

Trans-arterial chemoembolization [TACE]

Radiology

What is the aim of this leaflet?

The aim of this leaflet is to explain the procedure for patients undergoing a trans-arterial chemoembolisation [TACE]. This leaflet is not meant to replace informed discussion between you and your doctor, but can act as a starting point for outlining risks and benefits.

What is trans-arterial chemoembolisation?

The procedure involves the use of X-rays to navigate a fine, soft and flexible tube (catheter) to the blood vessels within your liver. Once the blood vessels that supply the tumour are identified, treatment is delivered and works in two ways:

- Delivering high dose chemotherapy to the tumour
- Blocking the blood vessels, reducing blood flow, and starving the tumour from oxygen and nutrients it needs to grow.

Why do I need a trans-arterial chemoembolisation?

Previous scans and tests have shown a mass within your liver, which is probably a liver cancer. This procedure is one way to directly treat the tumour.

Who has made the decision?

The choice about which treatment is best for you will be made together with your doctor. This will be based on the risks and benefits of the treatment and your individual circumstances.

Consent

We must seek your consent for any procedure or treatment beforehand. A written consent will be obtained from yourself, by a doctor, to give permission to have the procedure carried out.

Your doctor will explain the risks, benefits and alternatives where relevant before you sign the consent. A referral will be made and your appointment will be arranged. If you are unsure about any aspect of the procedure or treatment proposed please do not hesitate to ask for more information.

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

What are the potential benefits of having a trans-arterial chemoembolisation?

The aim of trans-arterial chemoembolisation is to control the size, growth and spread of the tumour, but will not provide a cure. However this in turn has been shown that patients treated with trans-arterial chemoembolisation have improved survival and quality of life.

What are the potential risks from a trans-arterial chemoembolisation?

TACE is generally a safe procedure with few risks and side effects requiring further treatment including:

- **Pain**, this can occur at the right side of your abdomen, the tip of the shoulders or between the shoulder blades. You will be given strong pain relief during and after the procedure
- **Bruising** at the entry site gradually improves a few days or weeks after the procedure
- **Significant bleeding** requiring treatment is rare (0.1%)
- **Infection**, this uncommon complication can occur at the area of treatment in the liver and may require antibiotics or a small operation. You will be given antibiotics before the procedure and you will be monitored during and after the procedure to check for signs of infection
- **Acute Liver Failure**, this can happen when the liver is unable to cope once the blood supply to the tumour is blocked. Up to 20% of patients can experience reversible transient liver function derangement. Irreversible liver failure is a rare but serious complication occurring in 1% of patients. You will have blood tests before the procedure to check the function of the liver and make sure we avoid this complication
- **Post-embolisation syndrome** this is how your body reacts to having the blood supply to the tumour in the liver blocked. Up to half of patients can experience flu like symptoms such as tiredness, muscle aches, mild fever and shakes. These symptoms are controlled with rest and pain killers. Fatigue is common after the procedure lasting for about two weeks
- **Death** as a result of the procedure is extremely rare
- **Radiation:**
Ionising radiation may cause cancer many years or decades after the exposure. We are all at risk of developing cancer during our lifetime. 50% of the population is likely to develop one of the many forms of cancer at some stage during our lifetime. It has been estimated that undergoing this procedure may increase the chances of this happening to you to about 0.1 %. The requesting doctor and the doctor that will be performing your examination feel that the benefit of having the test or treatment outweighs the risk from the exposure to radiation
- If you have further questions about the risk of exposure to radiation please talk to your doctor during consent.

Please contact the X-ray department as soon as you receive this appointment if you think you may be pregnant.

- Contrast agent: The " dye" that is used to show up the blood vessels can have side effect for a minority of patients:
 - 3 in 100 patients experience nausea and hot flushes
 - 4 in 10,000 may have more serious effects including breathing difficulties.

If a side effect does occur the doctors, nurses and radiographers are trained to deal with it.

Are there any alternative treatments and what if I decide not to have it done?

The consultant in charge of your care will discuss the alternatives with you. They will also discuss the consequences of no treatment.

Are there any special preparations required?

Trans-arterial chemoembolization's are usually carried out as an inpatient procedure under local anaesthetic [a medication used to numb an area of the body to reduce pain].

- If sedation [a medication used to produce a state of calm or sleep] is necessary you will be advised not to eat for 6 hours prior but you can have clear fluids up to 2 hours before your procedure. The nurse on the ward will know if your procedure requires sedation or not as it will have been discussed at consent
- Bloods will be taken from you to check for any abnormalities and to check your clotting
- A cannula [a needle with a small plastic tube] will be inserted on the ward, through which fluids, antibiotics and sedation can be given
- You will be given antibiotics prior to your procedure to reduce the risk of any infection post-procedure.
- If you have any allergies or have previously had a reaction to the "dye" [contrast agent], you must tell the radiology staff before the procedure.

If you are taking the following medication and the doctor has not discussed them during consent please contact the X-ray department when you receive this information:

Acenocoumarol, Apixaban, Aspirin, Bivalirudin, Dabigatran, Dalteparin, Danaparoid, Dipyridamole, Edoxaban, Enoxoparin [Clexane], Fondaparinuxm, Heparin, Phenindione, Tinzaparin, Warfarin.

Who will carry out the procedure?

An interventional radiologist will perform the trans-arterial chemoembolization. Interventional radiologists are doctors who have special expertise in interpreting the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

Where will the procedure take place?

The procedure will take place in the angiography suite; this is located within the radiology department. This is similar to an operating theatre where specialised X-ray equipment has been installed.

The radiology staff will liaise with your nurse and porters to arrange your transfer.

What actually happens during a trans-arterial chemoembolisation?

You will be asked to get undressed and put on a hospital gown, if you are not already in one. On entering the X-ray room you will be asked to lie on the X-ray couch flat on your back. Routine observations of your heart rate, blood pressure and oxygen levels will be taken during and after the procedure. A team of nurses' and radiographers will assist the interventional radiologist during this procedure.

An area in both groins will be cleaned with antiseptic liquid and the area covered with sterile drapes, local anaesthetic is injected at the procedure site; this may sting for a few seconds, but then go numb. A small tube [catheter] will be inserted into the artery and directed toward the artery supplying the tumour using X-rays and a contrast agent [X-ray "dye"].

The interventional radiologist aims to navigate the catheter as close as possible to the tumour. Treatment is injected slowly in the blood vessel supplying the tumour area. After treatment the catheter is removed and a closure device [a piece of equipment to "plug" the hole in the artery] will be deployed and or pressure applied to stop the bleeding.

Will it hurt?

When the local anaesthetic is injected, it will sting for a short while, but soon wears off. You may get pain on the right side of the abdomen (tummy), tip of the shoulder blades or between the shoulder blades. You will be given strong pain relief during and after this procedure.

How long will it take?

All patients are different and it is often difficult to predict, but expect to be in the procedure room for 1 to 2 hours.

What happens afterwards?

- You will return to your ward
- The nurse on the ward will take your pulse and blood pressure to make sure that there are no problems. They will also look at the skin entry point to make sure there is no bleeding from it
- You will need bed rest for up to six hours, you will then be able to sit up and walk around if there are no complications
- Most patients stay and are observed in hospital for one night following the procedure and then are discharged home on the following day.

What will the advice be when I go home?

The nurse and doctor in charge of your care will give you clear instructions and advice.

- The ward in charge of your care will give you the correct advice to follow at home
- You will need somebody to come and collect you when the ward is happy for you to go home
- You will need somebody to stay with you at home for 24 hours following the procedure. You will also need access to a telephone during this time
- Do not undertake heavy or physical activities for the next 48 hours.

What will the advice be when I go home?

The nurse and doctor in charge of your care will give you clear instructions and advice.

- The ward in charge of your care will give you the correct advice to follow at home
- You will need somebody to come and collect you when the ward is happy for you to go home
- You will need somebody to stay with you at home for 24 hours following the procedure. You will also need access to a telephone during this time
- Do not undertake heavy or physical activities for the next 48 hours
- It is unlikely that the puncture site will bleed, but if this happens, you should follow the instructions below:
 - Stop what you are doing and lie down
 - Press firmly on the site with your fingers
 - Call NHS helpline on 111 or 999, explain that you have had an embolisation and the site is bleeding
- Special care must be taken when driving especially if your access site is the groin. Staff will give you further information on the day unit, but we advise you not to drive for the first 48 hours after the procedure. If bruising over the groin is preventing you from breaking quickly and effectively, it is advised you do not drive until the bruise has resolved. Further information can be found on the DVLA website: <https://www.gov.uk/guidance/general-information-assessingfitness-to-drive>

Will I receive a follow up appointment?

A follow up appointment will be made and sent to you in the post in the near future.

Trainees

A radiology trainee [qualified experienced doctors training in radiology] or occasionally a student may be present during the examination. If you would prefer them not to attend, please let a member of radiology staff know.

A follow up appointment will be made and sent to you in the post in the near future.

How to contact us

If you have any personal access needs, require wheelchair access or wish to speak to a member of staff for further information please contact the interventional radiology department 01902 307999 ext. 86344 between 8:30am – 4:30pm as the department cannot help with queries outside of these hours.

Angiography Suite / Interventional Radiology

Second floor radiology

New Cross Hospital

Wolverhampton

West Midlands

WV10 0QP

Patient Advice and Liaison Service

New Cross Hospital: 01902 695362

E-mail: rwh-tr.pals@nhs.net

Further information

Further information may be found at;

www.nhs.uk/conditions/liver-cancer/treatment

www.cancerresearchuk.org/about-cancer/liver-cancer/treatment/chemoembolisation

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。