## 516 TABLE 107-6 SEVENTH EDITION TNM STAGING SYSTEMS FOR NON-SMALL-CELL LUNG CANCER

TIVIN Stagi	ng System for Lung Cancer (7th Edition)
Primary Tu	mor (T)
Τ1	Tumor ≤3 cm diameter, surrounded by lung or visceral pleura, without invasion more proximal than lobar bronchus
T1a	Tumor ≤2 cm in diameter
T1b	Tumor >2 cm but $\leq$ 3 cm in diameter
T2	Tumor >3 cm but $\leq$ 7 cm, or tumor with any of the following features:
	Involves main bronchus, ≥2 cm distal to 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
T2b	Tumor >5 cm but ≤7 cm
Т3	Tumor >7 cm or any of the following:
	Directly invades any of the following: chest wall, dia- phragm, phrenic nerve, mediastinal pleura, parietal pericardium, main bronchus <2 cm from carina (without involvement of carina)
	Atelectasis or obstructive pneumonitis of the entire lung
	Separate tumor nodules in the same lobe
T4	Tumor of any size that invades the mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, carina, or with separate tumor nodules in a different ipsilateral lobe
Regional Ly	ymph Nodes (N)
N0	No regional lymph node metastases
N1	Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involve- ment 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)
Distant Me	tastasis (M)
MO	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 (in extrathoracic organs)
Abbreviation:	TNM, tumor-node-metastasis.

Source: Reproduced with permission from P Goldstraw et al: J Thorac Oncol 2:706, 2007.

## TABLE 107-7 SEVENTH EDITION TNM STAGING SYSTEMS FOR NON-SMALL-CELL LUNG CANCER

Stage groupings			
Stage IA	T1a-T1b	NO	MO
Stage IB	T2a	NO	MO
Stage IIA	T1a,T1b,T2a	N1	MO
	T2b	NO	MO
Stage IIB	T2b	N1	MO
	Т3	NO	MO
Stage IIIA	T1a,T1b,T2a,T2b	N2	MO
	Т3	N1,N2	MO
	T4	N0,N1	MO
Stage IIIB	T4	N2	MO
	Any T	N3	MO
Stage IV	Any T	Any N	M1a or M1b

Abbreviation: TNM, tumor-node-metastasis.

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ABLE 107-8	FIVE-YEAR SURVIVAL BY STAGE AND TNM CLASSIFICATION OF
	NON-SMALL-CELL LUNG CANCER (SEVENTH EDITION)

Stage	TNM Seventh Edition	5-Year Survival (%)
IA	T1a-T1bN0M0	73%
IB	T2aN0M0	58%
IIA	T1a-T2aN1M0 T2bN0M0	46%
IIB	T2bN1M0 T3N0M0	36%
IIIA	T1a-T3N2M0 T3N1M0 T4N0-1M0	24%
IIIB	T4N2M0 T1a-T4N3M0	9%
IV	Any T Any N plus M1a or M1b	13%

Abbreviation: TNM, tumor-node-metastasis.

usually a nonsolid nodule and tends to be slightly more opaque than AAH. MIA is mainly solid, usually with a small (<5 mm) central solid component. However, overlap exists among the imaging features of the preinvasive and minimally invasive lesions in the lung adenocarcinoma spectrum. Lepidic adenocarcinomas are usually solid but may be nonsolid. Likewise, the small invasive adenocarcinomas also are usually solid but may exhibit a small nonsolid component.

## **MANAGEMENT OF STAGES I AND II NSCLC**

Surgical Resection of Stage I and II NSCLC Surgical resection, ideally by an experienced thoracic surgeon, is the treatment of choice for patients with clinical stage I and II NSCLC who are able to tolerate the procedure. Operative mortality rates for patients resected by thoracic or cardiothoracic surgeons are lower compared to general surgeons. Moreover, survival rates are higher in patients who undergo resection in facilities with a high surgical volume compared to those performing fewer than 70 procedures per year, even though the higher-volume facilities often serve older and less socioeconomic advantaged populations. The improvement in survival is most evident in the immediate postoperative period. The extent of resection is a matter of surgical judgment based on findings at exploration. In patients with stage IA NSCLC, lobectomy is superior to wedge resection with respect to rates of local recurrence. There is also a trend toward improvement in overall survival. In patients with comorbidities, compromised pulmonary reserve, and small peripheral lesions, a limited resection, wedge resection, and segmentectomy (potentially by video-assisted thoracoscopic surgery) may be reasonable surgical option. Pneumonectomy is reserved for patients with central tumors and should be performed only in

TABLE 107-9	ASSESSMENT OF RISK OF CANCER IN PATIENTS WITH SOLITARY PULMONARY NODULES

	Risk			
Variable	Low	Intermediate	High	
Diameter (cm)	<1.5	1.5–2.2	≥2.3	
Age (years)	<45	45–60	>60	
Smoking status	Never smoker	Current smoker (<20 cigarettes/d)	Current smoker (>20 cigarettes/d)	
Smoking cessation status	Quit ≥7 years ago or quit	Quit <7 years ago	Never quit	
Characteristics of nodule margins	Smooth	Scalloped	Corona radiata or spiculated	

Source: Reproduced with permission from D Ost et al: N Engl J Med 348:2535, 2003.