

**Supplementary Table I (online only).** Patient and operative characteristics with and without postoperative myocardial infarction (POMI) after carotid endarterectomy (CEA; derivation cohort 2010-2014)

	Overall, % (N = 36,659)	No POMI, % (n = 36,338)	POMI, % (n = 321)	P value <sup>a</sup>
Age, years, mean	70	70	73	<.0001
Age category, years				
<60	12.9	99.5	0.5	<.0001
60-69	31.8	99.2	0.8	
70-79	37.2	99.2	0.8	
>80	18.1	98.6	1.4	
Urgency				
Elective	86.9	99.1	0.9	.919
Symptomatic	13.1	99.1	0.9	
BMI, mean	28.3	28.3	28.3	.922
BMI, quartile				
≤24	25.1	99.2	0.8	.687
>24 and ≤27	25.1	99.0	1.0	
>27 and ≤31	25.2	99.1	0.9	
>31	24.6	99.2	0.8	
Gender				
Female	60.3	99.1	0.9	.892
Male	39.7	99.1	0.9	
Race				
Nonwhite	7.8	99.1	0.9	.748
White	92.2	99.1	0.9	
Ethnicity				
Non-Hispanic	96.9	99.1	0.9	.418
Hispanic	3.1	98.9	1.1	
CAD				
None	71.8	99.3	0.7	<.0001
Asymptomatic	17.6	98.7	1.3	
Symptomatic	10.6	98.4	1.6	
Stress test				
Not done	66.1	99.2	0.8	<.0001
Normal	25.5	99.4	0.6	
Abnormal	8.3	98.1	1.9	
Diabetes				
None	64.8	99.3	0.7	<.0001
Diet or noninsulin medication	22.9	99.0	1.0	
Insulin	12.3	98.5	1.5	
Creatinine				
<1.8 mg/dL	93.8	99.2	0.8	<.0001
≥1.8 mg/dL or on dialysis	6.2	97.8	2.2	
CHF				
None	89.8	99.2	0.8	<.0001
History, asymptomatic	5.9	98.4	1.6	
Symptomatic	4.3	98.1	1.9	
Smoking				
Never	24.7	99.2	0.8	.083
Prior	47.4	99.0	1.0	
Current	27.9	99.3	0.7	
HTN				
No	11.0	99.4	0.6	.034
Yes	89.0	99.1	0.9	
COPD				
None	78.7	99.1	0.9	.699
Yes, not on medication	7.1	99.0	1.0	
Yes, on medication or oxygen	14.3	99.1	0.9	

**Supplementary Table I (online only).** Continued.

	Overall, % (N = 36,659)	No POMI, % (n = 36,338)	POMI, % (n = 321)	P value <sup>a</sup>
Any prior vascular surgery				
No	74.8	99.3	0.7	<.0001
Yes	25.2	98.7	1.3	
Prior CABG or PCI				
No	66.8	99.3	0.7	<.0001
Yes	33.2	98.8	1.2	
Prior neurologic event				
No	54.4	99.1	0.9	.613
Yes	45.5	99.1	0.9	
Anesthesia				
Local/regional	9.1	99.3	0.7	.466
General	90.9	99.1	0.9	

BMI, Body mass index; CABG, coronary artery bypass graft; CAD, coronary artery disease; CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; HTN, hypertension; PCI, percutaneous coronary intervention.

<sup>a</sup>P value from  $\chi^2$  test for categorical variables, statistical significance at  $P < .05$ .

**Supplementary Table II (online only).** Patient and operative characteristics with and without postoperative myocardial infarction (POMI) after infrainguinal bypass (INFRA; derivation cohort 2011-2014)

	Overall, % (N = 14,442)	No POMI, % (n = 14,042)	POMI, % (n = 400)	P value <sup>a</sup>
Urgency				
Elective	79.0	97.5	2.5	.0007
Symptomatic	21.0	96.3	4.7	
Gender				
Male	67.2	97.3	2.7	.432
Female	32.8	97.1	2.9	
Race				
White	80.8	97.1	2.9	.015
Black	15.0	98.0	2.0	
Other	4.2	96.0	4.0	
Ethnicity				
Non-Hispanic	94.7	97.2	2.8	1.0
Hispanic	5.3	97.2	2.8	
BMI, mean	27.6	27.6	27.2	.162
BMI, quartile				
≤24	25.1	97.2	2.8	.327
>24 and ≤27	25.0	96.9	3.1	
>27 and ≤31	25.0	97.2	2.8	
>31	25.0	97.6	2.4	
Age, years, mean	66.9	66.8	71.2	<.0001
Age category, years				
<60	25.9	98.6	1.4	<.0001
60-69	32.8	97.5	2.5	
70-79	26.9	96.4	3.6	
>80	14.5	95.6	4.4	
Smoking				
Never	16.7	96.6	3.4	<.0001
Prior	42.2	96.5	3.5	
Current	41.1	98.3	1.7	
HTN				
No	12.2	99.2	0.8	<.0001
Yes	87.8	97.0	3.0	
Diabetes				
None	52.0	98.1	1.9	<.0001
Diet or noninsulin medication	21.9	97.0	3.0	
Insulin	26.1	95.6	4.4	
CAD				
None	70.1	98.1	1.9	<.0001
Asymptomatic	22.0	95.7	4.3	
Symptomatic	7.9	93.9	6.1	
Prior CABG or PCI				
No	65.6	98.1	1.9	<.0001
Yes	34.4	95.6	4.4	
CHF				
None	84.1	97.8	2.2	<.0001
History, asymptomatic	9.4	94.4	5.6	
Symptomatic	6.4	94.3	5.7	
COPD				
None	75.3	97.2	2.8	.120
Yes, not on medication	8.6	96.4	3.6	
Yes, on medication/home oxygen	16.2	97.6	2.4	
Creatinine				
<1.8 mg/dL	88.5	97.6	2.4	<.0001
≥1.8 mg/dL	6.2	95.5	4.5	
On dialysis	5.4	93.8	6.2	

**Supplementary Table II (online only).** Continued.

	Overall, % (N = 14,442)	No POMI, % (n = 14,042)	POMI, % (n = 400)	P value <sup>a</sup>
Stress				
Not done	67.7	97.4	2.6	<.0001
Normal	23.3	97.9	2.1	
Abnormal	9.0	94.4	5.6	
Indication				
Claudication	31.3	98.8	1.2	<.0001
Rest pain	22.2	97.3	2.7	
Tissue loss	35.6	96.0	4.0	
Acute ischemia	10.9	96.4	3.6	
Prior vascular surgery				
No	37.2	97.5	2.5	.087
Yes	62.8	97.0	3.0	
Conduit				
GSV	55.4	97.4	2.6	.115
Prosthetic	39.4	97.2	2.8	
Other	5.1	96.1	3.9	
Pathology				
None/aneurysm	10.3	98.7	1.3	.0005
Occlusive disease	89.7	97.1	2.9	
Graft recipient				
Femoral-popliteal	60.1	97.9	2.1	<.0001
Infrapopliteal <sup>b</sup>	39.9	96.2	3.8	
Anesthesia				
Spinal/epidural	3.7	97.2	2.8	1.0
General	96.3	97.2	2.8	

BMI, Body mass index; CABG, coronary artery bypass graft; CAD, coronary artery disease; CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; GSV, great saphenous vein; HTN, hypertension; PCI, percutaneous coronary intervention.

<sup>a</sup>P value from  $\chi^2$  or Fisher test as appropriate, statistical significance at  $P < .05$ .

<sup>b</sup>Infrapopliteal includes distal anastomosis to tibial peroneal trunk, anterior or posterior tibial, peroneal, or pedal artery.

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**Supplementary Table III (online only).** Patient and operative characteristics with and without postoperative myocardial infarction (POMI) after endovascular aneurysm repair (EVAR; derivation cohort 2010-2014)

	Overall, % (N = 9965)	No POMI, % (n = 9837)	POMI, % (n = 128)	P value <sup>a</sup>
Age, years, mean	73.7	73.6	77.4	<.0001
Age category, years				
<60	5.8	99.0	1.0	
60-69	25.6	99.3	0.7	<.0001
70-79	40.9	98.9	1.1	
>80	27.6	97.9	2.1	
Urgency				
Elective	90.6	98.9	1.1	<.0001
Symptomatic	9.4	96.9	3.1	
BMI, mean	27.9	27.9	26.7	.008
BMI, quartile				
≤24	24.9	98.4	1.6	.311
>24 and ≤27	25.5	98.8	1.2	
>27 and ≤31	25.3	98.7	1.3	
>31	24.3	99.0	1.0	
Gender				
Male	80.7	98.8	1.2	.274
Female	19.3	98.4	1.6	
CAD				
None	69.9	99.1	0.9	<.0001
History, asymptomatic	22.0	98.2	1.8	
Symptomatic	8.1	97.0	3.0	
Stress test				
Not done	59.0	98.7	1.3	.0009
Normal	30.6	99.1	0.9	
Abnormal	10.4	97.6	2.4	
Diabetes				
No	80.0	98.9	1.1	.015
Yes	20.0	98.1	1.9	
Creatinine				
<1.8 mg/dL	93.2	98.9	1.1	<.0001
≥1.8 mg/dL or on dialysis	6.8	96.8	3.2	
CHF				
History, asymptomatic	95.4	98.9	1.1	<.0001
Symptomatic	4.6	95.2	4.8	
Smoking				
Never	14.1	98.4	1.6	.333
Prior	54.2	98.7	1.3	
Current	31.7	98.9	1.1	
HTN				
No	16.0	98.9	1.1	.632
Yes	84.0	98.7	1.3	
COPD				
No	68.3	98.9	1.1	.023
Yes, not on medication	10.1	98.0	2.0	
Yes, on medication/ home oxygen	21.7	98.4	1.6	
Prior aortic surgery				
No	95.6	98.7	1.3	1.0
Yes	4.4	98.6	1.4	
History of peripheral bypass				
No	96.7	98.8	1.2	.101
Yes	3.3	97.6	2.4	

**Supplementary Table III (online only).** Continued.

	Overall, % (N = 9965)	No POMI, % (n = 9837)	POMI, % (n = 128)	P value <sup>a</sup>
Maximum diameter, mm				
<55	53.1	99.1	0.9	<.0001
55-60	22.6	98.9	1.1	
>60	24.3	97.8	2.2	
Anesthesia				
Local/regional	8.1	98.4	1.6	.492
General	91.9	98.7	1.3	

BMI, Body mass index; CAD, coronary artery disease; CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; HTN, hypertension.

<sup>a</sup>P value from  $\chi^2$  or Fisher test as appropriate, statistical significance at  $P < .05$ .

**Supplementary Table IV (online only).** Patient and operative characteristics with and without postoperative myocardial infarction (POMI) after open abdominal aortic aneurysm (OAAA) repair (derivation cohort 2010-2014)

	Overall, % (N = 3414)	No POMI, % (n = 3244)	POMI, % (n = 170)	P value <sup>a</sup>
Age, years, mean	69.5	69.3	72.3	<.0001
Age category, years				
<60	12.0	97.3	2.7	.005
60-69	36.1	95.9	4.1	
70-79	39.8	94.3	5.7	
>80	12.0	92.7	7.3	
Urgency				
Elective	85.8	95.3	4.7	.149
Symptomatic	14.2	93.6	6.4	
BMI, mean	27.2	27.2	26.4	.067
BMI quartile				
<23.7	24.1	93.4	6.6	.019
23.7-26.7	25.2	94.8	5.2	
26.8-30.3	26.1	95.1	4.9	
>30.3	24.5	96.8	3.2	
Gender				
Female	72.7	94.9	5.1	.607
Male	27.3	95.4	4.6	
Race				
Nonwhite	8.3	91.8	8.2	.016
White	91.7	95.3	4.7	
CAD				
None	73.6	95.5	4.5	.067
Asymptomatic	19.7	93.6	6.4	
Symptomatic	6.7	93.4	6.6	
Stress test				
Not done	45.3	95.5	4.5	.091
Normal	42.8	95.1	4.9	
Abnormal	11.9	92.8	7.2	
Diabetes				
None	85.0	95.0	5.0	.990
Any	15.0	94.9	5.1	
Creatinine				
<1.8 mg/dL	93.4	95.5	4.5	<.0001
≥1.8 mg/dL or on dialysis	6.6	88.1	11.9	
CHF				
None	93.0	95.4	4.6	.001
Any	7.0	90.4	9.6	
Smoking				
Never	9.9	95.0	5.0	.101
Prior	46.6	94.2	5.8	
Current	43.5	95.9	4.1	
HTN				
No	15.8	96.8	3.2	.044
Yes	84.2	94.7	5.3	
COPD				
No	68.0	95.9	4.1	.004
Yes, not on medication	13.5	92.9	7.1	
Yes, on medication/ home oxygen	18.5	93.5	6.5	
Any prior vascular surgery				
No	79.2	95.9	4.1	<.0001
Yes	20.8	91.8	8.2	
Prior CABG or PCI				
No	70.4	95.8	4.2	.001
Yes	29.6	93.1	6.9	

**Supplementary Table IV (online only).** Continued.

	Overall, % (N = 3414)	No POMI, % (n = 3244)	POMI, % (n = 170)	P value <sup>a</sup>
Iliac aneurysm				
No	72.4	94.8	5.2	.341
Yes	27.6	95.6	4.4	
Maximum AP diameter, mm, mean	60.4	60.3	62.2	.120
Maximum AP diameter, mm				
≤55	41.9	96.1	3.9	.051
55-60	35.4	94.4	5.6	
>60	22.7	94.1	5.9	
Distal anastomosis				
Aorta	47.0	95.3	4.7	.377
CIA	32.5	95.2	4.8	
EIA/CFA	20.5	94.0	6.0	
Proximal clamp				
Infrarenal	57.9	95.8	4.2	.0003
Above one renal artery	13.5	94.8	5.2	
Above two renal arteries	21.1	95.1	4.9	
Supraceliac	7.5	89.5	10.5	
Anesthesia				
General	53.3	94.9	5.1	.756
General and epidural	46.7	95.2	4.8	

AP, Anteroposterior; BMI, body mass index; CABG, coronary artery bypass graft; CAD, coronary artery disease; CFA, common femoral artery; CHF, congestive heart failure; CIA, common iliac artery; COPD, chronic obstructive pulmonary disease; EIA, external iliac artery; HTN, hypertension; PCI, percutaneous coronary intervention.

<sup>a</sup>P value from  $\chi^2$  or Fisher test as appropriate, statistical significance at  $P < .05$ .