

Guidelines for performing breast and axillary biopsies in patients on anticoagulant and antiplatelet therapy

This guidance has been produced with advice from, but is not endorsed by, the British Society for Haematology. It is intended to be a general guide and does not replace existing local guidance. Consultation with a haematologist and/or cardiologist (as appropriate) is recommended where doubt exists.

Biopsies can be performed on patients taking anticoagulant or antiplatelet medication (including the newer oral agents) with caution. The use of local anaesthetic agents which include adrenaline is recommended.

All patients on such medication should be warned of the increased risk of bleeding, bruising and haematoma formation. Sufficient compression should be applied to the biopsy area during and following the procedure to ensure that all bleeding has stopped prior to the dressing being applied and the patient leaving the department.

1. Breast biopsy

Medication	FNA	Core biopsy (14-gauge)	Vacuum assisted biopsy/excision (VAB/VAE)	Restart treatment (if stopped)
Warfarin	Continue medication	If INR ¹ ≤4.0 – proceed If INR ¹ >4.0 – consult haematologist or cardiologist to consider discontinuing warfarin	If INR ¹ ≤2.5 – proceed (≤2.0 for VAE) ² If INR ¹ >2.5 (>2.0 for VAE) – consult haematologist or cardiologist to consider discontinuing warfarin	6 - 8 hours after procedure 24 hours after procedure for VAE
Direct oral anticoagulants (DOACs - e.g. rivaroxaban, apixaban, dabigatran) - no known renal function abnormality	Continue medication	Continue medication ³	Stop 12-24 hours prior to procedure Stop 48 hours prior to procedure for VAE	6 - 8 hours after procedure 24 hours after procedure for VAE
DOACs - known renal function abnormality CrCl<50ml/min	Continue medication	Continue medication ⁴	Stop 48 hours prior to procedure	24 hours after procedure

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Aspirin, clopidogrel and other antiplatelet agents (e.g. ticagralor, prasugrel)	Continue medication	Continue medication	If patient on dual therapy consider discontinuing clopidogrel / ticagralor 5 days before or prasugrel 7 days before procedure (with cardiology approval)	6 - 8 hours after procedure 24 hours after procedure for VAE
LMW heparin	Continue medication	Continue medication	Stop 12 hours prior to biopsy (prophylactic dose). Stop 24 hours prior to procedure (treatment dose)	6 - 8 hours after procedure (prophylactic dose) 24 hours after procedure (treatment dose)

Notes:

1. Patients taking warfarin usually have their anticoagulation clinic card with them. A recent INR result (ideally within 5 days but longer if INR is stable over a prolonged period) should be known before proceeding with biopsy. Some patients must not stop taking their warfarin, e.g. those with mechanical mitral prosthetic heart valves or those with a venous thrombosis within 3 months. There should be prior discussion with a haematologist or cardiologist (as appropriate) if the INR is outside these limits as bridging heparin therapy may be advised.

2. Diagnostic VAB (esp. as a first line procedure for microcalcification) is regarded as having a moderate risk of bleeding whereas VAE (e.g. for second-line large volume sampling of B3 lesions or therapeutic excision of fibroadenomas) is best regarded as high risk.

3. Direct anticoagulant agents (e.g. rivaroxaban, apixaban, dabigatran) are not monitored by INR level but require cessation for 24 hours to remove the anticoagulant effect in patients with normal renal function. There is no reversal agent. It is considered generally safe to proceed with core biopsy but prolonged compression of the biopsy site may need to be applied.

4. There is a higher risk of bleeding in patients on direct anticoagulant agents who have reduced renal function (creatinine clearance <50 ml/min). It is considered generally safe to proceed with core biopsy but prolonged compression of the biopsy site may need to be applied.

2. Axillary lymph node biopsy

Axillary lymph node biopsy carries a higher risk of bleeding and haematoma formation due to the vascularity of the lymph nodes, the proximity of large vessels and the difficulty in applying sufficient compression following biopsy. Patients should be counselled regarding these risks prior to the procedure.

14-gauge core biopsy is recommended as the first line investigation in the majority of patients on anticoagulation or antiplatelet therapy in view of its higher sensitivity compared to fine needle aspiration cytology (FNAC) but should be performed with caution. It is suggested that the guidance for vacuum-assisted breast biopsy is applied.

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It is often more difficult to apply compression to nodes higher in the axilla, and these often lie close to the axillary vessels. FNAC may be performed in these cases. If core biopsy is considered necessary it should be agreed by the MDT. There should also be discussion with a haematologist or cardiologist (as appropriate) regarding stopping oral anticoagulants for 24 to 48 hours prior to the procedure or for bridging heparin therapy for those on warfarin. If an oral anticoagulant has been stopped, do not restart for 24 hours following the procedure.

It is recommended that vacuum-assisted biopsies of axillary lymph nodes are not performed in patients on anticoagulant or antiplatelet therapy.

Executive Committee, British Society of Breast Radiology
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