probability assessed and documented. The Norfolk and Norwich University Hospital (NNUH) uses the Wells PE score. Validation studies have shown it to be a sensitive tool with a positive predictive value of: low risk (5%), medium risk (25%), and high risk (70%) respectively.

We wanted to assess the correlation of the Wells PE score with PE positivity rates on CT Pulmonary Angiogram (CTPA) in our patient population. We anticipated similar positive predictive rates as those seen in the original validation studies.

Methods We retrospectively collected data from CTPA requests submitted between October 2009 to September 2010. The Wells PE score was used to risk stratify patients into low (score < 2), moderate (score 2–6), or high risk (score > 6). These were correlated with the outcome of the CTPAs. We also used the alternate dichotomised Wells PE score of PE Unlikely (score ≤ 4) and PE likely group (score > 4) and correlated with results.

Results 1160 CTPA requests were identified, 66 were excluded, (they lacked a wells PE score). 1094 CTPA requests were analysed.

Conclusion We found poor correlation between the pre-test probability score and confirmed PE;

Results show a positive predictive value of low risk (21.4%), medium risk (22.1%) and high risk (35.3%). The dichotomised score showed PE Unlikely (19.1%) and PE Likely (27.4%). Analysis of the Wells PE variables revealed that they lacked a high specificity and high sensitivity, the subjective variable demonstrated the lowest specificity.

The Wells PE score is not an effective pre-test probability tool for discriminating low, moderate and high risk groups in the patient population at NNUH

Reference

1. Wells PS, Anderson DR, Rodger M, et al. Derivation of a simple clinical model to categorise patients probability of pulmonary embolism: Increasing the models utility with the SimpliRED D-dimer. Thrombosis and Haemastasis. 2000; 83 (3): 416–420.

Abstract P147 Table 1

	CTPAs	+ve for PE	-ve for PE	Positivity rate
Total	1094	278	816	25.4%
Low risk	56	12	44	21.4%
Medium risk	763	169	594	22.1%
High risk	275	97	178	35.3%
<4 PE unlikely	261	50	211	19.1%
>4 PE likely	833	228	605	27.4%

P148   **THE LIES WE TELL – PRE-TEST PROBABILITY IS ONLY USEFUL AT RISK STRATIFYING PULMONARY EMBOLI WHEN USED ACCURATELY**

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Introduction Pre-test probability (PTP) scores are widely used to risk stratify pulmonary emboli (PE). A multitude of scores exist; however diagnosing PE remains challenging. We aim to identify whether patients were correctly PTP scored and what effect rescoring with the correct information has on predicting PE. We will identify the effect different PTP scores have on the likelihood of PE.

Methods We conducted a retrospective study of inpatient computer tomography pulmonary angiograms (CTPA) within a large teaching hospital over a 1-year period. We recorded the originally submitted PTP score (modified Wells score), D-Dimer result and the CTPA outcome (PE-positive or negative cohorts). The accuracy of the PTP score was assessed from the original clinical information; rescoring when appropriate. We also rescored using alternative PTP

systems (Geneva and simplified BTS). We analysed whether any factor or PTP scores could predict the presence of PE.

Results 202 CTPAs were performed (70, 35% PE positive; 131, 65% PE negative). Baseline characteristics did not differ (age, gender, requesting team, inflammatory markers, mortality). PE was more likely with a higher D-dimer (682 vs. 853; p<0.001); pneumonia occurred more frequently in the PE-negative cohort (61 vs. 12; p<0.001). A third of forms were scored incorrectly; occurring significantly more in the PE-negative cohort (p=0.001). There was no difference between the original PTP scores (3.7 vs. 3.8; p=0.631); however when rescored with the correct clinical information, the PE-positive cohort had a significantly higher PTP score (2.0 vs. 3.1; p=0.001) (*Table 1*). Geneva score did not accurately predict PE (2.3 vs. 2.5; p=0.25); whereas the simplified BTS score did (0.9 vs. 1.3; p<0.001).

Conclusions Patients without a PE were significantly more likely to have an incorrect PTP score. Clinicians may have poor concordance with scoring to meet CTPA requesting criteria. The originally calculated PTP score was not predictive of PE. However, when scores were adjusted with the correct information, a higher PTP score was predictive of PE. Simple PTP scoring systems performed well compared with more complex versions. PTP scores are only effective at predicting PE when used accurately; this may not occur in practise.

Abstract P148 Table 1   PTP scores in negative and positive PE cohorts and the statistical significance between them

PTP Score	PE –ve	PE +ve	p-value
Wells – original	3.7	3.8	0.631
Wells – rescore	2.0	3.1	0.001
Geneva	2.3	2.5	0.250
Simplified BTS	0.9	1.3	<0.001

P149   **MANAGEMENT ALGORITHM FOR PULMONARY EMBOLISM (PE) WITH RIGHT HEART STRAIN: A CASE SERIES**

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Current guidelines state thrombolysis is first line therapy in hypotensive PE patients and may be of benefit in normotensive patients with right heart strain. There is, however, no specific guidance on selecting these patients.

In 2010, St George's Hospital, under the guidance of a multidisciplinary team of specialists, initiated an algorithm for the management of patients with massive PE. The aim of this study was to determine whether the algorithm is an effective means of assessing a series of nine patients who received thrombolytic therapy over a two year period.

The age range of the patients was 36–81 years, 5 were male. 5 patients had identifiable thromboembolic risk factors: pregnancy and protein S deficiency (1), recent lower limb surgery (2), new cancer diagnosis (1) and chronic immobility (1). All 9 patients had a computed tomography pulmonary angiogram (CTPA) confirming large proximal PEs with elevated troponin I and NT-pro-BNP levels at diagnosis. Right heart strain was demonstrated on echocardiogram in five patients with evidence of intracardiac thrombus in two. The remaining patients had right heart strain demonstrated by CTPA. The indications for thrombolysis were cardiac arrest (1), hypotension (1), intracardiac thrombus (2) and significant right ventricular strain (5). There was one mortality within this cohort following retroperitoneal bleed. This patient underwent an echocardiogram 5 days post thrombolysis revealing severely dilated right heart and RVSP of 61mmHg. Patients achieved good resolution of thrombus on repeat CTPA, and no evidence of right heart strain on follow up echocardiogram.