

## **Safety and Cost-Effectiveness of Venous Resection in Pancreatic Cancer**

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**Context** Safety and cost-effectiveness of venous resection (VR) in resectable/borderline resectable ductal adenocarcinoma of the pancreatic head is still debate. **Objectives** Primary end point was to compare post-operative mortality between patients treated with a standard resection and patients treated with a VR. Secondary end points were postoperative morbidity, type of discharge, costs of hospitalization, R1 rate, and overall (OS) and disease free (DFS) survivals. **Methods** From 2001 to 2013, data of 291 pancreatic resections were collected. All patients (n=91) affected by head ductal adenocarcinoma were divided in two groups: with (group B; n=15) or without vascular resection (group A; n=76). The two groups were compared for postoperative course, OS and DFS. Multivariate analysis was carried out in order to evaluate the role of demographic, clinical, surgical (including VR) and pathological factors on mortality, morbidity, type of discharge, costs, R1 rate, OS and DFS. **Results** Postoperative mortality, morbidity and type of discharge were similar in the two groups. The total costs of hospitalization was similar, while the costs of ICU stay were higher in group B

(P=0.012). No differences between two groups about R1 rate, DFS and OS were detected. Age >80 years was the only factor related to postoperative mortality (OR=3.9, P=0.048). ASA score increased the risk of postoperative complications (OR=2.9, P=0.029). Discharge to health care facility was more frequent in patients with age >80 years (OR=405.3, P=0.001) and with an higher preoperative total bilirubin (OR=1.2, P=0.042). ASA score increase by 34% the total hospital stay (P=0.004), by 48% the total hospital costs (P<0.001) and the ICU costs by 56% (P=0.004). Vascular resection increased the ICU costs by 50% (P=0.038). Vascular resection did not reduce the risk of R1. R1 resection on arterial margin is related with a shorter OS (HR=1.8, P=0.049), while R1 resection, vascular infiltration and a vascular involvement >G1 at imaging were all predictive of a worse DFS (HR=3.2, P=0.050; HR=2.6, P=0.027; and HR=1.6, P=0.043, respectively). **Conclusions** VR is safe and useful to reach an R0 resection. VR affects the costs of postoperative management. OS and DFS were similar in patients with or without VR.