My name is Jesse Krijthe and I’m presenting work on “estimating the long-term effect of early treatment initiation in Parkinson’s disease using observational data”. This is a collaboration between Neurologists at the Radboud University medical center and the data science department at Radboud university.

In Parkinson’s disease, medication therapy, in particular dopamine replacement, is an extremely effective therapy to treat symptoms and is used for most patients used at some point during the disease. However, patients and doctors are worried that starting therapy early in the disease might have long-term adverse effects. Our goal is to estimate the effect of the duration of therapy during the first years after diagnosis on disease related outcomes later on, to help make an informed treatment decision.

We try to do this by making use of an observational study, where the main challenge is to adjust for time-varying confounding. We use two common methods to address time-varying confounding, and show it is important to use these types of techniques to properly estimate the causal effect of interest.

To give you a preview of the results: we find that adjusting for time varying confounding leads to more positive effect estimates than when only considering baseline confounding. On the main disease outcome, we find tentative beneficial effects of starting treatment early.

If you would like to discuss these problems, methods and results further, I invite you to come talk to me at the poster, which looks like this.

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