

Study fuels debate over routine medical tests

August 27 2009, By Bob Lamendola

A new study found a small but significant number of patients received dangerously high doses of radiation from medical imaging tests, putting them at higher risk for cancer -- sometimes needlessly.

CT scans and the commonly used heart stress tests carrying high doses of radiation were the biggest sources of exposure, but even low-dose X-rays add to the lifetime exposure to radiation that can cause tumors, researchers said in the study published in Thursday's [New England Journal of Medicine](#).

About 2.1 percent of patients in the study were exposed to more than 20 millisieverts of radiation yearly, the maximum annual dose recommended for [health care](#) employees, said the lead author, Dr. Reza Fazel, a cardiologist at Emory University. The study looked at adults under age 65, who likely have decades of life left for cancer to develop.

"It sounds small, but when you translate it to the whole adult population, that's an estimated 4 million people getting high doses of radiation every year," Fazel said. "That's not a trivial thing. These are young people."

The study adds more fuel to an ongoing debate over whether some doctors overprescribe imaging tests to guard against patient lawsuits and to make money. Past research has shown doctors with ownership in imaging centers order 27 percent to 54 percent more CT scans, MRIs and stress tests than other doctors do.

The new study examined the records of 952,000 people insured by

UnitedHealthcare in five areas -- South Florida, Orlando (134,000 patients), Dallas, Wisconsin and Arizona -- from 2005 through 2007. Favel said a surprising 69 percent of the patients got radiation from a medical test, with half of those under age 35.

The Florida patients underwent more imaging tests and larger doses of radiation, reflecting results from other studies.

The radiation risks rose in older patients. Among those ages 60 to 64, more than 6.6 percent of men and 5 percent of women were subjected to high doses. About one-third of those who got high doses were under age 50.

Studies have shown many doctors, and virtually all patients, do not understand the long-term risks from imaging tests and are unconcerned about using them, said Dr. Edward Dauer, a radiologist and associate professor at the University of Miami medical school. Dauer was not involved in the new study.

"Too many imaging tests are unnecessary," Dauer said. "We need to still continue with these procedures when they are clinically indicated, but eliminate the ones that are done for no good reason."

One example he cited: full-body CT scans marketed as preventive medicine.

Another example, according to Fazel, are doctors doing annual stress tests on healthy diabetics. While the scans may appear to be a good way to monitor for heart trouble, Fazel said research shows the tests do not prevent heart attacks or lengthen life.

"We need (more) research to figure out in which situations these imaging studies are helpful and in which they're not," Fazel said.

But a big proponent of stress tests and CT scans said doctors must be free to use the tests based on patients' needs. Dr. Seth Baum, a Boca Raton cardiologist, said scans have found silent but life-endangering heart disease in middle-aged men.

Baum said he does not dispute that some imaging tests are needless, but he urged moving cautiously to set hard rules about which [patients](#) should be denied them.

"You get a patient who does not meet the guidelines for a stress test and doesn't get it, and then drops dead," Baum said, "boy, are you in trouble."

What's more, the latest [CT scan](#) systems now use only a fraction of the [radiation](#) such scans used a few years ago, and are similar to lower-dose X-rays.

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