Imaging in Oncology

J.E. Husband and R.H. Reznek, eds.

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Progress in medical imaging has been driven largely by increases in computer power, advances in microprocessing, rapid expansion of communication technology, and the resurgence of biomedical science. Cancer imaging is benefiting enormously from all these advances. The spatial and temporal resolution of anatomic images has reached new levels of excellence, making it possible to identify and characterize fine details of even small tumors. The fusion of images from different modalities, such as from MRI and spectroscopic MRI or from CT and PET, now permits the single-platform display of anatomy, function, and metabolism.

Building on the foundation laid by the first edition, which was named the Multiauthor Textbook of the Year by the Royal Society in 1998, this second edition presents an extensively referenced, evidence-based analysis of the role of imaging in planning cancer treatment. As with the first edition, the aim of this edition is to provide radiologists and other clinicians with a text that addresses all aspects of state-of-the-art cancer imaging in depth, from diagnosis through long-term follow-up. Emphasizing image interpretation for tumor staging and follow-up, the internationally recognized 141 authorities from the United Kingdom, the United States, and Europe explore the advantages and limitations of all relevant imaging modalities.

This second edition comprises 2 volumes with almost 1,500 pages and is divided into 9 parts (general principles, primary tumor evaluation and staging, hematologic malignancy, pediatrics, metastases, imaging and treatment, effects of treatment on normal tissue, the immunocompromised host, and new horizons in imaging). Like the previous edition, this edition begins with a general overview of cancer and discusses imaging strategies in cancer diagnosis, cancer staging, principles of treatment, and assessment of therapeutic response. New material includes expanded

chapters on all common tumors and new data on the late development of second malignancies after successful therapy. New chapters reflect the ever-widening applications of imaging to different cancers. The expanded section on imaging of the immunocompromised host contains new chapters on general clinical considerations and on imaging the central nervous system. All chapters have been revised, many of the images have been replaced with state-of-the-art images obtained on multichannel CT scanners, and MRI and PET have been introduced into the text when relevant. Much attention has been given to the differential diagnosis of focal abnormalities in each organ in patients with underlying cancer, and useful protocols for performing the study have been provided.

This book has several outstanding features: The color diagrams of the staging systems are exquisite and allow the often-complex systems to be understood easily and memorized; the clearly defined sections allow the book easily to be used as a reliable reference; and key points and summaries in point form are provided throughout for quick review. There are 1,210 superb figures and 167 tables. Although this book includes a section on new horizons in cancer imaging, such as the imaging of angiogenesis, MRI lymphography, and the rapidly evolving field of molecular imaging, the editors have not neglected the more traditional general principles of cancer behavior and imaging. In recent years, the central role of imaging in the management of cancer patients has become recognized. This comprehensive, excellent book not only is essential for radiologists and nuclear physicians but also is important for all members of a multidisciplinary team handling cancer patients.

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