



Introduction and implementation digital scanning in a routine-based pathology laboratory using the Mirax Scan.

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Abstract

Introduction/Methods: We investigated the effects of introduction and implementation of digital histology in routine histopathology and identified four levels of interest.

Level 1 (2006) was the scanner related topics. Apart from the brand choice, there are threshold, compression, focussing, dirt particles, filling gap and the actually scanned area of the slide. These tests established the trade off between quality of the scan, the scanning time and size of the scan file.

Level 2 (2006-2007) was the laboratory process related topics. The most important aspects were the sample (glass slide, size and number of sections, positioning sections) and the modification of the internal organisation (workflow, instruction staff).

Level 3 (2007) was the digital diagnostics learning process of the pathologist.

Level 4 (2007-2008) was management related topics like ICT structure and costs of scanner and data-storage.

Results: Settings at level 1 were teachable and may differ between different kinds of tissue, but can be defined properly.

Level 2 resulted in a definition of sample requirements and adjustments in the organisation.

At level 3 the pathologists were offered an initial training set and secondary monitoring before routine diagnostic results were generated. High levels of concordance were reached between digital and conventional slides.

At level 4 external hard disks were used before integrated high volume storage capacity was installed.

Conclusion: If carefully integrated, trained and monitored, digital histology can partially replace conventional slides.

References:

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