

<h2>PULMONARY EMBOLISM INITIAL DIAGNOSTIC PATHWAY</h2>	ID NUMBER: <input type="text"/>
	Surname: <input type="text"/>
	Forename: <input type="text"/>
Gender: <input type="text"/>	DOB: <input type="text"/>

PLEASE PLACE
PATIENT LABEL
WITHIN THIS BOX

CONFIRM 3 POINT PATIENT ID: YES

Read and follow ALL stages in the pathway until end point is reached or pathway is altered by advice from a consultant
THIS FORM MUST BE FULLY COMPLETED OR TESTS WILL BE REFUSED

Stage 1: DETAILS

Doctor's name	Doctor's signature	Doctor's contact	Date (MM/DD/YY)
<input type="checkbox"/> Intern	<input type="checkbox"/> RMO	<input type="checkbox"/> Reg	<input type="checkbox"/> Cons

Stage 2: CLINICAL ASSESSMENT

If hypotensive, hypoxic O₂ Sats <90% or PaO₂ <60, HR >120 or signs of shock, call consultant re urgent management (+MET on ward if criteria met)

History, examination, (includes DVT/leg exam): Is PE a realistic differential diagnosis?

Investigations: O₂ Sats, ECG, FBC, UE, ± VBG/ABG, 'hold' a blue tube (for coag and D-dimer if required later), CXR

Stage 3: WELLS PRE-TEST PROBABILITY

- 3 Signs of DVT (at least leg swelling and deep venous pain)
- 3 PE most likely (or as likely) cause for symptoms / signs
- 1.5 Previous objectively diagnosed DVT or PE
- 1 Active cancer (<6/12 since therapy / palliative stage)
- 1.5 Recent immobilisation (can only score once)
 - Bed rest
 - POP lower limb > 2/52
 - Post-op 4/52 or less
- 1.5 Heart rate >100 at rest
- 1 Haemoptysis by history

Wells PTP

Points for Wells PTP (circle appropriate)

0 - 1.5 = Low (< 20%) GO TO STAGE 4	2 - 6 = Intermediate (20-50%) GO TO STAGE 5	≥6.5 = High (>50%) GO TO STAGE 8
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Stage 4: PERC RULE

- Does the patient score <2 points in Stage 3 or is the patient low risk as judged by an experienced practitioner
- Age <50y
- Heart rate <100
- O₂ Sats at room air >94%
- No Hx of DVT / PE
- No recent trauma / surgery
- No haemoptysis
- No exogenous oestrogen
- No clinical signs suggestive of DVT (unilateral leg swelling)

Points for PERC rule

**If ALL PERC rule boxes ticked:
PE EXCLUDED, PATHWAY ENDS HERE
(INVESTIGATE ALTERNATE DIAGNOSIS)
OTHERWISE GO TO STAGE 5**

Stage 5: IS A D-dimer REQUIRED? (HIGH SENSITIVITY)

Do ANY of the following exclusion criteria apply?

- | | |
|--|--|
| <input type="checkbox"/> Symptoms > 7days | <input type="checkbox"/> Currently on anticoagulants (NOAC, Warfarin) |
| <input type="checkbox"/> 3 rd trimester pregnancy or < 1/52 post-partum | <input type="checkbox"/> Current hospital inpatient |
| <input type="checkbox"/> Recent major trauma in the past < 1/52 | <input type="checkbox"/> Unstable patient |
| <input type="checkbox"/> Invasive surgery (major ortho / body cavity) in the past < 1/52 | <input type="checkbox"/> Other DVT / VTE / major thrombosis diagnosed in previous 1/52 |

**If ANY box is ticked do NOT do a D-dimer: GO TO STAGE 8
If none of the criteria apply, do a D-dimer: GO TO STAGE 6**

Stage 6: D-dimer RESULT INTERPRETATION

<input type="checkbox"/> D-dimer not done (see Stage 5)	Low / Int / High pre-test probability	Pre-test probability unchanged GO TO STAGE 7
<input type="checkbox"/> Negative	Low / Int pre-test probability	PE EXCLUDED, PATHWAY ENDS HERE (INVESTIGATE ALTERNATE DIAGNOSIS)
	High pre-test probability	Pre-test probability alters to LOW GO TO STAGE 7
<input type="checkbox"/> Age (>50y) adjusted result	<u>ALL</u> the following apply: Age >50y Wells ≤ 4 D-dimer result < Age x 0.01ng/mL	PE EXCLUDED, PATHWAY ENDS HERE (INVESTIGATE ALTERNATE DIAGNOSIS)
<input type="checkbox"/> Positive	All other positive results where the above age related adjustment does not apply	Pre-test probability unchanged GO TO STAGE 7

Stage 7: REVISED PRE-TEST PROBABILITY SCORE (see Stage 6)

Low
 Negative
 High

Stage 8: FURTHER IMAGING AND INTERPRETATION OF RESULTS

CTPA[†]

The preferred test in all patients EXCEPT:
 †foetal cancer / foetal abnormality rate negligible
 Premenopausal females (breast cancer induction 1:150)
 Dye allergy
 Reduced creatinine clearance

CTPA result	PTP	Outcome / results
<input type="checkbox"/> Negative	Low / Int	PE EXCLUDED
	High	Do USS lower limb or CT venogram at time of CTPA to exclude DVT Negative: PE EXCLUDED, INVESTIGATE ALTERNATIVE DIAGNOSIS Positive: PE CONFIRMED
<input type="checkbox"/> Positive	Low / Int / High	PE CONFIRMED: (if single subsegmental clots, discuss with senior regarding benefit of treatment over possible risks)
<input type="checkbox"/> Alternative diagnosis	Low / Int / High	PE not seen: PE EXCLUDED, CONFIRMS ALTERNATIVE DIAGNOSIS
		PE seen: PE CONFIRMED plus CO-EXISTANT DISEASE. Manage both conditions
<input type="checkbox"/> Inadequate technical scan	Low / Int / High	Consider VQ ± USS lower limb for DVT or repeat CTPA scan if conditions can be optimized Positive: PE CONFIRMED Negative: PE EXCLUDED, INVESTIGATE ALTERNATIVE DIAGNOSIS

VQ[‡]

The preferred test in the following patients:
 ‡foetal cancer / foetal abnormality / female cancer rate negligible
 Premenopausal
 Pregnancy (discuss with consultant)
 Contra-indication to CTPA

VQ / PLANAR or SPECT ± CT result	PTP		
	Low	Intermediate	High
<input type="checkbox"/> Negative (very low likelihood)	PE EXCLUDED, INVESTIGATE ALTERNATIVE DIAGNOSIS	PE EXCLUDED, INVESTIGATE ALTERNATIVE DIAGNOSIS	PE EXCLUDED, INVESTIGATE ALTERNATIVE DIAGNOSIS
<input type="checkbox"/> Positive	Do USS lower limb for DVT Positive: PE CONFIRMED Negative: CONSIDER CTPA ± INVESTIGATE ALTERNATIVE DIAGNOSIS	PE CONFIRMED	PE CONFIRMED
<input type="checkbox"/> Indeterminate / Inadequate scan	Do USS lower limb for DVT Positive: PE CONFIRMED Negative: CONSIDER CTPA ± INVESTIGATE ALTERNATIVE DIAGNOSIS		

Stage 9: DOCUMENT DIAGNOSIS IN NOTES

THIS DOCUMENT SHOULD BE FILED IN PATIENT NOTES