

Rapid-arc treatment *Oncologist finds quicker, more effective and safer way to combat prostate cancer*

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When Cancer Treatment Services Arizona opened in Casa Grande a little more than a year ago, it had the latest equipment as well as doctors and staff members trained in the latest diagnostic and treatment modalities.



Dr. Ajay Bhatnagar checks a CAT-scan image of a patient's prostate prior to undergoing RapidArc radiation treatment at Cancer Treatment Services in Casa Grande.

Nevertheless, some six months later Dr. Ajay Bhatnagar, a radiation oncologist, made the decision to upgrade to RapidArc, which is the latest technology from Varian Medical Systems. It promises unprecedented radiation accuracy in a fraction of the time - with few side effects.

In use for a short time, RapidArc has reported a dramatic effect on the treatment of prostate cancer. According to Bhatnagar, traditional radiation treatments for prostate cancer involve multiple "fields," or areas of the prostate to be exposed to radiation. That requires 20 to 30 minutes for all the areas to receive the treatment, and it's not uncommon to have about seven to nine fields when treating prostate cancer, he said.

"Using RapidArc technology," Bhatnagar said, "we now can do it in one continuous arc that dramatically minimizes the time down to 90 seconds and maximizes precision. The one continuous arc replaces having to reposition the radiation unit to cover those seven to nine fields. As the unit is rotating to each angle, it's constantly changing the shape of the beam to conform to the shape of the area of the prostate that needs to receive radiation, while at the same time sparing the surrounding critical tissue."

The treatment plan starts with a CT simulation, which is a three-dimensional picture of the pelvis area, to gain a better understanding of the relationship of the prostate with the body structure.

"Nevertheless, even with this locked position, there is organ motion," he said. "The prostate itself can move; therefore, this rapid-arc treatment, by delivering radiation in 90 seconds, minimizes the opportunity for organ motion, which enhances the precision of the radiation treatment.

"The key is our ability to spare the surrounding critical structure, since there's very limited space between the rectum, prostate and bladder."

Bhatnagar said that with this new technology, radiologists are able to deliver a higher dose of radiation with fewer side effects, and that allows higher cure rates.

In the case of an enlarged prostate, Bhatnagar explained that some men will get medical or surgical treatment for obstructive symptoms. RapidArc treats enlarged prostates as well as cancer. Those men tend to have more urinary side effects, but once the treatment is completed, the symptoms withdraw fairly quickly.

"There is some irritation to the rectum and bladder during the radiation treatment," Bhatnagar said, "but we are now noticing that with RapidArc that it is significantly reduced. In fact, some men aren't even noticing any side effects during the treatment, but most men did feel some symptoms that they find quite tolerable and don't even require any medication."

Casa Grande resident Ulyssus "Slim" Sharp recently concluded his series of treatments for prostate cancer at Cancer Treatment Services and agreed to talk about his experiences.

"There were no side effects after my treatments," he said. "I would go to work every day. I had 45 days of treatment, and I didn't miss one day of work. It was really a very easy-going process. At one time I did have a symptom of itching in the rectum area, and I was given a salve for that. I used it a couple of times, and that was it.

"The treatment goes so well. You're in here for a minimum of three or four minutes from the time that you take your shoes off, get on the table, get treated and head out the door."

According to Bhatnagar, Sharp's 45 treatments over nine weeks are pretty much the standard for the majority of his prostate cancer patients. Follow-up routines consist of periodic checkups and PSA tests.

"We can adopt this technology for other tumor sites, such as head and neck and lung cancer, as well as other pelvic tumors, such as rectal cancer," he said. "Again, it goes back to the concept of this technology maximizing the precision of the radiation treatment, thereby leading to less side effects.

"We are the only facility in Arizona that has this technology. The closest other facility is in California. We basically became a pioneer for this in our state.

"We have visitors coming in every week just to see this Rapid-Arc technology. In early January, the doctors from Mayo Clinic came here as well as people from the University of Arizona. We even have patients coming here from Tucson. Our organization has visions and a mission to be able to provide the latest technology in the field in order to provide the best cancer care."