

## UNDERSTANDING VENOUS CATHETERS

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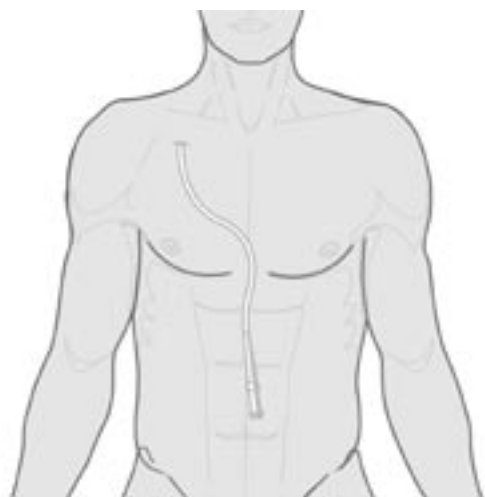
Most cancer treatments include therapy given into the veins, called *intravenous therapy*. Anti-cancer drugs, anti-nausea drugs, pain medicines, and red blood cell transfusions are types of intravenous therapy. Patients may also need frequent blood tests during cancer treatment. Repeated needle sticks can be painful and irritating to the veins. Your doctor may recommend a *venous catheter* to allow for frequent entry to your blood system without repeated needle sticks.

### *What Is a Venous Catheter?*

A venous catheter is a thin tube inserted into a large vein in the arm or chest. The tube has an open end that rests inside the vein and a closed or capped end used by the healthcare team. Blood can be withdrawn through the tube for lab tests. Chemotherapy, other medicines and blood transfusions can be given directly into your blood through the tube. The catheter is made of soft, long-lasting material that can stay in place for weeks, months or even years.

Georgia Cancer Specialists uses five types of catheters: Hickman, Groshong, PICC, Implanted Chest Port, and P.A.S. Port. Each catheter has advantages and disadvantages. Your catheter choice depends on your cancer treatment and lifestyle. Your doctor or nurse will provide you with information and help you select the most appropriate catheter type for you.

### *Hickman and Groshong Catheters*



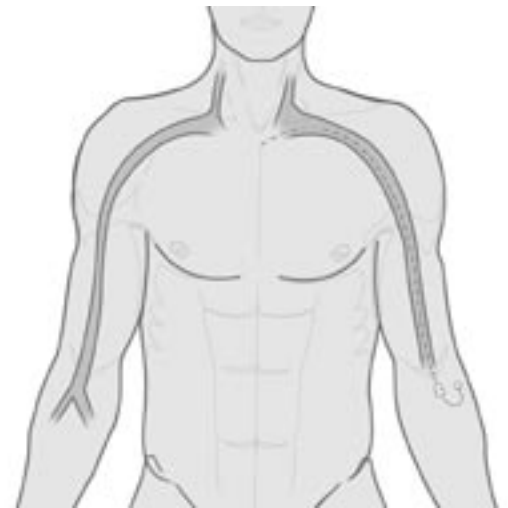
Hickman catheters are placed by a surgeon in a surgical procedure room. The tip of the catheter is inserted into a vein in the upper chest and threaded into a large vein near the heart. The other capped end of the catheter is tunneled under the skin a short distance and comes out through a small opening in the skin on the chest. The healthcare provider can take off the cap to allow chemotherapy or other medicines to flow into your bloodstream. Blood samples can also be withdrawn through the catheter so that you avoid being stuck with a needle.

The Groshong catheter is similar to the Hickman in the way it is surgically placed and how it looks. The difference is a self-sealing, two-way valve at the end of the catheter that may reduce the risk of blood clots in the catheter.

Both the Hickman and Groshong have a section of the catheter that is outside the skin, on the chest. You will be asked to learn how to care for the skin around the catheter and how to flush the catheter with fluid to keep it open. You may be prohibited from swimming or other water sports.

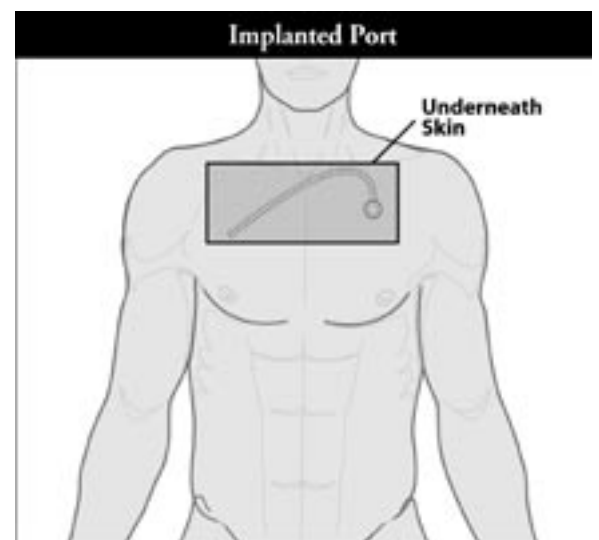
### *PICC Catheter*

PICC is the abbreviation for “peripherally inserted central catheter.” This is a catheter placed in a large vein in your arm, below the bend in your elbow. The tip of this catheter is threaded through the vein in your arm to a large vein near your heart. The other end of the catheter remains outside the arm. You will be asked to learn how to care for the skin around the catheter and how to flush the catheter with fluid to keep it open. You may be prohibited from swimming and other water sports. A PICC catheter can be inserted and removed by your doctor or a nurse with special training.



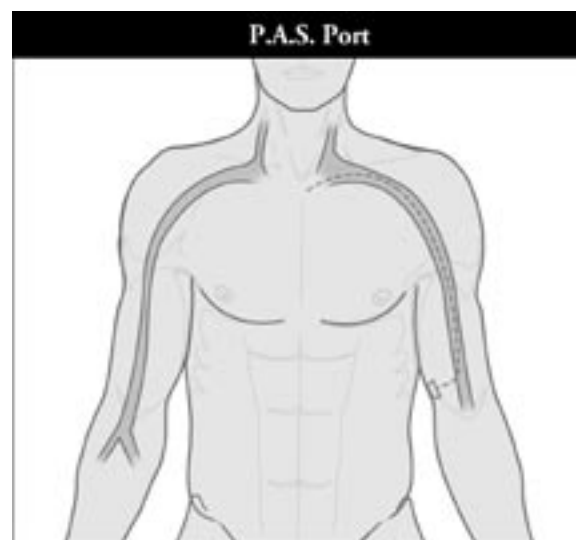
### *Implanted Port and P.A.S. Port*

An implanted port is placed completely inside the body. The open end of the catheter is placed inside a large vein near the heart, similar to the other catheters described. The other end of the catheter is capped with a spongy, rubbery top that is placed completely under the skin on your chest, usually just below the collarbone. You may be able to see a slight bulge under the skin but there is no part of the catheter visible. To reach the cap, your skin is cleaned and a special needle (*Huber needle*) is inserted through your skin. For most people this needle stick is far less painful than ordinary needle sticks and the Huber needle can stay in place for up to 7 days.



A smaller implanted port can also be placed in the arm. This type of catheter is called a P.A.S. Port. The open end of the catheter is placed inside a large vein near the heart, but the end with the spongy cap is placed completely under the skin in your forearm. Usually a small bump on the arm is visible. To reach the cap, your skin is cleaned and the Huber needle is inserted through your skin.

The main advantage of both of these implanted ports is that they are hidden completely under the skin, and that swimming and other water sports are not restricted.



### *Caring for Your Catheter*

**Hickman, Groshong, and PICC Catheters:** Part of the catheter rests on the outside of the skin. This area must be covered with a special dressing that is changed by you, a family member, or a nurse once a week. When you shower or bathe, the dressing must be kept dry to prevent infection. If the dressing gets wet, you will need to change it. Your nurse will teach you how to change the dressing for your particular catheter.

The catheter will need to be flushed with a special solution at scheduled times to prevent blood clots from forming inside the catheter. The Hickman and the PICC are flushed with saline and heparin daily. The Groshong is flushed with saline once a week. Your nurse will teach you how to flush your catheter and what solutions to use.

**Implanted Ports and P.A.S. Ports:** Neither of these catheters has any part that is outside the skin, so no special dressing is required. If you are sent home with a needle in place through the skin, you will need a special dressing which will be provided by your nurse.

Both of these ports only require flushing with heparin once a month, if they are not being used. If you are sent home with a needle in place through the skin, the port will need to be flushed once a day. Your nurse will teach you how to flush your catheter and what solutions to use.

## **All types of catheters:**

### **▶ Blood clots**

There is a slight risk of the catheter causing blood clots. You may be given medicine to prevent the clots from forming. Signs of a clotted catheter include trouble flushing your catheter, swelling or tenderness around your catheter, or swelling in the arm or shoulder closest to your catheter. If you are having any of these problems, please call your doctor.

### **▶ Infection**

There is a risk of infection from any of the catheters, but particularly the ones that have a part resting outside the skin. Signs of an infected catheter include pain or redness at the catheter site, or a fever. Call your doctor if you are having any of these problems. The most important way to prevent catheter infection is to always wash your hands before touching your catheter.

### **▶ Catheter won't flush**

If your catheter does not flush smoothly, check to make sure that the clamps are open, change your position, cough or take a few deep breaths and try again. Usually the catheter will now flush easily. If you still feel difficulty, do not use force to flush the catheter; you may break it. Call your doctor's office and report the problem.

### **▶ Never use scissors near your catheter**

The catheter is made of a soft material that can be cut or punctured easily. Do not use scissors or safety pins around your catheter. If the catheter does tear, puncture, or leak, clamp the catheter and call your doctor.