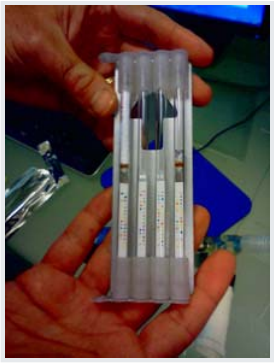

Breath tester: Inside Metabolomx's device, breath is pumped over arrays of 120 chemical reactants that change color in response to volatile breath biomarkers. *Technology Review*

BIOMEDICINE

Cancer Breath Test Enters Clinical Trials

A startup says its test can distinguish between subtypes of lung cancer.

TUESDAY, FEBRUARY 14, 2012 | BY KATHERINE BOURZAC

Audio »

Someday soon a breath test could do more than just tell if you've been drinking. Metabolomx, a startup in Mountain View, California, recently completed a clinical trial that shows that its breath test can spot lung cancer with 83 percent accuracy and can also distinguish between several different types of the disease, something that usually requires a biopsy. The accuracy of the test matches what's possible with low-dose computerized tomography imaging of the lungs.

Existing tests for lung cancer—the leading cause of cancer death worldwide—cause too many false positives, which means patients face unnecessary biopsies or exposure to radiation from imaging, and none are currently approved by Medicare. A breath test promises much simpler, safer screening.

Chemical results of a tumor's metabolism are dissolved in the blood, and can end up in the breath. Trained dogs can identify breath samples from patients with lung cancer with 98 percent accuracy. Researchers have been working on a noninvasive cancer breath test for years, but have struggled to make one that is simple, reliable, and portable enough. A method called gas chromotography-mass spectrometry can detect metabolites in the breath, but it can't be done at the bedside, and requires some expertise to operate.

Paul Rhodes, the founder and CEO of Metabolomx, says the company is now running additional lung and colon cancer clinical trials of equipment that is 1,000 times more sensitive to biomarkers carried on the breath than the one used in its recently completed clinical trial. That could help them get to 90 percent accuracy, which Rhodes believes will be necessary to get the test to market.

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