6 IMAGE-GUIDED BIOPSIRES
OF THE BREAST: TECHNICAL
CONSIDERATIONS, DIAGNOSTIC
CHALLENGES, AND POSTBIOPSY
CLINICAL MANAGEMENT

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Currently, nonpalpable breast lesions are sampled using image-guided biopsy—either needle localization excisional biopsy or image-guided fine-needle aspiration or core needle biopsy—to obtain a tissue diagnosis. Ten percent to 30% of nonpalpable lesions are found to be malignant. Accurate diagnosis is essential for the appropriate management of these early-stage lesions. The diagnostic accuracy of image-guided biopsy is dependent on standardization of biopsy procedures, familiarity with common diagnostic challenges, and correlation of the histopathologic findings with the prebiopsy imaging and clinical findings.

CHAPTER OVERVIEW

INTRODUCTION

The widespread use of screening mammography has resulted in an increase in the rate of detection of nonpalpable breast lesions and an increase in the number of biopsies done to evaluate such lesions. Traditionally, nonpalpable breast lesions were evaluated using needle localization excisional biopsy. Today, the preferred method of sampling nonpalpable breast lesions is image-guided percutaneous needle biopsy—either core needle biopsy (CNB) or fine-needle aspiration (FNA).

Both needle localization excisional biopsy specimens and CNB specimens present surgical pathologists with diagnostic challenges in daily practice. In the case of needle localization excisional biopsy specimens, the needle localization and any percutaneous needle biopsy procedure performed before biopsy induce changes that may influence interpretation of the biopsy results. Familiarity with these changes is necessary for accurate pathologic assessment. In the case of CNB specimens, breast lesions are often present in incomplete form and sometimes present in disrupted form, making pathologic evaluation difficult. Accurate pathologic assessment of nonpalpable breast lesions requires standardized biopsy techniques, standardized methods of evaluating pathologic specimens, and an understanding of the diagnostic problems associated with CNB specimens.

The first part of this chapter describes needle localization excisional biopsy and CNB and how specimens obtained by these techniques are handled. Next, the merits of CNB and FNA are compared, and the methods