Lymphedema is a chronic condition that impacts a number of cancer patients, especially those who have had 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 leakage of fluid under the skin, most often in the arms and 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 blockage of the lymph system.
- Surgery and/or radiation therapy to treat cancer.
- Infection and/or spread of a tumor to the lymph nodes.

Who does lymphedema affect?
- Lymphedema is a condition most commonly associated with breast cancer patients, though the surgical removal or damage to the lymph nodes from treatments to remove the cancer can cause lymphedema. 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 treatments for other cancers, such as:
  - Prostate cancer
  - Gastrointestinal cancer
  - Head and neck cancers
  - Lung cancer
  - Melanoma
  - Neck cancers
  - Breast cancer
  - Colon cancer
  - Chest or leg cancers

Lymphedema can affect anyone of any age or gender. It can be caused by trauma such as surgery, radiation therapy or muscle damage, but swelling isn’t visible.

Stages of progression

<table>
<thead>
<tr>
<th>stage</th>
<th>description</th>
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<td>0</td>
<td>begins with signs of lymphedema affecting the lymph nodes but swelling isn’t visible.</td>
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<tr>
<td>1</td>
<td>mild: noticeable. The tissue starts to harden.</td>
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<td>2</td>
<td>moderate: the tissue becomes more noticeable. Swelling, most often in the arms or legs, can result in tight-fitting clothes or shoes.</td>
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<td>3</td>
<td>severe: persistent tightness or swelling, most often in the fingers, shoulders, chest or hips.</td>
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<td>4</td>
<td>critical: lymphedema affects the entire area of the lymph nodes affected.</td>
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Symptoms
- Persistent swelling in the skin on affected limbs.
- A feeling of tightness or stiffness in the skin.
- Swelling, most often in the arms or legs, fingers, shoulders, chest or hips.
- Decreased muscle movement, flexibility is reduced.
- A sense of heaviness in the arms or legs.
- Untreated lymphedema can lead to decreased function and mobility in the affected area, skin breakdown, infection and other complications.

PREVENTION & TREATMENT

Prevention
- Radiation therapy or chemotherapy can cause lymphedema. But lymph nodes are also found in other parts of the body, such as the neck, abdomen and groin.

MANAGING LYMPHEDEMA
- Once a patient has lymphedema appear, most can be treated with lymphedema and prevent them from progressing. Options include:
  - Compression bandages, pumps or garments (e.g., sleeves, garments) to help prevent additional fluid from accumulating in the tissue.
  - Gentle range of motion exercises and education techniques to stimulate the lymphatic system.
  - Lymphaticovenular bypass surgery: This is an intricate microsurgical procedure used to treat patients with minimal to moderate lymphedema.

Surgeons perform the surgery by connecting damaged lymphatic vessels directly beneath the skin in the affected area of the body.

Surgical operations:
- Lymphaticovenous bypass surgery: This is an intricate microsurgical procedure used to treat patients with minimal to moderate lymphedema.
- Lymphovascularovenous bypass surgery: This is a minimally invasive microsurgical procedure used to treat patients with moderate to severe lymphedema.

Phleboenteric bypass surgery: The most common surgical options to include.

SURGICAL OPTIONS:
After extensive surgical approaches have been evaluated, two types of the art surgical options may also be available to treat lymphedema.

Managing and treating LYMPHEDEMA