Cardio Policy

Perioperative Cardiovascular Evaluation and Care Before Non-Cardiac Surgery

POLICY NUMBER UM CARDIO_1175	SUBJECT Perioperative Cardiovascular Evaluation and Care Before Non-Cardiac Surgery		DEPT/PROGRAM UM Dept	PAGE 1 OF 7
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PRIMARY BUSINESS OWNER: UM		COMMITTEE/BOARD APPROVAL Utilization Management Committee		
NCQA STANDARDS UM 2		ADDITIONAL AREAS OF IMPACT		
CMS REQUIREMENTS	STATE/FEDERAL REQUIREMENTS		APPLICABLE LINES OF BUSINESS Commercial, Exchange, Medicaid, Medicare	

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I. General information

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations, and CMS policies when applicable.*
- In order to review a request for medical necessity, the following items must be submitted for review:
    - Latest notes from Requesting /Servicing Provider that would support the medical necessity for the service(s) requested.
    - Latest test/procedure report

II. Purpose

Indications for determining medical necessity for perioperative cardiovascular evaluation and care before non-cardiac surgery.

III. Clinical reasoning

- All criteria are substantiated by the latest evidence-based medical literature. To enhance transparency and reference, Appropriate Use Criteria (AUC) scores, when available, are diligently listed alongside the criteria.

- This guideline first defaults to AUC scores established by published, evidence-based guidance endorsed by professional medical organizations. In the absence of those scores, we adhere to a standardized practice of assigning an AUC score of 6. This score is determined by considering variables that ensure the delivery of patient-centered care in line with current guidelines, with a focus on achieving benefits that outweigh associated risks. This approach aims to maintain a robust foundation for decision-making and underscores our commitment to upholding the highest standards of care. [1, 2, 3, 4, 5]

IV. Indications

- **12- Lead Electrocardiography**
    - Patients who are ≥65 years of age undergoing intermediate-high risk non-cardiac surgery (NCS) [6]

    - Patients who are undergoing intermediate-high risk NCS with known cardiovascular disease, cardiovascular risk factors, or symptoms suggesting underlying cardiac disorders. [6] Examples of cardiovascular diseases that require 12-lead electrocardiography include: [7]
        - Coronary heart disease
        - Significant arrhythmia
        - Peripheral arterial disease

        - Cerebrovascular disease
        - Other significant structural heart diseases

- **Transthoracic Echocardiography**
    - TTE is indicated for patients undergoing high-risk NCS when they exhibit:
        - Dyspnea of unknown origin [7]
        - Poor functional capacity and/or high NT-proBNP/BNP, or heart murmurs [6]
    - TTE may also be considered for:
        - Patients undergoing high-risk NCS with new CVD or unexplained signs/symptoms of CVD [6]
        - Patients undergoing intermediate-risk NCS with poor functional capacity, abnormal ECG, high NT-proBNP/BNP, or ≥1 clinical risk factor [6]
        - Patients with heart failure with worsening dyspnea, or other changes in clinical status [7]

- **Stress Testing**
    - Stress test imaging is indicated for patients undergoing high-risk NCS with poor functional capacity (<4 METS) [7] and high likelihood of CAD or clinical risk [6]
    - Stress test imaging may also be considered for patients undergoing intermediate-high risk NCS if the results may affect/change management strategy [6]
    - Exercise stress testing may be appropriate if it will affect/change management strategy when: 1) non-invasive imaging is unavailable to test for obstructive CAD, [6] or 2) the patient's functional capacity is unknown or ambiguous [7, 6]

- **Angiography** [6]
    - Coronary computed tomography angiography (CCTA) may be considered to rule out CAD in patients with suspected chronic coronary syndrome, or when non-invasive functional testing is unsuitable
    - Indications for performing preoperative invasive coronary angiography (ICA) before NCS are the same as those in the non-surgical setting

- **Coronary Revascularization Before Noncardiac Surgery** [7]
    - Revascularization before noncardiac surgery is recommended when indicated.

- **Considerations for Patients with Congenital Heart Disease** [8, 6]
    - All recent preoperative imaging studies (ECG, echocardiograms, etc.) should be reviewed
    - If the patient has an implanted cardiac device, device interrogation is indicated, as well as device programming (if necessary)
    - Preoperative laboratory analyses are indicated on the basis of clinical symptoms

- **Limitations**
    - Requests for services that are part of a surveillance protocol for patients who are involved in a clinical trial are considered out of scope (OOS) for Evolent and cannot be reviewed.

- Preoperative 12-lead ECG and biomarker testing are not indicated in low-risk patients undergoing low-risk NCS [7, 6]
- Routine preoperative TTE, stress testing, and coronary angiography are not recommended [7, 6]
- Exercise stress testing is not recommended for patients with a known exercise capacity limitation, and is also unnecessary for patients with known ST-segment abnormalities [6]
- For patients with moderate (≥4-10 METS) to excellent (>10 METS) functional capacity, it is reasonable to forgo exercise stress testing and proceed to surgery [7]

V. Background

A. Definitions

The purpose of **perioperative cardiovascular evaluation** before non-cardiac surgery is to ensure that the patient's cardiovascular system can withstand the planned surgical procedure(s), with the primary goal being to avoid major adverse cardiac events and mortality. This process involves evaluating the patient's current medical status (**Table 1**, below), making recommendations concerning the evaluation, management, and risk of cardiac problems over the entire perioperative period, and providing a clinical risk profile that the patient, primary physician and non-physician caregivers, anesthesiologist, and surgeon can use in making treatment decisions that may influence short and long-term cardiac outcomes. No test should be performed unless it is likely to influence patient treatment. The goal of the consultation is the optimal care of the patient.

Table 1. Cardiac risk-stratification for non-cardiac surgical procedures:

Risk Stratification	Procedure Examples
Vascular (reported cardiac risk often more than 5%)	Aortic and other major vascular surgery Peripheral vascular surgery
Intermediate (reported cardiac risk generally 1% to 5%)	Intraperitoneal and intrathoracic surgery Carotid endarterectomy Head and neck surgery Orthopedic Surgery Prostate surgery
Low† (reported cardiac risk generally less than 1%)	Endoscopic procedures Superficial Procedure Cataract Surgery Breast Surgery Ambulatory surgery

* Combined incidence of cardiac death and nonfatal myocardial infarction.

†These procedures do not generally require further preoperative cardiac testing.

B. AUC Score

A reasonable diagnostic or therapeutic procedure care can be defined as that for which the expected clinical benefits outweigh the associated risks, enhancing patient care and health outcomes in a cost effective manner.

Appropriate Care – Median Score 7-9
May be Appropriate Care- Median Score 4-6
Rarely Appropriate Care- Median Score 1-3

C. Acronyms/Abbreviations

AUC	Appropriate Use Criteria
BNP	By-type natriuretic peptide
CAD	Coronary artery disease
CCTA	Coronary computed tomography angiography
CVD	Cardiovascular disease
ECG	Electrocardiography
ICA	Invasive coronary angiography
METS	Metabolic equivalent of task
NCS	Non-cardiac surgery
NT-proBNP	N-terminal pro-B-type natriuretic peptide
OOS	Out of scope
TTE	Transthoracic echocardiography

VI. Coding and Standards

- **Review**
  - Utilization Management Department
- **Final Approval**
  - Utilization Management Committee

VII. References

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