

***Anesthesiology Rounds*  
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**Perioperative Cardiovascular Risk Evaluation and Care for Noncardiac Surgery – Part I**

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**Objectives:**

This issue of *Anesthesiology Rounds* will help readers to:

- know the tools available to carry out perioperative risk evaluation for noncardiac surgery
- determine which patients may benefit from a more extensive functional investigation of their cardiovascular state using noninvasive examinations
- note the study limitations and uncertainties regarding overall perioperative risk management.

**Questions:** (*Only one response is correct.*)

1. All the following statements concerning perioperative myocardial infarction (MI) are true except one. Which is false?
  - a. The majority of perioperative MIs are asymptomatic, with no ST segment elevation.
  - b. A perioperative MI occurs in the first three days following surgery.
  - c. A diagnosis of perioperative MI is associated with a poor long-term prognosis.
  - d. Approximately 15% of MIs or other major events will occur during the intraoperative period itself.
2. Which of the following risk factors is not considered in Lee's risk prediction tool, known as the Revised Goldman Cardiac Risk Index (RCRI)?
  - a. high-risk surgery (vascular, thoracic, or intra-abdominal)
  - b. low functional capacity
  - c. history of coronary artery disease (CAD)
  - d. history of heart failure
  - e. history of stroke
  - f. insulin-treated diabetes
  - g. creatinine >177  $\mu$ mol/L

3. Regarding functional investigation using noninvasive tests, which statement is false?
- a. The negative predictive value (NPV) is excellent (90%-100%) for these tests, whereas the positive predictive value (PPV) is weaker.
  - b. It is mainly the extent of ischemia and not its only presence that appears to be associated with the occurrence of events.
  - c. Dobutamine echocardiography has a slightly lower sensitivity and specificity compared to the myocardial perfusion scan for the detection of ischemia.
  - d. A functional investigation is more useful to reduce the initially estimated risk, if it is negative (or normal), than to identify patients at very high risk, if it is positive.
4. All of the following statements regarding cardiac management of patients in the perioperative period are false, except one. Which is true?
- a. Patients undergoing low-risk surgery never require a cardiac evaluation prior to surgery.
  - b. A recent MI is no longer considered to increase the risk of perioperative adverse events.
  - c. Unless the patient needs an urgent life-saving procedure, a patient with a cardiac condition should be stabilized prior to surgery.
  - d. A physical exam is useless in the perioperative period.

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