

Table A1: General model equations for 30 day mortality

| Centred variables | | KEY ln = natural log | |
|-------------------|---------------------|----------------------|----------------------|
| Age_cent | = Age – 64 | Creatinine_cent | = ln(Creatinine) - 4 |
| Pulse_cent | = Pulse - 91 | Urea_cent | = ln(Urea) - 1.9 |
| SystolicBP_cent | = Systolic BP – 127 | Potassium_cent | = Potassium - 4 |
| Sodium_cent | = Sodium - 123 | WBC_cent | = WBC - 13 |

Category definitions

- Respiratory[2] = Dyspnoea on exertion or CXR
- Respiratory[3] = Dyspnoea limiting exertion & at rest
- Cardiac[2] = Diuretic, digoxin, antihypertensive therapy
- Cardiac[3] = Peripheral oedema, warfarin therapy or CXR
- Cardiac[4] = Raised jugular venous pressure or CXR

CALCULATE for all patients

PartA = 0.03200 x Female
 + 0.08938 x Cardiac[2] + 0.3259647 x Cardiac[3] + 0.24444 x Cardiac[4]
 – 0.11484 x Urgency[6-18hrs] + 0.01322 x Urgency[2-6hrs] + 0.42474 x Urgency[<2hrs]
 + 0.16550 x AF rate[60-90] + 0.21009 x AF rate[>90 / abnormal rhythm]
 – 0.30646 x Operations[n=2] – 0.31247 x Operations[n>2]
 + 0.14551 x Operative severity[Major+] + 0.01149 x Blood loss[101-500ml]
 + 0.04770 x Blood loss[501-999ml] – 0.12317 x Blood loss[≥1000ml]
 + 0.19592 x Soiling[Serous fluid] – 0.00964 x Soiling[Localised pus]
 + 0.35131 x Soiling[Free bowel content, pus or blood]
 + 0.09954 x Malignancy[Primary only] + 0.44169 x Malignancy[Nodal metastases]
 + 1.17612 x Malignancy[Distant metastases]
 + 0.60558 x Glasgow coma score[9-12] + 0.82952 x Glasgow coma score[3-8]
 + 0.01170 x Pulse_cent – 0.0001129 x Pulse_cent²
 – 0.00782 x SystolicBP_cent + 0.0001201 x SystolicBP_cent²
 – 0.25180 x Creatinine_cent + 0.2250538 x Creatinine_cent²
 – 0.11405 x Potassium_cent + 0.2394057 x Potassium_cent²
 + 0.32310 x Urea_cent – 0.0406424 x Urea_cent²
 – 0.00062 x WBC_cent + 0.0009041 x WBC_cent²
 – 0.00082 x Sodium_cent³ + 0.0002584 x [Sodium_cent³ x ln(Sodium_cent)]

| For patients with ASA | Calculate Log odds of 30 day mortality as: |
|-----------------------|---|
| 1-2 | Log (odds) = PartA -4.11832 + 0.0556509 x Age_cent + 0.0003635 x Age_cent ² + 0.7285072 x Respiratory[2] + 1.251223 x Respiratory[3] |
| 3 | Log (odds) = PartA -4.11832 + 0.8959784 + (0.0556509-0.0163981) x Age_cent + (0.0003635 - 0.0002042) x Age_cent ² + (0.7285072 - 0.382044) x Respiratory[2] + (1.251223 - 0.597705) x Respiratory[3] |
| 4 | Log (odds) = PartA -4.11832 + 1.822416 + (0.0556509-0.0253105) x Age_cent + (0.0003635 - 0.0000425) x Age_cent ² + (0.7285072 - 0.5330661) x Respiratory[2] + (1.251223 - 0.8656163) x Respiratory[3] |
| 5 | Log (odds) = PartA -4.11832 + 2.8656163 + (0.0556509 - 0.0270848) x Age_cent + (0.0003635 - 0.0002982) x Age_cent ² + (0.7285072 - 0.8290239) x Respiratory[2] + (1.251223 - 1.107162) x Respiratory[3] |