

Researchers develop successful method for extracting and archiving patient radiation dose info

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Researchers have developed an efficient method for extracting and archiving CT radiation dose information that can enable providers to keep track of estimated radiation dose delivered to each patient at a given facility, help providers make more informed health care decisions and improve patient safety, according to a study in the November issue of the Journal of the American College of Radiology.

To facilitate access to and analysis of [radiation dose](#) information, researchers at the Hospital of the University of Pennsylvania in Philadelphia, PA, designed, implemented and validated RADIANCE, an automated extraction "pipeline" to query their institutional Picture Archiving and Communication System (PACS) and extract radiation dose data stored in the dose report image of every [CT examination](#) performed. "The "pipeline" can process both retrospective and prospective CT studies, in order to make dose information available for all CT examinations at our institution, as well as examinations acquired at other institutions provided for review or re-evaluation," said Tessa S. Cook, MD, lead author of the study.

"The goal of extracting and analyzing radiation dose information is to assess patient exposure to radiation from CT. By storing radiation dose information both retrospectively and prospectively, we can generate dose report cards indicating patients' estimated lifetime radiation dose for all studies obtained at our institution. This information is important not only

for involving the patient and his/her physicians in medical decision-making for future imaging studies, but also for dose monitoring, outlier analysis and protocol optimization to minimize unnecessary exposure to radiation," said Cook.

"Extracted radiation dose information can be used to perform a variety of analyses aimed at quality assurance and patient safety. The automated extraction "pipeline" for radiation dose information allows us to be more cognizant of radiation dose to our patients, thus resulting in improved patient care and management," she said.

More information: www.jacr.org

Provided by American College of Radiology

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