



A joint Australian, State and Territory Government Program

Clinical Advisory Committee advice:
Consistent protocols on radial scars

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CAC response to:	BreastScreen Australia Program Management Group (PMG)
Original sponsor:	Dr Anne Bicknell BreastScreen ACT
Subject:	Management of Radial Scar (RS)/Complex Sclerosing Lesion (CSL) in asymptomatic women diagnosed on Core Biopsy, with no associated features of atypia or malignancy and imaging concordant with pathology findings.
CAC decision/recommendation:	<p>The upgrade risk is determined by the gauge of the needle and whether there was atypia present on the initial sample. For most women with a radial scar and no histological atypia, the malignant upgrade rate is low. Specifically for RS without atypia, the upgrade rate is 5% when the diagnosis was based on 14G needle core biopsy (NCB) but reduces to 1% when diagnosed on 8-11G vacuum-assisted breast core biopsy (VAB). This may be an acceptable level of risk for some women in order to avoid surgery.</p> <p>There is a higher chance of malignant upgrade if the radial scar shows histologic atypia on needle biopsies, including VAB. The risk of concurrent DCIS or invasive carcinoma is in the range of 18-28%, requiring follow-up excision.</p>
Background:	NIL
CAC discussion/comments:	Radial scars (RS) are benign, mostly asymptomatic breast lesions with a prevalence of 5-6 per 100,000 screening mammograms. Up to 4% of all core biopsies are to investigate RS. The improved visualisation of architectural

distortions by digital breast tomosynthesis (DBT) has led to increased detection of RS.

A variety of epithelial proliferations may be found in association with RS. Series of RS excised after needle biopsy have documented unsuspected concurrent DCIS or invasive carcinoma in 0-28% of cases. Diagnostic open biopsy is therefore usually recommended after a needle biopsy diagnosis of RS. In contemporary Australian practice RS account for 10% of benign open biopsies.

A 2019 meta-analysis of 3163 RS excised after needle biopsy has shown that two factors, namely the presence of epithelial atypia and the needle gauge, influence the likely malignant upgrade rates. When the needle biopsy shows RS with atypia, the upgrade rate is 18-28%. Even when these diagnoses are based on 8-11G VAB, the upgrade rate is significant at 18%, such that further histologic evaluation is prudent.

For RS without atypia, the upgrade rate is 5% when the diagnosis was based on 14G NCB but reduces to 1% when diagnosed on 8-11G VABs.

When information regarding these two key factors is not specified, intermediate upgrade rates are found.

For RS without atypia on 14G NCB, the upgrade rate is 5%. One strategy to reduce the need for surgical biopsies in this group is to re-evaluate the lesion by VAB. If there is still no atypia, the upgrade rate falls to 1%, which may be acceptable for surveillance in appropriately informed, clients.

When histologic evaluation is required, the options include surgical biopsy and vacuum-assisted excision (VAE). For RS with atypia, since the upgrade rate is high, surgical biopsy is advised to permit evaluation of the intact architecture.

Vacuum-assisted excision (VAE) is a more recent approach best applied to RS without atypia determined to require histologic evaluation after MDT discussion. VAE is the systematic and deliberate removal of the entire area of the lesion by multiple VA samples. VAE is distinguished from VAB.

Data are more limited but small series have shown that RS in the following three settings had zero upgrade rates,

<ul style="list-style-type: none"> • Literature reviewed • Reviewed guidelines from: <ul style="list-style-type: none"> ○ Australia/international ○ Jurisdictions/Programs 	<p>obviating routine surgical biopsy, unless MDT discussions mandate otherwise:</p> <ul style="list-style-type: none"> • RS ≤ 5 mm, without atypia or a papillary component, • Incidental histologic finding of a mammographically-occult RS during the histologic evaluation of a needle biopsy for another target lesion • Mammographically-occult RS, assessed by ultrasound-guided 14G NCB <p>RS biopsied on MRI-guided 9G VAB had an upgrade rate of 24%, suggesting that further histologic evaluation is advisable.</p> <p>Farshid G, Farshid, G. & Buckley, E. Breast Cancer Res Treat (2018). https://doi.org/10.1007/s10549-018-5040-3</p>
<p>Attachments:</p>	<p>NIL</p>
<p>Next Steps: (for PMG/NQMC)</p>	<p>The PMG endorsed this advice at its 14-15 October 2019 meeting. This advice is clinical guidance for the BreastScreen Australia Program for consideration and suggested implementation within each jurisdiction.</p>