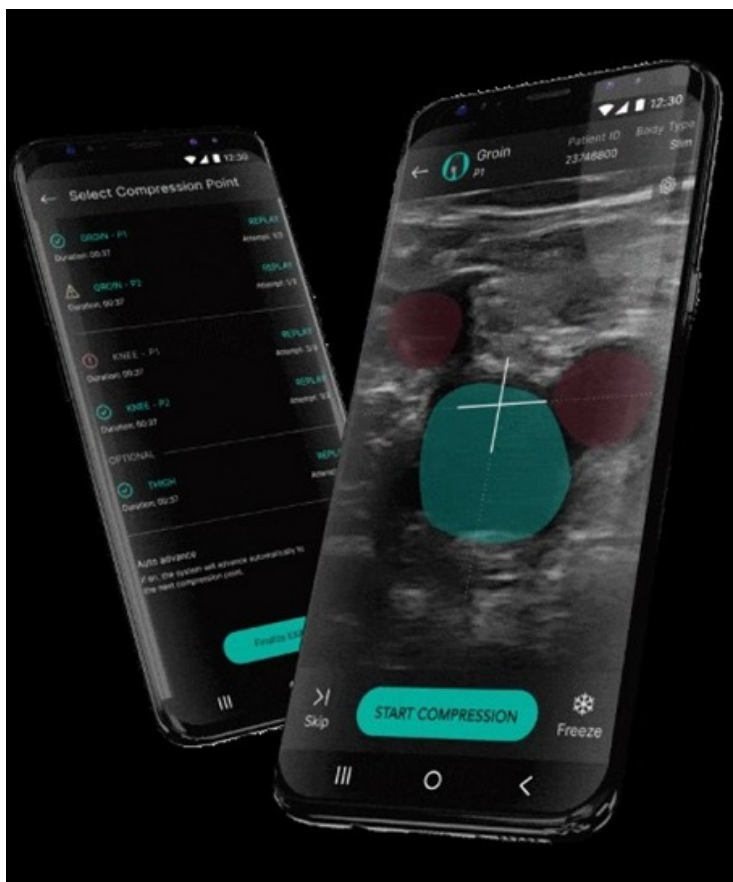# UK researchers develop AI algorithms to potentially diagnose DVT

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ThinkSono DVT detection software creates a fast and accurate diagnosis platform and potentially saves health services examination costs

A UK researcher team is developing an artificial intelligence (AI) algorithm to diagnose deep vein thrombosis (DVT) more quickly and as effectively as traditional radiologist-interpreted diagnostic scans. The invention potentially cuts down long patient waiting lists and avoiding patients unnecessarily receiving drugs to treat DVT when they don't have it.

DVT is a type of blood clot most commonly formed in the leg, causing swelling, pain and discomfort - if left untreated, it can lead to fatal blood clots in the lungs. 30-50% of people who develop a DVT can go on to have long-term symptoms and disability.

Researchers at Oxford University, Imperial College and the University of Sheffield collaborated with the tech company ThinkSono, to train a machine learning AI algorithm (AutoDVT) to distinguish patients who had DVT from those without DVT. The AI algorithm accurately diagnosed DVT when compared to the gold standard ultrasound scan, and the team worked out that using the algorithm could potentially save health services examination costs.

"The AI algorithm can not only be trained to analyze ultrasound images to discriminate the presence versus the absence of a blood clot - it can also direct the user using the ultrasound wand to the right locations along the femoral vein so that even a non-specialist user can acquire the right images," said study team member Christopher Deane from the Oxford Haemophilia and Thrombosis Centre.

The research team hope that the combination of the AutoDVT tool, with the inclusion of the AI algorithm, will allow non-specialist healthcare professionals, like GPs and nurses, to quickly diagnose and treat DVT.