Pathology-2013

OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference and Exhibition on
Pathology

August 05-07, 2013 Embassy Suites Las Vegas, USA

E-cadherin and NM23H1 as metastasis predictors for various degrees of histological malignancy in invasive ductal carcinoma

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Abstract

Background: This study aims to analyze whether the expressions of E-cadherin and NM23HI can be used as predictors of ductal carcinoma metastasis in various degrees of histological malignancies.
Methods: Paraffin blocks were obtained from 97 patients with invasive breast ductal carcinoma with malignancy grade 1, 2 and 3 who came to several hospitals in Jakarta and Bandung from 2000 to 2006. Histopathological examinations of eosin hematoxylin slides of primary and secondary tumors were done to diagnose the degree of histological malignancy and metastasis status. Further, immunohistochemistry staining of E-cadherin, NM23HI and cytokeratin were done followed by scoring according the number of positive cells and staining intensity. The associations of E-cadhetin and NM23H1 expression with the presence of metastasis and grade of histological malignancy were analyzed.
Results: Subjects were 29 - 75 years old (mean: 48.19 years), with most subjects aged 40 – 45 years old, with malignancy grade 1, 2 and 3 of 18.56%; 45.36% and 36.1% respectively. There was a significant association between E-cadherin and NM23HI expression in primary tumor with the possibility of invasion and metastasis inhibition by 14 times and 11 times respectively compared to those with negative E-cadherin and NM23HI expression. The ROC curve showed that E-cadherin (r=0.755) and NM23HI (r=0.827) expressions were strongly associated, sensitive and specific as metastasis markers.
Conclusion: E-cadherin and NM23HI expressions can be used as invasion and metastasis markers, but cannot be used as markers for the degree of histological malignancy of invasive ductal carcinoma.

Biography

Primariadewi Rustamadji has completed her Ph.D at the age of 45 in University of Indonesia. She is a Pathologist Specialist and Consultant from Faculty of Medicine University of Indonesia and a Lecturer in University of Indonesia, UIN, UNTAN, University of Palangkaraya, University of Bengkulu and a member of IAP organization. Last year she has done an Observership in Breast Pathology at Beth Israel Deaconess Medical Centre Teaching Hospital of Harvard University. She just has published a few of papers in reputed journal. She had a Research on Overexpression of HER2 and NM23H1 at ductal invasive carcinoma breast cancer and metastasis at lymph node and E-cadherin and NM23H1 as metastasis predictors for various degrees of histological malignancy in invasive ductal carcinoma.