Breast MRI: Diagnosis and Intervention

E.A. Morris and L. Liberman, eds.

New York, NY: Springer, 2005, 513 pages, $149

MRI is gaining wider acceptance as a breast-imaging procedure, and its role in a variety of clinical indications is being examined. Despite its high sensitivity in diagnosing breast cancer, MRI has considerable limitations, including a high cost, that require it to be used judiciously. In some cases, it can allow for better clinical management of breast cancer than can conventional imaging. Therefore, in applications for early detection of breast cancer, MRI is finding its role as a screening technique for high-risk populations that are not effectively screened with mammography. When breast MRI is used, it should supplement but not replace mammography.

Individuals who perform or refer patients for breast-imaging studies need to understand the indications for breast MRI, how to obtain and interpret the images, the outcomes of breast MRI in specific scenarios, and how to perform a biopsy on lesions detected by MRI only. This book, which was created to fill that need, does fulfill its intended purpose and meets the needs of its audience. The book is organized into 2 parts. The 21 chapters of Part I cover the basics of breast MRI, including a historical overview, techniques, the setting up of a breast MRI program, the normal breast and axilla, a breast MRI lexicon, and dynamic MRI. The use of breast MRI in benign lesions, in ductal carcinoma in situ, in invasive carcinoma, in high-risk patients, in the assessment of the extent of disease and of residual disease, in patients after treatment, in patients with breast implants, and in other clinical scenarios is discussed in detail. The emerging technology of breast MR spectroscopy is also discussed. Specific chapters address MRI-guided interventional procedures, including needle localization, vacuum-assisted biopsy, and the surgeon's perspective. The final chapter discusses MRI-guided ablation of breast cancer. Part II is a 6-chapter atlas of breast MRI covering the normal breast, malignant lesions, high-risk lesions, benign lesions, findings after intervention, and pitfalls in the analysis of carcinomas.

The cases are well selected, illustrated, and updated.

This book is readable, has extensive references, and covers both the fundamentals and advanced topics on breast MRI for practicing radiologists, breast oncologists, residents, and fellows in training in these fields. This book would work well as an introductory text, a reference text, or a teaching tool. The book can certainly help build confidence in image interpretation and provide information for educating physicians, trainees, and technologists on breast imaging.

E. Edmund Kim, MD
University of Texas M.D. Anderson Cancer Center
Houston, Texas