Blood Test Predicts Lymphoma Treatment Success in Days

The test may allow doctors to choose the best therapeutic option for a patient within days or weeks, rather than months.

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One of the greatest challenges doctors face is predicting, which patients will respond to a particular cancer therapy. Ash Alizadeh, MD, PhD (Damon Runyon Clinical Investigator ’14–’17), and David Kurtz, MD, PhD (Damon Runyon Physician Scientist ’16–’20), at Stanford University School of Medicine, have developed a new blood test to guide doctors when treating diffuse large B cell lymphoma (DLBCL). The blood test measures the levels of circulating tumor DNA (ctDNA)—fragments of DNA released by cancer cells—in patients before and after therapy. They observed in clinical trials that those who lived 24 months or more without a recurrence of their disease had a rapid drop in the amount of ctDNA in their blood within one or two treatments. However, patients whose cancer did not respond even after a full six treatments had ctDNA levels decline more slowly within the initial treatment period.

Rather than waiting five or six months for treatment to run its course, doctors may be able to choose the best therapeutic option for a patient within days or weeks using the blood test. “By identifying those people who are responding extremely well, we could spare them unnecessary treatments. Conversely, we could intensify the therapy or seek other options for those who are not responding,” explains David. “We are thinking about how to use the tools to best benefit patients and are very excited to test this approach in other types of cancers,” adds Ash.

This research was published in the Journal of Clinical Oncology. Read more in Science Daily.

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