Revised Preadmission Assessment Guidelines for the Planned Surgical Patient

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# 1. Purpose

To provide a contemporary, evidence-based framework for the preadmission assessment of elective surgical patients that ensures safety, optimised perioperative outcomes, and efficient use of resources.

# 2. Scope

Applicable to all elective surgical patients undergoing preadmission at Austin Health. This guideline is multidisciplinary and nurse-led with escalation pathways for anaesthetic and physician input.

# 3. Assessment Domains and Pathway Allocation

## 3.1 Risk Stratification (Mandatory)

Each patient must be assessed using the following validated tools:  
- Cardiac Risk: Revised Cardiac Risk Index (RCRI)  
- Functional Status: Duke Activity Status Index (DASI)  
- Pulmonary Risk: ARISCAT Score  
- Frailty: Clinical Frailty Scale (for age > 65)  
- Obstructive Sleep Apnoea (OSA): STOP-BANG Questionnaire

Escalation Criteria:  
- RCRI ≥1  
- DASI < 4 METs  
- ARISCAT ≥70  
- Frailty score ≥4  
- STOP-BANG ≥5  
  
Trigger anaesthetist/physician review and optimisation if thresholds met.

# 4. Investigations and Biomarkers

Routine testing is not recommended. Testing should be guided by risk score thresholds and surgical severity.  
- NT-proBNP or BNP: All patients ≥65 years undergoing intermediate- or high-risk surgery.  
- High-sensitivity Troponin: In patients with known CAD, CKD, or RCRI ≥1.  
- ECG/Echo: Only if warranted by new symptoms or abnormal biomarkers.  
- Chest Imaging: Only in patients with active respiratory symptoms or ARISCAT >70.

# 5. Medication Reconciliation and Optimisation

- Diabetes:  
 - SGLT2 inhibitors: Stop 3 days prior  
 - Individualise insulin adjustment based on ADA perioperative protocols.  
- Anticoagulants/Antiplatelets:  
 - Follow ASH 2023 guidelines for DOACs, warfarin, LMWH  
 - Escalate to anaesthetist if recent stent (<6 months) or high thrombotic risk  
- ACEi/ARBs: Hold morning of surgery for intermediate- or high-risk patients  
- Biologics/Immunosuppressants: Individualised plan in liaison with surgical and medical teams.

# 6. Perioperative Optimisation Triggers

Refer to Anaesthesia/Perioperative Clinic if:  
- Any score exceeds cut-offs (see Section 3)  
- HbA1c > 8.5% or BSL >15 mmol/L  
- NT-proBNP >300 pg/mL or abnormal troponin  
- Home oxygen use, or FEV1 <50% predicted  
- eGFR <30 or dialysis  
- BMI >40 with known OSA or METs <4  
- Multiple medications >8 (polypharmacy risk)

# 7. Shared Decision-Making and Informed Consent

Patients identified as high risk should receive goal-concordant care planning, including:  
- Multidisciplinary case review  
- Advance Care Planning if appropriate  
- Documentation of perioperative resuscitation and ventilation preferences  
  
Use language access services for all non-English-speaking patients.

# 8. Workflow and Documentation

## 8.1 Digital Risk Calculator Tool

- Deploy AI-enabled risk stratification dashboard (e.g., PreOpNet)  
- Auto-populate EHR data where available (medications, history, METs)

## 8.2 Preassessment Pathways

Risk Level | Assessor | Additional Steps  
------------|----------|------------------  
Low Risk | Nurse Consultant | Routine advice + checklist  
Intermediate Risk | Nurse + Anaesthetist Telehealth | Labs/imaging + optimisation  
High Risk | In-person Anaesthetist/Physician | MDT prehab + shared decision-making

# 9. Checklist (Updated)

- [ ] Identify procedure type and surgical severity  
- [ ] Assign METs (subjective or DASI)  
- [ ] Complete STOP-BANG and Frailty screening  
- [ ] Reconcile medications (anticoagulants, insulin, etc.)  
- [ ] Apply RCRI and ARISCAT scores  
- [ ] Trigger biomarker tests if indicated  
- [ ] Allocate to appropriate preop stream  
- [ ] Refer to interpreter services where needed  
- [ ] Schedule follow-up or escalate as per pathway

# 10. References (Vancouver Style)

1. 1. Fleisher LA, et al. 2024 AHA/ACC Guideline for Perioperative Cardiovascular Evaluation. J Am Coll Cardiol. 2024;83(4):e100–e142.
2. 2. Kristensen SD, et al. 2022 ESC/ESAIC Guidelines on Non-Cardiac Surgery. Eur Heart J. 2022;43(19):1803–67.
3. 3. McIsaac DI, et al. Frailty and Surgical Outcomes. Br J Anaesth. 2020;125(5):716–25.
4. 4. American Diabetes Association. Standards of Medical Care in Diabetes 2022. Diabetes Care. 2022;45(Suppl 1):S187–S194.
5. 5. Maheshwari K, et al. Preoperative troponins and BNP: Role and Evidence. Anesth Analg. 2023;137(1):1–10.
6. 6. Liu Y, et al. Deep Learning ECG Risk Prediction. Lancet Digit Health. 2024;6:e210–e220.
7. 7. Wijeysundera DN, et al. Incorporating Risk Prediction into Preoperative Assessment. Anesthesiology. 2022;136(4):639–53.
8. 8. Poldermans D, et al. ARISCAT Score for Pulmonary Risk. Chest. 2010;138(5):1200–9.
9. 9. Douketis JD, et al. Perioperative Anticoagulant Management. ASH Clinical Guidelines. 2023.