

Protura Robotic Patient Positioning System Aids Successful Treatment of Eye Cancer

Precise positioning provided by the Protura system enabled a patient to undergo IMRT that removed her cancer without damaging her eye.

Imagine being told that complete removal of your left eye was required to stop your spreading cancer. Kathy Kelly of New Milford, Conn., was told just that. An initial biopsy confirmed cancer of her eyelid. In April 2011, surgery revealed Kelly had squamous cell carcinoma, and the disease was not completely removed.

Kelly's surgeon recommended complete removal of all tissue surrounding the affected area — including her left eye — to ensure removal of the cancer. Kelly wanted to save her eye, so she consulted Joseph Bargellini, M.D., a radiation oncologist at the New Milford Hospital Regional Cancer Center, to review her treatment options. Bargellini suggested radiation therapy to the tissues surrounding the eye as an alternative to complete removal.

The cancer center at New Milford Hospital is equipped with CIVCO Medical Solutions' Protura system, a specialized robotic patient positioning couch that allows for a degree of treatment accuracy not ordinarily available at traditional treatment centers. "When there are rotational adjustments, there is no other way to accomplish this than with Protura," Bargellini said. "We have treated two eye cancer patients, and for both we used the Protura robotic couch for the greatest positional accuracy."

Kelly's treatment plan consisted of a course of 22 radiation sessions. She was treated with a 7-field intensity-modulated radiation therapy (IMRT) treatment plan and daily image-guided radiotherapy (IGRT) using the Protura system for precise, 6-D robotic positioning



The high-level precision afforded by the Protura Robotic Patient Positioning System made all the difference in cancer treatment for patient Kathy Kelly, shown with her doctor, Joseph Bargellini.

of the target. "I was able to be close to home for the five weeks of treatment," Kelly said, "and the staff at New Milford took great care of me."

The Protura system is the ideal

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The Protura Robotic Patient Positioning System fully enables IGRT by providing sub-millimeter corrections with 6 degrees of freedom.

solution for delivering more accurate and efficient radiation treatments. The robotic couch fully enables IGRT by providing submillimeter corrections with 6 degrees of freedom,

meaning patient positioning can be corrected in all directions to ensure precise dose delivery to the target area. This increases the ability to optimize dosage while sparing the surrounding healthy tissue.

"We could not reach the level of accuracy required for stereotactic body radiation therapy (SBRT) patients without using our Protura system," Bargellini said. "It is especially important in stereotactic treatments, where the highest level of

positional accuracy is needed due to tight margins and proximity of critical structures. Because of the ability to make rotational adjustments in patient positioning, the system allows for treatment of more than one lesion simultaneously, which is easier for the patient as well."

The high-level precision afforded by the Protura system made all of the difference in Kelly's case. "We were able to treat her disease and completely remove the cancer," Bargellini said. "Most importantly, her left eye was saved, and her vision to date has not been changed by the radiation."

"So far, things are good, and my scans show no evidence of cancer," Kelly said. "The treatment almost seemed too easy and effortless on my part for such a great result."

Case study supplied by CIVCO Medical Solutions

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