TABLE 56-3 TNM STAGING SYSTEM FOR LUNG CANCER (2010)

T (PRIMARY TUMOR)	
TX	Primary tumor cannot be assessed, or tumor proven by the presence of malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy
T0	No evidence of primary tumor
Tis	Carcinoma in situ
T1	Tumor ≤3 cm in greatest dimension, surrounded by lung or visceral pleura, without bronchoscopic evidence of invasion more proximal than the lobar bronchus (i.e., not in the main bronchus)*
T1a	Tumor ≤2 cm in greatest dimension
T1b	Tumor >2 cm but ≤3 cm in greatest dimension
T2	Tumor >3 cm but ≤7 cm or tumor with any of the following features (T2 tumors with these features are classified T2a if ≤5 cm): Involves main bronchus, ≥2 cm distal to the carina Invades visceral pleura Associated with atelectasis or obstructive pneumonitis that extends to the hilar region but does not involve the entire lung
T2a	Tumor >3 cm but ≤5 cm in greatest dimension
T2b	Tumor >5 cm but ≤7 cm in greatest dimension
T3	Tumor >7 cm or one that directly invades any of the following: chest wall (including superior sulcus tumors), diaphragm, phrenic nerve, mediastinal pleura, parietal pericardium; or tumor in the main bronchus (<2 cm distal to the carina* but without involvement of the carina; or associated atelectasis or obstructive pneumonitis of the entire lung or separate tumor nodule(s) in the same lobe
T4	Tumor of any size that invades any of the following: mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, carina, separate tumor nodule(s) in a different ipsilateral lobe
N (REGIONAL LYMPH NODES)	
NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastases
N1	Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involvement by direct extension
N2	Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
N3	Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene, or supraclavicular lymph node(s)
M (DISTANT METASTASIS)	
MX	Distant metastasis cannot be assessed
M0	No distant metastasis
M1	Distant metastasis
M1a	Separate tumor nodule(s) in a contralateral lobe; tumor with pleural nodules or malignant pleural (or pericardial) effusion†
M1b	Distant metastasis

From Edge S, Byrd DR, Compton CC, et al, editors: AJCC Cancer Staging Manual, ed 7, New York, 2010, Springer.

*The uncommon superficial spreading tumor of any size with its invasive component limited to the bronchial wall, which may extend proximally to the main bronchus, is also classified as T1a.

†Most pleural (and pericardial) effusions with lung cancer are due to tumor. In a few patients, however, multiple cytopathologic examinations of pleural (pericardial) fluid are negative for tumor, and the fluid is nonbloody and is not an exudate. Where these elements and clinical judgment dictate the effusion is not related to the tumor, the effusion should be excluded as a staging element and the patient should be classified as M0.

without definite imaging evidence of lymph node involvement before definitive resection of the lung cancer. PET scanning is limited in its ability to detect brain lesions, and magnetic resonance imaging (MRI) of the brain with intravenous contrast (or CT scanning if MRI cannot be done) should be performed if brain metastasis is suspected. Bone scans are useful for suspected symptomatic bony metastases.

Metastatic disease is now subdivided into those lesions that occurred with "local intrathoracic spread" (M1a)—malignant pleural/pericardial effusion or separate tumor nodule(s) in the contralateral lung—and those that already have "disseminated (extrathoracic) disease" (M1b) in liver, bone, brain, or adrenal gland. M1a disease has a better prognosis than M1b disease.

TREATMENT

Prevention by avoiding or stopping smoking is a responsibility of all physicians (Chapter 54). The United States Preventive Services Task Force (USPSTF) supports lung cancer screening for the high-risk populations: current and former smokers, aged 55 to 80 years, with a smoking history equivalent to 1 pack per day for 30 years or 2 packs per day for 15 years. The recommendation for screening includes those who have quit within the past 15 years.

Small Cell Lung Cancer

SCLCs can occasionally be resected if no evidence of metastasis is found, but most SCLCs are treated with chemotherapy for systemic disease. SCLC is staged as limited-stage, for which definitive treatment using combination chemoradiation with curative intent is pursued, and extensive-stage, for which chemotherapy with palliative intent is the mainstay of treatment. Combinations of cisplatin/carboplatin and etoposide constitute the standard front-line chemotherapeutic regimen. Topotecan is used for salvage therapy during disease relapse. SCLC responses to both chemotherapy and radiation therapy and long-term survival are possible. However, relapse with progressive therapeutic resistance is usual despite initial treatment response. Prophylactic cranial irradiation enhances overall survival in both limited-stage disease after completion of chemoradiation and extensive disease with response to chemotherapy.

Non–Small Cell Lung Cancer

Early-Stage Disease (Stages I and II)

Surgery is potentially curative for early-stage NSCLC and is indicated for patients with stage I or II disease who are eligible as operative candidates. Lobectomy (or greater) is considered