



## Proceedings

### SY11.04 | Clinical Workflow Integration

#### THE ROLE OF THE TECHNICIANS IN THE DIGITAL PATHOLOGY IMPLEMENTATION. SEARCHING OPTIMIZATION.

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#### *Introduction/ Background*

Scanning histological or cytological preparations is a crucial element in the process of digitization of Pathology Departments, along with the traceability of tissue samples and the reports management. The scanning time and the high size of the files are still considered suboptimal for full implementation.

#### *Aims*

In order to optimize time and space a comparative study in our center has been carried out.

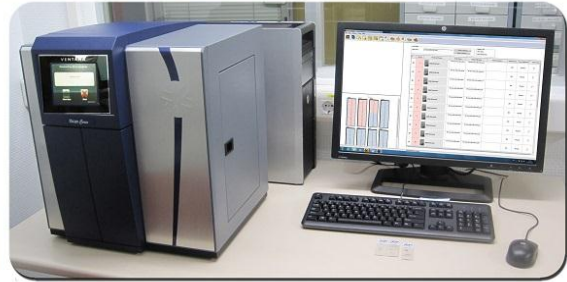
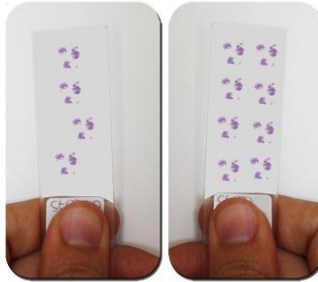
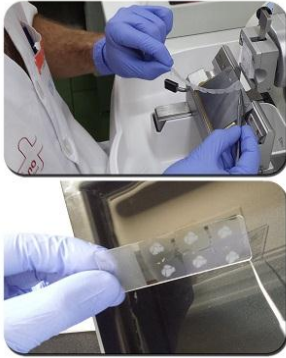
#### *Methods*

A total of 25 endoscopic samples (5 esophageal, 5 gastric, 5 duodenal, 5 colonic inflammatory, and 5 colonic neoplastic) were selected with the intention of comparing different parameters (scanning time, error rate during scanning and hard disk storage) between the original histological glass slides (group A: 2 slides per case, 50 preparations) and new sections, with levels grouped into a single slide (group B: 1 slide per case, 25 preparations). They were scanned at 20x magnification in routine way using the Ventana iScan scanner Coreo (Roche diagnostics). The process was repeated 4 times to calculate averages.

#### *Results*

The average scanning time was 5 hours 40 minutes (6m 48s / slide) in group A and 5 hours 10 minutes (12m 24s/slide) in group B. The error rate was higher than it had been found in previous studies (2-3%) with 6% errors in group A and 3,9% errors in group B. The space occupied on the hard disk was 11.87 GB in group A and 9.6 GB in group B (475 MB/case vs 385 MB/case, respectively). The average number of tissue sections per case was 7 in group A and 8 in group B.

**Conclusions:** There is a clear benefit of standardizing and optimizing the number of cuts per slide in terms of storage (saving 19%), biopsy sampling (14% more tissue) and error rate (35% less), including a not negligible decrease in the scanning time (9%) in the study conducted.



Left: Sections and glass slide configuration. Center: Comparison between Group A and B slides. Right: Scanning system.