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NTU, SERI team invents pen camera for glaucoma detection

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A group of scientists at Nanyang Technological University, Singapore (NTU Singapore), with clinicians from the Singapore Eye Research Institute (SERI), have invented a new 'pen camera' that makes it easier for doctors to diagnose patients with glaucoma.

The 'pen camera', called the GonioPEN, could help tackle the eye disease with its ability to detect the type of glaucoma in a faster and cheaper manner. It causes negligible discomfort, unlike the current gonioscopes, which are glass scopes that must be pressed against the eyeball of the patient for doctors to look at the eye's drainage canal to diagnose the cause.

The GonioPEN combines a high-resolution camera and LEDs for illumination to take a high quality image of the human eye. The prototype pen camera, estimated to cost $5,000, is connected to a computer via a USB cable. The camera captures images of the eye from four different perspectives and saves it to the computer, which can then be magnified several times for a better diagnosis by an eye doctor.