使用 Onco*type* DX 對於乳癌細胞增生程度之相關性探討

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Correlation Ki-67 in breast cancer with Onco*type* DX recurrence score

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Purpose: The Onco*type* DX recurrence score (RS) provides an assessment risk of recurrence and adjuvant chemotherapy benefit among female with breast cancer. Ki67, which is a conventional marker of cancer cell proliferation and increasingly been used to help physician to make decision for adjuvant chemotherapy. It whether influencing to the high risk of traditional and TAILORx cutoff points in Taiwan was still unknown.

Materials and Methods: This study was designed as a retrospective observation study. All demographics and clinical data were recorded in the Cheng Hsin General Hospital database and for analysis. Patients were accepted partial or total mastectomy surgery between Jan 2009 and Aug 2018. Specimen of patients were sent for Onco*type* DX 21-gene expression assay to estimate the RS by several cancer-related genes. RSs were divided into three risks group by using traditional and TAILORx cutoff points. These two cutoff points were stratified into low risk (traditional, <18; TAILORx, <11), intermediate risk (traditional, 18-30; TAILORx, 11-25) and high risk (traditional, >30; TAILORx, >25) groups. Ki67 level (percentage of Ki67-positive cancer nuclei) were determined by immunohistochemistry(IHC) method and stratified into ≤14% and >14% from pathology report. Uni-variable logistic regression model was used to determine the level of Ki67 of breast cancer associated with high risk RSs group.

Results: A total of 120 breast cancer patients were included in the study analysis. Among these patients, 50 (42.0%) were accepted breast conserving surgery, 69 (57.9%) were received total mastectomy and one patient without taken operation. Of these, the mean age was 54.5±8.9 years. Nearly 62.5% women were age more than 50 years. Around 62 patients with high level of Ki67 (>14%). Of high levels of Ki67, 16.1% (10 of 62) were high risk, 43.5% (27 of 62) were intermediate risk, and 40.3% (25 of 62) were low risk in traditional cutoff points, whereas for the TAILORx cutoff points, of the 62 patients with Ki67 more than 14%, 14.5% of them were low risk, 54.8% of them were intemediate risk, and 30.6% of them were high risk. In logistic regression model analysis demonstrated that patients with advanced tumor cell proliferation were 3.83-times high significant than low level of the Ki67 in determining of high risk group (p=0.0087).

Conclusion: Patients with advanced tumor proliferation were highly associated in high risk group in TAILORx cutoff points. We therefore suggest to offer Onco*type* DX to patients with high level of Ki67.