

DRAFT V0.1 (March 15, 2021)

Brighton Collaboration

CASE DEFINITION OF THROMBOSIS AND THROMBOEMBOLISM¹

TABLE xx Case Definition and Levels of Diagnostic Certainty of Venous or Arterial Thrombosis / Thromboembolism

Thrombosis / Thromboembolism
Level of Certainty 1 – Definitive Case
<p>Imaging study findings consistent with thrombosis/thromboembolism</p> <p>Imaging studies include any of the following, depending on the location of the lesion</p> <ul style="list-style-type: none">• Ultrasound – Doppler• Computed Tomography (CT scan) – contrast/angiography• Magnetic resonance venography (MRV) or arteriography (MRA)• Echocardiogram• Perfusion V/Q scan• Conventional angiography/Digital subtraction angiography <p>OR</p> <ul style="list-style-type: none">• Procedure that confirms the presence of a thrombus (eg. Thrombectomy) <p>OR</p> <ul style="list-style-type: none">• Pathology consistent with thrombosis/thromboembolism including biopsy or autopsy
<p>Notes:</p> <p>LOC 1 is Independent of clinical findings or presence of risk factors.</p> <p>Most appropriate imaging test depends of the location of the lesion. Any of the tests listed may be used as available. Based on radiologist/expert interpretation.</p> <p>Abnormal laboratory results are not required for confirmation as they can be normal in presence of thrombotic/thromboembolic events. When present, they can be supportive of the diagnosis, including:</p> <ul style="list-style-type: none">• D-dimer elevated above the upper limit of normal for age• Shortened PT, PTT– below the lower limit of normal for age

¹The case definition should be applied when there is no clear alternative diagnosis for the reported event to account for the combination of symptoms.

- Elevated fibrinogen

Level of Certainty 2 – Probable Case

Clinical Presentation Consistent with Thrombosis or Thromboembolism Event, including

- **Specific clinical syndromes:**
 - Deep vein thrombosis (DVT) – symptoms will depend on the location of the thrombosis, for example: swelling, pain, redness, or warmth of an extremity; headache, visual disturbance, seizures for sinus vein thrombosis; abdominal pain for intraabdominal thrombosis
 - Pulmonary thromboembolism (PE) - sudden onset shortness of breath, pleuritic chest pain, sudden death/pulseless electrical activity arrest [Wells criteria for scoring –based on clinical findings]
 - *Stroke*
 - *Myocardial infarction*

OR

- **Non-specific clinical symptoms:** (LIST) Edema, pain, ischemia, absent pulses, headaches,

AND

- **Presence of Risk Factors:** history of immobilization, vascular catheter in place, recent surgery or trauma, obesity, previous thrombosis, cancer, oral contraceptive use, pregnancy, age > 65 years, family history of thrombosis, heart failure, inflammatory bowel disease or other inflammatory disorder.

AND

Supporting Imaging findings suggestive but not definitive of thrombosis/thromboembolism

Chest radiograph

Echocardiogram

Computed tomography without contrast

OR

- D-dimer - elevated above the upper limit of normal for age

AND

No alternative etiology

Notes:

LOC 2 Lower level of certainty when **the gold standard imaging is not available, nor are procedural or pathology findings**

Abnormal laboratory results are not required for confirmation as they can be normal in presence of thrombotic/thromboembolic events. When present, they can be supportive of the diagnosis, including:

- D-dimer elevated above the upper limit of normal for age
- PT, PTT, INR – elevated above the upper limit of normal for age

Level of Certainty 3 – Possible Case

Clinical Presentation Consistent with Thrombosis or Thromboembolism Event, including

- **Specific clinical syndromes:**
 - Deep vein thrombosis (DVT) – symptoms will depend on the location of the thrombosis, for example: swelling, pain, redness, or warmth of an extremity; headache, visual disturbance, seizures for sinus vein thrombosis; abdominal pain for intraabdominal thrombosis
 - Pulmonary thromboembolism (PE) - sudden onset shortness of breath, pleuritic chest pain, sudden death/pulseless electrical activity arrest [Wells criteria for scoring –based on clinical findings]
 - *Stroke*
 - *Myocardial infarction*

OR

- **Non-specific clinical symptoms (LIST)** Edema, pain, ischemia, absent pulses, headaches,

AND

- **Presence or Risk Factors** (high risk criteria): history of immobilization, recent surgery or trauma, vascular catheter in place, obesity, previous thrombosis, cancer, oral contraceptive use, pregnancy, age > 65 years, family history of thrombosis, heart failure, inflammatory bowel disease or other inflammatory disorder.

AND

No alternative etiology

Notes:

LOC 3 Lower level of certainty based on clinical findings,

Presence of risk factors increases likelihood.

Abnormal laboratory results are not required for confirmation as they can be normal in presence of thrombotic/thromboembolic events. When present, they can be supportive of the diagnosis, including:

- D-dimer elevated above the upper limit of normal for age
- PT, PTT, INR – the upper limit of normal for age

Level 4 – Insufficient information available to confirm a possible, probable or definitive case of venous thrombosis / thromboembolism

Level 5 – Sufficient information to determine that it is NOT a case of venous thrombosis / thromboembolism