

## Prescribing Radiation Treatment by Primary Care Providers

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The computerized tomography (CT)-scan (or CAT-scan) technology is now a popular and common technology for almost all primary care physicians for detecting the precise nature and exact location of many medical ailments or injuries caused by traumatic events. Precision and readily available interpretations of CT-scan results prompt many physicians to prescribe them over alternatives such as ultrasound and/or magnetic resonance imaging (MRI) technologies which do not involve radiation exposure. Radiation doses in typical CT-scans far exceed those of traditional X-rays. For example, a single CT-scan procedure of noncardiac embolization is equivalent to over 1,300 chest x-rays in terms of radiation exposure. Further repeated use of multi-layer CT scan for same person by different physicians, without the knowledge of patients prior exposure of radiation from medical scan, have recently raised the concern in media, newspapers, as well as in scientific community, dubbing them “over-testing” and/or “over treatment.” Such concerns are even more critical, since physicians prescribe CT-scans generally without any recommendation of the radiation doses or number of layers of scanning to be administered.

Though many of these concerns do not emphasize benefits or reasons of screening or treatment with such doses of radiation exposure, there are some feasible avenues through which excess radiation

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exposures or “over-treatment” may be avoided (The Buffalo News: Opinion, Friday July 10, 2010). For example, patients as well as primary care physicians should be cognizant of past exposure doses administered, and discuss alternatives available at length to come to an informed decision. This will help in avoiding wrongful accusation of not providing state-of-art treatment, and should help in reducing a fear of law suites against health care providers. Modification of CT-scan instrumentation is another possibility, to block acutely harmful doses and to reduce scattered doses beyond the focus area of ailment. Regulatory changes can also be initiated so that primary care physicians can have access to past treatment of patients without the hurdles they face now for privacy reasons.

While at present, there are no FDA guidelines about the doses of radiation for medical scan except for mammography, the agency is planning to enforce the industries and doctors to set a standard dose of radiation for routine test, so that they can prescribe the dose along with the type of scanning they would recommend for a patient. This would set guidelines to keep the record of amount of radiation on an individual received from birth to death, forming a medical log of radiation exposure that can be shared by any physician treating a patient. Patients should also be more cognizant of the risk involved with excessive cumulative doses. They should ask their physicians whether and on which ground another scan would be justified and if there are other options available.

*(For a copy of the complete article, please send an email to [pcri@unthsc.edu](mailto:pcri@unthsc.edu)).*