SIR CHARLES GAIRDNER OSBORNE PARK
HEALTH CARE GROUP

PULMONARY EMBOLISM INITIAL DIAGNOSTIC PATHWAY

URN:

Family name:

Given name(s):

Gender:

DOB:

Check Patient ID and Affix Label

Read and follow <u>ALL</u> 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 DECT / page	Date (DD/MM/YY)
☐ Intern	☐ RMO	☐ Reg	☐ Cons

Stage 2: CLINICAL ASSESSMENT

If hypotensive, hypoxic O_2 Sats <90% or PaO_2 <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: O_2 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

Wells PTP

☐ 1.5 Heart rate >100 at rest

☐ 1 Haemoptysis by history

Points for Wells PTP (circle appropriate)

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

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

☐ O_2 Sats at room air >94%

☐ No Hx of DVT / PE

☐ No recent trauma / surgery

☐ No haemoptysis

☐ No exogenous œstrogen

☐ No clinical signs suggestive of DVT (unilateral leg swelling)

☐ No COVID in the past 6 months

Points for PERC rule
If <u>ALL</u> 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 <u>ANY</u> of the following exclusion criteria apply?

☐ Symptoms > 7days

☐ 3rd trimester pregnancy or < 1/52 post-partum

☐ Recent major trauma in the past < 1/52

☐ Invasive surgery (major ortho / body cavity) in the past < 1/52

☐ Current hospital inpatient

☐ Unstable patient

☐ Other DVT / VTE / major thrombosis diagnosed in previous 1/52

If <u>ANY</u> box is ticked do <u>NOT</u> 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

☐ **D-dimer not done** (see Stage 5)	Low / Int / High pre-test probability	Pre-test probability unchanged **GO TO STAGE 7**
☐ **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**
☐ **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)
☐ **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   ☐ Intermediate   ☐ High

Stage 8: FURTHER IMAGING AND INTERPRETATION OF RESULTS

CTPA†

†fœtal cancer / fœtal abnormality rate negligible

The preferred test in all patients <u>EXCEPT</u>: Premenopausal females (breast cancer induction 1:150); Dye allergy; Reduced creatinine clearance

CTPA result	PTP	Outcome / results	
☐ 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
☐ Positive	Low / Int / High	PE CONFIRMED: (if single subsegmental clots, discuss with senior regarding benefit of treatment over possible risks)	
☐ Alternative diagnosis	Low / Int / High	PE not seen: PE EXCLUDED, CONFIRMS ALTERNATIVE DIAGNOSIS	
		PE seen: PE CONFIRMED plus CO-EXISTANT DISEASE. Manage both conditions	
☐ 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‡

‡fœtal cancer / foetal abnormality / female cancer rate negligible

The preferred test in the following patients: Premenopausal; Pregnancy (discuss with consultant); Contra-indication to CTPA

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

Stage 9: DOCUMENT DIAGNOSIS IN NOTES AND EDIS

THIS DOCUMENT SHOULD BE FILED IN PATIENT NOTES