MEDICAL BREAKTHROUGHS
RESEARCH SUMMARY

TOPIC: AI: SAVING HEARTS AND TRANSFORMING HEALTHCARE
REPORT: **MB #5102**

BACKGROUND: Artificial intelligence is helping doctors worldwide improve treatments for patients with cardiovascular issues such as strokes, heart attacks and heart failure. AI is used to program computers to process and respond to data quickly and consistently for better treatment outcomes. For example, AI has helped people who have had strokes called an intracerebral hemorrhage. The patient receives a CT scan and then that scan is analyzed by a computer trained to interpret the data from the scan, which cuts diagnostic time and limits brain damage. This also helps with heart problems in which applying AI to ECGs results in low-cost testing that can be used to detect a weak heart pump. A weak heat pump leads to heart failure if left untreated.
(Source: https://www.mayoclinic.org/departments-centers/ai-cardiology/overview/ovc-20486648)

DIAGNOSING: When using an AI algorithm to diagnose certain cardiovascular disease, it's a two-step process that uses 34,000 cardiac ultrasound videos. When the images are applied the algorithm identifies specific features related to thickness of heart walls and the size of heart chambers to flag certain patients as suspicious for having unrecognized cardiac diseases. Without the comprehensive testing, cardiologists find it challenging to distinguish between similar-appearing diseases and changes to the heart shape. Size can be considered part of normal aging, so this algorithm will accurately see if the heart is growing abnormally, and also detect life-threatening cardiac conditions.
(Source: https://www.cedars-sinai.org/newsroom/new-artificial-intelligence-tool-detects-often-overlooked-heart-diseases/#:~:text=Physician%2Dscientists%20in%20the%20Smidt,hypertrophic%20cardiomyopathy%20and%20cardiac%20amyloidosis.)

NEW STUDY: Researchers at the University of Utah Health are studying a new way of predicting cardiovascular diseases that affect the heart and blood vessels. Scientists have shown that artificial intelligence could lead to better ways to predict the onset of cardiovascular disease. The researchers, working with colleagues from Intermountain Primary Children's Hospital, developed computational tools to precisely measure the effects of existing medical conditions on the heart and blood vessels. These findings could eventually lead to personalized, preventive medicine. Doctors could contact patients to alert them to problems and the potential treatments that are available.
(Source: https://healthcare.utah.edu/publicaffairs/news/2022/01/ai-cardio.php)

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com