

ADMINISTRATIVE POLICY AND PROCEDURE MANUAL

Guidelines for laboratory testing prior to elective surgery

SECTION: Pre-Admission Unit

NO. / N° : ADM ___ ___

ISSUED BY:

DATE ISSUED: yy/mm/dd

APPROVED BY:

DATE REVIEWED: yy/mm/dd

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1. POLICY

“Laboratory investigations should be ordered only when indicated by the patient’s medical status, drug therapy, or the nature of the proposed procedure. Investigations should not be ordered on a routine basis¹.” Best evidence suggests that laboratory investigations done without indication are of no clinical value².

2. DEFINITION:

Preoperative laboratory investigation refers only to those tests required to assess the patient’s fitness to undergo anesthesia and surgery. Testing done to guide surgical management, stage surgical disease, or rule out metastatic disease may be done as part of the Pre-Admission visit by physician’s order.

3. PROCEDURE

- 3.1 Surgeons are encouraged to order only those tests necessary for surgical indications. Ordering tests “for the anesthesiologist” is not encouraged.
- 3.2 Pre-Admission Unit policy will direct preoperative laboratory investigations based on patient and procedure indications.
- 3.3 Complete Blood Count (CBC)
 - 3.3.1 Major surgery in which blood loss and subsequent transfusion are likely
 - 3.3.2 Known or suspected anemia, bleeding disorder, or bone marrow suppression from any cause
 - 3.3.3 A current diagnosis of malignancy.
 - 3.3.4 Chronic diseases of the cardiovascular, respiratory, hepatic or renal systems currently requiring medical therapy.
- 3.4 Activated partial thromboplastin time (aPTT) and INR
 - 3.4.1 Therapy with heparin or warfarin
 - 3.4.2 Bleeding disorder
 - 3.4.3 Hepatic disease
- 3.5 Serum chemistry (sodium, potassium, chloride, creatinine, glucose)
 - 3.5.1 Renal disease
 - 3.5.2 Hypertension requiring therapy
 - 3.5.3 Diabetes mellitus, pituitary, or adrenal disease
 - 3.5.4 Therapy with diuretics, digoxin, lithium carbonate, corticosteroids
- 3.6 Electrocardiogram (ECG)
 - 3.6.1 Cardiac dysrhythmia requiring therapy, pacemaker, automated implantable defibrillator
 - 3.6.2 Coronary artery disease, valvular heart disease, congenital heart disease
 - 3.6.3 Hypertension or diabetes mellitus requiring therapy
 - 3.6.4 Chronic pulmonary disease requiring therapy

- 3.6.5 Age 65 or greater.
- 3.7 Sickle Cell Screen.
 - 3.7.1 Genetically susceptible individuals (African descent)
 - 3.7.2 Hemoglobin electrophoresis if sickle cell screen is positive
- 3.8 Pregnancy test (serum β -HCG)
 - 3.8.1 All women of childbearing years should be asked if there is any chance they might be pregnant
 - 3.8.2 A serum β -HCG should be ordered if pregnancy is suspected or if patient is unsure
- 3.9 Chest Radiograph
 - 3.9.1 Is not indicated for routine preoperative evaluation
 - 3.9.2 May be ordered if physician suspects active airway or airspace disease.
- 3.10 Urinalysis
 - 3.10.1 Is not indicated for routine preoperative evaluation
 - 3.10.2 May be ordered if physician suspects active urinary tract infection
- 3.11 Ophthalmology procedures
 - 3.11.1 Evidence from a prospective, randomized, controlled clinical trial indicates that preoperative testing of the patient undergoing cataract surgery is of no clinical value³.
 - 3.11.2 No preoperative testing will be ordered unless the treating physician suspects an acute medical problem.
- 3.12 Preoperative evaluation and testing should be performed within 6 weeks of elective surgery.
- 3.13 Laboratory testing done within the interval specified below will be considered valid and need not be repeated prior to surgery (assuming there has been no change in health status since testing).
 - 3.13.1 CBC, PTT, INR – 6 weeks
 - 3.13.2 Type and screen – 6 weeks
 - 3.13.3 Serum chemistry – 6 weeks
 - 3.13.4 Electrocardiogram – 6 months

References

1. 2001 CAS Guidelines to the practice of anesthesia. Can J Anesth 2001;48(9 Supplement)
2. Munro J, Booth A, Nicholl J. Routine preoperative testing: a systematic review of the evidence. Health Technology Assessment 1997;1(12)
3. Schein OD, Katz J, Bass EB, Tielsch JM, Lubomski LH, Feldman MA, Petty BG, Steinberg EP. The value of routine preoperative medical testing before cataract surgery. Study of Medical Testing for Cataract Surgery. NEJM 2000;342(3):168-75.

4. RELATED POLICIES AND / OR LEGISLATION: N/A

