Translation of AI tools from research into the clinic
Focus on pathology images

Prof. Inti Zlobec, Institute of Pathology
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A Center for Research, Education and Translation

For AI Technologies into Healthcare
CAIM is a research, education and translation platform for AI in Medicine.

We investigate and develop AI technologies for healthcare from a clinical perspective with patient benefit as our main driver.
Clinical Real-World AI Solutions

- Combining Clinical and AI expertise from the University of Bern, the Insel Gruppe, Bern Psychiatry Services, and sitem-insel the Swiss Institute for Translation and Entrepreneurial Medicine.
Fields of Activity
CAIM research fund
Supporting research projects for clinical translation

Groundbreaking and innovative
digitisation and AI projects

Build interdisciplinary collaborations
(medical and computational experts)

Realistic translation into the clinic for patient benefit
Areas supported by CAIM
Possibilities are numerous

- AI for Biosignals
- AI for Clinical Data
- AI for Medical Imaging
- AI for Precision Medicine
- Intelligent Medical Robotics
- Internet of Things
Pathology

A pillar for personalized medicine

Patient → Tissue → Blocks → Slides → Tissue analysis

diagnosis
prognosis
therapy response
disease (biological) processes
Digital pathology
What is it?

Patient  Tissue  Blocks  Slides

Scanning  Working digital  AI
Real-life example of AI in pathology

Breast cancer

• Potential use of biomarker Ki-67:
  – Prognosis
  – Chemotherapy benefit

• Differentiate between more and less aggressive molecular subtypes

• Comparison of methods, validation, integration and now use in routine
Integrated modalities

Huge potential for projects and collaborations!

- Development of AI algorithms to solve clinical problems
- Translate research findings into diagnostic tools
- Validation in real-life setting
- Integration into existing infrastructure
- Integration of different modalities!
Research Collaborations

Swiss-South African Joint Research Programme
Swiss National Science Foundation (SNSF)/National Research Foundation South Africa (NRF)
Research Cooperation to fund joint project proposals
https://www.snf.ch/en/2DTdRMIWG6LgpNjL/funding/programmes/bilateral-programmes-south-african

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