

## Image-guided therapy sets sights on cancer

By **STEPHANIE EARLS**  
Staff writer

Clark Hayward's to-do list reads like an Outward Bound syllabus: hiking, mountain climbing, kayaking, whitewater rafting, biking and running.

"I'm pretty health conscious," concedes the 53-year-old father of three, who lives in Greenfield Center. "I get bored easily."

Maintaining an active lifestyle means being a good body steward. For years, Hayward has undergone annual physicals, always with a clean bill of health. Until December 2004. Doctors found elevated levels of PSA — or prostate-specific antigen — in his blood. High PSAs can be a sign of prostate cancer. Further tests — and a biopsy — followed.

In February 2005, Hayward found out he did, indeed, have prostate cancer.

"I had thought that was possible, back in the deep recesses of my mind, but I was kind of shocked. I had no symptoms,"

### Clark Hayward

- **Hometown:** Greenfield Center
- **Age:** 53
- **Diagnosis:** Prostate cancer
- **Success:** Chose an advanced new, nonsurgical therapy that allowed him to keep up his active lifestyle while being treated for prostate cancer.

said Hayward, a part-time paramedic in Saratoga Springs and the director of client development for an Albany telecommunications company.

He was referred to Dr. Arun Puranik, the director of the Image-Guided Radiotherapy Treatment Program for Community Care Physicians in Latham, who gave him his options.

Surgery is traditionally the go-to alternative, with the goal of curing — or entirely removing — the prostate and thus all of the cancer. Even surgeries meant

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**CLARK HAYWARD** opted against surgery when he was diagnosed with prostate cancer. Instead, he chose a treatment that wouldn't interfere with his active lifestyle. Here, he runs in the Daketown State Forest near his home in Greenfield Center.

## THERAPY: 'This is the future of radiation'

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to spare the delicate nerves around the prostate pose a risk of side effects, such as incontinence and a loss of sexual function, however. For Hayward, surgery also would mean extended time away from his favorite activities as well.

Hayward's tests also showed the cancer had likely spread beyond the prostate. So Puranik recommended a combination of treatments using radiation — brachytherapy, the injection of radioactive seeds into the prostate, and a brand new type of technology in external beam radiation. After its FDA approval in

2004, Puranik's clinic was the first in the nation to use the advanced image-guided radiation therapy, with the Varian On-Board Imager device, which vastly enhances the precision of finding and irradiating cancerous cells.

At that time, image-guided radiation therapy was touted as "the hot new radiation oncology product" by the Trends-in-Medicine publication, which reports on pharmaceutical and technological advances and issues.

"It avoids treating the rectum and bladder, and we're able to give higher radiation doses with less complications," said Puranik. "It's much more accurate."

The machine achieves this precision by running a fresh CAT scan of the patient while on the table, prior to every treatment. This allows the exact location of the tumor to be mapped. Previous therapies relied on a

single CAT scan taken at the beginning of the course of treatment.

"With that, you don't really know what is going on inside," Puranik said. "Internal organs can shift on a day-to-day basis."

The side effects of the IGRT treatment were minimal compared to surgery, Hayward thought. In late June, 60 days after undergoing brachytherapy, he began a series of 25 external radiation treatments — five days a week, for five weeks.

Though he took it easy — no horseback riding or biking — for the first few weeks after the seeds were implanted, Hayward felt well enough to head back outdoors during the IGRT treatment.

He was warned of possible fatigue and bleeding, but says he felt virtually no side effects.

"I was pretty much, during the course of the radiation, back to a

full active schedule," said Hayward, whose blood tests, so far, indicate the cancer most likely has been eradicated. "Through this entire thing, I took, I believe, two days off from work."

Since Hayward's treatment, Puranik has seen the IGRT technology he helped introduce spread across the nation. In addition to prostate cancer, he uses it to treat head and neck cancer, brain tumors, pancreatic cancer, rectal and breast cancer.

"This is the future of radiation. Five years from now, every machine will have this technology," said Puranik, who sees patients from as far away as New Jersey. "This allows you to exactly treat what needs to be treated. It's not like shooting in the dark."

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