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Book Review

Bowcock AM (ed): Breast Cancer Molecular Genetics, Pathogenesis and Therapeutics, 582 pp, Totowa, NJ, Humana Press, 1999 ($145).

This book is primarily for medical and research personnel whose focus is breast cancer. It represents a state-of-the-art review of current and future research directions in breast cancer treatment, diagnosis, and pathogenesis. This multiauthored text is divided into three sections: etiology, biology of tumor progression, and therapeutics and diagnostics.

The first section, consisting of 10 chapters, is titled "Etiologies." This section includes in-depth discussion of the molecular and genetic alterations that play a role in breast cancer development. BRCA 1 and 2; oncogenes; and tumor suppressor genes, including growth factors, *Her2/neu*, *p53*, and apoptotic pathways, are discussed in detail. An attempt is made to correlate the genetic alterations with different stages of tumor progression from atypical ductal hyperplasia to carcinoma, and the clinical relevance of each marker is discussed. Three chapters are dedicated to hereditary breast cancer genes with excellent review of epidemiology, clinical expression of gene alteration, biologic function of protein, and genetic counseling. Lacking, however, is information for determining specific risk assessment based on pedigree, a practical piece of information.

The second section, "Biology of Tumor Progression," includes chapters that focus on the interplay between tumor stroma and breast cancer progression. Angiogenesis and proteolytic enzyme systems, including matrix metalloproteineases and NM23, are discussed.

The third section, "Therapeutics and Diagnostics," includes excellent discussions on the mechanism of action and uses of current and newer chemotherapies in the treatment of breast cancer. Immunotherapy (*i.e.*, anti-*Her2/neu* and anti-MUC1ag), metalloproteinase inhibitors, and hormone manipulations are discussed. Mechanisms of drug resistance are detailed. This book is well organized, expertly written, and comprehensive.

The references are extensive, although some are already dated. Although a large part of the text deals with basic research, the translational aspect of the information is emphasized and provides relevant clinical correlations whenever possible. Another strength is that most chapters conclude with a summary of the salient points. The negative aspects of this book is that it is highly compact with information and as with any research text is quickly dated.

The approach to breast cancer treatment is multidisciplinary, which requires a knowledge of the disease outside of your own subspecialty practice. Although this book does not specifically address the practice of general pathology, it provides important information for pathologists who are heavily involved with breast cancer, especially if part of a team of specialists.

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