



Oxford University Hospitals
NHS Foundation Trust

Cancer Associated Thrombosis

Information for patients



Cancer Associated Thrombosis

People living with cancer are at higher risk of developing thrombosis (blood clots). It is estimated that around 20 in 100 patients with cancer will experience a clot. This is known as cancer-associated thrombosis (CAT). This leaflet is about preventing and treating thrombosis that is associated with cancer.

How does cancer increase the risk of developing a blood clot?

- 1. Cancer cells** produce and release substances into the bloodstream which stimulate the body to make more of the proteins which make the blood clot.
- 2. Cancer therapy** including surgery, radiotherapy, chemotherapy, immunotherapy, and hormonal therapy kills cancer cells causing the release of substances that increase abnormal clotting.
- 3. Central venous catheters** are sometimes used to administer cancer therapy. These can include Peripherally Inserted Central Catheter (PICC) lines and Hickmann lines. Clots are more likely to occur around these lines.
- 4. Being less active** due to feeling unwell, tired, or weak means that the blood flow to the legs is reduced. This can lead to increased clot formation.

Signs and symptoms of Venous Thromboembolism (VTE)

Venous Thromboembolism includes both deep vein thrombosis (DVT) and pulmonary embolism (PE)

What is a Deep Vein Thrombosis (DVT)?

A DVT is a blood clot which forms within a deep vein, most commonly in the leg. However, it can develop in any deep vein including the arm.

Detecting DVT

Signs you may have a DVT in the leg may include:

- Pain and/or swelling in the leg.
- Skin discolouration.
- Skin may be warm to touch.

Should you have a central venous catheter (line) in place through which chemotherapy is administered, it is possible for clots to form around this. Pain and swelling around the site can warn you of a potential clot.

What is a Pulmonary Embolism (PE)?

When part of a DVT becomes dislodged and travels in the circulation, it can reach the lungs. A blood clot in the lung is known as a pulmonary embolism. A PE can be a serious and life-threatening event and is considered a medical emergency.

Detecting PE

Signs you may have a PE include:

- Pain in the chest or back.
- Shortness of breath.
- Coughing up blood.

When to seek immediate medical attention

You must seek immediate medical attention if you experience any of the following which could indicate a new clot.

- Chest pain or shortness of breath.
- Coughing up or vomiting blood.
- Increased pain or swelling in the leg.
- A leg that is hot to touch or discoloured.

Ways you can reduce your risk

- Drink plenty of fluids to avoid becoming dehydrated (unless you are told otherwise).
- Stay active and exercise / walk regularly if you can. If you cannot walk, move your legs, ankles, and feet around as much as possible. When in hospital, you can ask your nurse or physiotherapist for more information.
- Wear anti-embolism stockings as advised by your medical or surgical team during hospital admissions.
- Stop smoking. Please ask your oncology team if you would like help with this.
- If applicable, take your anticoagulant medication as prescribed.
- It is important to report any symptoms of a new clot or bleeding as described above to a doctor or nurse immediately.
- Speak with your doctor should you require more information or have concerns about your individual risk of VTE.

What the hospital can do to reduce your risk

Patients are given preventative anticoagulants to reduce the chance of a clot forming during a stay in hospital and after some types of cancer surgery.

Are some cancer types more likely to cause clots than others?

Cancers of the pancreas, bowel, lung, stomach, ovary, or cervix are associated with a higher risk of clots. Clots are also more likely if the cancer has spread to multiple organs (metastatic disease). Occasionally, preventative anticoagulation can be started for patients who are not in hospital if they are identified to be at very high risk of blood clots.

Treating blood clots

Should you develop a blood clot, you will receive treatment with a class of medicines called anticoagulants. These medicines work by reducing the time it takes for the blood to clot. They prevent new blood clots from forming and prevent the growth of the clot that is already present. The body will naturally break down the clot that has formed.

The choice of anticoagulant will depend upon where your cancer is, your kidney and liver function, your weight, your other medical conditions, and medications. Your overall risk of bleeding will also be carefully considered.

Throughout your journey with cancer, the dose of your anticoagulant or the choice of anticoagulant may change depending on the above factors. We will discuss your treatment options with you to help decide what is the most appropriate option for you. It is important to remember that this is not the same for everyone.

Low molecular weight heparins (dalteparin, enoxaparin, tinzaparin)

Low molecular weight heparins (LMWH) are given as an injection, just underneath the skin's surface (subcutaneously) once or twice a day. You or a relative/friend will be taught how to give the injection.

Direct Oral Anticoagulants (apixaban, edoxaban, rivaroxaban, dabigatran)

Direct Oral Anticoagulants are oral forms of anticoagulation that may be an option for you. You will take these once or twice a day depending on which one has been prescribed for you.

They may not be suitable for everyone. For example, patients with a low or high body weight, or with cancers that carry a higher risk of bleeding, or if the kidneys or liver are not working well.

Warfarin

Warfarin is an oral form of anticoagulation that may be an option for you. Patients on warfarin need blood tests to check the dose of warfarin being taken is correct. This blood test is called an INR (International Normalised Ratio).

Warfarin takes several days to work so you will need to use low molecular weight heparin alongside the warfarin until your INR is at a safe level.

Monitoring needed whilst you are taking anticoagulation medicines

While you are on anticoagulant treatment, your kidney function, liver function, full blood count and weight will be monitored, because changes may affect your dose. Your other medicines will also be reviewed.

The main side effect of an anticoagulant may be unexpected bleeding or bruising. You must seek immediate medical attention should you experience any of the following:

- Prolonged bleeding (lasting more than 10 minutes).
- Blood in vomit or sputum (spit).
- Passing blood when you go to the toilet, either in your urine or faeces.
- Passing black coloured faeces.
- Unusual headaches.
- Major trauma.
- Head injury (even if you feel well).

How long will I need to be on anticoagulant medicine for?

Patients who develop a cancer associated thrombosis will usually receive treatment with anticoagulation for 3 to 6 months. If you need to continue anticoagulation long than this, we will discuss this with you. Sometimes anticoagulation can be paused, or we may advise stopping anticoagulation if the risks of taking it outweigh the benefits.

Can I take painkillers?

Paracetamol is safe to use for pain relief. Avoid using aspirin and non-steroidal anti-inflammatory drugs (NDAIDs) such as ibuprofen as these can increase your bleeding risk.

Surgery or procedures

Your anticoagulant medicine may need to be stopped for a short period of time prior to any planned surgery or procedures. This is to make the surgery or procedure as safe as possible by reducing your bleeding risk. You will be provided with instructions about this.

Flying

Avoid flying for 2 weeks after your blood clot diagnosis. Seek advice from your oncology team before booking any flights.

Psychological effects of VTE

A VTE event can be sudden, unexpected, and potentially life-threatening. As a result, harm caused may have a physical or psychological impact – or both, and it is not unusual to experience emotional anxiety that is difficult to manage. There are a number of established resources available to help with these which can be found on the following website:

www.thrombosisuk.org/psychological-support.php

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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Oxford University Hospitals NHS Foundation Trust
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