

the primary endpoint 51% of patients in the EA PLUS arm were abstinent compared to 19% in UC at 16 weeks; OR 4.52 (95% CI 3.20 to 6.39,  $p < 0.0001$ ). In partners, the 7-day point prevalence of abstinence was significantly higher in EA PLUS (73% vs 37%) compared to UC, OR 4.7 (95% CI 1.9 to 11.5,  $p < 0.001$ ). 52.3% of patients in EA PLUS achieved a Mediterranean diet score  $\geq 9$ , compared to 37.3% in UC ( $p < 0.001$ ). 16.2% in EA PLUS achieved the physical activity target compared to 7.2% in UC ( $p = 0.002$ ) with a significantly higher proportion achieving the METSmax target (Chester Step test): 37.8% in EA PLUS vs 27.3% in UC ( $p = 0.04$ ). Blood pressure target ( $< 140/90$  (130/80 diabetes or vascular disease) was significantly higher in EA PLUS (52% vs 43%; OR 1.47,  $p = 0.03$ ) than UC but there were no differences in lipid or glucose management. Prescribing of cardioprotective medication was similar in both arms except for lipid lowering drugs; EA PLUS 53% vs UC (45%,  $p = 0.06$ ); high CVD risk individuals 48% EA PLUS vs 39% UC ( $p = 0.04$ ).

**Conclusion** This European trial has demonstrated that the EURO-ACTION nurse-led preventive cardiology programme, with an intensive smoking cessation intervention including optional Varenicline, helps more vascular and high risk patients, together with their partners, to stop smoking and better achieve the other European lifestyle and blood pressure targets for cardiovascular disease prevention than usual medical care.

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#### B-TYPE NATRIURETIC PEPTIDE AND CORONARY ATHEROSCLEROSIS: AN ASSOCIATION DEPENDENT ON CENTRAL PULSE PRESSURE

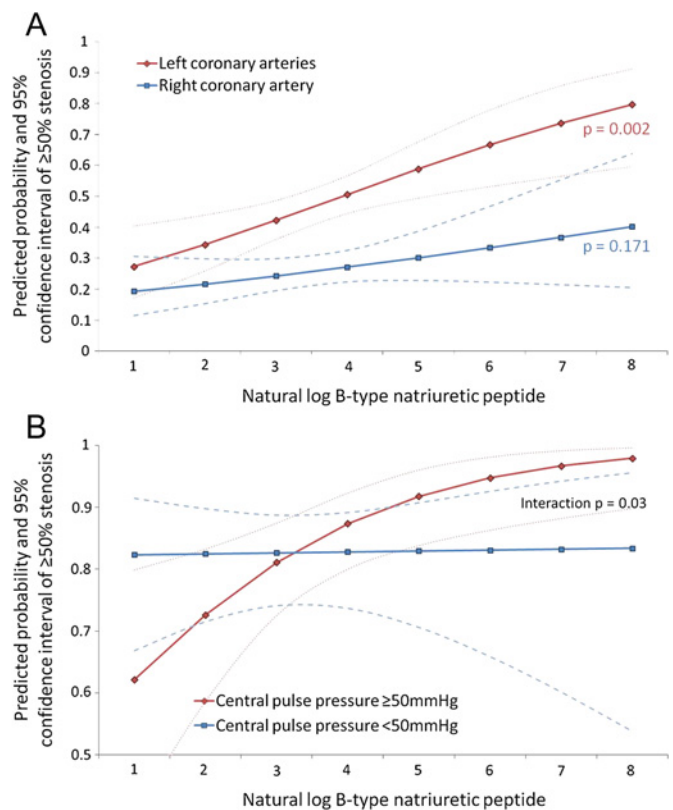
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**Background** B-type natriuretic peptide (BNP) is traditionally used as a marker of left-ventricular (LV) dysfunction. Prior studies have also identified BNP as a risk marker of coronary atherosclerosis, even in those with normal LV function. We sought to determine the clinical benefit of using BNP in an unselected population undergoing diagnostic angiography and identify any possible mechanisms for this association [the Alternative Risk Markers in Coronary Artery Disease (ARM-CAD) study].

**Methods** 468 participants without prior coronary bypass surgery were assessed according to the presence/severity of angiographic CAD using a stenosis score weighted for the impact on usual coronary blood flow. Blood samples, risk factor data and radial artery pulse wave analysis (to derive central blood pressures [BP]) were obtained prior to angiography.

**Results** Mean age  $\pm$  SD was  $64 \pm 11$ , BP  $144/80 \pm 21/10$ , 65% were male, 21% had diabetes, 44% had prior angina or myocardial infarction and 16% had impaired LV. There was a linear increase in BNP with the severity of CAD ( $p$  for trend  $< 0.0001$ ). However, patients with minor coronary stenoses (30%–50%) had elevated BNP levels compared to those with normal coronaries or single vessel CAD ( $p < 0.03$ ), perhaps relating to coronary plaque stability. Multivariate regression, adjusted for risk factors, LV impairment and medications, determined that BNP was an independent marker of the presence of CAD; the OR for any degree of angiographic CAD was 1.33 per log-unit increase in BNP (95% CI 1.03 to 1.71;  $p = 0.03$ ). BNP was associated with disease in the left coronary arteries but not in the right coronary artery (see Abstract 146 figure 1A). Further, the relationship between BNP and CAD was only present in patients with central pulse pressure above the median value of 50 mm Hg (see Abstract 146 figure 1B), suggesting that central BP may be part of the mechanism for the BNP increase seen in patients with CAD.



Abstract 146 Figure 1

**Conclusions** BNP is associated with the presence and severity of angiographic disease, irrespective of LV impairment. Our data suggest that in patients with coronary atherosclerosis, BNP may be a marker of ventricular wall tension and neurohormonal activation secondary to changes in central BP.

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#### POST CHALLENGE HYPERGLYCAEMIA: A PREDICTOR OF POOR CARDIOVASCULAR OUTCOME IN PATIENTS WITH ACS

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**Background** Patients with elevated random or diabetes have been known to have an adverse outcome following acute coronary syndrome (ACS). Most centers use fasting blood glucose to assess the glycaemic status for these patients, however the effect of elevated 2 h-post challenge BG to either diabetic or pre-diabetic levels on adverse cardiovascular events after myocardial infarction has been inadequately explored.

**Objective** We aim to assess the glucometabolic states of patients presenting with ACS using OGTT, and its the long term prognostic implications.

**Methods and Results** All patients admitted to the coronary care unit, with ACS to our hospital between November 2005 and October 2008 were included. All patients with known history of diabetes were excluded. All patients underwent an oral glucose tolerance test (OGTT) with 3–5 days after admission. The incidence of all cause mortality, cardiovascular death, re-infarction, CCF and CVA were collected. The primary end point was incidence of cardiovascular mortality, non-fatal reinfarction, CCF and non-haemorrhagic stroke. 930 patients were admitted in the described period with ACS, of which 136 were diabetic and noted were not available for 26, leaving 768 patients in the study. 337 (44%) had normal glucose tolerance,