Investigation Advice

High Probability of a DVT

Clinical score 2 or more, OR low clinical score plus positive D-dimer.

- **ALL** cases should undergo ultrasound scanning.
- **ALL** cases of DVT are referred to ED.
- If DVT has **not** been confirmed by ultrasound, then:

❖ **HIGH CLINICAL RISK with negative D-dimer.**
Some may need referral for further investigation (venography), while those not admitted require a repeat USS within 7 days. Despite a normal USS, the likelihood of DVT in this group can be as much as 5 – 18% over 3 months. **However** the overall risk of DVT following two normal USS within 7 days is low.

❖ **LOW CLINICAL RISK with positive D-dimer**
GP to clinically review within 7 days with a repeat clinical score. According to result follow with either D-dimer or repeat Doppler USS. Follow-up as per algorithm.Those with ongoing symptoms should be followed up with D-Dimer & USS if appropriate.

REFERENCES:

www.sign.ac.uk/guidelines/fulltext/36/section2.html
www.bcshguidelines.com/pdf/OutpatientDVT211003.pdf

Acknowledgements to Waitemata Primary Options

Low Probability of a DVT

Clinical score of 1 or less AND a negative D-dimer.
These patients do not require any further investigation to exclude DVT (unless their symptoms worsen in which case they will require re-assessment). However, close follow up is important over the following 3 months.

Prior to being sent home, all patients in this group require education regarding the following:

1. **Advice** about the signs and symptoms of pulmonary embolus or worsening DVT, and what to do about it should they have any concerns.
2. **Repeat assessment within 7 days** to review with further telephone contact again at 6 weeks and 3 months. Patients with worsening symptoms require careful re-evaluation & repeat investigation as indicated – either D-dimer or USS.

Patients with Persistent Symptoms

All patients with persisting symptoms at follow up require further assessment. This means repeating the clinical score and following with either D-dimer or USS.
NB. This is a guideline only. Go with your clinical judgement and refer if clinical suspicion of DVT despite negative tests.

This advice on the investigation of suspected DVT is consistent with accepted best practice.

Complete Clinical Risk Assessment

Risk Factor Assessment (using Modified Wells Criteria Score)	If yes add	**Score**
Active cancer (treatment in past 6 mths or palliative)	1	
Paralysis, paresis or recent immobilisation lower limb	1	
Recent immobilisation >3 days, or major surgery in last 12 weeks	1	
Localised tenderness along distribution of deep veins	1	
Calf swelling > 3cm compared asymptomatic side (measured at 10 cm below tibial tuberosity)	1	
Pitting oedema confined to symptomatic leg	1	
Distended non varicose superficial veins on symptomatic side	1	
Previously documented DVT	1	
Entire leg swollen	1	
Is alternative diagnosis as likely as, or more likely than DVT ?	Subtract **2**	
Total Clinical Score		

In patients with symptoms in both legs, the more symptomatic leg is used.

Clinical probability of DVT is:

- ➢ **Unlikely if score is 1 or less. If D-dimer negative, DVT effectively excluded**
- ➢ **Likely if score is 2 or more -*all cases undergo D-dimer. Refer for further assessment***

Exclusions

The following have not yet been validated for use with the clinical score assessment, and if present, consider Doppler ultrasound:

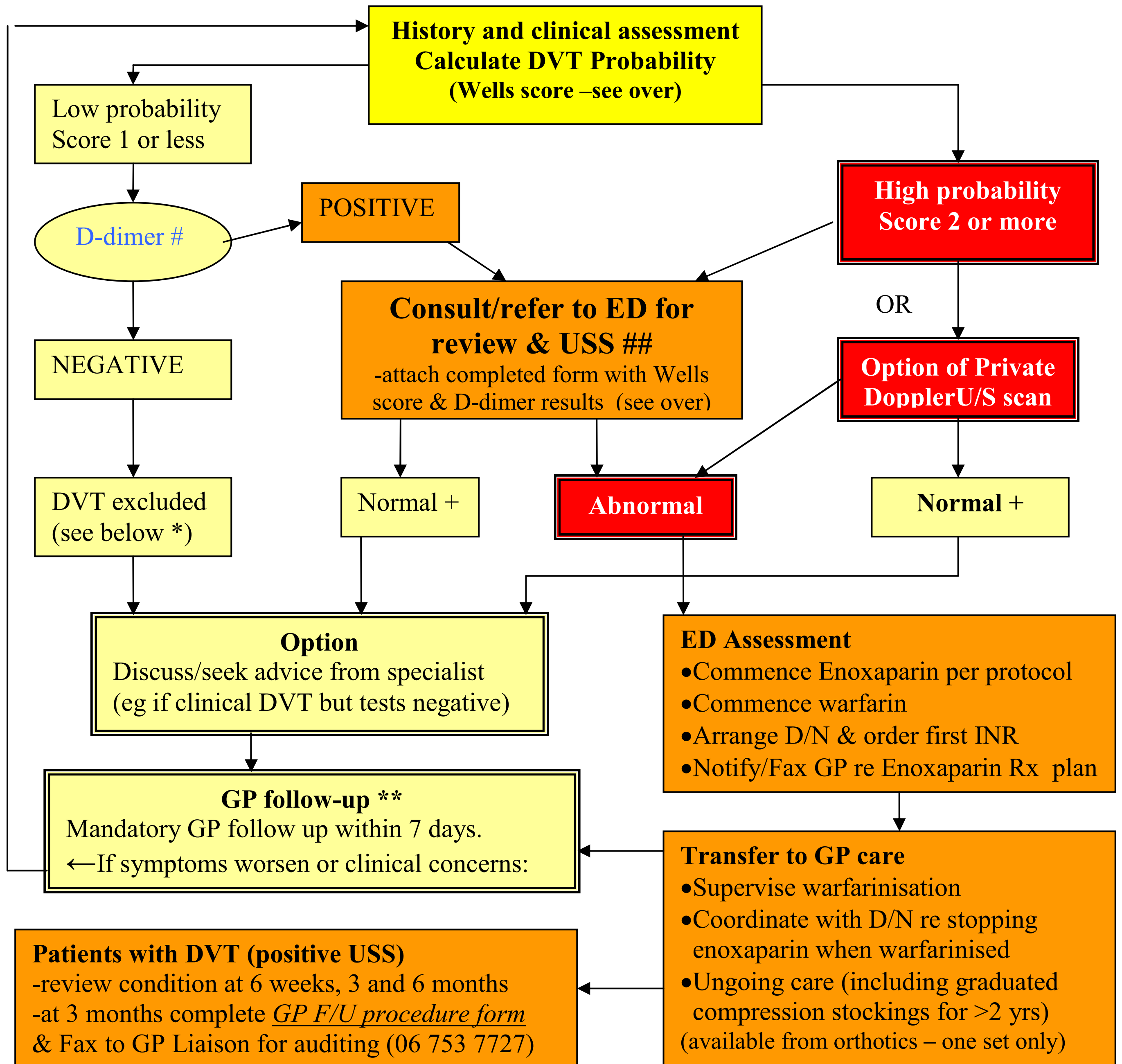
- ***UNDER 18 YEARS OF AGE***
- ***PREGNANCY***
- ***ORAL CONTRACEPTION***
- ***LONG HAUL AIR TRAVEL***
- ***PREVIOUS DVT OR P.E.****

** All patients with previous DVT/PE are considered "high risk" and as well as undergoing USS, referral to hospital for further assessment is recommended regardless of the US result.*

Order urgent bloods for D-Dimer, FBC, APPT, INR, U&E, LFT, Creatinine & Albumin
Do **thrombophilia screen** if patient <45 or recurrent thrombosis or FH of thrombosis. *(If done at Medlab mark result to be linked to hospital Labcare)*

Urgent D-Dimer: Result: ______

SUSPECTED LOWER LIMB DVT – GP INVESTIGATION/MANAGEMENT ALGORITHM TARANAKI BASE HOSPITAL OCTOBER 2006.



NOTES: D-dimer is an effective **exclusion** test for DVT in low probability groups. However, a positive D-dimer does not reliably confirm the presence of DVT (raised also in infection, cancer, trauma, etc).

Calf DVT carries a low risk of PE. However, 20-30% of calf DVT may extend to proximal veins, which carries a **high probability** of PE, hence the need to investigate all suspected cases

Currently USS can only be ordered via ED or consultant. If sending patient to ED provide full details of clinical assessment, D-dimer, etc.

* Prevalence of DVT with **low probability** score & **negative D-dimer** is < 1% over 3 months

** **Low probability** with **positive D-dimer** & **negative USS**: < 6% will have DVT over next 3 months

+ If **high probability** score: 2 negative U/S within 7 days has negative predictive value of 98%

NB The full ***DVT guideline*** & ***GP F/U procedure form*** is available under GP Liaison/Guidelines on DHB website/intranet, or via Case Managers. A DVT patient information booklet will be provided to patients at ED. ***To allow for audit of this protocol, please return completed F/U form at 6 mnth visit.***