

- Adenocarcinoma (38%)
- Squamous cell carcinoma (20%)
- Small cell carcinoma (14%)
- Large cell carcinoma (3%)
- Other (25%)

There may be mixtures of histologic patterns, even in the same cancer. Thus, combinations of squamous cell carcinoma and adenocarcinoma or small-cell and squamous cell carcinoma occur in about 10% of patients.

The incidence of adenocarcinoma has increased significantly in the last 2 decades. Adenocarcinoma is now the most common form of lung cancer in women and, in many studies, men as well. The basis for this change is unclear. A possible factor is the increase in women smokers, but this only highlights our lack of knowledge about why women tend to develop more adenocarcinomas. One possibility is that changes in cigarette type (filter tips, lower tar and nicotine) have caused smokers to inhale more deeply and thereby expose more peripheral airways and cells (with a predilection to adenocarcinoma) to carcinogens.

MORPHOLOGY

Lung carcinomas may arise in the peripheral lung (more often adenocarcinomas) or in the central/hilar region (more often squamous cell carcinomas), sometimes in association with recognizable precursor lesions.

Atypical adenomatous hyperplasia is a small lesion (≤ 5 mm) characterized by dysplastic pneumocytes lining alveolar walls that are mildly fibrotic (Fig. 15-41). It can be single or multiple and can be in the lung adjacent to invasive tumor or away from it.

Adenocarcinoma in situ (formerly called bronchioloalveolar carcinoma) is a lesion that is less than 3 cm and is composed entirely of dysplastic cells growing along preexisting alveolar septae. The cells have more dysplasia than atypical adenomatous hyperplasia and may or may not have intracellular mucin (mucinous and nonmucinous, respectively) (Fig. 15-42).

Adenocarcinoma is an invasive malignant epithelial tumor with glandular differentiation or mucin production by the tumor cells. Adenocarcinomas grow in various patterns, including acinar, lepidic, papillary, micropapillary, and solid with mucin formation. Compared with squamous cell cancers, the lesions are usually more peripherally located and tend to be smaller. They vary histologically from well-differentiated tumors with obvious glandular elements (Fig. 15-43A) to papillary lesions

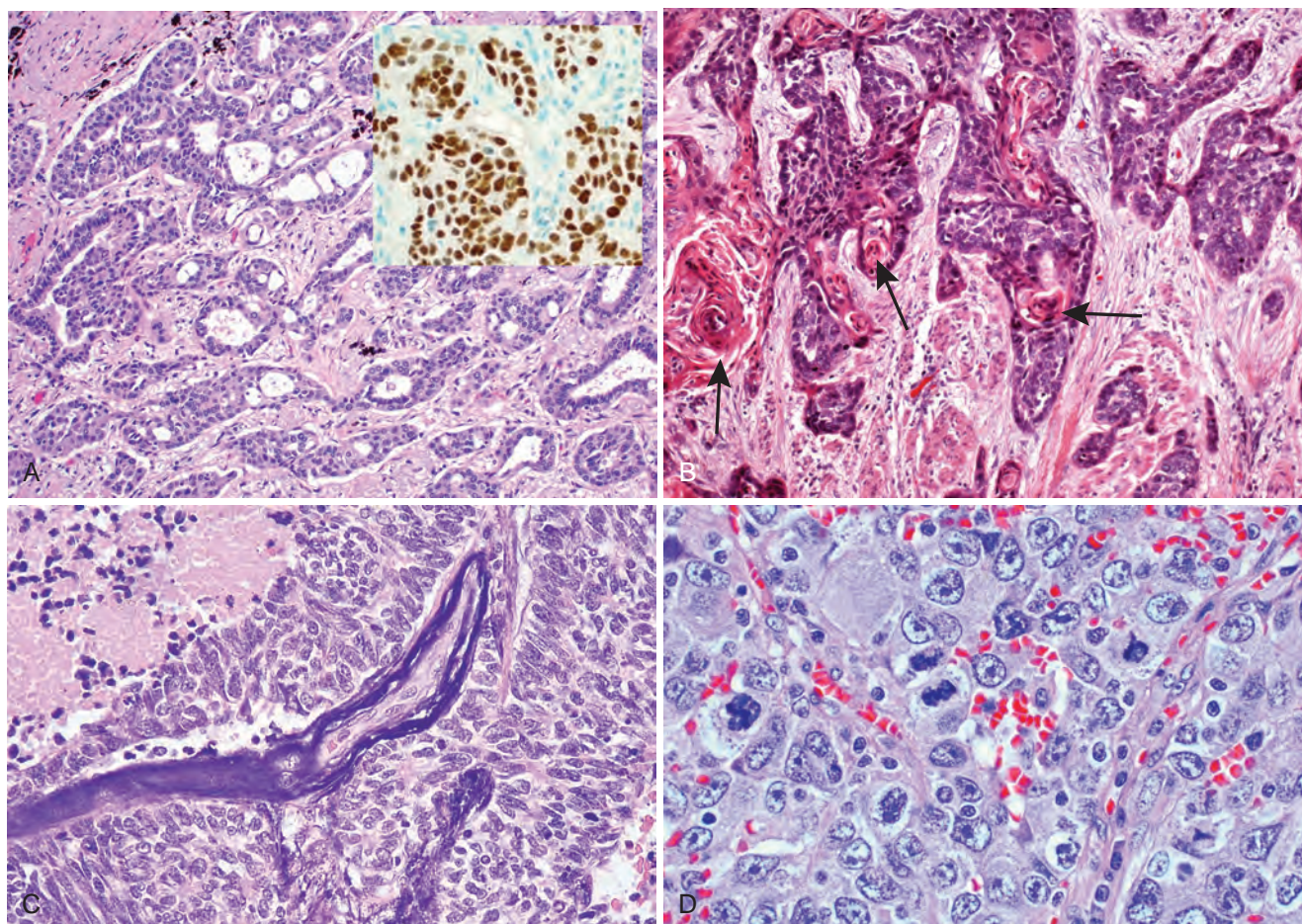


Figure 15-43 Histologic variants of lung carcinoma. **A**, Gland-forming adenocarcinoma; *inset* shows thyroid transcription factor 1 (TTF-1) expression, as detected by immunohistochemistry. **B**, Well-differentiated squamous cell carcinoma showing keratinization (*arrow*). **C**, Small cell carcinoma. There are islands of small deeply basophilic cells and areas of necrosis. **D**, Large cell carcinoma. The tumor cells are pleomorphic and show no evidence of squamous or glandular differentiation.