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Lab on chip research aims to accelerate detection of cancer

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Nanoelectronics specialist, **imec** has launched a project to develop an operational lab on chip for the isolation and detection of circulating and disseminated tumor cells in blood.

Currently, the detection analyses of tumor cells are performed in medical laboratories requiring sample processing and cell isolation steps, which can take more than a day. IMEC and its project partners claim that a lab on chip, integrating the many processing steps, would enable a faster, cost effective detection of tumor cells in blood.



The aim of the Miracle Project is to develop a fully automated, lab-on-chip platform to isolate, count and genotype circulating tumor cells.

The research will look at extracting genetic material from cells. Multiple cancer related markers will be amplified based on multiplex ligation dependent probe amplification, followed by their detection using electrochemical sensors. IMEC believes that the resulting lab on chip tumor detection system will be far more advanced than current cancer diagnostics.

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Supporting Information
<http://www.imec.be>
<http://www.miracle-fp7.eu>

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