LIVING BEYOND
BREAST CANCER®

Session 1 | Lymphedema: Early action & long-term care

Effective treatment & side effect support | Innovations in breast cancer care

Breast Cancer Associated Lymphedema: What it is, what it isn't, and what you need to know

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Disclaimer and Disclosures

- The opinions and experiences shared do not represent LBBC, Grand View/St. Luke's University Health Network, or other medical professionals beyond myself.
- You should consult with your healthcare team should you have any questions about the specifics of your health and medical plan
- I have no relevant disclosures for today's presentation

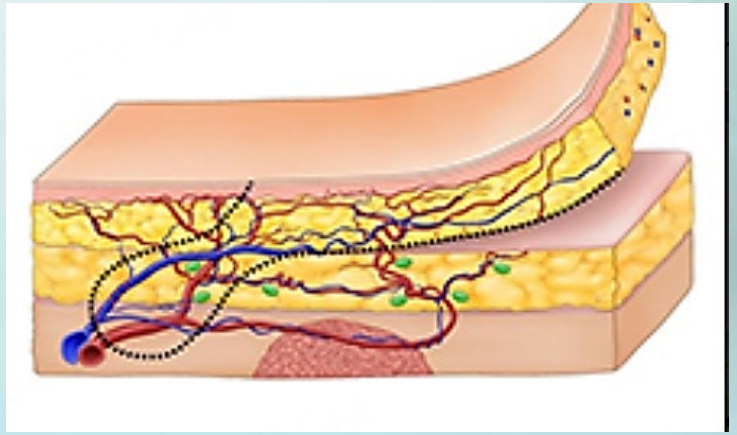
- What is Breast Cancer-Related Lymphedema (BCRL)?
  - Who is at risk for lymphedema? (BCRL)
  - What are early signs of lymphedema?
  - How can I prevent lymphedema?

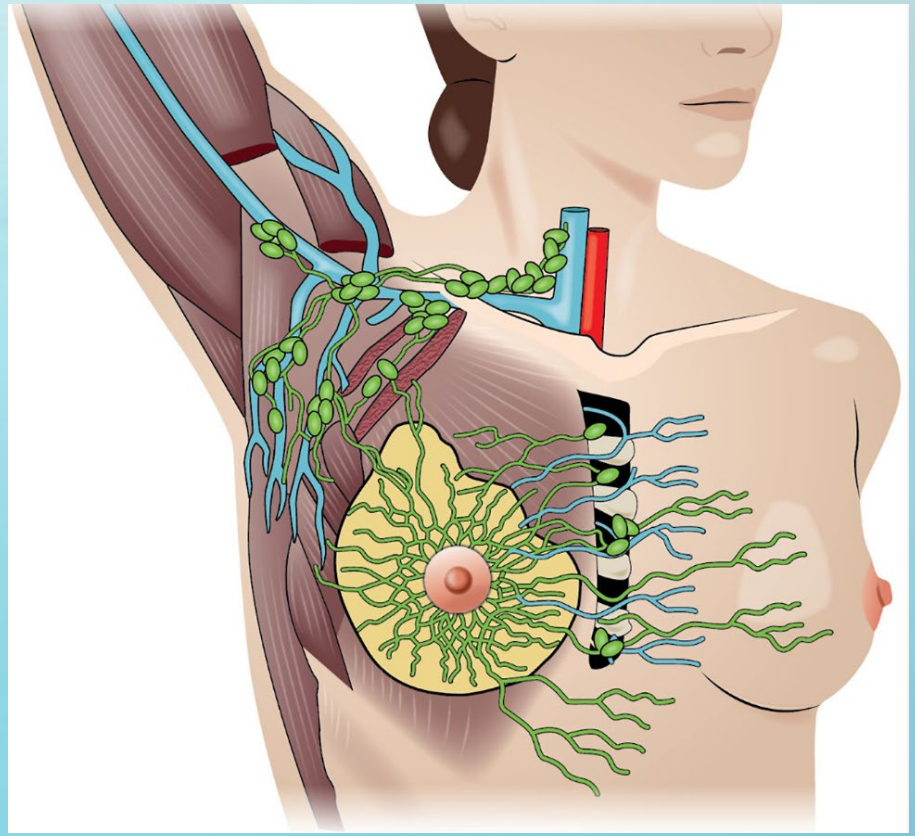
Catching symptoms early can make a big difference.

Lymphedema: What is it?

What is Breast Cancer-Related Lymphedema (BCRL) ?

BCRL is the **accumulation of lymphatic fluid that can cause swelling in the arm, hand, trunk or breast**. Lymphatic fluid is normally filtered through the lymph nodes. Removal of lymph nodes requires lymph fluids from the arm to be rerouted and filtered through remaining axillary lymph nodes.





Who is at risk for lymphedema ? (BCRL)

With a sentinel node biopsy, the lifetime risk of lymphedema is very small and may occur in up to

5%

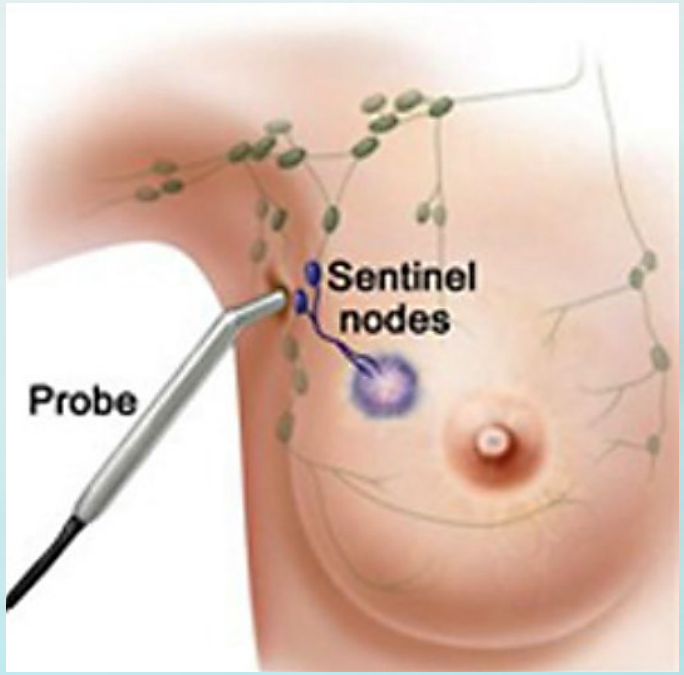
of patients.

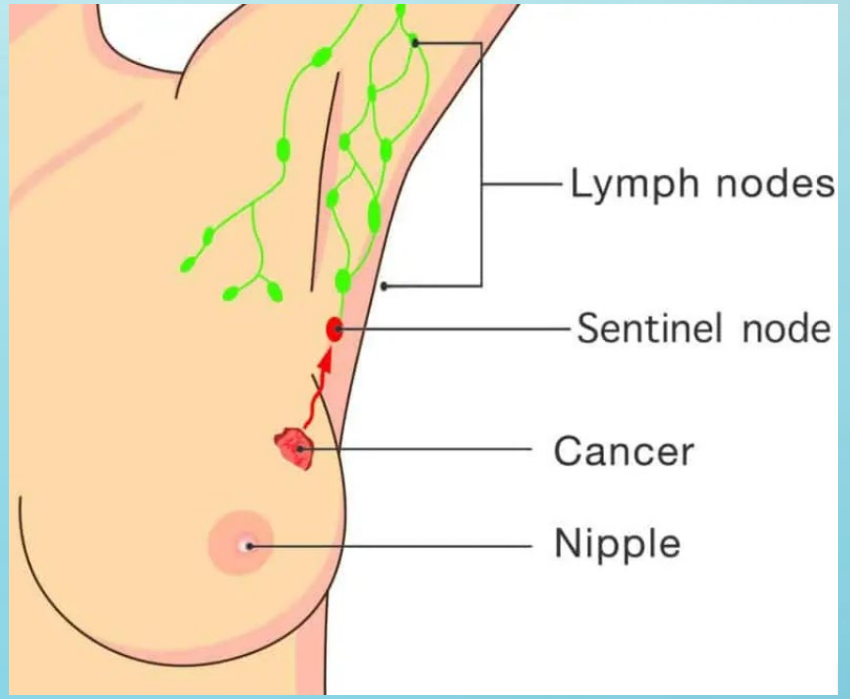
With an axillary dissection or radiation to the axilla, the lifetime risk is up to

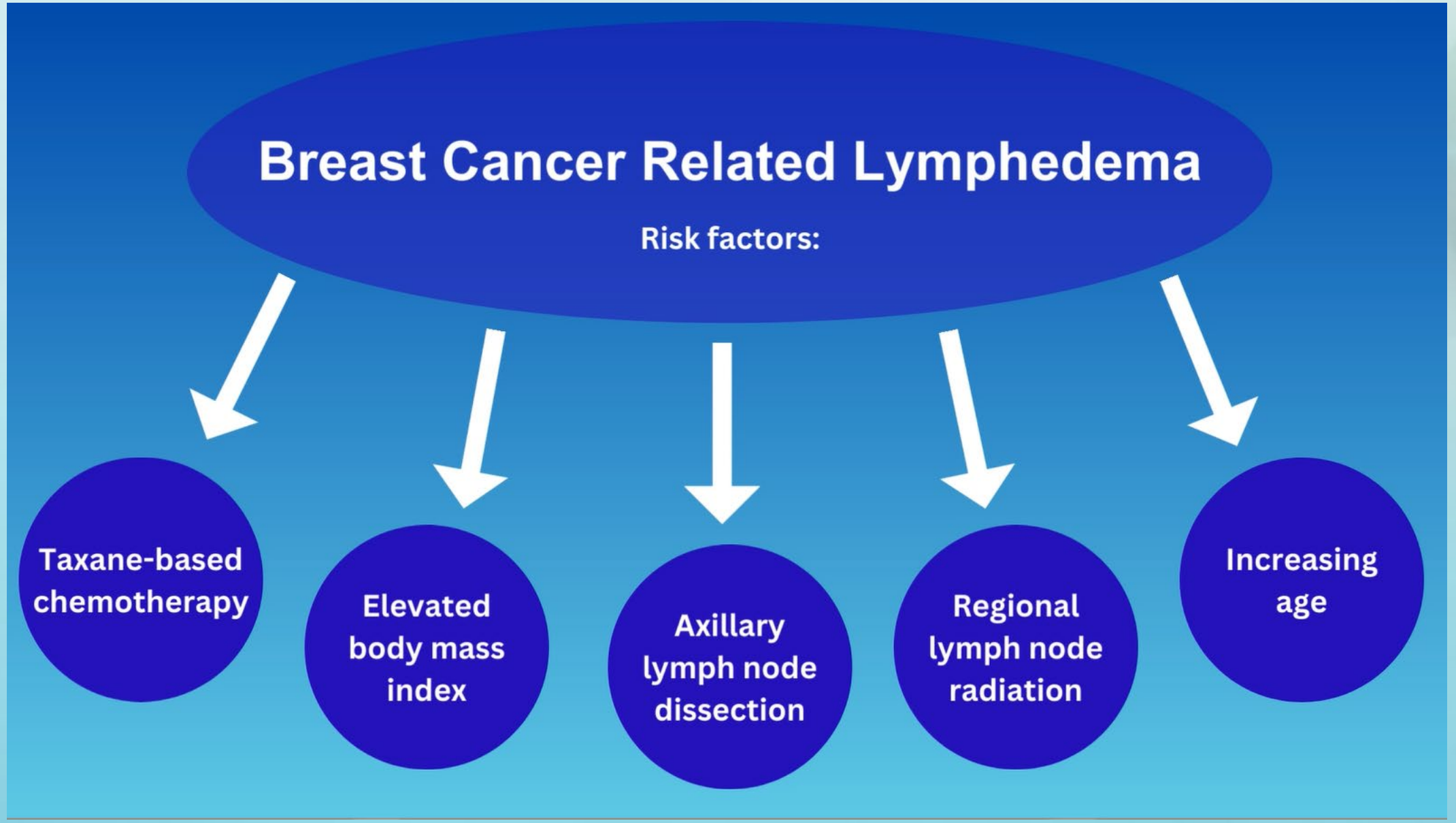
20%

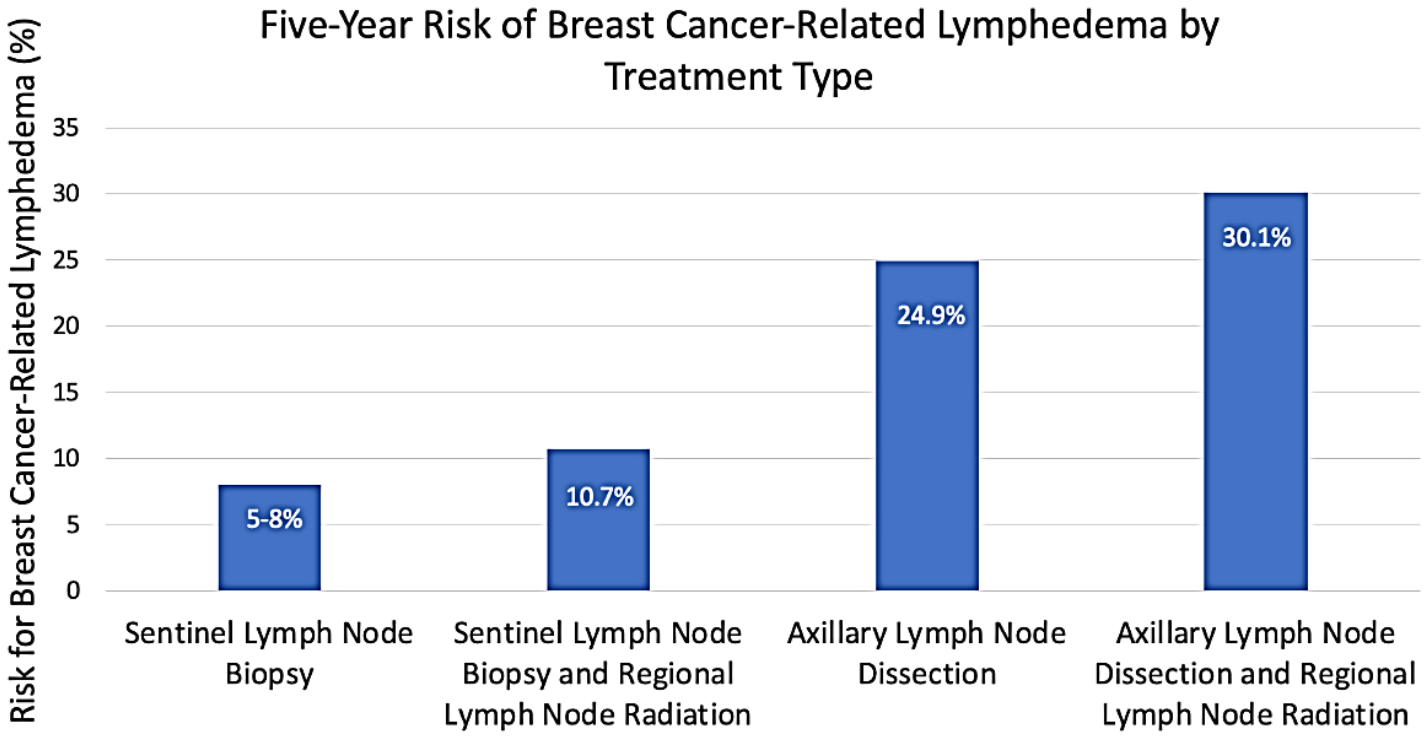
of patients.

The vast majority of cases of lymphedema related to breast surgery or radiation occur in the first year after treatment. Being overweight can increase your risk.






Breast Cancer Related Lymphedema
Risk factors:
Taxane-based chemotherapy
Elevated body mass index
Axillary lymph node dissection
Regional lymph node radiation
Increasing age

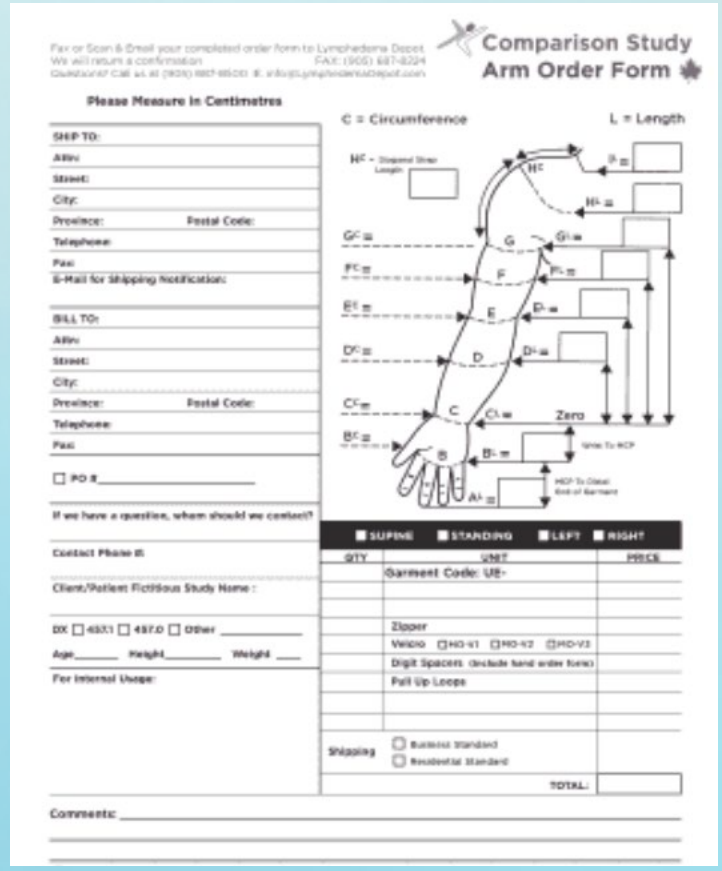


George E. Naoum; Sacha Roberts; Cheryl L. Brunelle; Amy M. Shui; Laura Salama; Kayla Daniell; Tessa Gillespie; Loryn Bucci; Barbara L. Smith; Alice Y. Ho; Alphonse G. Taghian. "Quantifying the Impact of Axillary Surgery and Nodal Irradiation on Breast Cancer-Related Lymphedema and Local Tumor Control: Long-Term Results From a Prospective Screening Trial." Journal of clinical oncology : official journal of the American Society of Clinical Oncology vol. 38,29 (2020): 3430-3438. doi:10.1200/JCO.20.00459

When Am I at Highest Risk for Lymphedema?

- Timing of lymphedema often depends on the surgery you had for lymph node removal.
- Patients who had axillary lymph node dissection are at highest risk within the first year after surgery.
- Patients who have had sentinel lymph node biopsy are at highest risk later on, and can often develop lymphedema 3-4 years post-surgery.
- Lymphedema can occur at any time, however, most patients who develop lymphedema do so within the first 5 years post-surgery.
- It is important to continue lymphedema screening for 5 years so we can identify lymphedema early.

How do you screen for lymphedema?



Comparison Study
Arm Order Form

Please Measure in Centimetres

C = Circumference L = Length

SHIP TO:
Attn:
Street:
City:
Province: Postal Code:
Telephone:
Fax:
E-Mail for Shipping Notification:

BILL TO:
Attn:
Street:
City:
Province: Postal Code:
Telephone:
Fax:

☐ PO #

If we have a question, whom should we contact?

Contact Phone #:

Client/Patient Fictitious Study Name :

DX ☐ 457.1 ☐ 457.0 ☐ Other

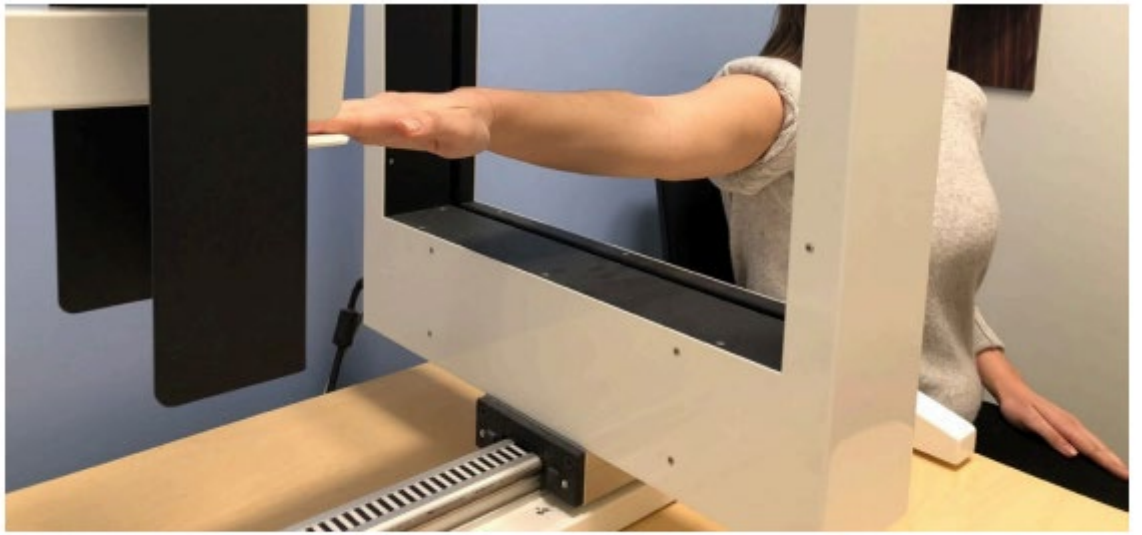
Age Height Weight

For Internal Usage:

☐ SUPINE ☐ STANDING ☐ LEFT ☐ RIGHT

QTY	UNIT	PRICE
	Garment Code: UE-	
	Zipper	
	Velcro ☐ HO-V1 ☐ HO-V2 ☐ HO-V3	
	Digit Spacers (include hand order form)	
	Pull Up Loops	
Shipping	☐ Business Standard ☐ Residential Standard	
	TOTAL:	

Comments:



A perometer is used to measure this woman's arm volume.

Ways to Measure Lymphedema

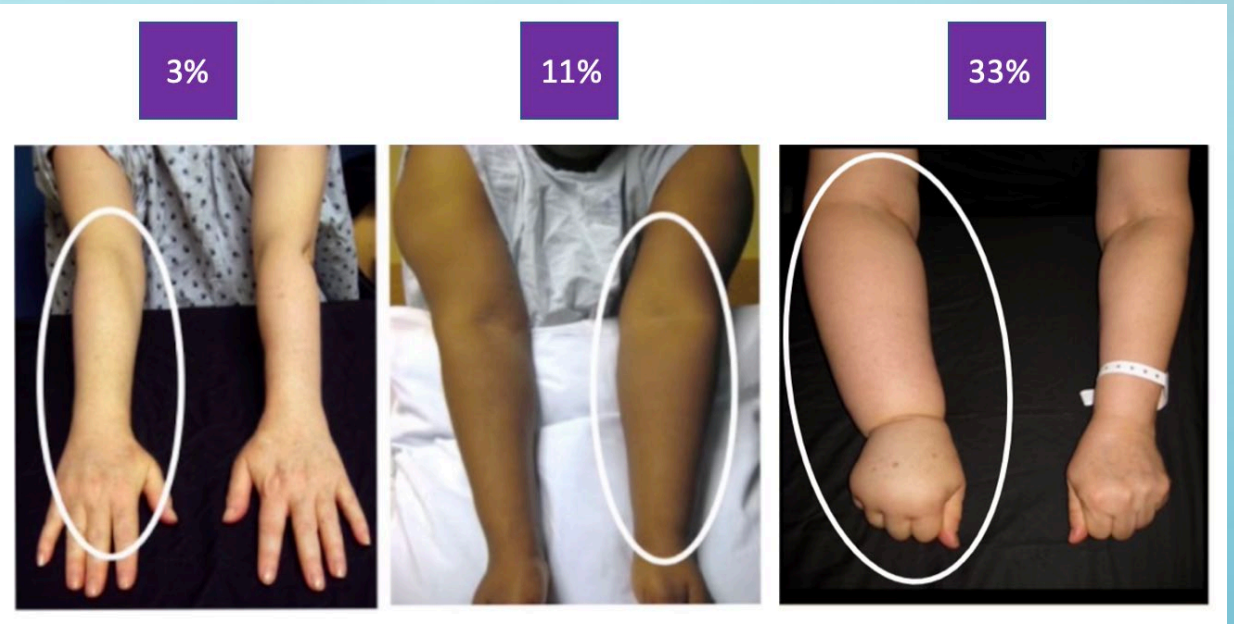
- Circumferential Measurements
  - Use a tape measure to measure the circumference of the affected limb at specific points (e.g., 5 cm intervals). Compare the measurements to the unaffected limb or a reference chart.
- Volumetric Measurements
  - Water displacement method: Submerge the affected limb in water and measure the displaced water volume.
  - Bioimpedance spectroscopy: Uses electrical currents to estimate fluid volume.
  - Tissue dielectric constant: Measures the electrical properties of tissues to assess fluid content.
- Imaging Techniques
  - Lymphoscintigraphy: Uses radioactive tracers to visualize the lymphatic system and identify blockages.
  - Computed tomography (CT) scan: Provides detailed images of the affected tissues.
- Other Methods
  - Pitting edema test: Pressing on the affected area to see if it leaves an indentation.
  - Ultrasound: Can be used to measure tissue thickness and fluid accumulation.
  - Fluorescence lymphography: Uses a fluorescent dye to highlight lymphatic channels.

What are some early signs of lymphedema?

- Swelling of the arm or hand
- Heaviness in the arm
- Tighter than usual sleeve, watch, jewelry
- Tingling in the arm, hand, digits

- Early lymphedema does not always have signs!!

Lymphedema after breast cancer treatment can occur on your **chest, breast, arm, hand or back on the side of your body that was treated for breast cancer**, also known as your affected side. If you had removal of lymph nodes from the axilla (armpit) on both sides, lymphedema can occur on either, or both sides.



Late Signs of lymphedema

- decreased range of motion
- firm, thickened skin
- dry skin, sometimes with bumps and blisters
- skin discoloration
- Poor would healing
- Recurrent infections

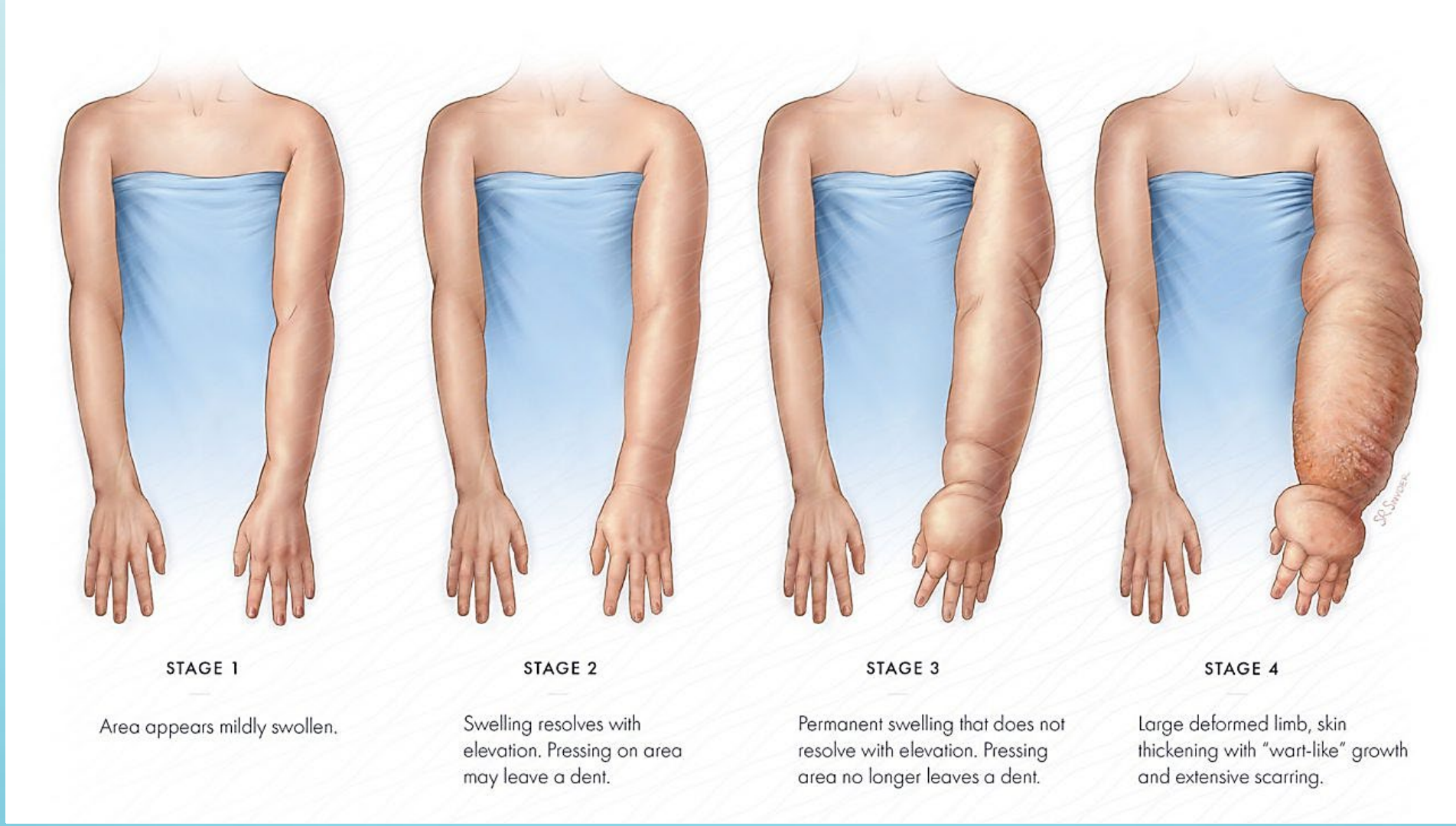
Management of Lymphedema

- Complete decongestive therapy (CDT) is the most effective treatment for lymphedema. CDT consists of two phases: active therapy and maintenance therapy.
- Active therapy sessions are performed by a licensed lymphedema specialist in a medical facility.
- The specialist will teach you how to perform these techniques yourself so you can do them at home during the maintenance phase.

Complete decongestive therapy (CDT)

- **Exercise.** Exercise helps to promote a healthy weight and encourages circulation. Your lymphedema specialist can help tailor an exercise regimen based on your needs and abilities.
- **Skin care.** Skin irritation and infection can worsen lymphedema. Gently clean the affected skin and dry thoroughly. Apply moisturizers daily to help with dryness and cracking.
- **Compression therapy.** To manage short-term swelling, wrap compression bandages firmly around affected areas. Compression garments (such as stockings or arm sleeves) are used for long-term management and prevention of swelling. Ensure garments are properly measured and fitted to your body by a specialist. Wear these daily, even during exercise, as directed by your doctor.
- **Advanced pneumatic compression (APC) therapy.** APC devices actively compress your arm or leg to mimic muscle contraction and encourage fluid movement.
- **Lymphatic drainage.** Manual lymphatic drainage is a hands-on massage technique to help drain and circulate lymphatic fluid.

Stages of BCL



What's Next?

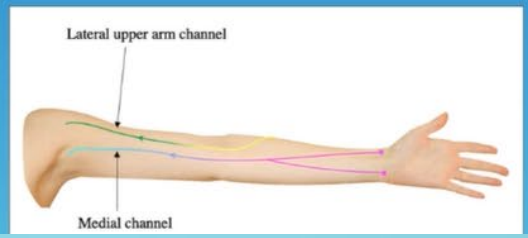
Immediate lymphatic reconstruction for the prevention of breast cancer-related lymphedema: An experience highlighting the importance of lymphatic anatomy

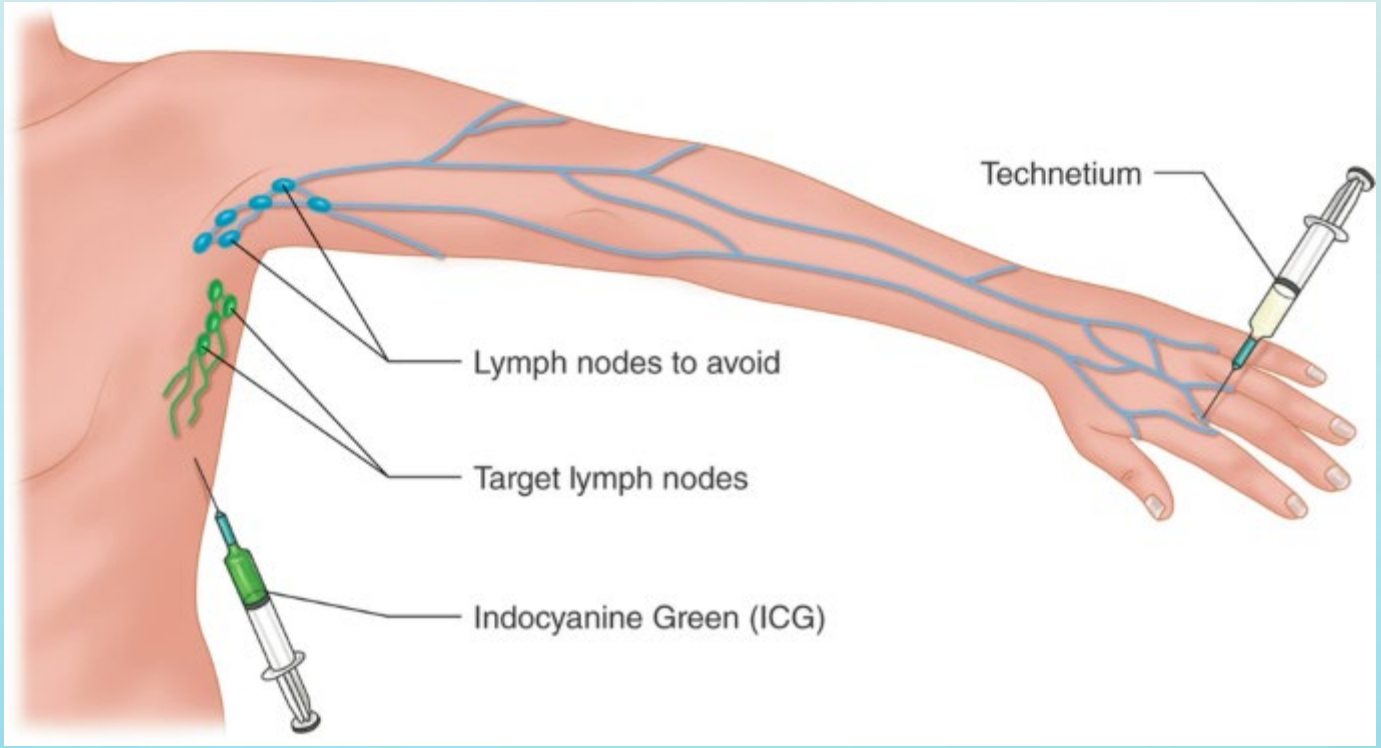
Start of Operation

- Inject dye for lymphatic channel identificaiton

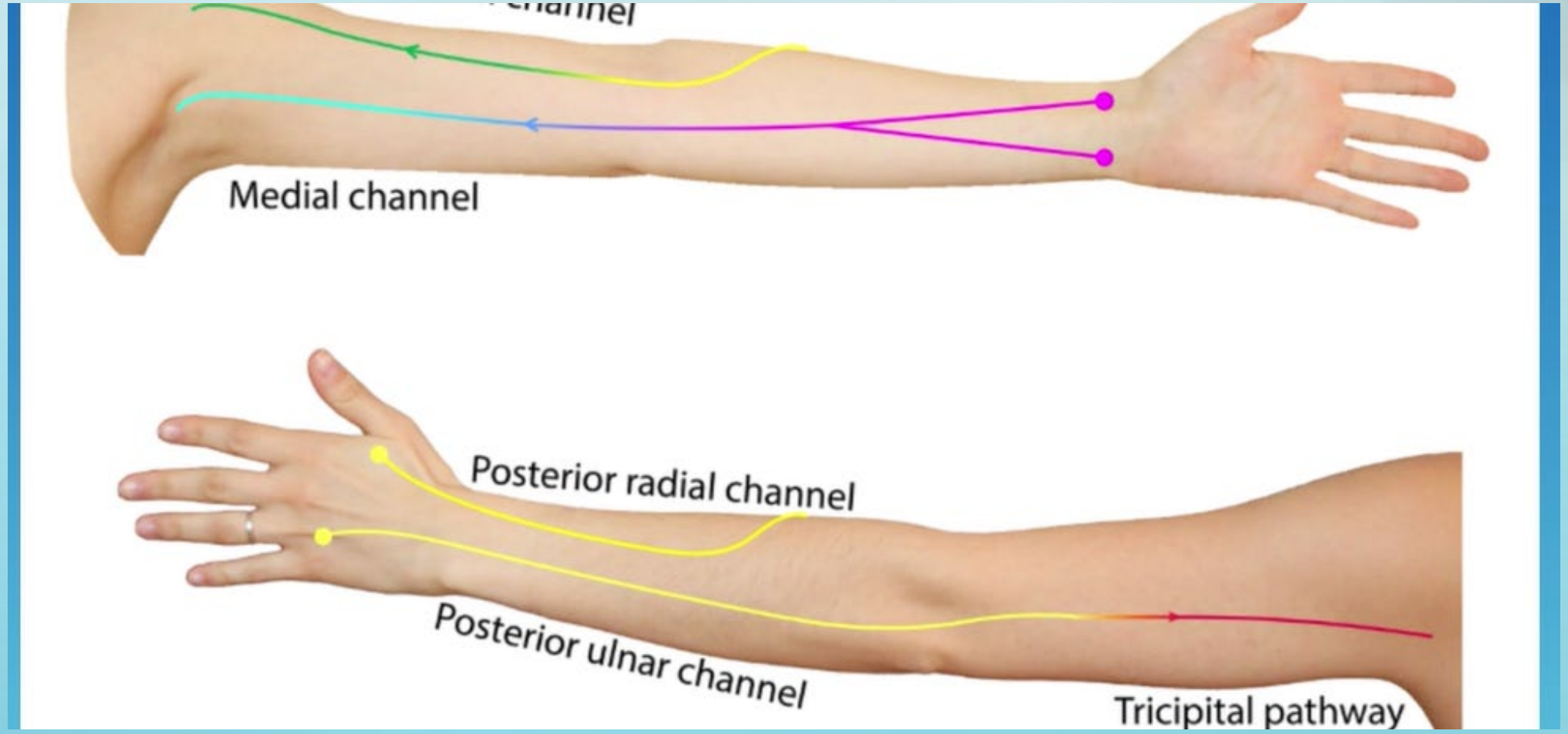
Immediate Lymphatic Reconstruction

- Identify lower extremity vein graft using
- Harvest lower extremity vein
- Identify recipient vein
- Identify transected lymphatics
- Anastomose vein graft to recipient vein using coupler
- Perform lymphovenous anastamosis
- Confirm pactency and proper flow with dye





Reverse lymphatic mapping is a surgical technique, primarily Axillary Reverse Mapping (ARM), that uses dyes or isotopes to identify and preserve lymphatic vessels and nodes that drain an extremity, distinct from those that drain a tumor site, like the breast. By injecting a tracer into the extremity and tracing its path to unique lymph nodes, surgeons can avoid removing these arm lymphatics during procedures such as sentinel lymph node biopsy or axillary lymph node dissection. This approach aims to prevent or reduce post-surgical lymphedema


Medial channel
Posterior radial channel
Posterior ulnar channel
Tricipital pathway

Can I prevent lymphedema?

While there is no medical evidence that lymphedema can be prevented, below are some recommendations for possible risk reduction:

Maintaining a healthy weight

Maintaining a healthy weight has been shown to reduce risk of lymphedema.

Avoiding cuts and infections in your affected arm

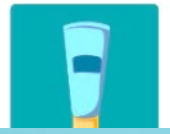
Be careful with sharp objects or edges.

Avoid sunburns by using sunscreen with SPF 30 or higher.

Wear gloves while gardening or performing housework.

Wash all cuts with soap and water.

Protect yourself from insect bites.



Regularly use a moisturizer to avoid skin cracking.

Blood pressure readings, blood draws, injections, tests and infusions

There is NO EVIDENCE that these will cause lymphedema. If needed, it is safe to have these performed in either arm. However, your preferences on use/selection of arm for these tests should be respected.

Research shows that you should **avoid blood draws and blood pressure** in the arm only **if you have been diagnosed with lymphedema** or have a history of lymphedema in that arm.

Exercise

There is strong evidence that exercise does not cause lymphedema and does not worsen lymphedema for patients who have been diagnosed with it.

Airplane travel

If you have not been diagnosed with lymphedema, **there is NO EVIDENCE that you need to wear a compression sleeve while traveling for prevention.**

Stretch your arm often during and before your flight.

Saunas and Hot tubs

There is no medical literature that shows hot tubs cause lymphedema.

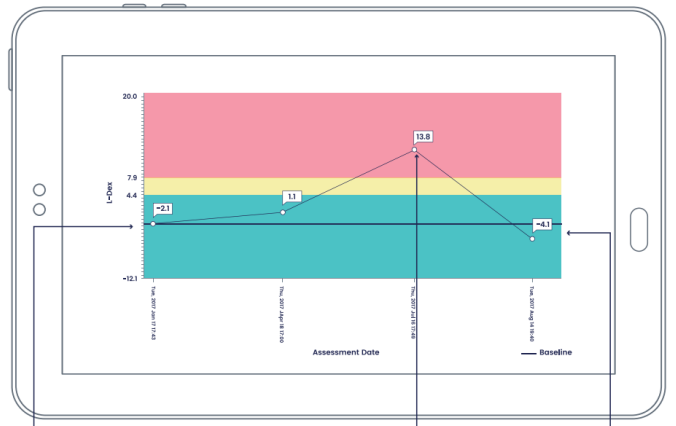
One study suggested that saunas may play a role in the development of lymphedema. If you would like to use a sauna, start with gradual exposure and monitor your body for swelling.

Precision in Symptom Management- Lymphedema, finally!

SOZO Digital Health Platform

L-Dex Score History

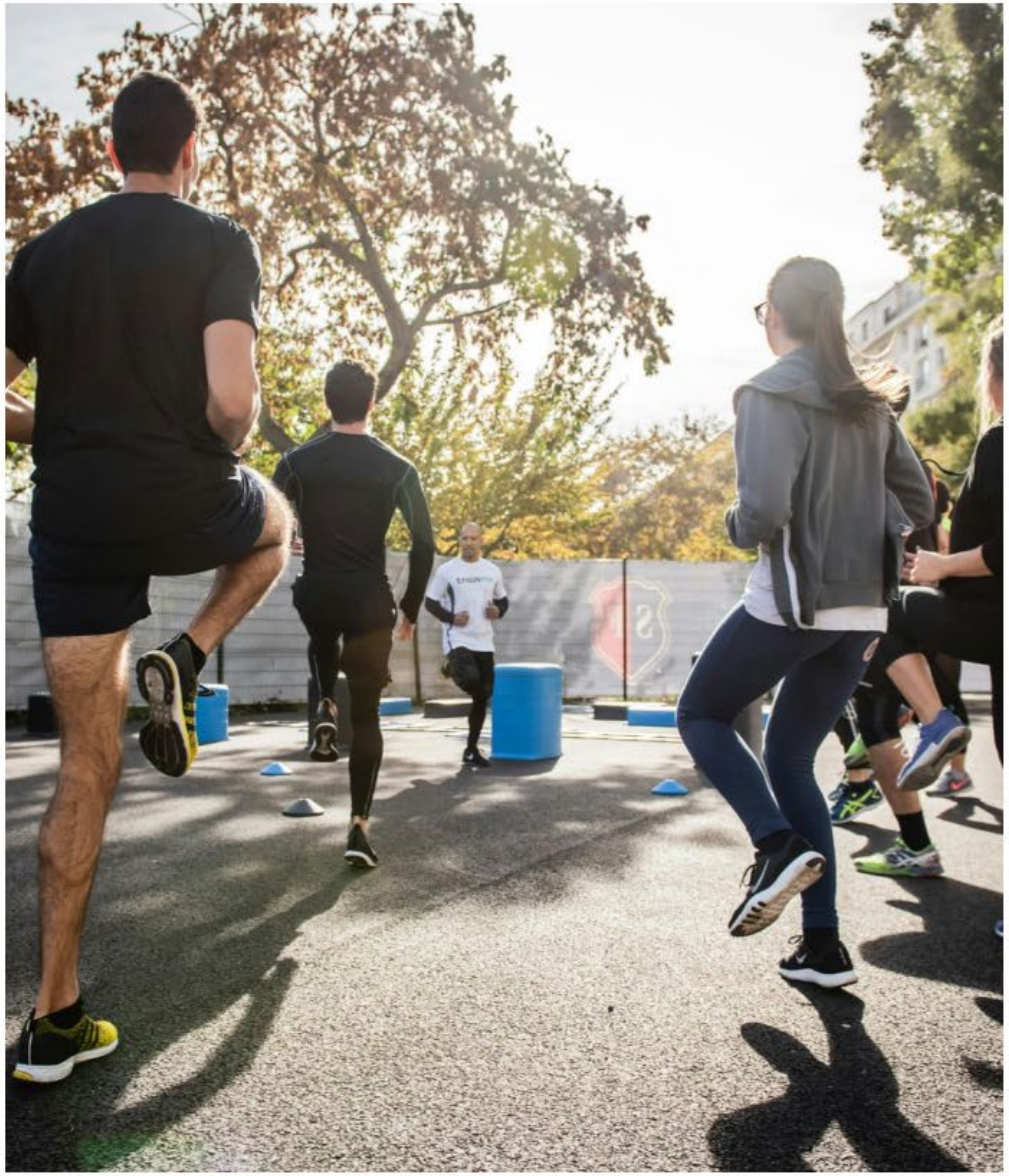
By testing your L-Dex score before and after cancer treatment, your healthcare provider can see changes that may mean you have early lymphoedema and should be treated.



L-Dex Score before cancer treatment

L-Dex score is higher and treatment begins

After treatment, L-Dex score returns to normal range



American Cancer Society Physical Activity Guidelines

150-300 minutes of moderate-intensity physical activity per week

75-150 minutes of vigorous-intensity physical activity, or a combination

Getting 300 minutes or even more will give you the most health benefits

Movement Goals

- Walk
- Dance
- Elliptical
- Stairs
- Hiking
- Bike
- Swimming
- Pickleball

- Weights
- Resistance Bands
- Yoga
- Body Weight Resistance
- Sit to Stand

- Stand up
- Stand up
- Stand up
- Stand up
- Stand up
- Stand up
- Stand up

stillrisefarms

stillrisefarms Another huge thank you to @unite4her and your amazing partnership with us at Still Rise Farms.

Thank you for sharing your wellness program and providing education and integrative therapies to the breast cancer and ovarian cancer communities! We appreciate your support and the shared love of integrative wellness!

SRF #StillRiseFarms #Unite4Her #WellnessProgram #WellnessDay #IntegrativeTherapy #HolisticHealth #HolisticHealing #MindBodySoul #FoodAsMedicine #Partnership #BreastCancer #OvarianCancer #WellnessForAll

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