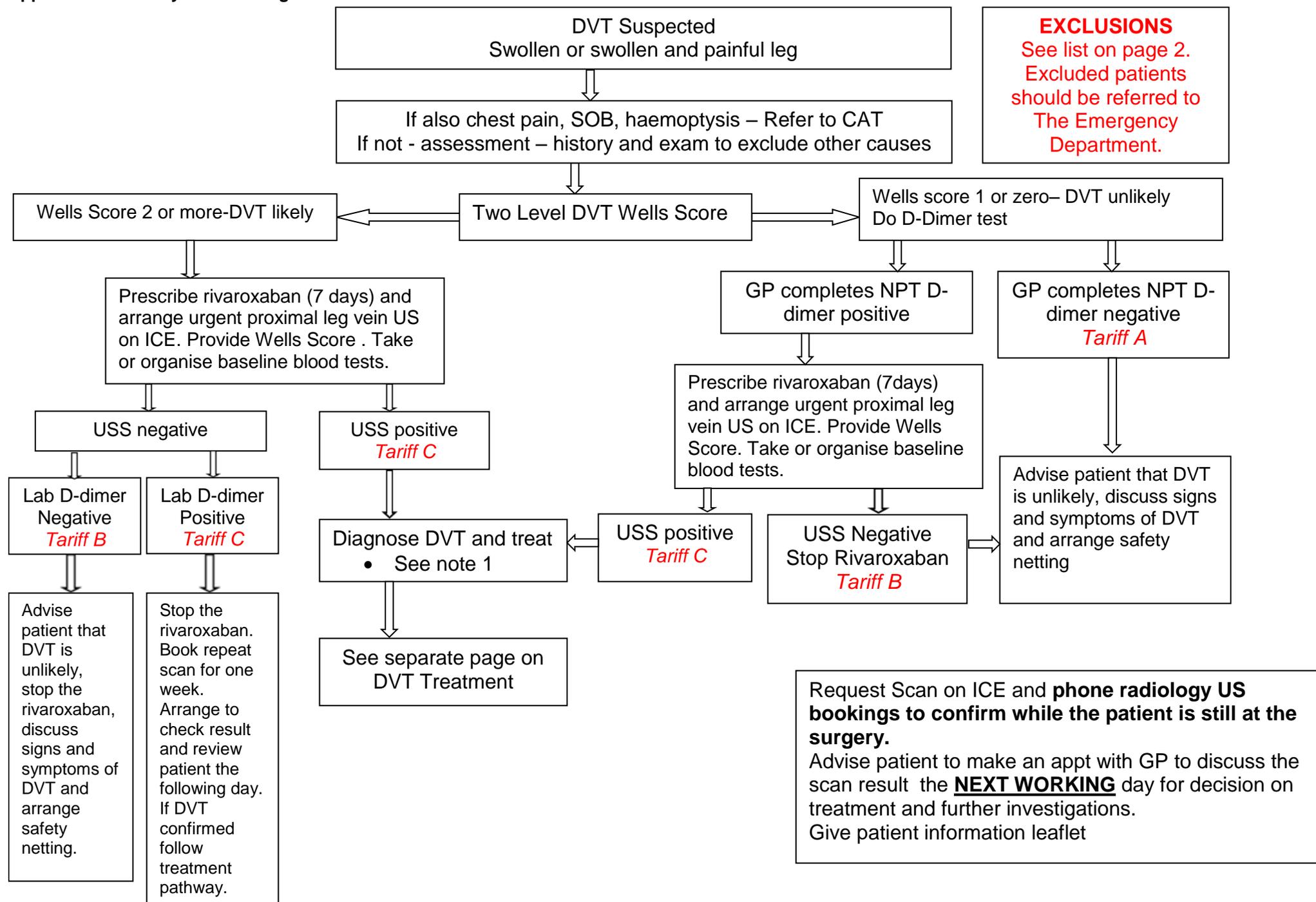


**Appendix 1: Pathway for DVT Diagnosis and Treatment**



**Baseline blood tests:**

**FBC U+E LFT Calcium  
Clotting Screen  
Lab D-Dimer**

Any problems with this pathway please report via e-mail to [HARDCCG.Commissioning@nhs.net](mailto:HARDCCG.Commissioning@nhs.net) with DVT pathway as the subject heading

**EXCLUSIONS FROM USE OF DVT PATHWAY OR  
RIVAROXABAN**

Pregnancy or breastfeeding or less than 6 weeks postpartum

Age <18

Severe renal impairment (Cr Cl<15ml/min)

Anticipated compliance problem even with help

On contra-indicated drugs. (See Note 2)

Solid tumour or VTE secondary to active cancer

Active or potential bleeding lesion/risk (See Note 3)

Congenital or acquired bleeding disorders

Known liver failure

Hypersensitivity to rivaroxaban

Already on therapeutic anticoagulation

Symptoms of pulmonary embolism

Uncontrolled severe arterial hypertension (>180mmHg systolic or>110mmHg diastolic)

Patients weighing greater than 120kg

**Note 1:** A positive scan will show thrombus in proximal veins or in the long saphenous vein within 3 cm of sapheno-femoral junction.

Although not specifically sought, scans will sometimes refer to calf vein DVTs or superficial vein thrombosis.

For calf vein thrombosis individualise decision to anti-coagulate patient. With an ongoing risk factor, e.g. leg in plaster, consider anti-coagulation. If there is high bleeding risk consider serial US scans. If clot is confined to calf veins only 6 week duration of anti-coagulation is required.

Ensure the patient is advised to report any worsening whilst awaiting scan in which case the patient should be reassessed from the start of the pathway.

For superficial vein thrombosis please seek advice from haematology.

For ilio-femoral DVT with symptoms of less than 2 weeks duration, where patient is fit with low bleeding risk, contact the on-call vascular consultant to discuss catheter-directed lysis.

**Note 2:** Rivaroxaban is not recommended in patients receiving concomitant systemic treatment with azole- or HIV protease inhibitors

Care is to be taken if patients are treated concomitantly with medicinal products affecting haemostasis such NSAIDs, aspirin and platelet aggregation inhibitors or other anticoagulants. For patients at risk of ulcerative gastrointestinal disease an appropriate prophylactic treatment may be considered.

**Note 3:** As with other anti-thrombotics, rivaroxaban is not recommended in patients with an increased bleeding risk such as:

- congenital or acquired bleeding disorders
- uncontrolled severe arterial hypertension
- other gastrointestinal disease without active ulceration that can potentially lead to bleeding complications
- vascular retinopathy
- bronchiectasis or history of pulmonary bleeding.

## Treatment of DVT

This comprises three main streams

- Anticoagulation to be prescribed by GP
- Below knee compression for 2 years. initiated by GP
- Investigation of the Unprovoked DVT in a patient not known to have cancer by haematology OPD

Most patients will need routine referral to haematology for further advice, consideration of duration of anticoagulation and need for thrombophilia screen.

Elderly frail patients, palliative care patients or those with dementia may not benefit from clinic attendance and Dr Emma Harris is happy to discuss such cases. Dr Harris works Tuesday, Thursday and Friday and can be contacted via her secretary on 01423 557320.

Patient information/education is also an important part of management. This should include advice about avoidance of NSAIDs and anti-platelet drugs whilst taking rivaroxaban.

Anti-platelet drugs can be stopped in the majority of patients. Patients on a single anti-platelet drug within 12 months of ACS should complete the 12 months unless there is a high bleeding risk. Aspirin is preferred to clopidogrel which has a higher bleeding risk. Any concerns should be discussed with cardiology. Any patients on dual anti-platelet therapy following ACS or stent should be discussed with cardiology as triple therapy is associated with a higher risk of bleeding.

Oestrogenic drugs such as the combined contraceptive pill and HRT should be discontinued.

### Anticoagulation

The recommendation is to use Rivaroxaban for the complete treatment of the episode from the initial anticoagulation of a patient with a suspected DVT awaiting an ultrasound and for a minimum of 3 months anti-coagulation for proximal DVT. The normal dose is 15mg twice a day for 21 days, then 20mg once a day for the remaining 70 days. For patients with creatinine clearance between 15-50ml/min and felt to be at high bleeding risk the maintenance dose can be reduced to 15mg once a day. In some cases 6 months or lifelong treatment may be advised by haematology even after a first DVT.

## Below Knee Compression

Prescription of compression hosiery is advised to prevent the chronic pain, swelling and leg ulcers of post-thrombotic syndrome that affects 20% of patients with DVT. It is most likely to occur with extensive DVT, recurrent ipsilateral DVT or poor anticoagulation.

Prescribe a pair below knee, open toe Class 2 stockings; one to wear and one to wash. These should be replaced every 3-6 months and continued for 2 years post-event. They should be removed at night and need only be worn on the affected leg.

Fitting should be delayed for a week or two after the event to allow initial calf swelling to settle.

If there is a suspicion of peripheral vascular disease Doppler ABPI should be undertaken prior to fitting. Compression should not be applied when ABPI is less than 0.8. If in doubt seek advice from a vascular surgeon.

Other contraindications to stockings include CCF, massive thrombosis with incipient gangrene, severe leg deformity, peripheral neuropathy, compromised skin integrity and intolerance of stocking material.

### The following elements of the pathway will occur at the Haematology OPD Visit:

#### *Investigation of the Unprovoked DVT*

*Provoked cases include those known to have cancer, after trauma, surgery, significant immobility, pregnancy, the puerperium, or while taking HRT or hormonal contraception.*

*For patients over 40 years with a first unprovoked DVT the possibility of underlying cancer should be considered. Take a history and examine fully including breast examination in women. Urinalysis, a FBC, U+E, LFT, Calcium and a chest x-ray should also be undertaken..*

*The NICE guidance also recommends consideration of abdomino-pelvic CT in those over 40 (and mammogram for women) who do not have signs of cancer on initial examination. This is not wide-spread clinical practice as the pick-up rate from these further investigations is low. Bilateral DVTs, recurrence on anticoagulation or very high D dimer levels may be useful in selecting those for further investigation. CT should be considered on a case by case basis. Individualise investigations in discussion with patient and /or carer. Most patients with no suspicious features are happy to avoid CT scanning after discussion.*

*If CT scan is undertaken it is reasonable to request CT chest in addition to abdomino-pelvic CT scan. In this event a prior chest x-ray can be omitted.*

*Mammograms should not be requested and if there is a high suspicion of breast cancer referral to breast clinic is appropriate.*

*Do not order thrombophilia screen at the time of DVT as the result may be affected and it will not change management. Decisions regarding thrombophilia testing will be made by Dr Harris when the patient is reviewed in outpatients.*

## Appendix 2: Checklist of Actions for GP's

### CHECKLIST OF ACTIONS AT EACH VISIT FOR DVT PATHWAY

#### INITIAL CONTACT

- History and Examination
- Wells score
- Near patient D-Dimer test if Wells score 0 or 1

If Wells 0 or 1 and D-Dimer negative:

- Give safety netting advice.

If Wells 2 or more then:

- Check there is no reason to exclude from pathway
- Prescribe 7 days rivaroxaban 15mg bd
- Book Urgent US
- Take or organise baseline bloods
- Provide patient information leaflet
- Organise follow-up appointment for next working day

#### NEXT WORKING DAY FOLLOW-UP

If ultrasound negative and Wells Score 0-1:

- Give safety netting advice and stop Rivaroxaban

If ultrasound negative and Wells score 2 or more and D-dimer negative:

- Give safety netting advice and stop rivaroxaban

If ultrasound negative and Wells score 2 or more and D-dimer positive:

- Book further scan one week from first
- Arrange further appointment the working day after the follow-up scan.

If ultrasound positive:

- Prescribe a further 2 weeks rivaroxaban 15 mg bd to complete 3 week initiation course.
- Discuss any changes needed to other regular medication
- Book further review appointment in 2-3 weeks.
- Make a referral to haematology outpatients (for exceptions see main pathway)

#### 2-3 WEEK REVIEW APPOINTMENT

- Review progress
- Check OPD with Dr Harris has been received
- Provide further rivaroxban 20 mg od for 70 days