Histology and Biologic Profile of Breast Cancer in Elderly of Balinese Population

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INTRODUCTION

- Breast cancer is the most common cancer in women worldwide. The incidence of breast cancer increases with age.

**In Indonesia...**

- Elderly is the fastest growing segment of the population. In 2012, 7.58% of the population are 60 years and older.
- Older Indonesian women will represent an increasing cohort of patients with newly diagnosed breast cancer.

The incidence of breast cancer among older Indonesian women is unknown.

No data on breast cancer characteristics among older Indonesian women, especially women of Balinese ethnicity.
OBJECTIVE

- To describe the biology of breast cancer (i.e. histology and expression of hormone receptors) among older Balinese women aged 65 years and more.
MATERIALS AND METHOD

- Descriptive epidemiologic study
- We used data from the local cancer registry of Sanglah General Hospital
- We identified all women newly diagnosed with breast cancer between 1997 and 2013, excluding those who are not Bali islanders
- We obtained data on age at diagnosis, stage, histology, and expression of hormone receptors (ER, PR) and HER2 status
- We examined breast cancer characteristics by age at diagnosis (elderly vs. non-elderly)
- Descriptive statistics was performed using SPSS ver.16
A total of 1,020 breast cancers were recorded between 1997-2013. Only 964 cases present with data about histology and only 158 present with immunohistochemistry staining for expression of hormone receptors.

From a total of 1,020 cases of breast cancer that were recorded during the period of 1997-2013, only 78 breast cancers (7.6%) were diagnosed in elderly. IDC was the most common histologic type of breast cancer (80%).
IDC was the most common histologic type of all study sample (80%), followed by ILC, mucinous, and medullary carcinoma (n=964).
Elderly have a higher rate of high grade IDC but lower rate of ILC, mucinous, and medullary carcinoma. *percentage within age group
The rate for ER-positive, PR-positive, and over-expressed HER2 breast cancer were lower in the elderly. *percentage within age group
Elderly have higher rates of Luminal A and Triple Negative breast cancer but lower rates of Luminal B and over-expressed HER2 breast cancer. *percentage within age group
DISCUSSION

- Breast cancer in the elderly has distinctive biologic characteristics

- Several large studies demonstrated an association between increasing age at diagnosis and the presence of more favorable biologic characteristics of the tumor. 

  Older patients having more lobular and mucinous carcinoma, more tumor that is positive for ER and PR but negative for HER2, and lower proliferative index.


Breast cancer characteristics among Asians...

- In one large review involving breast cancer patients of non-Hispanic whites, African Americans, Native Americans, Asians/Pacific Islanders, and Hispanic whites, it was found that biologic characteristics of breast cancer differ according to race/ethnicity.

- Relative to non-Hispanic white women, Asian women had 1.2-to 2.6-fold elevation in the risk of having either ER-negative or PR-negative tumor. Asian women also had 20-70% reductions in the risk of having lobular and/or ductal carcinoma.

Limitation to our study...

- The databases used might not perfectly represent the population at large.

- Data on biologic characteristics were only available on a very small number of elderly patients, thus cannot evaluate the trend on biologic characteristics by age.
CONCLUSION

- Histologic subtypes favoring a slower, more indolent pattern of growth and progression are less common in elderly of Balinese population.
- Biologic features that favor worse prognosis are quite frequent in this population.
- Factors that contribute to this observation need to be elucidated in future studies.
THANK YOU