at PPCI in elderly patients such as SENIOR PAMI (Grines, 2005) and TRIANA (Bueno, 2009) the minimum age for inclusion was 70 yrs and 75 yrs respectively. With an ageing population in the western world, about 20% of patients admitted for suspected STEMI are ≥80 yrs. We evaluated the outcome of PPCI in patients ≥80 yrs who were admitted to our unit with STEMI.

**Methods**
Our PPCI service was started in September 2009 and we analysed all the patients who were ≥80 yrs presenting to the PPCI service between September 2009 and September 2010 (15 months). Prospectively entered data were obtained from our dedicated cardiac service database system (Philips CVIS). Mortality data were obtained from the summary care record (SCR) database. Follow-up data were obtained from patients’ respective district general hospitals and general practitioners medical records.

**Results**
Of the 998 patients who were admitted to our unit for primary PCI for suspected STEMI during the study period, 183 (18.5%) were ≥80 yrs of age. After excluding 51 patients (27.9%) who did not undergo PPCI, we included 132 (70.1%) patients for analysis. Of those who were included in the study (n=132), 65 (49.2%) were female), the mean age was 85 ±3.95 yrs (range 80–99 yrs, median 85 yrs). There were 20 diabetics (15.2%) and 39 (29.5%) had previous myocardial infarction. Ten patients (7.6%) were in cardiogenic shock on arrival of which 9 (90%) had an Intra aortic balloon pump (IABP). The infarct related vessel was the right coronary in 42.4% and left anterior descending in 37.1%. Drug eluting stents were used in 40.2% of patients. In-hospital and 30-day mortality was 14.4% and 19.7% respectively. There was a significant difference in the mortality between patients age <80 yrs and those ≥80 yrs (Abstract 45 figure 1). In patients ≥80 yrs, mortality and bleeding risk increased markedly with advancing age (Abstract 45 table 1).

![Abstract 45 Figure 1](image_url)

**Conclusion**
This study clearly demonstrates a significant mortality difference between patients aged <80 yrs and those ≥80 yrs treated with PPCI. Our 30-day mortality outcome in patients ≥80 yrs (19.7%) was similar to the subgroup analysis of the PPCI arm in similar SENIOR-PAMI patients (19%). In the same analysis, the thrombotic group had a lower (16%) mortality. Further studies are required to determine whether PPCI should be routinely used in very elderly patients presenting with STEMI.

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**46 PROGNOSTIC VALUE OF BASELINE RENAL FUNCTION ON LONGTERM OUTCOME IN PATIENTS UNDERGOING PRIMARY PERCUTANEOUS CORONARY INTERVENTION FOR ST-ELEVATION MYOCARDIAL INFARCTION**

**doi:10.1136/heartjnl-2011-300198.46**


**Background**
Renal impairment is associated with increased cardiovascular mortality following acute coronary syndromes (ACS), however there is limited data assessing this relationship in the context of primary PCI and whether it exists with other major adverse cardiovascular events.

**Methods**
Clinical information was analysed from a prospective database on 2310 STEMI patients who underwent primary PCI between January 2004 and May 2010 at a London centre. Information was entered at the time of procedure and outcome assessed by all-cause mortality information provided by the Office of National Statistics via the BCIS/CCAD national audit. Estimated glomerular filtration rate (eGFR) was calculated using the modified diet in renal disease equation and patients were divided into groups based on eGFR (<40, 40–50, 50–60, >60 ml/min/1.73 m²). 3-year composite of MACE (death, reinfarction, stroke and target vessel revascularisation) were compared between groups.

**Results**
The average eGFR in all patients was 73.40±23.37 ml/min/1.73 m². The prevalence of coexisting risk factors (hypertension, diabetes mellitus, hypercholesterolaemia), previous MI, previous CABG and cardiogenic shock were higher among patients with reduced eGFR. There was a progressive increase in MACE with declining eGFR (OR=4.84, 95% CI 2.94 to 7.96, for comparison between the highest and lowest eGFR groups). See Abstract 46 figure 1. After adjustment for baseline characteristics including age, diabetes and cardiogenic shock renal function based on the GFR at admission remained a strong independent predictor of outcome.

![Abstract 46 Figure 1](image_url)

**Conclusion**
Baseline renal dysfunction in patients undergoing primary PCI is associated with an increased risk for combined death, re-infarction and recurrent angina. This risk increases linearly with declining eGFR.

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**47 CARDIOVASCULAR EVALUATION OF ENGLISH PREMIERSHIP RUGBY PLAYERS**

**doi:10.1136/heartjnl-2011-300198.47**

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**Introduction**
Recent experience of pre-participation cardiovascular evaluation (PPCE) in Italian athletes demonstrates a significant
**Abstract 48**

Effect of darbepoetin on endothelial progenitor cells (EPC) and ischaemia-reperfusion injury. (M Tilling, J Hunt, A Donald, J Clapp, P Chowienczyk.)

**Abstract**

Background: The role of erythropoietin in enhancing endothelial function has been investigated in animal models of ischaemia–reperfusion injury. In human subjects the role of erythropoietin has not been studied.

Method: A total of 11 men (mean age 32.6 years) were studied. Ischaemia–reperfusion injury was induced in the upper limb by the delivery of an enzyme-linked immunosorbent assay (ELISA) to detect keratinocyte growth factor (KGF) and vascular endothelial growth factor (VEGF) in the forearm. KGF and VEGF were measured by ELISA. FMD of the brachial artery was measured before and after darbepoetin/placebo. The increase in FMD after darbepoetin/placebo was compared with baseline.

Results: The increase in FMD at 72 h after darbepoetin/placebo was significantly greater in the darbepoetin group (change from baseline 1.1 ± 0.6 mm) than in the placebo group (change from baseline 0.5 ± 0.6 mm) (p < 0.01).

Conclusion: Erythropoietin enhances endothelial progenitor cells and ischaemia-reperfusion injury.

**Table 1**

<table>
<thead>
<tr>
<th>Endothelial function</th>
<th>Placebo Baseline</th>
<th>Placebo 24 h</th>
<th>Placebo 72 h</th>
<th>Placebo 7d</th>
<th>Darbepoetin Baseline</th>
<th>Darbepoetin 24 h</th>
<th>Darbepoetin 72d</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMD%</td>
<td>3.5 ± 0.8</td>
<td>3.4 ± 0.73</td>
<td>2.9 ± 0.63</td>
<td>3.4 ± 0.75</td>
<td>3.5 ± 0.92</td>
<td>4.4 ± 0.97</td>
<td>5.2 ± 0.9***</td>
</tr>
</tbody>
</table>

**Abstract 48 Figure 1** Change from baseline in FMD at 72 h, 48 h after ischaemia-reperfusion (+IR), after placebo and darbepoetin (study 1) and after darbepoetin without preceding ischaemia-reperfusion (−IR, study 2).