



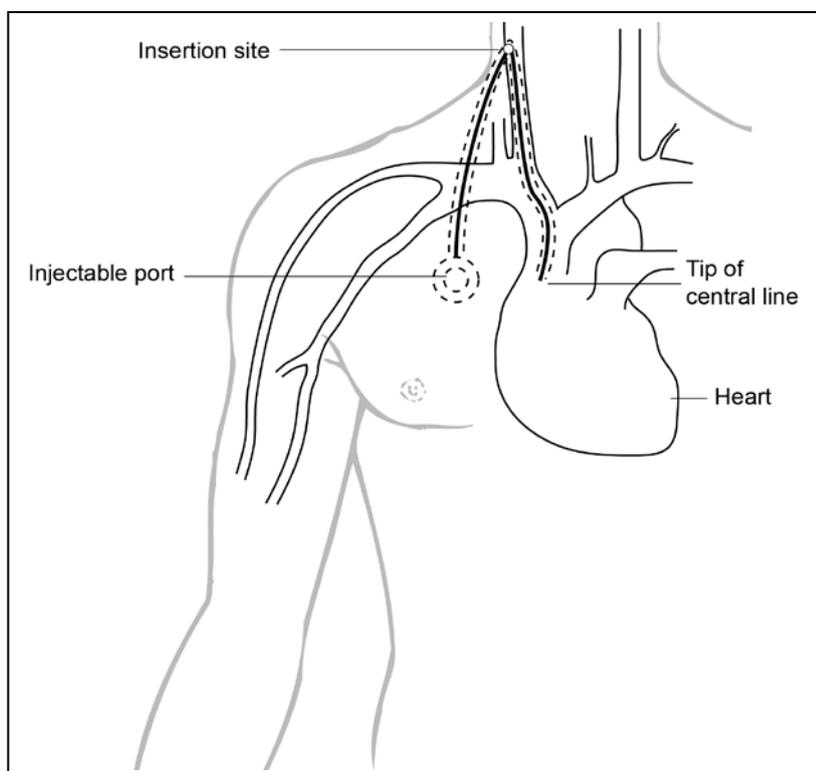
Insertion of a totally implantable vascular access device (TIVAD)

What is a TIVAD?

A TIVAD is a long hollow tube that is inserted into one of the large veins in your body. One end of the tube sits in a vein, usually just above the heart, and the other end is attached to the injection port that sits underneath your skin on the chest. TIVADs are also known as ports or Portacaths[®]. A port is a type of central venous catheter usually made of silicon rubber or polyurethane. These are usually recommended for patients who need certain types of medicines or treatments that irritate or damage the smaller veins or who need intravenous therapy over a long period of time. Ports have to be inserted using a sterile procedure which is usually carried out under local anaesthetic and sometimes sedation.

In this leaflet we explain some of the aims, benefits, risks and alternatives to this procedure. We want you to be informed about your choices to help you to be fully involved in making any decisions.

Please ask about anything you do not fully understand or wish to have explained in more detail.



**Diagram showing
insertion site of the port**

Before the insertion of the port

- You will meet a member of the procedure team or a doctor before the port is inserted, but this may not be until the day of the procedure.
- It is important to tell the doctor or nurse before attending for your procedure if you are on any medication to prevent or treat blood clots, such as warfarin, heparin and aspirin. You

must not take aspirin (or aspirin-containing products) for one week before the insertion of your port as this prevents your blood clotting normally.

- An ultrasound machine is used to look at the vein in your neck to check that it is suitable.
- This procedure involves the use of local anaesthesia and may include sedation. Most people who have this type of procedure can have it done as an outpatient. However, if you have sedation you will not be able to drive for 24 hours, so please arrange for a friend or relative to collect you. You should not drink alcohol for 24 hours after having sedation. It is also advisable to bring an overnight bag and be prepared to stay in hospital just in case there is a problem with inserting your port.
- Before the procedure you may eat or drink, although we recommend you only have light meals.
- You will need blood tests within 2 weeks of the procedure.

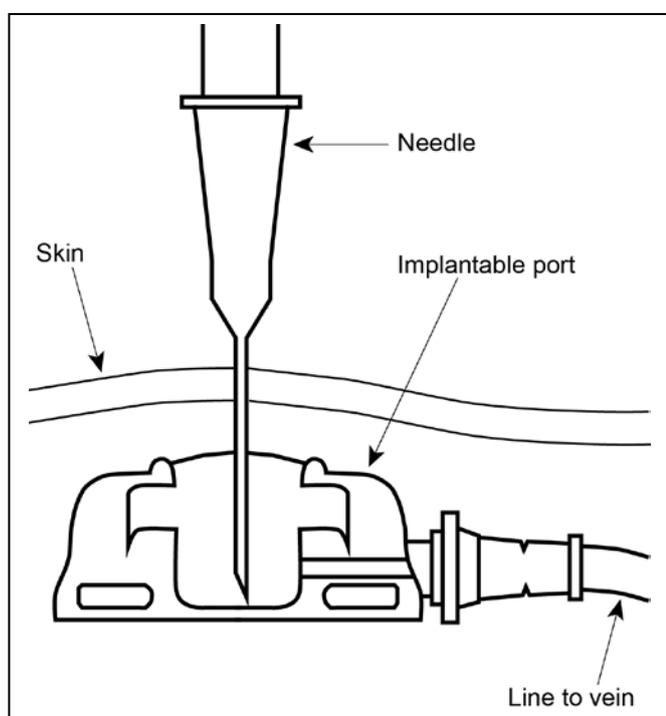


Diagram showing a needle accessing the port

Prevention of surgical site Infection (SSI)

Hair from the insertion site may need to be removed to prevent infection. The hair from the insertion site will be removed sixty minutes before the procedure to reduce the risk of infection. This is carried out by the nurses just before the procedure. The skin is then cleaned with a skin preparation solution.

You must not shave the area that is being operated on yourself. Shaving at home, or the night before surgery, increases the risk of infection as no matter how careful you are the skin may become irritated and this could increase the risk of infection.

About the insertion of a port

The catheter can be placed in different veins, the most common being the jugular vein which is located at the base of the neck. The particular vein that we use and the side of the body will depend on the reasons that you need the port, and how large the veins are when we examine them with an ultrasound machine during the insertion. The best position and site for the port insertion will be discussed with you before the procedure. However, it is sometimes

impossible to decide until during the procedure. You will be able to feel the port as a lump under your skin and you may be able to see the port under the skin. Injections can be given via the port. The reasons for having the port will be discussed with you by the doctors or nurse specialist inserting the port.

What happens during the procedure?

- We will clean your skin and numb the area where the port will be placed with an injection of local anaesthetic. The procedure is carried out under full sterile conditions.
- We will then create a 'pocket' under the skin of your chest into which will place the port. This will leave you with a scar about 3-5 cm in length.
- The catheter is attached to the port and tunnelled under the skin and inserted into your vein.
- You will usually have two dressings: one to cover the port (usually under the collar bone) and one at the base of the neck (entry point to vein).

After the procedure

- After the procedure you will be transferred to the recovery area where you will spend up to a couple of hours until you are ready to go home. If you are an inpatient you will be transferred back to the ward
- **Eating and drinking.** After this procedure, you should be able to eat and drink as soon as you have recovered.
- **Getting around and about.** After this procedure you may get up as soon as you feel able once you have been assessed by the nurse or doctor.
- **What about stitches?** We will check the wound at 7 days and trim the end of the stitches. The stitches at the base of the neck and the insertion site are absorbable.
- **When you can leave hospital?** Most people who have had this type of procedure under local anaesthetic and sedation will be able to leave hospital after two to three hours. You may not be able to drive yourself home. The actual time that you stay in hospital will depend on your general health, how quickly you recover from the procedure and your doctor's/nurses advice.
- **When can you resume normal activities including work?** Most people who have had this procedure can resume normal activities but you may have some discomfort in your neck and/or chest. You might need to wait a little longer before resuming increased activity/exercise. When you will be ready to return to work will depend on your usual health, how fast you recover and what type of work you do. Please ask your nurse specialist/doctor for his/her opinion.
- Please remember to use an anti-bacterial body wash (for example Hibiscrub) to bathe or shower and wash your hair from 5 days prior to the procedure and until the skin is fully healed (usually 7-10 days after the procedure).

What are the benefits of having a port?

- The main benefits are that the port is a secure method for administering drugs and medicines that cannot be given through smaller veins. Because the port is placed beneath your skin, it is quite simple to look after and live with.
- The infection rates are lower compared to central venous catheters.

Who will insert the port?

- This procedure will be performed by a specially trained specialist nurse or doctor.

Are there any alternatives to having a port?

- There are two alternatives to a port. The first is to place a cannula in a small vein in your arm. However, this is often not possible or safe.
- The second alternative is to have a central line either a tunnelled central venous catheter or a PICC (peripherally inserted central venous catheter). Please ask your specialist nurse or doctor for more information about these.
- If you decide not to have a port or central venous catheter your treatment may be delayed.

Serious or frequently occurring risks associated with this procedure:

As with all procedures there is a small risk of complications.

- You may have some bruising or pain at the site of insertion. This usually settles over a few days, but you may need some painkillers. Please discuss this with your nurse or doctor.
- **Infection.** The procedure is carried out using full sterile conditions but there are still risks of the port getting infected – this may be local infection at the skin or a more general bloodstream infection. Sometimes the infection can be treated with antibiotics but sometimes the port has to be removed. To reduce the incidence of infections, the port needs looking after very carefully and we will give you more information about this.
- **Port erosion.** There is a small chance that the port may wear thin the tissue above the port or even break the skin. If this occurs the port will be removed.
- **Thrombosis** (blood clot). When a catheter sits in a vein there is an increased chance of a blood clot forming in the vein. Signs of this include pain, swelling and discomfort in the neck or arm on the side the port has been placed.
- **Arterial puncture.** Puncture of the artery that may cause bleeding; approximately 4 in 1000 patients may have an arterial puncture. The staff are careful to prevent bleeding and will take a blood sample to check that your blood is able to clot normally.
- **Lung puncture.** This happens in less than 1 in every 9,000 of patients and may need further treatment to avoid breathing complications. You will usually have to stay in hospital until the lung has healed.
- **Stenosis.** If you need the catheter for a long period of time there is a risk that the vein becomes narrowed or stenosed. If this happens then we may need to put the catheter into a different vein.
- **Extravasation.** This is damage caused by leakage of solution from the vein to the surrounding tissue spaces during intravenous administration. Extravasation of some chemotherapy drugs from ports can cause tissue necrosis (tissue damage) and may need surgical removal of the port and the affected tissue.
- **Mechanical failure.** A break in the catheter or the connection that may lead to extravasation.
- **Emboli.** There is a small risk of a blockage or embolus (air or equipment) if the catheter or guidewire breaks, or an air embolus (bubble of air) enters the bloodstream.

- **Port rotation/movement.** The port may move out of place or turn round within the chest wall and in this instance the port may have to be repositioned or removed.
- **Scarring.** There will be a small scar at the base of the neck and a 3-5cm scar where the port is inserted. The catheter under the skin at the base of the neck may also be visible.

Your anaesthesia

- Local anaesthesia. The local anaesthetic drug is injected into the skin and tissues at the site of the operation to produce an area of numbness. You may still feel some sensation of pressure and movement during the procedure. Local anaesthesia is used for minor operations. Usually a local anaesthetic will be given by the nurse specialist or doctor carrying out the procedure.
- Sedation is the use of small amounts of anaesthetic or similar drugs to produce a 'sleepy-like' state. It leaves you able to communicate and co-operate but makes you feel relaxed and calm during the procedure. Your memory of the procedure may be affected.

How will I know if something is wrong once the port is in place?

- Complications do sometimes occur. Contact The Christie as soon as you suspect that something is wrong or in the event of any of the following:
 - If you have any temperature above normal (a temperature higher than 37.5°C), fever, chills or feel generally unwell, this could indicate the beginning of an infection.
 - Pain, redness or swelling around the exit site.
 - Tell us immediately if you experience any pain, swelling or discomfort on the side the port has been inserted in the fingers, neck, shoulder or arm. Please contact your hospital doctor or The Christie Hotline as soon as possible **(0161 446 3658)**.

Keeping your port clear

Your port will need flushing every four weeks if it has not been used. Most treatment regimens are more frequent than four-weekly so the port will not need flushing between treatments. The port is flushed with Hepsal, an anti-clotting agent.

Please note: Before chemotherapy is administered via a port, blood must always be withdrawn to ensure that the system is safe to be used.

If you experience any pain during an infusion given via your port, the infusion **must be stopped**. The staff will need to assess the needle position and port site immediately.

If you have any questions or anxieties, please feel free to ask a member of the Procedure Team.

Contacts

The Procedure team (8:30am to 5:00pm)
The Christie Hotline

0161 446 3916 or **0161 446 3446**
0161 446 3658

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If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

We try to ensure that all our information given to patients is accurate, balanced and based on the most up-to-date scientific evidence. If you would like to have details about the sources used please contact **patient.information@christie.nhs.uk**

For more information about The Christie and our services, please visit **www.christie.nhs.uk** or visit the cancer information centres at Withington, Oldham or Salford.

Contact The Christie Hotline for
urgent support and specialist advice

**The Christie Hotline:
0161 446 3658**

Open 24 hours a day, 7 days a week

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