NHS England

GIRFT
GETTING IT RIGHT FIRST TIME

Interventional Radiology (IR) Preoperative Assessment Guide:

For patients having local anaesthetic, mild or moderate sedation and without the requirement for anaesthesia/airway support

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SOCIETY OF ANAESTHESIA & RADIOLOGY

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Introduction

The Getting it Right First Time (GIRFT) programme has recognised through provider feedback, both via the preoperative assessment (POA) non-medical network and on-site reviews, that there is unwarranted variation and challenges in preoperative screening and diagnostic pathways.

These can affect timing of elective surgical pathways, especially if there is a short time interval between POA and the to-come-in (TCI) date. Specifically, unwarranted variation in preoperative screening and diagnostic pathways can result in postponements being made at POA, as well as on-the-day cancellations.

Furthermore, while NICE[1] guidance on preoperative testing is readily available, additional practical guidance is needed to standardise practice operationally across provider sites. Preoperative assessment of interventional radiology procedures is one such area of unwarranted variation where it has been identified that additional guidance is required.

As such, this guide forms part of a wider series developed by the GIRFT programme, designed to support providers in streamlining their preoperative screening and diagnostic pathways. The overarching aim is to enhance the perioperative pathway by ensuring diagnostic testing is appropriately targeted, in accordance with current guidance and evidence. By adopting these principles, providers can help prevent unnecessary postponements and avoidable on-the-day cancellations, thereby improving patient flow and overall surgical outcomes.

Who should read this guide?

This document is aimed at clinicians who are involved in the preoperative assessment (POA) and treatment of patients undergoing IR procedures, including:

- POA clinical and operational teams;
- interventional radiology (IR) clinical and operational teams;
- booking and scheduling teams;
- theatre and ward teams.

[1] Overview | Routine preoperative tests for elective surgery | Guidance | NICE

What is the guide's aim?

The aim is to create guidance for a standardised approach to the preoperative assessment (POA) of patients undergoing IR procedures **without** the requirement for surgical or anaesthetic/airway support with the overall aims of:

- Reducing unnecessary testing for patients undergoing IR procedures, as well as reducing unnecessary escalation on referral and optimisation.
- Reducing cancellations on the day.

Rationalising POA testing will increase efficiency at POA, as illustrated with this case study.

What is Interventional radiology?

Interventional radiology (IR) has evolved to become a key subspecialty in improving patient outcomes, by delivering minimally-invasive treatments for a wide range of pathologies. Procedures use real-time imaging techniques, including X-rays, ultrasound and CT, together with small instruments such as catheters and wires, to guide the operator to the affected structures and organs. IR is involved in both the diagnosis and treatment of patients. For more information about what IR is and the various types of procedure please see BSIR guidance[2] .

Procedures included in this guide's scope:

- ✓ IR procedures performed under local anaesthetic (LA).
- ✓ IR procedures performed under minimal/moderate sedation that do not require surgical, anaesthetic or airway support (for further details please click here).

Procedures that do not meet these criteria should follow a specific anaesthesia-supported care pathway.

[2] What is Interventional Radiology? | BSIR

Our guidance for best practice delivery of POA for patients undergoing IR

The key principles for best practice delivery of POA for patients undergoing IR procedures are highlighted in the blue boxes below, organised by theme. Where further detail or context is required for implementation, this information is also provided. This guidance is summarised in a flow chart on page 9.

Identified patient risk factors and onward referral

By default, patients who are ASA grade one or two (low, medium risk) should follow a virtual POA IR non-medical practitioner pathway without the need for formal review. Patients who are ASA grade 3 or greater (higher risk) may require consultation/further assessment by face-to-face consultation with an interventional radiologist, POA anaesthetic team or a senior decision maker. The quick reference table provided should be used in the management of risk at POA for patients undergoing interventional radiology procedures.

Table 1: Quick reference table for management of patient risks at preoperative assessment

Quick reference table: Identified patient risks and onward referral	GETTING IT RIGHT FIRST TIME
Patient risk factors	**What to do**
Unable to lie flat or requiring hoist	Ensure that equipment is available to aid the procedure and escalate to the medical teams if there is a requirement to lie flat.
Chronic disease that is poorly controlled or requiring regular specialist input	**This group of patients may need onward assessment to discuss risks/assess the type of sedation required by a senior decision maker** ○ Uncontrolled diabetes ○ Severe cardio-respiratory conditions such as angina/COPD ○ Obstructive sleep apnoea ○ Chronic pain/opioid use
Increased risk of bleeding	Refer to IR Procedure Bleeding Risk Guidance to assess bleeding risk for unmedicated patients and standardised instructions for patients taking anti-thrombotic medication.

Lacking appropriate support at home	Many IR procedures can be performed as day cases but may require home support after the procedure. Any requirements should be discussed with the patient to ensure that there is a plan in place for safe discharge.
Infection, Prevention and Control (IPC) considerations	Targeted screening should be performed to identify risk of infection. Useful guidelines for MRSA can be found here.
Pre-procedure preparation	Provide preparation instructions and complete targeted preoperative testing (find BSIR patient information leaflets here).
Patient-centred needs	Address communication, language, cultural, spiritual, social, physical, mental needs; deliver patient-centred care.
Consent	Obtain consent like any surgery; address incapacity issues via an informed consent process.
Current smoker	Simultaneous referral to local services for smoking cessation support.
High alcohol consumption	For patients deemed at **increased** operative risk secondary to alcohol consumption (AUDIT score of 8-19) brief behavioural intervention should be considered. For **high** risk or **alcohol dependent** patients (AUDIT >19) community alcohol detoxification referral is recommended.
Documentation	Review essential documentation; ensure single listing-to-discharge pathway with demographics, screening, Making Every Contact Count captured.
For any of the above, local services should decide if patients require face-to-face assessment.	

Targeted testing

By default, patients undergoing IR procedures should not receive preoperative testing, other than urea and electrolytes. Preoperative tests should only be ordered if it will affect management, given the patient's history and the procedure that they will be having. Detailed guidance on individual tests are provided In the table below.

Table 2: Best practice advice for preoperative tests in interventional radiology

Type of POA test	Our advice
Urea and electrolytes	Yes - for procedures using contrast only (unless there is a valid result within the last three months)
Full blood count	Not usually required
Infection Prevention and Control (IPC) screening	Where there has been an identified risk (such as MRSA/CPE) follow GIRFT guidance on screening for MRSA[3] and localised guidance.
Clotting (including International Normalised Ratio)	Refer to IR Procedure Bleeding Risk Guidance[4]
Electrocardiogram	Not usually required
Glycated haemoglobin (HbA1c)	Not usually required

[3] Guide to preoperative testing: adult MRSA screening and suppression/eradication prophylaxis for patients who are on an elective surgical pathway
[4] IR Procedure Bleeding Risk Guidance

Risks and complications associated with interventional radiology

Patients should have the opportunity to be part of an informed consent process and be involved in discussions around risk before the day of the procedure. Fasting times should be considered for those patients requiring moderate sedation; this should be in line with local GA guidance.

While IR procedures are minimally invasive, risks and complications can happen, although these are often lower when compared to open surgical procedures.

Complications typically include:

- haematoma;
- haemorrhage;
- infection;
- pain.

Role of the health professional for POA in interventional radiology

All patients undergoing LA or sedation for procedures should be pre-assessed to ensure their fitness and suitability for the procedure. Assessments may occur in nurse-led/practitioner clinics but should be performed by a suitable registered practitioner who understands and has knowledge of IR. Centralised POA clinics should follow a separate pathway for those patients who are complex or require deep sedation, anaesthesia, or airway support[5]. The assessment and resultant pre-procedure plan should be documented and available at the time of procedure.

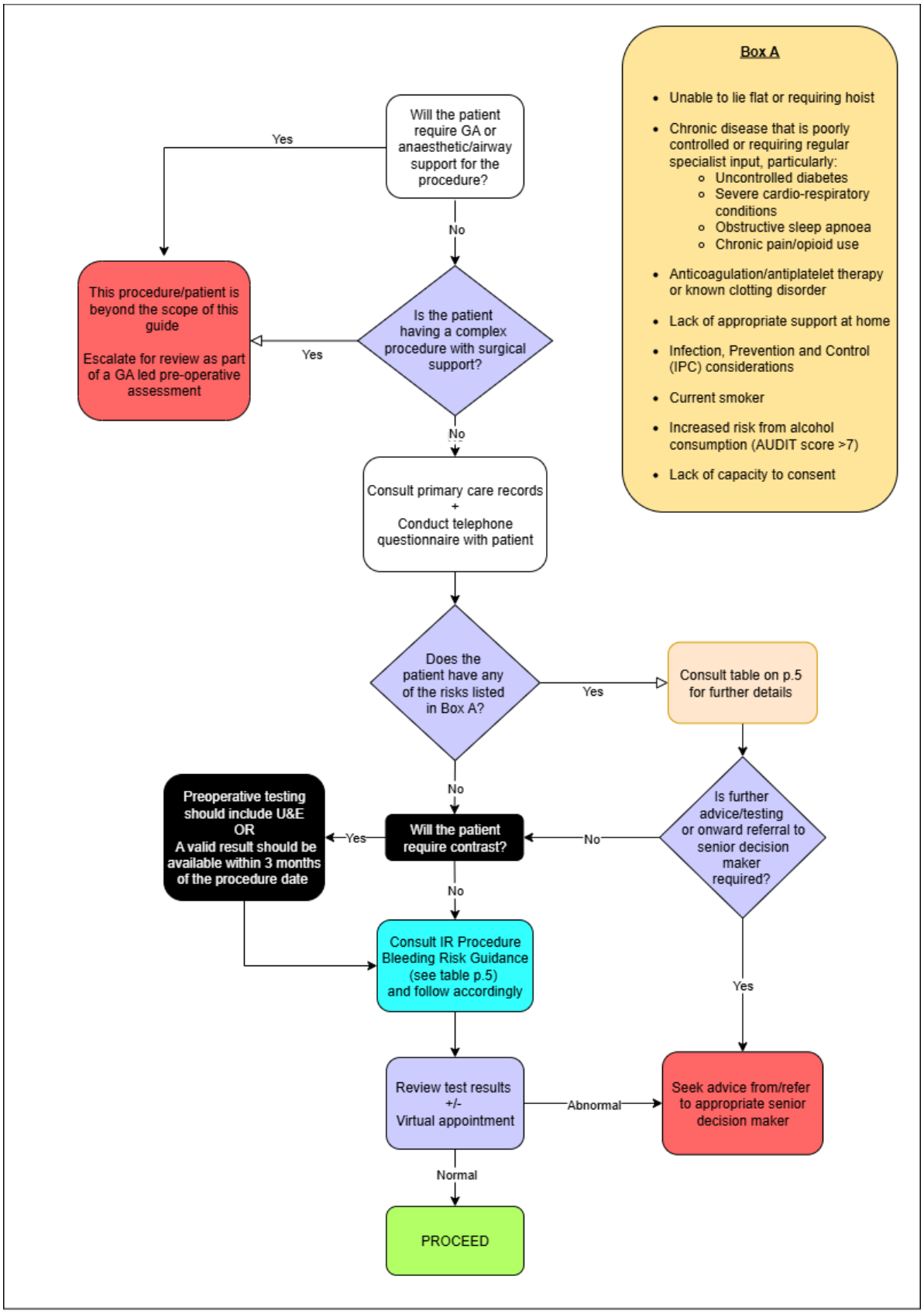
Identified patient risks that may affect the ability to undertake the procedure or where further review and/or treatment is necessary should be escalated to a senior decision maker i.e. interventional radiologist, which may affect the decision on how the procedure is performed and/or if the patient requires anaesthetic support or further assessment.

Interventional radiology preoperative assessment decision tool

The flow chart overleaf provides a concise summary of our guidance and is designed to assist you with preoperative decision making for patients undergoing interventional radiology procedures. By following this visual aid, you can ensure that each step of the assessment and planning process is addressed, supporting safe and effective patient care in line with best practice.

[5] GIRFT-Pre-operative-assessment-guidance-FINAL-V1-July-2023.pdf

Figure 1: Interventional radiology preoperative assessment decision tool



Service, governance overview and audit

The responsibility for POA of patients undergoing IR procedures will vary by trust. In some areas, this takes place within dedicated IR departments by ward or IR-based staff who support the team with the procedure. In other areas, this is completed by general anaesthetic or surgical POA teams. While there is no prescriptive recommendation on who can complete the POA, it is vital that the practitioners who do follow standardised guidance and have a governance structure to allow for escalation of patient risks. This will be to a senior decision maker who has clinical responsibility for the service.

As with any implementation of new guidance, it is important to ensure that there is regular audit and opportunities for feedback across the team. Key performance indicators for new guidance should include:

- patient and staff feedback;
- postponements and cancellations at POA and on the day of the procedure;
- DNA rates
- variation on consent processes;
- post procedural complications.

Children and young people (CYP)

It is essential to provide preoperative assessment for children undergoing sedation. Decisions on whether the procedure is better performed under GA should be discussed with the parent or carer during the initial consultation. POA should include:

- evaluation of current medical condition;
- past medical history (particularly related to prior sedation or anaesthesia);
- medication history and physical status, including airway problems and psychological/developmental status;
- the preferences of the child and parents/carer should be considered as described in Royal College of Radiology guidance[6].

Sustainable service provision

Successful adoption of this guidance will help improve the environmental sustainability of preoperative assessment services by increasing use of virtual service delivery and by preventing over testing. Both of these points are discussed in further detail below.

[6] https://www.rcr.ac.uk/our-services/all-our-publications/clinical-radiology-publications/sedation-analgesia-and-anaesthesia-in-radiology-third-edition/

Virtual outpatient appointments:
By arranging outpatient consultations as virtual by default, especially for those patients that are deemed low risk, significant reductions in travel-associated carbon emissions can be made[7]. In addition to the environmental benefits, inequalities for those patients with access issues can also be avoided.

Prevent over-testing:
Investigations can be rationalised according to recent pre-existing records to avoid unnecessary duplication. This avoids the environmental and financial implications associated with unnecessary investigations. Patient travel to healthcare settings for unnecessary investigations to be performed can be minimised in this way.

[7] Purohit A, Smith J, Hibble A. Does telemedicine reduce the carbon footprint of healthcare? A systematic review. Future Healthcare J. 2021;8(1):e85-e91

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About GIRFT and the GIRFT Academy

Getting It Right First Time (GIRFT) is a clinically-led national programme designed to identify and minimise unwarranted variation in treatment and care delivered. It undertakes clinically-led reviews of specialties, combining wide-ranging data analysis with the input and professional knowledge of senior clinicians to examine how things are currently being done and how they could be improved.

The programme has the backing of the Royal Colleges and professional associations and has a significant and growing presence on the Model Health System portal, with its data-rich approach providing the evidence for hospitals to benchmark against expected standards of service and efficiency.

The GIRFT model has now been applied in more than 50 different areas of clinical practice. It consists of five key strands:

1. Data gathering – a broad data gathering and analysis exercise, generating a detailed picture of current national practice and outcomes.
2. Peer reviews – direct clinical engagement via visits or virtual meetings between clinical leads and trust teams; an opportunity to examine trust behaviour in the context of the national picture, enabling teams to understand where they are performing well and what they can do better.
3. National report and Academy resources – production of national reports that draw on data analysis and discussions with provider teams to identify opportunities for improvement, locally, regionally and nationally, alongside - clinical resources such as best practice pathways and guides.
4. Support to deliver – the implementation phase where the GIRFT team supports trusts, commissioners and integrated care systems to deliver the improvements recommended.
5. Research and development – GIRFT fellowships support resident doctors, nurses and allied health professionals to develop their research and clinical improvement skills, delivering research projects and GIRFT identified improvements in their host provider, system or region.

For the latest version of this document, please see www.gettingitrightfirsttime.co.uk or Getting It Right First Time - FutureNHS Collaboration Platform

GIRFT and a greener NHS

Climate change is one of the greatest health threats and opportunities of the 21st century. The NHS is acting now to mitigate and adapt to this threat in order to protect the health of current and future generations. Doing so will not only protect the environment but will also bring many health, social and financial benefits. As the largest employer in the UK, contributing 4.6% of national emissions, the NHS is both part of the challenge and the solution.

Through its endeavour to improve the quality of care within the NHS by reducing unwarranted variation, GIRFT can play an important role in reducing the carbon emissions associated with care delivery. Through the GIRFT model, there is the opportunity to identify changes that will help reduce the NHS carbon footprint and therefore improve patient care now and in the future.

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