MULTIMEDIA ARTICLE

How to Counter the Problem of R1 Resection in Duodenopancreatectomy for Pancreatic Cancer?

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Abstract

Objective Although duodenopancreatectomy has been standardized for many years, the pathological examination of the specimen was re-described in the last years. In methodical pathological studies up to 85% had an R1 margin.[1,2] These mainly involved the posterior und medial resection margin.[3] As a consequence we need to optimize and standardize the pathological workup of the specimen and to extend the surgical resection, where possible without risk for the patient.

Method and Result In an instructive video we show the technique of duodenopancreatectomy with emphasis on the dorsal and medial resection margin. Furthermore we show the standardized pathological workup of the specimen, involving the reporting of all the resection margins.

Conclusion To accurately determine R1 status at the posterior and medial resection margin, a close collaboration between pathologist and surgeon is crucial. Pathologists do a standardized workup of the resected specimen with staining of the surfaces and systematic analysis of all the resection margins. Surgeons need to extend the resection of the pancreatic head to the superior mesenteric artery by dorsal dissection.

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References

1. Verbeke CS, Leitch D, Menon KV, McMahon MJ, Guillou PJ, Anthoney A. Redefining the R1 resection in pancreatic cancer. Br J Surg 2006;93:1232–1237.
2. Esposito I, Kleeff J, Bergmann F, Reiser C, Herpel E, Friess H, Schirmacher P, Buchler MW. Most pancreatic cancer resections are R1 resections. Ann Surg Oncol 2008;15:1651–1660.
3. Sobin LH, Gospodarowicz MK, Wittekind C. TNM Classification of Malignant Tumours. Weinheim: Wiley-VCH, 2009.