

Appendix 2

Illnesses and conditions where burdens commonly outweigh the benefits of operating in the elderly

This table illustrates situations where there are many postoperative outcomes where the burdens outweigh the benefits of operating.¹ This is not a strict list of where surgery should not be offered, but an indicator to the surgeon that they should ensure the patient is aware that there may be a poor outcome associated with treatment and a poor postoperative expected quality of life, which may be below what the patient might value. This should inform the patient's own decision making.

Table 1. Serious illnesses and acute surgical conditions that put elderly patients at risk for non-beneficial emergency surgery

Serious Illnesses	Acute surgical condition
<p>General indicators</p> <ul style="list-style-type: none"> • Unplanned weight loss <10% in past 6 months • Permanent residence in a nursing home • Poor performance status, bed bound • Life expectancy < 6 months • ASA 4 or 5 	<p>General</p> <ul style="list-style-type: none"> • Small bowel obstruction • Large bowel obstruction • Malignant intestinal obstruction • Gastric or duodenal perforation • Intestinal perforation • Massive GI bleed • Infectious colitis • Necrotizing soft tissue infection • Mesenteric ischaemia
<p>Cancer</p> <ul style="list-style-type: none"> • Worsening performance status • No longer candidate for chemo/radio-therapy due to disease progression • Persistent symptoms despite optimal therapy 	<p>Vascular</p> <ul style="list-style-type: none"> • Critical limb ischaemia • Acute limb ischaemia • Ruptured aneurysm
<p>Heart disease</p> <ul style="list-style-type: none"> • New York Heart Association Class 3 or 4 • Persistent symptoms despite maximal therapy • Cardiac cachexia • >2 hospitalisations for cardiac failure in 6 months 	<p>Cardiac</p> <ul style="list-style-type: none"> • Myocardial ischaemia meeting criteria for coronary bypass • Acute valvular insufficiency

<p>Respiratory disease</p> <ul style="list-style-type: none"> • Forced expiratory volume 1s <30% predicted • Meets criteria for long term oxygen therapy • Severe symptoms despite optimal tolerated therapy • Pulmonary hypertension • Pulmonary cachexia • >3 emergency admissions in the past 12 months 	<p>Neurosurgical</p> <ul style="list-style-type: none"> • Cerebral haemorrhage with midline shift
<p>Liver disease</p> <ul style="list-style-type: none"> • Ascites • Encephalopathy • Variceal bleeding refractory to medical therapy • Hepatorenal syndrome • Coagulopathy 	<p>Orthopaedic</p> <ul style="list-style-type: none"> • Acute spinal cord compression • Malignant fracture • Osteoporotic fracture
<p>Renal disease</p> <ul style="list-style-type: none"> • GFR < 30 mL/min • Worsening condition on haemodialysis • Refuses further dialysis 	
<p>Neurological disease</p> <ul style="list-style-type: none"> • Progressive deterioration in physical or cognitive function despite optimal therapy • Symptoms that are complex and difficult to control • Progressive dysarthria or dysphagia • Recurrent aspiration pneumonia 	
<p>Dementia</p> <ul style="list-style-type: none"> • Complete functional dependence • Unable to communicate meaningfully • Worsening eating problems • Recurrent aspiration pneumonia 	

Reference

1. Cooper Z, Courtwright A, Karlage A *et al.* Pitfalls in communication that lead to nonbeneficial emergency surgery in elderly patients with serious illness. *Ann Surg* 2014; **260**(6): 949–957