



- High Risk Bleeding:**
- Renal Biopsy
 - Liver Biopsy
 - TIPS
 - Thermal ablation
 - Nephrostomy tube placement
 - Biliary interventions (new tract)
 - Angiography/venous intervention
 - Chemoembolisation
 - Uterine fibroid embolization
 - Tunnelled venous catheter
 - Subcutaneous port device placement
 - Abscess drainage
 - Biopsy (excluding superficial)
 - Percutaneous cholecystostomy
 - Enteric tube placement (RIG/RIGJ/JEJ)
 - Enteric stent
 - Spinal Intervention (neuraxial anaesthesia/vertebroplasty/kyphoplasty)

- Tests & Thresholds:**
- **INR** - recommended (within 7 days of procedure)
 - **APTT** - recommended (correct so value ≤ 1.5x control)
 - **Platelet count** - recommended (transfuse if ≤ 50,000 μ L or ≤ 100,000 μ L if liver biopsy/ hepatobiliary intervention)
 - **Hb** ≥ 8g/dL for hepatobiliary
 - **Liver biopsy** - if INR>1.3 after Vit K, consider plugged or transjugular biopsy
- Non severe thrombophilia – eg heterozygous for factor V Leiden or heterozygous for prothrombin G20210A mutation
- Severe thrombophilia – eg deficiency of protein C, protein S or antithrombin, antiphospholipid syndrome or multiple/homozygous abnormalities

- STOP Clopidogrel/ Prasugrel/ Ticagrelor 7 days pre-procedure**
- Continue aspirin if on dual antiplatelets
Substitute aspirin if on single agent**
- Dabigatran:**
eGFR: >79ml/min – miss 3 doses (last dose 2 days before)
50-79ml/min – miss 5 doses (last dose 3 days before)
30-49ml/min – miss 7 doses (last dose 4 days before)
<30ml/min – contraindicated
- Apixaban:**
eGFR: >50ml/min – miss 3 doses (last dose 2 days before)
30-50ml/min – miss 4 doses (last dose 2 days before)
15-29ml/min – miss 4 doses (last dose 2 days before)
<15ml/min – contraindicated
- Rivaroxaban:**
eGFR: >30ml/min – miss 1 doses (last dose 1 day before)
15-29ml/min – miss 2 doses (last dose 2 days before)
<15ml/min – contraindicated

- STOP Liaise with Cardiology/ Haematology**
- Consider stopping Clopidogrel/ Prasugrel 7 days before procedure if:
>12 months after insertion of drug-eluting coronary stent
>1 month after insertion of bare metal coronary stent

References

1. Patel JJ, Davidson JC, Nikolic B et al. Addendum of newer anticoagulants to the SIR consensus guideline. J Vasc Interv Radiol 2013;**24**:641-5.
2. Foremny GB, Pretell-Mazzini J, Jose J et al. Risk of bleeding associated with interventional musculoskeletal radiology procedures. A comprehensive review of the literature. Skeletal Radiol 2015;**44**:619-27.
3. RUH Trust Haematology Guidelines (2016) Peri-operative management of antiplatelet agents.