

The Ability to Look: A Review of Ultrasound in Breast Surgical Oncology Fellowships

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BACKGROUND

- Ultrasound is an adjunct to physical exam, procedures, and intraoperative techniques for optimization of breast surgical care
- There is wide variation among breast surgical oncology training programs in exposure to and education on the use of ultrasound

METHODS

- Survey sent to breast surgical oncology fellowship program directors
- Review of available literature performed about the uses of ultrasound in breast evaluation by breast surgeons

Table 1. Survey Questions

1	How many fellows do you train each year?
2	Is there an ultrasound available in your outpatient setting?
3	Are preoperative ultrasound patient evaluations routinely done?
4	Are ultrasound-guided core needle biopsies performed in your surgery clinics?
5	If so, on average approximately how many are performed each week?
6	What intraoperative tumor localization techniques are used at your institution?
7	Is intraoperative ultrasound used to augment any of the other localization techniques?
8	Is ultrasound used for postoperative evaluation or intervention?
9	Do your fellows attend an ultrasound course during fellowship? If so, which course?
10	Are residents included in your fellows' ultrasound education?

RESULTS

SURVEY

- 42% survey response rate (20/48 programs)
- 80% of responding programs have an ultrasound available in their outpatient setting
- 65% of responding programs have intraoperative ultrasound available for use
- 30% of responding programs utilize ultrasound for image-guided procedures
- Half of responding programs send their fellows for formal ultrasound training

LITERATURE REVIEW

- Hieken and Velasco demonstrated that surgeon-directed in-clinic breast ultrasound correlated with benign lesions (97%) and lesions suspicious for malignancy (75%)
- COBALT trial showed superiority of ultrasound guidance for excision of palpable lesions (97% vs. 83% negative margin rate)
- Hematoma ultrasound guidance (HUG) in the intraoperative setting revealed better outcomes for this technique versus needle localization (64% vs. 50% negative margin rate)
- Sood et al showed that ultrasound can be the diagnostic tool of choice in limited resource settings with high sensitivity (89.2%) and specificity (99.1%)
- Current Society of Surgical Oncology guidelines dictate that 15 hands on or 30 observation only breast ultrasounds are sufficient for training purposes

Figure 1. Intraoperative Ultrasound Use



Figure 2. In-Office Ultrasound Guided Core Needle Biopsy



CONCLUSIONS

- Ultrasound experiences vary widely across breast surgical oncology training programs
- Fellowships should train and prepare surgeons to be able to meet American Society of Breast Surgeons certification requirements within their first year of practice
- As a specialty where the ability to look is necessary, breast surgeons should be experts in the field of ultrasound

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