
1005.1

(41) Ref IASEB 2009

IT TECHNOLOGY ENABLES SAME-DAY PAP TEST

Olivera Markovic¹ and Nenad Svetomir Markovic¹

¹ R&D, BioSciCon, Inc., Rockville, MD

ABSTRACT

INTRODUCTION The MarkPap[®] test, a new improved biomarker-based assay for cytological cervical cancer screening was introduced to the Experimental Biology audience in 2004. In clinical trials, this test was found to be more sensitive and with less false negatives than the control Pap test. The biomarker is amenable for digital imaging and we have developed a prototype of a device to exploit on this characteristic and to explore whether human participation could be efficiently replaced with electronic communication technology for the purpose of mass cervical cancer screening. **METHOD** We developed a prototype of a device--composed of biomarker-based cytology and digital imaging included into an IT communication network--serving, at the input side, the providers of specimen image files and, at the output site, the image evaluators (result providers). We tested our IT communication protocol, and began developing a diagnostic protocol. **RESULTS** The striking improvement was achieved with the time reduction between specimen arriving in the laboratory and providing the final results from a remote site. The time for specimen staining, screening, image and demographic data collection, filing a series of typical abnormal images into case folders, forwarding those folders to the central processing unit, alerting the examiners, login, reviewing the folders, consulting other experts if necessary, writing case reports and reporting the results back, could be achieved for approximately two hours per evaluation of an abnormal slide. **CONCLUSION** This result indicates that using IT technology for telecytopathology-based cervical cancer

screening could transform the current practice into a same-day pap test—a huge improvement in time and cost of labor.