

Trio of studies support use of PET/CT scans as prostate cancer staging tool

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Recent studies have suggested that C-11 choline positron emission tomography/computerized tomography (PET/CT) scans can be utilized as a staging and potentially therapeutic tool in prostate cancer. The results of three studies, released today during a meeting of the North Central Section of the American Urological Association, validate findings in Europe and expand the potential use of C-11 choline PET scans.

One study found that C-11 choline PET/CT scans can be used as a staging tool rather than multiple x-rays, but is not necessarily better. Two additional studies support the favorable claims made in recent medical literature about the use of PET scans to evaluate patients with recurrent [prostate cancer](#). These findings are important because distinguishing localized [disease recurrence](#) from systemic recurrence is a vital step in optimizing treatment following primary [treatment failure](#).

"Taken together, the three studies presented today represent an important validation of the C-11 choline PET/[CT scan](#) as a staging tool for patients with prostate cancer," says R. Jeffrey Karnes, M.D., senior author of all three papers. "We believe the use of these scans can improve the staging and treatment of this common form of cancer, while potentially reducing the cost of delivering the best possible care."

Positron emission tomography is an imaging test that uses a small amount of radioactive material to reveal how tissues and organs are functioning. A C-11 choline PET scan involves the injection into a vein

of a small amount of C-11 choline, a radioactive form of the vitamin choline. Clinicians then use a scanner and computer to make detailed pictures of areas where the C-11 choline collects. Since [cancer cells](#) take up more C-11 choline than normal cells, the pictures can be used to find cancer in the body.

Summary of the Three Studies

"Initial Staging for High-Risk Prostate Cancer: Is there a Role for C-11 Choline PET Scan?" – The findings suggest that C11-choline PET is an accurate diagnostic tool when used as the initial staging modality prior to definitive treatment and could potentially eliminate the need for CT and/or bone scans.

"Detection of Consolidated Disease Recurrences of Prostate Cancer by C-11 Choline PET Scan: Results Confirmed by Surgical Resection" – This study found that a C-11 choline PET scan is an accurate diagnostic tool for detecting localized disease recurrences that, in select cases, are suitable for salvage surgical resection.

"Operational Characteristics of C-11 Choline [PET Scan](#) for Prostate Cancer Patients with Biochemical Recurrence Following Initial Treatment" – The operational performance of C11-choline PET for evaluating patients with recurrent prostate cancer supports the favorable claims regarding this technology. The use of C-11-choline PET substantially enhances the rate of prostate cancer lesion detection by approximately 30% beyond what can be garnered using conventional imaging technologies.

Provided by Mayo Clinic

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