

The Prostate Post

Wednesday 16 February 2011

Stanford Hospital, Palo Alto, Calif.

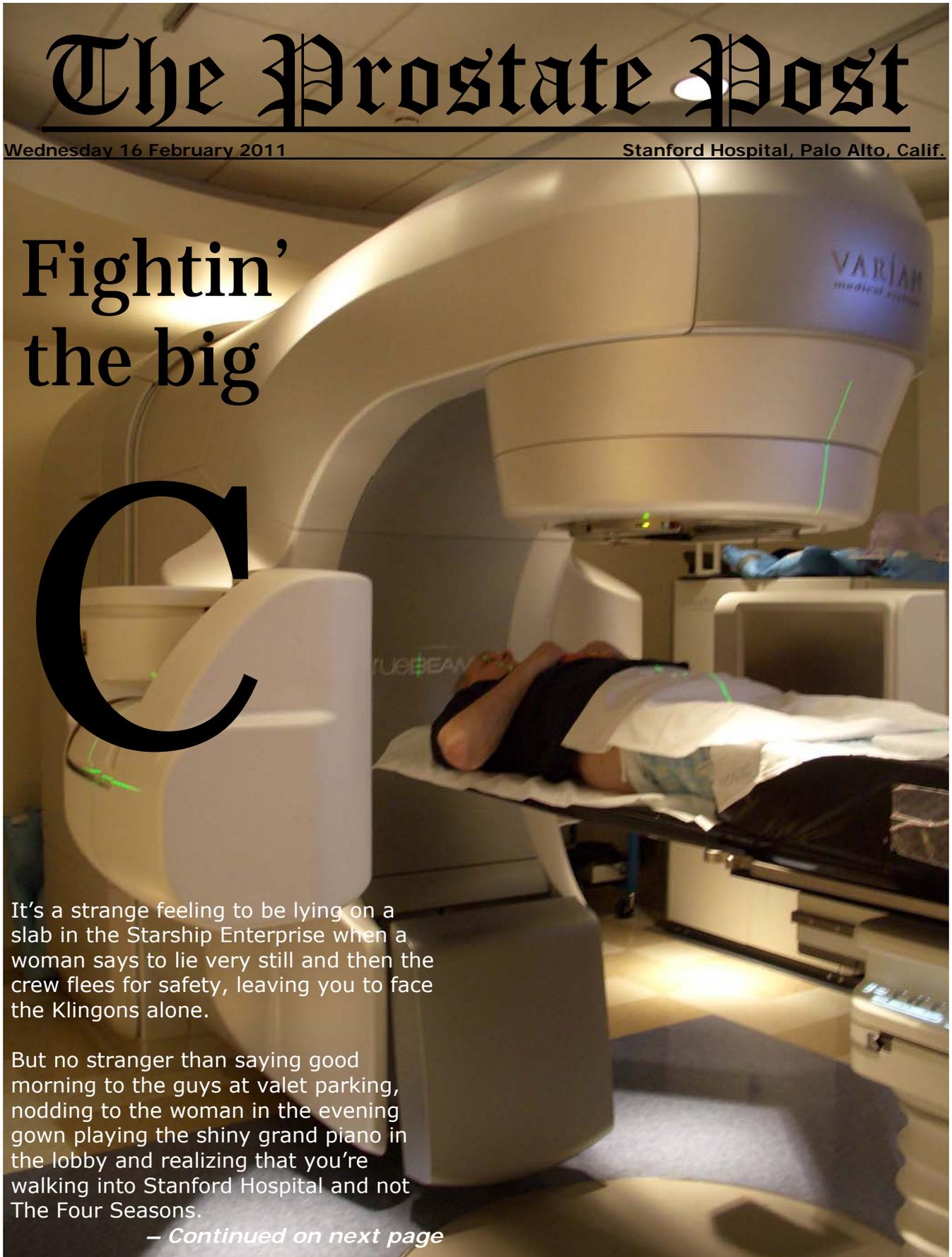
Fightin' the big

C

It's a strange feeling to be lying on a slab in the Starship Enterprise when a woman says to lie very still and then the crew flees for safety, leaving you to face the Klingons alone.

But no stranger than saying good morning to the guys at valet parking, nodding to the woman in the evening gown playing the shiny grand piano in the lobby and realizing that you're walking into Stanford Hospital and not The Four Seasons.

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Fightin' the big C



"Young Frankenstein," 1974. Gene Wilder and Peter Boyle.

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Ever since the radiation phase of my prostate cancer treatment began last week, I have spent part of every weekday in the weird and wonderful place that is the Stanford Cancer Center with my new love, LA-15. That's what they call the Varian TrueBeam™ STx system linear accelerator, a \$2 million piece of equipment that blasts photons through my groin with a force measured in millions of electron volts.

It doesn't even tingle.

LA-15 is a robot with a heart of gold and a thirst for electricity unmatched by anything this side of Las Vegas. I'm told that by the time LA-15 and I have to part ways after 35 dates, I will have grown tired of her, fatigued by her constant attention, tired of the unblinking gaze from her multiple radiation-spewing eyes.

We shall see.

The first day we met, two of her arms reached out for me, nearly caressed me and then began a slow X-ray survey of my body from a tantalizing few inches away, up and down and all around.

So seductive.

Once she pinpointed my tumor down to the millimeter in three dimensions, she withdrew the arms with the little eyes and peered at me with her big round one that hummed a deep sci-fi hum as it revolved completely around me. Ninety seconds, tops, and our date is over.

So destructive.

My role in this romance is simply to lie there and absorb her radiating love. 'Cause if I move, she'll get angry and fry a kidney, maybe laser off an appendage.

Or so I fear.

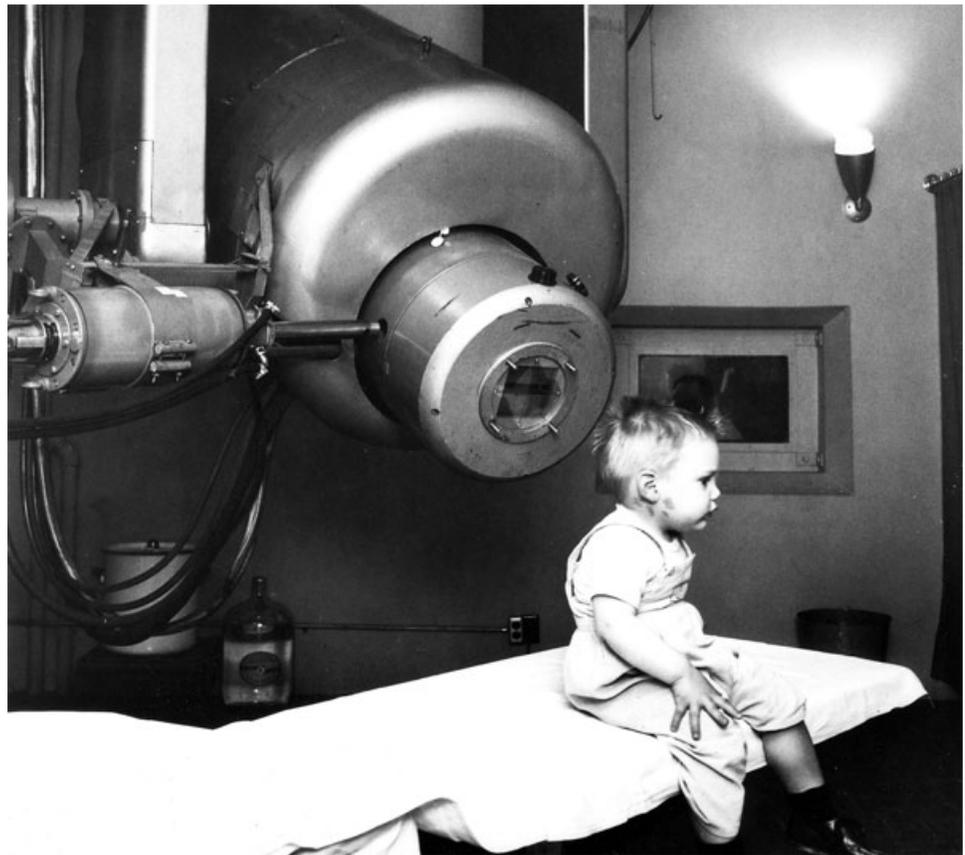
How LA-15 does its work

The last landmark on Interstate 280 before I exit for the hospital and my radiation treatment is the Stanford Linear Accelerator, housed a two-mile-long building – the world’s longest – that stretches beneath the freeway and dead ends into a mountain.

It is a first cousin of the machine on the cover of this newsletter, which was invented by a physician and a physics professor at the university and is manufactured by a company in Mountain View just a few miles away. Both machines speed the flow of electrons – an electric current – by very high force – voltage. When these high-speed electrons hit certain kinds of metal, extremely powerful X rays are created that can kill living cells.

The first time X rays from a linear accelerator were used to treat a cancer patient was in 1956 at Stanford Hospital, then located in San Francisco. A two-year-old boy had already lost one eye to cancer, but the radiation treatment killed the cancer before it claimed his other eye. Since then more than 40 million cancer patients have been treated with radiation.

LA-15 is a refinement of that first machine. The tweaks are all related to concentrating the radiation on the cancer cells and avoiding as much damage as possible to the healthy cells that it also strikes.



Stanford Department of Radiation Oncology photo

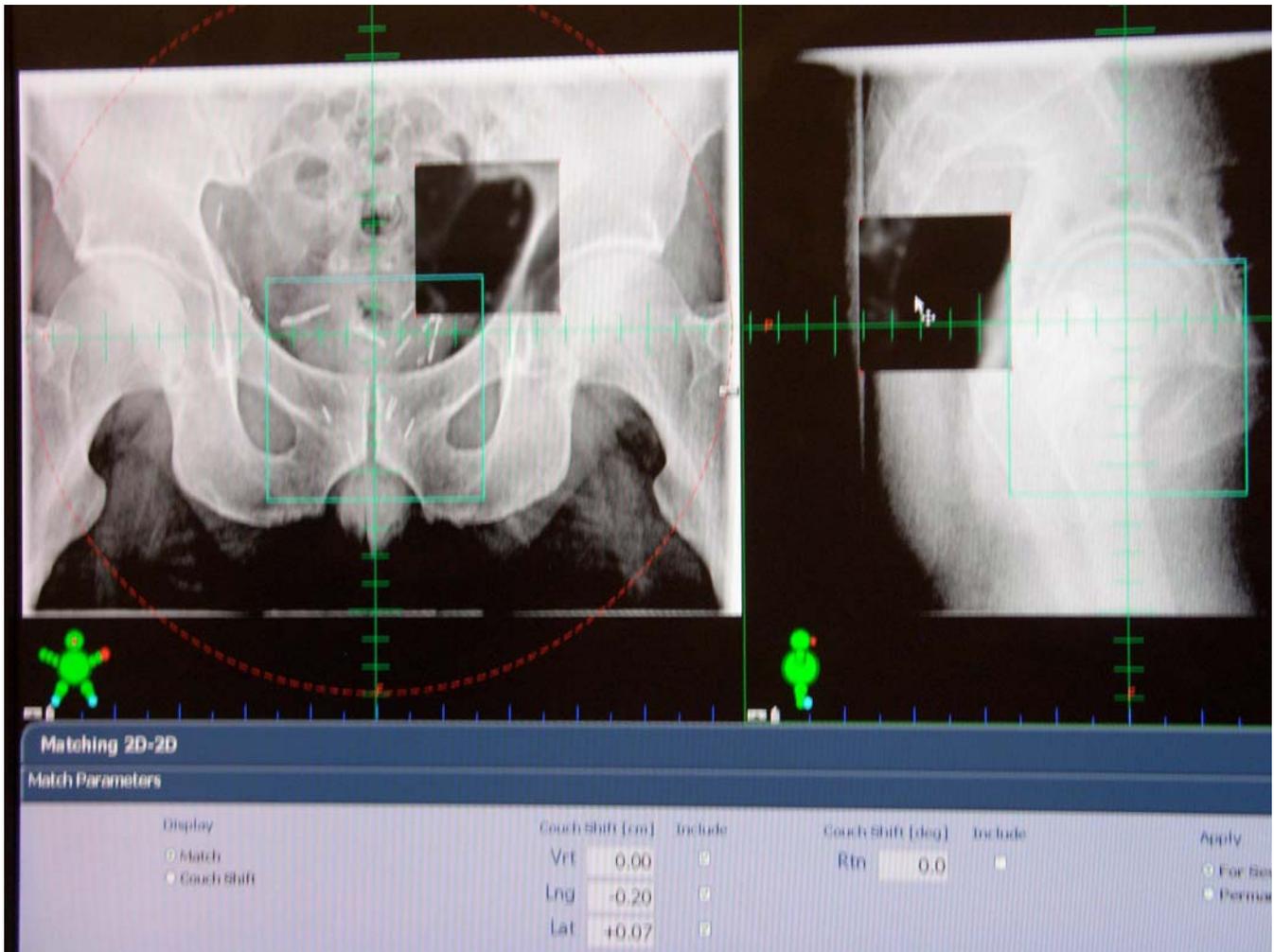
The world’s first patient treated with a linear accelerator.

One of the ways LA-15 does that is by revolving around my body. Because the radiation is focused on my tumor as it moves, the other tissues that the radiation hits receive only momentary exposure.

Aim is also important. That’s why every treatment begins with the two radiation therapy technologists who work with me – Jackie Pace and Onne Lao – moving my body around on the slab to align my three tattoos (one on each hip and one on my belly) with the laser beam lines projected through the room.

Then they leave for their shielded control room and use X ray scanning arms to fine tune the alignment by looking inside me almost in real time. They move me into final alignment by remotely controlling

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At first I thought it was affection, but this is what LA-15 sees in me.

How LA-15 does its work



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my slab's position. My job is to stay still and let them and LA-15 do all the work.

My tumor is deep in my pelvis and doesn't move as I breathe. But for patients whose cancer is in places that move during respiration, such as in the chest, LA-15 can time its bursts of treatment radiation to precisely the same instant of each breath when the tumor is in the beam's focal point.

My treatments are spread over 35 days to allow the healthy cells that are harmed by radiation to recover and heal.

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<<< Jackie Pace, left, who shot the color photos in this newsletter, and Onne Lao, LA-15's operators.