

## Supplementary tables

*Table S1: Comparison of demographic, clinical and surgical characteristics between patients with and without a recent HbA1c.*

Characteristic	No recent HbA1c (n = 836)	Recent HbA1c (n = 697)	p
<b>Age, years</b>	73 (6)	73 (6)	0.027
<b>Sex, female, n</b>	479 (57.3%)	323 (46.3%)	< 0.001
<b>BMI, kg m<sup>-2</sup></b>	26 (5)	26 (4)	0.048
<b>ASA score, n</b>			
<b>1 or 2</b>	496 (59.3%)	473 (67.9%)	< 0.001
<b>≥ 3</b>	340 (40.7%)	224 (32.1%)	< 0.001
<b>Maximum MET, n</b>			
<b>&lt; 7</b>	327 (44.7%)	240 (39.5%)	0.059
<b>≥ 7</b>	405 (55.3%)	367 (60.5%)	0.101
<b>Cardiovascular history, n</b>			
<b>HT</b>	363 (43.4%)	317 (45.5%)	0.42
<b>IHD</b>	136 (16.3%)	96 (13.8%)	0.18
<b>CVA/TIA</b>	84 (10.0%)	76 (10.9%)	0.59
<b>PVD</b>	26 (3.1%)	25 (3.6%)	0.60
<b>Surgical specialty, n</b>			
<b>Gynaecology</b>	171 (20.5%)	49 (7.0%)	< 0.001
<b>Gastrointestinal</b>	121 (14.5%)	95 (13.6%)	0.636
<b>Orthopaedic</b>	52 (6.2%)	106 (15.2%)	< 0.001
<b>Urology</b>	77 (9.2%)	62 (8.9%)	0.831
<b>Neurosurgery</b>	71 (8.5%)	37 (5.3%)	0.015
<b>Other</b>	344 (41.1%)	349 (49.9%)	< 0.001
<b>Surgical risk, n</b>			
<b>Minor</b>	421 (50.4%)	418 (60.0%)	< 0.001
<b>Moderate</b>	275 (32.9%)	220 (31.6%)	0.579
<b>Major</b>	140 (16.7%)	59 (8.5%)	< 0.001
<b>Anaesthesia type, n</b>			
<b>General</b>	696 (83.4%)	594 (85.3%)	0.293
<b>Neuraxial</b>	23 (2.8%)	36 (5.2%)	0.014
<b>PNB</b>	14 (1.7%)	24 (3.4%)	0.027
<b>Sedation</b>	102 (12.2%)	42 (6.0%)	< 0.001

Values are number (proportion) or mean (SD). HT, hypertension; IHD, ischemic heart disease; CVA/TIA, cerebrovascular accident and/or transient ischaemic attack; MET, metabolic equivalent of task; PNB, peripheral nerve block; PVD, peripheral vascular disease.

*Table S2: Other observational studies reporting on the association between HbA1c and postoperative outcome in (a subgroup of) patients without a diagnosis of diabetes.*

	Type	Population*	Postoperative outcome
<b>Gustafsson (2009)</b>	Prospective	N = 120 Age: 31-90 Colorectal surgery	HbA1c > 43 was associated with a higher rate of 30-day overall complications (OR 2.9 [95%CI 1.1-7.9]; p = 0.037)
<b>Walid (2010)</b>	Retrospective	N = 383 (442) Age: 21-92 Spine surgery	HbA1c ≥ 43 was associated with increased LOS (7.0 (5.9) vs 4.7 (2.5) days; p < 0.05) and higher total cost in 1 of 3 subgroups (lumbar decompression and fusion).
<b>Hudson (2010)</b>	Retrospective	N = 1615 Age: 65 (11) Cardiac surgery	Increased 30-day mortality (OR 1.53 per 11 mmol.mol <sup>-1</sup> HbA1c increase [95%CI 1.24-1.91]; p < 0.001); HbA1c > 43 was associated with an increased rate of AKI (OR 1.148 [95%CI 1.003-1.313]; p = 0.04). No association between HbA1c and infection.
<b>Iavazzo (2015)</b>	Prospective	N = 266 Age: unknown Gynaecologic surgery	No association between HbA1c and rate of complications or 30-day readmissions
<b>Gatti (2017)</b>	Prospective (E-CABG registry)	N = 1384 Age: 68 (9) Cardiac surgery	HbA1c > 44 was an independent predictor of sternal wound infections (OR 2.23 [95%CI 1.17-4.2]; p = 0.012)
<b>Narayan (2017)</b>	Retrospective	N = 1633 Age: 59 (9) Cardiac surgery	No association between HbA1c and complications or 30-day mortality
<b>Nicolini (2018)</b>	Prospective (E-CABG registry)	N = 1664 Age: 68 (9) Cardiac surgery	HbA1c > 53 was associated with a higher rate of stroke (adjusted OR 5.68 [95%CI 1.74-18.57]; p < 0.001) and prolonged inotropic support (adjusted OR 1.88 [95%CI 1.17-3.03]; p = 0.01)
<b>Kocogullari (2018)</b>	Retrospective	N = 202 Age: 33-82 Cardiac surgery	HbA1c ≥ 38 was associated with a higher rate of AKI (adjusted OR 11.17 [95%CI 2.21-56.33]; p = 0.003)
<b>Arya (2018)</b>	Retrospective (Veterans Health Administration database)	N = 10,746 Age: 66 (9) Vascular surgery	Higher rate of amputation (HR 1.49 [95%CI 1.06-2.11] for HbA1c 54-64 vs. < 42; HR 1.98 [95%CI 1.51-2.59] for HbA1c > 64 vs. < 42). Higher rate of modified major adverse limb events (HR 1.19 [95%CI 0.95-1.48] for HbA1c

			54-64 vs. < 42; HR 1.52 [95%CI 1.25-1.84] for HbA1c > 64 vs. < 42)
<b>Wysocki (2019)</b>	Retrospective	N = 1375 Age: 41 (35-51) Bariatric surgery	No association between HbA1c and postoperative morbidity, prolonged LOS or hospital readmission
<b>Lam (2022)</b>	Prospective (UK Biobank cohort study)	N = 26,653 Age: 58 (8) (HbA1c < 42) 61 (7) (HbA1c ≥ 42) Cardiac and non-cardiac surgery	HbA1c ≥ 42 was associated with a higher rate of the composite endpoint of 30-day major postoperative complications and 90-day all-cause mortality

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Values are mean (SD) or median (Q1-Q3).

\* If the study sample also included patients with a diagnosis of diabetes, the total sample size is shown between brackets. Only the outcome data of patients without a history of diabetes are shown.

AKI, Acute Kidney Injury; CABG, Coronary Artery Bypass Grafting; CPB, cardiopulmonary bypass; PAD, peripheral arterial disease; HbA1c, glycosylated haemoglobin (mmol.mol<sup>-1</sup>).