Challenging the Role of Limb Length in Bile Reflux After One Anastomosis Gastric Bypass: Insights from a High-Volume Center

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anno	Tot OAGB	F	M	ETA' MEDIA	ETA' MIN	ETA' MAX	NUMERO OAGB CONVERTITI	% CONVERSIONE
2015	33	27	6	48,7	32	66	3	9,09
2016	81	59	22	48,02	32	63	8	9,87
2017	76	52	24	49,53	29	69	3	3,94
2018	141	114	27	49,24	18	70	9	6,38
2019	178	128	50	50,42	25	70	14	7,86
2020	85	73	12	49,47	25	74	9	10,58
2021	122	92	30	50,64	23	76	10	8,19
2022	113	73	40	50,33	27	66	2	1,76
2023	111	82	29	51,42	28	69	0	0
2024	81	51	30	51,35	27	64	2	2,46
2025	63	48	15	51,90	33	71	0	0

*1 pz che ha fatto OAGB nel 2011 , 1 pz che ha fatto OAGB nel 2001

Variable	Mean	Median	IQR
Duration (conversion to RYGB) (minutes)	105.0161	97.5	62
Months between procedures	74.6487	44.34954	24.29369
First procedure limb	170.3509	180	30
Biliary limb	159.625	150	30
Alimentary limb	62.88136	60	10

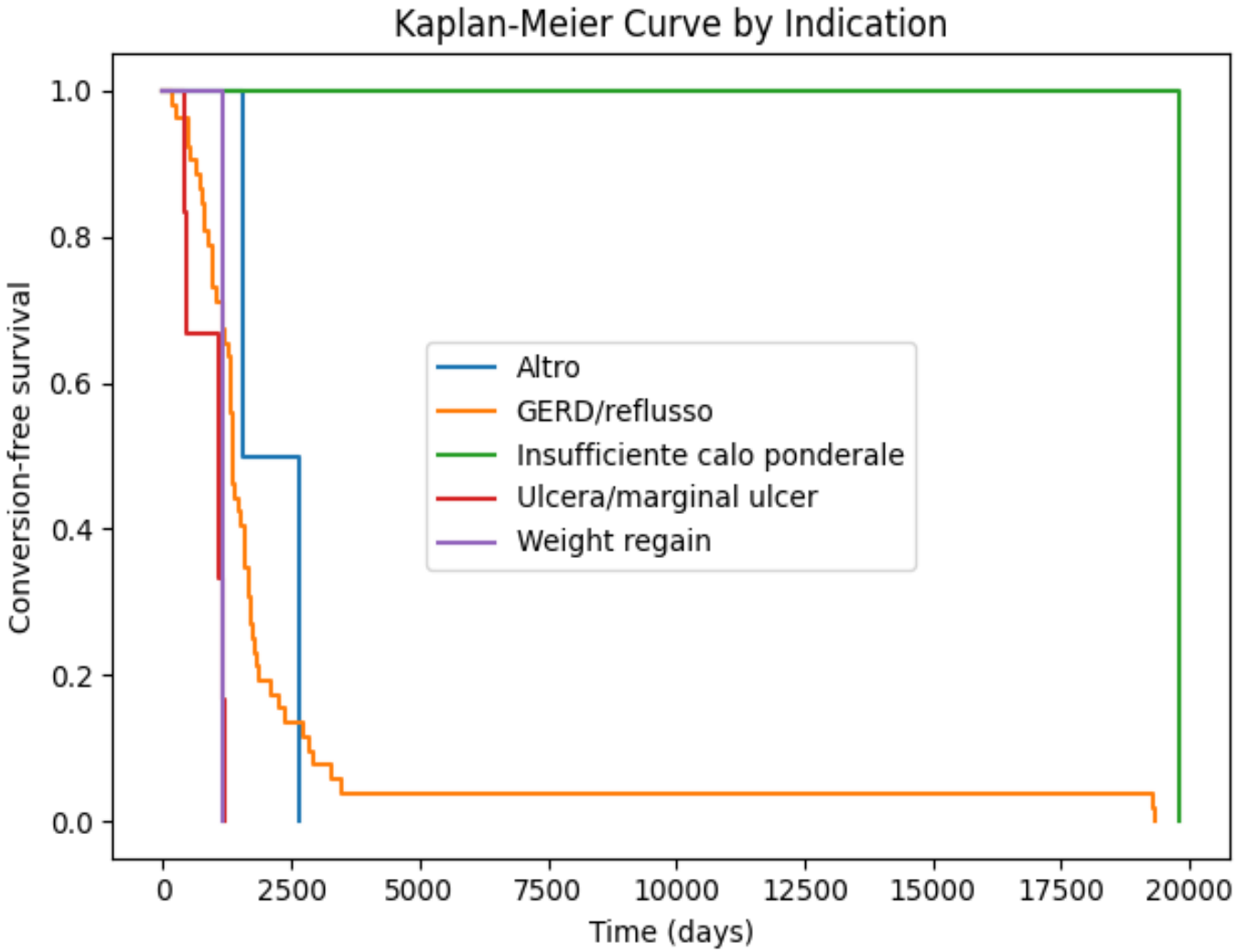
sex	%
f	85
m	15

Indication	n	%
GERD/reflux	52	83.9%
Other causes	10	16.1%

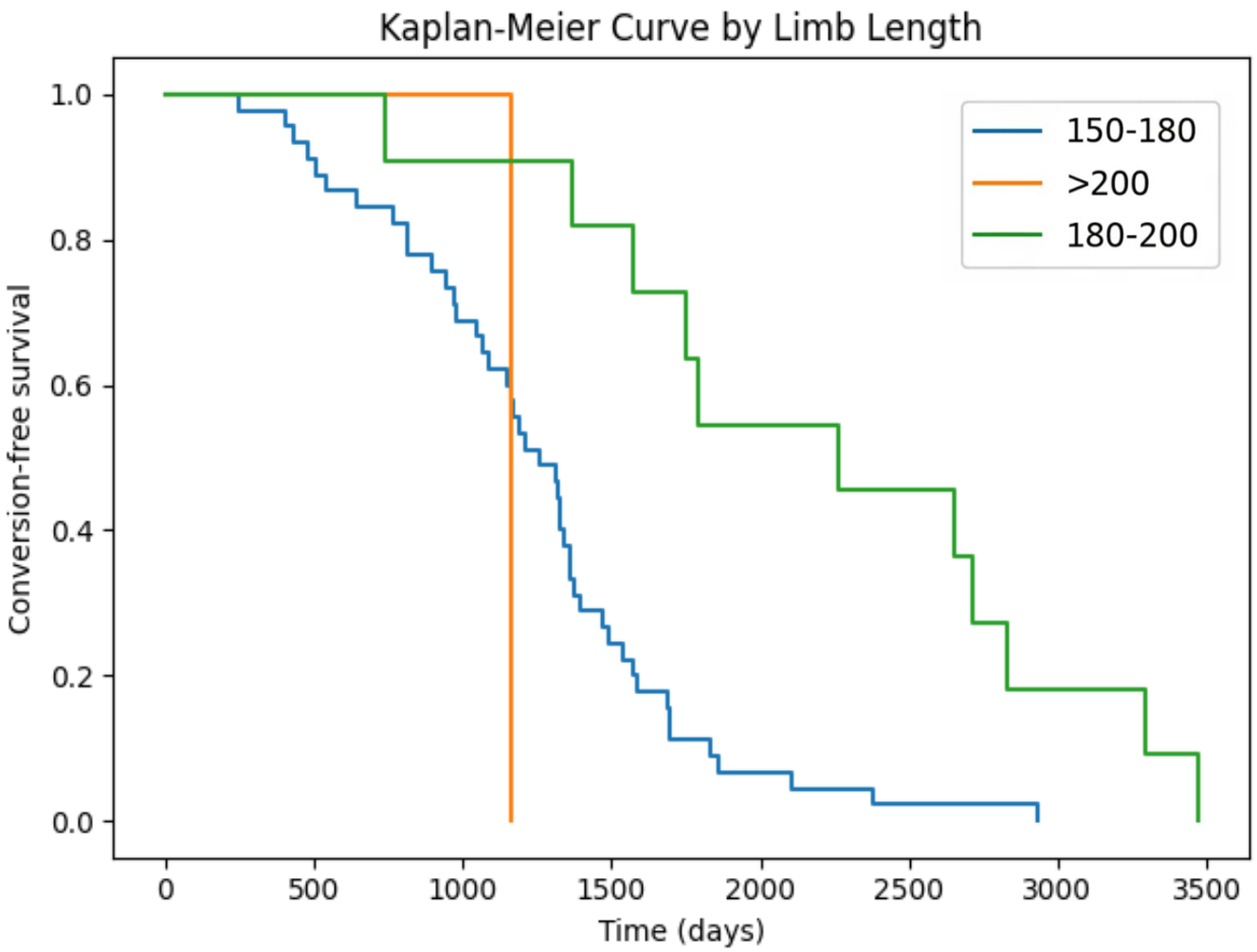
Other Causes:
-marginal ulcer
-Insufficient weight loss
-Weight regain
-others

Group	Mean ± SD
Total	170 ± 21 cm
GERD	169 ± 20 cm
Non-GERD	177 ± 23 cm

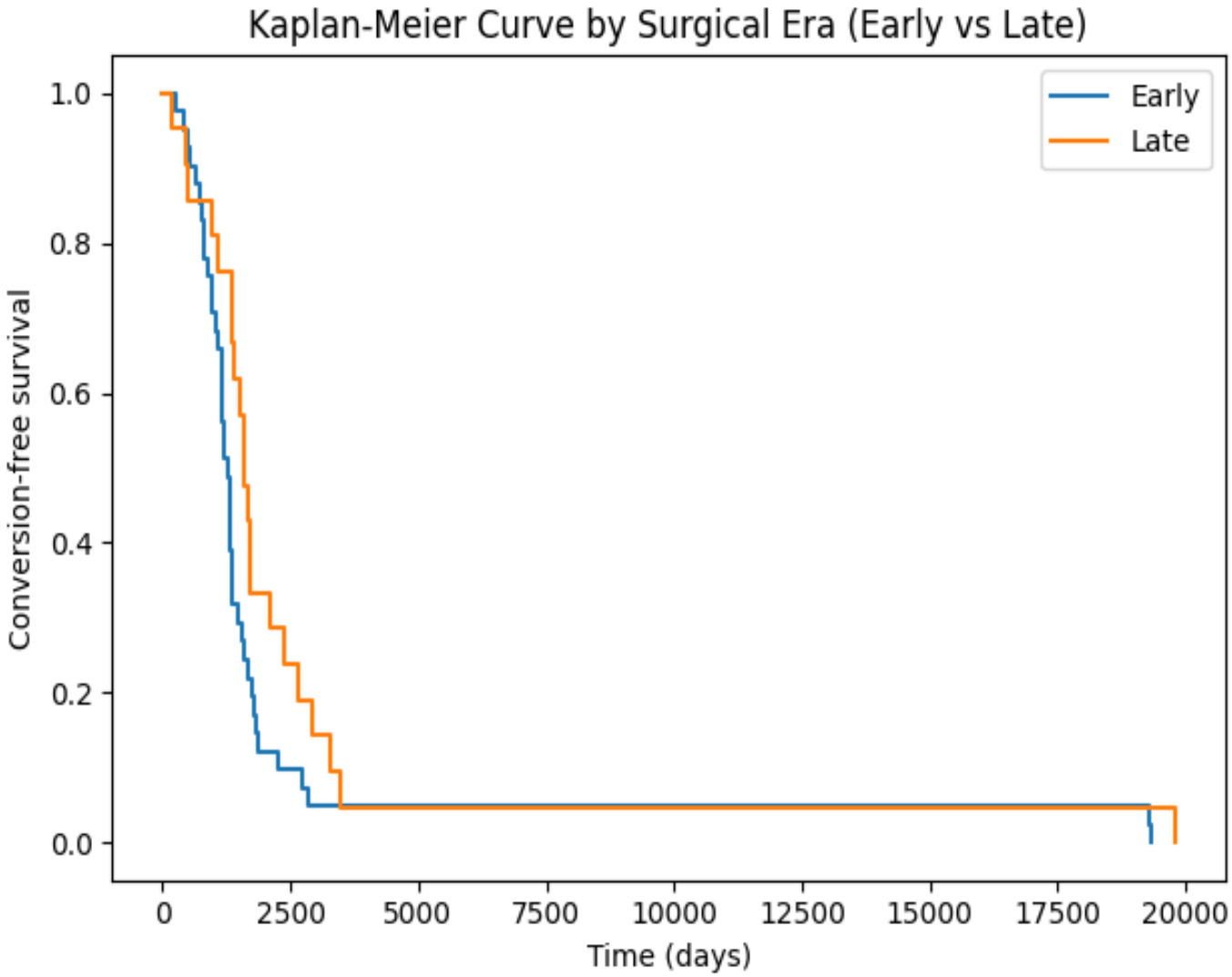
P = 0.39, not significant



Significant differences in conversion-free survival were observed based on the reason for revision (chi^2 = 16.858; p = 0.002).

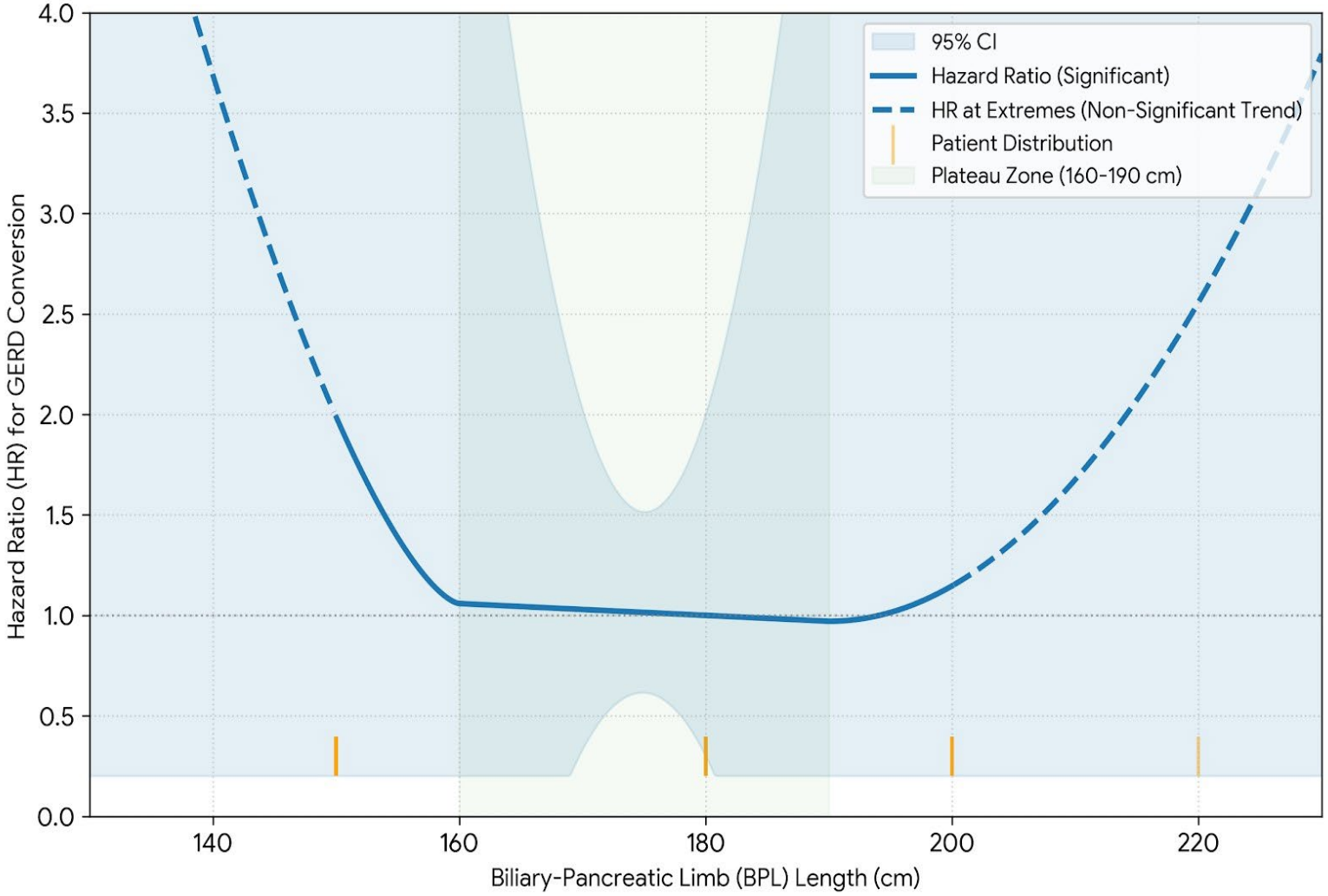


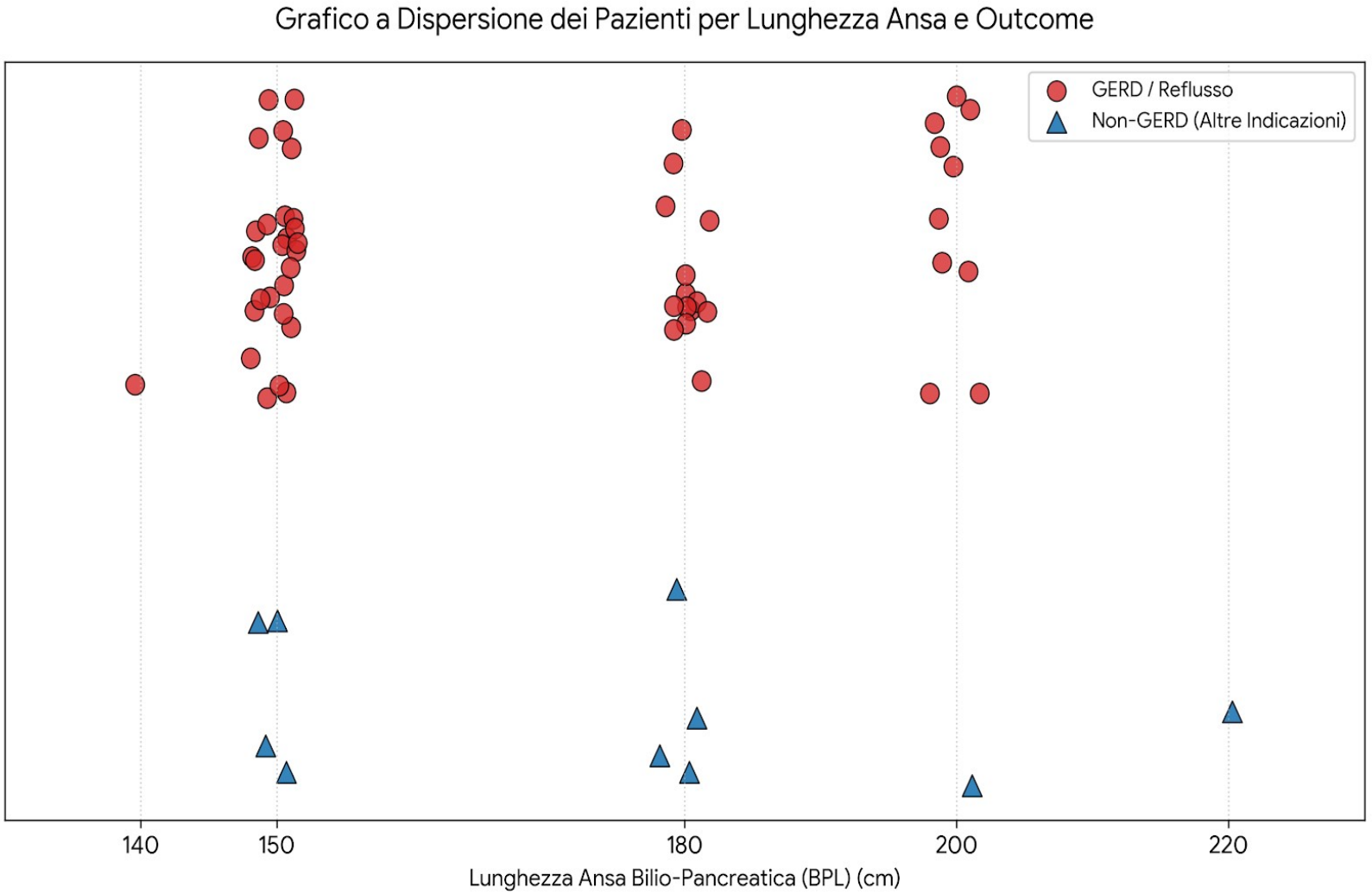
Stratification by primary biliopancreatic limb (BPL) length (<150 cm, 150–180 cm, >200 cm) showed a highly significant association with time-to-conversion (chi^2 = 26.048; $p < 0.001$)



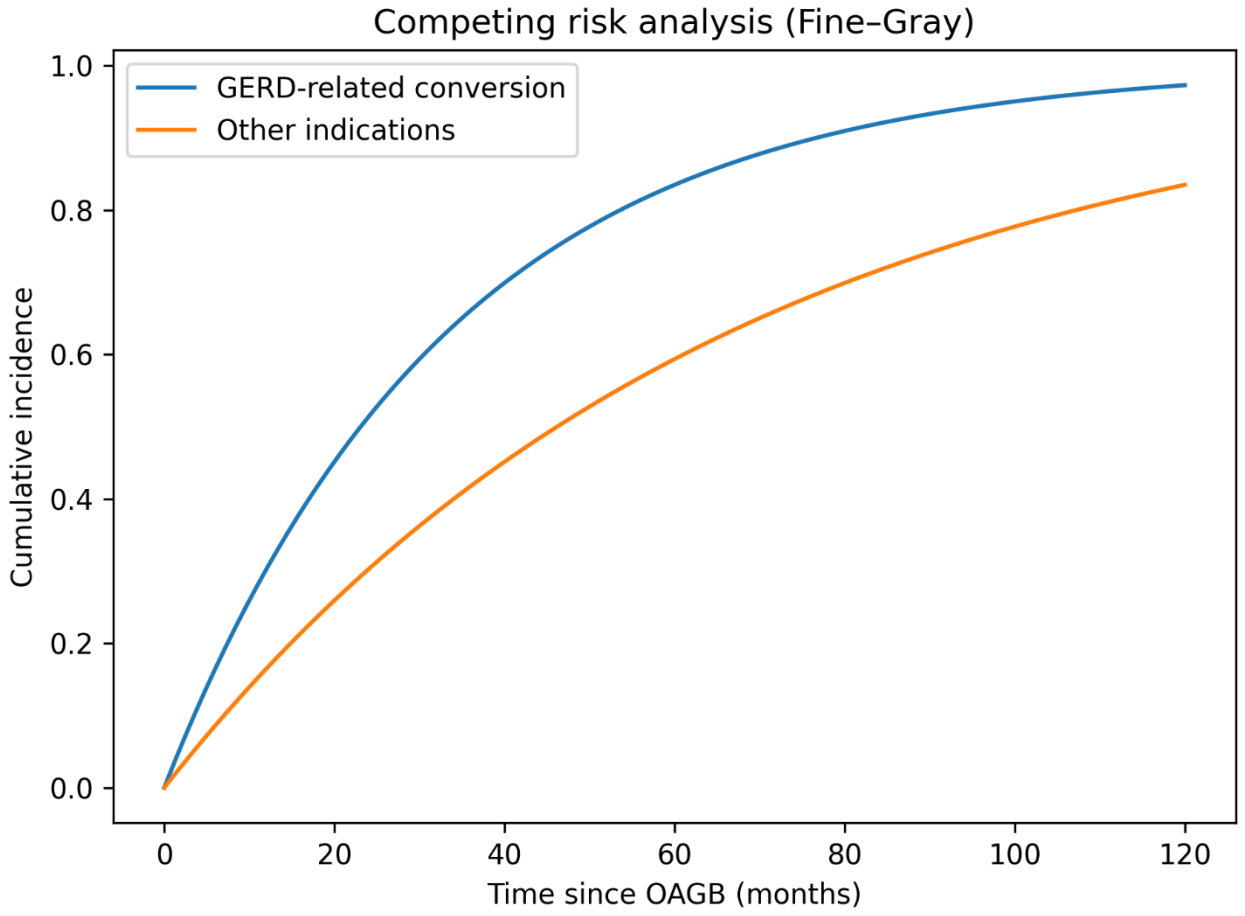
Using the median year of revision (2023) as a cut-off, patients in the "Late Era" demonstrated significantly improbe conversion-free survival compared to the "Early Era" (chi^2 = 7.040; p = 0.008)

Non Linear Spline Analysis

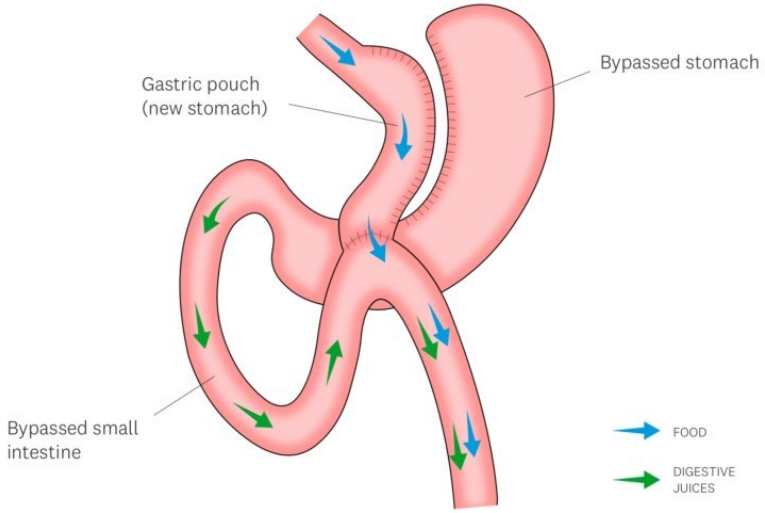




Patient Distribution and Conversion Indications by BPL Length. A jittered scatter plot illustrating the individual distribution of the patient cohort according to the initial Biliary-Pancreatic Limb (BPL) length (cm) and the primary indication for surgical conversion to RYGB. Red circles (top tier) represent individual cases converted due to GERD/reflux complications, showing a high density cluster at the 150 cm mark. Blue triangles (bottom tier) indicate non-GERD conversion etiologies (including marginal ulcers, weight regain, insufficient weight loss, and others). Horizontal jittering was applied to prevent symbol overlap and visually preserve the absolute case volume across the discrete surgical cohorts.


Competing risk analysis (Fine–Gray)
GERD-related conversion
Other indications
Cumulative incidence
1.0
0.8
0.6
0.4
0.2
0.0
0
20
40
60
80
100
120
Time since OAGB (months)

Pathophysiology of Reflux in OAGB



Short limb (proximity) vs Long limb (stasis–volume–hypokinesia)
distinct mechanisms, shared symptoms

One-Anastomosis Gastric Bypass (OAGB) creates a long gastric pouch anastomosed to the jejunum; reflux may involve bile, acid, or mixed duodenogastric contents reaching the pouch and esophagus.
Symptom spectrum: heartburn, regurgitation, bile taste, cough/hoarseness; risks include esophagitis, Barrett's changes, pouch gastritis.

E in letteratura?

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REVIEW

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Review

Bile reflux after one anastomosis gastric bypass surgery: A review study

Behrouz Keleidari [a], Mohsen Mahmoudieh Dehkordi [a], Masoud Sayadi Shahraki [a], Zeinab Sadat Ahmadi [a], Mahmoud Heidari [a], Abbas Hajian [b], Hossein Taheri Nasaj [a,*]

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OAGB 2025 A systematic review with meta-analysis of indications

Obesity Surgery (2022) 32:2309–2320
https://doi.org/10.1007/s11695-022-06078-w

ORIGINAL CONTRIBUTIONS

o Schiavone[1] ·

Outcomes and Effects of 250-cm Biliopancreatic Limb One Anastomosis Gastric Bypass in Patients with BMI > 50 kg/m^2 with Total Bowel Length > 6 m: a 2-Year Follow-up

Moheb S. Eskandaros[1]

CONCLUSIONS

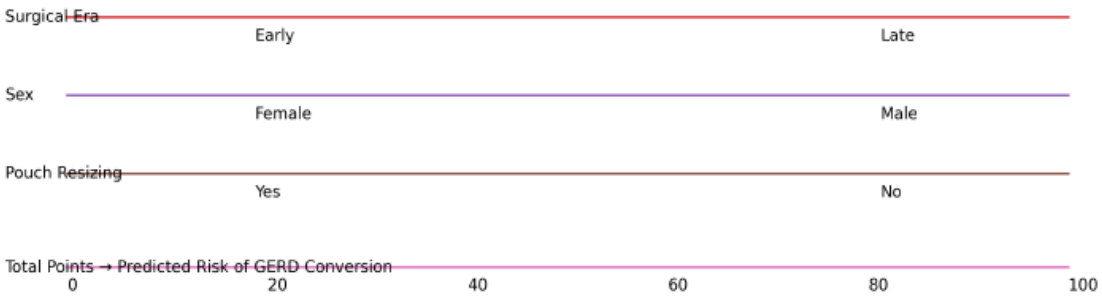
Primary BPL length alone does not independently predict GERD-related conversion after OAGB. Reflux appears **multifactorial**, and surgical era significantly influences outcomes, suggesting that technical refinement and patient selection may outweigh limb length in determining reflux risk. **Larger prospective studies are needed to clarify optimal limb lenght and patient selection.**

WORK IN PROGRES…

Nomogram Predicting GERD-Related Conversion After OAGB

Nomogram derived from multivariate logistic regression including biliopancreatic limb length, age, sex, surgical era, and pouch resizing. Model discrimination: c-statistic = 0.73.

NOTHING IS IMPOSSIBLE



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