



## CALIFORNIA HEMATOLOGY ONCOLOGY MEDICAL GROUP

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### Central Venous Access Devices

Central venous access device, or CVAD, is a broad term that includes many types of catheters (thin, flexible hollow tubes) that are inserted into and positioned within a vein in the body to deliver therapies to the bloodstream.

Varying types of CVAD are used for different conditions and therapies.

There are two general types of CVADs: catheters and ports. Catheters have one end positioned outside the body, while ports are surgically placed under the skin and require a special needle for access. With both catheters and ports, the opposite end of the tubing is positioned within the large vein near the heart. The most common CVADs include:

- Peripherally inserted central catheters (PICCs)--inserted into one of the peripheral veins in the upper arm
- *Implanted ports*--inserted into the subclavian vein or jugular vein and attached to a fluid reservoir placed in a surgically created subcutaneous pocket on the upper chest, or into an arm vein with a peripheral port pocket

#### **What is a P.I.C.C. line?**

A PICC line is a Peripherally Inserted Central Catheter. It is a long plastic tube, which is inserted into a large vein in your arm. This will allow intravenous medications to be given easily. It will save you the discomfort of repeated IV sticks.



*A patient receiving chemotherapy through a PICC line.*

#### **Why do I need a PICC Line?**

Most chemotherapy patients will greatly benefit from a PICC line. Many chemotherapy medicines are potentially harmful to the veins and skin around the IV site. Placement of a PICC Line will minimize the risk of tissue damage from these medications. Additionally, some patients may receive a continuous infusion chemotherapy treatment at home via a small pump. A PICC line is necessary in these cases.



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### How is the PICC Line put in?

You will be set up with an appointment at the Radiology Department at your local hospital.

When you arrive in the Department, a local anesthetic will be injected to the area above the bend in your elbow - this is where the PICC line will be inserted into your vein. The doctor or nurse will then insert the PICC line, which is a long tube that threads up through a vein in your arm and into one of the large veins above your heart. After the PICC line is placed, you will have an x-ray so that the position of the PICC line can be checked. The PICC line will then be sutured into position, in order to keep it in place.

### How long can the PICC line stay in my arm?

The PICC line can stay in your arm for as long as 12 months, although the average length is usually about 6 months, depending on your treatment requirements.

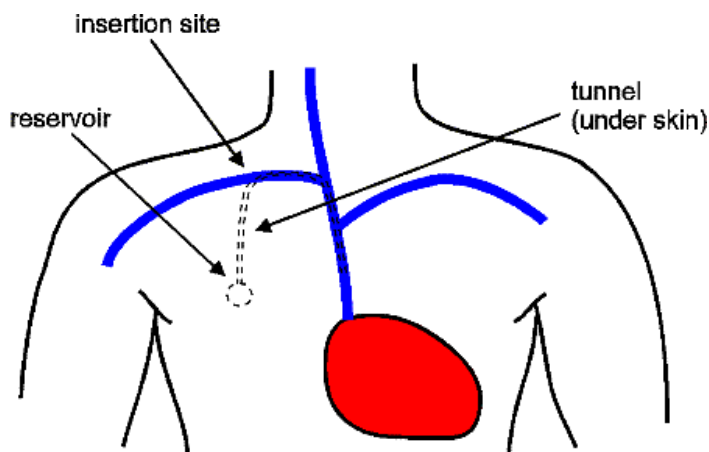
### Care of the PICC Line.

Your PICC line will need a new dressing once a week and if your line isn't currently being used for treatment, it will require a flush at this time as well. This can take place in our office or you and your family members can be taught how to take care of your PICC line at home. You will be given a prescription for dressing supplies for your PICC line.

### Portacaths and P.A.S. Ports

Portacaths are one of the most popular types of catheter because of the convenience using these catheters. They are placed completely under the skin. What you will notice is a small bubble, called the **reservoir** where the catheter is accessed. Through this bubble, your nurse will draw blood, or infuse IV drugs. There is no major difference between the different brands of catheter.

A Portacath is located in the chest wall (see pictures below), whereas a P.A.S. Port is located in the upper arm.



Location of the Portacath in the chest



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Actual Portacath under the skin

### How is the Portacath used?

The Portacath is *accessed* by the use of a special needle, called a Huber needle, although it's also known by a variety of other names. **It is important that you don't allow any other type of needle to access your catheter.** Regular needles have the hole at the tip, and when they puncture the catheter membrane, they will core out a small hole. Do this over and over, and your catheter membrane will be Swiss cheese. The Huber needle is different - the hole is off to the side, so that when the needle is removed, only a small slit remains, which seals better than a hole.

### Does it hurt when the needle goes in?

Yes it does a little. You can lessen this pain by asking your doctor for a prescription for some **Emla cream**, which is a topical anesthetic you can apply at home before you come in. Cover it with a piece of plastic wrap, and by the time the catheter is ready to be accessed, the skin will be quite numbed.

### Care of the Portacath.

The Portacath needs to be flushed at least once a month, with regular sterile saline. It is advisable to schedule an appointment for a Portacath flush once a month in our office if you are not receiving treatment currently. As the Portacath is under the skin, you may swim, and take showers and baths easily.

### Are there any complications from PICC lines or Portacaths?

Complications with PICC lines are rare. However, you should be aware of them before you provide consent. These complications can include

- Pneumothorax - Collapse of the lung because of injury from the needle used to insert the device
- Hemothorax - Bleeding into the chest because of injury to the blood vessels from the needle at insertion
- Cellulitis - Infection of the skin around the catheter or port
- Catheter infection - An actual infection of the device itself inside the vein



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- Sepsis - Release of bacteria into the bloodstream from the device, causing a life-threatening infection. This often results from an infection of the device or from not using sterile technique when using the device.
- Mechanical problems - A device breaks or does not function right
- Venous thrombosis - A blood clot in the vein that can cause swelling of the involved extremity. This is often called deep venous thrombosis or deep venous thrombophlebitis. This is dangerous because pieces of the clot in the vein may break off and travel to the lung, which can be life threatening.
- Endocarditis - Bacteria or fungi from the device traveling through the bloodstream to the heart valves, where they form an infection that can destroy the valve