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IIT-M develops screening device for blood vessel health assessment

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This assessment can provide early warnings for future cardiovascular diseases



A team of researchers at the Indian Institute of Technology Madras (IIT-M) has developed a novel, non-invasive device to assess the health and age of blood vessels and thereby provide early screening for cardiovascular diseases.

Called ARTSENS, it is designed such that it can be used in routine medical examination by even non-experts, to assess and predict vascular health. It is powered by a proprietary non-imaging probe and an intelligent computing platform and is developed by the Healthcare Technology Innovation Centre (HTIC) at IIT-M.

The device has been assessed on more than 5,000 human subjects. The technology already has five utility patents in the US, European Union and India, 10 design patents and awaits awarding of 28 patents in various jurisdictions.

The product is ready for technology transfer and commercialisation after extensive testing. The IIT-M team intends to deploy this to conduct over a million vascular screenings per year.

ARTSENS has been approved for clinical studies in India, US, and Europe. An extensive clinical study is underway at the All India Institute of Medical Sciences (AIIMS), New Delhi. Scientists at Radboud University Medical Center, The Netherlands, are using this device to investigate the association between arterial age, physical (in)activity, and cardiovascular events and AIIMS New Delhi researchers are using it to study and understand the physiological underpinnings of arterial ageing in various disease conditions.