Next-Generation Combination Approach for Muscle-Invasive Bladder Cancer Treatment

Successful R&I in Europe 2025: 12th European Networking Event

Dnipro State Medical University
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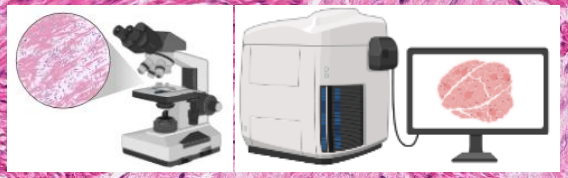
The General Topic of Cancer Exploration

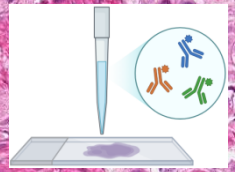
Leveraging Digital Pathology and Artificial Intelligence for Accurate Cancer Diagnosis, Prognosis, and Personalized Treatment Strategies to Improve Healthcare Efficiency and Reduce Costs



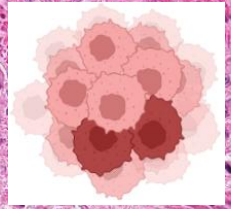
Digital Pathology

AND

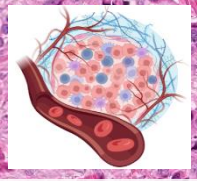
Artificial Intelligence Solutions



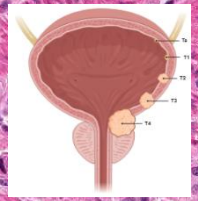
Cancer Diagnosis and Quantifying Biomarkers



Cancer Grading



Tumour Microenvironment and Cancer-Host Dynamic Assessment



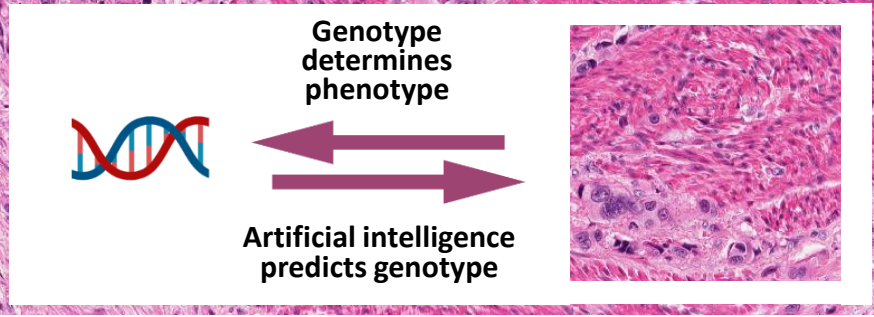
Cancer Staging

Cancer Molecular Subtype and Response to Treatment Prediction

Increase Efficiency, Precise Care, And Disease Costs to the Patient and the Healthcare System

Topics of Muscle-Invasive Bladder Cancer (MIBC) Exploration

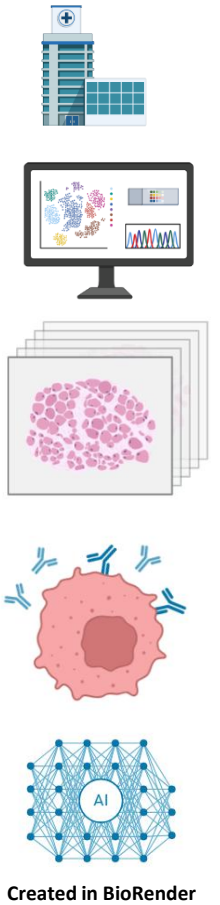
- **AI-Based Prognostic Models** for MIBC Recurrence and Progression **Using Histopathological Features**
- Combining **Molecular Testing** and **AI** to **Stratify** MIBC for Neoadjuvant Chemo-, Immuno- and Targeted **Therapy**
- **AI** and **Deep Learning** for **Identifying Predictive Biomarkers** of **Immunotherapy** Response
- Utilizing **AI** to **Detect Micrometastases** in Lymph Nodes for MIBC Diagnosis
- Integrating **Radiological** and **Pathological Features** for MIBC **Molecular Subtype Prediction**
- **AI Models** for **Cost-Effective Screening of FGFR3** Mutations in Bladder Cancer
- Advancements in **Tumor Mutational Burden** (TMB) Prediction Using Computational Pathology
- AI-Based Approach for **Predicting** MIBC **Genotype Based** on **Phenotype**



Type and role of the partners

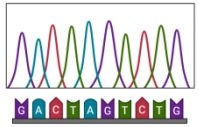
We are looking for a consortium leader and members

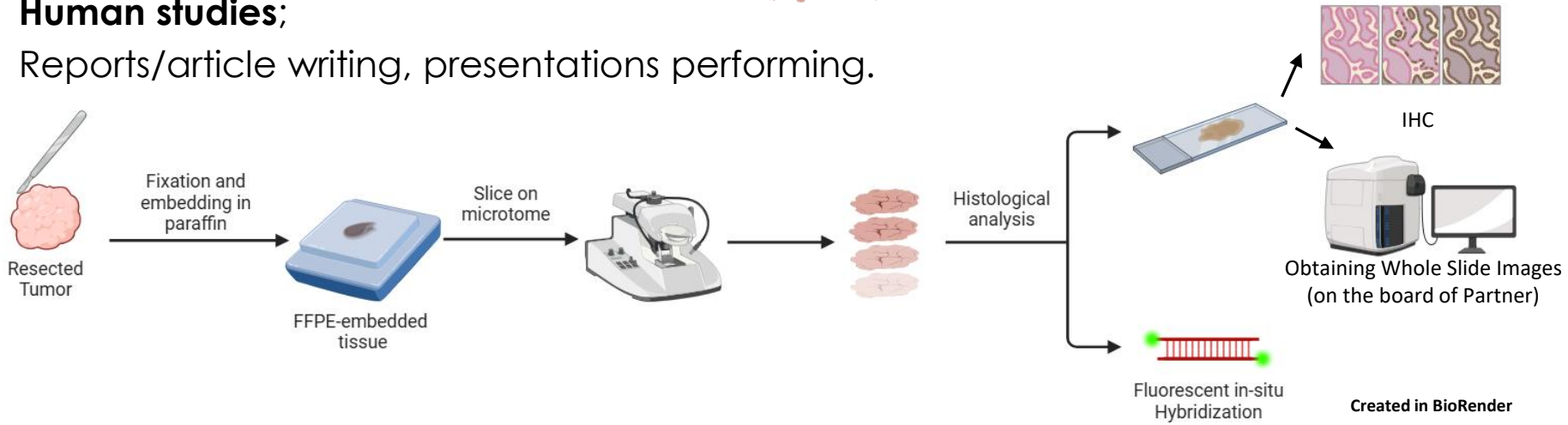
- **Clinical Research Institutions & Hospitals:** Provide clinical expertise, patient data, and access to a diverse cohort of MIBC patients for analysis.
- **Computational Pathology & Data Science Experts (Academic Institutions/Tech Companies):** Contribute computational tools, AI, and machine learning expertise to analyze large datasets from clinical, histological, and molecular profiles.
- **Histopathology Laboratories & Histotechnologists:** Digitize tissue samples and assist in generating high-quality Whole Slide Images (WSIs).
- **Biotechnology & Pharmaceutical Companies:** Support in the development of biomarker assays and contribute to translational research.
- **Radiology Departments & Medical Imaging Companies:** Provide radiological data for multi-modal AI integration (pathology and radiology).
- **Health Informatics & Data Management Partners:** Manage, store, and securely integrate large clinical, digital pathology and molecular datasets.
- **Immunotherapy and Cancer Research Centers:** Study immune microenvironment in MIBC and its role in therapy response.
- **AI Technology Providers & Software Development Companies:** Provide software solutions for AI-driven image analysis and data processing.



Scientific and technological expertise we have

- Standard PFFE **histological support** (incl. histochemistry, IHC, IF and molecular diagnostic: Fluorescent in-situ Hybridization with Slide Incubation System CytoBrite®);
- **Optical imaging** (microscope ZEISS Axio Imager 2) and data analysis;
- **Whole Slide Images analysis** and **creation** of a large **annotated dataset for AI** model training;
- **NGS** data analysis;
- **Animal** handling;
- **Human studies**;
- Reports/article writing, presentations performing.





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Actual calls:

- Boosting innovation through exploitation of digitalisation and data exchange in healthcare
HORIZON-JU-IHI-2025-09-04-single-stage **Deadline 29 April 2025**
- Boosting innovation through better integration of fragmented health R&I efforts
HORIZON-JU-IHI-2025-09-02-single-stage **Deadline 29 April 2025**
- Boosting innovation for peopled centred integrated healthcare solutions
HORIZON-JU-IHI-2025-09-03-single-stage **Deadline 29 April 2025**