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DOES THE PRYOR RISK SCORE AS RECOMMENDED BY NICE GUIDANCE OVER EGG THE PUDDING IN ASSESSING PATIENTS REFERRED TO THE CHEST PAIN CLINICJ S Shome, C G Wilkinson, A F C Lee, P D Higham *Wansbeck General Hospital*

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Background NICE guidance recommends risk stratification of patients presenting to chest pain clinics using the Pryor score. The Pryor score calculates a risk for a significant (>50%) coronary stenosis. This score influences which imaging modality to select to confirm or refute the presence of coronary artery disease (CAD) with patients with a risk score of 10–29% undergoing CT calcium scoring \pm CT coronary angiography, 30–59% non-invasive functional testing and 60% or more invasive coronary angiography.

Aim This study evaluates the accuracy of the Pryor risk score in predicting significant coronary artery disease in patients presenting to a rapid access chest pain clinic (RACPC) undergoing either CT evaluation or invasive angiography.

Design Retrospective analysis of prospectively collected clinical data.

Methods Data was collected by coronary CT report analysis, and coronary angiogram data base review of patients referred from the

Table 1

Calcium Scores	0	>0-9	10-99	100-399	≥400	Total
Only CT calcium scoring (n)	134	17	7	4	6	168
CT calcium scoring and CT coronary angiography (n)	4	13	33	9	0	59
Significant CAD on CT coronary angiography (n)	0	2	8	7	0	17

Table 2

	Observed (n)	Expected (n)	p value
Significant CAD on CT angiography	17	45	<0.0001
No significant CAD on CT angiography	210	182	
Significant CAD on invasive angiography	45	61	<0.0001
No significant CAD on invasive angiography	36	20	

RACPC in our Trust from January 2011 to October 2012. Significant coronary disease was confirmed if the reporting consultant recorded a stenosis of 50% or more. Pryor scores were calculated at the time of initial attendance by the nurse specialist using a standardised Pryor risk calculator circulated by the Cardiovascular Network. Statistical analysis was carried out using the χ^2 test.

Results In the study period 228 patients underwent CT assessment, one of whom had a non diagnostic study and was excluded. Of the 227, 168 underwent calcium scoring only, and 59 had subsequent CT coronary angiography reflecting the NICE recommendation of undertaking CT angiography in those patients with a calcium score in the range 1-400. Table 1 shows the distribution of patients with and without significant disease in the NICE recommended calcium scoring categories. The mean Pryor score for this patient group was 21.8%. In the whole group, 17/227 (7.4%) had significant CAD compared to 210/227 (92.5%) who had no significant CAD ($p<0.0001$, see table 2).

The invasive angiography group was taken from the data base of a single consultant during the same time period. 81 patients were referred from the RACPC for this investigation with a mean Pryor score of 75%. Only 45 of these patients (55.5%) had significant CAD ($p<0.0001$, see table 2).

Discussion Our study shows that the Pryor risk score significantly overpredicts the prevalence of significant coronary artery disease in our patient population. The number of patients with significant CAD, undergoing calcium scoring and CT angiography was much lower than that expected and the same was also true of the higher risk invasive angiography group. A significant proportion of those referred for calcium scoring were found to have minor coronary disease. However, NICE may need to alter its guidance to improve clinical effectiveness.