# Matthew Knowles

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## EDUCATION

**University of York**  York, UK
*PhD, Mathematics*  *June 2025 – Present*
- Supervised by Dr. Jessica Hargreaves and Dr. Marina Knight

**University of Sheffield**  Sheffield, UK
*MSc, Statistics with Medical Applications, Grade: Merit*  *September 2022 – September 2024*
- Studied part time while working at OPEN Health
- Modules in time series, bayesian statistics, medical statistics, machine learning and economic modelling
- Disseration: A Network Meta-Analysis of Treatments of Locally Advanced/Metastatic Pancreatic Cancer (75%)

**University of York**  York, UK
*MMath (Hons), Mathematics, Grade: 2:1*  *October 2018 – June 2022*
- Specialised in statistics and financial mathematics in year 4. Focused on pure mathematics and statistics in years 1-3
- Key modules included statistical pattern recognition, applied data science in R, and bayesian statistics
- Third year project: On Differential Equations in in-host Viral Pathology (70%)
- Dissertation: Statistical Methods for Resetting Score Targets in Limited-Overs Cricket (72%)
- Recived full colours for representing the university at cricket

## EXPERIENCE

**Statistical Scientist**  December 2024 – Present
*Astellas Pharma*  *York, UK*
- Trial statistician in the oncology group, working on two novel compounds
- Contribute to the development of statistical analysis plans and trial protocols
- Developed an automated R pipeline for creating weekly outputs of key trial endpoints
- Co-lead a research group on indirect treatment-comparisons

**Senior Statistical Analyst**  April 2024 – November 2024
*OPEN Health Evidence and Access*  *London, UK*
- Lead the survival analysis workstream update for a large clinical trial in chronic-lympochytic leukemia
- Supported the delivery of a network meta analysis in crohn's disease
- Conducted a non-proportional-hazards network meta analysis in ulcerative colitis
- Lead an indirect treatment comparison in crohn's disease
- Implemented a novel survival modelling technique into a cost-effectiveness model
- Lead the development of in-house R packages for survival analysis and indirect treatment comparisons

**Statistical Analyst**  June 2022 – March 2024
*OPEN Health Evidence and Access*  *York, UK*
- Worked on building and maintaining in-house R packages for survival analysis
- Performed and reported on the survival analyses of four clinical trials for submissions to health technology assessment agencies
- Performed a network meta analysis in multiple myeloma
- Gave two internal talks about network meta analysis methodologies
- Wrote statistical analysis plans for trial analyses and network meta analyses

## PUBLICATIONS

**Comparative Efficacy of Treatments in Advanced/Metastatic Pancreatic Cancer: Demonstrating the Power of Multi-Level Network Meta Regression**, Value in Health, Volume 27, Issue 12, S2 (December 2024)

**Discrete Event-Simulation Model Projects Mepolizumab Treatment Outcomes Associated With Long-Term Clinical Remission in Severe Asthma**, American Journal of Respiratory and Critical Care Medicine, Issue 211 (May 2025)

## Skills

**Programming Languages**: R, Python, C/C++, Stan
**Developer Tools**: Git, Vim, VS Code, Rstudio Server, Rstudio Desktop
**Communicative Languages**: English, Norwegian
**Presenting**: Experienced at creating and giving talks/presentations in both Beamer and PowerPoint
**Other**: Excel, VBA, PowerBI, RShiny, R package development, LaTeX

## Professional Memberships

Associate Member, Institute for Mathematics and its Applications

Royal Statistical Society