Central venous catheter: Peripherally inserted central catheter

This information leaflet aims to help answer some of the questions you may have about your peripherally inserted central catheter (PICC).

This information leaflet will explain why you need a PICC, what to do before you come in for the procedure and how to care for it when you are at home. If you have any other questions or concerns, please do not hesitate to speak to the nurse or doctor caring for you.

Sometimes a district nurse may be required to help you look after your PICC line while you are at home. We have included instructions for your district nurse on pages 4 and 5 of this booklet.

What is a PICC line?
A PICC line is a long thin, hollow flexible tube inserted in one of the veins of the arm. The length of the line depends on how tall you are and where the insertion site is. Usually, it is 38–52cm long. It has openings on both ends. The tip of the PICC sits in a big vein just outside your heart while at the other end around 5cm of the line comes out of your arm. The space inside the line is called a lumen. You may have one or two lumens. Not all patients are suitable for a PICC line and a nurse specialist or doctor will assess you before inserting a line.

Image courtesy of Vygon Pharmaceuticals
Why should I have a PICC line?

Some drugs such as chemotherapy can cause discomfort or pain to the vein. A PICC line can reduce irritation in the veins by delivering the chemotherapy straight into a big vein and to make sure that the chemotherapy is given safely. It also allows for the medications, fluids and antibiotics to be given directly to the bloodstream. It can be used for blood taking which reduces the need for taking blood directly from the arm.

A PICC is ideal for people with small veins or who are scared of needles. It can also be used as a temporary central line, especially for people who need to start intensive treatment immediately or need a different type of line but are unable to have one because they are on blood thinning medication or are unable to lie flat.

A PICC line can be used for:
- taking blood samples
- giving chemotherapy
- giving blood and blood products like platelets
- intravenous feeding
- giving intravenous medicines.

Are there any risks?

Like any other types of central lines, PICC carries a small risk of complications. The nurse specialist or doctor will explain these to you.

- **Infection.** There is a small risk of having an infection. This can happen anytime while the PICC line is in place.
- **Thrombus or clot.** This can form around the line. Patients who had blood clots often reported having painful and swollen arms. You must let the nurses looking after you know if you get these symptoms so we can treat the clot immediately.
- **Malposition.** In some cases, the tip of the line may not be in the correct position. A chest X-ray is required to check the tip position and the nurse specialist or doctor may have to adjust the line for you.
- **Bleeding and bruising around the insertion site.** Sometimes a small ooze of blood may be noticed on the insertion site. A gentle pressure will be applied after the procedure to prevent bleeding, especially on patients with blood that does not clot normally.

What happens during insertion?

The specialist nurse or doctor will scan your arm first with an ultrasound machine. This will help find the right size and type of vein to place the PICC line in. This is a painless process. Your arm will then be cleaned with antiseptic solution and covered with sterile drape. The nurse or doctor will then inject a local anaesthetic to numb the insertion site. You should not feel any pain during the procedure. However, you will feel some pressure on the insertion site while the specialist nurse or doctor is working. The procedure will take approximately 20–30 minutes.

A statlock (which holds the PICC in place) and a transparent, breathable dressing will be applied on the insertion site to secure the PICC. A chest X-ray will also be taken to confirm that the tip of the PICC is in the tight position.
What happens after the procedure?

Once the local anaesthetic wears off, you may feel some slight discomfort or achy feeling in the arm where the PICC was inserted. This is quite common. Most people do not need any pain relief but if you need to, you can take your usual painkillers (make sure you follow the instructions on the label). There may also be some bruising and blood on the dressing. This is nothing to worry about.

In some cases, there may be some tenderness or swelling around the insertion site. This is quite common, especially during the first week of insertion.

Make sure that you continue to move your arm as normally as possible and apply some warm compresses on the insertion site as needed or until the reaction settles. However, if the pain and swelling persist, please ring the hospital and we will assess and give you the appropriate advice.

How will I know if something is wrong with my line?

Most PICC line insertions are trouble-free, but please contact us if you notice any of the following:

- oozing from the insertion site
- a temperature of 38°C, fever and chills especially right after the line is flushed with saline
- leaking or cracked line
- pain and swelling of the arm, neck and chest
- PICC appears longer than when first inserted and you could see more of the line
- redness and inflammation of the insertion site.

Please do not hesitate to call the nurse-led Central Venous Access Devices service or the chemotherapy and haematology day units if you have any worries (see page 5 for contact details).

Who will look after my PICC?

When you come in for your chemotherapy or treatment, the nurses on the day unit will clean the insertion site and line for you. They will also flush the line with normal saline and change the transparent dressing. This must be done on a weekly basis.

Sometimes, we may ask for a district nurse to see you at home to change the dressing and flush the line especially on the weeks that you cannot come to the hospital. Please let us know if you want us to arrange this for you.

How will I look after the line when I get home?

The transparent dressing must be kept dry at all times. We will give you a plastic sleeve to use when you shower. When having a bath, make sure that the insertion site and the tip of the line are not sitting in the water. This will prevent your line from getting infected.

Avoid strenuous activities such as golf and tennis while the PICC is in as it can dislodge the line or accidentally pull it out.
How is the PICC removed?

PICCs can easily be removed. A nurse will remove the dressing and the line is gently pulled until the whole line is out. A small dressing is then applied over the site. There will be no bleeding or pain.

Information for district nurses

PICC lines, when looked after well, usually can stay in for 6–8 months. But it requires regular weekly dressing change and line flush to keep the line free from infection and from getting blocked.

Guidelines on changing the dressing and flushing the PICC

Materials required:
- One sterile dressing pack containing:
  - sterile gauze
  - sterile gloves
  - sterile drape
- One 10mL syringe
- 10mL prefilled 0.9% Sodium Chloride
- Two 3mL ChloraPrep sponges or wipes
- One transparent, breathable dressing
- Steri-strips
- Sterile bung

Procedure:
1. Wash hands. Dry.
2. Gather all materials needed.
3. Open dressing pack and add the other materials in the sterile pack. Maintain sterility all the time.
4. Remove the dressing gently. Pull the dressing towards the direction of the upper arm. Make sure that the PICC is kept secure with statlock and steri-strips.
5. Inspect the site for oozing, bleeding, redness, tenderness and swelling.
6. Wash and dry hands thoroughly.
7. Put on sterile gloves. Pick up the end of the PICC with a ChloraPrep wipe and wrap the line with it. Make sure that sterile gloves and the line are not touching. Lift the line and place a sterile drape underneath the line before resting the tip of the line on it.
8. Remove the old bung and clean the tip of the lumen with ChloraPrep wipe. Attach the empty 10 mL syringe. Open the clamp and aspirate slowly. Withdraw 2-3 mL blood. Close the clamp and discard the used syringe.
9. Attach the pre-filled 10 mL 0.9% Sodium Chloride and flush the line slowly using a ‘pause and push’ technique. Do not use a syringe smaller than the 10 mL as this can cause the line to split.
11. Clean the insertion site with the 3 mL ChloraPrep sponge. Allow the site to dry. Apply new steri-strips and cover the site with the transparent dressing. Ensure that the dressing covers the insertion site, steri-strips and the statlock. Check if patient is comfortable with the new dressing and can move arm easily.
12. Discard materials used. Cover the line with tubigrip or bandage depending on patient’s preference.
13. Wash hands.
Fixing problems

Unable to take blood sample from the line
Check that there are no kinks on the line. If still unable to aspirate blood, flush line with 2-3 mL of 0.9% Sodium Chloride then try to aspirate blood again. If the problem persists, please ring the CVAD service or the day unit for advice.

Do not aspirate blood from the line if you are disconnecting chemotherapy from the line. Flush immediately with saline and close clamp.

Bleeding from the insertion site
Cover the insertion site with sterile gauze and transparent dressing. Apply gentle pressure over the site for 24 hours. Monitor for any changes.

Redness, tenderness or inflammation on the insertion site
Remove the dressing. If oozing is noted from the insertion site, take a swab to test for possible infection. Clean the site well and cover with a new transparent dressing. Monitor for changes. Sometimes, this can be caused by trauma during insertion or reaction to dressings or chemicals.

Phlebitis
This is an inflammation of the vein. The skin will have a red streak and follows the vein where the line was placed. Mechanical phlebitis can occur especially during difficult insertion. Apply warm soaks for at least 20 minutes as needed until the reaction settles. Give pain medications if required.

Pain and swelling on the insertion arm
This can be an early sign of blood clot or thrombus on the arm. The patient needs to be seen in hospital immediately for assessment and treatment.

If you have any worries or concerns regarding your patient’s PICC, please do not hesitate to phone us for advice (see below for contact details).

Useful contact numbers

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Guy’s Haematology Day Unit</td>
<td>020 7188 2745</td>
</tr>
<tr>
<td>Haematology Clinic</td>
<td>020 7188 2760</td>
</tr>
<tr>
<td>Guy’s Chemotherapy Day Unit</td>
<td>020 7188 6452</td>
</tr>
<tr>
<td>St Thomas’ Chemotherapy Day Unit</td>
<td>020 7188 4229</td>
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<tr>
<td>Samaritan Ward (24 hrs)</td>
<td>020 7188 8855</td>
</tr>
<tr>
<td>Hedley Atkins Ward (24 hours)</td>
<td>020 7188 8854</td>
</tr>
<tr>
<td>Advanced Nurse Practitioner for</td>
<td>020 7188 5885</td>
</tr>
<tr>
<td>Central Access Devices</td>
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Guy’s and St Thomas’ hospitals offer a range of cancer-related information leaflets for patients and carers, available at www.guysandstthomas.nhs.uk/patientleaflets/cancer

**PALS** – To make comments or raise concerns about the Trust’s services, please contact our Patient Advice and Liaison Service (PALS). Ask a member of staff to direct you to PALS or:

- **t:** 020 7188 8801 at St Thomas’
- **t:** 020 7188 8803 at Guy’s
- **e:** pals@gstt.nhs.uk

**Language support services** – If you need an interpreter or information about the care you are receiving in the language or format of your choice, please get in touch using the following contact details:

- **t:** 020 7188 8815
- **fax:** 020 7188 5953
- **e:** languagesupport@gstt.nhs.uk

**Knowledge & Information Centre (KIC)** – For more information about health conditions, support groups and local services, or to search the internet and send emails, please visit the KIC on the Ground Floor, North Wing, St Thomas’ Hospital.

- **t:** 020 7188 3416

**Become a member of your local hospitals, and help shape our future**

Membership is free and it is completely up to you how much you get involved. To become a member of our Foundation Trust, you need to be 18 years of age or over, live in Lambeth, Southwark, Lewisham, Wandsworth or Westminster or have been a patient at either hospital in the last five years.

To join, please call 0848 143 4017, email members@gstt.nhs.uk or visit www.guysandstthomas.nhs.uk

**Dimbleby Cancer Care** is the cancer support service for Guy’s and St Thomas’. They have drop-in information centres, and also offer complementary therapies, psychological support and benefits advice.

Drop-in information centres are located at Guy’s in Oncology Outpatients (Ground floor, Tabard Annex) and at St Thomas’ on the Lower Ground Floor, Lambeth Wing.

- **t:** 020 7188 5918
- **e:** RichardDimblebyCentre@gstt.nhs.uk