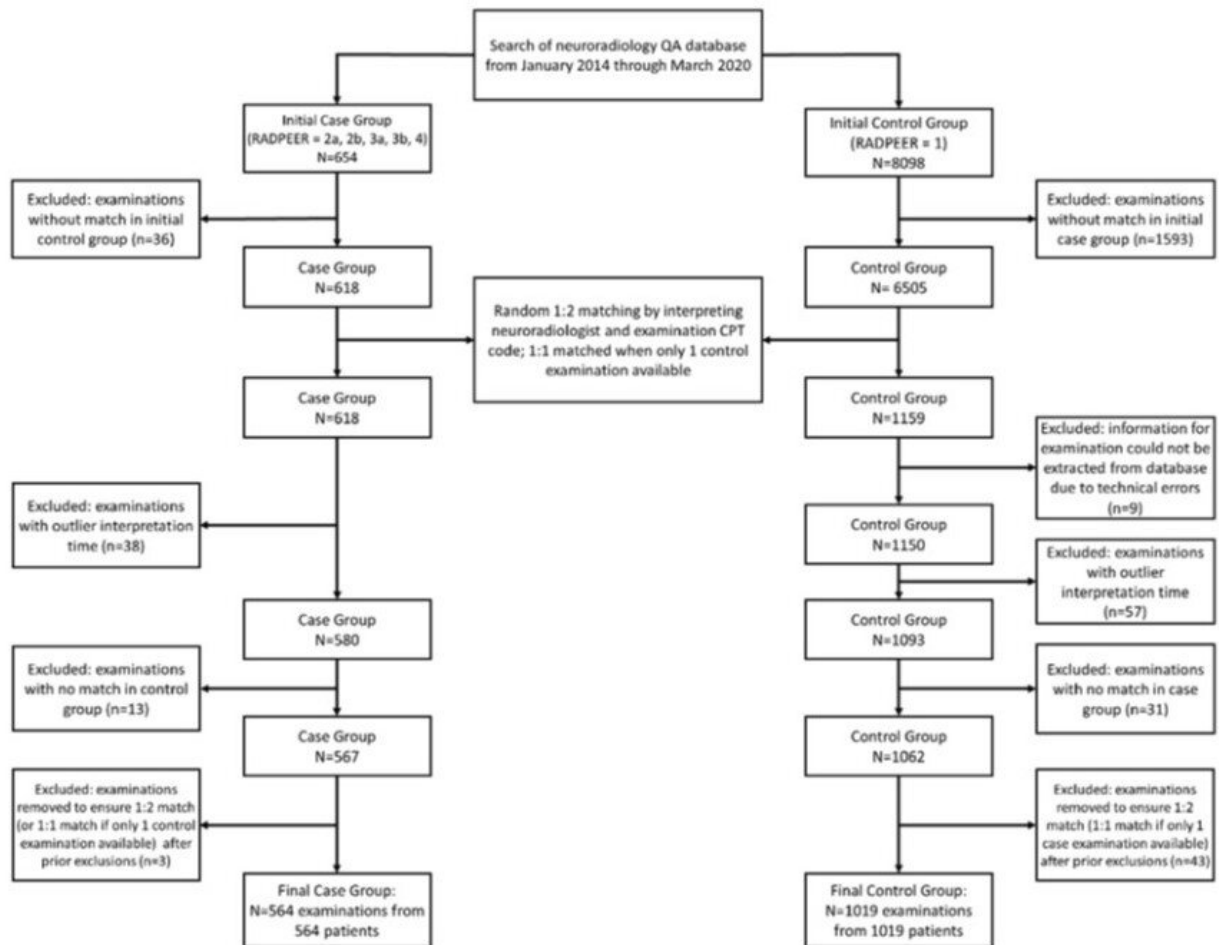


Diagnostic errors in neuroradiology—more time, higher volume, weekend work

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QA = quality assurance. Credit: ARRS/AJR

According to an accepted manuscript published in ARRS' own *American*

Journal of Roentgenology (AJR), diagnostic errors in neuroradiology were associated with longer interpretation times, higher shift volumes, and weekend interpretation.

Noting that their findings should be considered when designing workflow-related interventions that would reduce such interpretative errors, "the identified risk factors for diagnostic error in neuroradiology could be used to guide targeted quality improvement interventions," concluded corresponding author Vladimir Ivanovic, MD, from the Medical College of Wisconsin.

Ivanovic et al.'s retrospective case-control study used a large tertiary-care academic medical center's neuroradiology quality assurance database to evaluate CT and MRI examinations from January 2014 through March 2020 for which neuroradiologists had assigned RADPEER scores. Database searches were performed for examinations both without (RADPEER score 1) and with (RADPEER scores 2a, 2b, 3a, 3b, or 4) diagnostic error. For each examination with error, two examinations without error were randomly selected—unless only one examination could be identified—matched by interpreting radiologist and examination type, to form case and control groups, respectively. The authors of this *AJR* manuscript then used models to assess associations of diagnostic error with interpretation [time](#) (minutes since preceding report's completion), shift volume (examinations interpreted during shift), emergency/inpatient setting, weekend interpretation, and trainee participation in interpretation.

Ultimately, diagnostic error of neuroradiology examinations was independently associated with longer interpretation time (OR=1.18), higher shift volume (OR=1.27), and weekend interpretation (OR=1.69). Diagnostic error was not associated with emergency/inpatient setting or trainee participations. In subanalysis, diagnostic [error](#) was associated with [interpretation](#) time and shift [volume](#) on weekdays, though not on

weekends.

More information: Vladimir Ivanovic et al, Factors Associated With Neuroradiology Diagnostic Errors at a Large Tertiary-Care Academic Medical Center: A Case-Control Study, *American Journal of Roentgenology* (2023). [DOI: 10.2214/AJR.22.28925](https://doi.org/10.2214/AJR.22.28925)

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