

HIV may have returned in 'cured' patient: scientists

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An American man whose HIV seemed to disappear after a blood marrow transplant for leukemia may be showing new hints of the disease, sparking debate over whether a cure was really achieved.

Scientists disagree over the latest findings on Timothy Brown, also known as the "Berlin patient," presented at a conference in Spain last week, according to a report in the journal Science's ScienceInsider blog.

Brown was given [bone marrow transplants](#) in 2006 that appeared to eradicate the [human immunodeficiency virus](#) from his body, leading his doctors to declare a "cure of [HIV](#) has been achieved" in the peer-reviewed journal *Blood* in 2010.

The transplants came from a donor with an unusual genetic mutation that is naturally resistant to HIV. About one in 100 [Caucasian](#) people have this mutation which prevents the molecule CCR5 from appearing on the [cell surface](#).

The latest debate arose after virologist Steven Yukl of the University of California, San Francisco, gave a talk on June 8 at the International Workshop on HIV & Hepatitis Virus.

Yukl "highlighted the difficulties that they and several labs they collaborated with have had determining if Brown truly had eradicated the virus from his body," said the ScienceInsider report.

"There are some signals of the virus and we don't know if they are real or contamination, and, at this point, we can't say for sure whether there's been complete eradication of HIV," Yukl was quoted as saying by ScienceInsider.

"The point of the presentation was to raise the question of how do we define a cure and, at this level of detection, how do we know the signal is

real?"

However, some scientists interpreted the presentation to mean that a cure was not actually achieved, and that Brown may even have been re-infected with the virus that causes AIDS.

Alain Lafeuillade of the General Hospital in Toulon, France, issued a press release that described how Yukl and colleagues "challenged these results as they showed persistence of low levels of HIV viremia in this patient, and HIV DNA in his rectal cells."

He noted that "these HIV strains were found to be different from those initially present in this patient back in 2006, and different from each other."

While that could mean the HIV has "evolved and persist(ed) over the last 5 years, these data also raise the possibility that the patient has been re-infected," Lafeuillade wrote.

"More studies are in progress to know if this seronegative HIV individual can infect other subjects if he has unsafe sex," he concluded.

Yukl, quoted by ScienceInsider, said Lafeuillade misinterpreted the presentation.

"We weren't trying to say HIV was still there or he hadn't been cured," he said, noting the talk centered on how to interpret very sensitive test results on Brown's blood cells, plasma and rectal tissue.

One of his collaborators, Douglas Richman of the University of California, San Diego, said he believes researchers have picked up contaminants.

"If you do enough cycles of PCR (polymerase chain reaction), you can get a signal in water for pink elephants," Richman was quoted as saying.

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