

Simple assault and ground level fall do not require cervical spine CT

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Cervical spine CT examinations are unnecessary for emergency department (ED) patients who are a victim of "simple assault" or who have a "ground-level fall", unless the patient has a condition that predisposes the patient to spine fracture, a new study finds.

The study, conducted at Grady Memorial Hospital by researchers from the Department of Radiology and Imaging Sciences of the Emory University School of Medicine in Atlanta, found that out of 218 exams for simple assault, there were none that were positive, said Andrew Nicholson, MD, lead author of the study. In the series of 154 cervical spine CT scans that were obtained for ground-level fall, there was only one positive exam. This fracture was in a patient with [ankylosing spondylitis](#), a condition that is known to increase the risk of fracture of the spine.

"The criteria that exist for cervical spine imaging can be vague in certain circumstances and lead to many patients receiving this exam who likely don't need it," said Dr. Nicholson. "At our level 1 trauma center in the past 12 months, there were 5,046 cervical spine [CT examinations](#); in 2003, there were 2,091, an increase of 241%," he said.

"While this study looks at a relatively small subset of the CT exams ordered from the ED, we believe it can have a significant impact on radiation dose reduction at a population level," said Chad Holder, MD, senior author of the study. "These patients frequently have CT scans of the head and/or the face at the same time. The [radiation dose](#) to the

lenses of the eyes, thyroid and lymph nodes from cervical spine CT is not insignificant; reducing unnecessary radiation exposure to these organs is important," he said. "Additionally, overutilization of high-cost imaging exams has contributed to the increase in healthcare expenditures. Efforts to contain these two aspects should be led by radiologists, who can be a driving force to reduce overutilization," said Dr. Nicholson.

The study will be presented on May 3 at the 2012 American Roentgen Ray Society Annual Meeting in Vancouver, Canada.

Provided by American Roentgen Ray Society

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