<table>
<thead>
<tr>
<th>Author, Year (Reference)</th>
<th>RR (95% CI)</th>
<th>P Value</th>
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<tr>
<td>Arozullah et al., 2001 (120)</td>
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<td>Significant factors</td>
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<td>AAA repair</td>
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<td>Thoracic</td>
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<td>Upper abdominal</td>
<td>2.68 (2.38–3.03)</td>
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<td>Neck</td>
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<td>Neurosurgery</td>
<td>2.14 (1.66–2.75)</td>
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<tr>
<td>Vascular</td>
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<tr>
<td>Age ≥ 80 y</td>
<td>5.63 (4.62–6.84)</td>
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<td>Age 70–79 y</td>
<td>3.58 (2.97–4.33)</td>
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<td>Age 60–69 y</td>
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<td>Age 50–59 y</td>
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<tr>
<td>Totally dependent</td>
<td>2.83 (2.33–3.43)</td>
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<tr>
<td>Partially dependent</td>
<td>1.83 (1.63–2.06)</td>
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<tr>
<td>Weight loss &gt; 10% in 6 mo</td>
<td>1.92 (1.68–2.18)</td>
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<tr>
<td>COPD</td>
<td>1.72 (1.55–1.91)</td>
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<td>General anesthesia</td>
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<tr>
<td>Impaired sensorn</td>
<td>1.51 (1.26–1.82)</td>
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<tr>
<td>History of CVA</td>
<td>1.47 (1.28–1.68)</td>
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<td>BUN level &lt; 8 mg/dL</td>
<td>1.47 (1.26–1.72)</td>
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<td>BUN level, 22–30 mg/dL</td>
<td>1.24 (1.11–1.39)</td>
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<td>BUN level ≥ 30 mg/dL</td>
<td>1.41 (1.22–1.64)</td>
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<tr>
<td>Transfusion &gt; 4 units</td>
<td>1.35 (1.07–1.72)</td>
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<td>Emergency surgery</td>
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<td>Steroid use</td>
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<td>Current smoker within 1 y</td>
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<td>Alcohol &gt; 2 drinks per day in past 2 wk</td>
<td>1.24 (1.08–1.42)</td>
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<tr>
<td>Leung and Dzankic, 2001 (121)</td>
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<tr>
<td>Significant factors</td>
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<tr>
<td>Emergency surgery</td>
<td>3.6 (1.6–8.3)</td>
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<tr>
<td>History of CHF</td>
<td>5.7 (2.1–16)</td>
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<td>Invasive monitoring</td>
<td>9.7 (3.7–25.4)</td>
<td>&lt;0.001</td>
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<tr>
<td>Møller et al., 2001 (119)</td>
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<tr>
<td>Significant factors</td>
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<td>Age &gt; 65 y</td>
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<tr>
<td>COPD</td>
<td>4.21 (2.77–6.41)</td>
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<tr>
<td>Arozullah et al., 2000 (118)</td>
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<tr>
<td>Significant factors</td>
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<td>Albumin level &lt; 20 g/L</td>
<td>4.33 (3.99–5.52)</td>
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<td>Albumin level, 20–30 g/L</td>
<td>2.16 (1.86–2.51)</td>
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<td>Albumin level, 31–40 g/L</td>
<td>1.17 (1.05–1.31)</td>
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<td>Age ≥ 70 y</td>
<td>2.60 (2.31–3.05)</td>
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<td>Age 60–69 y</td>
<td>1.99 (1.70–2.33)</td>
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<td>Age 50–59 y</td>
<td>1.50 (1.25–1.79)</td>
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<tr>
<td>Totally dependent</td>
<td>2.24 (1.88–2.66)</td>
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<td>Partially dependent</td>
<td>1.50 (1.25–1.79)</td>
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<tr>
<td>Weight loss &gt; 10% in 6 mo</td>
<td>1.37 (1.19–1.57)</td>
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<tr>
<td>Alcohol &gt; 2 drinks per day</td>
<td>1.19 (1.07–1.33)</td>
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<tr>
<td>Diabetes</td>
<td>1.15 (1.00–1.33)</td>
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<td>BUN level &gt; 40 mg/dL</td>
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<td>BUN level, 31–40 mg/dL</td>
<td>2.09 (1.78–2.45)</td>
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<td>BUN level, 21–30 mg/dL</td>
<td>1.31 (1.18–1.46)</td>
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<tr>
<td>Preoperative renal failure</td>
<td>1.67 (1.23–2.27)</td>
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<tr>
<td>Transfusion &gt; 4 units</td>
<td>1.56 (1.28–1.91)</td>
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<tr>
<td>Preoperative pneumonia</td>
<td>1.70 (1.35–2.13)</td>
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<tr>
<td>Dyspnea at rest</td>
<td>1.69 (1.36–2.09)</td>
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<tr>
<td>Dyspnea on minimal exertion</td>
<td>1.21 (1.09–1.34)</td>
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<td>COPD</td>
<td>1.58 (1.44–1.75)</td>
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<tr>
<td>Recent smoking</td>
<td>1.24 (1.14–1.36)</td>
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<td>CHF</td>
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<td>Impaired sensorium</td>
<td>1.22 (1.04–1.43)</td>
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<tr>
<td>CVA</td>
<td>1.20 (1.05–1.38)</td>
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</table>
### Appendix Table 3—Continued

<table>
<thead>
<tr>
<th>Author, Year (Reference)</th>
<th>RR (95% CI)</th>
<th>P Value</th>
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<tbody>
<tr>
<td><strong>Pedersen et al., 1990 (103)</strong></td>
<td><strong>Significant factors</strong></td>
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<tr>
<td>Age 50–69 y</td>
<td>4.26 (2.37–7.68)</td>
<td>&lt;0.001</td>
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<tr>
<td>Age ≥ 70 y</td>
<td>5.70 (3.04–10.67)</td>
<td>&lt;0.001</td>
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<td>COPD</td>
<td>2.92 (1.86–4.58)</td>
<td>&lt;0.001</td>
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<tr>
<td>Major operation</td>
<td>4.85 (3.35–7.05)</td>
<td>&lt;0.001</td>
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<tr>
<td>Emergency operation</td>
<td>2.51 (1.87–3.37)</td>
<td>&lt;0.001</td>
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<tr>
<td>General anesthesia with muscle relaxant</td>
<td>2.83 (1.99–4.03)</td>
<td>&lt;0.001</td>
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</tbody>
</table>

| **Ferguson and Durkin, 2002 (124)** | **Significant factors** |         |
| Creatinine level, 1.5–2.0 mg/dL | 1.42 (1.22–1.64) |  0.059  |
| Creatinine level, 2.0–2.5 mg/dL | 1.39 (1.11–1.75) |  0.006  |
| Creatinine level, 2.5–3.0 mg/dL | 1.60 (1.23–2.07) |         |
| Creatinine level > 3.0 mg/dL | 1.58 (1.31–1.89) |         |

| **O’Brien et al., 2002 (123)** | **Significant factors** |         |
| Surgery > 1 h duration | 1.06 (1.05–1.13) |  0.034  |
| HDL cholesterol level ≤ 35 mg/dL | 1.16 (1.05–1.29) |  0.05   |
| COPD | 2.5 (1.1–5.5) |  0.04   |

| **Wong et al., 1995 (108)** | **Significant factors** |         |
| Abdominal incision | 18 (1.2–97.1) |  0.0001 |
| Anesthesia duration (per hour) | 1.78 (1.14–2.71) |  0.0001 |
| ASA physical status 4 or 5 | 41 (5.8–292.4) |  0.0002 |
| General anesthesia | 20 (3.1–127.0) |  0.0008 |
| FEV1/FVC ≤ 0.5 | 16 (2.7–88.4) |  0.0020 |
| Shapiro score ≥ 5 | 10 (1.1–89.4) |  0.0345 |

| **Elkhouri et al., 2004 (125)** | **Significant factors** |         |
| Endovascular aortic repair (compared with open surgery) | 0.14 (0.04–0.47) |  0.002  |

| **McAllister et al., 2005 (126)** | **Significant factors** |         |
| Age ≥ 65 y | 5.9 |  <0.001 |
| Positive cough test result | 3.8 |  0.01   |
| Perioperative nasogastric tube | 7.7 |  <0.001 |
| Duration ≥ 2.5 h | 3.3 |  0.008  |

* To convert BUN values to mmol/L, multiply by 0.357. To convert creatinine values to μmol/L, multiply by 88.4. To convert HDL cholesterol values to mmol/L, multiply by 0.2586. AAA = abdominal aortic aneurysm; ASA = American Society of Anesthesiologists; BMI = body mass index; BUN = blood urea nitrogen; CHF = congestive heart failure; COPD = chronic obstructive pulmonary disease; CVA = cerebrovascular accident; DLCO = diffusing capacity of carbon monoxide; HDL = high-density lipoprotein; NA = not available; RR = relative risk; RV = residual volume.