

Silencing cancer cell communication may reduce the growth of tumors

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In several types of cancer, elevated expression of the chemokine receptor CCR4 in tumors is associated with poor patient outcomes. Communication through CCR4 may be one mechanism that cancer cells use to create a pro-tumor environment that protects tumors from immune system attacks. Antibodies that block CCR4 are currently in clinical trials for treating blood and lymphatic cancers, but these approaches may also effectively target cancers that produce solid tumors.

In this issue of the *JCI*, a study led by Frances Balkwill at Barts Cancer Institute evaluated whether blocking CCR4 in a mouse model of cancer could counteract the signaling that creates a pro-tumor environment.

In mice with [renal cell carcinoma](#), antibody-mediated inhibition of CCR4 changed the composition of immune cell populations that were present in the tumor microenvironment. The changes were associated with reduced tumor proliferation, suggesting that inhibition of CCR4 had anti-tumor effects.

These results highlight anti-CCR4 antibodies as a potential therapeutic for multiple cancers that are linked to abnormal CCR4 expression, including ovarian cancer, breast cancer, and glioblastoma.

More information: Chiara Berlato et al, A CCR4 antagonist reverses the tumor-promoting microenvironment of renal cancer, *Journal of Clinical Investigation* (2017). [DOI: 10.1172/JCI82976](https://doi.org/10.1172/JCI82976)

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