Supplementary Online Content

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1: Participants' Eligibility Criteria

Inclusion criteria:

Adults 18 years and older undergoing elective major abdominal surgery of
a. atleast 2 hours duration
b. hospital stay of atleast 3 days and
c. at increased risk of postoperative complications, defined as atleast one of the following criteria:
    i. age ≥70 years,
    ii. known or documented history of coronary artery disease,
    iii. known or documented history of heart failure,
    iv. diabetes currently treated with an oral hypoglycemic agent and/or insulin,
    v. preoperative serum creatinine >200 μmol/L (>2.8 mg/dl),
    vi. morbid obesity (BMI ≥35 kg/m²),
    vii. preoperative serum albumin <30 g/L,
    viii. anerobic threshold (if done) <12 mL/kg/min,
    ix. r) two or more of the following risk factors: American Society of Anesthesiologists (ASA) physical status 3 or 4, chronic respiratory disease, obesity (BMI 30-35 kg/m²), aortic or peripheral vascular disease, preoperative hemoglobin <100 g/L, preoperative serum creatinine 150-199 μ mol/L (>1.7 mg/dl), anerobic threshold (if done) 12-14 mL/kg/min.

Exclusion criteria:

a. urgent or time-critical surgery,
b. ASA physical status 5
c. pulmonary or cardiac surgery
d. liver resection
e. minor or intermediate surgery
f. end-stage kidney failure requiring dialysis

eTable 2. Results From Regression Analyses for All Outcomes With Adjusted Adiposity Variables

| Outcomes	Adiposity variable	N	Adjusted OR for each SD increase in the adiposity variable*	95% CI	P-value
Composite 30-day mortality or septic complication	Waist circumference	2636	1.58[a**, b**]	1.25 - 2.01	<0.001
	WHR		0.96	0.84 - 1.10	0.552
	BMI		0.90	0.72 - 1.12	0.324
Composite disability event or death	Waist circumference	2661	1.37	1.04 - 1.81	0.024
	WHR		1.01	0.87 - 1.16	0.936
	BMI		0.91	0.70 - 1.18	0.457
Septic complications	Waist circumference	2636	1.57[a**, b*]	1.24 - 2.00	<0.001
	WHR		0.97	0.85 - 1.11	0.679
	BMI		0.90	0.72 - 1.13	0.371
Pulmonary edema	Waist circumference	1695	1.53	0.70 - 3.34	0.282
	WHR		1.11	0.77 - 1.60	0.566
	BMI		1.11	0.51 - 2.44	0.786
Acute kidney injury	Waist circumference	2598	1.52	1.00 - 2.30	0.048
	WHR		1.15	0.93 - 1.41	0.203
	BMI		0.79	0.52 - 1.21	0.282
Unplanned ICU	Waist circumference	2611	1.25	0.91 - 1.71	0.177
	WHR		1.08	0.91 - 1.28	0.372
	BMI		1.58	0.58 - 1.09	0.152

WHR: waist-to-hip ratio, BMI: body mass index, ICU: intensive care unit
*From multivariable models including all three adiposity variables and adjusting for age, sex, smoking status, study center and treatment arm.

Superscripts: a = comparison of Waist circumference with WHR,   b= comparison of Waist circumference with BMI;   ** is P<0.01, * is 0.01 <= P < 0.05
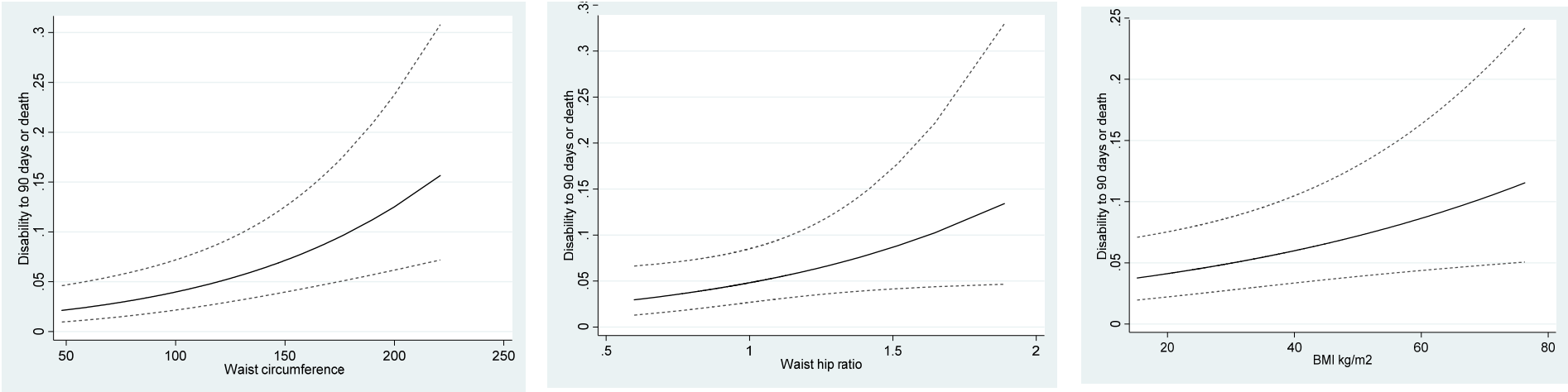Example: Composite outcome: a**, b* means Waist vs WHR P<0.01, Waist vs BMI 0.01<=P<0.05

e Figure 1. Histograms of Waist Circumference, Waist-to-Hip Ratio, and BMI for 2755
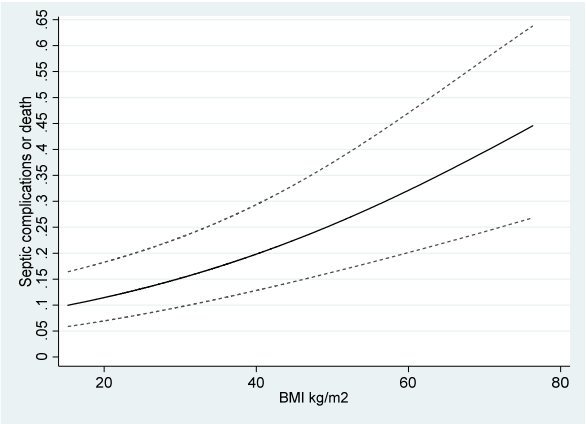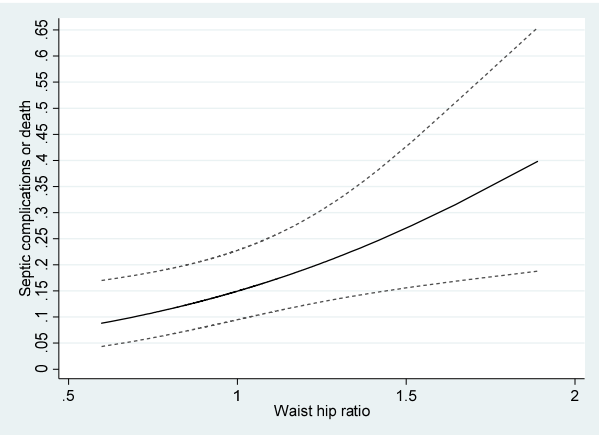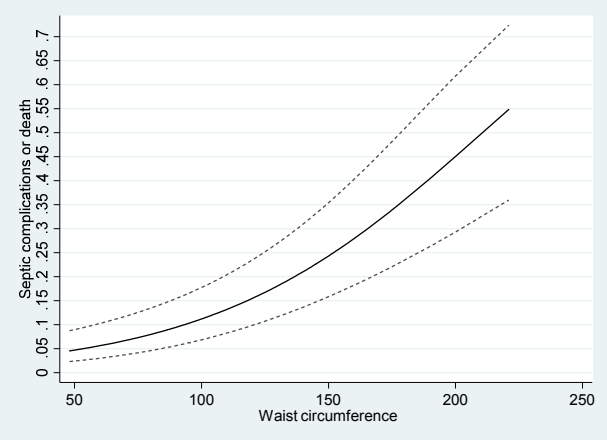
Participants
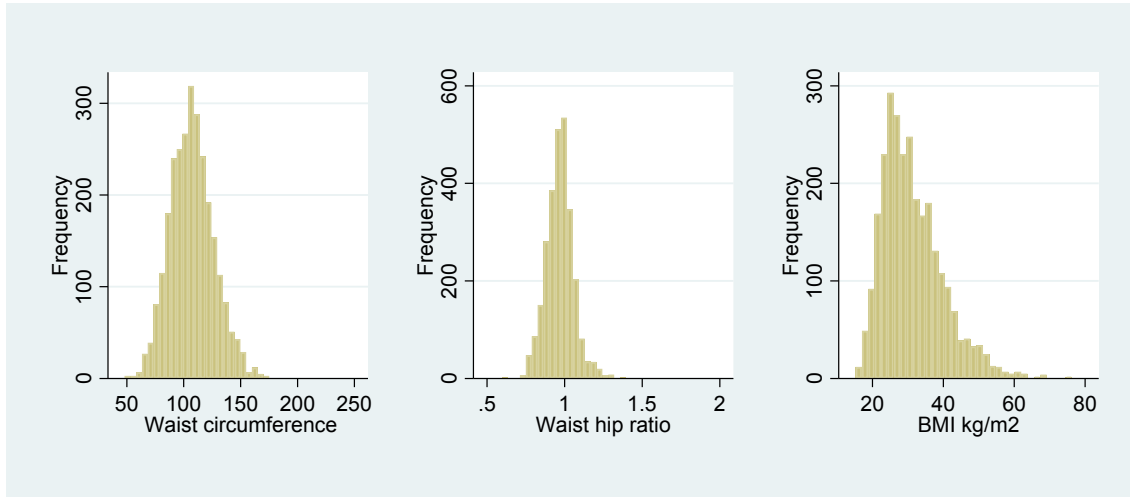
BMI: Body Mass Index

eFigure 2. Fitted Risk Prediction Model for Disability or Death to 90 Days

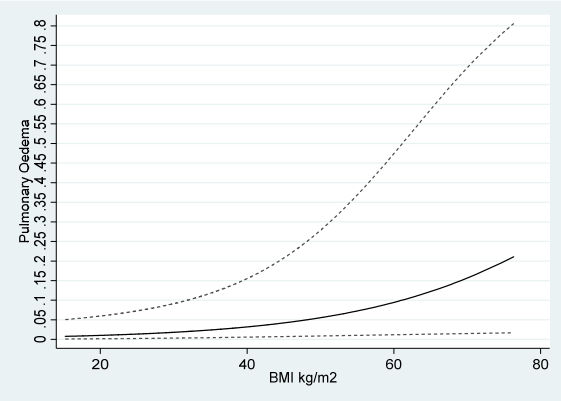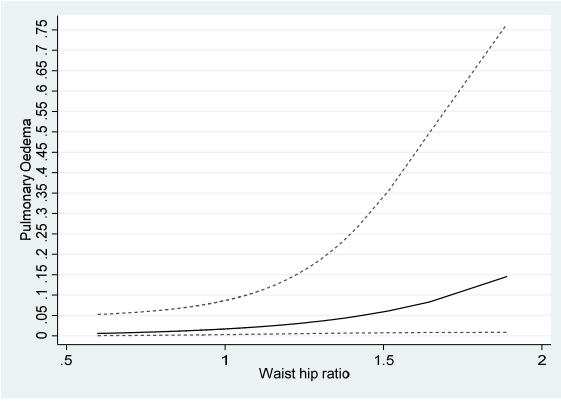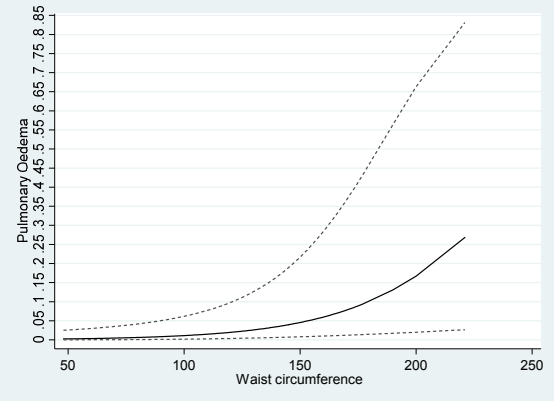**eFigure 3.** Fitted Risk Prediction Model for Septic Complications or Death to 30 Days
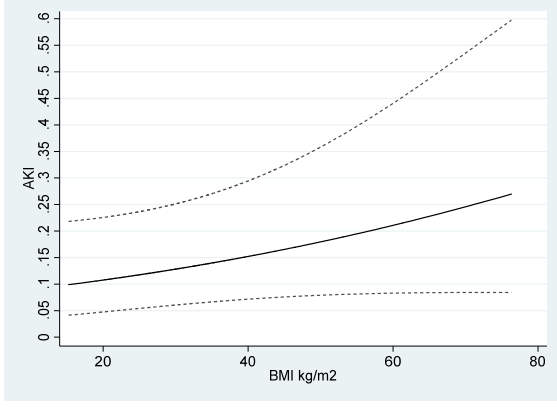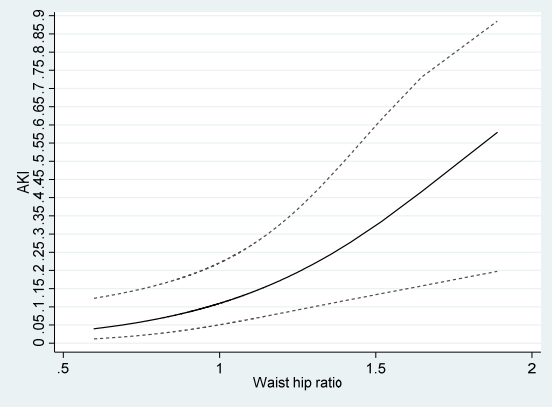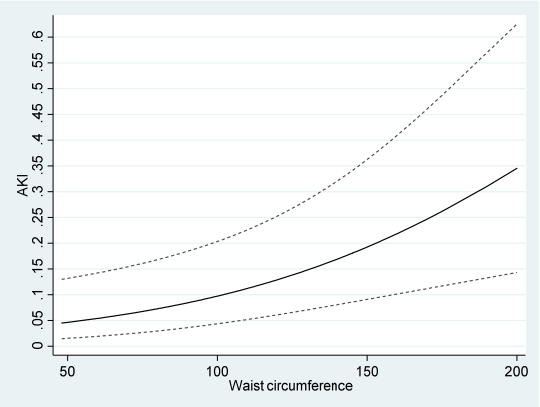
eFigure 4. Fitted Risk Prediction Model for Any Major Septic Complication
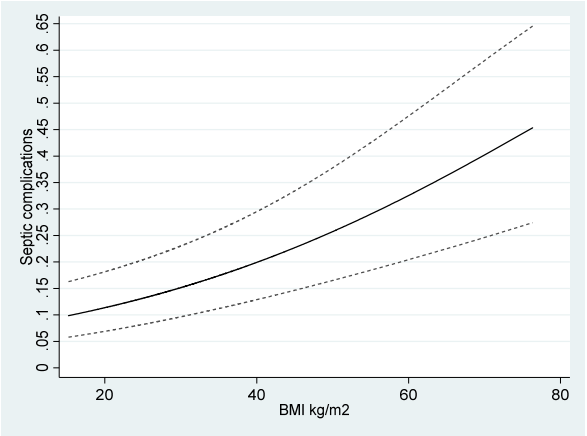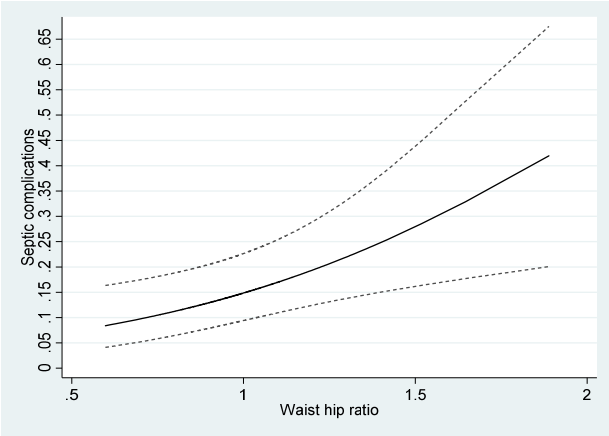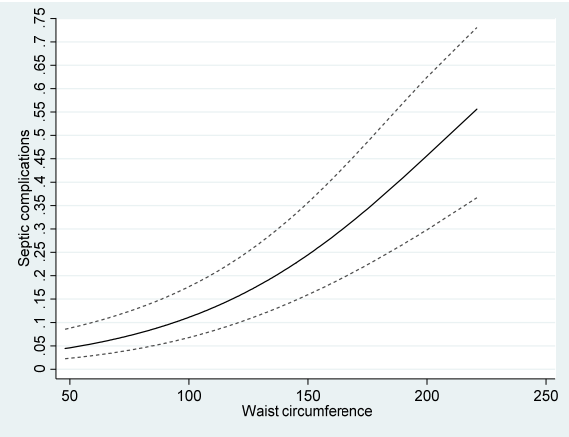
eFigure 5. Fitted Risk Prediction Model for Pulmonary Edema

eFigure 6. Fitted Risk Prediction Model for Acute Kidney Injury

eFigure 7. Fitted Risk Prediction Model for Unplanned ICU Admission to 30 Days