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An app developed for screening pancreatic cancer

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BiliScreen could potentially ease the burden on patients with pancreatic cancer who require frequent bilirubin monitoring.

University of Washington researchers have developed an app that could allow people to easily screen for pancreatic cancer and other diseases by snapping a smartphone selfie.

BiliScreen uses a smartphone camera, computer vision algorithms and machine learning tools to detect increased bilirubin levels in a person's sclera, or the white part of the eye.

The team developed a computer vision system to automatically and effectively isolate the white parts of the eye, which is a valuable tool for medical diagnostics. The app then calculates the color information from the sclera based on the wavelengths of light that are being reflected and absorbed and correlates it with bilirubin levels using machine learning algorithms.

BiliScreen is designed to be an easy-to-use, non-invasive tool that could help determine whether someone ought to consult a doctor for further testing. Beyond diagnosis, BiliScreen could also potentially ease the burden on patients with pancreatic cancer who require frequent bilirubin monitoring.

Next steps for the research team include testing the app on a wider range of people at risk for jaundice and underlying conditions, as well as continuing to make usability improvements.