Figure 2: Guidelines for the management of patients on warfarin or Direct Oral Anticoagulants (DOAC) undergoing endoscopic procedures: 2021 update

Low Risk Procedure
- Diagnostic procedures +/- biopsy
- Biliary or pancreatic stenting
- Device-assisted enteroscopy without polypectomy
- Oesophageal, enteral or colonic stenting
- EUS without sampling or interventional therapy

High Risk Procedure
- Polypectomy
- ERCP with sphincterotomy
- EMR/ESD
- Dilatation of strictures
- Therapy of varices
- PEG
- EUS-guided sampling or with interventional therapy
- Oesophageal or gastric radiofrequency ablation

Warfarin
- Continue Warfarin
  - Check INR 1 week before endoscopy
  - If INR within therapeutic range continue usual daily dose
  - If INR above therapeutic range but <5 reduce daily dose until INR returns to therapeutic range

DOAC
- Warfarin
  - Stop warfarin for 5 days before endoscopy
    - Check INR prior to procedure to ensure INR<1.5
    - Restart warfarin evening of procedure with usual daily dose
    - Check INR 1 week later to ensure adequate anticoagulation

- Low Risk Condition
  - Xenograft heart valve
  - AF without high risk factors
  - (CHADS2<4)
  - >3 months after VTE

- High Risk Condition
  - Prosthetic metal heart valve in mitral or aortic position
  - Prosthetic heart valve and AF
  - AF and mitral stenosis
  - AF with previous stroke/TIA and 3 or more of:
    - Congestive cardiac failure
    - Hypertension*
    - Age > 75 years
    - Diabetes mellitus
    - AF and stroke/TIA within 3 months
    - <3 months after VTE
    - Previous VTE on anticoagulation**

- Take last dose of drug 3 days before endoscopy
  - For dabigatran with CrCl (eGFR) 30-50ml/min take last dose 5 days before the procedure. In any patient with rapidly deteriorating renal function a haematologist should be consulted
  - Restart DOAC 2-3 days after procedure***

Warfarin
- Stop warfarin for 5 days before endoscopy
  - Check INR prior to procedure to ensure INR<1.5
  - Restart warfarin evening of procedure with usual daily dose
  - Check INR 1 week later to ensure adequate anticoagulation

DOAC
- Dabigatran
- Rivaroxaban
- Apixaban
- Edoxaban
- Omit DOAC on morning of procedure

- Low Risk Condition
  - Xenograft heart valve
  - AF without high risk factors
  - (CHADS2<4)
  - >3 months after VTE

- High Risk Condition
  - Prosthetic metal heart valve in mitral or aortic position
  - Prosthetic heart valve and AF
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    - Previous VTE on anticoagulation**

*Blood pressure >140/90mmHg or on antihypertensive medication
**Previous VTE on anticoagulation and target INR now 3.5
***depends on haemorrhagic and thrombotic risk, interval may be extended for ESD