

AUTOMATED LUNG CANCER DETECTION

An intelligent image analysis system that searches for lung cancer could help radiologists identify cases faster and more accurately.

Masters student Alycia Lee is developing the analytical software with supervisor Associate Professor Abbas Kouzani from Deakin University's School of Engineering. It automatically analyses CT (computed tomography) lung images and identifies lung nodules that could be cancerous. The radiologist can then concentrate on the suspected regions.

Lung cancer is the leading cause of cancer death in Australians, causing around 7000 deaths each year. Early detection and diagnosis are the keys to survival.

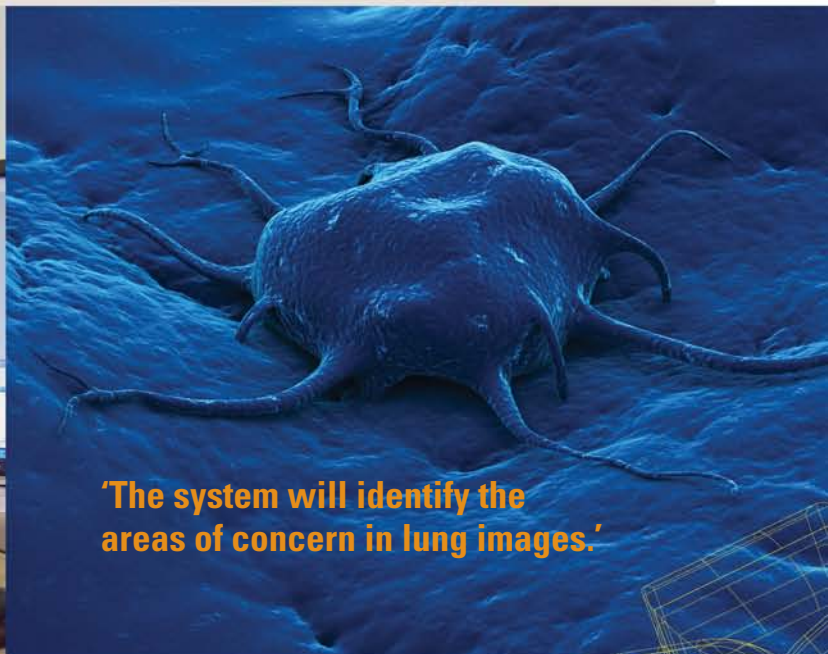
"CT images and MRI (magnetic resonance imaging) scans are commonly used for detecting lung cancer, but it can be difficult to interpret the results, leading to false detections," says Alycia.

The system is designed to help radiologists examining lung images. "They will have fewer scans to look at because the system will identify the areas of concern in lung images. We hope that our automated approach will improve the precision of lung nodule detection," says Alycia.

The system's nodule detection rate is higher and its false detection rate is lower than that of the existing systems.

The researchers expect to trial the system at a hospital later this year.

Alycia demonstrates how the system highlights suspected regions in the lung



'The system will identify the areas of concern in lung images.'

FURTHER INFORMATION:

School of Engineering
Principal supervisor: Associate Professor Abbas Kouzani
E: abbas.kouzani@deakin.edu.au
www.deakin.edu.au/scitech/eng