



Pulmonary Embolism Rule-out Criteria (PERC) For patients presenting with pleuritic chest pain

PERC is 'negative' if all of the following are present:

- PE clinically unlikely ie no unexplained breathlessness / tachypnoea, no thrombophilia, no cancer
- Age <50
- HR <100 • O₂ sats in air 95% or more
- No prior history of DVT / PE
- No Recent trauma or surgery (within 6 weeks)
- No haemoptvsis
- No exogenous oestrogen
- No clinical signs of DVT

Wells score for PE

Previous PE or DVT 1.5 Heart rate >100 beats/ minute 1.5 Surgery or immobilisation within 30 days 1.5 Haemoptysis Active cancer (within 6 months)

Clinical signs of DVT Alternative diagnosis less likely than PE

Clinical probability

PE Low Risk = score 4 or below PE High Risk = score 4.5 or above

If pregnant seek senior advice

Notes on D-dimer Normal < 0.5 mg/L

May be elevated with:

- Cancer
- Infection

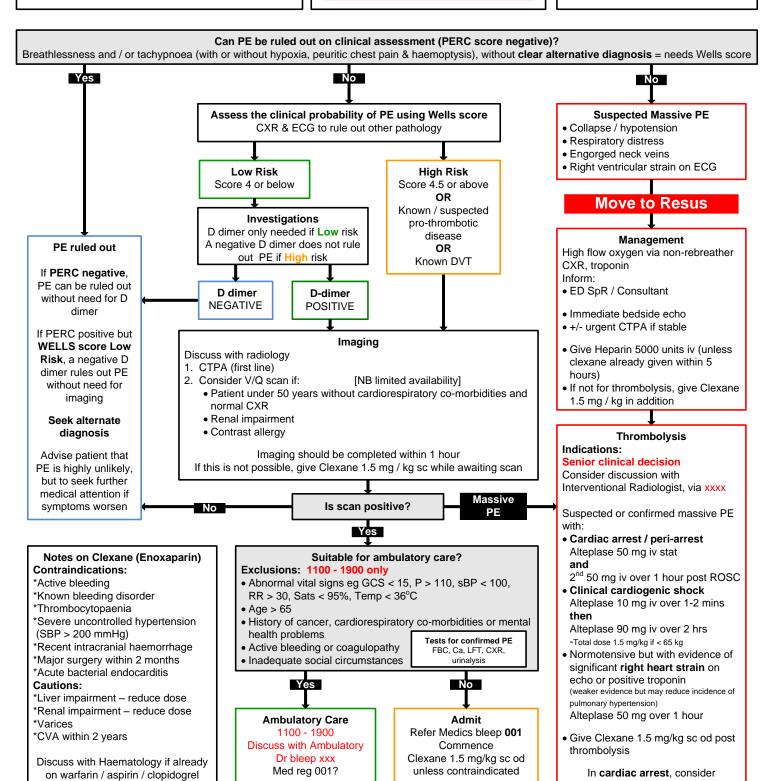
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- Inflammation / arthritis Necrosis
- Aortic dissection
- Pregnancy
- Trauma Recent surgery
- Age over 50 (normal range increases with age eg

continuing CPR for 60 - 90 minutes after thrombolysis

age/100 or 60 years = 0.6)



Management of Pulmonary Emoblism



Notes on Warfarin

Contraindications:

- Haemorrhagic stroke
- Significant bleeding
- Pregnancy, including up to 7 days post partum
- Severe liver disease with prolonged prothrombin time
- Severe renal impairment

Cautions:

- History of GI bleeding or peptic ulcer
- Recent surgery
- Recent ischaemic stroke
- Bacterial endocarditis
- Uncontrolled hypertension
- Mild to moderate liver or renal impairment

Warfarin is not present in breast milk in significant amounts, but prophylactic vitamin K for the infant is advised

Patients should avoid alcohol and cranberry juice Check all medication for interactions

Treatment

Baseline prothrombin time should be sent
Usual adult loading dose is 10 mg (5 mg in elderly)
Subsequent doses determined by INR
Continue Clexane for 5 days, or until INR above 2 for more than 24 hours
Maintenance usually 3 – 9 mg taken at the same time each day
Lower doses may be needed in liver or renal impairment

Clexane for 6 months if active cancer Clexane for pregnancy

Discuss with Haematology if patient taking aspirin or clopidogrel

Follow-up

Anticoagulant Clinic Review of underlying cause:

Full history and examination FBC, Ca, LFT, CXR, urinalysis

Consder: CT abdo / pelvis, sputum cytology, mammogram

Haematology Clinic 3 months

Consider thrombophillia screen if under 40 with first unprovoked VTE

Target INR

- 2.5 for first PE, or recurrence that occurs when warfarin stopped. Includes patients with antiphospholipid syndrome
- 3.5 if recurrence of PE while on warfarin with INR above 2

Treatment Duration

First episode PE = 3 months

Consider longer duration if recurrence or underlying risk factors

Pulmonary Embolus



Lead Author

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Reference Documents

Two level Wells score – templates for deep vein thrombosis and pulmonary embolism, NICE, CG144, February 2013

Prevention and management of venous thromboembolism. Edinburgh SIGN, no 122, 2010

Kline J et al. Clinical criteria to prevent unnecessary diagnostic testing in emergency department patients with suspected pulmonary embolism. *J Thromb Haemost*, Aug 2004;2(8):1247-55

Kline J et al. Prospective multicenter evaluation of the pulmonary embolism rule-out criteria. *J Thromb Haemost*, May 2008;6(5):772-80