

Second Opinion Review of Outside Breast Imaging: An Analysis of the Frequency that Additional Testing is Recommended and Radiology/Pathology Outcomes.

Introduction: Second opinion review of outside imaging for breast cancer patients is a common practice performed at many institutions across the United States. However, it is unknown whether the additional imaging and biopsies ordered as a result of second opinion review leads to actionable change in the patient's treatment plan. The purpose of this study is 1) to evaluate the frequency that additional imaging and/or biopsies are recommended based on second opinion review and 2) to determine how frequently these additional interventions yield new or malignant results.

Methods: Breast cancer patients who had diagnostic imaging and biopsies performed at an outside facility and presented to our multidisciplinary clinic at an academic breast center between 2018 and 2020 were retrospectively reviewed. Patients who pursued follow-up care at another institution were excluded. Recommendations for additional diagnostic evaluation were compared between outside facility and our multidisciplinary team. Additional imaging or biopsies performed and their results were recorded. Frequency of additional testing and new or malignant results were summarized with descriptive statistics.

Results: 181 patients were seen in our clinic during this time period, 14 of which received follow-up care elsewhere and were excluded. 167 patients were thus included in the final analysis. Figure 1 summarizes a breakdown of additional testing recommendations. Of the 151 patients in which additional testing was not recommended by the outside facility, we recommended additional testing in 48 (32%). Of the 16 patients in which additional testing was recommended by the outside facility, we also recommended additional testing in 7 (44%). Only one of these seven patients were provided recommendations that differed from the outside facility. Overall, based on second opinion review, our multidisciplinary team provided recommendations for additional testing that differed from the outside facility in 49 of 167 (29%) patients. 60 imaging procedures (11 mammograms, 23 ultrasounds, 24 magnetic resonance imaging, 2 other) and 25 biopsies (12 ipsilateral breast, 7 contralateral breast, and 6 axillary biopsies) were performed among these 49 patients. From these 60 additional imaging orders, additional lesions were found in 22 (37%), lesions larger than originally described in 4 (7%), and no additional findings in 23 (38%). From these 25 additional biopsies, 17 (68%) were found to be malignant on pathology and 8 (32%) benign.

Conclusions: Overall, second opinion review was valuable in determining 17 additional malignant lesions that were not noted at the primary consultation. This study focused on determining the frequency in which additional testing was recommended and the concordance of these recommendations with outside facilities. Future analysis includes determining how often our recommendations for additional testing yield actionable changes towards patients' treatment plan. This will help inform us of the utility and impact that second opinion review has towards the patient's diagnostic work-up.

Figure 1. Additional Testing Recommendations by Outside Facility and Multidisciplinary Clinic

