

# FierceDiagnostics

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## Quanterix diagnostic spotted a key concussion biomarker in blood

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*Swedish professional hockey players participated in the JAMA Neurology study*

Quanterix said its blood test to detect [traumatic brain injury](#) was able to successfully measure the protein tau in the blood of Swedish hockey players who suffered concussions, a promising outcome of a new study. The biomarker can flag brain injury and neurodegeneration, and this is the first time clinicians achieved the measurement in blood.

The accomplishment, while early stage, bodes well for continued clinical use of Quanterix's Simoa technology to develop a concussion-related diagnostic test. Details of the study, involving scientists from Quanterix and academic colleagues in Sweden and the U.K., are published in the journal *JAMA Neurology*.

For the study, researchers went to an apparently robust source of concussions: all 12 teams of the Swedish Hockey League. Out of 288 professional hockey players who consented to the study, 47 from two of the 12 teams submitted to blood sampling before the start of the 2012-2013 season. Of that number, 35 players suffered a concussion from Sept. 13, 2012, to Jan. 31, 2013, according to the study. And 28 underwent repeated blood sampling, one hour after the injury and then 12, 36 and 144 hours later, and after they returned to the game. What researchers found: higher levels of tau than at the start of the season from players who suffered mild to severe concussion. What's more, those levels stayed higher versus preseason levels for up to 6 days after the injury. The test also showed a high degree of sensitivity.

"One of the most promising applications for our Simoa platform is to provide a simple blood test that could speed the diagnosis of a concussion in a clinical setting and on the sidelines in a sports arena, therefore improving overall treatment," Quanterix CEO Paul Chapman said in a statement.

More research is likely and also needed. But the idea is that if further studies support the initial results, the Simoa platform-related simple blood test could help speed the diagnosis of a player's concussion on the sidelines, leading to quicker treatment. Left unaddressed, head injuries can cause major problems, and players risk causing worse injuries if they continue their activities without knowing the extent of the concussions they have. Further, the test could eventually be useful for other neurological and neurodegenerative conditions. Tau can also be an [Alzheimer's](#) biomarker, for example.

Additionally, approved tests for neuronal proteins such as tau are much more invasive than the option Quanterix proposes. Cerebrospinal fluid collection is one alternative, and it is costly, time-consuming and painful, considering that doctors must perform a spinal tap to complete the test.

Quanterix's technology has drawn some significant attention over the past few years. The Lexington, MA-based company attracted an \$18.5 million Series C financing back in November 2012 in a round led by French [in vitro diagnostics](#) giant [bioMérieux](#), a shot in the arm for further development of ultrasensitive and multilevel immunoassays. The company also recently won grant funding from General Electric ([\\$GE](#)) and the NFL as part of a \$50 million effort to develop new brain injury-related concussion imaging, diagnostic and treatment technology.

- read the [release](#)
- here's the journal [abstract](#)