使用 Onco*type* DX 對於乳癌預後因子以及不同組織型態之相關性探討

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Association of prognostic factors and different histologic subtypes 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 prognostic factors and histologic subtypes of breast cancer whether influencing to the high risk of traditional and TAILORx cutoff points in Taiwan were 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 tumor grades and the different subtypes 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. The distinct subtypes of tumors were IDC (99 of 120, 82.5%), ILC (7 of 120, 5.8%), mucinous (7 of 120, 5.8%), papillary (2 of 120, 1.7%), cribriform (1 of 120, 0.8%), medullarycis (1 of 120, 0.8%), mixed IDC and mucinous (1 of 120, 0.8%), tubulalobular (1 of 120, 0.8%), tubular (1 of 120, 0.8%). Overall, around 20.8% and 12.5% patients were classified into high risk group by TAILORx and traditional cutoff points. As for intermediate risk patients, accounted 55.8% and 32.5% for TAILORx and traditional cutoff points. However, by using traditional cutoff points, nearly 55.0% patients presented more than TAILORx cutoff points, both differences around 32%. For the tumor grades, 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, 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. In logistic regression model analysis, we found that ILC tumors were more increasing likelihood associated with high risk (OR=2.65, 95% CI: 0.46-15.08) and (OR=2.79, 95% CI: 0.58-13.43) compared with IDC based on traditional and TAILORx cutoff points, respectively. Tumor grades of breast cancer 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 ILC tumor have potential associated in high risk with RSs in both cutoff points. 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.