Ultrasonographic compared to histologic sizing of benign and malignant breast lesions

Abstract:
Aim: This study aims to evaluate the correlation between ultrasonographic and histologic sizing of benign and malignant breast lesions. Ultrasonography is an important adjunct, because palpatory findings are insufficient to decide about the surgical management, e.g. tissue-sparing resection versus mastectomy. Neither does the physical examination suffice to determine if to proceed with surgery or primary chemotherapy.
Method: Over a two-year period, breast ultrasonographic and the corresponding histologic sizing data were prospectively collected. The largest measurement obtained for each lesion was entered into the analysis.
Results: Among a total number of 281 lesions, 152 (54.1%) were benign and 129 (45.9%) malignant. Measured by ultrasonography, 74.6% of tumors up to 10 mm are benign. Both ultrasonographic and histologic size data were available in 199 cases. Seven patients had received neoadjuvant chemotherapy, leaving 192 lesions for final analysis. By ultrasonography, lesions measured between 3 and 86 mm (mean 18.1 mm) in size. The average size of benign lesions was 15.3 mm, the average size of malignant lesions 21.4 mm. All lesions larger than 50 mm were malignant. There is a trend toward slight overestimation of the size of malignant and underestimation of the size of benign lesions by
ultrasonography. In 33.9% (n = 65) of all 192 cases, ultrasonographic and histologic measurements agreed to within 2 mm. Conclusion: Due to precise lesion sizing, breast ultrasonography possesses a significant potential as a preoperative staging tool.