

The American College of Chest Physicians proposed that patients with lung cancer be separated into four categories with respect to the radiographic characteristics of the primary tumor and the lymph nodes based on CT scan findings.

Group A: patients with mediastinal tumor infiltration.

- Tissue diagnosis is necessary, but mediastinal involvement is implied, and thus a mediastinal staging procedure is not indicated.

Group B: patients with mediastinal node enlargement by CT or PET positive.

- EBUS tissue confirmation of their lymph nodes is needed.
- Tissue sampling is still required to confirm PET scan-positive findings. False positives are seen in patients with active infection and inflammation.

Groups C: patients with normal mediastinal nodes on CT or PET scan with a central tumor OR suspected N1 disease on CT scan or PET scan (hilar, interlobar nodes).

- EBUS tissue confirmation is needed

Group D: patients with a peripheral <3cm clinical stage 1 tumor with normal mediastinal, hilar, and interlobar nodes on PET-CT scan.

- EBUS staging prior to surgery is not recommended.
- EBUS tissue diagnosis is needed for nonsurgical candidates who will undergo stereotactic body radiation therapy (SBRT).

PET scanning is not a definitive test. Lymph node sampling improves staging accuracy beyond the ability of PET scanning

- In the absence of M1 extrathoracic disease, a PET scan showing hypermetabolism in the mediastinal nodes requires confirmation.
- If the PET scan is negative, tissue confirmation is recommended prior to surgery in any of the following circumstances
 - Presence of central tumor within the proximal one-third of the hemithorax regardless of size.
 - Tumor size is >3 cm regardless of localization (peripheral vs central).
 - The tumor has low maximum standard uptake value.
 - Discrete mediastinal lymph nodes is seen in CT scan.
 - There is suspicious for N1 disease (hilar or interlobar lymph nodes).

