

### **Apocrine Carcinoma of the Breast - A Rare Entity**

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**Conflicts of Interest:** Nil

#### **Abstract**

Apocrine carcinoma is a rare type of invasive ductal carcinoma of the breast . We present a case of estrogen receptor, progesterone receptor and HER 2 NEU positive apocrine carcinoma of the breast evaluated by Modified Bloom Richardson system. The occurrence of triple positive apocrine carcinoma of the breast is very less. The literature review did not show any prognostic variation of the apocrine carcinoma with invasive ductal carcinoma, not otherwise identified (IDC-NOS).

**Keywords:** Apocrine carcinoma, infiltrating ductal carcinoma, gross cystic fluid disease protein (GCDFP).

#### **Introduction**

A rare kind of invasive ductal cancer found in the breast is the Apocrine carcinoma ,often triple negative with less lymph nodes and good prognosis. The apocrine carcinomas do not act discordantly from the ductal carcinoma in all stages, nevertheless presenting a unique response to the androgen administration.

#### **Case Report**

A 34 year old female presented with complaints of painless lump on the right breast for the past three months , on onset it was insidious but gradually it progresses . She narrated that there was no discharge from the nipple and co morbid illness. She is married for the past 11 years and has two children.

O/E: the size of the lump 4\*4 cm in the lower part of the right breast. She underwent modified radical mastectomy. Stage pT2 N1 M0 . ER ,PR , HER2/neu - positive . Post operative period uneventful .

#### **Discussion**

The features of the apocrine carcinoma of the breast are round nucleus , sharp bordered, with esinophilic cytoplasm. The emergence of the apocrine cells is from the terminal duct of the lobular unit. The incidence of the apocrine carcinomas scales from 0.3 by Azzopardi to 62% as stated by Haagensen<sup>1</sup> . Apocrine carcinomas are exceptionals of the insidious ductal carcinoma of no special type whereas the lobulars present an apocrine distinction. The apocrine carcinoma of the breast is well distinguished according to the Japaze criteria in 2005<sup>2</sup>. (Fig 1)

#### **Major criteria**

- Apocrine cells-75% or more
- Presence of esinophilic granular cytoplasm in the huge cell.
- The ratio of nucleus and cytoplasm 1:2,
- Larger nucleus, round and vesicles (could be pleomorphic),
- Borders that are stridently distinct

**Minor criteria** (that are not mandatory)

- Prominent nucleoli in >50% fields
- Apical cytoplasmic snouts into luminal spaces.

Apocrine carcinoma of the breast has a varied hormonal profile which must be identified from other physiological category of breast cancer.

The hormonal rank of apocrine carcinoma is seen to be the basal, triple in apocrine negative in apocrine carcinomas<sup>3,4</sup>. Axillary lymph node involvement is about 1 to 4 %<sup>5</sup>.

The study's case was found to be Grade 2, estrogen, progesterone, HER2 NEU positive luminal type with axillary nodal involvement which is rare (figure 2).

The apocrine carcinomas do not act discordantly from the ductals in all stages, nevertheless presenting a unique response<sup>2,6</sup>. Recent studies show GCDFP (Gross cystic disease fluid protein) positivity for apocrine carcinomas and the role of GCDFP is not established as non-apocrine malignancies show tumour reactivity. However, there is no difference in outcomes in tumours with negative immunoreactivity for GCDFP<sup>7</sup>. Ongoing trails are yet to determine whether the PTEN germline mutations predisposes to the formation of breast with the features of the apocrine<sup>8</sup>.

### Conclusion

A discrete body of invasive carcinoma is the Apocrine carcinoma of the breast. This has a different hormonal profile that must be identified from other physiological kinds of breast cancer as it was found that there is a unique response to androgen administration, in identifying the apocrine carcinoma of the breast.

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### Legends Figures

Figure 1: Apocrine Cells With Eosinophilic Granular Cytoplasm

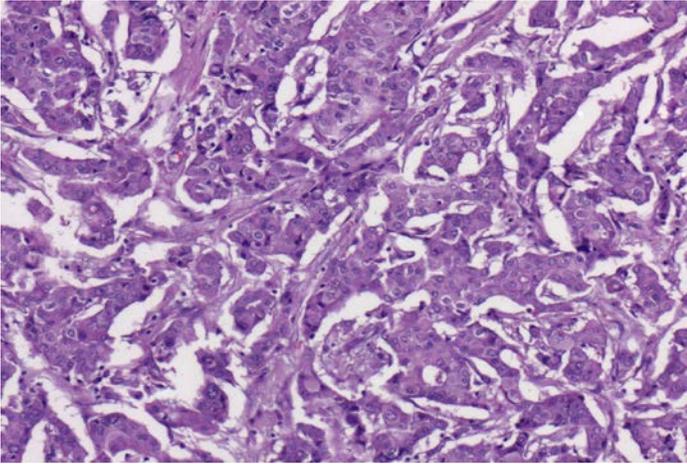
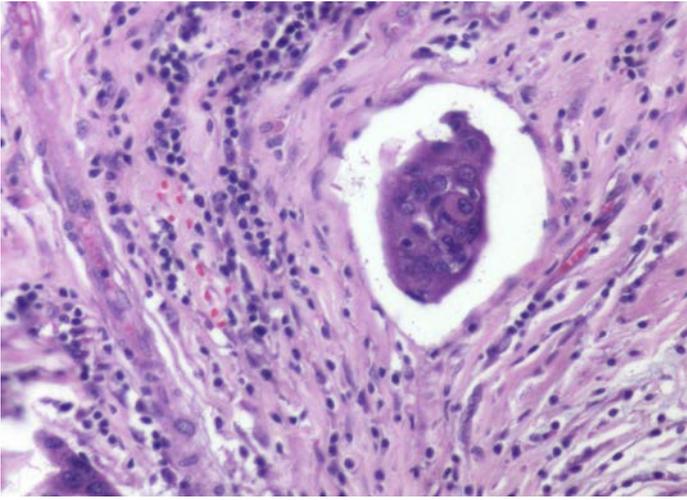


Figure 2: Lymphnode Involvement



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