

Supplementary Table (online only). Comorbidity scales for the Vascular Study Group of New England (VSGNE) and Society for Vascular Surgery/American Association for Vascular Surgery (SVS/AAVS) grading scale

Variable	VQI variable	SVS/AAVS grading scale	
Smoking			
Never			
Prior	Prior = quit \geq 1 month ago		
Current	Current = still smoking within the last month, includes cigarettes, pipe, or cigar Exclude smokeless, ie, chewing tobacco, snuff, nicotine replacement therapy (eg, patch, gum, lozenge, e-cigarettes)		
Hypertension			
No			
Yes	Hypertension documented in history or recorded BP \geq 140/90 preoperatively		
		Hypertension	
		0	None (cutoff point, diastolic pressure usually lower than 90 mm Hg)
		1	Controlled (cutoff point, diastolic pressure usually lower than 90 mm Hg) with single-drug controlled
		2	Controlled with 2 drugs
		3	Requires >2 drugs or is uncontrolled
Diabetes			
None	Select most severe category (they are listed in hierarchical order) None = patient has never been diagnosed with diabetes		
Diet controlled	Diet = diagnosis of diabetes but not on any medication, including patients refusing medication		
Noninsulin medication only	Noninsulin medications = oral medications and noninsulin injections		
Insulin	Insulin = injectable insulin		
CAD symptoms		Cardiac status	Description of score
None	MI <6 months ago = recent MI within last 6 months; unstable angina = new onset, increasing frequency, lasting >20 minutes, or rest angina	0	Asymptomatic
Prior MI, no current symptoms	History of MI, no symptoms = old MI >6 months ago	1	Asymptomatic but with remote MI by history (6 months), occult MI by electrocardiography, or fixed defect on dipyridamole thallium or similar scan
Stable angina	Stable angina = stable pattern or symptoms with or without antianginal medication	2	Any one of the following: stable angina, no angina but significant reversible perfusion defect on dipyridamole thallium scan, significant silent ischemia (1% of time) on Holter monitoring, ejection fraction 25% to 45%, controlled ectopy or asymptomatic arrhythmia, or history of CHF that is now well compensated

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Supplementary Table (online only). Continued.

Variable	VQI variable		SVS/AAVS grading scale
Unstable angina or MI within 6 months	MI <6 months ago = recent MI within last 6 months; unstable angina = new onset, increasing frequency, lasting >20 minutes, or rest angina	3	Any one of the following: unstable angina, symptomatic or poorly controlled ectopy/arrhythmia (chronic/recurrent), poorly compensated or recurrent CHF, ejection fraction <25%, MI within 6 months
Prior CABG			
None	CABG		
Within 5 years			
Longer than 5 years			
Prior PCI			
None	PCI angioplasty, atherectomy, stent		
Within 5 years			
Longer than 5 years			
Prior CHF			
None	CHF		
Asymptomatic	Asymptomatic, with history of CHF: no limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, or dyspnea (shortness of breath).		
Mild	Mild: Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in fatigue, palpitation, or dyspnea.		
Moderate	Moderate: Marked limitation of physical activity. Comfortable at rest, but less than ordinary activity causes fatigue, palpitation, or dyspnea.		
Severe	Severe: Unable to carry out any physical activity without discomfort. Symptoms of cardiac insufficiency at rest. If any physical activity is undertaken, discomfort is increased.		
COPD		Pulmonary status	
None	COPD is defined by any disease that results in COPD (ie, asthma, chronic bronchitis, emphysema, asbestos, occupational exposure to dust/chemicals)	0	Asymptomatic, normal chest radiograph, pulmonary function tests within 20% of predicted
Not treated	Not treated = COPD documented in record but not treated with medication	1	Asymptomatic or mild dyspnea on exertion, mild chronic parenchymal radiograph changes, pulmonary function tests 65% to 80% of predicted
On medication	Medication includes theophylline, aminophylline, inhalers, or steroids	2	Between 1 and 3
On home oxygen	Any home oxygen use	3	Vital capacity <1.85 L, FEV ₁ <1.2 L or <35% of predicted, maximal voluntary ventilation <50% of predicted, P _{CO2} >45 mm Hg, supplemental oxygen use medically necessary, or pulmonary hypertension

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Variable	VQI variable	SVS/AAVS grading scale
Dialysis		
No		
Functioning transplant	Transplant = patient has functioning kidney transplant	
On dialysis	Dialysis = currently on hemodialysis or peritoneal dialysis	
	Renal status	
	0	No known renal disease, normal serum creatinine level
	1	Moderately elevated creatinine level, as high as 2.4 mg/dL
	2	Creatinine level, 2.5-5.9 mg/dL
	3	Creatinine level >6.0 mg/dL or on dialysis or with kidney transplant
Stress test result		
Not done	Includes stress ECG, stress echocardiography, nuclear stress scans within 2 years of surgery, assuming no intervening coronary intervention	
Normal		
Ischemic changes		
MI		
Both ischemia and MI		
	Age	
	0	<55 years old
	1	55-69 years old
	2	70-79 years old
	3	>80 years old

BP, Blood pressure; *CABC*, coronary artery bypass graft surgery; *CAD*, coronary artery disease; *CHF*, congestive heart failure; *COPD*, chronic obstructive pulmonary disease; *ECC*, electrocardiography; *FEV₁*, forced expiratory volume in the first second of expiration; *MI*, myocardial infarction; *Pco₂*, partial pressure of carbon dioxide; *PCI*, percutaneous coronary intervention.