

Imaging studies help detect underlying cancers in patients with neurologic symptoms

January 11 2010

A combined positron emission tomography-computed tomography (PET-CT) scan of the whole body appears to detect cancer in individuals with related neurologic complications more accurately than some other commonly used tests, according to a report posted online today that will appear in the March print issue of *Archives of Neurology*.

Paraneoplastic neurologic disorders occur in some people with [cancer](#)—including lung, breast or ovarian cancer—and may develop when cancer-fighting antibodies mistakenly attack cells in the nervous system. "In the assessment of patients with suspected paraneoplastic neurologic disorders, routine non-invasive oncologic evaluations may be unrevealing," the authors write as background information in the article. "These standard evaluations include [physical examination](#); computed tomography (CT) of the chest, abdomen and pelvis; mammography in women; and testicular ultrasonography and prostate-specific antigen testing in men." Cancers underlying paraneoplastic neurologic disorders are typically small, restricted to one site and are often not detected until autopsy.

Andrew McKeon, M.B., M.R.C.P.I., and colleagues at Mayo Clinic, Rochester, Minn., analyzed the medical records of 56 consecutive patients with suspected paraneoplastic [neurologic disorders](#) whose standard evaluations (including CT) did not reveal cancer. All of them underwent PET-CT at Mayo Clinic between 2005 and 2008.

PET-CT detected abnormalities suggestive of cancer in 22 of the

patients (39 percent), of whom 10 (18 percent) had cancer diagnoses confirmed by biopsy or another method. Of these cancers, two were in the thyroid, one was in the tonsil, three were in the lungs, one was in the colon and three were cancerous lymph nodes with unknown primary cancer sites. Nine of the ten were early-stage cancers, and detection facilitated early treatment. Cancer remission was reported in seven patients and improvement in neurologic symptoms in five patients after a median (midpoint) of 11 months of follow-up.

Before their PET-CT, patients underwent a median of three other screening tests; the most common was CT of the chest, abdomen and pelvis. "However, four of the 10 detected cancers using PET-CT were outside the anatomical scope of CT of the chest, abdomen and pelvis (thyroid, two; cervical lymph node, one; and palatine tonsil, one)," the authors write. "The other six detected cancers were too small to be detected by appropriate regional CT (lung, four; axillary lymph node, one; and colon, one). Clearly, CT alone is not sufficient to exclude cancer in cases with a high index of suspicion for cancer."

Some types of cancer, including bladder and kidney cancers, are more difficult to detect by PET-CT, the authors note. "Recognizing the limitations of PET-CT, we favor this modality for initial oncologic evaluation of patients in whom a paraneoplastic neurologic disorder is strongly suspected," they conclude. "Elimination of whole-body imaging with CT alone before further imaging with PET-CT could reduce radiation exposure and the total financial burden of testing."

More information: Arch Neurol. 2010;67[3];
[doi:10.1001/archneurol.2009.336](https://doi.org/10.1001/archneurol.2009.336)

Provided by JAMA and Archives Journals

Citation: Imaging studies help detect underlying cancers in patients with neurologic symptoms (2010, January 11) retrieved 24 April 2024 from <https://medicalxpress.com/news/2010-01-imaging-underlying-cancers-patients-neurologic.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.