

OUR JOURNEY of HOPE®

Managing and treating  
LYMPHEDEMA

Lymphedema is a chronic condition that impacts a number of cancer patients, especially those who have lymph nodes removed or damaged as part of their treatment. While lymphedema can be painful, even debilitating in some cases, the condition can be managed, prevented and, in some cases, reversed.

WHAT IS LYMPHEDEMA

- ▶ **Lymphedema is swelling that results from excess buildup of fluid** under the skin, most often in the arms and/or legs.
- ▶ The **swelling is most commonly caused by the removal of or damage to the lymph nodes**, creating a blockage that prevents fluid from draining sufficiently.
- ▶ The **greater the number of lymph nodes affected**, the higher the risk for developing lymphedema.

The condition can be caused by:

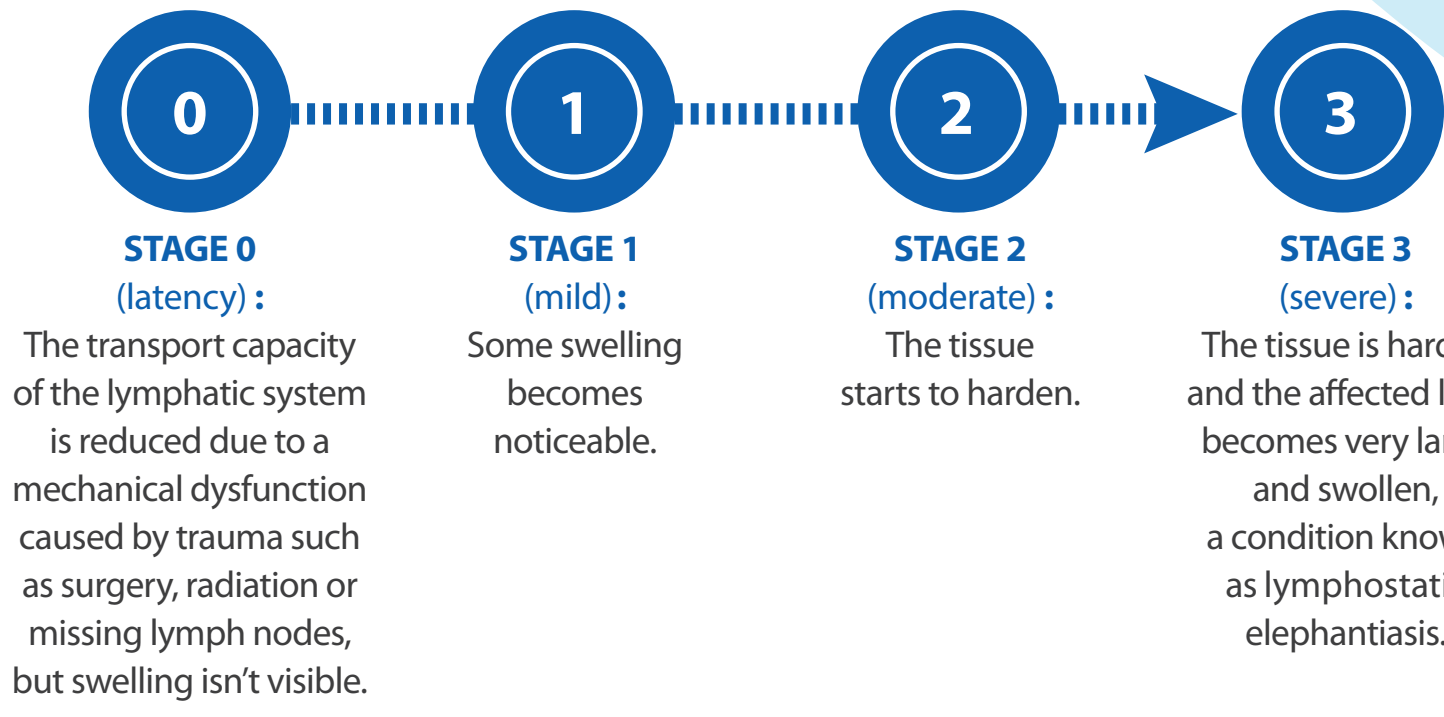
- Cancer tumors or lesions that cause **blockages of the lymph system**
  - **Surgery and/or radiation therapy** to treat cancer
  - **Recurrence or spread of a tumor** to the lymph nodes
- **Infection and/or injury** to the lymphatic vessels
  - **Inflammation** or scarring
  - **Temporary loss** of lymphatic function
  - **Blood clot** blocking a vein

Who does lymphedema affect?

- ▶ The condition is **most commonly associated with breast cancer patients**, since the surgical removal of lymph nodes and the use of radiation therapy are common treatments to prevent breast cancer from spreading to nodes under the arm.
- ▶ But lymph nodes are also found in other parts of the body, such as the neck, abdomen and groin. That's why **lymphedema affects both men and women** and can result from treatment for other cancers, such as:
  - Prostate cancer
  - Lymphoma
  - Head and neck cancers
  - Gynecological cancers
  - Melanoma

Stages of progression

Lymphedema occurs in four stages, the last three of which are active:



PREVENTION & TREATMENT

With early diagnosis and proper care and treatment, lymphedema may be prevented or controlled, and with surgical options available to some patients, possibly even reversed.

**PREVENTING LYMPHEDEMA:**

If a cancer patient is deemed at risk for lymphedema, a number of options may be recommended to keep the condition at bay, including:

- **A sentinel lymph node biopsy** prior to surgery to identify lymph nodes for removal, while helping to preserve remaining lymph nodes
- **Gentle range-of-motion exercises**, massage, skin care, light exercises and education techniques to stimulate the lymphatic system
- **Compression bandages, pumps or garments** (e.g., sleeves, stockings) to help prevent additional fluid from accumulating in the tissue

**MANAGING LYMPHEDEMA:**

Once signs of lymphedema appear, steps can be taken to manage the symptoms and prevent them from progressing. Options include:

- **Compression bandages, pumps or garments** (e.g., sleeves, stockings) to help prevent additional fluid from accumulating in the tissue
- **Lymph drainage therapy:** This specialized massage technique is designed to activate the pumping action of your lymphatic system. The pumping action reduces and, in some cases, prevents fluid buildup.
- **Le duc manual lymph drainage:** This option employs a combination of manual lymph drainage with multi-layer bandaging and a compression pump, to clear excess lymphatic fluids from the body by activating the pumping action of the lymphatic system.

SURGICAL OPTIONS:

After non-surgical therapeutic approaches have been exhausted, two state-of-the-art surgical options may also be available to treat lymphedema.

- **Vascularized lymph node transfer surgery:** This is an intricate microsurgical procedure used to treat patients with advanced lymphedema affecting the skin tissue in the arms or legs. Plastic surgeons transfer working lymph nodes from another part of the body, typically the upper groin or lower abdomen, to the damaged site. The existing blood vessels supplying the nodes are then divided and connected at the site the lymph nodes are needed. Reverse lymphatic mapping is used to reduce the chance of lymphedema occurring in the areas where lymph nodes were harvested.
- **Lymphaticovenular bypass surgery:** This is an intricate super-microsurgical procedure used to treat patients with mild to moderate lymphedema. The plastic surgeons perform the surgery by locating damaged lymphatic vessels directly beneath the skin in the affected area of the body. Then the surgeons redirect, or shunt, fluid from damaged lymphatic vessels to neighboring tiny veins called "venules," by connecting the working segments of the lymphatic vessels to the venules to allow excess fluid to drain into the bloodstream and reduce pressure in the affected area.

