AB069. P041. A nomogram based on postoperative neutrophil-to-lymphocyte rate and TNM stage to predict the prognostic value in pancreatic ductal adenocarcinoma with open distal pancreatosplenectomy

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Background: The prognosis of pancreatic ductal adenocarcinoma (PDAC) remains poor. Open distal pancreatosplenectomy (ODPS) is prevalent in the patients of early PDAC located in pancreatic body or tail. However, the models for relapse or survival prediction in those patients are still limited. Postoperative neutrophil-to-lymphocyte rate (poNLR), a novel inflammation-based score, has been formulated to analyze the prognostic significance in PDAC patients with ODPS. Therefore, this study aims to generate a valuable prognostic nomogram for PDAC following ODPS.

Methods: We retrospectively enrolled 97 patients of PDAC undergoing ODPS in this study. The Cox proportional hazards regression methodology was used in univariate and multivariate survival analyses to identify significant independent prognostic factors. The prognostic nomograms integrating poNLR into the American Joint Commission on Cancer (AJCC) staging system (8th edition) for predicting overall survival (OS) and relapse-free survival (RFS) were established to achieve superior discriminatory abilities. Further, these prognostic nomograms were verified according to concordance index (C-index), calibrations and decision curve analyses (DCA).

Results: The optimal cut-off value of poNLR for assessing OS determined by X-tile program was 14.1. Higher poNLR was associated with higher postoperative neutrophil (poNeutrophil), lower postoperative lymphocyte (poLymphocyte), lower preoperative lymphocyte-to-monocyte rate (preLMR) and higher $\triangle$NLR (postoperative-preoperative NLR). In the univariate and multivariate analysis, poNLR was identified as an independent prognostic indicator for OS and RFS (P=0.044 and 0.028, respectively) and patients with higher poNLR level were probable to have shorter OS and RFS. Compared with the TNM staging system of the AJCC 8th edition, the nomogram comprising of poNLR and AJCC 8th edition exhibited superior predictive accuracy for OS and RFS.

Conclusions: poNLR can be a proven, inexpensive and novel survival predictor of PDAC patients with ODPS. One more advanced and accurate predictive model will be achieved to assist in risk stratification via the incorporation of poNLR into nomograms.