



## A STUDY OF CORRELATION OF COMEDO-NECROSIS AND GRADE OF TUMOR IN INVASIVE CARCINOMA BREAST

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**ABSTRACT** **OBJECTIVES:** To know the co-relation of Comedo-necrosis with grade of tumor in operated early invasive breast cancer patients.

**Methods:** In this present study, 80 consecutive early invasive breast cancers patients were operated and pathologist was requested to give complete morphological details viz. Comedo necrosis, grade of tumor, nodal metastases, presence or absence of LVSI in these patients.

**RESULTS:** in this study, 33 out of 80 patients had comedo necrosis. 97% of the patients with comedo-necrosis had grade2 or grade 3 carcinoma. 75% of the grade3 carcinomas had comedo necrosis.

**CONCLUSION:** in this study presence of comedo necrosis correlates with increasing grade of the carcinoma.

**KEYWORDS :** Breast carcinoma, Histo-pathological parameters, comedo-necrosis, Grade

### Introduction

Breast cancer may present as in situ form or invasive form. There are two types of In situ carcinoma, Ductal (DCIS) and Lobular (LCIS). There are four patterns of DCIS such as Comedo, cribriform, papillary and micro papillary. Comedo pattern can occur in invasive ductal carcinoma also.

Comedo pattern is diagnosed when at least one duct in the breast is filled and expanded by large, markedly atypical cells and has abundant central luminal necrosis. This type occurring in invasive carcinoma may mimic like DCIS, misleading to diagnosis as In situ form. Statistically significant independent predictors of grade of the disease like lymph node metastases are higher in comedo Pattern. Since Comedo pattern indicates high grade tumor, this study aimed at correlating this pattern with nodal metastases and grade of tumor

### Materials and Methods

Records of Patients who underwent surgery-modified radical mastectomy for early operable breast carcinoma from 2012 to 2018 – totally 80, were analyzed. Ductal carcinoma in situ, locally advanced breast carcinoma and metastatic breast carcinoma were excluded from this study.

Pathologist was asked to completely study the primary tumor including morphology for comedo necrosis pattern and all axillary nodes that were sent separately. These axillary nodes were completely grossed immediately after surgery by the operating surgeon in the operating room itself.

### Results

In this study, most of the patients had grade 2 or grade 3 tumors (93.75%) and only 6.25% of patients had Grade 1 tumor. 67 out of 80 (83.75%) patients had grade 2 tumors and 8/80 (10%) patients had grade 3 tumors.

**Table 1-Grade of tumors**

Grade	No of patients	Percentage
Grade 1	5	6.25%
Grade 2	67	83.75%
Grade 3	8	10%

Comedo necrotic pattern of invasive carcinoma is not uncommon since 33 out of 80 (41.25%) had this pattern even though majority of patients (47 out of 80- 58.75%) did not have no comedo - necrosis

**Table 2.Presence of Comedo - Necrosis**

Comedo necrosis	Number	Percentage
present	33	41.25%
absent	47	58.75%

On correlating grade and comedo necrosis, presence of comedo-necrosis increases with increasing grade. 20% (1/5) of grade 1 tumors, 38.8% (26/67) of grade 2 tumors and 75% (6/8) of Grade 3 tumors have

comedo necrosis.

**Table 3- Correlating Grade and Comedo - Necrosis**

Grade	No of patients	No of patients with Comedo-necrosis	Comedo-necrosis %
1	5	1	20%
2	67	26	38.8%
3	8	6	75%

On comparing the comedo necrosis and grade, in patients with comedo necrosis, 3%(1/33) had grade 1 tumors, 78.8% (26/33) had grade 2 tumors and 18.2% (6/33) had grade 3 tumors.

**Table 4- comparing comedo necrosis and grade in patients with comedo-necrotic pattern**

	Grade 1	Grade 2	Grade 3
Comedo-necrosis	1/33	26/33	6/33
Percentage	3%	78.8%	18.2%

### Discussion

Even though Comedo type of DCIS is a distinct clinical entity, this type of comedo pattern can occur in invasive ductal carcinoma also. When at least one duct in the breast is filled and expanded by large, markedly atypical cells and has abundant central luminal necrosis, it is called as comedo type. This type occurring in invasive carcinoma may mimic like DCIS, misleading to diagnosis as In situ form.

### Conclusion

In this study, Presence of Comedo type of necrosis in patients with invasive carcinoma increases with increasing grade. In other words most of the patients with grade 3 tumors had comedo necrosis. In this study presence of comedo necrosis correlates with increasing grade of the carcinoma and Comedo pattern indicates high grade tumor and poor prognosis.

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### CONFLICT OF INTERESTS

Declare none

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