

## WEB EXCLUSIVES

# The Ins and Outs of Ports

BY CURTIS PESMEN

*A port can make intravenous chemotherapy easier on patients.*

Right after my stage 3 colon cancer diagnosis, something seemed odd: I was advised to have an immediate, voluntary surgery in order to get chemotherapy. But my port-a-cath implant surgery—also designed to help me avoid countless needle sticks—doesn't seem odd today, looking back cancer-free, seven years after treatment.

Basically, I consented to have a port-a-cath, a small, round (about 1.5 inches in diameter) intravenous drug reservoir and thin catheter tube placed into my chest to streamline both chemotherapy delivery and many blood draws over the course of nine months. Breast cancer patients who have mastectomies and lymph node removal also benefit from ports, as access to the inside of their arms on the operating side(s) may be limited.

The theory was that I'd have less pain and fewer vein-related complications. All proved true. Plus, unlike my planned tumor removal, it was outpatient surgery. The port stayed in me for one year post-treatment—shrouded by my chest hair—just in case of recurrence.

Today, port implants in the chest or along the inside arm seem almost routine following myriad cancer diagnoses. Both surgeons and interventional radiologists are now trained to perform the surgery. Radiologists are newer to the field, but their implants may be guided more precisely by pre-operative imaging.

Yet patients and their caregivers don't always realize there's more to the port story than easier access for oncology nurses and treatment efficiency. Older patients and survivors who face multiple rounds of intravenous therapy may over time suffer hardened veins, which complicates or even prevents traditional needle-catheter infusions of anti-cancer drugs, liquid nutrition, or antibiotics.

“Your [port] access is always there; without repeated needles, and without worrying about the nurse or CT tech not being able to ‘find’ a vein,” says John Kaufman, MD, chief of vascular and interventional radiology at Dotter Interventional Institute at the Oregon Health & Science University in Portland.

Kaufman explains that many chemotherapy and targeted drug therapies follow a strict schedule; and if you return home after unsuccessful jabs one day—without a successful needle point-of-entry for treatment—that very schedule is jeopardized. “The port gives you tremendous security,” he says. “It's meant to make a difficult time of your life easier.” Also, some chemotherapy agents can

cause tissue damage if they leak around the vein from a regular I.V. line, so a port avoids that risk as well.

Still, ports aren't perfect, nor are they maintenance-free. They typically require flushing every four to six weeks with heparin solution, a quick and relatively painless procedure that helps to prevent blood clots. The devices can break on rare occasions, or more often contribute to swelling, excessive pain, or infection. If the device does break, surgery may be needed—never a risk-free proposition for those who have compromised immune systems during chemotherapy— but other methods may be available. One recent European study looked at 30 patients whose ports required corrections, as they had migrated or were incorrectly implanted. One patient's port corrected itself, while doctors used radiological imaging to help reposition 27 other patients' ports without surgery.

Though rare, the ports can also “flip” over, rupture, or fracture, leading to risk of chemotherapy leakage. “I've been doing these for 17 years, into the thousands,” says Kaufman, “and I've only seen two flips.” Fractures and infections are more common. To avoid unnerving port malfunctions, experts say it pays to be vigilant about the device's limitations and side effects.

### **Keeping Ports Healthy**

So the key question remains: What can you do, if you opt for a port, to minimize your risk of complications? These tricks of the trade can help with maintenance—plus help you avoid port removals:

- > To prevent pain, apply prescription EMLA cream (lidocaine-prilocaine) over the port site prior to infusions. Before intravenous therapy, a sturdy needle still needs to be inserted through the skin into the port receptacle, so remember to apply it one hour before your appointment. If you forget the advance prep, ask for numbing spray, such as Hurricane, at the infusion center.
- > Ask what the center's schedule or process is for port flushing for maintenance. If you travel for weeks at a time, can a significant other be trained to perform the flush while away?
- > In case of infection, antibiotics may be able to successfully treat and cure the infection without having surgery for port removal. Ask your team what experience they have with both.
- > In breast cancer cases, ports are usually not added during lumpectomy or other initial breast surgery. “You wouldn't know the staging or prognosis until after the pathology report,” says Allen Cohn, MD, medical oncologist at Rocky Mountain Cancer Centers in Denver. It may turn out, he says, that a port isn't needed after all.