

GUIDELINES FOR PRE-OPERATIVE INVESTIGATIONS

* The following schedule of suggested tests is to guide the general medical evaluation of the patient prior to an actual or potential significant physiological stress such as surgery. This role is much broader than 'Screening tests for Anaesthesia'. Conducting a test carries a responsibility for ensuring the result is acted on. Discussion with the Surgeon and the procedural Anaesthetist is advised, particularly before repeating tests that have been done previously, or ordering tests that seem unnecessary or may delay patient care.

Complete blood count

1. Age > 60 years, except minor surgery
2. History or physical examination suggesting anaemia
3. Known significant cardiac, pulmonary or renal disease, or malignancy
4. As baseline when major perioperative blood loss is possible or anticipated
5. Bleeding tendency as evidenced by history or physical examination
6. Possible active infection or sepsis

Coagulation profile (INR and APTT)

1. Bleeding tendency as evidenced by history or physical examination
 2. Patient on warfarin, heparin or another medication altering the coagulation profile
 3. Significant Hepatic disease
- n.b. NOT USEFUL AS A SCREENING TEST

Liver Function Tests

1. Albumin – Used to Assess frailty & overall risk
2. Significant hepatic disease
3. Malnourished patient or patient on TPN.
4. Possible drug/liver function interactions

Electrolytes/Renal Function Tests (EUC)

1. Age > 60 years
2. Cardiac, vascular, renal disease
3. Diabetes
4. Patient on drugs that can affect the electrolyte balance (e.g. diuretics) or those affected by renal function (e.g. digoxin).
5. As a baseline for major surgery
6. Patient on TPN
7. Patient having bowel preparation for surgery
8. Recent vomiting and diarrhoea

Hb A1C Level

1. Diabetic patients with uncertain control
2. Consider use as screening test for undiagnosed diabetes (e.g. In obese patients, particularly those having moderate/major, vascular or joint surgery.) (This is controversial).

Arterial blood gases

1. Metabolic decompensation (e.g. DKA)
2. Cyanotic Cardiac or Pulmonary Disease
3. Possible CO₂ retention e.g. Obesity Hypoventilation Syndrome etc

Chest X-Ray

1. Significant cardiac failure or pulmonary disease having abdominal/thoracic or other major surgery.
2. n.b. Often ordered unnecessarily:- Not generally needed for asthmatics

ECG

Not generally required if ECG within the past 6 months available and condition is stable.

1. Age > 50 years (male) or > 60 years (female).
2. Cardiac disease as evidenced by history or physical examination.
3. Patients with cardiac risk factors.

Spirometry

1. Asthma/CAL
2. Smokers >10/day
3. Previous thoracic surgery

Lung Function Tests

1. Complex pulmonary disease
2. Previous pneumonectomy
3. Spinal scoliosis
4. Neuro-muscular disease (MND, Myasthenia etc)

Group & Screen

- **Check against local guidelines.**
- Requirement for Preoperative testing will vary depending on hospital's blood stock and access to 24/7 transfusion laboratory support.
- Not routinely necessary for laminectomies, lap cholecystectomies, hernias, non-oncological hysterectomies, right hemicolectomies.

Guidelines Reviewed by John Hunter Hospital Perioperative Interest Group. Nov. 2017

* Adapted from M G Irwin. Implementation and evaluation of guidelines for preoperative testing in a tertiary hospital Anaesthesia and Intensive Care: Jun 2002 30, 3; p326. Various textbooks have similar schedules, but all testing should be selective, not 'routine'.

All patients: check Infection Control (multi-resistant organism) alert status!