



The use of Vacuum Assisted Core Biopsy (VACB)

Version Control

Date developed by CAC:	18 September 2017
Date of PMG endorsement:	4 October 2017
Version #:	1.0
Date last updated:	4 October 2017

Background

The Clinical Advisory Committee (CAC) advice on the use of VACB applies to both stereotactic and tomosynthesis guided VACB, and does not pertain to ultrasound guided VACB.

The CAC is aware that most jurisdictions have VACB policies/guidelines but not all jurisdictions have access to VACB. The CAC recognises that establishment and consumable costs may be barriers to the use of VACB in some BreastScreen Australia Services. The CAC notes that the use of VACB means a reduction in the overall number of procedures, which can help to off-set VACB costs.

Due to superior diagnostic accuracy, the United Kingdom's National Health Service guidelines on VACB state that the VACB procedure is preferred over automated core biopsy, however in a pragmatic decision, the guidelines do not mandate the use of VACB.

Particularly for microcalcifications, including the experience of BSA services, the use of VACB increases the likelihood of an adequate biopsy. This reduces the need for repeat needle biopsies and the reliance on diagnostic surgical biopsies.

In addition, VACB are associated with fewer discordant results and lower upgrade rates compared to automated core biopsies.

When ductal carcinoma in situ (DCIS) is diagnosed with VACB, there are fewer cases upgraded to invasive cancer at operation, compared with core biopsy. Women whose invasive cancer has remained undetected on core biopsy only to be found at surgery are then likely to require additional investigations and surgery for axillary staging.

The CAC is of the view that there is particular clinical benefit in assessing calcifications with the VACB procedure as it achieves superior results compared to an automated core biopsy.

Literature reviewed included the Royal College of Pathologists, June 2016 *Guidelines for non-operative diagnostic procedures and reporting in breast cancer screening* from <<https://www.rcpath.org/asset/4B16F19C-F7BD-456C-B212F557F8040F66/>> and the research article *Performance Indices of Needle Biopsy Procedures for the Assessment of Screen Detected Abnormalities in Services Accredited by BreastScreen Australia*, Farshid G, Sullivan T, Jones S, Roder D. *Asian Pac J Cancer Prev*. 2014;15(24):10665-73 from <<https://www.ncbi.nlm.nih.gov/pubmed/25605157>>.

The CAC reviewed guidelines from BreastScreen Australia jurisdictional VACB policies and guidelines, the United Kingdom National Health Service *Clinical guidelines for breast cancer screening assessment and the National Institute for Health and Clinical Excellence Image guided vacuum assisted excision biopsy of benign breast lesions*.

CAC decision/recommendation

The CAC recommends that VACB is the procedure of choice for image guided percutaneous biopsy of microcalcifications and may also be superior for other lesion types.

The committee notes that there are localised variations to the availability of this technique. Before undergoing an excisional biopsy, women should have timely access to VACB for calcifications when automated core biopsy results are non-diagnostic or inadequate. However, multiple biopsies are not desired nor considered best-practice.

Particular indications for VACB are outlined below:

- For all lesion types:
 - Failed ultrasound or stereotactically/tomographically guided 14G core biopsy due to inadequate sampling
 - Prior 14G core biopsy without definitive benign or malignant histology or result discordant with imaging.
- Microcalcifications:
 - Small sized cluster, particularly if likely to require a marker
 - Lesion where accurate targeting is difficult (e.g. faint, small-sized, scattered calcifications).
- Architectural Distortions:
 - Lesion where accurate targeting is difficult (e.g. nebulous distortions).
- Mass lesions:
 - Small lesion.
- Nonspecific Densities:
 - Nebulous densities where sizeable sampling is required, and clip placement is desirable.

This advice is clinical guidance for the BreastScreen Australia Program for consideration and suggested implementation within each jurisdiction.