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

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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