

Licensing and Technology Transfer Opportunity: Manipal University

Title of Technology Available: Device and apparatus for cervical cancer screening

Brief Description of Invention:

This apparatus for detecting cervical cancer comprises of a mechanical structure configured to expose cervical region to capture cervix images and determine abnormalities in the cervix region based on preprogrammed instructions. The image capturing unit captures images before and after application of acetic acid on the cervix region and determines abnormalities based on temporary change in color of the cervix region due to application of acetic acid. It acts as a decision support system which could be particularly useful for low resource settings where lay health workers can be empowered to perform the screening.

Brief Background of Invention:

Cancer cervix is entirely preventable but is the second most common cause of death among women in low and middle income countries. More than 85% of the global burden and 88% of deaths due to this disease occur in developing countries. Contrary to the developed countries, wherein nearly 68-84% of women undergo cervical cancer screening, only an appalling 2.6-5% undergo the same in India. Although evidence has shown Visual inspection with acetic acid (VIA) to be a simple and cost effective approach for cervix cancer screening in resource poor settings lack of trained manpower limits its application. This invention aims at facilitating task shifting and thus compensate for lack of manpower.

Describe the final product:

The final product consists of a simple docking device and an image capturing device. The docking device docks the image capturing device onto a speculum, permitting standardized image acquisition. The docking device positions the image capturing device precisely in the same position. Image processing algorithm for detection of abnormality is loaded on to the capturing device to provide the decision. The captured image is saved into the storage facility provided in the device along with the patient identification number.

Technological Domain (Keywords): Cervical cancer screening, Automation, Visual inspection with acetic acid, Telemedicine

Proof of Concept: A docking device is designed and an image processing algorithm has been developed.

Stage of Development: Prototype

Ideation/Prototype/Advanced Prototype/Ready to Market technology

Provide Information on Competitors who manufacture and/or sell similar products: NA

What are the unique advantages your innovation has compared to the competition:

An Auxiliary Nurse Midwife can easily be instructed to perform the procedure and a specialized health worker is not required. The improved technology in the device is expected to provide good quality images acquired in a standardized manner. This will enable quick decision making, thereby rendering it suitable for mass screening activities. It is not dependent on laboratory facilities and will be an ideal tool for resource poor, rural settings with inconsistent power supply and poor internet connectivity. Introducing a specific device with a built-in app and image processing algorithm makes the adoption of this device very attractive. This device besides helping on the spot decision making will also enable us to transmit tagged patient details to the hospitals repository.

A few potential companies who might be interested in this technology: mobileODT

Intellectual Property Status: Indian Patent application with number filed in (mention year): US patent granted, No: 10045731, 2017

CONFIDENTIAL Only for purpose for evaluation of Technology