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# New Criterion for Borderline Resectable Pancreatic Cancer: Invasion of a Replaced Right Hepatic Artery

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**ABSTRACT**

**Background:** Loco-regional invasion is not uncommon in a patient diagnosed with a pancreatic cancer. A negative resection margins pancreatectomy represents the most important determining factor of survival in patients resected for pancreatic adenocarcinoma. Thus, in order to increase resectability in such patients, extended pancreatectomies were proposed in so-called borderline resectable tumors, including venous, arterial or other surrounding organs removal.

**Case presentation:** A 52-year old male, with pancreatic head cancer invasive into the portal vein and replaced right hepatic artery (rRHA)(from superior mesenteric artery), underwent pancreatico-duodenectomy (PD) with portal vein resection and reconstruction, segmental resection of the rRHA and associated right hemi-hepatectomy.

**Results:** The postoperative outcome was remarkably uneventful except for a self-limited minor bile leak. Negative resection margins of the operative specimen were observed at pathological examination.

**Conclusion:** Proper assessment of the presence and course of a rRHA prior to PD is mandatory for a safe surgery. Invasion of the rRHA is not a contraindication for resection in a patient with pancreatic head cancer and should be included among the borderline resection criteria. Associated right hemi-hepatectomy is a safe option for such a patient in order to achieve negative resection margins.

**Key words:** pancreatic cancer, replaced right hepatic artery, pancreatico-dudenectomy, hemi-hepatectomy