

# Radiation innovations

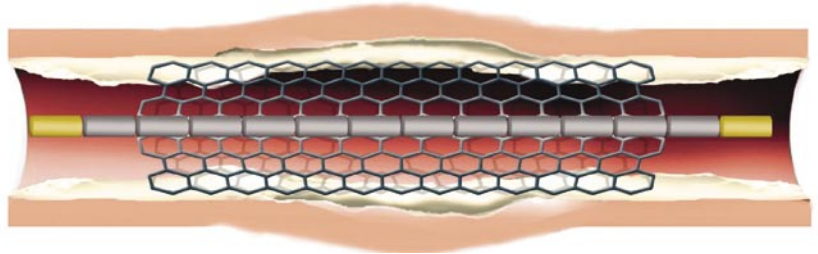
## GOING DIGITAL

Staying on the leading edge of technology can be quite expensive. So when the Kootenai Medical Center radiology department found an economical solution to taking X-rays from the darkroom to a digital format, we felt it worth noting.

In March, the KMC board of trustees approved the purchase of a computerized radiography system in order to move the radiology department toward its goal of being 100 percent digital.

Why go digital? “X-ray films and the equipment necessary to develop and process them are expensive and time consuming,” says Scott Venera, radiology department director. “And if you’ve ever had to carry your own X-ray films from one doctor to another, you know that they can easily be misplaced or even go unread. With digital X-rays, physicians can simultaneously read your X-rays online from the hospital, their offices or their homes.”

Instead of completely outfitting each of the four X-ray rooms with new digital X-ray equipment, costing \$400,000 per room, Venera pro-



When a patient experiences reclogging in the stent, brachytherapy may be an appropriate treatment. Radioactive seeds are temporarily placed into the vessel via a catheter and remain in place for a treatment time of two to five minutes.

posed shooting the X-rays on a digital plate, like the film cassettes you’re used to.

“With this new plate system, we’re replacing the film with a digital pack, instead of replacing the whole machine,” Venera explains.

Other KMC digital imaging innovations include the Stentor computerized system, which is used by Inland Northwest Health Services for long-term archiving of a variety of scans, including CT, MRI, nuclear medicine, ultrasound and interventional images.

## THE ACHILLES’ HEEL OF CARDIOLOGY

Physicians at KMC’s new North Idaho Heart Center offer innovative treatments from drug-eluting stents to radiation therapy to help prevent heart vessels from reclogging after stenting procedures.

After a stent is placed in a coronary artery, scar tissue may build up within the tiny metal mesh stent. If the vessel becomes more than 50 percent blocked—called in-stent restenosis—additional intervention is required.

Intravascular brachytherapy offers a solution to a problem that has been the Achilles’ heel of cardiology. It uses radiation therapy to prevent the scar tissue from building up, thereby keeping the stent and artery open for the vital blood needed by the heart muscle.

“Brachy” is Greek for “short,” meaning the radiation is delivered over a short distance in a small, controlled area. An interventional cardiologist guides a catheter wire to the exact spot identified for radiation treatment. A radiation oncologist then uses a specialized machine to thread a tiny pellet of radioactive material on the tip of the catheter wire to the same spot, irradiating the affected area of the artery.

The low dose of radiation does not harm other tissues or organs in the body, and the patient feels no pain and little discomfort. Patients receiving brachytherapy are able to go home the day after the procedure, with no major restrictions on their activities. ■

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