

Impact on Long-term Survival of a Standardized Histopathological Protocol on the R1 Incidence in Pancreatoduodenectomy for Pancreatic Ductal Adenocarcinoma

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Abstract

Background: Pancreatic Ductal Adenocarcinoma (PDAC) is a pathology with a very poor prognostic, the only curative treatment option being surgery, in association with chemotherapy. This study aims to assess the influence that the use of a standardized pathology report after a pancreaticoduodenectomy (PD) has on the R1 margins rate and the impact that this has on long term survival.

Material and Methods: We included 116 patients admitted to the Regional Institute of Gastroenterology and Hepatology Prof. Dr. O. Fodor Cluj Napoca, who underwent PD for PDAC (Pancreatic Ductal Adenocarcinoma) between January 2012 and May 2017. We divided them in two groups: 59 patients for which a non-standardized histopathological protocol was used and 57 patients for which a standardized protocol was implemented. We considered a margin to be R1 when there were tumor cells at ≤ 1 mm from the resection margin.

Results: The R1 percentage in the first group of patients was of 39%, while the R1 resection rate in the second group was of 68.4%. The median survival rate was similar in the two groups, with no statistically significant difference between them, but in the prospective study when comparing R0 vs R1 margins there was a statistically differences in 5 year OS with a p-value = 0.03.

Conclusion: The use of a standardized pathology report reveals a significant increase in R1 resection rates. Also study revealed not only increasing R1 incidence when using a standardized histopathology report, but also that those margins (R1) playing a determinant role in 5-year OS. The mesopancreas is the most frequently R1 resection margin.

Key words: pancreatic ductal adenocarcinoma, pancreatoduodenectomy, R1 resection margins, standardized histopathology report, survival