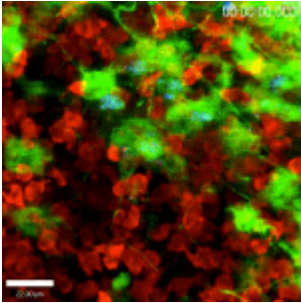


How neutrophils can be used to fight cancer



Researchers have highlighted the significance of white blood cells known as neutrophils in eliminating solid tumours.

The purpose of the study was to determine how a T cell-based [immunotherapy](#) might eradicate melanoma tumours despite the fact that many of the cancer cells lacked the markers or “antigens” that the T cells were designed to target. They discovered that when the T cells attacked the tumors, a swarm of neutrophils was generated, which then destroyed the cancer cells that the T cells were unable to destroy. The discoveries may result in fresh [immunotherapies](#) that take use of this unexpected yet effective anticancer immune response.

Innate cells were formerly thought of by scientists as immune cells that, at best, may promote an early T cell response to a cancer. Neutrophils have also been linked to cancer progression in several studies, but this study showed that they can also play a crucial part in eradicating and curing tumours that would otherwise resist T cell treatment.

Over the past ten years, cancer immunotherapies, which harness or enhance immune cells’ capacity to attack malignant cells, have started to revolutionise cancer treatment. Some individuals with advanced cancer who had no other chance of life have really been cured by these medicines. However, only a small percentage of individuals with the majority of tumours benefit from immunotherapies. Researchers looked at an

experimental immunotherapy that combines a medicine to increase T cell activity and proliferation with T cells that have been modified to recognise a melanoma-associated antigen.

These recent findings imply that neutrophils can have a substantial anticancer effect in the context of a potent immunotherapy that comprises modified T-cells targeting tumour antigens and a general boosting of T-cell activities.

Journal article: Hirschhorn, D., et al. [T cell immunotherapies engage neutrophils to eliminate tumor antigen escape variants](#). *Cell*.

Summary by Stefan Botha