

# Age Specific Histologic Types of Carcinoma Breast in Malaysians

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## ABSTRACT

The influence of age on various histological types of breast cancer at both age <50 years and >50 years to simulate menopause was studied retrospective from 2002 to 2004 in Malaysia. One hundred and fifty five cases were reviewed. Ninety two cases recorded at age <50 years, 60 (65.2%, 95%CI: 54.6 – 74.8%) were infiltrating ductal carcinoma in 11(12.0%, 95% CI: 6.1-20.4%), ductal carcinoma *in situ* (DCIS) in 9 (9.8%, 95% CI: 4.6-17.8%), medullary carcinoma in 6 (6.5%, 85%CI: 2.4-13.6%), invasive lobular carcinoma in 4 (4.3%, 95%CI: 1.2-10.8%), mucinous carcinoma and poorly differentiated carcinoma in 2 cases (2.2%, 95%CI: 0.3-7.6%).

At >50 years of age, 63 cases were recorded. Forty seven (74.6%, 95%CI: 62.0- 84.7%) cases were of infiltrating ductal carcinoma, ductal carcinoma in situ in 9 (14.3%, 95%CI: 6.7-25.4%), mucinous carcinoma in 5 (7.9%, 95%CI: 2.6-17.6%), medullary carcinoma (8.5%) and papillary carcinoma in 1 case each (1.6%, 95%CI: 0.0-8.5%). Infiltrating ductal carcinoma was the commonest histology at both age <50 years and >50 years.

**Key words:** *Carcinoma breast. Infiltrating ductal carcinoma. Medullary carcinoma. Ductal carcinoma in situ. Mucinous carcinoma.*

Breast cancer histologies are important from treatment point of view and carry prognostic importance for rare histologic types for this number one cancer in women, although in general prognosis in breast cancer, mostly multifactor but tumour type becomes an important factor in rare histologies like poorly differentiated carcinoma.<sup>1</sup>

Breast cancer manifests various histologic types. Among unfavourable histological types are inflammatory carcinoma, signet ring carcinoma and metaplastic carcinoma. Favourable histological types include typical medullary, mucinous, papillary, tubular and adenocystic carcinomas. Most of these tumours have long tumour doubling time (TDT).<sup>2</sup>

The objective of this study was to determine the commonest histology in Malaysian patients at ages less than and more than 50 years.

This study was conducted in the State of Penang, Malaysia, at two major Ministry of Health Hospitals.

All cases of carcinoma breast presenting at these hospitals between year 2002 and 2004 were reviewed retrospectively. Patient case records were reviewed for

age of the patient at presentation and histological type of breast carcinoma, dividing in two groups of age less than and more than 50 years. The data was analyzed using SPSS software. Confidence interval (CI) for proportions was calculated for the commonest histology in both age groups. Since the sample size in this study was small, breakdown in multiple age groups was not done as it may not have yielded credible results.

Out of the 155 cases of carcinoma breast, included in the study, 92 patients were eligible for inclusion in the group of aged under 50 years and 63 patients in the group aged above 50 years.

In the group age under 50 years, 60 out of 90 cases were of infiltrating ductal carcinoma (65.2%, 95% CI: 54.6 – 74.8%). Ductal carcinoma-*in-situ* was found in 11 cases (12.0%, 95% CI: 6.1-20.4%), medullary carcinoma in 9 cases (9.8%, 95% CI: 4.6-17.8%), invasive lobular carcinoma in 6 cases (6.5%, 85%CI: 2.4-13.6%), mucinous carcinoma in 4 cases (4.3%, 95% CI: 1.2-10.8%) and poorly differentiated carcinoma in 2 cases (2.2%, 95% CI: 0.3-7.6%).

In the group aged above 50 years, Infiltrating ductal carcinoma represented 47 cases out of the 63 cases (74.6%, 95% CI: 62.0- 84.7%), ductal carcinoma-*in-situ* in 9 cases (14.3%, 95% CI: 6.7-25.4%), mucinous carcinoma in 5 cases (7.9%, 95% CI: 2.6-17.6%) and papillary and medullary carcinoma in one case each (1.6%, 95% CI: 0.0-8.5%) as well.

The commonest histological type of carcinoma breast in both age groups was infiltrating ductal carcinoma with slightly more cases after 50 years as compared to the other group but difference was small. Ductal carcinoma-*in-situ* was second commonest histology with no marked

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difference between the groups; same was the case with mucinous carcinoma. Medullary carcinoma, invasive lobular carcinoma and poorly differentiated carcinoma were predominantly seen in those age under 50 years. Breast cancer histologies are important from the management view point because they determine response to therapy and have impact on survival, especially the aggressive tumour types, like undifferentiated carcinoma.<sup>3</sup>

More than 20 common histological types of breast cancer are described with 68 less common types, which account for less than 2.3% of all female invasive breast cancer.

Common histologies include infiltrating ductal carcinoma accounting for more than two-third of cases, other less common histological types include lobular carcinoma, medullary carcinoma, comedo carcinoma, colloid carcinoma and papillary carcinoma.<sup>3</sup>

Anderson *et al.* reported that age specific incidence rates for medullary and inflammatory types of breast carcinoma failed to rise after menopause, while menopause seemed to have no effect on papillary and or mucinous carcinoma.<sup>4</sup> Walker *et al.* found that breast cancers in young women were more aggressive.<sup>5</sup>

This study found that infiltrating ductal carcinoma, followed by ductal carcinoma-*in-situ*, remained the commonest histologies, regardless of age, not influenced much by menopause, while medullary carcinoma and invasive lobular carcinoma were seen predominantly at age less than 50 years, suggesting

hormonal influence. Papillary carcinoma, mucinous carcinoma and poorly differentiated carcinoma represented too few a number of cases to be significant. These findings in Malaysian population are consistent with those of western population in terms of histological types of carcinoma breast although the number of cases in this study was small, they need to be verified in much larger studies.

Future etiologic or preventive studies should look at age specific risk factors on different histological types of breast cancer.

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