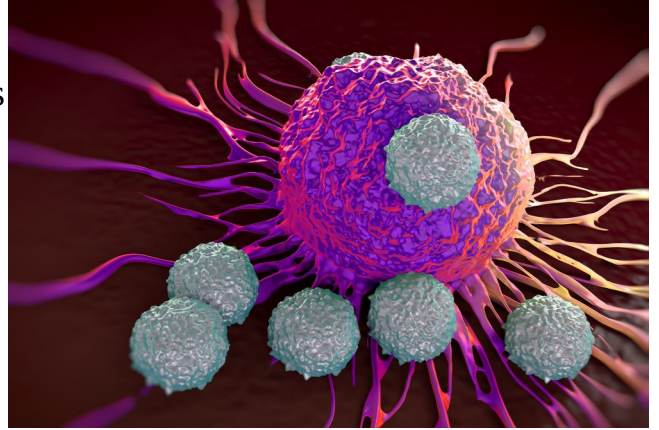


## Boosting the immune system's 'arsenal'

One type of therapy that has attracted a lot of attention recently is immunotherapy, which aims to reinforce our own bodies' existing arsenal against foreign bodies and harmful cells: our immune system's response to the spread of cancer tumors.

But many types of cancer cell are so dangerous because they have ways of “duping” the immune system — either into ignoring them altogether or else into giving them a “helping hand.”



T cells : soldiers of the immune system

Therefore, some types of aggressive cancer are able to spread more easily and become resistant to chemotherapy or radiotherapy.

However, thanks to in vitro and in vivo experiments, researchers are now learning how they might be able to “deactivate” the cancer cells' protective systems. A study published last year in *Nature Immunology* found that macrophages, or white blood cells, that are normally tasked with “eating up” cellular debris and other harmful foreign “objects” failed to obliterate the super-aggressive cancer cells.

**That was because, in their interaction with the cancer cells, the macrophages read not one but two signals meant to repel their “cleansing” action.**

This knowledge, however, also showed the scientists the way forward: by blocking the two relevant signaling pathways, they re-enabled the white blood cells to do their work.

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