

Photoacoustics technique detects small number of cancer cells

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Researchers have developed multiple techniques and procedures to detect cancer cells during the earliest stages of the disease or after treatment. But one of the major limitations of these technologies is their inability to detect the presence of only a few cancer cells.

Now, a research collaboration between the University of Missouri-Columbia and Mexico's Universidad de Guanajuato shows that pulsed photoacoustic techniques, which combine the high optical contrast of <u>optical tomography</u> with the high resolution of ultrasound, can do just that, in vitro. Most <u>cancer cells</u> are naturally elusive, so they used a photoacoustic enhancer to detect them.

New developments are necessary, the researchers say, to be able to properly use photoacoustic techniques to recognize different cancer cell types inside the human body or in blood or tissue samples.

More information: "An experimental and theoretical approach to the study of the photoacoustic signal produced by cancer cells" is published in *AIP Advances*.

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