**Prognostic index model for overall survival in advanced unresectable pancreatic cancer from GEST study**

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**Background:** The management of advanced pancreatic cancer (APC) patients remains complex. Better discrimination for overall survival (OS) is needed to improve therapeutic decisions. We address this issue by establishing the prognosis model for OS with the full spectrum of parameters currently available at diagnosis.

**Methods:** We enrolled 834 APC patients recruited in GEST study, an international multicenter randomized phase III trial. 27 baseline variables among demographic, cancer history, clinical, biological and radiological parameters were evaluated in univariate and multivariate analyses as prognostic factors for OS. One hundred dataset were replicated by bootstrap method. In each dataset, univariate Cox Proportional Hazard (CPH) model were performed to select factors as covariates and then evaluated in multivariate model. The final CPH model was performed using selected covariates and hazard ratio of each covariate were estimated. Prognostic index (PI) per patients were constructed by sum of product covariates and weights from the final model. Patients were classified into three risk groups: low, intermediate and high risk. The predictive value of the final model was evaluated with Harrells C index.

**Results:** A total of 834 patients of enrolled in GEST study, 801 patients with no missing data were included in analysis. In multiple CPH analyses determined 10 prognostic factors (liver metastasis, peritoneal metastasis, AST >=60, pancreatic resection, CRP >=1, Hemoglobin <=11, neutropenia <=5000, LDH <=300, Bilirubin <=1.5, age <=70). Stratified CPH model was performed with 10 factors by the original dataset. Harrells C-statistic for the final model was 0.689 (95% bootstrap CI 0.67 0.72). Three risk-groups for death could be identified.

**Conclusions:** Our model of PIs could aid individual patient risk stratification and predict prognosis in pancreatic cancer treated with gemcitabine based and/or fluorouracil based chemotherapy.