1. CT, MRI

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Lung cancer is staged according to the traditional TNM classification. Stages 3B and 4 are considered unresectable. The role of imaging is to provide accurate staging and to help plan surgical approach. Computed tomography is the most powerful imaging tool in the staging of bronchogenic carcinoma. However, it has been shown to have significant limitations both in the evaluation of mediastinal and chest wall involvement and the determination of mediastinal nodal metastasis. MRI provides some slight improvement in the evaluation of the T-factor because of its ability to more accurately separate T3 resectable lesions from T4 lesions. Recent studies have shown the sensitivity and specificity of CT in the detection of mediastinal nodal masses as low as the 60–70% range. Although CT does not replace mediastinoscopy for mediastinal staging, it does provide a helpful road map for the surgeon, and it also helps to identify enlarged nodes that are beyond the reach of the mediastinoscope. The use of imaging modalities in the evaluation of distant metastases is somewhat controversial. However, in the absence of any clinical signs, symptoms or abnormal biochemical tests, the use of extensive imaging modalities to screen for metastatic disease is not worthwhile. Possible exceptions would include adenocarcinoma, particularly if nodal metastases are present in the mediastinum. MR may be useful in the detection of brain metastases in such situations.

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