Assessing the heart for non-cardiac surgery

**Background**

Patients with overt heart disease or exercise limitation often present for surgery

There is evidence that- mostly- investigating the heart before major surgery has no benefit

**Guidelines**

2014 American College of Cardiology/American Heart Association

2014 European Society of Cardiology/European Society of Anaesthesiology

**A practical approach whether to investigate is based on**

* Surgery Urgency
  + Emergency- proceed to surgery and treat conditions
* Active Cardiac Condition 
  + LVF, severe valve, VT/SVT, angina and MI (<1 month)
  + Pause and investigate/cardiology refer
* Surgery Severity
  + Mild/surface surgery -proceed
* Patient Exercise Capacity
  + >4 metabolic equivalent of task. MET- proceed
* Patient Specific risks / Comorbidities
  + No risk factors on Lees rCRI – proceed
  + Any risk factors – consider testing heart
  + 1% mortality risk or more – consider testing heart
* What to do/how investigate
  + Consider testing /investigate ‘if it will change management’
  + Guidelines have lots of suggestions
  + Resting ECHO – only if new condition / examination suggests
  + Stress ECHO – is an option
  + Perfusion Scans - are an option
  + CPET – is an option
  + Cardiac CT – not mentioned

**Other issues**

* Biomarkers Troponin and ANP
  + Elevated Postop Troponin is associated with a poor outcome
  + What to do about a raised postop Troponin is controversial
  + Interventional studies have shown no benefit
  + Raised preop ANP is associated with a poor outcome… Presumably because of its association with cardiac failure.