

# E-nose detects malignant mesothelioma

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Australian researchers have developed a breath test using an electronic nose to help diagnose malignant mesothelioma in its early stages, a potentially life-saving move.

The non-invasive test was created by a team at the University of [New South Wales](#). The device was designed to distinguish between benign and malignant [disease](#) and to detect disease early.

“If you catch it earlier your chances of actually giving people the right treatment to stop it spreading are actually better,” says study team leader, Associate Professor Deborah Yates, from UNSW's St Vincent's Clinical School.

“We tried to exclude the other asbestos diseases because it’s very important from a patient’s point of view that you don’t pick up something that is a benign asbestos disease, so that you don’t diagnose them with something that’s not actually a problem.”

Asbestos-related disease affects thousands of people in Australia, which has one of the highest age-specific rates of mesothelioma in the world.

[Malignant mesothelioma](#) is a rare tumour that has traditionally been difficult to diagnose in its early stages. Globally, up to 20,000 people die each year as a result of the disease.

The researchers say conventional techniques for distinguishing between benign and malignant asbestos-related disease are inaccurate, invasive and difficult for the mostly elderly [patients](#) with the illness.

Associate Professor Yates and her team analysed breath samples from 20 patients with malignant mesothelioma, along with 18 people with asbestos-related diseases and 42 control subjects in the study of which the results are published in the *European Respiratory Journal*.

In the study, patients with malignant disease, asbestos-related diseases and control patients were correctly identified in 88 per cent of cases.

The study authors say exhaled breath profiling can accurately distinguish between each of these groups of patients using the carbon polymer array [electronic nose](#), a technique that could eventually translate into a screening tool for high-risk populations.

Provided by University of New South Wales

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