

On-call radiology residents accurately interpret off-hours neuro CT exams

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On-call radiology residents generally provide accurate preliminary interpretation of emergency neuroradiology CT scans after hours when attending neuroradiologist unavailable, according to results of a large study performed at a level I trauma center published in the December issue of the *Journal of the American College of Radiology (JACR)*.

The accuracy of image interpretation is the most essential element of diagnostic radiology. In most training programs, [radiology](#) residents provide preliminary interpretation of studies done outside of regular hours and on weekends when the attending neuroradiologist is not available. Referring clinicians, mostly emergency department (ED) physicians, trauma surgeons, and neurosurgeons, make treatment decisions and depend solely on the preliminary interpretation by on-call residents.

A quality assurance (QA) database of neuroradiology CT examinations was reviewed to compare preliminary interpretations by on-call residents with final analyses by attending neuroradiologists during a 12-month period. "Out of 6852 cases reviewed, there were 252 with disagreements," said Asako Miyakoshi, M.D., lead author of the study. "Of those, 226 were confirmed as resident errors, which included 171 that were significant. Among the 171 significant cases, 105 had no change in clinical management and 55 required some change," said Miyakoshi.

"Significant misses and misinterpretations may result in delayed

diagnosis, changed management, require additional tests, adversely affect patient outcomes or cause prolonged hospital stay," she said.

"Although the results of our study were positive, continued monitoring of the residents' performances is important to maintain or improve patient safety," said Miyakoshi.

Source: American College of Radiology

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