



New methods for better cancer prognosis

Nanotechnology makes it possible to diagnose cancer at an earlier stage and in a more detailed way for more personalised treatment and increased survival rates.

More than one in three people currently living in Sweden will receive a cancer diagnosis in their lifetime. In 2040, over 27 million people worldwide are expected to get cancer. Those in the world's poorer countries are particularly affected, with limited possibilities for diagnosis and treatment.

Early diagnosis and personalised treatment are crucial for successfully dealing with cancer.

At Lund University, promising research is underway for early and rapid diagnostics based on nanotechnology. Nanowires have proven to be particularly interesting. The researchers are studying the interaction between nanowires and cancer cells.

Cancer spreads in the body via the blood and lymph system. Except in the diagnosis of leukaemia, we currently have no methods to detect cancer cells in the blood. Nanowires have properties that could be applied in simple and cost-effective equipment to detect and identify signs of cancer rapidly and securely in a blood sample. This would revolutionise cancer diagnostics and enable early and personalised treatment – not only for those living in the wealthy regions of the world, but for everyone.

Nanowires have also proven to be excellent tools in the more specific diagnosis of the actual cancer tumour. Devel-

oping this nanotechnology to enable its clinical application in cancer diagnostics could improve the personalisation of cancer treatment and lead to improved survival rates.

A new laboratory with proximity to industry and the unique new infrastructure investments of ESS and the MAX IV Nanolab Science Village would provide our researchers with stronger opportunities to contribute to improved diagnostics and more personalised treatment of cancer diseases. For everyone.

Imagine this being possible thanks to you!

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