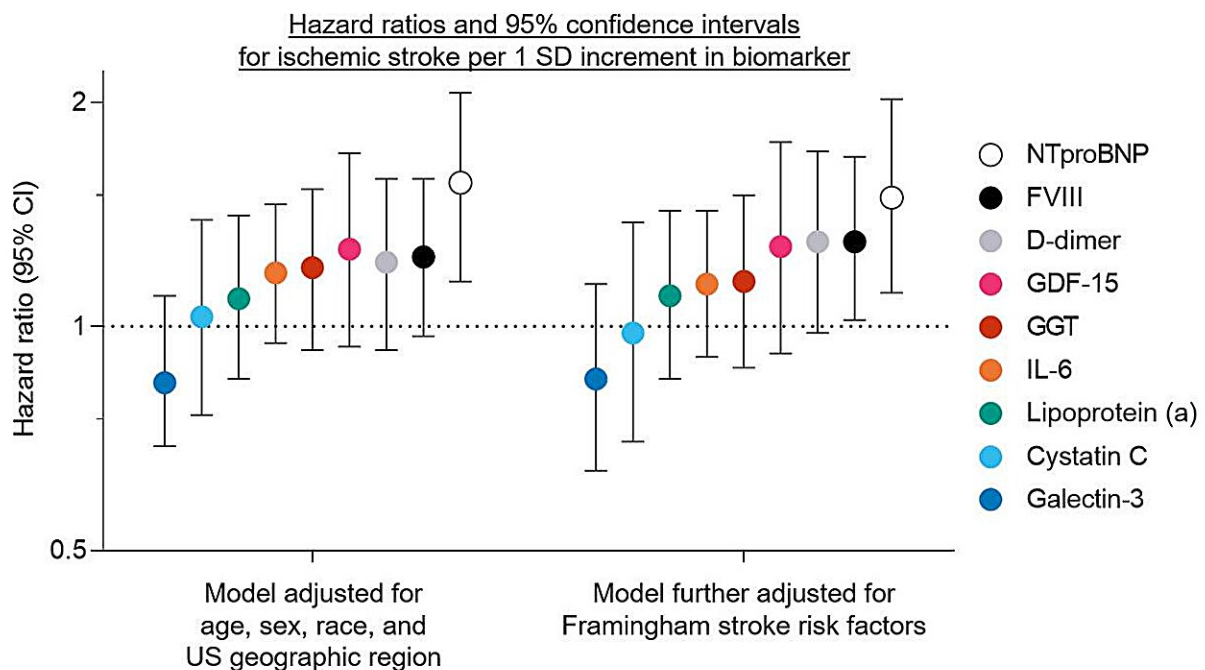


Blood tests could identify people with AFib at risk for 'breakthrough' stroke

March 22 2024, by Laura Williamson



US geographic region: stroke buckle, non-buckle stroke belt, or other.

Framingham stroke risk factors: systolic blood pressure, antihypertensive medication use, diabetes, coronary artery disease, left ventricular hypertrophy, and smoking.

CI, confidence interval; GDF-15, growth differentiation factor 15; GGT, gamma glutamyl transferase; FVIII, factor VIII; IL-6, interleukin 6; NTproBNP, N-terminal pro-B type natriuretic peptide; SD, standard deviation

Credit: Circulating Biomarkers and Anticoagulation Breakthrough Stroke Risk in Atrial Fibrillation: The REGARDS Study.

<https://www.abstractsonline.com/pp8/#!/20343/presentation/13>

Looking at specific substances in the blood of people with atrial fibrillation, a type of irregular heartbeat, could help identify who's at risk for a stroke despite taking blood-thinning medication to prevent one, new research suggests.

The researchers found biomarkers in the blood that reflect heart strain, inflammation and clotting raised stroke risk in people with AFib who are on blood thinners. The [findings](#) were presented Thursday at the American Heart Association's Epidemiology, Prevention, Lifestyle and Cardiometabolic Health conference in Chicago.

AFib is a common type of arrhythmia in which the heart's two upper chambers quiver instead of fully contracting, interfering with their ability to pump blood to the heart's lower chambers. Blood left behind may pool and clot, raising the risk for a stroke. To prevent clots, people with AFib are often prescribed blood thinners, including anticoagulant and antiplatelet medications.

But the treatment doesn't always work. Some people on blood thinners have what are called breakthrough strokes, said Dr. Samuel Short, the study's lead researcher and an internal medicine resident at the University of North Carolina in Chapel Hill.

"We wanted to find out if, among people already taking blood thinners, blood tests could be used to predict who might have a stroke," Short said. If so, it could help researchers pinpoint which people with AFib might benefit from additional treatment.

Short and his team used blood tests to measure levels of nine biomarkers previously shown to be associated with risk of strokes caused by clots, known as ischemic strokes. Among 713 people with AFib who were taking blood-thinning medications, 9% (67 people) had their first ischemic stroke over 12 years of follow-up.

Elevated levels of four biomarkers involved in heart strain, inflammation and [blood clotting](#) were associated with higher [stroke risk](#).

The findings are considered preliminary until full results are published in a peer-reviewed journal.

Because blood clots might form more easily in people with higher levels of these biomarkers, Short said that being able to identify people at highest risk for a breakthrough stroke "is the first step in understanding what else might need to be done for that patient."

The next step is to look at how additional medications or procedures could help this group of people, he said.

For some AFib patients on [blood thinners](#), breakthrough strokes might happen because they aren't taking their medications as prescribed or the drugs are ineffective, said Dr. Uma Srivatsa, director of arrhythmia services at UC Davis Health in California.

Higher [biomarkers](#) "would help us to be more diligent in monitoring these patients and to identify alternative treatment options," said Srivatsa, who was not involved in the new study. "There are a lot of unknowns out there, but anything that helps us identify who is at risk is useful."

More information: Circulating Biomarkers and Anticoagulation Breakthrough Stroke Risk in Atrial Fibrillation: The REGARDS Study. www.abstractsonline.com/pp8/#!/...0343/presentation/13

Provided by American Heart Association

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