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It's a Healthy Time for Diagnostic Firms

By Julie Donnelly



Paul Chapman, president and CEO of Quanterix in Lexington, says actress Angelina Jolie can be thanked for helping put diagnostics in the public eye.

Local diagnostics firms are making big advances as they benefit from new demand from the drug companies and hospitals that hope these firms' new tests will boost their bottom lines.

Cambridge-based Foundation Medicine, maker of a diagnostic tool that matches cancer patents with treatments based on their genetic makeup, announced it planned to go public on July 30. That same day, IntelligentMDx, which plans to move from Cambridge to a bigger space in Waltham this fall, announced its first-ever [U.S. Food and Drug Administration](#) approval for a test to detect antibiotic-resistant bacteria.

Meanwhile, Lexington-based Quanterix Corp. has launched its Simoa diagnostic technology platform, which uses a simple blood test to detect tiny amounts of proteins that can diagnose a variety of conditions, from cancer to brain injuries.

The success of these local, privately held diagnostics firms can be measured in how much investor excitement they have generated. Foundation Medicine raised \$56 million in January from investors such as Third Rock Ventures, Google Ventures and [Bill Gates](#). IntelligentMDx has raised a total of \$40 million from angel funders and private equity, since its launch in 2004, while Quanterix has recently raised \$47 million.

“The business model for diagnostics has historically not been that attractive because of the low prices per procedure and the need to rely on partners such as diagnostic instrument makers and hospital labs,” said [John Gordon](#), a partner at drug industry consultancy Putnam Associates in Burlington. “But now pharma has made a 180-degree turn from focusing on mass-market drugs to specialty pharmaceutical markets, like cancer and rare diseases, where companion diagnostics can help determine which patients will benefit most from their drugs.”

In some cases, the FDA requires that a drug be submitted for approval with a companion diagnostic. And health insurers are increasingly putting pressure on drug companies to identify which patients will respond best, so money is not wasted on treatments that don’t work for that particular patient.

“There are really three types of diagnostics,” IntelligentMDx CEO [Alice Jacobs Nesselrodt](#) said. “Those that detect the presence of a disease, those that predict the probability of getting a disease, and those that predict whether a treatment will work.”

IMDx received FDA clearance for a test in the first category — to detect the presence of vancomycin-resistant enterococci responsible for a variety of health care-associated infections.

“Really, we do have to thank [Angelina Jolie](#) for helping to bring diagnostics into the public discourse,” Quanterix CEO [Paul Chapman](#) said.

The actress’ decision to have a double mastectomy based on tests predicting she had a high likelihood of developing breast cancer, has helped elevate genetic testing to a topic for water-cooler discussion. Chapman predicts it will soon become a hot topic at sports arenas as well.

Quanterix has used its Simoa platform in a study with the Swedish Hockey League. The technology can be used to test blood biomarkers one hour after a concussion and every morning after up to six days to reveal how the concussion has affected the brain and track any changes over time.

Chapman hopes this blood test could replace painful spinal taps, currently used to measure brain fluid, as the predictive tool of choice for sports-related brain injuries.

“I would like to see a point of care kit at every NHL ice rink, that could be used to determine the severity of a brain injury,” Chapman said. “Because right now, you go in a dark room and perform a bunch of tasks, and it’s not precise at all.”