NŐGYÓGYÁSZATI ONKOLÓGIA

Hungarian Journal of Gynecologic Oncology

A Magyar Nőgyógyász Onkológusok Társaságának hivatalos tudományos folyóirata

Főszerkesztő: Bősze Péter dr. Szerkesztő: Barabás Terézia

TARTALOM

7. ÉVFOLYAM 2. SZÁM 85–192. OLDAL 2002. OKTÓBER ISSN1219-9079

A logot Mátyássy László tervezte. Egy nyolcszögből (octogon) és egy mandula alakú résből, ún. mandorla-ból áll. Az oktogon, vagyis a nyolcas szám az átváltozást (megújulást, újra születést), a mandorla pedig a szeméremtestet jelöli. A logo a női nemi szervek átváltozásának (pl. ismeretlen kimenetelű rákos megbetegedés) jelképe.

The embleme, designed by László Mátyássy, symbolizes a transition related to the female genital system, such as gynecologic cancer of unknown outcome. It is composed of an octogon and a mandorla. Octogon means eight, which is the number of transition (renewal, rebirth), the mandorla is an almond-shape aureole respresenting the vulva.

NŐGYÓGYÁSZATI ONKOLÓGIA

Hungarian Journal of Gynecologic Oncology

A Magyar Nőgyógyász Onkológusok Társaságának hivatalos lapja
Official Journal of the Hungarian Society of Gynecologic Oncologists

A **Nőgyógyászati Onkológia** (ISSN 1219-9079) 4 havonta jelenik meg 1600 példányban. Kiadó: Primed-X Kiadó. Cím: 1301 Budapest, Pf. 46. Tel./Fax: (36-1) 275-2172. Tervezőszerkesztő: Kardos Gábor. Nyomdai kivitelezés: VISIT Kft., Budapest, Telefon: (36-1) 399-0135

Előfizetés. Előfizetési díj egy évre közületeknek 3000 Ft + 12% áfa.
A magyar kollégák térítésmentesen kapják. Ez a szám a Belvárosi-Lipótvárosi Vagyonkezelő Rt. támogatásával került kiadásra.

Hirdetés. Tájékoztatásért forduljon a kiadóhoz.

EAGC

EUROPEAN ACADEMY OF GYNAECOLOGICAL CANCER, EAGC

1st EAGC Educational World Congress on Gynecologic Oncology

October 10-12, 2002 Budapest, Hungary

PATRON OF THE CONGRESS

Mrs Dalma Mádl
Spouse of the President
of the Hungarian Republic

ORGANIZED IN CO-OPERATION WITH

European Board and Collage of Obstetrics and Gynaecology (EBCOG)

European School of Oncology (ESO)

European Society for Medical Oncology (ESMO)

European Society of Surgical Oncology (ESSO)

European Society for Therapeutic Radiology and Oncology (ESTRO)

European Union of Medical Specialists (UEMS)

Hungarian Society of Gynaecological Oncologists

International Federation of Cervical Pathology and Colposcopy (IFCPC)

International Federation of Gynecology and Obstetrics (FIGO)

HONORARY PRESIDENTS

István Besznyák *(Hungary)*
Sándor Eckhardt *(Hungary)*
István Gáti *(Hungary)*
Antonio Onnis *(Italy)*

PRESIDENTS OF THE CONGRESS

Hugh H. Allen (Canada), Péter Bősze (Hungary), Alberto Costa (Italy), Daniel Dargent (France), Santiago Dexeus (Spain), Neville F. Hacker (Australia), Michael Hoeckel (Germany), Carlos F. de Oliveira (Portugal), Piereluigi Benedetti Panici (Italy), Ben J. Smit (South African Republic), Claes Tropé (Norway), László Ungár (Hungary), Jan B. Vermorken (Belgium), Raimund Winter (Austria)

CONTINUING MEDICAL EDUCATION (CME) ACCREDITATION

The Congress has been awarded 26 CME credit points by the Accreditation Council of Oncology in Europe (ACOE). On this bases, this Educational Congress is also accredited by the European Accreditation Council for Continuing Medical education (EACCME) to provide the following CME activity for medical specialists. The EACCME is an institute of the European Union of medical Specialists (UEMS, www.uems.be).

The congress is designated for up to 26 hours of European external credits. Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity. EACCME credits are recognized by the American Medical Association towards the Physician's recognition Award (PRA). To convert EACCME credit to AMA PRA category 1 credit, contact the AMA.

FEDERATION OF EUROPEAN CANCER SOCIETIES

U.E.M.S.

Local Organising Committee

PRESIDENT: Ferenc Paulin (Hungary)

MEMBERS: Attila Artner, Antal Borsos, Zsolt Csapó, Jenő Egyed, Olga Ésik, László Kornya, László Kovács, Gábor Krivácsi, Károly Krommer, Edit Oláh, Attila Pál, László Pálfalvi, István Rákóczi, Pál Siklós, Robert Póka, András Szánthó, Miklós Török, László Vass

ORGANISING COMPANY
PRIMED-X Ltd.
1301 Budapest, PO Box 46, Phone: (36 1) 4290316
Fax: (36 1) 4290317 E-mail: mail@primed-x.hu
WWW.CME.HU

EUROPEAN ACADEMY OF GYNAECOLOGICAL CANCER, EAGC

Chairman: Péter Bősze (Hungary)

EAGC EXECUTIVE BOARD

PRESIDENT: Carlos F. de Oliveira (Portugal)

MEMBERS: Daniel Dargent (France), Santiago Dexeus (Spain), William Dunlop (UK), Stelios Fotiou (Greece), Gerald Gitsch (Astria), A. Peter M. Heintz (Netherlands), Michael Hoeckel (Germany), Ian Jacobs (UK), Tiziano Maggino (Italy), Harald Meden (Germany), Jacques Lansac (France), Joseph Monsonego (France), Giuseppe de Palo (Italy), Pierluigi Benedetti Panici (Italy), Sergio Pecorelli (Italy), Denis Quelleu (France), Stelio Rakar (Slovenia), Piero Sismondi (Italy), Claes Tropé (Norway), László Ungár (Hungary), André van Assche (Belgium), Raimund Winter (Austria)

INTERNATIONAL ADVISORY BOARD

CHAIRMAN: Antonio Onnis (Italy)

MEMBERS: Hugh H. Allen (Canada), Curt W. Burger (Netherlands), Alberto Costa (Italy), André Gorins (France), Neville F. Hacker (Astralia), Maria Marchetti (Italy), Stelios P. Michalas (Greece), Maria Teresa Osorio (Portugal), Ulf Ulmsten (Sweden), Jan B. Vermorken (Belgium), George D. Wilbanks (USA), Jan Zielinski (Poland)

Dear Colleagues,

On behalf of the Board of the European Academy of Gynaecological Cancer, EAGC, I wish to extend an invitation to you to attend our 1st Educational World Congress on Gynecologic Oncology to be held in Budapest, Hungary from October 10-12, 2002.

The EAGC is a foundation-based, non-private, non-profit, non-governmental and independent European organization for comprehensive subspecialty and continuous professional development training and education in gynecologic oncology. This is a novel model of a European training program aimed at harmonizing education and training of the specialty in practical terms in Europe. The mission of EAGC is to improve training and education in gynecologic oncology, thereby improving the care of women with tumors of the breasts and genital tract.

This educational world congress will not only be a major event in achieving the EAGC's objectives but it will be a novel approach to education, and therefore requires special merit. This kind of congress has never been organized. This will not be a venue for original papers, and will by no means be a congress similar to that of the congresses of the European Society of Gynaecological Oncology. This will be exclusively on education, teaching, e.g. teaching how to perform a radical hysterectomy, the best way of delivering radiation therapy or chemotherapy, task force lectures in colposcopy, etc. In other words it will deal with the way to do things and not when or why.

The Congress has several equal-ability chairmen representing the world. The chairmen are responsible for the scientific program and so there will be no scientific committee. The Organizing Committee will make every effort to make the Congress a memorable event. This will be a non-profit endeavor.

All topics will be covered and all papers, etc. will be presented by the invited faculty, i.e. there will be no room for proffered papers. However, the Congress will offer the attendees the opportunity of teaching all participants by presenting posters. Since this is a major goal, the participants are encouraged to prepare posters. Those who wish to publish the posters as full papers in a book can do so by extra charge by submitting their papers.

As an indicator of the interest this event is attracting, it is my pleasure to acknowledge that a large body of International Societies and other organizations have cordially accepted to participate. This amounts to a guarantee of the high scientific level of the Meeting.

As for the venue, Budapest offers warm hospitality, with lots of cultural and tourist attractions. Participants will have an opportunity to experience some of them. The city is proud to host the 1st Educational World Congress on Gynecologic Oncology.

We are looking forward to welcoming you to Budapest and looking forward as well to your invaluable contribution.

Yours sincerely,

Péter Bősze, M.D.
Organizing President
Chairman of EAGC

Kállay Bori

AVON

Ami a szívemen az a számon

Szívügyünknek érezzük az emlőrák elleni küzdelmet!

Ha most akciós ajakrúzst vásárol, **200 forinttal támogatja** a mellrák ellen folytatott harcot.

Új krémes, selymesen sima Avon Color hidratáló formulájú rúzsaink jólzű, ragyogó mosolyt varázsolnak ajkaira.

Mivel az Avon termékek boltban nem kaphatók, küldje vissza ezt a kupont, és mi elküldjük Önnek legújabb katalógusunkat. 46

Vezetéknév _____

Keresztnév _____

Lakcím _____

Telefonszám _____

Ha érdekli a tanácsadónői munka, kérjük, x-elje be a négyzetet! ☐

Avon ügyfélszolgálat: 06 28 530 078

Címünk: Avon 1439 Budapest, Pf. 626

www.avon.hu

Beszéljünk róla!

Faculty

Hugh H. Allen M.D.
Professor and Chairman Emeritus
Department of Obstetrics and Gynecology
The University of Western Ontario
London, Ontario, Canada

Attila Artner, M.D
Consultant,
Department of Obstetrics and Gynecology
Saint Stephen Hospital, Budapest, Hungary

Ibtisam Lale Atahan, M.D.
Professor, Board member of ESTRO
Department of Radiation Oncology
Hacettepe University of Oncology, Hastanesi
Ankara, Turkey

Paul Bartos, M.D.
Head and Chairman
Department of Pelvic Surgery
and Oncolaparoscopic Training Center
Na Homolce Hospital
Prague, Czech Republic

Gianfranco Bellezza, M.D.
Radiofrequency Medical Technologies
Expert Scientific and General Manager
MDH Forniture Ospedaliere S.r.l
Milan, Italy

István Besznyák, M.D.
Professor and Chairman Emeritus
Department of Surgery
Budai MÁV Hospital
Budapest, Hungary

Péter Bősze, M.D.
Professor and Chairman
European Academy of Gynaecological Cancer, EAGC
Clinic of Cancer Genetics and Prevention
Department of Obstetrics and Gynecology
Saint Stephen Hospital, Budapest, Hungary

Tak-hong Cheung, M.D.
Consultant and Adjunct Associate Professor
Department of Gynaecology
Prince of Wales Hospital
The Chinese University of Hong Kong, Hong Kong

Alberto Costa, M.D.
Director, European School of Oncology
Department of Surgery
European Institute of Oncology
Milan, Italy

Zsolt Csapó, M.D.
Associate Professor, Vice Director
1st Department of Obstetrics and Gynaecology
Semmelweis University, Faculty of Medicine
Budapest, Hungary

Marcello Deraco, M.D.
Department of Surgery
National Cancer Institute of Milan
Milan, Italy

Daniel Dargent, M.D.
Professor and Head
Department of Gynaecologic Oncology
University of Edouard Herriot
Lyon, FRANCE

Santiago Dexeus, M.D.
Professor and Chairman
Past president of IFCPC
Department of Obstetrics and Gynecology
Institut Universitari Dexeus
Barcelona, SPAIN

Csaba Dzsinich, M.D.
Professor of Surgery
President of the European Society
for Cardiovascular Surgery
Department od Cardiac and Vascular Surgery
Semmelweis University,
Budapest, Hungary

Sándor Eckhardt, M.D.
Professor and Chairman Emeritus
Department of Medical Oncology
National Institute of Oncology,
Budapest, Hungary

Jenő Egyed, M.D.
Professor of Obstetrics and Gynaecolgy
Semmelweis University, Faculty of Medicine
Department of Obstetrics and Gynaecology
National Medical Center
Budapest, Hungary

Olga Ésik, M.D.
Professor and Head
Department of Radiotherapy
National Institute of Oncology
Budapest, Hungary

Vilmos Fülöp, M.D.
Associate Professor
Semmelweis University,
Faculty of Medicine
Department of Obstetrics and Gynaecology
National Medical Center
Budapest, Hungary

István Gáti, M.D.
Professor and Chairman Emeritus
Semmelweis University, Faculty of Medicine
Department of Obstetrics and Gynaecology
National Medical Center
Budapest, Hungary

Gusztáv Gulyás, M.D.
Head, Department of Plastic Surgery,
National Institute of Oncology,
Budapest, Hungary

Neville F. Hacker, M.D.
Director of Gynecologic Oncology
Royal Hospital for Women
Randwick, Australia

Michael Höckel, M.D.
Professor and Director
Department of Obstetrics and Gynaecology
University of Leipzig
Leipzig, Germany

János Károvits, M.D.
Consultant Anaesthetist,
Honorary Senior Lecturer
Department of Anaesthetics, NGH-2
King's College London, Guy's Campus, London, UK

Vesna Kesic, M.D.
Associate Professor
of Gynaecology and Obstetrics
Department of Obstetrics and Gynaecology
University Clinical Centre, Beograd, Yugoslavia

Róbert Koiss, M.D.
Lecturer
Department of Obstetrics and Gynecology
Saint Stephen Hospital
Budapest Hungary

László Kornya, M.D.
Lecturer
Department of Obstetrics and Gynaecology
Péterfy Hospital
Budapest, Hungary

László Kovács, M.D.
Professor of Obstetrics and Gynaecology
Department of Obstetrics and Gynaecology
Szeged University, Szent-Györgyi Albert Medical and
Pharmaceutical Center
Szeged, Hungary

Cees C. Leibbrandt, M.D.
Secretary-General UEMS
European Union of Medical Specialists
Brussels, Belgium

Hextan YS Ngan, M.D.
Full Professor
Chair of FIGO Oncology Committee
Department of Obstetrics and Gynaecology
Queen Mary Hospital, Hong Kong

Niall O'Higgins, M. D.
Professor and Director
University Department of Surgery
St. Vincent's Hospital,
Dublin, Ireland

Antonio Onnis, M.D.
Professor and Chairman Emeritus
Department of Obstetrics and Gynaecology
University of Padova
Padova, Italy

Pierluigi Benedetti Panici, M.D.
Professor and Director
Department of Gynecology,
Free University, Campus Biomedico
Rome, Italy

Ferenc Paulin, M.D.
Professor and Chairman
2nd Department of Obstetrics and Gynaecology
Semmelweis University, Faculty of Medicine
Budapest, Hungary

Attila Pál, M.D.
Professor and Chairman
Department of Obstetrics and Gynaecology
Szeged University,
Szent-Györgyi Albert Medical
and Pharmaceutical Center
Szeged, Hungary

László Pálfalvi, M.D.
Consultant
Department of Obstetrics and Gynecology
Saint Stephen Hospital,
Budapest, Hungary

Róbert Póka, M.D.
Senior Lecturel
Department of Obstetrics and Gynaecology
University of Debrecen, Health Science Center
Debrecen, Hungary

István Rákóczi, M.D.
Professor and Director
Department of Obstetrics and Gynaecology
Saint Imre Hospital
Budapest, Hungary

Charles WE. Redman, M.D.
Consultant
Department of Obstetrics and Gynaecology
Birmingham Women's Hospital
Birmingham, United Kingdom

Giovanni Scambia, M.D.
Associate Professor and Chief
Department of Gynecologic Oncology
Department of Gynecology and Obstetrics
Catholic University of the Sacred Heart
Rome, Italy

Pál Siklós, M.D.
Associate Head
Department of Obstetrics and Gynecology
Saint Stephen Hospital
Budapest Hungary

Ben J. Smit, M.D.
Professor and Chairman emeritus
Department of Radiation Oncology
University of Stellenbosch,
Tygerberg Academic Hospital
Tygerberg, Republic of South Africa

Egon Svastics, M.D.
Head, Department of Surgery
Budai MÁV Hospital
Budapest, Hungary

András Szánthó, M.D.
Head of Division of Gynaecological Oncology
1st Department of Obstetrics and Gynaecology
Semmelweis University, Faculty of Medicine
Budapest, Hungary

Wiebren AA. Tjalma, M.D.
Professor and Chairman
Department of Gynecologic Oncology
University Hospital Antwerpen
Edegem, Belgium

Miklós Török, M.D.
Senior Consultant
Semmelweis University,
Faculty of Medicine
Department of Obstetrics and Gynaecology
National Medical Center
Budapest, Hungary

Claes Tropé, M.D.
Professor and Director
Department of Gynecologic Oncology
The Norwegian Radium Hospital
Oslo, Norway

László Ungár, M.D.
Head, Department of Obstetrics
and Gynecology
Saint Stephen Hospital
Budapest Hungary

F. André Van Assche, M.D.
Professor and Chairman
Secretary-General EBCOG
Department of Obstetrics and Gynecology
University Hospital Leuven
Leuven, Belgium

László Vass, M.D.
Head, Department
of Pathology-Cytopathology
Flór Ferenc Hospital of Pest County
Budapest, Hungary

Jan B. Vermorken, M.D.
Professor and Director
Department of Medical Oncology
University Hospital Antwerp
Edegem, Belgium

Raimund Winter, M.D.
Full Professor
Department of Obstetrics and Gynecology
University of Graz,
Graz, Austria

Frans A.N. Zoetmulder, M.D.
Professor and Head
Department of Surgery
The Netherlands Cancer Institute
(Antoni van Leeuwenhoek) Hospital
Amsterdam, the Netherlands

Nyisson

az új lehetőség felé!

a változókori panaszok kezelésében

Remifemin®

a hatásos, **hormonmentes** terápia

PHYTOTEC
EVIDENCE BASED NATURE

www.phytotec.hu

További információval készséggel áll rendelkezésére a Phytotec Hungária.
Cím: 1026 Budapest, Lotz Károly u. 3., Tel.: 392-0384 • info@phytotec.hu

A változókor kezelésének biztonsága

Izopropanolos Cimicifuga kivonat – a legújabb kutatási eredmények

BEVEZETÉS Az emberiség évszázadok óta alkalmaz gyógynövényeket betegségek kezelésére, illetve a tünetek enyhítésére. Mai gyógyszereink közül sokat a gyógynövények és hatóanyagaik modern, tudományos módszerekkel történő kutatásainak köszönhetünk. A gyógyításban egykor felhasznált gyógynövényi készítmények azonban, napjaink korszerűen előállított fitofarmakonjaihoz csupán a kiindulási anyagban – a gyógynövényben hasonlítanak.

A fitofarmakonoknak mindazon követelményeknek meg kell felelniük, melyeket a kémiai alapanyagú (szintetikus) gyógyszerekkel szemben támasztanak: farmakológiai (stabil, garantált, ellenőrzött) minőség, a gyógyszer hatásosságának és biztonságosságának bizonyítása. Ellentétben a kémiai gyógyszerekkel – melyeknél egy meghatározott anyag biztosítja a gyógyhatást – a fitofarmakonok hatóanyaga mindig a teljes növényi kivonat. Az eltérő módszerek szerint előállított növényi kivonatok hatóanyag összetétele különböző. Következésképpen a botanikailag azonos növényből származó készítmények hatásukat tekintve nem mondhatók azonosnak, illetve a klinikai tanulmányok eredményei, valamint a tudományos megállapítások is kizárólag a vizsgálatban alkalmazott izopropanolos Cimicifuga kivonatra (Remifemin®) érvényesek, azok más hatóanyag összetételű kivonatokra nem vonatkoztathatók.

A **Remifemin®** tabletta Németországban már negyed százada a vezető antiklimakteriális gyógyszerek közé tartozik. A Cimicifuga racemosa gyökértörzsének ezen standardizált kivonatával történő kezelés során a változókori tünetek az esetek több mint 80%-ában javulnak, illetve megszűnnek, mégpedig hormonális megterhelés nélkül. A legújabb preklinikai in vitro és in vivo tanulmányok is éppen arra szolgáltattak bizonyítékot, hogy a **Remifemin®** és a **Remifemin Plus®** tabletták hatóanyagaként ismert izopropanolos Cimicifuga extractumnak (iCR) **nincs ösztrogén agonisztikus hatása az emlőszövetre,** nem befolyásolja a daganatsejtek proliferációját, sem pedig a daganatképződést.

MENNYISÉGFÜGGŐ PROLIFERÁCIÓ GÁTLÁS Az ösztrogén receptor pozitív emlőrák sejtsorral folytatott *in vitro* tanulmányok a Remifemin® kivonat mennyiségfüggő proliferáció gátló hatását igazolták, mely az ösztradiol által felgyorsított sejtosztódást ellensúlyozta. Szintén ezt támasztották alá azok az emberi emlőrák sejtsorral végzett összehasonlító vizsgálatok, melyek során a változókori tünetek enyhítésére használatos egyéb növényi kivonatokat (szója, vörös here) is alkalmaztak. A Remifemin®-nel ellentétben azonban az utóbbiak az emlőrák sejtek szaporodását fokozták. Ezek a tények a Remifemin® tabletta nagymértékű biztonságosságát támasztják alá.

CSONTVÉDŐ HATÁS Az iCR-nek sem állatkísérletes modellben, sem pedig sejttenyészetben nem volt kimutatható ösztrogénszerű hatása a méhnyálkahártyára, illetve az emlőszövetre. Petefészek-eltávolításon átesett patkányokon folytatott csontritkulási kísérletben ezzel szemben a kivonat csontvédő hatást mutatott: a csontsűrűség növekedett. Az izopropanolos Remifemin® kivonat ösztrogénfüggő szövetekben tapasztalható biztonságossága, ugyanakkor, pl. a csontanyagcserében észlelhető pozitív hatása arra enged következtetni, hogy ezen speciálextraktum hatóanyagai esetében SERM (szelektív ösztrogén receptor modulátor) hatásmechanizmusról beszélhetünk. Ezért a készítmény, mint ahogyan azt a klinikai vizsgálatok többszörösen is bizonyították – a hormonpótló kezelés mellett megfelelő alternatívát jelent a változókori tünetek kezelésében.

Levelezési cím:

Phytotec Hungária
1026 Budapest, Lotz Károly u. 3.
1538 Budapest, Pf.: 491
Távbeszélő: (1) 392-0384
Villanyposta: info@phytotec.h

IRODALOM*

1. Boblitz N, et al. Traubensilberkertze. Wirksamkeit, Wirkung und Sicherheit von Cimicifuga racemosa in der Gynaekologie. DAZ 2000; 140:2833-2838.

2. Bodinet C, et al. Effects of various herbal preparations on the proliferation of human breast cancer cells. Posterpresentation at the 10th World Congress on the Menopause, 2002. Berlin, Germany.

3. Bodinet C, et al. Influence of Cimicifuga racemosa on the proliferation of estrogen receptor positive human breast cancer cells. Breast Cancer Research and Treatment, publication in press, 2002.

4. Freudenstein J, et al. Lack of promotion of estrogen-dependent mammry gland tumors in vivo by an isopropanolic Cimicifuga racemosa extract. Cancer Research 2002; 62:3448-3452.

5. Liske E, et al. Physiological investigation of a unique extract of Black Cohosh (Cimicifugae racemosae rhizoma): A 6-month clinical study demoonstrates no systemic estrogenic effect. Journal of Women's Health &Gender-Baesed-Medicine 2002; 11:163-174.

6. Nisslein T, et al. Effects of Black Cohosh on bone marrow cytology and epiphyseal bone architecture. Posterpresentation at the 10th World Congress on the Menopause, 2002. Berlin, Germany.

7. Nisslein, T. et al.: Effects of Black Cohosh on urinary bone markers and femoral density in an OVX-rat model. Posterpresentation at the World Congress on Osteoporosis, 2000, Chicago, USA.

8. Zierau O, et al. Antiestrogenic activities of Cimicifuga racemosa extracts. Journal of Steroid Biochemistry & Molecular Biology 2002; 80:125-130.

* Az irodalomjegyzékben szereplő tanulmányokat kérésére eljuttatja Önnek a Phytotec Hungária.

Aventis

A világon leggyakrabban alkalmazott kis molekulatömegű heparin.[1]

- **Óriási klinikai tapasztalat**
- **Bizonyított hatékonyság**
- **Egyszerű adagolás**
- **Biztonságos alkalmazás**

A TÉNYEKEN ALAPULÓ VÁLASZTÁS

Clexane 40 mg sc. naponta egyszer: ENOXACAN II. vizsgálat[2]

[2] A vénás trombózis megelőzése daganatos betegség miatt operált betegek esetében.

(1) IMS Q3 2001
(2) Bergquist NEJM 2002; 346

CLEXANE®
enoxaparin

További információért forduljon irodánkhoz:
Aventis Pharma Kft. 1036 Budapest, Lajos u. 48-66. Telefon: 4545 400, fax: 4545 401
e-mail: hungary@aventis.com; www.aventis.hu

Program Overview

2002	October 10, Thursday	October 11, Friday	October 12, Saturday
08.30–11.00	Lectures of the new honorary members of the Hungarian Society of Gynaecological Oncologists	Elements in removing a fixed pelvic mass and abdominal metastases; the way I do it	How to perform FIGO staging: practical guidance *In collaboration with the International Federation of Gynecology and Obstetrics (FIGO)*
10.30–11.00		Coffee Break	Coffee Break
11.00–13.00	Opening Ceremony	Colposcopy: practical hints *In collaboration with the International Federation for Cervical pathology and Colposcopy (IFCPC)*	Practical guidance of delivering chemotherapy *In collaboration with the European Society for Medical Oncologists (ESMO)*
12.00–13.00		Lunch Break	Lunch Break
13.00–15.00	Elements of radical hysterectomy; the way I do it	Elements of breast surgery; the way I do it (the primary tumor) *In collaboration with the European School of Oncology (ESO)*	How to prevent and manage bleeding during pelvic surgery *In collaboration with the European Society of Surgical Oncology (ESSO)*
15.00–15.30	Coffee Break	Coffee Break	Coffee Break
15.30–16.30	What gynaecological oncologists should know about radiation therapy *In collaboration with the European Society for Therapeutic Radiology and Oncology (ESTRO)*	Elements of breast surgery; the way I do it (the axilla)	How to perform cone biopsy/LEETZ
16.30–18.00	Principles and practical hints of making flaps	Elements of groin node dissection: the way I do it.	How to perform laparoscopy: little tricks make things better
18.00–19.00	European Certificate: how to get accreditation	Techniques of preserving fertility in cervical cancer	Closing Ceremony
19.00-20.00 continued	*European meeting*	Surgical histology of cervical cancer	
20.00	Welcome Party	Free Evening	

A pattanás elleni tabletta

Diane 35

Acne

Seborrhoea

Hirsutismus

- Kiváló hatékonyság pattanásos, zsíros bőr esetén[1]
- Megbízható fogamzásgátló hatás (Pearl-index: 0.1)[1]
- Az egyetlen antiandrogén tartalmú fogamzásgátló[2]
- Hosszú távon is biztonsággal, folyamatosan szedhető[1,3]

1. Aydinlik S et al: Clin Tri J 1990 27 (6): 392-402
2. Neumann F: Exp Clin Endocrinol 102 (1994) 1-32
3. Van Wayjen RGA, Van den Ende A:
Exp Clin Endocrinol Diabetes 103 (1995) 241-251

További információval készséggel állunk rendelkezésére:
Schering Kft., 1037 Budapest, Szépvölgyi út 35-37.
Tel.: (06-1) 453-8010 Fax: (06-1) 453-8011
www.schering.hu

SCHERING

U032H

SOCIAL EVENTS Opening Ceremony
Welcome Party
Closing Ceremony

PROGRAM IN DETAIL

OCTOBER 10, 2002 FRIDAY

08.30-11.00 Lectures of the new honorary members of the Hungarian Society of Gynaecological Oncologists
Chairmen: *Péter Bősze and László Ungár*

Physiology of the postoperative patient
Hugh H. Allen

Gynecologic oncology: a perspective from "down under"
Neville F. Hacker

The future of radiation therapy in the management of the female genital tract malignancies
Ben J. Smit

NOTES

OCTOBER 10, 2002 THURSDAY

11.45-13.00 Opening Ceremony
Chairman: *László Kovács*

11.45-11.55 Opening of the 1st EAGC Educational World Congress on Gynecologic Oncology
Mrs. Dalma Mádl (patron of the congress)

11.55-12.15 Welcome addresses
István Besznyák
Sándor Eckhardt
István Gáti
Antonio Onnis

12.15-12.50 Architectural heritage of Budapest
Pál Ritoók

12.50-13.00 Background and objectives of the congress
Péter Bősze

NOTES

OCTOBER 10, 2002 THURSDAY
13.00-15.00

ELEMENTS OF RADICAL HYSTERECTOMY; THE WAY I DO IT
Chairman: *Pierluigi Benedetti Panici*
Co-chairman: *Róbert Koiss*

13.00-13.40	Elements of radical hysterectomy and key points in performing pelvic and paraaortic lymphadenectomy: an overview *Pierluigi Benedetti Panici*
13.40-13.55	The way I do it *Attila Artner*
13.55-14.10	My view *Tak-hong Cheung*
14.10-14.25	This is our approach *Michael Höckel*
14.25-15.00	Discussion

LEARNING OBJECTIVES This session will focus on the most important anatomic structures in terms of the safety and adequacy of performing radical hysterectomy and associated lymphadenectomy, including pelvic and paraaortic lymph node dissection. A thorough discussion will also be conducted on avoiding postoperative bladder dysfunction and other intra- and postoperative complications with the aid of novel anatomic findings. Emphases will be put on how to utilize the anatomic structures in tailoring surgery to suit individual patient's need.

15.00-15.30 **COFFEE BREAK**

NOTES

OCTOBER 10, 2002 THURSDAY
15.30-16.30

WHAT GYNAECOLOGICAL ONCOLOGISTS SHOULD KNOW ABOUT RADIATION THERAPY
In collaboration with ESTRO
Chairmen: *Ibtisam Lale Atahan and Ben J. Smit*
Co-chairman: *Olga Ésik*

15.30-16.00	An overview *Ben J. Smit*
16.00-16.20	My way of delivering radiation therapy *Ibtisam Lale Atahan*
16.20-16.30	Discussion

LEARNING OBJECTIVES Radiotherapy has made major strides during the last two decades, and this progress is likely to have further impact on reducing complications and improving the local control and survival rates for radiotherapy patients. Experience in radiotherapy, both in principle including radiobiology and physics and in clinical practice, is a prerequisite for gynaecological oncologists to be a competent consultant in the field. It is not necessary for the gynaecological oncologist to give radiotherapy, but to be prepared to do so in case it is necessary, and in order to be able to evaluate the capability of this treatment modality, when making a decision regarding treatment approaches of individual patients, and to avoid the one-sided decision of the radiotherapist.

NOTES

OCTOBER 10, 2002 THURSDAY
16.30-18.00

PRINCIPLES AND PRACTICAL HINTS OF MAKING FLAPS
Chairman: *Michael Höckel*
Co-chairman: *Gusztáv Gulyás*

16.30-17.00	An overview *Michael Höckel*
17.00-17.15	My view *Gusztáv Gulyás*
17.15-17.30	The way I do it *Pierluigi Benedetti Panici*
17.30-18.00	Discussion

LEARNING OBJECTIVES Flaps are increasingly used even in gynecologic surgery and they have a major role in managing cancer patients. Gynecologic oncologists should be familiar and experienced in making flaps not only to cover large wounds and for plastic surgical purposes, but also to improve the blood supply of the tumor beds by neovascularisation. Due to the newly formed blood vessels from the flaps, oxygen level of the remaining cancer cells increases and the radiation therapy will be more effective. This program is designed for gynecologists, gynecologic oncologists, plastic surgeons, radiotherapists and all others who treat patients with malignant diseases. As with other sessions, the major objective is how to make flaps.

NOTES

OCTOBER 10, 2002 THURSDAY
18.00-20.00

EUROPEAN CERTIFICATES: HOW TO GET ACCREDITATION
European meeting
Chairman: *Cees C. Leibbrandt*
Co-chairman: *Attila Pál*

18.00-18.05	Introduction *Cees C. Leibbrandt*
18.05-18.25	Is there a need for European Certificates: an overview *Péter Bősze*
18.25-18.45	Organisation: practical considerations *Charles W.E. Redman*
18.45-19.05	The role of FECS in accrediting European Certificates in oncology *Niall O'Higgins*
19.05-19.25	The role of EBCOG in accrediting European Certificates in gynecology and gynecologic oncology *F. André van Assche*
19.25-19.45	The role of UEMS in accrediting European Certificates in oncology *Cees C. Leibbrandt*
19.45-20.00	Discussion

LEARNING OBJECTIVES Regarding the European training in medicine, one of the major issues is accreditation. As for CME accreditation, we are well on the way with the establishment of the European Accreditation Centre for CME within UEMS. However, there is still a long way to go in terms of accreditation of European Certificates. Apparently, there is an increasing need for European Certificates. E.g. the European Federation of Colposcopy has developed a core curriculum for European Colposcopy Training and a Course Book on Colposcopy is being published by the European Academy of Gynaecological Cancer. The interest in getting such a European Colposcopy Certificate is obvious for several reasons. The major concern is accreditation. This is just one example and there are many others including subspecialty training. This is the rational of this session and it seems timely to organise a European meeting in this context.

OCTOBER 10, 2002 THURSDAY

20.00 **WELCOME PARTY**

NOTES

OCTOBER 11, 2002 FRIDAY
08.30-10.30

ELEMENTS IN REMOVING A FIXED PELVIC MASS AND ABDOMINAL METASTASES; THE WAY I DO IT
Chairman: *Hugh H. Allen*
Co-chairman: *Róbert Póka*

08.30-09.10	Major points of the surgical approach *Hugh H. Allen*
09.10-09.25	The way I do it *Neville F. Hacker*
09.25-09.40	The way I do it *Frans A.N. Zoetmulder*
09.40-10.30	Discussion

LEARNING OBJECTIVES This comprehensive session has been designed to advance the surgical experience of pelvic surgeons in managing patients with seemingly unresectable tumors. With the understanding of the retroperitoneal approach and the major anatomic structures, almost all pelvic masses can be removed. By the end of the session, attendees will be familiar with the surgical elements required to manage women with advanced tumors, e.g. disseminated ovarian cancer. Leading world experts will share their experience in this context.

10.30-11.00 **COFFEE BREAK**

NOTES

OCTOBER 11, 2002 FRIDAY
11.00-12.00

COLPOSCOPY: PRACTICAL HINTS
In collaboration with IFCPC
Chairman: *Santiago Dexeus*
Co-chairman: *László Kornya*

11.00-11.20	Task force lectures in colposcopy *Santiago Dexeus*
11.20-11.35	Atypical colposcopic findings: recognition and clinical implications *Claes Tropé*
11.35-11.45	Vulvoscopy: practical hints *Vesna Kesic*
11.45-12.00	Discussion

LEARNING OBJECTIVES Colposcopy has a fundamental role in evaluating women with abnormal smears. It is also used in primary setting, as part of gynecologic examination, in some parts of the world. The lectures will be arranged in a didactic fashion by providing algorithms. By the end, participants should be able to understand the colposcopic findings and their clinical implications as well as the limitations of this procedure.

12.00-13.00 **LUNCH BREAK**

NOTES

OCTOBER 11, 2002 FRIDAY
13.00-15.00

ELEMENTS OF BREAST SURGERY; THE WAY I DO IT
(THE PRIMARY TUMOR)
In collaboration with the European School of Oncology (ESO)
Chairman: *Alberto Costa*
Co-chairman: *Pál Siklós*

13.00-13.40	Biopsy techniques and conservative surgery: an overview *Alberto Costa*
13.40-13.55	Biopsy techniques: the way I do it *Niall O'Higgins*
13.55-14.10	Biopsy techniques: the way I do it *Egon Svastics*
14.10-14.25	Conservative surgery of the primary tumor: my view *László Pálfalvi*
14.25-14.40	Conservative surgery of the primary tumor: my view *Wiebren AA. Tjalma*
14.40-15.00	Discussion

LEARNING OBJECTIVES As with other sessions on surgery, thorough discussion will be conducted on anatomy and the utilization of anatomic landmarks in removing the primary breast tumors or masses. Breast biopsy is by no means an easy procedure requiring special techniques, which will be demonstrated. This session will introduce the basic surgical principles in preserving the cancer-bearing breast. Again, the major emphases will not focus on when, but rather how to perform breast-conserving surgery in terms of removing the primary tumor.

15.00-15.30 **COFFEE BREAK**

NOTES

OCTOBER 11, 2002 FRIDAY
15.30-16.30

ELEMENTS OF BREAST SURGERY; THE WAY I DO IT (THE AXILLA)
Chairman: *Niall O'Higgins*
Co-chairman: *Egon Svastics*

15.30-15.55	Surgical management of the axilla: key anatomical landmarks and techniques *Niall O'Higgins*
15.55-16.10	The way I do it *Santiago Dexeus*
16.10-16.30	Discussion

LEARNING OBJECTIVES In principle, this session has the same objective as the previous one, focusing on the axillary node dissection. With the advances of applied anatomy, the surgeon can be safely guided to find the axillary vein, the most important landmark in clearing the axilla. This will allow for the participants to significantly reduce the surgical risk in their home practice.

NOTES

OCTOBER 11, 2002 FRIDAY
16.30-18.00

ELEMENTS OF GROIN NODE DISSECTION: THE WAY I DO IT
Chairman: *Neville F. Hacker*
Co-chairman: *Attila Artner*

16.30-17.00	Anatomical landmarks for guiding surgery; my technique *Neville F. Hacker*
17.00-17.15	The way I do it *Hugh H. Allen*
17.15-17.30	My view *Frans A. N. Zoetmulder*
17.30-18.00	Discussion

LEARNING OBJECTIVES Carcinoma of the vulva is relatively rare and not many centers accumulate enough cases to establish firm therapeutic guidelines. There are still controversies regarding the extent of groin node dissection. This matter, however, is of particular importance because groin failure is almost invariable fatal in one hand, and the more radical the node dissection is the more severe the complications are, particularly the lymphedema. Recent studies have provided insight into the exact anatomic localization of the inguinal and femoral notes, making possible to remove the nodes effectively without disturbing normal anatomical structures. This approach is a key step in reducing the incidence and severity of lymphedema without compromising patients' care.

NOTES

OCTOBER 11, 2002 FRIDAY
18.00-19.00

TECHNIQUES OF PRESERVING FERTILITY IN CERVICAL CANCER
Chairman: *László Pálfalvi*
Co-chairman: *Vilmos Fülöp*

18.00-18.20	Radical trachelectomy: applied anatomy and major technical elements *Daniel Dargent*
18.20-18.40	Uterine preserving abdominal surgery: the way I do it *László Ungár*
18.40-19.00	Discussion

LEARNING OBJECTIVES Cervical cancer is one of the most common cancers of the female genital tract. Traditionally, it has been treated with radical surgery and/or radical radiotherapy, with the invariable consequence of compromising further childbearing. Recent advances have dramatically changed this practice. Women with early-stage cervical carcinoma may have the option of preserving the uterine corpus, i.e. fertility capacity. There are two major approaches, which will be addressed in detail.

NOTES

OCTOBER 11, 2002 FRIDAY
19.00-20.00

SURGICAL HISTOLOGY OF CERVICAL CANCER
Chairmen: *László Ungár* and *László Vass*

19.00-19.25	Surgical histology of cervical cancer: an overview *László Ungár*
19.25-19.45	My view *Giovanni Scambia*
19.45-20.00	Discussion

LEARNING OBJECTIVES The session includes a thorough discussion on the clinical implications of the surgical histology. Important details will be highlighted with special emphases on intra- and postoperative decision-making. The participants will have the opportunity to share their own experience. At the end of the session the attendees should be familiar with this novel concept and its practical clinical value.

NOTES

OCTOBER 12, 2002 SATURDAY
08.30-10.30

HOW TO PERFORM FIGO STAGING: PRACTICAL GUIDANCE
In collaboration with FIGO
Chairmen: *Hextan YS Ngan* and *Claes Tropé*

08.30-08.50	FIGO Oncology Committee and principles of setting up FIGO staging *Hextan YS Ngan*
08.50-09.30	Practical guidance of staging carcinoma of vulva, vagina, cervix, corpus uteri and ovaries *Claes Tropé*
09.30-09.45	My view *Neville F. Hacker*
09.45-10.30	Discussion

LEARNING OBJECTIVES This session will provide gynecologists, gynecologic oncologists and other physicians dealing with cancers of the female genital tract with up-dated and comprehensive knowledge on the principles of the FIGO staging system. It is also intended to provide practical guidelines in terms of practice, pitfalls and controversies of FIGO staging. By the end of the session, participants should aware of the best way in performing FIGO staging in women with gynecological malignancies.

10.30-11.00 **COFFEE BREAK**

NOTES

OCTOBER 12, 2002 SATURDAY
11.00-12.00

PRACTICAL GUIDANCE OF DELIVERING CHEMOTHERAPY
In collaboration with ESMO
Chairman: *Jan B. Vermorken*
Co-chairman: *András Szánthó*

11.00-11.30	An overview *Jan B. Vermorken*
11.30-11.45	Cytoreductive surgery followed by intraperitoneal hyperthermic perfusion in the treatment of recurrent epithelial ovarian cancer *Marcello Deraco*
11.45-12.00	Discussion

LEARNING OBJECTIVES Chemotherapy is mostly given by medical oncologists. In many centers, however, it is the gynecological oncologists, who treat their patients. Irrespective of the institutional practice, physicians involved in the management of cancer patients should be familiar with the practical administration of cytotoxic drugs. The participants will have the opportunity to get the basic principles and practical hints from one of the leading world experts in the field.

12.00-13.00 **LUNCH BREAK**

NOTES

OCTOBER 12, 2002 SATURDAY
13.00-15.00

HOW TO PREVENT AND MANAGE BLEEDING DURING PELVIC SURGERY
In collaboration with the
European Society of Surgical Oncology (ESSO)
Chairman: *Frans A.N. Zoetmulder*
Co-chairman: *Miklós Török*

13.00-13.30	Principles: methods of preventing bleeding, management of heavy (life threatening) bleeding, how to deal with oozing, management of bleeding from small vessels retracting in the bones *Frans A.N. Zoetmulder*
13.30-13.50	Step by step approach in clearing the pelvic side wall: applied anatomy *László Pálfalvi*
13.50-14.10	Bleeding: the view of the anaesthetist (systemic anticoagulation) *János Károvits*
14.10-14.25	Ligation of the large vessels in the pelvis: indication and consequences *Csaba Dzsinich*
14.25-14.40	Novel approaches *Gianfranco Bellezza*
14.40-15.00	Discussion

LEARNING OBJECTIVES This session is designed to suit all surgeons regardless of whether they are gynecologists, cancer surgeons or general surgeons. A comprehensive review will be provided, covering all methods utilized in managing intraoperative bleeding. In addition, the key anatomical structures will be discussed which can be used to avoid vascular injury and bleeding. Participants will learn novel surgical methods of sealing the small vessel and, thereby, they will be able to significantly reduce blood loss and operating time. The role of the anaesthetists in managing heavy bleeding will also be addressed.

15.00-15.30 **COFFEE BREAK**

NOTES

OCTOBER 12, 2002 SATURDAY
15.30-16.30

HOW TO PERFORM CONE BIOPSY/LEETZ
Chairmen: *Raimund Winter* and *Ferenc Paulin*

THE WAY I DO IT

15.30-15.45	The Graz experience *Raimund Winter*
15.45-16.00	The Oslo experience *Claes Tropé*
16.00-16.15	The Belgrade experience *Vesna Kesic*
16.15-16.30	Discussion

LEARNING OBJECTIVES Cone biopsy of the uterine cervix is one of the most frequently performed minor surgical interventions in gynecology. In spite of this, there have been a great variety of methods used during the last three decades. Recently, the radiofrequency electrosurgical excision has become very trendy. Controversies, however, still exist. World experts will address the relevant questions and share their experiences.

NOTES

OCTOBER 12, 2002 SATURDAY
16.30-18.00

HOW TO PERFORM LAPAROSCOPY:
LITTLE TRICKS MAKE THINGS BETTER
Chairman: *Daniel Dargent*
Co-chairman: *Zsolt Csapó*

16.30-17.00	An overview *Daniel Dargent*
17.00-17.15	The way I do it *István Rákóczi*
17.15-17.30	My view *Paul Bartos*
17.30-18.00	Discussion

LEARNING OBJECTIVES Laparoscopy has an increasing role in gynecologic oncology. This involves minor and major surgical procedures. The efficacy of laparoscopic lymphadenectomy, for instance, has been demonstrated. The learning curve of laparoscopic surgery, however, is long and incidental complications are not infrequent. This session, therefore, is specifically designed to discuss the basic roles in performing laparoscopy and to highlight little tricks in order to avoid adverse effects.

NOTES

OCTOBER 12, 2002 SATURDAY
18.00-19.00

CLOSING CEREMONY

REGISTRATION INFORMATION

Please present the confirmation as proof of registration at the Registration Desk and pick up your Congress Documents. Registration Desk is located in the EAGC Registration Area in the Congress Venue.
On-site registration is available.

REGISTRATION FEE	
Delegates	510 EUR
Accompanying Persons	150 EUR

Registered delegates are entitled to attend all Scientific Sessions, receive all official Congress Documents, access to Exhibitions, attend the Opening Ceremony, Welcome Reception and Closing Ceremony, receive 2 luncheon vouchers (Friday and Saturday) and coffee during the Congress.

Registered Accompanying Persons (not attending the scientific program) are entitled to access to Exhibitions, attend the Opening Ceremony, Welcome Reception and Closing Ceremony, coffee during the Congress and one half-day sightseeing tour.

The participants acknowledge that he or she has no right to lodge damage claims against the organizers should the holding of the congress be hindered or prevented by unexpected political or economic events or generally by vis major, or should the non-appearance of speakers or other reasons necessitate program changes. With registration, the participants accept this proviso.

ACCOMMODATION INFORMATION

The Organizing Company has special prices for participants at selected hotels. Rates are as fallows:

HOTELS	Cost per night (EUR) Double room (2 persons)	Single room
Hotel Mercure Budapest Buda **** (Congress venue)	121	108
*****Hotels	220-320	200-300
***Hotels	70-90	60-80

Other individual accommodation arrangements are available upon request to the Organizing Company.

There will be an additional room charge of 20 EUR/per night + the cost of breakfast for a third person sharing a double room. Children under 18 years of age may share room with parents at no additional room charge but breakfast.

The rate is in EUR per night and includes breakfast and all taxes but gratuities. It is the responsibility of participants to settle his or her own extras charged to the room on the day of departure. Check-out time is 12.00 a.m.

TOURIST PROGRAM

1. "GUARANTEED CLASSICAL BUDAPEST SIGHTSEEING TOUR" by bus with tour guide. We show you the most beautiful sights of Budapest: Heroe's Square, Millennium Memorial, Opera House, St Stephen's Cathedral, Parliament, Margaret Island, Castle District, Fishermen's Bastion (walk), Matthias Church, Citadel (photo-stop), Downtown, Market Hall, National Museum, Jewish Synagogue. Tour ends at the pier/city center.

Price: 32 EUR / person

2. "SECRETS OF BUDAPEST" Visit of the Market Hall, Parliament, Opera Backstage with bus and guide

Price: 27 EUR / person

3. "BOAT TRIP TO THE MARGARET ISLAND" One-hour boat trip from city center to the Island, cake and coffee service. One-hour guided tour on the Island – getting acquainted with the history and the monuments. One-hour boat trip back to the city center.

Price: 14 EUR / person

4. "DANUBE TOUR" Full-day trip on the Danube Bend. Visit the towns of archbishops, kings and artists. See Hungary's greatest Basilica in Esztergom, center of catholic faith. Visegrád houses the former Royal Residence. Panoramic View from the castle followed by trip to Szentendre. Lunch and wine tasting. Walk in the town. Return to Budapest on the Danube by boat. Tour ends at the pier/city center. By low level of water the tour is available only by bus.

Price: 85 EUR / person

5. POST CONGRESS PROGRAM *"Castle Tournament with Feast of the Middle Ages in Sümeg"*
We turn back the time and evoke the spirit of the most manly contest of the Middle Ages involving both cavalry's and

infantry's fascinating battles. Faithful to their titles, the knights fought in order to be worthy of the ladies' heart. They set an excellent example in skill, strength, courage and cleverness. The program is followed by the feast with unlimited consumption of food and drinks. According to the customs of the Middle Ages, guests may eat without cutlery. Knights and Ladies of the Castle serve the food and drink. The meal is accompanied by gypsy music. Travel by bus.

Price: 50 EUR / person

IMPORTANT NOTE: The prices are subject to changes depending on the number of participants.

GENERAL INFORMATION

THE CITY OF BUDAPEST

With its over 2 million inhabitants, Budapest, the capital of Hungary, is the largest city in a country of 11 million people, and is also the richest in attractions. The city lies in the heart of Europe, on both banks of the river Danube.

Thanks to its favorable geographical position, the place was, even in ancient times and the Middle Ages, an important road junction and a major settlement. If we take into account its Roman predecessor, Aquincum, we can say that it is 2,000 years old. Legally, however, Budapest did not come into being until as recently as 1873, when the three independent towns of Pest, Buda and Óbuda (Old Buda) were united. Thus, a settlement with over two thousand years of history has only been 'Budapest' for the past 128 years.

The beautiful setting of the city, its artistic monuments dating from so many different periods, its lively cultural life and numerous medicinal baths, its fine food and drink, and its animated life and warm hospitality – these assets deservedly attract more and more foreign visitors each year.

CONGRESS VENUE

Hotel Mercure Buda (1013 Budapest, Krisztina krt. 41-43)

OFFICIAL LANGUAGE

The official language of the Congress is exclusively English. There will be no simultaneous translation.

WEATHER AND CLOTHING

In October the weather is usually pleasant and sunny. The average temperature ranges from 18 to 22 °C. Fairly light clothing is advisable; however, the evenings may be cool, so a jacket or raincoat may be useful.

EXHIBITION

During the congress, a large exhibition, featuring commercial displays by pharmaceutical companies and industries serving the gynecological oncology community will be organized.

INFORMATION DESK

Information service will be provided during the Congress from 07.00 to 19.30. The Information Desk will be located in the Registration Area.

INVITATION LETTERS

Official letters of invitation to help overcome administrative difficulties including obtaining visa or permission to attend the Congress can be sent upon written request to the Organising Company. This should not, however, be construed as a financial commitment on the part of the Organizers.

BADGE

Name badge will be needed for admission to all scientific events including exhibits, and to all social events. Participants, exhibitors and accompanying persons are requested to wear their badge at all times during the conference.

SLIDE VIEW ROOM AND PROJECTION

The Slide View Room will be located in the Congress venue and will be open during Congress Hours.

Available projection facilities: single and double slide projection, overhead projection, LCD projection for PC (PowerPoint, JPG, BMP) and video (VHS, S-VHS, PAL, NTSC). Please indicate your preference.

CERTIFICATES OF ATTENDANCE

Certificates of Attendance will be provided to all attendees.

INSURANCE

The Organizers do not accept liability for individual medical, travel or personal insurance, and participants are strongly advised to take out their own personal insurance policies.

If necessary consult your travel agent.

LEFT LUGGAGE

Cloakroom facilities will be available at the Congress Venue every day.

LOST AND FOUND

All enquires should be directed to the Information Desk. Participants are advised to mark their Congress Documents with their name. Pre-printed labels will be provided for this purpose.

MESSAGE CENTRE

Message Centre will be operating during the Congress and are located in the Registration area.

SMOKING

There will be a strict no-smoking policy within all areas used by the Conference.

TIPPING

Gratuities are expected and are usually 10% in restaurants and other public places and for taxi drivers. Please note that service charges are included in transportation rates from and to the Airport.

ELECTRICITY

The electricity supply is 220 V, 50 Hz.

CAR PARK

The Hotel Mercure Budapest Buda has an open Car Park and there is a covered Car Park in the vicinity of the Congress Venue. Car Park Tickets are available in the Car Parks. The cost of car parking is not included in the Registration Fee.

EUROPEAN SOCIETY OF MASTOLOGY

ESSO

European School Of Oncology

ANNOUNCEMENT

The European Society of Mastology, The European Society of Surgical Oncology and the European School of Oncology are pleased to announce a one week, intensive residential course:

"Improving Clinical Skills in Early Breast Cancer"

Ljubljana, Slovenia, 3-7 February 2003

followed by

One month of training in a European Breast Unit

between March 2003 and July 2003

The aim of the programme is to facilitate the creation of the first group of European-minded senologists; clinicians who will be specifically and almost exclusively dedicated to breast cancer.

Free registration by competitive application

Final deadline for application: 11 November, 2002

- Potential candidates have a maximum age of 40 years
- Priority will be given to applicants already working in the field of breast cancer, especially to radiologists, pathologists, surgeons and radiotherapists
- Candidates from Southern, Eastern and Central Europe will be given priority
- The course will be conducted in English so a good knowledge of the English language is required

Interested candidates should send a copy of their curriculum vitae in English, together with an accompanying letter of recommendation from the Head of the Department that they are working in and a covering letter explaining their motivation. Successful candidates will be notified by December 15th.

For more information or to submit an application,
visit www.eusoma.org or contact the European Society of Mastology
Corso Italia 16, 20122 Milan, Italy
Tel: +39 02 89096008 fax:+39 02 89098904 e-mail: secretariat@eusoma.org

This programme has been made possible by an educational grant from the Federation of European Cancer Societies Project Fund. The residential course has been organised in collaboration with the Institute of Oncology in Ljubljana.

GDDB
GLOBAL DRUG DATABASE

MEDI MEDIA
INFORMÁCIÓS KFT.

Gyógyszer–KOMPENDIUM nélkül?

2002

PHARMINDEX gyógyszerinformáció *a hiteles forrás*

Kérem küldjék a megrendelt kiadványokat
☐ Munkahelyi címemre ☐ Lakcímemre

Név:.....
Szakképzettség:.....
Intézménynév: .....(ha munkahelyi cím)
☐☐☐☐ Helység:.....
Utca, hsz.....

PHARMINDEX RENDSZER.....**7980,- Ft** ..... **pld**
(GYÓGYSZER KOMPENDIUM+CD-ROM+2 egymást követő PHARMINDEX Zsebkönyv)

GYÓGYSZER KOMPENDIUM.....**7480,- Ft** ..... **pld**
(GYÓGYSZER KOMPENDIUM+CD-ROM)

PHARMINDEX ZSEBKÖNYVEK.....**2820,- Ft** ..... **pld**
(2 egymást követő PHARMINDEX Zsebkönyv)

PHARMINDEX CD-ROM.....**6480,- Ft** ..... **pld**
(a hivatalos alkalmazási előírások mellett interakció, tápszerek, dopping, egyéb kiegészítő infromációk)

Dátum:..... Aláírás:.....

Nyugdíjasoknak és diákoknak a fenti árakból 10% kedvezményt adunk. Az árak az ÁFÁ-t és a postaköltséget nem tartalmazzák.

MediMedia Információs Kft.
1096 Budapest, Thaly K. u. 39.
Tel.: 476-8902, fax: 476-8910
medimedia@medimedia.hu
www.medimedia.hu
www.pharmindex.hu

TISZTELETBELI TAGSÁG

New Honorary Members of the Hungarian Society of Gynaecological Oncologists
A Magyar Nőgyógyász Onkológusok Társaságának új tiszteletbeli tagjai

HUGH H. ALLEN, M.D. Professor Emeritus, London Health Sciences Centre, Westminster Campus, London, Ontario, Canada

NEVILLE F HACKER, M.D. Professor and Chairman, Royal Hospital for Women, Sydney, Australia

BEN J. SMIT, M.D. Professor Emeritus, Department of Radiation Oncology, Faculty of Medicine, University of Stellenbosch, Tygerberg, Republic of South Africa

The Hungarian Society of Gynaecological Oncologists has the honor to welcome its new honorary members: Professors Hugh H. Allan, Neville F. Hacker and Ben J. Smit.

A Magyar Nőgyógyász Onkológusok Társasága új tiszteletbeli tagjait köszöntheti Allen, Hacker és Smit professzorok személyében. Az alábbiakban ismertetjük pályafutásaikat.

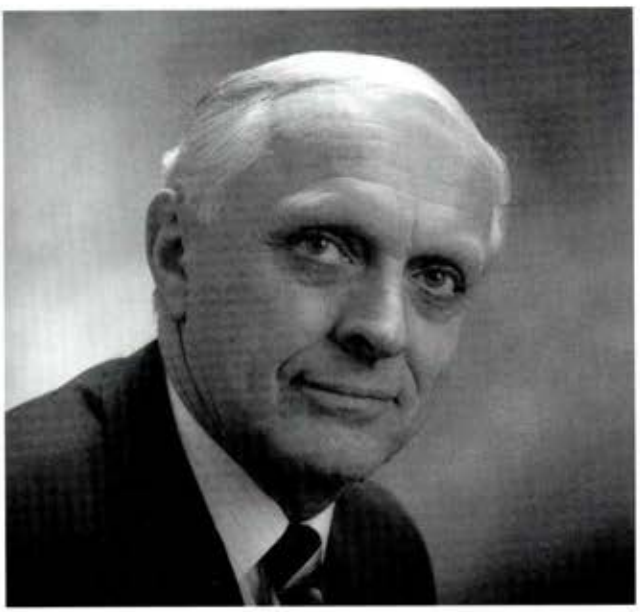
ALLEN H. HUGH, M.D. Professor of Obstetrics and Gynaecology

SPECIALTY Obstetrics and Gynaecology, Sub-Specialty – Gynecologic Oncology, University of Western Ontario
PUBLIC SCHOOL S.S. #8 Dover, a one room school with one teacher, 65 students from Grade I–VIII
HIGH SCHOOL Chatham Collegiate Institute
POST-GRADUATE Training for fellowship in Obstetrics & Gynaecology at London and Hamilton
POST-FELLOWSHIP Training on a John A. McEachern Scholarship in European Centres – Stockholm, Sweden; Amsterdam, Netherlands; Gratz and Vienna, Austria; Newcastle and London, England.

MEDICAL SOCIETY MEMBERSHIP AND OFFICES HELD 1. Fellow of the Royal College of Physicians & Surgeons of Canada, 2. Society of Obstetricians & Gynaecologists of Canada (President 1979–1980), (Vice-President 1975–76: 1978–79), 3. Fellow of the

Address correspondence to:

Hugh H. Allen, M.D.
London Health Sciences Centre
Westminster Campus
800 Commissioners Rd. E.,
London, Ontario N6A 4G5, Canada
Phone (1 519) 6858110 Fax (1 519) 685 8194



American College of Surgeons (Governor 1978–87), 4. Fellow of the American College of Obstetricians & Gynaecologists, 5. Ontario Medical Association, 6. Canadian Medical Association, 7. Canadian Gynaecologic Oncology Society (President: 1984–1986), 8. Infectious Disease Society for Obstetrics & Gynaecology, 9. International Society for Infectious Disease in Obstetrics & Gynaecology (Advisory Board) 10. International Gynae-


Nos Praepositi SOCIETATIS GYNAECOLOGICAE ONCOLOGIAE HUNGARICAE
significamus quibus expedit omnibus illustrissimum dominum professorem
Hugh H. Allen
Qui disciplinas medicinales operibus apud nationes etiam exteras
Cognitis promovendo nec non laboribus medicorum Hungarorum una
Cum medicis extraneis peractis operam dando optime meruit
Sodalem honoris causa societatem nostram ascriptum esse.
Budapest, 2002. Oktober 10.
Péter Bőcze
praeses

cologic Cancer Society, 11. Council of The College of Physicians & Surgeons of Ontario (3 years) 12. Disciplinary Committee of The College of Physicians & Surgeons of Ontario (l–l/2 years), 13. Complaints Committee of The College of Physicians & Surgeons of Ontario (l–l/2 years), 14. Finance Committee of The College of Physicians & Surgeons of Ontario (l–l/2 years), 15. European Journal of Gynaecologic Oncology (Editorial Board), 16. A CME Journal of Gynaecologic Oncology (International Advisory Board), 17. European Academy of Gynaecological Cancer (Advisory Board), 18. Polish Gynaecologic Oncology Society (Honorary Member).

HONOURS 1. Canadian Cancer Society John A. McEachern Fellowship Award, 2. Royal College of Physicians & Surgeons of Canada – Duncan Graham Award (1987), 3. Alpha Omega Alpha Honour Medical Society, 4. PAIRO Clinical Teaching Award for Province of Ontario (1995), 5. Medical Advisory Presidents Award (1995), 6. Royal College of Physicians & Surgeons of Canada – Mentor of the Year (2002), 7. Teaching Award – The Government of Yemen (2002).

PUBLICATIONS AND LECTURES 1. Co-author of book "Cancer in Pregnancy", 2. Author of several book chapters on Gynecologic Surgery, 3. Author or co-author of 50 Journal Publications, 4. Over 300 abstracts and lectures presented at local, national and international meetings and universities in 35 different countries.

ALLEN H. HUGH, M.D. A szülészet és nőgyógyászat professzora
SZAKOSODÁS nőgyógyászati onkológia, University of Western Ontario.
ÁLTALÁNOS ISKOLA S.S. #8 Dover – egytantermes iskola, hatvanöt, 1–8. osztály közötti tanulóra egyetlen tanár jutott.
KÖZÉPISKOLA Chatham Collegiate Institute.
POSZTGRADUÁLIS KÉPZÉS Szülészeti és nőgyógyászati képzés Londonban Hamiltonban.
POSZTGRADUÁLIS ÖSZTÖNDÍJ John A. McEachern ösztöndíj keret;ben több európai központban, köztük a Svédországban, Stockholmban, Hollandiában, Amszterdamban, Ausztriában Grazban és Bécsben, illetve Nagy Britanniában, Newscastleban és Londonban.

ORVOSTÁRSASÁGI TAGSÁGOK ÉS BETÖLTÖTT HIVATALOK 1. A Royal College of Physicians & Surgeons of Canada tagja, 2. A Society of Obstetricians & Gynaecologists of Canada elnöke 1979–1980 között, illetve alelnöke 1975–1976 és 1978–1979 között, 3. Az American College of Surgeons tagja, kormányzó 1978–1987 között, 4. Az American College of Obstetricians & Gynaecologists tagja, 5. Az Ontario Medical Association tagja, 6. A Canadian Medical Association tagja,7. A Canadian Gynaecologic-Oncology Society elnöke 1984–1986 között, 8. Az Infectious Disease Society for Obstetrics & Gynaecology tagja, 9. Az International Society for Infectious Disease in Obstetrics & Gynaecology Tanácsadó Bizottságának tagja, 10. Az International Gynaecologic Cancer Society tagja, 11. A College of Physicians & Surgeons of Ontario Tanácsának tagja 3 éven át, 12. A College of Physicians & Surgeons of Ontario Fegyelmi Bizottságának tagja másfél évig, 13. A College of Physicians and Surgeons of Ontario Panasz Bizottságának tagja másfél évig, 14. A College of Physicians and Surgeons of Ontario Pénzügyi Bizottságának tagja másfél évig, 15. A European Journal of Gynaecologic Oncology Szerkesztőbizottságának tagja, 16. A CME Journal of Gynecologic Oncology, Nemzetközi Tanácsadó Testületének tagja, 17. Az Európai Nőgyógyászati Akadémia Tanácsadó Bizottságának tagja, 18. A Polish Gynaecologic Oncology Society tiszteletbeli tagja.

TISZTELETBELI TAGSÁGOK – lásd az angol nyelvű ismertetőben.

KÖZLEMÉNYEK ÉS ELŐADÁSOK 1. A "Cancer in Pregnancy" című könyv társszerzője, 2. Számos könyvfejezet alkotója nőgyógyászati sebészeti témakörben, 3. Mintegy 50 folyóirati közlemény szerzője vagy társszerzője. 4. Több mint 300 absztrakt vagy előadás szerzője és előadója helyi, nemzeti vagy nemzetközi konferenciákon és egyetemeken a világ 35 különböző országában.

NEVILLE FREDERICK HACKER M.D. Professor of Obstetrics and Gynaecology

BIRTH DATE January 16, 1944
BIRTHPLACE Brisbane, Queensland, Australia
PRESENT ADDRESS 59 Salisbury Road, Rose Bay Sydney Nsw 2029, Telephone: (02) 9327 8942
DEGREES MB BS (1967) First Class Honours, University of Queensland MD (1993) University of New South Wales
INTERNSHIP Royal Brisbane Hospital (General Internship) 1968
MEDICAL APPOINTMENTS Resident Medical Officer, Gympie Hospital, Queensland, 1969–1970, Medical Superintendent Atherton Hospital, Queensland, 1971–1973, Registrar in Obstetrics and Gynaecology, 1974–1977 Royal Brisbane Hospital, Royal Womens Hospital, Princess Alexandra Hospital

FELLOWSHIP Fellow in Gynaecological Oncology, 1978–80, University of California, Los Angeles, (UCLA).
PARTICIPATING INSTITUTIONS UCLA Medical Center, Cedars-Sinai Medical Center, Habor General/UCLA Medical Center, Martin Luther King Jr., Hospital

ACADEMIC APPOINTMENTS Department of Obstetrics and Gynaecology, University of California at Los Angeles (UCLA), School of Medicine, Los Angeles, California U.S.A. Assistant Professor (July 1980 – June 1984), Associate Professor (July 1984 – October 1986), Director of Gynaecologic Oncology (April 1985 – October 1986), University of New South Wales, School of Medicine Sydney NSW Australia (November 1986 – present) Associate Professor of Obstetrics and Gynaecology, Director of Gynaecologic Oncology, Royal Hospital for Women and associated teaching hospitals of the University of New South Wales, Barker Street, Randwick NSW 2031, Australia (November 1986 – present)

BOARDS 1. Flex examination for Foreign Medical Graduates, 1979, 2. American Board of Obstetrics and Gynaecology, 1982, 3. Subspeciality Certification in Gynaecologic Oncology, (ACOG), 1983, 4. Certificate in Gynaecologic Oncology (RACOG), 1989.

LICENSURE 1. California, U.S.A. No. A34820, 2. New South Wales, Australia No. 045201H, 3. Queensland, Australia No. 045202, 4. ACT, Registration No. 3636

Address correspondence to:

Neville F. Hacker M.D.
Gynaecological Cancer Centre
Royal Hospital for Women
188 Oxford Street, Paddington,
NSW 2021 AUSTRALIA
Phone (61 2) 93826290 Fax (61 2) 3604243
E-mail N.Hacker@unsw.edu.au

PROFESSIONAL ORGANISATIONS 1. Royal College of Obstetricians and Gynaecologist (Member 1976, fellow 1988), 2. Sims Black Travelling Professor (1999), 3. Royal Australian & New Zealand College of Obstetricians and Gynaecologists (Foundation Member 1979, Fellow 1986 Certified Gynaecological Oncologist 1988), 4. Western Association of Gynaecologic Oncologists (Member 1982 –1996), 5. American College of Obstetricians and Gynaecologists (Fellow 1983), 6. International Society for the Study of Vulvar Disease (Fellow 1983, Chairman, Oncology Committee 1995–1997), 7. American College of Surgeons (Fellow 1984) 8. Society of Gynaecologic Oncologists (Member 1984), 9. International Gynaecologic Cancer Society (Foundation Member, 1987, Executive Committee 1987–1993, Vice President 1991–1993, President Elect 1993–1995, President 1995–1997), 10. Australian Society of Gynaecological Oncologists (Member, 1987 – present), 11. American Society of Clinical Oncologists (Member, 1987–1999), 12. Clinical Oncology Society of Australia (Member, 1988, Chairman – Gynaecology Section 1995–1997), 13. International Society of Gynaecological Pathologists (Associate Member, 1988–1999), 14. Society of Pelvic Surgeons (Member, 1998 – present), 15. Argentinian Association of Gynaecologic Oncologist (Honorary member 1999 – present)

COMMITTEES 1. UCLA Committees: a) Medical Director Intensive Care Unit, 1980, Chairman of Committee, 1981–1982, b) Medical Risk Management Committee, UCLA School of Medicine, 1981–1984, c) Medical Records Committee, UCLA School of Medicine 1981–1984, d) Academic Personnel Committee, Department of Obstetrics and Gynaecology 1981–1986, e) Administrative Budget Committee, Department of obstetrics and Gynaecology 1981–1983, Chairman 1983–1985, e) Medical Student Education Committee (Ob-Gyn) Chairman 1982–1986, f) Education Policy and Curriculum Committee, UCLA School of Medicine, July 1984–1986, g) Executive Committee, Department of Obstetrics and Gynaecology 1985–1986, h) Executive Policy committee, Jonsson Cancer Center, 1985–1986, i) Tissue Committee, UCLA School of Medicine, 1984–1986, 2. National and International


Nos Praepositi SOCIETATIS GYNAECOLOGICAE ONCOLOGIAE HUNGARICAE
significamus quibus expedit omnibus illustrissimum dominum professorem

Neville F. Hacker

Qui disciplinas medicinales operibus apud nationes etiam exteras
Cognitis promovendo nec non laboribus medicorum Hungarorum una
Cum medicis extraneis peractis operam dando optime meruit
Sodalem honoris causa societatem nostram ascriptum esse.

Budapest, 2002. Október 20.

Péter Bősze
praeses

Committees: a) Cervix, Vulva, Vagina Committee, Gynaecologic Oncology Group, U.S.A. 1982–1986, b) Task Force on Micro-Invasive Carcinoma of the Vulva, International Society for the Study of vulvar Disease, 1983–1986, c) M.D. Thesis Committee for Dr A P M Heintz. Thesis: Advanced Ovarian Cancer: Surgical treatment and prognosis (University of Leiden, The Netherlands June 5, 1985), d) Organising Committee, Third International Congress of Gynaecologic Oncology, London, England, September 1985, e) International Gynaecologic Cancer society (Steering Committee 1985–1986, Program Committee 1987, 1989, 1993, 1995, 1997, 1999, Chairman of Program Committee 1991, Chairman of Organising Committee 1991, Chairman Guidelines Committee 1999–present), f) Cervical Trials Committee – Chairman, Clinical Oncology Society of Australia 1988–1998, g) Endometrial and Vulvar Trials Committees, Clinical Oncology Society of Australia 1987–1998, h) Registry for Vulvar Melanomas – Chairman, International Society for the Study of Vulvar Disease. 1988–1990, i) RACOG Oncology Committee, Member 1988–1998, Chairman 1992–1996, j) New South Wales State Oncology Advisory Committee, 1989–1994, k) RACOG Examiner for Gynaecological Oncology, Member 1989 – present, Chairman of Examiners 1992 – present, l) National Working Party on Quality Assurance in Cervical Cytology, Member 1993–1997, m) Australian Health Council for Mature Women, Member 1997–1998, n) FIGO Expert Advisory Panel on Oncology, Member 1997 – present

EDITORIAL BOARDS: 1. International Gynecologic Cancer Journal, 2. Regional Editor (Pacific) 1989 – 2000, 3. Gynecologic Oncology 1992–1999

GRANTS 1. NIH– Grant CA 13630, Gynaecologic Oncology Group, 1981–1983. Co Principal Investigator ($75,000/yr), 2. NIH – Grant CA 16042 (UCLA Jonsson Comprehensive Cancer Center Core Grant). Patterns of care of ovarian cancer in Community Hospitals, 1982–1983. Co-Principal Investigator ($19,700), 3. California Institute for Cancer Research (CA16042-08). Intraperitoneal Corynebacterium parvum in ovarian cancer limited to the peritoneal cavity, 1981–1982. Co-Principal Investigator ($18,385), 4. NIH – Grant (CA18630-13). Gynaecologic Oncology Group, 1984–1988. Principal Investigator ($350,888), 5. Essex Laboratories. Intraperitoneal Interferon in ovarian cancer 1988–1989. Co-Principal Investigator ($30,000 for 2 years), 6. Government Employees Medical Research fund 1988–1989. Immunological aspects of Interferon in ovarian cancer. Co-Principal Investigator ($46,000), 7. NHMRC GRANT NO: 911081. A case control study of ovarian cancer. Co-Investigator ($280,000), 8. NHMRC GRANT NO: 921138. A randomised trial of concurrent radiotherapy and chemotherapy for cancer of the cervix. Principal Investigator $28,134 per year for three years (1992–1994)

PUBLICATIONS

1. Hacker NF. Spontaneous bowel haematoma with anticoagulant therapy. Med J Aust 1973; 2:220-224.

2. Biggs JSG, Hacker NF, Andrews E, and Munro C. Bromocryptine, methyl testosterone, and placebo for inhibition of physiological lactation. Med J Aust Spec Supplement 1978; 2:23-27.

3. Hacker NF, and Biggs JSG. Blood pressure changes when uterine muscle stimulants are used after normal delivery. Brit J Obst Gynecol 1979; 86:633-635.

4. Hacker NF, Charles EH, Savage EW. Postcoital, posthysterectomy vaginal vault rupture with haemorrhagic shock. Aust N.Z. J Obstet Gynaecol 1980; 20:182-184.

5. Khoo SK, Hacker NF, Chang A: An incremental dose combined oestrogen-progesterone oral contraceptive: Effect on body weight, blood pressure, and biochemical parameters. Aust N. Z. J Obstet Gynaecol 1980; 20:172-176.

6. Charles EH, Savage EW, Hacker NF, Jones NC. Cryosurgical treatment of cervical intraepithelial neoplasia. Gynecol Oncol 1981; 12:83-88.

7. Hacker NF, Leuchter RS, Berek JS, Castaldo TW, Lagasse LD. Radical vulvectomy and bilateral inguinal lymphadenectomy through separate groin incisions. Obstet Gynecol 1981; 58:574-579.

8. Hacker N F, Morrow CP, Castaldo TW, Ballon SC. Positive peritoneal cytology in corpus carcinoma. Report of a fatal outcome. Aust N.Z. J Obstet Gynaecol 1982; 22:103-106.

9. Berek JS, Castaldo TW, Hacker NF, Petrilli ES, Lagasse LD, Moore JG. Adenocarcinoma of the uterine cervix. Cancer 1981; 48:2734-2741.

10. Hacker NF, Charles EH, Berek JS, Savage EW, Lagasse LD, Moore JG. Cervix carcinoma associated with pregnancy. Obstet Gynecol 1982; 59:735-746.

11. Leuchter RS, Petrilli ES, Dwyer RM, Hacker NF, Castaldo TW, Lagasse LD. Nd-YAG Laser therapy of rectosigmoid bleeding due to radiation therapy. Am J Obstet Gynecol 1982; 59:65S-67S.

12. Andersen BL, Hacker NF: Treatment for Gynaecologic Cancer. A review of the effects on female sexuality. Health Psych 1983; 2:203-221.

13. Leuchter RS, Hacker NF, Berek JS, Lagasse LD. Primary carcinoma of Bartholin's gland: A report of 15 cases. Obstet Gynecol 1982; 60:361-368.

14. Berek JS, Hacker NF, Leuchter RS, Lagasse LD, Byron RL. Urologic operations during cytoreductive surgery for ovarian cancer. Gynecol Oncol 1982; 13: 87-92.

15. Berek JS, Lagasse LD, Hacker NF, Leuchter RS. Levator ani transposition for anal incompetence secondary to sphincter damage. Obstet Gynecol 1982; 59:108-112.

16. Andersen BL, Hacker NF. Psychosexual adjustment of gynecologic oncology patients: A proposed model for future investigations. Gynecol Oncol 1983; 15:214-223.

17. Leuchter RS, Lagasse LD, Hacker NF, Berek JS. Management of postexenteration perineal hernias by myocutaneous axial flaps. Gynecol Oncol 1982; 14:15-22.

18. Hacker NF, Neiberg RK, Berek JS, Lagasse LD, et al. Superficially invasive vulvar cancer with nodal metastases. Gynecol Oncol 1983; 15:65-77.

19. Ford LC, Berek JS, Lagasse LD, Hacker NF, et al. Estrogen and progesterone receptors in ovarian neoplasms. Gynecol Oncol 1983; 15:299-304.

20. Berek JS, Hacker NF, Lagasse LD, Neiberg RK, Elashoff RM. Survival of patients following secondary cytoreductive surgery in ovarian cancer. Obstet Gynecol 1983; 61:189-193.

21. Hacker NF, Berek JS, Lagasse LD, Nieberg RK, Elashoff RM. Primary cytoreductive surgery in ovarian cancer. Obstet Gynecol 1983; 61:413-420.

22. Ford LC, Berek JS, Lagasse LD, Hacker NF, Delange RJ. Estrogen and progesterone receptors in malignancies of the uterine cervix, vagina and vulva. Gynecol Oncol 1983; 15:27-31.

23. Berek JS, Hacker NF, Lagasse LD, Smith McL. Delayed vaginal reconstruction in the fibrotic pelvis following radiation or previous reconstruction. Obstet Gynecol 1983; 61:743-748.

24. Hacker NF, Berek JS, Lagasse LD, Leuchter RS, Moore JG. Management of regional lymph nodes and their prognostic influeance in vulvar cancer. Obstet Gynecol 1983; 61:408-412.

25. Andersen BL, Hacker NF. Psychosexual adjustment following exenteration. Obstet Gynecol 1983; 61:331-338.

26. Berek JS, Hacker NF, Lagasse LD. Recent progress in the treatment of epithelial ovarian malignancy West J Med 1982; 137:273-277.

27. Bast RC, Berek JS, Obrist R, Griffith CT Berkowitz R, Hacker NF, Parker L, Lagasse LD, Knapp RC. Intraperitoneal immunotherapy of human ovarian carcinoma with Corynebacterium parvum. Cancer Research 1983; 43:1395-1399.

28. Pretorius RG, Hacker NF, Berek JS, Lagasse LD. The pharmacokinetics of Ip Cisplatin in refractory ovarian cancer. Cancer Treatment Reports 1983; 67:1085-1092.

29. Andersen BL, Hacker NF. Psychosexual adjustment after vulvar surgery. Obstet Gynecol 1983; 62:457-462.

30. Hacker NF, Berek JS, Nieberg RK, Leuchter RS, Lagasse LD. Individualisation of treatment for Stage I squamous cell vulvar carcinoma. Obstet Gynecol 1984; 63:155-161.

31. Berek JS, Hacker NF, Lagasse LD. Vaginal reconstruction performed simultaneously with pelvic exenteration. Obstet Gynecol 1984; 63:318-323.

32. Hacker NF, Berek JS, Juillard GJF, Lagasse LD. Pre-operative radiation therapy for locally advanced vulvar cancer. Cancer 1984; 54:2056-2061.

33. Leuchter RS, Townsend DE, Hacker NF, Pretorius RG, Lagasse LD, Wade ME. Treatment of vulvar carcinoma insitu with the CO 2 laser. Gynecol Oncol 1984; 19:314-322.

34. Berek JS, Cantrell JL, Lichtenstein AK, Hacker NF, et al. Immunotherapy with biochemically dissociated fractions of propionebacterium acnes in a murine ovarian cancer model. Cancer Research 1984; 44:1871-1875.

35. Berek JS, Bast RC, Hacker NF. Lichtenstein A, Lagasse LD, Knapp RC, Zighelboim J. Lymphocyte cytotoxicity in the peritoneal cavity and blood of patients with ovarian cancer. Obstet Gynecol 1984; 64:708-714.

36. Lichtenstein A, Berek JS, Bast RC, Spina C, Hacker NF, Knapp RC, Zighelboim J. Activation of peritoneal lymphocyte cytotoxicity in patients with ovarian cancer by intraperitoneal treatment with Corynebacterium parvum. Journal Bio Respons Modif 1984; 3 (4):1-8.

37. Berek JS, Hacker NF, Lagasse LD, Poth T, Resnick B, Nieberg RK. Second-look laparotomy in Stage III epithelial ovarian cancer: Clinical variables associated with disease status. Obstet Gynecol 1984; 64:207-212.

38. Berek JS, Hacker NF, Lichtenstein A, Jung T, Spina C et al. Intraperitoneal recombinant alpha 2 – interferon for salvage immunotherapy in persistent epithelial ovarian cancer. Cancer Treat Reviews 1985; 12 (Supplement B):23-32.

39. Berek JS, Hacker NF, Fu YS, Sokale JR, Leuchter RS, Lagasse LD. Adenocarcinoma of the uterine cervix: histologic variables associated with lymph node metastases and survival. Obstet Gynecol 1985; 65:46-52.

40. Berek JS, Hacker NF, Lagasse LD. Rectosigmoid colectomy and reanastomosis to facilitate resection of primary and recurrent gynecologic cancer. Obstet Gynecol 1984; 64:715-720.

41. Hacker NF, Berek JS, Juillard JKF, Heintz APM, Burniston CM, Lagasse LD. Whole abdominal radiation as salvage therapy for epithelial ovarian cancer. Obstet Gynecol 1985; 65:60-66.

42. Heintz APM, Hacker NF, Lagasse LD. Epidemiology and etiology of ovarian cancer. Obstet Gynecol 1985; 66:127-133.

43. Berek JS, Knapp RC, Hacker NF, Lichtenstein A, et al. Intraperitoneal immunotherapy of epithelial ovarian carcinoma with Corynebacterium parvum. Am J Obstet Gynecol 1985; 152:1003-10.

44. Heintz APM, Hacker NF, Berek JKS, Poth T, Munoz AK, Lagasse LD. Cytoreductive surgery in ovarian carcinoma: Feasibility and morbidity. Obstet Gynecol 1986; 67:783-788.

45. Thigpen JT, Blessing JA, Homesley DH, Hacker NF, Curry SL. Phase II trial of Piperazinedione in patients with advanced or recurrent uterine sarcoma: A Gynecologic Oncology Group Study. Am J Clin Oncol 1985; 8:350.

46. Berek JS, Hacker NF, Lichtenstein A, Jung T. Intraperitoneal recombinant alpha-interferon for "salvage" immunotherapy in Stage III epithelial ovarian cancer: A Gynecological Oncology Group Study. Cancer Research 1985; 45:4447-4453.

47. Smotkin D, Berek JS, Fu YS, Hacker NF, Major F, Lagasse LD, Wettstein F. Papilloma virus DNA in adenocarcinoma and adenosquamous carcinomas of the uterine cervix. Obstet Gynecol 1986; 68:241-244.

48. Sedlis A, Homesley H, Bundy F, Hacker NF, Marshall R. Positive groin lymph nodes in superficial squamous cell vulvar cancer. (A Gynecologic Oncology Group Study) Am J Obstet Gynecol 1987; 156:1159-64.

49. Cochran SD, Hacker NF, Wellisch DK, Berek JS. Sexual functioning after treatment for endometrial cancer. J Psychosocial Oncol 1987; 5:47-61.

50. Hacker NF, Berek JS, Pretorius RG, Zuckerman J, Eisenkop S, Lagasse LD. Intraperitoneal Cis-platinum as salvage therapy for refractory epithelial ovarian cancer. Obstet gynecol 1987; 70:759-764.

51. Thomas GM, Dembo AJ, Hacker NF, DePetrillo AD. Current therapy for dysgerminoma of the ovary. Obstet Gynecol 1987; 70:268-275.

52. Dauplat J, Nieberg RKI, Philippe A, Hacker NF. Changes in the histocytologic grading of epithelial ovarian carcinoma following treatment. Int J Gynecol Path 1988; 7:12-22.

53. Dauplat J, Nieberg RK, Hacker NF. Central nervous system metastases in epithelial ovarian carcinoma. Cancer 1987; 60:2559-2562.

54. Reimitz CE, Brand E, Nieberg RK, Hacker NF. Malignancy arising in endometriosis associated with unopposed estrogen replacement. Obstet Gynecol 1988; 71:444-447.

55. Brand E, Berek JS, Nieberg RK, Hacker NF. Rhabdomyosarcoma of the uterine cervix (sarcoma botryoides) Report of 4 cases and review of the literature. Cancer 1987; 60:1552-1560.

56. Cochran SD, Hacker NF, Berek JS. Correlates of delay in seeking treatment for endometrial cancer J Psycho Ob Gyn 1986; 5:245-251.

57. Brand E, Berek JS, Hacker NF. Controversies in the management of cervical adenocarcinoma. Obstet Gynecol 1988; 71:261-269.

58. Sagae S, Berek JS, Fu YS, Chang N, Dauplat J, Hacker NF. Peritoneal cytology of ovarian cancer patients receiving intraperitoneal therapy: Quantitation of malignant cells and response. Obstet Gynecol 1988; 72:782-788.

59. Dauplat J, Hacker NF, Nieberg RK, Berek JS, Rose TP, Sagae S. Distant metastases from epithelial ovarian cancer. Cancer 1987; 60:1561-1566.

60. Pretorius RG, Eisenkop S, Berek JS, Hacker NF, Ashikaga T, Knox RM, Lagasse LD. Utilization of a murine model to optimize volume and dwell time of intraperitoneal cisplatinum. Gynecol Oncol 1989; 34:66-69.

61. Hacker NF. Surgery for gynecological cancer: Results since the introduction of radical operations. Aust. NZ.J. Obstet Gynecol 1990; 30:24-28.

62. Wain GV, Hacker NF. Pitfalls in the screening and early diagnosis of cervical cancer. Current Opinion Obstet Gynecol 1990; 2:74-79.

63. Binder SW, Huang I, Fu YS, Hacker NF, Berek JS. Risk factors for the development of lymph node metastases in vulvar squamous cell carcinoma. Gynecol Oncol 1990; 37:9-16.

64. Farnsworth A, Hacker NF. Pathology of the vulva. Current Opinion Obstet Gynecol 1990; 2:448.

65. Hacker NF. Current treatment of small vulvar cancers. Oncology 1990; 4:21.

66. Lawton F Hacker NF. Surgery for invasive gynecologic cancer in the elderly female population. Obstet Gynecol. 1990; 76:287-289.

67. Heaps JM, Fu YS, Montz FJ, Hacker NF, Berek JS. Surgical – Pathological variables predictive of local recurrence in squamous cell carcinoma of the vulva. Gynecol Oncol 1990; 38:309 – 314.

68. Berek JS, Heaps JM, Fu YS, Juillard GJF, Hacker NF. Concurrent cisplatin and 5-Fluorouracil chemotherapy and radiation therapy for advanced squamous carcinoma of the vulva. Gynecol Oncol 1991; 42:197-201.

69. Wain GV, Farnsworth A, Hacker NF. The Papanicolaou smear histories of 237 patients with cervical cancer. Med J. Aust. 1992; 157:14-16.

70. Hacker NF. Philosophical, political, and education requirements for subspecialization in gynecologic oncology. Obst Y Ginec Lat Americ. 1992; 40:232-236.

71. Wain GV, Farnsworth A, Hacker NF. Cervical carcinoma after negative pap smears : evidence against rapid-onset cancers. Int J Gynecol Cancer 1992; 2:318-322.

72. Hacker NF, Van der Velden J. Conservative management of early vulvar cancer. Cancer 1993; 71(Suppl):1673-1677.

73. Trimbos B, Hacker NF. The case against aspirating ovarian cysts. Cancer 1993; 72:828-831.

74. Proietto A, Hacker NF. Intraperitoneal interferon-alpha-2b for patients with no macroscopic disease following second-look laparotomy. Int J Gynecol Cancer. 1993; 3:324-328.

75. Hacker NF, van der Burg MEL. Debulking and intervention surgery for ovarian cancer. Annals Oncology 1993; 4:583-588.

76. Segelov E, Campbell J, Ng M, Tattersall M, Rome R, Free K, Hacker NF, Friedlander ML. Cisplatin based chemotherapy in ovarian germ cell malignancies: The Australian Experience. J Clin Oncol 1994; 12:378-384.

77. Nicklin JL, van Eijkeran M, Athanasatos P, Wain GV, Hacker NF. A comparison of ovarian cyst aspirate cytology and histology. The case against aspiration of cystic pelvic masses. Aust NZ J Obstet Gynaecol 1994; 34:546-549.

78. Hacker NF. Subspecialization in Gynaecologic Oncology – An Australian perspective. Hungarian J Obstet Gynecol 1994; 57:67-70.

79. Nicklin JL, Hacker NF, Heintze SW, van Eijkeran M, Durham NJ. An anatomical study of inguinal lymph node topography and clinical implications for the surgical management of vulval cancer. Int J Gynecol Cancer 1995; 5:128-133.

80. Gitsch G, van Eijkeran MJ, Hacker NF. Surgical therapy of vulvar cancer in pregnancy. Gynecol Oncol 1995; 56:312-315.

81. Hacker NF, Wain GV, Nicklin JL. Resection of bulky positive lymph nodes in patients with cervical cancer. Int J Gynecol Cancer 1995; 5:250-256.

82. Van der Velden J, Gitsch G, Wain GV, Friedlander ML, Hacker NF. Tamoxifen in patients with advanced epithelial ovarian cancer. Int J Gynecol Cancer. 1995; 5:301-305.

83. Gitsch G, Hacker NF. Endometrial cancer in women under 45 years of age. Obstet Gynecol 1995; 85:504-508.

84. Gitsch C, Friedlander ML, Wain GV, Hacker NF. Uterine papillary serous carcinoma: A clinical study. Cancer 1995; 75:2239-2243.

85. Gitsch G, Hacker NF. A combined abdomino-perineal approach for resection of a large giant cell tumour of the sacrum. Gynecol Oncol 1995; 57:123-116.

86. Purdie D, Green A, Bain C, Siskind V, Ward B, Hacker NF, Quinn M, Wright G, Russell P, Susil B. Reproductive and other factors and risk of epithelial ovarian cancer. An Australian case-control study. Int J Cancer 1995; 62:678-684.

87. Dew JE, Athanasatos P, Hacker NF. The significance of mild squamous atypia on cytology. Aust NZ J Obstet Gynaecol 1995; 35; 4:443-445.

88. Hacker NF. Systematic pelvic and para-aortic lymphadenectomy for ovarian cancer – therapeutic advance or surgical folly? Invited editorial. Gynecol Oncol 1995; 56:325-327.

89. Van der Velden J, Hacker NF. Prognostic factors in squamous cell cancer of the vulva and the implications for treatment. Current Opinion Ob Gyn 1996; 8:3-7.

90. Hacker NF. The management of early invasive carcinoma of the vulva. Isreal J Obstet Gynecol 1996; 7 (Suppl):1-5.

91. Robertson G, Hacker NF. Conservative management of ovarian granulosa cell tumours. CME J Gynecol Oncol 1996; 1:150-159.

92. Van Haaften-Day C, Russell P, Boyer CM, Kerns BJ, Weiner JR, Jensen DN, Bast RC Hacker NF. Expression of cell regulatory proteins in ovarian borderline tumors. Cancer 1996; 77:2092-98.

93. Hacker NF. Cytoreduction for advanced ovarian cancer in perspective. Invited editorial. Int J Gynecol Cancer 1996; 6:159-160.

94. Purdie D, Green A, Bain C, Siskind V, Ward B, Hacker NF, Quinn M, Wright G, Russell P, Susil B. Reproductive and other factors and risk of epithelial ovarian cancer: An Australian case – control study. Int J Cancer 1996; 62:678-684.

95. Hacker NF. Organisation of gynaecological cancer care: A time for change. Int J Gynecol Cancer 1998; 8:1-5.

96. Bancher-Todesca D, Gitsch G, Williams KE, Kohlberger P, Neunteufel W, Obermair A, Heinze G, Breitenecker G, Hacker NF. P53 protein over expression: A strong prognostic factor in uterine papillary serous carcinoma. Gynecol Oncol 1998; 71:59-63.

97. Hacker NF. Current management of early vulvar cancer Ann Acad Med Singapore 1998; 27:688-92.

98. Bancher-Todesca D, Neunteufel W. Williams KE, Prainsack D, Breitenecker G, Friedlander ML, Hacker NF. Influence of postoperative treatment on survival in patients with uterine papillary serous carcinoma. Gynecol Oncol: 1998; 71:344-347.

99. Campion MJ, Hacker NF. Vulvar intraepithelial neoplasia and carcinoma. Seminars Cutan Med Surg 1998; 17:205-212.

100. Hacker NF. Radical resection of vulvar malignancies: A paradigm shift in surgical approaches. Current Opinion Ob Gyn 1999; 11:61-64.

101. Ishioka S, Van Haafter-Day C, Sagae S, Kudo R, Hacker NF. Interleukin – 6 (IL-6) does

not change the expression of Bcl – 2 protein in the prevention of cisplatin induced apoptosis in ovarian cancer cell lines. J Obstet Gynecol Res 1999; 25:23-27.

102. Purdie DM, Green A, Bain CJ, Siskind V, Russell P, Hacker NF, Ward BG, Quinn MA, Green AC. Hormone replacement therapy and risk of epithelial ovarian cancer. Brit J Cancer 1999; 81 (3):559-563.

103. Alper O, Agrawal S, Hacker NF, Cho-Chung YS. Protein kinase A-RI alpha subunit-directed antisense inhibition of ovarian cancer cell growth: crosstalk with tyrosine kinase signaling pathway. Oncogene. In press

104. Philip J, Lickiss N. Grant PT, Hacker NF. Corticosterolids in the management of bowel obstruction on a gynaecological oncology unit. Gynecol Oncol 1999; 74: 68-73.

105. Hyde S, Hacker NF. Vaginal reconstruction in the fibrotic pelvis. Aust NZ J Obstet Gynaecol 1999; 39 (4):448-453.

106. Speiser P, Kridelka F, Tempfer C, Edwards L, Leodolter S, Kainz C, Hacker NF. CD 44 v6 expression is an independent prognostic factor in node negative FIGO Stage IB cervical carcinoma. Int J Gynecol Cancer 1999; 9 (2):160-165.

107. Kridelka FJ, Berg DO, Neuman M, Edwards LS, Robertson G, Grant PT, Hacker NF. Adjuvant small field pelvic radiation for patients with high risk Stage IB lymph node negative cervix carcinoma after radical hysterectomy and pelvic lymph node dissection. Cancer 1999; 86:2059-65.

108. Ischioka S, Van Haaften-Day C, Sagae S, Kudo R, Hacker NF. Effects of interleukin – 6 (IL-6) on chemotherapy induced apoptosis in human ovarian cancer cell lines. Int J. Clin Oncol 1999; 4:84-89.

109. Low JJH, Hacker NF. Vulvar reconstruction in gynaecologic oncology. Hung J Gynecol Oncol 1999; 3:105-112.

110. Thuis YN, Campion M, Fox H, Hacker NF. Contemporary experience of vulvar intraepithelial neoplasia. Int J Gynecol Cancer 2000; 10:223-227.

111. Low JJH, Perrin LC, Crandon AJ, Hacker NF. Conservative surgery to preserve ovarian function in malignant ovarian germ cell tumors — a review of 74 cases. Cancer 2000; 89:391-8.

112. Kohlberger PD, Milross C, Edwards L, Hacker NF. Laparoscopic port-site recurrence following surgery for a Stage IB squamous cell carcinoma of the cervix with negative lymph nodes. Gynecol Oncol 2000; 79:324-326.

113. Manolitsas TP, Wain GV, Williams KE, Friedlander M, Hacker NF. Multimodality therapy for clinical Stage I and II malignant mixed mesodermal tumors (MMMT) of the uterus. Cancer 91:2001.

114. Krishnan CS, Grant PT, Robertson G, Hacker NF. Lymphatic ascites following lymphadenectomy for gynaecological malignancy. Submitted

115. Grumann M, Robertson R, Hacker NF, Sommer G. Sexual functioning in patients following radical hysterectomy for Stage IB cancer of the cervix. Submitted for publication.

116. Van Haafter-Day C, Shen Y, XO F, Yu Y, Berchuck A, Van de Zee AGJ, Bast RC, Hacker NF. OVXI, M-CSF and CA-125 – 11 as tumor markers for epithelial ovarian cancer – a critical appraisal. Submitted for publication.

CONTRIBUTIONS

1. Berek JS, Hacker NF, Ford LC, Lagasse LD: Recent progress in the treatment of epithelial ovarian malignancies. UCLA Cancer Centre Bulletin 1981; 8:6.

2. Hacker NF: Invited editorial response. Conditioned aversion in cancer patients by Redd WH and Andersen GV. The Behav Ther 1981; 4:2.

3. Hacker NF, Berek JS, Lagasse LD: How to dissect inguinal and femoral nodes. Letter to the editor. Contemp Ob Gyn 1981 18:19.

4. Hacker NF, Berek JS, Lagasse LD. Staging for cervical cancer by an extraperitoneal approach. Contemp Ob-Gyn 1982; 20:45.

5. Hacker NF, Berek JS, Lagasse LD. Stage I vulvar cancer: Criteria for microinvasion. Letter to the editor. Obstet Gynecol 1983; 62:134.

6. Berek JS, Hacker NF, Lagasse LD. Ovarian cancer – improving survival with cytoreductive surgery. Contemp Ob Gyn 1983; 21:229.

7. Hacker NF. Carcinoma of the cervix associated with pregnancy. Reply to Letter to the Editor. Obstet Gynecol 1983; 61:401.

8. Hacker NF, Berek JS, Lagasse LD. Management of vulvar cancer: Current perspectives. UCLA Cancer Center Bulletin 1983; 10:3.

9. Hacker NF, Berek JS, Lagasse LD. Ovarian cancer – more on cytoreduction. Contemp Ob Gyn 1983; 21:68.

10. Berek JS, Hacker NF, Lagasse LD. Surgically staging early ovarian CA. Contemp Ob Gyn 1984; 23:31.

11. Hacker NF, Berek JS, Lagasse LD. Cytoreductive surgery. Reply to Letter to the Editor. Obstet Gynecol 1984; 64:148.

12. Hacker NF, Berek JS, Heintz APM, Lagasse LD. Management of Stage I vulvar cancer. Contemp Ob Gyn 1984; 24:105.

13. Richart R, Hacker NF, Monaghan JM, Boronow RC, Thomas GM. Symposium on early vulvar cancer. Contemp Ob Gyn 1988; 32:117.

14. Hacker NF. Carcinoma of the vulva – recent approaches to therapy. RACOG Resurce Unit 52:

15. Lawton FG, Hacker NF. Sex and the elderly. Brit Med J 1989; 299:1279.

16. Hacker NF. Early Gynaecological Cancers. NSW Cancer Council Newsletter February 1990.

17. Hacker NF. Vulvar Cancer. Technical Educational Bulletin for the American College of Obstetricians and Gynecologists 1993.

NATIONAL PROTOCOLS

1. Hacker NF, Protocol Chairman: Primary cytoreductive surgery for ovarian carcinoma – a prospective study. Protocol – 80 for the Gynecologic Oncology Group.

2. Hacker NF, Montana G, Study Chairmen: Pre-operative chemoradiotherapy for advanced vulvar cancer. Protocol 37-R for the Gynecologic Oncology Group.

3. Berek JS, Hacker NF, Study Chairmen. Intraperitoneal interferon for persistent ovarian cancer. Gynecologic Oncology Group Study.

4. Hacker NF, Campbell JJ, Co-Chairmen. Chemoradiation for advanced cervical cancer. Clinical Oncology Society of Australia protocol. Activated August 1992.

5. Hacker NF. Study Chairman. Systemic pelvic and para-aortic lymphadenectomy versus resection of bulky nodes only for advanced ovarian cancer. Activated August 1992.

MAJOR PRESENTATIONS

1. Squamous papillary tumors of the cervix uteri. Presented at the Queensland – New south Wales, Ob-Gyn Annual College Meeting, Leura, New South Wales, 1976

2. Carcinoma of the cervix in pregnancy. Presented at the 8th Annual Meeting of the Western Association of Gynecologic Oncologists, South Late Tahoe, Nevada, May 1980

3. Positive peritoneal cytology in corpus carcinoma – Report of a fatal outcome. Presented at the 8th Annual meeting of the Western Association of Gynecologic Oncologists, South Lake Tahoe, Nevada, May 1980

4. Radical vulvectomy and bilateral inguinal lymphadenectomy through separate groin incisions. Presented at the 12th Annual Meeting of the Society of Gynecologic Oncologists, Marco Island, Florida, January 1981.

5. Superficially invasive vulvar cancer with nodal metastases. A report of 7 cases. Presented at the 9th Annual Meeting of the Western Association of Gynecologic Oncologists, Napa Valley, California, May 1981.

6. Primary cytoreductive surgery for ovarian cancer. Presented at the 13th Annual Meeting of the Society of Gynecologic Oncologists, Marco Island, Florida, January 1982.

7. The management of regional lymph nodes in vulvar cancer. Presented at the 10th annual Meeting of the Western Association of Gynecologic Oncologists, Sante Fe, New Mexico, May 1982.

8. Vulvar squaous cell carcinomas two centimeters or less in diameter. (T1). Presented at the 14th Annual Meeting of the Society of Gynecologic Oncologists, Scottsdale, Arizona, February 1983.

9. Pre-operative radiation therapy for advanced vulvar cancer. Presented at the 11th Annual meeting of the Western Association of Gynecologic Oncologists, Colorado springs, Colorado, May 1983.

10. Current status of intraperitoneal Cis-platinum in the management of ovarian cancer. Presented at the Scientific Session of the Gynecologic Oncology Group meeting Denver, Colorado, July 1983.

11. Management of lymph nodes in vulvar cancer. Presented at the Second International Congress of Gynecologic Oncology, Edinburgh, Scotland, September 1983.

12. Management of patients with Stage I vulvar cancer. Presented at the 7th World Congress of the International Society for the Study of Vulvar Disease, Lake Buena Vista, Florida, September 1983.

13. Pre-operative radiation therapy for advanced vulvar disease. Presented at the 69th Scientific Assembly of the Radiological Society of North America, Chicago, Illinois, November 1983.

14. Whole abdominal radiation as salvage therapy for advanced stage ovarian cancer. Presented at the 15th Annual Meeting of the Society of Gynecologic Oncologists, Miami, Florida, February 1984.

15. Low-frequency radiowave hyperthermia in a murine ovarian tumor model. Presented at the 31st Annual Meeting of the Society for Gynecologic Investigation, San Francisco California, March 1984.

16. In vivo and in vitro hyperthermia in a murine ovarian tumor model. Presented at the 32nd Annual Meeting of the Radiation Research Society, Orlando, Florida, March 1984.

17. Management of early vulvar neoplasia. Presented at the 13th Annual Meeting of the Daniel Morton Society, Los Angeles, California, April 1984.

18. Whole abdominal radiation as salvage therapy for advanced stage ovarian cancer. Presented at the 32nd Annual Clinical Meeting of the American College of Obstetricians and Gynecologists, San Francisco, California, May 1984.

19. A conservative approach to vulvar cancer. Presented as Invited Guest Professor University of Indiana, Indianapolis, Indiana, October 1984.

20. Management of advanced ovarian cancer. Presented as Invited Guest Professor University of Indiana, Indianapolis, Indiana, October 1984.

21. Recent advances in the management of vulvar cancer. Presented as Invited Guest Speaker, Inaugural Meeting of the Irish Society of Gynecologic Oncologists, Cork, Ireland, November 1984.

22. Management of vulvar cancer. Presented as Invited Guest Professor, Rotunda Hospital, Dublin, Ireland, November 1984.

23. Intraperitoneal cis-platinum as salvage therapy for refractory epithelial ovarian cancer. Presented at the 16th Annual Meeting of the Society of Gynecologic Oncologists, Miami, Florida, February 1985.

24. An introduction to intraperitoneal therapy for ovarian cancer. Presented at the 2nd Annual Conference of the University of Southern California's Cancer Management Network, Pasadena, California, April 1985.

25. Recent advances in the management of vulvar cancer. Presented as Invited Guest Professor, Memorial-Sloan-Kettering Cancer Institute, New York, May 1985.

26. Diagnosis and management of cervical intraepithelial neoplasia. Presented as Invited Guest Speaker at the 9th International Medical Congress of the Kuring-gai District Medical Association, Cherating, Malaysia, July 1985.

27. Management of advanced ovarian cancer. Presented as an invited Guest Speaker at the 9th International Medical Congress of the Kuring-gai District Medical Association, Cherating, Malaysia, July 1985.

28. Conservative surgery for early vulvar cancer. Presented as an Invited Speaker for the International Symposium on Microinvasive Carcinoma of the Vulva at the VIII World Congress of the International Society for the Study of Vulvar Disease, Aland Island, Finland, September 1985.

29. Early vulvar cancer. The case for conservative surgery. Presented as Invited Guest Speaker at the 3rd International Congress of Gynecologic Oncology, London, England, September 1985.

30. Carcinoma of the vulva. Presented as the Upjohn Visiting Professor, Inaugural Annual Scientific Meeting of the Australian Society of Gynaecological Oncologists, Hobart, Australia, March 1986.

31. Intraperitoneal therapy for gynaecological malignancies. Presented as the Upjohn Visiting Professor, Inaugural Scientific Meeting of the Australian Society of Gynaecological Oncologists, Hobart, Australia, March 1986.

32. The future of Gynecologic Oncology. Presented as Invited Guest Speaker at the Annual Meeting of the Society of Osteopathic Obstetricians and Gynecologists, Tuscon, Arizona, May 1986.

33. Vulvar surgery – conservative or radical. Presented as Invited Guest speaker at the 4th International Conference on Gynecologic Cancer, San Francisco, California, May 1986.

34. Current status of vulvar crcinoma. Presented as Invited Guest Professor, University of Oklahoma, Oklahoma City, Oklahoma, June 1986.

35. Feasibility of primary cytoreductive surgery for advanced ovarian cancer. Presented as invited speaker at the Helene Harris Memorial Trust Symposium on Ovarian Cancer, Brocket Hall, Hertfordshire, England, April 1987.

36. Management of advanced vulvar cancer. Presented by invitation at the 9th International Conference of the International Society for the Study of Vulvar Disease, Broadbeach, Queensland, Australia, September 1987.

37. Chairman of Workshop entitled "Vulvar cancer – individualization of treatment". Panel members: BL Kneale, LD Lagasse, JM Monaghan, HD Homesley, RC Boronow, GW Morley. 1st Meeting of the International Gynecologic Cancer Society, Amsterdam, The Netherlands, October 1987.

38. Management of vulvar cancer. Presented as Invited Guest Professor, University of Graz Graz, Austria, October 1987.

39. Current status of intraperitoneal therapy for ovarian cancer. Presented by invitation at the 3rd International Congress of Gynecologic Oncology, Surgery and Urology, Sendai, Japan, October 1987.

40. Management of early vulvar cancer. Presented by invitation at the 3rd International Congress of Gynecologic Oncology, Surgery and Urology, Tokyo, Japan. October 1987.

41. The role of radical surgery in gynecologic oncology. Presented by invitation at the 14th annual Scientific Meeting of the Clinical Oncology Society of Australia. Melbourne, Australia, November 1987.

42. Recent advances in gynecological malignancy. Presented by invitation at a seminar entitled "Women's Health on the Northern Rivers in 1988". Lismore, Australia, November 1987.

43. Interferon Therapy in Ovarian Carcinoma. Presented at the 3rd annual Scientific Meeting of the Australian Society of Gynecologic Oncologists. Hunter Valley, Australia, March 1988.

44. Controversial aspects of cytoreductive surgery. Clinical and operative staging of cervical cancer. Presented by invitation at the International Symposium. Operative treatment of Cervical and Ovarian Cancer. Graz, Austria. June 1988.

45. First speaker for the negative team in a debate: "Thou shalt not strive officiously to keep alive". Fifth Advanced Course of the RACOG. Sydney, Australia, August 1988.

46. Intraperitoneal therapy for ovarian cancer. Presented by invitation at the Annual Meeting of the Tasmanian Haematology, Immunology and Neoplasia Group. Oatlands, Tasmania, November 1988.

47. Surgical Staging for cervical cancer. What have we learnt from 15 years experience? Presented at the Annual Meeting of the Clinical Oncology Society of Australia. Sydney, New South Wales. November 1988.

48. Secondary Cytoreductive Surgery for epithelial ovarian cancer. Invited discussion on papers by Hoskins et al and Morris et al, at the 20th Annual Meeting of the Society of Gynecological Oncologists. Maui, Hawaii. February 1989.

49. 1. High dose chemotherapy with autologous bone marrow rescue as salvage therapy for ovarian cancer. 2. Intraperitoneal interferon for ovarian cancer. Presented by invitation at the Second Biennial Helene Harris memorial Forum on Ovarian Cancer. Graz, Austria. April 1989.

50. Intraperitoneal therapy for ovarian cancer. Presented by invitation at the Second Chinese National Congress on Gynaecologic Oncology. Chengdu, China. May 1989.

51. Cervical cancer in pregnancy. Presented by invitation at the International Conference on Gynaecology, Obstetrics and Gynaecological Oncology. Hong Kong. May 1989.

52. Surgery for gynaecological Cancer. Results since the introduction of radical operations. Presented by invitation at the Valedictory Symposium in honour of Professor Eric Mackay. Brisbane, Queensland. September 1989.

53. Participant in Workshop entitled "Gynaecological Oncology and the Generalist" Panel members: K. Free (Chairman), H. Averett, L. Brunello. Fifth Australian Congress of Obstetrics and Gynaecology. Brisbane, Queensland. September, 1989

54. Chairman of Workshop entitled "Cervical carcinoma in young women". Panel members: JM Monaghan, G. Blackledge, R. Richart, P. Schwartz, P Elliott. Second biennial meeting of the International Gynecologic Cancer Society. Toronto, Canada. October, 1989

55. Cervical cancer in pregnancy. Presented by invitation at the inaugural Scientific meeting of the Illawarra Society of Obstetricians and Gynaecologists. Wollongong, New South Wales. November, 1989

56. The conservative surgical approach to vulvar cancer. Presented at the Annual Meeting of the Australian Society of Gynaecological Oncologists, Margaret River, Western Australia. April, 1990

57. Organ conservation in vulvar cancer. Presented by invitation at the Fifteenth International Cancer Congress, Hamburg, Germany. August 1990

58. The surgical approach to endometrial cancer. Presented by invitation at an International Conference entitled "New Aspects in the Therapy of Endometrial Cancer". Freiburg, Germany. August, 1990

59. Surgical technique for radical hysterectomy and modified radical vulvectomy. Demonstrated by invitation at the National Cancer Institute, Budapest, Hungary. August, 1990

60. Conservative surgery for vulvar cancer. Presented by invitation at the Catholic University of Rome. Rome, Italy. September, 1990

61. Surgery for invasive gynecological cancer in women over 70 years. Presented at the Fortieth Annual Meeting of the Society of Pelvic Surgeons. Charleston, South Carolina. November. 1990

62. Major gynaecological surgery in the elderly. Presented at the J.F. Correy Valedictory Meeting. Hobart, Tasmania. March, 1991

63. Management and outcome of Stage III epithelial ovarian cancer. Presented at the Third Biennial Meeting of the Helene Harris Ovarian Cancer Trust. Charleston, South Carolina. April 1991

64. Surgical aspects of palliation in gynaecological cancer. Presented by invitation at the golden Jubilee Scientific Meeting. King George V Hospital, Sydney. May 1991

65. Surgery for invasive gynaecological cancer for women over seventy years. Presented at the Sixth Annual Meeting of the Australian Society of Gynecological Oncologists, Coolum, Queensland. May 1991

66. The Pap Smear – Facts and Fiction. Presented by invitation at the Australian Medical Research Week Symposium. Brisbane, Queensland, August 1991

67. Participant in Workshop entitled: "Conservative Management of Vulvar Cancer". Panel members R. Boronow (Chairman), H. Bender, J. Monaghan. Third Biennial Meeting of the International Gynecologic Cancer society. Cairns, Queensland. September 1991

68. a. Philosophical, Educational and Political Requirements for sub-specialization in Gynaecologic Oncology, b. Vulvar Cancer: State of the art, c. Ovarian Cancer: State of the art. Presented by invitation at the Inaugural Meeting of the Argentinian Association of Gynecologic Oncologists. Buenos Aires, Argentina. October 1991.

69. Surgery for ovarian cancer. Chairman of the surgical section of the Consensus Development Conference on Ovarian Cancer. University of Freiburg, Freiburg, Germany, November 1991

70. Surgical management of cervical cancer. Presented as Keynote Address at the 10th anniversary Meeting of the Fukuoka Gynecologic Cancer Conference. Fukuoka, Japan. January 1992.

71. Current management of vulvar cancer. Presented by invitation at the University of Kyushu, Fukuoka, Japan. January 1992

72. Conservative management of early vulvar cancer. Presented by invitation at the American Cancer Society's National Conference on Gynecologic Cancer. Orlando, Florida. April, 1992

73. Conservative surgery for vulvar cancer. Presented by invitation at the Fifth International Symposium on Gynecologic Oncology, Surgery and Urology. Venice, Italy, April 1992

74. a. New Trends and controversies in the treatment of vulvar cancer, b. Current approach to uterine sarcomas, c. Surgical therapy for early cervical cancer. Presented by invitation at the Third National Congress on Gynaecologic Oncology. Antalya, Turkey. May 1992

75. Subspecialization in Gynaecological Oncology: A philosophical perspective. Shedden Adam memorial lecture, Brisbane, Queensland. August 1992

76. a. Surgical management of endometrial cancer, b. Current cancer status of cervical and vulvar cancer. Presented as Royal Women's Hospital visitor. Brisbane, Queensland, August, 1992

77. a. Rationale for Inguinal Node Dissection, b. Lymphoedema following Groin Dissection. Presented by invitation at the First Biennial Alon J. Dembo memorial Workshop entitled: "Innovations in the treatment of vulvar cancer". Toronto, Canada. September 25-26th, 1992

78. New Trends in the Treatment of Vulvar Cancer. Presented by invitation at New Trends in Obstetrics and Gynaecology in 1992 – An International Symposium. Taipei, Taiwan. November 6-9th, 1992.

79. Current Status of Surgery in the Management of Epithelial Ovarian Cancer. Presented by invitation at the 19th annual Scientific Meeting of the Clinical Oncology Society of Australia. Melbourne, Australia. November 25-27th, 1992

80. Individualization of Treatment of Early Vulvar Cancer. Presented by invitation at the 8th World Congress of Cervical Pathology and Colposcopy. Chicago, Illinois, May 12-16th, 1993

81. Intervention and Debulking Surgery for Ovarian Cancer. Presented by invitation at an International workshop on Ovarian Cancer. Copenhagen, Denmark June 16-19th, 1993

82. Current Management of Cervical Cancer. Presented by invitation at the National Cancer Institute, Bucharest, Romania. August, 1993

83. Resection of Bulky Lymph Nodes in Cervical Cancer. Presented at the Fourth Biennial meeting of the International Gynecologic Cancer Society, Stockholm. Sweden September 1993

84. Participant in Workshop entitled "Conservative Management of Ovarian Tumours". Panel Members: S. Pecorelli (Chairman), P Schwartz, C. Trope, C. Mangioni, U. Bianchi. Fourth Biennial Meeting of the International Gynecologic Cancer Society. Stockholm, Sweden. August 29th – September 2nd, 1993.

85. Current Status of Ovarian Cancer. Presented by invitation at the Fourth Annual Scientific Meeting of the ACT Branch of the Royal Australian College of Surgeons. Canberra, ACT September 1993

86. Current Status of Surgery in the Management of Epithelial Ovarian Cancer. Presented by invitation at the 44th Annual Meeting of the Royal Australian College of Radiologists. Sydney, Australia October 1993.

87. Gynaecological Oncology and the Generalist. Participant in Workshop at the 3rd Annual Scientific Meeting of the RACOG Sydney, Australia, April 1994

88. A Pilot Study of Resection of Bulky Positive Lymph Nodes in Conjunction with Radical Hysterectomy. Presented by invitation at the meeting entitled "Wertheim's radical hysterectomy. Present and future". Rome, Italy. June 23 – 25, 1994

89. a. Current Status of Endometrial Cancer Management, b. Management of Early Vulvar Cancer. Presented by invitation at the Fourteenth World Congress of Gynaecology and Obstetrics (FIGO) Montreal, Canada, September, 1994.

90. Resection of Bulky Positive Nodes in Conjunction with Radical Hysterectomy. Presented at the Annual Meeting of the Australian Society of Gynaecological Oncologists. Melbourne, Australia, September, 1994

91. a. Management of CIN, b. Surgery for Cervical Cancer, c. Current Treatment of Endometrial Cancer. Presented by invitation at the Fourth National Congress on Gynaecological Oncology. Antalya, Turkey. November, 1994.

92. Adjuvant Chemotherapy for Papillary Serous Endometrial Carcinoma. Presented at the 21stAnnual Scientific meeting of the Clinical Oncology Society of Australia. Adelaide, Australia. November, 1994

93. Screening for Gynaecological Malignancies. Presented by invitation at an International Symposium entitled "Cancer Prevention and Early Detection in Asia: A Call to Action". Taipai, Taiwan. October 1994.

94. Management of High Grade Cervical Abnormalities. Presented by invitation at a Seminar on Screen Detected Abnormalities. Canberra, Australia. November, 1994

95. a. Surgical Management of Cervical Cancer, b. Current Trends in Endometrial Cancer. Presented at the International Gynaecological Cancer Conference, Auckland, New Zealand. March 1995.

96. Gynaecological Cancer: Its Impact on the Woman. Presented as Nathan Visiting Professor, University of Auckland, Auckland, New Zealand. March 1995

97. a. Screening for Gynaecological Cancer, b. Current Status of Endometrial Cancer Management. Presented by invitation at the combined Coast and Northern Obstetrical and Gynaecological Society, Tugan Queensland. April 1995.

98. a. Resection of Bulky Positive Nodes in Cervical Cancer, b. Trends in the Management of Endometrial Cancer. Presented at the Jakarta International Cancer Conference, Jakartra, Indonesia. May 1995.

99. Staging of Ovarian Cancer. Presented as Visiting Professor at the Dharmais Cancer Hospital, Jakarta, Indonesia. May 1995.

100. a. Cervical Cancer: A Philosophy of Management, b. Current Status of Vulvar Cancer, c. Trends in the Management of Endometrial Cancer. d. Gynaecological Cancer: Its Impact on the Woman. Presented as the J George Moore Visiting Professor, UCLA School of Medicine, Los Angeles, California. June 1995

101. Primary surgery is optimal therapy for bulky Stage IB cervical cancer. Presented as affirmative side in debate. Fifth biennial meeting of the International Gynaecologic Cancer society, Philadelphia, Pennsylvania. September 1995.

102. Advanced vulvar cancer. Presented as part of a workshop with RC Boronow, PG Knapstein, and GM Thomas at the Fifth biennial meeting of the International Gynaecologic Cancer Society, Philadelphia, Pennsylvania. September 1995.

103. Cervical Cancer: A Philosophy of Management. Presented by invitation at the Department of Obstetrics and Gynaecology. Emory University, Atlanta. Georgia. September 1995

104. Treatment of groin lymph nodes. Presented as part of a panel on "Conservative Treatment of Vulvar Cancer" with GR Di Paola, K Hatch, H Bender. Thirteenth International Congress of the ISSVD. Iguazu Argentina. September 1995

105. Endometrial cancer in women under 45 years. Presented at the 10th Annual Scientific Meeting of the Australian Society of Gynaecological Oncologists. Fremantle, Western Australia. September 1995

106. a. Current Management of Endometrial Cancer, b. A Philosophical Approach to Cervical Cancer. Presented as keynote speaker at the 28th Biennial Congress of the South African Society of Obstetricians and Gynaecologists. Bloemfontein, South Aftrica. April 1996.

107. Surgery for Carcinoma of the Vulva. Presented as Keynote Speaker at the 5th Scientific Meeting of the Austrian Society of Gynaecologic Oncologists.

108. Rapid Onset Cervical Cancer: Fact or Fiction. Presented by invitation at the 9th World Congress of Cervical Pathology and Colposcopy Sydney, Australia, May 1996.

109. Treating Vulvar Cancer and Related Premalignant Lesions: Quo Vadis? Presented as keynote Speaker at the COBRA Symposium of Gynaecological Cancer. Noordwijkerhout, The Netherlands, May, 1996

110. a. Ovarian cancer and the general gynaecologist, b. Screening for gynaecological cancer, c. Subspecialization in gynaecological cancer, d. Surgery for ovarian cancer, e. Current trends in endometrial cancer management. Presented as the Health Manpower Development Plan Visiting Expert in Gynaecological Oncology, Singapore, May 1996

111. Resection of Bulky Positive Nodes in Conjunction with Radical Hysterectomy. Presented by invitation at a Symposium entitled Gynecologic Oncology – State of the Art, Freiburg, Germany, September 1996.

112. a. New Developments in the management of Cervical Cancer, b. Vulvar Cancer: The Benefits of Individualized Treatment, c. Conservative Management of Gynaecological Cancer. Presented as the Biennial Visitor, King Edward VII Memorial Hospital for Women, Perth, Western Australia, October 1996

113. Resection of Bulky Positive Lymph Nodes in Conjunction with Radical Hysterectomy. Presented as invited speaker at the Charite – Mayo Conference – Update in Gynaecological Oncology, Berlin, Germany, November 1996.

114. a. Current Status of Endometrial Cancer Treatment, b. Surgical Management of Early Cervical Cancer. Presented as keynote speaker at the VII Helenic National Congress of Obstetrics and Gynaecology. Heraklion, Crete, Greece, May 1997.

115. Early Cervical Cancer: A Philosophy of Management . Presented as keynote speaker at the First Annual Terry Fox and Chang Gung Memorial Hospital International Cancer Symposium. Taipei, Taiwan October 1997.

116. Organization of Gynaecological Cancer Care: A Time for Change. Presented as Presidential Address. Sixth biennial meeting of the Interna-tional Gynecologic Cancer Society, Fukuoka, Japan, October 1997.

117. Resection of Bulky Positive Lymph Nodes in Conjunction with Radical Hysterectomy. Presented at the 47th Annual Meeting of the Society of Pelvic Surgeons: Indianapolis, Indiana, November 1997.

118. Groin node dissection in vulvar cancer. Presented at breakfast session, Society of Gynecologic Oncologists. Orlando, Florida. February 19989.

119. a. Recent advances in techniques and technology in gynaecological oncology, b. Socioeconomic implications of recent advances in technology in gynaecological oncology. Presented by invitation at the 60th Anniversary symposium of The Royal Women's Hospital Brisbane. September 1989.

120. a. Management of lymph nodes in cervical cancer, b. Early cervical cancer. A philosophy of management. Presented by invitation at the Wertheim Centenary Meeting, Vienna, Austria. September 1998

121. a. Early cervical cancer. A philosophy of management. b. Management of endometrial cancer. Presented by invitation at the annual meeting of the Korean Society of Gynaecologic Oncology. Seoul, South Korea. September, 1998

122. a. Surgical approach to vulvar cancer, b. Treatment strategies in high-risk, Stage IB cervical cancer. Presented by invitation at the Third National Congress of the Hellenic Society of Gynaecologic Oncologists, Athens Greece, October 1998.

123. a. Vulvar cancer-can we be conservative but safe?, b. Endometrial cancer-an evolving story, c. Early cervical cancer – a philosophy of management, d. Ovarian cancer for the generalist, e. Molecular genetics for the gynaecologist. Presented as Sims Black Travelling Professor in the UK and South Africa. August 21st – October 8th, 1999.

124. The need for surgery in early stage cervical cancer. Presented as the affirmative in a debate at the 50th Annual Scientific meeting of the RANZ College of Radiologists. Sydney, Australia, October 1999

125. Groin node dissection in vulvar cancer. Presented at the 7th Biennial Meeting of the International Gynecologic Cancer Society Rome, Italy. October 1999.

126. Gynaecological cancer and lymphoedema. Presented at the Australian Lymphology Association Annual Meeting. Melbourne, Australia. April 2000.

127. Conservative management of germ cell ovarian tumours. Presented as part of a work-

shop at the 8th Biennial Meeting of the International Gynecologic Cancer Society. Buenos Aires, Argentina. October 2000

128. Secondary cytoreductive surgery for recurrent epithelial ovarian cancer. Presented at the 50th Annual Meeting of The Society of Pelvic Surgeons. Hamilton, Bermuda. November 2000.

129. Current trends in the management of vulvar cancer. Presented at the Japanese Gynaecological Cancer Society Meeting. Sopporo, Japan, November 2000.

130. a. Stage IBII cervical cancer. What is the best management?, b. Endometrial cancer care: An evolving story, c. Conservative management of vulvar cancer, d. Screening for gynaecologic cancer, e. The role of cytoreductive surgery in epithelial ovarian cancer. Presented as Guest Professor at the 56th Obstetrical and Gynecological Assembly of Southern California, Los Angeles, California. February 2001.

131. Stage IBII cervical cancer: a philosophy of management. Presented at the Alan Hewson Valedictory meeting Newcastle, Australia. February 2001.

ABSTRACTS

1. Hacker NF, Charles EH, Savage EW, Moore JG, Lagasse LD. Carcinoma of the cervix in pregnancy. Proceedings of the 8th Annual Meeting of the Western Association of Gynecologic Oncologists, South Lake Tahoe, Navada, May 1980.

2. Hacker NF, Morrow CP, Castaldo TW, Ballon SC. Positive peritoneal cytology in corpus carcinoma – Report of a fatal outcome. Proceedings of the 8th Annual Meeting of the Western Association of Gynecologic Oncologists, South Lake, Tahoe, Nevada, May 1980

3. Charles EH, Savage EW, Hacker NF, Jones NC. Cryosurgical treatment of cervical intraepithelial neoplasia. Proceedings of the 18th Annual Meeting of the Western Association of Gynecologic Oncologists, south Lake Tahoe, Nevada, May 1980

4. Berek JS, Castaldo TW, Hacker NF, Petrilli ES, Lagasse LD, Moore JG. Adenocarcinoma of the uterine cervix. Proceedings of the 8th Annual Meeting of the Western Association of Gynecolic Oncologists, South Lake Tahoe, Nevada, May 1980

5. Hacker NF, Leuchter RS, Berek JS, et al. Radical vulvectomy and bilateral inguinal lymphadenectomy through separate groin incisions. Proceedings of the 12th Annual Meeting of the Society of Gynecologic Oncologists, Marco Island, Florida, January 1981.

6. Berek JS, Hacker NF, Leuchter RS, Lagasse LD, Byron RL. Urologic operations during cytoreductive surgery for ovarian cancer. Proceedings of the 9th Annual Meeting of the Western Association of Gynecologic Oncologists, Napa Valley, California, May 1981.

7. Hacker NF.Nieberg RK, Berek JS, et al. Superficially invasive vulvar cancer with nodal metastases: A report of 7 cases. Proceedings of the 9th Annual Meeting of the Western Association of Gynecologic Oncologists, Napa Valley, California, May 1981.

8. Leuchter RS, Hacker NF, Berek JS, Lagasse LD. Primary carcinoma of Bartholin's gland: A report of 15 cases. Proceedings of the 9th Annual meeting of the Western Association of Gynecologic Oncologists, Napa Valley, California, May 1981.

9. Berek JS, Lagasse LD, Hacker NF, Leuchter RS. Levator Ani transposition of anal incontinence. Proceedings of the 9th Annual Meeting of the Western Association of Gynecologic Oncologists, Napa Valley, California, May 1983.

10. Lagasse LD, Berek JS, Hacker NF, Pretorius RG, Ford LC. The intraperitoneal route of cis-platinum chemotherapy. Proceedings of the 4th Annual Meeting of the Society of Memorial Gynecologic Oncologists. Port-au-Prince, Haiti, November 1981

11. Ford LC, Berek JS, Lagasse LD, Hacker NF, et al. Estrogen and progesterone receptors in ovarian neoplasms. Proceedings of the 9th Annual Meeting of the Western Association of Gynecologic Oncologists, Napa Valley, California, May 1981.

12. Hacker NF, Berek JS, Lagasse LD, et al. Primary cytoreductive surgery for ovarian cancer. Proceedings of the 13th Annual Meeting of the Society of Gynecologic Oncologists, Marco Island, Florida, January 1982.

13. Berek JS, Zighelboim J, Hacker NF, et al. Natural killer (NK) lymphocytes and antibody dependent cell mediated cytotoxicity (ADCC) in peritoneal effluents of advanced ovarian cancer patients treated with intraperitoneum Corynebacterium parvum. Proceedings of the 29th Annual Meeting of the Society for Gynecologic Investigation, Dallas, Texas, March 1982.

14. Ford LC, Berek JS, Hacker NF, et al. Estrogen and progesterone receptors in malignancies of the uterine cervix, vagina and vulva. Proceedings of the 10thAnnual Meeting of the Western Association of Gynecologic Oncologists, Sante Fe, New Mexico, May 1982.

15. Smith JJ, Hacker NF, Berek JS, Lagasse LD. Leptomeningeal metastases from granulosa cell tumor. Proceedings of the 10th Annual Meeting of the Western Association of Gynecological Oncologists, Sante Fe, New Mexico, May 1982.

16. Hacker NF, Berek JS, Lagasse LD, et al. The management of regional lymph nodes in vulvar cancer, Proceedings of the 10th Annual Meeting of the Western Association of Gynecological Oncologists, Sante Fe, New Mexico, May 1982

17. Berek JS, Hacker NF, Lagasse LD, Smith McL. Delayed vaginal reconstruction in the fibrotic pelvis: Results after radiation or previous reconstructive attempt. Proceedings of the 10th Annual Meeting of the Western Association of Gynecological Oncologists, Santa Fe, New Mexico, May 1982.

18. Pretorius RG, Hacker NF. Intraperitoneal Cisplatin in ovarian carcinoma. Proceedings of the 18th Annual Meeting of the American Society of Clinical Oncology (ASCO) Abstract C0437) St Louis, Missouri, April 1982.

19. Bast Jr RC, Berek JS, Hacker NF, et al. Intraperitoneal immunotherapy of human ovarian carcinoma with Corynebacterium parvum. Proceedings of the 18th Annual Meeting of the American Society of Clinical Oncology (ASCO Abstract C0150) St Louis, Missouri, April 1982.

20. Berek JS, Castaldo TW, Hacker NF, et al. Adenocarcinoma of the uterine cervix. Ob-Gyn Surv 1982; 37: 348.

21. Leuchter RS, Townsend D, Hacker NF, et al. Carcinoma insitu of the vulva: Modern treatment techniques using the CO Laser. Proceedings of the 10th Annual Meeting of the Western Association of Gynecologic Oncologists, Santa Fe, New Mexico, May 1982.

22. Pretorius RG,. Hacker NF, Berek JS, et al. The pharmacology of intraperitoneal cis-platinum. Proceedings of the 10th Annual Meeting of the Western Association of Gynecological Oncologists, Sante Fe, New Mexico, May 1982.

23. Hacker NF, Berek JS, Nieberg RK, Leuchter RS, Lagasse LD. Vulvar squamous cell carcinomas two centimeters or less in diameter. Proceedings of the 14th Annual Meeting of the Society of Gynecologic Oncologists, Scottsdale, Arizona, February 1983.

24. Berek JS, Hacker NF, Zighelboim J, Lichtenstein A, Knox R, Lagasse LD, Cantrell J. Cytotoxic lymkphocytes, interferon and tumor rejection in the peritoneal cavity of a murine ovarian cancer model using immunotherapy and biologic response modifiers. Society of Gynecologic Oncologists, Scottsdale, Arizona, February 1982.

25. Berek JS, Hacker NF, Lagasse LD, Resnick B, Hunter T, Nieberg RK, Elsahoof RM. Second look laparotomy for epithelial ovarian cancer. Proceedings of the 19th Annual Meeting of the American Society of Clinical Oncology (Abstract 2: C-613) San Diego, California, May 1983

26. Semrad NF, Berek JS, Watring WG, Hacker NF, Fu YS, Roth P, Hallet J, Ryoo M, Lagasse LD. Fallopian tube adenocarcinoma. Proceedings of the 11th Annual Meeting of the Western Association of Gynecologic Oncologists, Colorado Springs, Colorado, May 1983.

27. Berek JS, Hacker NF, Lagasse LD, Resnick B, Poth T, Neiberg RK. Second look laparotomy in epithelial ovarian cancer: Variables predictive of disease status. Proceedings of the 11th Annual Meeting of the Western Association of Gynecologic Oncologists, Colorado Springs, Colorado.

28. Ghozland SA, Hacker NF, Berek JS, Resnick B, Poth T, Nieberg RK. Use of hyperthermia in a murine ovarian tumor model: A preliminary report. Proceeding of the 11th Annual Meeting of the Western Association of Gynecologic Oncologists. Colorado Springs, Colorado May 1983.

29. Eisenkop S, Pretorius RG, Berek JS, Hacker NF, Ford LC, Lagasse LD. The pharmacokinetics of intraperitoneally administered cis-platinum in a murine ovarian teratocarcinoma model. Proceedings of the 11th Annual Meeting of the Western Association of Gynecologic Oncologists, Colorado Springs, Colorado, May 1983.

30. Smith JJ, Hacker NF, Leuchter RS, Berek JS, Lagasse LD, Moore JG. Paget's disease of the vulva. Proceedings of the 11th Annual Meeting of the Western Association of Gynecologic Oncologists, Colorado Springs, Colorado, May 1983.

31. Hacker NF, Berek JS, Juillard GJF, Lagasse LD. Preoperative radiation therapy for

advanced vulvar cancer. Proceedings of the 11th Annual Meeting of the Western Association of Gynecological Oncologists, Colorado Springs, Colorado, May 1983.

32. Hacker NF, Berek JS, Lagasse LD, Nieberg RK, Leuchter RS. Lymph nodes in vulvar cancer. Proceedings of the 2nd International Congress of Gynecologic Oncology. Edinburgh, Scotland, September 1983.

33. Hacker NF, Berek JS, Lagasse LD, Nieberg RK, Leauchter RS. Management of patients with Stage I vulvar cancer. Proceedings of the 7th World Congress of the International Society for the Study of Vulvar Disease, Orlando, Florida, September 1983.

34. Burnison MC, Hacker NF, Juillard GJF, Berek JS, Lagasse LD. Whole abdominal radiation therapy in Stage III ovarian carcinoma. Proceedings of the 25th Annual Scientific meeting of the American Society of Therapeutic Radiologists, Los Angeles, California, October 1983.

35. Hacker NF, Berek JS, Juillard GJF, Lagasse LD. Preoperative radiation therapy for advanced vulvar cancer. Radiology 149 (P): 135, 1983.

36. Berek JS, Hacker NF, Lagasse LD. Rectosigmoid colostomy and reanastomosis to facilitate resection of primary and recurrent pelvic neoplasms. Proceedings of the 33rd Annual Meeting of the Society Of Pelvic Surgeons. Philadelphia, Pennsylvania, November 1983.

37. Berek JS, Hacker NF, Fu YS, Sokale JR, Leuchter RC, Lagasse LD. Adenocarcinoma of the uterine cervix: the influence of lesion size and grade on lymph node metastases and prognosis. Proceedings of the 15th Annual Meeting of the Society of Gynecologic Oncologists, Miami, Florida, February 1984 (Abstract 18).

38. Hacker NF, Berek JS, Juillard GJF, Eisenkop S, Burnison CM, et al. Whole abdominal radiation as salvage therapy for advanced stage ovarian cancer. Proceedings of the 15th Annual Meeting of the Society of Gynecologic Oncologists, Miami, Florida, February 1984. (Abstract 44).

39. Berek JS, Cantrell JL, Lichtenstein AK, Hacker NF, Knox RM, et al. Immunotherapy with biochemically dissociated fractions of propionibacterium acnes in a murine ovarian cancer model. Proceedings of the 31st Annual meeting of the Society for Gynecologic Investigation, San Francisco, California, March 1984 (Abstract 122).

40. Hacker NF, Ghozland SA, Berek JS, Resnick B, Lagasse LD. Low frequency radiowave hyperthermia in a murine ovarian tumor model. Proceedings of the 31st Annual meeting of the Society for Gynecologic Investigation, San Francisco, California, March 1984. (Abstract 132P).

41. Hacker NF, Ghozland SA, Berek JS, Resnick B, Lagasse LD. In vivo and in vitro hyperthermia in a murine ovarian tumor model. Proceedings of the 32nd Annual meeting of the Radiation Research Society, Florida, March 1984. (Abstract G1-11).

42. Hacker NF, Leuchter RS, Berek JS, Castaldo TW, Lagasse LD. Radical vulvectomy and bilateral inguinal lymphadenectomy through separate groin incisions. Year Book of Obstet Gynecol. Year Book Medical Publishers Chicago, 1983 P237.

43. Berek JS, Lagasse LD, Hacker NF, Leuchter RS. Levator ani transposition for anal incompetence secondary to sphincter damage. Year Book of Obstet Gynecol. Year Book Medical Publishers, Chicago, 1983 P. 235.

44. Leuchter RS, Hacker NF, Voet RL, Berek JS, Townsend DE, Lagasse LD. Primary carcinoma of the Bartholin gland. A report of 14 cases and review of the literature. Year Book of Obstet Gynecol. Year Book Medical Publishers Chicago, 1984 P. 315.

45. Hacker NF, Berek JS, Lagasse LD, Nieberg RK, Elashoff RM. Primary cytoreductive surgery for epithelial ovarian cancer. Year Book of Obstet Gynecol. Year Book Medical Publishers Chicago, 1984 P.315.

46. Munoz AK, DeZeigler D, Hacker NF, Nieberg RK, Berek JS, Lagasse LD. Bilateral metachronous dysgerminomas in a patient with pure gonodal dysgenesis. A case report and literature review. Proceedings of the 12th Annual Meeting of the Western Association of Gynecologic Oncologists. Sun River, Oregon, May 30 – June 2, 1984.

47. Heintz APM, Hacker NF, Berek JS, Munoz AK, Lagasse LD. Primary cytoreductive surgery in advanced epithelial carcinoma of the ovary: Feasibility and morbidity. Proceedings of the 12th Annual meeting of the Western Association of Gynecologic Oncologists. Sun River, Oregon, May 30-June 2, 1984.

48. Munoz AK, Berek JS, Fu YS, Hacker NF, Heintz APM, Eisenkop S, Fu YS, Burnison CM, Lagasse LD. Pelvic hemangiopericytomas: Report of five cases and review of the literature. Proceedings of the 12th annual Meeting of the Western Association of Gynecologists, sun River, Oregon, May 30 – June 2, 1984.

49. Hacker NF, Berek JS, Juillard JF, Heintz APM, Eisenkop S, Fu YS, Burnison CM, Lagasse LD. Whole abdominal radiation as salvage therapy for epithelial ovarian cancer. Proceedings of the 32nd Annual Clinical Meeting of the American College of Obstetricians and Gynecologists, San Francisco, California, May 1984

50. Hacker NF, et al. Individualization of treatment for Stage I squamous cell vulvar carcinoma. Ob Gyn Digest, September 1984, P. 31.

51. Hacker NF, Berek JS, Pretorius RG, Zuckerman J, Eisenkop S, Lagasse LD. Intraperitoneal cis-platinum as salvage therapy for refractory epithelial ovarian cancer. Proceedings of the 16th Annual Meeting of the Society of Gynecologic Oncologists Miami, Florida, February 1985.

52. Berek JS, Hacker NF, Lichtenstein A, Jung T, Know R, Greene T, Bonnem E, Lagasse LD, Zighelboim J. intraperitoneal immunotherapy of human ovarian carcinoma with recombinant interferon: A phase I toxicity/immunopharmacology study. Proceedings of the 16th Annual meeting of the Society of Gynecologic Oncologists, Miami, Florida, February 1985.

53. Smotkin D, Berek JS, Fu YS, Hacker NF, Major FJ, Lagasse LD, Wettstein FO. Papillomavirus DNA in adenocarcinoma and adenosquamous carcinomas of the uterine cervix. Proceedings of the 13th Annual Meeting of the Western Association of Gynecologic Oncologists, San Diego, California, May 1985.

54. Berek JS, Jung TS, Lichtenstein A, Hacker NF, Spina C, Bonnem E, Zighelboim J. Systemic and intraperitoneal (IP) immunological and pharmacokinetic data in patients who were treated with IP recombinant interferon (rIFNa2) for persistent ovarian carcinoma. I Proceedings of the 13th Annual Meeting of the Western Association of Gynecologic Oncologists, San Diego, California, May 1985.

55. Eisenkop S, Leuchter RS, Berek JS, Hacker NF, Smith ML, Morrow CP, Lagasse LD. The pharmacokinetics of intraperitoneally (IP) administered cis-platinum in a murine ovarian teratocarcinoma (MOT) model. Proceedings of the 12th Annual Meeting of the Western Association of Gynecologic Oncologists, San Diego, California, May 1985.

56. Eisenkop S, Leuchter RS, Berek JS, Hacker NF, Smith ML, Morrow CP, Lagasse LD. Management of occult low-risk metastatic gestational trophoblastic neoplasia resistant to chemotherapy. Proceedings of the 13th Annual Meeting of the Western Association of Gynecologic Oncologists, San Diego, California, may 1985.

57. Barrett RJ, Berek JS, Fu YS, Hacker NF. Clinicopathologic assessment of mesenchymal sarcomas of the uterine cervix. Proceedings of the 13th Annual Meeting of the Western Association of Gynecologic Oncologists, San Diego, California, May 1985.

58. McIntosh DG, Hacker NF, Berek JS, Dauplat J, Nieberg RK. Microinvasive cervical cancer: A clinical-pathological review. Proceedings of the 14th Annual Meeting of the Western Association of Gynecological Oncologists, Monterey, California, May 1986.

59. Smotkin D, Fu YS, Berek JS, Hacker NF, Wettswtein FO. Distribution of human papillomavirus types 16 and 18 in lesions of the female lower genital tract. Proceedings of the Western Association of Gynecological Oncologist, Monterey, California, May 1986.

60. Fu YS, Berek JS, Huang I, Hacker NF. Probability of tumour recurrence in patients with endometrial carcinoma. Proceedings of the 1st Meeting of the International Gynecologic Cancer Society, Amsterdam, The Netherlands, October 1987.

61. Lawton F, Hacker NF. Surgery for invasive gynaecological cancer in the elderly female population. Proceedings of the 21st annual Meeting of the Society of Gynecological Oncologists, San Francisco, California, February, 1990.

62. Van Haaften-Day C, Russell P, Hacker NF. Immunocytochemical details and cellular DNA content of human ovarian serous papillary neoplasms. Proc. 41st Annual Meeting of the Tissue Culture Association. Houston, Texas. June 1990.

63. Wain GV, Hacker NF. Surgical debulking of lymph nodes in cervical cancer. Proc. Clinical Oncology Society of Australia Melbourne, Australia. November, 1990

64. Berg D, Hacker NF. Morbidity of extended field radiotherapy with 5-Fluorouracil for cancer of the cervix. Proc. International Gynecologic Cancer Society. Cairns, Queensland September 1991.

65. Segelov E, Friedlander ML, Campbell J, Tattersall MHN, Rome R, Free KI, Hacker NF. Analysis of patients treated with Cisplatin based chemotherapy for ovarian germ cell malignancies – The Australian experience. Abstract 33 – Clinical Oncology Society of Australia. Melbourne, Australia. November 1992.

66. Favalli G, Berg D, Wain G, Hacker NF. Morbidity associated with extended field

chemoradiation for locally advanced cervical cancer. Abstract 34. International Gynecologic Cancer Society. Stockholm, Sweden. August 1993.

67. Friedlander M, Segelov E, Campbell J, Hacker NF, Rome R, Tattersall M, Free K. Analysis of patients treated with Cisplatin based chemotherapy for ovarian germ cell tumors – the Australian experience. Abstract 100. International Gynecologic Cancer Society. Stockholm, Sweden. August, 1993.

68. Trimbos J, Hacker NF. Killing spill following aspiration of ovarian cysts. Abstract 179. International Gynecologic Cancer Society. Stockholm, Sweden. August 1993.

69. Wain G, Nicklin J, Hacker NF. Surgery in the Management of Uterine Sarcomas. Abstract 203. International Gynecologic Cancer Society. Stockholm, Sweden. August 1993.

70. Hacker NF. Primary surgery is optimal therapy for bulky Stage IB cervical cancer. Int J Gynecol Cancer 1995; 5 (S1):17.

71. Hacker NF. Management of advanced vulvar cancer. Int J Gynecol Cancer 1995; 5 (S1):21.

72. Hanzal E, Gitsch G, Jensen D, Hacker NF. Endometrial cancer in pre-menopausal women 45 years of age or younger. Int J Gynecol Cancer 1995; 5 (S1):31.

73. Robertson G, Milliken S, Friedlander M, Hacker NF. High dose chemotherapy with autologous bone marrow or stem cell support in ovarian cancer. Int J Gynecol Cancer 1995; 5 (S1):46.

74. Gitsch G, Friedlander M, Wain GV, Hacker NF. A clinical study of 18 patients with uterine papillary serous carcinoma. Int J Gynecol Cancer 1995; 5 (S1):67.

75. Hacker NF. Rapid onset cervical cancer: Fact or fiction. Proceeding of the 9th World Congress of Cervical Pathology and Colposcopy. Abstract 179, May, 1996.

76. Phillip J, Do T, Lickiss N, Grant PT, Hacker NF. Corticosteroids in gastrointestinal obstruction in patients with gynaecological cancer. Int J Gynecol Cancer 1997; 7 (S2):87.

77. Phillip J, Do T, Hacker NF, Grant PT. Lickiss N. Outcomes in patients with gastrointestinal obstruction: 62 episodes in 33 patients in a 12 month period. Int J Gynecol Cancer 1997; 7 (S2):86.

78. Tay EH, Grant PT, Hacker NF. Survival benefits of secondary cytoreductive surgery (SCRS) for epithelial ovarian cancer (EOC) recurrences. Int J Gynecol Cancer 1997; 7 (S2):81.

79. Ishioka S, van Haaften-Day C, Sagae S, Kudo R, Hacker NF. Effects of interleukin – 6 on chemotherapy – induced apoptosis in human ovarian cancer cell lines. Int J Gynecol Cancer 1997; 7 (S2):71.

80. Speiser P, Tempfer C, Kridelka F, Edwards L, Mittelbock M, Kainz CH, Hacker NF. CD44 is an independent prognostic factor in Stage IB cervical carcinoma. Int J Gynecol Cancer 1997; 7 (S2):34.

81. Kridelka F, Robertson G, Grant P, Berg D, Edwards L, Hacker NF. Adjuvant small field pelvic radiation for high-risk Stage IB node-negative cervical cancer following radical hysterectomy and pelvic lymph node dissection. A pilot study. Int.J Gynecol Cancer. 1997; 7 (S2):35.

82. The "T2-effect" in the psychological adjustment of partners to early stage cervical cancer patients during the first eight months following their wife's treatment. Psycho-Oncology: 7(5) abstract 295, 1998.

83. Alper O, De Santis ML, Hacker NF, Cho-Chung YS, Salomon D. Epidermal growth factor receptor-antisense expressing ovarian cancer cells altered cellular proliferation, adhesion protein expression and tumorigenesis. Poster 201 11th Lorne Cancer Conference, Lorne, Victoria. February 1999.

84. Hacker NF. Screening for endometrial cancer. Abstract 41 Fourth international Scientific Meeting of the RCOG Capetown, South Africa. October 1999.

85. Speicer P, Zeillinger R, Tempfer C, Leary J, Leodolter S, Hacker NF, Birnbaum D, Friedlander ML. High frequency of allelic inbalance at regions of chromosone arm 8P in ovarian cancer. Int J Gynecol Cancer 1999; (S1):29.

86. Low JJH, Perrin LC, Crandon AJ, Hacker NF. Conservative surgery to preserve ovarian function in malignant ovarian germ cell tumors – a review of 74 cases. Int J Gynecol Cancer 9 (S1):9

87. Benedetti Panici P, Landoni F, Scarabelli C, Winter R, Maggioni A, Ackermann S, Favalli G, Monaghan JM, Grassi R, Greggi S, Amoroso M, Giannarelli D, Torri V, Mangioni C, Hacker NF. Systemic aortic and pelvic lymphadenectomy vs resection of any bulky nodes only for optimally debulked advanced ovarian cancer: preliminary results of an international randomized trial. Int J Gynecol Cancer 1999; 9 (S1):44

CHAPTERS

1. Hacker NF, Berek JS, Lagasse LD. Vulvar Cancer. Chapter 25: In Cancer Treatment Ed. Haskell CM. 2nd edition. WB Saunders Co, Philadelphia, PA, 1984. Third edition 1990.

2. Berek JS, Hacker NF, Lagasse LD. Ovarian Cancer. In Cancer Treatment. Ed. Haskell CM. 2nd edition. WB Saunders Co, Philadelphia, PA, 1984. Third edition 1990.

3. Berman; ML, Ballon SC, Hacker NF, kBerek JS. Cervix Cancer, In Cancer Treatment Ed.l Haskell CM. 2nd edition. WB Saunders Co, Philadelphia, PA, 1984. Third edition 1990.

4. Berek JS, Hacker NF, Laparoscopy for evaluation of patients with ovarian cancer. Clinics in Obstetrics and Gynaecology. Vo. 10, No. 2, 1983.

5. Berek JS, Hacker NF, Lagasse LD. Reconstructive surgery in gynecologic oncology. In Gynecologic Oncology. Eds. Knapp RC and Berkowitz RS. MacMillan and Co, New York, 1985. Second edition, 1993.

6. Hacker NF, Berek JS, Lagasse LD. Gastro-intestinal surgery in gynecologic oncology. In Gynecologic Oncology. Eds. Knapp RC and Berkowitz RS. MacMillan and Co, New York, 1985. Second edition, 1993.

7. Berek JS, Hacker NF. Immunotherapy in gynecologic malignancies. In Chemotherapy in Gynecologic Cancer. Ed. Deppe G. Alan R. Liss Inc, New York, 1984.

8. Hacker NF, Berek JS. Cytoreductive surgery in ovarian cancer. Chapter 4 in New Approaches in the Management of Ovarian Cancer. Eds. Alberts D and Surwit EA. Martinus Nijhoff BV, The Netherlands, 1984.

9. Berek JS, Hacker NF. Second-look laparotomy in ovarian cancer. Chapter 5 in New Approaches in the Management of Ovarian Cancer. Eds. Alberts D and Surwit EA. Martinus Nijhoff BV, The Netherlands 1984.

10. Hacker NF, Berek JS, Lagasse LD, et al. Management of regional lymph nodes and their prognostic influence on vulvar cancer. Chapter 26 in Gynecological Oncology. Eds. Morrow CP and Smart GE. Springer-Verlag, New York, 1985

11. Berek JS, Hacker NF. Staging and second-look operation in ovarian cancer. Chapter 6 in Ovarian Malignjancies: Diagnostic and Therapeutic Advances. Ed. Piver MS. Churchill Livingstone, England 1987.

12. Hacker NF. Consultant for Miller BF and Keane CB: Encyclopedia and Dictionary of Medicine, Nursing and Allied Health. 4th edition. WB Saunders Co, Philadelphia, PA, 1987.

13. Hacker NF, Berek JS. Surgical Staging of cervical cancer. Chapter 4 in Cervix Cancer. Eds. Albert D. and Surwit EA. Martinus Nijhoff BV, The Netherlands, 1987.

14. Hacker NF, Jochimsen PR. Common Malignancies among Women: Sites and Treatment. In Women with Cancer: Psychological Perspectives. Ed. Andersen B. Springer-Verlag, New York, 1987

15. Berek JS, Hacker NF. Sarcomas of the female genital tract. Chapter 6 in The Soft Tissue Sarcomas. Eds. Eilber FR, Morton DL, Sondak VK, Economou JS, Grune and Stratton Inc. Orlando, 1987.

16. Berek JS, Hacker NF, Hatch KD, Young RC. Uterine corpus and cervical cancer. In Current Problems in Cancer. Ed. CM Haskell. Year Book Medical Publishers, Chicago Illinois, 1988.

17. Hacker NF. Clinical and Operative Staging of Cervical Cancer. Chapter 2. In Clinical Obstetrics and Gynaecology. Operative Treatment of Cervical Cancer. Eds. E. Burghardt and JM. Monaghan. Bailliere Tindall, London 1988.

18. Hacker NF. Controversial aspects of cytoreductive surgery in epithelial ovarian cancer. Chapter 6. In Clinical Obstetrics and Gynaecology. Operative Treatment of Ovarian Cancer. Eds. E. Burghardt and JM. Monaghan, Bailliere Tindall. London 1989

19. Hacker NF. Management of Stage I vulvar cancer. In Maligancies of the Vulva. Eds.

Knapstein PG, di Re F, Di Saia P, Haller U, Sevin B-U Thieme Verlag, Stuttgard 1991.

20. Hacker NF. Surgery for endometrial carcinoma. In Therapy for endometrial carcinomas. Eds. W Kleine, HG Meerpohl, A. Pfleiderer, Ch. Z Profous, Springer-Verlag, Berlin. 1991.

21. Hacker NF, Eifel PJ, McGuire WP, Wilkinson EJ. Vulvar Cancer. In Principles and Practice of Gynecologic Oncology. Eds. Hoskins WJ, Perez CA, Young RC. J.B. Lippincott, Philadelphia, 1992.

22. Hacker NF. Conservative surgery for Stage I carcinoma of the vulva. In Gynecologic Oncology (second edition) Eds. Coppleson M, Monaghan JM, Morrow CP, Tattersall MHN. Churchill Livingstone, Edinburgh. 1992.

23. Hacker NF, Wain GV, Trimbos JB. Management and outcome of Stage III epithelial ovarian cancer. Chapter 34. In Ovarian Cancer 2. Eds. Sharp F, Mason WP, and Creasman W. Chapman and Hall Medical. London 1992.

24. Hacker NF. Primary Surgery for Epithelial Ovarian Cancer. In Das Ovarialkarzinom. Ed. H-G Meerpohl, A Pfleiderer, Spring-Verlag, Berlin, 1992.

25. Hacker NF. Vulvar Cancer Chapter 10. In Surgical Gynecology. Eds. Gershensen D and Curry S. W.B. Saunders, Philadelphia. 1993.

26. Wain GV and Hacker NF. Genital Sarcomas. Chapter 8. In Gynecologic Oncology. Eds. Burghardt E, Monaghan JM, and Webb M. Thieme, New York 1993.

27. Van der Velden J, Hacker NF. Update on vulvar cancer. In Cancer Treatment and Research – Gynecologic Oncology. Ed. Mace L Rothenberg. Kluwer Academic Publishers. 1994.

28. Hacker NF. Surgical Management of Advanced Ovarian Cancer. In Epithelial Cancer of the Ovary. Lawton F Neijt JKP, Swenerton KD (Eds) BMJ Publishing Group. London 1995.

29. Wain GV, Hacker NF. Multimodality therapy in cancer of the vulva and vagina. In Multimodality therapy in Gynecologic Oncology. Knapstein PG, Seven B-U (Eds). Thieme, New York 1996.

30. Hacker NF. Vulvar Cancer. In Novaks Gynaecology. 12th Edition. Berek JS, Adashi FY, Hillard PA (eds). Williams and Wilkins, Baltimore 1996.

31. Berek JS, Fu YS, Hacker NF. Ovarian Cancer. In Novak's Gynaecology. 12th Edition. Berek JS, Adashi FY, Hillard PA (eds). Williams and Wilkins, Baltimore 1996.

32. Hacker NF. Contribution to chapters on vulvar cancer and ovarian cancer. In Expert Consultations in Gynaecological Cancers. Eds M Markman, G. Belinson. Marcel Decker Inc, New York 1996.

33. Robertson G, Hacker NF. Radical vulvar and vaginal procedures. In Heintz APM and Allen DG (Eds). Practical Procedures for the Gynecological Oncologist. Elsevier, Amsterdam 35-70, 1997.

34. Grant PT, Hacker NF. Vulvar cancer. Chapter 2. In Cancer in Women Eds N Einhorn, J Cavanagh, S Pecorelli. Blackwell Science, Massachusetts. 381-396, 1998.

35. Marsden DE, Friedlander M, Hacker NF. Current Management of Epithelial Carcinoma. A review. Semin Surg Oncol. 2000

36. Scurr ME, Friedlander ML, Hacker NF. Management of an isolated recurrent pelvic mass. Chapter 14. In Clinical Management of Ovarian Cancer. Eds JA Ledermann, WJ Hoskings, SB Kaye, IB Vergote. Martin Dunitz. London 179-188, 2001

37. Lickiss JN, Hacker NF, Care of the Patient Close to Death. In Palliative Care in Gynaecology. Editor J Cain. In press.

38. Marsden DE, Hacker NF. Optimal Management of endometrial hyperplasia. Best Practice and Research. Clinical Obstetrics and Gynecology. Bailliere Tindall London.

39. Marx GM,l Friedlander ML, Hacker NF. Cystotoxic drug therapy for vulvar and vaginal cancer.

BOOKS

1. Hacker NF, Moore JG (eds): Essentials of Obstetrics and Gynecology. WB Saunders Co, Philadelphia, P A, (Spanish edition published by Emalsa SA, Madrid, Spain). – Second Edition 1992, Third Edition 1997

2. Berek JS, Hacker NF (eds): Practical Gynecologic Oncology. Williams and Eilkins, Baltimore MD 1989 – Second Edition 1994, Third Edition 2000

POST GRADUATE

COURSES 1. American College of Surgeons: Techniques in Gynecologic Surgery – "Surgical Management of Ovarian Cancer" J George Moore, M.D., Course Director. San Francisco, California, May 1981, 2. Granada Hills Hospital, Fifteenth Annual Symposium: Endocrinology Today. "Endocrine Considerations in Gynecologic Oncology" Arno A Roscher, M.D., Course Director, North Hollywood, California, November 1983, 3. UCLA Winter Oncology Conference, First Annual symposium: "Advances in the Treatment of Vulvar Cancer" Jean B de Kernion, M.D., Course Director, Santa Monica, California, March 1984, 4. International Seminar on Cancer Management – Curable Cancer in Adults, "Surgery for Ovarian Cancer", Martin Tattersall, M.D., Course Director, Sydney Australia, May 1984, 5. Boerhaave Committee for Postgraduate Medical Education, "Current Concepts in Gyneacologic Oncology": a. Carcinoma of the Cervix associated with pregnancy, b. Ovarian tumors in children and adolescents, c. Recent advances in the management of vulvar cancer. A Peter, M Heintz, M.D., Course Director, Noodwijkerhout, The Netherlands June 1985, 6. Saint John Hospital – Wayne State University, Update on Gynecologic Oncology. Lectures: a. Vulvar neoplasia – current management, b. Role of chemotherapy and second-look surgery in the management of ovarian cancer. Gunter Deppe, M.D., Course Director, Detroit, Michigan, October 1985, 7. Saint Joseph Hospital – University of Colorado, Ovarian Cancer Seminar, "The Surgical Management of Ovarian Cancer", C Houston Alexander, M.D,., Course Director, Denver, Colorado, November 1985, 8. Good Samaritan Hospital – University of Southern California. Fourteenth Annual Cancer Symposium. Progress in Gynecological Oncology. "Current Surgical Aspects of Cervical, Vulvar, and Vaginal Carcinoma", Jim S Bonorris, M.D., Program Directors, Los Angeles, California, February 1986, 9. Greater Baltimore Medical Centre. Colposcopy, Cervical and Vulvar Pathology and Gynecologic Laser surgery. "Surgical Options for Early Vulvar Cancer". James Dorsey, M.D., and Richard Reid, Course Directors, San Francisco, California, June 1986, 10. Royal College of Obstetricians and Gynecologists. Radical Management of Gynecological Malignancies. Lectures: a. Surgical Staging of Cervical Cancer, b. Management of Early Vulvar Cancer. Dr Pat Soutter, Course Director, London, England, April 1987, 11. International Society for the Study of Vulvar Disease. Vulvar Disease Symposium. Lectures: a. Individualization of Treatment for Vulvar Cancer, 2. Psychological Aspects of Vulvectomy. Dr Barry Kneal, Course Director, Broadbeach, Queensland. September 1987, 12. Royal College of Obstetricians and Gynaecologists. Ovarian Symposium, Chairman of Session on Primary Surgery, Professor F Sharp, Course Director, London, England, October 1987, 13. Royal Australian College of Obstetricians and Gynaecologists. Fifth Advanced Course. "Maximal Surgical Effort for Ovarian Cancer", Sydney, Australia, August 1988, 14. Tasmanian Gynaecological Cancer Support Group. Gynaecological Oncology Symposium. Lectures: a. Vulvar

Cancer, b. Ovarian Cancer, c. Sexuality and gynaecologic malignancy. Dr Don Marsden, Course Director, Hobart, Tasmania, November, 1988, 15. University of Massachusettes. Update in Gynecologic Oncology. Lectures: a. Recent modifications in the treatment of vulvar cancer, b. Second-look laparotomy. Richard E Hunter, M.D., Course Director Sturbridge, Massachusettes, October 1989, 16. European School of Oncology. Post Graduate Course on Gynecologic Oncology. Lectures: a. Surgical Management of cervical cancer, b. Surgical management of vulvar cancer, c. Surgical Management of endometrial cancer, d. Surgical Management of ovarian cancer. Course Directors: J Vermorken MD, J Aalders MD. Amsterdam, The Netherlands, September 1990, 17. University of Tennessee and Baptist Memorial Hospital. Lectures: a. Intraoperative Management of an unsuspected ovarian malignancy, b. Management of cervical carcinoma in pregnancy, c. Diagnosis and Management of early vulvar cancer. Course Director: Thomas G Stovall MD. Memphis, Tennessee. November 1990, 18. Royal Hospital for Women. Third Annual Conference. Lectures: a. Cervical Cancer in pregnancy, b. Radical surgery for ovarian cancer, c. Current management of vulvar cancer. Course Director: Neville F Hacker. Leura. New South Wales, April 1991, 19. University of Freiburg. International Postgraduate Symposium on Diagnosis and Therapy of Ovarian Cancer. Lectures: a. Surgical Staging for ovarian cancer, b. Cytoreduction for ovarian cancer. Course Director: Albrecht Pfleiderer M.D. Freiburg, Germany. November 1991, 20. European School of Oncology. Postgraduate Course on Gynecologic Oncology. Lectures: a. Surgery for endometrial cancer, b. Surgery for cervical cancer, c. Surgery for vulvar cancer, d. Surgery for ovarian cancer, e. Management of bowel obstruction. Course Directors: J. Vermorken MD, J. Aalders MD, Amsterdam, The Netherlands, September 6-11th 1992, 21. European School of Oncology. Curso, Sobre Oncologia Ginecologia. Lectures: a. Management of HPV and preinvasive cervical cancer, b. Surgery for cervical cancer, c. Surgery for endometrial cancer, d. Surgery for ovarian cancer. Course Directors: N. Einhorn MD, A. Arrighi MD. Buenos Aires, Argentina, October 506th, 1992, 22. European School of Oncology. Simposio International Cancer Genecologico. Lectures: a. Management of HPV and preinvasive cervical cancer, b. Surgery for cervical cancer, c. Surgery for endometrial cancer, d. Surgery for ovarian cancer. Course Directors: N. Einhorn MD, J.A. Pinotti, MD. San Paulo, Brazil. October 8-9th, 1992, 23. Gujarat Cancer Society. Update in Gynecologic Oncology. Lectures: a . Surgery for cervical cancer, b. Surgery for endometrial cancer, c. Surgery for ovarian cancer, d. Live demonstration of radical hysterectomy. Course Director: Dr Anila Kapadia, Ahmedabad, India. October 29-31st, 1992, 24. Cancer Institute of Madras and European School of Oncology. Postgraduate Course on Gynecologic Oncology. Lectures: a. Surgical procedures in cervical carcinoma, b. Implications of new FIGO Staging on surgical procedures, c. Surgical approach in ovarian cancer, d. Management of vulvar carcinoma. Course Directors: N. Einhorn MD, V. Shanta MD Madras, India. November 1-5th,1992. 25. Royal Hospital for Women. Update on Gynaecological Oncology. Lectures: a. Recent advances in cervical cancer. b. Implications of the new FIGO Staging for endometrial cancer, c. Current status of vulvar cancer. Course Director: Neville F Hacker, Leura, New South Wales. April 30th – 2nd May, 1993, 26. European School of Oncology. Postgraduate Course in Gynecologic Oncology. Lectures: a. Surgical management of cervical cancer, b. Surgery for endometrial cancer, c. Cytoreduction for ovarian cancer, d. Surgery for vulvar cancer. Course Directors: N. Einhorn MD, J. Vermorken MD, Orta, Italy. May 17-21st 1993, 27. Royal Australian College of Obstetricians and Gynaecologists. Postgraduate course on Gynaecologic Surgery. Lectures: a. Disseminated ovarian cancer, b. Residual ovary syndrome and ovarian remnant syndrome, c. Abdominal wound closure-pitfalls, practice and complications, d. Laparoscopic surgery-pitfalls and problems. Course Directors: R. Rome and B. Cutter. Canberra ACT Australia. November 1993, 28. European School of Oncology. Curso Internatinal de Ginecologia Oncologia. Lectures: a. Surgical management of cervical cancer, b. Surgery for endometrial cancer, c. Cytoreduction for ovarian cancer, d. Surgery for vulvar cancer.Course Directors: Dr J.G. de la Garza, Salazar National Cancer Institute, Mexico City. November 1993, 29. European School of Oncology. Curso de Actualizacion en Cancer Ginecologico. Lectures: a. Surgical management of cervical cancer, b. Surgery for endometrial cancer, c. Cytoreduction for ovarian cancer, d. Surgery for vulvar cancer.Course Director: Dr Jesus Garcia Colina Caracus, Venezula. November 1993, 30. European School of Oncology. Postgraduate Course on Gynaecological Oncology. Lectures: a. Surgical management of cervical cancer, b. Surgery for endometrial cancer, c. Cytoreduction for ovarian cancer, d. Surgery for vulvar cancer. Course Director: Dr Jan Vermorken, Amsterdam, The Netherlands. September 18-23, 1994, 31. International Society for the Sudy of Vulvo-vaginal Disease. Postgraduate Course. Lectures: a. Individualisation of treatment of early vulvar cancer, b. Strategies in advanced vulvar cancer. Course Director: Professor GR Di Paola, Buenos Aires, Argentina. September 1995, 32. Pelvic surgery for the General Gynaecologist. Lectures: a. The residual ovary and the ovarian remnant syndrome, b. Disseminated ovarian cancer, c. Abdominal wound closure: principles, practice and complications.Course Director: Mr Robert Rome, Melbourne, Australia. December 1995, 33. European School of Oncology. Postgraduate course on gynaecological oncology. Lectures: a. Surgery for vulvar cancer, b. Surgery versus radiation for early cervical cancer, c. Surgery for advanced cervical cancer, d. Surgery for advanced ovarian cancer. Course Directors: J Vermorken MD, N Einhorn MD Heemskerk, The Netherlands, September 1996, 34. International Society for the Study of Vulvo-vaginal Disease. Postgraduate Course. Lecture: Conservative vulvar surgery. Course Directors: L. Micheletti MD, M Sideri MD, Baveno, Italy September 1997. 35. Institute of Obstetrics and Gynaecology, Queen Charlotte's and Chelsea Hospital. Postgraduate Course on gynaecological oncology. Lecture: Managing patients with bulky positive lymph nodes. Course Drector: Dr Angus McIndoe, London, England. November 1997, 36. European School of Oncology. Postgraduate course on gynecological oncology. Lectures: a. Management of lymph nodes in vulvar cancer, b. Surgery for endometrial cancer, 3. Surgery for

ovarian cancer, 4. Management of germ cell tumours. Course Director: Ali Ayhan MD Hacettepe University, Ankara, Turkey. March 1998, 37. European School of Oncology. Postgraduate course on pelvic reconstruction. Lectures: a. Vaginal reconstruction in the fibrotic pelvis, b. Vulvar reconstruction. Course Directors: Peter Bosze, Lazlo Ungar. Budapest, Hungary. September 1998, 38. European School of Oncology. First Gynecologic Oncology Meeting of the New Millennium. Lectures: a. Surgical management of advanced and recurrent cervical cancer, b. Surgical management of advanced endometrial cancer, c. Initial versus interval debulking in advanced ovarian cancer, d. Update management of vulvar cancer. Course Director: Dr Ali Ayhan, Ismir, Turkey. April 2000.

NEVILLE FREDERICK HACKER 1944. január 16-án született Brisbane-ben, Queensland, Ausztrália. Jelenlegi címe: 59 Salisbury Road, Rose Bay, Sydney NSW 2029, Australia, Távbeszélő: (02) 9327 8942

VÉGZETTSÉGEK MB BS (1967), kiváló hallgató, University of Queensland M.D. (1993), University of New South Wales

SZAKMAI GYAKORLAT Royal Brisbane Hospital (általános orvosi gyakorlat), 1968.

ORVOSI BEOSZTÁSOK Rezidens tisztiorvos – Gympie Hospital, Queensland, 1969–1970, Orvosigazgató – Atherton Hospital, Queensland, 1971–1973, Gyakorló szülész-nőgyógyász szakorvos, 1974–1977 – Royal Brisbane Hospital, Royal Womens Hospital, Princess Alexandra Hospital.

ÖSZTÖNDÍJAK 1. Nőgyógyászati onkológiai ösztöndíjas, 1978–1980, University of California, Los Angeles (UCLA). Ennek keretében dolgozott: UCLA Medical Center, Cedars-Sinai Medical Center, Habor General/UCLA Medical Center, Martin Luther King Jr., Hospital.

AKADÉMIAI BEOSZTÁSOK Department of Obstetrics and Gynaecology, University of California at Los Angeles (UCLA), School of Medicine, Los Angeles, California, USA, – adjunktus (1980. július–1984. június), egyetemi docens (1984. július–1986. október), nőgyógyászati onkológiai igazgató (1985. április–1986. október), University of New South Wales, School of Medicine, Sydney, NSW, Ausztrália (1986. novembere óta), Royal Hospital for Women és a University of New South Wales oktató kórházai (Barker Street, Randwick NSW 2031, Ausztrália) – szülészeti-nőgyógyászati adjunktus, nőgyógyászati onkológiai igazgató (1986. novembere óta).

BIZOTTSÁGI TAGSÁG 1. Külföldi orvostanhallgatók vizsgáztatása, 1979, 2. Amerikai Szülészeti és Nőgyógyászati Bizottság, 1982, 3. Nőgyógyászati Onkológiai Szakoklevél (ACOG), 1983, 4. Nőgyógyászati Onkológiai Oklevél (RACOG), 1989

SZAKMAI JEGYZÉS 1. Kalifornia, USA: Nr. A34820, 2. New South Wales, Ausztrália: Nr. 045201H, 3. Queensland, Ausztrália: Nr. 045202, 4. ACT Regisztrációs szám: Nr. 3636

SZAKMAI SZERVEZETEK 1. Royal College of Obstetricians and Gynaecologist (tag: 1976, testületi tag: 1988), 2. Sims Black (utazóprofesszor: 1999), 3. Royal Australian & New Zealand College of Obstetricians and Gynaecologists (alapító tag: 1979. testületi tag: 1986. okleveles nőgyógyász onkológus: 1988), 4. Western Association of Gynaecologic Oncologists (tag: 1982–1996), 5. American College of Obstetricians and Gynaecologists (testületi tag: 1983), 6. International Society for the Study of Vulvar Disease (testületi tag: 1983, az Onkológiai Bizottság elnöke: 1995–1997), 7. American College of Surgeons (testületi tag: 1984), 8. Society of Gynaecologic Oncologists (tag: 1984), 9. International Gynaecologic Cancer Society (alapító tag: 1987, végrehajtó bizottság tagja: 1987–1993, elnökhelyettes: 1991–1993, választott elnök: 1993–1995, elnök: 1995–1997), 10. Australian Society of Gynaecological Oncologists (tag: 1987 óta), 11. American Society of Clinical Oncologists (tag: 1987–1999), 12. Clinical Oncology Society of Australia (tag: 1988, nőgyógyászati szekció elnöke: 1995–1997), 13. International Society of Gynaecological Pathologists (társtag: 1988–1999), 14. Society of Pelvic Surgeons (tag: 1998 óta), 15. Argentinian Association of Gynaecologic Oncologist (tiszteletbeli tag: 1999 óta).

UCLA BIZOTTSÁGOK a. Intenzív Ellátási Egység orvosigazgatója (1980, a bizottság elnöke: 1981–1982 között), b. Orvosi Kockázatkezelő Bizottság UCLA School of Medicine (1981–1984), c. Orvosi Följegyzések Bizottsága – UCLA School of Medicine (1981–1984), d. Akadémiai Testület Bizottsága – Szülészeti és Nőgyógyászati Osztály (1981–1986), e. Adminisztratív Költségvezési Bizottság – Szülészeti és Nőgyógyászati Osztály (1981–1983, elnök: 1983–1985), f. Orvostanhallgatók Oktatási Bizottsága (szülészet-nőgyógyászat) (elnök: 1982–1986), g. Oktatáspolitikai és Tantervi Bizottság – UCLA School of Medicine (1984 július–1986), h. Végrehajtó Bizottság – Szülészeti és Nőgyógyászati Osztály (1985–1986), i. Végrehajtópolitikai Bizottság – Jonsson Cancer Center (1985–1986), j. Szövettani Bizottság – UCLA School of Medicine (1984–1986).

NEMZETI ÉS NEMZETKÖZI BIZOTTSÁGOK 1. Méhnyak, Szeméremtest és Hüvely Bizottság – Gynaecologic Oncology Group, USA (1982–1986), 2. Mikroinvazív Szeméremtest-rák Munkacsoport – International Society for the Study of Vulvar Disease, 1983–1986, 3. Dr. A. P. M. Heintz Orvosi Témabizottságai – Előrehaladott petefészekrák: Sebészeti ellátás és kórjóslat, Leideni Egyetem, Hollandia 1985. június 5., 4. Szervezőbizottság – 3rd International Congress on Gynaecological Oncology, London, Anglia, 1985. szeptember, 5. International Gynaecologic Cancer Society (Kormányzóbizottság tagja: 1985–1986; Programbizottság tagja: 1987, 1989, 1993, 1995,

1997, 1999; A Programbizottság elnöke: 1991; A Szervezőbizottság elnöke: 1991; Irányvonal Bizottság elnöke: 1999 óta, 6. Méhnyak-kísérleti Bizottság elnöke; Clinical Oncology Society of Australia, 1988–1998), 7. Méhnyálkahártya- és Szeméremtest-kísérleti Bizottságok – Clinical Oncology Society of Australia (1987–1998), 8. Szeméremtest Melanoma Jegyzék elnöke – International Society for the Study of Vulvar Disease (1988–1990), 9. RACOG Onkológiai Bizottság (tag: 1988–1998, elnök: 1992–1996), 10. New South Wales Állam Onkológiai Tanácsadó Bizottsága (1989–1994), 11. RACOG Nőgyógyászati Onkológiai Vizsgálóbiztos (tag: 1989 óta; vizsgálóbiztosok elnöke: 1992 óta), 12. Nemzetközi Méhnyak-citológiai Minőségbiztosítási Munkacsoport (tag: 1993–1997), 13. Ausztrál Felnőtt Női Egészségtanács (tag: 1997–1998), 14. FIGO Onkológia Szakértői Tanácsadó Testület (tag: 1997 óta).

SZERKESZTŐBIZOTTSÁGI TAGSÁG 1. International Gynecologic Cancer Journal, területi szerkesztő (Csendes-óceáni térség): 1989–2000, 2. Gynecologic Oncology, 1992–1999

ÖSZTÖNDÍJAK 1. CA 13630 NIH-ösztöndíj: Gynaecologic Oncology Group, 1981–1983, vezető kutató munkatárs (75,000 USD/év), 2. CA 16042 NIH-ösztöndíj, UCLA Jonsson Comprehensive Cancer Center Core Grant, A petefészekrák kezelési eljárásai a Megyei Kórházakban, 1982–1983, vezető kutató munkatárs (19,700 USD) 3. California Institute for Cancer Research (CA16042-08), A hasüregben elhelyezkedő, hasüregi Corynebacterium parvum petefészekrák esetén, 1981–1982, vezető kutató munkatárs (18,385 USD), 4. CA18630-13 NIH-ösztöndíj, Gynaecologic Oncology Group, 1984–1988, vezető kutató (350,888 USD) 5. Essex Laboratories, Hasüregi interferon petefészekrák esetén, 1988–1989, vezető kutató munkatárs (30,000 USD 2 évig), 6. Government Employees Medical Research Fund, 1988–1989, Az interferon immunológiai hatásai petefészekrák esetén, vezető kutató munkatárs (46,000 USD), 7. 911081 NHMRC ösztöndíj, Esetellenőrzött tanulmány a petefészekrákról, kutató munkatárs (280,000 USD), 8. 921138 NHMRC ösztöndíj, A méhnyakrák sugár- és a gyógyszerkezelésének véletlenszerűen kiválasztott beteganyaggal dolgozó összehasonlító tanulmánya, vezető kutató (28,134 USD/év 3 évig, 1992–1994)

KÖZLEMÉNYEK – lásd az angol nyelvű ismertetést.

CONTRIBUTIONS – lásd az angol nyelvű ismertetést.

NEMZETI PROTOKOLLOK

1. Hacker NF (protokoll-elnök). Primary cytoreductive surgery for ovarian carcinoma – a prospective study. Protocol-80, Gynecologic Oncology Group.

2. Hacker NF, Montana G (a tanulmány elnökei). Pre-operative chemoradiotherapy for advanced vulvar cancer. Protocol 37-R, Gynecologic Oncology Group.

3. Berek JS, Hacker NF (a tanulmány elnökei). Intraperitoneal interferon for persistent ovarian cancer. Gynecologic Oncology Group Study.

4. Hacker NF, Campbell JJ (társelnökök). Chemoradiation for advanced cervical cancer. A Clinical Oncology Society of Australia jegyzőkönyve. Életbe lépés: 1992. augusztus.

5. Hacker NF (a tanulmány elnöke). Systemic pelvic and para-aortic lymphadenectomy versus resection of bulky nodes only for advanced ovarian cancer. Életbe lépés: 1992. augusztus.

FŐBB ELŐADÁSOK – lásd az angol nyelvű ismertetést

ABSZTRAKTOK – lásd az angol nyelvű ismertetést

KÖNYVFEJEZETEK – lásd az angol nyelvű ismertetést

KÖNYVEK

1. Hacker NF, Moore JG, szerk. Essentials of obstetrics and gynecology. WB Saunders Co, Philadelphia, PA. (a spanyol kiadás Emalsa SA, Madrid, Spanyolország gondozásában készült). 2. kiad. 1992. 3. kiad. 1997.

2. Berek JS, Hacker NF, szerk. Practical gynecologic oncology. Williams and Wilkins, Baltimore, MD, 1989. 2. kiad. 1994. 3. kiad. 2000.

TOVÁBBKÉPZÉSEK – lásd az angol nyelvű ismertetést

BEN J. SMIT, M.D.

First Names: Berend Jakobus
Surname: Smit
Date of birth: 16 November 1935
Nationality: South African
Marital status: Married
Languages: English and Afrikaans

EDUCATION

1953: Matriculation with a first class pass.
1959: Obtained the degree M.B., Ch.B. at the University of Pretoria, with distinction in diseases of the Ear, Nose and Throat.
1961–63: University of Pretoria.
1963–71: General Practitioner in general practice, first in the rural town of Alicedale near Port Elizabeth and then in Port Elizabeth itself.
1971–75: Registrar, Department of Radiotherapy, Groote Schuur Hospital, Cape Town, and obtained the degree M.Med. (Rad.T.) in 1975.
1975–78: Senior Radiotherapist, Department of Radiotherapy, Provincial Hospital, Port Elizabeth.
May 1978: Professor and Head, Department of Radiotherapy, Faculty of Medicine, University of Stellenbosch, Tygerberg.

PUBLICATIONS

1. Smit BJ. Correspondence: Combined approach to carcinoma. S Afr Med J 1977; 51:451.

2. Van Der Spuy S, Levin W, Smit BJ. The role of mastectomy in locally advanced breast cancer. S Afr Med J 1977; 52:716-717.

3. Van Der Spuy S, Levin W, Smit BJ. Correspondence: The efficacy of chemotherapy in the treatment of breast cancer. S Afr Med J 1978; 53:390.

4. Van Der Spuy S, Levin W, Smit BJ, GRAHAM T, McQuaide JR. Peritoneoscopy in the management of breast cancer. S Afr Med J 1978; 54:402-403.

5. Smit BJ. Correspondence: More about mammography. S Afr Med J Journal 1978; 54:846.

6. Smit B, Stjernswärd J, Dowdle E, Sealy R, Wilson E, Beatty D, Jacobs P, Bennett B. The lymphocyte-monocyte ratio: B- and T-cell ratio after radiotherapy, chemotherapy and surgery. Int J Radiat Oncol Biol Phys 1979; 5:1841-1847.

7. Smit BJ. Radioterapie en onkologie – wat was die belangrikste ontwikkelings in niechirurgiese behandeling van kanker die afgelope kwarteeu? 25 Jarige Gedenkuitgawe van Tygerland 1981.

8. Smit BJ. Correspondence: The reversibility of cancer. S Afr Med J 1982; 62:716.

9. Smit BJ. Fundamental aspects of the radiotherapy of cancer. Cancer 1983.

10. Smit BJ. Correspondence: The treatment of incurable cancer. S Afr Med J 1983; 63:350.

Address correspondence to:

Ben J. Smit, M.D.
Department of Radiation Oncology,
Faculty of Medicine
University of Stellenbosch
P.O. Box 19063, Tygerberg 7505, Republic of South Africa
Távbeszélő (27 021) 938 5992 Távmásoló (27 021) 931 0804
E-posta BJSM@sun.ac.z

11. Smit BJ. S.A. has made major advances in cancer treatment. The Star 1983.

12. De Wet JJ, Smit BJ. The role of ultrasound in the management of cervical carcinoma. S Afr Med J 1983; 64:381-383.

13. Smit BJ. Cancer of the uterus. S Afr J Cont Med Educat 1984.

14. Du Toit DF, Heydenrych JJ, Smit BJ, Zuurmond T, Louw G, Laker L, Els D, Wolfe-Coote S, Van Der Merwe EA, Groenewald WA. Segmental pancreatic allograft survival in primates treated with total body or lymphoid irradiation and pre-operative blood transfusions. Transplantation 1984; 37:325-326.

15. Du Toit DF, Heydenrych JJ, Smit BJ, Zuurmond T, Louw G, Laker L, Els D, Wolfe-Coote S, Van Der Merwe EA, Groenewald WA. Segmental pancreatic allograft survival in pancreatectomized baboons treated with total body or lymphoid irradiation and preoperative blood transfusions. Transplant Proceed 1984; 16:804-806.

16. Du Toit DF, Heydenrych JJ, Smit BJ, Louw G, Zuurmond T, Laker L, Els D, Weideman A, Wolfe-Coote S, Van Der Merwe EA, Groenewald WA. Experimental vascularized segmental pancreatic and islet transplantation in the baboon. World J Surg 1984; 8:236-243.

17. Du Toit DF, Heydenrych JJ, Smit BJ, Zuurmond T, Louw G, Laker L, Els D, Davids H, Weideman A, Wolfe-Coote S, Van Der Merwe E, Groenewald W. Prolongation of baboon pancreas allografts with total lymphoid irradiation (TLI). S Afr J Surg 1984; 22:150.

18. Du Toit DF, Heydenrych JJ, Smit BJ, Louw G, Zuurmond T, Laker L, Els D, Weideman A, Wolfe-Coote S, Van Der Merwe E, Groenewald A. Segmental pancreatic allograft survival in baboons treated with combined irradiation and cyclosporin (CSA). S Afr J Surg 1984; 22:151.

19. Gelderblom D, Smit BJ, Böhm L. Effect of irradiation and endogenous nucleases on rat liver chromatin. Radiat Res 1984; 99:363-371.

20. Du Toit DF, Heydenrych JJ, Smit BJ, Louw G, Zuurmond T, Laker L, Els D, Weideman A, Wolfe-Coote S, Van Der Merwe EA, Groenewald WA. Segmental pancreatic allograft survival in baboons treated with combined irradiation and cyclosporine: A preliminary report. Surgery 1985; 97:447-453.

21. Du Toit DF, Heydenrych JJ, Smit BJ. Die Hematologiese en Pankreatiese Endokriene Afwykings na Ioniserende Bestraling: 'n Eksperimentele Studie. Geneeskunde 1986; 28:83-89. Pryswennende artikel – Mer-National Prys gesamentlik toegeken.

22. Heussen C, Nackerdien Z, Smit BJ, Böhm L. Irradiation damage in chromatin isolated from V-79 chinese hamster lung fibroblasts. Radiat Res 1987; 110:84-94.

23. Smit BJ, Du Toit JP, Groenewald WA. An indwelling intrauterine tube to facilitate intracavitary radiotherapy of carcinoma of the cervix. Br J Radiol 1989; 62:68-69.

24. Schmitt G, Mills EED, Levin V, Pape H, Smit BJ, Zamboglou N. The role of neutrons in the treatment of soft tissue sarcoma. Cancer 1989; 64:2064-2068.

25. Smit BJ. Highly active at close quarters. Nuclear Active (Int J Atomic Energy Corp) 1989; 40:13-16.

26. Smit BJ. Radiotherapy: enjoying advances on all major fronts. Hospital Supplies January 1990; 9 and 12.

27. Smit BJ. Occupational exposure of women of reproductive capacity with special reference to pregnant radiographers – new recommendations. S Afr Med J 1990; 77:432-433.

28. Smit BJ. Die Geskiedenis van die Tygerbergse Radioterapie Departement. Tygerland 1990; 12(2):5-7.

29. Smit BJ. HDR brachytherapy for cervical carcinoma using the indwelling tube. Act, Select Brachyther J 1991; 5:28-32.

30. Mills EED, Levin CV, Smit BJ, Werner ID, Jones D, Van Wyk CE. Editorial: Neutron therapy – clinical considerations. S Afr Med J 1991; 79:62-63.

31. Smit BJ. Prospects for proton therapy in carcinoma of the cervix. Int J Radiat Oncol Biol Phys 1992; 22:349-353.

32. Schmitt G, Mills EED, Levin V, Smit BJ, Boecker H, Pape H. Radiotherapy of aggressive fibromatosis. Eur J Cancer 1992; 28A:832-835.

33. Smit BJ. Correspondence: One versus two or more brachytherapy applications in cervical cancer. Int J Radiat Oncol Biol Phys 1992; 23:477.

34. Smit BJ. Editorial: Improving the therapeutic ratio? Spec Med 1993; 15:6.

35. Smit BJ, Van Der Merwe A. Hydroxyurea and cisplatinum as radiosensitizers in advanced carcinoma of the cervix. Spec Med 1993; 15:8-20.

36. Smit BJ, Vernimmen F. Drug management of radiation side effects. Spec Med 1993; 15:40-49.

37. Smit BJ, Van Der Merwe A. Preliminary results of a prospective randomized controlled clinical trial with hydroxyurea and cisplatinum as radiosensitizers in advanced carcinoma of the cervix. Radiat Oncol Invest 1993; 1:117-125.

38. Smit BJ. Technical note: Design features of the indwelling intrauterine tube for high dose rate intracavitary therapy for carcinoma of the cervix and some hints on its optimal use. Br J Radiol 1993; 66:1042-1043.

39. Smit B, Böhm L. Correspondence: Cyclotron future. Nature 1994; 367:676.

40. Smit BJ. Editorial: Lethal exposure. S Afr Med J 1994; 84:780.

41. Smit BJ. Editorial: Morphine for cancer pain. S Afr Med J 1994; 84:788.

42. Smit BJ. Editorial: Primary health care and attitudes. S Afr Med J 1994; 84:869.

43. Böhm L, Smit BJ. Editorial: Cancer therapy at the faure cyclotron – a case for the continuation of high-tech medicine. S Afr Med J 1995; 85:116-117.

44. Stannard C, Vernimmen F, Jones D, Wilson J, Van Wijk L, Brennan S, Schreuder N, Symons J, Levin V, Mills E, Alberts A, Werner D, Smit B, Schmitt G. Neutron Therapy Program at the National Accelerator Centre, South Africa: preliminary results. Radiat Oncol Invest 1995; 2:245-255.

45. Smit BJ. Editorial: Safety and nutritional adequacy of irradiated food. S Afr Med J 1995; 85:544.

46. Smit BJ, Kiley JE, Schmitt G. Radiation oncology needs in South Africa. Hospital Supplies August 1995; 3-8.

47. Albrecht CF, Kruger PB, Smit BJ, Freestone M, Gouws L, Miller R, Van Jaarsveld PP. The pharmacokinetic behaviour of hypoxoside taken orally by patients with lung cancer in a phase I trial. S Afr Med J 1995; 85:861-865.

48. Smit BJ, Albrecht CF, Liebenberg RW, Kruger PB, Freestone M, Gouws L, Theron E, Bouic PJD, Etsebeth S, Van Jaarsveld PP. A phase i clinical trial of hypoxoside as an oral prodrug for cancer therapy – absence of toxicity. S Afr Med J 1995; 85:865-870.

49. Smit BJ. Brachyradiotherapy in clinical practice. Hospital Supplies June 1996; 3-14.

50. Smit BJ. Editorial: 'Translational research', the 'linker laboratory' or a paradigm shift in cancer care? S Afr Med J 1996; 86:388.

51. Stannard CE, Vernimmen FJ, Jones DTL, Van Wijk AL, Brennan SM, Visser AM, Johnson CA, Wilson JAG, Murray EA, Levin CV, Mills EED, Alberts A, Werner ID, Smit BJ, Schmitt G. The neutron therapy clinical programme at the National Accelerator Centre (NAC). Results of fast neutron therapy. Bull Cancer/Radiother 1996; 83:87-92.

52. Smit BJ. Editorial: cancer incidence. Understand Oncol 1997; 8:30.

53. Smit BJ. Brachytherapy in the Management of carcinoma of the cervix. Spec Med 1998.

54. Smit BJ, Beck L, Roth SL. Gynäkologische Tumoren: Zervixkarzinom. In: Onkologie systematisch: Diagnostik und interdisziplinäre Therapie maligner Tumoren. UNI-MED Verlag, International Medical Publishers, Germany 1999.

55. Smit BJ. Radiation related prognostic factors in radiation oncology. Distinguished Expert Series. Eur J Gynaecol Oncol 2000; 7-12.

56. Michie J, Janssens D, Cilliers J, Smit BJ, Böhm L. Assessment of electroporation by flow cytometry. Cytometry 2000; 41:96-101.

57. Vernimmen FJ, Harris JK, Wilson JA, Melvill R, Smit BJ, Slabbert JP. Stereotactic proton beam therapy of skull base meningiomas. Int J Radiat Oncol Biol Phys 2001; 49(1):99-105.

PUBLISHED ABSTRACTS OF PUBLICATIONS

1. Smit BJ. Combined approach to carcinoma. S Afr Med J 1977; 51(4):451. Published as Oncology Abstract in IRL 1978: 137.

2. Smit BJ. Prospects for proton therapy in carcinoma of the cervix. Int J Radiat Oncol Biol Phys 1992; 22:349-354. Published as Oncology Abstract in Clinical Digest Series 1992: 14-15.

PUBLISHED PROCEEDINGS OF INTERNATIONAL CONGRESSES

1. Smit BJ. A New Technique for High Dose Rate Intracavitary Brachytherapy. Gammamed: Proceedings of the First International Meeting of GammaMed Users. Evansville, Indiana, U.S.A. 1986: 78-88.

2. Smit BJ. Clinical Radiobiological Data in Stage IB Carcinoma of the Cervix with 4 Different Fractionation Schemes. Gammamed: Proceedings of the Second Annual International High Dose Rate Remote Afterloading Symposium. Baltimore, Maryland, U.S.A. 1987: 45-49.

3. Smit BJ. Clinical Results in Patients with Stage IB, IIB and IIIB Carcinoma of the Cervix Treated with the Gammamed II. Gammamed: Proceedings of the Second Annual International High Dose Rate Remote Afterloading Symposium. Baltimore, Maryland, U.S.A. 1987: 135-142.

4. Smit BJ. Van der Merwe EJ. Target Cell Theory and Rectal Protection During High Dose Rate Intracavitary Therapy for Carcinoma of the Cervix. Gammamed: Proceedings of the Fourth International High Dose Rate Remote Afterloading Symposium. Düsseldorf, Germany, 1989: 37-45.

5. Smit BJ. Groenewald WA. The Role of the Volume of Urine in the Bladder and the Effect on Dose Distribution in the Pelvic Organs with the Indwelling Intra-Uterine Tube Technique for Intracavitary Radiotherapy of Carcinoma of the Cervix. Gammamed: Proceedings of the Fifth International High Dose Rate Remote Afterloading Conference. "25 Years of High Dose Rate Remote Afterloading". Norfolk, Virginia, U.S.A. 1990: 61-74.

6. Smit BJ. Van der Merwe AP, Deale J. The role of radiotherapy in Figo stage I and II endometrial carcinoma, with special reference to high dose rate remotely controlled afterloading. Proceedings of the 1st Budapest Symposium on Recent Advances in Gynaecological Oncology. Budapest, Hungary, 1990:26-32.

7. Smit BJ. The Importance of Fractionation in HDR Brachytherapy. Gammamed: Proceedings of the Sixth International High Dose Rate Remote Afterloading Conference. Budapest, Hungary, 1991: 33.

8. Smit BJ. Radiotherapy as primary therapy for endometrial carcinoma. Proceedings of the Joint Course of the European Institute of Oncology, Milan, and the Hungarian Society of Gynecologic Oncologists, Budapest. Nogyogyaszati Onkologia, Hungarian Journal of Gynecologic Oncology 1996;2:147-149.

9. Smit BJ. Radiation therapy versus surgery for early stage carcinoma of the cervix. Proceedings of the Joint Course of the European Institute of Oncology, Milan, and the Hungarian Society of Gynecologic Oncologists, Budapest. Nogyogyaszati Onkologia, Hungarian Journal of Gynecologic Oncology 1996;2:167-170.

10. Smit BJ. Du Toit GC. The management of advanced and recurrent carcinoma of the cervix. Proceedings of the Joint Course of the European Institute of Oncology, Milan, and the Hungarian Society of Gynecologic Oncologists, Budapest. Nőgyógyászati Onkologia, Hungarian Journal of Gynecologic Oncology 1996;2:180-182.

PAPER / POSTER PRESENTATIONS AT INTERNATIONAL CONGRESSES (NOT PUBLISHED AS CONGRESS PROCEEDINGS)

1. Smit BJ. Prospects for proton therapy in carcinoma of the cervix in conjunction with a special intracavitary technique. Particle Therapy Oncology Group. NIH, Crow Plaza, USA, 1989.

2. Smit BJ. A two-minute update on proton therapy programme at National Accelerator Centre in the Cape. XIIth Proton Therapy Co-operative Group Meeting: Workshop on Proton Gantries and Beam Delivery Systems. Loma Linda, California, USA, 1990.

3. Smit BJ. Clinical trial: International presentation of 'Zoladex' vs 'Zoladex' + Flutamide in the treatment of advanced prostate cancer. 15th International Cancer Congress. Hamburg, Németország, 1990.

4. Michie J, Serafin AM, Smit BJ. Modification of mammalian cell survival by polyunsaturated fatty acids, post irradiation. 15th International Cancer Concress. Hamburg, Németország, 1990.

5. Smit BJ. A high dose rate intra-cavitary therapy (HDR ICT) for the uterine cervix, equivalent to low dose rate (LDR)? UICC Congress. Hamburg, Németország, 1990.

6. Smit BJ. A technique suitable for giving 16 fractions for early stage IB carcinoma of the cervix with 192IR high dose rate afterloading. 3rd International Afterloading Buchler User's Meeting. Orebro, Svédország, 1990.

7. Michie J, Serafin AM, Smit BJ. Comparison of thermal sensitivity and radiosensitivity of normal and tumour cells after exposure to pufas. 38th Annual Meeting of the Radiation Research Society and 10th Annual Meeting of the North American Hyperthermia Group. New Orleans, Louisiana, USA, 1990.

8. Schmitt G, Mills E, Levin V, Smit BJ, Vernimmen F. Neutron therapy at NAC: Clinical experience. EPAC 90 Medical Satellite Meeting. Nice, Franciaország, 1990.

9. Smit BJ. Hydroxyurea and cisplatin as radiosensitizers together with teletherapy and HDR fractionated intracavitary therapy versus radiation alone for stage IIB and III carcinoma of the cervix. 7th International Brachytherapy Conference and Gammamed Users Meeting. Luzern, Svájc, 1992.

10. Smit BJ. Treatment strategy in cervical cancer. Update course in gynaecologic radiotherapy. Tumorzentrum, Dusseldorf, Németország, 1993.

11. Smit BJ. 192Ir-HDR-intracavitary radiotherapy of cervix cancer: The Tygerberg Experience. 3rd European Interuniversity Symposium on Advances in the Diagnosis and Treatment of Gynaecological Cancer. Naousa, Macedonia, Görögország, 1993.

12. Smit BJ. Particle therapy (neutrons and protons) at the National Accelerator Centre (NAC) at Faure. 16th African Health Sciences Congress. Nairobi, Kenya, 1995.

13. Smit BJ. Comparison of the indwelling intra-uterine tube and Foley's bulb with tandem ring and tandem ovoid systems. 8th International Brachytherapy Conference and Gammamed Users Meeting. Linz, Ausztria, 1995.

14. Johnson CA, Stannard CE, Vernimmen F, Werner ID, Smit B. The Faure experience of neutron irradiation for irresectable malignant melanoma. 4th World Conference on Melanoma. Sydney, Ausztrália, 1997.

15. Smit BJ, Groenewald WA. Radiosurgery and constraints in dose-volume relationships. 11th International Meeting of Gynaecological Oncology, Budapest, 1999.

PAPER / POSTER PRESENTATIONS AT NATIONAL CONGRESSES

1. Smit BJ. The influence of radiotherapy on some cells of the immune system. Congress of the S.A. Society of Radiotherapists, 1974.

2. Smit BJ. The influence of a single dose of 50 mg/kg cyclophosphamide on B-cell killing and other cells of the immune system. Congress of the S.A. Society of Radiotherapists, 1975.

3. Smit BJ. The current status of immunotherapy. Congress of the S.A. Society of Radiotherapists, 1977.

4. Smit BJ. What is meant by high dose in radiotherapy? Congress of the S.A. Society of Radiotherapists, 1981.

5. Smit BJ. High dose rate intracavitary treatment for carcinoma of the cervix. 7th National Congress of Radiotherapy and Oncology. Durban, 1982.

6. Smit BJ. Palliative radiotherapy for carcinoma of the oesophagus. Oesophageal Symposium. Johannesburg, 1983.

7. Smit BJ. High dose rate intra-cavitary technique for carcinoma of the cervix. Gynaecological Oncology Symposium. Cape Town, 1983.

8. Smit BJ. Malignant melanoma: surgical approach and management: recurrence. Congress on Operational Techniques in General Surgery. Cape Town, 1984.

9. Smit BJ. Holography in proton therapy planning. MRC Symposium on Nuclear Particle Accelerators in Medicine. Sea Point, 1986.

10. Smit BJ. Gynaecological brachytherapy: towards a rational approach. 10th National Radiotherapy Congress. Johannesburg, 1986.

11. Smit BJ. A comparison of the radiobiological effects of conventional radium treatment of the uterine cervix and various high dose rate fractionation schemes with 192iridium. 10th National Radiotherapy Congress. Johannesburg 1986.

12. Smit BJ. Intracavitary radiotherapy. Second Gynaecological Oncology Congress. Cape Town, 1987.

13. Smit BJ. Panel discussion: gestational trophoblastic disease. Second Gynaecological Oncology Congress. Cape Town, 1987.

14. Smit BJ. Intraluminal therapy in bronchial cancer. 1st Congress of the South African Lung Cancer Study Group. Johannesburg, 1987.

15. Smit BJ. The role of total nodal irradiation for immunosuppression in organ transplant. 11th National Congress of the S.A. Society of Radiotherapists. Mpekweni, 1987.

16. Smit BJ. A correlation of early and late effects and the influence of the number of fractions in patients with stage IB carcinoma of the cervix treated with an indwelling intra-uterine tube and the gammamed ii high dose rate afterloading machine. 11th National Congress of the S.A. Society of Radiotherapists. Mpekweni, 1987.

17. Smit BJ. An analysis of the acute reactions of the first 600 patients with carcinoma of the cervix treated with an indwelling intra-uterine tube and the gammamed ii high dose rate afterloading machine. 11th National Congress of the S.A. Society of Radiotherapists. Mpekweni, 1987.

18. Smit BJ. Dosimetry in carcinoma of the cervix. 12th National Congress of the S.A. Society of Radiotherapists. Thaba'Nchu, 1988.

19. Smit BJ. The influence of bladder volume in high dose rate intracavitary therapy for carcinoma of the cervix. Third Congress and Intensive Course in Gynaecologic Oncology. Bloemfontein, 1989.

20. Smit BJ. The role of radiotherapy in endometrial carcinoma. 13th National Congress of Radiotherapy and Oncology. Wild Coast, Transkei, 1990.

21. Smit BJ. Dosimetric consideration during high dose rate intracavitary therapy for carcinoma of the cervix. 13th National Congress of Radiotherapy and Oncology. Wild Coast, Transkei, 1990.

22. Smit BJ. The role of radiotherapy in endometrial carcinoma. 3rd National Scientific Congress of the South African Society of Medical Oncology. Johannesburg, 1990.

23. Smit BJ. The management of advanced carcinoma of the uterine cervix. 4th S.A. Congress of Gynaecologic Oncology. Pretoria, 1991.

24. Smit BJ. Hydroxyurea and cisplatin as radiosensitizers together with teletherapy and HDR fractionated intracavitary therapy versus radiation alone for stage IIB and III carcinoma of the cervix. Combined Congress of the South African Society of Medical Oncologists and the South African Society of Radiotherapists. Drakensberg Sun, Natal, 1992.

25. Michie J, Palmer M, Serafin AM, Smit BJ. Modulation of radiation response of normal and tumour cells by pre- or post-irradiation exposure to gamma linolenic acid. Combined Congress of the South African Society of Medical Oncologists and the South African Society of Radiotherapists. Drakensberg Sun, Natal, 1992.

26. Michie J, Mills EED, Palmer M, Serafin AM, Smit BJ. Prediction of human tumour response to radiation by in vitro assay of biopsies. Combined Congress of the South African Society of Medical Oncologists and the South African Society of Radiotherapists. Drakensberg Sun, Natal, 1992.

27. Michie J, Smit BJ, Bruins K, Van Der Merwe A, Du Toit G. Flow cytometric analyses of cervical carcinoma biopsies. 15th National Radiotherapy Congress. Waterfront, Cape Town, 1993.

28. Michie J, Smit BJ, Albrecht C. The effect of rooperol and cobalt gamma radiation on the in vivo growth of B16-BL6 mouse melanoma. 15th National Radiotherapy Congress. Waterfront, Cape Town, 1993.

30. Stannard C, Mills E, Vernimmen F, Levin V, Kranold D, Werner ID, Smit BJ. Fast neutron therapy improves local control of malignant salivary gland tumours. 15th National Radiotherapy Congress. Waterfront, Cape Town, 1993.

31. Alberts AS, Smit BJ, Louw WK, Van Rensburg AJ, Iturralde M, Dormehl IC, Beverley GH, Engelbrecht AJ, Van Beek A. Samarium-153 EDTMP(SM-153-EDTMP) in the treatment of resistant cancer metastases in bone. 15th National Radiotherapy Congress. Waterfront, Cape Town, 1993.

32. Brennan S, Levin V, Hacking A, Mills E, Gudgeon A, Bental N, Barry L, Greeff L, Daniel V, Stannard C, Werner ID, Smit BJ. Neutron irradiation in locally advanced breast carcinoma. 15th National Radiotherapy Congress. Waterfront, Cape Town, 1993.

33. Van Wijk AL, Van Der Merwe AP, Levin VC, Stannard CE, Smit BJ, Werner ID. A phase II study of high energy neutrons in uterine sarcomas – a preliminary report. 15th National Radiotherapy Congress. Waterfront, Cape Town, 1993.

34. Smit BJ. Experience with afterloading techniques in management of cervical cancer. 5th Gynaecological Oncology Congress. Waterfront, Cape Town, 1994.

35. Alberts A, Smit BJ, Bruins K, Mouton R. Samarium EDTMP in carcinoma of the prostate (hormone escaped metastatic CA {HEPC}). Urological Oncology Symposium. UCT Waterfront Campus, Cape Town, 1994.

36. Smit BJ, Albrecht CF, Liebenberg RW, Freestone M, Gouws L, Theron E, Bouic PJD. Phase I clinical trial of hypoxoside as an oral prodrug for cancer therapy. Annual Conference of the Pharmacology Society, UCT. Sea Point, 1994.

37. Stannard C, Vernimmen F, Van Wijk L, Brennan S, Visser AM, Johnson C, Wilson J, Levin V, Mills E, Alberts A, Werner D, Smit B, Schmitt G, Kranold D, Murray E, Gudgeon A, Bental N, Abratt R, Kiley J, Van Der Merwe A, Keuler R, Goedhals L, Krawitz H, Donde B, Bairston S, Friediger D, Dreyer A, Reddi V, Morgan M. The National Neutron Therapy Programme update. Combined congress of the South African Society of Medical Oncologists and the South African Society of Radiation Oncologists. Thaba Nchu Sun, Bloemfontein, 1995.

38. Johnson CA, Stannard CE, Vernimmen F, Mills E, Werner ID, Smit B. The Faure experience of neutron irradiation for irresectable malignant melanoma. Combined congress of the South African Society of Medical Oncologists and the South African Society of Radiation Oncologists. Thaba Nchu Sun, Bloemfontein, 1995.

39. Vernimmen F, Wilson J, Stannard C, Schreuder N, Symons J, Jones D, Hough J, Smit B. Proton therapy at the National Accelerator Centre : an overview. Combined congress of the South African Society of Medical Oncologists and the South African Society of Radiation Oncologists. Thaba Nchu Sun, Bloemfontein, 1995.

40. Du Toit GC, Smit BJ. Curative radiotherapy in stage III cervical carcinoma: A travesty in terms? Combined congress of the South African Society of Medical Oncologists and the South African Society of Radiation Oncologists. Thaba Nchu Sun, Bloemfontein, 1995.

41. Smit BJ, Van Der Merwe AP, Van Der Merwe EJ, Michie J, Cloete J. Preliminary report on a hyperthermia project for carcinoma of the uterine cervix. Combined congress of the South African Society of Medical Oncologists and the South African Society of Radiation Oncologists. Thaba Nchu Sun, Bloemfontein, 1995.

42. Smit BJ, Van Der Merwe AP, Mouton R. A critical appraisal of the use of "ovoids", "rings" and "line sources" in brachytherapy for carcinoma of the cervix. Combined congress of the South African Society of Medical Oncologists and the South African Society of Radiation Oncologists. Thaba Nchu Sun, Bloemfontein, 1995.

43. Smit BJ, Siebrits GA. A new treatment radiotherapeutic technique for carcinoma of the penis. SASMO/SASRO Congress, Holiday Inn Crown Plaza, Durban, 1997.

44. Smit BJ, Van Der Merwe AP, Vernimmen F, Groenewald W, Visser A, Apffelstaed J, Van Der Merwe A, Main M, Steward C, Coetzee J. Photodynamic therapy with foscan. SASMO/SASRO Congress, Sea Point, Cape Town, 1998.

45. Smit BJ, Groenewald WA. Dose-volume relationships in radiosurgery. First Kansa Oncology School, National Accelerator Centre, Faure, 1999.

46. Smit BJ, Groenewald WA. Constraints in dose-volume relationships in radiosurgery. Combined Meeting on Hadron Therapy, Sea Point, Cape Town, 1999.

47. Smit BJ. Dose volume relationships in radiosurgery. SASMO/SASRO Congress, CSIR, Pretoria, 17–19 March 2000.

48. Smit BJ. Cervical cancer: overview of comparative techniques. Second Oncology School on Brachytherapy, Groote Schuur Hospital and Medical School, Cape Town, 2000. november 17–19.

49. Smit BJ. Management of radiotherapy complications in gynaecologic oncology. 8th Meeting of the Gynaecologic Oncology Society, SA Society of Gynaecologic Oncology Conference, Protea Hotel Kruger Gate, Mpumalanga, 2001. május 3–6.

50. Smit BJ. Hyperfractionation in prostate cancer. 5th Annual National Symposium, University of the Witwatersrand, Johannesburg Hospital, 2001. július 16.

OTHER PAPER / POSTER PRESENTATIONS

1. Smit BJ. Epidemiologie van Kanker. Diploma in Gemeenskapsgesondheid Kursusgangers. Tygerberg, 1981.

2. Smit BJ. Nadelige effekte van Bestraling. Interdepartementele Radiologie Simposium oor Bestralingsgevare. Tygerberg 1981.

3. Smit BJ. Die Mediese gebruike van die NVS. Nasionale Versnellercentrum. Faure, 1981.

4. Smit BJ. Sifting vir Kanker. Vrydagmiddag by Tygerberg. Tygerberg, 1982.

5. Smit BJ. 'n Nuwe Tegniek vir die behandeling van Servikskarsinoom m.b.t. 191Iridium. 26ste Akademiese Jaardag, Fakulteit Geneeskunde, Universiteit van Stellenbosch. Tygerberg, 1982.

6. Smit BJ. Kliniese ervaring tot op datum met die 192Iridium Hoë Dosis Naladingstelsel in die behandeling van Karsinoom van die Uteriene Serviks. 28ste Akademiese Jaardag, Fakulteit Geneeskunde, Universiteit van Stellenbosch. Tygerberg 1984.

7. Smit BJ. Hoë Dosis Tempo Bragieterapie vir Karsinoom van die Serviks. 31ste Akademiese Jaardag, Fakulteit Geneeskunde, Universiteit van Stellenbosch. Tygerberg 1987.

8. Smit BJ. Geld Skuif-sel hipotese in die kliniek? 33ste Akademiese Jaardag, Fakulteit Geneeskunde, Universiteit van Stellenbosch. Tygerberg, 1989.

9. Smit BJ. Clinical trials – The nomenclature of oncological clinical trials with special reference to radiotherapy – inappropriate? Seminar on Cost/Care Equations for the Future. Cape Town, 1990.

10. Michie J, Mills EED, Palmer M, Serafin AM, Smit BJ. Prediction of human tumour response to radiation by in vitro assay of biopsies. 35th Academic Year Day, Faculty of Medicine, University of Stellenbosch. Tygerberg, 1991.

11. Smit BJ. Cancer and the woman – radiotherapy in female malignancies. National Cancer Association Diamond Jubilee Expo. Cape Town, 1991.

12. Michie J, Mills EED, Palmer M, Serafin AM, Smit BJ. Prediction of human tumour response to radiation by in vitro assay of biopsies. National Cancer Association Diamond Jubilee Expo. Cape Town, 1991.

13. Smit BJ, Michie J, Verheye F, Serafin T, Palmer M, Buckle C. In vivo study of animal tumour models and polyunsaturated fatty acids. Open Day National Cancer Association. Cape Town, 1992.

14. Van Der Merwe AP, Smit BJ, Cloete J, Michie J, Bruins K. Hipertermie in Gevorderde Karsinoom van die Serviks. 37ste Akademiese Jaardag, Fakulteit Geneeskunde, Universiteit van Stellenbosch. Tygerberg, 1993.

15. Smit BJ. Samarium in pain control. A 1 day Symposium to celebrate 10 years of the Oncology Nursing Society of the Western Cape. Groote Schuur Hospital, Cape Town, 1994.

16. Smit BJ. 153-SM as Palliatiewe Middel vir Beenpyn as gevolg van Metastatiese Prostaatkarsinoom. 38ste Akademiese Jaardag, Fakulteit Geneeskunde, Universiteit van Stellenbosch. Tygerberg, 1994.

17. Smit BJ. Management of head and neck tumours – neutron and proton treatments. National Hospice Congress. Stellenbosch, 1995.

18. Albrecht C, Theron E, Kruger P, Van Jaarsveld P, Van Der Merwe M, Smit B, Bouic P, Freestone F, Wenteler G, Liebenberg R. Hypoxoside – a novel phytomedicinal, non-toxic, pro-drug for the treatment of certain cancers. Second National Conference of the Cancer Association of South Africa and the University of Cape Town, Langebaan, 1997.

19. Smit BJ, Groenewald, WA. Dose-volume in radiosurgery: a novel way to prescribe. First National CANSA Oncology School. Convenor: BJ Smit, National Accelerator Centre, Faure, 1999.

20. Smit BJ. Invited speaker and chairman of session: 11th International meeting of Gynaecological Oncology, Budapest, 1999. május.

21. Smit BJ. Chairman: Session on "Brachytherapy in Practice" at Brachytherapy Meeting, Cyprus, 1999. május.

22. Smit BJ. Radiochirurgie: Nuwe toepassings in radioterapie vir breinletsels. Spiespunt Voordrag, 44ste Akademiese Jaardag, Universiteit van Stellenbosch, Tygerberg Kampus, 2000. augusztus 23–24.

23. Smit BJ. Nuwe ontwikkeling in kankerterapie. Openbare Lesing oor Kanker, Universiteit van Stellenbosch, Tygerberg Kampus, 2000. augusztus 30.

24. Smit BJ. Radiochirurgie: Geskiedenis, Tegniese Aspekte, Bestaande geriewe in die RSA, Indikasies. VPO lesing gehou deur die Onkologie Eenheid van Durbanville in samewerking met Durbanville Medi-Clinic, Fairways Restaurant, Welgemoed Golfklub, 2000. szeptember 13.

25. Smit BJ. Radiosurgery and constraints in dose volume relationships. Guest speaker at Middlesex Hospital and Royal Marsden Hospital on new development in Radiosurgery. London, Egyesült Királyság, 2000. május 18.

CHAPTERS IN BOOKS

1. Smit BJ. Experience in the treatment of esophageal carcinoma: 1st S.A. Congress on Esophageal Cancer. In: Silber W, ed. Carcinoma of the esophagus. Balkema AA, 1978.

2. Smit BJ. Kanker van die Bejaarde en sy Kwale. In: Wicht C, Red. Kanker van die Bejaarde. 1984.

3. Du Toit DF, Heydenrych JJ, Smit BJ. Experimental observations with cytoimmunological monitoring and biochemical rejection markers after pancreatic transplantation and immunesuppression with total lymphoid irradiation and cyclosporine. In: Reichardt B, ed. Recent advances of cardiovascular surgery. Schultz RS, 1989: 106-119.

4. Smit BJ, Albrecht CF. Kankernavorsing – nuwe kennis, nuwe hoop. In: Boek van die Jaar 1990 – Die wêreld in 1989: feite en agtergrond. Wêreldspektrum, 1990: 60-73.

5. Smit BJ, Schmitt G. High-dose-rate-(HDR-) afterloading-therapie in Kombination mit perkutaner Therapie beim inoperablen Zervixkarzinom. In: Roth SL, Böttcher HD, eds. Gynäkologische Strahlentherapie. Enke Verlag F, Stuttgart, 1993: 38-44.

6. Smit BJ, Beck L, Roth SL. Gynäkologische Tumoren: Zervixkarzinom. In: Schmidt, G. Onkologie systematische: Diagnostik und interdisziplinäre Therapie maligner Tumoren. UNI-MED Verlag, International Medical Publishers, Germany, 1999: 121-125.

BOOKS

Breuer H, Smit BJ. Proton Therapy and Radiosurgery. Springer-Verlag, Germany, 2000/2001.

ADDITIONAL

1. Member, Technical Advisory Panel – Foundation for Research Development, 2. Ex-Secretary – S.A. Society of Radiotherapists, 3, Ex-Chairman – S.A. Society of Radiotherapists, 4. Alternative Head Radiotherapist – National Accelerator Centre, 5. Examiner for Radiotherapy – S.A. College of Medicine, 6. Reviewer for the S.A. Medical Journal, 7. Appointed on Editorial Board of Radiation Oncology Investigations. (An International Journal), 8. Member of the Evaluation Panel for Radiotherapy and Radiobiology, Medical Research Council, 9. Co-promotor, Doctoral Thesis – Dr WA Groenewald, Radiotherapy Department, Faculty of Medicine, Univeristy of Stellenbosch (1979), 10. Co-winner – Mer National Prize for the best article in "Geneeskunde" (1986), 11. Certificate of Merit for contributions to High Dose Rate Brachytherapy (1992), 12. Special Mention, section "Oncology Abstracts", of outstanding article in its field, in Clinical Digest Series (Prospects for Proton Therapy in Ca. Cervix, Int. J. Rad. Oncol. Biol. Phys. 1992), 13. Recipient of the Dr. Kurt Sauerwein Medal by the European International Brachytherapy Group (Sponsor: Isotopen-Technik Dr. Sauerwein GMBH, Haan, Germany) 1993, for outstanding work in the field of radiation therapy, 14. Associate of the Faculty of Radiology of The College of Medicine of South Africa, 15. Visiting Professor to the Oncology Group, Department of Obstetrics and Gynaecology, University of the Witwatersrand (1993), 16. Member of the Advisory Panel on Medical Biophysics, Medical Research Council, 17. Co-recipient of the Alex Mortimer Memorial Award for research on Samarium153, 18. Founder member of the Aristoteles Society, Greece, 19. Recipient of Certificate of Appreciation by the Cancer Association of South Africa, for research in combating cancer (1995), 20. Member of the Physics Work Group of the Curriculum Committee for M.B., Ch.B. I, (1996), 21. Vice Chairman of the Forum for Radiation Protection (since 1996), 22. Member of Radiation Research Society (since 1996), 23. Member of the Committee for Radiation Oncology at the College of Medicine of South Africa (1999), 24. Member of an interviewing panel for the Clinical Research/Hospital Manager post at the National Accelerator Centre at Faure (1999), 25. Speaker: AFRA, University of Orange Free State, Bloemfontein (March 1999), 26. Project Leader of Audit Team on Radiotherapy facilities in Tunesia. Requested by the IAEA (International Atomic Energy Agency), (14–18 December 1998), 27. Member of SASMO (South African Society of Medical Oncologists), 28. Member of the panel of experts with regard to medical and dental professional conduct matters (Gynaecology, Prostate, Radiosurgery), Medical and Dental Professional Board, Health Professions Council of South Africa)1999), 29. Speaker: Prostate Cancer. National Cancer Week 1999 (Vredendal, Western Cape, August 1999), 30. Radio Namakwaland, Vredendal. Radio discussion on Prostate and Testis Cancer, organised by CANSA (26 August 1999), 31. Chairman of the "Temozolomide Launch", Two Oceans Aquarium, Waterfront, Cape Town. Sponsored by Schering-Plough (Pty) Ltd., (12 October 1999), 32. Speaker: Prostate and Testis Cancer. Organised by CANSA. Wellington Town Hall (27 October 1999), 33. Tygerberg Management Team (1999), 34. Member: Panel of experts with regard to Medical and Dental Professional Conduct Matters. HPCSA (2000), 35. Chairman of Session. SASMO/SASRO Congress, CSIR, Pretoria (17–19 March 2000), 36.

Investigators' Meeting: Astra Zeneca, for ZD1839 ('Iressa'), Geneve, Switzerland (19–21 June 2000), 37. Member: American Association for the Advancement of Science, 38. Colleges of Medicine of South Africa: Awarded the Fellowship by Peer Review of the College of Radiation Oncologists (CMSA) 2000.

NATIONAL CONGRESSES ORGANISED

1. Congress of the South African Society of Radiotherapists, 1977. (Co-organiser), 2. Congress of the South African Society of Radiotherapists, 1985, 3. Congress of the South African Society of Radiotherapists, 1993.

OTHER

Co-organizer, symposium on Molecular Biology, guest George Klein, Cape Town (1986), First CANSA Oncology School (140 delegates): Radiosurgery and Particle Therapy (1999).

MAJOR LEADERSHIP / MANAGEMENT SYMPOSIA

1981: Situational Leadership for TBH/US at Mispah – Colonel Dugmore.
1984: Situational Leadership for Department at Stellenbosch – Colonel Dugmore.
1988: Communication Skills at Gene Louw – Elna Mouton.
1991: Strategic Planning for Department – Prof Cas Terblanche.
1992: Strategic Planning for Medical Faculty – Prof Cas Terblanche.

COMMISSIONING COMMITTEES

1. Medical Component of the NAC, especially the hospital, 2. Radiation Oncology Unit at Tygerberg. Moved from 1,500 m^2 at Karl Bremer to 5,500 m^2 ultra modern building (The Gene Louw) on the Tygerberg Campus, 1986, 3. Patient information Centre, NCA, 1988.

RESEARCH PROJECTS

1. Dosimetric studies of carcinoma of the cervix.
2. Proton therapy development.
3. Electro-porosity and electro-chemotherapy.
4. Simultaneous hyperthermia and radiation for carcinoma of the cervix.
5. Intra-operative radiotherapy.
6. Samarium153 in: (a) late, and (b) early metastatic carcinoma of the prostate in co-operation with principal, Albert Alberts. (First National co-operative study outside protons/neutrons).
7. Predictive assays and tumour cell kinetics with flow cytometry.
8. Photodynamic Therapy (PDT) for early oral carcinomas.
9. PDT for recurrent oral carcinomas.
10. Various "contract research" projects with chemotherapy.
11. Co-operative project with The Strahlenklinik in Offenbach, Germany (Proff Zambouglou, Balthas), December 1998.
12. Co-developer with Dermatology and the Centre of Electronic Services, University of Stellenbosch, for the development of the PDT light-source, August 1999.
13. Investigation into the dose-volume effects of radiosurgery.
14. ZD0473 in patients with malignant mesothelioma who have failed one prior chemotherapy regimen.
15. ZD0473 as second-line therapy to patients with ovarian cancer who have failed one prior platinum based chemotherapy regimen.
16. Anti-EGFr antibody (Cetuximab) for locally advanced squamous cell carcinomas of the head and neck .

BEN J. SMIT, M.D. (Berend Jakobus Smit) 1935. november 16-án született, dél-afrikai állampolgár, nős, az angol és afrikánsz nyelvek beszéli.

TANULMÁNYOK

1953	Kiváló minősítésű érettségi
1959	M.B, Ch.B. fokozatok megszerzése a Pretoria Egyetemen, a fül, az orr- és a torok betegségeiből kitüntetéssel
1961–1963	A Pretoria Egyetem hallgatója
1963–1971	Gyakorló általános orvos először a Port Elizabeth-közeli vidéki városban, Alicedale-ben, később Port Elizabeth-ben
1971–1975	A Cape Town-i Groote Schuur Kórház Sugárkezelési Osztályára veszik föl, majd 1975-ben megszerzi a M.Med. fokozatot sugárkezelésből
1975–1978	Rangidős sugárkezelési orvos a Porth Elizabeth-i Tartományi Kórház Sugárkezelési Osztályán
1978. május	A tygerbergi Stellenbosch Egyetem Orvosi Tagozatán a Sugárkezelési Osztály igazgató professzora

KÖZLEMÉNYEK – lásd az angol nyelvű ismertetőben..

KÖZLEMÉNYEK MEGJELENTETETT ÖSSZEFOGLALÓI – lásd az angol nyelvű ismertetőben..

NEMZETKÖZI TUDOMÁNYOS RENDEZVÉNYEK KIADOTT ELŐADÁSAI – lásd az angol nyelvű ismertetőben..

A RENDEZVÉNYEK KÖZLEMÉNY-GYŰJTEMÉNYÉBEN MEG NEM JELENTETETT ELŐADÁSOK ÉS POSZTER BEMUTATÓK – lásd az angol nyelvű ismertetőben..

BELFÖLDI TUDOMÁNYOS RENDEZVÉNYEK ELŐADÁSAI ÉS POSZTER BEMUTATÓI – lásd az angol nyelvű ismertetőben..

EGYÉB ELŐADÁSOK ÉS POSZTER BEMUTATÓK – lásd az angol nyelvű ismertetőben..

KÖNYVFEJEZETEK – lásd az angol nyelvű ismertetőben.

KÖNYVEK

Breuer H, Smit BJ. Proton therapy and radiosurgery. Springer Verlag, Germany, 2000/2001.

EGYÉB

1. A Foundation for Research Development Technikai Tanácsadó Testületének tagja.
2. A S.A. Society of Radiotherapists volt titkára.
3. A S.A. Society of Radiotherapists volt elnöke.
4. A National Accelerator Centre „Alternative Head Radiotherapist" munkatársa

5. Az S.A. College of Medicine Sugárkezelési Vizsgálóbiztosa.
6. Az S.A. Medical Journal közlemény-bírálója.
7. A Radiation Oncology Investigations nemzetközi folyóirat Szerkesztőbizottságának kinevezett tagja.
8. Az Orvosi Kutatótanács Sugárkezelési és Sugárbiológiai Értékelő Bizottságának tagja.
9. A Stellenbosch Egyetem Orvosi Karán a Sugárkezelési Osztályon doktorátust író Dr. W.A. Groenewald diplomadolgozatának társbírálója, 1979.
10. A „Geneeskunde" tárgykörben legjobb közleményt szerzőnek járó Mer National Prize díj társ-nyertese, 1986.
11. „Merit for contributions to High Dose Rate Brachytherapy" bizonyítvány megszerzése, 1992.
12. Különleges dicséret a Clinical Digest Series-ben (Prospects for proton therapy in carcinoma of the cervix, Int J Rad Oncol Biol Phys 1992), az Onkológiai Absztraktok témakörében írt kimagasló közleményért.
13. A European International Brachytherapy Group (támogatója: Isotopen-Technik Dr. Sauerwein GMBH, Haan, Németország) 1993. évi Dr. Kurt Sauerwein Érdemérmének díjazottja a sugárkezelés területén végzett kimagasló munkásságáért.
14. A College of Medicine of South Africa Radiológiai Karának munkatársa.
15. A Witwatersrand Egyetem Szülészeti és Nőgyógyászati Osztálya Onkológiai Csoportjának vendégelőadója, 1993.
16. A Medical Research Council Orvosi Biofizikai Tanácsadó Testületének tagja.
17. A Samarium153 kutatásáért az Alex Mortimer Emlékérem társ-díjazottja.
18. A görög Aristoteles Society alapító tagja.
19. Cancer Association of South Africa Elismerő Bizonyítványának díjazottja a rák elleni küzdelem érdekében végzett kutatásáért, 1995.
20. M.B., Ch.B. I Tantervi Bizottsága Fizikai Munkacsoportjának tagja, 1996.
21. A Forum for Radiation Protection társ-elnöke 1996 óta.
22. A Radiation Research Society tagja 1996 óta.
23. College of Medicine of South Africa Besugárzási-Daganatgyógyászati Bizottságának tagja, 1999.
24. A Faure-i National Accelerator Centre „Clinical Research/Hospital Manager" állásának betöltésére létrehozott felvételi bizottság tagja, 1999.
25. Szónok: AFRA, University of Orange Free State, Bloemfontein, 1999. március.
26. Az Audit Team on Radiotherapy facilities in Tunesia tervfeladat-vezetője az IAEA (International Atomic Energy Agency) felkérése alapján, 1998. december 14–18.
27. A SASMO (South African Society of Medical Oncologists) tagja.
28. Az orvosi és fogorvosi hivatásgyakorlási eljárások (Nőgyógyászat, Prosztata, Sugársebészet vizsgálatára létrehozott szakértőbizottság tagja, Medical and Dental Pro-fessional Board, Health Professions Council of South Africa, 1999.
29. Szónok: Prostate Cancer. National Cancer Week 1999 – Vredendal, Western Cape, 1999. augusztus.
30. Radio Namakwaland, Vredendal. A CANSA által 1999. augusztus 26-án a prosztata- és a hererákról rendezett rádióvita résztvevője.
31. „Temozolomide Launch" című ülés elnöke. Two Oceans Aquarium, Waterfront, Cape Town. Szponzor: Schering-Plough (Pty) Ltd., 1999. október 12.
32. Szónok: Prostate and Testis Cancer. Szervező: CANSA. Wellington Town Hall, 1999. október 27.
33. A Tygerberg Management Team tagja, 1999.
34. Az orvosi és fogorvosi hivatásgyakorlási vizsgálatára létrehozott szakértőbizottság tagja. HPCSA, 2000.
35. Üléselnök: SASMO/SASRO Congress, CSIR, Pretoria, 2000. március 17–19.
36. A ZD1839 („Iressa") tanulmányozását összefoglaló Kutatói Találkozó résztvevője. Szervező: Astra Zeneca, Genf, Svájc, 2000. június 19–20.
37. Az American Association for the Advancement of Science tagja.
38. A Colleges of Medicine of South Africa kitüntetett tagja a College of Radiation Oncologists (CMSA) Bíráló Bizottságának javaslatára, 2000.

SAJÁT SZERVEZÉSŰ NEMZETKÖZI TUDOMÁNYOS RENDEZVÉNYEK 1. Congress of the South African Society of Radiotherapists 1977 (társ-szervező), 2. Congress of the South African Society of Radiotherapists, 1985, 3. Congress of the South African Society of Radiotherapists, 1993.

EGYÉB RENDEZVÉNYSZERVEZÉS

1. Társzervező, Symposium on Molecular Biology, vendég: George Klein, Cape Town (1986), 2. First CANSA Oncology School (140 résztvevő): Radiosurgery and Particle Therapy (1999).

ELNÖKSÉG VAGY KEREKASZTAL VEZETÉSE

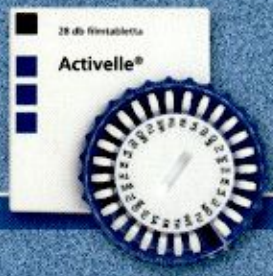
1981 Situational Leadership for TBH/US at Mispah – Colonel Dugmore.
1984 Situational Leadership for Department at Stellenbosch – Colonel Dugmore.
1988 Communication Skills at Gene Louw – Elna Mouton.
1991 Strategic Planning for Department – Prof Cas Terblanche.
1992 Strategic Planning for Medical Faculty – Prof Cas Terblanche.

BIZOTTSÁGI MEGBÍZÁSOK

1. A NAC és Korház Orvosi Bizottsága, különösen a kórházé, 2. Költöztető Bizottság, Tygerberg Besugárzási-Daganatgyógyászati Egységének átköltöztetése 1500 m^2-ről, Karl Bremerből egy 5.500 m^2 alapterületű, korszerű épületbe (The Gene Louw), a Tygerberg Egyetemi Központ területére, 1986, 3. Tájékoztatási Bizottság, Információs Központ Betegek részére, NCA, 1988.

KUTATÁSI TERVFELADATOK – lásd az angol nyelvű ismertetőben.

1 éve a változó korban, egyre jobb karban!



Activelle® filmtabletta — **Hormonpótlás könnyedén**

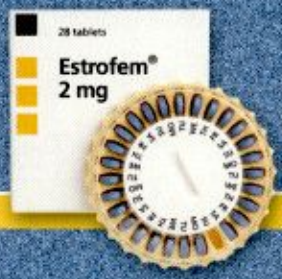
Megemelt hormonszinttel legyőzheti a változó kort!

Kliogest® filmtabletta — **Vérzésmentes hormonpótlás**

Milyen az élet a változó korban? Teljes!

Trisequens® N filmtabletta — **Természetes ciklusszabályozó**

Egy műtét nem veheti el a nőiességet. Mert az Estrofem® megőrzi.



Estrofem® 2 mg filmtabletta — **Hormonpótlás hiszterektomizált hölgyeknek**

Novo Nordisk Hungária Kft.
1025 Budapest
Felsőzöldmáli út 35.

novo nordisk®

Tel.: 325-9161, 325-9162
Fax: 325-9169
Zöld szám: 06-80-200-970
(9-12 óra között)

2002.HRT01

Gondtalanul élhet kedvtelésének...

Életünk során mindannyian arra törekszünk, hogy magunk, családunk és gyermekeink jövőjét megalapozzuk, valóra vált álmainkat, értékeinket megőrizzük az utánunk következő generációk számára. Célkitűzéseink eléréséhez olyan társakra van szükségünk, akikhez bizalommal fordulhatunk és hosszú távon ragaszkodunk.

A Raiffeisen Private Banking a magánpénzügyek kezelésében teljes körűen áll rendelkezésére, biztosítva az Ön igényeihez igazodó egyedi megoldásokat és diszkréciót. Felelősséggel átérezve értékei fontosságát munkánkkal arra törekszünk, hogy vagyona gyarapítása mellett kedvteléseinek is gondtalanul élhessen!

VELÜNK KÖNNYEBB **Raiffeisen BANK**

Private Banking

www.raiffeisen.hu
Hívja a 484 42 22-es telefonszámot!

LECTURES

Physiology of the postoperative patient

HUGH H. ALLEN, M.D.

Department of Gynecology, Health Sciences Centre, London, Ontario

INTRODUCTION The surgeon of today must understand the stress physiologic responses of the patient who undergoes the major surgical procedures carried out, especially in oncology, and complicated benign cases in order to optimise their physiologic responses with a common sense well balanced approach. The many facettes of these physiologic responses presents a huge challenge to the surgeon responsible. The real physiologic ability of each patient to respond to stress, cannot as yet be accurately measured. We can fairly accurately measure their cardiac, renal and pulmonary reserve. However many important functions appear to be altered by genetically determined variants exemplified by germline mutations in specific gene encoding, and probably to some extent also by environmental factors. Important clinical physiologic responses are l. the hyper dynamic and hyper metabolic state, 2. muscle wasting, 3. glucose intolerance, 4. fluid, electrolyte and protein movement, 5. pain and temperature effects.

FACTORS THAT CAN BE DIRECTLY CONTROLLED OR INFLUENCED 1. Whole body oxygen, 2. whole body perfusion, 3. pain, anxiety, 4. body temperature, 5. glucose concentration, 6. extracellular fluid electrolytes balance, 7. acid-base balance, 8. gut mucosal integrity, 9. focal infection and bacteraemia, 10. wound healing potential, 11. nutritional supply.

HYPER DYNAMIC AND HYPER METABOLIC RESPONSE

1. HEART – tachycardia, increased cardiac output, decreased peripheral resistance;

2. REGIONAL BLOOD FLOW INCREASED (SURGICAL AREA) – 0_2 delivery, 0_2 consumption, cellular activity, energy requirements

3. HYPER METABOLIC – $C0_2$ production, respiratory rate, energy consumption

Address correspondence to:

Hugh H. Allen, M.D.
Health Sciences Centre, Victoria Campus
800 Commissioners Road, East, Box 5375
London, Ontario, Canada N6A 4G5
Phone (1 519) 6858110 Fax (1 519) 685 8194

4. GUT – increased blood flow, 0_2 utilization, energy utilization

5. KIDNEY – increased blood flow, increase glomerular filtration, solute load excretion, drug excretion

MUSCLE WASTING In postoperative time energy increased requirements and utilization is marked. Much of this energy is supplied by muscle protein breakdown mostly in striated but some in smooth muscle. Glucose and amino acids both are supplied for wound healing and production of acute phase proteins in the liver. The catabolic process with the subsequent release of amino acids and other intracellular products results in muscle wasting. Mild hypochloremia and a reduction in total body potassium and magnesium with some metabolic alkalosis can result from this process. Therefore nutritional support should include potassium (100 meq/day or more) magnesium at least 30 mmol/day and trace minerals. Phosphate replacement may be important to facilitate O_2 change, especially for patients with a prolonged illness or heavy tumour burden.

Skeletal muscle contains approximately 80% total body free amino acid pool. Intracellular concentration of amino acids are 30 times grater than plasma concentrations. A 70 kg patient will have about 87 grams of free amino acid intracellular and only 1.2 gm extracellular. Glutamine is a most important free amino acid. It is only 5% of the cellular protein but is 60% of the free amino acid pool. It is readily available for use at times of demand (i.e. postoperative sepsis, starvation, etc.) A decrease in cellular glutamine occurs early in stress and becomes less available as time of stress increases.

Glutamine and alanine comprise 70% of the amino acids released from muscle to interstitial space for transport to liver, kidney, gut, etc. The 2 amino acids are metabolized in liver to glucose for energy. Urea is formed from this metabolic process and is excreted by the kidney which produces an irreversible loss of body nitrogen. Bed exercises with mobilizing the patient as soon as possible will help decrease muscle wasting and weight loss.

GLUCOSE INTOLERANCE Most ill patients post major surgery, infection, etc. exhibit glucose intolerance. Hyperglycaemia

results from increased liver production of glucose and decreased uptake by insulin dependent tissues. This occurs despite an insulin response to hyperglycaemia. Marked hyperglycaemia may exacerbate ventilatory insufficiency, promotes asmotic diuresis and dehydration, also contribute to hepatic dysfunction. Control of blood glucose level below renal threshold (approx. 180 mg/dl, i.e. 10 mmol/l is necessary. Insulin resistance is present in most postoperative patients and may require unusual amounts of insulin to control glucose levels. Insulin by iv. infusion is useful to closely control glucose levels. Insulin requirements will decrease as the patient improves. Infection or pending sepsis can increase insulin requirements.

Healing wounds require glucose for energy and utilize large amounts, however, marked hyperglycaemia (over 180 mg) is counter productive and should be avoided.

FLUIDS AND ELECTROLYTE REPLACEMENT Adequate perfusion and delivery of oxygen and nutrients is a critical part of postoperative care. The cellular biochemical processes involved in wound healing and recovery from illness require 0_2 delivery, and energy substrate, mainly glucose but also other essential nutrients such as proteins, electrolytes and micronutrients. The heart is the pump that maintains blood pressure i.e. the hydrostatic force. The kidney acts to control sodium and water balance directed by the ADH and aldosterone mechanisms which is regulated by the supra optic nuclei sensitive to sodium concentration. Urine output is mainly regulated by ADH production and its effect on renal tubular cells to effect water reabsorption. The aldosterone mechanism in the kidney is less important.

The physiologic responses requiring fluid and electrolyte infusions and the rate of intravascular replacement can be considered 3 phases:

PHASE 1 – The surgical procedure when blood loss and surgical trauma begins to stimulate cytokine responses.

PHASE 2 – The immediate postoperative time. Fluid and electrolytes move into the interstitial space from intravascular compartment, lasting 28-70 hours. Average time in our review 41.5 hours, young fit patients respond sooner than older patients.

PHASE 3 – The period of mobilization of fluid electrolytes and albumin from interstitial and intracellular space back into the intravascular space.

In the hours immediately following the surgical procedure, the patient frequently has some oliguria caused by a decrease in intravascular volume resulting from the movement of fluid, electrolyte and protein into the interstitial space decreasing intravascular volume. There is usually a decrease in urine output and is best managed by balanced electrolyte infusion. Diuretics in this situation only leads to a more marked decrease in intravascular volume with a decrease in 0_2 and nutrient delivery to the surgical area as well as liver and other essential organs. If there is doubt about the intravascular volume, an infusion of 500-1000 ml of saline over 15-30 minutes should result in a suitable increase in urinary output. This indicates an increase in fluid infusion is necessary to maintain the intravascular volume. The surgeon responsible must remember fluid sequestration is an ongoing process during phase 2. An infusion rate to sustain a urinary output of 1-4 ml/kg/hr should be given. An urinary output of less than 0.5 ml/kg/hr promotes under perfusion with delayed healing and increased infection in the surgical area.

The margination of white blood cells in the pulmonary system during phase 2 increases the cytokine effect on the vascular endothelium predisposing to fluid, electrolyte and albumin movement into the interstitial space. This also increases the distance 0_2 must travel to get into capillary blood and $C0_2$ to get out. $C0_2$ does move more readily than 0_2 across this barrier by a ratio of 20 to 1. In phase 3, when the intravascular volume rises, this may then lead to pulmonary oedema and diuretics may be required.

Older patients may have a blunted response to reversal of the ADH and aldosterone mechanisms probably by slower renal tubular cell receptor response. If this does occur, the diagnosis usually can be made with intravascular monitoring or if some cardiac decompensation (pulmonary oedema occurs), diuretics then are indicated to take off some fluid, and decrease cardiac work.

In phase 2, a reduction in plasma proteins may occur as a result of albumin and some globulin being retained in the interstitial space along with sodium and water. When the transition from phase 2 to phase 3 begins, there is a marked movement of sodium, water and albumin back into the intravascular space. This is usually indicated by a slowing of pulse rate and some increase in blood pressure as the intravascular space fills and becomes more stable. A rise in urinary output should occur and the maintenance infusion rate can be decreased appropriately.

If a delayed renal response occurs, (more frequent in older patients), some help with low dose diuretics may be indicated to help renal response rate. Patients who have been on diuretics or beta blocking agents preoperatively may confuse some primary physiologic responses. Intravascular monitoring is more often necessary in these patients. Patients that do not enter phase 3 in 60-70 hours usually have a poor prognosis.

PAIN All patients who have major surgical procedures experience some pain. Lack of pain control results in increased sympathetic tone, which reduces arteriolar vascular diameter and markedly decreases blood supply to the healing surgical area.

Pain control is imperative. Continuous intravenous infusion of analgesics usually produces the best physiologic results. Highs and lows with resultant respiratory depression and hypoxia are less likely to occur. If this occurs, it is not sufficient to stop the analgesia until the effect reduces. This will produce an unacceptable time off tissue hypoxia and predispose to infection and delayed wound healing. Pharmacologic agents to release this respiratory depressant effect are readily available and should be used immediately.

TEMPERATURE The ill patient usually adjusts the temperature regulating system upwards and therefore, prefers warmer surroundings. Patients exposed to reduced core temperature during surgery have been shown to have vascular spasm and reduced blood flow to surgical area with resultant increase in infection and hospital time. Operations lasting over 2 hours are predisposed to this problem. Recent observations strongly suggest there is real value in maximizing the pain free state. (Pain pump if indicated). Also, early mobilization, oral feeding as soon as appropriate, renal and vascular support with reinforced preoperative psychologic preparation of the patient, will lead to a major improvement in postoperative morbidity including decreased fatigue (muscle wasting) and decreased hospital stay.

Factors that influence postoperative physiologic response that we cannot control at present but that in the future we may be able to measure and therefore more accurately quantify the risk of surgery (i.e. stress response ability) are: 1. patient genetic makeup, 2. gene transcription and translation, 3. expression of hormones, cytokines and growth factors, 4. expression of secondary messengers, 5. bacterial virulence factors. In the next decade, these and others yet to be unveiled will surely become measurable clinical factors for preoperative assessment of surgical risk.

Abdominal mass removal

HUGH H. ALLEN, M.D.

Department of Gynecology, Health Sciences Centre, London, Ontario

INTRODUCTION Abdominal masses are described in the very early medical literature. *Hippocrates* in 400 BC discussed the diagnostic importance of abdominal masses and physical signs of bad omen. He writes "the state of the hypochondrium is best when it is free of pain, soft and of equal size on the right side and the left. But if inflamed or painful or distended, or when the right and left side are of disproportionate sizes, all these appearances are to be dreaded. Such swellings as are soft, free from pain, and yield to the finger, occasion more protracted crises and are less dangerous than others. Such then as are painful, hard and large, indicate danger and speedy death". These clinical findings are still true today.

Papyrus Ebor 1500 BC described methods of physical examination to help in the differential diagnosis of abdominal masses. Many of the basic lessons learned in those early days are still useful tools. In spite of all the new technology and imaging that we have available today, we must not forget the real value of physical examination and clinical assessment of each patient, especially in determining the urgency of surgical intervention. All of the evidence must be systematically assembled and considered. A careful history, physical examination, laboratory findings and imaging were indicated. Preoperative, physiologic, pharmacologic and psychologic preparation is very important in reducing operative and postoperative morbidity. The patient must be in the best condition possible to undergo the stress of the surgical procedure with the many psychologic changes that occur with stress.

Ultrasound and CT imaging can be helpful but must not be regarded as an absolute indicator of the presence or absence of intra-abdominal tumour or extension of cervical tumour to bladder or parametrium. Over application and reliance of CT or ultrasound can result in misdiagnosis and management errors. If the CT does not fit the clinical picture and the physical examination, one should proceed with caution. MRI has been recently shown by a Japanese group to have similar errors in reliability of disease extent. Careful clinical examination is still a most important aspect of surgical diagnosis and management.

The nature and extent of the surgery depends very heavily on accurate diagnosis before or early in the surgical procedure. The surgery also is influenced by the preoperative assessment of each patient's ability to tolerate the stress of surgery. Diagnostic laparoscopy and biopsy are helpful in a very limited number of cases. Mass size adhesions and technical difficulties make this route rarely practical. For those who are training in the field I strongly urge you to have a method, use it and only change when you believe some improvement in it comes along. The decision to attempt optimal debulking can generally be made early in the procedure. The abdomen should be systematically explored at the beginning of the surgery to determine the mobility of the tumour areas, whether they can probably be removed without irreparable damage to essential organs or blood loss that is beyond the ability of this individual patient to tolerate. The physiologic and psychologic limitations of each individual patient must be considered to the best of the surgical team's ability. A careful preoperative assessment of each patient's physiologic reserve is essential. The physiologic age of the patient is more important than the chronologic age.

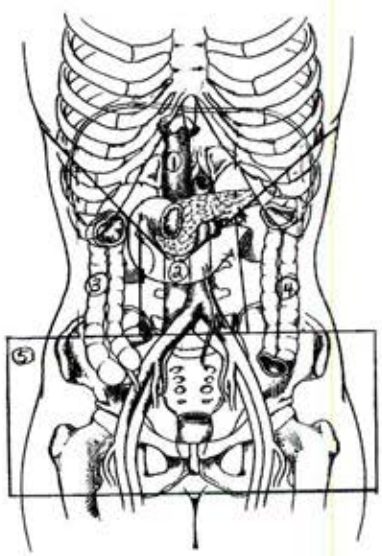


Figure 1. Zones of the abdomen

Address correspondence to:

Hugh H. Allen, M.D.
Professor Emeritus
Health Sciences Centre, Victoria Campus
800 Commissioners Road, East, Box 5375
London, Ontario, Canada N6A 4G5
Phone (1 519) 6858110 Fax (1 519) 685 8194

ZONES OF THE ABDOMEN The abdomen can be divided into 5 anatomic zones: 1. upper abdomen – subdiaphragmatic, liver, spleen, pancreas and stomach; 2. central zone – periaortic and vena caval areas with the small bowel, transverse colon and omentum; 3. right flank – colon and kidney, 4. left flank (colon and kidney), 5. pelvis – all pelvic contents (*Figure 1*).

Zones 1 and 2 present the most difficult surgical areas to explore systematically and remove tumour. The basic surgical principles are: 1. identify the organs not to be removed and then keep them in view throughout the procedure, 2. identify and control the blood supply of the tumour to be removed, 3. go about freeing it up from other organs so it can be removed, 4. repair any damage that may have occurred to surrounding tissue. In order to do these things easily, exposure is an important prerequisite. Start the procedure in the upper abdomen if tumour present.

DIAPHRAGM EXPOSURE The midline incision may require extension to the xiphoid. Occasionally the triangular ligament of the liver and coronary ligament may be divided to give proper exposure of the diaphragm or liver (Richardson or similar retractor for rib cage). Care must be taken not to damage the hepatic veins.

TUMOUR REMOVAL If the diaphragm is coated with tumour – no large masses –, I usually take a large uterine curette and scrape the abdominal side of the diaphragm as clean as I can. This should be done early in the procedure. I then pack the diaphragm with large dry sponges and proceed with the next step. I have never had serious bleeding result.

Large tumours require more dissection to free the diaphragm. Warn the anaesthetist you may perforate the diaphragm. Perforation of the diaphragm is not a serious complication but the diaphragm must be repaired – never leave a diaphragm perforation or tear of any kind not repaired.

Repair of diaphragm: 1. use monofilament permanent suture for repair (Novafil, Prolene, etc.) with a continous suturing method, 2. rarely a large defect is present – marlex or dacron prosthetic material may be required, 3. in either case, long Allis clamps or similar type (T-clamps, etc.) can be used to evert the diaphragm to make the defect more easily visible for repair, 4. have the anaesthetist expand the lung and put the diaphragm back to allow air in chest to escape before you seal off the diaphragm repair.

TUMOUR INVADING THE LIVER Surface tumour invading the liver 2 or 3 cm can be removed locally with cautery and careful systematic control of all bleeding as it occurs.

If the lower edge of the liver is involved: 1. expose the liver, 2. mattress sutures through liver proximal to the tumour using absorbable suture over a bumper of surgical or other absorbable material, 3. the distal liver edge can then be removed with cautery to control residual points.

If undue bleeding occurs, direct pressure or the Pringle manoeuvre controls blood going to the liver via portal vein and hepatic artery. Pringle manoeuvre is the index finger in foramen of Winslow and soft clamp or thumb across this area to put pressure on portal vein and hepatic artery – remember the common bile duct is also in this bundle of tissue (*Figure 2*). Any further bleeding is from the hepatic veins, which is not severe and under low pressure.

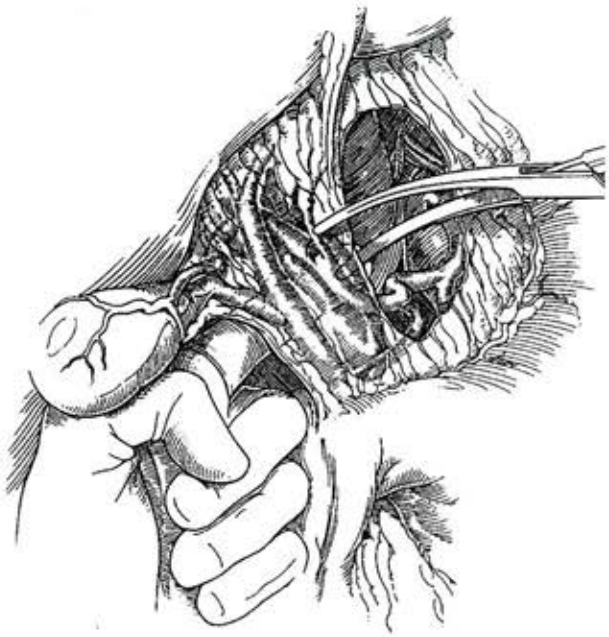


Figure 2. Pringle manoeuvre

There are other areas in the liver of special interest. The gynaecologist probably is better dealing with tumours in above areas and leaving larger resections if indicated to liver surgeons.

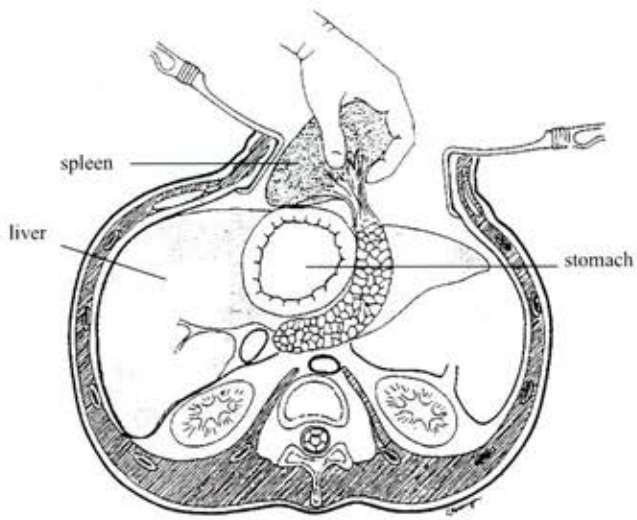


Figure 3. Splenectomy

SPLEEN A tumour mass on the spleen or at the hilum usually requires removal of the spleen, occasionally the tumour may be removed from the hilum or spleen surface. Damage to splenic blood supply or capsule is not easily repaired. Occasionally mattress sutures through the spleen over a soft bumper will control the bleeding and allow the spleen to heal. The spleen can be mobilized forward into the operative field for management decisions (*Figure 3 and 4*) .

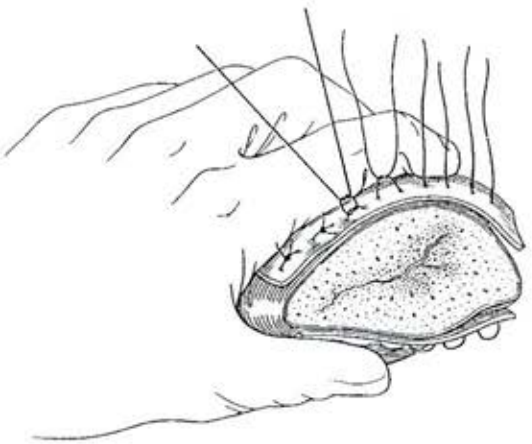


Figure 4. Spleen repair

If splenectomy is necessary, postoperative pneumovax should be given. It is best to wait 2-4 weeks after the surgery so the patient is more capable of mounting an immune response to the vaccine. Preoperative and immediate postoperative vaccine has produced less immune response in the patient, especially when they have a large tumour burden and require extensive surgery.

PANCREAS Tumour involving the tail of the pancreas is quite commonly associated with tumour in the spleen. The tail of the pancreas is very close to the lower part of the spleen. When the spleen is mobilized forward, the tail of the pancreas comes forward with it. Removal of the tail of the pancreas can easily be carried out if necessary. The cut edge of the pancreas is closed with mattress sutures and if possible, some adjacent tissue to cover the cut area. If the head of the pancreas is involved, it is much more serious as preservation of the main pancreatic duct is essential.

STOMACH Resection of tumour from stomach usually involves repair of the stomach wall with a 1 or 2 layer closure – surgeon preference. The stomach usually heals quickly if blood supply to the repaired area is maintained. A gastrostomy can be used to decrease tension on the repaired area. If a gastrostomy is used, I prefer to make a small skin incision over the falciform ligament, then with blunt dissection, go down between the layers of falciform adjacent to stomach and place gastrotomy in anterior wall of stomach at that side with no part of the tube through the free peritoneal cavity. The falciform ligament is sutured to the stomach at the site. The gastrotomy tube enters the stomach. If leaking occurs, it can track out the anterior abdominal wall along the catheter. The gastrostomy is usually inserted at the end of the procedure to avoid inadvertent tension on the stomach during the surgery.

SMALL BOWEL Area 2 – The small bowel, omentum, paraaortic and vena caval area is the next area where one may find tumour that is non-resectable. Small bowel resection is frequently required. Resection of diseased areas with end to end anastamosis by stapler or 2-layer, hand-sewn anastamoses using 2 0 vicryl or dexon, maintaining all the rules of repair: 1. adequate diameter to the anastamosis to avoid stenosis of lumen, 2. blood supply, and 3. all sutures through the submucosal layer of the bowel. It is often discussed how much small bowel must be left for postoperative nutrition. Many say 25-40 inches must be left. If ileum is removed, postoperative B12 should be given.

VENA CAVA AND AORTIC AREAS Exploration of the vena caval and periaortic areas can be carried out by the anterior route below the mesentery of the small bowel by incising the peritoneum with care to avoid the aorta and mesenteric vessels. I prefer to incise the peritoneum on the right side lateral to the right colon and reflect the colon and mesentery forward to expose the anterior part of the right kidney and *(Figure 5.)* the vena cava. This is a non-vascular area that gives very good visibility of the whole area. Removal of tumour in lymph nodes here may be desirable. To expose the aorta and left side, the left colon is mobilized in a similar manner incising of the lateral peritoneum and reflecting the bowel forward with its mesentery which includes the blood supply almost the full length of the abdominal aorta and right common iliac vessels will be visible *(Figure 6.)*. This reflection takes the spleen and tail of the pancreas forward also making resection of this area easily visible. The coeliac axis, superior mesenteric and inferior mesenteric vessels all will be visualized and must be preserved if possible. The inferior mesenteric however may be sacrificed if necessary providing you are able to preserve the marginal vessel along the colon. I have sacrificed the inferior mesenteric many times and have not had a problem with lower bowel hypoxia to require resection of the recto-sigmoid area. The incidence of significant hypoxia is said to be 10%. I have not seen this occur if care is taken to preserve the marginal vessel.

RIGHT COLON PATHOLOGY The right colon can be reflected forward into the incision as above for better visibility if disease is present in the right colon, that necessitates removal of a portion of the right colon: 1. if it is only in the caecum – resection of the caecum with closure of the colon can be carried out, 2. if ileo-caecal valve is damaged or removed – closure of the colon and anastomosis of ileum to transverse colon (right side near hepatic flexure) – (side-to-side anastomosis). The terminal 12-14 cms of ileum should be removed with the caecum as it is

usually supplied by end vessels with decreased collateral vessels to terminal ileum. Therefore may have decreased healing potential. Injuries to the colon that involve less than half the circumference recognized at the time of surgery can usually be repaired without resection of the wall providing the blood supply is preserved. The colon of course has a much higher bacterial level than the small bowel. Colon bacterial concentration ranges from 10^6 in the caecum to 10^{13} in the rectum. Primary closure of colon injuries have a higher incidence of leaking than small bowel.

Operative right colon injuries and resections rarely require proximal diversion of the faecal stream by ileostomy. However, the healing potential of the repair or resection must always be assessed. Caecostomy is no longer used.

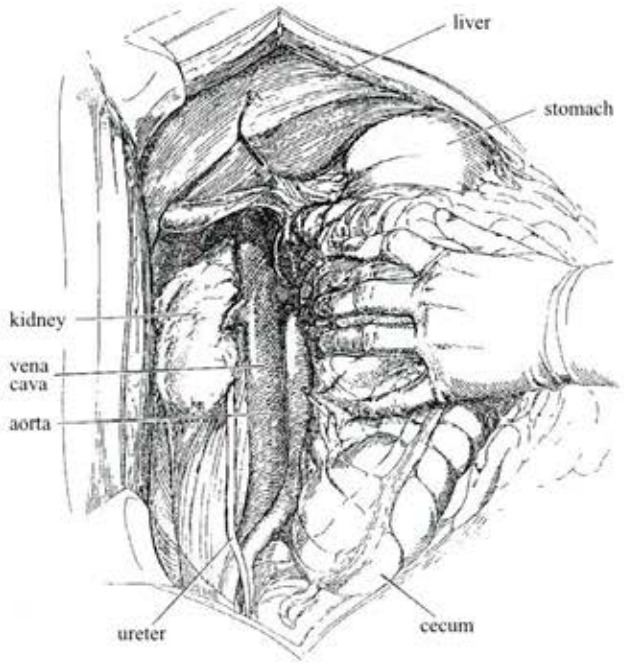


Figure 5. The right colon and mesentery is reflected forward

TRANSVERSE COLON AND LEFT COLON Transverse colon and left colon injuries and resection can usually be repaired or resected with primary closure without defunctioning colostomy. *Fabian, Strada and others* have reported as good or better results with primary closure of colon injuries when recognized early. A grossly dilated colon from distal obstruction is a very dangerous bowel to repair or anastamose. The local defense mechanisms in the bowel may be seriously depressed so that the primary process of wound healing may not proceed as usual and leakage at the site of repair is much more likely. Proximal and distal faecal load should be removed by irrigation or manual expression. Defunctioning proximal colostomy may be necessary in these cases. When defunctioning colostomy is carried out, care must be taken not to injure the blood supply distal to the colostomy, (i.e. marginal vessel). (*Figure 6*)

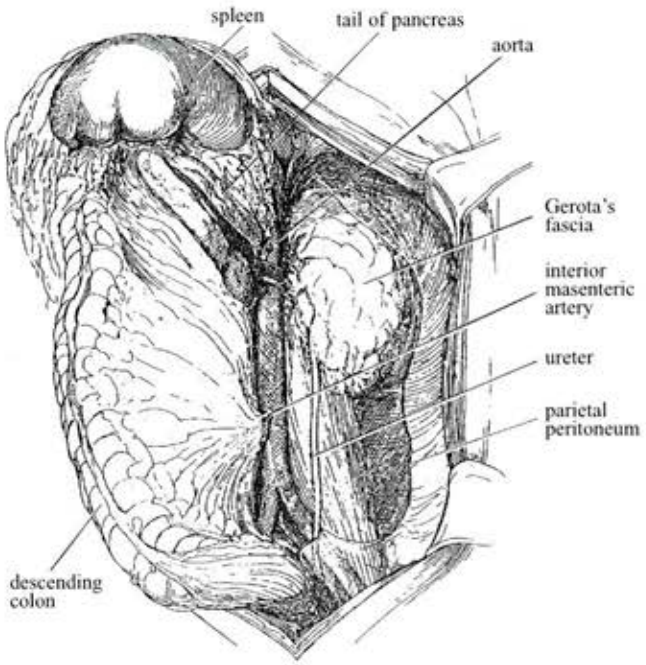


Figure 6. The left colon and mesentery is reflected forward

SIGMOID COLON AND RECTUM The basic principles of colon repair apply to sigmoid and rectum: 1. irrigate the colon and rectum clear, especially if bowel preparation has not been possible, 2. maintain blood supply to repair, 3. I prefer a 2-layer closure with all sutures involving the submucosal layer of the

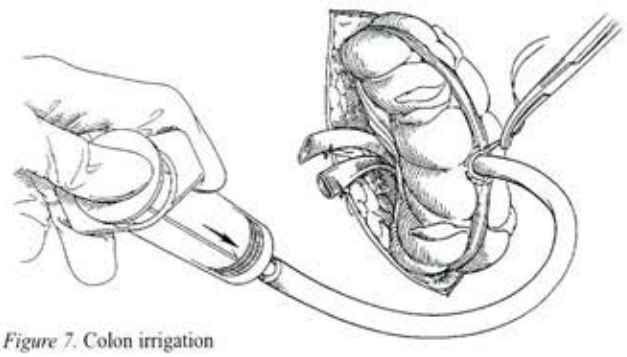


Figure 7. Colon irrigation

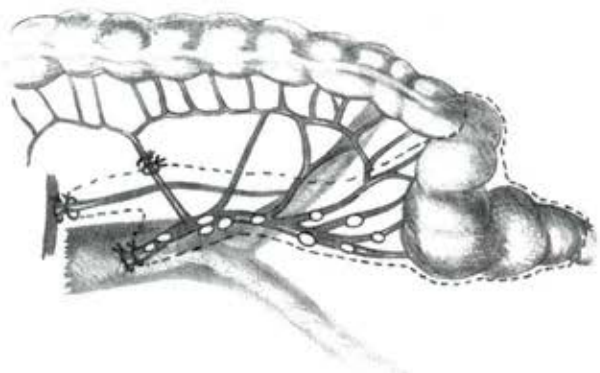


Figure 8. In most patients high ligations are necessary to provide sufficient mobility of the left colon for it to reach safely to the pelvic floor

bowel – staples may be used, 4. Prophylactic antibiotics with wide coverage and continue 2-3 days (*Figure 7*).

PELVIC MASS The approach to a pelvic mass in general is much more standard: 1. identify the blood free pelvic spaces and decide the likelihood of removal of the mass to the optimum level, 2. identify the structures not to be removed and keep them in view at all times. I do not put rubber drains on ureters or vessels to identify them, 3. identify the blood supply to the tumour at a level it can be controlled, 4. use sharp dissection with scalpel to identify planes and slightly open long scissors (slide) to explore the blood free planes of dissection for removal of the tumour mass.

A very important part of removal of a pelvic tumour is: 1. use of the blood free space (i.e. pararectal and paravesicle), 2. control of major blood supply to the tumour, i.e. ovarian vessels, internal iliac or anterior division, inferior mesenteric or branches. Controlling these vessels by tying them off or a vessel clamp may be used if you are not going to sacrifice the vessel at that proximal point. Controlling blood supply as early in the procedure as possible is very helpful in pelvic mass removal. If the omentum is densely adherent to the mass, it would have been disconnected from the colon and its main blood supply during stage 11 of the procedure.

If tumour is adherent in the obturator fossa and involves the obturator nerve rather than leave gross tumour behind the obturator nerve can be sacrificed with very little or no sensory loss or motor deficit. Most areas supplied by the obturator nerve have overlapping innervation. The lumbo-sacral nerve trunk however is close by and comes into the pelvis from the lumbar plexus over the sacro-iliac joint, posterior to the obturator nerve and is quite a different story. Trauma to this nerve can cause foot drop and a much more problematic nerve deficit with considerable disability. It should therefore be carefully preserved.

Usually the pelvic tumour can be removed as one mass that may include part of the rectum or sigmoid and possible a portion of bladder dome, which may leave a large denuded area in the pelvis.

The lower presacral area is especially dangerous. The presacral area at the level of sacral segments 1 and 2 may have bleeding from the anterior presacral vessels. These are relatively easy to control with cautery as they are on the anterior aspect of the upper sacrum. The lower 3 segments of the sacrum however have veins that penetrate directly into the anterior foramen and if they are severed near the foramen, they retract into the opening and the bleeding can be very difficult to control. Cautery set at 100 will usually control the bleeding, which is usually of venous origin. Bone wax pressed into the foramen will sometimes help. If nerve roots sacral 4 and 5 have to be sacrificed by cautery in the foramen, no serious nerve deficit will result. S3 however, is a larger trunk that can be sacrificed if absolutely necessary to control bleeding. Some posterior buttock loss of sensation may occur but no major motor deficit should result. Pelvic floor bleeding can be very difficult to control. Great respect and care in this area to control bleeding immediately will pay dividends in decreased blood loss and surgical time.

A large denuded area on the pelvic floor that continues to ooze from capillary bleeding can be packed with dry sponges or other large packs and the abdomen left open with rayon cover for 24 hours. Then taken back to the OR for removal of the packs, and the abdomen is washed liberally and closed. Drains can be used but usually are not necessary unless oozing continues which is rare if the patient is adequately resuscitated and adequate perfusion maintained postoperatively to bring clotting factors back to normal.

The intravascular volume, oxygenation and nutrient delivery must all be carefully monitored to promote the best physiologic patient response.

ABDOMINAL CLOSURE The method of abdominal closure has been debated between continuous and interrupted suturing. In our Centre and also in Edmonton, comparative series of over 1,000 cases in each group using monofilament permanent suture. The continuous suture closure was slightly better for both short-term problems of incisional rupture and long-term hernia formation. The method of closure was one-layer 1-1/2-2 cms of rectus sheath in each suture with or without peritoneum. We therefore use a continuous suture of prolene or Novafil being careful that each bite contains 1.5-2 cm of rectus sheath. Peritoneal closure is not regarded important.

Delayed primary closure is often used for the very obese patient or if bacterial contamination of the wound is higher than normal. Subcutaneous fatty tissue cannot significantly increase blood supply to mount an adequate defence response. Obese patients require special care to reduce postoperative infection. In these cases the skin is left open. The wound is packed and covered. It is closed on the ward with mild sedation on the 4th postoperative day when collagen is just beginning to be secreted by the healing fibroblasts. By the 7th day the wound will have the same strength as primary closure. Infection rates were reduced from 21 to 2.5% in this special group of infection predisposed patients. Prophylactic antibiotics cannot and should not be used to compensate for improper wound care.

Carcinoma of the vulva: method of node dissection

HUGH H. ALLEN, M.D.

Department of Gynecology, Health Sciences Centre, London, Ontario

INTRODUCTION Carcinoma of the vulva has been treated surgically for a number of years however, *Taussig* in 1940 and *Way* in the 1950's recognized the importance of gland removal in the treatment of all stages of carcinoma of the vulva. They were able to show a reduction in long-term mortality of 15-20 or even 25%, especially in stage II and III lesions.

Most groin recurrences are not cured by secondary treatment. Groin node removal prevents many of these recurrences, very especially those that are confined to the node and with the node capsule and where the number of positive nodes in the groin does not exceed 3. It is now well accepted that groin node dissection therefore is necessary for all squamous cell carcinomas of the vulva that exceed 1 mm depth of invasion. It may be unilateral in certain circumstances or bilateral, depending on the depth of penetration, the size of the tumour, the position of the tumour and to some extent on the degree of anaplasticity. The size of the lesion is important in determining the incidence of nodal extension. If there is 3 or more nodes in the groin, this is a negative factor for recurrence and long-term survival. Extension in a node beyond the gland capsule also is a negative factor. If the nodes are positive in the groin overall, there is approximately 8-times decrease in 5-year survival and smokers also have a 6.3-times decrease in long-term survival. For each cm increase in size of lesion beyond 1 cm, a decrease in survival by over 40% has been reported.

Professor *Hacker* has been a proponent of conservative management of carcinoma of the vulva for many years. I first discussed this subject with him in 1987 at the original meeting of The International Society of Gynaecologic Oncology in Amsterdam. Dr. Hacker's work on conservative management began to appear in the early 80's. Our own work on the long-term results of conservative management was later in the 80's.

We looked at 181 patients with stage I and II carcinoma of the vulva treated by surgery, approximately one-half treated by the radical method – Stanley Way type of wide removal of groin and vulvar area – and the other half treated by a much more conservative local excision of the lesion with a subcutaneous node dissection with no node groin incisions. We have been able to show a decrease in operative and postoperative complications including infection and postoperative lymphoedema with this more conservative approach to both the primary tumour removal with the absence of groin incisions. Our 5-year results are comparable for both the radical and conservative methods although admittedly the series is small. There are larger numbers since the 1995 report on conservative management but the figures have not changed. They are now being compared to the more recent method of the 3-incision approach which is a modification of the operation described in 1812 by *Antoine Basset* of Paris and popularized by *Taussig* in United States. There has been a good deal of discussion regarding the 3-incision method and the problem of bridge recurrences. Bridge recurrences may be 2-4% especially if nodes are positive.

In our experience, there has been very little difference in the long-term survival in the 3 different types of approach to wide excision of the lesion and removal of the groin nodes. We have had a decrease in the incidence of wound infection, bridge recurrences and probably a decrease in lymphoedema of the leg with the 1 incision method. The technique is very simple and can be quickly outlined.

Address correspondence to:

Hugh H. Allen, M.D.
Health Sciences Centre,
Victoria Campus
800 Commissioners Road, East, Box 5375
London, Ontario, Canada N6A 4G5
Phone (1 519) 6858110 Fax (1 519) 685 8194

CARCINOMA OF VULVA: LOCAL RECURRENCE RATE

The local recurrence rate is directly proportional to the adequacy of local removal of the tumour and the time the patient is followed. Local removal margins for lesions of less than 2 cm: 1 cm margin around the tumour is adequate. If the lesion is 2-4 cm, 2 cm of margin around the tumour is necessary. If there is vaginal mucosal involvement, 3 cm are required. Lesions greater than 3-4 cm have a margin of 3-4 cm of normal tissue at the time of resection, not necessarily in the contracted pathology specimen but in the resection incision at the time of removal. (*Table 1*)

Table 1. Carcinoma of the vulva: local resection

Size of the tumour (cm)	Margins (cm)
<2	1
2-4	2
Vaginal mucosa involved	3
>4	3-4

The local recurrence rate has been said to be proportional to the length of time the patient is followed and to the adequacy of the removal. *Stanley Way* and others have maintained that the local biochemistry in the vulvar area in patients who develop carcinoma of the vulva predisposes to recurrence of malignancy in a high percentage of cases if they are followed long enough. This, unfortunately, includes skin flaps, skin grafts in the area and local skin that is moved in to close the defect. The anaplasticity of the tumour as well is a factor. Groin and bridge recurrences are almost always related to the presence of positive nodes at the time of surgery as well as the adequacy of the node removal.

GROIN NODE DISSECTION The indication of groin node dissection is outlined in *Table 2*.

Table 2. Carcinoma of the vulva: node removal

Tumour size	Node removal
<1 mm invasion	0
>1 mm invasion	+
Posterior to middle l/3 lesion <2 cm	Unilateral
Anterior l/3 lesion Lesion <2 cm	Bilateral
Posterior or middle l/3 lesion >2 cm	Bilateral

METHOD

1. Separate groin incisions not necessary – unless groin skin or subcutaneous tissue is involved with tumour.

2. May extend vulvar incision anterior to open dissection space.

3. Lift skin flaps on both sides – identify Scarpa's fascia.

4. Remove all tissue deep to superficial fascial layer (Scarpa's) – no bridge of tissue remains between the gland dissection and the vulvar tumour removal.

5. Remove all tissue 4 cm above and below inguinal ligament lateral to 5 cm below anterior superior iliac spine – clean femoral vein where saphenous vein enters – clean down saphenous vein 4-5 cm.

6. Remove nodal tissue from lateral to medial down to the fascia lata.

7. Clean the medial aspect of the femoral vein and femoral canal.

8. Open external ring and remove ligament and all adjacent tissue up to a deep inguinal ring.

9. Close the external inguinal ring and oblique fascia – place peyrara sutures.

10. Irrigate under flaps and perineal area with copious amounts of saline or water and remove all devascularized tissue.

11. Be sure bleeding points are tied and flaps are dry, (especially superficial circumflex iliac and superficial epigastric vessels) – Deep nodes can be dissected if desired.

12. Mobilize edges of the incision – especially abdominal flap if necessary.

13. Bring in fatty tissue to cover the pubic ramus if possible for padding over the ramus – reduces pressure dyspareunia at this point.

14. Close skin with 4-0 absorbable suture, preferably subcutaneous and subcuticular suture.

15. If unilateral tumour removal, try to build the area up so that it will be as close to the normal side as possible.

16. Bring drain out under skin flaps – low in a dependent area with good blood supply.

17. Do not bring thigh skin across pubic area – will give pain with abduction.

18. Mobilize the patient as soon as possible.

19. Do not remove drains until drainage is less than 50 ml/24 hrs.

20. If lymphocysts develops, establish drainage usually through the previous drainage opening and maintain drainage.

21. Keep the skin flaps over lymphocyst down on underlying tissue.

22. Give antibiotics if skin begins to become inflamed.

Sentinel node research may make radical node removal less frequent.

INDICATIONS FOR RADIATION 1. Three or more nodes positive in the pathology specimen, 2. positive node with extension outside node capsule, 3. nodes fixed to femoral vessels, 4. inoperable advanced disease.

Gynaecological oncology: a perspective from "down under"

NEVILLE F. HACKER, M.D.

Gynaecological Cancer Centre, Royal Hospital for Women, Sydney

INTRODUCTION It is an honour for me to present this lecture, in accepting honorary membership of the Hungarian Society of Gynaecological Oncologists. The title of the lecture was chosen in consultation with *Péter Bősze,* and it is probably an opportune time to reflect on the development of the subspeciality in Australia, as the European Union of Medical Specialists has accepted subspecialization in Gynaecologic Oncology for Europe as recently as December 1999.

I feel well qualified to comment on the subspeciality in Australia, having served as Chairman of the Oncology Committee of the Royal Australian College of Obstetricians and Gynaecologists from 1992 to 1997 and as Chairman of the Board of Oncology Examiners from 1992 to the present time. In 1998 the Australian and New Zealand Colleges amalgamated, so the Oncology Committee and Board of Examiners now have responsibility for Oncology training and certification in both countries.

I undertook my own training in gynaecologic oncology at the University of California, Los Angeles, in the late 1970's, and subsequently served on the faculty of UCLA for a further 6 ½ years. Hence I had an opportunity to experience first hand the evolution of the subspeciality in the United States in its early years. Having done my basic training in obstetrics and gynaecology in Australia in the era of the general obstetrician and gynaecologist, there was no doubt in my mind that what I experienced when I arrived in the United States was a paradigm shift in gynaecological cancer care.

The formal fellowship training in the United States meant that the gynaecological oncologist had a much better understanding of the biological behaviour of all the relevant tumours, a better understanding of the principles of all treatment modalities, and far greater surgical skills.

Address correspondence to:

Neville F. Hacker M.D.
Gynaecological Cancer Centre, Royal Hospital for Women
188 Oxford Street, Paddington, NSW 2021 AUSTRALIA
Phone (61 2) 93826290 Fax (61 2) 3604243
E-mail N.Hacker@unsw.edu.au

The most obvious difference was the better training in radical surgery, including relevant aspects of bowel, urologic, and plastic surgery. This meant less reliance on radiation for early cervical and endometrial cancer, better surgical staging of patients with endometrial and ovarian cancer, radical debulking rather than biopsy and closure of the abdomen for patients with advanced ovarian cancer, and an ability to undertake pelvic exenteration and reconstruction for patients with tumours recurrent in the central pelvis.

THE SUBSPECIALTY IN AUSTRALIA The subspeciality in Australia was officially recognized by the College in 1985, and the first Board Examinations were held in 1991. In developing the subspeciality in Australia, the American model naturally formed the basic blueprint to follow. However, with the luxury that we had of reflecting on the US experience with hindsight, some important differences were incorporated.

One of the first requirements for the establishment of a subspeciality is the anointment of "Grandfathers", Senior Consultants who have had the responsibility of caring for gynaecological cancer patients for many years, often without the advantage of any formal training. This process has the potential to be both controversial and divisive. In the United States, all "Grandfathers' were required to sit a formal Board Examination, which tended to make the subspeciality somewhat exclusive.

In Australia, we took the view that it was important not to alienate senior, influential consultants, whose support would be vital to the acceptance of the subspeciality in the wider gynaecological community. Hence, we attempted to be as inclusive as possible. "Grandfathers" were not required to take an examination, but rather were required to produce a log book of cases, demonstrating that about 50% of their time was spent dealing with invasive and preinvasive disease.

Not all of those who would have been eligible applied to be "Grandfathers", but of those 20 who did apply, 18 were accepted. Nobody who held a position at a teaching hospital was rejected. For this reason, I believe that we were able to garner

much goodwill and support within the wider gynaecological community.

Another important early event was the formation of the Australian Society of Gynaecological Oncologists (ASGO). This followed a retreat, which was organized by *Margaret Davy* in the Barossa Valley in South Australia. There were 10 invitees, and *Bill Creasman,* then at Duke University, was the invited guest. As a result of this retreat, it was resolved to form the Society, and the first meeting was organized by *Don Marsden* in Hobart. Robert Rome was the inaugural Chairperson, and I was privileged to be the first invited overseas guest, as I was still working at UCLA at the time.

Not all "Grandfathers" supported the formation of ASGO, because it was seen as being in competition with another cancer society, the Clinical Oncology Society of Australia (COSA), of which gynaecology was a subsection. Certainly, participation at COSA meetings by gynaecological oncologists has declined markedly as ASGO has grown, but the political influence that ASGO has had cannot be underestimated.

The decision was made to restrict membership of ASGO to gynaecological oncologists, allowing colleagues in other disciplines to attend only as guests. This has kept the group fairly small, but it has allowed ASGO to be the major lobby group for the advancement of the subspeciality in Australia. In recent years, the Society has attracted an increasing attendance from Asian colleagues, a number of whom have trained in Australia over the past 10 years.

In Australia, certification in Obstetrics and Gynaecology requires 6 years of specialty training, which may commence after a minimum of 3 years of a rotating residency program. Training in Oncology may commence after a minimum of 4 years of training in Obstetrics and Gynaecology, and the requirement is for 3 years of clinical training in an approved Gynaecological Oncology Unit.

During this 3 year Fellowship program, up to 6 months may be spent rotating to other clinical areas such as Radiation Oncology, Medical Oncology, Pathology or Palliative Care. Unlike in the United Kingdom and the United States, we do not require training in laboratory research.

In my view, and that of the Australian and New Zealand College, it is the surgical skills which are the most difficult to acquire, but yet are the most important prerequisites for a gynaecological oncologist. This is our raison d'etre. We must be able to perform radical surgical procedures safely, and independently, if we are to have the respect of our gynaecological colleagues, and attract referrals from them. If we cannot do this, gynaecological cancer care will once again be shared among general gynaecologists, general surgeons, and radiation oncologists. As surgical expertise is partly inherent and partly learnt, we all have a responsibility to encourage only those trainees with a natural aptitude for surgery, and to ensure that the training they receive is of the highest order.

Expertise in radical surgery requires not only aptitude and training, but also continued exposure to a large volume of cases. Caseload relates to manpower issues, and this is another point of difference between the US and Australian Colleges. In the United States, the American College accredits units to train Fellows, and each unit is able to have one or more Fellows in training at any given time.

In Australia, we believe that it is important to control our manpower needs, which means that accredited units will not always have an Australian Fellow in their program. A vacant position may be taken by an overseas gynaecologist seeking training in oncology, or a general trainee seeking to enhance his or her surgical skills.

We believe that an optimal manpower ratio is about one gynaecological oncologist for every half million head of population, so with Australia's current population of 19 million, we would need about 35-40. At the present time, we have 29 certified gynaecological oncologists in Australia, and there are a further 5 in training or awaiting certification.

In order to achieve control of our manpower, we introduced the National Selection Program in 1996 and accept only one or two candidates into training positions each year. Candidates wishing to apply for Fellowship training do so to the College, and each June, there is a meeting to select the best candidate. Participants at the meeting are representatives from each of the accredited training units, and all candidates are asked the same series of questions. To be competitive, it is usually necessary for a candidate to have had surgical or research experience beyond the 4 years of basic training in Obstetrics and Gynaecology.

As there is a finite number of cases to be managed each year, oversupply of manpower and dispersion of cases among multiple units can only lead to low case loads, difficulty maintaining surgical skills, complex cases rarely seen, and limited availability of cases for research and training. All of these lead to job dissatisfaction, and to competition with general gynaecologists for benign cases, in order to pay the rent.

Certification "down under" is by examination. Candidates are required to pass a written and oral examination, and to submit an original clinico-pathological research paper. The latter must be acceptable for publication in a peer-reviewed journal. An examination, of course, does not guarantee surgical competence, but Fellows must submit progress reports to the College from their Program Director every 6 months during training. It is the responsibility of the Program Director to terminate the training of any Fellow who lacks the necessary surgical skills to master radical pelvic surgery.

At the present time, candidates are allowed to sit for the written examination if they are within 3 months of completing their Fellowship training. Candidates currently elect to take the examination as soon as they are eligible, but I am not convinced that this allows a proper assessment of their ability to function as an independent consultant. My own view is that the American system is preferable here, where candidates are considered Board Eligible at the completion of their Fellowship training, and are not able to sit the examination until they have been in independent practice for 2 years, and submitted a satisfactory log of cases.

Certification in Gynaecologic Oncology is valid for 3 years only in Australia, following which re-certification is necessary. The re-certification is based on submission of a satisfactory log book of cases, together with the accumulation of a minimum number of Continuing Medical Education credits. The log book must demonstrate that the candidate is personally responsible for the management of at least 75 new cases of invasive cancer per year, and spends at least 66% of his or her time in the subspeciality.

Unlike our British counterparts, we see no role for a "gynaecologist with a special interest in oncology". The general gynaecologist will usually make the initial diagnosis, and participate in the follow-up care, but we believe that all patients with invasive cancer should be managed in consultation with a gynaecological oncologist. This is not to suggest that all patients requiring surgery need to be referred to a tertiary referral unit. If non-radical surgery is considered appropriate after review of the pathology, this would normally be carried out by the patient's own gynaecologist.

Most gynaecological oncologists in Australia work in tertiary referral units, as part of a multidisciplinary team of medical, nursing, and paramedical personnel. Such units offer the best compromise between quality care and economic reality. With a finite number of new cancers each year, it is not possible for every teaching hospital to have such a unit, if units of a viable size are to be maintained.

There can be no doubt that subspecialization in gynaecological oncology is in the best interests of patient care, but it has been slow to gain acceptance in Europe, because of the medical politics involved. The American model of a gynaecological oncologist encroaches on other medical and surgical specialities, particularly medical oncology, colorectal and urologic surgery, and this has led to many confrontations in individual hospitals.

In Australia, chemotherapy is generally given by a medical oncologist who works as member of a multidisciplinary team, and I feel that this provides the optimal standard of care. Medical Oncology is now a mature specialty in its own right, and it is impossible for the gynaecological oncologist to be expert in all aspects of chemotherapy, tumour genetics, immunotherapy, and gene therapy (1).

Most bowel surgery is done by the gynaecological oncologist, and I believe that it is realistically impossible to practice this subspecialty if one is not competent to undertake this surgery. The need for bowel resection is common, so expertise is readily maintained, and it is frequently not possible to predict its need preoperatively. On the other hand, the need for major urologic procedures, such as continent conduits, is uncommon, and their requirement is entirely predictable, so it is preferable to undertake such procedures in conjunction with a urologic surgeon. The underlying principle should always be to do what is in the best interests of the patient.

Notwithstanding the political problems with colleagues from other specialities, the major resistance to sub-specialization has always come from within our own ranks. The well-trained gynaecological oncologist is undoubtedly an elite surgeon, and general gynaecologists have always perceived us as a threat Hence it is incumbent upon us to work towards developing a partnership with our general colleagues which is non-threatening, non-judgemental, and non competitive. If we want patients with cancer referred to us, we must not compete with the general gynaecologist for patients with benign disease. This will only happen if we control our manpower (2).

We must also accept that as oncologists, we live in an "ivory tower". Patients are typically referred after the diagnosis has been made, and with the benefit of hindsight, it is sometimes easy to see problems with a colleague's management. However we should remember that diplomacy and humility are ultimately more likely to be influential in changing patterns of care, than is blatant criticism.

CONCLUDING THOUGHTS We live in changing times. Alexander Pope said "Be not the first by whom the new is tried, nor yet the last to cast the old aside". I believe it is time for Europe to cast the old aside and embrace the concept of subspecialization in gynaecological oncology, so that women with gynaecological cancer may be assured that their management will be carried out with genuine expertise.

I wish the members of the European Union of Medical Specialists every success in their endeavours to introduce subspecialization to Europe, and may I conclude by once again thanking Péter Bősze and the members of the Hungarian Society of Gynaecological Oncologists for the honour of membership of their Society.

PRESIDENTIAL ADDRESS

1. Heintz APM. Gynecologic Oncology: a discipline or a profession? Int J Gynecol Cancer 2002; 12:133-134.

2. Hacker NF. Organization of gynecological cancer care: a time for change. Int J Gynecol Cancer 1998; 8:1-5.

European Colposcopy Certificate – how to get accreditation

CHARLES WE REDMAN, M.D.

Department of Obstetrics and Gynaecology, North Staffordshire Hospital, Stoke-on-Trent

INTRODUCTION At present, there is no European Colposcopy Certificate and no agreed form of accreditation. On the other hand it would be useful to review the current situation and discuss the ways forward.

Firstly, the fact that we are considering this issue at all indicates the quality assurance, and professional accountability has become important issues throughout Europe and indeed the world. There is increasing recognition that clinical care should be evidence-based and that practise should conform to agreed guidelines and standards. Clinicians, and indeed health care workers generally, need to provide evidence of adequate training, and professional governance, including continued professional development. These concepts have become widely accepted, at least in principle, but their implementation can be difficult.

In addition to issues of quality assurance, the need for greater uniformity in health care provision has become an issue, particularly within national Health Care systems such as the National Health Service (NHS) in the United Kingdom (UK) or within political or economic bodies such as the European Economic Commission (EEC). It is obviously important to patients that they know that the care they receive is not dependent on where they live and that the professionals looking after meet up to required standards. In the context of colposcopy, which is a relatively limited clinical area with well-defined objectives, it is clearly desirable that women throughout Europe can be safe in the knowledge that anyone who sees them is trustworthy and competent. Furthermore, from a professional point of view uniformity in practise and training between states should confers a number of advantages and facilitate mobility.

Address correspondence to:

Charles WE Redman, M.D.
Department of Obstetrics and Gynaecology
North Staffordshire Hospital
Stoke-on-Trent, UK
E-mail credman@netcentral.co.uk

WHAT IS MEANT BY ACCREDITATION? The principle is that some body or other is given the authority to accredit a professional usually to the effect that they meet some or other list of required standards.

In the UK, for example, the British Society for Colposcopy and Cervical Pathology (BSCCP) launched an accreditation process and, in conjunction with Royal College of Obstetricians and Gynaecologists (RCOG), introduced a structured training programme which all future colposcopists will need to successfully complete in order to practise as BSCCP certified colposcopists.

The NHSCSP colposcopy quality standards require that all colposcopists are adequately trained and see sufficient patients to maintain their skills. At present certification occurs on a triennial basis and requires the colposcopist to demonstrate:

- a sufficient work-load which is defined as a minimum of 50 new patients presenting with an abnormal smear per annum
- commitment to audit
- engages in Continued Medical Education i.e. must attend at least one BSCCP recognised meeting every three years.

It is possible that in future practitioners will need to demonstrate not only a commitment to audit of their practise but that it conforms to agreed clinical guidelines. Clearly the development of such guidelines is a necessary pre-requisite.

There are two key points to note. Firstly although accreditation requires adequate training, it is not simply about this but includes other areas of professional practise. Secondly, the certifying body has the authority to decide who is certified and who is not, but has no direct authority about who should practise colposcopy. In the UK, there are about 1900 BSCCP certified colposcopists who represent about 90% of currently practising colposcopists. Many employing or purchasing authorities are demanding that colposcopy is performed by BSCCP accredited practitioners but it not the BSCCP who validates whether or not practising colposcopists are accredited.

TRAINING REQUIREMENTS Accreditation requires that an adequate training programme exists and if there is to be European

certification there has to be uniform training programmes throughout Europe. There are, in fact, few national training programmes in the 40 or so countries within Europe: a recent survey identified only 4 programmes, namely in Belgium, Croatia, Yugoslavia and the United Kingdom (1).

The need for adequate and uniform training is well recognised. In 1998, representatives from a number of European colposcopy societies met and agreed that a pan-European group should be established. Consequently the European Federation for Colposcopy (EFC) was formed in April 2000.

IDENTIFICATION OF A CURRICULUM The first step was to agree a training curriculum. It was decided to use a competence-based approach; in other words, the aim was to identify those competencies that an individual would require to practise colposcopy. Although colposcopy is performed for a variety of different reasons and in different settings throughout Europe, whatever the indication, the prime objective is the same, namely to detect cervical disease, particularly pre-cancerous changes, as are the required core skills.

There are a number of ways of developing a curriculum (2), which include a subject-centred or 'content knowledge' approach, task analysis and the Delphi technique. The subject-centred or 'content knowledge' approach is the traditional model used for training doctors in the UK and Europe. The training methodology is theory dominated and demands factual knowledge at the expense of practical experience and clinical competence. The drawbacks of this approach are widely acknowledged. Task analysis involves detailing all the functions, which constitute the practise of colposcopy. One could then prepare a training programme founded on these activities. The obvious disadvantage of this approach is that it refers only to functional tacks and not how best to perform them. Such as exercise can only have limited value.

Another approach is the Delphi technique, which relies on obtaining a consensus from an expert panel or 'wise men'. This is one of the most commonly and successfully used mechanisms for identifying professional behaviour /competencies. This approach has been often used in clinical and health services research (2-5). The Delphi technique is an iterative multistage process designed to combine opinion into group consensus. It was decided to use this method to identify competences that are regarded as necessary for a diagnostic colposcopist to practise within Europe and these would form the basis of a competence-based core curriculum (6). The core competences identified are shown in *Table 1*.

TRAINING PROGRAMME COMPONENTS It is not intended that there should a single pan-European colposcopy training programme, rather that training programmes in Europe share, not only a common core curriculum, but a number of other basic features. Given that this is achieved then the way is open for training in

Table 1. EFC Core Competencies

1. Basic skills	
1.1	History taking
1.2	Positioning of patient
1.3	Insertion of vaginal speculum
1.4	Perform cervical smear (including Cytobrush)
1.5	Perform bacteriological swabs
1.6	Take samples for HPV testing
1.7	Practise complies with Health and Safety recommendations
1.8	Practise complies with National Cervical Screening Guidelines
2. Colposcopic examination	
2.1	Position and adjust the colposcope
2.2	Determine whether or not the entire transformation zone (TZ) is visible
2.3	Determine whether or not colposcopy is satisfactory
2.4	Recognise abnormal vascular patterns
2.5	Examination of TZ with saline and green filter
2.6	Examination of TZ with acetic acid
2.7	Quantify and describe acetic acid changes
2.8	Use endocervical speculum
2.9	Schiller's Test
2.10	Examination of vagina with acetic acid
3. Colposcopic features of the normal cervix	
3.1	Recognise original squamous epithelium
3.2	Recognise columnar epithelium
3.3	Recognise metaplastic epithelium
3.4	Recognise Congenital Transformation Zone
3.5	Recognise features of a postmenopausal cervix
3.6	Recognise effects of pregnancy
4. Colposcopic features of the abnormal lower genital tract	
4.1	Low grade pre-cancerous cervical abnormality
4.2	High grade pre-cancerous cervical abnormality
4.3	Features suggestive of invasion
4.4	VaIN
4.5	VIN
4.6	Extent of abnormal epithelium
4.7	Acute inflammatory changes
4.8	HPV infection, including condylomata plana and accuminata
4.9	Changes associated with prior treatment
4.10	Benign cervical polyps
5. Practical Procedures	
5.1	Local analgesia
5.2	Directed cervical biopsies
5.3	Directed vaginal biopsies
5.4	Directed vulval biopsies
5.5	Control bleeding from biopsy sites
6. Administration	
6.1	Document findings
6.2	Manage patients within guidelines
7. Communication	
7.1	Ensure adequate information
7.2	Obtain informed consent correctly
7.3	Break bad news
7.4	Communicate well with other health professionals

one country being recognised by another. This methodology allows each training programme to be customised to the needs of the individual country and yet share sufficient common ground with other training programmes.

A training programme is not simply an educational course. It is a comprehensive period of training with defined aims and objectives, and a designated trainer who facilitates learning of the various skills required. Training is clinically based and necessarily will use an apprenticeship model. There is a need for assessment and quality assurance.

The features of the current programmes are summarised in *Table 2*. The current length of training ranges from 3-18 months depending on whether the trainee is full-time (as in Yugoslavia) or part-time as in the UK (about one session per week). Similarly the requirements necessary to be a trainer vary: in the UK a trainer only needs to see a minimum of 50 patients whereas in Yugoslavia the requirement is 500! The UK is the only training programme that does not have comprehensive assessment.

Table 2. Current European Training Programme Details

Country	Aims	Length (mo)	Assess-ment	Cases	Trainer criteria	Centre criteria
Belgium	X	6	–	150	X	–
Croatia	X	6	–	X	X	X
Yugoslavia	–	3	–	X	500	–
UK	–	18	X	150	50	X

If there is to be uniformity and mutual recognition in training programmes in Europe, there has to be agreement on these basic training programme features. This exercise is currently underway and agreement will hopefully be reached by April 2003.

THE BSCCP/RCOG TRAINING PROGRAMME This programme serves as an example of an on-going colposcopy-training programme. It is open to any qualified doctor or nurse who has attended a BSCCP recognised Basic Colposcopy Course. The trainee needs to identify a trainer, who must be a BSCCP certified colposcopist, and then register with the BSCCP. There are currently 470 BSCCP certified colposcopists who have indicated a commitment to training and 400 registered trainees. Since 1998 over 300 trainees have completed the training programme.

The training programme has an agreed curriculum, is structured and trainee-centred. The trainee must see a total of 150 patients under supervision (the first 50 of these must be directly supervised). In addition to completing a logbook the trainee is required to present 10 short case commentaries on which the management is discussed. Successful completion of these requirements allows the trainee to be awarded the BSCCP/RCOG Colposcopy (D) diploma i.e. in diagnostic colposcopy. There is an optional treatment module which allows the BSCCP/RCOG Colposcopy (DT) diploma i.e. diagnosis and treatment.

LESSONS TO BE GAINED FROM THE UK EXPERIENC Colposcopy forms part of the NHSCSP, which has helped to introduce of a uniform strategy based on agreed quality standards. Through previously agreed national guidelines, the role of and indications for colposcopy have been well defined. There has been close co-operation between the NHSCSP and the involved national bodies, which include the BSCCP, RCOG, and the Association of Genito-Urinary Medicine. The BSCCP is a well-established and thriving society that has promoted colposcopy for over 25 years and to which most UK colposcopists belong. All these factors have promoted consensus and cohesion.

In a relatively short space of time a comprehensive accreditation and training programme has been instituted. In many ways the scene was set for this to happen as throughout the NHS a quality assurance culture has emerged, responding to a political and public demand for cost effectiveness and accountabilty. There appeared to be high degree of consensus that these changes were right and necessary; consequently little opposition has been encountered.

THE ROLE OF NATIONAL COLPOSCOPY SOCIETIES There are many advantages in using national colposcopy societies as the organisational structure for co-ordinating training and accreditation. A principle advantage is that the process is in the control of those who undertake colposcopy and therefore understand the practical issues. Naturally it may be necessary for liaison with other national bodies. In the UK, for example, the BSCCP works closely with the NHS Cervical Screening Programme and has joint responsibility with the RCOG for training. However, the BSCCP was from the outset, in many ways, in a privileged position not shared in other countries. Not all countries have a colposcopy society and in those countries with a society, the proportion of practising colposcopists who are members can vary greatly. In Germany there may be 4000 colposcopists but only 300 are member of the national colposcopy society.

What steps are needed if societies are going to be able to realise their potential. Firstly it is vital that every country has a colposcopy society and with the advent of the EFC this appears to be happening. Secondly there is a need for these societies to work together and there is an obvious role for the EFC to enable this, and, to date, this appears to be happening. Finally

societies need to be given the mandate to train. This, to some degree, is a political area and it may be that the medical educational authorities within the EEC need to be brought on board to realise this goal. Once a society has the authority to train, it is in a position to introduce accreditation for its members. The significance of accreditation in any given country will vary subject to local forces.

REQUIREMENTS FOR ACCREDITATION In summary, accreditation, as with training, should be a local issue. There should, nonetheless, be core common features so that accreditation in one country is transferable. For this to occur there needs to be common standards for training, accreditation and, ultimately of clinical practise. These objectives are currently being addressed by the EFC in conjunction with the EEC Cervical Screening Network.

ROLE FOR THE EAGC It is likely that individual national societies will have the authority to plan individual training programmes and set targets for accreditation. The educational activity required for training and, just as importantly, continued professional development (CPD) and education (CME) will be provided by a variety of sources. In the UK, for example, basic colposcopy courses, as well as courses in pathology and cytopathology are provided by other bodies but the courses are recognised by the BSCCP for the purposes of training. A similar approach is taken for CME. It is recognised that not all colposcopy societies will have the resource to provide comprehensive educational material and opportunities required for these activities. Educational professional bodies, such as the EAGC, are ideally placed to meet this opportunity.

ACKNOWLEDGEMENTS I wish to acknowledge the EFC Training Committee, in particular Mr J.A. Jordan and Mrs Dollery, who on behalf of and in conjunction with the EFC have made a significant contribution to this work, which has, in part, been funded by the EEC Cervical Cancer Screening network.

REFERENCES

1. Redman CWE, Todd RW, Dollery E, Jordan JA. A Survey of European Colposcopy. Proceedings of the BSCCP Annual Scientific Meeting, April 2002.

2. Dunn WR, Hamilton DD, Harden RM. Techniques of identifying competences need of doctors. Medical Teacher 1985; 7:15-25.

3. Williams PL, Webb C. The Delphi technique: a methodological discussion. J Nurs 1994; 19:180-186.

4. Loughlin K, Moore L. Using Delphi to achieve congruent objectives and activities in a pediatrics department. J Med Educ 1974; 54:101-106.

5. Gibson JME. Using the Delphi to identify the content and context of nurses continuing professional development needs. J Clin Nurs 1998; 7:451-459.

6. Redman CWE, Dollery E, Byrom J, Jordan JA. (2002) Development of a competence-based colposcopy curriculum Proceedings of the 11th World Congress of Cervical Pathology and Colposcopy June 2002.

What gynecologists should know about radiotherapy

Ben J. Smit, M.D.

Department of Radiation Oncology, University of Stellenbosch, Tygerberg Campus, Tygerberg

INTRODUCTION This is not an easy question to answer. I am sure that the majority of gynecologists know that radiotherapy is very useful, and refer patients regularly to radiotherapists. Much literature has been generated in the last decade with reference to the integration of chemotherapy and radiotherapy – it seems that the jury still may be out relevant to this verdict.

The purpose of this paper is to spell out in some more detail how very useful this modality of radiotherapy is. Besides the perhaps drab purely clinical, radiotherapy has a very interesting and captivating origin, and the discoverers of X-rays and the phenomena of radioactivity and radioactive chemicals, had a profound influence on the course of world history; on the course of medical practice in general and on the successful treatment of cancer by means of radiotherapy.

The events leading to the discovery of the tools for radiotherapy also had a profound influence on astronomy and on our present understanding of the structure and functions of the Universe. These discoveries changed perceptions of our place in the universe. We can safely say that modern man was defined by the discovery of radioactivity and the tools for radiotherapy in the late 1800's early 1900's. Cancers of gynecological interest vary with the country, but often include cancers of the uterus, cervix, the ovaries and breasts, but this paper will exclude radiotherapy for breast cancers.

HISTORY: GYNECOLOGY AND RADIOTHERAPY I hope that the reader will find much pleasure in appreciating what monumental discoveries were made at the turn of the previous century, how perceptive these workers were and how quickly events followed on these discoveries.

Wilhelm Conrad Roentgen discovered X-rays, almost by accident. He unlocked this epoch making secret in 1895. What was this secret? Because man can only perceive colors from violet to red, anything above violet or under red was not visible to the human eye. Light is a form of electromagnetic radiation, just like radio waves. The color of a light wave is dependent on the wavelength. Ultraviolet has a relatively short, and red a relatively long wavelength. *Roentgen* observed by chance that if the charge of a fairly large induction coil (a thing still found in most modern motor cars) is made to pass through a Crookes' tube, shadows were formed on a nearby photographic plate. He immediately set out to do a series of very careful and thoughtful experiments. Because he appeared to realize that if the shadows were for real, then some "invisible light" must have penetrated the paper wraps around the photographic plate, which was something that UV light could not do. He then covered the Crookes' tube in black cardboard and placed it in a darkened room, and observed at each discharge of the induction coil through the tube, a bright illumination of a paper screen which he had covered with barium platino-cyanide, a material capable of fluorescing. Such materials fluoresce if some invisible light, for instance ultraviolet, falls on it. The UV light is invisible, but will cause the particular material to emit visible white light. This new, invisible ray emanating from the Crookes' tube, however, caused the material to fluoresce despite having passed through cardboard!

He then investigated how much paper this "light" could penetrate – it went through a book of 1000 pages, through a double pack of playing cards or through several layers of tinfoil. He found that thick blocks of wood were also transparent. A sheet of aluminum 15 mm thick enfeebled the action seriously, but it did not cause the fluorescence to disappear entirely. *Roentgen* named these rays, X-rays because at the time their nature was still unknown and the symbol in mathematics for the unknown is X. *Roentgen* is therefore in a sense, the father of teleradiotherapy because his apparatus could irradiate substances a substantial distance away from his Crookes' tube. Very soon he had photos of his hand and the hand of his wife, the first "X-rays" or Roentgenographs. *Roentgen* never patented his apparatus. This was a conscious and philanthropic decision, leaving it for the benefit of mankind.

HENRI BEQUEREL AND RADIOACTIVITY (1896) A physicist, *Antoine Henri Becquerel*, having read about Roentgen's discovery, became interested in materials in which "phosphorescence" could be induced by sunlight. He decided to investigate the relationship, if any, between light and X-rays. He postulated

Address correspondence:

Ben J Smit, M.D.
Department of Radiation Oncology
University of Stellenbosch
Tygerberg Campus
TYGERBERG 7505 South Africa
Phone: (27 21) 938 4727 Fax: (27 21) 931 0804
Email: bjsm@sun.ac.za or rm1@sun.ac.za

that phosphorescent materials may also be induced to produce X-rays. He placed several phosphorescent materials (on a photographic plate protected from light) and exposed the rocky materials to sunlight to make them phosphorescent. Sure enough, some of these materials had the profile of the stones displayed on the plate. However, he learnt that some materials, especially uranium salts, exposed the photographic film even when not exposed to sunlight. Obviously, whatever emanated from the rocks had a similar effect to that of X-rays. But were they X-rays? We now know that this process is due to the decay of radium or thorium atoms, and the very important phenomenon of radioactivity (later so named by the *Curies*) was discovered. This was in 1896, just about a year after Roentgen's monumental discovery. *Bequerel* therefore, in a sense, was the father of brachyradiotherapy, which means radiation from close up, i.e. from rays emitted from radioactive "rocks" like radium, or later from manmade radioactive materials like iridium 192. These could be made into highly radioactive small tubes, ideally suited for placing into either needles for interstitial radiotherapy, or into tubes for intracavitary radiotherapy, the latter ideal for treating cancer of the cervix, as was soon attempted. This was due in part to the fact that *Bequerel* found out that the rays from radium were not "innocent", he carried radium in a shirt pocket and received a radiation burn. These rays obviously had some biological effect!

MARIE SKLODOVSKA AND PIERRE CURIE (1898) This legendary couple discovered polonium (Marie was from Poland) and Marie discovered the element radium. *Marie Curie* called the phenomenon of radiation emanating from rocks and uranium radioactivity, although *Bequerel* discovered the phenomenon, he did not give it a name.

The discoveries discussed above had an enormous influence on medicine, physics, astronomy and the way mankind understands his place in the universe. Today, we are using both X-rays and the products of radioactivity to analyze materials, to unravel the nature of matter and energy and to treat cancer successfully.

Jean Danysz, a polish pathologist, used radium to treat malignant tumors, circa 1899. *James Ewing* was an oncologist from Cornell University Medical College and of course described Ewing's sarcoma. In 1920 he was internationally recognized for his work on cancer. He was born in 1866 and he was instrumental in establishing oncology as a specialty in America in 1919. He was professor of oncology at the Cornell University Medical College in New York.

In 1904 the *Curies* demonstrated that radium rays are capable of destroying diseased cells, and consequently radium treatment was used for malignant diseases. Modern variations of radiation therapy remain one of the most significant developments in the history of oncology.

In 1903 *Margaret Cleaves* is reputed to have used radium in glass tubes (highly dangerous!) for carcinoma of the cervix, but it was *Carl Forssell*, a Swedish radiologist who pioneered radium treatment for cancer of the uterus in 1917. Radium treatment for cancer was introduced into the UK in 1929, and in 1930 radiotherapy was added to surgery as an effective modality in the treatment of certain cancers. In 1935, radioisotopes to study living tissues were initiated by the Hungarian-born professor of chemistry, *Georg Charles von Hevesy*. In 1963 a South African born physicist, *Alan Cormack*, developed the mathematical principles for the X-ray imaging of soft tissues, the basis for the CT scanner (Computerized tomograph).

Geoffrey Hounsfield built the first CT Scanner, based on Cormack's algorithm for the differential absorption of X-rays in tissues of differing densities. He was at the time, an engineer employed by the EMI record company. The year was 1973. They, *Cormack and Hounsfield* later received the Nobel Prize for physics for this achievement (1979). This discovery revolutionized diagnostic radiology as well as the standard of radiotherapy practice (1-2).

THE RELEVANT PHYSICS FOR GYNECOLOGISTS

PHOTONS AND ELECTRONS, THE COMMONLY USED RADIOTHERAPY MODALITIES A photon is an electromagnetic wave. Ordinary white light is composed of a spectrum of photons of different wavelengths, red having the longest, and ultraviolet the shortest. The shorter the wavelength, the more energetic and penetrating the photon. Gamma rays are quite energetic, but modern linear accelerators can produce X-rays that are as much as 25 times more energetic than gamma rays. The distinction between gamma rays and X-rays is largely academic: gamma rays emanate from radioactive nuclides like radium, cesium 37 or iridium 192; X-rays from manmade electron accelerators. X- and gamma rays are thus both high-energy photons with very short wavelengths.

Photons are emitted from atoms under certain conditions. An atom is composed of elementary particles, the proton and neutron in the nucleus, the electrons orbiting the nucleus. All these particles can be used for radiotherapy, but only electrons are used widely. Unlike photons, which can penetrate the body with ease, although the exit dose will be smaller than the entry dose, electrons can only penetrate about 2-6 cm in ordinary use, depending on the energy with which they are accelerated. Electrons are useful; because of this quality underlying tissue can be protected. An example would be the treatment of the chest wall in breast cancer, where the underlying lung or heart can be spared. This cannot easily be done with photons.

RADIOTHERAPY PLANNING With the advent of the CT scanner in 1973, this apparatus was soon used not only for tumor localization and diagnosis, but it also allowed 3-dimensional col-

lection of data on tissue densities as well as corrections for differences in the composition of tissues. This allows a very accurate determination of the energy distribution through a target area, which can then be irradiated very homogeneously.

Three-dimensional planning also allows the normal tissue some centimeters from the tumor to be protected from the insult of large doses of radiation. This leads to improved tumor control and fewer complications. Computerized scanning, localization and the associated 3-D planning revolutionized the practice of radiotherapy. No plan for radical curative radiotherapy is presently acceptable unless the plans were done by aid of a CT scanner and 3-D planning computer.

The Magnetic Resonance Imager (MRI) soon followed the example of the CT scanner (1980's), and pioneered the way for marvelous 3-dimensional pictures. The MRI scanner can image soft tissues exquisitely, and is of great value to the radiation oncologist in all anatomical regions. Software programs enabling the registering of MRI and CT pictures are available, and are essential in some areas, for example the pituitary gland.

PROTECTION OF NORMAL TISSUES The unit of radiation dose for clinical use is the Gray, abbreviated Gy. Technically it is energy of 1 Joule deposited for each kilogram of water. In terms of heat energy, this is very little. The damage to tissue is by virtue of damage to the DNA and it is not because of any thermal effect.

Normal tissues can be protected in the high dose areas near the target or tumor area by suitably shaped and contoured lead or low-melting point "Cerrobend" blocks. These have the big advantage of allowing larger doses to, for example, the cervix and reducing dose to the sensitive rectum and slightly less sensitive bladder. These organs can tolerate only about 60 Gy in 2 Gy fractions, whereas the cervix and vaginal vault can tolerate very high doses of radiation, in the order of 100 Gy or more, delivered by radium.

The modern frontier of technical excellence is the multi-leaf collimator. With this device the projected shape of any tumor can be matched from any direction the radiotherapy beam is directed. This obviates custom-made lead blocks and is fast and accurate, although the collimators are expensive.

The next significant development is that of conformal radiotherapy. This is somewhat complicated technically, but what it means, is the capability now, by modulating the intensity of each of a large number of radiotherapy pixels (or little cubes per field). The result of this is that a homogeneous dose conforming to the surface of a tumor of complicated shape can be delivered. In this way the sensitive organs can be protected, for example the spinal cord where irradiation of the para-aortic nodes is considered.

RADIOTHERAPY OPTIONS As alluded to above, in the section on the history of radiotherapy, radiotherapy can be divided into teletherapy, brachytherapy and systemic radiotherapy.

TELERADIOTHERAPY By this is meant the delivery of X-rays from a radiation source some distance from the skin surface or from the midpoint of the tumor. This point is called the iso-center, because the central axes of beams of radiation directed from a gantry that can rotate around the patient will all cross through this point. It is easy to visualize this situation if one imagines the hub of a bicycle wheel as the iso-center and the spokes as multiple beams passing from all of 360 degrees through the hub. In practice the number of beams seldom exceed 6. Note that all the "spokes" are in the same plane. The distance from the point of exit of the radiation energy to the iso-center is nowadays most frequently one meter, or 100 centimeters.

The dominant teletherapy machine employed globally is the linear accelerator. A linear accelerator produces X-rays by accelerating electrons to very near the speed of light in a vacuum tube. If these high speed electrons collide with a heavy metal like tungsten, a lot of heat is produced (99%) as well as very penetrating X-rays (about 1% of the total energy).

BRACHYTHERAPY Brachyradiotherapy is radiotherapy "from close up". Here the source of radiation is in close contact with the tissues and it is usually a radioactive substance like radium (low dose rate) or iridium 192 (high dose rate).

Brachyradiotherapy is subdivided into:

INTERSTITIAL Usually radioactive needles or wires, used to implant malignant tissues for example a carcinomatous plaque in the vagina, or the tumor bed as a booster in carcinoma of the breast.

INTRACAVITARY Here a tube containing the radioactive material is inserted into a cavity, for example, the endometrial cavity or cervical canal. Sophisticated software for optimizing the dose distribution of the multi-step point source high dose rate afterloading brachytherapy units were developed. A Group in Offenbach, Germany, is very active on this front.

SYSTEMIC RADIOTHERAPY Systemic radiotherapy is the oral or intravenous administration of a radioactive nuclide. The best-known example is radioactive iodine for the treatment of carcinoma of the thyroid. In gynecology, it may be of use in the very rare case of malignant metastases from struma ovarii.

RADIOBIOLOGICAL PRINCIPLES This is a complex subject, but the gynecologist will be in a better position to understand the reasons for some things radiotherapists do if the basic facts are explained. It is important to understand that all the biological

damage done by radiation is by damage to the DNA. The heat effect of 1 Gy is negligible!

Radiation damage can be classified as acute damage or late damage. Acute effects on tissues are due to depletion of sensitive epithelium, for instance the lining of the gut or bladder. Late effects are due to changes in the connective supporting tissue and the capillaries. The capillaries are drastically reduced in patency and number and this causes fibrosis and edema and a greater vulnerability to injury like surgery or other some months or years after radiotherapy.

RADIOSENSITIVITY Some tumors are inherently more radiosensitive than others. The most sensitive are dysgerminomas (because the germinal epithelium is so sensitive) then squamous carcinomas, then adenocarcinomas, with sarcomas being frankly radio-resistant.

FRACTIONATION A single large dose of radiotherapy, for example 20 Gy, will not usually cure a tumor without causing extremely serious damage to the tissue of the rectum, gut, bladder or other radiosensitive tissues like the lung, liver or kidney. A fairly large dose, for example 36 Gy in increments of 6 Gy each may cure a tumor, but with still a very high risk of damage to the normal tissues. A very large dose of radiotherapy can be delivered in small daily or bi-daily increments. A daily dose of 2 Gy over 6 weeks to a total dose of 60 Gy is likely to cure the imaginary tumour mentioned above with very little morbidity. This is in fact simple to comprehend. A single large dose catches each tumor cell in different phases of the cell cycle. Some of these phases are more radio-resistant than others therefore the chance of catching cells in sensitive phases improves if the dose is protracted. The same argument applies to states of oxygenation; a tumor cell is more sensitive if well oxygenated. The cells killed by a fraction of radiotherapy reduce the tissue pressure on the remaining cells, allowing a better blood supply and better oxygenation. A well-oxygenated cell requires only half the dose to kill it than an anoxic cell. This may explain why the results of radiotherapy are better stage for stage, in patients with cervix cancer with hemoglobin levels above 11 gm per 100 ml blood.

Fractionation allows the cells of normal tissues to migrate from areas outside the target field to replenish damaged tissues, a luxury and privilege that a well-demarcated tumor will not have. This is called repopulation. Many small fractions are effective and safe, whereas a few large fractions are usually ineffective and dangerous.

Fractionation also allows the DNA repair enzymes to achieve some repair in normal tissues. Tumor cells often have an impaired capacity for repair. The 4 Rs of radiotherapy re-oxygenation, repopulation, redistribution and repair can thus be optimally exploited by adequate fractionation!

CHEMOSENSITIZATION The concurrent administration of some chemotherapeutic drugs may enhance the radiosensitivity of tumor cells. One such chemotherapeutic agent is cisplatinum, which is well tolerated given in relatively small doses once or twice a week during a course of radiotherapy. This is now regarded as the standard approach for carcinoma of the cervix in the stages IB and upwards, where radical hysterectomy is not an option.

VASCULITIS Patients who have syphilis or diabetes do not tolerate radiotherapy as well as patients with healthy vessels.

PREDICTIVE MODELS Radiotherapists have at their disposal elegant models to model many "what if" situations. What will happen to tumor control if we make the treatment course shorter or longer? What will be the effect of a treatment gap? What will happen if we give 2 fractions a day instead of just one? A lot depends on the value ratio alpha/beta, which is a value that depends on the relative abilities of a particular tumor relative to the normal tissues surrounding the tumor, to repair partial or so-called sub-lethal damage. In general, the smaller the fraction size and the larger the total dose, the better the tumor control will be and the smallest the amount of damage to normal tissues will be (3).

RADIOTHERAPY AND GYNECOLOGICAL CANCERS

CARCINOMA OF THE UTERINE CERVIX Radiotherapy has been used extensively for the treatment of this cancer, so common in overpopulated and underprivileged parts of the world. The consequences of inadequate or overzealous therapy can be absolutely devastating to the victim of this sexually transmissible and largely preventable disease.

The primary therapy is intervention by thermal loops (LETZ), cone resection or simple hysterectomy for the earliest lesions. For larger lesions up to stage IB or IIA, a radical hysterectomy is indicated.

Where inadequate surgery has inadvertently been done for lesions further advanced than initially judged, adjuvant radiotherapy is mandatory to ensure sterilization of the residual tumor. Postoperative radiotherapy after inadequate surgery is less effective than when an adequate operation has been done with no trans-section of malignant tissue. This is because the malignant cells caught in postoperative scar tissue will be more resistant to therapy for two reasons: firstly adjuvant chemotherapy is gaining in popularity, and cells caught in scar tissue are not perfused as well as they should be and therefore chemotherapy drugs, now commonly used as radiosensitizers will have difficulty to penetrate to the cells in adequate amounts. Secondly, because of poor perfusion, the cells will be anoxic and therefore will be more radioresistant, as we have discussed under radiobiology above. It is therefore imperative that the clinician must avail himself of all the possible aids to stage the

patient properly, so that the initial therapeutic option is correct and optimal to avoid inappropriatesurgery and therefore suboptimal adjuvant postoperative radiotherapy.

IS RADIOTHERAPY EFFECTIVE AND CURATIVE FOR CANCER OF THE CERVIX? Intracavitary therapy alone by radium or high dose rate fractionated therapy can cure 96% of stage IA and IB tumors less than 1 cm in diameter according to *Grigsby and Perez* (4). Radiotherapy can cure upwards of 85% of stage I tumors that are not barrel-shaped and very bulky. The cure rate for stage II is about 60 % at five years and about 20-30 % for stage III, according to a survey of 14 institutions by FIGO, *Pettersson* (5).

At Tygerberg we have treated about 5250 patients over the last 21 years, most of them with stage IIIB uni- or bilateral parametrial disease. We analyzed the results in the first 750 patients and achieved an absolute 5-year survival rate of 38% with a 5% complication rate of late proctitis, and cystitis not requiring surgery of 5% (6). These relatively good results we ascribe to a number of factors: namely, accurate staging in a combined gynecological–radio-chemotherapy clinic, computerized tomographic localization and planning of all patients, treating all fields every day, using small daily fractions of 1.8-2 Gy, irradiation of all patients by high energy linear accelerator 8-16 MeV, and when the tumor has shrunk maximally, adding 4 fractions of 4.2 Gy each high dose rate intracavitary therapy using the Smit tube (or sleeve, as the Americans call it) defined at the paracental point or "point A". This nominal dose is somewhat lower than advocated by *Brenner and Hall* (7), who maintain that the dose should be 75 Gy or more at the para-central point. These authors usually recommend about 45 Gy in 1.8 Gy fractions, and an additional 30 Gy by LDR brachytherapy to bring the total nominal dose to 75 Gy.

DOSE EXPRESSED AS A STANDARDIZED DOSE What is this dose i.e. 75 Gy mentioned above, if it is translated into the 2 Gy fraction equivalents dose (the so-called ID2)? Our treatment schedule translated into the 2 Gy per fraction equivalent dose (ID2, see appendix) is 50 Gy for the whole pelvic irradiation and 20.5 Gy for the intracavitary therapy, for a total dose of 70.5 Gy at point A. The nominal dose of our schedule of 66.8 Gy thus is in reality equivalent to 70.5 Gy in 2 Gy fractions.

What is the LDR dose of 75 Gy equivalent to in terms of 2 Gy fractions? Radium is about 1.3 times less effective for the same nominal dose than fractionated high dose rate therapy. The relevant dose from this (LDR) therapy that must be added to 45 Gy teletherapy to obtain 75 Gy must be 30 Gy equivalent. Down scaled to 1.1 – 1.3 times less effective the ID2 dose becomes 23.07 Gy to 27.27 Gy, or a biological equivalent of 68.0 to 72.27 Gy. Thus the nominal dose of 75 Gy becomes also about 70.5 Gy. This explanation illustrates that nominal doses quoted have only a comparative meaning. The dose should ideally be "translated" into a standardized 2 Gy per fraction dose. Read the appendix for more information. Radiation oncologists should perhaps be convinced to do this as a matter of habit!

So the well–fractionated HDR schedule used by us by using the Smit tube fell into the recommended dose range, but with two possible advantages: firstly, a larger total pelvic dose (50 Gy versus 45 Gy) with a better chance of tumor control in the nodes and parametria, and secondly, because our intracavitary therapy is given at the end of the course in 4 consecutive fractions, there is no time for repopulation of cells in between fractions, and more importantly the full booster dose is given to a tumor that has been maximally shrunk by the external radiotherapy. This is very important because the really effective dose outside of the critical 40 mm diameter irradiated to the stipulated dose at point A diminishes rapidly. This is discussed further down. Apart from the above-mentioned points, the entire course is relatively short at a total of 39 days, with no interruptions of the whole pelvic irradiation. This is well within the recommended 37 to 60 days total treatment time. Treatment lasting more than 60 days adversely affects prognosis and results (8-9).

Lastly, intracavitary therapy is absolutely essential for optimal results. Patients, who cannot get intracavitary therapy for whatever reason, invariably have a worse result, because the total tumor dose cannot be escalated to more than about 60 Gy without compromising the bladder and the rectum. With intracavitary therapy the dose across the primary tumour varies from about 1200 Gy at 2 Gy equivalent fractions to the stated 70 Gy at the para-central point. There is thus a very steep dose gradient across the tumor, very lethal to any tumor cells in this area. This is not achievable with external therapy. Many methods of delivering the intracavitary dose have been described, with each institution or person believing firmly in the merits of his/her particular method. Basically all systems deliver the essential high dose boost to the site of the primary tumour. The major systems are the Paris, Stockholm or Manchester methods. An American variant is the Fletcher-Suit applicators. To the gynecologist, it is largely irrelevant which system is given, provided that it is given adequately and competently. The danger is overdosing either the bladder or the rectum or both. The radiotherapist must know the problems and appreciate the dangers.

Intacavitary therapy can be mainly low dose rate, or high dose rate. It is not terribly important for the gynecologist to know all the details, but a few differences are important.

All systems require dilatation of the cervix and anesthesia. Low dose rate systems need to stay in situ for many hours, and this carries a risk of shift of the sources and a risk of pelvic deep vein thrombosis. Because anesthesia is required, the ex-

ternal therapy must be interrupted to apply the minimum recommended two applications. The consequence is that the treatment is usually not given at the end of a course of pelvic radiotherapy, which is the optimal time. To give three or more fractions would require 3-4 anesthetics, which is not usually convenient or cost–effective. The compromise is to give large doses per fraction, and this is radiobiologically unwise. The Smit tube (10) solves these problems, because only a single anesthetic at the end of whole pelvis irradiation is needed. The other fractions can be given with the greatest of ease without anesthetic, because the cervix is accessible through the indwelling Smit tube, which can remain in situ for up to 10 days if required. In principle, the Smit tube simply is a way to keep the cervix dilated and accessible for as long as is required. Fractionation can now be optimized and the intracavitary therapy can be given at the end of the pelvic external radiotherapy, when the tumor is maximally shrunk and ready for the booster dose.

DOES IT HELP TO GIVE EXTENDED FIELD IRRADIATION IN SELECTED PATIENTS? The incidence of paraaortic lymph node involvement ranges from 8% for stage IB to 30% in stage IIIB. In patients with pelvic nodal disease there is as much as a 50 to 60% risk of involvement of the paraaortic nodes.

It is essential that the primary site must be considered controllable. That usually means a tumor should be small enough to allow the para-centrally prescribed maximally tolerable dose to cover it completely. In the RTOG trial 79-20, *Rotman et al.* (11) randomized 330 patients with stage IB or IIA <4 cm tumors, to pelvic versus extended field therapy. The 5-year survival was 66 versus 55%, ($p = 0.043$). The complication rates were equal in the pelvic versus extended field radiotherapy in patients who were not operated on. For the entire group the complication rate was 7.8% for the extended field group and 3.6% for the pelvis alone group. The complications included 11 life threatening complications and 2 deaths. The distant metastatic rate was also lowered from 22% for pelvic radiotherapy alone to 12% for the extended field group ($p = 0.04$). The pelvic regimen is as per standard, but the paraaortic nodal area receives 45 Gy through AP-PA fields, or no more than 50 Gy in planned fields.Extended field radiotherapy can produce improved cure in selected patients at risk of between 10 and 50%.

There may be a new stimulus to give paraaortic radiotherapy with the advent of chemosensitization, and such trials may be needed. The fundamental problem however, is that the small bowel is very radiosensitive – as are the kidneys. The benefit of paraaortic, or so-called extended field radiotherapy is marginal, since the anatomical biological factors are almost insurmountable. Modern radioprotectors like amiphostine may also be investigated to protect the normal tissues in the area. Amifostine is supposed not to protect tumor cells against the effects of radiation.

IS THERE A PLACE FOR PREOPERATIVE RADIOTHERAPY FOR CARCINOMA OF THE CERVIX? Preoperative brachytherapy is popular in Europe and in some American hospitals. The rationale is sterilization of viable cells, sterilization of microscopic disease and reduction of tumor bulk. *Pearcy* (12) compared Preoperative brachytherapy plus radical surgery to radical surgery alone and found no difference. This has been our own experience at Tygerberg. The gynecological oncologist felt that the blood loss per operation was somewhat larger in the irradiated group and that the tissue planes were much more difficult to find. Analysis did not suggest any survival advantage and the procedure was abandoned (unpublished results).

Preoperative intracavitary therapy has been used in an attempt to extend the indications for radical hysterectomy to include patients with stage IIB disease. The Gustave Roussy Institute Group used preoperative brachytherapy with this purpose in mind (13). This Group reported pelvic failure only in 13 out of 153 patients with stage IIA and proximal IIB disease. This is a control rate of 91% with serious complications in 6%. This seems to indicate that a blanket approach to preoperative intracavitary therapy may be the wrong approach; but if a particular goal is in sight, namely "down-staging" of very early IIB cancers, the results may be good.

POSTOPERATIVE RADIOTHERAPY The goal is to reduce the risk for local and pelvic recurrence after radical surgery and to improve the disease free interval and survival. Salvage of pelvic failures after surgery is only 3% to 27% (14). It is therefore important to find a way to prevent recurrence if possible. Recurrence in accurately staged patients with early disease is rare, since the cure rate usually is over 80%. The identification of valid risk factors is the key to select patients for adjuvant therapy; otherwise many patients will receive unnecessary radiotherapy. The factors associated with an increased risk of pelvic recurrence are pelvic nodes involved, tumor larger than 2 cm in diameter, stromal invasion, involved resection margins and parametrial extension (15).

Thomas and Dembo (16) found that patients with positive pelvic nodes fail distantly or on the pelvic sidewall, whereas patients with early disease and negative nodes tend to fail centrally. The challenge then is to identify the few patients with negative nodes with increased risk factors. Currently postoperative therapy is still indicated in patients with the stated risk factors, since the evidence we have point to a reduction in pelvic recurrence rate from about 70 to 40% in stage IB and IIA patients. Adjuvant radiation increases the median time to recurrent disease from 1.4 to 2.1 years (17). There is additional evidence that the period to recurrence may be lengthened by from 12 to 35 months (15).

Morrow et al. (18) found a reduction in the proportion of pelvic failures from 84 to 50%. They found a reduction in pelvic failures from 84 to50%. *Figge and Tamini* (19) reported a reduc-

tion in the recurrence rate from 92 to 38%. There is also a survival advantage recorded. *Morrow et al.* (18) also found an improvement in the 2-year survival from 41 to 70% (18).

Since the complication rate is quite low for postoperative radiotherapy, till such time as its usefulness is definitely proven to be low, it seems wise to give patients with risk factors postoperative pelvic radiotherapy. Also in this situation, combined chemotherapy and radiotherapy have been shown to be beneficial.

CHEMO-RADIOTHERAPY There is now a fairly strong body of evidence that sensitizing doses of cisplatinum given concurrently during a course of radiotherapy confers a survival advantage. *Piver* (20) and *Hreshchyshyn et al.* (21) used hydroxyurea as a sensitizing agent and reported a survival benefit. Since then, *Smit and van der Merwe* (22) reported a trend towards improved survival in a randomized study with 63 patients with stage IIB carcinoma in three arms: radiotherapy alone vs. radiotherapy plus hydroxyurea vs. radiotherapy with cisplatinum. The latter appeared to be better than the other 2 arms. A plethora of review articles appeared recently, all supporting the use of adjuvant chemotherapy, mainly using cisplatinum. Review articles have appeared from the Martin Luther University, Halle-Wittenberg Germany, by *Dunst and Haensgen* (23), Clatterbridge Center for Oncology by *Green, Kirwan, Tierney et al.* (24) and The Mallincrodt Institute of Radiology Washington, University Medical College St Louis, by *Grigsby* (25).

RADIOTHERAPY AND ENDOMETRIAL CARCINOMA Surgery, namely total abdominal hysterectomy and bilateral salpingo-oophorectomy, (TAH-BSO) is the treatment of choice, especially since the majority of cases are diagnosed relatively early and 75% are stage I.

The uterus is an ideal receptacle for radium sources, and it can tolerate very high doses of radiation. The dose it can tolerate is really determined by the sensitivity of the small intestine, bladder and rectum, since the latter structures can tolerate only very much lower doses. One of the problems with endometrial carcinoma is the fact that about 9.5% of these tumors recur in the vagina. Several strategies have evolved to reduce this risk.

PREOPERATIVE RADIOTHERAPY Preoperative intracavitary therapy reduces the risk of vaginal recurrence from 9.5 to 2%, whilst preoperative teleradiotherapy reduces this risk from 9.5% (average) to about 1%. The problem with the preoperative approach is that it spoils the histology and that it precludes adequate surgical staging. Routine preoperative radiotherapy will also mean that a lot of patients will receive unneeded radiotherapy, since only 9.5% will actually develop vaginal recurrences. Selection could be made on the basis of risk factors, but these again are better assessed post-surgically. These risk factors are: positive nodal disease, and unfavorable pathology like adeno-acanthoma or adenosquamous carcinoma with a risk of recurrence of 10-18%. Poor differentiation of a tumor or myometrial invasion of especially the outer third has a risk of recurrence of 24%. Positive peritoneal cytology carries a risk for recurrence of 25% and parametrial invasion a risk of 32% (23).

The question then is how good is postoperative radiotherapy? The newer imaging techniques may reduce the need for surgical staging. MRI is especially good. Regardless of how good the imaging techniques may become, the patient will still need surgery. The logical approach therefore seems to stage the patients surgically and then give radiotherapy only to those with increased risk factors.

POSTOPERATIVE RADIOTHERAPY: 1. PREVENTION OF RECURRENT DISEASE As already stated, the risk factors post-surgery and post-pathology scrutiny can be far better assessed than with preoperative radiotherapy. Furthermore, a detailed operative description of the tumor extent helps the radiation oncologist significantly, especially if surgical clips are placed at sites of possible macroscopic residuum or at the site where suspicious nodes were removed.

Intracavitary therapy is the treatment of choice for vaginal recurrences, and external radiotherapy for pelvic recurrences. The dose to the pelvic wall must be 50 Gy to assure control of positive lymph nodes. We have irradiated about 300 patients with endometrial carcinoma stage I with risk factors. The approach was whole pelvic radiotherapy to 50 Gy in 2 Gy fractions, and a vaginal cylinder, usually only to the upper 1/3 of the vagina, an additional 10 Gy in 2 Gy fractions delivered to the vaginal epithelium. There were no recurrences in this group and the survival equaled that of the low risk stage I patients at 5 years. The complication rate was 1% (grade 1-2, moderate cystitis or proctitis, unpublished results).

RADIOTHERAPY AS PRIMARY AND ONLY THERAPY FOR ENDOMETRIAL CARCINOMA It needs to be remembered that radiotherapy on its own can eliminate even fairly large tumors where an operation is not possible. The success rate of this approach is stage dependent, but *Landgren et al.* (26) showed a survival rate of about 75% for stage I A, and for I B, 70%, for all patients 50% for stage II. Even technically unresectable endometrial carcinoma had a survival rate at 5 years of about 30%, (27).

The conclusion is that postoperative radiotherapy or radiotherapy alone in inoperable patients, is a very valuable adjunct or treatment modality.

RADIATION THERAPY FOR CARCINOMA OF THE VULVA Although radical vulvectomy is frequently needed, the objective in the management of vulva carcinoma is to avoid the use of the very mutilating classical radical vulvectomy as far as possible. Lesser procedures are now more widely accepted. For patients

with in situ carcinoma, or lesions smaller than 2 cm, the cancer can be treated adequately by simple excision or simple vulvectomy (28). Radiation therapy may be substituted for lymphadenectomy in the management of the regional nodes if the size of the lesion or the depth of invasion suggests involvement. Fields must encompass the inguinal and proximal femoral node stations. Doses of 45 Gy in 1.8 Gy fractions are required, plus an additional dose of 6-10 Gy to reduced fields. For known positive nodes, 65 to 70 Gy may be needed (29). *Homesley* (29) showed that radiotherapy, whole pelvis to 50 Gy, was superior to pelvic lymphadenectomy. The survival for patients with carcinoma of the vulva is reasonably favorable. *Hacker* (30) reported 5-year survival rates in 1035 patients of 90% for stage I, 77% for stage II, 51% for stage III and 18% for stage IV. This is, stage for stage, better than the survival rates for cervical carcinoma. Radio-chemotherapy, given concurrently, may further improve the survival rate, but more importantly, reduce the morbidity. Trials to investigate this question are needed.

RADIATION THERAPY OF VAGINAL CARCINOMA Because of the proximity of the urethra and the rectum as adjacent anatomical structures, and the great need to conserve these structures, radiotherapy is with few exceptions, the treatment of choice.

Local excision may suffice for intra-epithelial lesions. These and multi-focal superficial lesions, can also be treated by vaginal cylinder, 50 Gy in 2 Gy fractions to the surface of the applicator.

Invasive carcinomas require whole pelvis irradiation. The vaginal primary can be boosted with an iridium wire implant. The larger lesions may need 65-70 Gy achievable by a combination of external beam irradiation, vaginal implant or cylinder or a combination of these, for example a largish lesion that is infiltrating. The teletherapy dose should be about 50 Gy in 1.8 to 2 Gy fractions, supplemented by implant or cylinder to another 20 to 25 Gy. Fortunately, the vagina itself can tolerate fairly high doses if the volume is not too large. Survival can be good: *Perez et al.* (31) reported a 94% 5-years for stage 0. *Kucera and Vavra* (32) reported a 5-year survival rate of 81% for stage 1, 44% for stage II, stage 35% for stage IIB and stage 24% for stage IV.

The conclusion is that for the majority of vaginal cancers, radiotherapy is the treatment modality of choice. Here, like with other squamous carcinomas of the female genital tract, combined chemo-radiation should be further explored by clinical trial.

RADIOTHERAPY AND CARCINOMA OF THE FEMALE URETHRA There is a need to preserve the anatomy, therefore radiotherapy is a very useful and effective therapy option. Small lesions should be treated virtually as for cancer of the cervix, with whole pelvis irradiation including the primary tumor and the femoral and inguinal nodes. Two parallel-opposed fields can be used, with the beams tilted so as to avoid the anus. The approach is 45 Gy in 1.8 Gy fractions, plus a peri-urethral implant to boost the dose to the primary to about 65 to 70 Gy. For inguinal metastases, preoperative or postoperative radiotherapy may improve results. Concurrent radio-chemotherapy is under investigation and is likely to lead to improved results.

CARCINOMA OF THE OVARY The ovary is very sensitive to radiotherapy. The oocyte is the most sensitive, and can be destroyed by low doses of radiation. Menopause can be induced in women over 40 by 3.5 Gy whereas women under 40 require higher doses, in the order of 5-10 Gy. Castration can be induced in patients with breast cancer by 4 fractions of 2.5 Gy or 5 fractions of 3 Gy each. *Dembo* (33) argues that less than 1% of disease relapses occur beyond 8 years of diagnosis. Patients may be cured by surgery alone. Therefore, only patients with known macroscopic residual after primary surgery can eventually supply evidence of the efficacy of a modality. Ten-year results of abdomino-pelvic irradiation for stage II and III disease are reported in three series (33-35). All three show that about 40 to 50% of patients with residual lesions smaller than 2 cm achieve long-term disease free status. Very few patients with residual lesions larger than 2 cm are cured by radio- or chemotherapy, but chemotherapy supplies longer disease free intervals and is therefore preferred to radiotherapy.

Technically the entire abdominal cavity including the liver and entire diaphragm should receive 25 to 28 Gy in 1-1.2 Gy fractions. The pelvis gets an additional dose to take the total dose to 45-48 Gy. The total 2 Gy equivalent dose of this regimen is 44 Gy to the pelvis, 24 Gy to the liver and diaphragm. The dose to the kidneys is limited to 18-20 Gy.

INDICATIONS FOR POSTOPERATIVE ABDOMINO-PELVIC IRRADIATION: PATIENTS WITH STAGE I, II OR III DISEASE WITH NO MACROSCOPIC RESIDUUM Exclude patients with stage I, grade 1 lesions and negative cytology – these patients require no additional therapy. Exclude patients with high risk. These should get cisplatinum chemotherapy. The remainder of the patients in this intermediate risk group has a 5-year survival rate of 75%, if treated by abdomino-pelvic irradiation. Patients with intermediate risk make up almost a third of the patients (33). Data for platinum based chemotherapy in stage II disease seems to be no better than that of stage III disease. The results are about 40% 5-year progression free interval which is much worse that the 75% reported by *Dembo et al.* (33). Cisplatin resulted in a 5-10% increase in survival over single agent therapy. The overall 5-year survival for platinum based chemotherapy is only 20 to 30%.

There are now newer drugs like the taxanes, which seem to give even better results than the cisplatin based chemotherapy,

so that the role of radiotherapy may have to be redefined. In the United States of America more than 23,000 cases of ovarian cancer were expected in the year 2000, with 13,900 deaths, or the survivors will only add up to less than 40% of the new cases. Although there have been advances in the success rate of chemotherapy, the 5-year survival of women with advanced disease is only 25-30%, and 75% of women present with advanced disease.

Adjuvant chemotherapy presently is indicated in patients with high-risk early stage disease, which will comprise patients with stage IA, or IB disease with grade 3 histology. Adjuvant chemotherapy is also recommended for all patients with advanced disease. Standard chemotherapy presently is a combination of paclitaxel and carboplatin. Other promising agents include doxorubicin, topotecan, etoposide, gemcitabine or taxotere (36).

The relative costs will also have to be taken into account.

In conclusion, radiotherapy is a very valuable adjunct in the management of ovarian cancer and offers a cohort of patients a reasonable cure rate. It is still a modality to keep in mind. Overall, radiotherapy is a very valuable primary treatment modality or adjunct to surgery for the majority of gynecological malignancies. A slightly better comprehension of the physics radiobiology and technical factors will equip the gynecological oncologist to make increasingly use of the many options and opportunities that modern radiotherapy offers.

APPENDIX

Formula for expressing a radiation dose in terms of a "standard" course of 60 Gy in 2 Gy fractions (ID2)

$$ID2 = \frac{D(d + \alpha/\beta)}{(2 + \alpha/\beta)} \text{ Gy}$$ where D = the total dose and d= the dose per fraction

Example 1: A dose of 60 Gy is delivered in 2 Gy fractions and the $\alpha/\beta = 10$

$$\frac{60(2 + 10)}{(2+10)} \text{ Gy} = 60 \text{ Gy}$$ which is the test "standard dose"

(The a/b ratio for acutely reacting tissue like the small bowel or a tumor like carcinoma of the cervix may be taken to be 10.

The ID2 effects for late reacting tissues like the bladder or rectum will be:

$$ID2 = \frac{60(2 + 2)}{(2 + 2)} \text{ Gy}$$

i.e. the reaction the which clinicians are used to for this "standard dose"

Example 2: A radiation oncologist treats a patient with cervix carcinoma to a dose of only 40 Gy but uses 4 Gy fractions. What is the damage to the tumour in terms of a standard dose of 60 Gy?

$$ID2 = \frac{40(4 + 10)}{(2 + 10)} \text{ Gy} = 46.6 \text{ Gy}$$

illustrating that this dose will not kill the tumor to the same degree as 60 Gy in 30 fractions of 2 Gy each.

Example 3: The ID2 for damage to bladder and rectum:

$$ID2 = \frac{40(4 + 2)}{(2+2)} \text{ Gy} = 60 \text{ Gy}$$

This illustrates that the large 40 Gy in 4 Gy fractions will do as much damage to the rectum and the bladder as the dose of 60 Gy in 2 Gy fractions, but with a much weaker chance to control the tumor. This simple example illustrates the dangers in using large faction sizes.

REFERENCES

1. Dates in Oncology – A Chronological Record of Progress in Oncology over the Last Millennium. Lee, HSJ (ed) The Parthenon Publishing Group, New York and London, 2000.

2. Source Book Of Medical History, Dover Publications New York1942, 1960.

3. Hall EJ. (ed) Radiobiology for the Radiologist. Philadelphia, J.B.Lippincott, 1988

4. Grigsby PW, Perez CA. Radiotherapy for medically inoperable carcinoma of the cervix: stage IA and carcinoma in situ. Int J Radiat Oncol Biol Phys 1991; 21:375-378.

5. Pettersson F. (ed) Annual report FIGO v 20 Stockholm 1988.

6. Du Toit G, Smit BJ. Clinical prognostic parameters in stage III cervical carcinoma – an analysis of 732 patients. SAMJ 1997; 87:1434-1440.

7. Brenner DJ, Hall EJ. Fractionated high dose rate versus low dose rate regimens for intracavitary radiotherapy of the cervix. General correspondence based on radiobiology. Br J Radiol 1991; 64:133-141.

8. Mendelhall WM, Thar TL, Bova FJ, et al. Prognostic and treatment factors affecting pelvic control of stage IB and IIB of the carcinoma of the intact uterine cervix treated with radiation therapy alone. Cancer 1984; 53:2649-2654.

9. Keane TJ, Fyles A, O'Sullivan B, et al. The effect of treatment duration on local control of squamous carcinoma of the tonsil and carcinoma of the cervix. Semin Rad Oncol 1992; 2:26-28.

10. Smit BJ, Du Toit JP, Groenewald WA. An Indwelling catheter intrauterine tube to facilitate intracavitary radiotherapy of carcinoma of the cervix. Br J Radiol, 1989; 62:68-69.

11. Rotman M, Choi K, Guse C, et al. Prophylactic irradiation of the paraaortic lymph node chain in stage IIB and bulky stage carcinoma of the cervix, initial treatment results of RTOG 79-20. Int J Radiat Oncol Biop Phys 1990; 19:513-521.

12. Pearcy RG, Peel KR, Throrogood J, et al. The value of preoperative intracavitary radiotherapy in patients treated by radical hysterectomy and pelvic lymphadenectomy for invasive carcinoma of the cervix. Clin Radiol 1988; 39:95-98.

13. Gerbaulet AP, Kunkler IH, Kerr G, et al. Combined radiotherapy and

surgery: local control and complications in early cancer of the uterine cervix – the Villejeuf experience 1975-1984. Radiother Oncol 1992; 23:66-73.

14. Shingleton HM, Gore H, Soong SJ, et al. Tumor recurrence and survival in stage IB carcinoma of the cervix. Am J Clin Oncol 1983; 6:265-272.

15. Crooks J, Esche Bernd A. The Uterine Cervix. In: Moss' Radiation Oncology – Rationale Technique, Results. Seventh edition, Mosby, London, 1994, page 659

16. Thomas GM, Dembo AJ, Myhr T, et al. Long term results of concurrent radiation and chemotherapy for carcinoma of the cervix recurrent after surgery. Int J Gynecol Cancer 1993; 3:193-98.

17. Kinney W, Alvarez RD, Reid GC, et al. Value of adjuvant whole pelvis irradiation after Wertheim's hysterectomy for early stage squamous carcinoma of the cervix with pelvic nodal metastases: a matched control study. Gynecol Oncol 1989; 34:258-262.

18. Morrow P. Is pelvic radiation beneficial in the postoperative management of stage IB squamous cell carcinoma of the cervix with pelvic node metastases treated by radical hysterectomy and pelvic lymphadenectomy: panel report. Gynecol Oncol 1980; 1: 105-110.

19. Figge D, Taminin HK. Patterns of recurrence of carcinoma following radical hysterectomy. Am J Obstet Gynecol 1981; 139:799-814.

20. Piver MS, Barlow JJ, Vongtama V, et al. Hydroxyurea and radiation therapy in advanced cervical cancer. Am J Obstet Gynecol 1974; 120:969-972.

21. Hreshchyshyn MM, Aron BS, Boronow RC, Franklin EW 3rd, Shingleton HM,

Blessing JA. Hydroxyurea or placebo combined with radiation to treat stages IIIB and IV

cervical cancer confined to the pelvis. Int J Radiat Oncol Biol Phys. 1979; 5:317-22.

22. Smit BJ, van der Merwe, AP. Preliminary results of a prospective randomized controlled clinical trial with hydroxyurea and cisplatinum as radiosensitizers in advanced carcinoma of the cervix. Radiation Oncology Investigations 1993; 1:117-125.

23. Dunst J, Haensgen G. Simultaneous radiochemotherapy in cervical cancer: recommendations for chemotherapy. Strahlenther Onkol 2001; 177:635-640.

24. Green J, Kirwan J, Tierney J, et al. Cochrane Database Syst Rev 2001(4):CD002225

25. Grigsby PW. Cervical cancer: combined modality therapy. Cancer J suppl 2001; 1, 5487-501.

26. Landgren RC, Fletcher GH, Delclos L, et al. Actuarial survival rates for patients irradiated for medically in-operable (unable to tolerate hysterectomy) carcinoma of the endometrium. Am J Roentgenol Ther Nucl Med 1976; 128:148-154.

27. Landgren RC, Fletcher GH, Delclos L, et al. Actuarial survival rates for patients irradiated for technically unresectable cancer of the endometrium. Am J Roentgenol Ther Nucl Med 1976; 126:148.

28. Hacker NV, Eifel P, McGuire W, et al. Vulva. In: Hoskins WJ, Perez CA Young, RC (eds) Principles and practice of gynecologic oncology, Philadelphia, Lippincott, 1992

29. Homesly HD, Bundy BN, Sedlis A, et al. Radiation therapy versus pelvic node resection for carcinoma of the vulva with positive groin nodes. Obstet Gynecol 1986; 68:733-740.

30. Hacker NF. Vulvar cancer. In: Berek JS, Hacker NF (eds) Practical Gynecologic Oncology, Baltimore, Williams and Wilkens, 1989

31. Perez CA, Camel HM, Galakatos AE, et al. Definitive irradiation in carcinoma of the vagina: long term evaluation of results. Int J Radiat Oncol Biol Phys 1988; 15:1283–1290.

32. Kucera H, Vavra N. Radiation management of primary carcinoma of the vagina: clinical and histopathological variables associated with survival. Gynecol Oncol 1991; 40:12-16.

33. Dembo AJ. Abdomino-pelvic radiotherapy in ovarian cancer: a 10-literature year experience. Cancer 1985; 55:2285-2290.

34. Martinez A, Stray MF, Howes AE, et al. Postoperative radiation therapy for ovarian cancer: the curative role based on a 24-year experience. J Clin Oncol 1985; 3:901-911.

35. Weiser EB, Burke TW, Heller PB, et al. Determinants of survival in patients with epithelial ovarian carcinoma following whole abdominal irradiation. Gynecol Oncol 1988; 30:201-208.

36. Memarzadeh S, Berek JS. Advances in the management of epithelial ovarian cancer. J Reprod Med 2001; 46:621-629, discussion: 629-630.

Biztonságos oszteoporózis terápia

EVISTA®
raloxifene HCl

- Nem hormonális készítmény.
- Biztonságos a reproduktív szervekben (emlő, uterus, ovarium).[2, 3]
- Cardiovasculáris biztonság.[1]
- Bizonyítottan hatékony a töréskockázat hosszútávú csökkentésében.[4]
- Eredményes a csontvesztés gyors megállításában.[5]
- Kiemelkedően hatékony a többszörös csigolyatörések megelőzésében.[4]

Rövidített alkalmazási előírás:
Hatóanyag: 60 mg raloxifenium chloratum. **Javallatok:** Postmenopausalis osteoporosis kezelése és megelőzése; a vertebralis fracturák csökkentése. **Adagolás:** Orálisan naponta egy tabletta, a nap bármely időszakában étkezéstől függetlenül. **Ellenjavallatok:** Fogamzóképes életkor. Vénás thromboemboliás megbetegedés. Túlérzékenység. Májfunkció zavara, cholestasis. Súlyos veseelégtelenség. Rendellenes genitalis vérzés. Endometrium carcinoma, mivel ebben a betegségben a raloxifen biztonságos alkalmazását nem vizsgálták kielégítő módon. **Mellékhatások:** vénás thromboembolia, hőhullámok, lábizom görcsök. **Gyógyszerkölcsönhatás:** kumarin származék egyidejű adagolása során a prothrombin idő mérsékelten csökken. A raloxifent nem szabad együtt alkalmazni cholestyramin-nal, vagy más anion cseréló gyantával. **Figyelmeztetés:** A vénás thromboemboliás megbetegedések kialakulásának veszélye hasonló mértékű a jelenleg használatos női hormonpótló kezelés során észleltekhez. Az előny/kockázat arányát kell mérlegelni a vénás thromboemboliás megbetegedések szempontjából veszélyeztetett betegek esetében. A raloxifen adását fel kell függeszteni minden olyan megbetegedés vagy állapot esetén, ami hosszan tartó immobilizációhoz vezet. A raloxifen nem okoz endometrium proliferatiot, ezért raloxifen kezelés alatt jelentkező genitalis vérzés esetén ennek szakorvosi kivizsgálása javasolt. A raloxifen kezelés biztonságosságát emlőcarcinomás betegeknel nem vizsgálták kielégítő módon. A raloxifen és az emlőcarcinoma kezelésében használatos gyógyszerek vagy adjuváns terápia együttes alkalmazására nincsenek adatok, ezért a raloxifent az osteoporosis megelőzésére és kezelésére csak az emlőcarcinoma kezelésének és adjuváns terápiájának befejezése után javasolt adni. A raloxifen csak postmenopausában adható, fogamzóképes korú nőknél alkalmazása kontraindikált. Terhesség során alkalmazva magzati károsodást okozhat. Szoptatás időtartama alatt használata nem javallt, mivel befolyásolhatja a csecsemő fejlódését. Férfiak kezelésére nem javallt. A raloxifen nem hatékony a hőhullámok vagy a menopausa ösztrogén hiánnyal összefüggő egyéb tüneteinek kezelésében. **Csomagolás:** 28 filmtabletta.

Irodalom: **1.** Barrett-Connor E. Raloxifene and Cardiovascular Events in Osteoporotic Postmenopausal Women. JAMA 287: 847-857, 2002. **2.** Cauley JA et al. Breast Cancer Res. Treat 2001; 65:125-134 **3.** Neven P et al. The Effect of Raloxifene on the Incidence of Ovarian Cancer in Postmenopausal Women. Gynecol Oncol 85:388-390, 2002. 09. 10. **4.** Delmas PD et al. Efficacy of Raloxifene on Vertebral Fracture Risk Reduction in Postmenopausal Women with Osteoporosis: Four-Year Results from a Randomized Clinical Trial. J Clin Endocrinol Metab 87: 3609-3617, 2002. **5.** Delmas PD et al. Effects of raloxifene on bone mineral density, serum cholesterol concentrations, and uterine endometrium in postmenopausal women. N Eng J Med 1997; 337: 1641-1647. **6.** Ettinger B et al. JAMA 1999;282:637-645

Kérésére a teljes alkalmazási előírás elérhető: **Lilly Hungária Kft.** 1075 Budapest, Madách u. 13-14. Telefon: 328-5152

Lilly

IBM házhozszállítási akció!

IBM ThinkPad R30

- Szemkímélő, hatalmas aktív mátrixos kijelző (14,1" TFT)
- Intel Celeron 900 MHz processzor
- 15 GB winchester
- 128 MB RAM
- 24× CD olvasó
- Infravörös port
- USB és párhuzamos port (nyomtató, szkenner és CD író csatlakoztatásához)
- PCMCIA csatlakozó (speciális külső eszközök csatlakoztatására)
- Beépített ethernet hálózati csatlakozó
- Beépített modem (internetezéshez)
- Külső monitor, SVGA televízió és videó csatlakozó
- Beépített hangszóró, mikrofon és külső hangfal csatlakozó
- Trackpoint
- Billentyűzet megvilágító lámpa
- Gyárilag installált jogtiszta Microsoft Windows 98 operációs rendszer
- Ajánlatunk nem tartalmazza a külön megvásárolható 1,44" külső floppy meghajtót

Eredeti IBM Notebook már

299.000 Ft-ért!

Ajánlatunk a készlet erejéig tart.
Árunk az Áfát és a szállítási költséget nem tartalmazza.

Ön fizethet:

- **Utánvéttel** - a telefonos megrendelés feldolgozását követő 48 órán belül kézbesítjük a megrendelt számítógépet az ország bármely területére
- **Átutalással** - a vételár beérkezését követő 48 órán belül kézhez kapja számítógépét
- **Személyesen, készpénzzel** - budapesti irodánkban

ADcomp
www.adcomp.hu

AD-Comp Kereskedelmi és Szolgáltató Kft.
H-1016 Budapest, Zsolt u. 8/A fsz. 4.
Telefon: +36 1 225-3787
Fax: +36 1 201-3841
E-mail: notebook@adcomp.hu
www.adcomp.hu


DICYNONE®
Egyedülálló
vérzéscsillapító
További információval
készséggel állunk
rendelkezésére:
OM
HUNGÁRIA KFT
OM HUNGÁRIA Kft. 1145 Budapest, Uzsoki u. 36/A Telefon: 470-30-30 Fax: 470-30-39
BIOGAL
TEVA

Selected abstracts of the 1st EAGC Educational World Congress on Gynecologic Oncology

Neoadjuvant chemotherapy in women with breast cancer and the influence into the type of surgery

M. BENDOVÁ, M.D[1]., V. PECHA[1], K. TIKOVSKÝ[1], K. PELCOVÁ[2], M. SKOVAJSOVÁ[3]

[1]Department of Obstetrics and Gynecology, 3rd Faculty of Medicine, [2]Radiodiagnostic Clinic, 3rd Faculty of Medicine,Charles University, [3]Mammacentrum DTC, Prague

OBJECTIVE In historical introduction authors give a summary the therapeutic modalities of breast cancer. They characterize conception of advanced breast cancer from a local disease to the systemic one in historical context. As a result of this philosophy is mentioned the influence into the seguence of using therapeutic modalities.

METHODS The article deals especially with using the possibility of the neoadjuvant chemotherapy in women with advanced breast cancer with a goal to reach the operability (conservative surgery) in indicated cases, when the risk of dissemination or generalisation is higher then the risk of local progression or local relaps. At the same time effect of the neoadjuvant chemotherapy is such a test of chemosensitivity of the tumor in vivo. The absolute indications for mastectomy (radical operation) are mentioned and the reasons for change this postulates and posibility of the conservative (partial) operation of the breast cancer is described. Authors report a group of 70 patients with new breast cancer (stadium T2-4), in which operation was planned. In this group, neoadjuvant chemotherapy was applied (number of cycles 2-5). The average size of the tumor was monitored by sonography (cm) before the start of chemotherapy, after every cycle and after stopping chemotherapy before operation. Average size of the tumor was evaluate before and after neoadjuvant chemotherapy. At the same time the influence into the deciding process about the type of operation was studied.

RESULTS Regression of the tumor after chemotherapy was observed in a group of women with conservative operation in average to 27,7% , respectivelly to 53% in a group of women with radical operation.

CONCLUSIONS The influence of neoadjuvant chemotherapy into the deciding process about the type of operation was evaluate in women with advanced breast cancer. The results show the evidence of the significant efect of neoadjuvant chemotherapy on the average size (regression) of the tumor and it´s significant influence to decreasing the number of mutile radical operations. The possibility of conservative operation with the same therapeutic efect stimulates the psychic stage of the patients and increases their quality of life.

Key words breast cancer, neoadjuvant chemoterapy, conservative and radical surgery

Cytoreductive surgery followed by intraperitoneal hyperthermic perfusion in the treatment of recurrent epithelial ovarian cancer – a phase II clinical study

MARCELLO DERACO[1], CARLO R. ROSSI[2], ELISABETTA PENNACCHIOLI[1], STEFANO GUADAGNI[3], DANIELLE CARLIER SOMERS[1], NICOLA SANTORO[1], FRANCESCO RASPAGLIESI[1], SHIGEKI KUSAMURA[1], MAURIZIO VAGLINI†

[1]Department of Surgery, National Cancer Institute of Milan, [2]Department of Surgery, University of Padua, [3]Department of Surgery, University of L'Aquila

AIMS AND BACKGROUND The optimal salvage therapy for recurrent ovarian carcinoma has not been clearly established. Response to second-line chemotherapy is low with a short median survival (8.8-15 months). We investigated the effect of an aggressive approach consisting of surgery followed by intraperitoneal drug delivery and local hyperthermia.

PATIENTS AND METHODS In a phase II clinical study, 27 patients with advanced/recurrent ovarian carcinoma were treated with cytoreductive surgery (CRS) and intraperitoneal hyperthermic perfusion (IPHP). Median patient age was 53 years (30-67) and mean follow-up was 17.4 months (0.3-36.0). Patients had been surgically staged and heavily pre-treated with cisplatin-based, taxol-based or taxol-platinum containing regimens. Nineteen (70%) patients were cytoreduced to minimal residual disease <2.5 mm. The IPHP was performed with the closed abdomen

technique, using a preheated polysaline perfusate containing cisplatin (25 mg/m²/l) + mitomycin-C (3.3 mg/m²/l) through a heart-lung pump (mean flow of 700 ml/min) for 60 minutes in the hyperthermic phase (42.5°C).

RESULTS Two-year overall survival was 55%. Median times to overall progression and local progression were 16 months and 21.8 months, respectively. Variables that affected the overall survival or time to progression were as follows: residual disease ($p = 0.00025$), patient age ($p = 0.04$), and lag-time between diagnosis and CRS+IPHP ($p = 0.04$). Treatment-related morbidity, mortality and acute toxicity (grade II-III) rates were 11, 4 and 11%, respectively. Eight (89%) out of 9 patients had ascites resolution.

CONCLUSION Our results suggest that CRS+IPHP is a well-tolerated, feasible and promising alternative in the management of selected patients with recurrent ovarian cancer, but further randomised controlled studies are needed in order to confirm our findings.

Human papillomavirus (HPV) typing in pozega county

DAMIR HODŽIĆ[1], RENATA RALIŠ[1], RASTISLAV NAVRATIL[1], DAMIR ELJUGA[2], KREŠIMIR PAVELIĆ[3], MAGDALENA GRCE[3]

[1]Pozega County General Hospital, Department of Gynecology & Obstetrics, Pozega, [2]University Clinic for Tumors, Department of Gynecology, Zagreb, [3]Institute "Ruđer Bošković", Division of Molecular Medicine, Zagreb

Between May 2001 and May 2002 in gynecological polyclinic of Pozega County General Hospital we treated 66 women with HPV suspect Pap smear or with chronic and persistent inflammation of lower genital tract. In all of them we took endocervical smear for microbiological analysis, as well as endocervical cyto-brush for HPV DNA identification by PCR method. From all 66 patients, 37 (56.1%) were HPV positive. In 19 (51.4%) of them HPV 16 was found, in 15 (40.5%) there was HPV of undetermined type, in 2 (5.4%) HPV 33, and in 1 (2.7%) HPV 6. Among all patients, only in 15 (22.7%) of them no microbiological agent was isolated, and of these, 11 (73.3%) were HPV positive. All other patients with proven infection of lower genital tract were specifically treated with antibiotics. Recurrent infection was occurred in 3 (5.9%) patients, and treatment was repeated with other suitable antibiotics. Nuligravidae were 24 (36.4%), out of which 16 (66.7%) were HPV positive. The youngest patient was 19, and the oldest 75 years old. In the group up to 19 years, there were 2 patients and 1 was HPV positive. In the group of 20-29 years, there were 26 patients, out of which 15 (57.7%) were HPV positive. In the group of 30-39 years, there were 22 patients, out of which 13 (59,1%) were HPV positive. In the group 40-49 of years, there were 10 patients, out of which 5 (50%) were HPV positive. In the group of 50 and older, there were 6 patients, out of which 3 were HPV positive. HPV infection, as most common sexually transmitted disease, occurs in 20-40% sexually active women. It is the fact that HPV, up to now, can not be completely eradicated by any known therapy. Moreover, according to recent literature reports, the HPV infection obviously correlates with developing of cervical cancer. Knowing these facts, the importance of prevention the infections of lower genital tract is easily understandable as well as proper treatment. So, we presented our own educational program not only for risk women, but medical staff, too. We also presented improved algorhytms of preventive measures and combined therapy against HPV infection.

Key words HPV typing, female genital infections, cervical cancer prevention

HDR and MDR brachytherapy carcinoma of the uterine cervix

M. KISELEVA, L. KRIKUNOVA

Department of Radiation Therapy of Gynecologycal Diseases, Medical Radiological Research Center of RAMS, Obninck

241 patients with cervix uteri cancer have gone through the course of the combined radiation therapy in the Department of Radiation Therapy of Gynecological Diseases of the MRRC RAMS. In 108 patients, the internal radiation therapy was performed with the "Selectron" apparatus (produced by the Nucletron) with ^{137}Cs-MDR source. The remaining 133 patients were irradiated by traditional technique with ^{60}Co-HDR source. In the both groups, the stage II of the illness dominated. Basing on the results of the morphological examinations, the squamous cell cancer diagnosis was verified in 65% patients from the first group and in 77% patients from the second group. Of these, 61.5 and 55% cases, correspondingly, were squamous cell cancers. Adenocarcinoma has made up 18.2% and low-differentiated cancer case – 1% from the fist group and in group number two: adenocarcinoma took place in 18,8%, low-differentiated – 3%. The dominating types of growth were the exophyte type in the first group (52.5%) and the endophyte one in the second group (43%). As regards the spread of the tumor process, the parametrium-vaginal version dominated in the both groups. In the 1st group, the required local dose equaled to 10.6 Gy. The total local dose was 53.0 Gy for the stage I, and 58.4 Gy for the remaining stages and for histologically unfavorable forms. In the 2nd group, the single local dose was 5.0 Gy, exposures were performed twice a week. The total local dose made up 40 to 45 Gy for the stage I and 50.0 Gy for the stages II and III. The 5-year survival was: first – 76.7%, second – 88%, third – 56.6% in the 1st group, and 92.6, 69.3 and 52.8% in the 2nd group, correspondingly.

Pelvic (intraperitoneal) and paraaortal (extraperitoneal) laparoscopic lymphadenectomy in gynecological malignomas

MIROSLAV KOPJAR, MLADEN ZADRO, TONČI VISKOVIĆ, MARIN ŠIMIĆ, NIKŠA KNEZOVIĆ, ILIJA ALVIR, Z.VAJDIĆ, IGOR MARIČIĆ

General Hospital Zabok, Zabok

OBJECTIVE We would like to present our early results in laparoscopic pelvic lymphadenectomies and one laparoscopic paraaortal lymphadenectomy in General Hospital Zabok, Croatia. The most important prognostic factor in gynecological malignomas is the presence of pelvic and/or paraaortal lymph node metastasis. Lymph node dissection is only reliable method in staging of pelvic malignancies. Open surgery lymphadenectomy is connected with high morbidity and long postoperative recovery and diagnostic results of noninvasive imaging methods can't be compared with surgical methods. We believe that laparoscopic lymphadenectomy is reasonable alternative to open surgery.

SUBJECTS AND METHODS Over a period of 5 years, 25 pelvic lymphadenectomies and 12 pelvic-paraaortal lymphadenectomies were performed at General Hospital Zabok, Croatia and of that number there were 5 laparoscopic intraperitoneal pelvic limphadenectomies and one extraperitoneal laparoscopic paraaortal lymphadenectomy, the rest of the operations were performed by laparotomy. We used transperitoneal route for laparoscopic pelvic lymphadenectomies and extraperitoneal route for paraaortal laparoscopic lymphadenectomy. Indication for operation were carcinoma of endometrium, and one carcinoma of cervix. The aim of the laparoscopic lymphadenectomies was the staging of carcinoma. All lymphadenectomies were performed together with TLH, except one which was performed with coelio Shauta radical hysterectomy.

RESULTS All laparoscopic lymphadenectomies were performed successfully. There was no operative mortality, and there was no serious intraoperative complications. The average number of removed lymph nodes was 20 (range 9-25). In one patient tumor metastasis were found in removed lymph nodes. There was no significant blood loss.

CONCLUSION Our early experience shows that endoscopic pelvic lymphadenectomy gives the same surgical results as laparotomy if performed by experienced laparoscopist with excellent knowledge of anatomy and oncology. Laparoscopic lymphadenectomy performed with TLH or coelio Shauta operation combines advantages of both technics allowing a radical operation with shorter postoperative recovery, shorter hospitalization and better quality of life. Although laparascopic paraaortal lymphadenectomy looks very promising, our experience is insufficient to draw longterm conclusions.

Key words laparoscopic pelvic lymphadenectomy, laparoscopic paraaortal lymphadenectomy

---

Radical hysterectomy, class III, accurding to the Mayo Clinic modification

MILOŠ MLYNČEK, ADRIÁN OBERT, MIROSLAV KRJAK, PETER UHARČEK

Department of Obstetrics and Gynecology, Faculty Hospital, Nitra

The basic phases of abdominal radical hysterectomy, class III in the modification of Mayo Clinic for cervical cancer, stage IA2, IB1, IB2 are the following: 1. The opening of the retroperitoneal space and the developing of the paravesical and pararectal spaces. 2. Pelvic lymphadenectomy – the dissection of common iliac, external iliac, internal iliac and obturator nodes. 3. The ligation of the anterior division of the internal iliac artery. 4. The cardinal ligament transection. 5. The uterosacral ligament transection after the dissection of the rectum from the back of the upper vagina. 6. The dissection of the ureter from the top of the cardinal ligament and from the pubocervical ligament. 7. The dissection of the bladder from the cervix and vagina. 8. The division and ligation of the vesicouterine ligament. 9. The divison of the paracolpium up to the edge of the vagina, the cutting of the vagina. 10. The closure of the vagina and peritoneum. 11. The insertion of the suprapubic 18 French Foley catheter into the bladder.

The authors demonstrate the results in the series of the last consecutive 150 radical hysterectomies performed by the same operative team:
Mean operative time: 210 minutes (160-300)
Mean blood loss: 550 ml (300-1200)
Mean number of pelvic lymph nodes: 26 (12-38)
Postoperative period with suprapubic bladder drainage: 11 days (9-16)
Bleeding from pelvic floor veins: 3 (2%)
Bleeding from the external iliac vein: 1 (0.7%)
Bleeding from the internal iliac vein: 2 (1.3%)
Complications during first 30 postoperative days
Vesicovaginal fistula: 1 (0.7%)
Ileus from intestinal obstruction: 2 (1.3%)
Wound dehiscence: 1 (0.7%)

CONCLUSION The surgical competence in gynecologic oncology is the independent prognostic factor for the benefit of surgical treatment. The training in the specialized centers must be realized under the requirements of the U.S. Society of Gyne-

cologic Oncology and the European Society of Gynecologic Oncology.

Key words radical hysterectomy, training, gynecologic oncology

The treatment in advanced ovarian cancer – cooperation of the gynecologist and the surgeon

A. OLEJEK, W. BICHALSKI, L. MITAS, D. WALA, A. DRĘBKOWSKI, R. MUCHA

1st Department of Obstetrics and Gynecology, Department of General Surgery, Silesian Medical University, Bytom

BACKGROUND Surgery is still the base treatment in advanced ovarian cancer. The paper analyse the advanced ovarian cancer cases treated by the team gynecologist-general surgeon. Between 1994-2001, in the 1st Department of Obstetrics and Gynecology in Bytom 421 women were operated because of ovarian cancer stage I to IV according to FIGO. The mean age was 47.6 years. In advanced cases, surgical consultation before surgery was planned and in 76 women (18,1%) these surgical procedure was necessary. The surgery included cytoreduction, excision of uterus and adnexas, omentectomy, appendectomy, pelvic and periaortal lymphadenectomy, multiplices excision and washing. There were performed in 24 cases small bowel resection, in18 cases colon resection, in 12 cases resection both of them, in 11 cases anus preternatural, in 1 case kidney resection. In 16 cases large intestinal adhesions was the cause of bowel perforation. After the surgery the transitory bowel obstruction appeared in 28 women. In 4 cases relaparotomy was necessary. In 2 cases bleeding to the peritoneum cavity was stated.

CONCLUSIONS The cooperation of gynecologist surgeon and general surgeon enables more radical surgery in case of advanced ovarian cancer.

Malignant mass of the ovary in women under 30 years of age

A. OLEJEK, L. MITAS, J. ZAMŁYŃSKI, A. DRĘBKOWSKI, P. BINKIEWICZ, D. WALA

1st Department of Obstetrics and Gynecology, Silesian Medical University, Bytom

The study presents malignant ovarian neoplasms in women aged under 30 treated between 1994-2002 in our department. 24 women aged 13-30 (mean age 23.4) was operated because of ovarian malignant neoplasms staged I-IV FIGO. In 16 cases was performed radical surgery applying ovarian cancer surgical protocol. In 4 cases, staged IA was performed adnexectomy with biopsies and washing according to EORTC rules. In 4 cases there secondary cytoreduction was made.

RESULTS In 7 cases (29.16%) was ascertained cystadenocarcinoma papillare serosum, in 4 cases (16.66%) cystadenocarcinoma papillare mucinosum, in 2 cases (8.33%) adenocarcinoma leve diifferentiatum. The next cases were: in 3 women (12.5%) dysgerminoma, in 3 (12.5%) endodermal sinus tumor, in 1 case dysgerminoma/yolk sac tumor. All cases of germinal tumors were found in the group aged 13-20 years. Next cases were: 1 carcinoma embryonale, 1 carcinoma mesonephroides, 1 carcinoma anaplasticum fusocellulare, 1 carcinoma anaplasticum.

CONCLUSIONS Ovarian epithelial cancer were found in nearly 50% of women aged under 30 years. In age under 20 years germinal neoplasms were found most often.

Hormonal activity of transposed ovaries in young women treated for cervical cancer-follow up study

A. OLEJEK, L. MITAS, A. DRĘBKOWSKI, J. ZAMŁYŃSKI, D. WALA, A. BLECHARZ, A. LAITL, P. CHIMICZEWSKI

Department of Obstetrics and Gynaecology of Silesian Medical University, Bytom

OBJECTIVE The paper analyse the hormonal function of transposed ovaries in young women treated for cervical cancer stage IB according to FIGO classification.

MATERIALS AND METHODS Between 1995-2001, 64 women aged from 20 to 40 years, mean age 34.5 years underwent radical hysterectomy by Wertheim-Meigs methods with ovarian transposition. The studied patients had no menstrual nor climacteric like problems before surgery. Concentration of FSH, LH, PRL, oestradiol, testosterone, progesterone in serum was assessed before surgery and on 9th day after surgery. Patients were subsequently requested to return after 6 months, and then in 2001 in order to have the hormonal activity of ovaries left in the body assessed in the perspective of a few years after the operation, depending on whether there had been additional radiotherapy after surgery.

RESULTS There was a statistically significant difference between the groups after radiotherapy compared to those without radiotherapy concerning climacteric complaints and hormonal results. Proper ovarian hormonal function was observed as still present in 65% of patients, even 6 years after surgery.

Lower bone density in young women treated because of cervical cancer was also observed.

CONCLUSION Ovarian transposition is a procedure allowing ovarian function to be preserved in women treated for cervical cancer simultaneously preventing the necessity of long term application of HRT with all the burdens it carries. It is necessary to pay special attention to densitometric examination due to possibility of lower bone mass in women with cervical cancer.

Bacterial flora in vulvar carcinoma with HPV16 or HPV18 infection

A. OLEJEK

Department of Obstetrics and Gynaecology, Silesian Medical Uneversity, Bytom

The objective of the research was to analyze bacterial flora of vagina in patients with vulvar carcinoma and with presence of HPV type 16 or 18 infection The investigation covered 20 women with vulvar carcinoma consecutively operated in our Department. The vaginal swab was taken from each patient immediately after admission and the bacteriological examination was performed. We collected the specimens of vulvar carcinoma tissues during radical operation. The examined tissues were first analyzed histopathologically and then molecularly. Presence of HPV in the examined tissues was detected with the PCR technique using consensus starters, and then HPV was genotyped also with the PCR technique using starters specific for high oncogenous HPV's 16 and 18. Statistical analysis was carried out with the Statistica PL package.

HPV16 or HPV18 infections were found in 75,0% of cases. In the cases without HPV16 or 18 infections the bacteriological examination revealed (according to the frequency of appearance): Streptococcus sp., Streptococcus B-haemolyticus, Staphylococcus epidermidis, Escherichia coli, Corynebacterium sp., Proteus mirabilis, Morganella morganii. However, in the cases with presence of HPV16 or 18 infection we found (according to the frequency of appearance): Staphylococcus epidermidis, Streptococcus sp., Escherichia coli, Proteus mirabilis, Streptococcus B-haemolyticus, Enterococcus sp., Morganella morganii, Enterobacter cloacae.

The tumor and its environment: role of local feedback mechanisms in human breast cancer

CHRISTIAN F. SINGER[1], ERNST KUBISTA[1], FARIDEH GARMROUDI[2], KEVIN J. CULLEN[2]

[1]University of Vienna Medical Center and Ludwig-Boltzmann-Institute of Clinical Experimental Oncology, Vienna, [2]Vincent T. Lombardi Cancer Center, Georgetown University, Washington

Breast function and development are controlled by a variety of both local and systemic signals. Many of these signals are exerted by hormones and cytokines which are believed to be effectors in autoregulatory feedback loops. Recent studies have also suggested the involvement of such mechanisms in human breast cancer. For example, the disruption of a negative feedback system by malignant transformation can result in the loss of growth control or in increased malignant behavior of tumor cells. Conversely, pathological positive feedback loops can develop that enhance tumor growth and invasion by excessive release of stimulatory factors. These loops are often located at the site of tumor invasion and involve stromal-epithelial interactions. They can be composed of mutually stimulating or inhibiting cytokines and may include locally expressed sex steroids.

Although most studies have concentrated on cell-cell interactions at the site of the primary tumor, a number of observations indicate their importance in metastases as well. A thorough analysis of the regulatory mechansims within a malignant tumor is essential for the understanding of its unique behavior and for the investigation of more specific breast cancer therapies.

Key words stromal-epithelial interactions, breast cancer, paracrine

Trans-vaginal hydro-laparoscopy as a screening method for high-risk ovarian cancer patients

VASILIOS TANOS[1], DIOMEDES IOANNOU[1], MINAS PASCHOPOULOS[2]

[1]Department of Gynecological Oncology Evaggelistria Medical Center, Nicosia, [2]Department of Gynecology, Ioannina Medical School

Trans-Vaginal Hydro-Laparoscopy (TVHL) is a new method, which is primarily used to diagnose infertility problems such as endometriosis, pelvic adhesions and other pelvic pathology. Vaginal sonography accompanied with color Doppler study and serum Ca125 failed as early ovarian cancer diagnosis and screening tests. According to latest reports for every 7 postmenopausal women identified with abnormal ultrasound (US) and/or elevated Ca125, undergoing laparoscopy/laparotomy only one had ovarian cancer. ovarian cancer high risk patients present women with familial breast/ovarian cancer syndrome (estimated risk up to 80%) and patients with suspected ovari-

an/pelvic pathology visualized by US. We performed TVHL to such high risk patients.

METHODS Pethidine 1 mg/kg was injected i.m, 30 minutes before the procedure. The patient was placed in lithotomy position and local anesthesia was applied at the insertion point. A veres needle 1.5 mm was inserted in the posterior vaginal wall 1-2 cm above the cervical-corpus uteri junction while a bigger trocar of 3.4 mm followed. About 300-500 ml of warm normal saline was injected in the pelvis, the needle was removed and a telescope of 2.7 mm was then introduced, connected to a light source and a monitor. At the end of the procedure, the normal saline injected was drained and sent for cytology while biopsies sampled through a working channel from suspected areas. All our cases were selected not to have vaginal or pelvic operation in the past. In all cases pelvic US and serum Ca 125 was performed. The majority of these patients although high risk to develop ovarian cancer, they wanted to preserve their fertility.

RESULTS In all 23 cases excellent visualization was noted and the examiner had no difficulties to identify any pathology. All patients except one found TVHL simple and painless procedure and they were ready to repeat it in one year. The average time of TVHL was 30 minutes while the discomfort of the patient can be compared to that of colonoscopy. Eight women were postmenopausal without family history presenting pathological findings in vaginal sonography while 4 had elevated Ca 125. One woman had left adnexal varicose veins, 3 women diagnosed with benign ovarian pathology and the other four were within normal limits. Among the other 15 women investigated were 9 breast cancer patients below 50 years of age with family history and another 6 patients with strong family breast/ovarian cancer history only. In 3 patients benign lesions were noted and confirmed in histopathology. Until now no ovarian cancer case was diagnosed in our series investigated. In 3 women, this method was repeated after one year for screening purposes. The problem of spreading the disease after biopsy of an ovarian cancer suspected lesion is of primary importance, however, frozen section or switch to laparotomy in these cases can be an option.

CONCLUSION TVHL is an easy method to learn, can be repetitive with reliable results. TVHL can reduce the number of unnecessary laparoscopies and or laparotomies and it seems to be useful for early diagnosis of ovarian cancer. As far as we know this is the first report introducing TVHL as a method of ovarian cancer early diagnosis in high-risk patients.

Key words ovarian cancer, screening, endoscopy.

Cervical angiogenesis and its prognostic significance in various degrees of morphopathology

BOGDAN MICHALSKI[1], URSZULA MAZUREK[2], ANNA FILA[2], DARIUSZ KUŚMIERZ[2], GRAŻYNA BIERZYNSKA-MACYSZYN[3], ANITA OLEJEK[4], TADEUSZ WILCZOK[2]

[1]Department of Obstetrics and Gynaecology, Tychy, [2]Department of Molecular Biology, Biochemistry and Biopharmacy, Sosnowiec, [3]Department of Pathomorphology, Katowice, [4]Department of Obstetrics and Gynaecology, Bytom, Medical University School of Silesia, Katowice

INTRODUCTION It has been a recognised fact for over 100 years that tumour growth is inseparably linked with growth of a new vascular network which secures the supply of adequate nutrient and oxygen quantities, and is involved in the growth of remote metastases. However, it was not until the arrival of the new research techniques applicable in primary cancer research, that a new chapter in pathology was opened, i.e. angiogenesis. Ever since Hinselman introduced colposcopic examination to cervical clinical pathology in 1940, there has been increasing recognition of the role of angiogenesis in the natural history of intraepithelial changes and cervical cancer. This is confirmed by the colposcopic classification, where the diagnosis of intraepithelial pathology and of the neoplastic process is fundamentally based on the observation of incorrect architecture of the vascular network in the regeneration zone. The proangiogenic factors include bFGF, TGF?, PD-ECGF, TNF?, interleukins, prostaglandins and others; however, none of the above proteins is so specifically mitotic for the epithelial cells as VEGF is. Among the array of proangiogenic factors Werner Riseau focused on VEGF and its receptors as specific angiogenic factors which have a direct and specific effect on vascular endothelial cells.

In intraepithelial pathologies and in cervical cancer, the classification of changes relies entirely on the morphological appearance of the tissue. Changes of similar pathomorphological characteristics show different clinical behaviour and response to treatment. The need for new diagnostic methods and therapeutic strategies is particularly evident in oncology. Tumour classifications that are based on molecular subtypes with different clinical behaviour will allow clinicians to apply individually targeted therapies. Within the currently used classification systems, which are based on morphological examinations, there are important molecular subclasses which are yet to be accurately defined. Examples include curable cervical cancer cases, treated by radical surgery, where we find micrometastases similar to more advanced cases. The clinical and pathological heterogeneity of endothelial changes and of

cervical cancer has been observed for a long time, and it has become a major driving force for the search to define new molecular types of advancement within the same clinical grade.

In this report we focus on angiogenesis, as one component in the complex process of neovascularisation in the correct regeneration zone, in intraepithelial changes (LSIL and HSIL) and in cervical cancer. The process is discussed in various degrees of morphological pathology on the basis of the expression of VEGF and its mRNA isoforms ($VEGF_{121}$, $VEGF_{145}$, $VEGF_{165}$, $VEGF_{183}$, $VEGF_{189}$, $VEGF_{206}$) produced by alternative splicing, and the VEGF receptors (Flt-1, Flk-1, sFlt-1), using quantitative gene expression analysis (QRT-PCR TaqMan®).

ANGIOGENESIS In 1968, *Greenblatt and Shubik* were first to describe the vascular permeability factor (VPF), the substance that stimulates blood vessel growth, which was finally defined in 1989 by *Gospodarowicz, Ferrarra, and Henzel*, as the vascular endothelial growth factor (VEGF). The pioneering studies by *Dr. Juda Folkman* demonstrated beyond any doubt that angiogenesis is the key process responsible for tumour growth and remote metastasis. Angiogenesis, in approximate translation is: angio – from Greek angeion "vessel" + Greek génesis, i.e. „The sum of the circumstances leading to the initiation and development of a phenomenon". The phenomenon in question is the growth of small new blood vessels out of the existing ones. The research and accomplishments of *Werner Risau* in the area of angiogenesis from the stage of embryo- and organogenesis up to a fully mature organism, provided a solid foundation for studies of the role of numerous biological and molecular factors in the process. Early research into the role of angiogenesis in the biology of various neoplasms led to the commonly accepted view that a tumour may grow without necessarily building a new vascular network – „avascular tumour growth" – up to the size of 2 mm (population of 10^5–10^6 neoplastic cells). This hypothesis may be challenged by the recent findings by *Li et al.*, who demonstrated that 20-50 cells with a "malignant" molecular angiogenic phenotype, are already capable of initiating an angiogenetic process, thus corroborating the hypothesis that the physiological process of angiogenesis is genetically determined.

UTERINE CERVICAL ANGIOGENESIS *Guidi AJ et al.*, in an immunohistochemical study using factor VIII-related antigen for the evaluation of the vascular networks in intraepithelial changes (LSIL, HSIL) of uterine cervix, imaged two characteristic arrangements of vessels in the stroma: disseminated (in 13% cases of normal cervix and 20% LSIL), and in the form of „cuffing" (in 90% HSIL and 93% cancer), thus providing solid morphologic foundations for colposcopic images of punctation and mosaic. In the in situ hybridisation examination using ^{35}S-antysensRNA for VPF, KDR and flt-1, a significantly higher ($p<0,0001$) expression was found in cancer and HSIL cases than in LSIL and normal cervix. High expression of VPF mRNA was statistically significantly linked with greater average vessel density in the epithelial stroma, which, for low and medium expression, was not statistically different between LSIL and correct cervix; besides, no expression of the above mentioned genes was found at the site of necrotic neoplastic tissue, while a positive reaction was only observed at the perimeter of the zone. The prognostic importance of „cuffing" in cervical cancer was confirmed in a study by *Hirakawa et al.*, where such picture was linked with worse prognosis, and was not linked with inflammatory infiltration in the neoplastic stroma. These results were corroborated by *Obermair et al.*, who used the polyclonal antibody F8-RA to evaluate the average vascular density coefficient, and monoclonal for VEGF protein. The results of studies of angiogenesis in cervical cancer which were largely based on the measurement of average vascular density gave inconclusive values and did not always correlate with clinical and histological parameters (degree of clinical advancement and histological differentiation). Although a prognostic significance has been demonstrated for this pathomorphological parameter and for the presence of metastases in the lymph glands before intrusion into the lymphatic space, Hawighorst et al. have demonstrated that a magnetic resonance examination in cervical cancer provides more sensitive prognostic indications than the examination of angiogenesis by means of morphologic measurement of vascular density. The experimental study by *Detmar et al.* using SCC-13 cervical cancer cells stably transfected with expression vectors containing murine VEGF $(mVEGF)_{164}$ in sense (SCC/VEGF+) or antisense (SCC/VEGF-)orientation or with vector alone (SCC/vec) which were intradermal and subcutaneous xenotransplantation, demonstrated a rapid tumour growth with increased vascular pattern at the point of invasion, thus documenting the possibility of occurrence of invasive molecular phenotype of squamous carcinoma.

VEGF (VASCULAR-EPITHELIAL GROWTH FACTOR) AND ITS RECEPTORS Vascular-Epithelial Growth Factor (VEGF), also called the vascular permeability factor (VPF), is a member of the growth cytokine family, originating from the platelets, and is a homodimeric glycoprotein of a molecular weight in the range of 34–64 kDa. Its aminoacid sequence is identical in 20% with the sequence of the platelet derived growth factor (PDGF) and to a lesser degree with the transforming growth factor β (TGFβ), which implies a similarity of secondary and tertiary structure, similar location of bisulfide bonds, and a relative orientation of protein sub-units. The VEGF gene, consisting of eight exons, was located in site 21.3 of chromosome 6, and its encoding region occupies some 14 kb. By way of alternative mRNA maturing, a relatively frequent occurrence involving differentiated resection of introns from a pre-mRNA molecule, one single gene breeds all the isoforms know to date – $VEGF_{121}$, $VEGF_{145}$, $VEGF_{165}$, $VEGF_{183}$, $VEGF_{189}$, oraz $VEGF_{206}$ (the indices signify the numbers of aminoacids constituting a given protein). The mutual functioning of the complex molecular and morphological system of HPV-dependent

intraepithelial changes and dynamic angiogenesis involving the entire connective tissue stroma of the uterine cervix is a result of co-operation between the said isoforms and their receptors. Two highly specific vascular endothelial receptors have been identified: Flt-1 (VEGFR-1) and Flk-1 (VEGFR-2, known as KDR), classified as class III receptors, with their own thyrosine kinase, and seven extracellular immunoglobuline-like domains. The bond of VEGF with Flt-1 and Flk-1 is mediated by another domain – Ig. Studies of angiogenesis in placental tissues have discovered and described a shorter, soluble form of receptor to Flt-1 (sFlt-1), unrelated to endothelial cellular membrane. The third familiar member of the VEGF receptor family is Flt-4 (VEGFR-3), which binds VEGF-like proteins (VEGF-C and VEGF-D). Like Flt-1 and Flk-1, Flt-4 is expressed not only at the early stages of embryogenesis, but also in mature life, and its expression is limited to lymphatic endothelium. This suggest some involvement of angiogenic factors and their receptors in the angio- and lymphogenesis processes which occur in parallel.

Although VEGF is produced by various body cells, the expression of Flk-1 and Flt-1 is strictly limited to vascular endothelium.

$VEGF_{121}$ – mRNA is built of exons 1-5 (containing the information necessary to recognise the receptors Flk-1, Flt-1) and exon 8. It is the smallest, totally soluble, lightly acidic protein; it does not combine with heparin, has strong mitotic properties and increases vascular permeability. Because of these unique features it is the most commonly detected and studied cytokine.

$VEGF_{145}$ – a transcript of this isoform is deprived of exon 7. It was found to be able to induce endothelial cell proliferation and angiogenesis in vivo. The isoform was observed as one of the most frequently occurring in the cell lines of the genital organ cancers.

$VEGF_{165}$ – this isoform is deprived of exon 6 and, like $VEGF_{121}$, counts as a soluble factor. However, because it has a domain that is encoded by exon 7, which allows combination with heparin, it acquires new, specific properties.

$VEGF_{183}$ – is totally devoid of exon 6' of a length of 51 basic couples (which is equal to 17 protein aminoacids) and another 18 basic couples from end 3' of exon 6, which has 72 basic couples. $VEGF_{183}$ is the least familiar isoform, which was first discovered and described by *Lei et al.* in 1998, in kidney tissues.

$VEGF_{189}$ – is devoid of exon 6', and the full length of exon 6 and 7 (encoding the cationic domains) imparts the isoform the ability to bind heparin. By possessing both exons, its operating direction is radically determined and is clearly targeted at the extracellular space (ECM) stimulating cell division, phosphorilation of VEGF receptors, increase of intracellular Ca^{2+}, gene expression, migration of various components of the ECM.

$VEGF_{206}$ – is the only isoform that contains all the VEGF encoded exons and, like $VEGF_{189}$, has sites that develop a strong heparin bond; as a result it is an isoform that is associated with cellular surface. Few findings report this isoform; fewer yet explain the role it plays in angiogenesis.

OCCURRENCE OF MRNA OF THE ISOFORMS $VEGF_{121, 145, 165, 183, 189, 206}$, OF THE SFLT-1 RECEPTOR IN A CORRECT REGENERATION ZONE stratified squamous epithelium does not appear to have the mRNA isoforms $VEGF_{189}$, $VEGF_{206}$, and the expression of other isoforms is sporadic. Metaplastic epithelium of correct regeneration zone demonstrated the mRNA of all VEGF isoforms, with two or more isoforms occurring simultaneously. The expression of individual VEGF isoforms in glandular epithelium was found much more frequently than in the previous type; co-occurrence of several isoforms was also found more frequently. The only receptor that demonstrated any expression in the correct epithelial components of the regeneration zone was the soluble form Flt-1 (sFlt-1). mRNA of this receptor was found in metaplastic epithelium in 50%, while in squamous epithelimu it was only found in 20% of the cases. The expression of sFlt-1 receptor and most VEGF isoforms was never above $5x10^3$ copies mRNA/1µg total RNA. Only $VEGF_{189}$ and $VEGF_{206}$ had increased values, even up to $2x10^4$ copies/1µg total RNA. The highest gene expression values were found in cervical tissue samples from those sites which were covered with metaplastic epithelium.

$VEGF_{121, 145, 165, 183, 189, 206}$, ISOFORMS OF FLK-1, FLT-1, SFLT-1 RECEPTORS, AND LSIL PROGRESSION The isoforms that occurred most frequently in LSIL were $VEGF_{145}$ (70% of the cases). Oraz $VEGF_{121}$ and $VEGF_{189}$. Isoforms $VEGF_{165, 183, 206}$ occurred with similar frequency as in correct regeneration zone. The angiogenic phenotype – the number of simultaneously occurring VEGF isoforms in the individual cases provided an extremely varied picture of angiogenic activity of the individual cases. In 11% no mRNA of any VEGF isoform was observed while all isoforms were present in 13% of the LSIL cases. mRNA of sFlt-1, and Flt-1 and Flk-1 receptors was found, which was not found in the proper regeneration zone. Expression of mRNA of Flk-1 receptor is observed in 16%, Flt-1 in 11% and sFlt-1 w 42% of the LSIL cases. The number of mRNA copies of VEGF isoforms in some LSIL cases, and in particular the maximum values for $VEGF_{121}$, $VEGF_{145}$, $VEGF_{165}$, $VEGF_{183}$ and $VEGF_{189}$ point to increased angiogenic activity. The relative risk of progression of morphological changes of the LSIL type will be doubled in the event of simultaneous occurrence of increased numbers of $VEGF_{121}$, $VEGF_{189}$, Flt-1, mRNA copies, and of expression of the five angiogenic factors (VEGF isoforms and receptors).

OCCURRENCE OF MRNA EXPRESSION OF THE $VEGF_{121, 145, 165, 183, 189, 206}$, ISOFORMS OF FLK-1, FLT-1, SFLT-1 RECEPTORS AND HSIL PROGRESSION Along with increasing epithelial morphologic pathology, increasingly frequent occurrence of VEGF isoform mRNA was observed in the HSIL group, especially $VEGF_{145, 165, 183, 189, 206}$. The angiogenic profile showed the presence of mRNA of all VEGF isoforms at the same time (65%), or of at

least forms (12%). Expression of Flk-1 mRNA is observed in 60%, Flt-1 in 50%, and sFlt-1 in 70% of the HSIL cases. In the event of high $VEGF_{121}$ and $VEGF_{206}$ mRNA expressions, the risk of progression will increase by a factor of nine, and for $VEGF_{189}$ it will increase by a factor of 13. The high values of Flk-1 and Flk-1 receptor mRNA demonstrated a risk of progression that was five times higher than in the LSIL group. The risk increases by a factor of 14 in the event of simultaneous occurrence of five angiogenic factors (VEGF isoforms and receptors).

OCCURRENCE OF MRNA EXPRESSION OF THE $VEGF_{121, 145, 165, 183, 189, 206}$, ISOFORMS OF FLK-1, FLT-1, SFLT-1 RECEPTORS AND PROGRESSION IN SQUAMOUS CARCINOMA Despite what seemed expectable, no increase in angiogenic activity in cervical cancer was observed as morphological pathology increased. Neither were there any differences observed in the frequency of expression of VEGF isoforms between tissue with signs of epithelial carcinoma and HSIL. The most frequently occurring isoform in cervical cancer was $VEGF_{145}$, and $VEGF_{206}$, whose mRNA occurred in 95%. That was accompanied by increased presence of mRNA of all receptors, and sFlt-1 in particular. The angiogenic profile of cervical cancer, with simultaneous occurrence of many isoforms as its main characteristic, was close to HSIL. No further increase of all maximum expression values of the isoforms was observed in comparison with HSIL. In squamous carcinoma, the highest value of relative risk of morphological changes progression was related to high values of mRNA expression was found for $VEGF_{206}$, where the risk increases by a factor of 21. The high expression of the Flk-1 receptor was linked with an increase in change progression by a factor of 6. For Flt-1 the progression risk is higher by a factor of 4. The relative risk of morphological change progression is higher by a factor of 10 when five angiogenic factors occur simultaneously.

Key words angiogenesis, VEGF, VEGF receptors, SIL, cervical cancer

Surgical complications connected with intraperitoneal chemotherapy in ovarian cancer.

JANUSZ EMERICH, M.D., TOMASZ MILCZEK, M.D., DAGMARA KLASA-MAZURKIEWICZ, M.D., JAROSŁAW DĘBNIAK, M.D.

Department of Gynaecology, Medical University of Gdañsk, Gdañsk, Poland

OBJECTIVES From a theoretical viewpoint, intraperitoneal therapy (IP) in-patients with ovarian cancer, a malignancy, which remains mainly, confined to the peritoneal cavity is logical. Intraperitoneal catheters have moved to the forefront as e delivery system in cancer treatment. Authors still described complications during the placement, usage, and evacuation of Tenckhoff catheters. Some of them report much too high number of surgeries complications connected with IP.

DESIGN We report a number of complications connected with insertions, functions, and evacuations of Tenckhoffa catheter.

MATERIAL AND METHODS From January 1996 to January 2002, 92 patients with recurrent or persistent ovarian cancer, after surgery and first line chemotherapy, have had catheter insertion performed, but only 79 have had performed catheter evacuation: because of: not complete therapy (7 patients), three patients died during IP therapy, in three cases intraperitoneal catheter has spontaneously fold out. Results: During insertion total number of complications 9 (9.78%), 6 bowel incision, 1 bladder incision, 1 hernia of the linea alba, 1 incision of bowel and bladder. During catheter evacuation total number of complications 9 (11.39%), 8 bowel incisions 1 hernia of the linea alba. Complications connected with catheter function: only 8 of 92 (8.70%) required cessation of chemotherapy prior to its expected completion, 2 fistula of the catheter to vagina, 2 fistulas to bowel, in two cases intraperitoneal catheter has spontaneously fold out due to abscess, one after citostatics flow under the skin, one because of abscess in peritoneal cavity, and problems with citostatics inflow one because of subileus.

CONCLUSION The surgical complications occurring during IPC are not dangerous for patients. IPC is valid and safety way of treatment patients with ovarian cancer. The frequency of complications occurring during insertion of Tenckhoff catheter depends on the way of placement.

Key words ovarian cancer, intraperitoneal chemotherapy, surgical complications, chemotherapy complications

Effects of intraperitoneal chemotherapy as a second line therapy, for patients with ovarian cancer.

JANUSZ EMERICH, M.D., TOMASZ MILCZEK, M.D., DAGMARA KLASA-MAZURKIEWICZ, M.D., JAROSŁAW DĘBNIAK, M.D.

Department of Gynaecology, Medical University of Gdansk, Gdansk, Poland

OBJECTIVES From a theoretical viewpoint, intraperitoneal therapy in-patients with ovarian cancer, a malignancy, which remains mainly, confined to the peritoneal cavity is logical. Intraperitoneal catheters have moved to the forefront as e delivery system in cancer treatment. DESIGN The authors sought to evaluate effects of intraperitoneal chemotherapy (IPC) as second line therapy for ovarian cancer patients.

MATERIAL AND METHODS From January 1996 to January 2002, 92 patients with recurrent or persistent cancer, after surgery, and first line chemotherapy, were treated with intraperitoneal chemotherapy as second line treatment. Only 74 caught bee taken to the study, because of not complete therapy (6 patients), spontaneously fold out of catheter (3 patients), five patient ware treated because of some other kind of carcinomas, three patients dead during therapy because of independent reasons, and caught not be verify and one patient who had wrong pathological diagnosis in SLL.

RESULTS The three year survival in whole group reached 58.62% for patients who responded to first line chemotherapy, or debunking surgery was complete, it was significant improvement in survival. There was significant improvement in survival for patients with residual tumor <5 mm compered with all group, and especially with these, whose residual tumores were greater then 5 mm.

CONCLUSIONS 1. Survival was increased for patients who had a positive response to first line intravenous chemotherapy, or had complete debulking surgery 2. The response for IPC depends on size of residual disease. 3. Intraperitonead chemotherapy improves survival in ovarian cancer.

Key words: ovarian cancer, intraperitoneal chemotherapy, second line chemotherapy.

ACIKLOVIR

Telviran®

800 mg, 400 mg, 200 mg filmtabletta; 5% krém

herpes simplex

herpes genitalis

5% krém

200 mg

400 mg

800 mg

AZ ELSŐ VÁLASZTÁS A HERPES SIMPLEX SZISZTÉMÁS KEZELÉSBEN

További információ:
Egis Gyógyszergyár Rt., Termékosztály
1146 Budapest, Hungária krt. 179-187.
Tel.: 469-2222 · Fax: 383-9257
E-mail: marketing2.opr@egis.hu

EGIS

Experimental and clinical results with Avemar (a dried extract from fermented weath germ) in animal cancer models and in cancer patients

MICHELE NICHELATTI, M.D., MÁTÉ HIDVÉGI, M.D.

Avemar Research Group, Limbiate (MI), Italy and Biromedicina Co., Budapest

INTRODUCTION Relationships between food and health today must be studied by taking into account the expanding role of dietary supplements, specialised medical foods and functional foods, collectively named as nutraceuticals. Nonnutrient biologically active components of foods are receiving increasing scientific attention. Health professionals, consumers and industry are incorporating this new knowledge into their own practice, behavior and strategies. In most cases, nutraceuticals can challenge the standard distinctions existing between foods and drugs.

The family of dietary supplements includes not only essential nutrients but also botanical and herbal products, which offer a particular challenge in evaluation of biological activity, active constituents, and interactions with conventional medicines. Medical foods include a somewhat limited category of foods targeted to existing health problems. Functional foods represent an emerging category of food products with claims to offer health benefits. There is a great need for ongoing research and documentation regarding the efficacy, safety, and regulation of both dietary supplements and the other specialized food products. Health professionals need to actively follow these scientific advances to be credible sources of information for their patients (1-2).

Beyond allowed cancer-related health claims, patients are today invested by popular press and advertising with a confusing array of remedies found in dietary supplements and bioactive substances found in foods. Included are specific foods (tomatoes, broccoli, sprouts, chili peppers, yogurt, soybeans), drinks (green tea, grapefruit and orange juice), vitamins (C, D, E, folic acid and beta-carotene), minerals (selenium, calcium) and some nonnutrient substances like echinacea, saw palmetto, rosemary, cat's claw, mistletoe, kombucha, shiitake mushrooms, and shark cartilage. Most of these compounds are being studied with some relation to cancer; however, the reality is that not long after any information is publicized, patients start self-experimenting with these remedies. They self-dose at a range of levels, both high and low; with consequences that may prove effective, useless, or harmful results.

In the late 1990's, reports were published about a biotech process by which a fermented wheat germ extract could bee produced. The product, called Avemar, available as a water soluble granulate for oral consumption, has gained much attention from cancer researchers of several countries, like Israel, Hungary, the United States, England and Russia. The reason why this extract has got so much dedication from researchers was possibly the fact that it has been produced from one of the most common food sources of mankind, and it has shown a good synergism with some anticancer drugs used in standard clinical protocols.

Wheat kernel contains 2-4% germ (also called embryo), which is separated from the endosperm by milling operations like rolling, sieving, etc. In the wheat grain, most nutrients with the exception of starch, are concentrated in the germ. Even though it is nutritious, wheat germ is mainly used as an animal feed. Besides its proteins of high biological value and its oil (showing a good fatty acid pattern), wheat germ is the richest known natural source of tocopherols and also abundant in B-group vitamins. The most significant antinutrients of wheat germ are the lectin WGA (wheat germ agglutinin) and a group of trypsin inhibitors, which can be destroyed by heat treatment. Other remarkable nonnutrients of wheat germ are the bioquinones which are present as glycosides of the corresponding methoxyhydroquinones (3), whose potential anticancer effects have been firstly investigated in experiemental systems by Nobel laureate *Albert Szent-Györgyi* (4).

A group of chemists has produced a per os applicable standardized complex of multiple, biologically active molecules

Levelezési cím:

Dr. med. habil. Hidvégi Máté
Biromedicina Rt.
1137 Budapest, Szent István park 18.
Távbeszélő: (36 1) 266 1023 Távmásoló: (36 1) 266 1026
Villanyposta: hidvegi@biromedicina.com

obtained from the aqueous extract of fermented wheat germ (5). The standardized extract – named as Avemar – has been registered and is now marketed as an over-the-counter dietary supplement in various countries, like Hungary, Israel, Italy, Austria, Slovakia, Czech Republic, Cyprus and Switzerland. It is therefore to point out that Avemar is neither a drug, nor an alternative to standard anticancer drugs or standard therapies: Avemar is a dietary supplement to be given to cancer patients to help drugs to work better.

As any natural product, Avemar exerts several biological effects, which can be theoretically explained, according to some possible metabolic modeling (6-7). In general, the biological activity of Avemar can be divided in effects useful for the treatment of neoplastic diseases (8-16) and effects which can be well used in the treatment of certain immune disturbances (17-19). Avemar even improves the patients' quality of life which latter effects can be independent from the previous ones.

ANIMAL EXPERIMENTS: SINGLE USE OF AVEMAR In all experiments, 8-10 week-old inbred mice of 20-22 g body weight were used. The following transplantable tumor lines, grown on mice or rats, were used in the experiments: a highly metastatic variant of Lewis lung carcinoma (3LL-HH), B16 mouse melanoma, C38 mouse colorectal tumor and HCR-25, a human colon carcinoma xenograft (17). In all experiments, Avemar treatment was started 24 hours after tumor implantation. Avemar was dissolved in water and administered by means of a gastric tube. The daily dose was 3 g/kg body weight per os administered in 0.1 ml of water. Control animals received tap water daily (0.1 mL), also via gastric tube.

Avemar treatment resulted in a statistically significant 71% decrease in the number of liver metastases of the 3LL-HH tumor inoculated into the spleen (17). In case of the HCR-25 human colon carcinoma, the 50 days of Avemar treatment decreased the amount of liver metastases, in addition to reducing the weight of the tumorous spleen. The number of metastases in the Avemar-treated animals as compared to the control group was around 50% (17). In case of the B16 melanoma inoculated into the muscle, also a significant decrease of 85% was observed in the number of metastases as compared to the control group (17).

ANIMAL EXPERIMENTS: COMBINED USE OF AVEMAR AND CYTOSTATICS In these experiments the B16 mouse melanoma and C38 mouse colorectal tumor strains were used. The aim of these experiments was to find out how the daily treatment with Avemar (3 g/kg body weight) would influence the tumor growth and metastasis inhibiting effect of treatment with some of the well known antineoplastic agents 5-Fluorouracil (5-FU) and Dacarbazine (DTIC), which are widely used in clinical oncology in the frame of various treatment protocols (17).

The B16 melanoma was used as muscle-lung metastasis model, while the C38 mouse colorectal carcinoma cell line was applied for serving as spleen-liver metastasis model. Mice bearing the C38 colorectal carcinoma implanted into the spleen were treated with 5-FU administered via intraperitoneal injection 3 times a week in a dosage of 1 mg/kg, while the mice inoculated with the B16 melanoma received DTIC treatment daily (60 mg/kg i.p.) Synchronously, the animals treated with antineoplastic agents also received Avemar daily (3 g/kg). In the case of combined (Avemar + DTIC) treatment the number of lung metastases of B16 melanoma practically decreased to zero, and this effect was significant. The results show that in therapeutic composition, Avemar – having metastasis inhibitory effect also alone – exerted a more than additive effect, that is, it synergically enhanced the metastasis inhibitory effect of DTIC used in clinical practice to decrease metastasis in protocols for treatment of patients with melanoma. Treatment of C38 colorectal carcinoma with the therapeutic composition of Avemar and 5-FU decreased the number of liver metastases synergically. This effect was also significant. The mass of the diseased spleen also displayed a marked decrease as a consequence of the treatment.

Although the therapeutic effects at both of the combination experiments were considerable, the usual toxic side effects of cytostatics, e.g. decrease of body mass were not observed. It can be concluded that Avemar treatment does not reduce the antitumoral effects of chemotherapeutic drugs upon the primary tumors but, dramatically enhances their antimetastatic effects. Using several other cytostatics (data not shown) it was also proved that Avemar did not reduce their cytostatic effects upon the primary tumors.

CHEMOPREVENTIVE EFFECTS OF AVEMAR It has been demonstrated that Avemar treatment prevents colon cancer in laboratory animals; in this case, four weeks old inbred male F-344 rats were used (9). Colon carcinogenesis has been induced by injections of azoxymethane (AOM), a well-known carcinogenic chemical. Ten rats served as untreated controls (group 1). For the treatment of the animals in group 2, AOM was dissolved in physiologic saline and the animals were given 3 subcutaneous injections 1 week apart, 15 mg/kg body weight (BW) each. In two additional groups the basal diet was supplemented with Avemar. The extract was dissolved in water and was given at a dose of 3 g/kg BW once a day. In group 3, animals started to receive Avemar two weeks prior to the first injection of AOM daily and continuously thereafter until sacrificed 32 weeks later. In group 4 the basal diet was supplemented by Avemar administration only. At the end of the experiment all the rats were sacrificed by exsanguination, the abdominal large vessels were cut under a light ether anaesthesia and a complete autopsy was performed. The percentage of animals developing colon tumors and the number of tumors per animals were: 0 and 0 (group 1); 83.0 and 2.3 (group 2); 44.8 ($p<0.001$) and 1.3 ($p<0.004$) (group 3); 0 and 0 (group 4);

all the tumors resulted of neoplastic nature also at histological inspection. Thus, the overall chemopreventive effect of Avemar (see also *Table 1*) was nearly 70%, as one obtains from the simple calculus:

$$1-\frac{0.45\times1.3}{0.83\times2.3}\approx0.69=69\%\ .$$

The numbers of the aberrant crypt foci (ACF) per area (measured in cm^2) was 4.85 in group 2, while in group 3 the number of ACF numbers was 2.03 only ($p<0.0001$).

Table 1. Macroscopic findings in the large intestine of F-344 rats treated with Avemar or with Avemar + AOM; statistical significance was: $p<0.001$ (*); $p<0.004$ (**)

Group	Animals with colon tumors	Average number of colon tumors per animal	Average diameter of the colon tumors	Remarks
1. Untreated controls (n = 10)	0/10	0/10	–	
2. AOM (n = 47)	39/47 (83.0%)	2.3 ± 0.21	2.35 ± 0.25	1 Wilms' tumor
3. Avemar + AOM (n = 29)	13/29 (44.8%)*	1.3 ± 0.17**		2.21 ± 0.12
4. Avemar (n = 9)	0/9	0/9	–	

Modified from (9)

CLINICAL STUDIES: NEW METASTASES AND PROGRESSION-FREE SURVIVAL IN CANCER PATIENTS An early open-label phase II clinical trial with Avemar was conducted in colorectal cancer patients, involving 30 consecutive subjects undergoing curative surgery, accrued since 1998 up to June 1999 (20). Patients were divided into control cohort (n = 18, 11 men and 7 women with mean age of 70 years) and Avemar cohort (n = 12, 6 men and 6 women with mean age of 64 years) according to their own preference. Patients of the control group received adjuvant chemotherapy alone (if necessary), whereas patients of the Avemar group received adjuvant chemotherapy (if necessary) plus 9 g of Avemar once or twice daily, depending on their body weight. The median follow-up of all patients was 9 months, with range 6-11 months.

At the end of the study, no patients treated with Avemar did show new metastases, neither hepatic, nor in other organs, while 4 patients (22%) did develop new metastases in the control group.

This first clinical result was so encouraging that it was decided to evaluate the impact of Avemar in a second trial involving more patients, and comparing the disease progression-free survival as well as the overall survival in two groups of colorectal patients differing just for the Avemar intake. In the survival analysis trial done with Avemar, as well as in all similar trials, the absolute survival and the disease progression-free survival are normally assessed by a survivor function S(t), defined as the probability that survival time T is greater than a given time t, e.g., $S(t) = \Pr(T > t)$, and hence

$$S(t)=\int_t^{+\infty} f(u)\,\mathrm{d}(u)=1-F(t),$$

where f(u) and respectively are the probability density and the cumulative probability of T; obviously, the survivor function is very sensitive to the shape of the probability density. In this model, the survivor function must be estimated, assuming that its value is constant between two consecutive events, thus the plot of S(t) versus time is represented by a stepwise decreasing graph.

If all the observed individuals are followed up until the event occurs to each of them, the $\hat{S}(t)$ value, estimating the true S(t), may be evolved from the ratio $\hat{S}(t)=N(T\ ³\ t)/N(0)$, where $N(T\ ³\ t)$ is the number of subjects surviving at time $T\ ³\ t$, and N(0) is the number of subject originally enrolled in the trial. In the case of censored data (like in this second trial), however, this simple calculation cannot be done, and the estimated $\hat{S}(t)$ value must be evaluated by some other methods. One of the most used is the Kaplan-Meier product limit estimator, which is obtained with the formula

$$\hat{S}(t)=\prod_{k|t_k\le t}\frac{r_k-d_k}{r_k},$$

where r_k is the number of subjects at risk (including censored subjects) at time immediately preceding t_k, and d_k is the number of subjects experiencing the event at time t_k.

Survival analysis allows the assessment of the periods where a given clinical event of interest (death, or any disease progression event like a new metastasis, a relapse, or the death itself) has the highest and the lowest chance. For this purpose, it is used the hazard function h(t) defined by the relationship

$$h(t)=\frac{f(t)}{S(t)}=\frac{\mathrm{d}-[\log S(t)}{\mathrm{d}(t)},$$

from which we easily obtain the survivor function in terms of hazard function as follows:

$$S(t)=\exp\left(-\int_0^t h(u)\mathrm{d}u\right).$$

The survival analysis uses its own regression models. In general, its multiplicative factor must be assumed costant, so that the hazards in the studied cohorts must be proportional. In this case, one is dealing with proportional hazards regression, with hazard ratio constant over time, and different individuals have proportional hazards, so that, if the covariate row vector of subject A is, say, $\mathbf{x}_A = (x_{A1}, x_{A2}, \mathrm{K}, x_{An})$, and the covariate row vector of subject B is $\mathbf{x}_B = (x_{B1}, x_{B2}, \mathrm{K}, x_{Bn})$, then the ratio $h(t|\mathbf{x}_A)/h(t|\mathbf{x}_B)$ must not change with time along all the study period. Under this assumption (to be verified at time of data analysis), the hazard function could be written as $h(t|\mathbf{x}) = h_0(t)\xi(\mathbf{x})$, where $h_0(t)$ is the baseline hazard and $\boldsymbol{X}(\mathbf{x})$

is a relative risk function of the vector of covariates alone. Thus, since the hazard ratio between individuals A and B must be kept constant, one infers that:

$$\frac{h(t \mid \mathbf{x}_A)}{h(t \mid \mathbf{x}_B)} = \frac{h_0(t)\xi(\mathbf{x}_A)}{h_0(t)\xi(\mathbf{x}_B)} = \frac{\xi(\mathbf{x}_A)}{\xi(\mathbf{x}_B)}.$$

In the case of exponential relative risk, the effect on a log-linear scale is additive, and the baseline hazard function is multiplied by the covariate vector: for this reason, each individual accrued in the trial shows an hazard function of the form: $h(t \mid \mathbf{x}) = h_0(t)e^{\beta'\mathbf{x}}$.

If one model parametrically only the relative risk, as proposed by *Cox* (21-22), then the shape of baseline hazard may be left unspecified, and a semiparametric model can be constructed, allowing to estimate β from a partial likelihood function which takes into account ties among survival times and does not depend on the hazard function:

$$L(\beta) = \prod_{k=1}^{z} \frac{\exp(\beta' \mathbf{s}_k)}{\left(\sum_{j \in R_k} \exp(\beta' \mathbf{x}_j) \right)^{m}_{k}},$$

where s is the vector sum of the covariates of the m_k individuals surviving for a time t_k.

To analyse the influence of Avemar (added to surgery and standard radiotherapy and/or chemotherapy) on the disease progression-free survival (disease progression events were defined as deaths, relapses and new metastases occurring in both cohorts) and on overal survival (deaths only) in colorectal cancer patients, an open-label comparative cohort trial has been conducted.

For the analysis of the effects exerted by different variables (disease staging, Avemar administration, age, sex, chemotherapy, radiotherapy) on survival, the Cox regression (proportional hazards model) was used, after verifying that this method was suitable according to the study data, by means of the Schoenfeld residuals (23) of the general form:

$$r_{ij} = x_{ij} - \frac{\sum_{k \in R_j} x_{ik} \exp(\mathbf{x}_k \beta_x)}{\sum_{k \in R_j} \exp(\mathbf{x}_k \beta_x)},$$

for each covariate x_u, such that r_{uj} is the existing difference between the covariate value for any failed j-th observation and the average value of the covariate, which is weighted on the basis of estimated hazards from Cox model. The residual analysis for this trial has shown no evidence of violations of the assumptions at the basis of Cox proportional hazards model.

The goal was to determine if the use of Avemar adds any therapeutic benefit compared to standard therapeutical protocols alone, and therefore, to obtain information on the feasibility of long term administration of Avemar as well as to estimate the expected difference of treatment outcome between cohorts of colorectal cancer patients receiving standard treatment and standard treatment plus Avemar supplementation. For the trials, the chosen values for sample size calculus were $\beta = 0.05$ (i.e., 5%) and $1-\beta = 0.9$ (i.e., the power was 90%), so that a minimal sample size of 50 patients was needed for each cohort.

Beyond the standard oncological treatment used in both groups, the patients assigned to the Avemar cohort did take 9 gramms of Avemar per os once or twice daily, along all the study period, for which the minimal follow-up was at least 6 months. The treatment time period was measured as the interval between the time 0 (baseline) and the last completed visit. Patients of the control cohort received the standard oncological treatment alone, consisting of 5-fluorouracil (5-FU) based chemotherapy and/or radiation therapy, following surgery. All patients were evaluated at baseline, after one month, and then every 12 weeks. Evaluation included imaging quantification of all measurable lesions (by usual radiographic, ultrasonic, or magnetic resonance techniques), laboratory tests (hematology, chemistry, and urinalysis), physical examination, as well as data regarding treatment compliance and toxicity. Tumor progression was defined as an increase of at least 25 percent in the overall tumor size or the appearance of any new lesions; deaths were also recorded. All the time-related events were measured from the date of first diagnosis.

The primary end-point of this study was to compare progression-free survivals of the two cohorts. For this purpose, it was used the two-tailed, unstratified log-rank tests (Kaplan-Meier method), while for other comparisons, z-test, Mann-Whitney's test, Fisher's exact test and Student's t-test were applied as suitable.

The multicenter trial started in November 1998 and patient recruitment lasted up to March 2001, so that 170 consecutive colorectal cancer subjects entered the study (24), to be included in the Avemar or in the control cohorts according to the patient's own decison. The patients had either new diagnosis of their cancer or arrived for routine check-up of their previously diagnosed and treated disease.

The age of the patients of the control cohort was significantly higher than that of the Avemar one (mean was 66.1 years in the controls versus 61.7 years in the Avemar cohort; $p < 0.01$). In contrary, the Avemar patients had significantly more advanced disease stages (Mann-Whitney probe: $z = 4.618$; $p < 0.001$), since 27.3 per cent of the Avemar patients were at UICC stage IV (metastatic), while this value for the control patients was 3.8 % only ($p < 0.001$); moreover, the average time from diagnosis to the study enrolment was significantly longer for the Avemar cohort (11.2 months and 1.1 months, respectively, $p < 0.001$). There were no significant differences between the

average length of time from diagnosis to the last visit (29.6 months and 34.0 months, respectively; Student's t = 1.494; p = 0.137), nor significant difference between the number of patients receiving chemotherapy (z = 1.819; p = 0.069), while the controls did receive significantly more radiotherapy (z = 3.406; p <0.001). Generally, the prognoses of the Avemar patients at baseline were poorer than those of the control patients.

Table 2. Occurrence of progression-related events

	Avemar (n = 66)	Controls (n = 104)
% patients with new relapses*	3.0	17.3
% patients with new metastases*	7.6	23.1
% deaths**	12.1	31.7
% patients with disease progression events**	16.7	42.3

* p <0.01 ** p <0.001

At end-point analysis, observed progression-related events (relapsed tumors, new metastatic lesions, deaths) were significantly more abundant in the control cohort (*Table 2*). The log-rank test showed significant differences in favor of the Avemar patients, in both the cumulative probabilities of disease progression-free survival (primary endpoint) and overall survivals. Among all analysed covariates (age, sex, UICC staging, Avemar treatment, radiotherapy and chemotherapy), the only strong predictors of survival in the Cox proportional hazards model were UICC stage and Avemar treatment (*Table 3*).

Table 3. Multivariate analysis of survival of colorectal patients (Cox regression), proportional hazards model: $\chi^2 = 22.756$; p = 0.0009. Among all the six tested variables, only the strong predictors (with significant p value) are shown.

Variable	β	S.e.m.	Significance	Exp (β)	95% CI
UICC staging	0.704	0.197	p = 0.0004	2.02	1.37-2.98
Avemar treatment	-1.103	0.388	p = 0.0045	0.33	0.16-0.71

The treatment with Avemar was generally safe (no serious adverse events were recorded), and the compliance to protocol was good: practically, the only complaint reported by Avemar patients was its disagreeable taste.

The results generally showed highly significant data in favor of Avemar treatment: that was somewhat surprising but not entirely unexpected; rather, the main results confirmed what previously seen in the phase II trial (20). It could be concluded that the present study brought the first evidences that this wheat extract, in combination with surgery plus standard radio/chemotherapy, can significantly inhibit overall tumor progression including the formation of new metastases, and could prolong the survival of colorectal cancer patients. The Cox analysis identified UICC staging and the Avemar treatment (for more than 6 months) as independent survival predictors. Interestingly, similarly to the previously observed nearly 70% preventing effect exerted by Avemar in rat colon carcinogenesis model (9), in this last clinical trial Avemar increased the probability of survival still by nearly seventy percent (see the exp(β) value in *Table 3)*, since one obtains 1 – 0.33 = 67%.

REFERENCES

1. Ashley JM, Harrison G. Dietary supplements, medical foods, and functional foods. In: Nutritional oncology. Heber D, Blackburn GL, Go VLW, eds. Academic Press, New York, 1999: 371-378.

2. Bonney RC. Nutraceuticals and functional foods – A new market for the pharmaceutical industry. Scrip Reports BS 1017, PJB Publications Ltd, Richmond, UK, 1999.

3. Cosgrove DJ, Daniels DGH, Greer EN, Hutchinson JB, Moran T, Whitehead JK. Isolation of methoxy- and 2:6-dimethoxy-p-benzoquinone from fermented wheat germ. Nature 1952; 169:966-967.

4. Szent-Györgyi A. Metabolism and cancer. Int J Quant Chem Quant Biol Symp 1985; 12:257-261.

5. Tömösközi-Farkas R, Rásó E, Lapis K, Szende B, Paku S, Hidvégi M. Avemar: Fermentation product of wheat germ with antimetastatic effect. In: Functional Foods – A new challenge for the food chemists. Vol. 2. Lásztity R, Pfannhauser W, Simon-Sarkadi L, Tömösközi S, eds. Federation of European Chemical Societies, Food Chemistry Division, Budapest, 1999: 559-565.

6. Hidvégi M. Results of the research on the mode of action of Avemar. (In Hungarian). Nőgyógy Onkol 1998; 3:241-243.

7. Cascante M, Boros LG, Comin-Anduix B, Atauri P, Centelles JJ, Lee W-NP. Metabolic control analysis in drug discovery and disease. Nat Biotechnol 2002; 20:243-249.

8. Hidvégi M, Rásó E, Tömösközi-Farkas R, Paku S, Lapis K, Szende B. Effect of Avemar and Avemar + vitamin C on tumor growth and metastasis in experimental animals. Anticancer Res 1998; 18:2353-2358.

9. Zalatnai A, Lapis K, Szende B, Rásó E, Telekes A, Resetár Á, Hidvégi M. Wheat germ extract inhibits experimental colon carcinogenesis in F-344 rats. Carcinogenesis 2001; 22:1649-1652.

10. Fajka-Boja R, Hidvégi M, Ion G, Székely Szűcs K, Demidenko D, Monostori É (2000). Avemar triggers apoptosis and downregulation of major histocompatibility complex class 1 in leukocyte tumor cells. 1st Congress of the Hungarian Society of Clinical Oncology. Budapest, Hungary, 10 – 11 November.

11. Boros LG, Lee W-NP, Hidvégi M, Go VLW (2000). Metabolic effects of fermented wheat germ extract with anti-tumor properties in cultured MIA pancreatic adenocarcinoma cells. Combined Meeting of the International Association of Pancreatology and the American Pancreatic Association. Chicago, Illinois, USA, 1 – 5 November.

12. Boros LG, Lapis K, Szende B, Tömösközi-Farkas R, Balogh Á, Boren J, et al. Wheat germ extract decreases glucose uptake and RNA ribose formation but increases fatty acid synthesis in MIA pancreatic adenocarcinoma cells. Pancreas 2001; 23:141-147.

13. Ribári O, Almay K, Hoffmann A, Hidvégi M. Early results on the supportive treatment of head and neck cancer patients with Avemar. 1st Congress of the Hungarian Society of Clinical Oncology. Budapest, Hungary, 10-11 November, 2000.

14. Szende B, Rásó E, Hidvégi M, Tömösközi-Farkas R, Paku S, Prónai L, et al. A new, substituted benzoquinone-containing natural product with antimetastatic effect. (In Hungarian). Orv Hetil 1998; 139:2893-2897.

15. Fajka-Boja R, Hidvégi M, Shoenfeld Y, Ion G, Demydenko D, Tömösközi-Farkas R, et al. Fermented wheat germ extract induces apoptosis and downregulation of major histocompatibility complex class I proteins in tumor T and B cell lines. Int J Oncol 2002; 20:563-570.

16. Hidvégi M, Rásó E, Tömösközi-Farkas R, Szende B, Paku S, Prónai L, et al. MSC, a new benzoquinone-containing natural product with antimetastatic effect. Cancer Biother Radiopharm 1999; 14:277-289.

17. Hidvégi M, Rásó E, Tömösközi-Farkas R, Lapis K, Szende B. Effect of MSC on the immune response of mice. Immunopharmacology 1999; 41:183-186.

18. Falkay Gy, Blazsó G. Antiinflammatory effect of Avemar. Scientific meeting of the Albert Szent-Györgyi Medical and Pharmaceutical Center of the University of Szeged. Szeged, Hungary, 14 November, 2000.

19. Ehrenfeld M, Blank M, Shoenfeld Y, Hidvégi M. Avemar (a new benzoquinone-containing natural product) administration interferes with the Th2 response in experimental SLE and promotes amelioration of the disease. Lupus 2001; 10:622-627.

20. Jakab F, Mayer Á, Hoffmann A, Hidvégi M. First clinical data of a natural immunomodulator in colorectal cancer. Hepatogastroenterology 2000; 47:393-395.

21. Cox DR. Partial likelyhood. Biometrika 1975; 62:269-276.

22. Cox DR. Regression models and life tables. J Roy Statist Soc Ser B 1972; 34:187-220.

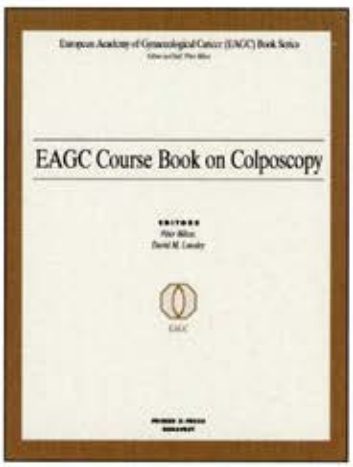
23. Schoenfeld D. Partial residuals for the proportional hazards regression model. Biometrika 1982; 69:239-241.

24. Jakab F, Shoenfeld Y, Balogh Á, Nichelatti M, Telekes A, Hoffmann A, et al. Anticancer activity of a wheat germ derived nutraceutical in colorectal cancer patients. Am J Clin Oncol (submitted).

EAGC Course Book on Colposcopy

December 2001

Up-to-date and comprehensive coverage with 145 colour illustrations and practical guidance
Novel approach for trainees and specialists
Textbook for EAGC Certificate in Colposcopy



European Academy of Gynaecological Cancer

EAGC Course Book on Colposcopy

This book is the first edition of
European Academy of Gynaecological Cancer (EAGC) Book Series
Editor-in-Chief Péter Bősze

Edited by Péter Bősze
Professor of Gynaecology
Saint Stephan Hospital, Budapest, Hungary
Chairman of the European Academy of Gynaecological Cancer
and
David M. Luesley
Professor of Gynaecological Oncology
City Hospital NHS Trust, Birmingham, UK

ISBN 963-00-7356-0
December 2001
192 pages • 145 colour illustrations • 29 contributors
Euro 85.00

Publisher: PRIMED-X-PRESS, BUDAPEST
Editorial Office: 1301 Budapest, P.O. Box 46, Hungary
Phone (36) 1 429 0316, Fax (36) 1 429 0318, E-mail: mail@primed-x.hu

WEBSITE www.cme.hu/eagc/

TARTALOM

Érdeklődni lehet:

Prof. Dr. Bősze Péter
Primed-X. Kft.
Pf. 46., Budapest 1301
Távmásoló (36 1) 429 0318 Villanyposta mail@primed-x.hu

A kézirattal kapcsolatos tudnivalók

A KÉZIRATOK ELKÜLDÉSE A kéziratok teljes anyagát ábrákkal, táblázatokkal együtt *két példányban* a főszerkesztő címére (Prof. Dr. Bősze Péter, 1301 Budapest, Pf. 46. Tel/fax (36 1) 275-2172, e-posta: bosze@matavnet.hu) kérjük küldeni. Amennyiben erre a szerzőknek lehetőségük van, a kéziratok anyagát a számítógépes szerkesztés megkönnyítése és a szerkesztésből eredő hibaforrások csökkentése céljából egy megfelelően jelzett mágneslemezen (3 1/2 disk, IBM MS-DOS) is küldjék el. Mágneslemez helyett a kéziratok anyaga e-postán is küldhető. Az eredeti kézirat minden esetben szükséges. A kéziratokat *kísérőlevéllel* együtt kell küldeni.

KÍSÉRŐLEVÉL A kísérőlevél tartalmazza a szerzők nevét, a közlemény címét és a levelező szerző adatait (név, munkahely, postacím, távbeszélő, távmásoló, e-posta). A kísérőlevél aláírásával a levelező szerző kijelenti, hogy a mellékelt munka más helyen nem került és nem is fog közlésre kerülni. Ugyanannak a közleménynek idegen nyelvű folyóiratban történő megjelentetése csak a szerkesztőség *írásbeli beleegyezésével* történhet. A levelező szerző a kísérőlevél aláírásával kijelenti továbbá, hogy a kézirat közlését a társszerzők a kéziratban foglaltak szerint jóváhagyták, a „személyes közlésbe" (personal communication) az idézett szerző beleegyezett, és hogy a szerzők a szerzői jogot átruházzák a szerkesztőségre.

A KÉZIRATTAL KAPCSOLATOS FORMAI KÖVETELMÉNYEK A kézirat formája feleljen meg a nemzetközileg elfogadott, Uniform Requirements for Manuscripts Submitted to Biomedical Journals (Ann Intern Med 1988; 108:258-265) előírásoknak.

GÉPELÉS Ha a kézirat szövegszerkesztővel készült, a kívánt jelölések, pl. kiemelés, dőlt betű stb. a szövegszerkesztővel megoldhatók. Magyar ékezetes betűket használjunk. Hagyományos gépelés esetén kérjük a megfelelő részt aláhúzni és a szöveg szélén a kívánalmakat írásban megadni, pl. apró, félkövér vagy dőlt betű, aláhúzni stb. Gépelés vagy nyomtatás mindig csak egy oldalon történjék.

CÍMOLDAL A címoldal tartalmazza a közlemény címét, alatta a szerzők teljes nevét, a szerzők munkahelyét (az osztály vagy intézet vezetőjének nevét nem kell külön megadni), egy 50 karakternél nem hosszabb, rövidített címet és a levelező szerző postacímét, telefonszámát.

MÁSODIK OLDAL A második oldal egy magyar nyelvű összefoglalót és 3-4 kulcsszót tartalmazzon. A kulcsszavak csak az Index Medicus Medical Subject Headings szavai közül kerülhetnek ki. A harmadik oldalon az összefoglalónak és a kulcsszavaknak az angol nyelvű változatát kell megadni. Az angol nyelvű összefoglalóban szerepeljen a dolgozat angol címe és a szerzők neve is.

SZÖVEG Az eredeti közleményeket hagyományos módon: Bevezetés, Anyag és Módszer (vagy betegek és vizsgáló módszerek/kezelések stb.), Eredmények, Megbeszélés, Irodalom részekre kell tagolni. Esetismertetés esetén a közleményt Bevezetés, Esetismertetés, Megbeszélés és Irodalom részekre bontsuk. Minden más esetben a közlemény felépítését a szerzők választják meg. Az irodalmi hivatkozások azonban mindig a közlemény végére kerüljenek.

IRODALOM Az irodalom idézése a szövegben zárójelbe tett arab számokkal történjen a hivatkozás előfordulásának sorrendjében, és nem abc szerint. A szövegben a szerzők nevét dőlt betűvel írjuk, ilyenkor a vonatkozó szám a szerző neve után jön. Ha a szerző neve nem szerepel a mondatban, a hivatkozási szám a mondat végére, de még a pont elé kerül. A hivatkozási számot csak akkor kell a pont után tenni, ha az egész bekezdésre vonatkozik. Az irodalmi adatokat az „irodalom" részben, amely a szöveges rész után következik, az idézés sorrendjében írjuk, az alábbiak szerint.

FOLYÓIRAT ÉS KÜLÖNSZÁM Monaghan JM. The role of surgery in the management of granulosa cell tumours of the ovary. CME J Gynecol Oncol 1996; 1:116.
Webb MJ, Symmonds RE. Site of recurrence of cervical cancer after radical hysterectomy. Am J Obstet Gynecol 1980; 138:813.
Creasman WT, Morrow CP, Bundy BN, et al. Surgical pathologic spread patterns of endometrial cancer. Cancer 1987; 60:2035.
Magrina JF. Intestinal surgery in gynecologic malignancies. Magy Nőorv L 1995; 58 (Suppl. 2):55.

KÖNYV László J, Gaál M. Nőgyógyászati pathológia. 2. kiadás, Budapest, Medicina Könyvkiadó, 1976: 33.

KÖNYVFEJEZET Egyed J. Diabetes és terhesség. In: Doszpod J, szerk. A szülészet és nőgyógyászat aktuális kérdései. Budapest, OTKI, 1982: 87.

Az irodalmi hivatkozások pontosságáért a szerzők felelősek. Ha a szerzők száma hat vagy annál kevesebb, az összes szerző nevét soroljuk fel. Ha hatnál több, csak az első hatét, és utána az „és mtsai" (idegen nyelvű közlemény esetén „et al") kifejezést írjuk. Egyszavas folyóiratok nevét teljesen ki kell írni, egyébként a folyóiratok nemzetközileg elfogadott rövidítéseit alkalmazzuk, amelyet az Index Medicus tartalmaz. A Nőgyógyászati Onkológia rövidítése: Nőgyógy Onkol.

KÖSZÖNETNYILVÁNÍTÁS A köszönetnyilvánítást az irodalom után írjuk.

TÁBLÁZATOK A szövegben a táblázatok számozását megjelenésük sorrendjében, zárójelbe tett arab számokkal írjuk, pl. *(1. táblázat, Table 1)*. A táblázatokat a táblázat felett megszámozva, külön oldalakon kérjük. A számozás után a táblázat címe következik. A táblázat alá rövid magyarázó szöveg kerül. Ide írjuk megfelelő jelöléssel a táblázatban előforduló rövidítések magyarázatát is. Más szerzőktől vett táblázatok csak az eredeti szerzők vagy a szerzői jog tulajdonosának engedélyével idézhetők.

ÁBRÁK Mindig az eredeti ábrákat, fényképeket kell beküldeni két példányban. A szövegben az ábrák számozását megjelenésük sorrendjében, zárójelbe tett arab számokkal írjuk, pl. *(1. ábra, Figure 1)*. Az ábrák hátoldalán vékony ceruzával vagy ragasztható cédulán tüntessük fel a sorszámot, a szerző nevét és az ábra irányát kis nyíl segítségével. Kontrasztos, jó minőségű fekete-fehér fényképeket kell küldeni. Szükség esetén színes képet is elfogadunk. A rajzolt ábrák fekete tintával fehér háttér előtt készüljenek. Az ábraaláírásokat külön lapon kérjük. Ebben az ábrán használt jelzések magyarázatát is adjuk meg. Más szerzőktől vett ábrák csak az eredeti szerzők vagy a szerzői jog tulajdonosának engedélyével idézhetők. A beküldött ábrákat csak a szerzők külön kérésére küldjük vissza.

MÉRTÉKEGYSÉG A mértékegységeket „méter rendszerben", SI egységekben kell megadni.

RÖVIDÍTÉSEK A rövidítéseket a szövegben először jelentésük teljes kiírása után zárójelben adjuk meg, és csak ezután használjuk önállóan. Az összefoglalóban (Abstract) ne legyen rövidítés.

HELYESÍRÁS Törekedjünk magyar orvosi kifejezések használatára, az idegen kifejezéseket, amikor csak lehet, kerüljük el. Az orvosi kifejezések magyarítása kívánatos. Nem magyar eredetű szavak írása az eredeti írásmód szerint történjen. Magyaros helyesírással csak a köznyelvben meghonosodott (pl. krónikus, akut) szakkifejezéseket írjuk. Egyazon közleményben következetesen, egységesen kell alkalmazni a magyaros vagy a klasszikus írásmódot. Angol nyelvű szövegben az angol és az amerikai helyesírás is alkalmazható.

Betadine®

Bőr és nyálkahártya -fertőtlenítőszer

- sokoldalú,
- hatékony,
- jól tolerálható

Oldat
30 és 120 ml

Folyékony szappan
120 ml

Kenőcs

Hüvelykúp

Licencadó: Mundipharma

Kapható a patikákban!

További információ:
EGIS Gyógyszergyár Rt. Termékosztály Felelős kiadó: Varga E.
1146 Budapest, Hungária krt. 179-187., Telefon: 469-2222 Fax: 383-9257,E-mail: marketing.opr@egis.hu

A BETEGSÉG NEM VÁR. MI SEM.

Másodpercenként több mint 30 adag oltóanyagot hozunk forgalomba.

Percenként több mint 1100 receptre írják fel gyógyszereinket.

Óránként több mint 450 ezer dollárt költünk gyógyszerkutatásra.

Naponta több mint 200 millió ember használja fogkefénket vagy fogkrémünket a világon.

Évente több mint 90 millió dollár értékű termék- és pénzadományt osztunk szét a rászorulóknak.

A tudomány csoda.
Mi naponta használjuk.

gsk GlaxoSmithKline

www.gsk.hu

Képviselet: Kis Buda Center, 1023 Budapest, Frankel Leó u. 30-34.

Instructions to authors

The original manuscript – together with a cover letter – must be submitted to the Editor-in-Chief (Péter Bősze, M.D., 1301 Budapest, P.O.Box 46, Hungary, Tel/Fax (36 1) 275-2172, E-mail address bosze@axelero.hu). Authors are encouraged to e-mail their manuscripts or submit them on a floppy disk with adequate labeling and information (3 1/2 diskette in IBM MS-DOS). In either case, an accurate hard-copy printout must be sent (v.c.), as well. The Editor-in-Chief requires the original manuscripts and cover letters. By signing the cover letter, the authors certify that the same work has not been published, and is not under consideration for publication elsewhere, that its submission for publication has been approved by all of the authors, and that any person cited as a source of personal communication has approved such citation. By signing the cover letter, the authors transfer the copyright to the Publisher. Manuscript decisions will be based on peer review.

Articles and any other material published in the ***Hungarian Journal of Gynecologic Oncology*** (Hu J Gynecol Oncol) represent the opinions of the author(s) and should not be construed to reflect the opinions of the Editors or the Publisher.

FORM OF A MANUSCRIPT

The ***Hungarian Journal of Gynecologic Oncology*** guidelines are based on instructions set forth in the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** (Ann Intern Med 1988; 108:258-265).

TITLE PAGE The title page should contain the article title followed by the author's first, middle and last names, residence of the author(s) (the name of the head or director of the department or institution is not required), a short running head of not more than 50 characters, and the complete mailing address including e-mail and telephone numbers of the single author to whom correspondence should be sent. ***Page 2*** should contain a short abstract followed by 3 to 4 key words for index purposes.

TEXT Original articles should incorporate the following sections: Introduction, Patients and Methods, Results, Discussion and References. The organization of the text of review papers is up to the author(s). However, all articles should contain References. *Acknowledgements* follow the References. Pages should be numbered in succession, the title page being page one.

REFERENCES These should be numbered in the order in which they are cited in the text by Arabic numerals in brackets (1), (2-5). When the name(s) of the author(s) is in the text, the reference number comes right after it, e.g. *Onnis* (7), or *Gorins et al.* (5); if not, it should be written at the end of the sentence before the full stop. References are listed in a separate section as illustrated in the following examples:

JOURNAL ARTICLE AND SUPPLEMENT Monaghan JM. The role of surgery in the management of granulosa cell tumours of the ovary. CME J Gynecol Oncol 1996; 1:116.

Webb MJ, Symmonds RE. Site of recurrence of cervical cancer after radical hysterectomy. Am J Obstet Gynecol 1980; 138:813.

Creasman WT, Morrow CP, Bundy BN, et al. Surgical pathologic spread patterns of endometrial cancer. Cancer 1987; 60:2035.

Magrina JF. Intestinal surgery in gynecologic malignancies. Magy Nőorv L 1995; 58 (Suppl. 2):55.

BOOK DiSaia PJ, Creasman WT. Clinical Gynecologic Oncology. 3rd edn. St. Louis, The C. V. Mosby Company, 1989: 211.

CHAPTER IN A BOOK Schwartz PE, Naftolin F. Hormone therapy. In: Berek JS, Hacker NF, eds. Practical Gynecologic Oncology. 2nd edn. Baltimore, Williams and Wilkins, 1994: 613.

Accuracy of reference data is the responsibility of the author(s). All authors should be listed when there are six or less; with seven or more the first six should be given followed by "et al.". Single word journal titles should be spelled out, all authors should be abbreviated according to the instructions of Index Medicus.

TABLES Tables are numbered consecutively using Arabic numerals in brackets *(Table 1)*, in the order cited in the text. They should be typed double-spaced on separate pages and should be accompanied by a short caption. All abbreviations should be explained in a footnote.

FIGURES The original illustrations and line drawings should be submitted and numbered using Arabic numerals in brackets *(Figure 1)* consecutively as they appear in the text. Line drawings should be in black ink on a white background or clear glossy prints, with lettering of high standard and large enough to be legible when reduced. Color or black-and-white photographic prints must be glossy and provide sharp contrast. Color illustrations are accepted when appropriate. On the back of each illustration or on a label affixed to the back of each figure indicate the author's last name, figure number and the "top" with an arrow. Never use labels on color figures, and never use ink on the front or back of any figures. Captions should be on a separate page and should include the figure number and a brief description of the illustration. Explain all symbols used in the illustration. Scale bars (when appropriate) should be provided on the photographs. Figures that are reproduced from another published source require written permission from the authors and copyright holders. Submitted illustrations are returned on request only.

UNITS All measurements should be in metric, SI units.

ABBREVIATIONS Abbreviations must be written in full when first mentioned in the text.

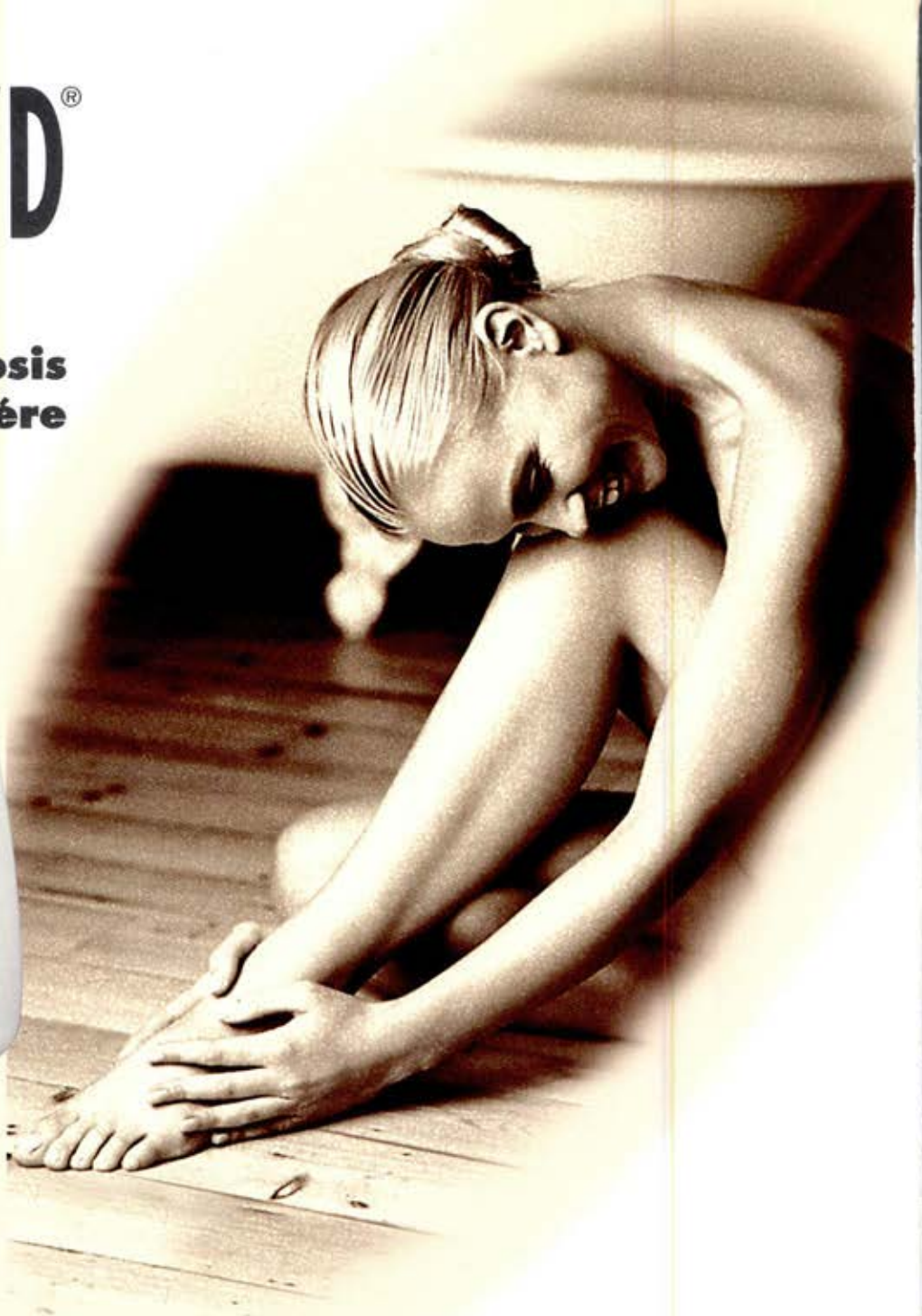
SPELLING Both American and English spelling are accepted.

EDITORIAL ASSISTANCE This courtesy will be extended to authors who have difficulty with the English language. Corrected manuscripts will be returned to the authors for their approval. The aim of the English Language Editorial Service is to ensure a uniformly high standard of presentation for all published material.

ADVERTISEMENT For information about advertising in the Hungarian Journal of Gynecologic Oncology, please contact the Editor-in-Chief (Péter Bősze, M.D., 1301 Budapest, P.O.Box 46, Hungary. Tel/Fax (36 1) 275-2172, E-mail address bosze@matavnet.hu).

LACTACYD®
FEMINA

Bacterialis vaginosis adjuváns kezelésére



„A rendszeres hüvelyöblítés alkalmazása – adjuváns kezelésként – akkor ajánlható, ha a hüvelyben visszatérően lúgos vegyhatással járó dysbacteriosis (pl. bacterialis vaginosis) alakul ki.
A bacterialis vaginosis – endogén fertőzés lévén – recidívára hajlamos, ami ismételt célzott kezelést tesz szükségessé. A célzott kezelés kiegészítése és a recidívák megelőzése céljából alkalmazott hüvelyöblítés védelmet jelent a panaszok kiújulása ellen."

(részlet a Szülészeti és Nőgyógyászati Szakmai Kollégium
1999. December 13-ai állásfoglalásából)

Lactacyd Femina, az intim higiénia szakértője.

SB
SmithKline Beecham
Consumer Healthcare

További információval szívesen állunk rendelkezésére!
SmithKline Beecham Consumer Healthcare, Kis Buda Center, 1023 Budapest, Frankel Leó út 30-34. II. em. Tel.: 346-1600 Fax: 326-4890

CÉLKITŰZÉS ÉS INFORMÁCIÓ A **Nőgyógyászati Onkológia** a Magyar Nőgyógyász Onkológusok Társaságának hivatalos lapja. Azzal a céllal jött létre, hogy a nőgyógyászati onkológiának, a szülészet-nőgyógyászat és az onkológia önálló szakmájának hazánkban is tudományos fórumot teremtsen. Nőgyógyászati onkológiai folyóirat más országokban és nemzetközi szerkesztésben már évtizedek óta létezik, ezért a **Nőgyógyászati Onkológia** megjelentetése az orvostudománynak ezen a területén a haladó világhoz történő felzárkózásunkat jelenti. A szakmai célkitűzések mellett a magyar orvosi nyelv művelése, jobbítása is a lap alapvető feladata.

A **Nőgyógyászati Onkológia** a női nemi szervek, az emlők és a határterületek daganatos megbetegedéseivel, valamint az ezekhez kapcsolódó általános, elméleti és gyakorlati kérdésekkel foglalkozik. Tárgyalja továbbá a nőgyógyászati onkológiát, mint szakmát, beleértve a szervezési, a képzési és az anyagi meggondolásokat is. A lap eredeti összefoglaló és szerkesztőségi közleményeket, esetismertetéseket és beszámolókat közöl. Különös hangsúlyt fektet a képzésre, amelyet nemcsak elméleti, de gyakorlati szinten is meg kíván valósítani. Orvostörténeti ismereteket ad annak tudatában, hogy nincs jelen és jövő a gyökerek ismerete nélkül. Társasági hírek, kritikák, megemlékezések, események ismertetése és más hírmondás a folyóirat szerves részét képezik. Határterületi kérdések és betegtájékozatók szintén a célkitűzések közé tartoznak. A **Nőgyógyászati Onkológia,** mint a Magyar Nőgyógyász Onkológusok Társaságának hivatalos lapja, a Társaság állásfoglalásait, hírleveleit és más kiadványait is közli.

A felkért közlemények kivételével minden közlést két bíráló véleményez. Ennek alapján a **Nőgyógyászati Onkológia** is az ún. „bírálóan átnézett" (peer-reviewed) folyóiratok közé tartozik. A bírálók javaslatot tesznek módosításokra és a közlemény elfogadására vagy elutasítására, amelyet a szerkesztőség messzemenően figyelembe vesz. A bírálók személyét nem fedjük fel. **A közleményekben megfogalmazott vélemények, javaslatok nem a szerkesztőség, hanem a szerzők véleményét, állásfoglalását jelentik.**

A **Nőgyógyászati Onkológia** alapvetően magyar nyelvű. A kis népek létezése azonban megköveteli a kétnyelvűséget, ezért a lapban a közlemények összefoglalóját és a fontosabb adatokat angol nyelven is ismertetjük. Elfogadunk angol nyelvű közleményeket, egy-egy nemzetközi rendezvény előadásait pedig teljes egészében angolul adjuk közre.

SCOPE AND INFORMATION With the rapid advances of radical surgery, clinical technologies, anesthesia, modern blood banks, antibiotics, medical oncology and radiotherapy, and with the explosion of molecular biology, it has been recognized that the usual training of gynecologists-obstetricians was insufficient to provide optimal care for patients with malignancies of the female genital tract and breast cancer. This recognition has led to the development of the subspeciality of gynecologic oncology with board certification in many countries worldwide.

Since the establishment of our specialty, a plethora of information has been accumulated with the recognition that in the rapidly expanding field of gynecologic oncology it is becoming almost impossible to be up-to-date with issues of concern. The spectrum of gynecologic oncology is broadening each day and includes among others advanced surgery, fundamental understanding and practice of drug and radiation therapy and an in-depth knowledge in pathology and molecular biology. The gynecologic oncologists should keep pace with these exciting basic and clinical advances. The explosion of scientific information brought about by molecular and cellular biology should be reflected in patient's care at bedside. Cancer treatment and molecular biology cannot be separated any longer. These are some of the major reasons of establishing national and international journals devoted to gynecologic oncology.

In Hungary, gynecologic oncology has been officially recognized as a specialty of obstetrics and gynecology. This was followed by the foundation of the Hungarian Society of Gynecologic Oncology in 1991. During the last 5 years, there has been a growing need for a national venue for publications focusing on clinical and basic gynecologic oncology, thus, the foundation of the **Hungarian Journal of Gynecologic Oncology** with the aim of providing a sole forum for gynecologic oncology in Hungary. The **Hungarian Journal of Gynecologic Oncology** is the offical journal of the Hungarian Society of Gynecologic Oncologists.

The **Hungarian Journal of Gynecologic Oncology** will provide a national archive to high quality papers that deal with tumors of female genital tract and related organs, and with the benign and malignant diseases of the breasts. Reports of investigations relating to any aspect of these fields, including etiology, epidemiology, pathology, diagnosis, treatment, follow-up and basic science will be considered. Such contributions may come from any of the disciplines with interests in gynecologic oncology.

The **Hungarian Journal of Gynecologic Oncology** will publish original articles, invited reviews, brief reports, papers focusing on the history and on the professional aspect of the specialty, news, comments, critique, book reviews and letters. Education with particular emphasis on countinuing medical education is one of the major aims of the journal.

The language of the **Hungarian Journal of Gynecologic Oncology** is basically Hungarian. However, papers written in English will also be accepted.

The original manuscript together with a cover letter must be submitted to the Editor-in-Chief (Péter Bősze, M.D., 1301 Budapest, P.O.Box 46, Hungary. Tel/fax (36 1) 275-2172, E-mail address bosze@matavnet.hu). The authors are encouraged to e-mail their manuscript or submit the article on a floppy disk with adequate labelling and information (3 1/2 diskette in IBM MS-DOS). In either case, an accurate hard-copy print-out must accompany. The Editor-in-Chief requires the original manuscripts and the cover letters. By signing the cover letter, the authors certify that the same work has not been published, that it is not under consideration for publication elsewhere, that its submission for publication has been approved by all of the authors, and that any person cited as a source of personal communication has approved such citation. By signing the cover letter, the authors transfer the copyright to the Publisher. Manuscript decision will be based on peer review.

Articles and any other material published in the **Hungarian Journal of Gynecologic Oncology** represent the opinions of the author(s) and should not be construed to reflect the opinions of the Editors and the Publisher.