



The PET Experts

□ ABSTRACT

Impact of PET Staging in Limited-Stage Small-Cell Lung Cancer

Xanthopoulos, Eric P, et al. *Journal of Thoracic Oncology*. 8(7):899-905, July 2013.

Introduction: Although positron emission tomography computed tomography (PET-CT) has been widely used for small-cell lung cancer (SCLC) staging, no study has examined the clinical impact of PET staging in limited-stage (LS) SCLC.

Methods: We identified patients with LS-SCLC treated definitively with concurrent chemoradiation. Outcomes were assessed using the Kaplan–Meier approach, Cox regression, and competing risks method.

Results: We treated 54 consecutive LS-SCLC patients with concurrent chemoradiation from January 2002 to August 2010. Forty underwent PET, 14 did not, and all underwent thoracoabdominopelvic CT and magnetic resonance imaging neuroimaging. Most patient characteristics were balanced between the comparison groups, including age, race, sex, bone scanning, median dosage, and performance status. **More number of PET-staged patients presented with nodal metastases ($p = 0.05$).** Median follow-up was similar for PET-staged and non–PET-staged patients ($p = 0.59$). **Median overall survival from diagnosis in PET-staged patients was 32 versus 17 months in patients staged without PET ($p = 0.03$), and 3-year survival was 47% versus 19%.** Median time-to-distant failure was 29 versus 12 months ($p = 0.04$); median time-to-local failure was not reached versus 16 months ($p = 0.04$). On multivariable analysis, PET staging (odds ratio [OR] = 0.24; $p = 0.04$), performance status (OR = 1.89; $p = 0.05$), and N-stage (OR = 4.94; $p < 0.01$) were associated with survival.

Conclusion: **LS-SCLC patients staged with PET exhibited improved disease control and survival when compared with non–PET-staged LS-SCLC patients.** Improved staging accuracy and better identification of intrathoracic disease may explain these findings, underscoring the value of PET-CT in these patients.

News article below...



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PET/CT enhances care for lung cancer patients

By AuntMinnie.com staff writers

June 27, 2013 -- PET/CT improves staging accuracy and intrathoracic disease identification, which can lead to improved clinical outcomes for patients with limited-stage small-cell lung cancer (LS-SCLC), according to a study published in the July issue of the *Journal of Thoracic Oncology*.

Researchers led by Dr. Eric Xanthopoulos, a radiation oncology intern at the University of Pennsylvania, found that pretreatment PET staging of limited-stage small-cell lung cancer was associated with improved survival.

In the study, 54 LS-SCLC patients were treated with concurrent chemoradiation between January 2002 and August 2010. Of this group, 40 received PET scans, and all 54 patients underwent CT and MRI, according to the authors.

PET-staged patients had a three-year overall survival rate of 47%, compared with 19% for those not staged with PET. Median overall survival from diagnosis in PET-staged patients was 32 months, compared with 17 months for patients staged without PET ([*JTO*](#), Vol. 8:7, pp. 899-905).

"LS-SCLC patients staged with PET exhibited improved disease control and survival when compared with non-PET-staged LS-SCLC patients," the authors concluded. "Improved staging accuracy and better identification of intrathoracic disease may explain these findings, underscoring the value of PET/CT in these patients."