Harvard Medical School Develops A Smartphone App That Can Detect Cancers

A new smartphone application has been developed to detect cervical cancer and other types of lymphoma. A team of researchers at the Harvard School of Medicine integrated multidisciplinary advancements in technology, including a type of microscope into one app.

Lead researcher Dr Cesar Castro, who is also the head of the cancer program for systems biology at Massachusetts General Hospital said that the process involved obtaining blood and saliva samples and placing it in a small cartridge attached to the smartphone. "We secured an extra biopsy from women who were undergoing a cervical biopsy to begin with, because they had a suspicious pap smear previously," Castro adds.

The findings of the smartphone module revealed that there is a relationship between the results generated by the new device and the results that came from gold standard diagnostic procedures. Apart from cervical cancer, the device was also able to identify cases of lymphoma and infectious diseases.

The development of this study was featured in the Proceedings of the National Academy of Sciences (PNAS) and was said to deliver instant results without breaking the bank. Specifically, it is said that this new innovation can take place in less than hour, with only less than $2 as total cost.

However, Castro iterates that the breakthrough is not for public use. He said that the team is looking at providing the device to community centres and to other locations where it can be put to good and accurate use, with due consideration to treatment. Further testing of this new invention is also required according to Castro.

Castro said that with this new development, we can go past biopsies and use human blood with the latest technological advancements and wearables made available for us today. He further suggests that the information obtained from the app can be sent to one agency to be able to channel open communication.

The issue of privacy, however, is still a major concern as raw data will have to be processed by a computer before the results are sent back to the smartphone. But Castro said that these lapses in information transmission happens even with the current pen and paper system, hence he and his team remain optimistic that advancements in data security systems will also be developed alongside their invention.

To contact the writer, email rinadoctor00@gmail.com