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Dear Distinguished Panel Members:

On behalf of the Medical Imaging & Technology Alliance, I respectfully request that the NCCN Panel on Small Cell Lung Cancer (SCLC) review the enclosed data for modification of the current guidelines regarding the use of <sup>18</sup>F-Fluorodeoxyglucose Positron Emission Tomography with Computed Tomography (FDG PET/CT) in the evaluation of small cell lung cancer. Currently, the guidelines recommend initial imaging evaluation with intravenous contrast enhanced CT of the chest and abdomen (liver/adrenal glands) and MRI brain with intravenous contrast (CT brain with intravenous contrast if MRI not possible) for staging purposes. FDG PET/CT is only advocated in patients with “suspected limited stage disease” or in patients with limited stage disease that is surgically resectable. We request the guidelines be changed to recommend FDG PET/CT in the initial staging evaluation of all patients with newly diagnosed small cell lung cancer in conjunction with MRI brain.

Podoloff DA et al (1) of the NCCN Task Force determined the body of evidence supporting the use of staging FDG PET/CT was limited by small and heterogeneous patient populations (18-120 patients) and concluded more rigorous prospective studies were need to determine the overall efficacy of FDG PET/CT in patients with small cell lung cancer. However, Hillner BE et al (2) reported that based on 2,983 scans performed on patients with SCLC within the National Oncology PET Registry (NOPR), 41.2% of patients had a change in management. More specifically, in the initial staging setting, 1,082 studies were performed with 43.3% of cases resulting in a change in management. The data from NOPR justified the universal reimbursement by the Centers for Medicare & Medicaid Services (CMS) for initial tumor evaluation in patients with SCLC (3). A large systematic review in the Australian setting that included 1,663 patients (4) supported the NOPR body of evidence and concluded FDG PET/CT compared to conventional staging altered management in at least 28% of patients. Changes in management often reflect either upstaging or downstaging and/or changes to radiotherapy portal or avoidance of unnecessary radiotherapy entirely (5-12). This includes a more recent review by Kalemkerian GP et al (11) published within the Journal of the National Comprehensive Cancer Network in 2013 that may not have been available for review at the time the current guidelines were written. This comprehensive review concluded the use of FDG PET/CT, in addition to CT chest and abdomen and either contrast enhanced MRI or CT of the brain, seems to improve overall accuracy of initial staging and radiotherapy planning in patients with SCLC. FDG PET/CT is not to replace contrast enhanced MRI of the brain for the detection of intracranial metastasis.

The following articles are submitted in support of this proposed change. We would like to acknowledge the contributions of the NCCN panel members who also are coauthors or co-contributors to some of these publications. In conclusion, we believe there is ample evidence to include FDG PET/CT in the initial staging evaluation of all patients with newly diagnosed SCLC. At a minimum, it should be mentioned within the guidelines FDG PET/CT can be used in lieu of intravenous contrast enhanced CT chest and abdomen in those patients with intravenous contrast allergy or poor renal function precluding the safe administration of iodinated contrast material similar to the mention of utilizing contrast enhance CT in lieu of MRI in those patients that cannot have MRI.

Respectfully,

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