Background and Objectives

- Troponin dosage plays an increasingly important role in risk stratification in pulmonary embolism (PE), especially in patients (pts) without hemodynamic compromise.
- Troponin elevation in the setting of acute PE is of small magnitude and short duration and thus, can go unnoticed in pts referred late after symptom onset.

**Methods: Patient Selection**

- **Inclusion criteria:**
  - Patients with intermediate-risk PE defined as at least 1 echocardiographic sign of RV dysfunction (paradoxic septal motion, systolic PH>30 mmHg, or RVED/VED diameter ratio >1)
  - Patients with intermediate-risk PE
  - Anticoagulant therapy with LMWH (enoxaparin or tinzaparin) or fondaparinux
  - UFH preferred in pts with renal failure (creatinine Cl >100 mL/min) or with elevated bleeding risk (>5 days post-op, hemoglobin <10g/dL, thrombocoria >100,000/mL)

- **Exclusion criteria:**
  - Prior heart failure or respiratory failure (not to bias interpretation of the V/Q scan images or interfere with assessment of the endpoint).
  - Onset of symptoms >15 days.
  - High-risk PE.
  - Previous venous TETED.

- **Study Aim:** To evaluate the prognostic value of troponin elevation according to the onset of symptoms in patients with intermediate-risk PE.

**Results**

**Sensitivity and specificity of troponin elevation in predicting in-hospital adverse outcome**

- **Variables**
  - Symptoms ≤5 days (n=174)
  - Symptoms >5 days (n=108)
  - A
- **Sensitivity**
  - 72% (61.3-82.7) 51% (42.4-59.6) 0.002
- **Specificity**
  - 42% (34.5-50.1) 47% (39.1-54.9) 0.33
- **PPV**
  - 26% (18.4-33.6) 30% (22.2-37.8) 0.81
- **NPV**
  - 85% (78.4-91.6) 70% (63-77) 0.002

**ROC curve analysis according to symptom onset and troponin elevation**

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  - Symptoms ≤5 days (n=174)
  - Symptoms >5 days (n=108)
  - A
  - **Sensitivity**
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  - **Specificity**
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**Conclusions**

Our results show that there is a significant relation between troponin elevation and symptom onset in patients with intermediate-risk PE. Time since symptom onset should be taken into consideration when interpreting troponin elevation in this population. Negative predictive value of troponin elevation is adequate in pts treated early (<5 days) but suboptimal in pts treated >5 days after symptom onset.