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## Concept of a Duct-to-Mucosa Pancreaticojejunostomy

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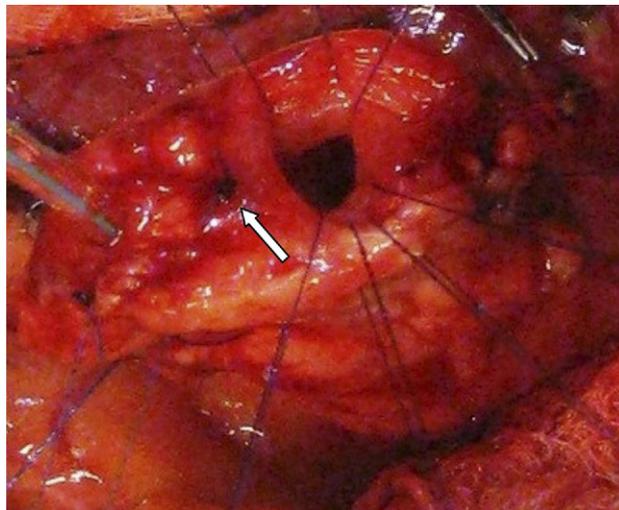
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We have read with great interest and congratulate Grobmyer and colleagues<sup>1</sup> for their informative article on their novel technique of pancreaticojejunostomy. This technique has stood the test of time and we commend their low anastomotic failure rate. Our concern, however, lies in the basic concept of a duct to mucosa or Wirsungojejunostomy, as described by the authors.

The anatomy of the main pancreatic duct, as illustrated in *Gray's Anatomy*, comprises numerous branch ducts draining into the main pancreatic duct in a herringbone fashion.<sup>2</sup> The presence of branch ducts is, of course, also well described in the present classification of intraductal papillary mucinous neoplasm (IPMN) into main duct and branch duct variants.<sup>3</sup> During a standard Wirsungojejunostomy, the branch ducts are not engaged into the anastomosis and can logically “leak” outside the anastomosis, contributing to a postoperative pancreatic fistula (POPF). In fact, in rare cases a minor duct of Santorini may be present at the cut surface of the pancreas, and, if small and not identified, it will also not be engaged into a duct-to-mucosa anastomosis (Fig. 1). We wonder if, despite a sound technique by the authors, this might explain the grade A POPFs reported in this article?

A technique that we have used is a hybrid of the invagination and duct-to-mucosa techniques in which the entire cut surface of the pancreas is placed within the jejunum in an end-to-side fashion, thus allowing drainage of the major and minor ducts. Tacking sutures are used to evaginate the main duct against the pancreatic parenchyma to prevent circumferential scarring and possible ductal stenosis.<sup>4</sup>

We would therefore appreciate the authors' response on



**Fig 1.** Minor duct of Santorini (arrow).

the management of the pancreatic remnant considering the existence of the branch ducts.

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### Reply

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We thank Drs Maharaj, Naraynsingh, and Shukla for their interest in our recently published work.<sup>1</sup> Pancreatic anastomotic failure was historically considered a “feared” complication of pancreaticoduodenectomy because of its association with postoperative mortality.<sup>2</sup> As a result, there has been significant interest in the development of techniques