

Introduction to the *Southern Medical Journal's* Special Issue on Breast Cancer

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Breast cancer remains the second most common cancer in women, after lung cancer. By the end of 2017, the American Cancer Society estimates that in the United States, 63,410 women will be diagnosed as having a noninvasive carcinoma in situ breast cancer, 252,710 women will receive a diagnosis of an invasive breast cancer, and 40,610 will die of breast cancer. The overall chance of a women dying of breast cancer is 1 in 37.

Despite these numbers, the risk of death from this disease actually is declining, particularly in women older than 50 years. Much of this is the result of continued research efforts, which help to develop newer protocols to increase survivorship.

The articles presented in this special issue of the *Southern Medical Journal*, for which Drs. Loretta Loftus, Christine Laronga, and Hatem Soliman served as guest editors, highlight many aspects of the cutting-edge investigation that it takes to continue to increase the number of women who will eventually avoid or survive breast cancer. Funaro et al examine the emerging technology of digital breast tomosynthesis, that it may soon become the mainstay of breast cancer screening, and encourages clinicians to understand the basis for current screening recommendations, the evidence behind screening with digital breast tomosynthesis, and when supplemental screening should be considered.¹ Hussein Alnajjar and colleagues investigate the frequency of hematologic malignancies, their relative primary and secondary occurrences, and further characterize the distinct histopathologies of these malignancies with a special focus on lymphomas.² Cristina O'Donoghue and her team review fertility preservation in young women with breast cancer, highlighting the importance of early pretreatment referral, the risks of infertility associated with breast cancer treatments, and the existing and emerging techniques for fertility preservation.³ Shafique and coworkers review the literature and emerging data regarding the treatment of pregnancy-associated breast cancer, noting that existing staging and treatment practices need slight modifications in the setting of pregnancy.⁴

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Soliman et al examine the major developments in experimental therapeutics and how they relate to our present understanding of breast cancer and its various biologic subtypes,⁵ and Apuri reviews the clinical approaches to the management of patients diagnosed with breast cancer treated with neoadjuvant and/or adjuvant chemotherapy.⁶ The identification and treatment of TP53 carriers detected using multigene panel testing is discussed by Pal and colleagues.⁷

Alexandra Gangi and her group evaluate the use of genomic assays in ductal carcinoma in situ at a single academic institution and review the literature.⁸ The use of mastectomy has increased in recent years in patients who are high-risk genetic carriers who need or desire mastectomy for prophylactic reasons, as well as for patients who have breast cancer and need or desire mastectomy for treatment of their cancer. Retaining the nipple and skin with a nipple-sparing mastectomy results in improved patient satisfaction compared with traditional mastectomy, without compromise of oncologic principles, and the pool of eligible patients is expanding, according to Orcutt et al.⁹ Lee and coworkers look at oncoplastic breast surgery, which uses both oncologic and plastic surgery techniques for breast conservation in an effort to improve cosmetic outcomes, and evaluate the risk factors associated with complications after oncoplastic breast reduction.¹⁰ Lora Thompson and Margarita Bobonis Babilonia distinguish major depressive symptoms from similar breast cancer-related somatic symptoms and discuss the use of a standardized and validated screening measure that may help healthcare providers identify patients in need of further assessment or treatment.¹¹ Finally, Loftus and colleagues present guidelines for post-treatment follow-up care of breast cancer. Survivorship care plans have been developed to facilitate care transition, guide the content and coordination of posttreatment care, and engender greater self-management of health by cancer survivors. They also offer interventions that patients may practice to promote a healthy lifestyle.¹²

All of the articles in this special issue help to chisel away at the heart of a cancer that has affected someone we know or to whom we have provided health care.

These investigators are to be applauded for their work, and it is hoped that they will continue to make new discoveries that one day will allow us to eradicate this deadly disease.

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