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## TOPIC: Screening and Measurement for Early Detection of Breast Cancer Related Lymphedema

Breast cancer treatment places individuals at life-long risk for the development of lymphedema. Early detection of lymphedema allows for early intervention that can prevent or slow progression of lymphedema to a chronic, harder-to-treat stage. Patient education regarding the signs and symptoms of developing lymphedema and objective measurement of arms is needed to promote early detection and improve patient outcomes.

- Patient education: Patients should be made aware of the need to immediately report any feelings of heaviness or tightness, swelling, redness, and/or heat in at-risk arms, breast, chest, or truncal areas to their health care provider. On-going education and support are essential in helping patients reduce the risk of lymphedema.
- Objective measurement: A pre-operative baseline measurement of arms or at least a post-operative should be a standard component of breast cancer care, which can be used to compare all subsequent measures throughout recovery and survivorship. Surgeons, medical oncologists, and Advanced Practice Nurses who treat patients with breast cancer should work collaboratively to establish follow-up care that includes measurements at each visit. As breast cancer survivors are living longer and returning to their primary physicians for follow-up care, it is important that primary physicians and/or advanced practice nurses are cognizant of the importance of lymphedema surveillance.

The following guidelines are suggested for all individuals, practices, or centers that treat breast cancer:

- There is a written institutional policy and protocol addressing arm measure methods and monitoring preoperatively through recovery and survivorship with patients who are diagnosed with breast cancer.
- All patients receive lymphedema risk information at the time of breast cancer diagnosis. (1, 6, 12)
- Height, weight, and body mass index (BMI) calculations should be documented on all patients at the time of diagnosis and at each subsequent follow-up visit. An elevated BMI is associated with increased risk of developing lymphedema. (8, 10, 11)
  - Overweight patients who have a BMI  $\geq 25$  should be referred to a qualified professional for nutrition education. (5, 6)
  - Obese patients who have a BMI  $\geq 30$  should be referred to a qualified professional for nutrition counseling and evaluation for potential weight reduction program. (5, 6)
- Bilateral arm measurements using a standard reproducible consistent method should be taken on all patients at the time of breast cancer diagnosis and at each follow-up visit for comparison.(2)
  - Measurements should be recorded in the patient record and easily accessible to health care providers.
  - Patients should be given a record of their measurements, including method(s) used for sharing purposes in case of relocation or change in health care providers.

- o Documentation in the medical record should include the type of measurement method used and criteria for determining lymphedema development. The same method of measurement should be used for future assessments to facilitate comparison.
- In addition to arm measurements, each follow-up visit should include assessment of post-treatment physical impairment, functional status, and subjective self-report of symptoms.
- There is documentation that those performing such measurements have been trained and are capable of reliable measurement.
- There are institutionally-defined criteria for treatment referral based upon:
  - o Objective measurements (e.g., an increase of 1 cm in any of the circumference measurements compared to the contralateral limb warrants a follow-up visit in one month. A 2 cm change in any of the circumferential measurements or a 5% volume change in an at-risk limb as calculated by a circumferential formula or perometry in the absence of such a change in the contralateral limb or a BIS reading outside normal limits for equipment being used (e.g., L-Dex reading >10) warrant immediate referral for further evaluation by a professional trained in lymphedema assessment and management. Circumferential tape measurements are acceptable when made with a flexible, non-elastic Gulick II (or similar) tape measure. At minimum, six measurements are recommended: circumference at the mid-hand, wrist, elbow, upper arm just below the axilla, and at 10cm distal to and proximal to the lateral epicondyle on both arms. Bioelectrical spectroscopy (BIS) or infrared perometry are suggested as alternative or adjunct methods to circumferential measurement. Specific protocols describing standard positions and measurements for these procedures should be in place.

Objective evidence/visualization of swelling in the chest or trunk.

- Reliable and valid questionnaires via interview should be conducted at each follow-up to assess subjective symptom reports, specifically regarding perceived swelling, heaviness, and/or tightness in the at-risk or affected arm/arms, breast, chest and truncal areas.
- There is documentation that referrals for treatment have been made when indicated. Such referrals should be made to one of the following:
  - o Certified Lymphedema Therapists who have met the minimum of 135 hours of lymphedema certification training as outlined by the Lymphology Association of North America (LANA®), or
  - o Physician, Advanced Practice Nurse, or physician -assistant with knowledgeable about lymphedema and lymphedema management. Circumferential measurements should be performed by a specialty-trained health care provider with monthly inter-rater reliability testing and documentation.

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