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## Vaccines less protective for multiple myeloma patients

The Korea Times · 25 Oct 2021 · 14

Coronavirus vaccines are known to be less protective in people with the blood cancer multiple myeloma, such as former U.S. Secretary of State Colin Powell, who died on Monday of complications from COVID-19 despite being fully vaccinated.



The release of a new study sheds light on the vulnerability of multiple myeloma patients to the coronavirus.

The study, expected to appear online on Monday in *Cancer Cell*, reveals these patients not only produce fewer neutralizing antibodies in response to the vaccines, but also have a weak response from the immune system's T cells.

While antibodies attack the virus as it circulates in the body, T cells attack the cells that have been infected, or they produce important signals that lead to other immune responses, limiting the extent of the infection.

In the study of 44 patients with multiple myeloma who had received both doses of an mRNA vaccine from Pfizer/BioNTech or Moderna, those with low or no antibody response to the COVID-19 mRNA also had few or no T cells that could have helped to protect them from a severe COVID-19 infection, according to the report.

"The unexpected lack of T cell responses, coupled with the absence of antibodies following SARS-CoV-2 vaccination, is of concern," study leader Dr. Samir Parekh of the Icahn School of Medicine at Mount Sinai in New York City, said in a statement.

The researchers said the finding emphasizes the need for blood tests to monitor immune responses in these patients after vaccination.

Numerous businesses have made unsubstantiated and inaccurate claims about supposed stem cell products to treat COVID-19, researchers said in a paper on Thursday in the journal *Stem Cell Reports*.

Their paper cites more than 20 companies that have received warning letters from the U.S. Food and Drug Administration or Federal Trade Commission for promoting unlicensed stem cell treatments for COVID-19.

Exactly how many businesses are involved in manufacturing or selling these bogus products directly to consumers is unknown, according to the authors. Stem cells, from which other cells with specialized functions can be generated, are presently used to treat only a few diseases and conditions.

No such therapy has been approved by government regulators for preventing or treating COVID-19. Many advertisements falsely claim their therapies' effectiveness and safety are supported by evidence.

“The spread of such misinformation has potential to cause real harm to patient safety and public health by making it difficult or impossible for patients and other members of the public to distinguish evidence-based scientific claims from pseudoscience and quackery,” the authors said.