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# Practical Guides in Radiation Oncology

## Series Editors

Nancy Y. Lee

Department of Radiation Oncology  
Memorial Sloan-Kettering Cancer Center  
New York, NY, USA

Jiade J. Lu

Department of Radiation Oncology  
Shanghai Proton and Heavy Ion Center  
Shanghai, China

The series Practical Guides in Radiation Oncology is designed to assist radiation oncology residents and practicing radiation oncologists in the application of current techniques in radiation oncology and day-to-day management in clinical practice, i.e., treatment planning. Individual volumes offer clear guidance on contouring in different cancers and present treatment recommendations, including with regard to advanced options such as intensity-modulated radiation therapy (IMRT) and stereotactic body radiation therapy (SBRT). Each volume addresses one particular area of practice and is edited by experts with an outstanding international reputation. Readers will find the series to be an ideal source of up-to-date information on when to apply the various available technologies and how to perform safe treatment planning.

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Kevin Albuquerque • Sushil Beriwal  
Akila N. Viswanathan • Beth Erickson  
Editors

# Radiation Therapy Techniques for Gynecological Cancers

A Comprehensive Practical Guide

 Springer

*Editors*

Kevin Albuquerque  
Department of Radiation Oncology  
UT Southwestern Medical Center  
Dallas, TX  
USA

Sushil Beriwal  
Department of Radiation Oncology  
UPMC Hillman Cancer Center  
Pittsburgh, PA  
USA

Akila N. Viswanathan  
Department of Radiation Oncology  
Johns Hopkins University  
Baltimore, MD  
USA

Beth Erickson  
Department of Radiation Oncology  
Medical College of Wisconsin  
Milwaukee, WI  
USA

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## Preface

Radiation is an integral component of the definitive and adjuvant treatment of gynecologic cancers. This can be external beam irradiation to the pelvis or abdomen or interstitial or intracavitary brachytherapy or a combination of the two. The possibility of both acute and late toxicities due to this modality needs to be balanced against the very effective treatment that radiation provides. The ability to cure gynecologic cancers with an acceptable risk of significant complications requires an in-depth understanding of pelvic and abdominal anatomy as well as the appropriate volumes and radiation doses required to afford this cure. It also requires brachytherapy skills which can adapt to the many complex disease presentations inherent to gynecologic cancers. Image guidance, for both external beam radiation and brachytherapy, is the key in achieving this balance. Over many decades, there has been a transformation from 2D film-based dosimetry into 3D image-based dosimetry utilizing CT, MRI, PET, and ultrasound for both external beam and brachytherapy planning. This book will focus on the importance and the practical details of these image-guided techniques in creating effective and safe radiation treatment plans. From simulation, to contouring, to plan generation, to brachytherapy techniques, each of the gynecological disease sites and modalities will be explored. Additionally, the book will close with a look at evolving techniques that may provide helpful solutions for challenging disease presentations. This book will be a very practical guide for the clinician and will instruct and affirm important guiding principles in the management of these variable and complex disease presentations.

Dallas, TX, USA  
Pittsburgh, PA, USA  
Baltimore, MD, USA  
Milwaukee, WI, USA

Kevin Albuquerque  
Sushil Beriwal  
Akila N. Viswanathan  
Beth Erickson

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