

Preparing for your Interventional Radiology visit

Wollongong Hospital Medical Imaging Department



Health
Illawarra Shoalhaven
Local Health District

What is Interventional Radiology?

Interventional Radiology (IR) is a minimally invasive option to open surgery that uses radiological image guidance (fluoroscopy, ultrasound and CT) to aid diagnosis and/or treatment. In many cases, surgery can be avoided and the risks to the patient can be lowered with faster recovery times.

Where are we?

Interventional Radiology procedures are performed in the Medical Imaging Department at Wollongong Hospital. The Medical Imaging Department is found on the ground floor of Wollongong Hospital near the Loftus Street entrance.



Wollongong Hospital main entrance

Parking

There is access to the hospital car park from both Dudley Street and New Dapto Road. Prices for parking in the hospital car park vary and are displayed at the entrance, or on the Wollongong hospital website (www.islhd.health.nsw.gov.au). There is limited free parking available on the streets around the hospital.

There is space to drop off patients at the main entrance at the Loftus Street entrance.

How long will I be there for?

Every patient is different and it is not always easy to predict how long each procedure will take. More information on how long different procedures take can be found on pages 5 to 10.

Wollongong Hospital is a major regional trauma centre. This means your procedure may be delayed if there is an emergency. Be assured our staff are doing their best to run to time. If an emergency occurs and your procedure is delayed, our nursing staff will keep you informed.

When your procedure is finished, you may need to be monitored in the department for up to several hours. To help you organise transport, please ask our staff for an estimated timeframe.

Please call our friendly nursing staff on (02) 4222 5321 if you have any questions.

Preparing for your procedure?

A staff member will contact you when you make your booking. They will give you information on how to prepare for your procedure. Some procedures may require you to:

- Fast (going without all food and liquid), sometimes called “nil by mouth”.
- Stop medications. Please discuss all medications you are taking with our nursing staff at the time of your booking.
- Have a recent blood test.
- Tell the booking nurse of any conditions you may have (e.g. diabetes) and allergies, especially to iodine.

Our nursing staff may also contact you in the days before your procedure to confirm your preparation instructions. If you are unsure of your preparation instructions please contact us on (02) 4222 5321.



Medical Imaging reception staff

Coming from home?

Staff will ask you to arrive 30 minutes before your procedure. At the front desk, our reception staff will register your Medicare card. They will walk you into the department to the nurses station.

What if I am already a patient at the hospital?

If you are already a patient at Wollongong Hospital, a medical imaging wardsperson will collect you for your procedure. You will be collected about 40 minutes before your procedure is due to start. You will be taken in your bed to the imaging department, where nurses will get you ready for your procedure.

If you are a patient at another hospital within the Illawarra Shoalhaven Local Health District, you will be transported to and from Wollongong Hospital for your procedure by the health services' Non Emergency Patient Transport Service (NEPT).

At the Medical Imaging Department

You will be prepared for your procedure. This may include:

- Changing into a hospital gown.
- Routine observations including pulse and blood pressure.
- The insertion of a cannula (a small plastic tube inserted into the vein in order to give medication).



Medical Imaging nurse performing routine observations

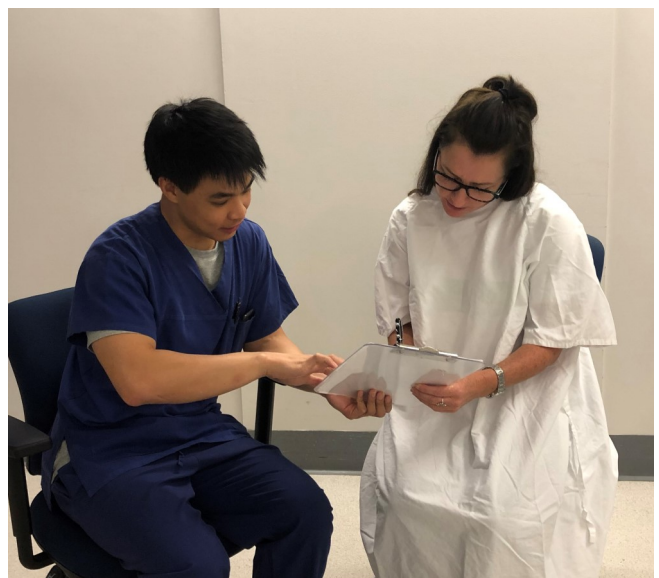
Before your procedure

A doctor will explain the procedure and any risks involved before asking you to sign a consent form.

Please feel free to ask any questions that you may have at this time. And remember, even at this stage, you can decide against having the procedure if you wish.

If you require an interpreter or are unable to provide consent for any reason (e.g. dementia) please call our nursing staff before your procedure on (02) 4222 5321.

If you are an inpatient, please raise this issue with your nurse or doctor.



Doctor explaining consent

Common Interventional Radiology procedures performed at Wollongong Hospital

Below is a short description of procedures performed at Wollongong Hospitals Medical Imaging Department. If your procedure is not included, or you have any questions, please contact our friendly staff on (02) 4222 5321.

Biopsy

A biopsy is a way of taking a small sample of tissue out of your body, using a special needle. This allows doctors to look at the sample under a microscope and will help your treating doctors decide on a plan. This procedure uses a CT scan or Ultrasound to help locate the needle.

The procedure usually takes up to 60 minutes. After your biopsy is finished, you will be monitored until the medical team think it is safe for you to go home or back to your ward. Estimated times before you can leave are:

- General biopsy 2 to 3 hours
- Lung biopsy 2 to 3 hours
- Renal and Liver biopsies 4 to 6 hours

Drainage

In the past, drainage of an abscess (a collection of fluid) inside your body would have required an open operation. Now we can drain an abscess by putting a fine plastic tube, called a drainage catheter, into it through the skin. This is done through a very small cut and is usually performed under CT or ultrasound.

Every patient is different, but the procedure takes around 60 minutes. After your drainage is complete, you will be required to stay until the medical team think it is safe for you to leave.

Barium Swallow

A barium swallow looks at the oesophagus (food pipe) and the stomach. These areas of your body cannot normally be seen on x-ray images unless coated in a white liquid called barium contrast. Barium swallows are done in the DSI (Digital Subtraction Imaging) screening room.

The procedure uses a type of x-ray called fluoroscopic imaging. The images are taken as you swallow the liquid and as it passes into your stomach. The radiologist is able to check the oesophagus and stomach and see how well the liquid moves through them.

Every patient is different, but the procedure takes around 30 minutes. There is no recovery time after a Barium Swallow so you can leave once the procedure is finished.

Nephrostomy

A nephrostomy is a procedure where a fine plastic tube (catheter) is placed through the skin into your kidney to drain your urine. The urine is then collected in a drainage bag. Your Nephrostomy will be done in the Angiography suite.

Local anaesthetic is injected, which may sting for a short while, but this sting soon wears off. Later, you may be aware of the needle and the catheter passing into the kidney, and sometimes this is painful. Any pain you have will be controlled with painkillers or a sedative. Generally, placing the catheter in the kidney only takes a short time, and once in place it should not be felt.

Every patient is different, but the procedure takes around 90 minutes. After your nephrostomy insertion is complete, you will be required to stay until the medical team think it is safe for you to be discharged. This can be up to 2 hours.



Angiography Suite

CT Nerve block or Facet joint injection

Facet joint injections or nerve block injections are performed to treat pain, most commonly in the neck, back and legs. The procedure involves an injection either directly into the joint or to the small nerve which supplies feeling to the joint.

The injection is made up of a mixture of local anaesthetic (to numb the area) and a corticosteroid. The corticosteroid reduces inflammation (swelling) at the site, and as a result reduces pain and other symptoms caused by the inflammation.

The procedure takes place on a CT scanner because a CT scan is used to guide a radiologist precisely to the area that needs to be treated.

Every patient is different, but the procedure to take around 60 minutes. After your injection is finished, you will need to stay until the medical team think it is safe for you to leave.



Nurse preparing for procedures in the CT room

Angiogram

An angiogram is an X-ray procedure that shows the arteries (blood vessels) in your body in the area of your problems. A dye (contrast agent), which usually contains iodine, is injected directly into the artery through a fine tube (catheter). The dye fills the arteries and makes them more visible on an X-ray screen. Angiograms are performed in the Angiography suite.

Angiograms are usually performed to find any blockages, areas of bleeding or to display the blood supply to abnormal areas. It may sting a little when the local anaesthetic is injected until the area becomes numb. You may have a warm feeling for a few seconds when the dye is injected and feel like you are passing urine. This feeling is normal and will pass quickly.

Every patient is different, but the procedure takes around 60 minutes. After your Angiogram is complete, you will need to stay for several hours until the medical team thinks it is safe for you to go. This can be up to 4 hours.

Lumbar Puncture (LP)

A lumbar puncture (LP) involves putting a needle into the lower back to reach the fluid that sits around the spinal cord. This can help diagnose and sometimes treat problems of the brain and spinal cord. Fluoroscopic (a type of x-ray) guidance will be used during your LP and your procedure will be performed in the DSI (Digital Subtraction Imaging) screening room.

You will need to stay in the prone position (laying face down on the table) for LPs performed under fluoroscopic guidance. Pillows may be placed under the stomach or hips to improve your comfort as well as help in bending the lower spine.

Every patient is different, but the procedure takes around 45 minutes. After your LP is complete, you will need to lay flat for between 4 and 6 hours before being released.



Digital Subtraction Imaging (DSI) Room

Embolisation

This is a procedure to block blood flow to an affected area. It involves blocking the blood vessels that provide blood to the targeted area. Embolisations are performed if you have any of the following conditions:

- Brain Aneurysms (bulging weak spots in the walls of blood vessels in the brain)
- Tumours such as uterine fibroids
- Intra abdominal bleeding (usually performed as an emergency procedure)
- Arteriovenous malformations (AVMs) of your brain and spine. These are knots of blood vessels that are at a high risk of bleeding.

A catheter (fine plastic tube) is inserted through the femoral artery and is guided through the body to the affected area. Once in the area to be treated, material is injected through the catheter to seal the blood vessel. A number of different materials may be used, including:

- Tiny plastic particles
- Foam
- Metal coils
- Glue
- Surgical balloons.

The type of material used will depend on the problem being treated. Patients are usually required to stay in hospital for up to several days after undergoing an embolisation procedure. How long you stay depends on the condition being treated.

Embolisations are performed in the Angiography suite. Every patient is different, but the procedure takes around 90 minutes.



ISLHD Interventional Radiologist

Venous Access (PICC line/Portacath insertion)

With a catheter (a specially made thin, flexible tube) in place, treatments such as chemotherapy or antibiotics can be given through the catheter over a period of time without repeated injections. A catheter can also be used when regular blood samples need to be taken for blood transfusions and other procedures that need access to a vein over days, weeks or months.

Peripherally-inserted central catheters (PICC) are inserted through a vein in the arm, with the tip placed within a central vein.

Implantable ports (Portacath) are inserted through a large vein, usually at the base of the neck (jugular vein). Both the port and the catheter are placed completely under the skin. The port has a silicon window and a needle can be inserted through the skin and into the silicon window to provide access to the port and catheter.

Venous access is carried out in the angiography suite. You may be given oxygen and medications to ease any pain and to make you a little drowsy, particularly if you will be having an implantable port.

Local anaesthetic is injected into your skin through a small needle. This will numb the skin at the site of venous access, but you will still be awake.



Staff preparing equipment

If you are having an implantable port, local anaesthetic is also injected into the area where the port will be inserted. The injection will sting, but the feeling will quickly pass as the local anaesthetic starts to work.

A small cut is made in your skin, usually in your mid upper arm for PICC lines or at the base of your neck for ports, using ultrasound to guide. A needle is then inserted through the small cut and into the underlying vein. After gaining access into the vein with the needle, X-ray images are used to guide the tip of the catheter in place deep into the central vein. If you are receiving an implantable port, a small pouch, just large enough to hold the port, is created beneath your skin. The port is placed within the pouch, stitched in place, and connected to the catheter.

Your newly inserted venous access catheter or port is tested to make sure it is working correctly. The catheter or port is then flushed with normal saline (salt water) and a special medication called heparin to prevent any blood within the catheter from clotting. All incisions are then stitched and dressings are applied.

Every patient is different, but the procedure takes around 60 minutes.

Percutaneous Transhepatic Cholangiogram (PTC)

A percutaneous biliary drainage is a procedure in which a small plastic tube (drain) is inserted into the liver through the skin to drain the bile. Sometimes, a picture is taken of the bile ducts to see where the blockage might be. This is known as a percutaneous transhepatic cholangiogram (PTC).

This procedure is usually performed because you have become jaundiced (yellow) and very itchy. This happens when the bile cannot flow normally into the gut and increases your risk of infection. The most common reasons for jaundice are gallstones and pancreatic masses.

PTC's are performed in the angiography suite, under a general anaesthetic (the patient is put to sleep). The skin at the side of your abdomen is washed and covered with sterile towels. A small needle is inserted into the bile ducts. A small amount of dye (contrast agent) is injected so pictures can be taken of the ducts. Once the doctor has enough information, a drain will be left in place and attached to an external drainage bag. After the bile has drained into the bag, your jaundice (yellow colour) and itching will improve.

The procedure will take between 1 and 2 hours. Recovery from a general anaesthetic is different for every patient, most people remain groggy for a few hours after waking up.

Additional information:



InsideRadiology

Inside Radiology is an online Australasian resource on clinical radiology tests, procedures, and interventions. The website provides up-to-date information to health consumers at:

<https://www.insideradiology.com.au/>

References:

<https://www.healthline.com/health/endovascular-embolization>

<https://www.insideradiology.com.au/>

<https://www.bsir.org/patients/patient-information-leaflets/>

<https://www.guysandstthomas.nhs.uk/our-services/radiology/patient-leaflets.aspx>

Need an interpreter? Professional interpreters are available if you need help to communicate in English, or if you are Deaf. Our staff can also ask for an interpreter. The staff will book an interpreter for you. Interpreter Services are free and confidential. You can bring a family member or friend with you to the appointment. If you need help to communicate it should be through a professional interpreter. You can also call the Translating and Interpreting Service on 131 450 if you need to speak to us before your appointment.

