



IR PROCEDURE BLEEDING RISK GUIDANCE^a

PRE-ASSESSMENT SCREENING

All patients, not on anti-thrombotic therapy, can be initially assessed using the HEMSTOP questionnaire below (each question scores 1 for yes):

- Have you ever consulted a doctor or received treatment for prolonged or unusual bleeding (such as nosebleeds, minor wounds)?
- Do you experience bruises/haematomas larger than 2 cm without trauma or severe bruising after minor trauma?
- After a tooth extraction, have you ever experienced prolonged bleeding requiring medical/dental consultation?
- Have you experienced excessive bleeding during or after surgery?
- Is there anyone in your family who suffers from a bleeding disorder (such as haemophilia or von Willebrand disease)?
- Have you ever consulted a doctor or received treatment for heavy or prolonged menstrual periods (contraceptive pill, iron etc.)?
- Did you experience prolonged or excessive bleeding after delivery?

If < 2 positive responses:

LOW RISK PROCEDURES: No coagulation screen or FBC required

MODERATE/HIGH RISK PROCEDURES: No coagulation screening required; FBC only

If ≥ 2 positive responses:

Perform coagulation screen (FBC, PT, APTT, Clauss fibrinogen assay) and discuss with haematologist prior to procedure

BLEEDING RISK STRATIFICATION FOR COMMON IR PROCEDURES^b

LOW RISK INTERVENTIONS

Basic venous interventions (IVC filter insert/removal)
Superficial interventions/biopsies (excluding liver/renal)
GI tract stenting
MSK interventions
US guided drainages
Catheter exchange/removal

MODERATE RISK INTERVENTIONS

Arterial interventions (≤ 6F)
Embolisation (TACE/UAE/PAE)
Venous/dialysis access interventions
Tunnel line insertions^c
If on vit K antagonist INR: < 2.0

HIGH RISK INTERVENTIONS

Arterial interventions (≥ 7F)
Aortic stent grafting
Tumour ablation
PCNL/renal biopsy/nephrostomy
TIPSS/TJ liver biopsy
Liver biopsy/biliary intervention

PRE-PROCEDURAL BLOOD PARAMETERS REQUIREMENTS

LOW RISK INTERVENTIONS

No procedure specific laboratory tests

MODERATE RISK INTERVENTIONS

Hb: > 70 g/L
Plts: > 50 x 10⁹/L
If on vit K antagonist INR: < 2.0

HIGH RISK INTERVENTIONS

Hb: > 70 g/L
Plts: > 50 x 10⁹/L
If on vit K antagonist INR: < 1.5

LIVER DISEASE^d

Consider correction if: Fibrinogen: < 1.2 g/L Plts: < 50 x 10⁹/L Haematocrit < 25%

^a This is summary guidance and complementary to more detailed guidance: British Journal of Haematology 2024; 204 (5): 1697-1713
^b This guidance is not meant to be exhaustive for every variance of every procedure, and local policies and operator judgement remain important when balancing risk of thrombosis versus bleeding - these discussions should ideally be part of the consent process
^c Platelet count of >30 x 10⁹/L is an acceptable target
^d Neither PT nor INR correlate well with bleeding risk in patients with liver disease

PRE-PROCEDURAL ANTI-THROMBOTIC MEDICATION INSTRUCTIONS*

*CONSIDERATIONS:

- Cardiac stents and stroke or thrombosis within 3 months: consult appropriate clinical team
- Patients on dual antiplatelet therapy, ticagrelor or prasugrel: follow local policy or consult appropriate specialist
- Follow local Trust policy for referral to bridging clinic
- Bleeding and thrombosis risks should be discussed as part of the consent process

HEPARINS: Low Risk Procedures

	Hold duration prior to procedure	Suggest restart time following procedure
Unfractionated Heparin	2-4 h	6 h
LMWH (prophylactic)	12 h	6-12 h
LMWH (therapeutic)	1 day	6-12 h

HEPARINS: Moderate/High Risk Procedures

	Hold duration prior to procedure	Suggest restart time following procedure
Unfractionated Heparin	4 h	12-48 h
LMWH (prophylactic)	12 h	1 day
LMWH (therapeutic)	1 day	1-3 days

Vitamin K Antagonists: Low Risk Procedures | INR < 2.0 on day of procedure

	Hold duration prior to procedure	Suggest restart time following procedure
Warfarin/Acenocoumarol	2-3 days	Evening

Vitamin K Antagonists: Moderate/High Risk Procedures | INR < 1.5 on day of procedure

	Hold duration prior to procedure	Suggest restart time following procedure
Warfarin/Acenocoumarol	5 days	12-24 h

Thrombin Inhibitors: Low Risk Procedures (as per PAUSE protocol)

	Hold duration prior to procedure	Suggest restart time following procedure
Dabigatran	1 day if eGFR > 50 2 days if eGFR < 50	1 day
Argatroban	2-4 h	6 h

Thrombin Inhibitors: Moderate/High Risk Procedures (as per PAUSE protocol)

	Hold duration prior to procedure	Suggest restart time following procedure
Dabigatran	2 days if eGFR > 50 4 days if eGFR < 50	2-3 days
Argatroban	4 h	6 h

Factor Xa Inhibitors: Low Risk Procedures (as per PAUSE protocol)

	Hold duration prior to procedure	Suggest restart time following procedure
Apixaban/Rivaroxaban/Edoxaban	Omit 1 day prior	Restart after 1 day
Fondaparinux (prophylactic)	1 day	6 h
Fondaparinux (therapeutic)	2 days	6 h

Factor Xa Inhibitors: Moderate/High Risk Procedures (as per PAUSE protocol)

	Hold duration prior to procedure	Suggest restart time following procedure
Apixaban/Rivaroxaban/Edoxaban	Omit 2 days prior	Restart after 2-3 days
Fondaparinux (prophylactic)	1 day	12-24 h
Fondaparinux (therapeutic)	2 days	12-24 h

Aspirin & ADP Receptor Inhibitors: Low Risk Procedures

	Hold duration prior to procedure	Suggest restart time following procedure
Aspirin/ Clopidogrel/Ticagrelor/Prasugrel	Does not need to be stopped	N/A

Aspirin & ADP Receptor Inhibitors: Moderate/High Risk Procedures

	Hold duration prior to procedure	Suggest restart time following procedure
Aspirin (low dose monotherapy)	Does not need to be stopped	N/A
Clopidogrel	VASCULAR: Operators discretion NON-VASCULAR: 7 days	VASCULAR: Operators discretion NON-VASCULAR: 1 day
Ticagrelor/Prasugrel	7 days	1 day

Nucleoside transport inhibitor and PDE3 inhibitor: Low to High Risk Procedures

	Hold duration prior to procedure	Suggest restart time following procedure
Dipyridamole	Omit on day of procedure	N/A