

国际医学名著精品系列

(英文原版)

CLINICAL GYNECOLOGY

临床妇科学

Eric J. Bieber / Joseph S. Sanfilippo / Ira R. Horowitz



人民军医出版社

PEOPLE'S MILITARY MEDICAL PRESS

国际医学名著精品系列

(英文原版)

CLINICAL GYNECOLOGY

临床妇科学

Eric J. Bieber, MD, MHCM

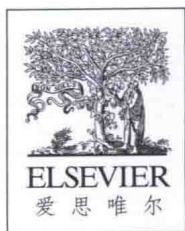
Chair, Department of Obstetrics and Gynecology
Medical Director, Women's Service Line
Chief Medical officer, Geisinger Wyoming Valley and
Geisinger South Wilkes-Barre
Senior Vice President
Geisinger Health Systems
Wilkes-Barre and Danville, PA

Joseph S. Sanfilippo, MD, MBA

Vice Chair, Reproductive Sciences
Director, Division of Reproductive Endocrinology and Infertility
University of Pittsburgh School of Medicine
Pittsburgh, PA

Ira R. Horowitz, MD, MHCM

Willaford Ransom Leach Professor and Vice Chair
Department of Obstetrics and Gynecology
Director, Division of Gynecologic Oncology
Assistant Dean of Clinical Affairs
Emory University School of Medicine
Associate Director, Emory Clinic
Atlanta, GA



人民军医出版社

PEOPLE'S MILITARY MEDICAL PRESS

北 京

Clinical Gynecology, 1st edition

Eric J. Bieber

ISBN-13: 9780443066917

ISBN-10: 0443066914

Copyright © 2006 by Elsevier. All rights reserved.

Authorized reprint edition from English edition published by the Proprietor.

ISBN-13: 9789812599681

ISBN-10: 9812599681

Copyright © 2007 by Elsevier (Singapore) Pte Ltd. All rights reserved.

Elsevier (Singapore) Pte Ltd.

3 Killiney Road

#08-01 Winsland House I

Singapore 239519

Tel: (65) 6349-0200

Fax: (65) 6733-1817

First Published 2007

2007 年初版

Printed in China by People's Military Medical Press under special arrangement with Elsevier (Singapore) Pte Ltd. This edition is authorized for sale in China only, excluding Hong Kong SAR and Taiwan. Unauthorized export of this edition is a violation of the Copyright Act. Violation of this Law is subject to Civil and Criminal Penalties.

本书英文影印版由 Elsevier (Singapore) Pte Ltd. 授权人民军医出版社在中国大陆境内独家发行。本版仅限在中国境内（不包括香港特别行政区及台湾）出版及标价销售。未经许可之出口，视为违反著作权法，将受法律之制裁。

图书在版编目 (CIP) 数据

临床妇科学 = Clinical Gynecology: 英文/ (美) 比伯 (Bieber. E. J.) 主编. —北京: 人民军医出版社, 2007.4

ISBN 978-7-5091-0796-6

I. 临... II. 比... III. 妇科学-英文 IV. R711

中国版本图书馆 CIP 数据核字 (2007) 第 042956 号

著作权合同登记号: 图字-军-2007-012

策划编辑: 郭伟疆 崔玲和

出版人: 齐学进

出版发行: 人民军医出版社 经 销: 新华书店

通信地址: 北京市 100036 信箱 188 分箱 邮 编: 100036

电话: (010) 66882586 (发行部)、51927290 (总编室)

传真: (010) 68222916 (发行部)、66882583 (办公室)

网址: www.pmmp.com.cn

印装: 北京佳信达艺术印刷有限公司

开本: 889 mm × 1 194 mm 1/16

印张: 64 字数: 2 755 千字

版、印次: 2007 年 4 月第 1 版第 1 次印刷

印数: 0001 ~ 1 500

定价: 700.00 元

版权所有 侵权必究

购买本社图书, 凡有缺、倒、脱页者, 本社负责调换

电话: (010) 66882585、51927252

To our patients whom we treat as family, and to our families for their patience.

I would like to thank my wife, Edie, and our sons, Brandon and Andrew, for continuing to support my academic endeavors and for providing a loving environment from which to grow professionally and personally. Also to my parents, George and Audrey, who taught me to “reach for the stars.” To the many mentors who have had such a profound impact on my life—to them I am forever indebted. Finally, I would like to recognize my coeditors, IH and JS. Their friendship has made this project enjoyable from the onset; their exemplary professionalism is a credit to our field of medicine.

—EB

I dedicate this book to my family: Patricia, my wife, and our children, Angela, Andrea, and Luke for their unending enthusiasm and support for all my academic ventures. To my mother, who in her ninetieth year continues to remind me how “she is responsible for it all.” Finally as noted in the preface, behind every successful professional is one other key person, *viz.* their Administrative Assistant. This book could not have been completed without the capable assistance of Doreen Smith, whose tireless hours addressed the entire “attention to detail” prerequisite to what you have in your hands today.

—JS

I dedicate this text to my wife, Julie, and daughters, Andrea and Rebecah. It is through their support and sacrifice that I have been able to pursue my academic career. In addition to my family, I would like to recognize the mentors who have assisted me in my academic pursuits. As mentioned in the preface, my participation in preparing this text would not have been possible without my Administrative Assistant, Julie Cook. It is my hope that this text will provide physicians with an evidence-based approach to gynecology.

—IH

Preface

The stage is set as this segment of a textbook is always written, but may not always be read. The editors conceptualized this textbook almost a decade ago. While several popular gynecologic texts existed, we were unable to find a substantive reference text that had all of the qualities we envisioned. We spent many months debating format options that we believed would optimize the educational experience of you our audience. This final version is the distillation of those many discussions.

The three editors come from distinct and vastly different backgrounds: Eric Bieber's greatest interest lies in minimally invasive surgery (MIS), reproductive endocrinology and infertility (REI), and general gynecology; Ira Horowitz is interested in gynecologic oncology, pelvic surgery, and anatomy; and Joseph Sanfilippo is integrally involved with REI, MIS, and pediatric and adolescent gynecology. Each of us has directed fellowships, residencies, and departments over the years and each of us has also completed master's degrees in business administration or healthcare management. These disparate, yet singularly motivated interests, were an excellent nidus and most appropriate prerequisite for the text genesis.

The planning of this book has the basic tenets of combing the literature, pursuing the shelves of libraries, and arriving at a conclusion focused on what is needed for all sectors of female healthcare provision. The editors felt it was of paramount importance to provide for our readers a well-illustrated text in full color that was visually interesting but that also spanned the spectrum of gynecology. The text is thus divided into the following sections:

- 1 Ambulatory office practice
- 2 General gynecology
- 3 Gynecologic infectious disease
- 4 Urogynecology
- 5 Pediatric and adolescent gynecology
- 6 Minimal invasive surgery
- 7 Gynecologic oncology
- 8 Reproductive endocrinology and infertility
- 9 Coding and office management

We tapped into the expertise of leading authorities to provide the most current information in a succinct and easily understood format. This allows each chapter to be a "stand alone" entity, although there is continuity of style from chapter to chapter. However, given how we have intentionally structured the text, there are areas where we have allowed seeming incongruencies to stand as written. This allows the reader a panoramic understanding regarding some topics where there are inherent multiplicities of opinions and data.

The reader will note the increased breadth given to the topic of minimal invasive surgery. In addition, we address other areas such as compliance and the regulatory environment that are typically not covered in other texts.

In an effort to bring the most up-to-date and relevant information to the reader, we asked the chapter authors to provide references with coding of the level of strength of study design. Furthermore, they were requested to limit their citations to references that were particularly important. While several quality-of-evidence paradigms exist, we chose one that has been internationally accepted and widely used for evaluating strength of data. This format will help the reader who desires to pursue more in-depth information on a particular topic. We have also asked each chapter author to highlight key points that are presented at the beginning of each chapter.

Clinical decision making represents collating the clinical circumstance, research evidence, and patient preference after learning alternative management strategies. Back in 1992, evidence-based medicine proponents focused on a new paradigm in which provision was made how to best utilize research in clinical correlation. We have requested all contributors to grade the strength of the study design and its implementation. This classification is as follows:

Quality of evidence

- Ia Evidence obtained from meta-analysis of randomized controlled trials
- Ib Evidence obtained from at least one randomized controlled trial
- Ila Evidence obtained from at least one well-designed controlled study without randomization
- Ilb Evidence obtained from at least one other type of well-designed quasi-experimental study
- III Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies, and case studies
- IV Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities

Strength of recommendation

- A At least one randomized controlled trial as part of a body of literature of overall good quality and consistency addressing the specific recommendation (Evidence levels Ia, Ib)
- B Well-controlled clinical studies available but no randomized clinical trials on the topic of recommendations (Evidence levels Ila, Ilb, III)
- C Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates an absence of directly applicable clinical studies of good quality (Evidence level IV)

Haynes RB: What kind of evidence is it that evidence-based medicine advocates want health care providers and consumers to pay attention to? <http://www.biomedcentral.com/1472-6963/2/3>. Accessed Feb. 8, 2004

We want to express our appreciation to the administrative and secretarial staff for the tireless effort in seeing the textbook to completion. We are indebted to Doreen Smith and Julie Cook among many individuals who were helpful in this regard. We would also like to thank Elsevier for their incredible effort in seeing this very large project from genesis to completion. Without their belief in the project we would be unable to produce this heavily illustrated text. Specifically, we would like to thank Dee Simpson, Todd Hummel, and Mary Stermel.

We hope for you, as the reader, that we have accomplished our goal of providing a single authoritative reference text for the broad area of gynecology. Significant effort has been put into making this the most visually interesting and distinct text available. We hope this aids you in managing your patients and con-

tinuing to be enthusiastic about providing them with the latest gynecologic care.

Happy reading and care providing!

EB, JS, IH

CLINICAL GYNECOLOGY

Contributors

Rony A. Adam, MD

Director, Division of Gynecologic Specialties, Department of Gynecology and Obstetrics, Emory University School of Medicine, Atlanta, GA

Diagnosis and Treatment of Fistulas; Nonsurgical Treatment of Urinary Incontinence

Raedah Al-Fadhli, MD

Fellow, Reproductive Endocrinology and Infertility, McGill University, Montreal, Quebec, Canada
Laparoscopic Instrumentation

Zoyla Almeida-Parra, MD

Gynecologic Oncologist, Department of Obstetrics and Gynecology, Memorial Miramar Hospital; Gynecologic Oncologist, Department of Obstetrics and Gynecology, Memorial West Hospital, Miramar, FL
Cervical Carcinoma

Rudi Ansbacher, MD, MS

Professor Emeritus, Obstetrics and Gynecology, University of Michigan Medical Center, Ann Arbor, MI
Geriatric Gynecology

Gloria Bachmann, MD

Professor, Departments of Obstetrics and Gynecology and Medicine; Associate Dean for Women's Health, Women's Health Institute; UMDNJ–Robert Wood Johnson Medical School; Attending, Obstetrics and Gynecology, Robert Wood Johnson University Hospital, New Brunswick, NJ
Sexual Function and Disorders

Patricia E. Bailey-Sarnelli, MD

Department of Obstetrics and Gynecology, Baystate Health Systems, Longmeadow, MA
Contraception

Randall B. Barnes, MD

Associate Professor, Department of Obstetrics and Gynecology, Northwestern University, Chicago, IL
Abnormal Uterine Bleeding

Jack Basil, MD

Associate Director, Department of Gynecologic Oncology, TriHealth, Tristate Gynecologic Oncology, Cincinnati, OH
Vaginal Carcinoma

John Bennett, MD

Department of Radiology, St. Joseph's Health Care, London, Ontario, Canada
Uterine Leiomyomas

Inbar Ben-Shachar, MD

Lecturer, Faculty of Medicine, Hebrew University; Attending, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Hadassah University Medical Center, Jerusalem, Israel
Gestational Trophoblastic Disease

Jonathan S. Berek, MD, MMSc

Professor and Chair, College of Applied Anatomy; Executive Vice Chair, Department of Obstetrics and Gynecology; Chief, Division of Gynecologic Oncology and Gynecology Service; Director, UCLA Women's Reproductive Cancer Program, David Geffen School of Medicine at UCLA, UCLA Center for the Health Sciences, Los Angeles, CA
Cancer Genetics

Sarah L. Berga, MD

James Robert McCord Professor and Chair, Department of Gynecology and Obstetrics, Emory University School of Medicine; Department of Gynecology and Obstetrics, Emory Healthcare, Atlanta, GA
Physiology of the Menstrual Cycle

Eric J. Bieber, MD, MHCM

Chair, Department of Obstetrics and Gynecology; Medical Director, Women's Service Line; Chief Medical Officer, Geisinger Wyoming Valley and Geisinger South Wilkes-Barre; Senior Vice President; Geisinger Health Systems; Wilkes-Barre and Danville, PA
Hysteroscopic Instrumentation; Hysteroscopic Procedures; Laparoscopic and Hysteroscopic Complications; Laparoscopic Instrumentation

Anita Blanchard, MD

Assistant Professor, Department of Obstetrics and Gynecology, University of Chicago Pritzker School of Medicine, Chicago, IL
Benign Vulvar Diagnosis

Thérèse E. Bocklage, MD

Associate Professor, Department of Pathology, University of New Mexico School of Medicine; Associate Professor, Department of Pathology, University of New Mexico Health Sciences Center, Albuquerque, NM
Fallopian Tube Carcinoma

Candace Brown, MSN, PharmD

Professor, Departments of Pharmacy, Obstetrics and Gynecology, and Psychiatry, University of Tennessee Health Science Center, Memphis, TN
Premenstrual Syndrome/Premenstrual Dysphoric Disorder

Colleen Buggs, MD, PhD

Assistant Professor, Department of Pediatrics, University of Chicago Pritzker School of Medicine; Assistant Professor, Pediatrics Section of Pediatric Endocrinology, University of Chicago Children's Hospital, Chicago IL
Delayed Puberty and Primary Amenorrhea

Ronald T. Burkman, MD

Deputy Chair and Professor,
Department of Obstetrics and
Gynecology, Tufts University School
of Medicine, Boston; Chair,
Department of Obstetrics and
Gynecology, Baystate Medical Center,
Springfield, MA
Contraception

John E. Buster, MD

Professor and Director, Division of
Reproductive Endocrinology and
Infertility, Department of Obstetrics
and Gynecology, Baylor College of
Medicine; Professor and Director,
Division of Reproductive Endocrinology
and Infertility, Department of Obstetrics
and Gynecology, Methodist Hospital;
Professor and Director, Division of
Reproductive Endocrinology and
Infertility, Department of Obstetrics
and Gynecology, St. Luke's Episcopal
Hospital, Houston, TX
Polycystic Ovary Syndrome

Michael Byas-Smith, MD

Associate Professor, Department of
Anesthesiology, Emory University
School of Medicine; Department of
Anesthesiology, Emory University
Hospital; Department of
Anesthesiology, Crawford Long
Hospital; Department of
Anesthesiology/Pain, Winship Cancer
Institute of Emory University,
Atlanta, GA
Cancer Pain

Alexandra S. Carey, MD

Department of Adolescent Medicine,
Children's Hospital of Pittsburgh,
Pittsburgh, PA
Puberty and Precocious Puberty

Sandra A. Carson, MD

Professor, Department of Obstetrics
and Gynecology, Baylor College of
Medicine; Attending Physician,
Obstetrics and Gynecology,
St. Luke's Episcopal Hospital;
Attending Physician, Obstetrics and
Gynecology, Methodist Hospital;
Attending Physician, Obstetrics and
Gynecology, Ben Taub Hospital,
Houston, TX
*Female Infertility and Evaluation of the
Infertile Couple*

Judy C. Chang, MD, MPH

Assistant Professor, Department of
Obstetrics, Gynecology, and
Reproductive Sciences, University of
Pittsburgh; Junior Investigator,
BIRCIWH Scholar, Magee-Women's
Research Institute, Pittsburgh, PA
Domestic Violence

Alice W. Chuang, MD

Assistant Professor, Department of
Obstetrics and Gynecology,
University of North Carolina—Chapel
Hill School of Medicine,
Chapel Hill, NC
Preventive Health

Daniel L. Clarke-Pearson, MD

James M. Ingram Professor of
Gynecologic Oncology, Department
of Obstetrics and Gynecology,
Duke University School of Medicine;
Director of Gynecologic Oncology,
Department of Obstetrics and
Gynecology, Duke University Hospital,
Durham, NC
*Preoperative Evaluation and
Postoperative Management*

Larry J. Copeland, MD

Professor and William Greenville
Pace III and Joann Norris Collins Pace
Chair, Department of Obstetrics and
Gynecology, The Ohio State University
College of Medicine; Professor,
Gynecologic Oncology, James Cancer
Hospital and Solove Research Institute,
Columbus, OH
Gestational Trophoblastic Disease

Susannah D. Copland, MD

Fellow, Reproductive Endocrinology
and Infertility, Department of
Obstetrics and Gynecology,
Emory University School of Medicine,
Atlanta, GA
Physiology of the Menstrual Cycle

Bryan D. Cowan, MD

Professor and Chair, Department of
Obstetrics and Gynecology,
University of Mississippi Medical
Center, Jackson, MS
*Assisted Reproductive Technologies/
In Vitro Fertilization*

Kristin L. Dardano, MD

Assistant Professor, Department of
Obstetrics and Gynecology, Tufts
University School of Medicine, Boston;
Assistant Professor, Department of
Obstetrics and Gynecology, Baystate
Medical Center, Springfield, MA
Contraception

Michael P. Diamond, MD

Kamran S. Moghissi Professor and
Associate Chair, Department of
Obstetrics and Gynecology, Wayne State
University; Director, Division of
Reproductive Endocrinology and
Infertility, Department of Obstetrics and
Gynecology, Detroit Medical Center,
Detroit, MI
Uterine Leiomyomas

Concepcion Diaz-Arrastia, MD

Associate Professor, Department of
Obstetrics and Gynecology, University
of Texas Medical Branch, Galveston, TX
Human Papillomaviruses

Oliver Dorigo, MD, PhD

Assistant Professor, Department of
Gynecologic Oncology, David Geffen
School of Medicine at UCLA,
Los Angeles, CA
Cancer Genetics

Steven C. Eberhardt, MD

Assistant Professor, Department of
Radiology, University of New Mexico,
Albuquerque, NM
Fallopian Tube Carcinoma

Philip N. Eskew, Jr., MD

Clinical Professor, Department of
Obstetrics and Gynecology, Indiana
University School of Medicine; Director,
Physician and Patient Relations,
Department of Medical Affairs,
St. Vincent Hospital, Indianapolis, IN
Coding Tips for the Busy Physician

Sebastian Faro, MD, PhD

Clinical Professor, Department of
Obstetrics, Gynecology, and
Reproductive Sciences, The University
of Texas—Houston Health Sciences
Center; Attending Physician,
Departments of Obstetrics and
Gynecology and Surgery, The Woman's
Hospital of Texas, Houston, TX
*Gynecologic and Surgical Sepsis;
Pelvic Inflammatory Disease;
Vulvovaginal Infections*

Murray J. Favus, MD

Professor, Department of Medicine, University of Chicago Pritzker School of Medicine; Attending Physician and Director, Bone Program, Department of Medicine, University of Chicago Hospitals, Chicago, IL
Osteoporosis

Lisa Flowers, MD

Assistant Professor, Department of Obstetrics and Gynecology, Emory University School of Medicine, Atlanta, GA
Colposcopy

Thomas P. Foley, Jr., MD

Professor Emeritus, Department of Pediatrics and Epidemiology, University of Pittsburgh; Professor Emeritus, Division of Endocrinology, Department of Pediatrics, Children's Hospital of Pittsburgh, Pittsburgh, PA
Thyroid Function and Disorders

Jennifer S. Gell, MD

Associate, Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology, Geisinger Wyoming Valley Hospital, Wilkes-Barre, PA
Alternative Medicine

Karen Godette, MD

Assistant Professor, Department of Radiation Oncology, Emory University School of Medicine, Atlanta, GA
Breast Carcinoma

Alan N. Gordon, MD

Clinical Professor, Department of Obstetrics and Gynecology, University of Arizona, Phoenix; Department of Obstetrics and Gynecology, Banner Good Samaritan Medical Center; Department of Obstetrics and Gynecology, St. Joseph's Hospital and Medical Center, Phoenix, AZ
Vulvar Carcinoma

Victoria L. Green, MD, MBA, JD

Associate Professor, Department of Obstetrics and Gynecology; Winship Cancer Institute of Emory University, Cancer Control and Population Sciences, Emory University School of Medicine, Atlanta, GA
Breast Cancer Screening

Nidhi Gupta, MD

Departments of Obstetrics and Gynecology and Medicine, UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ
Sexual Function and Disorders

Enrique Hernandez, MD, FACOG, FACS

The Abraham Roth Professor and Chair, Department of Obstetrics, Gynecology and Reproductive Sciences, Temple University School of Medicine; Chair, Department of Obstetrics and Gynecology, Temple University Hospital, Philadelphia, PA
Endometrial Carcinoma

S. Paige Hertweck, MD

Associate Professor, Pediatric and Adolescent Gynecology, Department of Obstetrics, Gynecology and Women's Health, University of Louisville School of Medicine; Chief of Gynecologic Surgery, Kosair Children's Hospital, Louisville, KY
Medical Management of Gynecologic Problems in the Pediatric and Adolescent Patient

Randall S. Hines, MD

Associate Professor and Director, Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology, University of Mississippi Medical Center, Jackson, MS
Assisted Reproductive Technologies/ In Vitro Fertilization

Ira R. Horowitz, MD, MHCM

Willaford Ransom Leach Professor and Vice Chair, Department of Obstetrics and Gynecology; Director, Division of Gynecologic Oncology; Assistant Dean of Clinical Affairs, Emory University School of Medicine; Associate Director, Emory Clinic, Atlanta, GA
Federal Regulations

Karen L. Houck, MD

Assistant Professor, Department of Obstetrics, Gynecology and Reproductive Services, Temple University Hospital, Philadelphia, PA
Endometrial Carcinoma

Fred M. Howard, MS, MD

Professor and Associate Chair, Department of Obstetrics and Gynecology, University of Rochester School of Medicine and Dentistry, Rochester, NY
Chronic Pelvic Pain

Denise J. Jamieson, MD, MPH

Clinical Associate Professor, Department of Gynecology and Obstetrics, Emory University School of Medicine, Atlanta, GA
Human Immunodeficiency Virus

Mohit Khera, MD, MBA, MPH

Urology Resident, Scott Department of Urology, Baylor College of Medicine, Houston, TX
Male Infertility

Jeremy A. King, MD

Instructor, Division of Reproductive Endocrinology, Department of Gynecology and Obstetrics, The Johns Hopkins Hospital, Baltimore, MD
Hyperprolactinemia

Ira J. Kodner, MD

Solon and Bettie Gershman Professor of Colon and Rectal Surgery, Department of Surgery, Washington University School of Medicine, St. Louis, MO
Treatment of Fecal Incontinence

Athena P. Kourtis, MD, PhD, MPH

Associate Professor, Department of Obstetrics and Gynecology, Eastern Virginia Medical School, Norfolk, VA
Human Immunodeficiency Virus

S. Robert Kovac, MD

Distinguished Professor of Gynecologic Surgery, Department of Gynecology and Obstetrics, Emory University School of Medicine, Atlanta, GA
Surgical Treatment of Urinary Incontinence; Diagnosis and Treatment of Fistulas

Ertug Kovanci, MD

Fellow, Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology and Infertility, Baylor College of Medicine, Houston, TX
Female Infertility and Evaluation of the Infertile Couple; Polycystic Ovary Syndrome

William H. Kutteh, MD, PhD, HCLD

Professor and Director of Reproductive Endocrinology, Obstetrics and Gynecology, University of Tennessee, Memphis; Director, Reproductive Endocrinology; Director, Reproductive Immunology, Fertility Associates of Memphis, Memphis, TN
Recurrent Pregnancy Loss

Eduardo Lara-Torre, MD

Chair, Obstetrics and Gynecology, Milford Memorial Hospital; Medical Director, Sexual Assault Nurse Examiner Program, Bayhealth Medical Center; Private Practice, Pediatric and Adolescent Gynecology, Milford Memorial Hospital, Milford, DE
Medical Management of Gynecologic Problems in the Pediatric and Adolescent Patient

Herschel W. Lawson, MD

Clinical Assistant Professor, Department of Gynecology and Obstetrics, Emory University School of Medicine; Senior Medical Advisor, Division of Cancer Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA
Cervical Cancer Screening

Paula S. Lee, MD, MPH

Clinical Associate, Department of Obstetrics and Gynecology, Duke University Medical Center, Durham, NC
Preoperative Evaluation and Postoperative Management

Ronald L. Levine, MD

Professor and Chief, Gynecologic Endoscopy Section, Department of Obstetrics, Gynecology, and Women's Health, University of Louisville School of Medicine; Director, Outpatient Gynecologic Surgery, Department of Obstetrics, Gynecology, and Women's Health, University of Louisville Hospital, Louisville, KY
Surgical Setup for Minimally Invasive Surgery

Frank W. Ling, MD

Clinical Professor, Department of Obstetrics and Gynecology, Vanderbilt University School of Medicine, Nashville; Partner, Women's Health Specialists, PLLC, Memphis, TN
Premenstrual Syndrome/Premenstrual Dysphoric Disorder; Preventive Health

Larry I. Lipshultz, MD

Professor of Urology; Lester and Sue Smith Chair in Reproductive Medicine; Chief, Division of Male Reproductive Medicine and Surgery; Scott Department of Urology, Baylor College of Medicine, Houston, TX
Male Infertility

Christopher V. Lutman, MD, FACOG

Clinical Instructor, Department of Obstetrics and Gynecology, Ohio State University College of Medicine; Attending Gynecologic Oncologist, Department of Obstetrics and Gynecology, Columbus, OH
Preoperative Evaluation and Postoperative Management

Ali Mahdavi, MD, FACOG

Minimally Invasive Surgery Fellow, Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Mount Sinai School of Medicine, New York, NY
Laparoscopic Procedures

Suketu Mansuria, MD

Assistant Professor; Coordinator of Gynecologic Minimally Invasive Surgery Fellowship, Department of Obstetrics, Gynecology and Reproductive Sciences, University of Pittsburgh and Magee-Womens Hospital, Pittsburgh, PA
Surgical Problems in the Pediatric Patient

Robert McLellan, MD

Chair, Department of Gynecology, Lahey Clinic Foundation, Inc., Burlington, MA; Clinical Professor of Obstetrics and Gynecology, Boston University School of Medicine, Boston, MA
Uterine Sarcomas

Luis E. Mendez, MD

South Florida Gynecologic Oncology, Miami, FL
Cervical Carcinoma

Pamela J. Murray, MD, MPH

Associate Professor and Division Chief, Adolescent Medicine, Department of Pediatrics, University of Pittsburgh School of Medicine; Director, Adolescent Medicine, Children's Hospital of Pittsburgh, Pittsburgh, PA
Puberty and Precocious Puberty

Padma C. Nadella, MD

Assistant Professor, Department of Hematology and Oncology, Emory University School of Medicine; Attending Physician, Department of Internal Medicine, Veterans Medical Center; Attending Physician, Department of Medical Oncology, Winship Cancer Institute of Emory University, Atlanta, GA
Breast Carcinoma

Farr Nezhat, MD, FACOG, FACS

Professor, Department of Obstetrics, Gynecology, and Reproductive Science, Mount Sinai Medical Center, New York, NY
Laparoscopic Procedures

Peggy A. Norton, MD

Chief, Urogynecology and Reconstructive Pelvic Surgery, Department of Obstetrics and Gynecology, University of Utah School of Medicine, Salt Lake City, UT
Nonsurgical Treatment of Urinary Incontinence

Ruth M. O'Regan, MD

Assistant Professor, Department of Hematology and Oncology, Emory University School of Medicine; Emory University Hospital; Director, Translational Breast Cancer Research Program, Department of Hematology/Oncology/Breast, Winship Cancer Institute of Emory University, Atlanta, GA
Breast Carcinoma

Mitesh Parekh, MD

Chief of Urogynecology; Director of Undergraduate Medical Education; Director of 3rd Year Obstetrics and Gynecology Clerkship, Departments of Obstetrics and Gynecology and Urogynecology, Geisinger Health System, Danville, PA
Urogynecologic Workup and Testing

Kristiina Parviainen, MD

Fellow, Maternal-Fetal Medicine, Department of Obstetrics, Gynecology and Reproductive Sciences, University of Pittsburgh; Fellow, Maternal-Fetal Medicine, Department of Obstetrics, Gynecology and Reproductive Sciences, Magee-Womens Hospital, Pittsburgh, PA
Thyroid Function and Disorders

Resad Pasic, MD, PhD

Associate Professor, Department of Obstetrics, Gynecology, and Women's Health, University of Louisville School of Medicine, Louisville, KY
Surgical Setup for Minimally Invasive Surgery

Tanja Pejovic, MD, PhD

Assistant Professor, Department of Obstetrics and Gynecology, Division of Gynecologic Oncology, Oregon Health and Science University, Portland, OR
Laparoscopic Procedures

Manuel Peñalver, MD

Medical Director, South Florida Gynecologic Oncology, Coral Gables, FL
Cervical Carcinoma

Elizabeth E. Puscheck, MD

Associate Professor, Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology and Infertility, Wayne State University School of Medicine; Hutzel Women's Hospital, Detroit; IVF Director and Gynecologic Ultrasound Director, University Women's Care in Southfield, Southfield, MI
Secondary Amenorrhea

David B. Redwine, MD

Private Practice, Endometriosis Treatment Program, St. Charles Medical Center—Bend, Bend, OR
Endometriosis

Robert L. Reid, MD, FRCSC

Professor, Department of Obstetrics and Gynecology; Chair, Division of Reproductive Endocrinology and Infertility, Queen's University; Deputy Head, Obstetrics and Gynecology, Kingston General Hospital, Kingston, Ontario, Canada
Menopause

Monica Rizzo, MD

Assistant Professor, Department of Surgery, Emory University School of Medicine, Atlanta, GA
Breast Carcinoma

Carla P. Roberts, MD, PhD

Assistant Professor, Division of Reproductive Endocrinology and Infertility, Department of Gynecology and Obstetrics, Emory University School of Medicine; Emory University Hospital; Emory Crawford Long Hospital, Atlanta, GA
Disorders of the Adrenal Gland

Robert M. Rogers, Jr., MD

Attending Gynecologist, Department of Obstetrics and Gynecology, Reading Hospital and Medical Center, Reading, PA
The Anatomic Basis of Normal and Abnormal Pelvic Support

Walter Romano, MD, FRCPC

Associate Professor, Department of Radiology, University of Western Ontario; Director of Ultrasound, Department of Radiology, St. Joseph's Health Centre, London, Ontario, Canada
Uterine Leiomyomas

Peter G. Rose, MD

Professor of Surgery, Reproductive Biology, and Oncology, Case Western Reserve University; Director, Gynecologic Oncology, Cleveland Clinic, Cleveland, OH
Ovarian Carcinoma

Robert L. Rosenfield, MD

Professor of Pediatrics and Medicine, Department of Pediatrics, The University of Chicago Pritzker School of Medicine; Attending Physician, Section of Pediatric Endocrinology, The University of Chicago Children's Hospital, Chicago, IL
Delayed Puberty and Primary Amenorrhea

Mack T. Ruffin IV, MD, MPH

Professor and Assistant Chair for Research, Department of Family Medicine, University of Michigan, Ann Arbor, MI
Human Papillomaviruses

Joseph S. Sanfilippo, MD, MBA

Vice Chair, Reproductive Sciences; Director, Division of Reproductive Endocrinology and Infertility, University of Pittsburgh School of Medicine, Pittsburgh, PA
Federal Regulations Surgical Problems in the Pediatric Patient

Brook A. Saunders, MD

Resident, Department of Obstetrics and Gynecology, University of Tennessee Health Science Center, Memphis, TN
Ectopic Pregnancy

Hyagriv N. Simhan, MD, MSCR

Assistant Professor, Division of Maternal-Fetal Medicine, Department of Obstetrics, Gynecology, and Reproductive Sciences, University of Pittsburgh School of Medicine; Magee-Womens Hospital, Pittsburgh, PA
Thyroid Function and Disorders

Harriet O. Smith, MD

Professor, Department of Obstetrics and Gynecology, Cancer Research and Treatment Center, University of New Mexico Health Sciences Center, Albuquerque, NM
Fallopian Tube Carcinoma

Thomas E. Snyder, MD

Associate Professor, Department of Obstetrics and Gynecology, University of Kansas School of Medicine; Associate Professor, Department of Obstetrics and Gynecology, University of Kansas Hospital, Kansas City, KS
Perimenopause

Valena Soto-Wright, MD

Assistant Professor, Department of Obstetrics and Gynecology, Boston University School of Medicine, Boston; Director, Gynecologic Oncology, Department of Gynecology, Lahey Clinic Foundation, Inc., Burlington, MA
Uterine Sarcomas

Monique A. Spillman, MD, PhD

Gynecologic Oncology Fellow, Division of Gynecologic Oncology, Duke University Medical Center, Durham, NC
Preoperative Evaluation and Postoperative Management

Mary D. Stephenson, MD, MSc

Professor, Department of Obstetrics and Gynecology, Section of Reproductive Endocrinology and Infertility, University of Chicago Pritzker School of Medicine; Director, Recurrent Pregnancy Loss Program, University of Chicago Hospitals, Chicago, IL
Recurrent Pregnancy Loss

Thomas G. Stovall, MD

Clinical Professor, Department of Obstetrics and Gynecology, Vanderbilt University School of Medicine, Nashville; Clinical Professor, Department of Obstetrics and Gynecology, University of Tennessee; Partner, Women's Health Specialists, PLLC, Memphis, TN
Ectopic Pregnancy

Toncred M. Styblo, MD, FACS

Associate Professor, Department of Surgery, Emory University School of Medicine, Atlanta, GA
Breast Carcinoma

Richard L. Sweet, MD

Professor and Vice Chair, Department of Obstetrics and Gynecology, University of California, Davis; Director, Women's Center for Health, University of California, Davis Health System, Sacramento, CA
Sexually Transmitted Diseases

Togas Tulandi, MD, MHCM, FRCSC, FACOG

Professor and Milton Leong Chair in Reproductive Medicine, Department of Obstetrics and Gynecology, McGill University; Department Chief, Obstetrics and Gynecology, The Sir Mortimer B. Davis, Jewish General Hospital; Associate Medical Director, McGill Reproductive Center, McGill University Health Center, Montreal, Quebec, Canada
Laparoscopic Instrumentation

Elizabeth R. Unger, MD, PhD

Team Leader, Human Papillomavirus Laboratory, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA
Human Papillomaviruses

Denise Uyar, MD

Assistant Professor, Department of Obstetrics and Gynecology, Division of Gynecology and Oncology, Medical College of Wisconsin; Department of Obstetrics and Gynecology, Division of Gynecology and Oncology, Froedtert Memorial Lutheran Hospital, Milwaukee, WI
Ovarian Carcinoma

Marion S. Verp, MD

Associate Professor, Obstetrics and Gynecology, and Human Genetics, University of Chicago Pritzker School of Medicine; Chicago Lying-In Hospital, Chicago, IL
Preconception Counseling

Claire F. Verschraegen, MD, FACP

Associate Professor, Division of Hematology Oncology, Cancer Research and Treatment Center, Albuquerque, NM
Fallopian Tube Carcinoma

Rahi Victory, MD, FRCSC

Fellow, Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology, Wayne State University; Fellow, Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology, Detroit Medical Center, Detroit, MI
Uterine Leiomyomas

Tamara J. Vokes, MD

Associate Professor of Medicine, Department of Endocrinology, University of Chicago Pritzker School of Medicine; Associate Professor of Medicine, Endocrinology, University of Chicago Hospitals, Chicago, IL
Osteoporosis

Paul E. Wise, MD

Assistant Professor of Surgery, Department of Colon and Rectal Surgery, Division of General Surgery, Vanderbilt University, Nashville, TN
Treatment of Fecal Incontinence

Frank M. Wittmaack, MD

Director, Fertility Center, Geisinger Health System, Danville, PA
Hysteroscopic Instrumentation

Howard A. Zacur, MD, PhD

Theodore and Ingrid Baramki Professor and Director of Reproductive Endocrinology and Infertility, Department of Gynecology and Obstetrics, The Johns Hopkins University School of Medicine, Baltimore, MD
Hyperprolactinemia

Contents

SECTION 1 AMBULATORY OFFICE PRACTICE

CHAPTER 1 Osteoporosis	1
Tamara J. Vokes, MD, and Murray J. Favus, MD	
CHAPTER 2 Premenstrual Syndrome/ Premenstrual Dysphoric Disorder	19
Candace Brown, MSN, PharmD, and Frank W. Ling, MD	
CHAPTER 3 Geriatric Gynecology	37
Rudi Ansbacher, MD, MS	
CHAPTER 4 Chronic Pelvic Pain	43
Fred M. Howard, MS, MD	
CHAPTER 5 Sexual Function and Disorders	61
Gloria Bachmann, MD, and Nidhi Gupta, MD	
CHAPTER 6 Alternative Medicine	71
Jennifer S. Gell, MD	
CHAPTER 7 Domestic Violence	79
Judy C. Chang, MD, MPH	
CHAPTER 8 Abnormal Uterine Bleeding	91
Randall B. Barnes, MD	
CHAPTER 9 Preventive Health	99
Alice W. Chuang, MD, and Frank W. Ling, MD	
CHAPTER 10 Preconception Counseling	113
Marion S. Verp, MD	
CHAPTER 11 Cervical Cancer Screening	121
Herschel W. Lawson, MD	
CHAPTER 12 Colposcopy	145
Lisa Flowers, MD	

SECTION 2 GENERAL GYNECOLOGY

CHAPTER 13 Endometriosis	159
David B. Redwine, MD	
CHAPTER 14 Uterine Leiomyomas	179
Rahi Victory, MD, Walter Romano, MD, John Bennett, MD, and Michael P. Diamond, MD	
CHAPTER 15 Ectopic Pregnancy	205
Brook A. Saunders, MD, and Thomas G. Stovall, MD	

CHAPTER 16 Benign Vulvar Diagnosis	219
Anita Blanchard, MD	

CHAPTER 17 Preoperative Evaluation and Postoperative Management	233
Daniel L. Clarke-Pearson, MD, Monique A. Spillman, MD, PhD, Christopher V. Lutman, MD, and Paula S. Lee, MD, MPH	

SECTION 3 GYNECOLOGIC INFECTIOUS DISEASE

CHAPTER 18 Vulvovaginal Infections	249
Sebastian Faro, MD, PhD	
CHAPTER 19 Sexually Transmitted Diseases	259
Richard L. Sweet, MD	
CHAPTER 20 Pelvic Inflammatory Disease	285
Sebastian Faro, MD, PhD	
CHAPTER 21 Human Immunodeficiency Virus	295
Denise J. Jamieson, MD, MPH, and Athena P. Kourtis, MD, PhD, MPH	
CHAPTER 22 Human Papillomaviruses	305
Elizabeth R. Unger, MD, PhD, Mack T. Ruffin IV, MD, MPH, and Concepcion Diaz-Arrastia, MD	
CHAPTER 23 Gynecologic and Surgical Sepsis	315
Sebastian Faro, MD, PhD	

SECTION 4 UROGYNECOLOGY

CHAPTER 24 The Anatomic Basis of Normal and Abnormal Pelvic Support	325
Robert M. Rogers, Jr., MD	
CHAPTER 25 Nonsurgical Treatment of Urinary Incontinence	335
Rony A. Adam, MD, and Peggy A. Norton, MD	
CHAPTER 26 Surgical Treatment of Urinary Incontinence	341
S. Robert Kovac, MD	
CHAPTER 27 Treatment of Fecal Incontinence	355
Paul E. Wise, MD, and Ira J. Kodner, MD	
CHAPTER 28 Urogynecologic Workup and Testing	375
Mitesh Parekh, MD	

CHAPTER 29 Diagnosis and Treatment of Fistulas Rony A. Adam, MD, and S. Robert Kovac, MD	413	CHAPTER 44 Cervical Carcinoma Zoyla Almeida-Parra, MD, Manuel Peñalver, MD, and Luis E. Mendez, MD	651
SECTION 5 PEDIATRIC AND ADOLESCENT GYNECOLOGY			
CHAPTER 30 Puberty and Precocious Puberty Alexandra S. Carey, MD, and Pamela J. Murray, MD, MPH	443	CHAPTER 45 Endometrial Carcinoma Enrique Hernandez, MD, and Karen L. Houck, MD	665
CHAPTER 31 Delayed Puberty and Primary Amenorrhea Colleen Buggs, MD, PhD, and Robert L. Rosenfield, MD	469	CHAPTER 46 Uterine Sarcomas Valena Soto-Wright, MD, and Robert McLellan, MD	677
CHAPTER 32 Medical Management of Gynecologic Problems in the Pediatric and Adolescent Patient Eduardo Lara-Torre, MD, and S. Paige Hertweck, MD	481	CHAPTER 47 Fallopian Tube Carcinoma Harriet O. Smith, MD, Steven C. Eberhardt, MD, Claire F. Verschraegen, MD, and Thérèse E. Bocklage, MD	687
CHAPTER 33 Surgical Problems in the Pediatric Patient Joseph S. Sanfilippo, MD, MBA, and Suketu Mansuria, MD	513	CHAPTER 48 Ovarian Carcinoma Denise Uyar, MD, and Peter G. Rose, MD	699
SECTION 6 MINIMALLY INVASIVE SURGERY			
CHAPTER 34 Laparoscopic Instrumentation Raedah Al-Fadhli, MD, Togas Tulandi, MD, MHCM, and Eric J. Bieber, MD, MHCM	527	CHAPTER 49 Gestational Trophoblastic Disease Inbar Ben-Shachar, MD, and Larry J. Copeland, MD	711
CHAPTER 35 Hysteroscopic Instrumentation Frank M. Wittmaack, MD, and Eric J. Bieber, MD, MHCM	537	CHAPTER 50 Cancer Pain Michael Byas-Smith, MD	727
CHAPTER 36 Surgical Setup for Minimally Invasive Surgery Ronald L. Levine, MD, and Resad Pasic, MD, PhD	543	CHAPTER 51 Cancer Genetics Oliver Dorigo, MD, PhD, and Jonathan S. Berek, MD, MMSc	739
CHAPTER 37 Laparoscopic Procedures Farr Nezhat, MD, FACOG, FACS, Ali Mahdavi, MD, FACOG, and Tanja Pejovic, MD, PhD	549	SECTION 8 REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY	
CHAPTER 38 Hysteroscopic Procedures Eric J. Bieber, MD, MHCM	569	A. Infertility	
CHAPTER 39 Laparoscopic and Hysteroscopic Complications Eric J. Bieber, MD, MHCM	585	CHAPTER 52 Female Infertility and Evaluation of the Infertile Couple Ertug Kovanci, MD, and Sandra A. Carson, MD	751
SECTION 7 GYNECOLOGIC ONCOLOGY			
CHAPTER 40 Breast Carcinoma Padma C. Nadella, MD, Karen Godette, MD, Monica Rizzo, MD, Toncred M. Styblo, MD, and Ruth M. O'Regan, MD	597	CHAPTER 53 Assisted Reproductive Technologies/In Vitro Fertilization Randall S. Hines, MD, and Bryan D. Cowan, MD	767
CHAPTER 41 Breast Cancer Screening Victoria L. Green, MD, MBA, JD	607	CHAPTER 54 Male Infertility Mohit Khera, MD, MBA, MPH, and Larry I. Lipshultz, MD	779
CHAPTER 42 Vulvar Carcinoma Alan N. Gordon, MD	631	CHAPTER 55 Recurrent Pregnancy Loss William H. Kutteh, MD, PhD, HCLD, and Mary D. Stephenson, MD, MSc	797
CHAPTER 43 Vaginal Carcinoma Jack Basil, MD	643	B. Reproduction/Endocrinology	
		CHAPTER 56 Hyperprolactinemia Jeremy A. King, MD, and Howard A. Zacur, MD, PhD	803
		CHAPTER 57 Secondary Amenorrhea Elizabeth E. Puscheck, MD	815
		CHAPTER 58 Contraception Ronald T. Burkman, MD, Kristin L. Dardano, MD, and Patricia E. Bailey-Sarnelli, MD	831
		CHAPTER 59 Physiology of the Menstrual Cycle Sarah L. Berga, MD, and Susannah D. Copland, MD	843