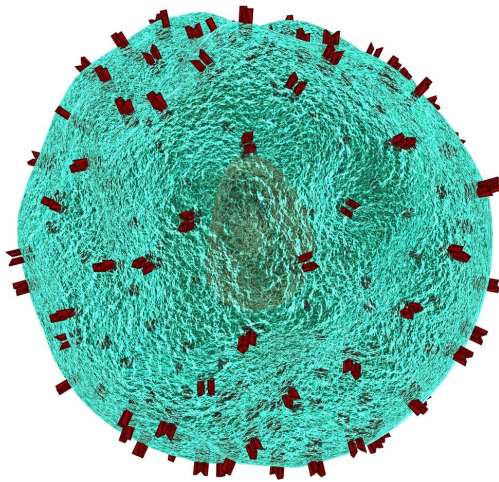


# T-cell receptor diversity may be key to treatment of follicular lymphoma, study finds

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Healthy white blood cells, called "T-cells," play a crucial role in how the body fights follicular lymphoma. That's according to the results of a study led by Mayo Clinic hematologists Zhi Zhang Yang, M.D., and Stephen Ansell, M.D., Ph.D., that was published in *Cell Reports*. T-cells are a key part of the immune system and protect the body by fighting infections and cancer.

"Follicular lymphoma is a type of blood cancer that mainly involves the [lymph nodes](#) in the body," says Dr. Yang. He says that, while the disease is quite common and has a relatively better prognosis than other cancers, it is not curable. Although many patients respond to treatment, it is common for the cancer to return after treatment.

Dr. Yang and his colleagues were interested in understanding why some patients with [follicular lymphoma](#) fare better than others with the disease. Their study found that patients who had a poor immune response to the disease exhibited a reduction in costimulatory receptors on their T-cells.

"The presence of costimulatory receptors on the [cell surface](#) allows the immune system to better recognize and attack cancer cells," says Dr. Yang. "We also found that, among patients with follicular lymphoma, those whose T-cells were lacking costimulatory receptors experienced significantly shorter survival than patients whose T-cells exhibited costimulatory receptors."

Dr. Yang says that, while this research is preclinical and preliminary, it eventually may have clinical implications. "If we can implement a strategy to restore the expression of costimulatory receptors in patients with this subpopulation of T-cells, we may be able to develop a new therapy for some patients with follicular lymphoma."

**More information:** Zhi-Zhang Yang et al, Mass Cytometry Analysis Reveals that Specific Intratumoral CD4+ T Cell Subsets Correlate with Patient Survival in Follicular Lymphoma, *Cell Reports* (2019). [DOI: 10.1016/j.celrep.2019.01.085](https://doi.org/10.1016/j.celrep.2019.01.085)

Provided by Mayo Clinic

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