# Test 'could aid cancer detection'

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Detecting "cell dust" could lead to quick and simple new methods of cancer diagnosis and monitoring, say scientists.

Researchers tried out the technique using a hand-held device to spot signs of brain cancer in both mouse and human blood samples.

The test detects and profiles tiny membrane bubbles called microvesicles that are shed by all cells, but especially those forming tumours.

Microvesicles measure less than one micrometre, or one thousandth of a millimetre, across. They are believed to play a role in cellular communication and the transport of proteins.

Because of their small size they are extremely difficult to detect. To overcome this problem, the scientists attached minute magnetic labels to the particles which allowed them to be identified and analysed using a special probe.

Dr Hakho Lee, from Massachusetts General Hospital in the US, who helped develop the test, said: "About 30 or 40 years ago, people noticed something in the bloodstream that they initially thought was some kind of debris or 'cell dust'.

"But it has recently become apparent that these vesicles shed by cells actually harbour the same biomarkers as their parent cells."

The research is reported in the journal Nature Medicine.

The scientists focused on glioblastoma multiforme (GBM), the most common and aggressive form of brain cancer in humans. By the time a patient is diagnosed with the disease he or she may have less than 15 months to live.

Currently the only way to diagnose and monitor GBM is with invasive biopsies and costly and complex imaging tests. The new technique demonstrated a high level of detection accuracy and was quick and simple to perform, said the scientists.