Cardiac Imaging and Procedures May Pose Cancer Risk

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Although no single test is likely to be harmful, radiation from cardiac tests, dental and chest X-rays, mammograms and tests performed for other reasons can add up to quickly surpass the recommended lifetime medical radiation limit of 100 milliSieverts (mSv), according to a recent Harvard Heart Letter release.

One mSv measures exposure to enough high-energy electromagnetic radiation to deposit one joule (a unit of energy) into one kilogram of living tissue.

In particular, procedures that use ionizing radiation to diagnose and treat heart disease can potentially damage cells and increase the risk of cancer. For this reason, there's growing concern about CT or CAT scans because these tests are often used to get information about possible cardiovascular conditions.

"One or two CT scans over a lifetime is appropriate," says Warren Manning, MD, the chief of noninvasive cardiac imaging and testing at Beth Israel Deaconess Medical Center and a professor at Harvard Medical School. "But if you have a condition that requires repeated monitoring, a test that does not expose you to ionizing radiation may be preferred."

Cardiac tests that pose no radiation risk include ECG, echocardiography, ultrasound and MRI.

Radiologists in Harvard-affiliated hospitals, as well as those in many other leading medical centers, take precautions to minimize radiation exposure. This includes medical institutions to use protocols that allow technicians to perform cardiac CT scans with one-sixth the conventional radiation dose.

More than 90 percent of mostly African-American patients with high blood pressure (a.k.a. hypertension) tested positive for early heart disease. Click here to read more.

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