MEDIA RELEASE

1 December 2008

Deakin University system helps with early detection of lung cancer

Deakin University researchers have developed an automated system to improve the vital early detection of lung cancer—one of the most common cancers in Australia.

Lung disease, including cancer, is usually detected with the aid of CT (computed tomography) and MRI (magnetic resonance imaging) scans. However interpreting the results of these tests can be challenging and may lead to false detections.

Deakin University engineering researchers Dr Abbas Kouzani and Alycia Lee have developed an automated system to evaluate CT scans with a higher level of accuracy.

“Currently, expert radiologists need to view many images per patient to try and identify nodules that may be cancerous. This large amount of data increases the complexity of inspection and interpretation,” Dr Kouzani explained.

“Recent studies show that radiologists can differ in their interpretation of nodules in one patient. Automated approaches can therefore help improve the precision of lung nodule detection and serve as a preliminary interpreter to assist radiologists.

“We have developed a system that can automatically identify lung nodules of varying sizes and shapes in CT images as a tool to improve the accuracy of cancer detection.”

While other automated methods have been developed over the years, the Deakin system has proved to be more accurate.

“We used many sample nodule, non-nodule and false detection patterns to effectively train the system,” Dr Kouzani said.

“The experimental results demonstrate that the system performs well. Our nodule detection rate is higher than that of the existing systems, and at the same time, our false detection rate is lower than that of those systems.”

The researchers have been working on this project for a year and a half and expect the system to be available for hospital trials by early next year.

Ends

Dr Kouzani and Ms Lee are available for interview. Telephone (03) 522 72818.

Issued by:
Mandi O’Garretty, Senior Media Officer
Phone 03 5227 2776 Mobile 0418 361 890