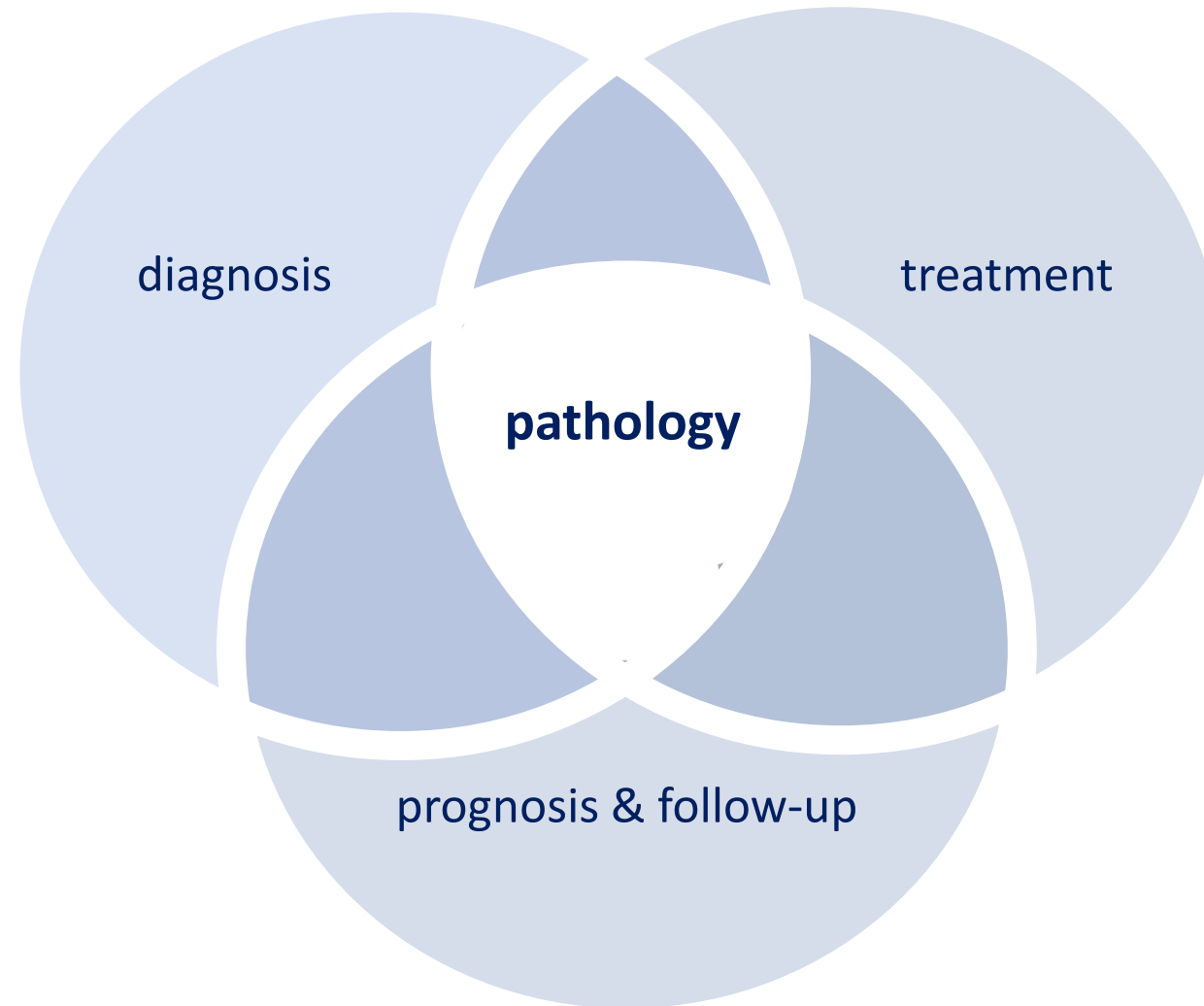


Pathology: challenges and opportunities for photonics

Senada Koljenović

Antwerp University Hospital/ University of Antwerp

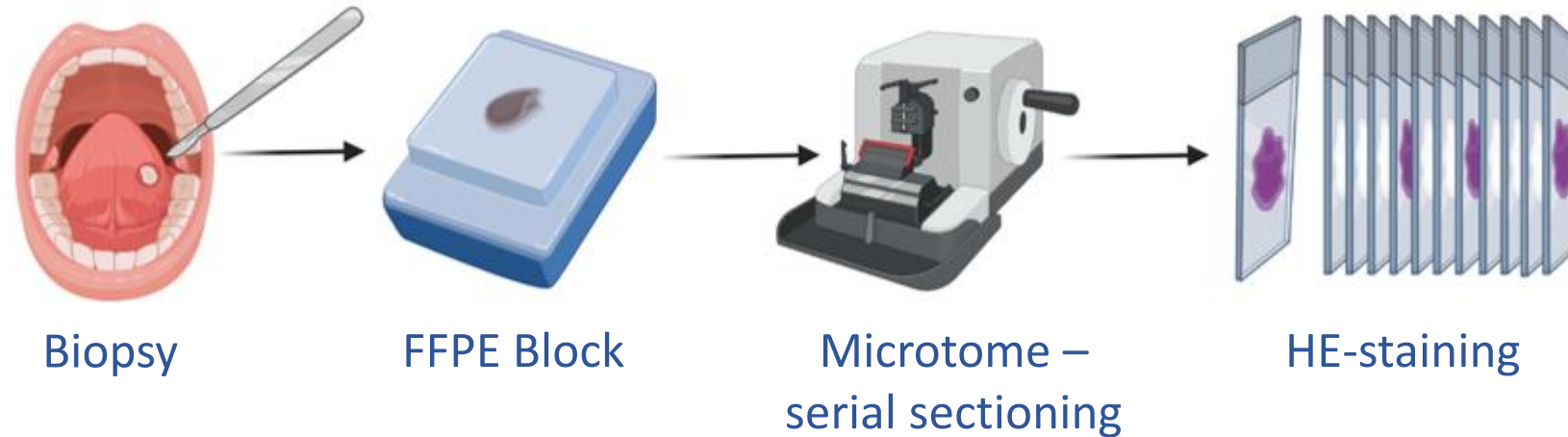


Pathology

Diagnosis → treatment & prognosis, follow-up

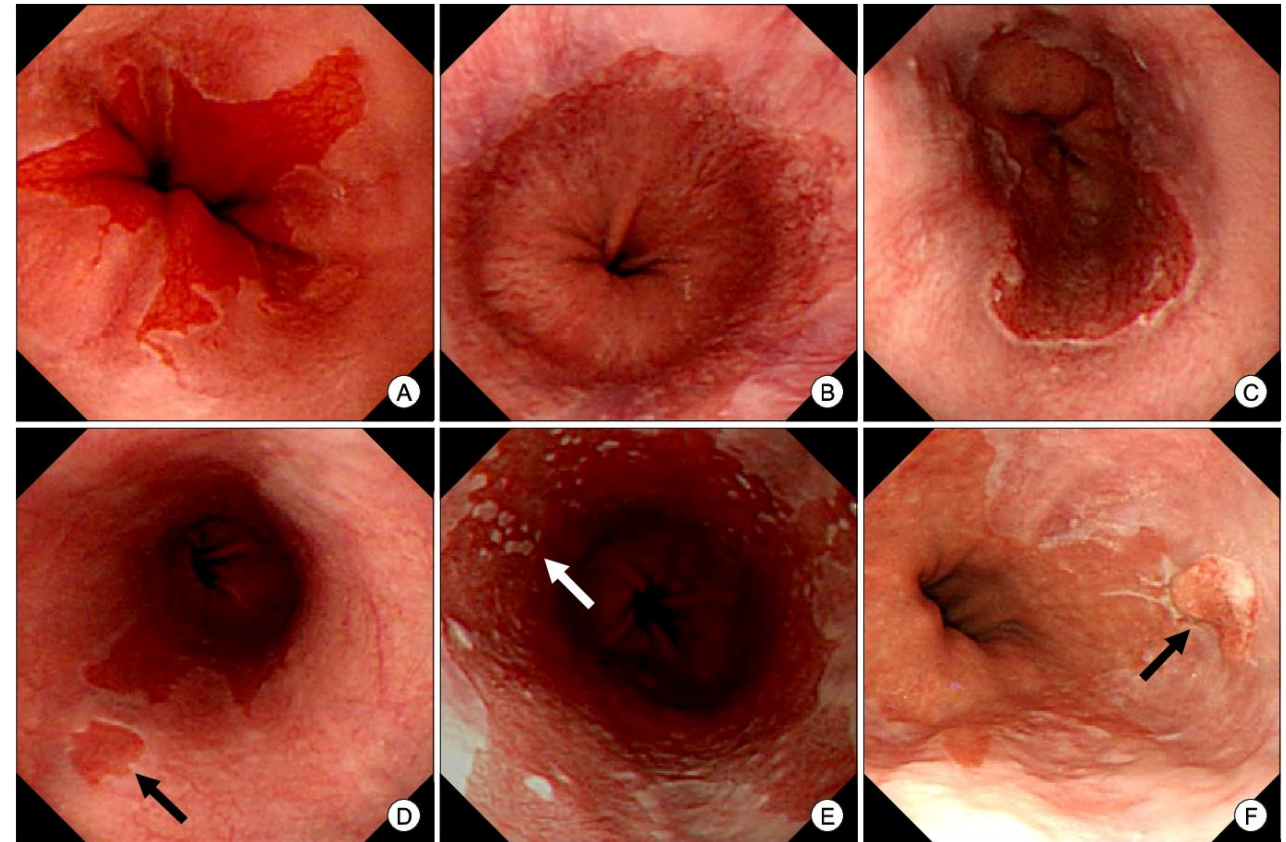
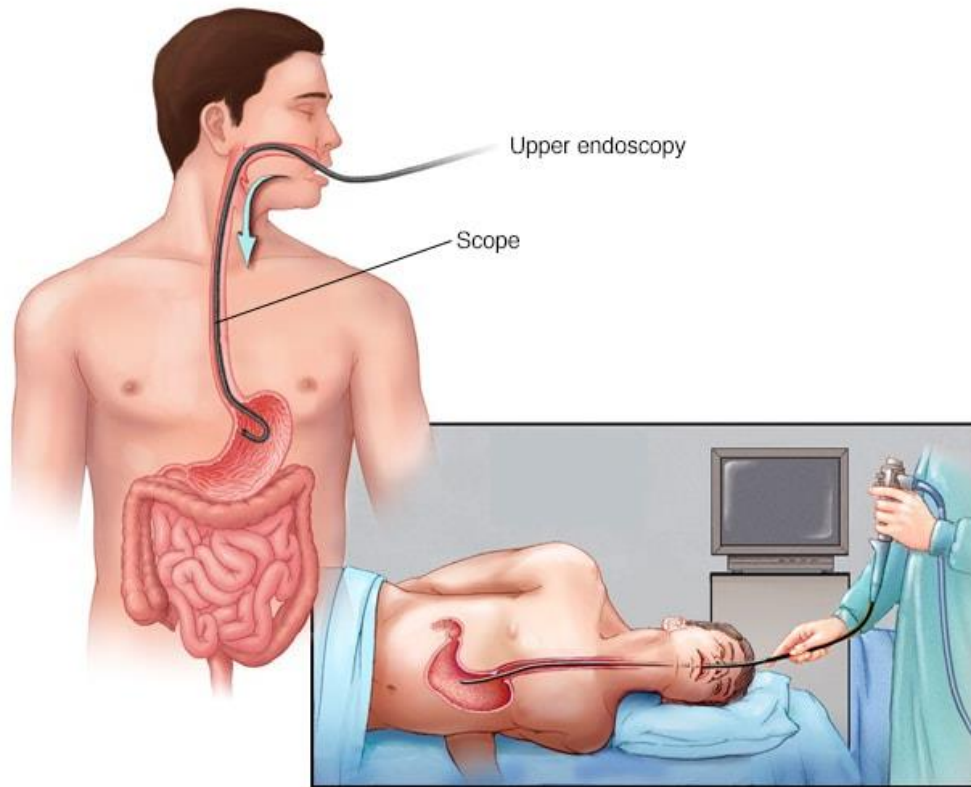


Pathology



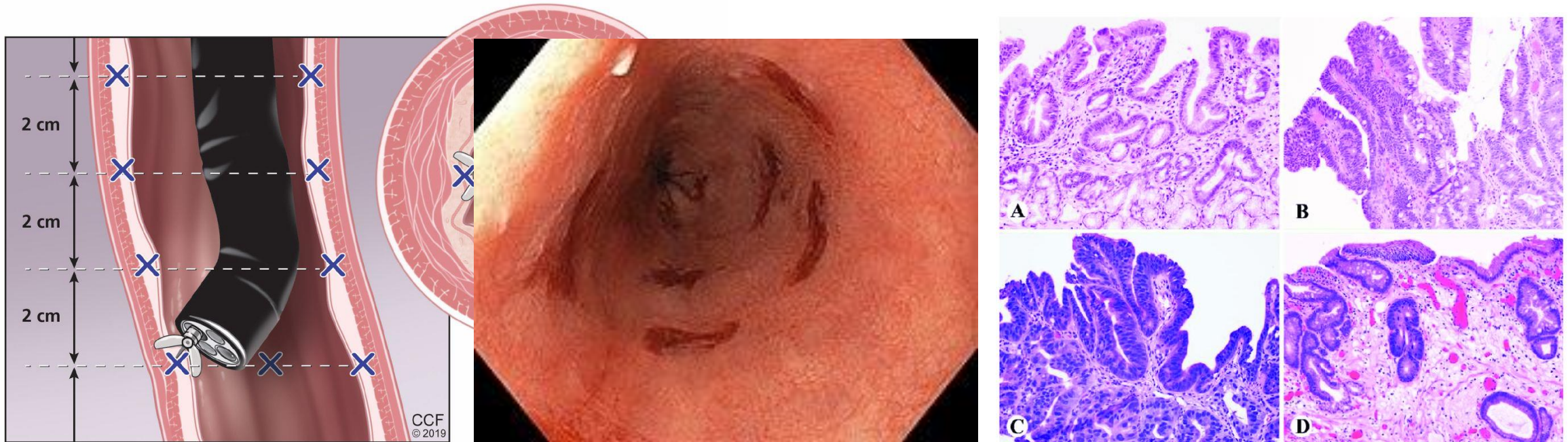
A biopsy is processed into a FFPE block. By use of a microtome, the FFPE block is sequentially cut into thin sections (4μ - 5μ), mounted on glass slides and H&E stained.

Pathology - biopsy for diagnosis

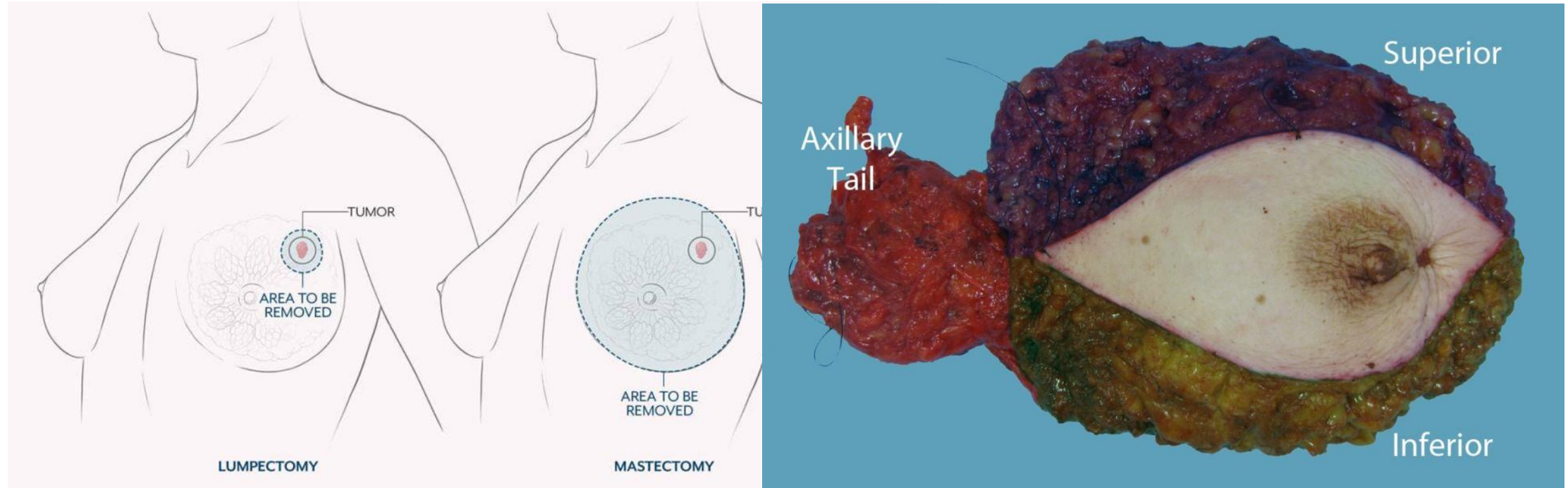


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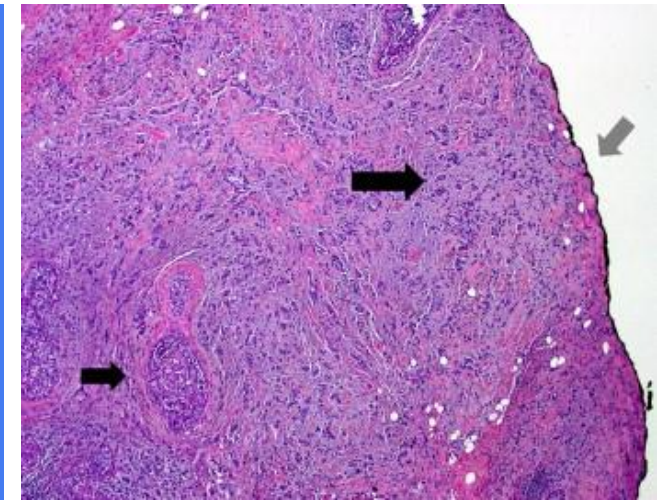
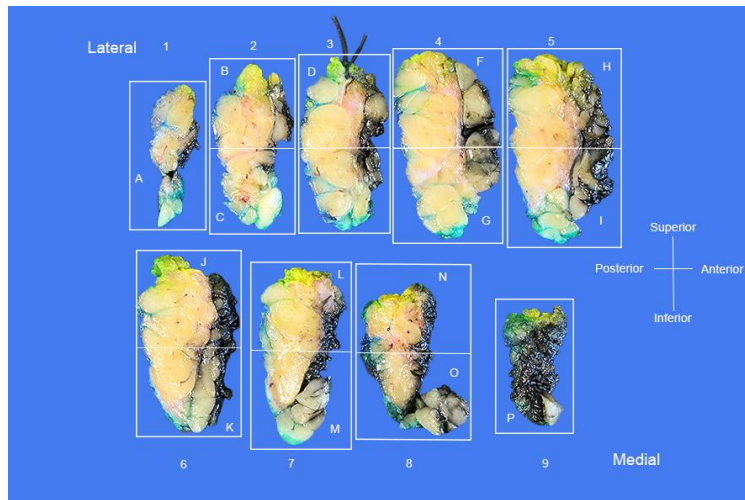
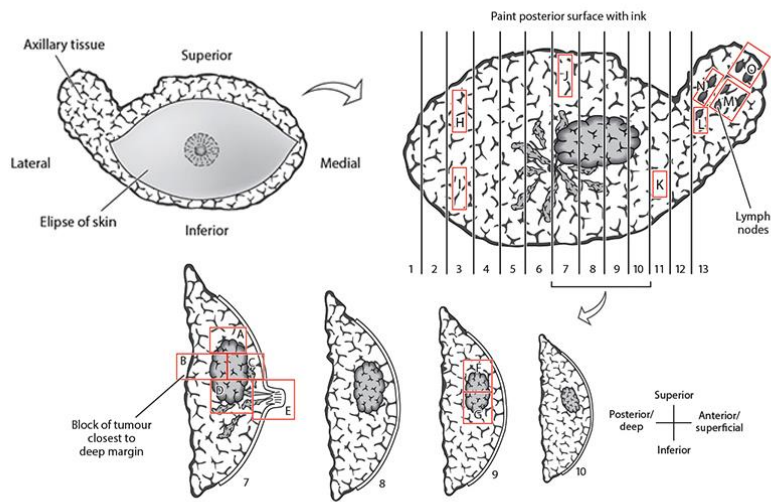
Pathology - biopsy for diagnosis



Pathology - treatment by tumor surgery

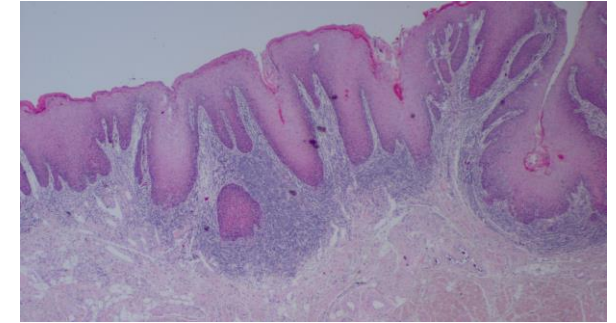


Pathology - treatment by tumor surgery



Pathology challenges & opportunities

▪ Subjectivity



▪ Non-representative biopsies



▪ Late



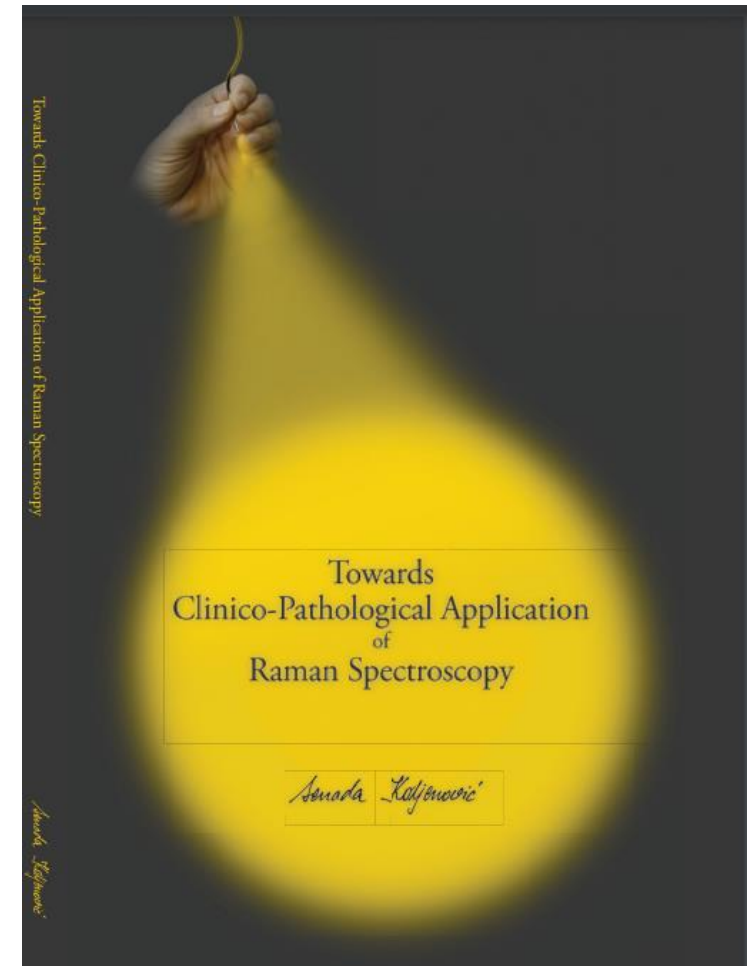
▪ Efficiency / completeness:

UZA / UAntwerp vision

molecular pathology

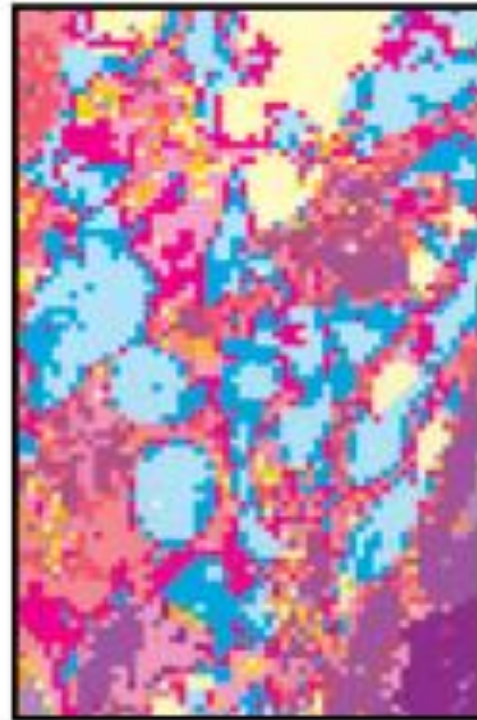
digital pathology & AI

photonics





(Size: 480 x 720 μm) **A₂**



B₂



C₂

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