

Evolution of disease phenotype, time to biological therapy and medium-, long-term surgery rates in Crohn's disease patients in Western Hungary – a population-based study between 2007–2018, data from the Veszprem county cohort

Lorant Gonczi ¹, Laszlo Lakatos ², Petra Golovics ³, Tunde Pandur ⁴, Gyula David ², Zsuzsanna Erdelyi ², Istvan Szita ², Peter L. Lakatos ^{1,5}



¹ Department of Internal Medicine and Oncology, Semmelweis University, Budapest, Hungary

² Ferenc Csolnoky Hospital, Department of Gastroenterology, Veszprem, Hungary

³ Department of Gastroenterology, Hungarian Defence Forces, Medical Centre, Budapest, Hungary

⁴ Grof Esterhazy Hospital, Department of Gastroenterology, Papa, Hungary

⁵ Department of Gastroenterology, McGill University Health Center, Montreal, Quebec, Canada

Centre universitaire de santé McGill

McGill University Health Centre



Background

The number of prospective population-based studies evaluating the natural disease course and surgical outcomes of Crohn's disease (CD) are still limited from Eastern Europe.

Aim

Our aim was to evaluate disease course by examining progression of disease phenotype, time to biological therapy and surgery rates in a *prospective population-based study* from Veszprem Province, including incident CD patients diagnosed between January 1, 2007 and December 31, 2018.

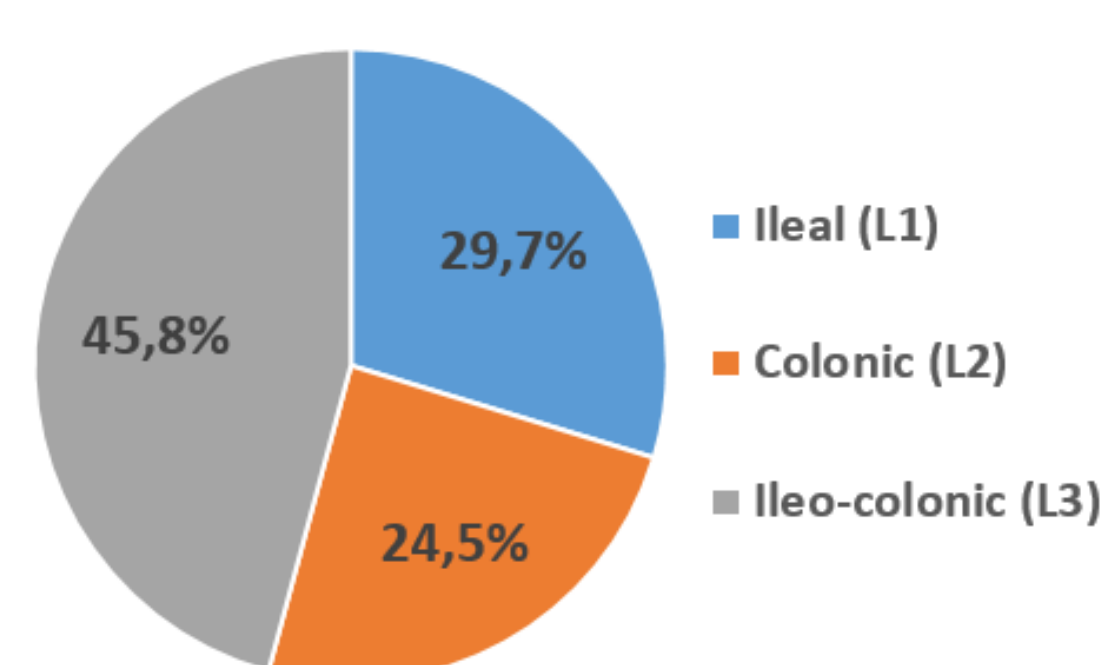
The present study is a continuation of the Veszprem IBD population-based cohort with a follow-up of the incidence and disease course of IBD since 1977.

Methods

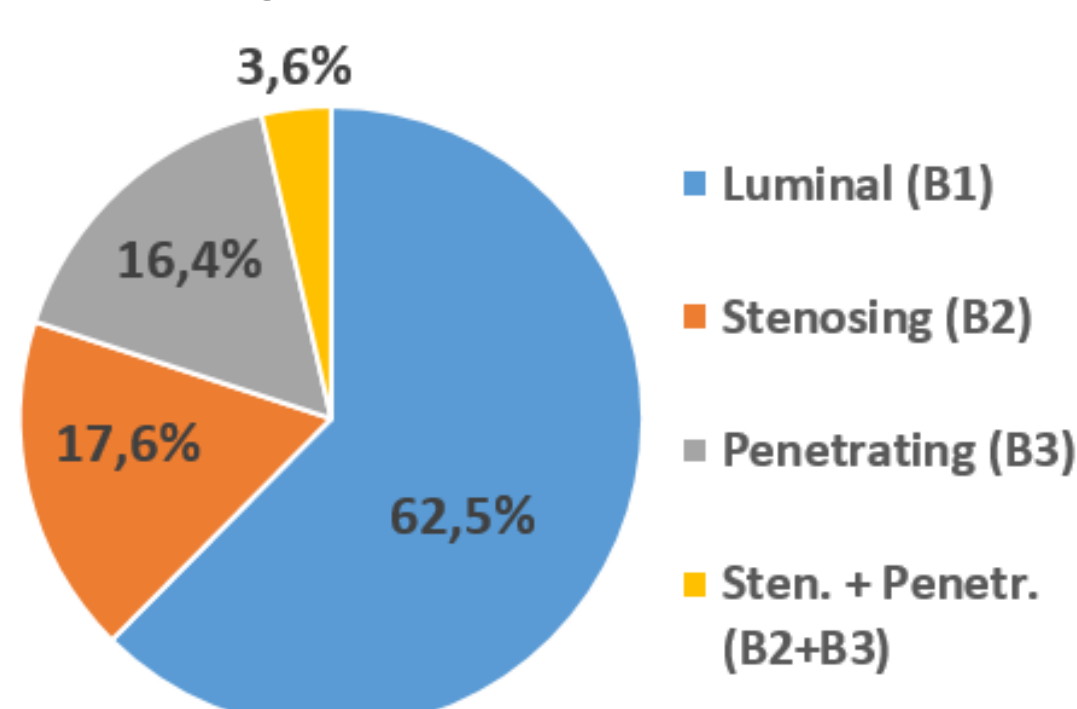
- Data of **421 incident CD patients** were analyzed (male/female: 237/184; median age at diagnosis: 29 years(y) [IQR: 21-42]).
- Both in-hospital and outpatient records were collected and comprehensively reviewed at diagnosis and during clinical follow-up.
- Disease phenotype was evaluated based on the Montreal classification.
- Probability of medium-, long-term change in disease course and surgical outcomes were analyzed using Kaplan–Meier survival analysis.
- The mean length of total follow-up was **8.53y** (SD: 3.3).

Results

Disease location (at diagnosis)

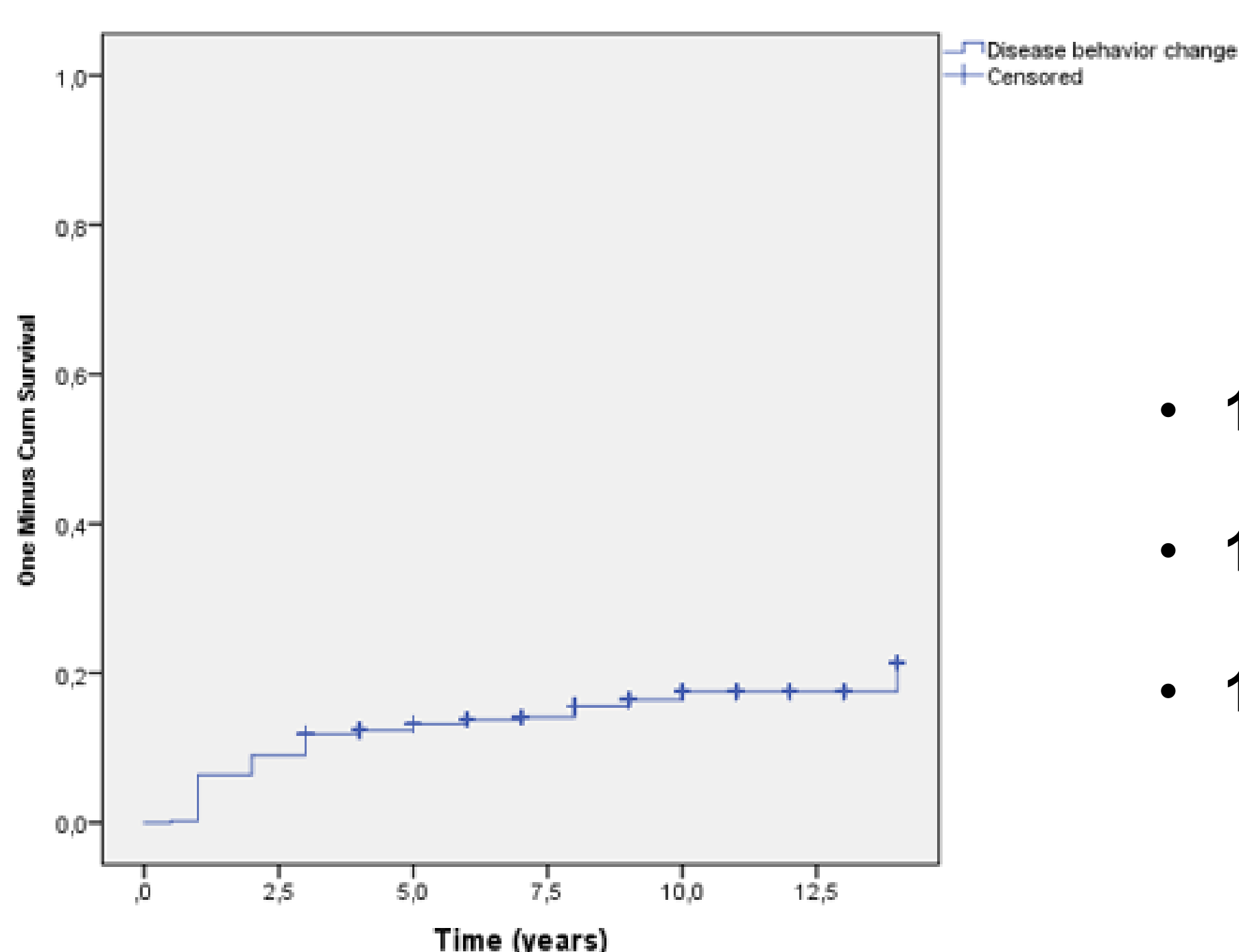


Disease behavior (at diagnosis)



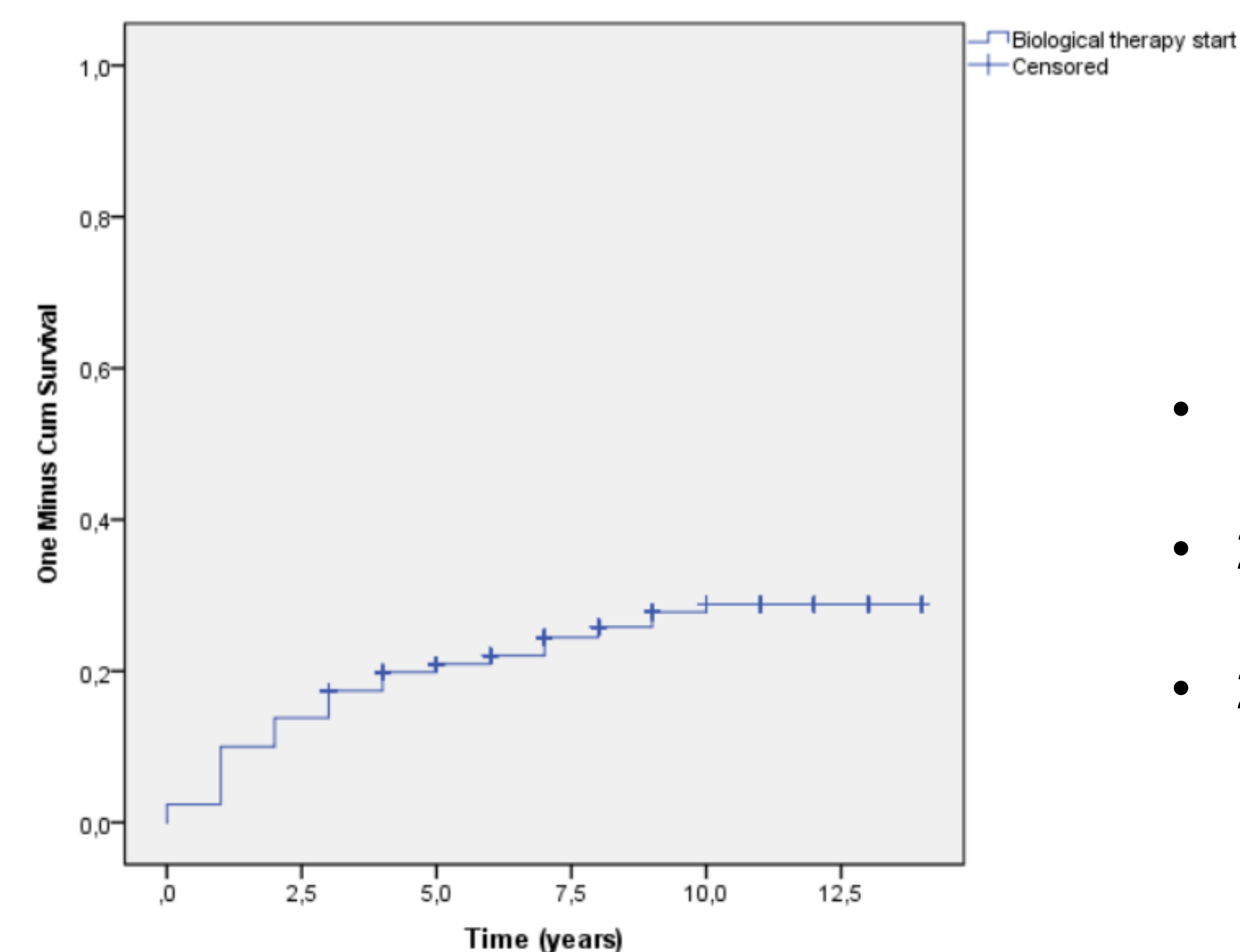
- Upper gastrointestinal manifestation: 7.6% at diagnosis and 8.1% at the end of follow-up
- Perianal disease: **13.5%** at diagnosis and **19.0%** at the end of follow-up

Cumulative probability of disease behavior progression (B1 > B2/3) in incident Crohn's disease patients (2007-2018)



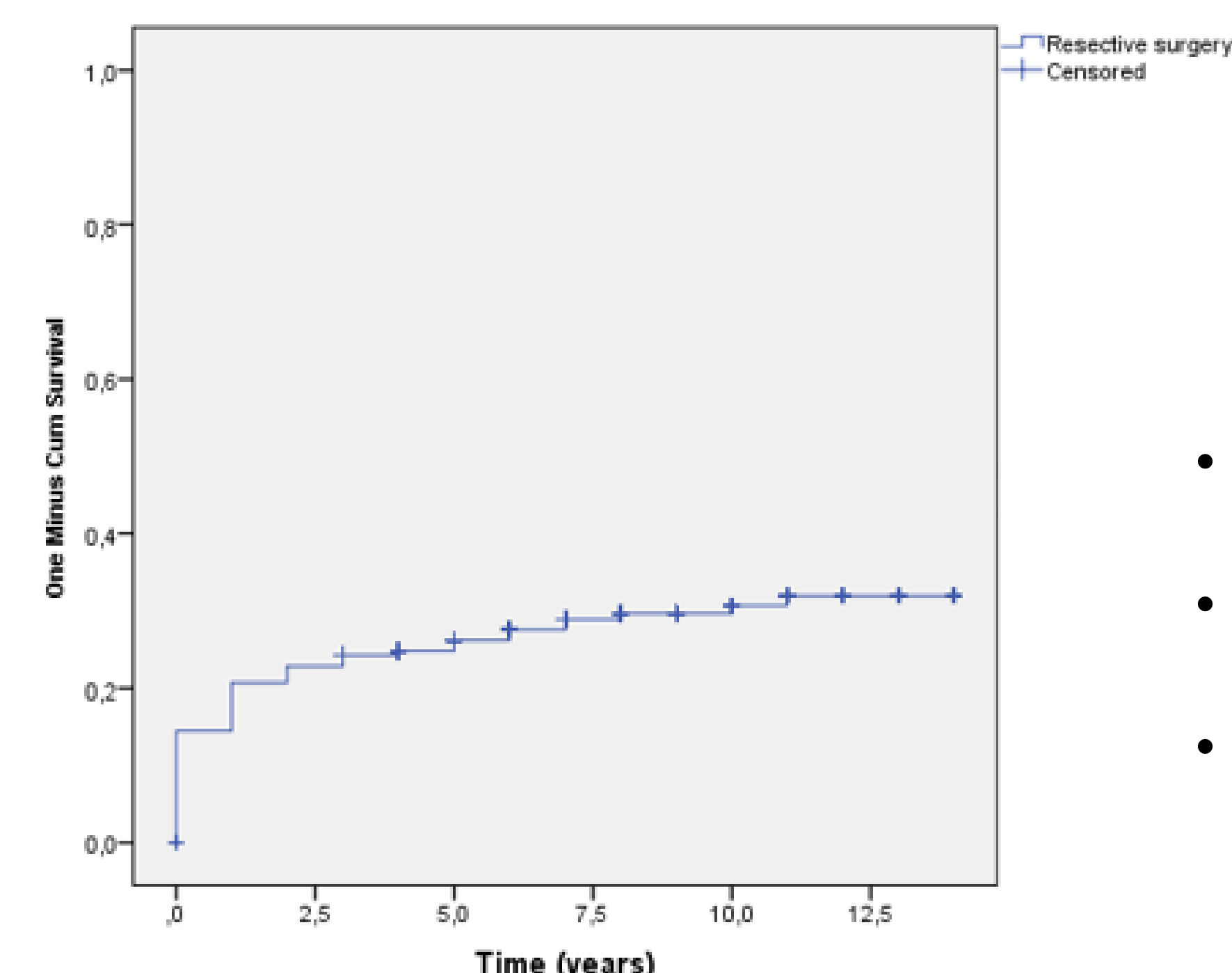
- 11.9% (SE:1.6) at 3 years
- 13.2% (SE:1.7) at 5 years
- 17.6% (SE:1.7) at 10 years

Cumulative probability of biological therapy initiation after diagnosis (2007-2018)



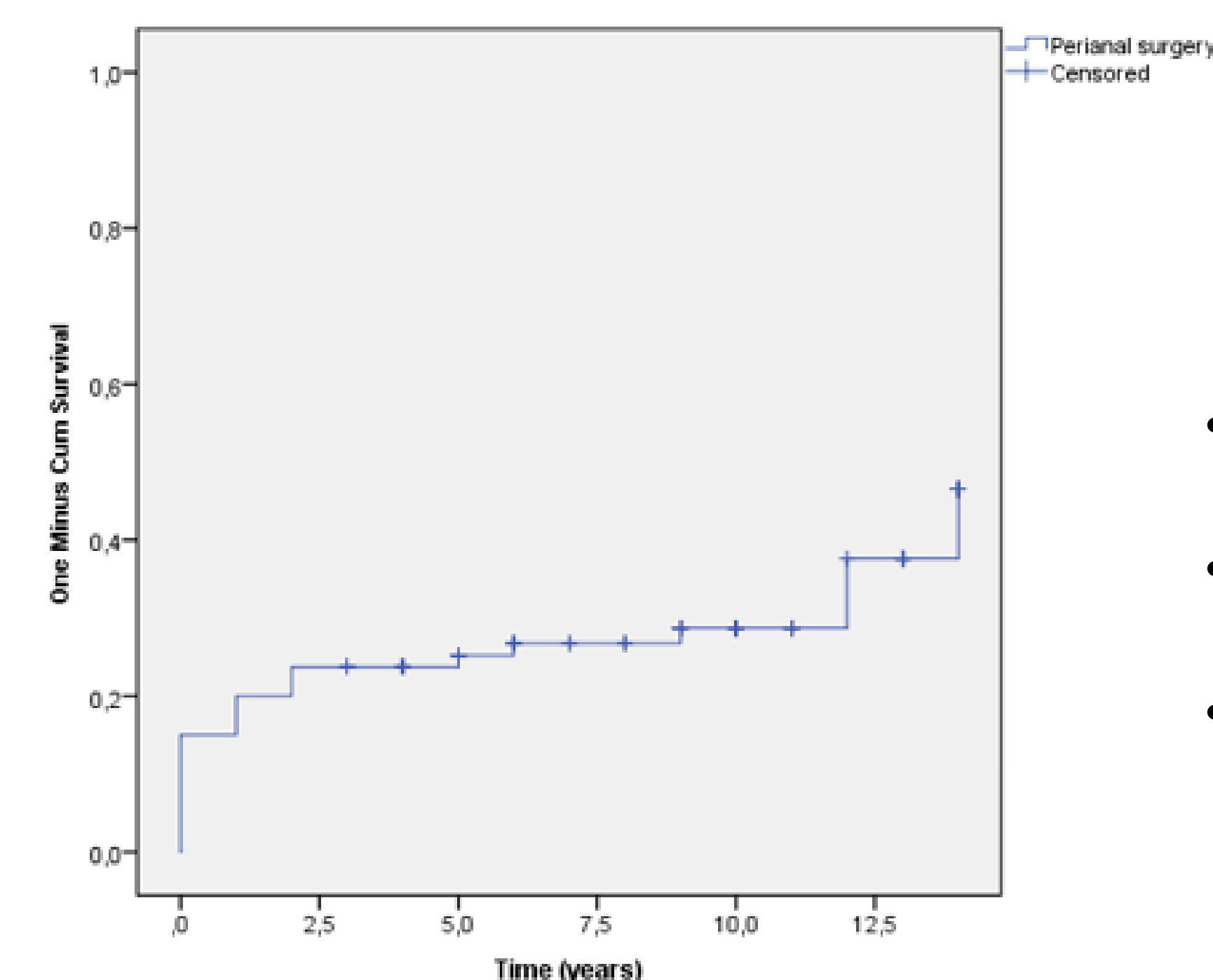
- 17.4% (SE:1.8) at 3 years
- 20.9% (SE:2.0) at 5 years
- 28.8% (SE:2.0) at 10 years

Cumulative probability of first surgical resection in incident Crohn's disease patients (2007-2018)



- 20.7% (SE:2.0) at 1 years
- 26.1% (SE:2.2) at 5 years
- 30.7% (SE:2.4) at 10 years

Cumulative probability of first perianal surgical procedure in incident Crohn's disease patients with perianal disease (2007-2018) [n=80]



- 20.0% (SE:4.5) at 1 years
- 25.2% (SE:4.9) at 5 years
- 28.7% (SE:5.3) at 10 years

Conclusion

The probability behavior progression was similar to results from recent pan-European population-based data. (Burisch 2018, JCC). One-year surgery rates after diagnosis were considerably higher, while medium-term (5y) surgery rates were similar (~20%) compared to recent Hungarian and European data, and long-term (10y) rates decreased compared to data from previous decades. (Lakatos 2011, IBD; Lakatos 2012, AJG).