Receiver operating characteristics (ROC) curve analysis was performed separately for patients with low and intermediate probability, and the optimum cut-off value to exclude PE determined.

Results Of the 2139 patients, prevalence of PE was 3.2% (50/1535) in the low, 14.2% (63/443) in the intermediate and 26% (42/161) in the high probability group. No patients with a D-dimer of <0.5 ug/mL who were discharged without any radiological investigations have returned with a missed diagnosis of PE.

ROC curve analysis showed the optimum D-dimer cut off value in low risk patients was 0.52, and 0.57 in patients with an intermediate risk.

Abstract P270 Table 1

Criterion (low risk)	Sensitivity	Specificity	NPV
>0.52	100%	49%	100%
>0.8	92%	71%	
>1	84%	78%	99.4%
Criterion (int risk)	Sensitivity	Specificity	NPV
>0.57	100%	37%	100%
>0.8	83%	62%	
>1	76%	67%	94.7%

Conclusion The optimum D-dimer value must be chosen in the context of missed PEs versus scanning fewer people and thus avoiding unnecessary radiation and using resources more efficiently. A higher D-dimer of 1.0 ug/mL would have correctly avoided 161 scans and subsequently saved over £19,000.² This must be offset however against patients being incorrectly diagnosed and often ending up in hospital with complications. Using the same cut off of 1.0 ug/mL would have missed a total of 22 PE's during the study period. Based on this the conventional D-dimer cut off value of 0.5 ug/mL is most appropriate for patients attending the ambulatory PE clinic.

REFERENCES

- 1 Venous Thromboembolic diseases: the management of venous thromboembolic diseases and the role of thrombophilia testing. Costing report. NICE, June 2012
- 2 British Thoracic Society guidelines for the management of suspected acute pulmonary embolism. *Thorax* 2003;**58**:470-484

P271 USING AGE-ADJUSTED D-DIMERS FOR RULING OUT PES IN AN AMBULATORY CARE SETTING

FA Khan, K Ryanna, E Bailie, Y Vali. *Glenfield Hospital, Leicester, UK*

10.1136/thoraxjnl-2015-207770.407

Introduction Patients attending the ambulatory pulmonary embolism (PE) clinic at the Glenfield Hospital are risk stratified into low, intermediate and high risk based on the BTS scoring.¹ Those with a low or intermediate pre-test probability go on to have a microlatex D-dimer assay and if this is greater than 0.5 ug/mL, imaging in the form of CTPA or VQ scan is carried out.

It has been suggested recently that using age adjusted D-dimers (patient's age X 10) ug/L in patients above the age of fifty may improve the negative predictive value in ruling out a PE, whilst not affecting sensitivity.²

Methods Data was collected for 2139 consecutive patients who presented to the ambulatory PE clinic between June 2010 and

Dec 2014. For each of these patients, age, BTS clinical probability, D-dimer results and final diagnosis was recorded.

For each patient above the age of 50, an age adjusted D-dimer was calculated by multiplying the age by 10. The patient's actual D-dimer was then compared against the age adjusted D-dimer to determine how many scans could have been avoided, and how many PE's may have been missed.

Results Above and including the age of 50, there were 660 patients in the low risk, 242 patients in the intermediate risk and 104 in the high-risk categories. Using an age adjusted D-dimer approach would have resulted in 123 scans being rightfully avoided (84 in the low risk and 39 in the intermediate risk), but 6 PE's would have been missed (2 in the low risk and 4 in the intermediate risk).

No patients with a D-dimer of <0.5 ug/mL who were discharged without any radiological investigations have returned with a missed diagnosis of PE.

Abstract P271 Table 1

Criterion	Sensitivity	Specificity	NPV
Age-adjusted D-dimers (low risk)	94%	48%	99%
Age adjusted D-dimers (int risk)	90%	37%	95%
Age adjusted (low and int risk)	91%	45%	98%
Conventional 0.5	100%	49%	100%

Conclusion The optimum D-dimer value must be chosen in the context of missed PEs versus scanning fewer people and thus avoiding unnecessary radiation and using resources more efficiently. An age-adjusted D-dimer in patients above the age of 50 would result in PEs being missed, and a conventional cut off value of 0.5 ug/mL is most appropriate for patients in an ambulatory care setting.

REFERENCES

- 1 British Thoracic Society Standards of Care Committee Pulmonary Embolism Guideline Development Group. British Thoracic Society guidelines for the management of suspected acute pulmonary embolism. *Thorax* 2003;**58**:470-484
- 2 Douma RA, le Gal G, Sohne M, *et al.* Potential of an age adjusted D-dimer cut-off value to improve the exclusion of pulmonary embolism in older patients: a retrospective analysis of three large cohorts. *BMJ* 2010;**340**:c1475

P272 MANAGING SUSPECTED PULMONARY EMBOLISM IN AN AMBULATORY SETTING: THE BARKING HAVERING AND REDBRIDGE UNIVERSITY HOSPITALS EXPERIENCE

¹F Kleidona, ²A Salehi, ¹C Dunne, ¹A Choudhury, ¹RH Johns. ¹Barking, Havering & Redbridge Hospitals NHS Trust, Essex, UK; ²Kingston Hospital, Surrey, UK

10.1136/thoraxjnl-2015-207770.408

Introduction and objectives There is an increasing national precedent for ambulatory care of selected patients with suspected pulmonary embolism (PE).¹ As part of our ambulatory services we established an ambulatory PE pathway in January 2012 with the intention to reduce hospitalizations and cost without any associated risk.

Methods We conducted a retrospective review of all 165 patients referred to the ambulatory service for suspected PE between January 2012 and May 2013. We included 122 patients and we reviewed all medical notes, laboratory and radiological investigations.