

Kana Chin, MD^{1,2}, Makoto Nishimura, MD¹, Sera Sato, MD^{1,3}, Jacques Beauvais, MD¹, Mark A. Schattner, MD¹

1. Gastroenterology, Hepatology, and Nutrition Service, Department of Medicine, Memorial Sloan Kettering Cancer Center, New York, NY,
2. Department of Medicine, Long Island Jewish Forest Hills, Forest Hills, NY, 3. Internal Medicine, Mount Sinai Beth Israel, New York, NY

Introduction

Endoscopic Submucosal Dissection (ESD) is a well-established and effective endoscopic technique that facilitates en bloc removal of gastrointestinal epithelial lesions. Duodenal ESD is a relatively novel and rare procedure in the United States (US). Here we report a single-center case series of duodenal ESD in the US.

Methods

Patients who received ESD at Memorial Sloan Kettering Cancer Center from June 2018 to May 2022 were reviewed (n=477) and a total of 29 patients who had duodenal ESD were included in this study. Gender, age, American Society of Anesthesiology (ASA) score, type of sedation, type of solution for submucosal lifting agents, procedure time, location of the lesion, en bloc resection rate, R0 (complete) resection rate, presence of scar, adverse events, final pathology, and length of hospital stay were reviewed.

Results

Total number of cases : 29

Procedure time : Mean 119 min (24 – 240 min)

Median 110 min

The median length of hospital stay : 2 days (0-20 days)

Complications :

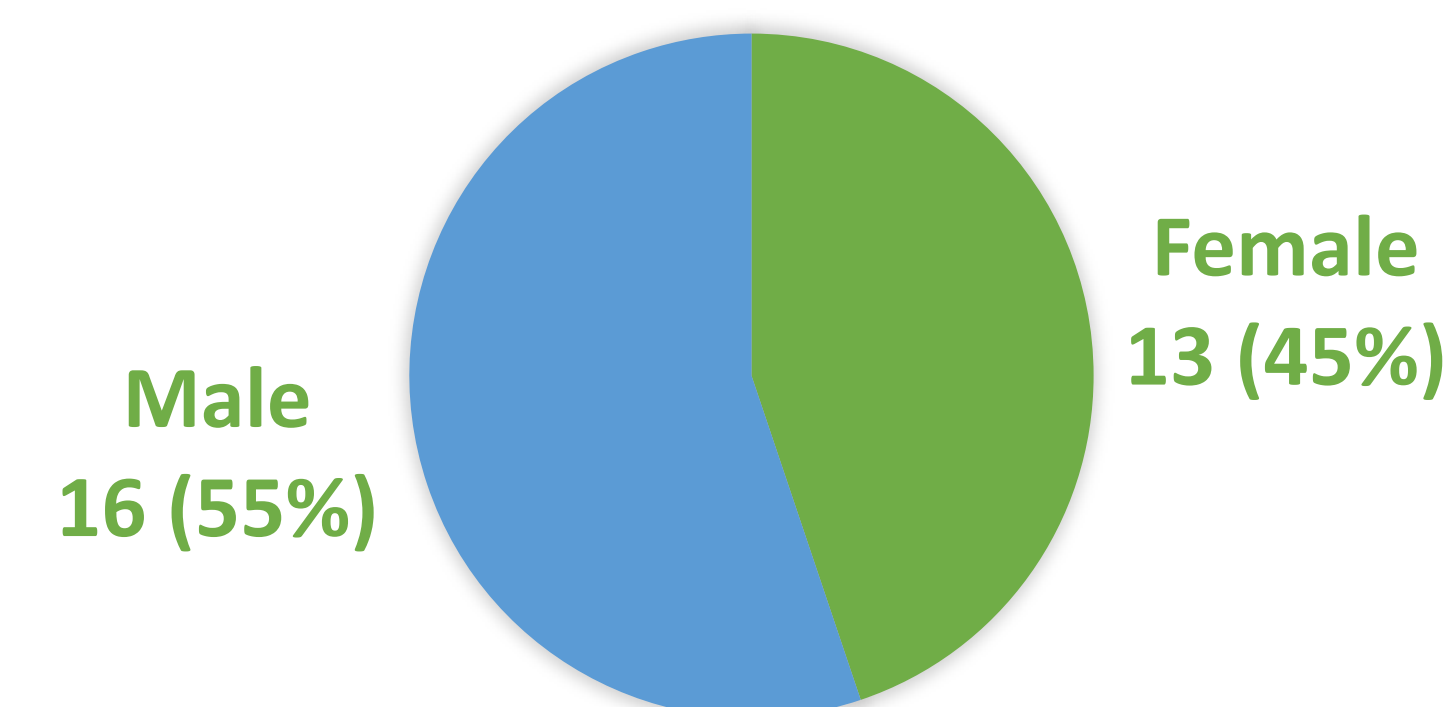
No perforations were noted.

One patient developed post-ESD pancreatitis after the removal of a large adenoma involving the ampulla.

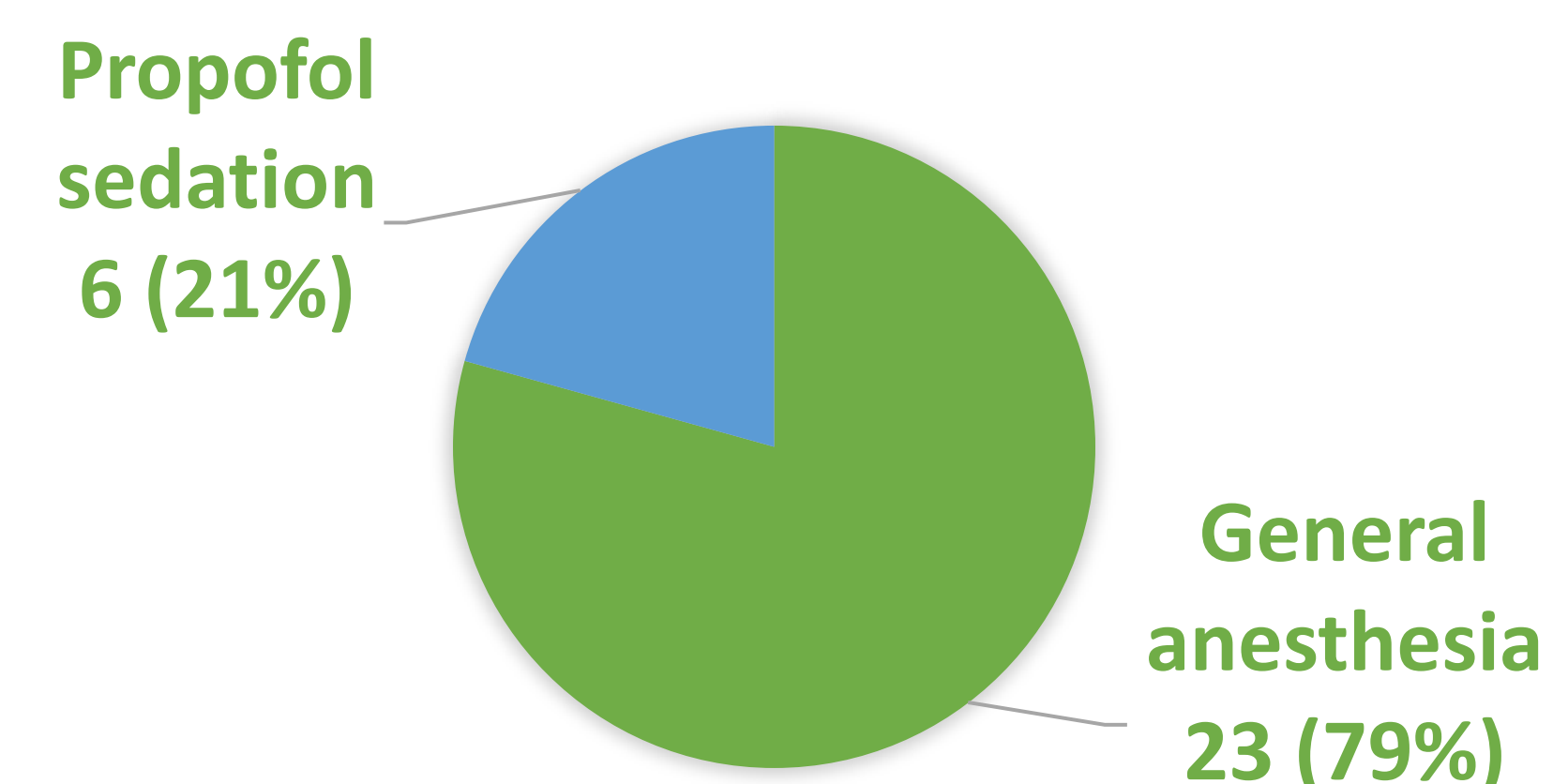
Results (Cont'd)

Patients' median age : 68 (40-79)

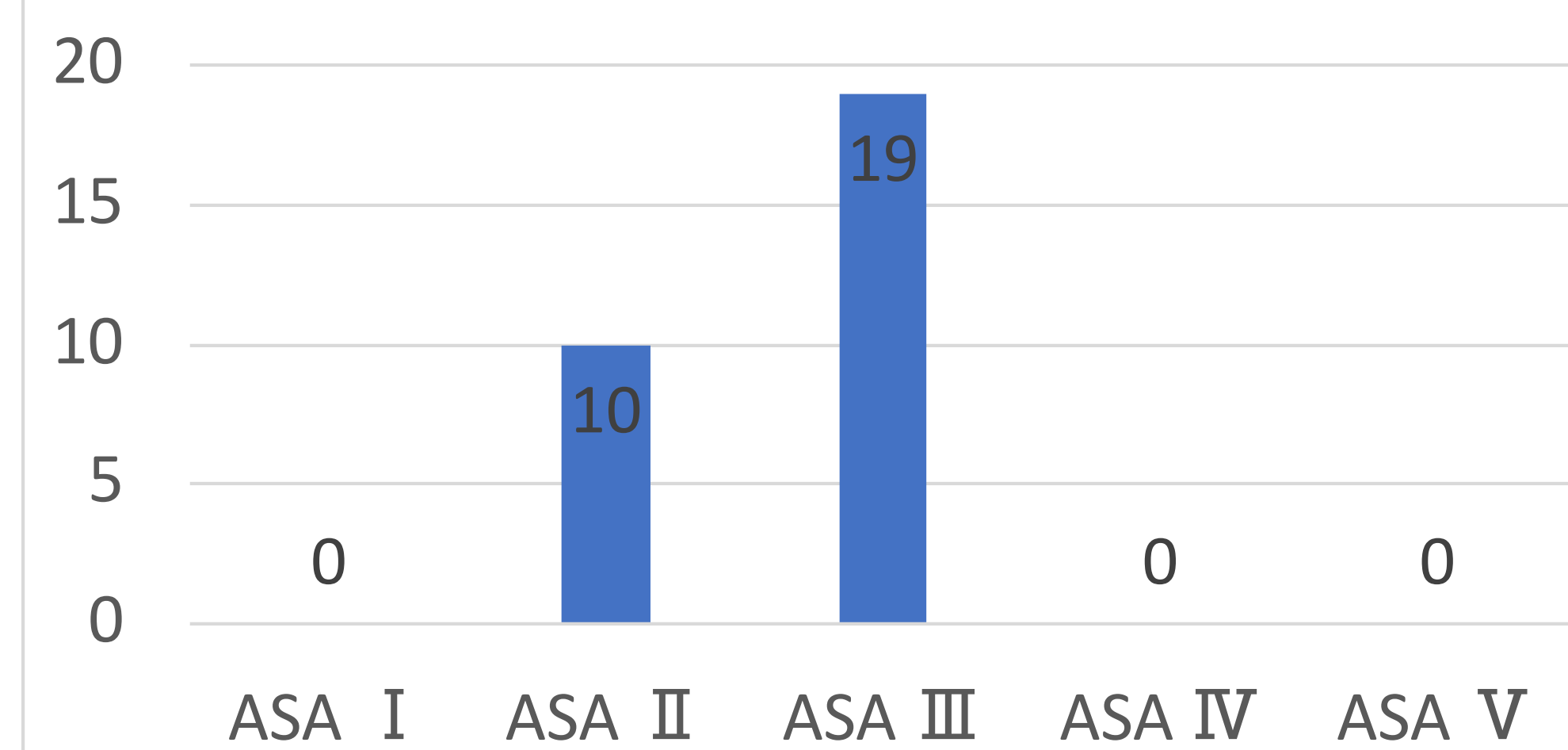
GENDER



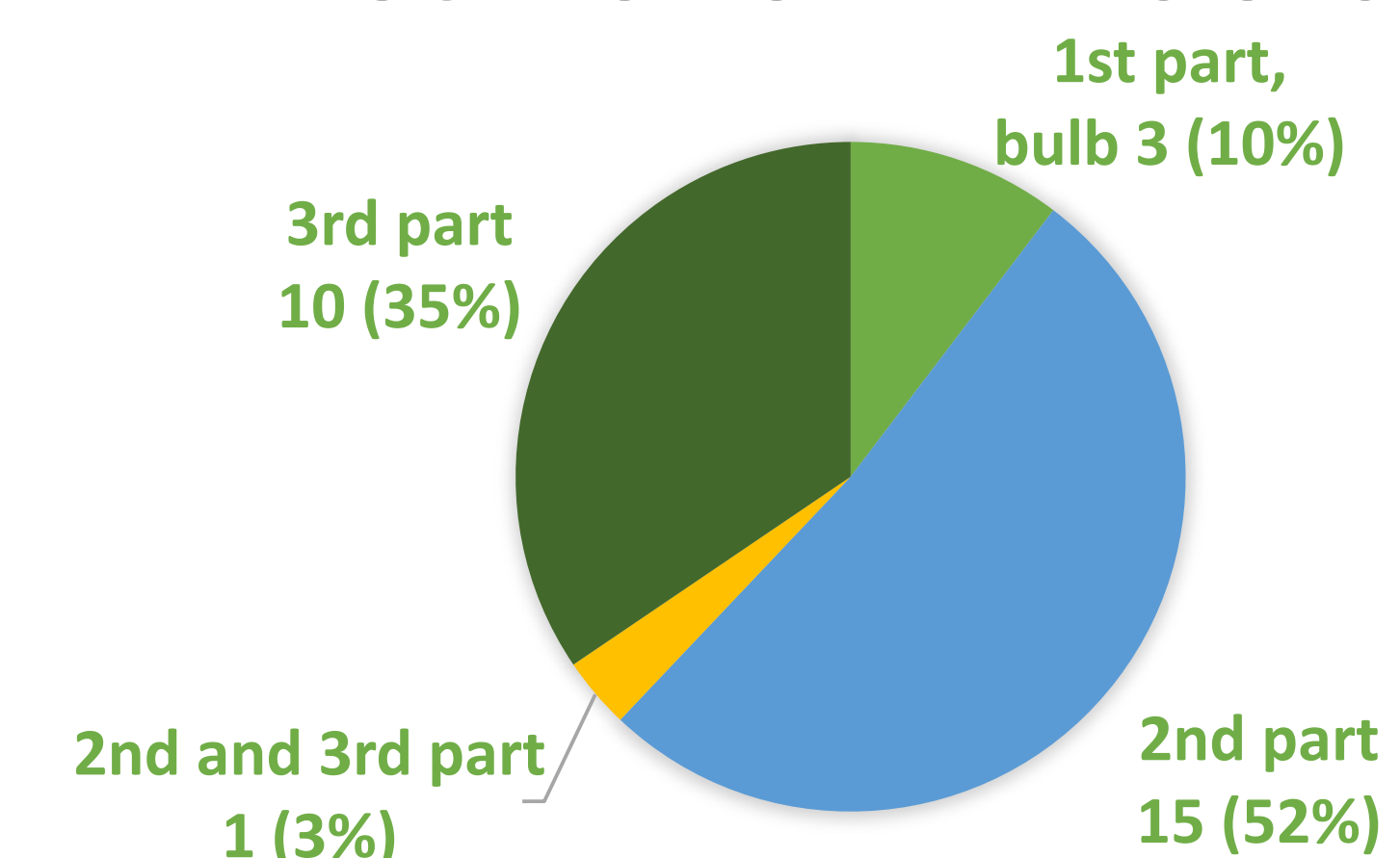
SEDATION TYPE



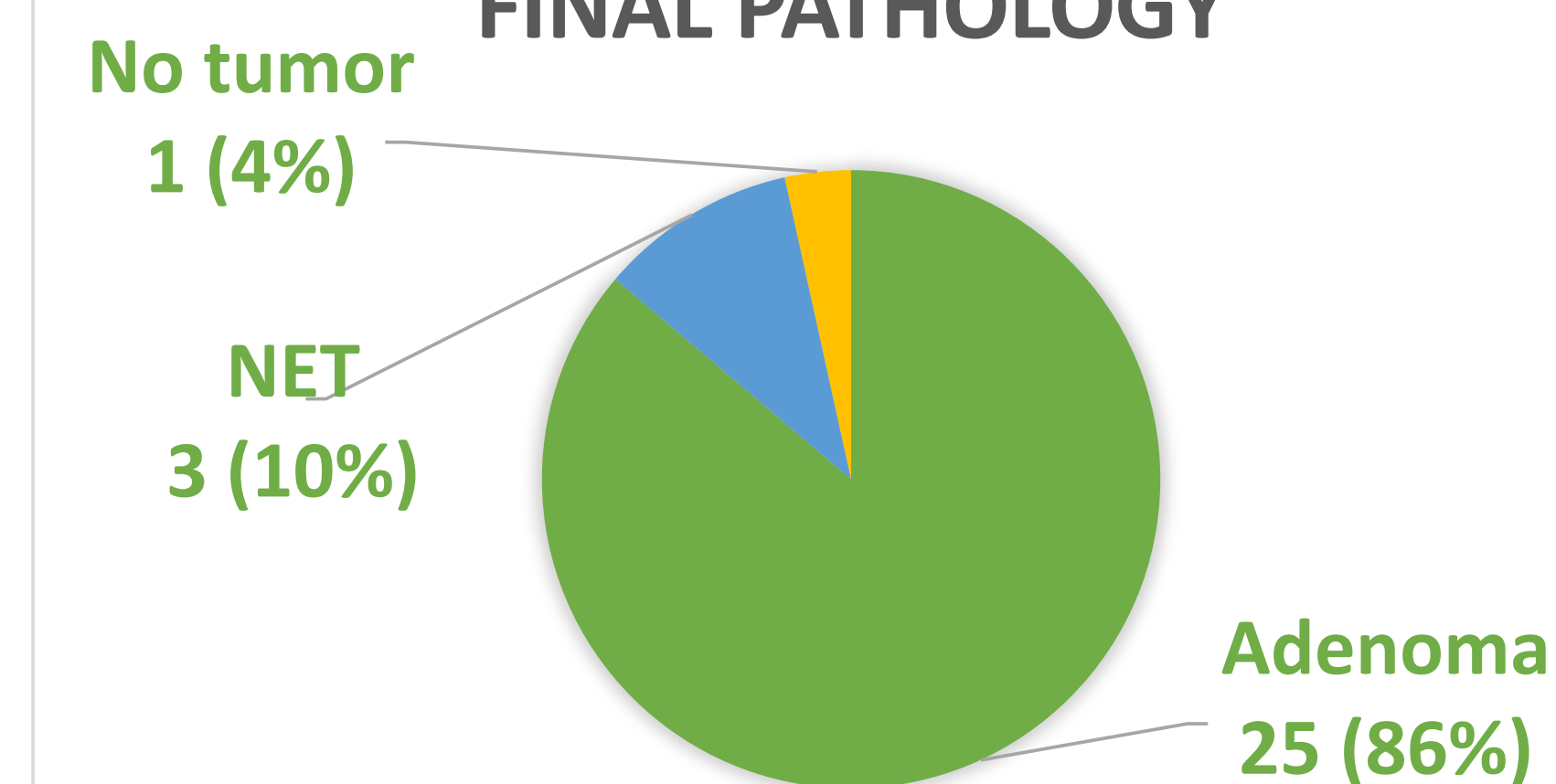
ASA scores of the patients



LOCATION OF THE LESIONS



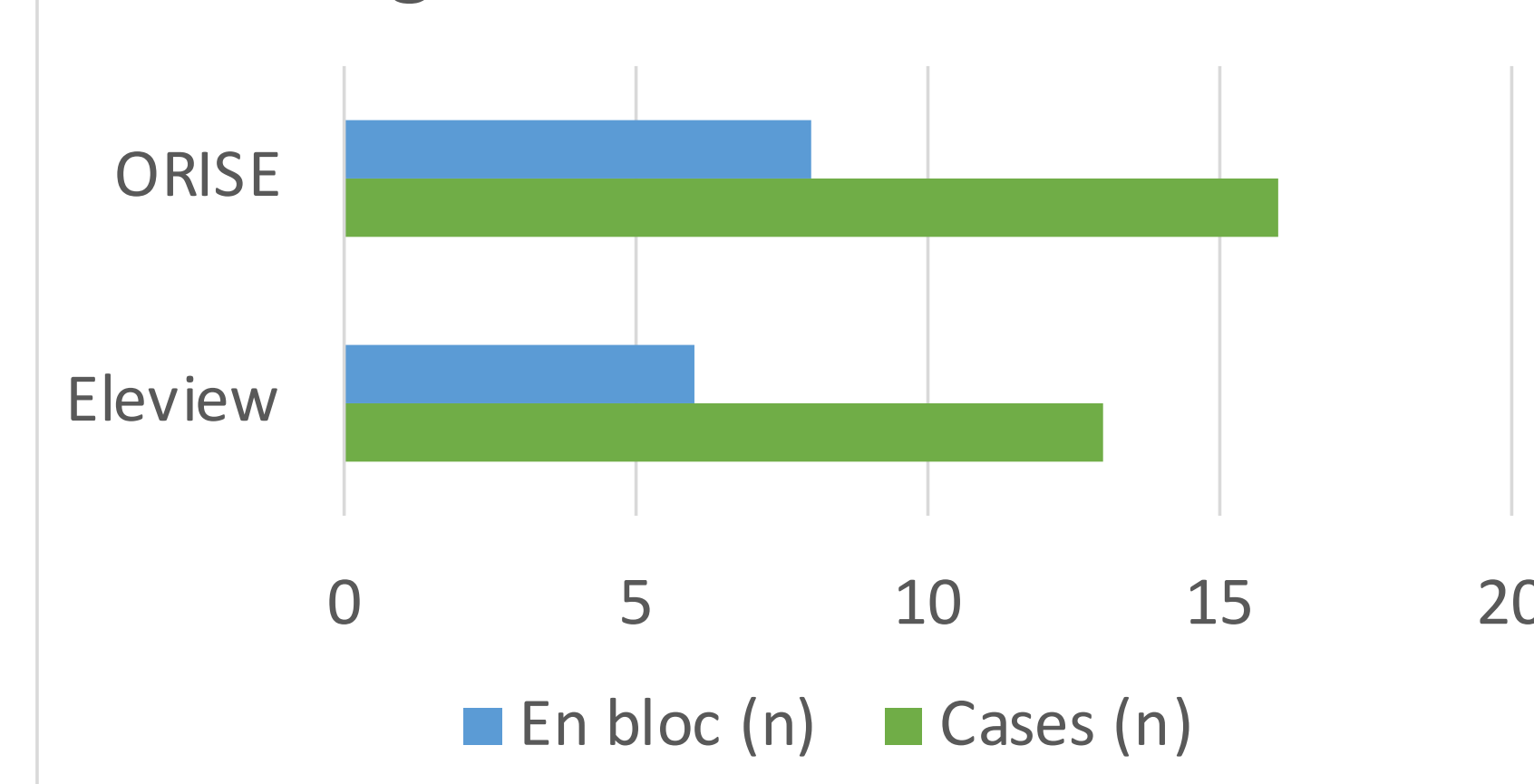
FINAL PATHOLOGY



NET: neuroendocrine tumor

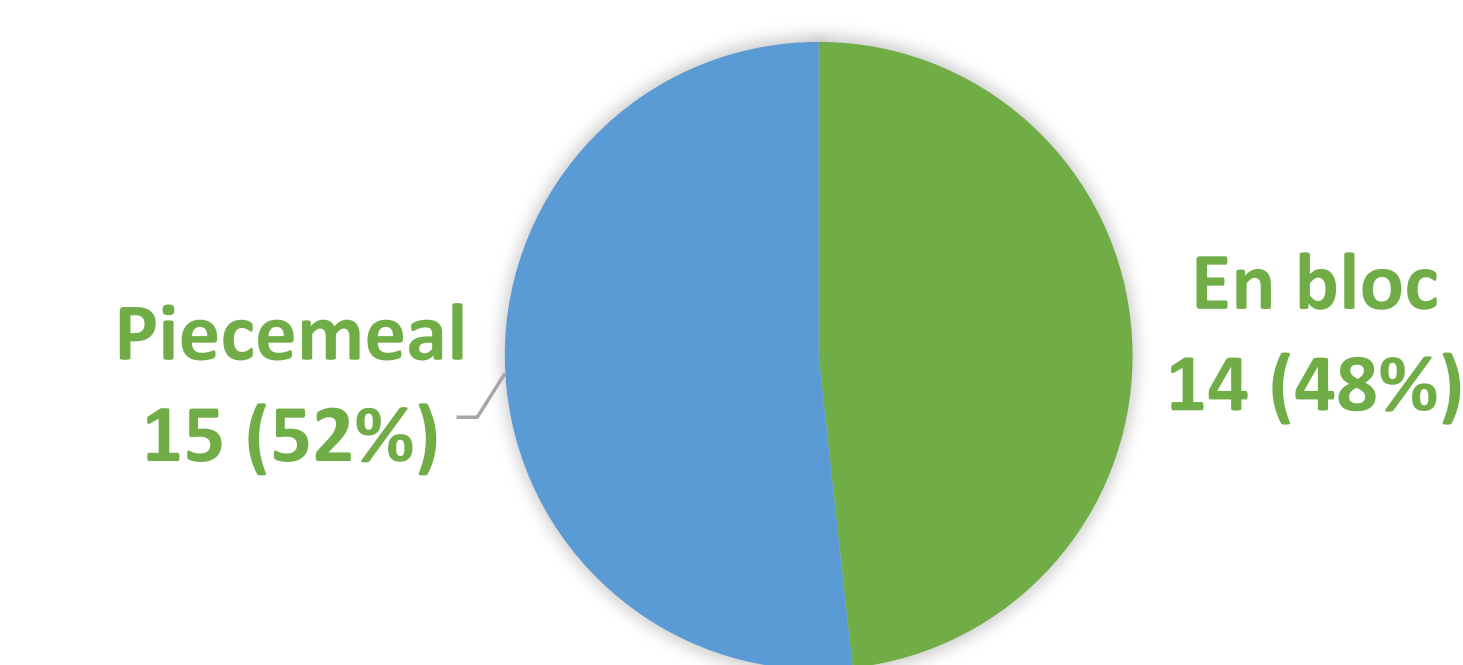
Mean of maximum size of resection area was 28.2mm

Lifting solutions and en bloc cases



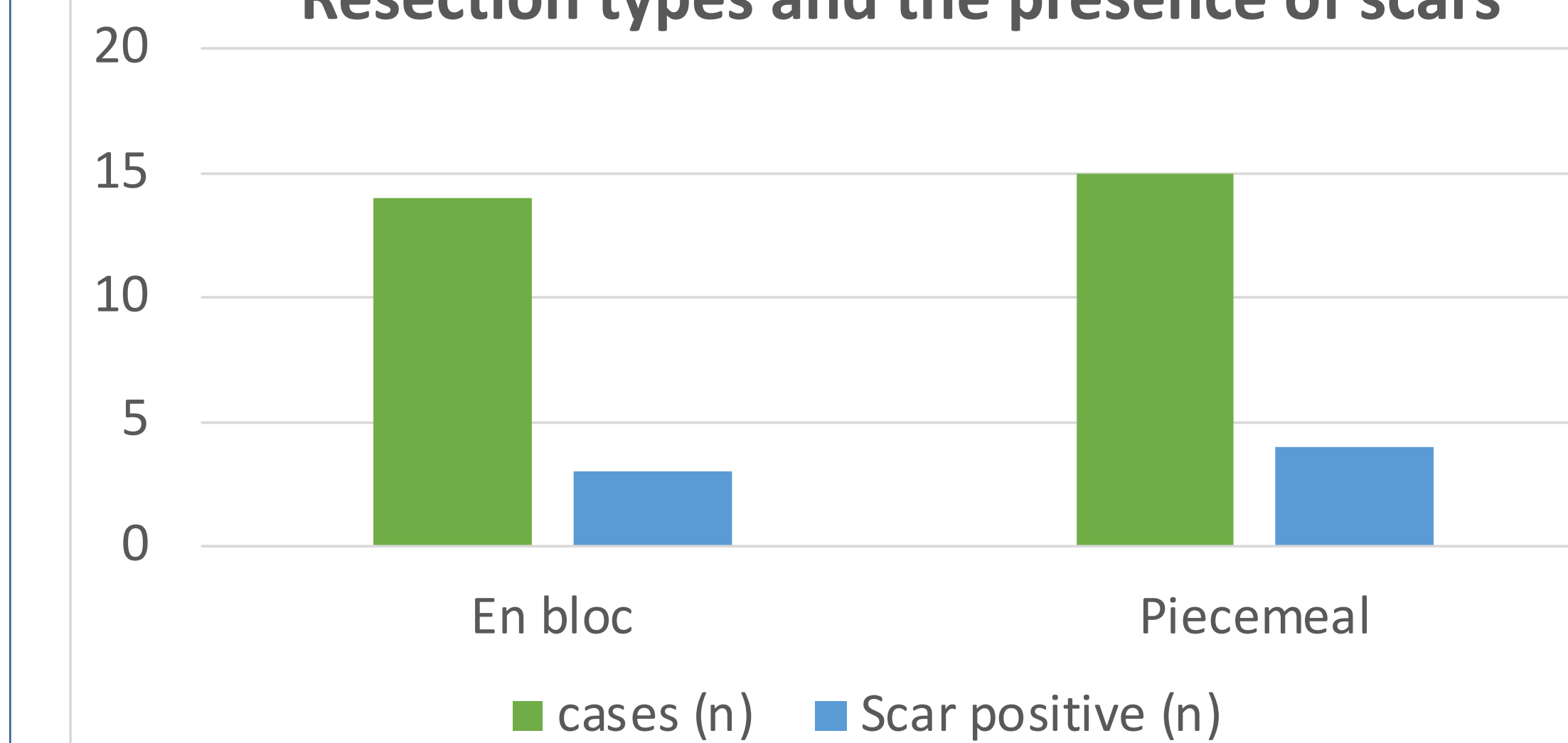
En bloc resection rate was 50% (8/16) with ORISE cases and 46.2% (6/13) in Eleview cases.

RESECTION TYPE



R0 (complete) resection rate was 44.8% (13 cases).

Resection types and the presence of scars



En bloc resection : 14 cases (48.3%) and 3 had post-endoscopic mucosal resection (EMR)/ polypectomy scars (3/14, 21.4%).
Of 15 of piecemeal resections (51.7%), 4 had post-EMR/ polypectomy scars (4/15, 26.7%).

En bloc and piecemeal resection rates were not affected by the presence of scars (p=0.35).

Discussion

This study demonstrated that duodenal ESD is safe and feasible in the US. The current task is to increase more skilled endoscopists for ESD procedures. Further studies with a larger population are necessary to investigate safety and efficacy in the US.

Contact

Kana Chin, MD

Email: chinkana77@gmail.com

References

- Hara Y, Goda K, Dobashi A, Ohya TR, Kato M, Sumiyama K, Mitsuishi T, Hirooka S, Ikegami M, Tajiri H. Short- and long-term outcomes of endoscopically treated superficial non-ampullary duodenal epithelial tumors. *World J Gastroenterol.* 2019 Feb 14;25(6):707-718. doi: 10.3748/wjg.v25.i6.707. PMID: 30783374; PMCID: PMC6378536.
- Akahoshi K, Kubokawa M, Inamura K, Akahoshi K, Shiratsuchi Y, Tamura S. Current Challenge: Endoscopic Submucosal Dissection of Superficial Non-ampullary Duodenal Epithelial Tumors. *Curr Treat Options Oncol.* 2020 Oct 26;21(12):98. doi: 10.1007/s11864-020-00796-y. PMID: 33104938; PMCID: PMC7588384.