# Senior Principal Data Scientist

Job ID
REQ-10053999

Jun 16, 2025

United Kingdom

## Summary

The Multimodal Data and Analytics group is searching for a Principal Data Scientist. As the successful candidate, you will support the application of high-dimensional analyses of patient level data (including various -omics, phenomics, IHC, MRI, clinical and outcomes data) to mid to late development clinical programs in one or more indications. You will be part of interdisciplinary teams that analyze and interpret biomarker data to inform critical project decisions, regulatory submissions and directly influence drug development decisions with internal and external partners.

## About the Role

# Principal Data Science, Multimodal Data & Analytics in Clinical Development

200+ compounds are supported by the quantitative drug developers at Novartis Development

Analytics. We focus on transforming data from multiple (multimodal) sources - clinical, -omics, imaging - into analyses and insights that build the basis for making innovative drugs accessible for patients. We influence decision-making in cross-functional international teams from mid to late phase drug development.

The Multimodal Data and Analytics group is searching for a Principal Data Scientist. As the successful candidate, you will support the application of high-dimensional analyses of patient level data (including various biomarker, clinical and outcomes data) to mid to late development clinical programs in one or more indications. You will be part of interdisciplinary teams that analyze and interpret biomarker data to inform critical project decisions and understand mechanisms of response/resistance to therapy. You will contribute to the design and execution of the biomarker strategy in those programs to inform drug development, and you will contribute to the strategy for addressing biomarker issues in late phase trials, regulatory submissions and directly influence drug development decisions with internal and external partners. The focus is less on method development or discovery, but on combining your domain knowledge of drug development, trials and biology with cutting-edge methodologies (ranging from survival models to machine learning) and technologies (imaging and multi-omics) to create tangible impact on clinical trials and patients.

# Key requirements

- Ability to collaborate with cross-functional partners, provide quantitative, scientific and strategic input to  support the execution of the integrated biomarker strategies in drug development that facilitate internal decision making, and support submissions of candidate drug.
- Ability to explain statistical concepts in an easily understandable way to non-statisticians and provide adequate statistical justifications and interpretation of analysis results for actions/decisions/statements, when required.
- Performing hands-on analysis of integrated clinical, outcomes and high-dimensional, patient-level biomarker data from clinical trials (genomics, transcriptomics, proteomics, flow cytometry etc.) to generate fit-for-purpose evidence that is applied for decision making in drug development programs.

# Essential requirements

- Advanced degree in bioinformatics, statistics, data science or other quantitative discipline with extensive exposure to clinical trials and drug development. MS with 5+ years relevant work experience or PhD with 2+ years of relevant work experience in the pharma/biotech industry
- Good understanding of clinical study design principles and basic familiarity working with clinical data in a clinical trial (GxP) setting

- Strong knowledge and understanding of (multivariate implementations of) statistical methods such as time to event analysis, machine learning, meta-analysis, mixed effect modeling, longitudinal modeling, Bayesian methods, variable selection methods (e.g., lasso, elastic net, random forest), design of clinical trials.
- Familiarity with statistical and analytical methods for genetics and -omics data analysis and working knowledge of high dimensional biomarker platforms (e.g., next generation

sequencing, transcriptomics, proteomics, flow cytometry, etc.).
- Strong programming skills in R and Python. Demonstrated knowledge of data visualization, exploratory analysis and predictive modeling.
- Ability to leverage technical and scientific information from a variety of sources in order to effectively enable data analysis and the scientific interpretation of analysis results.
- Ability to develop and deliver clear and concise presentations for both internal and external meetings in key decision-making situations.

## Desirable requirements

- Experience with modern data science methods and designing machine learning or other AI architectures for applications in healthcare
- Additional expertise in big data, web-based applications, good coding practice, source code management (Git, bitbucket)
- Exposure to and hands-on experience with various forms of RWE is a plus.

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Development

Innovative Medicines

United Kingdom

London (The Westworks)

Company / Legal Entity
GB16 (FCRS = GB016) Novartis Pharmaceuticals UK Ltd.

Functional Area
Data and Digital

Full time

Regular

Shift Work
No

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representative of the patients and communities we serve.



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