

## **Absolute Risk Prediction from Survival Data: Toward Maximizing Predictive Performance**

Accurately predicting absolute risk from survival data is critical in medical research, clinical decision-making, and beyond. This workshop will provide participants with a comprehensive overview of conventional statistical approaches and modern machine learning methods for risk prediction in survival analysis.

We will explore:

- How different modeling strategies work for predicting individual risks
- Strengths and limitations of both traditional and machine learning algorithms
- Practical methods for validating predictive performance in survival data
- Strategies to overcome shortcomings of each modeling class to achieve optimal prediction accuracy

### **Intended Audience:**

This workshop is designed for researchers, data scientists, statisticians, epidemiologists, and clinicians who work with survival data and wish to enhance their understanding of risk prediction tools and their practical application. A basic familiarity with survival analysis will be helpful.

### **Goal:**

By the end of the workshop, participants will be able to:

- Understand the trade-offs between conventional and machine learning approaches
- Apply appropriate validation techniques to assess prediction quality
- Identify strategies to balance and combine approaches for improved predictive performance

### **Date:**

The workshop will be offered on the 23<sup>rd</sup> of October, 2025, between 10:00 am and 3:00 pm with a one hour break between 12:00 am and 1:00 pm.

### **Location:**

Brandenburg Medical School Theodor Fontane, Fehrbelliner Straße 38, 16816 Neuruppin, Building D, Senatssaal 318

### **Cost:**

The workshop is available for free for employees and students of the Brandenburg Medical School Theodor Fontane and University Hospital of the Brandenburg Medical School Theodor Fontane. The fee for other participants is 59.50€ and includes only participation.

**Registration:**

To register and receive information about the payment of the fee, please send an e-mail to [katarzyna.jozwiak@mhb-fontane.de](mailto:katarzyna.jozwiak@mhb-fontane.de). Registration will be confirmed once the payment of the fee has been received. The workshop is available for a maximum of 20 participants.

**Workshop instructor:**

Shahin Roshani is a final-year PhD candidate in Biostatistics at the Netherlands Cancer Institute and Amsterdam UMC (Location: VUmc). His research focuses on developing and validating risk prediction tools to accurately estimate the (long-term) absolute risk of treatment-related complications in Hodgkin lymphoma patients.