

# HOSPITAL PHYSICIAN®

## ONCOLOGY BOARD REVIEW MANUAL

### STATEMENT OF EDITORIAL PURPOSE

The *Hospital Physician Oncology Board Review Manual* is a study guide for fellows and practicing physicians preparing for board examinations in oncology. Each quarterly manual reviews a topic essential to the current practice of oncology.

### PUBLISHING STAFF

#### PRESIDENT, GROUP PUBLISHER

Bruce M. White

#### EDITORIAL DIRECTOR

Debra Dreger

#### SENIOR EDITOR

Bobbie Lewis

#### ASSISTANT EDITOR

Rita E. Gould

#### EXECUTIVE VICE PRESIDENT

Barbara T. White

#### EXECUTIVE DIRECTOR OF OPERATIONS

Jean M. Gaul

#### PRODUCTION DIRECTOR

Suzanne S. Banish

#### PRODUCTION ASSOCIATE

Mary Beth Cunney

#### ADVERTISING/PROJECT MANAGER

Patricia Payne Castle

#### SALES & MARKETING MANAGER

Deborah D. Chavis

#### NOTE FROM THE PUBLISHER:

This publication has been developed without involvement of or review by the American Board of Internal Medicine.



Endorsed by the  
Association for Hospital  
Medical Education

## Cancer in Pregnancy

**Series Editor: Arthur T. Skarin, MD, FACP, FCCP**

*Medical Director*

*Thoracic Oncology Program*

*Department of Adult Oncology*

*Dana-Farber Cancer Institute and*

*Brigham and Women's Hospital*

*Associate Professor of Medicine*

*Harvard Medical School*

*Boston, MA*

**Contributor: Corey Cutler, MD, MPH, FRCPC**

*Clinical Fellow in Medicine*

*Harvard University*

*Fellow, Adult Oncology*

*Dana-Farber Cancer Institute*

*Boston, MA*

## Table of Contents

---

Introduction . . . . .	2
Epidemiology . . . . .	2
Diagnostic Dilemmas During Pregnancy . . . . .	2
Antineoplastic Agents and Pregnancy . . . . .	5
Radiation Therapy During Pregnancy . . . . .	6
Management of Specific Malignancies . . . . .	7
Outcomes After Treatment of Malignancy During Pregnancy . . . . .	11
References . . . . .	11

---

Cover illustration by Christie Grams

Copyright 2004, Turner White Communications, Inc., 125 Stafford Avenue, Suite 220, Wayne, PA 19087-3391, www.turner-white.com. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, electronic, photocopying, recording, or otherwise, without the prior written permission of Turner White Communications, Inc. The editors are solely responsible for selecting content. Although the editors take great care to ensure accuracy, Turner White Communications, Inc., will not be liable for any errors of omission or inaccuracies in this publication. Opinions expressed are those of the authors and do not necessarily reflect those of Turner White Communications, Inc.

## Cancer in Pregnancy

Corey Cutler, MD, MPH, FRCPC

### I. INTRODUCTION

- A. This manual is intended for the practicing oncologist who may be faced with the management of the pregnant patient with a newly diagnosed malignancy. No single manual can provide a comprehensive management plan for all pregnant patients faced with malignancy; rather, this manual should serve as an overview of commonly accepted treatment practices.
- B. The management of the pregnant cancer patient requires special cooperation between:
  1. Medical oncologists
  2. High-risk obstetricians and neonatologists
  3. Surgical and radiation oncologists
  4. Radiologists
  5. Nutritionists
  6. Psychiatrists, clergy, and other counselors
- C. There are specific diagnostic, therapeutic, and prognostic challenges when treating cancer during pregnancy, and both the mother and the fetus must be considered when making decisions. The type of cancer, stage at the time of diagnosis, and gestational age of the fetus are all important factors to consider when deciding on appropriate therapeutic interventions.
- D. Ethical considerations and the patient's right to choose therapy must be balanced by a rational approach to therapy using the published medical literature as a guide in decision making.
- E. It must be emphasized that large series of patients with cancer during pregnancy do not exist; therefore, much of what is considered "standard practice" is based only on anecdotal experience drawn from small series and case reports.

### II. EPIDEMIOLOGY

- A. **Definition.** Cancer complicating pregnancy is defined as any cancer occurring
  1. During the gestational period

2. During the first year post-partum
- B. **Malignancy coinciding with pregnancy** is more common than previously recognized. It occurs in up to 1/1000 pregnancies. This may not be a reflection of a true association between cancer and pregnancy but rather may reflect increased contact between the patient and the medical system during routine prenatal care.
- C. **Incidence patterns** mirror age-specific cancer incidence rates in the United States. Although almost every major cancer diagnosis has been reported in conjunction with pregnancy; those that occur with greatest frequency in women of childbearing age are reported the most frequently during pregnancy (**Table 1**).
- D. **The most common pregnancy-associated malignancies are:**
  1. Cervical cancer (up to 0.9% of all pregnancies)<sup>1</sup>
  2. Breast cancer (between 1/3,000 and 1/10,000 pregnancies)<sup>2</sup>
  3. Malignant melanoma
  4. Lymphoma (predominantly Hodgkin's disease)
  5. Acute leukemia

### III. DIAGNOSTIC DILEMMAS DURING PREGNANCY

- A. **History**
  1. Common, seemingly benign complaints during pregnancy can often herald real problems.
    - a. Fatigue could signify important anemia.
    - b. Malaise is a non-specific sign of many malignancies.
    - c. Shortness of breath may signify mediastinal adenopathy and Hodgkin's disease.
    - d. Vaginal spotting is often considered normal early in pregnancy but can be a sign of cervical cancer.
  2. Persistent complaints should be investigated thoughtfully and thoroughly.