

Guidelines for Preoperative Tests for Elective Surgery

Key Points

- Guidance on pre-operative tests required against ASA grade and surgical grade (complexity) of surgery
- Guidance on surgical grade by speciality
- Guidance on ASA grade

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Abbreviations

ASA	American Society of Anesthesiologists
AKI	Acute Kidney Injury
AF	Atrial Fibrillation
BMI	Body Mass Index
CKD	Chronic Kidney Disease
CVA	Cerebrovascular Accident
DCR	Dacryocystorhinostomy
EUA	Examination Under Anaesthetic
ECG	Electrocardiogram
FESS	Functional Endoscopic Sinus Surgery
GORD	Gastro-oesophageal reflux disease
HoLEP	Holmium Laser Enucleation of the Prostate
SOBOE	Shortness of Breath on Exertion
TURBT	Transurethral Resection of Bladder Tumour

TURP	TURP Transurethral Endoscopic Resection of Prostate
NICE	National Institute for Health and Care Excellence

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Aim of Guideline

To give guidance on the use of routine preoperative tests for elective surgery.

Excessive testing can cause significant anxiety in patients, delays in treatment and unnecessary, costly, and possibly harmful treatments. Moreover, even genuinely abnormal results often do not result in any significant change in perioperative management in relatively healthy patients (NICE NG45 2016)¹.

These guidelines are a general rule, principle or advice developed from evidence-based best practice to further support implementation of best practice in requesting pre-operative tests for elective surgery. These include actions and requirements. Individual circumstances may necessitate deviation from guidelines, but if this occurs it should be documented.

Guidelines for Preoperative Tests for Elective Surgery

Full list of recommendations

Communication

1. When offering tests before surgery, give people information in line with recommendations (including those on consent and capacity) made in the NICE guideline on patient experience in adult NHS services.²
2. Ensure that the results of any preoperative tests undertaken in primary care are included when referring people for surgical consultation.

Considering existing medicines

3. Take into account any medicines people are taking when considering whether to offer any preoperative test.

Resting ECG

4. Resting ECG

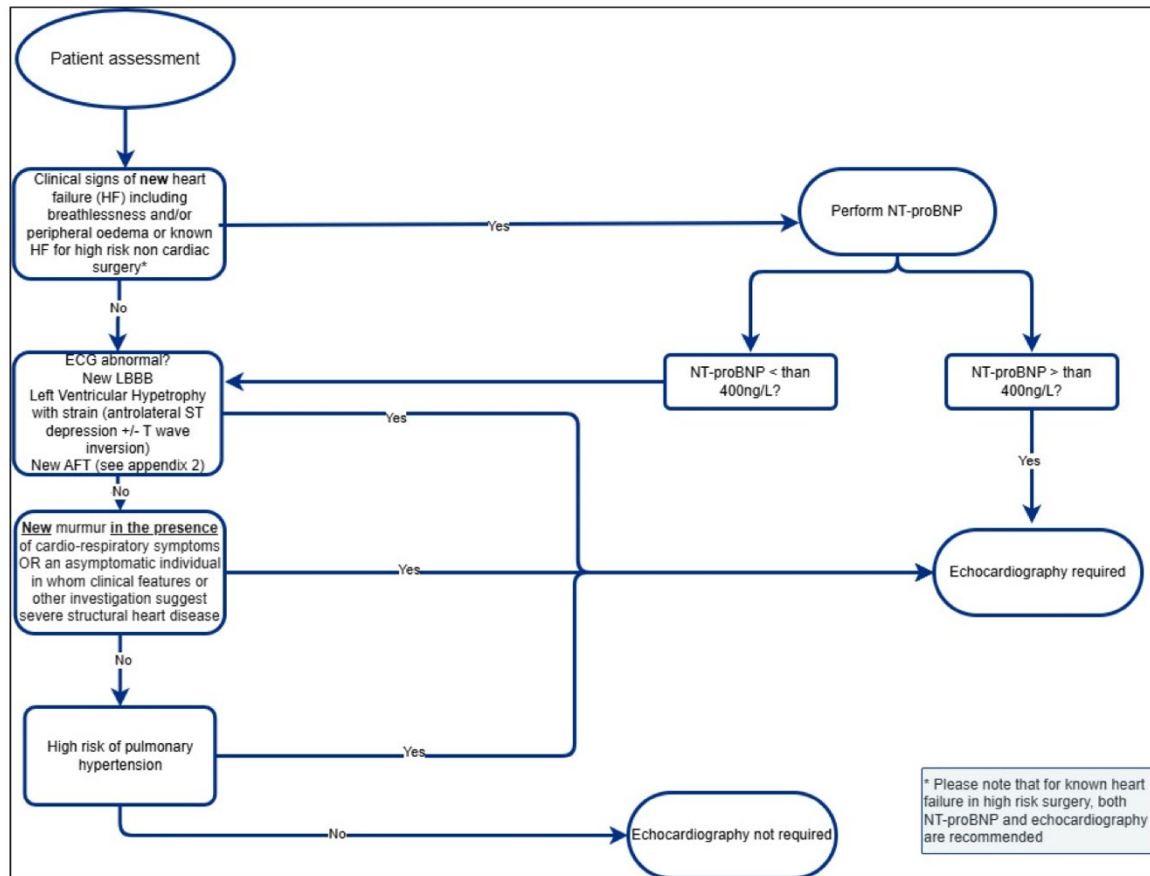
Resting ECG	Surgery Grade		
ASA Grade	Minor	Intermediate	Major/complex
ASA 1	Do not routinely offer	Do not routinely offer	Consider for people aged over 65 if no ECG results available from past 12 months
ASA2	Do not routinely offer	Consider for people with cardiovascular, renal or diabetes comorbidities	Offer
ASA3 or 4	Consider if no ECG results available from past 12 months	Offer	Offer

Resting echocardiography

5. Do not routinely offer resting echocardiography before surgery.

6. Consider performing a NT-proBNP on patients if they display clinical signs of new heart failure including breathlessness and/or peripheral oedema or known HF for high-risk non-cardiac surgery (refer to flow chart below).

Summary NT-proBNP and echocardiograph flow chart



Chest X-ray

7. Do not routinely offer chest X-rays before surgery.

Lung function tests and arterial blood gas analysis

8. Do not routinely offer lung function tests or arterial blood gas analysis before surgery.

9. Consider seeking advice from a senior anaesthetist as soon as possible after assessment for people who:

- are ASA grade 3 or 4 due to known or suspected respiratory disease and
- are having intermediate or major or complex surgery.

Full blood count test

10. Full Blood Count

Full Blood Count	Surgery Grade		
ASA Grade	Minor	Intermediate	Major/complex
ASA 1	Do not routinely offer	Do not routinely offer	Offer
ASA2	Do not routinely offer	Do not routinely offer	Offer
ASA3 or 4	Do not routinely offer	Consider for people with cardiovascular or renal disease if any symptoms not recently investigated	Offer

Kidney Function Test

11. Kidney Function Test

Kidney Function Test	Surgery Grade		
ASA Grade	Minor	Intermediate	Major/complex
ASA 1	Do not routinely offer	Do not routinely offer	Consider in people at risk of AKI ^(a)
ASA2	Do not routinely offer	Consider in people at risk of AKI ^(a)	Offer
ASA3 or 4	Consider in people at risk of AKI ^(a)	Offer	Offer

Haemostasis tests

12. Do not routinely offer haemostasis tests before surgery.
13. Consider haemostasis tests in people with chronic liver disease having intermediate or major or complex surgery.
 - If people taking anticoagulants need modification of their treatment regimen, make an individualised plan in line with local guidance.
 - If clotting status needs to be tested before surgery (depending on local guidance) use point-of-care testing.^(b)

Glycated haemoglobin (HbA1c) test in people with diagnosed diabetes

14. People with diabetes who are being referred for surgical consultation from primary care should have their most recent HbA1c test results included in their referral information.
15. Offer HbA1c testing to people with diabetes having surgery if they have not been tested in the last 3 months or the last test result was abnormal (HbA1c > 69mmol/mol)

Glycated haemoglobin (HbA1c) test in people without diagnosed diabetes

16. Do not routinely offer HbA1c testing before surgery to people without diagnosed diabetes.

Sickle cell disease or sickle cell trait tests

17. Do not routinely offer testing for sickle cell disease or sickle cell trait before surgery.
18. Ask the person having surgery if they or any member of their family have sickle cell disease.
19. If the person is known to have sickle cell disease and has their disease managed by a specialist sickle cell service, liaise with this team before surgery.

Urinalysis

20. Do not routinely offer urine dipstick tests before surgery.
21. Consider microscopy and culture of midstream urine sample before surgery if the presence of a urinary tract infection would influence the decision to operate.

a See recommendation 1.1.8 in NICE CG169: Acute kidney injury: prevention, detection and management (2013) ³

b Note that currently the effects of direct oral anticoagulants (DOACs) cannot be measured by routine testing.

Surgery Grades (for the purpose of Pre-operative tests)

	Minor	Intermediate	Major/Complex
General Surgery	Perianal abscess, EUA, colonoscopy/ Oesophago-gastro-duodenoscopy/ sigmoidoscopy, haemorrhoidectomy	Abdo wall hernia (open or laparoscopic), fistula surgery	Laparoscopic or open bowel resection/ incisional hernia repair/ gastrectomy/ splenectomy/ cholecystectomy/ hiatus hernia surgery
Breast	Abscess drainage	Wide Local Excision	Mastectomy, flap and reconstructive surgery
Vascular	Varicose veins under local anaesthesia	Varicose veins under general anaesthesia, Porto-cath insertions, Thoracic outlet surgery, Digit amputation	Aortic, carotid, endarterectomy/ embolectomy surgery, vascular bypass surgery, major joint amputations
Gynae	Hysteroscopy, colposcopy, vulval biopsy	Laparoscopy +/-proceed, colposuspension	Vaginal/ total hysterectomy, Salpingo-oophorectomy, myomectomy, ovarian cystectomy
ENT	EUA/ Pharyngoscopy, MUA nose, neck node biopsy, oesophagoscopy, grommets	Tonsillectomy, adenoidectomy, septo/ rhinoplasty, FESS, microlaryngoscopy, submandibular excision, tongue base biopsy	Thyroidectomy, parathyroidectomy, parotidectomy, myringoplasty, tympanoplasty, ossiculoplasty, mastoidectomy
Dental/ maxfax	Dental extractions, EUA, oral lesion excision/biopsy, lymph node biopsy, oral lumps and bumps, obturator change	Done at Northwick Park/ Royal Surrey County Hospital	Done at Northwick Park/ Royal Surrey County Hospital
Orthopaedic	Spinal injection, MUA joint,	Joint (shoulder, knee, ankle, hip) arthroscopy, foot surgery, bunion surgery	Joint (shoulder, elbow, hip, knee, ankle) implant surgery, discectomy/ decompression/ spinal fusion or stabilisation surgery, cervical discectomy/fusion, all revision surgery, ankle fusion,
Plastics	Excision skin lesion, I&D, skin suturing, carpal tunnel, laser skin,	Hand and wrist surgery, skin grafts	DIEP, latissimus dorsi flap
Eyes	EUA	Cataract, retinal surgery, vitrectomy, DCR	
Urology	Cystoscopy, urethral dilatation, JJ stent insertion or removal, circumcision, verapamil injection, penile biopsy	Laser stones, urethrotomy, TURBT, bladder biopsy, prostate biopsy, orchidectomy, Lues procedure, suprapubic catheter under GA	TURP, HoLEP, nephrectomy, percutaneous nephro lithotomy (PCNL)

ASA GRADING - (for purposes of pre op testing)

ASA1 – fit and well, non-smoker

ASA2 – chronic medical condition with no restrictions to day-to-day activity or complications, e.g., treated hypertension, mild asthma, NIDDM without complications; smoker; BMI >30; well controlled epilepsy; GORD; controlled AF

ASA 3 – chronic medical condition with restrictions to daily activities or complications, e.g., ischaemic heart disease/ angina, systemic arthritis (e.g. rheumatoid); CKD stage 3; BMI >40, moderate/severe asthma, IDDM, poorly controlled epilepsy; CVA; COPD; unable to lie flat due to breathing issues, dialysis

ASA 4 – unstable cardiac disease, recent (<3 months) MI or CVA, severe valve dysfunction, end-stage renal failure not on dialysis, clinical frailty score 7-9, severe respiratory disease (SOB minimal exertion), severe dementia such as Alzheimer's disease

References

1. NICE (2016) *Routine preoperative tests for elective surgery*. NG45. Available at: <https://www.nice.org.uk/guidance/ng45>.
2. NICE (2021) *Patient experience in adult NHS services: improving the experience of care for people using adult NHS services*. CG138. Available at: <https://www.nice.org.uk/guidance/cg138>.
3. GIRFT (2025) *Guide to pre-operative testing: N-terminal prohormone of Brain Natriuretic peptide (NT-ProBNP) and echocardiography*. Available at: <https://gettingitrightfirsttime.co.uk/wp-content/uploads/2025/02/Guide-to-preoperative-testing-NT-ProBNP-and-Echocardiography-FINAL-February-2025.pdf>
4. NICE (2024) *Acute kidney injury: prevention, detection and management*. NG148. Available at: <https://www.nice.org.uk/guidance/ng148>.

Full version control record

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Guidelines Lead(s):	Dr Elliott Ridgeon, Consultant Anaesthetist WPH, Dr Amer Qureshi, Consultant Anaesthetist WPH
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This guideline is for use in Frimley Health NHS Foundation Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

Version Control Sheet

Version	Date	Guideline Lead(s)	Status	Comment
1.0	Sept 2018	Consultant Anaesthetist Lead for Pre-op assessment Workstream cross-site	Final	Approved Joint Anaesthetics Clinical Governance Committee Sept 2018. Reviewed March 2022 (no changes)
1.1	April 2022	Clinical Guidelines Administrator	Interim	Transferred to new Clinical Guidelines Template.
2.0	June 2026	Dr Elliott Ridgeon, Consultant Anaesthetist WPH, Dr Amer Qureshi, Consultant Anaesthetist WPH	Final	Anaesthesia and Theatre Clinical Governance Committee Meeting 18 th March 2026

Related Documents

Document Type	Document Name
Policy	Referral to Treatment 18 Weeks Patient Access