

Supplementary Online Content

Afilalo J, Kim S, O'Brien S, et al. Gait speed and operative mortality in older adults following cardiac surgery. *JAMA Cardiol*. Published online May 11, 2016. doi:10.1001/jamacardio.2016.0316.

eTable 1. Comparison of Patients Without Versus With Gait Speed Measured

eTable 2. Incremental Value of Gait Speed for Model Discrimination

eTable 3. Effect of Gait Speed According to Patient Characteristics

eFigure. Distribution of Gait Speed Values

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Comparison of Patients Without Versus With Gait Speed Measured

	Gait speed <i>not</i> measured (n=34,635)		Gait speed measured (n=15,171)		<i>P</i> Value
Demographics					
Age, median (Q1, Q3)	71.0 (65.0, 77.0)		71.0 (66.0, 77.0)		.03
Female sex	10,941	31.6%	4,622	30.5%	.01
Race					
Caucasian	30,039	86.7%	13,250	87.3%	<.001
African American	1,970	5.7%	616	4.0%	
Asian	853	2.5%	507	3.3%	
Other	1,648	4.8%	737	4.9%	
Clinical/procedural					
Heart failure within 2 weeks	9,635	27.8%	4,134	27.3%	.19
NYHA class III or IV	6,105	63.4%	2,213	53.5%	<.001
Peripheral arterial disease	5,420	15.7%	2,211	14.6%	.002
Elective status	16,970	49.0%	10,060	66.3%	<.001
Surgery within 24 hours of admission	14,781	42.7%	8,841	58.3%	<.001
Surgery performed					<.001
Isolated CABG	22,642	65.4%	9,005	59.4%	
Isolated aortic/mitral valve	6,948	20.1%	3,765	24.8%	
CABG plus valve	5,045	14.6%	2,401	15.8%	
STS-PROM, median (Q1, Q3)	1.79 (0.94, 3.55)		1.70 (0.92, 3.18)		<.001
STS-PROMM, median (Q1, Q3)	14.78 (9.90, 23.13)		14.22 (9.76, 21.18)		<.001
Outcomes					
Operative mortality	904	2.6%	314	2.1%	.003
Composite mortality/morbidity	5,080	14.7%	1,926	12.7%	<.001
Abbreviations: CABG, coronary artery bypass graft; NYHA, New York Heart Association; Q1, quartile 1; Q3, quartile 3; STS-PROM, Society of Thoracic Surgeons predicted risk of mortality; STS-PROMM, Society of Thoracic Surgeons predicted risk of mortality or major morbidity.					

eTable 2. Incremental Value of Gait Speed for Model Discrimination**A. Operative Mortality**

	C-statistics		IDI	Relative IDI	95% CI for Δ c-statistic	95% CI for IDI
	Model 1	Model 2				
CABG	0.772	0.776	0.003	0.154	(-0.006,0.013)	(0.002,0.004)
Valve	0.738	0.744	0.004	0.205	(-0.006,0.019)	(0.002,0.007)
CABG plus valve	0.725	0.728	0.003	0.096	(-0.006,0.013)	(0.001,0.006)
All pooled	0.769	0.773	0.003	0.122	(-0.001,0.010)	(0.002,0.005)

B. Composite Mortality or Major Morbidity

	C-statistics		IDI	Relative IDI	95% CI for Δ c-statistic	95% CI for IDI
	Model 1	Model 2				
CABG	0.671	0.672	0.001	0.027	(-0.001,0.001)	(0.001,0.002)
Valve	0.663	0.665	0.004	0.086	(-0.002,0.006)	(0.003,0.005)
CABG plus valve	0.678	0.677	0.002	0.031	(-0.003,0.002)	(0.001,0.003)
All pooled	0.688	0.689	0.002	0.032	(-0.0004,0.001)	(0.0015,0.002)

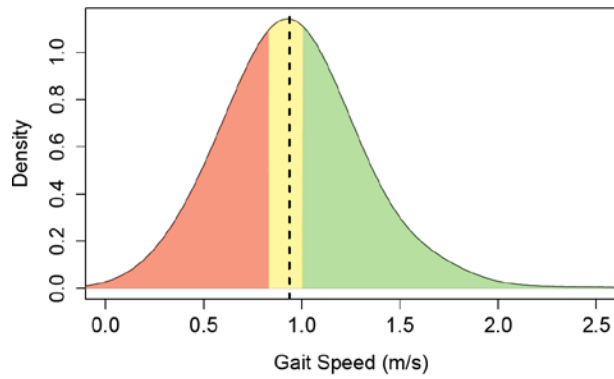
Model 1 includes STS-PROM/M. Model 2 includes STS-PROM/M and gait speed. Abbreviations: CABG, coronary artery bypass graft; CI, confidence interval; IDI, integrated discrimination improvement; STS-PROM, Society of Thoracic Surgeons predicted risk of mortality; STS-PROMM, Society of Thoracic Surgeons predicted risk of mortality or major morbidity

eTable 3. Effect of Gait Speed According to Patient Characteristics

	Odds Ratio (95% CI)
Age	
<75	1.15 (1.08 to 1.23)
≥75	1.06 (1.00 to 1.13)
Sex	
Male	1.14 (1.08 to 1.20)
Female	1.06 (1.00 to 1.13)
STS-PROM	
<2%	1.11 (1.03 to 1.19)
2% to 3.9%	1.07 (0.99 to 1.16)
4% to 7.9%	1.04 (0.97 to 1.12)
≥8%	1.06 (0.97 to 1.16)
LVEF	
≥50%	1.11 (1.05 to 1.16)
<50%	1.11 (1.03 to 1.20)
COPD	
Yes	1.06 (0.99 to 1.13)
No	1.14 (1.09 to 1.21)
BMI	
<30 kg/m ²	1.13 (1.07 to 1.18)
≥30 kg/m ²	1.09 (1.01 to 1.17)

None of the interactions met the Bonferroni-corrected threshold of $p < 0.01$ for statistical significance ($p = 0.014$, $p = 0.05$, $p = 0.32$, $p = 0.43$, $p = 0.014$, and $p = 0.59$ for age, sex, STS-PROM, LVEF, COPD, and BMI, respectively). Abbreviations: BMI, body mass index; COPD, chronic obstructive pulmonary disease; LVEF, left ventricular ejection fraction; STS-PROM, Society of Thoracic Surgeons predicted risk of mortality.

eFigure. Distribution of Gait Speed Values



Gait speed was normally distributed with a median value of 0.94 m/s (line), a slow tertile of <0.83 m/s (red area), a middle tertile of 0.83 to 1.00 m/s (yellow area), and a fast tertile of >1.00 m/s (green area). Abbreviations: m/s, meters per second.