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Table 5-1. Histological Classification of Malignant Mesothelioma

Epithelial

- Tubulopapillary
- Solid variant
- Adenomatoid
- Small cell
- Deciduoid
- Adenoidcystic
- Pleomorphic
- Well differentiated papillary*

Sarcomatoid

- Fibrosarcomatoid
- Chondrosarcomatoid
- Osteosarcomatoid
- Malignant fibrous histiocyoma-like
- Lymphohistiocytoid
- Desmoplastic

Biphasic (mixed)

- This variant is considered to be a tumor of low grade malignant potential

Table 5-2. Expected Immunohistochemical Staining Results for Mesothelioma vs. Adenocarcinoma

<i>Antibody</i>	<i>Mesothelioma</i>	<i>Adenocarcinoma</i>
Keratin cocktail	Pos.	Pos.
Cytokeratins 5/6	Pos.	Neg. ^a
Cytokeratin 7	Pos.	Pos/Neg ^b
Cytokeratin 20	Neg	Pos/Neg ^b
CEA	Neg.	Pos.
BerEP4	Neg.	Pos.
LeuM1 (CD15)	Neg.	Pos.
B72.3	Neg.	Pos.
EMA	Pos.	Pos. ^c
HMFG-2	Pos.	Pos. ^c
Calretinin	Pos. (N)	Neg.
Thrombomodulin	Pos.	Neg.
HBME-1	Pos.	Neg.
E-cadherin	Neg.	Pos.
N-cadherin	Pos.	Neg.
TTF-1	Neg.	Pos. (N)

a. Many adenocarcinomas of extrapulmonary origin may stain positive. See Ref. 277.

b. Varying combinations of CK7 and CK20 positivity are seen in adenocarcinomas, depending upon primary site. See Ref. 208.

c. Distribution of staining is primarily membranous in mesothelioma, cytoplasmic in adenocarcinoma.

Pos.= positive staining; Neg.= negative staining; N= nuclear staining.

Table 5-3. Suggested Immunohistochemical Panel for Mesothelioma Diagnosis

	<u>Epithelial or Biphasic</u>		<u>Sarcomatoid</u>
	<i>Pleural</i>	<i>Peritoneal</i>	
1 ST LINE	Cytokeratin cocktail	Cytokeratin cocktail	Cytokeratin
	Calretinin	Calretinin	cocktail
	Cytokeratins 5/6	Cytokeratins 5/6	Vimentin
	CEA	BerEP4	
	TTF-1	B72.3	
2 ND LINE	LeuM1	LeuM1	
	B72.3	Thrombomodulin	
	BerEP4	HBME-1	

CEA = carcinoembryonic antigen; TTF-1 = thyroid transcription factor-1. See text for details.

Table 5-4. Revised Staging System Proposed by Sugarbaker et al. Brigham/Dana-Farber Cancer Institute	
Stage	Definition
I	Disease completely resected within the capsule of the parietal pleura without adenopathy; ipsilateral pleura, lung, pericardium, diaphragm, or chest wall disease limited to previous biopsy sites
II	All of stage I with positive resection margins and/or intrapleural adenopathy
III	Local extension into the chest wall or mediastinum; into the heart or through the diaphragm or peritoneum; or with extrapleural lymph node involvement
IV	Distant metastatic disease