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NEWS

RSNA Press Release

CT Colonography Offers One-Stop Screening for Cancer and Osteoporosis

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At A Glance

- CT colonography may be used to screen for both colorectal cancer and osteoporosis.
- Bone mineral density measurements obtained with CT colonography were in agreement with dual-energy x-ray absorptiometry (DEXA) scores.
- Approximately 10 million Americans have osteoporosis, and 34 million are at risk for the disease.

CHICAGO — New research reveals that computed tomography (CT) colonography, also known as virtual colonoscopy, has the potential to screen for two diseases at once—colorectal cancer and osteoporosis, both of which commonly affect adults over age 50. Results of the study will be presented today at the annual meeting of the Radiological Society of North America (RSNA).

"With CT colonography, in addition to screening for colorectal cancer, we were able to identify patients with osteoporosis," said lead author Rizwan Aslam, M.B.Ch.B., assistant clinical professor of radiology at the University of California San Francisco.

CT colonography, an imaging study performed to detect pre-cancerous polyps in the large intestine, begins with an abdominal CT scan, which creates cross-sectional images of all structures in the abdomen including the spine. Computer software then arranges the CT images to create an interior or "fly-through" view of the colon.

Using the same CT images, another software application can create three-dimensional images of the spine, allowing bone mineral density to be measured. Low bone mineral density is usually associated with osteoporosis, a disease in which bones become fragile and more likely to break.

In the study conducted at the San Francisco Veterans Administration Hospital, the researchers evaluated the results of 35 patients who underwent CT colonography and bone mineral density testing with dual-energy x-ray absorptiometry (DEXA), a standard bone density screening tool. Patients included 30 males and five females ranging in age from 54 to 79.

The results of the study showed excellent agreement between the DEXA bone mineral density scores and the data generated through the CT colonography study.

"The bone density measurements obtained from CT colonography were comparable to the DEXA results," Dr. Aslam said. "Both tests identified osteoporotic bones."

Most physicians recommend that adults undergo CT colonography or conventional colonoscopy every seven to 10 years beginning at age 50.

"CT colonography isn't a replacement for DEXA testing, but it could be a way to screen more people for osteoporosis," Dr. Aslam said. "When an individual undergoes CT colonography, we can also obtain a bone density measurement with no additional radiation and at minimal cost."

According to the National Institute of Arthritis and Musculoskeletal and Skin Diseases, 10 million Americans over age 50 have osteoporosis. Approximately 34 million Americans are at risk due to low bone mass. Detecting osteoporosis early provides for early intervention and treatment.

Co-authors are Judy Yee, M.D., Alexander Keedy, B.S., Timothy Joseph, M.D., and Alex Chau, B.S.

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RSNA is an association of more than 42,000 radiologists, radiation oncologists, medical physicists and related scientists committed to excellence in patient care through education and research. The Society is based in Oak Brook, Ill. (RSNA.org)

Editor's note: The data in these releases may differ from those in the printed abstract and those actually presented at the meeting, as researchers continue to update their data right up until the meeting. To ensure you are using the most up-to-date information, please call the RSNA Newsroom at 1-312-949-3233.

For patient-friendly information on CT colonography and DEXA, visit RadiologyInfo.org.