

90-day post-operative mortality after major surgery for colorectal cancer

Background

90-day post-operative mortality is defined as a death which happens within 90 days of a patient undergoing surgery. Surgery is the most common and effective treatment for colorectal cancer with 66% of patients diagnosed with colon cancer and 63% of patients diagnosed with rectal cancer undergoing surgery to remove their tumour. Surgery carries a risk and it is important that patients are informed of the risks involved and how these risks can vary between individuals. 90-day post-operative mortality can also be used to look at individual NHS Trusts to investigate why variation between the Trusts might occur and what quality improvement measures could be implemented to improve outcomes. This study aimed to look for common characteristics among patients with colorectal cancer who died within 90 days of their surgery.

KEY MESSAGE:

There is significant variation in the 90 day post-operative mortality rate between Hospital Trusts ranging from 0% to 11%.

The characteristics of the individuals who died within 90 days of surgery are varied. Age, a history of pre-existing chronic health conditions, a late or unknown stage tumour and those who were admitted to hospital as an emergency are all factors associated with 90 day post-operative mortality.

Results

The rate of post-operative mortality within 90-days of major surgery for colorectal cancer varied between the 146 MDTs. It ranged from 0% to 11.0%.

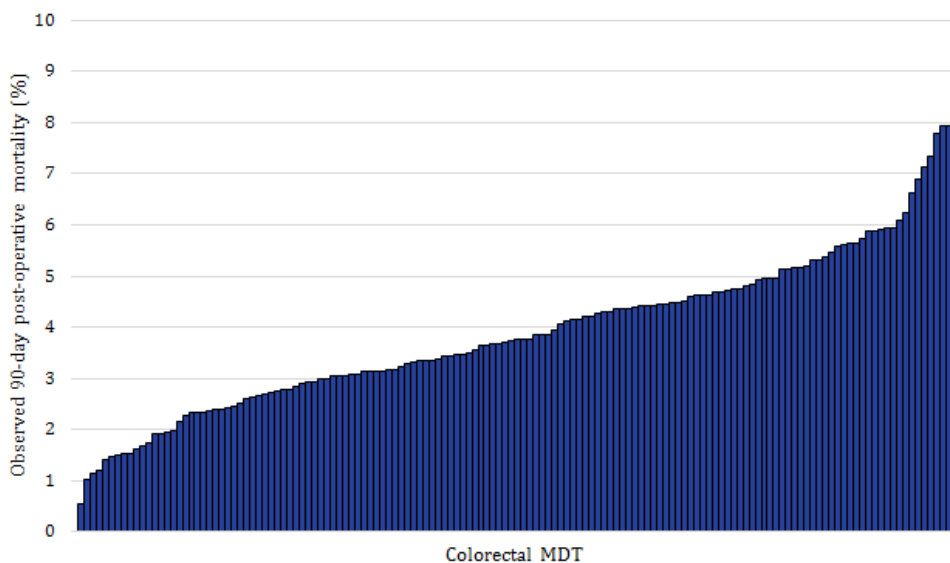


Figure 1 – Age group

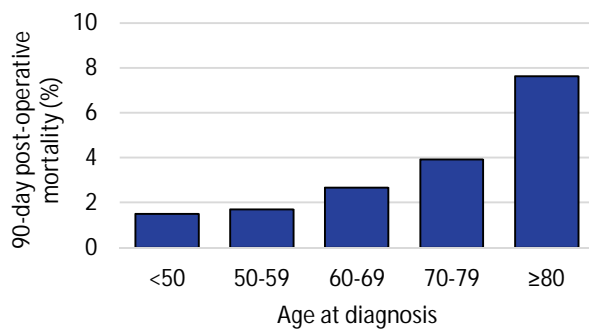


Figure 2 – Charlson comorbidity group

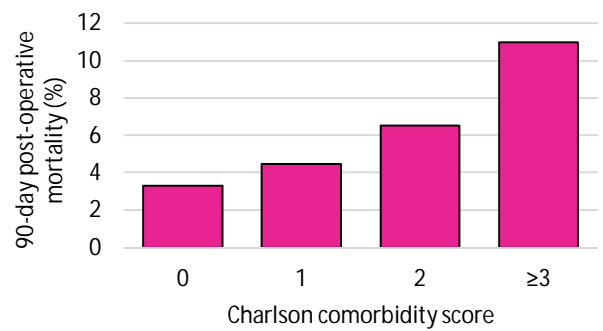


Figure 3 – Stage of disease

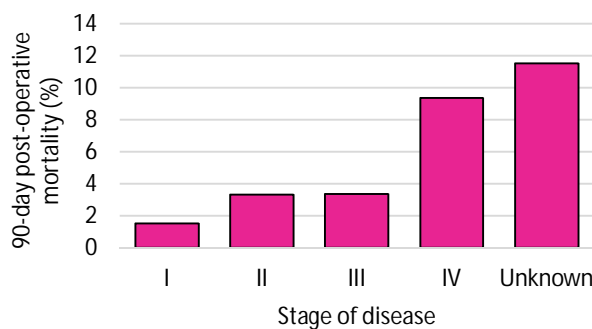


Figure 4 - Admission type

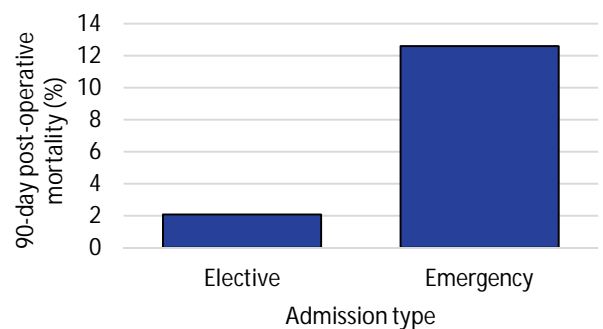


Figure 5 - Tumour site

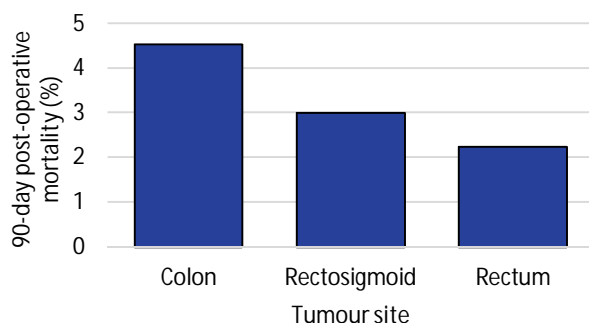
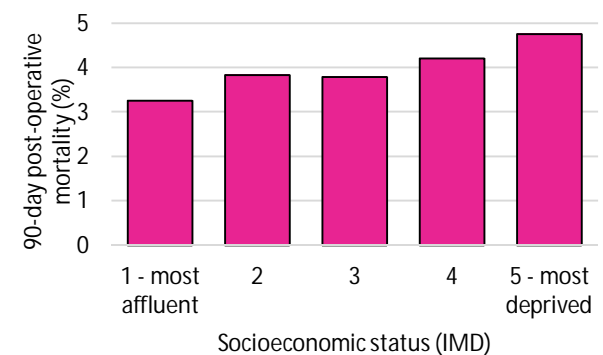


Figure 6 - Socioeconomic status



Conclusion

The rate of 90-day post operative mortality between English NHS Trusts is significantly varied. It is important to identify the reason for this variation to establish whether improvement measures can be implemented. Patients above the age of 80 years, those with a history of pre-existing health conditions, a late or unknown stage tumour and those who were admitted to hospital as an emergency all displayed higher rates of 90-day post operative mortality.

The UK Colorectal Cancer Intelligence Hub is a UK wide collaboration, aiming to use intelligence to drive improvements in the diagnosis, treatment and outcomes of patients with colorectal cancer. CORECT-R has been established by the Hub as a single repository for colorectal cancer data. If you wish to make use of the data within the resource, please visit <http://bci.leeds.ac.uk> to find out how. This work involves patient-level information collected by the NHS that has either been provided by, or derived from, patients as part of their care and support.