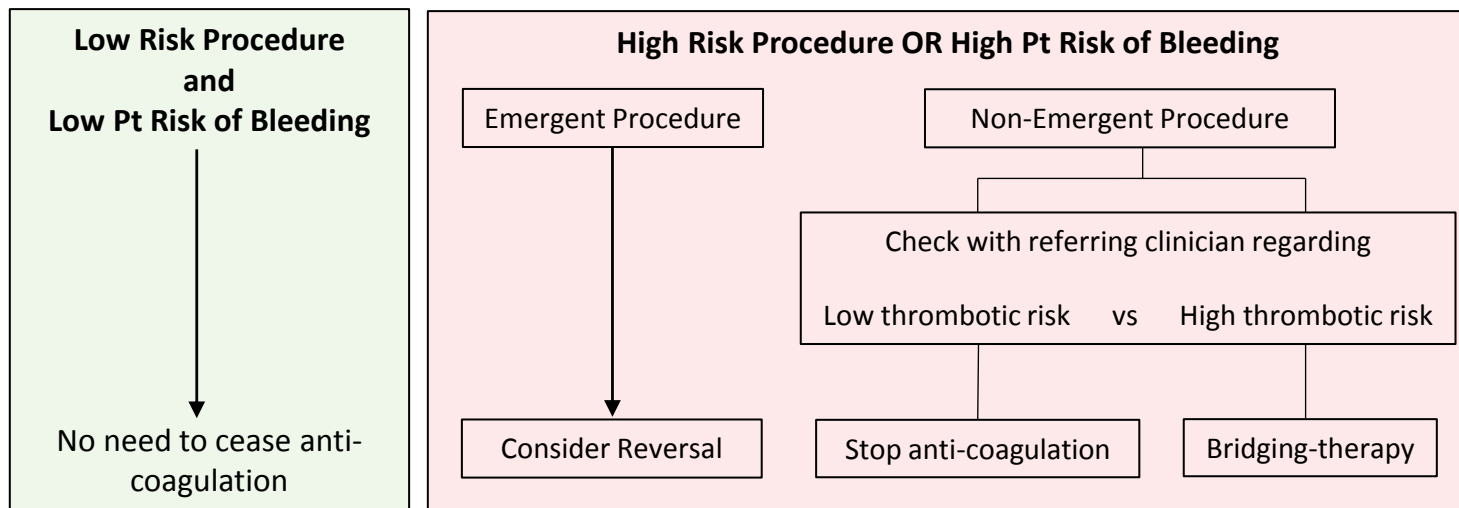


WESTERN HEALTH RADIOLOGY DEPARTMENT ANTICOAGULATION GUIDELINES REFERENCE CHART



Low Risk Procedures

- Arterial interventions: Peripheral 6F and smaller
- Catheter/drain tube exchanges
- Dialysis access interventions
- MSK injections
- PICC lines
- Superficial drainages/biopsies (soft tissue, LN, thyroid, superficial bone)
- T and L-spine procedures (facet, NRI, LP)
- Thoracocentesis and paracentesis
- Transjugular liver biopsy
- Tunneled venous catheter placement/removal
- Venography and venous interventions (incl pelvic, extremities, non-complex IVC filter placement and removal)
- **INR correct above 3.0**
 - Arterial access – femoral INR < 1.8, radial – INR < 2.2
- **Platelets transfuse if < 20**
- **Fibrinogen > 100**

High Risk Procedures

- Ablations (solid organs, bone, soft tissue, lung)
- Arterial interventions: Peripheral 7F and larger
- Arterial interventions: Non-peripheral (aortic, mesenteric, pelvic, CNS, TACE)
- Biliary interventions (incl PTC, cholecystostomy)
- Catheter-directed thrombolysis (DVT, PE, PV)
- Deep drainages/biopsies (lung, abdominal, pelvic, retroperitoneal, spine, solid organs, incl ultrasound and stereotactic breast biopsies)
- Gastrostomy/gastrojejunostomy placement
- IVC filter removal (complex)
- Portal vein interventions (incl PVE)
- Spinal procedures (epidural injections, cervical spine, vertebroplasty)
- Transjugular Intrahepatic Portosystemic Shunt (TIPS)
- Urinary tract interventions (incl nephrostomy)
- Venous interventions (intra-thoracic, CNS)
- **INR correct above 1.5**
- **Platelets transfuse if < 50**
- **Fibrinogen > 100**

Management of Anticoagulants and Antiplatelet Agents

	Low Risk	High Risk
Enoxaparin (Clexane®) - prophylactic	No need to cease	Withhold 1 dose before
Enoxaparin (Clexane®) - therapeutic		Withhold 24h before
Heparin – subcut		Procedure 6h aft last dose
Heparin – IV		Withhold 4h before
Aspirin		Cease for 5 days (except uss breast bx)
Clopidogrel (Plavix®)		Cease for 5 days
Dabigatran (Pradaxa®)		CrCl > 50 – withhold 4 doses CrCl < 50 – withhold 8 doses
Rivaroxaban (Xarelto®)		CrCl > 50 – withhold 2 doses CrCl < 50 – withhold 3 doses
Apixaban (Eliquis®)		CrCl > 50 – withhold 4 doses CrCl < 50 – withhold 6 doses
Ticagrelor (Brillinta®)		Withhold for 5 days
Warfarin ®	See above INR recommendations	

Assessment of Patient Bleeding Risk

HAS-BLED Score (4 or higher = high risk of bleeding)

Other risk factors for bleeding

- Prior bleeding within 3 months
- Prior bleeding with similar type of procedure
- Platelet abnormality
- INR above therapeutic range (Warfarin)
- Prior bleeding with bridging therapy
- Mechanical mitral heart valve
- Active cancer

HTN (SBP > 160)	1
Abnormal renal function (dialysis, renal transplant, Cr>200)	1
Abnormal LFT (cirrhosis or bili > 2xULN, AST or ALT >3xULN)	1
Prior stroke	1
History of major bleeding or predisposition to bleeding	1
Labile INR (time in therapeutic range <60%)	1
>65yo	1
Concomitant use of antiplatelet agent or NSAID	1
History of alcohol or drug use (>8 drinks per week)	1

*Chronic liver patients:

- paracentesis: No INR limit, require platelets >20 and fibrinogen >0.5 (as per hospital protocol)
- Low risk procedures: No INR limit, require platelets >20 and fibrinogen >1.0
- High risk procedures: INR < 2.5, require platelets >30 and fibrinogen >1.0

** Cardiac stent placed < 1yr: Continue aspirin, may with-hold second antiplatelet for 5 days before procedure, consult cardiology, vascular or internal medicine for management recommendations