

Introduction

Chronic Kidney Disease (CKD) has been associated with higher complication rate and mortality after chronic total occlusion (CTO) percutaneous coronary intervention (PCI).¹

No study has examined whether the health status benefit of CTO PCI is similar in patients across a range of baseline renal function.

Methodology

In OPEN-CTO (Outcomes, Patients Health Status, and Efficiency in Chronic Total Occlusions Registry) study, patients were assessed for periprocedural complications and health status over 1-year follow up using the Seattle Angina Questionnaire (SAQ).²

Major Adverse Cardiovascular and Cerebral Events (MACCE) was defined as composite of in-hospital death, periprocedural myocardial infarction, emergency coronary bypass graft surgery, in-hospital stroke and clinically significant perforation.

Hierarchical multivariable regression models were used to examine the independent association of baseline estimate glomerular filtration rate (GFR) with technical success, MACCE and health status change over 1-year follow up.

Results

	CKD n=225	No CKD n=732	P value
Age (Mean ± SD)	69.2 ± 10.1	64.1 ± 10.0	< 0.001
Female (%)	28.9%	16.5%	< 0.001
Diabetes Mellitus %	53.3%	36.6%	< 0.001
CHF %	37.3%	17.8%	< 0.001
CABG %	48.4%	33.1%	< 0.001

Table 1. Overview of baseline characteristics

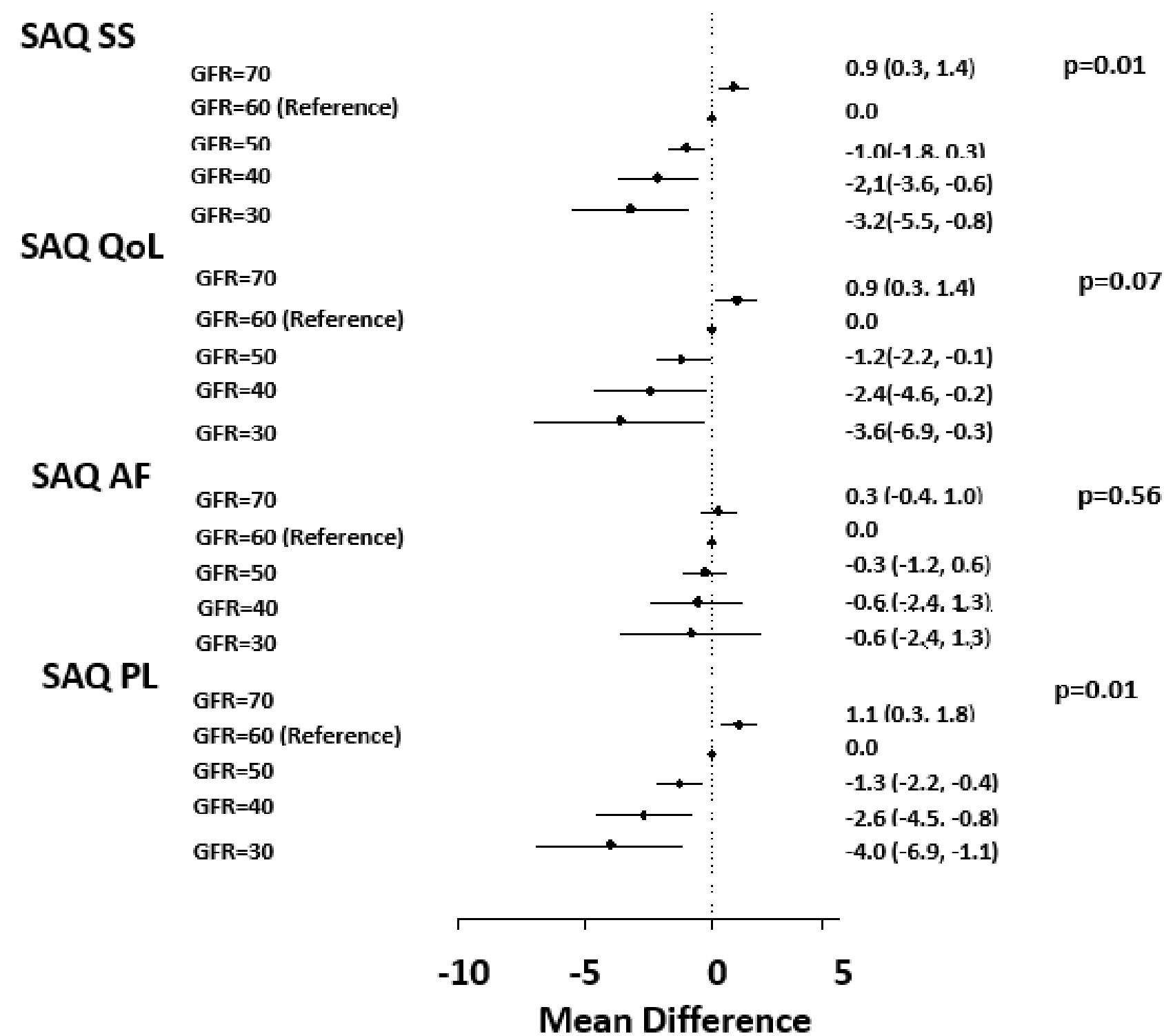


Figure 1. Multivariable adjusted change in health status at 1-year across range of GFRs.

MACCE

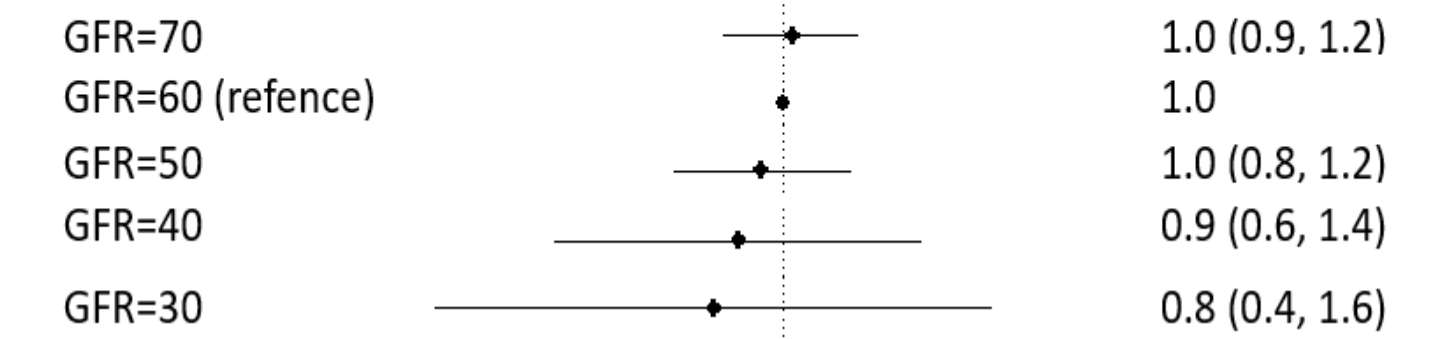


Figure 2. Association of GFR with MACCE.

Conclusion

Adjusting for potential confounders using hierarchical multivariable models we observed no significant association of GFR with MACCE.

The health status benefit was of CTO PCI was similar across a range of renal dysfunction compared to patients without CKD.

References

- Zhang QB et al. American Journal of Translational Research 2016;8:196-208
- Sapontis J., et al. Coronary Artery Disease 2017;28:110-119