



Cancer-Fighting Medical Device Helps Military Worker Battle the Disease

In the Fall of 2000, Diane Miesse, a buyer for the U.S. Military living in Columbus Ohio, began to experience back pain. After no relief with conservative management, her doctor ordered a CAT scan. The results surprised the medical team.

"They found a tumor the size of a head," said Diane. "My doctor told me I was lucky the tumor was discovered."

The 46-year-old quickly underwent a series of tests. She was diagnosed with liposarcoma, a malignant tumor that arises in fat cells in deep soft tissue. Liposarcomas are typically large bulky tumors which tend to have multiple smaller satellites extending beyond the confines of the main tumor.

Initial Treatment Plan Failed to Prevent Cancer from Recurring

"The tumor was removed, along with my left kidney and part of my colon," Diane explained. Considering the aggressive surgical resection of her tumor, the physicians elected to follow her carefully after surgery.

In 2005, a routine check up at the oncologist revealed the cancer had recurred. Doctors told Diane a large tumor had returned in the same area where the previous tumor was removed.

"I didn't have any symptoms at all," Diane revealed. "So of course, I was surprised and devastated by the news."

Turning to Ohio State University's Comprehensive Cancer Center

Diane's doctor contacted the Ohio State University Comprehensive Cancer Center – James Cancer Hospital and Solove Research Institute in Columbus, Ohio. The world-class research and healthcare enterprise is focused on the prevention, detection, diagnosis and treatment of cancer for patients in Ohio and beyond. It is one of 39 Comprehensive Cancer Centers in the country, designated by the National Cancer Institute (NCI). The NCI is the federal government's principal agency for research, training, health information dissemination, and other programs with respect to the cause, diagnosis, prevention, and treatment of cancer.

At the time, The James was only one of nine hospitals in the United States that offered intraoperative electron-beam radiation therapy (IOERT). IOERT is the application of electron radiation directly to the residual tumor or tumor bed during cancer surgery. IOERT has been called "precision radiotherapy," as the physician has direct visualization of the tumor, can exclude normal tissue from the field and can also protect critical structures within the field.

Diane was referred to Dr. Michael Walker, a surgical oncologist, and Dr. John C. Grecula, a radiation oncologist at The James. The doctors worked closely with Diane to develop a treatment plan to eradicate the cancer. Dr. Grecula explained that he would use a cancer-fighting device called Mobetron during the surgery to administer the IOERT treatment to target any remaining cancer cells in the area.

Mobetron is the first OR-ready, fully portable, self-shielding electron-beam linear accelerator designed for use in any operating room. With Mobetron, radiation and surgical oncologists can pinpoint the exact area that requires radiation and immediately deliver high doses directly to the affected tissue during cancer surgery. Hospitals can wheel Mobetron between existing operating

rooms without investing in costly renovations to accommodate traditional radiation therapy devices. Key Mobetron benefits include: better local tumor control, shorter treatment cycles, fewer side effects and increased survival rates.

“The Mobetron allows us much more flexibility in the delivery of intraoperative electron beam radiotherapy. In most cases, the Mobetron (portable linear accelerator) can be moved over the patient rather than moving the patient to the linear accelerator. This not only speeds up the delivery process but also increases the safety for the patient. Also the beam collimator (radiation applicator) is aligned to the linear accelerator utilizing a laser system so the sterile environment of the operative field is maintained,” said Dr. Grecula.

Use of Mobetron and IOERT Treatment Yields Positive Results

Diane quickly underwent surgery to remove the tumor. Again, part of her colon was extracted. But this time, doctors used the Mobetron to administer the IOERT treatment. Following the procedure, Diane also underwent 25 external radiation treatments.

“I was so thankful that my doctor was aware of IOERT treatment and that the hospital was in my own backyard so I didn’t have to travel far.”

In April 2006, a liposarcoma was found in Diane’s left pelvis. Again, Dr. Walker removed the tumor and Dr. Grecula used the Mobetron during the surgery. Diane followed up with a chemotherapy bath at the time of her surgery and external beam radiation therapy. The treatment was a success, and Diane is now living cancer-free.

“It’s important to recognize that the recurrence did not happen where the IOERT treatment was applied,” Diane explained.

Today, at 53, Diane is retired. “I want to emphasize that prayer and faith played a big part in my recovery, as well as friends, relatives, and my church. I could not have gotten through this without them,” said Diane. “I am so grateful for the care I received from my doctors, and I feel fortunate that I was able to take advantage of the latest technology in cancer treatment.”

As for her advice to other cancer patients, “Make sure you go to all your doctor appointments and continue going for follow ups.”

For more information on IntraOp Medical Corporation and the company’s flagship product, Mobetron, please visit: www.intraopmedical.com