

Objective GERD Following POEM Significantly Increased by Length of Myotomy

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Background Patient Selection ROC analysis

- GERD is a known complication after per-oral endoscopic myotomy (POEM).
- Incidence is well described, but predictors of objective GERD remain unclear.
- We evaluated endoscopic esophagitis and wireless pH testing to identify risk factors.

Methods

Design:

- Retrospective cohort (March 2017–December 2024)

Inclusion:

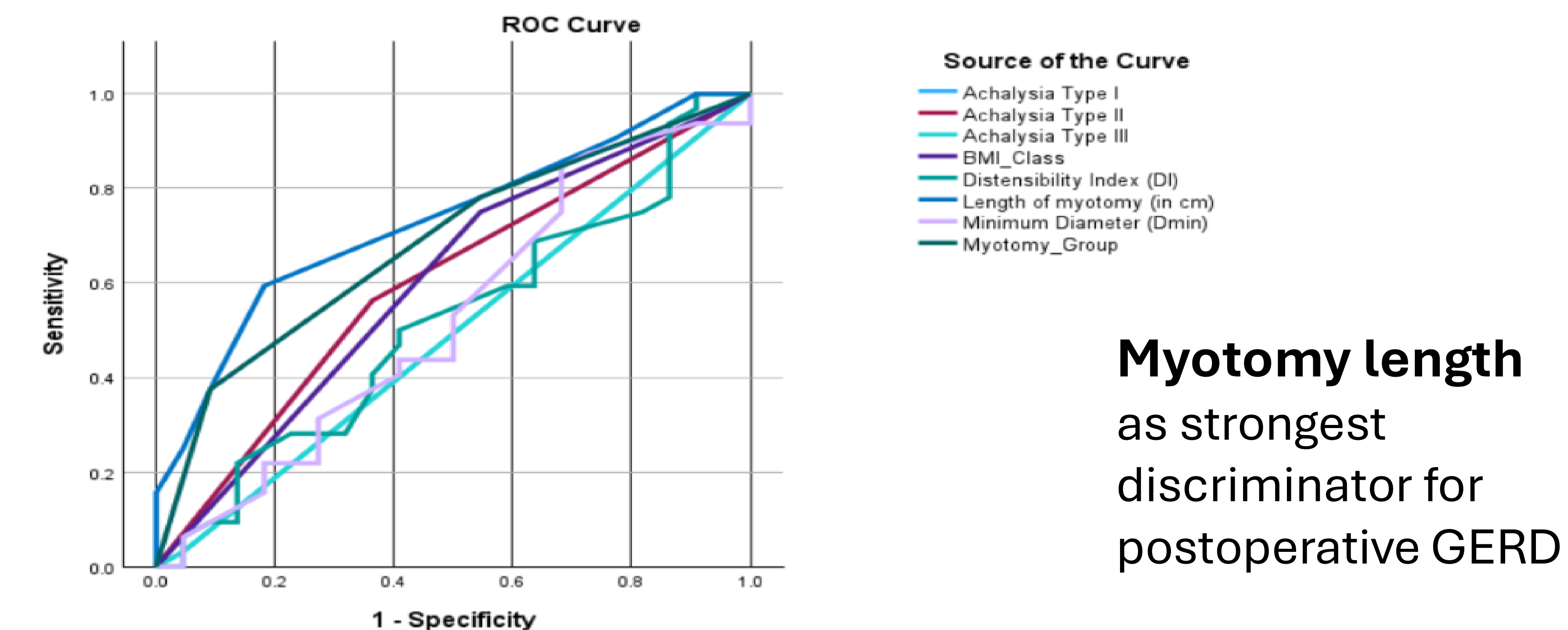
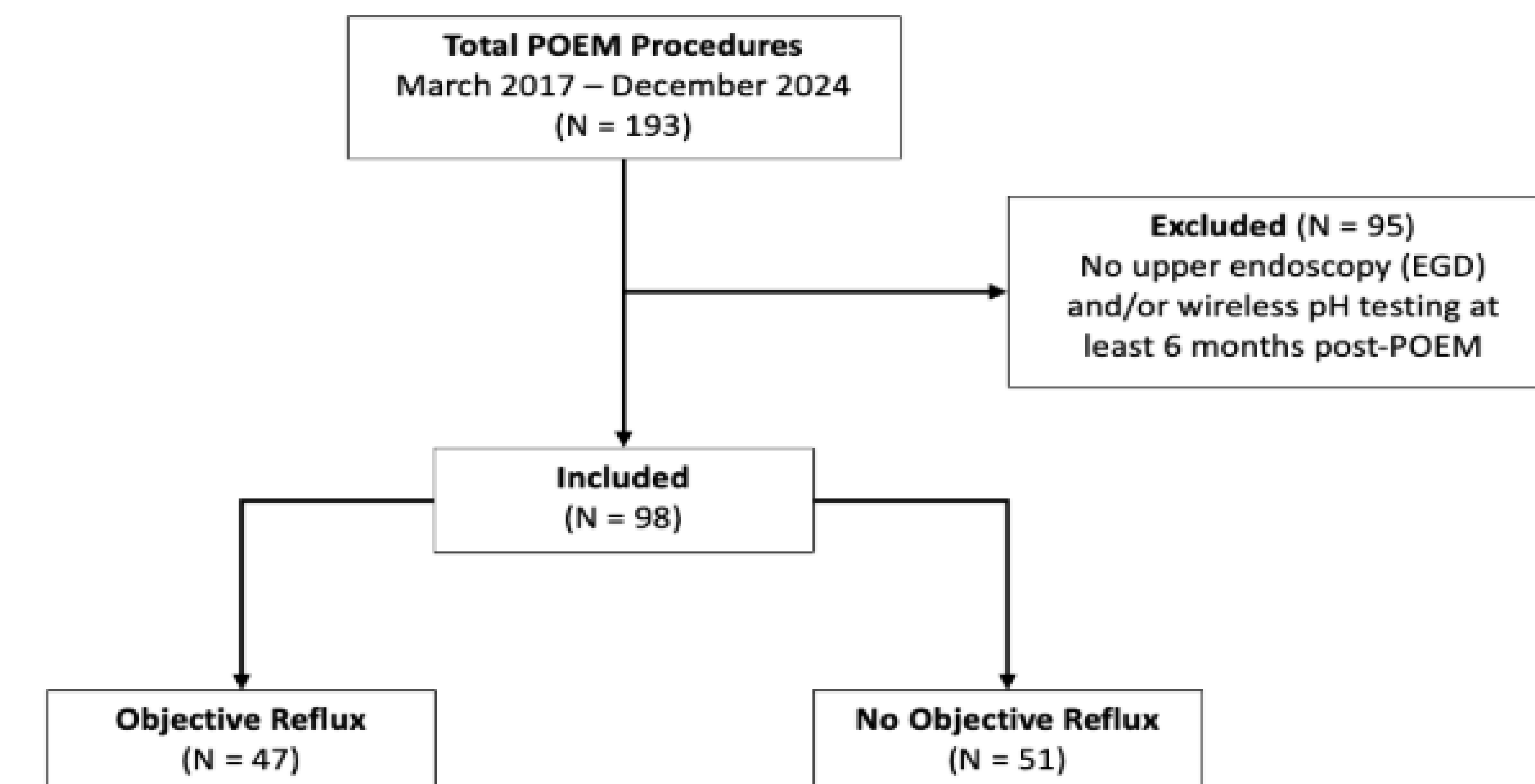
- Achalasia patients undergoing POEM with follow-up EGD and/or wireless pH ≥ 6 months after procedure

Objective GERD defined as:

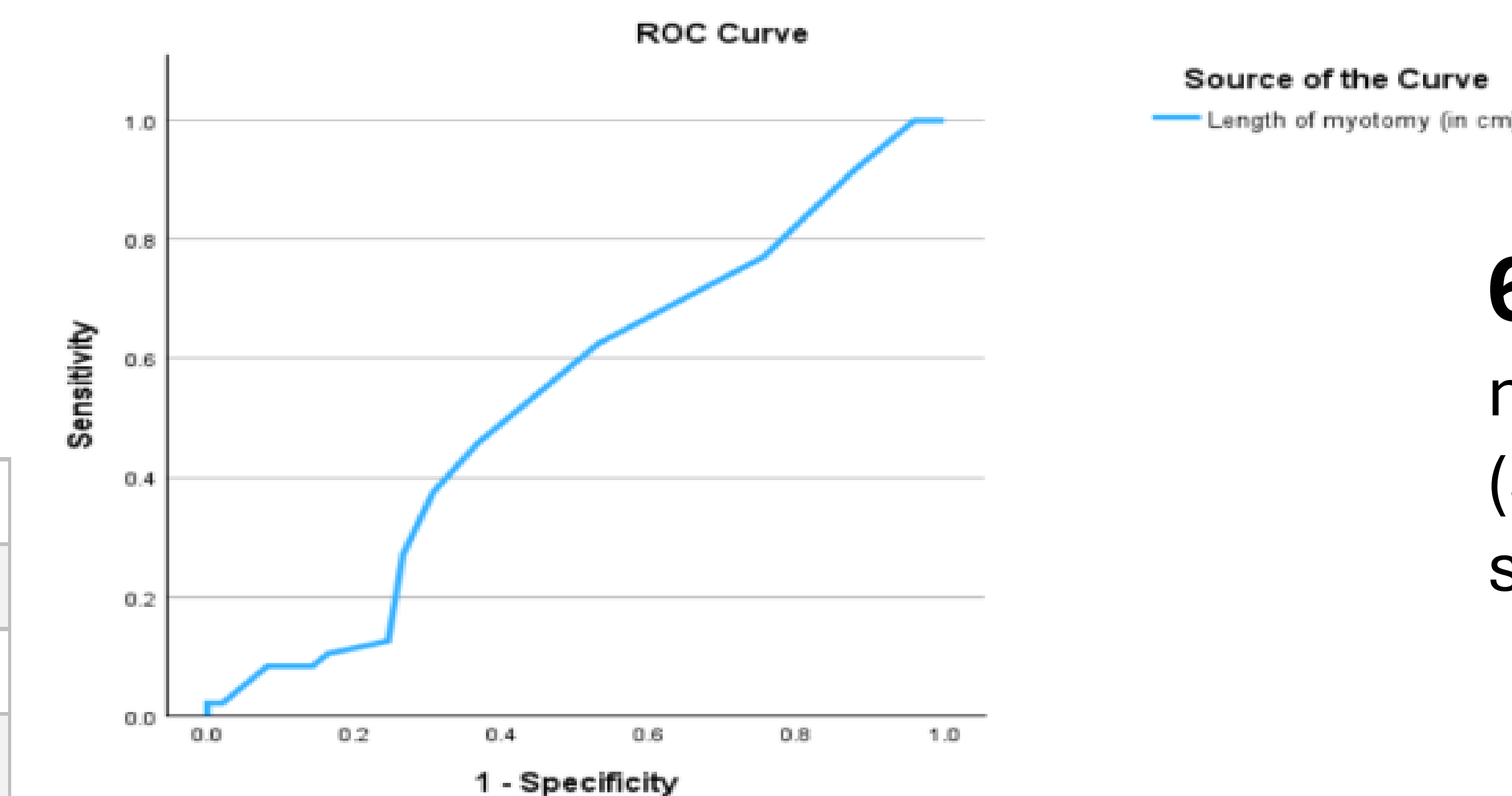
- DeMeester >14.72
- Esophagitis LA Grade B-D

Statistics:

- Univariate analysis + Chi-square
- Multivariable logistic regression
- ROC analysis for discriminatory ability
- Hosmer–Lemeshow for calibration



Myotomy length
as strongest
discriminator for
postoperative GERD



6.5 cm optimal
myotomy length
(sensitivity 62.5%,
specificity 46.9%)

Operative variables

	Mean $\pm$ SD
Length of Submucosal Tunnel (cm)	10.68 $\pm$ 3.91
Length of Myotomy (cm)	7.97 $\pm$ 3.52
Operative Time (min)	82.15 $\pm$ 47.98
Post-Op DI @ 30 mL	3.31 $\pm$ 1.11
Post-Op Dmin @ 30 mL	10.15 $\pm$ 1.75
Post-Op DI @ 40 mL	4.05 $\pm$ 1.71
Post-Op Dmin @ 40 mL	12.68 $\pm$ 1.82

Conclusions

- Objective GERD occurred in 48% of patients after POEM.
- Myotomy length of 6–7 cm was the only independent predictor.
- ROC analysis confirmed myotomy length as the strongest discriminator.
- BMI, achalasia subtype, DI, Dmin, and operative factors were not predictive.