**An audit on the management of breast lesions with uncertain malignant potentials**

**Descriptor:**

An audit to assess the management of six common breast lesions with uncertain malignant potentials according to the international consensus.

**Background:**

## The B-classification is widely used to categorize the histopathology of breast biopsy results, ranging from B1 normal tissue or uninterpretable, B2 benign, B3 benign but of uncertain biological potential, B4 suspicious to B5 malignant lesions. [1]

## It is known that B3 lesions in core (CNB) and vacuum-assisted biopsy (VAB) samples carry different risks of concomitant cancer and might increase the risk of future breast cancer development. [2]

## There are a variety of management options for these lesions, which include active surveillance with clinical follow up, vacuum-assisted excision (VAE) and open surgical excision (OSE).

## Recently, in 2023, The Third International Consensus Conference has proposed management on six major breast lesions of uncertain malignant potential with proposed maximum risk of 5% upgrade to invasive carcinoma and 10% upgrade to ductal carcinoma in-situ (DCIS). [3]

## Another European guideline for the diagnosis, treatment and follow-up of breast lesions with uncertain malignant potential (B3 lesions) has also been developed jointly by EUSOMA, EUSOBI, ESP (BWG) and ESSO. [4]

## The Cycle

**The standard:**

Due to high upgrade rates (>50%) in atypical ductal hyperplasia over the past decade in our institution and less availability of VAE compared to surgical excision, the standards in the Third international Consensus Conference have been adopted with the major principles as follows.

* If core needle biopsy samples revealed atypical ductal hyperplasia (ADH), flat epithelial atypia (FEA), classical lobular neoplasia (LN), radial scar (RS), papillary lesions without atypia (PL) and phyllodes tumors of benign and borderline types (PT), these lesions should be removed.
* For *ADH and PT*, these lesions should be removed by surgical excision due to high upgrade and recurrence rate.
* For *FEA, RS, LN and PL*, these lesions could be removed by means of surgical excision or vacuum assisted excision.
* If vacuum assisted excision is not widely available in the center, surgical excision would be a substitute.
* De-escalating management plan to clinical and radiological surveillance after multidisciplinary discussion could be considered in selected cases of FEA and PL lesions in view of low upgrade rate.

[See Appendix for flowcharts and guidance.]

**Target:**

100% of the B3 lesions outlined in the protocol should be managed according to the local management pathway.

Exclusions:

* Radiological-pathological discordance, where further sampling would be needed e.g., repeat vacuum-assisted biopsy in cases of core needle biopsy samples or surgical biopsy.
* Breast papillomatosis decided in the MDT meetings due to non-standardised management options.
* Concomitant ipsilateral cancer, high grade DCIS or equivalent which require mastectomy would also be excluded.

## Assess local practice

**Indicators:**

% of B3 lesions which adhere to the protocol.

% of B3 lesions which are discussed in the multidisciplinary meeting with radiological and pathological correlation.

% B3 lesions which are upgraded following further sampling.

**Data items to be collected**

* Initial method of sampling (core biopsy vs VAB).
* Subsequent management (VAE, surgery or surveillance).
* Was the B3 lesion discussed in clinical-radiological-histopathological meeting?
* Was the lesion upgraded following larger sampling (VAE or surgery)?
* Was there a subsequent malignant diagnosis in the same area as the B3 lesion?

**Suggested number:**

Sample size will depend on practice as the prevalence of these six types of lesions are different, i.e., atypical ductal hyperplasia and papillary lesions are more commonly found compared to radial scar. We aimed to have 50 lesions in total or half-year results for an audit cycle.

**Suggestions for change if target not met**

* Multidisciplinary review of all cases that are not managed according to the consensus.
* Flow charts to illustrate the management pathway.
* Re-audit the subsequent batch of cases.
* Modify pathway if any unintended consequences (missed cancers).

**Resources:**

* Pathological results of core needle biopsy and vacuum-assisted biopsy samples via electronic patient records.
* Management plan of the B3 lesions in clinical-radiological-histopathological meeting.

**References:**

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