

Visual analytics support in breast cancer diagnosis and reporting

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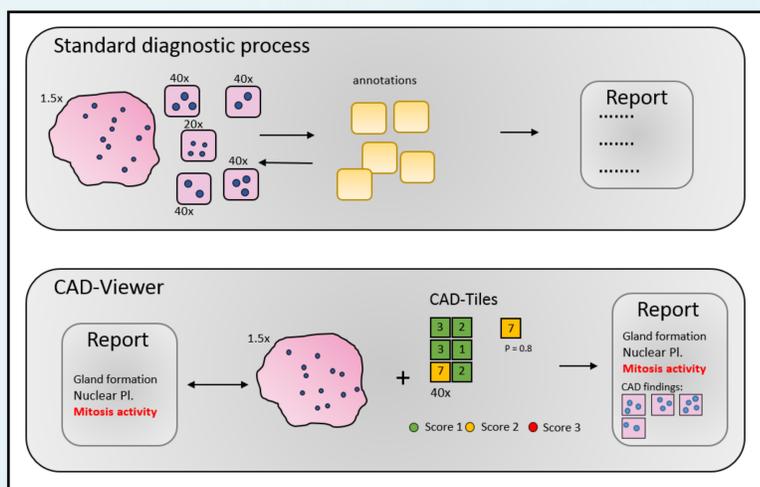
Questions

Pathology diagnosis is often highly subjective and suffers from a lack of reproducibility that might affect patients' care-pathways [1]. Pathologists' observations can be improved by image analysis support and visual analytics applications. However, image analysis has not been integrated in current clinical solutions yet. Many questions are open on its integration and on the way it has to be provided to pathologists.

Solutions

We present two solutions that aim to empower pathologists with visual analytics tools in the diagnostic workflow. **CAD-Tiles** addresses specifically breast cancer grading and the Nottingham Histologic Score (tubules, pleomorphism and mitosis examination). **PathoVA** has been designed to help pathologists during the reporting stage. By means of a tracking component and image analysis, we increase the provenance of findings and we lead the pathologist to a more intuitive and reproducible reporting process.

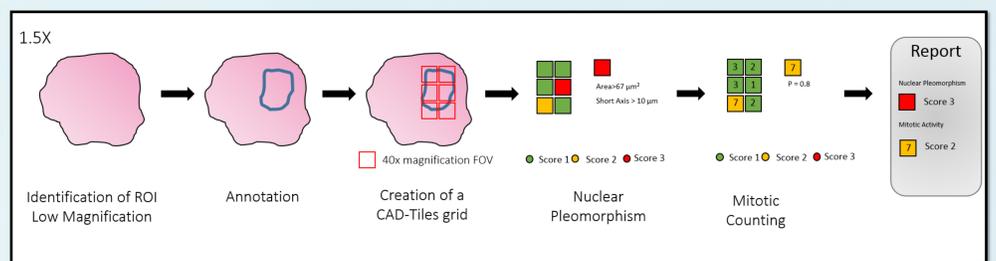
CAD-Tiles: visual analytics for optimized diagnostic workflow



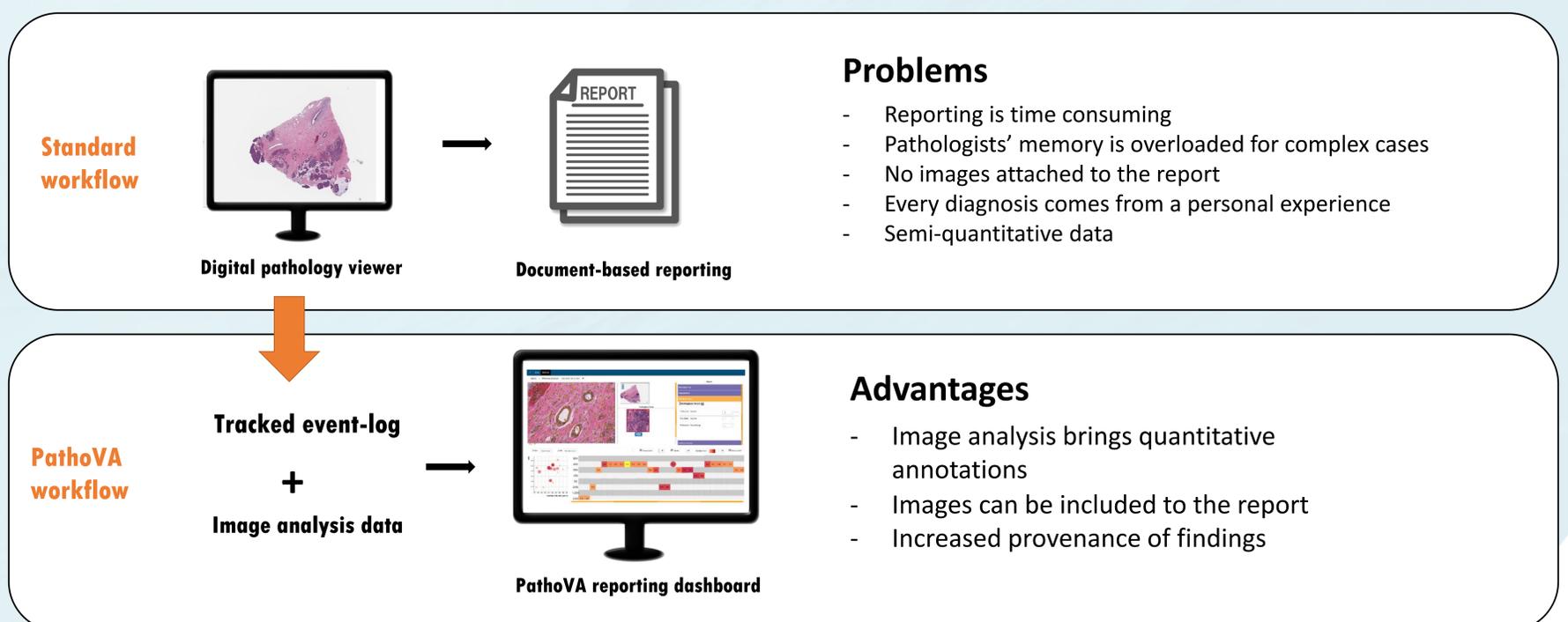
e.g. Mitosis counting workflow



In detail



PathoVA: a visual analytics tool for diagnosis and reporting [3]



[1] Troxel, D. B. (2001). Diagnostic Pitfalls in Surgical Pathology—Discovered by a Review of Malpractice Claims. *International Journal of Surgical Pathology*, 9(4), 305–308. <http://doi.org/10.1177/106689690100900409>
 [2] A. Corvò, M.A. van Driel, M.A. Westenberg, PathoVA: a visual analytics tool for pathology diagnosis and reporting, Visual Analytics in Healthcare Workshop, InfoVIS 2017



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