

Second opinion review of outside imaging resulted in the identification of **seventeen** additional malignant lesions not noted at primary consultation.

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

AUTHORS:
Revati Kalluri, Victoria Huynh MD, Teralyn Carter MD, Dulcy Wulverton MD, Sarah Tevis MD, Gretchen Ahrendt MD

INTRODUCTION: Second opinion review of outside imaging may lead to additional imaging or biopsies for breast cancer patients, but it is unknown whether this leads to actionable treatment changes. In this study, we evaluate the frequency of (1) additional imaging/biopsies recommended based on second opinion review and (2) new or malignant results that arise from additional intervention.

METHODS

- Setting:** Academic medical center
- Population:** Breast Cancer Patients seen for multidisciplinary (MDC) evaluation with second opinion radiology review of external imaging
- Design:** Retrospective Chart Review from June 2019-July 2020
 - Reviewed office notes, surgical pathology, and operative reports in EPIC.
 - Additional biopsies and imaging were noted and recommendations between outside facility and multidisciplinary second opinion radiology review were compared
- Analysis:** Descriptive Statistics on the frequency of additional testing and new or malignant results.

RESULTS

- The MDC second opinion recommendations differed from the outside facility in 49 out of 167 (29%) of 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

- Radiology second opinion review of external breast imaging resulted in change in tumor size and identification of additional sites of malignancy in many patients. Future work will assess how often our recommendations for additional testing yield actionable changes towards patients' treatment plan.

