Table 1

	Under 80	Over 80	p Value
Gender (female)	1800 (19.6%)	474 (45.4%)	<0.0001
Hypertension	3692 (42.3%)	501 (51.3%)	0.02
Hypercholesterolaemia	3708 (42.5%)	548 (56.1%)	<0.0001
Previous MI	1442 (16.9%)	182 (18.7%)	0.150
Previous CABG	264 (3.0%)	46 (4.6%)	0.010
Multi vessel disease	3821 (41.8%)	562 (54.0%)	<0.0001
GPIIb/IIIa	6515 (74.4%)	530 (53.8%)	<0.0001
DES use	4058 (45.9%)	311 (30.9%)	<0.0001
Access (radial)	2115 (23.4%)	194 (18.8%)	0.001
Procedural success	6932 (88.3%)	736 (84.7%)	0.003

attack centres between January 2005 and November 2011. Patient's details were recorded at the time of procedure into the British Cardiac Intervention Society (BCIS) database. Outcome was assessed by all-cause mortality. Anonymous datasets from the eight centres were merged for analysis. The primary end-point was all-cause mortality at a median follow-up of 3.0 years (IQR range 1.2–4.6 years).

Results A total of 1051 octogenarians (10.3% of the study population) with an average age of 84.2 years (IQR 80–101) were treated with primary PCI during the study period. Over time, the annual proportion of octogenarians gradually increased from 9.1% in 2005 to 10.5% in 2010.

Unsurprisingly, when compared to patients under 80, octogenarian STEMI patients included a higher proportion of women, and had a higher prevalence of hypertension, hypercholesterolaemia, multi-vessel disease, previous infarction and previous CABG (table 1). They additionally were less likely to undergo radial access, receive GPIIb/IIIa inhibitors or a drug-eluting stent. When compared with younger patients, primary PCI in octogenarians was less likely to achieve TIMI flow grade 3. However between 2005 and 2011 the rates of post-procedural TIMI flow grade 3 increased significantly from 80.5% in 2005 to 90% in 2011 (p for trend 0.05).

The cumulative incidence of all-cause mortality during follow-up was significantly higher in the octogenarian group compared to the younger subgroup (51.6% vs 12.8%, p<0.0001) (figure 1). As expected, the hazard of death during follow-up increased with age (unadjusted HR 1.069 per year increase (95% CI 1.064 to 1.074), p<0.0001), which persisted after adjustment for other predictors of mortality (HR of 1.059 (95% CI 1.048 to 1.071), p<0.0001).

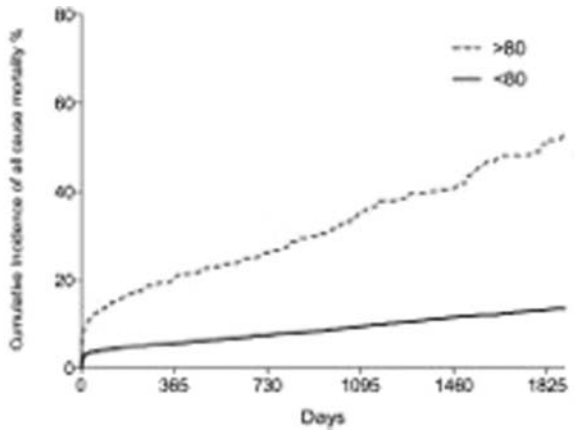

Figure 1

037

OUTCOME OF 1051 OCTOGENARIANS AFTER PRIMARY PERCUTANEOUS CORONARY INTERVENTION FOR ST ELEVATION MYOCARDIAL INFARCTION: OBSERVATIONAL COHORT FROM THE LONDON HEART ATTACK GROUP

D I Bromage,[1] D AJones,[1] K S Rathod,[1] P Lim,[2] G Virdi,[3] A J Jain,[1] S Singh Kalra,[4] T Crake,[5] P Meier,[5] Z Astroulakis,[2] C Dollery,[5] M Ozkor,[5] R Rakhit,[6] C J Knight,[1] M C Dalby,[7] I S Malik,[8] N Bunce,[2] M Whitbread,[3] C Grout,[1] A Mathur,[1] S Redwood,[9] P A MacCarthy,[4] A Wragg[1] *[1]Barts Health NHS Trust; [2]St Georges Hospital; [3]London Ambulance Service NHS Trust; [4]Kings College Hospital; [5]Heart Hospital; [6]Royal Free Hampstead NHS Trust; [7]Harefield Hospital; [8]Imperial College Healthcare NHS Trust; [9]Guys and St Thomas' Hospital*

doi:10.1136/heartjnl-2013-304019.37

Introduction The use of primary percutaneous coronary intervention (PCI) in octogenarians to treat ST elevation myocardial infarction (STEMI) is less than in other age groups. This is due in part to underrepresentation in clinical trials and perceived increased risk. We present long-term survival of a large cohort of elderly patients following primary PCI in London.

Methods This was an observational study of 10 249 consecutive patients undergoing primary PCI for STEMI at eight London heart

Conclusions Octogenarians constitute an important subgroup of STEMI patients. Data from London's experience would suggest that primary PCI rates are increasing in this group and that despite the high long term mortality, acute/year one rates survival rates are very encouraging.