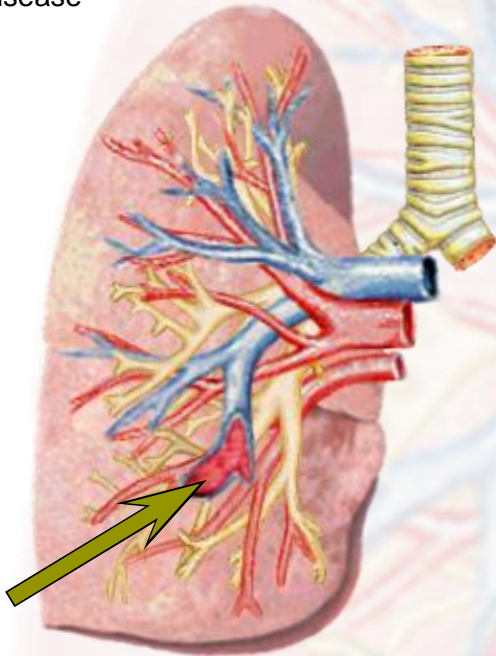


What is pulmonary embolism (PE)?

- Pulmonary embolism (PE) is a blood clot in the blood vessels of the lungs
- It is often caused by a blood clot in a leg vein which dislodges and travels to the lungs via the blood
- This can be serious in some patients, e.g.
 - If the blood clot is large and blocks the blood flowing through the heart or lungs
 - If a patient already has severe heart or lung disease



How is PE treated?

- PE is usually treated with anticoagulants
- Anticoagulants are drugs that:
 - Dissolve the blood clot (the blood clot becomes smaller and disappear within a few days to weeks)
 - Prevent the blood from clotting further
- Most patients are given anticoagulants at diagnosis and then sent home, but some may need to be admitted to hospital for a few days for observation

*Disclaimer: The PE Severity Index (PESI) and Hestia Score hyperlinks are for information only. BTS does not promote, or endorse these, or any other, pulmonary embolism assessment checklist websites.


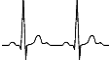

What is the Guideline about?

- ★ The BTS Guideline gives advice on how to assess PE patients so those at 'low risk' can be allowed home straight away

How is the risk of PE complications assessed?

- Risk of PE complications can be assessed by looking at patient information such as:
 - Patient age
 - Patient medical history
 - Observations (e.g. heart rate and blood pressure)
- A checklist is used to make the assessment. Checklists used are:
 - [The PE Severity Index \(PESI\)*](#); or
 - [The Hestia Score*](#)
- ★ So, the BTS Guideline recommends that a checklist assessment is used to assess if a PE patient can safely be allowed home

Should any other tests be done?

- Other tests may be used to assess the risk of PE complications such as:
 - Blood tests 
 - Echocardiogram (ECG) 
 - CT scans (CT scans are usually done to diagnose PE) 
- But, although useful, these tests are NOT usually better than checklist assessments at predicting who is safe to send home

How good are the checklists?

- Although helpful, checklists should always be used alongside clinical judgement
- No checklist, with or without extra tests, is 100% accurate at predicting risk
 - About 1 in 100 patients identified as 'low-risk' on a checklist have complications one month later (this can include death)



How good are the checklists? (continued)

- ★ So, because of this uncertainty, the BTS Guideline recommends that all PE patients being sent home are checked by:
 - A senior doctor, or
 - A specialist PE management nurse (who has support from a senior doctor)
- Even if a checklist indicates that a patient can be sent home, they may still need to stay in hospital (e.g. if they need palliative care)

Do hospital admissions prevent complications?

- Being admitted to hospital at PE diagnosis does not always prevent complications:
 - Complications can happen after the patient leaves hospital, or
 - Complications may not be directly caused by the PE (e.g. if a PE is caused by cancer)

What happens 'out of hours'?

- Diagnostic tests, such as CT scans, may not be available out of 'standard working hours'
- This can lead to a delay in a diagnosis of PE being confirmed
- ★ So, if a patient is suspected of having PE, the BTS Guideline recommends:
 - A patient should have a diagnostic scan within 24 hours
 - A patient should be assessed for the risk of PE complications; and

What happens 'out of hours'? (continued)

- Patients at 'low-risk' can be sent home on treatment and return for a diagnostic scan the next day

How is outpatient management PE treated?

- Direct oral anticoagulants (DOACs) are a new type of anticoagulant used to treat patients with PE
 - DOACs can be given as soon as a patient is diagnosed with PE
 - DOACs do not need to be monitored using blood tests (unlike other anticoagulants, such as warfarin), but
 - DOACs may NOT be suitable for ALL patients
- ★ The BTS Guideline supports the use of DOACs in outpatient management of PE
 - This includes those with 'suspected PE' who are awaiting a diagnostic scan
- ★ The BTS Guideline recommends that PE outpatient management patients should be given patient advice on PE, which should include:
 - An introduction to PE
 - Information on potential complications and what to look out for
 - Information on the drugs being given to treat the PE and their possible side effects
 - Details of who to contact, or where to go, if anything happens or if any questions arise
 - Details of the patient's follow-up care

This document has been prepared as a brief summary of the content and key points from the BTS Guideline for the initial outpatient management of pulmonary embolism. If you have any queries about the Guideline and your personal medical circumstances please discuss these with your health care professional.

The full Guideline is available on the BTS website at: <https://www.brit-thoracic.org.uk/quality-improvement/guidelines/pulmonary-embolism/>

The content of this document may be used by health care professionals in their discussions with patients and their carers provided the source of the document is acknowledged.

British Thoracic Society
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