As radiation treatments have advanced in complexity, cancer treatment facilities have faced greater demands for accuracy and precision in treatment. Northwestern Lake Forest Hospital recently installed CIVCO Medical Solutions’ Protura Robotic Patient Positioning System at its Center for Advanced Radiation Medicine in Lake Forest, Ill. The Protura system provides highly precise and accurate positioning of the patient for image-guided radiotherapy (IGRT), stereotactic body radiotherapy (SBRT) and other treatment types, offering advantages appreciated by medical physicists, radiation therapists and radiation oncologists.

As soon as they began using the Protura system for all their SBRT cases, the radiation therapy staff at Northwestern Lake Forest Hospital noticed a difference in their treatment quality. “There’s no question that being able to bring 6DOF corrections into the alignment process helps make sure the patients are positioned correctly,” said Marc Posner, M.D., radiation oncologist at Northwestern Lake Forest Hospital. “The perfect example of this is one of our recent lung SBRT cases,” he said. “We set up the patient as usual, with everything indexed correctly, and he still had a clear Z-axis rotation. Because we had Protura, we scanned him, calculated a 2-degree rotation and easily adjusted his position with Protura. When we rescanned him, the setup was accurate to less than 0.1 mm and 0.1 degree in all directions. That’s perfect positioning, and it ensured that he received the correct treatment.”

**Improved Workflow**

In addition to the increased clinical confidence Protura provides, Northwestern Lake Forest Hospital has also seen an increase in workflow efficiencies. “Before we had the Protura system, redoing the setup could double or triple set-up time,” Posner said. “Now, we have no compromise in treatment, and we don’t have to redo patient setup—we just make the needed shifts using the Protura.

“This dramatically cuts down the time patients are on the table — 10 minutes is a far cry from an hour,” Posner continued. “The decreased set-up time means faster throughput for us.” Posner said that this reduction in time on the table also contributes to an improvement in patient comfort.

“Protura was very well received by our staff, and it’s extremely easy to use,” Posner said. “From our staff’s perspective, it was a great boon. The Protura system speeds up the whole set-up process, allowing us to treat these cases during the day rather than just at the end of our day.”

Overall, Protura has been a welcomed addition at Northwestern Lake Forest Hospital. “The table and computer program were a very easy adjustment to make within our department, and we have noticed how much better cone beam computed tomography (CBCT) scans match with the ability to use 6DOF,” said Melissa Van Nuland, clinical coordinator at Northwestern Lake Forest Hospital. “All the therapists find the CIVCO immobilization devices very easy to use on the initial set-up day, as well as on a daily basis. We all feel the devices are perceived much better by the patients as well.”

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