

## **Faster Cancer Diagnosis** With Artificial Intelligence

### PROBLEMS IN EDUCATION FOR PATHOLOGISTS

The graduate pathology education pathway for the vast extent of the 20th Century rested on a traditional model relying upon basic science lecture courses supplemented by microscopyfocused laboratory sessions. Among these were that learning was enhanced by personal exposure to experts and to significant quantities of real and varied clinical materials. Thus learning pathology could then only happen in fairly intimate mentormentee relationships with sufficient long-term exposure to ensure adequate transmission of knowledge, habits and methods.

# ATHO ATFORM

Digital pathology and AI assisted platform for perfect tissue examination and collaboration with other experts and patients. Main advantages:

- image segmentation and classification of tumor cases from ≫ histopathological samples
- description and standarization of the sample >>
- supported by AI analysis with  $\pm$  90% accuracy >>
- built-in ICD-O standards and ICCR reports implemented >>
- **》** Segmentation, Gleason score, Metastatic classification, etc.

200 single users

and clinics

200 number of

participants each year



poor learning material - glass slides subject to age and damage, inconsistencies of content



no adequate instructional attention by professors and laboratory assistants due to lack of staff



limited access to quality, functional microscopes and high quality glass slides

limited access to current texts, up to date scientific journals and experienced specialists



243k pathology scans amassed



Al algorithms accuracy

### **BENEFITS**

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- >> 5 x higher number of patients per day per doctor
- **》** 2 x cost savings due to simpler procedure
- archive with similar cases. >>
- **》** a knowledge base for universities and medical centers.



**Roche Workshops** for pathologists

#### SUMMARY

Implementation data: Users: Files scanned:

08.07.2021 around 200 annually 98