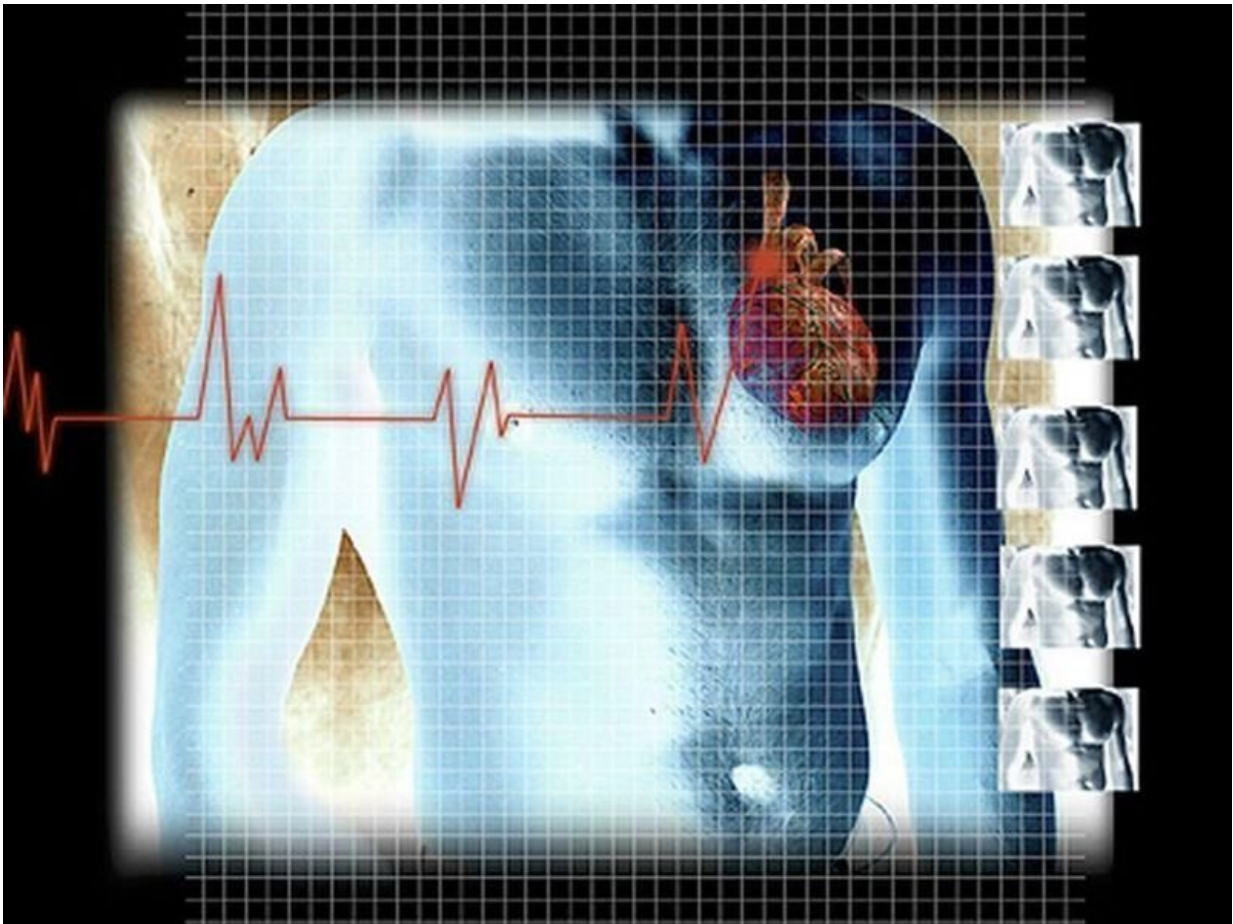


# AI algorithm aids early detection of low ejection fraction

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An artificial intelligence (AI) algorithm that uses data from

electrocardiography can help increase the diagnosis of low ejection fraction (EF), according to a study published online May 6 in *Nature Medicine*.

Xiaoxi Yao, Ph.D., from the Mayo Clinic in Rochester, Minnesota, and colleagues randomly assigned 120 primary care teams, including 358 clinicians, to [intervention](#) (access to AI results with positive results indicating high likelihood of low EF; 181 clinicians) or control (usual care; 177 clinicians) in a pragmatic trial at 45 clinics and hospitals. A total of 22,641 [adult patients](#) with echocardiography performed as part of routine care were included (11,573 in the intervention group; 11,068 controls).

The researchers found positive AI results in 6.0 percent of patients in both arms. More echocardiograms were obtained for patients with positive results by clinicians in the intervention group (49.6 versus 38.1 percent), but echocardiogram use was similar in the overall cohort (19.2 versus 18.2 percent). The [diagnosis](#) of low EF was increased with the intervention in the overall cohort (2.1 versus 1.6 percent; odds ratio, 1.32) and among patients with positive results (19.5 versus 14.5 percent; odds ratio, 1.43).

"The AI intervention increased the diagnosis of low ejection fraction overall by 32 percent relative to usual care. Among patients with a positive AI result, the relative increase of diagnosis was 43 percent," Yao said in a statement. "To put it in absolute terms, for every 1,000 patients screened, the AI screening yielded five new diagnoses of low ejection fraction over usual care."

Mayo Clinic has licensed the AI-ECG algorithm to EKO, a maker of digital stethoscopes with embedded ECG electrodes.

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