

## AB030. S030. Defining and predicting early recurrence in 957 patients with resected pancreatic ductal adenocarcinoma

Vincent P. Groot<sup>1,2</sup>, Georgios Gemenetzi<sup>1</sup>, Alex B. Blair<sup>1</sup>, Roberto J. Rivero-Soto<sup>1</sup>, Jun Yu<sup>1</sup>, Ammar A. Javed<sup>1</sup>, Richard A. Burkhart<sup>1</sup>, Inne H. M. Borel Rinkes<sup>2</sup>, I. Quintus Molenaar<sup>2</sup>, John L. Cameron<sup>1</sup>, Matthew J. Weiss<sup>1</sup>, Christopher L. Wolfgang<sup>1</sup>, Jin He<sup>1</sup>

<sup>1</sup>Department of Surgery, The Sol Goldman Pancreatic Cancer Research Center, The Johns Hopkins University School of Medicine, Baltimore, Maryland, USA; <sup>2</sup>Department of Surgery, UMC Utrecht Cancer Center, University Medical Center Utrecht, Utrecht, The Netherlands

**Background:** A clear definition of “early recurrence” after pancreatic ductal adenocarcinoma (PDAC) resection is currently lacking. The aim of this study was to establish an evidence-based cut-off to differentiate between early and late recurrence and to compare clinicopathologic risk factors between the two groups.

**Methods:** Patients undergoing pancreatectomy for PDAC between 2000–2013 were included. Exclusion criteria were neoadjuvant therapy and incomplete follow-up. A minimum P-value approach was used to evaluate the optimal cut-

off value of recurrence-free survival to divide the patients into early and late recurrence cohorts based on subsequent prognosis. Potential risk factors for early recurrence were assessed with logistic regression models.

**Results:** Of 957 included patients, 204 (21.3%) were recurrence-free at last follow-up. The optimal length of recurrence-free survival to distinguish between early (n=388, 51.5%) and late recurrence (n=365, 48.5%) was 12 months (P<0.001). Patients with early recurrence had 1-, and 2-year post-recurrence survival rates of 20% and 6% compared to 45% and 22% for the late recurrence group (both P<0.001). Pre-operative risk factors for early recurrence included a Charlson age-comorbidity index  $\geq 4$  (OR 1.65), tumor size >3.0 cm on CT (OR 1.53) and CA 19-9 >210 U/mL (OR 2.30). Post-operative risk factors consisted of poor tumor differentiation grade (OR 1.66), microscopic lymphovascular invasion (OR 1.70), a lymph node ratio >0.2 (OR 2.49) and CA 19-9 >37 U/mL (OR 3.38). Adjuvant chemotherapy (OR 0.28) and chemoradiotherapy (OR 0.29) were associated with a reduced likelihood of early recurrence.

**Conclusions:** A recurrence-free interval of 12 months is the optimal threshold for differentiating between early and late recurrence, based on subsequent prognosis.

doi: 10.21037/apc.2018.AB030

**Cite this abstract as:** Groot VP, Gemenetzi G, Blair A, Rivero-Soto R, Burkhart R, Borel Rinkes I, Molenaar Q, Cameron J, Weiss M, Wolfgang C, He J. Defining and predicting early recurrence in 957 patients with resected pancreatic ductal adenocarcinoma. *Ann Pancreat Cancer* 2018;1:AB030. doi: 10.21037/apc.2018.AB030