

# Blood Transfusion in Colorectal Surgery: Predictive Factors and Effects on Short-term Outcome

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Argomento: Anestesia generale

**Background:** Blood transfusions have been noted to have detrimental effects on both short-term and long-term post-operative outcomes after colorectal surgery. The objectives of the study were to identify preoperative and intraoperative variables that are predictive of perioperative blood transfusion in colorectal cancer surgery, and to assess outcomes associated with blood transfusion over a 30-day follow-up period.

**Methods:** This was a prospective observational study of 246 patients who underwent elective or emergent, open, laparoscopic or robotic-assisted, colonic or rectal resections in a tertiary cancer centre. Data about preoperative status of the patient - demographic data, comorbid conditions, preoperative laboratory variables, intraoperative variables of the patient, details of transfusions and postoperative complications in the patient were studied.

The short-term outcomes measured included 30 day mortality, 30 day morbidity, length of stay, pneumonia and surgical site infection

**Results:** 80 patients (32.5 %) received perioperative blood transfusion. Anemia, elevated alkaline phosphatase, open surgery, longer duration of procedure and blood loss more than 500 mL were significantly associated with blood transfusion. Overall morbidity, particularly postoperative infections, including surgical site infections, pneumonia, urinary tract infections, and sepsis, was higher in the transfused group. Patients who received blood transfusion were also more likely to require reintubation and mechanical ventilation for over 48 hours. The possibility of myocardial infarction, pulmonary embolism, and re-explorations was also greater in patients who had received perioperative blood transfusion.

**Conclusions:** Blood transfusion increases morbidity and length of stay in colorectal surgery, and can hinder enhanced recovery programmes. It is, however, a necessary evil. Identifying patients at risk would help clinicians implement strategies to reduce transfusion requirements, such as oral and intravenous iron, and erythropoietin, and minimally invasive surgery. There is also a need for standardization of protocols, and for identifying and adhering to appropriate patient-specific transfusion triggers to minimize unwarranted transfusions.

