Screening for cancer after unprovoked VTE

*NICE recommend:* if **unprovoked** DVT or PE do the following investigations to rule out cancer:

- Physical examination as guided by the history
- Chest X-ray
- Bloods (FBC, calcium, LFTs)
- Urinalysis

Consider abdomino-pelvic CT (and mammogram for women) in all patients presenting over the age of 40 with a first DVT/PE and in whom initial cancer investigations listed above are normal, though new research presented below questions the value of this.

Thrombophilia testing

- If **unprovoked** DVT/PE: consider testing for **antiphospholipid antibodies**.
- If **unprovoked** DVT/PE and a first degree relative with a DVT/PE: consider **thrombophilia testing**.
- **Do NOT** offer thrombophilia testing to:
  - Those with a provoked DVT/PE.
  - Those with a first degree relative with a DVT/PE but who themselves have never had a DVT/PE.
  - Those who are going to continue long-term anticoagulation.

Screening for occult cancer in unprovoked VTE

Unprovoked VTE may be the first presentation of an occult cancer and is particularly associated with breast, colorectal, urological and lung cancers.

NICE guidance recommends a history and examination lead approach followed by CXR, bloods and urinalysis in patients presenting with a first unprovoked event. If these tests are negative and the patient is over 40, consideration of abdomino-pelvic CT is recommended. This approach is supported by NICE NG12 Suspected cancer referral guidelines.

A BMJ review of the evidence for screening after **unprovoked** VTE, confirms that the latest and best trials show the rate of cancer diagnosis in the following year is around 4% (previously it was thought to be around 10%) (BMJ 2017;356:j1081).

The authors discussed the 3 trials of extensive versus limited screening for cancer after unprovoked VTE and suggested that the evidence suggests extensive screening (including CT scanning) may not be beneficial and may result in harms (a single abdomino-pelvic CT is equivalent radiation to 234 CXRs or 39 mammograms!).

One of these trials calculated that you would have to do a CT 91 times to detect one extra cancer compared with simple tests alone, and for every 460-500 CTs you do, you would cause one cancer (NEJM 2015;373:697).
The authors of the BMJ review suggest patients should be told of the NICE recommendations, and this latest evidence, and that some may choose not to have the CT scan.

*From a patient perspective, how easy would it be to live with the knowledge you had ‘turned down’ a test looking for cancer...?*

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**DVT and pulmonary embolus**

- The clinical features of DVTs are non-specific. Use the Well’s scoring tool and a D-dimer to assess the need for an ultrasound scan, in line with NICE guidance.
- For PEs, no features are particularly specific and the classical triad of pleuritic pain, dyspnoea and haemoptysis are rare. If you suspect a PE, admit.
- Compression hosiery is recommended for 2y after a DVT to prevent post-thrombotic syndrome, however, a trial showed no benefit.
- For all with unprovoked VTE, specific investigations should be done to rule out cancer.
- In unprovoked VTE consider antiphospholipid testing, but thrombophilia testing is reserved for those with an unprovoked VTE who have a family history of VTE in a first degree relative.
- Rivaroxaban and apixaban can be used instead of heparin-related drugs for the initial treatment of VTE. NICE concluded they are as effective as warfarin and more cost-effective overall. Dabigatran and edoxaban can only be used after heparin-related drugs.
- Anticoagulation should be continued for at least 3 months.
- Aspirin may be an option to consider after anticoagulation has finished in those with a first unprovoked VTE, although its benefits may not be in reducing VTE but in reducing other important endpoints such as CVD. The dose in trials was 100mg, which we can’t get in the UK...
- In pregnancy, be suspicious of DVT, remember most are left sided and the clot may be in the pelvic veins causing abdominal/pelvic/back or buttock pain!

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