

# Preoperative assessment

## Purpose

To evaluate the patient's medical, neurological, and functional status prior to neurosurgical intervention, aiming to reduce perioperative risk and improve surgical outcomes.

## Objectives

- Identify neurological and systemic risk factors.
- Optimize the management of comorbidities (e.g. epilepsy, hypertension, anticoagulation).
- Classify anesthetic and surgical risk (ASA, cardiac risk index).
- Plan perioperative neuro-monitoring and imaging.
- Ensure informed consent and patient education.

## Key Components

### 1. Medical History

- Past medical conditions (HTN, DM, epilepsy, etc.)
- History of neurosurgical disease or previous neurosurgery
- Medications (antiepileptics, anticoagulants, corticosteroids)
- Allergies
- Substance use (tobacco, alcohol, drugs)

### 2. Neurological Assessment

- Glasgow Coma Scale (GCS)
- Focal deficits (motor, sensory, language)
- Seizure history and control
- Intracranial pressure signs (headache, nausea, papilledema)

### 3. Imaging and Laboratory Studies

- Preoperative MRI / CT
- Angiography or tractography if required
- Routine bloodwork (CBC, coagulation, renal function, electrolytes)
- ECG / Chest X-ray (if risk factors present)

### 4. Risk Classification

- ASA Physical Status Classification

- Revised Cardiac Risk Index
- Anesthetic risk notes

## 5. Functional Status

- Karnofsky Performance Status (if tumor patient)
- Barthel Index or modified Rankin Scale
- Nutritional status

## 6. Anesthesia and Surgical Planning

- Anesthesia type and special considerations (e.g. awake craniotomy)
- Intraoperative neurophysiological monitoring plan
- Blood products / ICU bed reserved
- Antibiotic prophylaxis and DVT prevention plan

## 7. Consent and Patient Instructions

- Procedure explained and documented
- Informed consent signed
- Pre-op fasting instructions
- Medication adjustment plan (e.g. stop anticoagulants, continue antiepileptics)

## Notes

- All findings to be documented in the [preoperative checklist](#).
- Multidisciplinary discussion recommended for high-risk or complex cases.

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