

Background

Papillary lesions of the breast encompass a wide range of disease from benign papillomas to invasive papillary carcinomas. Due to increased screening and imaging in general, papillary lesions are being detected more frequently.

Papillary lesions with atypia always warrant excision due the high risk of carcinoma on final histological evaluation. However, in recent years there has been a trend toward conservative management of papillomas without atypia, given the low reported rates of upgrade to in-situ or invasive cancer .

Recently, a number of studies have been published attempting to clarify the most appropriate management of papilloma without atypia, producing conflicting results and recommendations .

Aims

The objective of this study was to determine the rate of upgrade to malignancy following excision of papilloma with no atypia diagnosed on core needle biopsy.

Methods

We carried out a retrospective review of a prospectively maintained database of all women diagnosed with papilloma without atypia on core needle biopsy, presenting to a single symptomatic tertiary referral centre, from July 2008 to July 2018.

Patients with malignancy or atypia on core biopsy, those with a personal history of breast cancer, cancer mutations or syndromes were excluded.

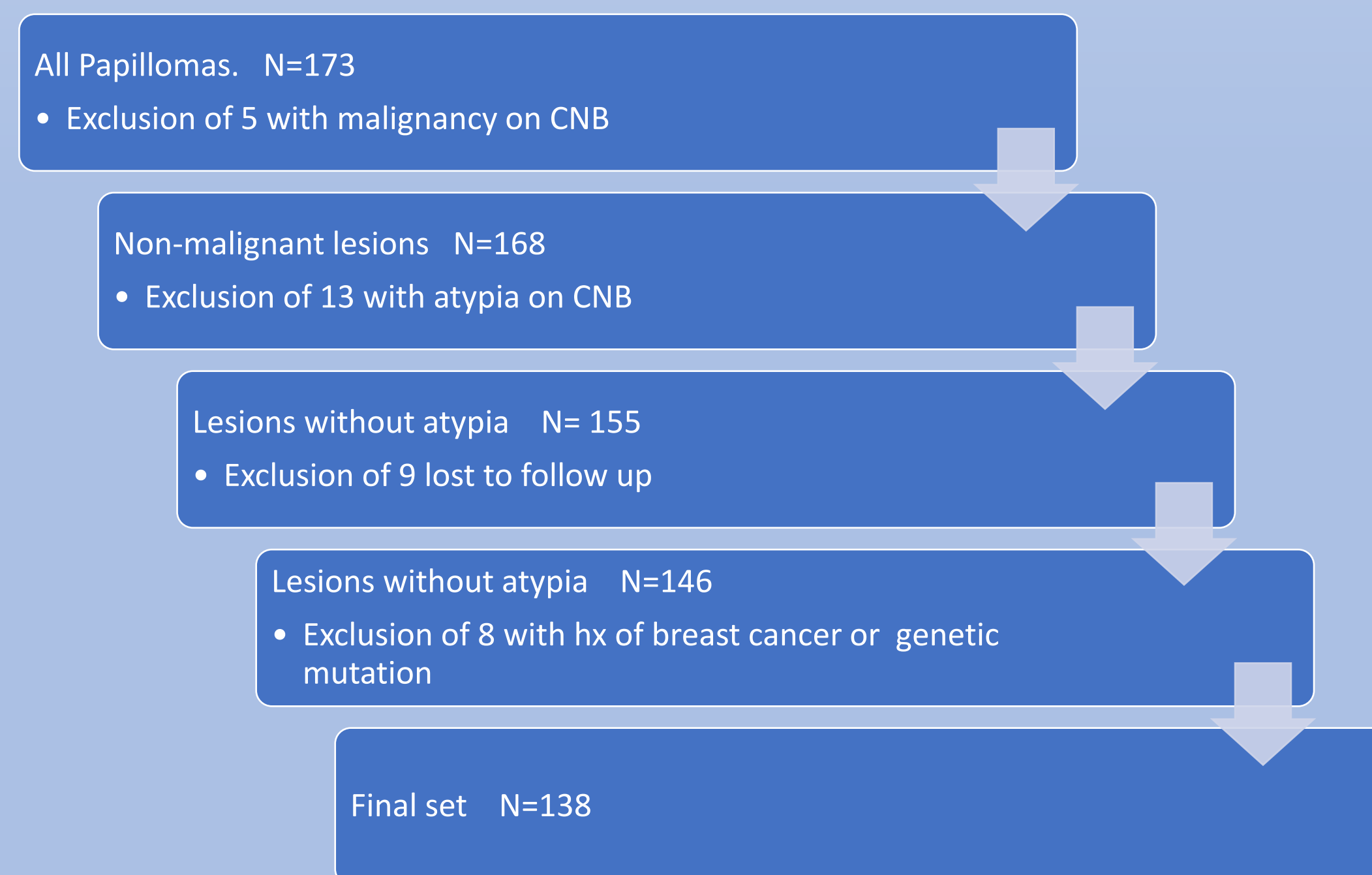


Fig. 1 Patient selection

Results

138 cases of benign papilloma with no atypia, diagnosed on core needle biopsy were included in the analysis.

All cases were female. The mean age of presentation was 51 (range 20-940. Mean follow up time was 9.6 months.

The most common presenting symptom was a lump, seen in 56 cases. Patients also presented with bloody discharge, non-bloody discharge, pain and nipple change. See Fig 2.

Presenting symptom	N (%)
Lump	56 (40%)
Bloody nipple discharge	33 (24%)
Non-bloody nipple discharge	26 (19%)
Pain	13 (9%)
Nipple change	6 (4%)
Nodularity	5 (4%)
Other	5 (4%)

Fig 2. Presenting symptoms

On clinical examination, 10 patients had findings that were concerning for malignancy, 29 patients had a normal clinical exam, 99 patients had a palpable but non-concerning lump.

All patients went on to have imaging with wither ultrasound, mammography or both.

Abnormal radiological findings were reported in all patient, except 1. In 19 (14%) the imaging was reported as suspicious for malignancy. The majority (118, 86%) were found to have an indeterminate lesion on imaging. The overall radiographic/histological concordance was 86%.

Management

124 (90%) underwent diagnostic excision of the lesion. 120 (87%) underwent surgical excision while 4 (3%) had vacuum assisted excision. 12 patients (10%) were managed conservatively, due to patient choice following discussion with their clinician.

Final histology results

Of the 124 papillomas which were excised, 3 (2.4%) were upgraded to DCIS on final pathology. High risk lesions were diagnosed in 15 (12%).

Of those upgraded to a high risk lesion, 12 (9.7%) were ADH, 2 (1.6%) were LCIS and 1 (0.8%) was ALH. See Fig 3.

Final histology showed benign papilloma in 100 (80.6%) and 6 (4.8%) had no residual papilloma.

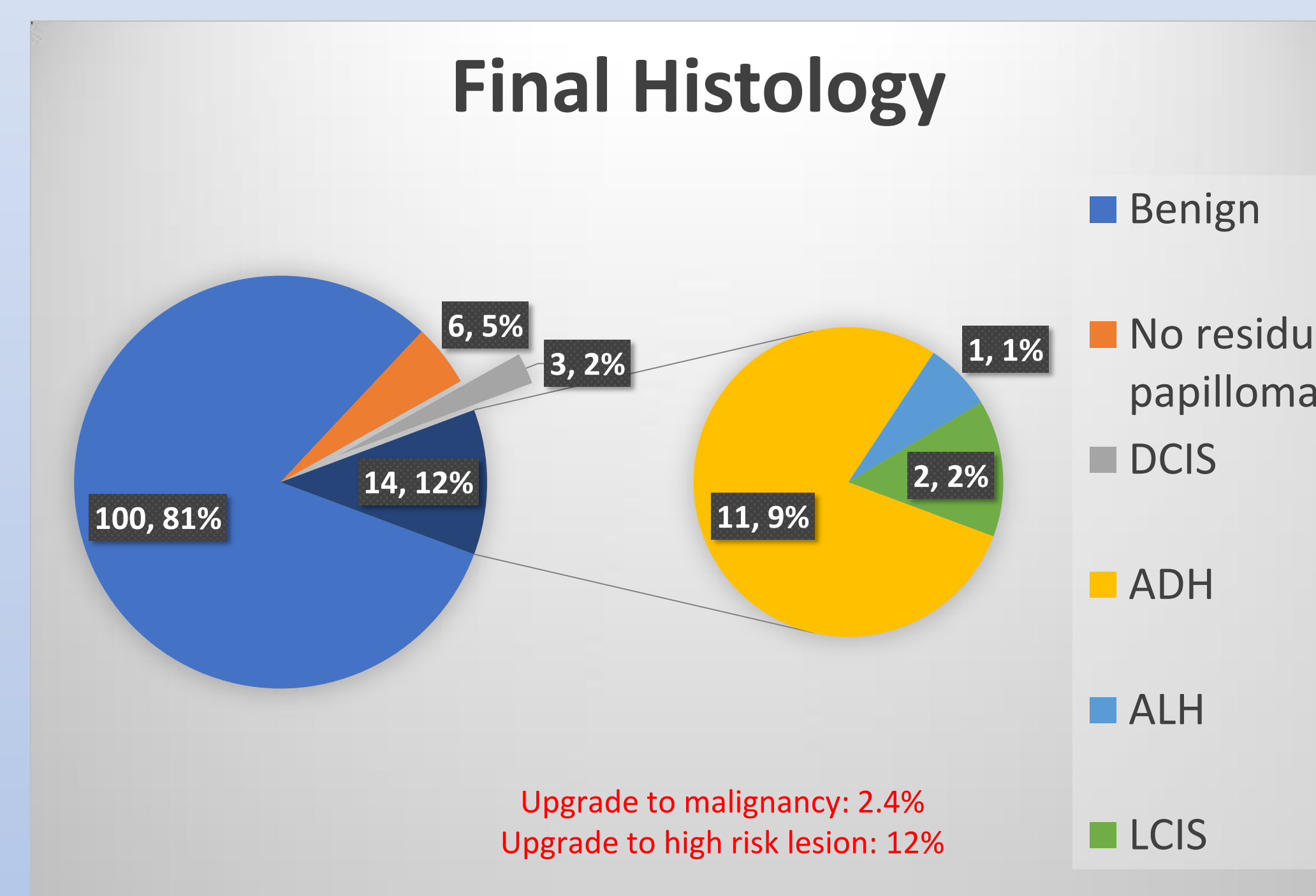


Fig. 3 Final histology results

Outcomes

The table below demonstrates the outcomes of those patients who were upgraded to malignant disease following excision.

Presenting symptom	Classification	Pathology	Treatment	Long term outcome
Non-bloody discharge	S3 R3	DCIS	Re-excision of margins + RTX	Developed contralateral invasive ca 1 yr later
Lump	S4 R3	DCIS	Re-excision of margins + RTX	Margins clear, undergoing surveillance elsewhere
Bloody discharge	S4 R3	DCIS	Completion mastectomy – IDC in mastectomy specimen	On surveillance no disease recurrence

Fig. 4. Outcomes of patients upgraded to malignancy following excision

The patients diagnosed with high risk lesion on final excision were followed up for a mean of 2.9 years. 1 patient developed contralateral DCIS during the course of this follow, but no other clinically significant lesions were identified.

The 12 conservatively managed patients were followed for a mean of 1.45 years. Of these, 1 developed malignancy. However her initial clinical exam and radiological findings were highly suggestive of malignancy. She declined any further investigation due to her advanced age and she died 1 year following initial biopsy. There were no other clinically significant lesions detected throughout the follow up of these patients. 2 patients initially managed conservatively went on to have surgical excision of their lesions due to persistent symptoms – both were benign on final excision.

Conclusions

In this cohort of symptomatic women diagnosed with papilloma without atypia on core needle biopsy, diagnostic excision led to 2.4% having a diagnosis of invasive or in-situ carcinoma, and 12% receiving a diagnosis of high grade lesion. Therefore management or follow up plan was altered by the result of the excision for 14.4%.

Numbers of conservatively managed patients in this study were too small to demonstrate safety.

Further research is necessary to establish if conservative management with radiological followup may be a safe option for these patients in the future.

References

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