Editorial

# Benchmark in surgical management of pancreatic and biliary tract malignancies

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Cameron and colleagues in this article (1) have presented a retrospective review of two thousand consecutive pancreaticoduodenectomies performed by a single surgeon (JC), between March 1969 and March of 2012. This impressive review serves as a benchmark in the management of pancreatic, distal bile duct, periampullary and duodenal cancers, and is a tribute to one surgeon's determination and drive to improve surgical outcomes with this operation. This article outlines the evolution of pancreaticoduodenectomies as an infrequent, highly morbid operations in the early 1970's, with hospital mortality rates as high as 25%, to our present state, with 30-day hospital mortality as low as 1.6% in this series. The improvements in outcomes with pancreaticoduodenectomies throughout the world are in a large part is due to the experience acquired by Dr. Cameron performing this operation in a high volume center. Historically, this paper chronicles Dr. Cameron's experience, and is a window into the early years when this operation began to be performed more frequently. In the first 21 years of this review [1969-1980], only 65 pancreaticoduodenectomies were performed, in contrast, between the year 2000 and 2012, more than 1,300 pancreaticoduodenectomies were performed. It's hard to imagine the hours spent performing this number of procedures, particularly when you consider the numerous obligations Dr. Cameron had during this period of time.

In this review, the 5-year survival data for adenocarcinoma of the head of the pancreas increased from 19% in the 1990's to 24% in the 2000's. As surgical technique was refined and preoperative imaging evolved in this center, the negative margin rate with resection increased from 66% in the first 1,000 cases to 81% in the second 1,000 cases. Equally impressive are the 5-year survival data for distal bile duct tumors, periampullary adenocarcinoma and duodenal cancers (45%, 27% and 48%) in the first 1,000 cases and (48%, 25%, and 43%) in the second 1,000 cases. The postoperative morbidity defined in this large cohort of patients serves as a standard to measure outcomes in other centers following this operation. The importance of having a readily available and active interventional radiology department is highlighted in this paper, and has become a key component in centers performing high volume pancreaticoduodenectomies.

This article highlights the surgical excellence achieved by Dr. Cameron over his very distinguished surgical career. Numerous prospective randomized trials were carried out on the large cohort of patients undergoing this operation at Johns Hopkins, answering key questions as this procedure evolved (Table 11). The impact of the evolution of this operation worldwide has resulted in widespread adoption of the surgical techniques refined by Dr. Cameron, and validated with prospective randomized trials from Johns Hopkins. Table 13 of this article lists surgeons trained in complex, high-risk alimentary tract procedures at John's Hopkins. The exponential impact of this group of distinguished surgeons trained by Dr. Cameron on current surgical practice is incalculable. These surgeons are a fitting living legacy to Dr. Cameron's surgical creativity and innovation. This article represents a very significant contribution to the surgical management of pancreatic and biliary tract malignancies.

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## Footnote

*Conflicts of Interest:* The author has no conflicts of interest to declare.

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