

MicroNMR Device Expedites Cancer Diagnosis Process



Harvard and MIT scientists have developed what they believe is the world's smallest cancer diagnostic system-a scanner approximately the size of a desk telephone which is connected to a smartphone.



The device utilizes NMR

(nuclear magnetic resonance) technology, in which magnetic nanoparticles are used to measure chemical compounds in cells. However, unlike traditional NMR, the device's technology, called microNMR, is portable enough to perform tests at a patient's bedside.

Not only is the device portable, but the technology itself is superior to immunohistochemistry typically used to diagnose cancer. The microNMR device requires just a speck of tissue rather than the significant amount excised during a biopsy. The device is able to give a result in under an hour, as opposed to waiting three days for biopsy results. Moreover, the results are more accurate, with an accuracy of 96 percent, compared to 84 percent in traditional assays. Finally, with a manufacturing cost of only \$200, the device is affordable for smaller clinics and poorer countries.

Video coverage from Bloomberg:



Abstract: <u>Micro-NMR for Rapid Molecular Analysis of Human Tumor</u> <u>Samples</u>

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