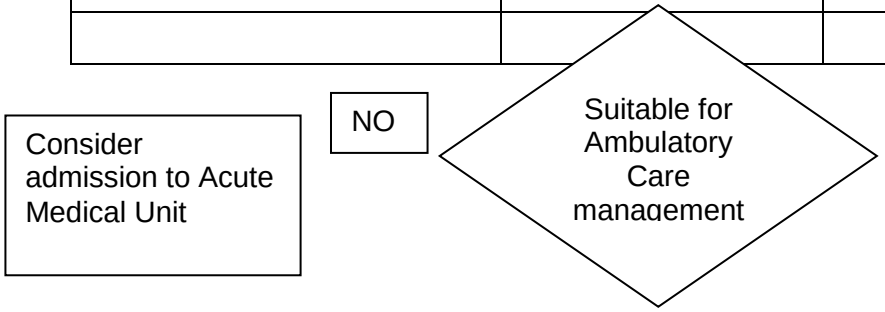
Deep and Superficial Vein Thrombosis Ambulatory Care Pathway

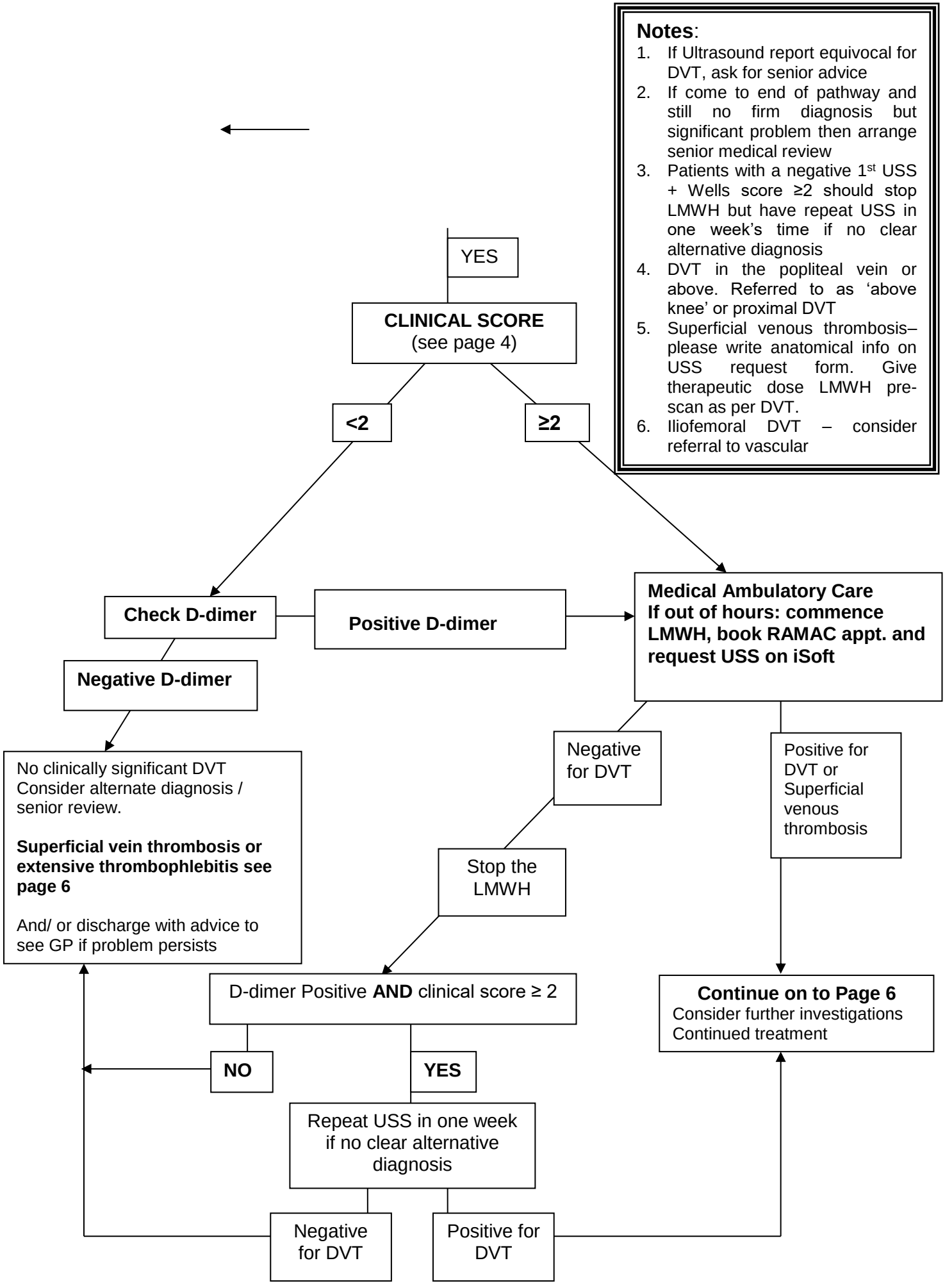
Consultant: …… Date:…… Time:…… Known allergies: …… Drug Sensitivities:……..	Affix patient label. Patient Contact No:…… First Contact/Next of Kin:……..……. GP Surgery……..….

Where should patients be managed?
Medical Ambulatory Care (RAMAC) open daily 08:00 to 22:00 Ext 43813 for DMH ; ……..... for UHND Extn:36850 Outside these hours patients may be seen in A+E with follow-up in RAMAC

Exclusion Criteria
Active bleeding Pregnancy and up to 6 weeks post-partum, d/w consultant (please refer to trust guideline ‘’VTE in Pregnancy and Puerperium’’ and d/w obstetrics) Suspected PE – follow PE pathway Within 2 weeks of lower limb surgery – d/w orthopaedics on call Limb threatening extensive DVT – refer direct to vascular **If patient is complicated or unsure please discuss suitability with RAMAC consultant**

Accountability			
Full Name	Designation	Signature	Initials




Notes:
1. If Ultrasound report equivocal for DVT, ask for senior advice
2. If come to end of pathway and still no firm diagnosis but significant problem then arrange senior medical review
3. Patients with a negative 1st USS + Wells score ≥2 should stop LMWH but have repeat USS in one week's time if no clear alternative diagnosis
4. DVT in the popliteal vein or above. Referred to as 'above knee' or proximal DVT
5. Superficial venous thrombosis– please write anatomical info on USS request form. Give therapeutic dose LMWH pre-scan as per DVT.
6. Iliofemoral DVT – consider referral to vascular
YES
CLINICAL SCORE
(see page 4)
<2
≥2
Check D-dimer
Positive D-dimer
Medical Ambulatory Care
If out of hours: commence LMWH, book RAMAC appt. and request USS on iSoft
Negative D-dimer
No clinically significant DVT
Consider alternate diagnosis / senior review.
Superficial vein thrombosis or extensive thrombophlebitis see page 6
And/ or discharge with advice to see GP if problem persists
Negative for DVT
Positive for DVT or Superficial venous thrombosis
Stop the LMWH
D-dimer Positive AND clinical score ≥ 2
Continue on to Page 6
Consider further investigations
Continued treatment
NO
YES
Repeat USS in one week if no clear alternative diagnosis
Negative for DVT
Positive for DVT

Addressograph

Clinical Assessment					
Temp	Pulse	BP	RR	Sats	Weight (kg)
Calf circumference (cm)		Left		Right	
Presenting History					
Past Medical History					
Medication					
Social History					

Examination Findings

Clinical Scoring (Modified Well's)

Clinical Features	**Score (circle)**
Active cancer (patient receiving treatment for cancer within the previous 6 months or currently receiving palliative treatment)	1
Paralysis, paresis, or recent plaster immobilisation of the lower extremities	1
Recently bedridden for 3 days or more, or major surgery within the previous 12 weeks requiring general or regional anaesthesia.	1
Localised tenderness along the distribution of the deep venous system.	1
Entire leg swollen (above and below knee)	1
Calf swelling at least 3 cm larger than that on the asymptomatic leg (measured 10 cm below tibial tuberosity).	1
Collateral (non-varicose) superficial veins present	1
Pitting oedema confined to the symptomatic leg.	1
Previously documented DVT (deep vein thrombosis) or pulmonary embolism.	1
Alternative diagnosis more than or as likely as DVT. *e.g. cellulitis, baker's cyst, injury*	-2
Total Score	

Score	**D-Dimer Result**	**Age-Adjusted D-dimer if ≥50 yrs**
☐ Less than 2 (unlikely) ☐ 2 or more (likely)		

Addressograph

Investigation Results	
Na	Hb
K	WCC
Urea	Plt
Creat	MCV
Bil	Coag
Alk Phos	Creatinine Clearance
ALT	Pregnancy Test (compulsory woman of childbearing age prescribed anti-coagulants)
CRP	

Ultrasound Result		
	DVT/ SVT present	**No DVT seen**
1st Scan		
2nd Scan		

If DVT present please continue with pathway
No DVT: Diagnosis and plan

Unprovoked Proximal DVT

All patients with an unprovoked proximal DVT should have the following performed **IN ADDITION** to a complete history and physical examination to assess for evidence of underlying malignancy.
Consider further urgent imaging if high suspicion, very high D-dimer, bilateral DVT or early VTE recurrence

Investigation	**Result/ Plan**
FBC,U&E, LFT, Calcium	
Urinalysis	
CXR	
Prostate examination in men >40 (+/- PSA)	
Breast examination in women >50	
In discharge letter please highlight to GP to check mammography and cervical screening up to date	

Symptomatic iliofemoral DVT

Consider vascular referral for catheter-directed thrombolytic therapy if: symptoms less than 14 days duration, good functional status, a life expectancy of 1 year or more, and a low risk of bleeding

Venous phase CT to be performed and images transferred to UHND/JCUH for review of vascular system if nil else found that on scan that would be contraindication to thrombolysis

Superficial Venous Thrombosis

D-Dimer cannot be used to aid this diagnosis

Patients with lower limb Superficial VT should have USS to exclude DVT

If Superficial VT confirmed within 3cm of saphenofemoral junction should receive **therapeutic** anticoagulation (manage as per proximal DVT, no further Ix required)

Superficial VT with risk factors for extension, recurrence or progression should receive **prophylactic** Enoxaparin for 30 days
- Risk factors for extension: SVT within 3-10cm of saphenofemoral junction, male, PMH of VTE, cancer, absence of varicose veins, severe venous insufficiency.

Other patients should be offered NSAIDs if no contraindications for 8-12 days

Oncology Patients

Therapeutic LMWH is treatment of choice for VTE in patients with cancer. Offer LMWH to patients with active cancer and confirmed DVT, and continue the LMWH for 6 months. At 6 months, assess the risks and benefits of continuing anticoagulation.

Addressograph

Treatment plan for patients with a confirmed DVT	
3 months anticoagulation provoked	
3 months minimum unprovoked	

Prior to commencing anticoagulation please consider:

- FBC
- Coagulation screen
- Renal function (CrCl should be checked; if less than 50ml/min consult senior doctor)
- LFT's
- U&E's

<u>If abnormal please discuss with senior doctor.</u>

Please tick which regimen is to be initiated.

LMWH	
Warfarin (with bridging LMWH)	
DOAC (see Appendix1)	

Prescribe LMWH. Name of LMWH used:	**Tick when completed**
Dose at Dose =	
Prescribe 7 full doses (minimum) and arrange supply.	
Supply sharps bin	
Education: • Patient/ relative to administer if appropriate. Supply information leaflet and instructions **<u>OR</u>** • Contact district nurses and fax separate DN summary form	
If on other anticoagulant/antiplatelet discuss with senior doctor. May need to be stopped.	
Inform GP and any other physicians actively involved in the patient's care	

Prescribe Warfarin (with bridging LMWH)	**Tick when completed**
Load warfarin as per "Oral Anticoagulation with Warfarin- Adult management guideline"	
Supply LMWH as above.	
Supply warfarin and yellow book.	
Counsel as appropriate.	
Refer to anticoagulation clinic (DMH 44580 or BAH 53118)	
Check for drug interactions.	

Addressograph

If on other anticoagulant/antiplatelet discuss with senior doctor. May need to be stopped.	
Inform GP and any other physicians actively involved in the patient's care	

Prescribe DOAC. Name of DOAC used:	**Tick when completed**
Dose: depends on the agent (a loading dose may be required)	
No significant other co-morbidities • Abnormal renal or liver fuction must be discussed with senior doctor	
Check for drug interactions. If on other anticoagulant/antiplatelet discuss with senior doctor. May need to be stopped.	
Prescribe for 7 days (minimum) and arrange supply	
Provide patient information leaflet, counselling and alert card	

Referrals	**Tick when completed**
Please refer to the Consultant Respiratory Physician clinic all PEs If active cancer please refer back to oncologist.	
Respiratory secretaries (DMH) – fax ……..: UHND – fax ……..	
Refer to anticoagulation clinic - For on-going warfarin treatment.	

Further Notes

Addressograph

Guidelines on duration of treatment		
Calf vein only	3 months (recurrent or bilateral refer haematology clinic)	
Provoked DVT	3 months minimum (proximal refer haematology Clinic)	
Unprovoked DVT	Haematology clinic	
Complicated DVT	Haematology clinic	
Superficial VT within 3cm of saphenofemoral junction	3 months only	
Superficial VT with risk factors	30 days prophylactic Enoxaparin	
Superficial VT none of above	8 – 12 days NSAIDs	
Oncology patient	Refer to Oncologist	
Recurrent VTE	Life – long	

Referrals	Tick when completed
Please refer to the Consultant Haematologist if the patient is complicated, proximal DVT or if the DVT is unprovoked (not calf vein DVT unless recurrent, or bilateral) If active cancer please refer back to oncologist.	
Referral sent to haematology clinic	
Refer to anticoagulation clinic • For on-going warfarin treatment	

Further Notes

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Addressograph

APPENDIX 1

Summary table of DOACs for Treatment and Prevention of Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE)

	APIXABAN (ELIQUIS®)	DABIGATRAN (PRADAXA®)	EDOXABAN (LIXIANA®)	RIVAROXABAN (XARELTO®)
Mechanism of Action	Direct factor Xa inhibitor	Direct thrombin inhibitor	Direct factor Xa inhibitor	Direct factor Xa inhibitor
Dose for Treatment of DVT/PE	10mg twice daily for 7 days, then 5 mg twice daily	150mg twice daily following treatment with a parenteral anticoagulant for at least 5 days	60 mg Edoxaban once daily following initial use of parenteral anticoagulant for at least 5 days	15mg twice daily for 21 days, then 20 mg daily with food to aid absorption
Dose in Secondary Prevention of DVT/PE	2.5 mg twice daily following completion of 6 months anticoagulant treatment	150 mg twice daily	60 mg once daily	20 mg daily with food to aid absorption
Dose in Renal Impairment	Do not use if CrCl <15ml/min* Use with caution if CrCl 15-29ml/min*	Do not use if CrCl less than 30ml/min* Consider dose reduction 110mg BD if CrCl 30-50ml/min*	If CrCl 15-50 ml /min then consider 30 mg once daily Do not use if CrCl less than 15ml/min*	If CrCl 15-49 ml /min then consider 15mg OD with food if assessed bleeding risk outweighs risk of recurrent DVT and PE. Do not use if CrCl less than 15ml/min*
Hepatic Impairment	Not recommended in severe hepatic impairment as requires hepatic metabolism. Contraindicated in hepatic disease associated with coagulopathy	Not recommended in patients with elevated liver enzymes >2 upper limit of normal. Contraindicated in patients with hepatic impairment or liver disease expected to impact on survival.	Not recommended in severe hepatic impairment as requires hepatic metabolism. Contraindicated in hepatic disease associated with coagulopathy	Use with caution as requires hepatic metabolism. Contraindicated in hepatic disease associated with coagulopathy
Contraindications	▪Hypersensitivity ▪A lesion or condition, if considered a significant risk factor for major bleeding ▪Active bleeding ▪Hepatic disease or impairment ▪Anticoagulant in use (except during switching -see below) ▪Prosthetic heart valves ▪Pregnancy and breastfeeding	▪Hypersensitivity ▪A lesion or condition, if considered a significant risk factor for major bleeding ▪Active bleeding ▪Hepatic disease associated with coagulopathy and clinically relevant bleeding risk ▪Anticoagulant in use (except during switching -see below) ▪Prosthetic heart valves ▪Pregnancy and breastfeeding	▪Hypersensitivity ▪A lesion or condition, if considered a ▪significant risk factor for major bleeding ▪Active clinically significant bleeding ▪Hepatic disease associated with coagulopathy and clinically relevant bleeding risk ▪Anticoagulant in use (except during switching - see below) ▪Prosthetic heart valves ▪Pregnancy and breastfeeding	▪Hypersensitivity ▪A lesion or condition, if considered a significant risk factor for major bleeding ▪Active bleeding ▪Hepatic disease associated with coagulopathy and clinically relevant bleeding risk ▪Anticoagulant in use (except during switching - see below) ▪Uncontrolled severe hypertension ▪Prosthetic heart valves ▪Pregnancy and breastfeeding
Extremes of BMI	If <50kg or >100-120kg** then exposure of DOAC is variable by 20-30%. It is recommended that at these body weights the Cockcroft and Gault formula is used to calculate CrCl rather than eGFR			
Pharmaceutical Issues	May be dispersed in water Stable in dosette boxes	Capsules can only be stored in original packaging thus not suitable for dosette boxes	Stable in dosette boxes	May be dispersed in water Stable in dosette boxes
Switching from Warfarin	Stop warfarin and start Apixaban once INR is less than 2	Stop warfarin and start dabigatran once INR less than 2	Stop warfarin and start Edoxaban once the INR is 2.5 or less	Stop warfarin and start Rivaroxaban once INR 2.5 or less (not forgetting higher initial dosing when within three weeks of an acute event)
Switching to Warfarin	Co-administer Apixaban and warfarin for 2 days. After 2 days, check INR prior to next Apixaban dose and continue until INR 2 or greater	Start warfarin 2 days (CrCl 30-49ml/min) or 3 days (CrCl 50ml/min or above) before stopping dabigatran	Co-administer Edoxaban*** and warfarin until INR 2 or greater, for up to a maximum of 14 days. During this time, frequently check INR immediately prior to Edoxaban dose.	Co-administer rivaroxaban and warfarin until INR 2 or greater