

# Blood Test Offers Early Risk Assessment for Heart Attack

## Competitive Advantages

- ☑ Enables physicians to assess risk of acute coronary syndromes.
- ☑ Testing is rapid and minimally invasive.
- ☑ Provides unique opportunities for life-saving interventions.
- ☑ Can be used to monitor changes in patient status.
- ☑ Cost-effective to manufacture as a screening kit.

In patients with stable coronary artery disease, fatty deposits on artery walls can dislodge and cause acute coronary syndromes such as unstable angina, acute myocardial infarction, and sudden death. The disruption of these deposits generally happens suddenly and without opportunity for medical intervention.

## A Simple Test

A new blood plasma assay for patients with stable coronary artery disease can determine their risk of developing an acute coronary syndrome.

The assay detects the presence of plasma Factor XIa (FXIa), a protein involved in blood coagulation, by enabling clinicians to measure the clotting time of a plasma sample treated with an FXIa antibody.

Prolonged clotting time indicates the presence of FXIa and increased risk of developing an acute coronary syndrome, with the level of risk rising in proportion to the length of clotting time.

## An Effective Screening Tool

In initial testing, the assay detected elevated FXIa in 25 out of 26 patients with known cases of acute coronary syndrome. Also, it detected no FXIa activity in any of 12 healthy volunteers.

The assay may offer a rapid and convenient way for physicians to determine appropriate monitoring and care of patients with stable coronary artery disease.

## Next Steps

Clinical trials will determine the assay's validity and reliability in ranking patients' risk of developing acute coronary syndrome.

## Commercialization

Screening kits could be marketed for screening of blood plasma samples. The kits might include an FXIa antibody, a control sample of FXIa in a standardized concentration, and instructions for use.

## Patent / Licensing Status

Patent pending. Exclusive rights available.

## Learn More

FXIa abstract  
[www.blackwellpublishing.com/isth2009/abstract.asp?id=78103](http://www.blackwellpublishing.com/isth2009/abstract.asp?id=78103)

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