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VIEWPOINT
Breast

What's Lymph Got to Do with It?

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Breast cancer–related lymphedema (BCRL) refers to the development of lymphedema after treatment of breast cancer—radiation and lymph node removal. In the United States, the rates of BCRL have been reported to be as high as 40%, making it a public health concern.[1,2] Lymphedema has detrimental physical and psychological effects with documented diminished health-related quality of life, including pain, disability, negative self-identity, illness permanence, and depression.[1–5] Our quality improvement study focused on patients who developed lymphedema after operative treatment of their breast cancer.

We received institutional review board exemption for this study. A total of 221 patients who received surgical treatment for breast cancer during 2019 and 2020, including lumpectomy, excisional biopsy, re-excision, modified radical mastectomy, and total mastectomy with removal of contralateral breast, were selected from the electronic medical record of a comprehensive cancer program and National Accreditation Program for Breast Centers (NAPBC)-accredited center. Of these patients, 27 were identified with BCRL. This cohort was then prospectively analyzed for longitudinal follow-up and development of lymphedema until June 2023.

Of the patients identified with BCRL, only 33% of these patients had "lymphedema" listed as one of their clinical problems. The remainder were noted after a thorough chart review of the provider notes (Table 1). Patients were diagnosed by breast surgeons, radiation oncologists, and medical oncologists. Initial treatment was physical therapy referral. None of these patients were staged in terms of their lymphedema. Furthermore, although 51% of these patients were discussed in terms of their lymphedema at multiple visits by a provider, discussion regarding response to treatments was not described.

Table 1. Patient Characteristics

Demographics	White (non-Hispanic)	15 patients
	African American	3 patients
	Hispanic	7 patients
	Asian	2 patients
	Other	1 patients
Diagnosing provider	Breast surgeon	11 patients
	Radiation oncologist	6 patients
	Medical oncologist	10 patients
Postoperative diagnosis time	Mean—293 d from surgery (29–709 d)	
Treatment	Physical therapy	23 patients
	Pneumatic compression therapy	3 patients
	Medical therapy	1 patient

Breast centers and accrediting bodies should consider including requirements for lymphedema documentation and standardized treatment and/or referral protocols. Currently, the American College of Surgeons website includes postsurgical arm care recommendations, including exercise and hygiene, as well as initial treatments after the onset of lymphedema symptoms. Although the current National Comprehensive Cancer Center guidelines recommend BCRL surveillance postradiation and postoperatively, a thorough history and physical examination, including limb and upper quadrant measurements, should be completed and documented on patients upon diagnosis of breast cancer to allow for comparison throughout the clinical course. We have developed improvement guidelines based on personal experience, as well as from the literature,[1–5] to incorporate in our clinical practice (Fig. 1). This presents a tremendous opportunity for improvement in the longitudinal care of breast cancer patients with simple and minor additions to reporting criteria required to maintain NAPBC accreditation. BCRL, when identified at an early stage, has a favorable response to therapy. Despite this, screening for and treatment of lymphedema remain provider dependent and largely underutilized.[5]

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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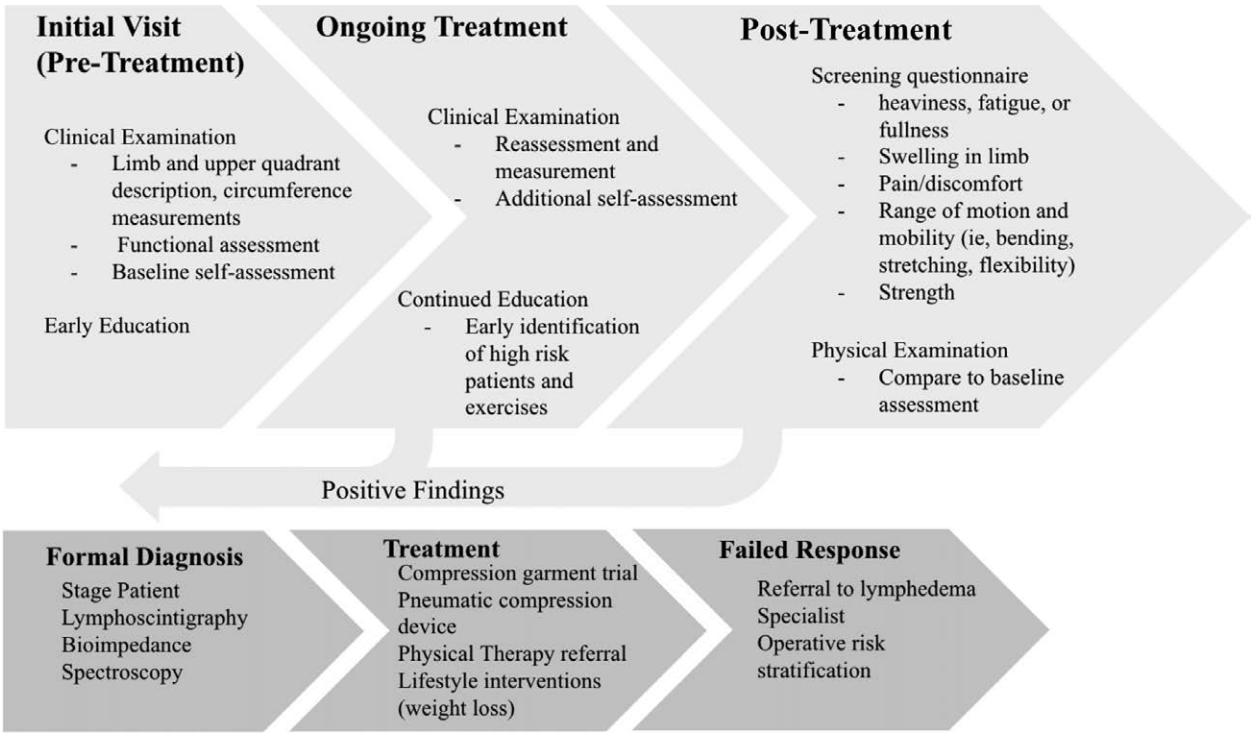

Fig. 1. Recommendations for lymphedema surveillance and treatment.

REFERENCES

1. McLaughlin SA, Stout NL, Schaverien MV. Avoiding the swell: advances in lymphedema prevention, detection, and management. American Society of Clinical Oncology educational book. American Society of Clinical Oncology Annual Meeting, 2020;40:1–10.
2. Fu MR. Breast cancer-related lymphedema: symptoms, diagnosis, risk reduction, and management. *World J Clin Oncol.* 2014;5:241–247.
3. Pappalardo M, Starnoni M, Franceschini G, et al. Breast cancer-related lymphedema: recent updates on diagnosis, severity and available treatments. *J Pers Med.* 2021;11:402.
4. He L, Qu H, Wu Q, et al. Lymphedema in survivors of breast cancer. *Oncol Lett.* 2020;19:2085–2096.
5. Nadal Castells MJ, Ramirez Mirabal E, Cuartero Archs J, et al. Effectiveness of lymphedema prevention programs with compression garment after lymphatic node dissection in breast cancer: a randomized controlled clinical trial. *Front Rehabil Sci.* 2021;2:727256.