Published in final edited form as:

Clin Obstet Gynecol. 2016 December ; 59(4): 649–650. doi:10.1097/GRF.0000000000000245.

Trends in Breast Cancer Treatment: Striving to Deliver Optimal Cancer Treatment While Avoiding Morbidity

Mary L. Gemignani, MD, MPH

Breast Service, Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, NY 10065

Obstetricians and gynecologists provide care for women during their reproductive years and in the postmenopausal period. With the estimated lifetime cumulative risk of developing breast cancer in the United States of 12.8% (1 in 8), it is likely that an obstetrician gynecologist will be involved in the diagnosis, treatment, and aftercare of women with breast cancer. It is estimated that there are more than 3.5 million women living in the United States with a history of invasive breast cancer, and an additional 246,660 women will be diagnosed in 2016 (1).

It is reassuring that survival from breast cancer has increased over the past several decades, and that the proportion of women with early-stage disease has significantly increased. This survival improvement is likely secondary to an increase in early detection as well as advances in cancer treatment.

Although current controversies regarding the age of when to start screening mammography as well as the interval of screening continue, the use of risk assessment models and genetic testing have contributed to a better understanding of which women are at high risk for developing breast cancer. Women choosing to undergo risk-reducing bilateral mastectomy also have better cosmetic options than in the past, with improvements in surgical techniques including options of nipple-sparing mastectomy.

State legislation regarding mandatory reporting of breast density to women has also helped to identify women who may benefit and avail themselves of additional imaging modalities. Newer imaging modalities such as tomosynthesis have recently been introduced, and routine use of digital mammography and ultrasound screening is common. Additionally, some studies evaluating pathologic high-risk lesions have focused on avoiding routine excision of all lesions. For example, routine excision of lobular carcinoma in situ (LCIS) in patients with radiologic and pathologic concordance is unlikely to be necessary.

In this last decade, we have benefited from clinical trials, such as the ACOSOG Z-11 trial (2), that have allowed avoidance of axillary node dissection and its associated morbidity in women with minimal nodal disease who are undergoing breast-conservation therapy (lumpectomy and radiation).

Correspondence to: Mary L. Gemignani, MD, Breast Service, Department of Surgery, Memorial Sloan Kettering Cancer Center, 300 East 66th Street, New York, NY 10065, (T) 646 888 5359, (F) 646 888 5365, gemignam@mskcc.org.

Disclosures: The authors have no conflicts of interest to disclose.

Advances in translational research, clinical, and laboratory studies have contributed to our medical knowledge and changes in treatment approach. Biologic markers instead of traditional pathologic markers such as tumor size and ipsilateral axillary nodal metastases have moved us away from the one-size-fits-all model of treatment. Tests such as Oncotype DX (Genomic Health, Redwood City, CA, USA) in ER positive tumors contribute to decision making in regards to adjuvant chemotherapy. Newer agents such as pertuzumab (Perjeta) (Genentech, South San Francisco, CA, USA) along with trastuzumab (Herceptin) (Genentech, South San Francisco, CA, USA) have added to our armamentarium for the treatment of HER2 positive invasive breast cancer.

Additionally, there has been an increased utilization of neoadjuvant chemotherapy to downstage tumors and potentially allow breast-conserving surgery in some patients. Recent clinical trials such as SENTINA (3) and ACOSOG Z-1071 (4) have allowed us to offer patients with positive axillary nodes at presentation a sentinel node biopsy after neoadjuvant chemotherapy, and avoidance of axillary node dissection if the sentinel nodes are negative.

As an obstetrician gynecologist, it is important to understand the diagnosis and treatment of breast cancer, and thus be able to provide support and guidance for your patients. This symposium focuses on important aspects of breast cancer screening, detection, and treatment with a focus on recent advances that will hopefully lessen morbidity for women without compromising outcome.

Acknowledgments

This manuscript was funded in part by NIH/NCI Cancer Center Support Grant No. P30 CA008748

References

1. Miller KD, Siegel RL, Lin CC, Mariotto AB, Kramer JL, Rowland JH, Stein KD, Alteri R, Jemal A. Cancer treatment and survivorship statistics. *CA Cancer J Clin.* 2016; 66:271–289. [PubMed: 27253694]
2. Giuliano AE, Hunt KK, Ballman KV, Beitsch PD, Whitworth PW, Blumencranz PW, et al. Axillary dissection vs no axillary dissection in women with invasive breast cancer and sentinel node metastasis: a randomized clinical trial. *JAMA.* 2011 Feb 9; 305(6):569–75. [PubMed: 21304082]
3. Boughie JC, Suman VJ, Mittendorf EA, Ahrendt GM, Wilke LG, Taback B, et al. Sentinel lymph node surgery after neoadjuvant chemotherapy in patients with node-positive breast cancer: the ACOSOG Z1071 (Alliance) clinical trial. *JAMA.* 2013 Oct 9; 310(14):1455–61. [PubMed: 24101169]
4. Kuehn T, Bauerfeind I, Fehm T, Fleige B, Hausschild M, Helms G, et al. Sentinel-lymph-node biopsy in patients with breast cancer before and after neoadjuvant chemotherapy (SENTINA): a prospective, multicentre cohort study. *Lancet Oncol.* 2013 Jun; 14(7):609–18. [PubMed: 23683750]