



Title: Pre-Operative Tests – Medical Directive	
Document #: 8289	Issuing Authority: VP Clinical Programs/Chief Nurse Executive, Administration
Last Revised Date: 6/17/2020	Version Number: 1.0 (Current)

Order and/or Delegated Procedure:	Appendix Attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Title: Routine Pre-operative Test Protocol
Performance of laboratory and diagnostic tests for specified patients prior to surgical procedures in the Operating Room.	
Recipient Patients:	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Title:
Surgical patients prior to surgery.	
Authorized Implementers:	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Title:
Nurses with the knowledge, skill and judgment will follow the medical directives.	
Indications:	Appendix Attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Title:
See appendix A.	
Contraindications:	
Not applicable.	
Consent:	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Title:
Guidelines for Implementing the Order / Procedure:	Appendix Attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Title: Routine Pre-operative Test Protocol
See appendix.	
Documentation and Communication:	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Title:
Implementation of this medical directive will be documented by the implementing nurse in the patient's chart.	
All assessments, interventions and outcomes will be documented in e-documentation using the appropriate documentation tools or on the appropriate paper documentation tools where e-documentation is not available.	

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Review and Quality Monitoring Guidelines:	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Title:
The following processes will be used to maintain appropriate implementation of the directive and guide action if inappropriate, unanticipated and/or untoward outcomes result. a. This medical directive will be reviewed routinely one year after initial activation. b. This medical directive can be placed on hold if routine review processes are not completed, or if indicated for an ad hoc review. During the hold, staff cannot perform the procedure under authority of the directive.	
Administrative Approvals (as applicable):	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Title:
Mariana Markovic, Clinical Director	
Approving Physician(s)/Authorizer(s):	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Title:
Dr. David Downie, Chief of Surgery	

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Appendix A – Routine Pre-operative Test Protocol

- For patients with complex or uncommon surgical or medical conditions, test beyond what is suggested in this grid may be appropriate
- Tests are valid for **3 months** provided there has been no interim change in the patient's condition which is determined by the Registered Nurse in collaboration with the anaesthetist and surgeon in day surgery.
- Elective Cholecystectomy require an extended hepatic profile: ALT, ALP, GGT, Bilirubin and Albumin within 4 weeks to the Day of Surgery. Then consider all patient comorbidities for further preoperative tests required.

Order all indicated tests, based on the type of Surgery, the Patient's Age, Exercise Tolerance, Medical Comorbidities and Drug Therapies	CBC	ECG	Elec	Cr and eGFR	Glucose	INR	PTT	Hepatic
Age, Surgery and Exercise Tolerance (E.T.)								
Minor surgery, age less than 50, any E.T.	No routinely indicated tests if patient is otherwise healthy							
Minor surgery, age greater than or equal to 50, E.T. greater or equal to 4 METs	No routinely indicated tests if patient is otherwise healthy							
Minor surgery, age greater than or equal to 50, E.T. less than 4 METs	•	•						
Major surgery, age less than 50	•							
Major surgery, age greater than or equal to 50	•	•	•	•				
Hip and Knee Arthroplasty, Long bone surgery	•	•	•	•		•		
Medical Comorbidities								
Hypertension		•		•				
Cardiac disease, E.T. greater than or equal to 4 METs		•						
Cardiac disease, E.T. less than 4 METs	•	•						
Respiratory disease, E.T. greater than or equal to 4 METs	No routinely indicated tests for this comorbidity							
Respiratory disease, E.T. less than 4 METs	•	•						
Stroke / TIA / Peripheral Vascular Disease		•						
Renal disease	•	•	•	•				
Liver disease	•		•	•		•		•
Diabetes mellitus		•	•	•	•			
BMI greater than 40					•			•
High risk for malnutrition	•		•			•		•
Thyroid disease			•	Also obtain TSH				
Malignancy (except basal cell ca.)	•							
High risk for anemia	•							
Drug Therapies								
Diuretic, ACE inhibitor, or ARB			•	•				
Warfarin, anticoagulants (re-draw for INR greater than 1.3)	•					•	•	
Oral Corticosteroids			•		•			

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Digoxin		•	•	Also obtain serum digoxin level
Transfusion Medicine Indications				
Preoperative Type and Screen will be carried out using existing “Standard Blood Orders for Elective Surgical Procedures” guideline.				

Other Preoperative Tests with Specific Indications

Sickle cell screen: With appropriate pre and post test counseling, preoperative sickle cell screen should be *offered* to patients of high risk ethnicity unless it has been previously performed, in which case it should be documented. *High risk ethnicity groups* include: African, Caribbean, Saudi Arabia, Northern Greece, Southern Italy, Southern Turkey and South Central India.

Antiepileptic drug (AED) levels: Should be obtained only for patients on Carbamazepine, Phenobarbitol, Phenytoin, or Valproic acid who meet at least one of the following criteria: (1) a history of unstable AED levels, (2) a seizure within the last 6 months, or (3) undergoing major gastrointestinal surgery.

Legend – Tests

Elec	Electrolytes (sodium, potassium, chloride and bicarbonate)
CBC	Complete blood cell count
ECG	Electrocardiogram
INR	International normalized ratio
PTT	Partial thromboplastin time
Cr and eGFR	Creatinine and estimated Glomerular Filtration Rate
Hepatic	ALT, Alk Phos, will automatically reflex to AST and total bilirubin if initials tests are abnormal
CXR	Chest X-Ray
ACE	Angiotensin-converting enzyme inhibitors
ARB	Angiotensin II receptor blockers

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Legend – Patient Characteristics

Major Surgery	Resection of organs (laparoscopic or open incision) in the neck, thorax, pelvis or abdomen, (except laparoscopic cholecystectomy); endovascular procedures; intracranial surgery, and neck surgery for malignancy (except basal cell carcinoma), major joint replacement or fusion, surgery involving free flap reconstruction, panniculectomy.	
Minor Surgery	Surgical procedures that do not meet the criteria for major surgery are deemed to be minor surgical procedures.	
Cardiac Disease	MI, Angina, CHF, Valvular heart disease, Atrial fibrillation or other Arrhythmia.	
Renal Disease	Gross proteinuria or elevated creatinine.	
Liver Disease	Includes jaundice, hepatitis, cirrhosis, hepatic metastases and ethanol abuse (defined as average intake > 2 standard drinks per day).	
High Risk for Malnutrition	Includes BMI less than 19, unintentional greater than or equal to 10% body weight loss over previous 6 months, inflammatory bowel disease, oral, esophageal, gastric, and pancreatic malignancy.	
High Risk for Anemia	Includes patients with a history of anemia, connective tissue disease (i.e. lupus, rheumatoid arthritis), inflammatory bowel disease, menorrhagia, gross hematuria or gastrointestinal bleeding.	
ARB	Angiotensin receptor blocker.	
E.T. in METs Exercise Tolerance (E.T.) in Metabolic Equivalents (METs)	Exercise tolerance refers to the exercise capacity of an individual as measured by their ability to endure exercise and/or the maximum work load achieved during the exercise period. A MET is defined as the resting metabolic rate, the amount of oxygen the body consumes at rest.	
	Greater than and equal to 4 METs	Exercise tolerance in metabolic equivalents (METs), as reported by the patient's response to completing one or more of the following activities or a more strenuous activity, without having chest pain or dyspnea: <ul style="list-style-type: none"> •walk up a hill •climb a flight of stairs •run a short distance •cycling / biking
	Less than and equal to 4 METs	If a patient has reported to have chest pain or dyspnea during any of the above activities they have a ET less than 4 METs

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		Page 6 of 6
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Notes

- *Preoperative Point of Care **Pregnancy Testing** will be carried out by preoperative staff for females of childbearing age on the day of surgery. If female patient has menses they are considered of childbearing age.
Exempt: Pts who have had hysterectomy, TA patients, missed abortion, greater than or equal to 55 years of age*
- *There are no routine indications for preoperative pulmonary function tests, spirometry or arterial blood gases.*
- *There are no routine indications for preoperative urinalysis, save for specific surgeries where the mucosa might be breached (causing cystitis/pyelo).*
- ***Preoperative histories and physicals are also valid for 1 year**, provided there has been no interim change in the patient's condition.*
- *Re-draw INR on the day of surgery if the pre-operative INR greater then 1.3*

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