

Breast surgery

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Breast problems seen in surgical practice range from breast pain and benign nipple discharge to metastatic breast cancer. These problems are exceedingly common among women and not rare among men. No matter how trivial the problem may seem to the surgeon, it is always worrisome to the patient because of increased awareness and fear of breast cancer as well as interference with activities of daily living. A surgeon considering specialization in breast disease needs to be willing to provide reassurance, emotional support, and time to the patient, as well as surgical skill.

General surgeons encounter breast problems frequently in their practices. In fact, many believe breast surgery requires no special training or experience and can be done by any surgeon. However, recent research has shown that expertise improves outcome in many areas of medicine, and those surgeons who have devoted their careers to the treatment of breast disease clearly believe the bar has been raised and it can be done better. A similar change has unfolded in radiology, in which suddenly the demand for fellowship-trained breast imagers exceeds the supply. The volume of mammography and other breast imaging has increased exponentially, as has the number of image-guided procedures.

In the past, confining oneself to breast surgery has been looked on with distain as a ghetto for surgeons who could not or did not want to do something more challenging and important. Currently, this specialty is being chosen by more and more people, especially women and more senior surgeons with interests in breast care and in a less-grueling lifestyle than full-time general surgery practice. The call responsibilities and lifestyle of a breast specialist tend to be better than that of the average general surgeon or surgical specialist; it is thus an appealing specialty to those who have other strong interests outside of medicine. As a breast surgeon, one's focus narrows from the wide range of surgical procedures to doing one area extremely well. However, many surgeons would miss the variety general surgery has to offer.

Breast surgery provides an opportunity to sometimes perform challenging surgery for those who really need it. Only the rare patient needs to spend more than 1 night in the hospital; most operations are performed on an ambulatory basis, and the remainder of management is performed in the office. Breast care also is multidisciplinary. Even benign lesions require a good professional relationship with obstetricians and gynecologists, as well as internists and family-care practitioners. Breast cancer treatment also involves close cooperation with plastic surgeons, oncologists, radiologists, pathologists, nurses, and social workers. Relationships with patients are long term. Many breast specialists counsel and follow women at increased risk for breast cancer. They do risk-management counseling and make recommendations for genetic testing, early detection, and prevention, which is considered highly rewarding work.

Breast surgeons perform a variety of procedures and operations. Procedures include aspiration of cysts and fine-needle aspiration of solid lesions; core needle biopsy; and, with special training and certification, sonography, stereotactic core biopsy, and ultrasound-guided core biopsy. Operations include open-breast biopsy, with wire localization if the lesion is not palpable; lumpectomy; simple, subcutaneous, and modified radical mastectomy; axillary lymph node biopsy; sentinel lymph node biopsy; and axillary node dissection. Most breast surgeons implant and remove venous access devices (usually for chemotherapy) and care for mastitis and breast abscesses both surgically and nonoperatively. Breast reconstruction, reduction, and mastopexy are usually performed by plastic surgeons, especially in urban areas.

Training Requirements and Fellowships

Currently, no breast surgery boards or specific training requirements are needed beyond residency. In fact, gynecologists also do breast surgery, although this is much less common in metropolitan areas.

However, fellowship training programs are available in breast surgery. A breast fellowship provides more specific training, particularly in the techniques of breast cancer care. Even in residency programs with a rotation devoted specifically to breast patients, training is usually insufficient to provide expertise in either techniques or diagnostic and

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treatment strategies. Lacking fellowship training, one must either learn from a mentor or be self-taught over a period of time after entering practice. The American Society of Breast Surgeons, American Society of Breast Diseases, Society of Surgical Oncology, and Susan B. Komen Foundation are currently engaged in a joint effort to develop a matching system for these fellowships. Breast fellowships are usually 1 year in length, and their number seems to be increasing. For those certain they want to focus their practice on breast disease, a breast fellowship is probably the best choice.

Those who have a broader interest in cancer and cancer surgery, research, or both perhaps would do better with a fellowship in surgical oncology. These fellowships, usually 2 or 3 years in length and including some research time, are appropriate for those who do not opt to confine themselves specifically to the breast. Surgical oncology is a broader and better-established field and may be preferable if one is interested in pursuing an academic career.

Research Opportunities and Grant Funding

Medical students

The best way for medical students to find research opportunities is through their schools. Identify a faculty member with an interest in breast disease and explore possibilities; you may be able to participate in his/her research or develop a project of your own. Your sponsor/mentor should be able to help you in obtaining funding, as necessary.

Surgery residents

As is true for medical students, the best way for surgery residents to find research opportunities is locally. If no suitable breast specialist or breast service is available at your institution, you will be able to find research opportunities with the help of your mentor, advisor, or program director. Educate yourself on the web first for maximum effect! You must have the support of your program in this effort; research is time and attention consuming and cannot be done on the side. If you are interested in breast surgery as a specialty, consider doing a fellowship (see earlier).

Faculty

The following funding opportunities are available for research in all aspects of breast cancer: (1) The Susan G. Komen Foundation, a Texas nonprofit corporation dedicated to advancing research, education, screening, and treatment (<http://www.komen.org/grants/>); (2) The American Cancer Society, a national organization that acts as a resource and organizer for patients, families, and healthcare professionals (http://www.cancer.org/docroot/RES/RES_0.asp); (3) The Breast Cancer Research Foundation, a national organization dedicated solely to funding clinical and genetic research on breast cancer (http://www.bcrfcure.org/rese_grantapp.html); (4) GrantsNet, supported by the Howard Hughes Medical Institute (<http://www.hhmi.org/>), and American Association for the Advancement of Science (<http://www.aaas.org/> and <http://www.grantsnet.org/>); (5) The Lance Armstrong Foundation, which helps fund programs designed to provide services and support for cancer survivors (<http://www.livestrong.org/site/c.jvKZLbMRIsg/>

[b.739079/k.9EDA/Research_Grants.html](http://www.b.739079/k.9EDA/Research_Grants.html)); (6) The Department of Defense Breast Cancer Research Program, established by Congress in 1992 and funded through FY 2002 (<http://cdmrp.army.mil/bcrp/>). Funding opportunities for FY 2003 will be announced when information is available; (7) The National Cancer Institute, established in 1937, a component of the National Institutes of Health, 1 of 8 agencies that comprise the Public Health Service in the Department of Health and Human Services (http://cri.nci.nih.gov/2tier2.cfm?cancertype_id=1); and (8) The Breast Cancer Alliance, founded in 1996, a not-for-profit organization that funds breast cancer research and seeks to promote breast health through education and outreach (<http://www.breastcanceralliance.org/grants/index.asp>). State and local public health departments and local organizations also may support breast research.

Membership in Societies

The American Society of Breast Surgeons

The American Society of Breast Surgeons (<http://www.breastsurgeons.org/index.html>), founded in 1995, has more than 1400 members and a seat on the American College of Surgeons Board of Governors. Their mission statement says the society was formed to encourage the study of breast surgery, promote research and development of advanced surgery techniques, improve standards of practice for breast surgery in the United States, and serve as a forum for the exchange of ideas. If you are a surgeon, the only membership requirement is that you pay the dues.

The American Society of Breast Disease

The American Society of Breast Disease (<http://www.asbd.org/>), a multidisciplinary organization founded in 1976 by a group of gynecologists, advocates a team approach to breast health management and breast disease prevention, early detection, treatment, and research. Membership is open to health care professionals involved in breast care.

The Society of Surgical Oncology

The Society of Surgical Oncology (<http://www.surgonc.org/>). Their stated mission is to ensure all cancer patients receive the highest-quality, comprehensive, multimodality cancer care. It is an academic organization; active membership requires the following: (1) board certification; (2) proposal and seconding by members; (3) reprints of at least 3 oncology articles in peer-reviewed journals; (4) a year of oncology fellowship or at least 3 years' practice in surgical oncology; (5) being principal surgeon in at least 50 major cancer surgeries in the last 12 months; and (6) involvement in teaching, research, and patient care; such activities as involvement in the American Cancer Society or the Commission on Cancer of the ACS; and leadership activities in your hospital, community, or both.

The Senologic International Society

The Senologic International Society (<http://www.sisbreast.org/>) was founded in Strasbourg, France, in 1976. Its members are primarily, but not exclusively, European and South American, from a wide variety of medical specialties that deal with breast disease. Its intention is to bring together

scientific groups; disseminate knowledge; and advance the prevention, diagnosis, and treatment of breast diseases. It is an association of societies, not people.

The following web sites were mentioned earlier: American Association for the Advancement of Science (<http://www.aaas.org/>), American Cancer Society (<http://www.cancer.org/>), American Society of Breast Disease (<http://www.asbd.org/>), American Society of Breast Surgeons (<http://www.breastsurgeons.org/>), Breast Cancer Alliance (<http://www.breastcanceralliance.org/>), Breast Cancer Re-

search Foundation (<http://www.bcrfcure.org/>), Department of Defense Breast Cancer Research Program (<http://cdmrp.army.mil/bcrp/>), GrantsNet (<http://www.grantsnet.org/>).

Howard Hughes Medical Institute (<http://www.hhmi.org/>), Lance Armstrong Foundation (http://www.livestrong.org/site/c.jvKZLbMRIsG/b.739079/k.9EDA/Research_Grants.htm/), National Cancer Institute (<http://cri.nci.nih.gov/>), Senologic International Society (<http://www.sisbreast.org/>), Society of Surgical Oncology (<http://www.surgonc.org/>), and Susan G. Komen Foundation (<http://www.komen.org/>).