

Thrive emerges with cash, a cancer blood test, and a plan



[Elizabeth Cairns](#)



A new player has entered the liquid biopsy game.

The lure of a blood test for solid tumours has led to a vast number of companies aiming to contest this space – and that number has just gone up by one. Thrive Earlier Detection came out of stealth mode today with a \$110m series A round, and must now set about proving that its CancerSeek test can keep up with the competition.

“It is a busy space,” acknowledges Steven Kafka, Thrive’s chief executive. He tells *Vantage* that the group’s test differs from others partly because of its high specificity: “When you get a result that says you may have cancer we need to be really confident that that detection result is in fact true.”

Liquid biopsy developers fall into two broad categories: those working on individual tests for separate cancers, such as [Oncimmune](#) and [LAM](#), and those pursuing the goal of a single test that can diagnose, or recommend treatment for, multiple cancers. Foundation Medicine’s [FoundationOne](#) and Guardant Health’s [Guardant360](#) are examples of these pan-cancer tests.

CancerSeek is another. The test, which was originally developed by researchers at Johns Hopkins, aims to detect genetic alterations in circulating tumour DNA and protein biomarkers within the blood. It is intended not only to identify the presence of relatively early cancer but also to detect the organ of origin.

Early research was [published in February 2018](#) concerning 1,005 patients previously diagnosed with breast, colorectal, liver, lung, oesophageal, ovarian, pancreatic and stomach cancers, and 812 healthy controls. The median sensitivity of CancerSeek among the eight cancer types was 70%, ranging from 98% in ovarian cancers to 33% in breast cancers. At these sensitivity levels, specificity was greater than 99% – there were seven false positives among the healthy people.

The right thing to do

The test is now in a larger trial called Detect. This is a prospective study in 10,000 healthy women aged 65-75, designed to assess CancerSeek’s performance as a screen for various cancers, and not just those that primarily affect women.

“It is a multi-cancer study,” says Mr Kafka. He explains that it’s in women only “to simply remove the gender variability” and says that future trials will include all genders.

Data from Detect, which ought to emerge over the next year or so, will be used to inform the design of a pivotal trial designed to allow US approval of CancerSeek. The assay has FDA breakthrough designation for detection of pancreatic and ovarian cancers, but Thrive eventually hopes to get approval across various cancer types.

Mr Kafka says gaining formal US approval is a better strategy than simply selling CancerSeek as a lab-developed test under Clia rules, which is, for example, how Guardant markets Guardant360 ([Guardant's liquid biopsy matches tissue testing in lung cancer](#), February 28, 2019).

"I think the world has changed and engaging with FDA early and moving towards a regulatory approval framework is the absolute right thing to do. It will help us build a better body of evidence. It will help us build a better test."

Robust, convincing clinical data will also help drive adoption by the primary care doctors to whom Thrive will be pitching the test, by payers and by professional societies – inclusion in screening guidelines will be crucial to increasing uptake.

Money magnets

Gaining this persuasive clinical data will take time and money, and it looks as if Thrive has both. Its \$110m funding round puts it ahead of Foundation Medicine, which had raised just shy of \$90m in venture cash before it floated in 2013. Mr Kafka and several of his colleagues on Thrive's management team and board had previously worked at Foundation.

Mr Kafka is also, not coincidentally, a partner at Third Rock Ventures, which led Thrive's series A. It is rare that Third Rock backs diagnostics or device companies, though it was an early investor in Foundation.

Another familiar name is among Thrive's investors: Exact Sciences. Exact's stool test Cologuard is a hugely successful noninvasive cancer screen, but could be vulnerable to competition from blood tests – which is why Exact is developing its own blood test for colorectal cancer ([Exact falls on Guardant's liquid biopsy plans](#), May 13, 2019). Mr Kafka says that being involved with Thrive essentially gives Exact another way into this market.

But Thrive is way behind the two richest liquid biopsy groups. Guardant has raised \$550m in venture capital, whereas the Illumina spin-out Grail has been funded to the tune of an astounding \$1.6bn.

Selected liquid biopsy companies' VC funding

Company	Date	Series	Amount raised (\$m)
Grail	May 2018	C	300
	Mar 2017/Jan 2018	B	1,215
	Jan 2016	A	100
		Total	1,615
Guardant Health	May 2017	E	360
	Jan 2016	D	100
	Feb 2015	C	50
	Apr 2014	B	30
	Feb 2014	A	10
	Total	550	
Foundation Medicine	Sep 2012/Jan 2013	B	56
	Apr 2010/Oct 2011	A	34
	Total	90	
Thrive	May 2019	A	110
		Total	110

Source: EvaluateMedTech.

Thrive has another possible way of raising cash: partnering with biopharma to aid drug development. Both Guardant and Foundation have these arrangements, and Mr Kafka says Thrive is open to them too.

“We’re absolutely interested in working with biopharma companies,” he says. “This is an important part of building the business, having collaborations with biopharma companies to help them more rapidly advance their new medicines.”

As to whether Thrive will follow Foundation’s path in another respect – Foundation was sold to Roche for \$5.3bn last June – it is too early to say. Thrive’s acquisition prospects are another thing, perhaps, that hinge on the trial data.

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Evaluate HQ
[44-\(0\)20-7377-0800](#)

Evaluate Americas
[+1-617-573-9450](#)

Evaluate APAC
[+81-\(0\)80-1164-4754](#)

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