THE FUTURE IS NOW FOR FASTER AND BETTER MEDICAL IMAGING

Alberta patients could soon benefit from cutting-edge AI imaging software at EFW Radiology.

Seldom do we hear people say they're excited about a magnetic resonance imaging (MRI) scan, and it's because it can be an uncomfortable and sometimes painful experience. Although it's an effective medical imaging tool used for screening and diagnostics, it requires patients to remain very still for long periods — which can be challenging and unpleasant, especially for those in pain.

"Anything that we can do to speed up the acquisition of MRI images for those patients is extremely helpful," explains Dr. John Lysack, a radiologist at EFW Radiology. To that end, EFW Radiology is in the trial process for a new AI software called Deep Resolve that could improve MRI scan times. So far, the trial is showing promising results.

"We're very pleasantly surprised that it looks like, in addition to being faster, the images are at least as good, if not better. We're getting a win-win here," says Lysack.

REDUCING INTERFERENCE FOR QUICKER AND CLEARER IMAGES

In the past, shorter MRI scan times meant sacrificing the quality of the images, but now, the opposite is proving possible. This is thanks to the AI software's ability to reduce the noise in the signal-to-noise ratio present in MRIs.

By getting rid of some excess noise, which entails any background variability that appears and interferes with the scan, it can produce better quality images, faster. "Radiologists will always have to train their brains to recognize what is noise, what is not and what's the signal. Now, it's even better if we can have an assistant to help us identify at least some of the noise and make it go away. And that's what the AI is doing with Deep Resolve and these sorts of systems," affirms Lysack.

EFW Radiology is currently performing traditional MRIs at the same time as using Deep Resolve, and comparing the results. So far, Deep Resolve is producing clear images in time frames that are, on average, improved by one third. In some instances, MRI scan times have even been cut in half. "In the world of MRI imaging, we used to get excited about times being improved by 10 per cent. So anything that's 20 or 30 per cent is incredibly good, and anything approaching 50 per cent is mind-boggling," says Lysack.

SERVING PATIENT NEEDS FIRST

While EFW Radiology prioritizes innovation, it is, firstly, a patient-focused company. EFW keeps up with modern advances, but cautiously, ensuring they will be the best option for its patients. But with the promising results so far, Lysack predicts EFW Radiology will soon put the AI software into full production, and when it does, the positive impact on Albertans will be significant.

He explains that in the not-too-distant past, it was practically impossible to use MRIs for some patients, like those who cannot remain still as they need to swallow or cough, for example. "Now with AI, the game is starting to change. We're not saying never anymore," he says. "The things that even a year ago we wouldn't have thought about trying to image with MRI, we're now successfully starting to image. It's really exciting to be able to open up whole new areas that we thought were going to be technically impossible for the foreseeable future."

EFW Radiology has proudly provided comprehensive diagnostic and interventional imaging services in Calgary and the surrounding areas for over 55 years. They perform over 600,000 imaging procedures, consultations and second opinions annually.

To learn more, visit EFW.ca.

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