

### OP05.3

#### **Different strategies for excluding pulmonary embolism (PE) in primary care.**

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**Background and Aim:** General practitioners (GP) can safely exclude PE using the Wells rule for PE in combination with D-dimer testing. The aim of this study was to compare the failure-rate (percentage of patients with PE despite a negative strategy) and efficiency (percentage of all study patients with a negative strategy) of four diagnostic strategies: 1. The Wells rule combined with a qualitative point-of-care (POC) D-dimer test. 2. The Wells rule combined with a quantitative D-dimer test. 3. The Wells rule combined with an age-adjusted quantitative D-dimer test. 4. A simplified Wells rule combined with a quantitative D-dimer test.

**Method:** We used data from a prospective cohort study including 598 primary care patients with suspected PE. GPs from all over the Netherlands scored the Wells rule and carried out a qualitative POC test. All patients were referred to hospital for reference testing. There, the diagnostic strategy was based on current guidelines and routine care practice. We obtained quantitative D-dimer-test results as performed in hospital laboratories.

**Results:** PE was diagnosed in 73 patients (12%). All strategies were safe missing 4 (1.5%), 1 (0.4%), 2 (0.8%) and 6 PE-patients (1.7%), respectively, with a negative strategy. The efficiency of the strategies was 46%, 42%, 44% and 59% respectively.

**Conclusions:** All four strategies are safe and efficient for excluding pulmonary embolism in primary care. The fourth strategy using a simplified Wells-rule is more efficient albeit with a higher failure- rate. The choice of strategy depends on the availability of either a qualitative POC test or a quantitative D-dimer test. Moreover the GP should weigh the somewhat higher efficiency of the strategy using the qualitative test and of the strategy using the simplified Wells-rule against the higher failure-rate of both strategies.