使用 Onco*type* DX 對於乳癌細胞分化程度之相關性探討

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Association of tumor grade 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. The tumor grade status of breast cancer 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. Uni-variable logistic regression model was used to determine the magnitude of proliferation 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. The well, moderate and poor differentiated of breast tumor accounted around 37.5% (45 of 120), 55.8% (67 of 120) and 6.7% (8 of 120). In traditional cutoff points, there were around 2.2%, 17.9%, and 25.0% of tumor grade 1, grade 2 and grade 3 were classified into high risk group, 24.4%, 35.8%, and 50.0% of tumor grade 1, grade 2 and grade 3 were classified into intermediate risk group, whereas for TAILORx cutoff points, 2.2%, 28.4%, and 62.5% of tumor grade 1, grade 2 and grade 3 were classified into high risk group and 68.8%, 49.2%, and 37.5% of tumor grade 1, grade 2 and grade 3 were classified into intermediate risk group. In logistic regression model analysis presented that tumor grades were highly odds significant of high risk group with traditional (grade 2 vs grade 1, OR=9.59, 95% CI: 1.20-72.6; grade 3 vs grade 1, OR=14.66, 95% CI: 1.15-187.2) and

TAILORx (grade 2 vs grade 1, OR=17.42, 95% CI: 2.24-135.6; grade 3 vs grade 1, OR=73.33, 95% CI: 6.36-845.46) cutoff points.

Conclusion: Patients with advanced tumor grade were highly associated in high risk with RSs in both cutoff points. We therefore suggest to offer Onco*type* DX to patients with moderate or poor tumor grade.