

## **Failure to rescue as a source of variation in hospital mortality after rectal surgery: The Italian experience**

Eur J Surg Oncol. 2019 Mar 16. pii: S0748-7983(19)30313-0. doi:10.1016/j.ejso.2019.03.006.

**Spolverato G, Gennaro N, Zorzi M, Rugge M, Mescoli C, Saugo M, Corti MC, Pucciarelli S.**

### **BACKGROUND**

Only fragmentary data are available on the burden of non-communicable diseases among immigrants in Europe, mostly limited to mortality by cause. Aim of the study is to investigate the prevalence of cardiovascular diseases across different immigrant groups in the Veneto Region (North-Eastern Italy).

### **INTRODUCTION**

Failure to rescue (FTR) patients from postoperative complications could contribute to the variability in surgical mortality seen among hospitals with different volumes. We sought to examine the impact of complications and FTR on mortality following rectal surgery.

### **METHODS**

The National Italian Hospital Discharge Dataset allowed to identify 75,280 patients who underwent rectal surgery between 2002 and 2014. Hospital volume was stratified into tertiles. Rates of major complications, FTR from complications and mortality following rectal surgery were compared.

### **RESULTS**

During the study period, both the incidence of complications (2002, 23.7% versus 2014, 21.2%), and FTR decreased overtime (2002, 6.9% versus 2014, 3.8%) (both  $P < 0.001$ ). The complication rate was 24.4% in low-, 21.6% in intermediate- and 20.4% in high-volume hospitals ( $P < 0.001$ ). Complications were less common in minimally invasive surgery (MIS) versus open cases (18.2% versus 23.2%;  $P < 0.001$ ). The most frequent complications included prolonged ileus or small bowel obstruction (5.3%), and anemia requiring blood transfusions (5.3%). The rate of FTR was 5.5%, 5.6% and 3.7% for low-, intermediate- and high-volume hospitals, respectively ( $P < 0.001$ ). FTR after MIS was 2.6% vs. 5.5% after open surgery ( $P < 0.001$ ). After accounting for patient and hospital characteristics, patients treated at low-volume hospitals were 23% more likely to die after a complication, compared to patients at high-volume hospitals (OR 1.23, 95%CI 1.13-1.33).

### **CONCLUSIONS**

Hospital volume is the strongest predictor of complication and FTR. The reduction in mortality in high-volume hospitals could be determined by the better ability to rescue patients. These findings support the centralization policy of rectal cancer treatment.

**FULL TEXT PER GLI UTENTI REGISTRATI ALLA RIVISTA**

[https://www.ejso.com/article/S0748-7983\(19\)30313-0/fulltext](https://www.ejso.com/article/S0748-7983(19)30313-0/fulltext)