

The Doctors Clinic CT scanner reduces radiation dose

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Dr. Patricia Burkhart with the low-dose CT scanner at The Doctors Clinic. As a radiologist, her work is typically behind the scenes, reading the images on her computer. The Doctors Clinic has been using a low-dose radiation scanner for the past year — the only technology of its kind on the Olympic Peninsula.

The computerized tomography (CT) scanner allows the radiation dose to be reduced up to 60 percent. “The scanner is faster and better but there’s also a new technique. When the computer reconstructs (the images), it uses better math so it needs less radiation,” said Dr. Patricia Burkhart, who’s worked as a radiologist at The Doctors Clinic for the past year and a half. CT scan technology, which was developed more than 40 years ago, has been credited with saving lives due to early diagnoses of diseases. However, radiation exposure could be a concern, especially for certain patient categories such as children and individuals with cancer. “We’re all exposed to radiation in the environment. Medical radiation is a small part but obviously we don’t want to add manmade radiation,” Burkhart said.

The Somatom Definition AS scanner at The Doctors Clinic needs about half of the radiation amount to produce a high-resolution image, and the image has more detail than the previous equipment provided. The machine also has an improved design, with an open architecture that minimizes the need for rescanning and automated controls to streamline procedures. The scanner, described as next-evolution technology, works in tandem with a new technique called SAFIRE (sinogram-affirmed iterative reconstruction). The low-dose scanning method was developed by the Mayo Clinic while Burkhart was in training there, and she was involved in the process through her mentor.

Fortuitously, The Doctors Clinic physicians had already decided to upgrade their imaging equipment just as she was joining the staff. She points out that there are now new recommendations for smokers to undergo low-dose CT screening every year for cancer.

In addition to the new CT scanner, The Doctors Clinics replaced its magnetic resonance imaging (MRI) equipment last year. The MRI scanner provides sharper images and shorter scan times. The scanner uses radio-frequency signals instead of radiation. The imaging department, which is located at the Salmon Center in Silverdale, serves not only TDC patients. Outside providers also refer patients to TDC for imaging, and some residents choose the center themselves. Burkhart is currently the sole radiologist, reading a variety of imaging, such as X-rays, MRIs, CTs and ultrasounds, as well as performing some image-guided procedures. The imaging department has become increasingly busy — a second radiologist will be added this summer. Burkart said her job as a radiologist involves detective work in order to come up with the right diagnosis. “I’m the consultant for the patient’s physician,” she said. “Some diseases are a challenge no matter what, and what I like about radiology is that I’m the medical detective.”

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