

The Benefits of Education Plus Early Diagnosis and Treatment of Breast Cancer Related Lymphedema

I am very grateful to Carol Doeringer, lymphedema patient and advocate, who submitted yet another insightful contribution on the subject of breast cancer related lymphedema (BCRL). The material is excerpted from a self-study course Carol has developed with the support of friends and experts in the lymphedema and nursing communities. The course is called Breast Cancer-Related Lymphedema: The Nurse's Role in Care and Prevention, the program will soon be available at no charge to any interested nurse. Those interested can learn more by visiting the [Lymphedema Speaks](#) website.

Getting BCRL on patients' and providers' radar screens: The benefits of education plus early diagnosis and treatment

Providing patient education, coupled with appropriate surveillance and intervention post-breast cancer treatment, can limit the incidence and progression of BCRL, preventing needless impairment of patient quality of life and reducing direct and secondary treatment costs.

Fu et al (2010) (1) determined that breast cancer patients who received information about BCRL had significantly reduced BCRL symptoms when compared with patients who did not receive information. The researchers concluded that patient education is one predictor of BCRL outcome. Women who received information about BCRL were significantly less likely to report arm swelling, arm heaviness, impaired shoulder mobility, seroma formation and breast swelling. This raises the question of whether BCRL education may help patients circumvent avoidable risk factors and subsequent development of BCRL. In an earlier study of the link between patient education and lymphedema risk-reduction behaviors, Fu et al (2008) (2) found that only 57% of breast cancer patients had been given any information about lymphedema.

As described in the [earlier discussion](#) of BCRL risks, Torres et al (3) found that post-surgical intervention including [manual lymph drainage](#), scar massage, and shoulder exercises reduced the incidence of lymphedema after breast cancer surgery. Todd et al (2008) (4) found that delaying shoulder exercises by one week post-surgery reduced BCRL incidence, suggesting that the timing of 'early' exercise has significant implications for managing BCRL risk after breast-cancer surgery.

Stout Gergich et al (2008) (5) demonstrated the effectiveness of using preoperative baseline measures, coupled with early and very frequent postoperative measures to identify BCRL using perometry, a very sensitive measurement technology. They also determined that women placed in compression sleeves at the earliest sign of swelling (a 3% volume increase compared to the preoperative baseline measure) could achieve significant volume reductions in about four weeks, and these reductions were sustained through the study follow-up period (averaging 4.8 months). The researchers concluded that a short trial of compression garments effectively treated subclinical lymphedema.

No studies are available to quantify the medical cost savings of early diagnosis and treatment, but it is clear that a diagnosis of BCRL adds significantly to breast cancer patients' medical care costs. Shih et al (2009) (6) used insurance claims data to study the cost of treatment of breast cancer patients with BCRL,

compared to medical costs of breast cancer patients without BCRL. The study was limited to a period of two years after initiation of each patient's cancer treatment. Researchers found that the BCRL group had significantly higher medical costs (\$8,290 more) and was twice as likely to have lymphangitis or [cellulitis](#) compared to the non-BCRL group.

Patients studied by Shih undoubtedly continued to incur costs to treat BCRL and infections, beyond the study period, because BCRL that advances becomes a chronic condition.

Key Points:

- Patient education about BCRL and its risks may help patients avoid certain risk factors, and reduce associated symptoms.
- Early post-surgical intervention with MLD, scar massage, and appropriately timed exercise has been shown to reduce BCRL incidence.
- Detecting BCRL when pre-clinical, and providing conservative compression therapy have been shown to result in speedy, sustained volume reductions.

The costs to treat advanced BCRL are significant, and of course, when BCRL advances, it impairs patients' quality of life.

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2. Fu, MR, Axelrod, D, Haber, J. (2008) Cancer-related lymphedema: Information, symptoms, and risk-reduction behaviors, *Journal of Nursing Scholarship*, 40(4):341-348.
3. Torres Lacompa, M, Yuse Sanches, MJ, et al.(2010) Effectiveness of early physiotherapy to prevent lymphedema after surgery for breast cancer: randomized, single blinded, clinical trial, *BMJ* 340:b5397.
4. Todd J, Scally A, et al. (2008) A randomized controlled trial of two programmes of shoulder exercise following axillary node dissection for invasive breast cancer, *Physiotherapy*, 94: 265-273
5. Stout Gergich NL, Pfalzer LA, McGarvey C, Springer B, Gerber LH, Soballe P. (2008) Preoperative assessment enables the early diagnosis and successful treatment of lymphedema. *Cancer*, 112:2809-2819.
6. Shih YC, Xu Y, Cormier JN et al. (2009) Incidence, treatment costs, and complications of lymphedema after breast cancer among women of working age: A 2-year follow-up study, *Journal of Clinical Oncology*, 27 (12).