

Are “Breast-Focused” Surgeons More Competent?

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Breast cancer affects 1 in 8 women today.¹ The treatment of breast diseases comprises 14–25% of general surgeons' practice volume.^{2,3} Yet, approximately half of all general surgeons perform only two or fewer breast cases per month. Unquestionably, long-term survival after surgery for breast cancer depends upon stage.⁴ More recently, survival has been linked to performance measures. For instance, survival is greater at hospitals performing greater than 125–150 breast cancer surgeries per year.^{5–8} Additionally, survival is greater if surgeons perform greater than 15 breast cancer operations per year.⁸ Finally, completion of a surgical oncology fellowship resulted in a 36% reduction in the risk of death at 5 years when controlled for hospital volume, surgeon volume, age, stage, and race.^{8–10} Can one infer from these studies that “breast-focused” surgeons are more competent? The criticisms of these studies have been that they often emanate from authors who may be prejudiced toward the results. In fact, there is an observation that, if a surgeon works in a hospital with a cancer center designation, the results from the treatment of breast cancer are not based on any specific surgical or breast disease training other than the general surgical residence.⁸ The implication would be that the multimodality approach to the

treatment of the disease is the reason for any increased survival rather than the judgmental or technical expertise of the surgeon.

Data compiled in 2006 by the American Board of Surgery for surgeons recertifying at the 10-year, 20-year, and 30-year levels is now available. To recertify, a list of cases done in the year previous to application for recertification must be provided by the candidate. Such data provides a snapshot of what is actually being done by practicing general surgeons in this country over a 30-year period. Fifty percent of general surgeons do a maximum of 18 breast biopsies; 10% do between 18 and 65; and 1% do between 65 and 182. Corresponding numbers for modified radical mastectomies are that 50% of surgeons do 2; 25% do 6; 10% do 11; and 1% do 34. The numbers for lumpectomy and axillary dissection are that 50% of surgeons do 2; 25% do 8; 10% do 17; and 1% do 81. These numbers are remarkably similar for the surgeons at 10-, 20-, and 30-year recertification time points; likewise, for those surgeons in the upper 25% category, the numbers are remarkably similar to the numbers of these procedures done during a general surgery residency prior to the advent of sentinel lymph node biopsy.¹¹ Currently, these surgeons do ten or more sentinel lymph node biopsies annually.

Interpretation of this data is that 25% of the practicing surgeons do almost 90% of the surgery for breast cancer. Essentially, none of the certifying surgeons had completed an accredited breast fellowship since these fellowships had not yet been established. Nevertheless, these surgeons should be

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qualified whether or not they work in an accredited breast center since case volume alone should dictate familiarity with the multidisciplinary treatment of breast cancer. Consequently, any attempt to accredit breast centers must protect these 25% of surgeons regardless of practice, locale, or fellowship status, as long as certain, yet to be defined “quality measures” are met.

It appears that breast-focused surgeons have identified themselves by the demographics of their practices over the last 30 years and, without doubt, are more competent than the 50% of surgeons who do the occasional case. The issue then becomes the competency of the surgeons finishing general surgery residencies today. Currently, the Surgical Residency Review Committee (SRRC) requires a total of 25 procedures to be preformed in the soft-tissue, skin, and breast category. Data available for the 2004–2005 graduating surgical residents demonstrates that the average number of mastectomies performed, partial or simple, with axillary sampling during training was 21, but 17 of these were performed at the junior resident level. Moreover, sentinel node biopsy rates were a mean of seven per resident with a mode of five, again primarily performed at the junior residency level. The obvious concern is that this experience may not be sufficient to guarantee competency. In univariate and multivariate analyses, the experience of the surgeon (volume and specialization) affected the rate of breast-conserving surgery.¹² Moreover, numerous studies have concluded that performance of 20–30 sentinel lymph node biopsies with completion axillary lymph node dissections or mentoring by an experienced colleague is optimal to minimize false-negative results.^{13–16} As a result of the advent of sentinel lymph node biopsy, the volume of axillary dissections has diminished. In the presidential address before the Society of Surgical Oncology (SSO) in 1998,¹¹ the prediction was made that routine use of sentinel lymph node biopsy would halve the number of axillary dissections over the next 10 years. In fact, in 1997 a resident at the University of Florida performed an average of ten axillary dissections, while the corresponding number for 2006 was six. Nationally, residents completing general surgery training in the United States performed 11 axillary dissections in 2000, compared with 4.5 in 2006. Over the same period, the number of sentinel lymph node biopsies increased from 0 to 8.3. If most of the cases are, in fact, done in the junior years and the cases are fewer in comparison to the past, then one wonders whether we are graduating “competent” breast surgeons. Because surgical residency experience varies

widely, perhaps those graduates who wish to treat patients with breast cancer need to enter a practice with one of the 25% who are competent, or they need to complete a surgical oncology or breast fellowship if they feel that their exposure was limited.

Currently, the number of available breast fellowships almost equals that for surgical oncology. At the time of the 2006 qualifying examination of the American Board of Surgery, candidates were queried about postgraduate fellowship enrollment. No documentation was required. Fellowships listed by the candidates included breast (31), surgical oncology (43), pediatric surgery (40), minimally invasive surgery (107), and cardiothoracic surgery (111). The recent acceptance rate was 77% for surgical oncology and 79% for breast fellowships. Clearly, it seems that the current generation of general surgery residents is choosing to enter a narrower specialty than general surgery and many are willing to give up the treatment of breast diseases. Those who pursue breast fellowship training are interested in advanced training in breast ultrasound, image-guided biopsy (either ultrasound or stereotactic guided), and specialized surgical techniques.

The issues of ultrasound and stereotactic biopsy are rather more complicated. The American College of Surgeons (ACS), the American Society of Breast Surgeons (ASBrS), and most recently the SSO have provided courses on ultrasound, to include the breast. The courses are often oversubscribed. More recently courses in stereotactic biopsy have been provided by the ACS and the ASBrS. The recertification numbers for stereotactic breast biopsy reveal that 75% of the surgeons do none. At 10-year recertification, 10% do 13 and 1% do 70; at 20 year recertification, 10% do 18 and 1% do 127; and at 30 year recertification, 10% do 3 and 1% do 72. These data demonstrate that 10% of surgeons do almost 100% of the stereotactic breast biopsies. Possibly individuals who elect to perform image-guided breast biopsies should be certified, since these techniques are not routinely taught during a general surgery residency. Both the ACS and the ASBrS offer stereotactic and breast ultrasound certification. Certification demonstrates a dedication to quality patient care and public safety through adherence to established standards for performance and training.

There is additional data to suggest that “breast-focused” surgeons have better outcomes. For example, surgical oncologists are 26% more likely to do breast-conservation surgery than are general surgeons.¹ The authors postulate that surgical oncologist have fewer positive margins resulting in fewer re-excisions and, therefore, fewer mastectomies. As

might be expected, the patients of "breast-focused" surgeons have been shown to have better satisfaction with their care regardless of the gender of their surgeon, length of time in practice, or association with a cancer center.¹⁷ A recent study, somewhat damning to our general surgery British colleagues, found that survival from breast cancer was 20% worse when the patients were *not* treated by a breast "specialist". The authors concluded that this result was at least in part due to inadequate local treatment, resulting in a higher rate of local recurrence in the breast and axilla.¹⁸ Like most professions, the more concentrated the effort, the better the outcomes.

It can be argued that specialization improves outcomes due to greater patient volume, enhanced technical ability, more integrated multimodality treatment, use of advanced techniques, and enhanced patient satisfaction. If this argument is accepted then program directors need to incorporate breast specialty training more into the traditional surgical residencies of the present, especially at the more senior resident levels to ensure adequately trained breast surgeons. The current data from the SRRC supports specialty fellowships to ensure an adequate number of surgeons who are "breast focused". The optimal surgical residency program will evolve as new specialty pathways modify the present postgraduate training programs. If so, there may be less need for post residency specialty fellowships or less need to spend the time in the current traditional residency programs.

But what about the 25% of the surgeons who do almost 90% of the surgery for breast cancer as detailed above? These individuals *should* have improved outcomes because of their case volume. Nevertheless, it will be important for them to be continuously aware of the advances in breast care, and implement new evidence-based findings into their practice. These actions will demonstrate their commitment to improved outcomes and facilitate documentation of the quality measures which ultimately will be demanded by both patients and payers.

Our conclusion is that "breast-focused" surgeons are more competent.

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