# Perioperative Management of Warfarin

## Is the listing surgeon happy for warfarin to be continued perioperatively?

For some procedures warfarin may not need to be stopped:
- Dentistry
- Joint injections
- Cataracts
- Some GI endoscopy procedures (see endoscopy guidelines)

This decision is the responsibility of the listing surgeon

### YES

- Continue Warfarin
  - Monitor INR
    - Anticoagulation pharmacist to actively manage INR prior to surgery
  - Check INR on day of surgery

### NO

- Stop warfarin 5 days before surgery

## Pre-op assessment team to consider bridging with treatment dose LMWH in:

- Patients with a VTE within the last 3 months and surgery not deferrable (discuss with haematologist as may need IVC filter)
- Patients with a previous VTE whilst on therapeutic anticoagulation who now have a target INR above 2.5
- Patients in AF with a previous stroke/TIA/arterial embolus in last 3 months
- Patients in AF with mitral stenosis
- Patients with a mechanical heart valve (other than those with a bi-leaflet aortic valve and no previous CVE/TIA, AF or reduced LV ejection fraction)

### Cases to be discussed with cardiologist:

- ‘Star Edwards’ caged ball valve (likely to need iv unfractionated heparin)
- Coronary stent not on antiplatelet treatment (may need antiplatelet cover)

## Pre- operative bridging

1. If the decision is made to bridge then start treatment dose LMWH (once daily morning dose) two days after stopping warfarin
2. The last dose of LMWH must be at least 24 h before surgery
3. In high bleeding risk surgery, consider halving the last dose

## Post-op: No bridging

1. If adequate haemostasis achieved, give prophylactic LMWH at 6 – 8 hrs post-surgery if indicated by Trust VTE guideline
2. Surgeon to consider restarting warfarin at 18:00hrs on the evening of surgery (or the next day) if haemostasis adequate and no contraindication (e.g. epidural in-situ)

## Post-op: Bridging

1. If adequate haemostasis achieved, give prophylactic LMWH at 6 – 8 hrs post-surgery if indicated by Trust VTE guideline
2. Surgeon to consider restarting warfarin and post-operative bridging (treatment dose LMWH) on the first post-operative day if haemostasis adequate and no contraindication (e.g. epidural in-situ).
3. Following high risk procedures and in patients with an increased bleeding risk or in any situation where increased risk of bleeding is unacceptable, post-operative bridging should not be started until at least 48 h post-procedure
4. Continue bridging therapy until INR therapeutic for two days.

### Check INR on day of surgery

- <1.3 for high bleeding risk bleeding procedures
- <1.5 for other procedures