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## **Predicting time-to-event outcomes under different intervention strategies: methods and applications**

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# List of Publications

## Included in this dissertation

1. **Prosepe I**, Groenwold RHH, Knevel R, Pajouheshnia R, van Geloven N (2022). The Disconnect Between Development and Intended Use of Clinical Prediction Models for Covid-19: A Systematic Review and Real-World Data Illustration. *Frontiers in Epidemiology*, 2. DOI: 10.3389/fepid.2022.899589.
2. Goudsmit BFJ, **Prosepe I**, Tushuizen ME, Mazzaferro V, Alwayn IPJ, van Hoek B, Braat AE, Hein Putter (2023). Survival benefit from liver transplantation for patients with and without hepatocellular carcinoma. *JHEP Reports*, 5(12):100907. DOI: 10.1016/j.jhepr.2023.100907.
3. **Prosepe I**, le Cessie S, Putter H, van Geloven N (2025). Causal multistate models to evaluate treatment delay. *Statistics in Medicine*, 44(7):e70061. DOI: 10.1002/sim.70061.
4. van der Staaij H, **Prosepe I**, Caram-Deelder C, Keogh RH, Deschmann E, Dame C, Onland W, Prins SA, Cassel F, d'Haens EJ, van Westering-Kroon E, Andriessen P, Vrancken SL, Hulzebos CV, Vijlbrief DC, Fustolo-Gunnink SF, Fijnvandraat K, Lopriore E, van der Bom JG, van Geloven N (2025). Individualized Prediction of Platelet Transfusion Outcomes in Preterm Infants With Severe Thrombocytopenia. *JAMA*, published online September 15 2025. DOI: 10.1001/jama.2025.14194
5. **Prosepe I**, van Geloven N, de Ferrante H, Braat AE, Putter H (2025). Estimating conditional survival benefit for the allocation of scarce resources. *Submitted*.

## Other publications

6. Ocagli H, Lanera C, Lorenzoni G, **Prosepe I**, Azzolina D, Bortolotto S, Stivanello L, Degan M, Gregori D (2020). Profiling patients by intensity of nursing care: An operative approach using machine learning. *Journal of Personalized Medicine*, 10(4):279. DOI: 10.3390/jpm10040279
7. Gregori D, Azzolina D, Lanera C, **Prosepe I**, Destro N, Lorenzoni G, Berchiolla P (2020). A first estimation of the impact of public health actions against COVID-19 in Veneto (Italy). *J Epidemiol Community Health*, 74(10):858-860. DOI: 10.1136/jech-2020-214209
8. Gallo E, **Prosepe I**, Lorenzoni G, Acar AŞ, Lanera C, Berchiolla P, Azzolina D, Gregori D (2021). Excess of all-cause mortality is only partially explained by COVID-19 in Veneto (Italy) during spring outbreak. *BMC Public Health*, 21(1): 797. DOI: 10.1186/s12889-021-10832-7
9. Berchiolla P, Giraudo MT, Fava C, Ricotti A, Saglio G, Lorenzoni G, Sciannameo V, Urru S, **Prosepe I**, Lanera C, Azzolina D (2021). To swab or not to swab? The lesson learned in Italy in the early stage of the COVID-19 pandemic. *Applied Sciences*, 11(9):4042. DOI: 10.3390/app11094042
10. Lanera C, Azzolina D, Pirotti F, **Prosepe I**, Lorenzoni G, Berchiolla P, Gregori D (2022). A Web-Based Application to Monitor and Inform about the COVID-19 Outbreak in Italy: The COVID-19ita Initiative. *InHealthcare*, 10(3):473. DOI: 10.3390/healthcare10030473
11. Azzolina D, Lorenzoni G, Silvestri L, **Prosepe I**, Berchiolla P, Gregori D (2022). Regional differences in mortality rates during the COVID-19 epidemic in Italy. *Disaster Medicine and Public Health Preparedness*, 16(4):1355-61. DOI: 10.1017/dmp.2020.486

12. Ranzato G, Adriaens I, Lora I, Aernouts B, Statham J, Azzolina D, Meuwissen D, **Prosepe I**, Zidi A, Cozzi G (2022). Joint models to predict dairy cow survival from sensor data recorded during the first lactation. *Animals*, 12(24):3494. DOI: 10.3390/ani12243494
13. Scagnellato L, Cozzi G, **Prosepe I**, Lorenzin M, Doria A, Martini G, Zulian F, Ramonda R (2024). Relapses of juvenile idiopathic arthritis in adulthood: A monocentric experience. *Plos one*, 19(5):e0298679. DOI: 10.1371/journal.pone.0298679

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# Curriculum vitae

Ilaria Prosepe was born on 10 December 1995 in Camposampiero, Italy. She completed her secondary education at the Liceo Scientifico Ippolito Nievo in Padova, graduating in 2014. She then obtained a Bachelor's degree in Mathematics from the Università degli Studi di Padova in 2017. In the same year, she enrolled in the ALGANT Master's programme, an international study track in Mathematics with a focus on ALgebra, Geometry And Number Theory. She pursued this program at Universiteit Leiden and the Università degli Studi di Padova, graduating cum laude from both institutions in July 2019.

Following her Master's degree, Ilaria shifted her focus to medical statistics, motivated by the desire to conduct research in an applied setting. In November 2019, she began a Research Fellowship under the supervision of Prof. Dr. Dario Gregori at the Unit of Biostatistics, Epidemiology and Public Health, Università degli Studi di Padova, a position she held until July 2020. In August 2020, she started her PhD at the Department of Biomedical Data Sciences of the Leiden University Medical Center (LUMC), under the supervision of Prof. Dr. Hein Putter and Dr. Ir. Nan van Geloven. Her research focused on causal inference methods and applications in survival analysis, the results of which are presented in this thesis. She has presented her work at several international conferences and workshops, including the International Society for Clinical Biostatistics (ISCB) Conference (Lyon, Newcastle, Milan, Thessaloniki, Basel), the Survival Analysis for Junior Researchers Conference (Ulm, Bonn), the Eurotransplant Annual Meeting (Sassenheim), and the Causal Inference in Time-to-Event Analysis Workshop (Dortmund). She assisted in teaching several courses at LUMC, focusing on survival analysis, and served as teaching assistant to Prof. Dr. Ruth Keogh (London School of Hygiene & Tropical Medicine) and Prof. Dr. Jon Michael Gran (University of Oslo) in the ISCB online short course "Causal inference for time-to-event outcomes – with practical applications in R". In addition, she was an active member of the Department's Social Committee for two years, contributing to the organization of departmental events.

Ilaria is currently a post-doctoral researcher at the Department of Biomedical Data Sciences, Leiden University Medical Center, under the supervision of Dr. Liesbeth C. de Wreede. Her current work focuses on theory for extensions of multi-state models in the presence of under-reporting of intermediate states.