E-152

PathoVisor: Prototype of a Web Based Telepathology Platform for Access to Educational Resources

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Background

In Honduras, pathology education faces significant challenges due to limited technological infrastructure and a lack of digital learning tools. The shortage of pathologists and the absence of systems for analyzing tissue samples further hinder student learning opportunities.

Objective:

The main objective of this study is to design a telepathology web platform prototype using images from public access databases, in order to evaluate its feasibility as an educational support tool for accessing visual resources in pathology learning.

Methodology

Information Gathering

Literature Review

Tool Selection

Comparison of no-code platforms

Prototype Development

Design of an intuitive interface and image access

Validation

Comparison with other platforms and review by a pathologist

Results

High-resolution pathology images (0.25–0.5 µm/px, 20x–40x) from The Cancer Imaging Archive were integrated.

Samples from breast, lung, skin, and digestive tract were selected for their educational value and clinical relevance.

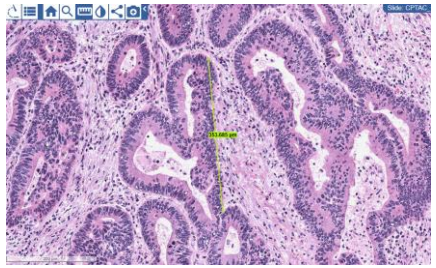

Fig. 1 Sample Visualization and Structure Measurement

The platform allows navigation by system or organ and includes interactive features through caMicroscope (zoom, measurement, panning).

Conclusions/ Recommendations

- The images are suitable for learning due to their quality and clinical relevance.
- Interactive features were added to enhance the educational experience.
- Bubble.io was helpful for organizing access to the resources.
- The prototype proved to be functional and meets educational goals.

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