Some of the biggest challenges in anaesthesiology are presented by the ‘high-risk’ patient. With increasing levels of obesity and chronic disease afflicting countries in both the developed and developing worlds, combined with the growing and ageing population, the absolute numbers of patients considered high-risk can only increase.

In the first of three presentations, Rupert Pearse, Associate Professor and Consultant in Intensive Care Medicine at Barts and The London School of Medicine and Dentistry, UK, asks: ‘what we have learned about high-risk patients?’ “While high-risk patients are only 10% of the surgical patient population, 80% of surgery-related deaths come from this group,” says Pearse.

Estimates have shown that, across Europe each year, 21 million in-patient general procedures take place, including 2.6 million high-risk procedures. Some 1.3 million patients develop complications, leading to around 315,000 deaths. “Many of these complications arise from failing to identify high-risk patients and change their treatment plan accordingly,” says Pearse, who says treatment is improving gradually with the advent of initiatives like the WHO Safe Surgery Checklist, which helps surgical teams prepare properly and cut out avoidable errors. The site of surgery, age of the patient, and comorbidities can all affect outcome, as can the use of tests like cardiopulmonary exercise testing to assess a person’s cardiovascular fitness (and thus by proxy fitness for surgery). Pearse believes simple actions such as linking with the patient’s community care, providing them with guidance, and optimising their medical therapy can all mitigate the risk, as well as no major surprises on the day of surgery.

In the second presentation, Professor Mike Grocott (University Hospital Southampton NHS Foundation Trust, and Honorary Lecturer, University College London, UK) will discuss better perioperative planning. Finally, Professor Michael Sander (Department of Anaesthesiology, University Hospital Charité, Berlin, Germany) will cover specific interventions for the high-risk patient.