

**Supplementary Table 1. Quality assessment of observational studies**

Study demographics			Quality assessment	GRADE approach (Guyatt)						
Author - Year - Country	Number of Centers	Patient Numbers (Total)	Matching Performed - Cohort, Propensity, None?	Are controls from the same population?	Are appropriate outcomes measured?	Are outcomes appropriately obtained?	Are confounders appropriately controlled?	Is follow-up complete (< 10% LTF)	Overall risk of bias	
Gurevich-2018-USA	1	130	None	Yes	Yes	Uncertain	MAC group more likely to have hypertension	Uncertain	Moderate	
Hosoba-2018-Japan	9	236	Propensity	Yes	Yes	Yes, from outpatient clinic	Yes, similar after propensity matching	100%	Low	
Miles-2016-UK	1	88	Propensity	No: patients from August 2012 - November 2013 had GA and patients from	Yes	Yes, collected in institution records	Yes, similar after propensity matching	Uncertain	Low	

				May - July 2014 had MAC					
Condo-2017-USA	1	88	Regression	Originally there were time differences between MAC and GA groups, but this was adjusted for by regression	Yes	Yes, from TAVR registry database	MAC group more likely to have history of CABG and less likely to have history of prior cerebrovascular disease	Uncertain	Low

Jabbar-2016-UK	1	216	None	No: Patients from January 3, 2011 to January 2, 2014 had GA patients after January 2, 2014 had MAC	Yes	Uncertain	No significant intergroup differences	Uncertain	Moderate
Palermo-2016-USA	2	65	None	Yes	Yes	Yes, from hospital's electronic medical records	MAC group was older, had lower mean aortic valve gradient, less likely to have coronary arterial disease, and COPD	Uncertain	Moderate
Kiramijyan-2016-USA	1	533	Regression	Yes	Yes	Yes, from hospitalization index	MAC group had lower BMI, more chronic kidney disease, more prior balloon aortic valvuloplasty, more chronic immunosuppressive therapy, more chronic heart failure, and higher STS score	Uncertain	Low

Attizani-2015-USA	3	207	None	Yes	Yes	Yes, from electronic medical record	No significant intergroup differences	Uncertain	Moderate
Oguri-2014-France	34	2,326	Propensity	Yes	Yes	Yes, from FRANCE 2 registry	Yes, similar after propensity matching	Uncertain	Low
Dehedin-2011-France	uncertain	125	None	Yes	Yes	Yes, from institutional registry	MAC group less likely to have dyslipidemia, and lower STS-PROM	100% for early outcomes, Uncertain for late outcomes	Low
Covello-2010-Italy	1	69	None	Yes	Yes	Uncertain	MAC patients had more COPD, carotid stenosis, extracardiac arteropathy	100%	Low
Abud-2018-Argentina	1	121	None	Yes	Yes	Yes, from interventional cardiology database	MAC group had lower NYHA 3-4 score, more PCI, and lower mean gradient on ECHO	Uncertain	Moderate
Sengupta-2015-USA	1	111	None	Yes	Yes	Uncertain	No significant intergroup differences	Uncertain	Moderate
Hayek-2017-USA	1	454	None	Yes	Yes	Yes, reports from procedures	MAC group had significantly less aortic mean transvalvular gradient and aortic peak transvalvular	No, only 38% reported at 1 year	Moderate

							gradient		
Sheriff-2018-USA	Uncertain	144	Propensity	Yes	Yes	Yes, from hospital records	Yes, similar after propensity matching	Uncertain	Low
Gauthier-2015-Belgium	Uncertain	176	None	Yes	Yes	Yes, from hospital records	No significant intergroup differences	Uncertain	Moderate

Quality of studies were assessed as described by Guyatt *et al.* All studies were retrospective. MAC: monitored anesthesia care; GA: general anesthesia; GRADE: Grading of Recommendations Assessment, Development and Evaluation; CABG: coronary artery bypass grafting; COPD: chronic obstructive pulmonary disease; STS: Society of Thoracic Surgery; STS-PROM: Society of Thoracic Surgery Predicted Risk of Mortality; PCI: percutaneous coronary intervention