

Surgical Advances for Pancreas Cancer and Related Diseases

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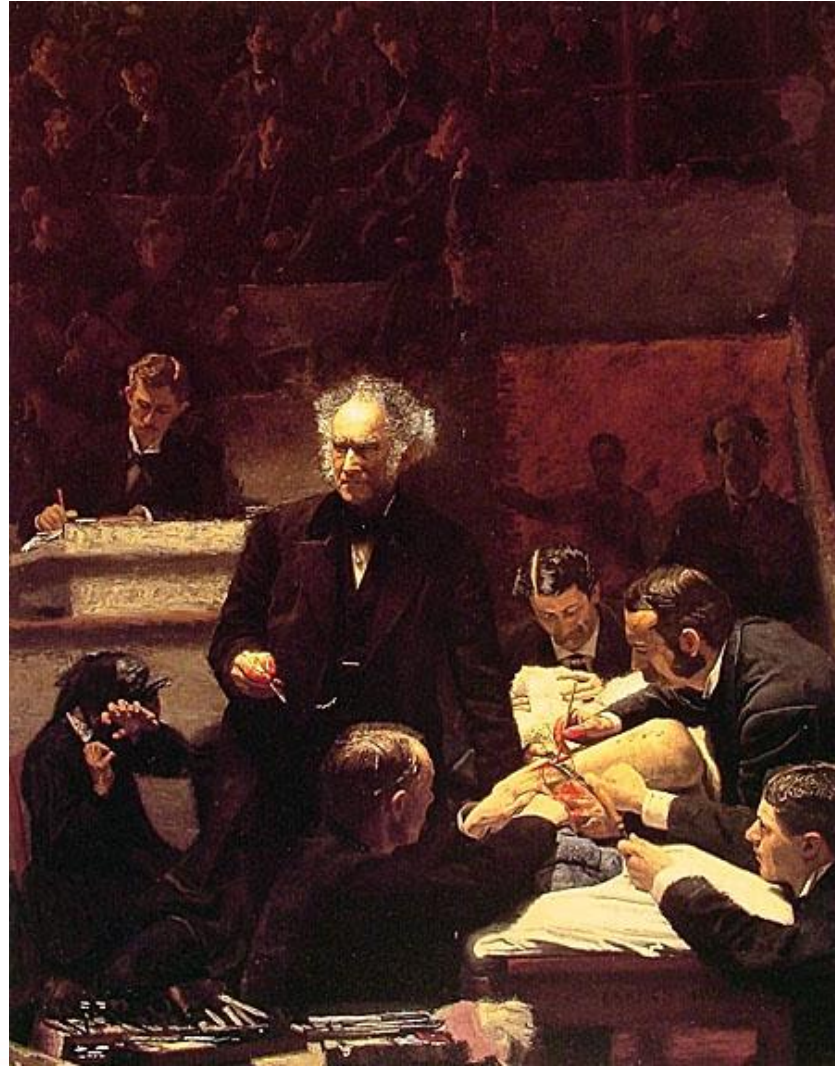
Jefferson Pancreas, Biliary and Related Cancer Center

Thomas Jefferson University

**If I have seen further it is by
standing on the shoulders of
giants.**

Isaac Newton

Surgery at Jefferson, Late 19th Century



Scientific Discoveries Which Made Complex Pancreatic Surgery Possible

- 1922- Frederick Banting and Charles Best discovered Insulin, illuminating the function of the pancreas



Scientific Discoveries Which Made Complex Pancreatic Surgery Possible

- 1929- Dam discovered Vitamin K and Doisy synthesized it in 1939 allowing patients with obstructive jaundice to be operated upon without fear of excessive bleeding



Henrick Carl Peter
Dam



Edward Adelbert
Doisy

Scientific Discoveries Which Made Complex Pancreatic Surgery Possible

- 1930- Karl Landsteiner discovered the human blood groups which made possible the development of blood banks and the ability to replace blood lost during surgery



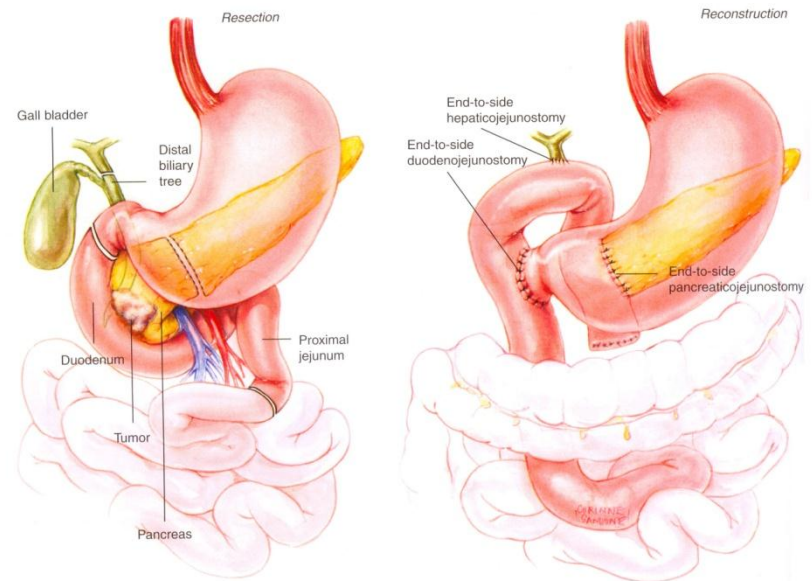
Scientific Discoveries Which Made Complex Pancreatic Surgery Possible

- 1935 AO Whipple and colleagues report their experience with pancreato-duodenectomy initially as a two stage procedure later adapted to a one stage procedure



Early Results in Pancreatic Surgery

- Whipple reported a 33% mortality rate with the procedure
- As late as the 1970's, the operative mortality in the US was 32%, and some prominent surgeons advocated that the operation be stopped



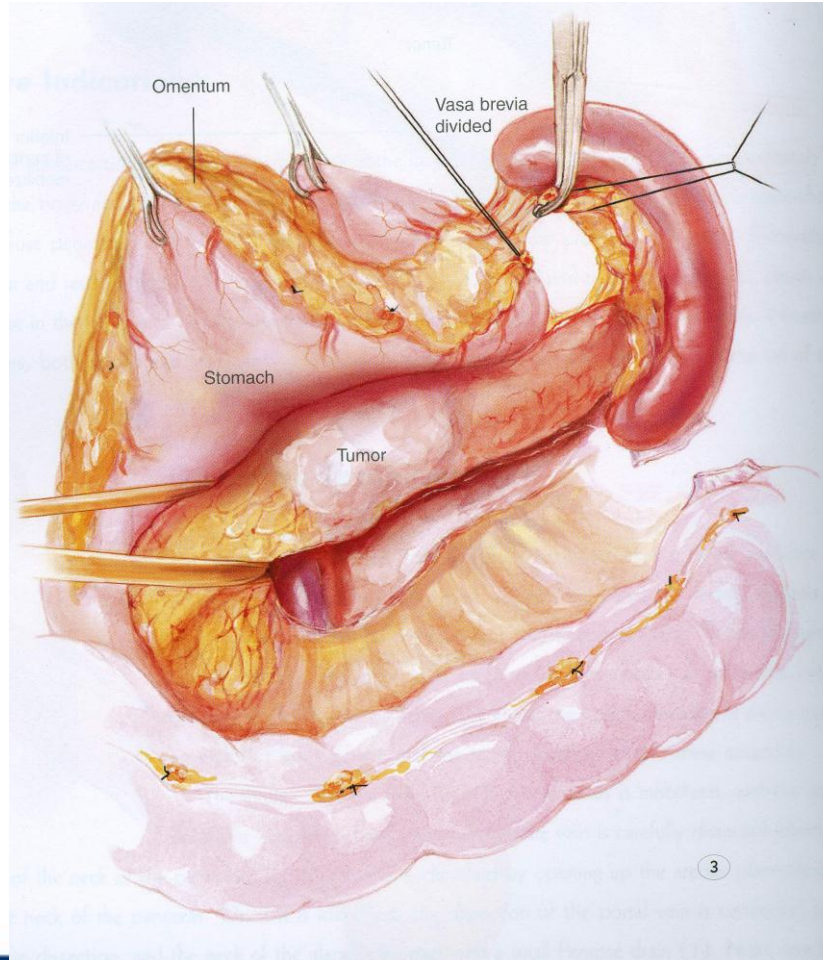
Minimally Invasive Pancreatic Surgery

- Same surgery on the inside, but with:
- Smaller Incisions
- Reduced Postoperative Pain
- Reduced Hospital Stay
- Rapid Return to Normal Daily Activities and Work
- Reduced Wound Complications (Infections)
- Improved Appearance

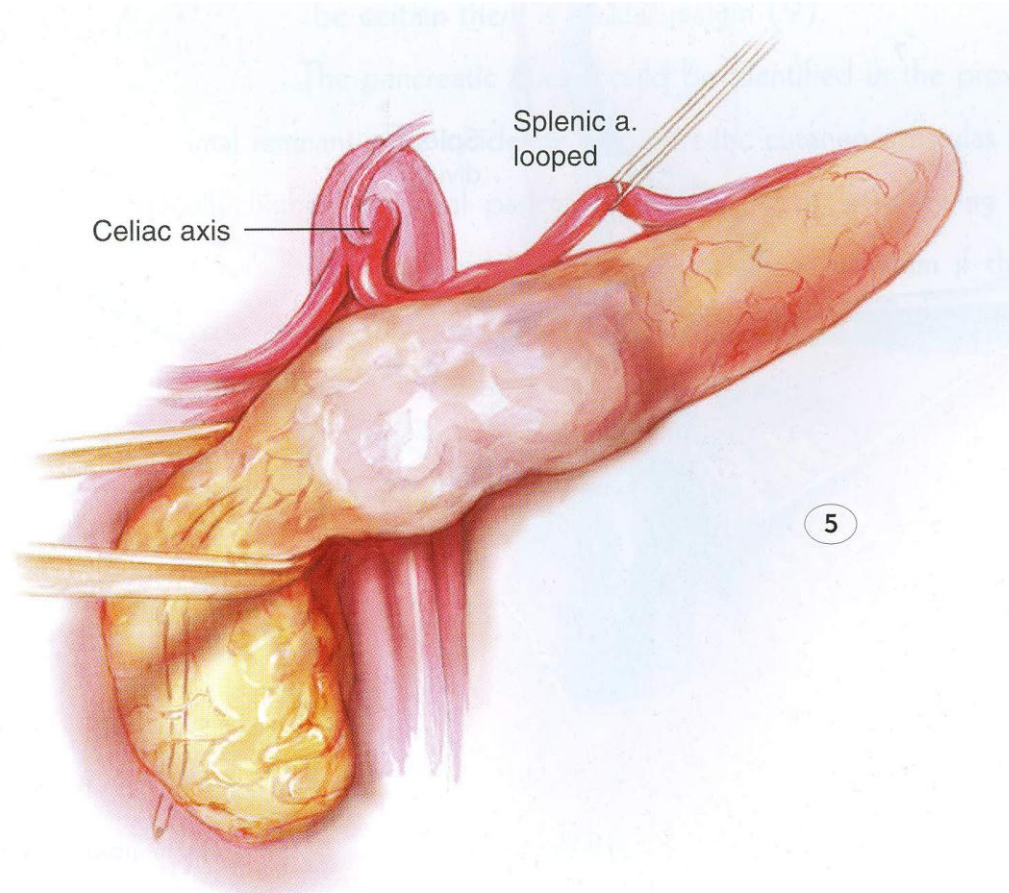
Robot Assisted Pancreatic Surgery



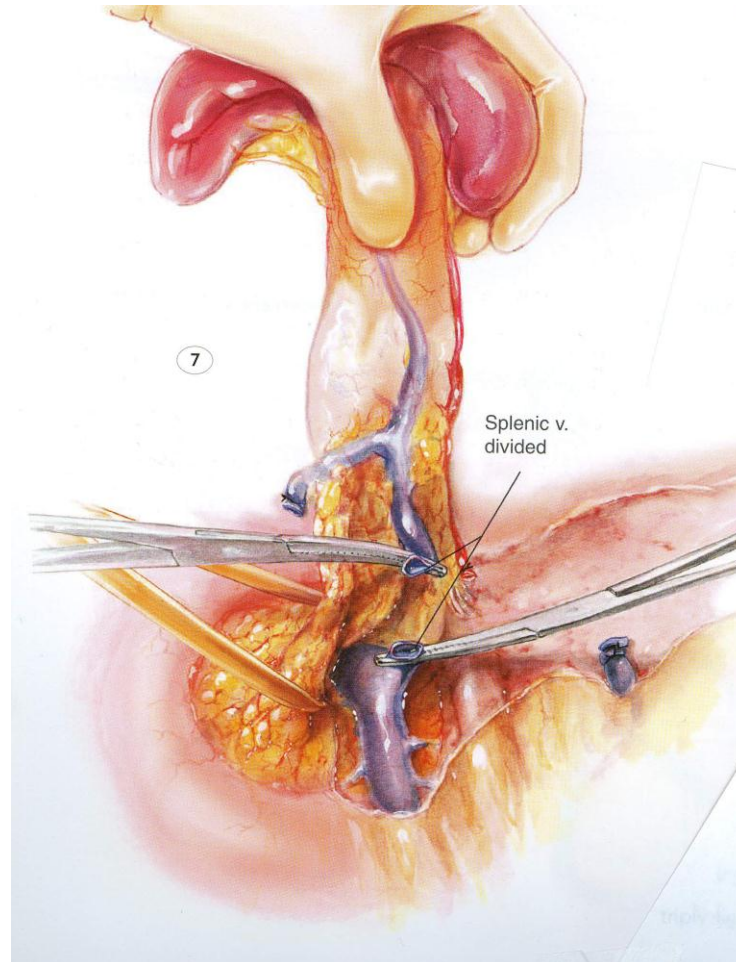
Tumor Located in Pancreatic Body



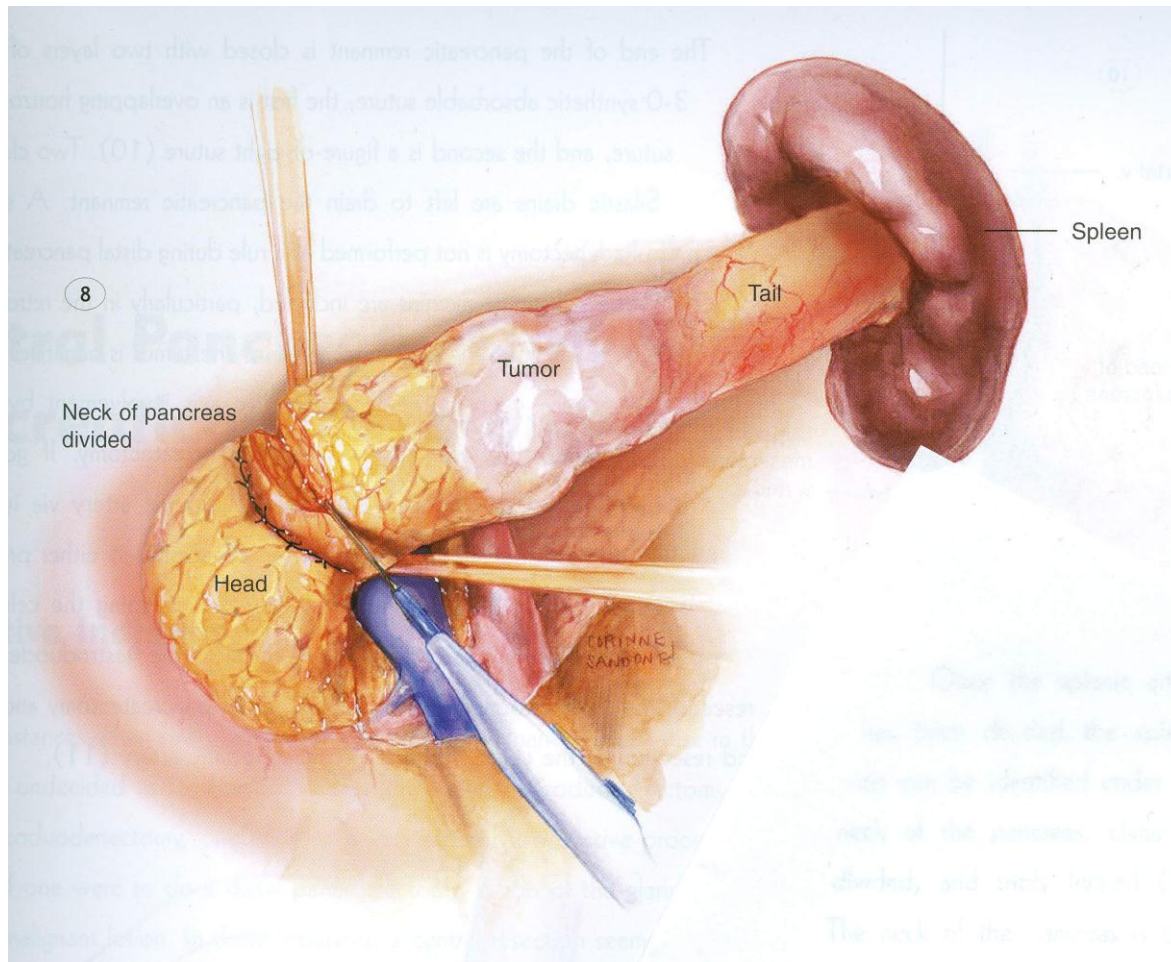
Ligate Inflow- Splenic Artery



Ligate Outflow- Splenic Vein



Divide the Pancreas



Positioning Robotic Arms



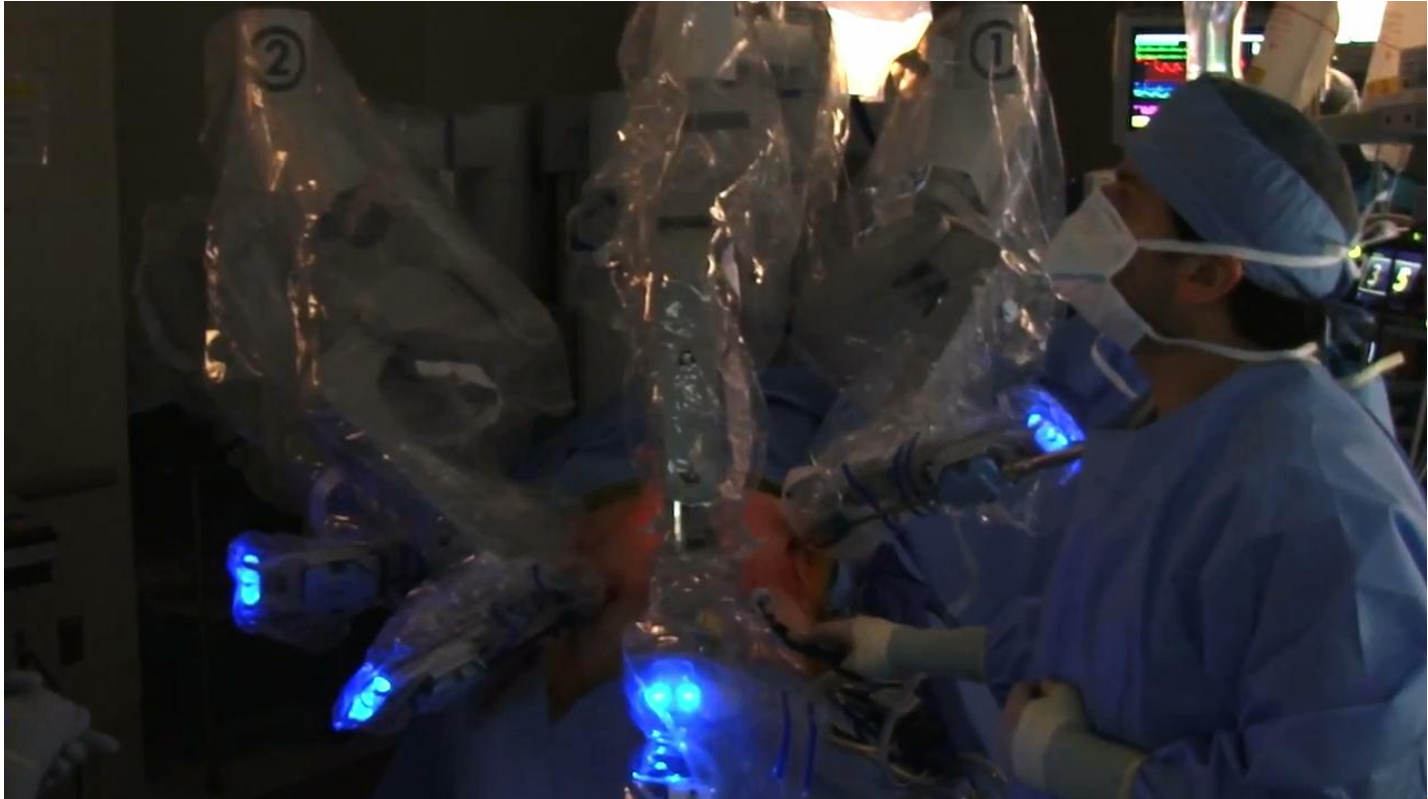
Robotic Arms Docked and Active



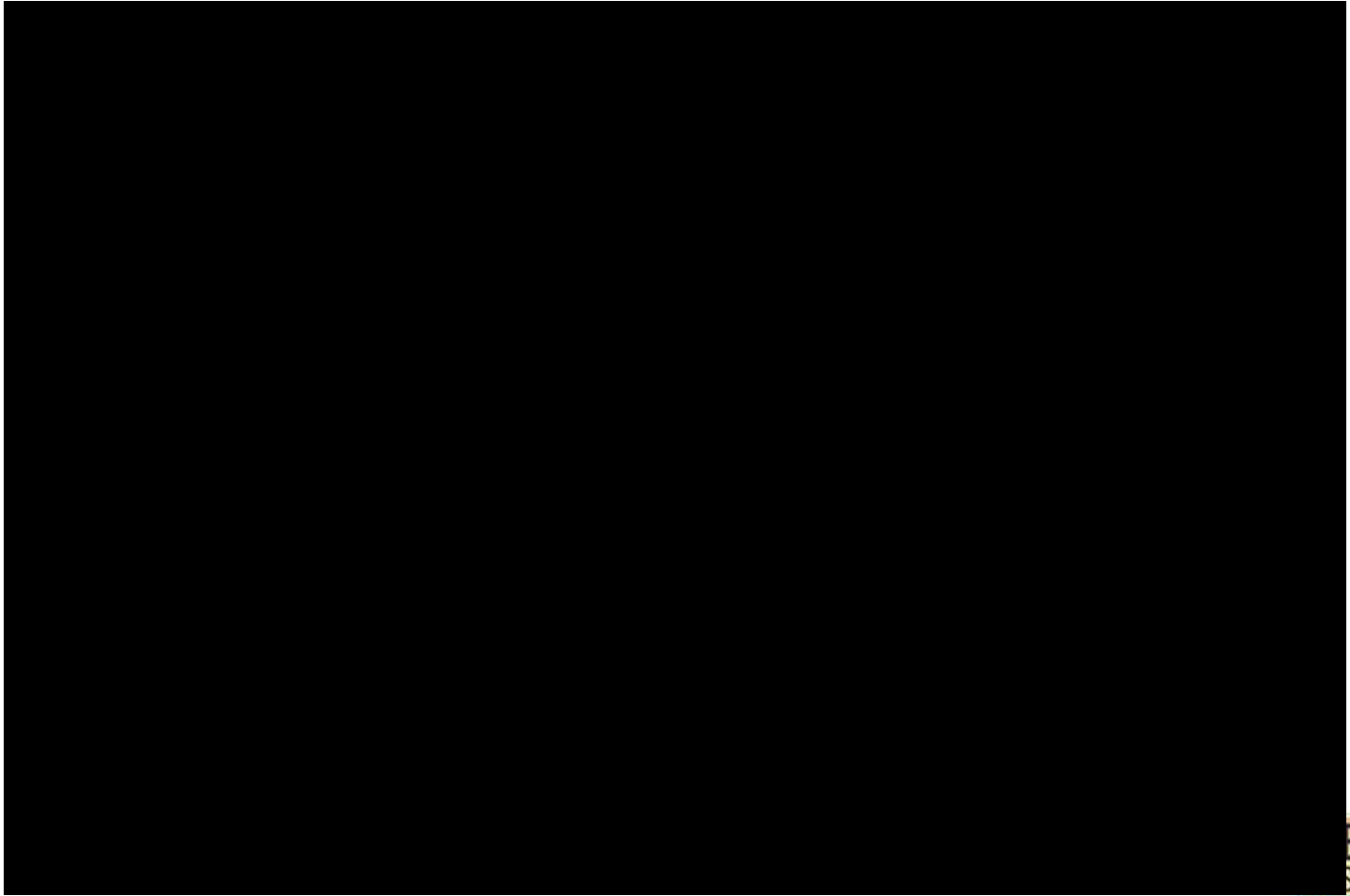
Surgeon at the Robotic Console



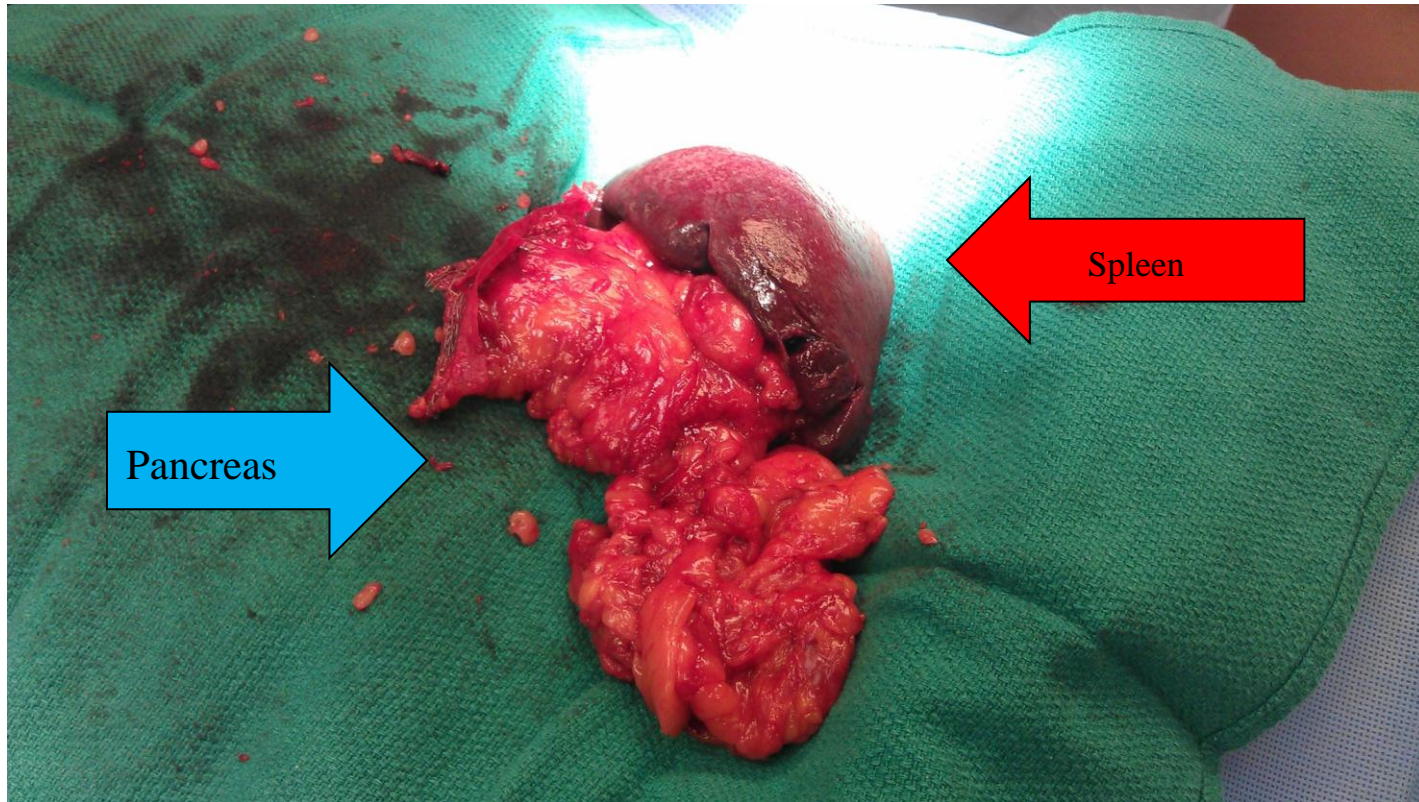
Bedside View



Video



Surgical Specimen



Pancreas

Spleen



Benefits of Minimally Invasive Pancreatic Surgery	Minimally Invasive Distal Pancreatectomy and Splenectomy	Open Distal Pancreatectomy and Splenectomy
Surgery Length	3 hours	3 hours
Incision Size	1 cm incisions	15 cm
Days in Hospital	2-3	4-5
Require Pain Meds	1 week	3-4 weeks
Return to Work	1-2 weeks	4-5 weeks

Robotic Surgeons at Jefferson



Thank You!

