

# Surgical Management And Multispecialty Involvement In The Removal Of Eroded Inferior Vena Cava Filters

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## INTRODUCTION

- Indwelling inferior vena cava (IVC) filters may fracture, migrate, or erode into surrounding structures when left in place for an extended period
- When endovascular retrieval of these filters fails, a surgical approach is needed in some proportion of cases
- These cases purpose of this study was to identify the variety of surgical involvement resources that were needed in the care of these patients at a single center over a two-year period

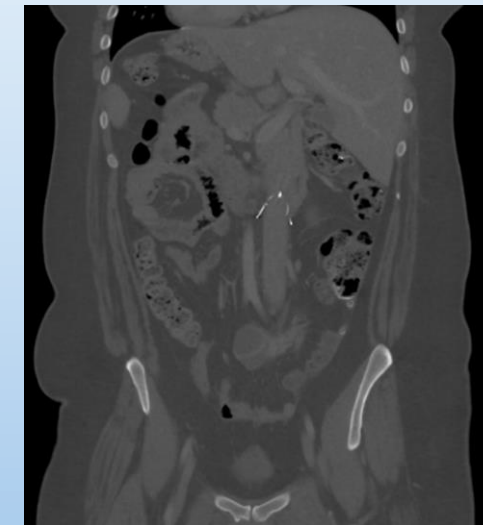
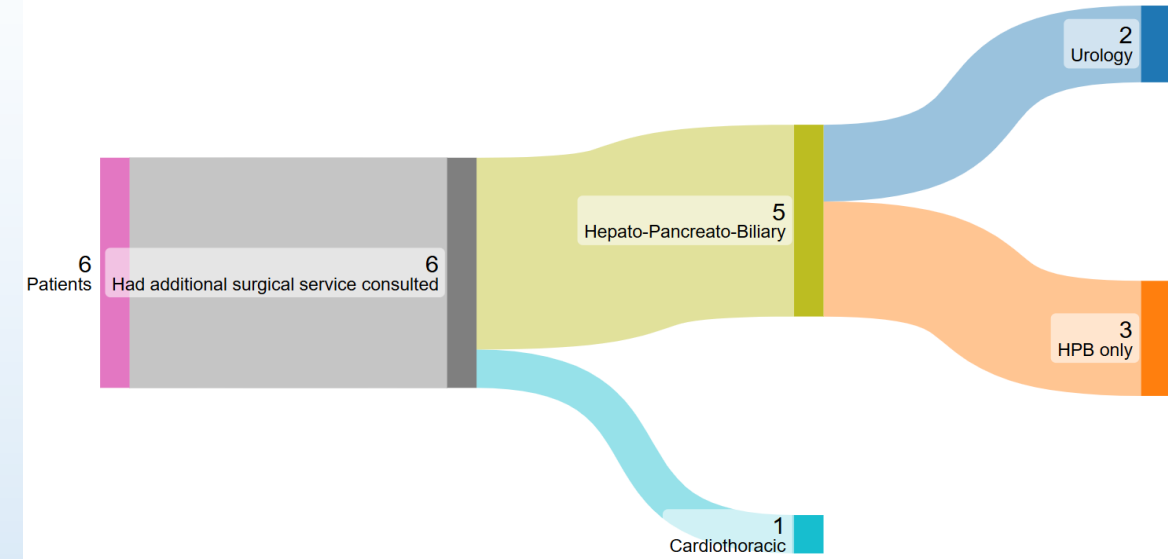
## METHODS

- Single center retrospective analysis
- May 2022 to June 2024
- Patients who underwent surgical removal of an IVC filter were included

Case	Sex	Age	Years with Filter	LOS (days)	Consulting Services
1	F	43	13	4	Hepatobiliary
2	M	49	13	15	Cardiothoracic
3	F	63	11	8	Hepatobiliary, Urology
4	F	31	5	7	Hepatobiliary
5	M	61	4	10	Hepatobiliary
6	M	41	6	10	Hepatobiliary, Urology

## RESULTS

- Three patients were male (50%), mean age 48 years old
- Removed filters had been in place an average of 8.7 years
- Mean length of stay was 9 days
- All patients had invasion of filter struts into surrounding structures including the duodenum (83%), aorta (83%), pancreas (33%), and right ureter (17%).
- Patients presented with a variety of symptoms including abdominal pain, painless hematuria, and one case of symptomatic IVC occlusion requiring preoperative thrombolysis.
- Primary repair (5 patients) and bovine pericardial patch (1) were used for caval reconstruction.
- All cases of duodenal or pancreatic erosion involved a hepatobiliary surgeon who primarily repaired these structures.
- Several in hospital complications occurred:
  - Pulmonary embolism resulting in cardiogenic shock and initiation of VA-ECMO
  - Retroperitoneal hematoma causing ureteral compression with hydronephrosis requiring right ureteral stent
  - Common bile duct injury that requiring primary repair over a T-tube



## CONCLUSIONS

- The surgical removal of eroding IVC filters often requires repairing structures adjacent to the IVC.
- An interdisciplinary approach is likely to improve outcomes for these complex patients.
- The availability of subspecialty services such as HPB surgery, urology, and cardiothoracic surgery should be considered when evaluating patients for surgical removal of an IVC filter.