

Stereotactic Body Radiation Therapy: A Promising New Tool For Treating Cancer

A new type of radiation therapy—stereotactic body radiation therapy (SBRT), also called stereotactic ablative radiation therapy—has been added to the services of The University of Arizona Cancer Center at Dignity Health St. Joseph's Hospital and Medical Center (Cancer Center). For some cancer patients with small- or medium-sized tumors, SBRT is truly a lifesaver.

Bill Morrison is one of them. Bill was diagnosed with early-stage lung cancer in December 2017. For many patients with that cancer diagnosis, the first treatment option is surgery, but because Bill's lung function is poor and he relies on oxygen, surgery was not on the table. Instead, Bill underwent SBRT at the Cancer Center, under the medical direction of radiation oncologist Nitika Thawani, MD.

"In SBRT, the patient is placed in an immobilization device," says Dr. Thawani. "That allows us to deliver targeted radiation therapy because the patient doesn't move." Bill describes the immobilization device as "almost like a body bag. It forms the shape of your body so you're in exactly the same position for every treatment."

During the 45-minute outpatient treatments, SBRT aims powerful, precise x-ray beams at the tumor, ablating—or destroying—the cancer completely. Patients typically have from one to five treatments over a period of a few days. Unlike open surgery, SBRT does not require anesthesia and poses fewer risks for patients who are elderly or frail, or who have other health issues.

In addition to lung cancer, SBRT is being used to treat liver, spine, and breast cancer. It can be particularly useful in destroying cancers that are difficult, if not impossible, to treat surgically, such as bone cancer.

"SBRT is used to treat both primary cancers and secondary, or metastatic, cancers," says Dr. Thawani. "This technique differs from other external beam radiation therapies because it involves the delivery of a higher dose of radiation that completely destroys the tumor."

Dr. Thawani says that Bill's prognosis is good. "In the past, the chances of controlling these small tumors was only up to 50 percent. Now, with three or maybe five treatments of SBRT, we control these tumors more than 95 percent of the time," she says. "These patients come back for years, and this just becomes part of their medical history. They were treated for lung cancer at one time, and we don't see it come back in their lifetime."

"I got sick right before Christmas and started to feel breathing was a problem. I was referred to The University of Arizona Cancer Center at Dignity Health St. Joseph's. Treatment itself is almost like a body bag, and it forms the shape of your body. I would be in exactly the same position every treatment. Each treatment lasted about 45 minutes. Everybody I have met has been fantastic with me. I have met people I never thought I would meet. People come up and give me hugs. I have had people come up and pray with me. I've even had people pray on me. It all meant something. It was a fantastic experience."
– Bill Morrison, Patient

Correction: In the initial published version of this article we misstated the surname of our featured patient. His name is William "Bill" Morrison, not Bill Jones.

"I asked Dr. Thawani what would happen to the cancer, and she said, 'The cells die.'"

– Bill Morrison, Patient

