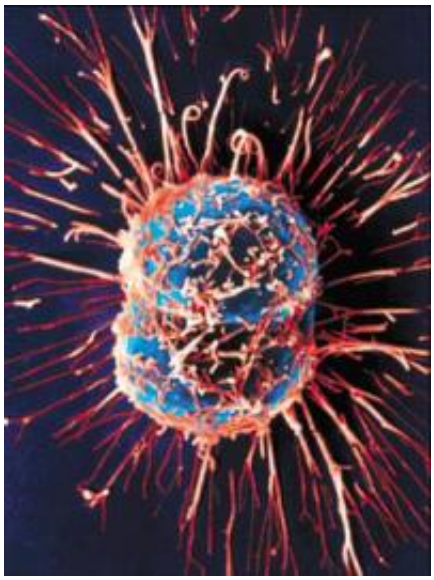
Cancer cells play hide-and-seek with immune system

29 June 2016



Dividing Cancer Cells. Credit: University of Birmingham

More information: Els M. E. Verdegaal et al. Neoantigen landscape dynamics during human melanoma–T cell interactions, *Nature* (2016). DOI: 10.1038/nature18945

Provided by Leiden University

When the immune system attacks cancer, the tumour modifies itself to escape the immune reaction. Researchers at LUMC published on this subject in *Nature* on 28 June.

The researchers discovered that as a result of the immune reaction new tumour cells are formed that have far fewer or even none of the DNA modifications that the immune system can recognise. This is how the tumour tries to escape the immune reaction. However, the immune system can learn to recognise new DNA modifications.

Other treatment methods

By treating cancer patients with a different form of immunotherapy, it should be possible to switch off the modified tumour cells as well, the researchers conclude. Immunotherapy is a cancer treatment whereby the patient's own immune system is activated to trace and destroy cancer cells.