

# ERCP Findings Provide Further Justification for a Surgery First Mindset in Pediatric Choledocholithiasis



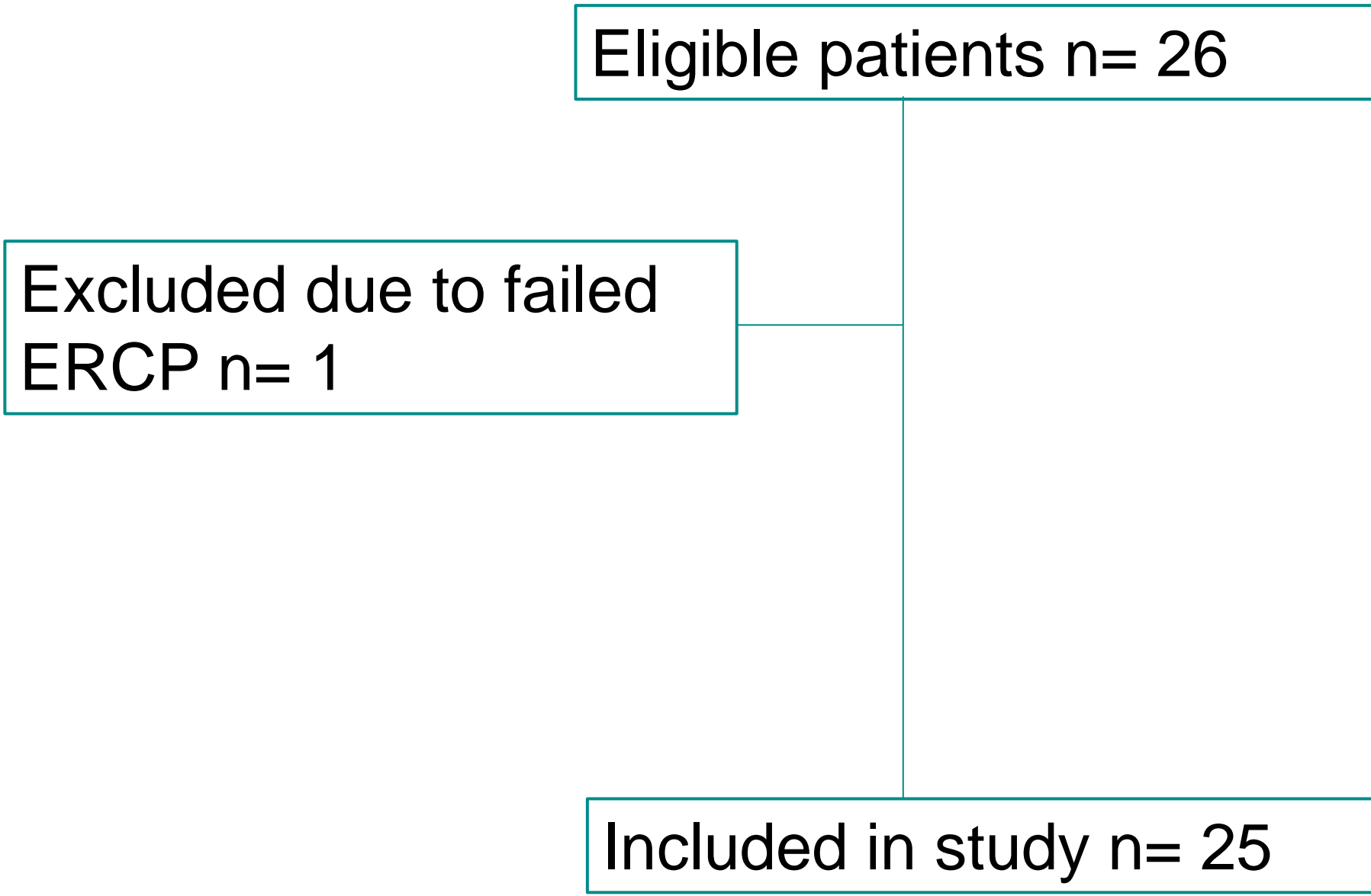
**Gloria Sanin, Gabriel Cambroner, James Patterson, Aravindh Ganapathy, Maggie Bosley, Allison Perko, Jake Niebler, Lucas Neff**  
*Department of General Surgery, Atrium Health Wake Forest Baptist, Winston Salem, North Carolina*

### INTRODUCTION

- Endoscopic retrograde cholangiopancreatography (ERCP) first pathway for choledocholithiasis management is a two-procedure process consisting of ERCP followed by laparoscopic cholecystectomy (LC).
- Single-stage approach consisting of LC with laparoscopic common bile duct exploration (LCBDE) has a shorter length of stay with an equivalent safety profile. Despite this, nationwide referral patterns heavily favor ERCP first.
- LCBDE as an initial approach may decrease the instances of patient exposure to multiple separate anesthetic events.
- We reviewed the endoscopy reports of preoperative ERCPs in patients with a non-complicated presentation of choledocholithiasis to determine what proportion of patients may benefit from a surgery first approach.

### METHODS

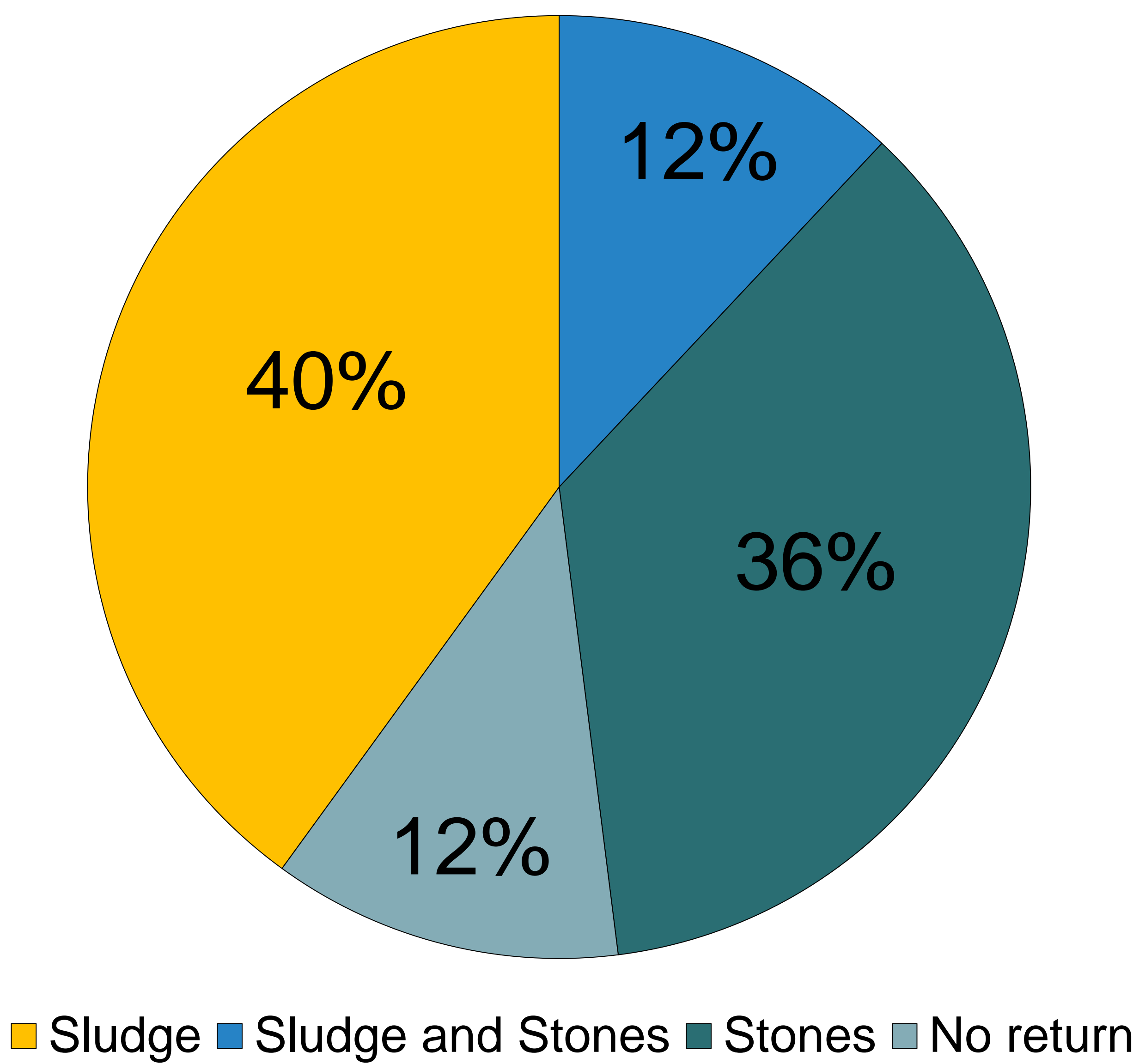
- Retrospective review of 26 patients under the age of 18 who underwent ERCP first. One patient was excluded because of failed ERCP
- Endoscopic information collected included indications for ERCP, presence of stones and/or sludge, stent placement, stone size and number, and common bile duct (CBD) diameter. Stone size was categorized as small (0-4 mm), medium (5-7 mm), and large (≥8 mm).



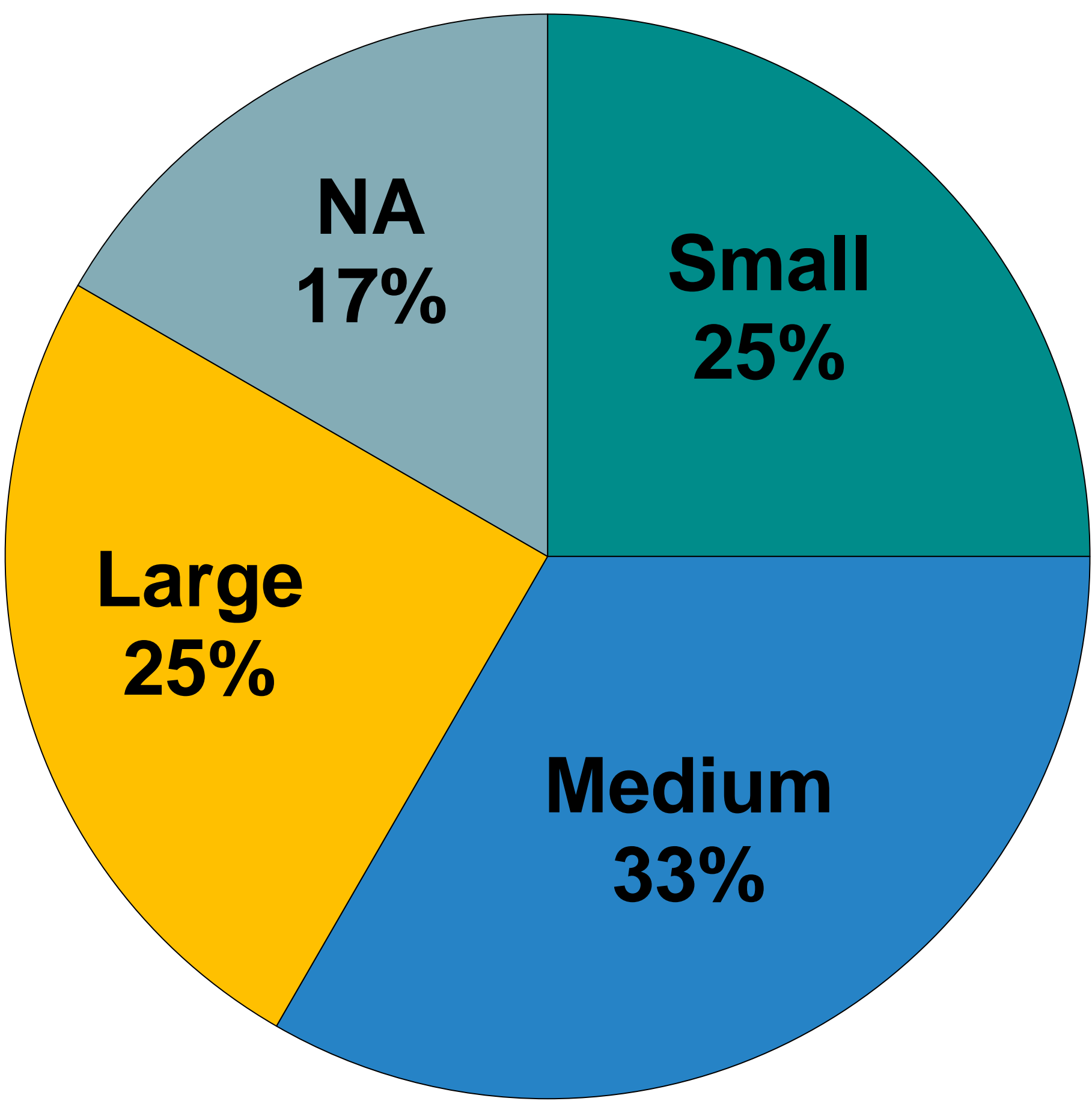
### RESULTS

- Of the 25 included patients, median (IQR) age was 16 years old (14-17) and median (IQR) BMI was 29 kg/m<sup>2</sup> (22-31). Most (76%) patients were female.
- Ten (40%) patients had sludge only, 3 patients (12%) had sludge and stones, 9 (36%) had stones only, 3 with no return (12%). Of those 12 patients with stones, 3 (25%) were small, 4 (33%) were medium, and 3 (25%) were large.
- Nineteen (76%) had a diagnosis involving choledocholithiasis, 4 (16%) had gallstone pancreatitis, and 2 had isolated cholecystitis (8%).
- Median (IQR) CBD diameter was 10 mm (8-12).
- Of those with stones, 7 (58%) had a single stone and 5 (42%) had multiple stones.

Return of ERCP Sweeps



Stone Size



### CONCLUSIONS

- Of all patients who underwent ERCP, 80% of patients had findings of sludge and/or stones that might have been amenable to basic LCBDE maneuvers and would have benefited from a surgery first approach.
- Implementing surgery first management for suspected choledocholithiasis can offer an efficient alternative to the more common pathway of ERCP followed by LC.
- Renewed efforts are needed to promote LCBDE implementation during LC and disseminate effective training to general surgeons.