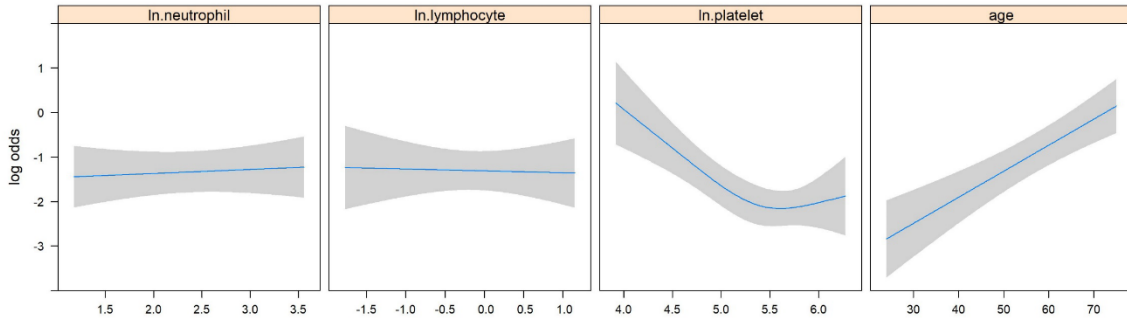
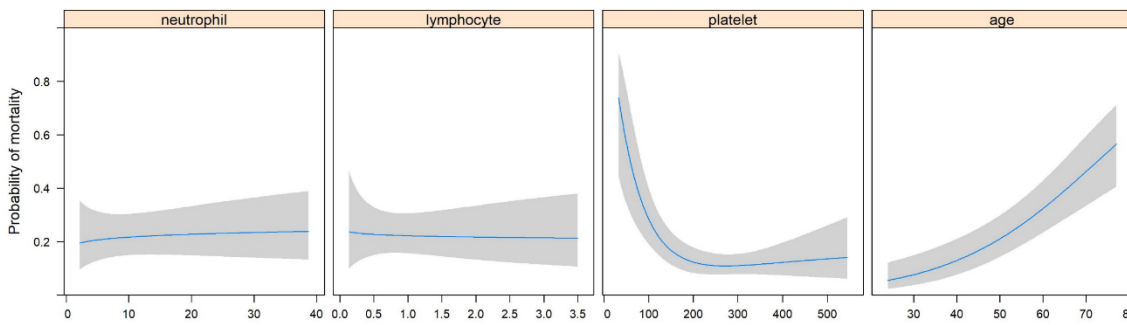


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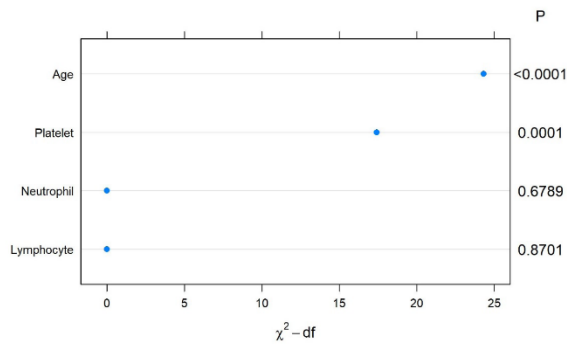
**A**



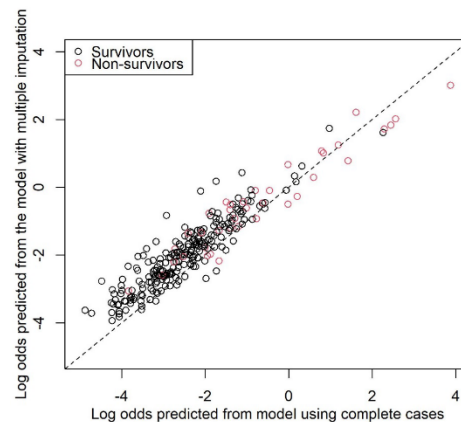
**B**



**C**



**D**



**Supplemental Figure 1:** Multivariable logistic regression model with multiple imputation. (A). Predicted log odds of in-hospital mortality as a function of individual predictor, adjusted for age=50, ln.platelet=4.8, ln.lymphocyte=0.207, ln.neutrophil=2.552. (B) Predicted probability of in-hospital mortality as a function of individual predictor on the original scale, adjusted for age=50, platelet=121.5  $\times 10^3/\mu\text{L}$ , lymphocyte=1.23  $\times 10^3/\mu\text{L}$ , neutrophil=12.83  $\times 10^3/\mu\text{L}$ . (C) Predictor

importance measured by degrees-of-freedom penalized Chi-squared statistics with P-values listed on the right. (D) agreement between predicted risks and those based on model with complete cases.

## **SUPPLEMENTAL INDEX 1: COMORBIDITY/OUTCOME COLLECTION**

### ***CANCER:***

- Chart search for malignant/cancerous disease

### ***CIRRHOSIS:***

- Cirrhosis of liver without mention of alcohol (571.5)
- Biliary cirrhosis (571.6)
- Alcoholic cirrhosis of liver (571.2)
- Unspecified cirrhosis of liver (K74.60)
- Alcoholic cirrhosis of liver without ascites (K70.30)
- Primary biliary cirrhosis (K74.3)
- Secondary biliary cirrhosis (K74.4)
- Biliary cirrhosis, unspecified (K74.5)
- Other cirrhosis of liver (K74.69)

### ***DIABETES:***

- Chart search for “Diabetes”

### ***HEART DISEASE:***

- Heart Failure
  - Congestive heart failure, unspecified (428.0; I50.9)
  - Acute on chronic systolic heart failure (428.23; I50.20-I50.23)
  - Chronic systolic heart failure (428.22; I50.22)
  - Acute on chronic diastolic heart failure (428.33; I50.33)
  - Chronic diastolic heart failure (428.32; I50.32)
- Coronary Artery Disease
  - Coronary atherosclerosis of coronary artery (414.00-414.07; I25.10, I25.11)
- Heart Disease
  - Heart disease, unspecified (429.9; I51.9)
  - Other forms of acute ischemic heart disease (411.89; I24.8)
  - Chronic ischemic heart disease (414.9; I25.9)
  - Other ill-defined heart diseases (429.89; I51.89)
  - Old myocardial infarction (412; I25.2)
  - Other chronic pulmonary heart diseases (416.8, 416.9; I27.2, I27.89)
  - Benign hypertensive heart disease with heart failure (402.11, 402.91; I11.0)
  - Benign hypertensive heart disease without heart failure (402.10; I11.9)

- Hypertensive heart and chronic kidney disease... (404.01, 404.11, 404.91; I13.0)

***HYPERTENSION:***

- Essential hypertension (401.0, 401.1, 401.9; I10)
- Chart search for “Hypertension”

***KIDNEY DISEASE:***

- Hypertensive chronic kidney disease... (403.00/.01/.10/.11/.90/.91; I12.0, I12.9)
- Hypertensive heart and chronic kidney disease... (404.00-404.03, 404.10-404.13, 404.90-404.93; I13.0/.2/.10/.11)
- Chronic kidney disease (585.1-585.5, 585.9; N18.1-N18.5, N18.9)
- End stage renal disease (585.6, N18.6)
- Kidney transplant status (V42.0; Z94.0)
- Acquired absence of kidney (V45.73; Z90.5)

***OBESITY:***

- BMI > 30.0
- Description of obesity in HPI
- Description of obese abdomen on physical exam

***PERIPHERAL VASCULAR DISEASE:***

- Peripheral vascular disease, unspecified (443.9; I73.9)
- Other specified peripheral vascular diseases (443.89, I73.89)

## **SUPPLEMENTAL INDEX 2: OPERATIONAL DEFINITIONS**

### Operational definitions for the location of infection were as follows:

Abdomen: infections originating from the abdomen extending from diaphragm to pelvis.

Back/Flank: infections originating from the back (shoulders distal to the neck, extending from the glenohumeral joint to the diaphragm) and/or the flank.

Chest: infection originating distally from the neck to the chest and/or breast and extending to the glenohumeral joint.

Extremity: infection originating from either the upper extremity (glenohumeral joint to hand) or lower extremity (hip joint to foot).

Head/neck: infections originating from the neck, face, and/or head.

Pelvic: infection originating from the pelvic region including the genitalia, inguinal region, groin, perineum, rectum, buttocks, and sacrum.

### Operational definitions for the mechanism of infection were as follows:

Idiopathic: patient developed symptoms of infection without a known or identifiable cause.

Infected wound: necrotizing process propagated from a pre-existing, non-surgical wound without evidence of puncture (includes decubitus ulcer, perirectal abscess, perianal fistula, chronic open wound, pimple, lesion, boil, open drain, cyst, foot ulcer, open intraoral injury, and pilonidal abscess).

Post-operative infection: patient developed an infection of a surgical wound, such as caesarian section, hernia repair, or tumor resection.

Puncture wound: patient developed an infection after a non-traumatic injury that pierces the skin, including insect/animal bite/sting, intravenous drug use, stepping on sharp object, or performing self I&D.

Trauma: patient developed an infection after minor or major, closed or open injury, including gunshot wound, motor vehicle crash, fall, crush injury, or impalement.

History Unattainable: patient could not provide an adequate history of symptoms as a result of either altered mental status or prior intubation.