

Doctors' bedside skills trump medical technology

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Sometimes, a simple bedside exam performed by a skilled physician is superior to a high-tech CT scan, a Loyola University Health System study has found.

Researchers found that physicians' bedside exams did a better job than CT scans in predicting which patients would need to return to the operating room to treat complications such as bleeding.

"The low cost, simple, but elegant neurological exam appears to be superior to a routine CT scan in determining return to the operating room," researchers report in the *Journal of Neurosurgery*.

Patients typically receive CT scans following open [brain surgery](#) to remove tumors, repair aneurysms, treat brain injuries, etc. But practices vary. Some surgeons order CT scans right after surgery. Others wait until the following morning.

There are downsides. CT scans cost hundreds of dollars and expose patients to radiation. Transporting patients to scanning machines "involves multiple personnel of varying skills and nursing staff who are taken away from their other unit responsibilities," researchers wrote. "These scans also often interfere with work flow efficiencies of the radiology department."

The lead author of the study is Dr. Ahmad Khaldi, chief resident in the Department of [Neurological Surgery](#) at Loyola University Chicago Stritch School of Medicine. The senior author is Dr. Thomas O'rigitano, chairman of the Department of Neurological Surgery.

Researchers examined the records of 251 patients who received CT scans within 24 hours of surgery at Loyola. They included 133 patients who received routine scans within seven hours of surgery and 108 patients who received routine scans between 8 hours and 24 hours after surgery. None of the routine scans predicted which patients

would need to return to the operating room.

Patients also received bedside neurological exams by physicians. In 10 cases, physicians detected serious problems, such as being slow to wake up, that warranted an urgent CT scan. Three of these urgent scans (30 percent) confirmed the patients' problems were serious enough to require a return to the [operating room](#). By comparison, 0 percent of the 241 routine CT scans predicted whether patients would have to return to the emergency room.

A normal [CT scan](#) given right after surgery might give a doctor a false sense of security, which could lead to less frequent monitoring and neurological exams. Of the 14 patients in the study who took a serious turn for the worse, 13 had had CT scans within four hours of surgery that were normal or showed only minor problems.

"Scanning technology is really good," O'rigitano said. "But applying it without a physician's input is not necessarily helpful."

Provided by Loyola University Health System

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