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Intuitive supports IIT-M to build ultrasound imaging system for early breast cancer detection in rural India

29 January 2026 | News

To help overcome longstanding screening barriers, and enable timely diagnosis



Intuitive Surgical, a global technology leader in minimally invasive care and the pioneer of robotic-assisted surgery, has partnered with the Indian Institute of Technology (IIT) Madras to support the development of a fully indigenous portable ultrasound imaging system through its CSR funding.

The initiative is led by the Biomedical Ultrasound Lab (BUSi) in the Department of Applied Mechanics and Biomedical Engineering at IIT Madras and focuses on strengthening early breast cancer detection for women in rural and semi-urban regions.

Beyond its on-ground healthcare impact, the initiative is also expected to open new opportunities for India's health-tech innovation ecosystem. By creating an indigenous source of high-quality imaging data, the project can support development of AI-driven diagnostics, automated screening tools, telemedicine workflows, and new domestic intellectual property.

Dr Arun Kumar Thittai, Professor, IIT Madras said, "India lacks indigenous medical imaging systems despite the widespread use of ultrasound in routine care. Our lab is addressing this gap by developing an advanced yet accessible screening device that allows frontline healthcare workers to perform reliable breast screening without specialized radiology training, extending early detection to villages, small towns and remote communities through mobile units and primary health centres. Built on our proprietary ultrasound platform, the system delivers high-quality images at higher frame rates than most existing commercial scanners."

In India, breast cancer survival rates remain around 66%, compared to nearly 90% in many Western countries, largely due to delays in diagnosis and limited access to screening especially in underserved regions. By offering a reliable, portable imaging solution that can be deployed in community-level healthcare settings, the project aims to bring early breast screening closer to where women live.