

2<sup>nd</sup> Symposium



# Intelligent Oncology

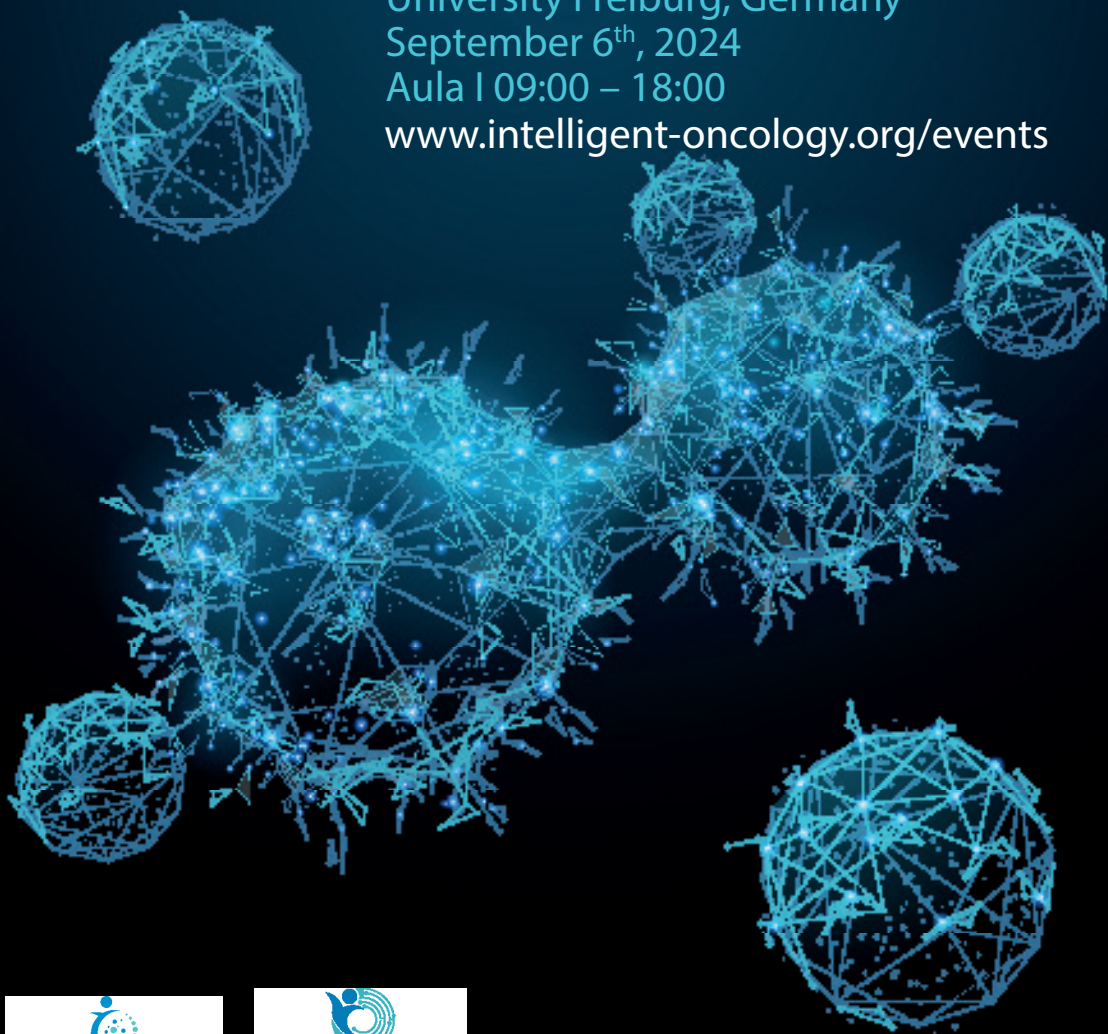
The Potential of AI to Control Cancer

University Freiburg, Germany

September 6<sup>th</sup>, 2024

Aula I 09:00 – 18:00

[www.intelligent-oncology.org/events](http://www.intelligent-oncology.org/events)



## Aim of the Conference

The theme of the conference is Intelligent Oncology, focusing on harnessing the power of AI to control cancer. Our aim is to present cutting-edge research and innovative approaches in cancer diagnosis, prognosis, and treatment. We aim to identify new research di-

rections, foster collaborations between academia and industry, and facilitate the translation of research findings into clinical practice. By connecting experts in the field, we aim to accelerate progress towards more effective and personalized cancer treatment.



AULA  
University Freiburg  
Germany

## Mission

Bringing together experts from various disciplines to explore the latest advances in AI-assisted cancer research. Our goal is to promote collaboration between researchers, physicians, industry leaders, and other visionaries in the field. By sharing knowledge and expertise, we aim to discover new ways to control cancer through the power of AI.



## **Session 1**

### **Understanding Cancer Through AI and Computational Biology**

This session will explore how AI and computational biology can improve our understanding of cancer

## **Session 2**

### **Building Trust and Regulation in Artificial Intelligence Models for Medicine**

This session will examine how to incorporate trust and regulatory to the development and deployment of AI and computational biology-powered cancer therapies

## **Session 3**

### **Deploying AI and Computational Biology into Clinical Applications**

In this session, speakers will discuss the challenges and opportunities of translating AI and computational biology into clinical practice for cancer diagnosis, prognosis, and treatment.

## **Target Audience**

Our meeting brings together Oncologists, Data Scientists, MedTech Industry, Consultants, and Researchers from different fields (Computer Science, Biology, Medicine, Pharmacology). We expect 120-200 international participants from around the world.



# Program

- 09:30 – 09:40     **Introduction**  
Roland Mertelsmann, Joschka Boedecker, CRIION  
Freiburg
- 09:40 – 09:45     Welcome remarks from Baden-Württemberg and City  
of Freiburg
- 09:45 – 09:55     Welcome remarks from the University and University  
Hospital
- 09:55 – 10:10     **Interpretability, Efficiency, Accessibility, &  
Trustworthiness: Building the Foundations of  
Applicable AI in Oncology**  
Maria Kalweit, CRIION, Freiburg, Germany
- Coffee break-
- Session 1:**     **Understanding Cancer Through AI and  
Computational Biology**  
Chair: Adriana Tomic
- 10:30 – 11:00     **Knowledge-based machine learning to extract  
disease mechanisms from multi-omics data**  
Julio Saez-Rodriguez, Universität Heidelberg, Germany
- 11:00 – 11:30     **Improving cell segmentation in spatial  
transcriptomics**  
Daniel Jones, Fred Hutch Cancer Center, USA
- 11:30 – 12:00     **tbd**  
Sven Maschek, MLL Münchner Leukämielabor,  
Germany
- 12:00 – 12:30     **Exploring mechanisms and functional  
heterogeneity in cellular immunotherapies  
targeting cancer via machine learning analysis of  
live-imaging**  
Maria Alieva, Instituto de Investigaciones Biomédicas  
de Madrid, Spain
- 12:30 – 12:40     Presentation of Abstracts
- Lunch break-

**Session 2: Building Trust and Regulation in Artificial Intelligence Models for Medicine**

Chair: Moritz Middeke

13:30 – 14:00 **New regulatory thinking is needed for, at-the-patient-bedside' AI-based personalised drug and cell therapies in precision oncology**  
Stephen Gilbert, Technische Universität Dresden, Germany

14:00 – 14:30 **tbd**  
Klaus Müller, Technical University Berlin, Germany (requested)

14:30 – 15:00 **A regulator's perspective on AI-based indications for anti-cancer medicines**  
Harald Enzmann, BFARM, Germany

15:00 – 15:10 **Presentation from Abstracts**

-Coffee break & Poster Presentations-

**Session 3: Deploying AI and Computational Biology into Clinical Applications**

Chair: Christoph Merten

16:00 – 16:30 **Application of biomarkers in personalized therapy**  
Jun Yang, St. Jude Children's Research Hospital, Memphis, USA

16:30 – 17:00 **AI for better Cancer Care**  
Andre Dekker, Maastricht University Medical Center, Netherlands

17:00 – 17:30 **Machine Learning for Personalized Cancer Care**  
Adam Yala, Berkley, USA

17:40 – 17:50 Young scientists Poster Award

17:50 – 18:00 Farewell

# Scientific Advisory Board

**Prof. Dr. Mascha Binder**

University Hospital Basel, Switzerland

**Prof. Dr. Joschka Boedecker**

University of Freiburg, Germany

**Prof. Dr. Dr. Melanie Börries**

University of Freiburg, Germany

**Assoc. Prof. Victor Greiff**

University of Oslo, Norway

**Dr. Maria Kalweit**

University of Freiburg, Germany

**Dr. Gabriel Kalweit**

University of Freiburg, Germany

**Prof. em. Dr. Dr. h.c. mult. Roland Mertelsmann**

University of Freiburg, Germany

**Prof. Chrisoph Merten**

EPFL, Switzerland

**Dr. Jan Moritz Middeke**

University Hospital Dresden, Germany

**Dr. Itay Tirosh**

Weizmann Institute, Israel

**Prof. Dr. Adriana Tomic**

Boston University, USA

**Prof Dr. Evelyn Ullrich**

Goethe University, Germany

**Prof. Dr. Robert Zeiser**

University of Freiburg, Germany



# General Information

## Event Location

University Freiburg | Aula  
Platz der Universität 3 | 79098 Freiburg, Germany

## Price

physicians and scientists: 100 CHF  
industry: 350 CHF  
students: 50 CHF

You can either join the meeting on site or online.  
Lectures will be recorded and available after the event.

## Organisation

Sina Reis-Balikcioglu & Pia Klaue  
Event Manager  
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## Foundation

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## Registration

[www.intelligent-oncology.org/events/](http://www.intelligent-oncology.org/events/)