

Tiny magnetic discs could kill cancer cells: study

November 29 2009

Tiny magnetic discs just a millionth of a metre in diameter could be used to used to kill cancer cells, according to a study published on Sunday.

Laboratory tests found the so-called "nanodiscs", around 60 billionths of a metre thick, could be used to disrupt the membranes of [cancer cells](#), causing them to self-destruct.

The discs are made from an iron-nickel alloy, which move when subjected to a magnetic field, damaging the cancer cells, the report published in *Nature Materials* said.

One of the study's authors, Elena Rozhlova of Argonne National Laboratory in the United States, said subjecting the discs to a low magnetic field for around ten minutes was enough to destroy 90 percent of cancer cells in tests.

In a commentary on the report, Jon Dobson of Keele University in Britain said [antibodies](#) could be used to direct the discs towards [tumour cells](#).

"This provides an elegant and rapid technique for targeting tumour destruction without the side effects associated with systemic treatments such as [chemotherapy](#)," Dobson wrote.

(c) 2009 AFP

Citation: Tiny magnetic discs could kill cancer cells: study (2009, November 29) retrieved 19 April 2024 from <https://phys.org/news/2009-11-tiny-magnetic-discs-cancer-cells.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.