IVC filter retrieval program effects on retrieval rates and number of patients lost to follow-up

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The authors have no relevant financial disclosures that would pose a conflict of interest with this study

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Background

Inferior vena cava (IVC) filters are an established method of preventing pulmonary embolism (PE) in patients with deep venous thrombosis (DVT) or risk factors who cannot be anti-coagulated

Despite an overall good safety profile, IVC filters can lead to complications

IVC filters are not benign

- FDA placed the long-term safety profile of IVC filters under increasing scrutiny due to potential complications after reviewing adverse events reported over a 5 year period

- FDA recommends implanting physicians should be responsible for the subsequent care of patients with retrievable IVC filters

- Filter retrieval rates have been historically low

Purpose

To assess the efficacy of a dedicated IVC filter retrieval program on filter retrieval rate and number of patients lost to follow-up

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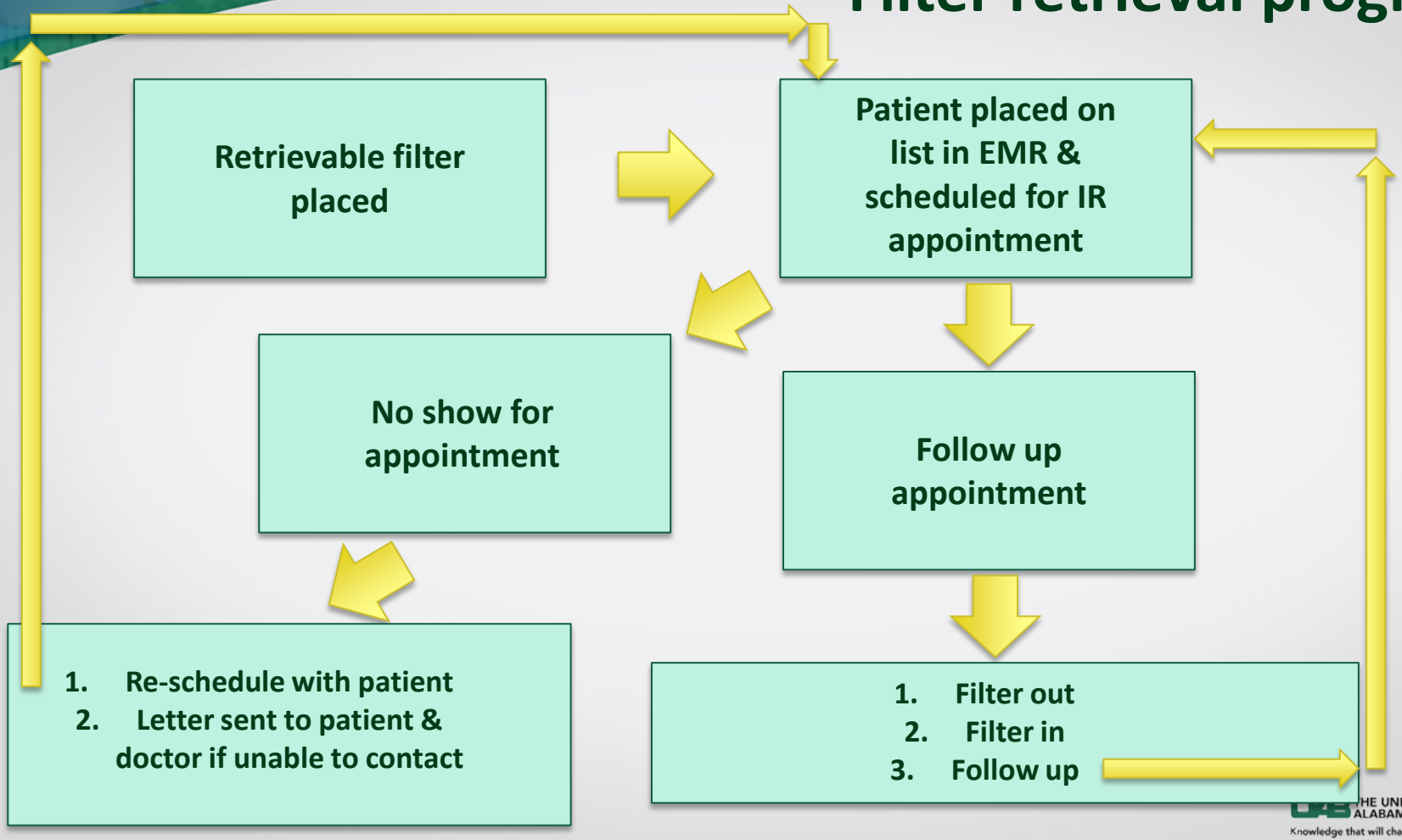
Filter retrieval program



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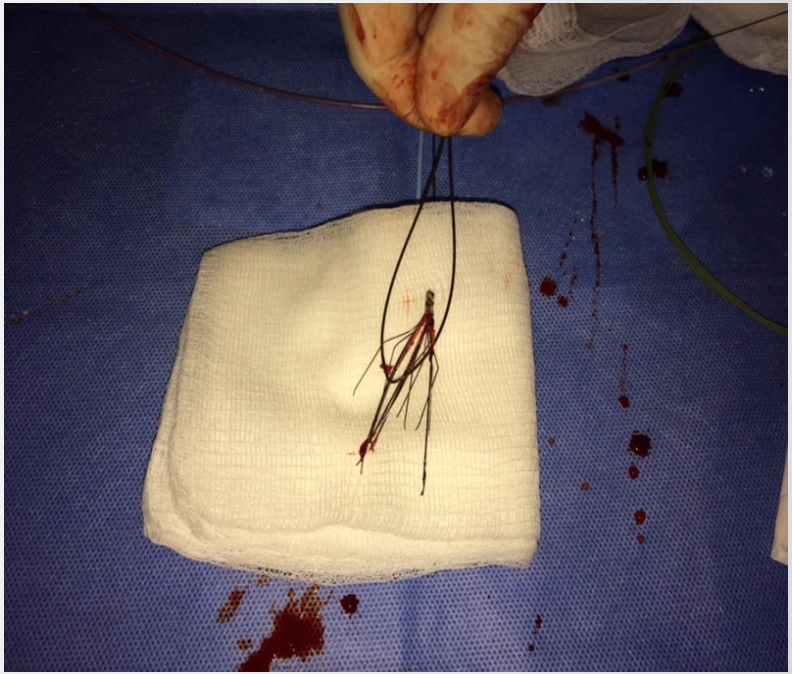
Materials and Methods

- To assess efficacy of the program, we reviewed the records of all the patients with retrievable IVC filters placed by IR 9 months prior to and 9 months after the program initiation

- Student's t-test was used for statistical analysis

- A *p* value of < 0.05 was considered statistically significant



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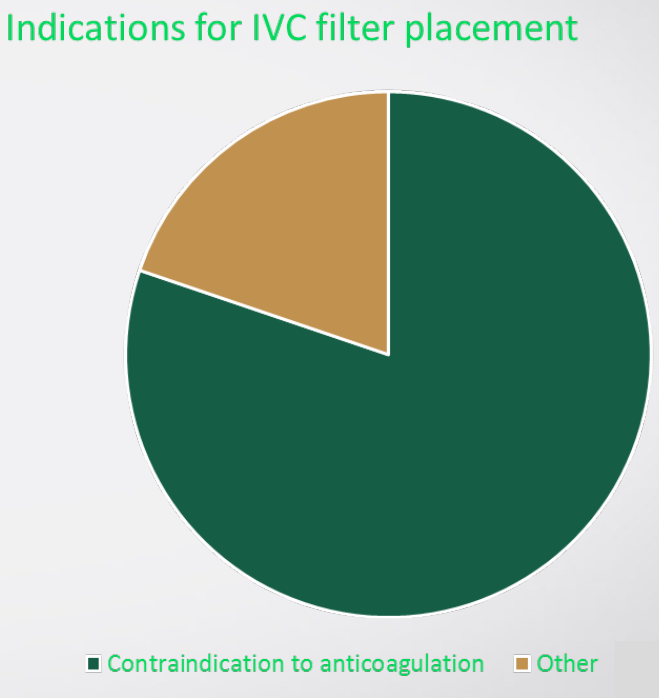
Prior to program initiation

- 76 patients (31M, 45F) had retrievable filters placed during 9 months
- Mean age: 64.2 years (range: 20-89)
- 80.2% were placed due to contraindications to anticoagulation
  - Prophylactic placement and massive PE with residual DVT were the next highest indications



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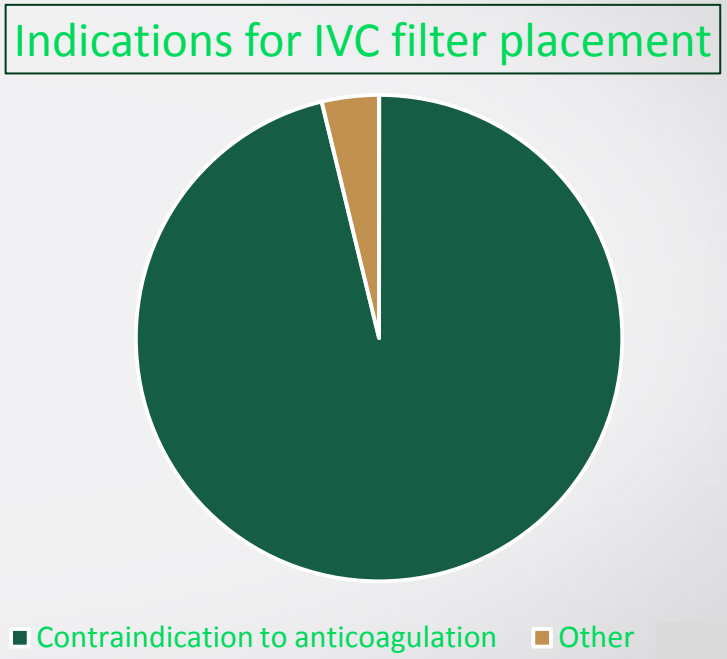
Prior to program initiation

Follow-up

- 5 filters were removed (**6.6%**)
- 42 patients were lost to follow-up (**55.3%**)
- 22 patients died (28.9%)
- 7 filters were deemed permanent by physicians after placement (9.2%)
- All 5 retrievals were successful without complications

After program initiation

- 106 (54M, 52F) patients had retrievable filters placed during 9 months
- Mean age: 58.8 years (range:26-90)
- 81.1% were placed due to contraindications to anti-coagulation
  - Complications from anti coagulation and failure of anticoagulation were the next most common indications



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After program initiation

Follow-up:

- Attempted retrieval in 29 patients (**27.4%**)
  - One attempt unsuccessful so actual rate: **26.4%**
- 10 patients were lost to follow-up (**9.4%**)
- 23 patients died (21.7%)
- 27 filters were deemed permanent by a physician after placement (25.4%)
- Decisions were still pending in 17 patients (16%)

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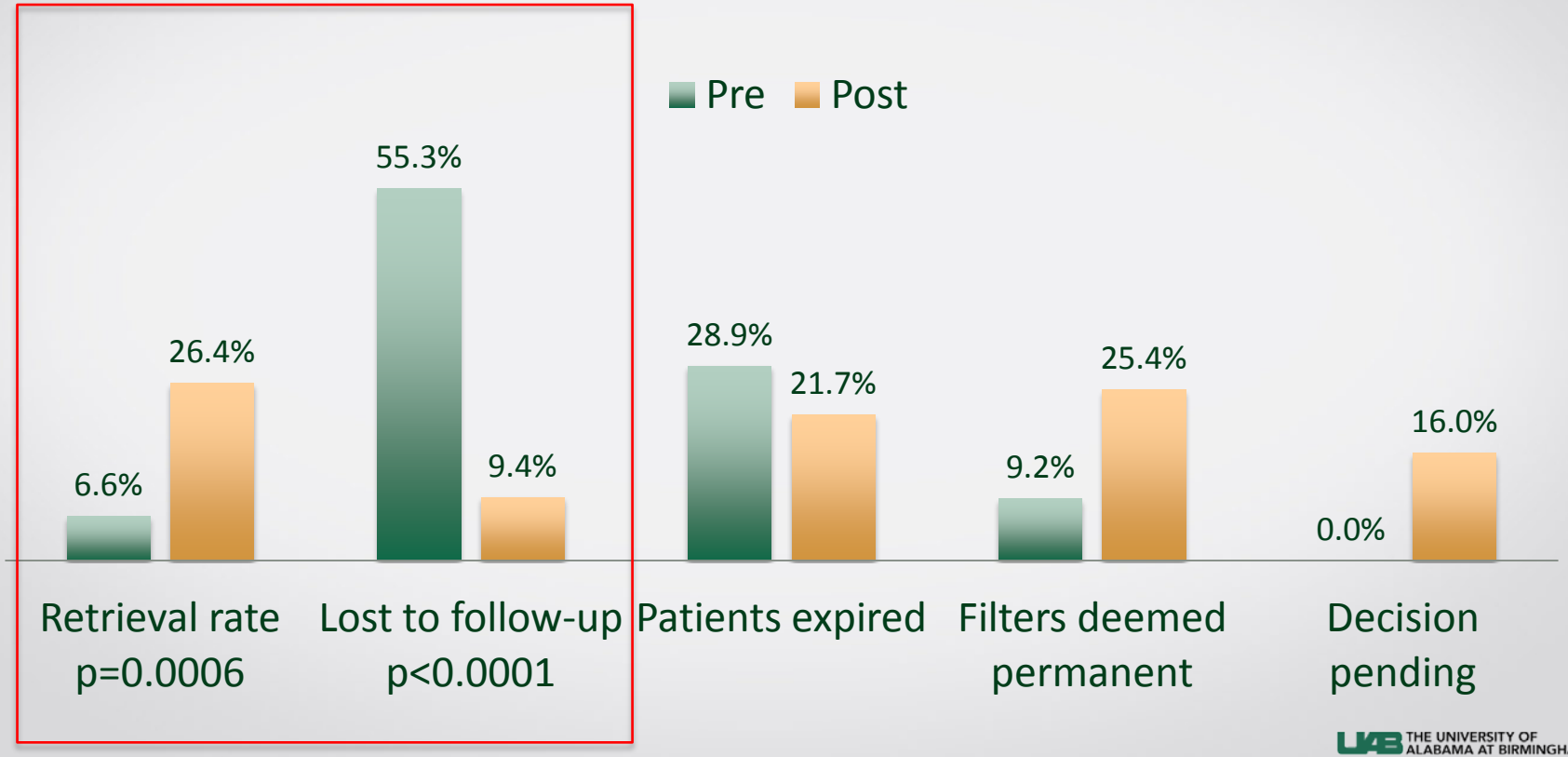
Results



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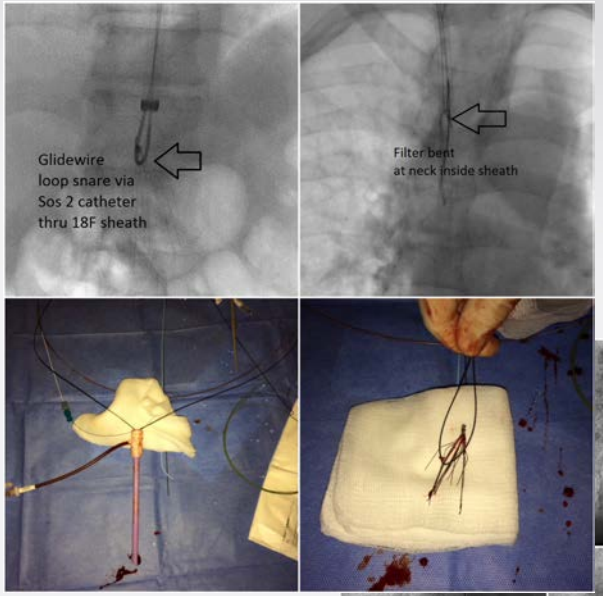
Discussion

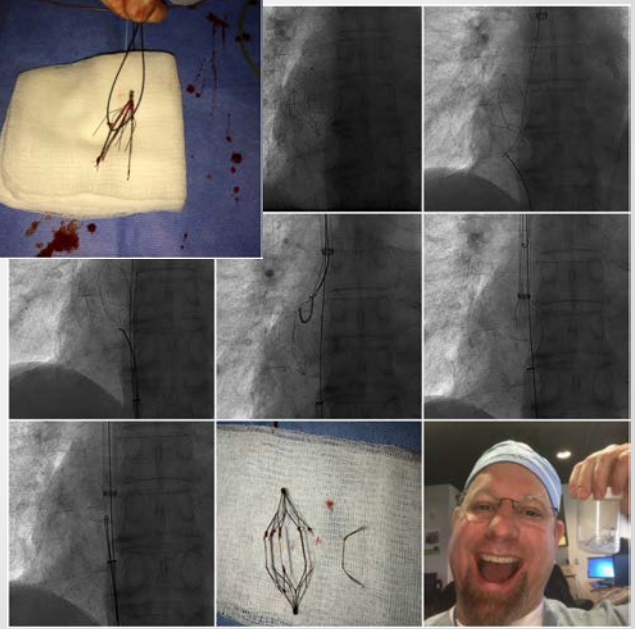
- Filter retrieval program is effective at ***increasing accountability*** for IVC filters
  - 55.3% vs. 9.4% of patients lost to follow up

- Filter retrieval program is **effective in improving filter retrieval rates**
  - 6.6% vs. 26.4% (p=0.0006)

Summary

Dedicated filter retrieval program is effective in increasing filter retrieval rate and decreasing the number of patients lost to follow-up





Comments or questions?

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