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NIH team develops AI approach for cervical cancer screening

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The approach was created collaboratively by investigators at the National Cancer Institute (NCI) and Global Good.



A research team led by investigators from the National Institutes of Health and Global Good has developed a computer algorithm that can analyze digital images of a woman's cervix and accurately identify precancerous changes that require medical attention.

This artificial intelligence (AI) approach, called automated visual evaluation, has the potential to revolutionize cervical cancer screening, particularly in low-resource settings.

To develop the method, researchers used comprehensive datasets to train a deep, or machine, learning algorithm to recognize patterns in complex visual inputs, such as medical images.

The approach was created collaboratively by investigators at the National Cancer Institute (NCI) and Global Good, a fund at Intellectual Ventures, and the findings were confirmed independently by experts at the National Library of Medicine (NLM).

The researchers plan to further train the algorithm on a sample of representative images of cervical pre-cancers and normal cervical tissue from women in communities around the world, using a variety of cameras and other imaging options. This step is necessary because of subtle variations in the appearance of the cervix among women in different geographic regions. The ultimate goal of the project is to create the best possible algorithm for common, open use.