Supporting your patients with breast cancer-related lymphedema.

How to assess risk, identify patients and improve lymphedema-related outcomes.

Tactile MEDICAL®

Breast cancer-related lymphedema.

Lymphedema is common. Despite advances in cancer treatment, **20–40%** of breast cancer survivors will develop lymphedema in the arm while nearly **50%** will develop lymphedema in the trunk or breast after treatment.[1,2] This swelling is not only painful and debilitating, but it can lead to further health risks, a lower quality of life, and greater healthcare costs.

Lymphedema is underdiagnosed. An independent research[3] survey of over 240 breast cancer survivors found that 78% had discussed their lymphedema symptoms with their doctor, yet only 28% were diagnosed with the condition.

Early intervention is key. Once lymphedema is diagnosed, it's important to begin episodic in-clinic care as needed, augmented by effective, pragmatic home management. This is where Tactile Medical comes in: We offer a clinically grounded approach to breast cancer-related lymphedema (BCRL) that fits within your daily operations to help you optimize patient outcomes.

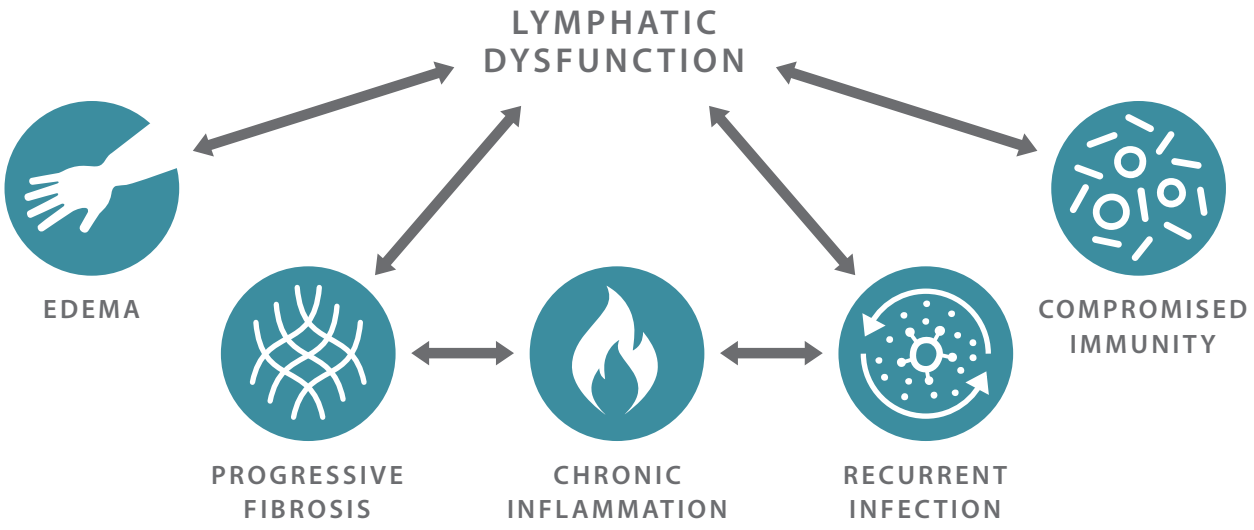
DID YOU KNOW?

- Examinations typically focus on limbs, but edema presenting in the breast, axilla, shoulder or back may be present in nearly 50% of breast cancer survivors.[2,4]
- Swelling can lead to reduced function and chronic inflammation, leading to tissue changes, infection risk and further lymphatic impairment.[5]
- Patients with BCRL can experience higher healthcare costs, missed work or an inability to work, impact to daily activities and lower quality of life.[5]
- Difficulty adhering to therapy due to a variety of factors is recognized as a major obstacle to successful management of lymphedema.[6]

The lymphatic system and risk factors.

Lymphedema is not just swelling. Evolving research continues to highlight the critical role lymphatics play in human health. The lymphatics are essential for maintaining tissue fluid balance, transporting lipids, clearing macromolecules, trafficking immune cells and immune surveillance.[7,8]

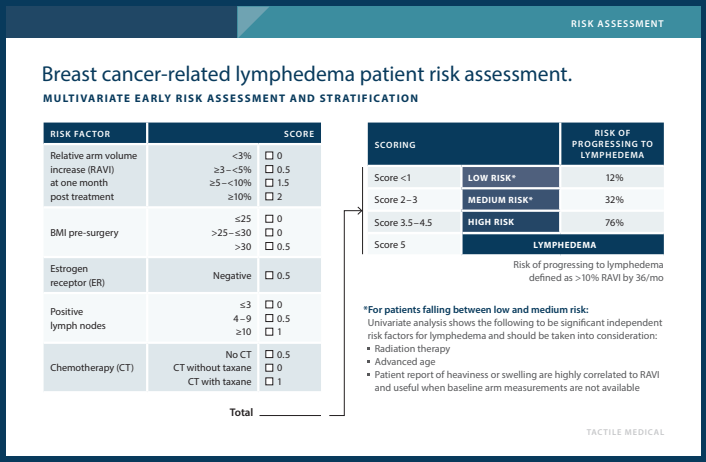
INTERPLAY OF FORCES IN LYMPHATIC PATHOGENESIS:[9]



WHO IS AT RISK?

Based on a prospective study[1] of more than 1,100 patients, risk factors for lymphedema are in breast cancer survivors are:

- Relative arm volume increase at four weeks post treatment
- BMI > 30
- Estrogen Receptor Negative
- Number of positive lymph nodes
- Taxane based chemotherapy
- Radiation therapy
- Advanced age



RISK ASSESSMENT

Breast cancer-related lymphedema patient risk assessment.

MULTIVARIATE EARLY RISK ASSESSMENT AND STRATIFICATION

RISK FACTOR	SCORE	
Relative arm volume increase (RAVI) at one month post treatment	<3%	☐ 0
	≥3–<5%	☐ 0.5
	≥5–<10%	☐ 1.5
	≥10%	☐ 2
BMI pre-surgery	≤25	☐ 0
	>25–≤30	☐ 0
	>30	☐ 0.5
Estrogen receptor (ER)	Negative	☐ 0.5
Positive lymph nodes	≤3	☐ 0
	4–9	☐ 0.5
	≥10	☐ 1
Chemotherapy (CT)	No CT	☐ 0.5
	CT without taxane	☐ 0
	CT with taxane	☐ 1

Total

SCORING		RISK OF PROGRESSING TO LYMPHEDEMA
Score <1	LOW RISK*	12%
Score 2–3	MEDIUM RISK*	32%
Score 3.5–4.5	HIGH RISK	76%
Score 5	LYMPHEDEMA	

Risk of progressing to lymphedema defined as >10% RAVI by 36/mo

***For patients falling between low and medium risk:**
Univariate analysis shows the following to be significant independent risk factors for lymphedema and should be taken into consideration:
- Radiation therapy
- Advanced age
- Patient report of heaviness or swelling are highly correlated to RAVI and useful when baseline arm measurements are not available

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To receive a printed risk assessment tool to use with your patients, scan this code.

The stages of breast cancer-related lymphedema.[10,11]

While changes in arm volume are often used as a diagnostic threshold, swelling only serves as a clinical proxy[10] for impaired function and disease progression.

Stage 0: Latent or Subclinical

Symptoms:
- Impaired lymphatic transport or subtle changes in tissue fluid or composition
- No evident swelling
- Patients commonly report feelings of heaviness, tightness or tingling
- May exist months or years before overt edema occurs

Early intervention is key.

Stage 1: Edema, Spontaneously Reversible

Symptoms:
- Early accumulation of high-protein fluid; pitting may occur
- Swelling is intermittent or subsides with limb elevation
- An increase in various types of proliferating cells may be seen

Stage 1 may be reversible; early intervention is key.

Intervention goals:
- Reverse symptoms
- Prevent progression
- Improve quality of life

Stage 2: Fibrosis

Symptoms:
- Swelling is evident; does not fully resolve with limb elevation
- Fibrosis and/or adipose tissue develops
- Pitting is evident until prevented by fibroadipose tissue in late stage 2

Intervention goals:
- Symptom management
- Maintain or improve quality of life

Stage 3: Lymphostatic Elephantiasis

Symptoms:
- Trophic skin changes such as acanthosis, alterations in skin character and thickness, further deposition of fat, fibrosis and warty overgrowths

Intervention goals:
- Palliative
- Limit infections

Patient identification and risk assessment.

When combined with known patient risk factors, you can reliably diagnose lymphedema based on patient-reported symptoms, clinical signs, or through volumetric measures if you have pre-treatment measurements available.[10]

Pain in chest area, burning, aching or tingling

Trunk/back/shoulder area swelling and tingling

Arm swelling, tightness or heaviness with limited movement in shoulder/arm

Swollen breast, dimpled hair follicles on breast

Hand/finger swelling; tight fitting jewelry/rings

NCCN Guidelines for Survivorship

The NCCN Survivorship Guidelines recommend treating lymphedema with manual lymphatic drainage and considering pneumatic compression for ongoing home management. In clinic combined with at-home treatment provides consistent care and may prevent disease progression.

IN-CLINIC CARE

A skilled lymphedema therapist can offer symptom relief and more. Refer to a therapist for:

- Additional evaluation for ambiguous or complex cases
- In-depth patient education
- Personalized exercise plans addressing strength or range of motion deficits
- Short-stretch bandaging or custom compression
- Complete decongestive therapy
- Other cancer rehabilitation unrelated to lymphedema

AT-HOME CARE

Untreated swelling can cause further damage to surrounding tissues and lymphatic system. In addition to in-clinic therapy, you can manage symptoms at home in a number of ways, including:

- Advanced pneumatic compression device (Flexitouch® Plus)
- Exercise
- Skin care
- Elevating the limb
- Compression sleeve or bandage to limit swelling
- Self-massage

Flexitouch Plus pneumatic compression.

The Flexitouch system is an at-home pneumatic compression therapy clinically proven to stimulate lymphatic function[12] and reduce swelling of the hand, arm and upper body.

Each ComfortEase™ garment contains air chambers connected to a programmable controller and offers more comprehensive treatment coverage, added comfort and an optimized fit. When activated, these chambers sequentially inflate and deflate, creating gentle waves of pressure. The treatment sequence and duration mimics manual therapy.

CONVENIENT

Helps drive better outcomes by making treatment readily available.

CONSISTENT

Enables repeatable results that do not rely on patient technique or ability.

COMFORTABLE

Feels like a soothing massage, supporting greater self-care compliance.

Results after Flexitouch Plus:

Flexitouch Plus offers clinically proven at-home relief.

STUDY 1

Health plans show improved outcomes and reduced costs for cancer-related lymphedema:[13]

↓79%
Reduction in cellulitis episodes

↓29%
Reduction in outpatient visits

↓19%
Reduction in the rate of hospitalizations

↓37%
Reduction in lymphedema-related costs

STUDY 2

Patients report improved health and high satisfaction:[14]

All physical and mental health scores improved
(P<0.001)

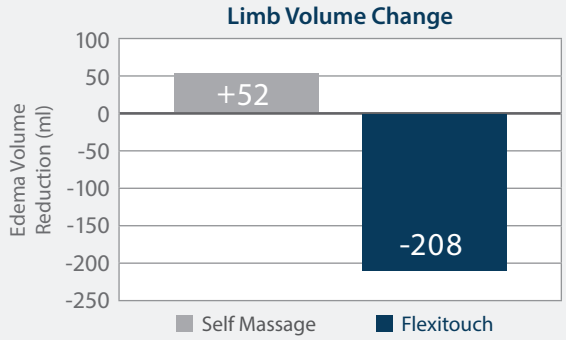
90%
Patient satisfaction

96%
On-going usage

95%
Maintained or reduced limb volume

STUDY 3

Randomized control crossover trial shows better ongoing home management results using Flexitouch when compared to self massage:[15]



Prescribing Flexitouch is an easy three-step process to screen, discuss and refer.

Once you've submitted a referral, the Tactile Medical team will take it from there. Learn more about prescribing Flexitouch therapy here.

Tactile Medical is a leader in developing and marketing at-home therapies for people suffering from underserved, chronic conditions including lymphedema, lipedema, chronic venous insufficiency and chronic pulmonary disease by helping them live better and care for themselves at home.

Download our symptom screener to help patients identify their chronic swelling.

Individual results may vary.

Indications for Use: The Flexitouch Plus system and garments for legs, arms, trunk, and chest are intended for use by medical professionals and patients who are under medical supervision, for the treatment of many conditions such as: lymphedema; primary lymphedema; post mastectomy edema; phlebolymphedema; lipedema; edema following trauma and sports injuries; post immobilization edema; venous insufficiency; reducing wound healing time; treatment and assistance in healing stasis dermatitis, venous stasis ulcers, or arterial and diabetic leg ulcers. The Flexitouch Plus system and garments for the head and neck are intended for use by medical professionals and patients who are under medical supervision for the treatment of head and neck lymphedema.

Contraindications: Contraindications, warnings, and instructions for use can be found in the product labeling supplied with each device.

Caution: Federal (U.S.) law restricts this device to sale by or on the order of a licensed healthcare practitioner.

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Patient photo consent on file at Tactile Medical.

Tactile Medical
3701 Wayzata Blvd, Suite 300
Minneapolis, MN 55416 USA
T: 612.355.5100
F: 612.355.5101

Customer Care
Toll Free Tel: 833.3TACTILE (833.382.2845)
Toll Free Fax: 866.435.3949
Hours: 7 a.m. to 7 p.m. CT, Monday–Friday
tactilemedical.com

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