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Cellphones AIDS tests studied in S.Africa, S.Korea

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South African and South Korean researchers are working on making a smartphone capable of doing AIDS tests in rural parts of Africa that are the worst hit by the disease, a researcher said Friday.

The team have developed a microscope and an application that can photograph and analyse blood samples in areas far from laboratories to diagnose HIV and even measure the health of immune systems.

"Our idea was to obtain images and analyse images on this smartphone using applications," said Jung Kyung Kim, a professor in biomedical engineering at Kookmin University in South Korea.

The gadget, called Smartscope, is a small 1-millimeter (0.04-inch) microscope and light which clips over a smartphone's camera.

A standard chip with a blood sample then slides into the gadget in front of the microscope. Next, a special phone programme photographs the sample and analyses the cells.

The team hopes that trials in clinics may start next year, Kim told AFP.

A different prototype developed in the United States takes tests in the field that need to be sent to a computer for analysis.

But the Smartscope will itself be able to do a CD4 cell count—a measure of white blood cells, which determines when treatment starts.

"Its basic function is to count those CD4 cells for diagnosis," said Kim.

The new technology is destined for AIDS treatment in remote communities in South Africa and Swaziland, where clinics often don't have the technology to do these tests effectively.

Almost six million South Africans are infected with HIV, while a quarter of Swazi adults carry the virus.

"In community health mobile technology is not a gimmick. It becomes an essential part of access," said Professor Jannie Hugo, who heads the family medicine department at the University of Pretoria, the partner in the study.

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