

**Abstract 87 Figure 1** Probability of all cause mortality in patients with perfusion defect stratified by revascularisation

**Methods** Pre- and post-operative high-sensitive troponins were checked on all elective and emergency surgical patients over 45 years of age with an inpatient stay of more than 2 days between August 2014 and June 2015. A MINS event was defined as in the VISION (1) study as any positive post-operative troponin.

Thirty-day mortality after surgery was determined via HES data. Notes, pathology reports and discharge letters were reviewed for evidence of sepsis, prolonged tachycardia, multi-organ failure or significant bleeding (Hb loss of >5 g/l and/or total Hb <8 g/dl). Events were classified as 'non MINS', 'unexplained MINS' or 'secondary MINS' due to one of these provoking factors.

Cox regression analysis was performed to assess association between variables.

**Results** 388 patients were studied. 196 were male with a mean age of 69 years (range 45–95). 132 (34%) were emergency admissions. 245 (63.1%) had normal post-operative troponins (i.e. non MINS), with 81 (20.9%), 49 (12.6%) and 13 (3.4%) recording troponin levels of 17–50, 51–1000 and more than 1000 respectively. 21 of the positive post-op values represented a downward trend from pre-op tests, with a further 17 positive pre-op values falling into the normal range post-operatively.

The 30 day mortality rate was 2.8% compared to 1.9% in VISION. Of the 11 deaths, 10 (90.9%) were emergency admissions. Two (18.2%) deaths occurred in patients exhibiting a downward trend in troponin and 3 (27.3%) had a

normal post-operative troponin (i.e. did not suffer a MINS event).

**Discussion** A raised post-operative troponin was associated with poor prognosis as suggested in the VISION study ( $p = 0.022$  HR 0.213 [0.057–0.803]). Sepsis was also associated with a poor prognosis ( $p < 0.001$  HR 0.08 [0.021–0.305]) as is emergency admission for surgery ( $p = 0.004$  HR 0.05 [CI 0.006–0.392]). However, there was no mortality from 'ischaemic' MINS events (unexplained events and events secondary to tachycardia and bleeding).

Whether MINS events are a separate clinical entity related to unstable or significant coronary disease or a reflection of other poor prognostic factors remains unclear. Further studies assessing coronary anatomy may be useful in delineating this further.

## REFERENCES

- 1 Devereaux PJ, Chan MT, Alonso-Coello P, *et al.* Association between Post-operative Troponin Levels and 30-Day Mortality among Patients undergoing Noncardiac Surgery. *JAMA*. 2012;**307**(21)
- 2 Myocardial Injury After Noncardiac Surgery. VISION Study Investigators. *Anaesthesiology*, 2014;120: 564–78

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## IMPLEMENTATION OF A MODIFIED VERSION OF NICE CLINICAL GUIDELINE 95 ON CHEST PAIN OF RECENT ONSET: EXPERIENCE IN A DISTRICT GENERAL HOSPITAL

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10.1136/heartjnl-2016-309890.89

**Introduction** NICE Clinical Guidance 95 was introduced to Rapid Access Chest Pain Clinics (RACPC) to aid investigation of possible stable angina based on pre-test probability of coronary artery disease (CAD). Following a recent 6 month audit of its implementation in our centre, we introduced a modified version, such that all patients with low or moderate risk of CAD were referred for computed tomography coronary angiography (CTCA), whilst those at high or very high risk were referred for invasive angiography.

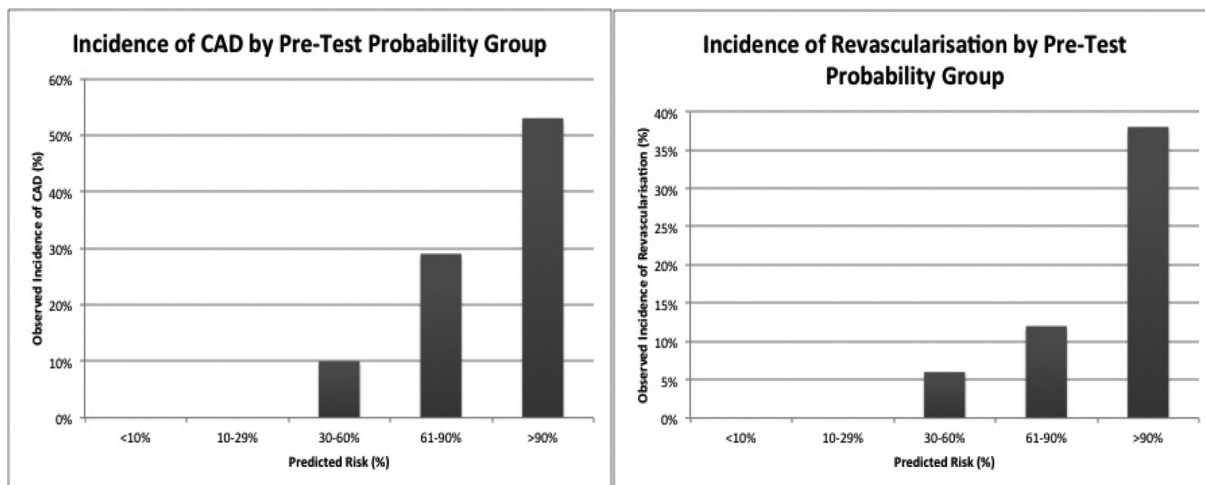
**Methods** The electronic patient records of 546 patients consecutively referred to our RACPC from primary care over a 6 month period were retrospectively analysed. Initial pre-test probability of CAD, referral for initial investigation, incidence of significant CAD and rates of revascularisation at a minimum follow-up time of 6 months were documented.

**Results** A large proportion of patients assessed had symptoms that were unlikely to be anginal in origin and were discharged directly from RACPC without further investigation. Rates of CAD generally correlated well with pre-test probability. Moderate risk patients showed low rates of CAD and revascularisation. CTCA had a shorter time to investigation than stress echo, but a number of false positive results. High and very high risk patients had high rates of revascularisation and a large proportion of this was for prognostically significant disease.

**Conclusions** Low rates of CAD in low and moderate risk groups justifies the use of CTCA as a first line investigation in these patients, reducing waiting times to investigation. Routine investigation of very high risk patients allows a significant proportion to undergo revascularisation for prognostically significant disease. Strict adherence to NICE CG95 could possibly lead to these patients being missed.

**Abstract 88 Table 1** Types of MINS and 30 day mortality

Pathophysiology	Emergency N = 132 (% of total MINS)	Elective N = 256 (% of total MINS)	All surgery N = 388 (% of total MINS)	30 day mortality N = 11 (% of total mortality)
All MINS events	82	60	142	8 (72.7%)
Unexplained	31 (37.8%)	39 (65%)	70 (49.3%)	0 (0%)
MINS				
Secondary to	41 (50%)	15 (25%)	56 (39.4%)	8 (72.7%)
Sepsis				
Secondary to	9 (11%)	5 (8.3%)	14 (9.9%)	0 (0%)
Bleeding				
Secondary to	1 (1.2%)	1 (1.7%)	2 (1.4%)	0 (0%)
Tachycardia				
No MINS event	50	196	246	3 (27.3%)
All patients	132	256	388	11



Abstract 89 Figure 1 Incidence of coronary artery disease and revascularisation by pre-test probability group

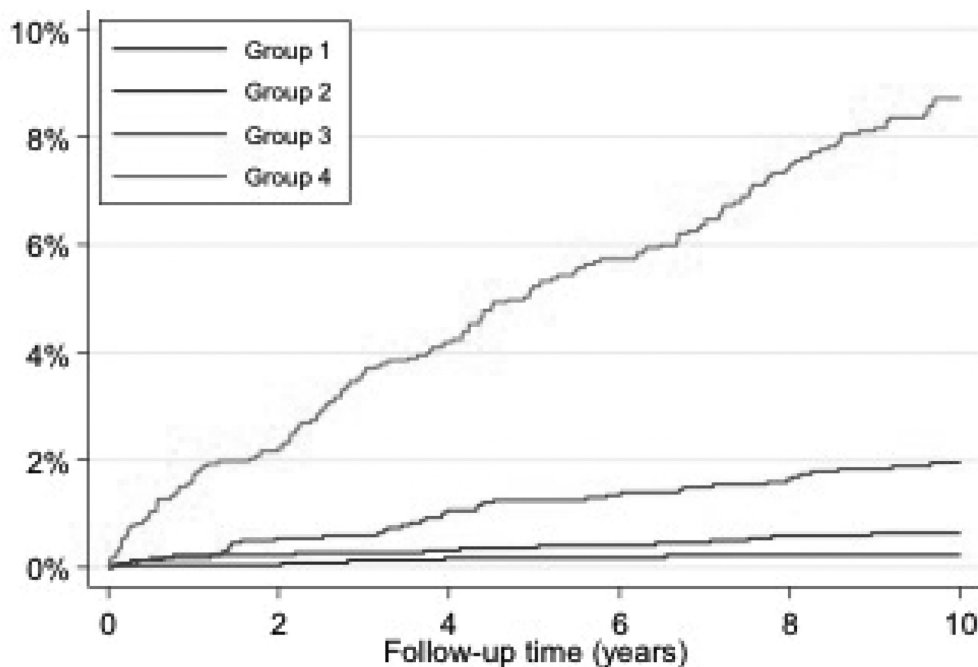
90 PROGNOSIS IN SUSPECTED ANGINA (PISA): A 10-YEAR RISK MODEL DEVELOPED IN A CHEST PAIN CLINIC COHORT

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10.1136/heartjnl-2016-309890.90

**Background** Diagnostic models play an important role in the management of suspected angina but provide no explicit information about prognosis. The objective of this study was to develop a prognostic model to predict 10-year coronary mortality in patients presenting for the first time with suspected angina to complement the updated Diamond-Forrester diagnostic model of disease probability.<sup>1</sup>

**Methods** A multicentre cohort of 8762 patients with suspected angina was followed up for a median of 10 years during which 233 coronary deaths were observed. Developmental (n



Number at risk						
	0	2	4	6	8	10
Group 1	2190	2184	2175	2169	2159	1503
Group 2	2191	2176	2160	2144	2125	1372
Group 3	2190	2150	2103	2062	2030	1261
Group 4	2191	2065	1955	1837	1684	1018

Abstract 90 Figure 1 Kaplan-Meier curve by quarters of risk for coronary mortality by the full prognostic model. There were 5, 14, 41 and 173 coronary deaths in risk groups 1 (lowest risk quarter) to 4 (highest risk quarter), respectively.