


# A Big Sigh of Relief

A souped-up  
breathalyzer  
fingerprints disease

 LUNG CANCER CLAIMS AN estimated 165,000 lives a year, more than any other type of cancer. It's deadly in large part because there's been no effective way to spot it before it spreads. But a new test could make catching the disease early as simple as exhaling.

The test is a tabletop device called the Lungscan. It's similar to an alcohol breathalyzer, though "a billion times as sensitive," claims inventor Michael Phillips, a physician at New York Medical College. Within minutes, the device can capture more than 30 types of signature chemicals produced by cancerous cells and excreted in the breath. Phillips will present his data at the annual meeting of the American Society of Clinical Oncology in Orlando, Florida, this month.

The procedure itself is simple and noninvasive. A patient breathes into a tube for about two minutes while a powerful pump draws the breath into a steel cylinder packed with carbon. The carbon traps volatile organic compounds, and then the sample is sent to a laboratory for chemical analysis. Lungscan's accuracy is impressive, according to a recent study funded by the National Institutes of Health, which showed that the device flagged 85 percent of lung cancers at their earliest stages, when survival rates can top 75 percent.

The test won't replace the biopsies and CT scans that are now used to definitively diagnose tumors, but it could become the first effective screening tool for lung cancer. If the Food and Drug Administration gives it the thumbs up, Lungscan could be in doctors' offices within two years.