

# PATHiDT:

## Pathology to Improve Diagnosis and Treatment

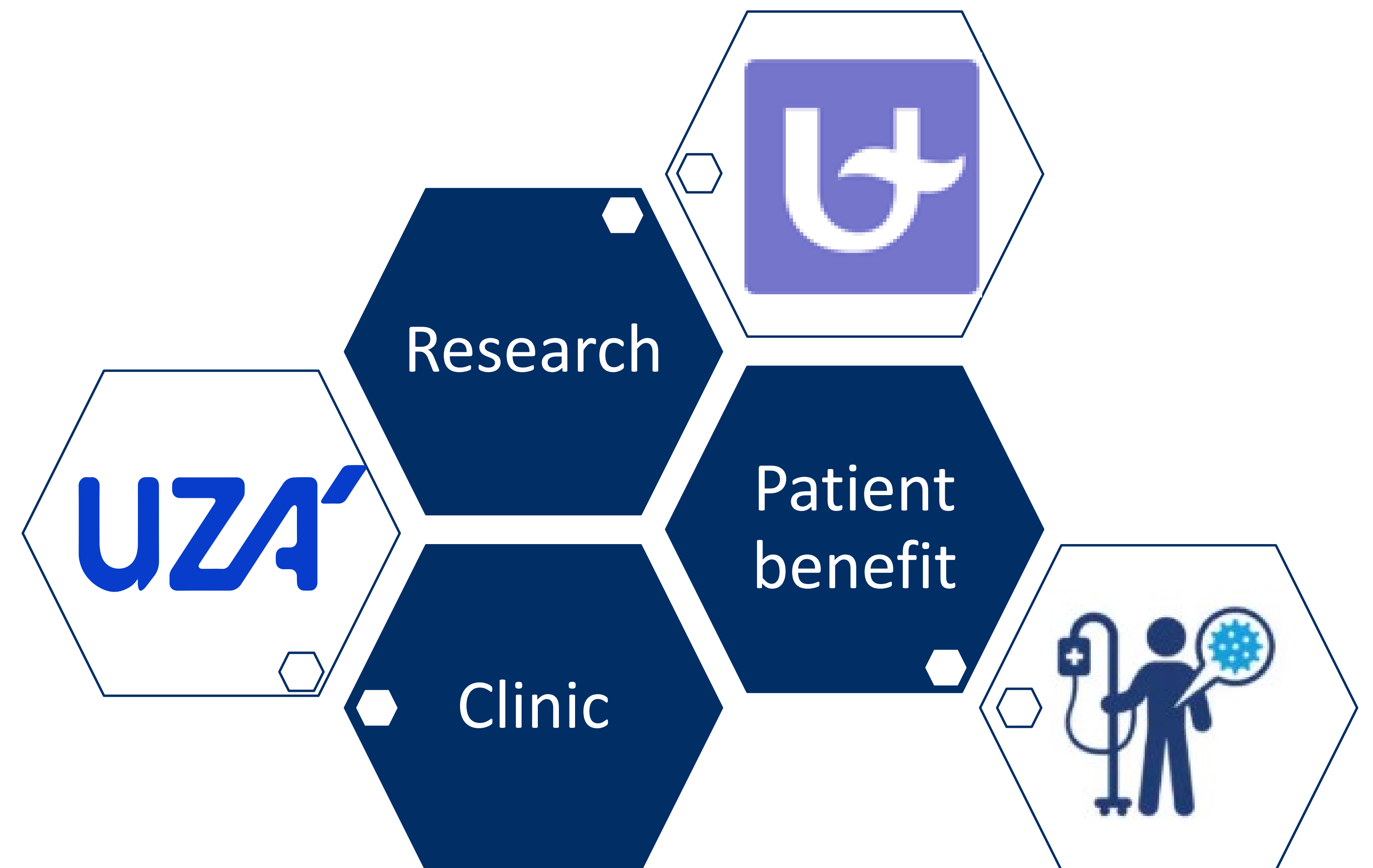
<https://www.uantwerpen.be/nl/onderzoeksgroep/core/wiezijnwe/teams/>

Translation research in close collaboration with  
University Hospital Antwerp

Focus: oncopathology

Mission:

- Enhancing surgical precision & patient outcomes
- Improving diagnosis, prognosis & personalized treatment

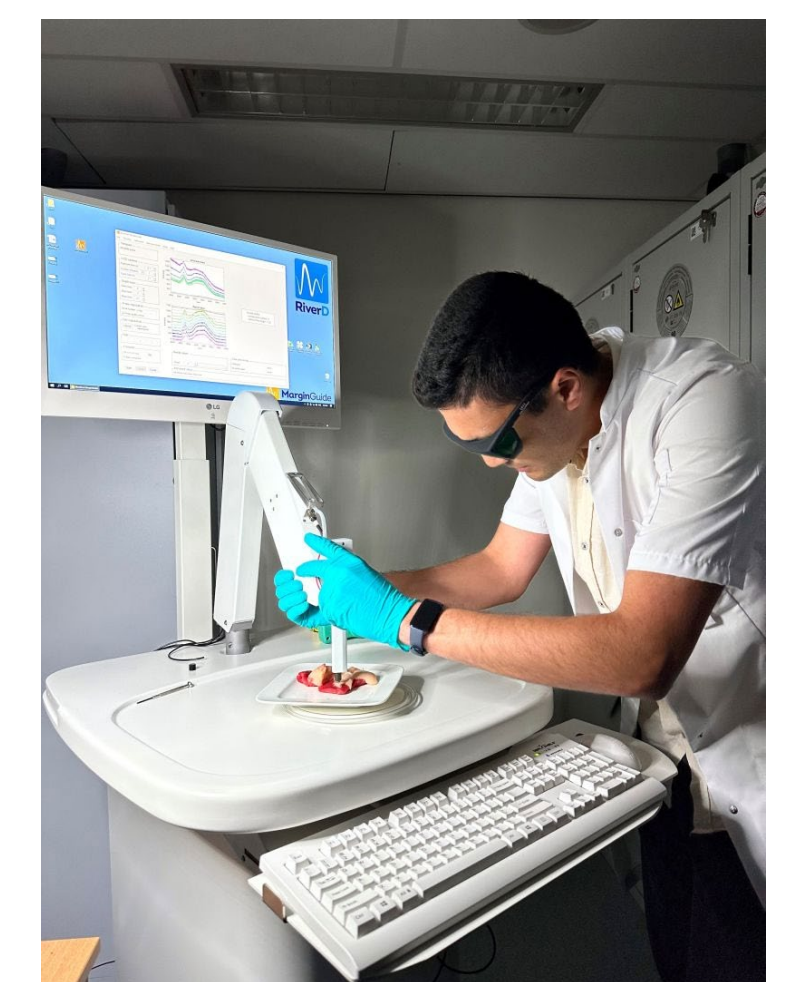
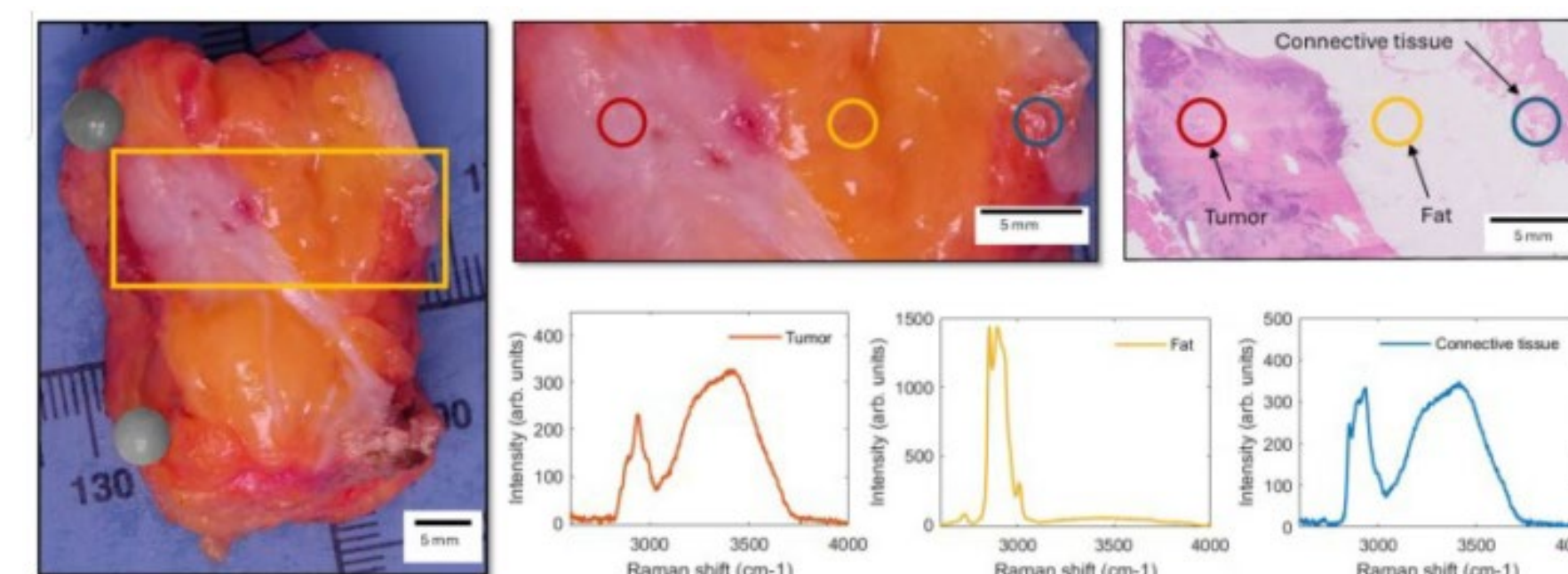


We combine photonics, molecular pathology, and digital pathology to create highly translational solutions for precision diagnostics - aiming for clinical implementation within 5 years.

### Photonics

- AIM: first time right surgery -

- Raman spectroscopy
- Raman-guided intra-operative assessment
- Distinguish tissue specific fingerprint spectra using machine learning & deep learning (MatLab, Python)



### Molecular Pathology

- AIM: advance precision medicine -

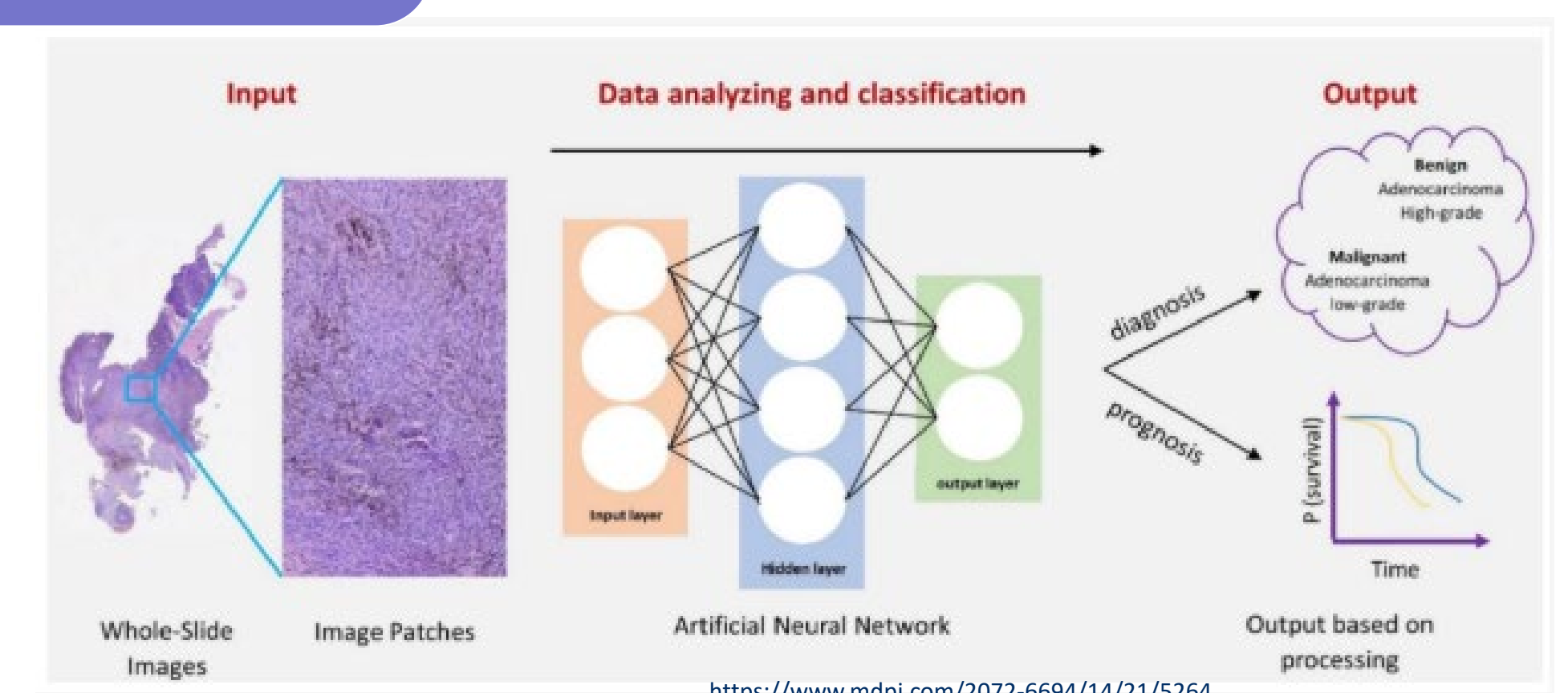
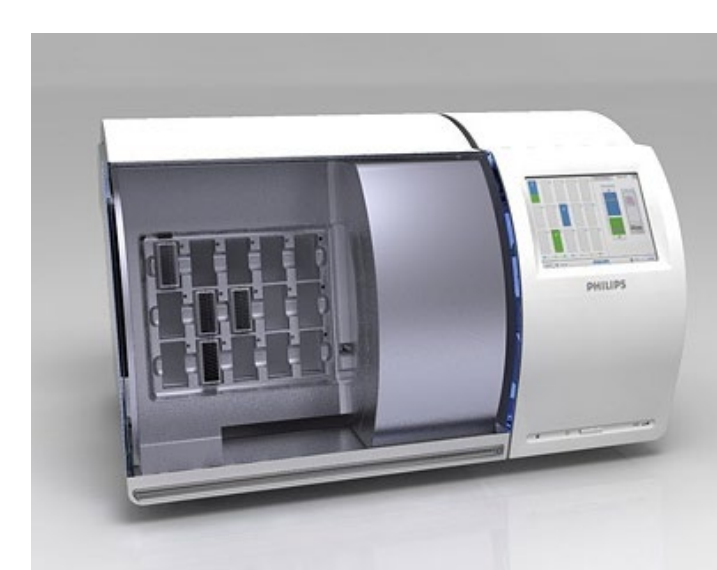
- Techniques: PCR, NGS, microarray & novel techniques
- Targets: DNA SNV & indels, methylation, gene fusions, copy number variations
- Ongoing projects:
  - Predicting malignant behaviour in melanocytic lesions
  - Tissue of Origin classifier for FFPE tissue
  - Photo-electrochemical-based mutation & fusion detection platform



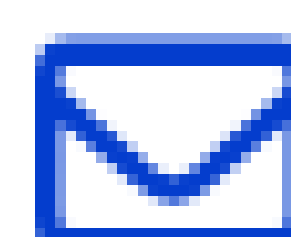
### Digital Pathology

- AIM: enhance histopathologic diagnosis -

- Increase objectivity
- Virtual staining for reagent-free workflow
- Faster time-to-result



**Universiteit Antwerpen**  
| **CORE** | Centrum voor  
Oncologisch Onderzoek



[Karen.Zwaenepoel@uantwerpen.be](mailto:Karen.Zwaenepoel@uantwerpen.be)  
[Senada.Koljenovic@uantwerpen.be](mailto:Senada.Koljenovic@uantwerpen.be)  
[core@uantwerpen.be](mailto:core@uantwerpen.be)