Multiple cone-beam scans fall within acceptable ranges

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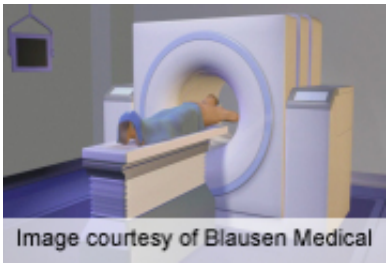
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The radiation dose imparted to patients undergoing multiple intraoperative lumbar single cone-beam computed tomography scans is within the dose range that patients receive during a single fan-beam abdominal scan, according to research published in the March 1 issue of *Spine*.

(HealthDay)—The radiation dose imparted to patients undergoing multiple intraoperative lumbar single cone-beam computed tomography (CT) scans is within the dose range that patients receive during a single fan-beam abdominal CT scan, according to research published in the March 1 issue of *Spine*.

Jeffrey Lange, M.D., of the University of Massachusetts Medical School in Worcester, and colleagues conducted an observational study to estimate the radiation exposure for patients undergoing cone-beam CT scans during several different thoracolumbar spinal surgery scenarios.

The researchers found that, for small patients requiring up to six cone-

beam CT scans during full-length procedures, the radiation dose ranged from 1 to 31 mSv, which is well within the range of published effective doses received by patients undergoing abdominal CT scans. For large patients, the radiation dose was also within the range, as long as the number of scans did not exceed three.

"Single cone-beam CT scans and most full-length posterior instrumented spinal procedures using O-arm in standard mode would likely impart a radiation dose within the range of those imparted by a single standard CT scan of the abdomen," the authors write. "Radiation dose increases with patient size, and the radiation dose received by larger patients as a result of more than three O-arm scans in standard mode may exceed the dose received during standard CT of the abdomen."

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More information: Abstract
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