

Medical News

Public Affairs and Media Relations

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SURGERY CAN ELIMINATE LYMPHATIC ‘TRAFFIC JAM’ CAUSING PAINFUL SWELLING POST CANCER TREATMENT

Novel supermicrosurgery techniques can prevent or significantly improve chronic lymphedema

COLUMBUS — An estimated 3 to 5 million Americans — and a staggering 140 to 200 million people worldwide — will experience chronic lymphedema, uncomfortable and oftentimes mobility limiting swelling of the arms, legs, hands or feet that occurs when a large number of lymph nodes are removed as part of cancer treatment.

Lymphedema is most common in breast cancer patients who have been treated with a combination of surgery, chemotherapy and radiation but can occur in all forms of cancer requiring full lymph node removal or treatment. The severity and persistence of the condition varies based on each patient’s specific situation.

“This is a huge clinical issue that has serious quality-of-life implications for cancers survivors. Forty to 60 percent of all cancer patients who have full lymph node removal are at risk of developing lymphedema. In breast cancer specifically, up to 40 percent of survivors will develop the condition,” says [Roman Skoracki](#), MD, division chief of oncologic plastic surgery at The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute ([OSUCCC – James](#)).

“Now we can offer patients a surgical approach to better manage their lymphedema and – in some cases – prevent it from occurring entirely.”

Understanding Lymphedema

There are hundreds of lymph nodes located deep inside the human body. Lymph nodes are the collection sites for protein-rich lymphatic fluid from tiny vessels throughout the body transported via the lymphatic system. The nodes act as an important part of the immune system and return the excess fluid into the bloodstream.

After a cancerous tumor is removed, one or more groups of lymph nodes adjacent to the tumor are removed (called lymph node dissection) to confirm the extent of disease and determine whether chemotherapy or radiation treatments are necessary. If too many lymph fluid channels are removed, the fluid downstream becomes trapped and has nowhere to go, leading to the development of lymphedema.

“In general, the more lymph nodes that are removed the more likely a patient is to develop severe lymphedema,” says Skoracki. “Not only can this limit a person’s mobility, it can also be painful and lead to infection. Surgery to reopen or reestablish channels to allow fluid to flow freely can reduce lymphedema swelling.”

Traditionally, lymphedema has been managed with a combination of physical therapy and compression bandaging/garments, but once the condition occurs this approach cannot eliminate it entirely.

Surgery to Reduce and Prevent Lymphedema

Now cancer patients who are at an increased risk for lymphedema have two new surgical options shown to improve lymphedema symptoms in more than 80 percent of patients.

Skoracki is among a handful of surgeons in the United States trained to perform two different lymphedema-relieving microsurgery techniques: lymphovenous bypass and vascularized lymph node transfer.

Both procedures involve re-routing lymphatic channels to allow for proper draining of fluids. In the lymphovenous bypass, Skoracki uses supermicrosurgical techniques to create shunts (tiny tubes) between the lymphatic channels and very small blood vessels to re-direct the flow of lymph fluids around the affected area. In the transfer procedure, lymph nodes are carefully selected from a different area of the body and then transplanted into the former cancer site to re-establish a channel for lymph fluid to pass without causing a fluid “traffic jam” elsewhere in the body.

“This excess fluid can make a person’s limbs feel heavy and cause a physical as well as a psychological burden for the patient that is very troubling,” adds Skoracki. “After lymphedema-relieving surgery, more than 60 percent of patients will have a significant improvement in their symptoms as well in more than 50 percent of patients we are able to measure a very significant decrease in the size of their affected limb.”

To date, Skoracki is the only surgeon in the United States performing certain lymph node transfer procedures for the prevention of lymphedema as well as management of the condition.

Breast Cancer Care at The James

Based at The [Stefanie Spielman Comprehensive Breast Center](#), The James multidisciplinary breast cancer team is comprised of breast surgical oncologists, medical oncologists, radiologists and radiation oncologists as well as genetic counselors, oncology nurses, plastic/reconstructive surgeons and physical therapists that all specialize in the treatment of breast cancer. The OSUCCC – James’s also [oncology rehabilitation team](#) offers testing to proactively detect when a patient is in early stage lymphedema before symptoms occur.

To learn more about breast cancer care at The James, visit cancer.osu.edu or call 1-800-293-5066.

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About the OSUCCC – James

The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute strives to create a cancer-free world by integrating scientific research with excellence in education and patient-centered care, a strategy that leads to better methods of prevention, detection and treatment. Ohio State is one of only 45 National Cancer Institute-designated Comprehensive Cancer Centers and one of only four centers funded by the NCI to conduct both phase I and phase II clinical trials on novel anticancer drugs. As the cancer program’s 306-bed adult patient-care component, The James is one of the top cancer hospitals in the nation as ranked by *U.S. News & World Report* and has achieved Magnet designation, the highest honor an organization can receive for quality patient care and professional nursing practice. At 21 floors with more than 1.1 million square feet, The James is a transformational facility that fosters collaboration and integration of cancer research and clinical cancer care. For more information, visit cancer.osu.edu.

