



Appendix D: Relative Risk of Bleeding Associated with Common Invasive Procedures

Risk of Bleeding	Procedure
Very High Risk	<ul style="list-style-type: none"> • Neurosurgery (intracranial or spinal surgery) • Cardiac surgery (coronary artery bypass or heart valve replacement) • Neuraxial blockade (e.g., epidural)
High Risk	<ul style="list-style-type: none"> • Major vascular surgery (abdominal aortic aneurysm repair, aortofemoral bypass) • Major urologic surgery (prostatectomy, bladder tumour resection) • Major lower limb orthopaedic surgery (hip/knee joint replacement) • Lung resection surgery • Intestinal anastomosis surgery • Permanent pacemaker insertion or internal defibrillator placement • Colonoscopy with polypectomy or biopsy • Selected procedures (e.g., kidney biopsy, pericardiocentesis)
Intermediate Risk	<ul style="list-style-type: none"> • Other intra-abdominal surgery • Other intrathoracic surgery • Other orthopaedic surgery • Other vascular surgery • Selected procedures (prostate or cervical biopsy)
Low Risk	<ul style="list-style-type: none"> • Laparoscopic cholecystectomy • Laparoscopic inguinal hernia repair • Dental procedures • Dermatologic procedures • Ophthalmologic procedures • Coronary angiography • Gastroscopy or colonoscopy without polypectomy or biopsy • Selected procedures (bone marrow or lymph node biopsy, thoracentesis, paracentesis, arthrocentesis)
Very Low Risk	<ul style="list-style-type: none"> • Single tooth extraction or teeth cleaning • Skin biopsy or selected skin cancer removal • Cataract removal

For more information, see Management Guidelines for Patients Having Elective Invasive Procedures in Medical Imaging:

- Vancouver Coastal Health, Interventional Radiology (under links), website: www.vch.ca/locations-and-services/find-health-services/?program_id=2148
- Fraser Health, Interventional Radiology (under links), website: www.fraserhealth.ca/find-us/services/our-services?program_id=8647

Reference:

Bell AD, Roussin A, Cartier R, et al. The use of antiplatelet therapy in the outpatient setting: Canadian Cardiovascular Society Guidelines. *Can J Cardiol.* 2011;27:S1-59.