Supplemental Table 1. Thirty-day outcomes in patients who underwent CABG, by physician sex discordance.

Variable	Discordant (n=19,893)	Concordant (n=59,969)	Standardized Difference	P-value
Mortality, n (%)	205 (1.3)	654 (1.4)	0.01	0.41
MACE, n (%)	524 (3.3)	1,692 (3.6)	0.01	0.12
Hospital length of stay, median (IQR), days	7 (6-9)	7 (6-9)	0.03	0.007
ICU length of stay, median (IQR), days	2 (2-3)	2 (2-3)	0.07	<0.001

Abbreviations: MACE = major adverse cardiovascular events; ICU = intensive care unit, IQR = interquartile range

Supplemental Table 2. Adjusted associations between surgeon-anaesthesiologist sex discordance and CABG outcomes at 30 days.

Outcome	Adjusted measure (95% CI)	P-value
Mortality	OR: 0.88 (0.74-1.05)	0.16
MACE	OR: 0.99 (0.98-1.11)	0.40
Hospital length of stay	RR: 1.00 (0.99-1.02)	0.70
ICU length of stay	RR: 0.99 (0.98-1.00)	0.09

Abbreviations: MACE = major adverse cardiovascular events; ICU = intensive care unit; OR = odds ratio; RR = risk ratio; CI = confidence interval

Supplemental Table 3. Predictors of major adverse cardiovascular events at 30 days in the overall cohort, by surgeon-anaesthesiologist sex discordance.

Variable	Adjusted OR (95% CI)	P-value
Physician characteristics		
Physician sex discordance	0.96 (0.87-1.06)	0.40
Surgeon experience, yr		
<10	Reference	Reference
11-20	0.91 (0.76-1.10)	0.33
21-30	0.97 (0.77-1.22)	0.79
>30	1.04 (0.78-1.37)	0.80
Surgeon volume, per 100 cases	1.00 (1.00-1.01)	0.71
Anaesthesiologist volume, per 100 cases	1.00 (0.99-1.01)	0.74
Anaesthesiologist experience, yr		
<10	Reference	Reference
11-20	1.12 (0.97-1.31)	0.13
21-30	1.13 (0.95-1.33)	0.17
>30	1.06 (0.87-1.28)	0.57
Patient characteristics		
Patient age, per 10 yr	1.30 (1.25-1.36)	<0.001
Female patient sex	1.45 (1.33-1.58)	<0.001
Income quintile		
1	1.07 (0.95-1.21)	0.27
2	1.15 (1.02-1.30)	0.02
3	1.04 (0.92-1.17)	0.58
4	1.01 (0.89-1.14)	0.89
5	Reference	Reference
Rural residence	0,99 (0.89-1.10)	0.83
Community hospital	0.79 (0.61-1.02)	0.08
Hypertension	1.12(0.97-1.28)	0.12
Atrial fibrillation	1.18 (1.04-1.34)	0.00
Recent MI within 30 days	1.98 (1.80-2.18)	<0.001
Remote MI	1.47 (1.32-1.63)	<0.001
Previous PCI	0.93 (0.83-1.03)	0.16
Left ventricular ejection fraction		
≥ 50	Reference	Reference
35-49	1.08 (0.98-1.19)	0.11
20-35	1.18 (1.04-1.34)	0.01
< 20	1.10 (0.84-1.44)	0.49
Heart failure	1.42 (1.30-1.55)	<0.001
Peripheral arterial disease	1.32 (1.20-1.47)	<0.001

Cerebrovascular disease	1.36 (1.22-1.51)	<0.001
Dementia	1.05 (0.59-1.89)	0.86
Depression	1.20 (0.93-1.55)	0.16
Psychosis	0.87 (0.40-1.88)	0.72
Smoking status		
Never	Reference	Reference
Current	1.05 (0.93-1.17)	0.43
Former	1.02 (0.93-1.11)	0.73
Chronic obstructive pulmonary disease	1.04 (0.95-1.12)	0.41
Pulmonary circulatory disorder	1.22 (0.99-1.51)	0.06
Serum creatinine (μmol/L)		
<120	Reference	Reference
120-179	1.16 (1.03-1.30)	0.01
>=180	1.23 (1.01-1.49)	0.04
Dialysis	1.21 (0.95-1.55)	0.12
Diabetes	1.02 (0.94-1.10)	0.65
Hypothyroidism	0.95 (0.75-1.21)	0.67
Morbid obesity	1.12 (1.03-1.22)	0.01
Primary cancer	0.93 (0.79-1.10)	0.40
Metastatic cancer	1.02 (0.94-1.10)	0.95
Anemia	1.23 (1.10-1.37)	0.0002
Venous thromboembolism	0.64 (0.35-1.17)	0.15
Liver disease	1.00 (0.69-1.44)	0.10
Alcohol abuse	1.28 (0.97-1.68)	0.08
Frailty	1.07 (0.97-1.18)	0.17
Redo sternotomy	1.44 (1.19-1.73)	0.0001
Emergent surgery	1.68 (1.48-1.90)	<0.001
Complex surgery	1.17 (1.04-1.32)	0.01
Surgery duration, per 10 min	1.02 (1.01-1.02)	<0.001

Abbreviations: MI = myocardial infarction; PCI = percutaneous coronary intervention
Total case volumes reflect the number of cases performed since 1991 until the date of the index procedure.

Supplemental Table 4a. Predictors of intensive care unit length of stay in the overall cohort, by surgeon-anaesthesiologist sex discordance.

Variable	Rate Ratio (95% CI)	P-value
Physician characteristics		
Physician sex discordance	0.99 (0.98-1.01)	0.52
Surgeon experience, yr		
<10	Reference	Reference
11-20	0.99 (0.97-1.02)	0.65
21-30	1.02 (0.99-1.06)	0.14
>30	1.02 (0.98-1.06)	0.24
Surgeon volume, per 100 cases	1.00 (1.00-1.00)	0.33
Anaesthesiologist experience, yr		
0-10	Reference	Reference
11-20	0.98 (0.96-1.00)	0.04
21-30	0.99 (0.97-1.02)	0.51
>30	1.00 (0.97-1.03)	0.89
Anaesthesiologist volume, per 100 cases	1.00 (1.00-1.00)	0.71
Surgery duration	1.02 (1.02-1.02)	<0.001
Patient characteristics		
Patient age, yr	1.09 (1.08-1.09)	<0.001
Female patient sex	1.07 (1.06-1.08)	<0.001
Income quintile		
1	1.05 (1.04-1.07)	<0.001
2	1.03 (1.02-1.04)	<0.001
3	1.03 (1.02-1.04)	<0.001
4	1.01 (1.00-1.02)	0.17
5	Reference	Reference
Rural residence	0.98 (0.97-0.99)	0.00
Community hospital	0.98 (0.86-1.13)	0.82
Hypertension	0.96 (0.95-0.97)	<0.001
Atrial fibrillation	1.06 (1.04-1.07)	<0.001
Recent MI within 30 days	1.02 (1.01-1.03)	0.00
Remote MI	1.00 (0.99-1.01)	0.69

Previous PCI	1.00 (0.99-1.01)	0.70
Left ventricular ejection fraction		
≥ 50%	Reference	Reference
35-49%	1.03 (1.02-1.04)	<0.001
20-35%	1.11 (1.10-1.13)	<0.001
< 20%	1.21 (1.18-1.24)	<0.001
Heart failure	1.21 (1.20-1.22)	<0.001
Peripheral arterial disease	1.05 (1.04-1.06)	<0.001
Cerebrovascular disease	1.04 (1.03-1.05)	<0.001
Dementia	1.02 (0.95-1.09)	0.54
Depression	1.18 (1.15-1.22)	<0.001
Psychosis	1.03 (0.96-1.11)	0.39
Smoking status		
Never	Reference	Reference
Current	1.02 (1.01-1.03)	<0.001
Former	1.00 (0.99-1.01)	1.00
Chronic obstructive pulmonary disease	1.05 (1.04-1.06)	<0.001
Pulmonary circulatory disorder	1.23 (1.21-1.26)	<0.001
Serum creatinine (μmol/L)		
<120	Reference	Reference
120-179	1.16 (1.15-1.18)	<0.001
>=180	1.33 (1.31-1.36)	<0.001
Dialysis	1.06 (1.04-1.09)	<0.001
Diabetes	1.03 (1.02-1.03)	<0.001
Hypothyroidism	1.01 (0.98-1.03)	0.60
Morbid obesity	0.99 (0.98-1.00)	0.02
Primary cancer	1.00 (0.99-1.02)	0.72
Metastatic cancer	0.99 (0.94-1.04)	0.62
Anemia	1.15 (1.14-1.16)	<0.001
Venous thromboembolism	0.94 (0.89-0.99)	0.02
Liver disease	1.09 (1.05-1.12)	<0.001
Alcohol abuse	1.10 (1.07-1.14)	<0.001
Frailty	1.09 (1.08-1.10)	<0.001
Complex surgery	1.15 (1.14-1.17)	<0.001

Redo sternotomy	0.97 (0.95-0.99)	0.00
Emergent surgery	1.46 (1.44-1.48)	<0.001

Abbreviations: MI = myocardial infarction; PCI = percutaneous coronary intervention
Total case volumes reflect the number of cases performed since 1991 until the date of the index procedure.

Supplemental Table 4b. Predictors of hospital length of stay in the overall cohort, by surgeon-anaesthesiologist sex discordance.

Variable	Rate Ratio (95% CI)	P-value
Physician characteristics		
Physician sex discordance	0.99 (0.98-1.00)	0.03
Surgeon experience, yr		
<10	Reference	Reference
11-20	0.99 (0.98-1.01)	0.35
21-30	1.01 (0.99-1.03)	0.41
>30	1.01 (0.98-1.03)	0.65
Surgeon volume, per 100 cases	1.00 (1.00-1.00)	<.0001
Anaesthesiologist experience, yr		
0-10	Reference	Reference
11-20	0.99 (0.98-1.00)	0.03
21-30	0.98 (0.97-1.00)	0.03
>30	0.97 (0.96-0.99)	0.00
Anaesthesiologist volume, per 100 cases	1.00 (1.00-1.00)	0.01
Surgery duration	1.01 (1.01-1.01)	<.0001
Patient characteristics		
Patient age, yr	1.11 (1.10-1.11)	<.0001
Female patient sex	1.11 (1.10-1.12)	<.0001
Income quintile		
1	1.07 (1.06-1.08)	<.0001
2	1.04 (1.03-1.04)	<.0001
3	1.03 (1.02-1.03)	<.0001
4	1.01 (1.01-1.02)	0.0002
5	Reference	Reference
Rural residence	1.00 (0.99-1.00)	0.15
Community hospital	1.02 (0.92-1.12)	0.71
Hypertension	0.98 (0.97-0.99)	<.0001
Atrial fibrillation	1.06 (1.05-1.07)	<.0001
Recent MI within 30 days	1.02 (1.02-1.03)	<.0001
Remote MI	1.00 (0.99-1.01)	0.80
Previous PCI	0.97 (0.97-0.98)	<.0001
Left ventricular ejection fraction		
≥ 50%	Reference	Reference
35-49%	1.02 (1.01-1.03)	<.0001
20-35%	1.06 (1.05-1.06)	<.0001
< 20%	1.10 (1.08-1.12)	<.0001
Heart failure	1.17 (1.16-1.18)	<.0001
Peripheral arterial disease	1.04 (1.04-1.05)	<.0001
Cerebrovascular disease	1.06 (1.05-1.07)	<.0001
Dementia	1.03 (0.99-1.08)	0.10

Depression	1.19 (1.17-1.21)	<.0001
Psychosis	1.22 (1.17-1.27)	<.0001
Smoking status		
Never	Reference	Reference
Current	1.00 (0.99-1.00)	0.20
Former	1.00 (0.99-1.00)	0.63
Chronic obstructive pulmonary disease	1.06 (1.05-1.06)	<.0001
Pulmonary circulatory disorder	1.14 (1.13-1.16)	<.0001
Serum creatinine (μmol/L)		
<120	Reference	Reference
120-179	1.10 (1.09-1.11)	<.0001
>=180	1.25 (1.23-1.27)	<.0001
Dialysis	1.11 (1.09-1.13)	<.0001
Diabetes	1.03 (1.03-1.04)	<.0001
Hypothyroidism	1.01 (1.00-1.03)	0.13
Morbid obesity	1.00 (0.99-1.00)	0.29
Primary cancer	1.02 (1.01-1.03)	0.0003
Metastatic cancer	1.00 (0.97-1.04)	0.83
Anemia	1.14 (1.13-1.15)	<.0001
Venous thromboembolism	1.01 (0.98-1.04)	0.60
Liver disease	1.06 (1.04-1.09)	<.0001
Alcohol abuse	1.07 (1.05-1.09)	<.0001
Frailty	1.15 (1.14-1.16)	<.0001
Complex surgery	1.13 (1.12-1.13)	<.0001
Redo sternotomy	0.95 (0.94-0.96)	<.0001
Emergent surgery	1.22 (1.21-1.24)	<.0001

Abbreviations: MI = myocardial infarction; PCI = percutaneous coronary intervention
Total case volumes reflect the number of cases performed since 1991 until the date of the index procedure.

Supplemental Table 5a. Sensitivity analysis of the association between physician sex and 30-day mortality and MACE in the overall cohort.

Physician Team	Mortality Adjusted OR (95% CI)	P-value	MACE Adjusted OR (95% CI)	P-value
Model with physician sex as a 4-level categorical variable:				
Female surgeon + female anaesthesiologist	Reference	Reference	Reference	Reference
Male surgeon + male anaesthesiologist	1.35 (0.77-2.37)	0.30	1.03 (0.72-1.47)	0.87
Female surgeon + male anaesthesiologist	1.20 (0.69-2.10)	0.52	0.86 (0.61-1.22)	0.41
Male surgeon + female anaesthesiologist	1.24 (0.69-2.20)	0.47	1.02 (0.71-1.46)	0.93
Model with surgeon sex only:				
Male surgeon	1.15 (0.84-1.57)	0.38	1.16 (0.93-1.44)	0.19
Model with anaesthesiologist sex only:				
Male anaesthesiologist	1.10 (0.94-1.28)	0.23	1.00 (0.90-1.11)	0.97

Abbreviations: MACE = major adverse cardiovascular events

Supplemental Table 5b. Sensitivity analysis of the association between physician sex and 30-day mortality and MACE in the CABG cohort.

Physician Team	Mortality Adjusted OR (95% CI)	P-value	MACE Adjusted OR (95% CI)	P-value
Model with physician sex as a 4-level categorical variable:				
Female surgeon + female anaesthesiologist	Reference	Reference	Reference	Reference
Male surgeon + male anaesthesiologist	1.31 (0.69-2.50)	0.41	0.92 (0.63-1.34)	0.66
Female surgeon + male anaesthesiologist	0.98 (0.50-1.91)	0.94	0.77 (0.52-1.13)	0.18
Male surgeon + female anaesthesiologist	1.20 (0.62-2.32)	0.59	0.96 (0.65-1.42)	0.84
Model with surgeon sex only:				
Male surgeon	1.31 (0.94-1.18)	0.12	1.14 (0.91-1.44)	0.26
Model with anaesthesiologist sex only:				
Male anaesthesiologist	1.09 (0.90-1.31)	0.39	0.94 (0.83-1.06)	0.30

Abbreviations: MACE = major adverse cardiovascular events; CABG = coronary artery bypass grafting

Supplemental Table 6a. Sensitivity analysis of the association between physician sex and lengths of stay in the CABG cohort.

Physician Team	ICU Length of Stay		Hospital Length of Stay	
	Rate Ratio (95% CI)	P-value	Rate Ratio (95% CI)	P-value
Model with physician sex as a 4-level categorical variable:				
Female surgeon + female anaesthesiologist	Reference	Reference	Reference	Reference
Male surgeon + male anaesthesiologist	1.05 (0.97-1.13)	0.21	1.07 (1.00-1.15)	0.049
Female surgeon + male anaesthesiologist	1.03 (0.98-1.08)	0.21	1.00 (0.97-1.03)	0.90
Male surgeon + female anaesthesiologist	1.05 (0.97-1.13)	0.25	1.06 (0.99-1.14)	0.09
Model with surgeon sex only:				
Male surgeon	1.02 (0.96-1.09)	0.48	1.10 (1.03-1.18)	0.004
Model with anaesthesiologist sex only:				
Male anaesthesiologist	1.01 (0.98-1.03)	0.55	1.02 (1.00-1.04)	0.01

Abbreviations: ICU = intensive care unit; CABG = coronary artery bypass grafting

Supplemental Table 6b. Sensitivity analysis of the association between physician sex and lengths of stay in the overall cohort.

Physician Team	ICU Length of Stay		Hospital Length of Stay	
	Rate Ratio (95% CI)	P-value	Rate Ratio (95% CI)	P-value
Model with physician sex as a 4-level categorical variable:				
Female surgeon + female anaesthesiologist	Reference	Reference	Reference	Reference
Male surgeon + male anaesthesiologist	1.07 (1.00-1.15)	0.06	1.07 (1.00-1.15)	0.06
Female surgeon + male anaesthesiologist	0.99 (0.97-1.02)	0.52	0.99 (0.97-1.02)	0.52
Male surgeon + female anaesthesiologist	1.06 (0.99-1.34)	0.12	1.06 (0.99-1.14)	0.12
Model with surgeon sex only:				
Male surgeon	1.02 (0.96-1.09)	0.54	1.10 (1.03-1.17)	0.006
Model with anaesthesiologist sex only:				
Male anaesthesiologist	1.16 (0.99-1.04)	0.19	1.02 (1.00-1.03)	0.03

Abbreviations: ICU = intensive care unit

Supplemental Table 7. Post-hoc power analysis

Power	N	Pcnt N X=1	P0	P1	Odds Ratio	R Squared	Alpha	Beta
0.19	79862	24.9	0.02	0.02	0.93	0.04	0.05	0.81

N is the size of the sample drawn from the population.
P0 is the response probability at the mean of X.
P1 is the response probability when X is increased to one standard deviation above the mean.
Alpha is the probability of rejecting a true null hypothesis.
Beta is the probability of accepting a false null hypothesis.