Multivision Diagnostics
A scalable computational tool for precision cancer diagnosis and personalized treatment selection

Diagnosis and treatment selection for cancer patients with solid tumors relies on manual examination of stained biopsy tissue under a microscope. Pathologists examine cellular and tissue structures and may visualize one or two biomarkers to arrive at a diagnosis and recommend a treatment. However, many cancer types have no informative biomarkers that would allow personalized diagnoses, leading patients to receive highly aggressive cancer treatments that compromise their quality of life. On the other hand, some lesions presenting benign morphology can result in poor patient outcomes, highlighting an urgent need for more diagnostic precision.

We have developed an automated computational tool for automated analysis of biological structures and cell-state markers in multiplexed biopsy tissue, generating a personalized "tumor fingerprint" for each patient. The method can be applied in pharmaceutical research settings to identify patient subgroups who would most benefit from novel targeted therapies, and in clinics to provide patients with more personalized diagnoses and treatment options. In this project we aim to develop our innovation into a diagnostic solution ready for commercialization in the clinical and pharmaceutical sectors.

COMPETITIVE ADVANTAGES
- No "black-box" AI: **transparent** technology delivers actionable insights.
- **Automated** workflow analyzes millions of cells and hundreds of patients at once.
- **Personalized** and **scalable** to numerous diseases and pre-disease states.
- **State-of-the-art** integration of subcellular biomarkers with structural parameters.

IPR STATUS
- Invention disclosure filed in spring 2021, rights acquired by University of Helsinki indicating strong commercialization potential.

SEARCHING FOR
- Business development professionals
- New networks in medical technologies, especially in digital pathology hardware and software, as well as in the pharmaceutical industry
- Input from clinical and industrial partners to push our invention to the market

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