**SIGNIFICANCE OF FLAT EPITHELIAL ATYPIA AT IMAGE GUIDED BREAST BIOPSY**

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**Introduction**
- The term Flat Epithelial Atypia (FEA) was introduced in 2003 by the WHO working group on the Pathology & Genetics committee of tumours of the breast.
- Previously known as columnar cell change with atypia, these lesions usually present as microcalcification.
- There is evidence to suggest that FEA represents a precursor lesion in the spectrum of low grade breast neoplasia with variable rates of upgrade to malignancy.
- Due to the relatively low upgrade rates many centres are opting for diagnostic rather than surgical excision of these lesions.
- The aim of this study was to determine the radiological characteristics of FEA and to evaluate the rate of upgrade to a more significant pathology at surgery in order to determine the role of diagnostic excision in managing these lesions.

**Patient Selection**
- Retrospective review of 1024 consecutive image guided core and vacuum biopsies performed.
- Both screening and symptomatic patients were included.
- In patients with FEA as the dominant pathology, concomitant B3 lesions such as lobular neoplasia, ADH or malignancy were documented and analysed separately.
- Size, morphology and multifocality of lesions was documented by review of imaging.
- Method of biopsy was also recorded.

**Results**
- Total no. of FEA/CCC lesions : 153
- 11% (2/18) of multifocal lesions were upgraded to DCIS or invasive disease.
- 15% (18/118) of pure FEA lesions were multifocal on initial MMG.
- 9% (11/118) of pure FEA were upgraded to malignancy but this figure dropped to 4% (2/55) following diagnostic vacuum biopsy (VAB).
- 14% (21/153) of all B3 lesions with FEA were upgraded and this increased to 43% (6/14) when associated with concomitant ADH.
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- 4/7 microcalcification with pleomorphism graded as M4 were upgraded.
- In patients with FEA as the dominant pathology, concomitant B3 pathology included Radial Scar (3), Papilloma (3), ALH (3), and Macronuclei like lesion (1).
- Average age of presentation 55 years with age range of 39-70 years.
- 76% showed MCC on imaging, with 93.5% graded M3 and 6.5% M4.

**Upgrade**
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**Conclusion**
- There was 9% upgrade of pure FEA to a more significant pathology, which was most frequently low grade DCIS.
- The rate of upgrade following VAB was just 4% supporting argument for diagnostic rather than surgical excision.
- FEA most commonly presented as microcalcification.
- The rate of upgrade to malignancy increased with size of the lesion but not with multifocality.
- Low rate of upgrade in lesions < 1 cm in size - these may be suitable for diagnostic rather than surgical excision.
- In FEA lesions associated with ADH, there was a significant increase in the rate of upgrade.

**References**
- Rates of upgrade to malignancy for 271 cases of flat epithelial atypia (FEA) diagnosed by breast core biopsy- Peres A et al; Cancer Research & Treatment. 2011;14:105(4):659-66.
- Multidisciplinary considerations in the management of high risk breast lesions - Krishnamurthy S et al; AUR, Feb 2012, 198 (2) : W132-40.