Developing an ESD Practice for the Colorectal Surgeon: Gradual expansion of volume and practice location

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Background

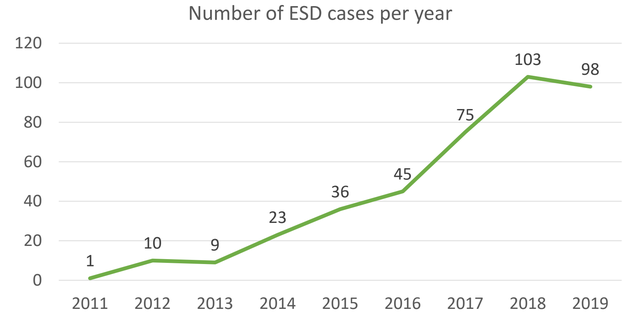
- Endoscopic submucosal dissection (ESD) can be utilized to remove large colorectal polyps.
- Few surgeons currently perform ESD.
- Advanced endoscopic skills are required with prior research suggesting proficiency is reached after 100 cases.
- Here we aim to describe a model for successful initiation and expansion of a surgical colorectal ESD practice.

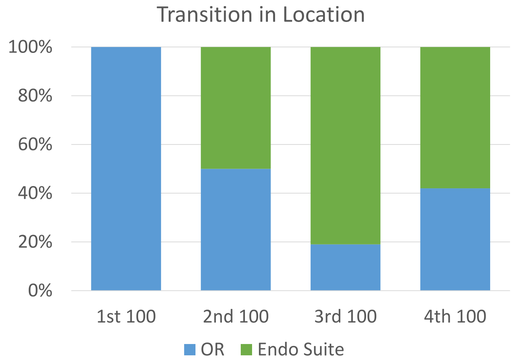
Methods

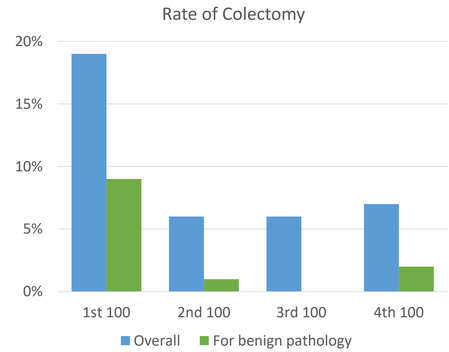
- We queried an IRB-approved prospective database of ESDs performed by a high-volume colorectal surgeon between 2011 and 2019.
- While the initial 100 cases were all performed in the operating room (OR), subsequent cases were selectively performed in the endoscopy suite (ES) based on polyp and patient factors following review of prior colonoscopic colored images.
- Patient, polyp and outcome data was compared over the first 400 ESD patients, analyzed in four intervals of 100 patients

Results

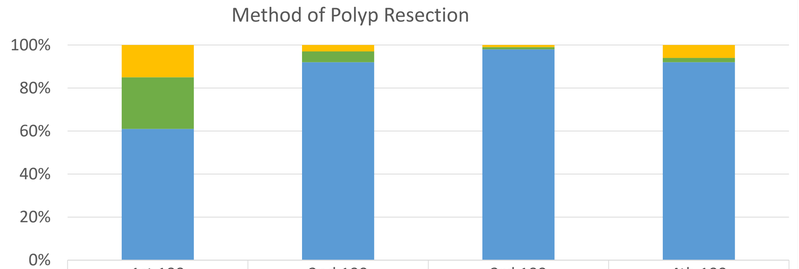
- 400 patients underwent resection of large colorectal polyps.
- Frequency of cases increased gradually.







- Polyp resection with ESD alone increased after the first 100 patients.
- One patient in each subsequent interval required transfer from the ES to OR for formal resection due to incomplete resection; one was a malignancy.
- Median polyp size was 30mm, 62% were in the right colon, 43% were removed *en-bloc,* 8% had malignancy on final pathology.
- Per interval, rate of colectomy for benign final pathology decreased from 9% in the first interval to 0- 2% in subsequent intervals.
- 13% ESD complication rate; did not differ significantly between intervals.



	1st 100	2nd 100	3rd 100	4th 100
Colonic resection	15	3	1	6
CELS	24	5	1	2
ESD alone	61	92	98	92

Patients grouped in intervals of 100

Conclusions

- This series demonstrates successful implementation of a model of gradual acquisition of ESD skills with incremental increase in volume and transition from the OR to endoscopy suites. Initial proficiency can safely be attained while in a controlled environment with a readily available alternative. With increasing experience, ESD can be performed safely and effectively with decreased utilization of laparoscopic assistance and OR resources, facilitating an efficient growth in volume.