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## ***Cell phones as a new m-Health opportunity for mass cervical cancer screening***

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### **ABSTRACT**

Lacking an efficient preventive screening, cervical cancer is a problem in developing world taking one woman's life every three minutes. At the prior EB meetings, we presented our MarkPap® platform technology for early detection of abnormal cells on cervical specimens, subsequently upgraded with telecytology using digital imaging and web networking. We will present expanding this platform into m-Health using a modified cellphone camera technology for capturing microscopic images and their wireless transmission for distant evaluation.

The biomarker is a unique connecting link between the microscopic evaluation on site and a remote, digital image evaluation by experts at distant locations. One of the still unresolved challenges to enable wider application of this wireless technology is the positioning and keeping the camera sensor in a proper illumination position to the ocular plane. We are currently testing several cellphone adapters to develop a universal adapter to connect "any microscope" and "any cellphone camera." Comparing images taken with standard digital camera and the cellphone camera with our new adapters we have shown sufficient cytological details enabling cytological diagnosis with high inter-observer reliability.

These results indicate this tool (m-Health) as a new affordable prospective for cervical cancer screening and for saving women's lives in the low-resource areas.