

# Liver directed therapies

## Hepatic artery embolization (HAE)/ transcatheter arterial chemoembolisation (TACE)

If the NET tumour has spread to the liver, you may be offered hepatic artery embolisation (HAE), which will aim to block the blood supply to the tumours in the liver.

You will have local anaesthetic (and sedation). The radiologist will access an artery in the groin and then direct a catheter, with the help of x-ray imaging, into the main supply of the liver (hepatic artery) and into the artery that supplies blood to the NET tumours in the liver. Tiny particles called microspheres are then injected through the catheter into the artery. These particles block the blood supply to the tumour, which can cause the tumour to shrink or even die.

This procedure may be combined with the injection of chemotherapy or the use of microspheres that contain chemotherapy. This is called transcatheter arterial chemoembolisation (TACE). For this procedure, you will probably be admitted to hospital overnight. The side effects can include fatigue, nausea, vomiting and pain especially around the liver.

## Selective internal radiation therapy (SIRT)

This is the use of radiotherapy to treat liver metastases that cannot be removed with surgery.

It is similar to hepatic artery embolisation. An experienced interventional radiologist will insert a catheter into the hepatic artery supplying blood to the NET tumours and tiny beads containing a radioactive substance will be injected. These interfere with the tumour cell DNA and slow tumour growth.

## Radiofrequency ablation (RFA)

This is a treatment for metastatic or primary NET and is done by a radiologist. Using ultrasound or CT guidance, a needle (under local anaesthetic and sedation) is inserted through the abdominal wall and into the liver tumour. Once the needle is localised within the tumour, a generator is used to deliver a rapidly alternating current (radiofrequency energy) producing high temperatures (heat) that destroy the cancer cells (necrosis).