Transarterial chemoembolisation

**TACE (transarterial chemoembolisation)** is a minimally invasive procedure used to treat liver cancer which delivers a high dose of chemotherapy directly into the arteries supplying the tumour. The chemotherapy drug is injected in combination with other materials in order to block the tumour’s blood supply. This approach means a maximum amount of the drug reaches the tumour but a much smaller dose is released into the bloodstream compared to receiving chemotherapy through an arm vein.

**How will the procedure benefit me?**
TACE is recommended if you have a tumour (or tumours) of the liver which cannot be treated in any other way. The goal of TACE is to shrink the tumour and stop it growing. TACE can help to get patients onto, and keep them on, the list for a liver transplant. Depending on the type of cancer, its size and location, you may need to have several TACE sessions in order to control the cancer. Around 70% of patients will see improvement after TACE, which has few side effects and can be used in combination with other treatments.

**How should I prepare for the procedure?**
Before the procedure, your doctor will require blood tests to make sure that your liver and kidneys are working and to check that your blood is clotting normally. You will need a contrast-enhanced CT or an MRI scan performed in the 30-60 days before the procedure. You should inform your doctor of all the medications that you are taking and any allergies you have. Your doctor may advise you to stop some medications before the procedure. You must inform your doctor if there’s a chance you might be pregnant. You will have to stop eating and drinking 6-8 hours before the procedure.

**The procedure**
The procedure will be performed in the department of interventional radiology. You will be taken into the treatment room and connected to monitors that will track your heart rate, blood pressure and pulse during the procedure. You will be given sedation, and medications will be given to prevent and treat nausea and/or pain. After giving local anaesthesia to the skin, the interventional radiologist will first pass a needle, then a wire into an artery in your groin or wrist. A small catheter (hollow tube) will then be moved forward over the guidewire into your artery in order to reach the liver and the arteries supplying the tumour.

A liquid (contrast) will be injected through the catheter to make the arteries visible on screen, so that the interventional radiologist can guide the catheter to the arteries supplying the tumour. You will be asked to hold your breath for a few seconds every so often throughout the procedure to ensure the pictures taken are clear. Once a small catheter is advanced in the artery supplying the tumour, the chemotherapeutic/embolic agent mixture will be injected.
At the end of the procedure the catheter is removed and site of access will be sealed. You may be asked to stay in bed for up to 12 hours in order to reduce the potential for bleeding from the artery that was punctured.

What are the risks?
Side effects are minimal. Pain, nausea and fever may occur which can make you feel like you have a cold or a flu, but these symptoms are usually easily managed with medications, and resolve in a few days.

You may have some bruising at the puncture site. Very rare complications include: bleeding or blockage of the artery requiring treatment with a further procedure, infection in the liver requiring antibiotics, acute liver failure and non-target embolisation (injection of the drug/embolic into the arteries outside of the tumour).

What should I expect after the procedure?
What is the follow-up plan?
Most patients experience what is called post-embolisation syndrome: pain, nausea or fever that can be easily controlled by medications. You can resume your regular diet the day after the procedure. You should be discharged within 24-48 hours. It is normal to have a minor fever, feel tired and lose your appetite for 1-2 weeks.

You should call your doctor if:
• Your leg becomes pale and cold
• You notice bleeding from the groin
• Pain in the leg or abdomen changes in strength or character
• You have significant shortness of breath.
• You have a fever of 38°C or higher
• You have signs of infection
• You experience frequent diarrhoea
• You develop a cough with yellow or green sputum
• You develop a red, hot or draining wound

In the weeks following the procedure, your oncologist or hepatologist will have blood tests done to see how your liver and kidneys are working. You will return for a CT or MRI scan 1-3 months later to check the size of the tumour. If the tumour is in both halves of the liver, you may be scheduled for another TACE treatment.

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