Racial differences in AKI incidence following percutaneous coronary intervention

Supplemental Material

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Table 1: Availability of creatinine measurements within 30 days before percutaneous coronary intervention (PCI) for ascertainment of the reference creatinine value

	Overall	Race		
		White	Black	Other
No. of patients	9422	7084	1854	484
No. of serum creatinine measurements per patient				
Mean (SD)	2.6 (3.3)	2.6 (3.3)	2.8 (3.4)	2.5 (3.0)
Median [IQR]	2 [1, 3]	2 [1, 3]	2 [1, 3]	2 [1, 3]
Reference creatinine value, mean (SD)	1.17 (0.89)	1.13 (0.79)	1.34 (1.18)	1.15 (1.03)
Baseline eGFR, median [IQR]	74 [57, 89]	73 [56, 88]	78 [58, 97]	78 [60, 93]

Definitions:

- Reference value: the average of all serum creatinine measurements obtained in an outpatient or inpatient setting within 30 days before PCI
- Baseline eGFR: calculated from the reference creatinine value above using the CKD-EPI equation

Table 2: Association of race and baseline eGFR with odds of incident AKI following percutaneous coronary intervention in a complete-case analysis without correction for missing data using multiple imputation

Variables	Incident AKI		
	Odds ratio	95% confidence interval	p-value
No. of events/no. of patients	640/7351		
Race			<0.001
White	Reference	Reference	
Black	1.85	1.49 to 2.30	
Other	1.32	0.88 to 1.97	
Baseline eGFR, ml/min/1.73m^2			<0.001
≥90	Reference	Reference	
60 to <90	0.96	0.72 to 1.27	
30 to <60	2.40	1.77 to 3.25	
15 to <30	5.21	3.34 to 8.14	
<15	14.77	8.77 to 24.87	
Interaction of race and baseline eGFR	NA	NA	0.389

AKI, acute kidney injury, defined as a 1.5-fold or greater relative elevation in serum creatinine from a reference value to the highest value within seven days following percutaneous coronary intervention (PCI) or a 0.3 mg/dl absolute increase in serum creatinine from the reference value within 48 hours following the date and time of PCI.

Baseline eGFR, estimated glomerular filtration rate, calculated from serum creatinine using the CKD-EPI equation.

Additional model covariates include demographics: year of index PCI; sex (male vs. female); age; tobacco use. PCI procedural characteristics: PCI setting (elective vs non-elective); number of stents placed; contrast volume; systolic and diastolic BP, mmHg. Medication use: RAAS inhibitors, diuretics, and NSAIDS. Peri-procedural AKI prophylaxis: administration of intravascular fluid and N-acetylcysteine. Comorbidities: body mass index, kg/m^2; acute coronary status pre-CATH (STEMI, non-STEMI, MI unspecified, unstable angina); pre-existing cardiovascular disease (prior MI, prior PCI, prior CABG, history of angina, congestive heart failure, cerebrovascular disease, peripheral vascular disease, carotid bruits); history of hyperlipidemia; diabetes and diabetes with end organ damage. Socioeconomic status: marital status (married or life-partner vs other); median household income.

Odds ratio, confidence intervals and p-values for race and baseline eGFR are from a main effects model. The interaction p-value is from a model incorporating a cross-product of AKI with baseline eGFR.