

## Isolated limb perfusion (ILP) with melphalan and TNF alpha or melphalan alone

### What is isolated limb perfusion (ILP)?

Isolated limb perfusion is a technique that can be used to deliver anti-cancer drugs directly to an arm or a leg. This means a high dose of drugs can be given in the area where the cancer occurred. This procedure is performed under a general anaesthetic and takes about four hours.

### What will happen to me?

A tight tourniquet will be applied to the top of the limb to stop the flow of blood reaching other areas of the body. Plastic tubes are placed in the main artery and vein, and a pump is used to circulate and oxygenate the blood.

A very high dose of chemotherapy can be given to the limb and it will not reach the rest of the body because of the tight tourniquet. With this technique, we can also raise the temperature of the perfused arm/ leg to over 38°C. This is because we know that the drug melphalan will work better at this temperature. At the end of the operation, the blood vessels are repaired. Once the tourniquet is removed, the normal blood supply to the limb from the rest of the body is restored.

You will stay in hospital for 3–5 days after the procedure. The first night is usually in our critical care unit, so you can have one to one nursing care. During your time in hospital, it is important to keep the limb elevated.

### What drugs are used?

Usually the combination of drugs is melphalan and TNF-alpha, although sometimes melphalan is used alone.

### What are the benefits of this procedure?

The response rate of tumours to this treatment is about 50% to 70%. Therefore, up to half (50%) of patients having this procedure will not benefit from this operation. Your team will discuss this with you prior to the procedure.

### Possible side effects

The side effects usually only affect the treated limb. The side effects usually get better after 6–8 weeks, but in some people they may last longer. Please let your team know about any side effects you may have.



### **Leakage of the chemotherapy**

During the ILP, there is a small risk that a small amount of the chemotherapy drug may get into the rest of your body. The team will inform you if this occurs.

### **Pain and stiffness**

After the operation, you are likely to have some pain in the limb, and your muscles and joints might be inflamed. This means you will feel stiff and uncomfortable when you are moving about. We will give you painkillers to take regularly to control the pain and you will probably need to take them for several weeks. Please let your doctor or nurse know if you are still in pain so that they can prescribe a stronger painkiller.

### **Swelling and redness**

Your limb may become red and swollen. This usually starts about 48 hours after your treatment and is most noticeable after one week. The swelling gradually reduces over 2–3 months. The redness will gradually fade over the next few months but may be permanent. Your skin colour should go back to normal after about six months, but some people are permanently left with a slight darkening of the skin.

### **Blisters and peeling skin**

You may get blisters or peeling skin after treatment. This can be on the sole of your foot if you have ILP on your leg or on the palm of your hand if you have ILP on your arm. This usually happens in the first two weeks after treatment but it will gradually heal.

### **Risk of infection**

There is a small risk of infection at the incision site which may require you to be reviewed by either a member of the surgical team or your local practice nurse or GP.

### **Hair loss**

You will lose the hair on the leg or arm that has been treated, but this will grow back again. Very occasionally, people also have a little thinning of the hair on their head but this is not usually noticeable.

### **Nail changes**

A few weeks after treatment, you may notice changes to your nails on the treated limb. They may develop lines or sometimes a nail may come off. If this happens, a new nail will grow in its place.

### **Numbness or tingling**

You may get numbness or tingling after treatment due to the effect of the chemotherapy drugs on your nerves or due to the surgery you have had. This will be in your foot or in your hand. Please tell your team if this happens. It usually improves slowly over a few months but is sometimes permanent.

### **Lymphoedema**

A possible long-term side effect is a permanent swelling of the treated limb, known as lymphoedema. Please let your team know if you think you may have this.



**Contact details**

If you have any concerns or questions about isolated limb perfusion, please call:

Your specialist nurse: .....

Telephone: .....

Alternatively, please call:

**The Royal Marsden Macmillan Hotline:**                      020 8915 6899  
(available 24 hours a day, 7 days a week)

