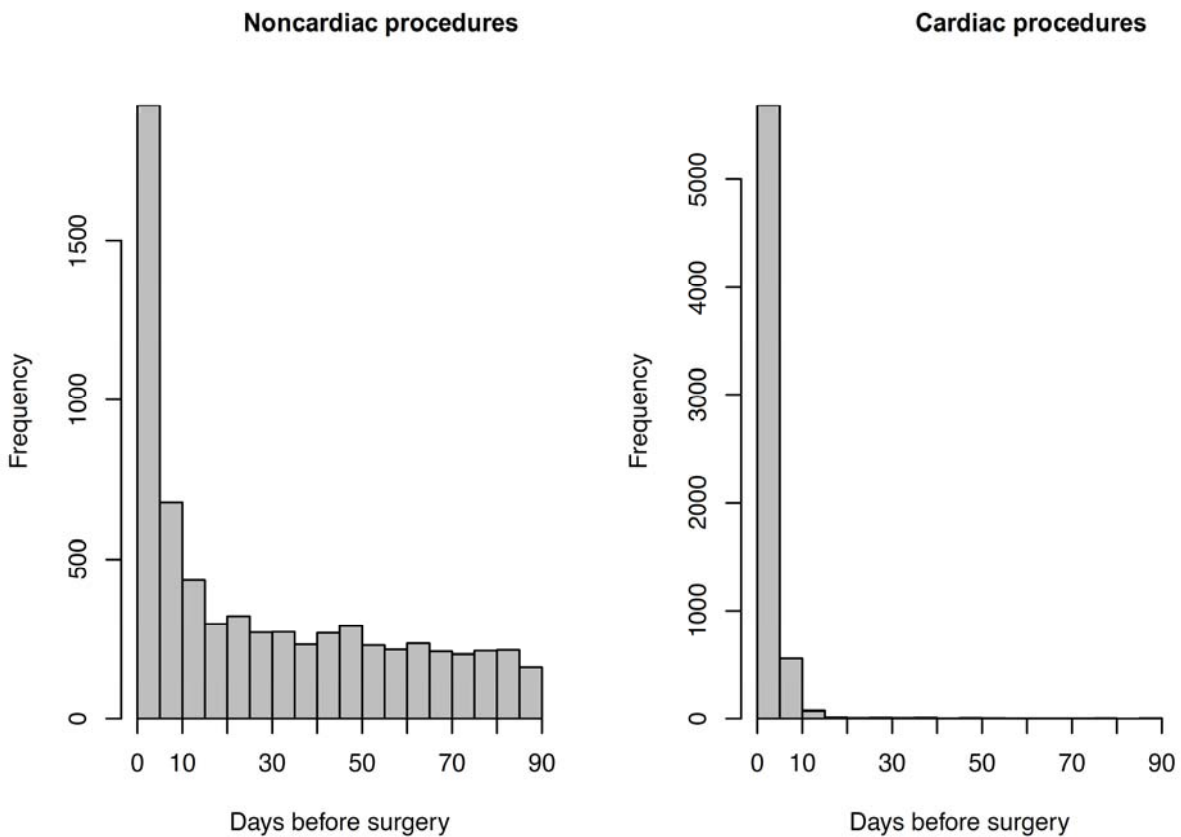


SUPPLEMENTARY DATA

Effect of A1C and Glucose on Postoperative Mortality in Noncardiac and Cardiac Surgeries

by Willem van den Boom, Rebecca A. Schroeder, Michael W. Manning, Tracy L. Setji, Gic-Owens Fiestan, and David B. Dunson

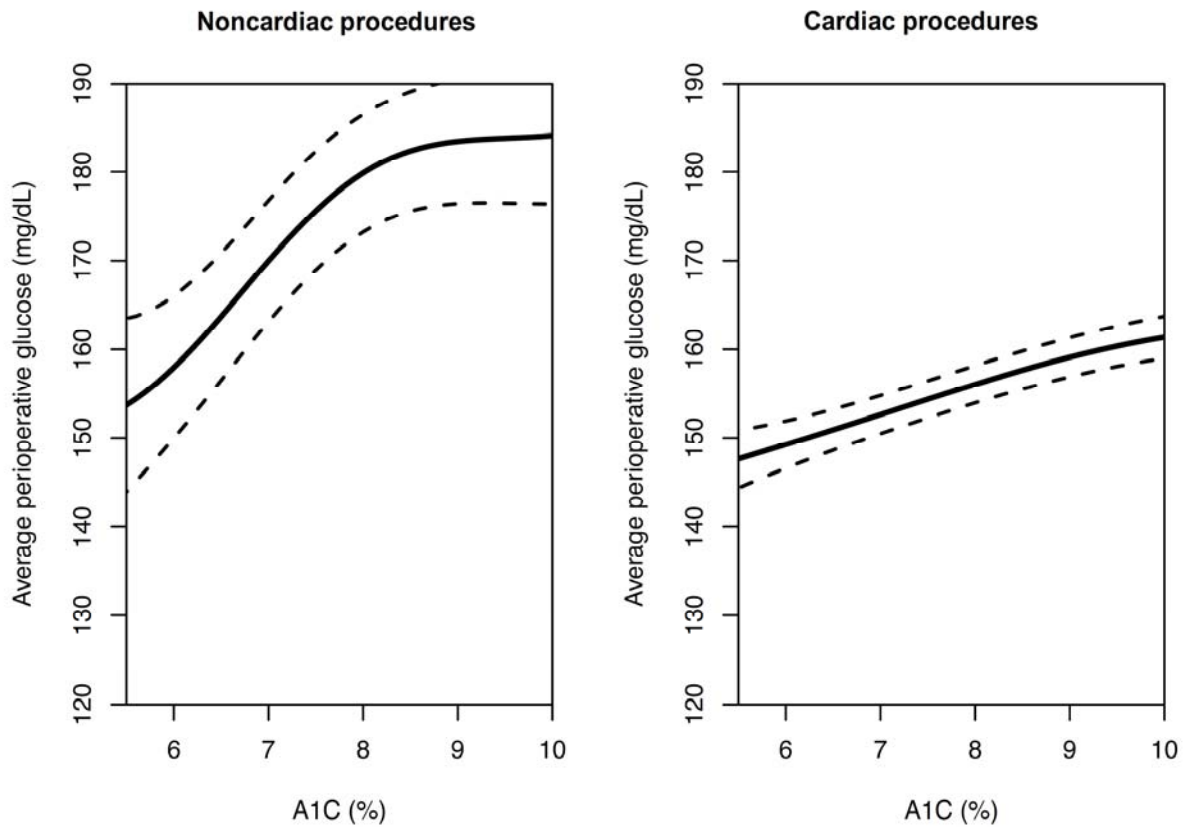
Supplementary Figure S1. *Histogram of how long before surgery the preoperative A1C was measured*
Histograms of the number of days between the preoperative A1C measurement and the day of surgery for the 6,684 noncardiac (left) and 6,393 cardiac surgeries (right).



SUPPLEMENTARY DATA

Supplementary Figure S2. Average perioperative glucose level versus preoperative A1C percentage for cases with diabetes diagnosis

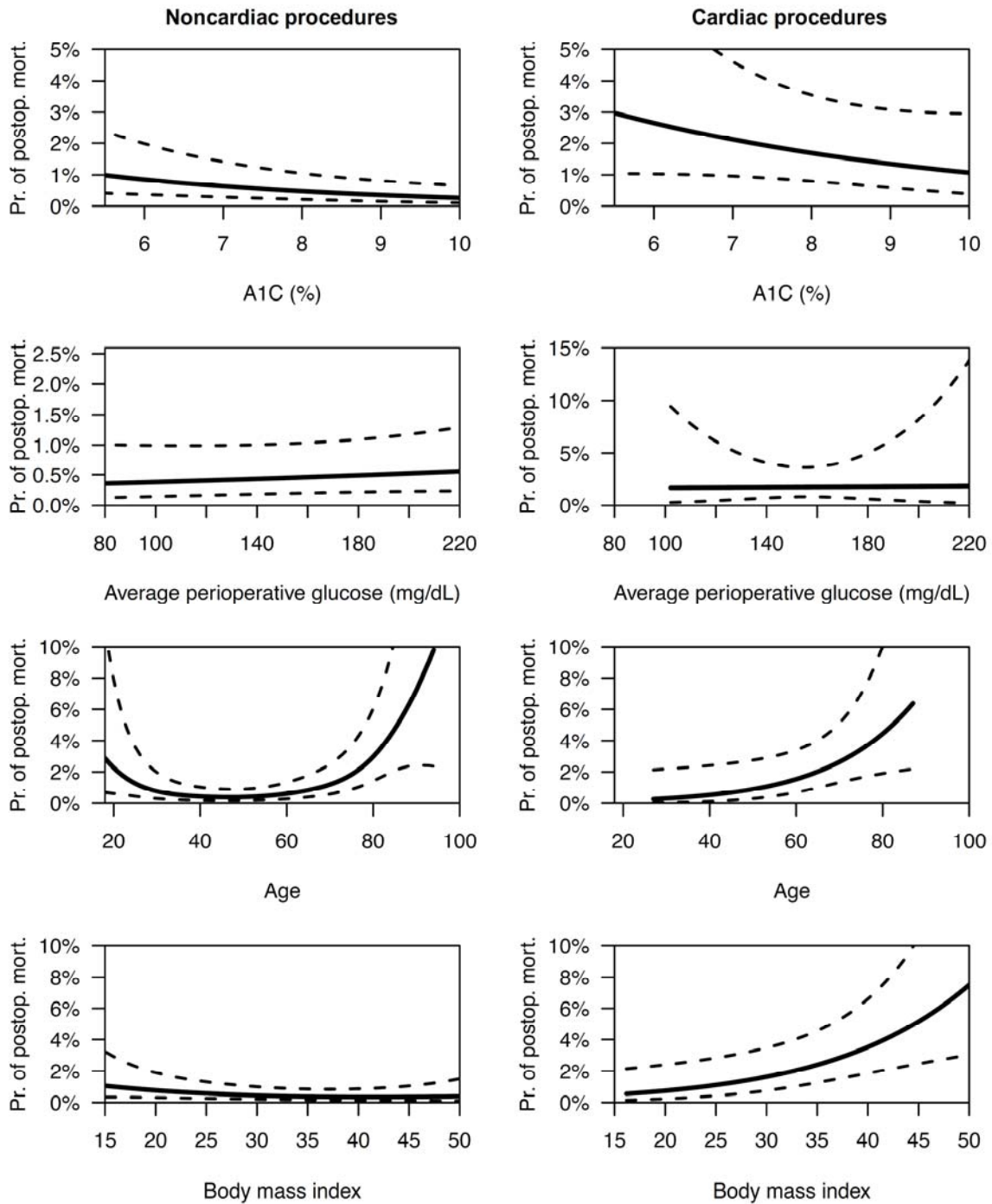
This plot is analogous to Figure 2 from the main text but considers only cases with a diagnosis of diabetes recorded in the data. This yields 986 noncardiac and 985 cardiac cases, fewer than before, and thus wider confidence intervals and less statistical significance.



SUPPLEMENTARY DATA

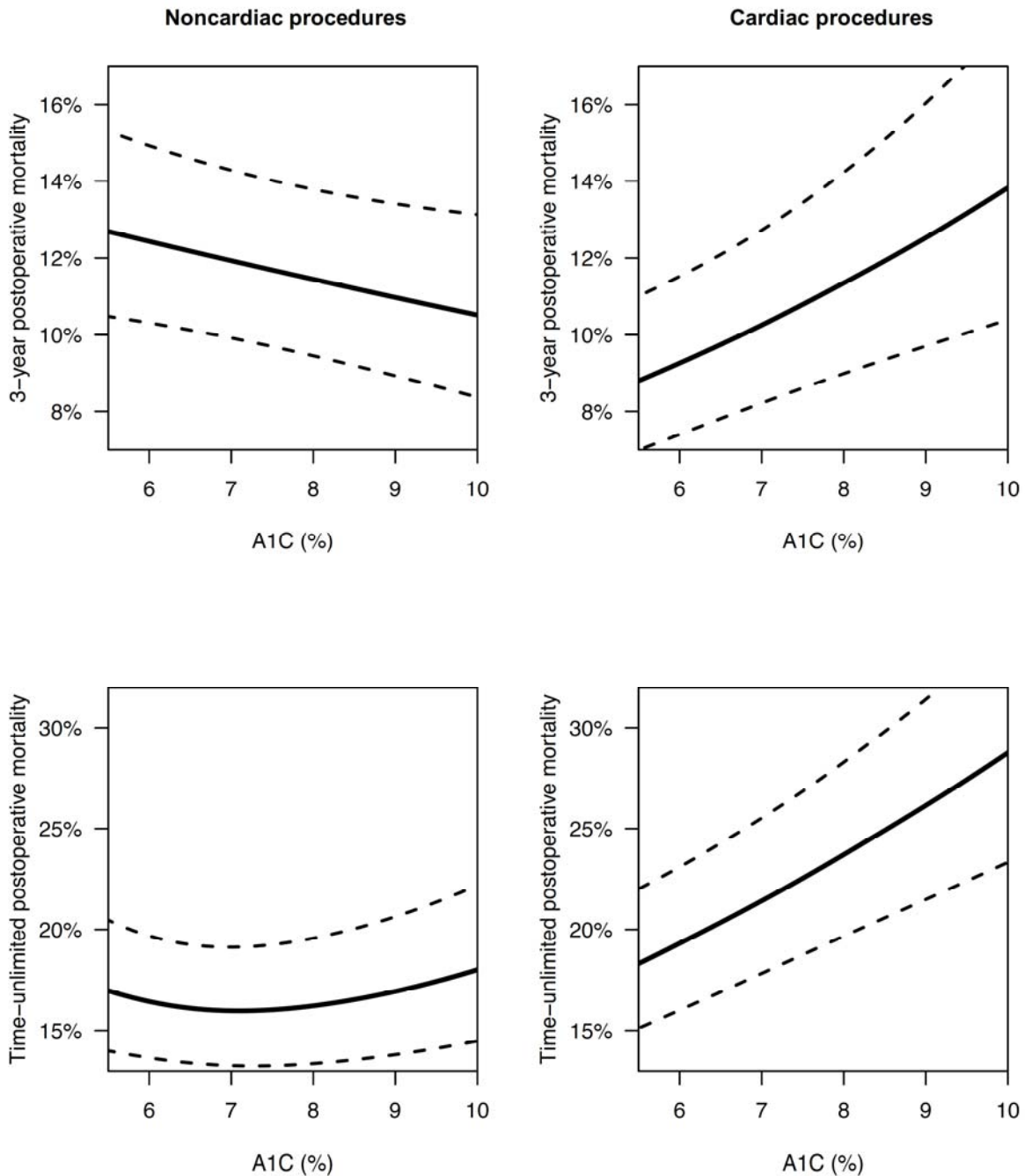
Supplementary Figure S3. Probability of postoperative mortality (Pr. of postop. mort.) versus A1C, glucose, age, and BMI for cases with diabetes diagnosis

This plot is analogous to Figure 3 from the main text but considers only cases with a diagnosis of diabetes recorded in the data. This yields 986 noncardiac and 985 cardiac cases, fewer than before, and thus wider confidence intervals and less statistical significance.



SUPPLEMENTARY DATA

Supplementary Figure S4. Probability of postoperative mortality using different time windows versus A1C Visual summary of the associations of the probability of 3-year (top) and time-unlimited (bottom) postoperative mortality versus preoperative A1C from the generalized additive logistic model fit on the 6,684 noncardiac (left) and 6,393 cardiac surgeries (right). The black line is the mean prediction and the dashed lines the 95% confidence interval.



SUPPLEMENTARY DATA

Supplementary Table S1. *Postoperative mortality rate for groups of preoperative A1C percentage*

A1C (%)	< 5.5	5.5 – 6.4	6.5 – 7.4	7.5 – 8.4	8.5 – 9.9	≥ 10
	Number of cases					
Noncardiac	636	2296	1744	898	659	451
Cardiac	1223	3195	1000	471	288	216
	Controlled for perioperative glucose					
Noncardiac	1.4 %	1.4 %	1.3 %	0.9 %	0.7 %	0.8 %
Cardiac	2.0 %	1.4 %	1.3 %	1.5 %	1.8 %	1.4 %
	Not controlled for perioperative glucose					
Noncardiac	1.3 %	1.4 %	1.4 %	1.0 %	0.9 %	1.0 %
Cardiac	2.3 %	1.6 %	1.6 %	2.3 %	2.3 %	2.5 %

Probability of 30-day postoperative mortality by groups of preoperative A1C percentage while controlling for age, gender, BMI, and procedure type, split out by whether the procedure was cardiac or not. The results are given with and without controlling for glucose.

SUPPLEMENTARY DATA

Supplementary Table S2. Postoperative mortality rate for groups of average perioperative blood glucose level

Aver. gl. (mg/dL)	< 110	110 – 129	130 – 149	150 – 179	180 – 219	≥ 220
	Number of cases					
Noncardiac	1167	1318	1395	1432	934	438
Cardiac	168	930	2874	2145	272	4
	Probability of 30-day postoperative mortality					
Noncardiac	1.0 %	1.1 %	1.2 %	1.5 %	1.5 %	2.0 %
Cardiac	6.8 %	1.7 %	1.4 %	2.1 %	4.9 %	51.8 %

Probability of 30-day postoperative mortality by groups of the average of glucose measurements from day of surgery up to postoperative day 2 while controlling for age, gender, BMI, procedure type, and, A1C split out by whether the procedure was cardiac or not.