

CLASSIFICATION OF BRONCHOSCOPIC VIEW OF LUNG CANCER

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In accordance with tumor growth patterns, macroscopic types of primary tumor and secondary changes should be recorded according to comprehensive criteria : (1) Mucosal, (2) Submucosal, and (3) Extramural invasion types. The types have been defined according to comparison with normal bronchoscopic findings.

1. **Mucosal invasion type** shows tumor growth mainly in the mucosal epithelium, and subclassified as (a) thickened type, (b) nodular type, and (c) polypoid type. These types are usually observed in hilar typed squamous cell carcinoma.
2. **Submucosal invasion type** shows tumor growth in a layer deeper than the lamina propria and is mainly observed in peripheral adenocarcinoma, squamous cell carcinoma, large cell carcinoma, and small cell carcinoma.
3. **Extramural invasion type** shows no bronchoscopic finding.

CLASSIFICATION OF BRONCHOSCOPIC FINDINGS IN NON-EARLY LUNG CANCER

Bronchoscopic findings of non-early lung cancer are grossly classified (I) Direct changes (changes due to primary tumor) and (II) Indirect changes (secondary changes due to tumor). These changes include (a) Irregularity (b) Dilatation of blood vessels (c) Necrosis (d) Ulceration (e) Reddening (f) Bleeding (g) Narrowing (h) Obstruction (i) Hyperplasia or atrophy of the mucosal wall (j) Swelling (Edema) (k) Indistinct cartilage ring (l) Dullness or obtuseness of the bifurcation. (Examples of recording: I-a, II-k). Combinations of some types may be seen.

BRONCHOSCOPY OF EARLY LUNG CANCER CLINICAL CRITERIA

Plain chest X-ray films, tomography and CT scans are normal. No lymph node metastasis or distant metastasis is observed in routine clinical screening., such as chest-Xray, CT scans, abdominal CT, abdominal echo, brain CT, or bone scintigraphy.

Bronchoscopic criteria

Location in subsegmental or more proximal bronchi or trachea. The peripheral margin of the tumor is visible bronchoscopically. The tumor size is less than 2 cm in maximal dimension. Squamous cell carcinoma is identified histologically.

Bronchoscopic findings

Standard findings

1. **Occult type:** Bronchoscopic findings are normal. Cytological examination such as bronchoscopic brushing, etc., show a localized carcinoma in the segmental or subsegmental branches. The category TXNOM0, or occult carcinoma according to the stage grouping, in the TNM classification should be excluded from this type.
2. **Thickened type:** The mucosal epithelium is superficially elevated, frequently at the bifurcation.
3. **Nodular type:** The distinctive sessile lesion has a large base and elevated mucosa epithelium. The height of the elevated mucosa epithelium should be more than 2 mm.
4. **Polypoid type:** The tumor is pedunculated. Movement on respiration is useful for distinguishing between this type and the nodular type. Combinations of some features may be present.

Associated findings

(a) Changes in the surface of the mucosal epithelium: irregularity, granulation, or corrugation. (b) Necrosis. (c) Bleeding. (d) Dilatation and hypertplasia of blood vessels. (e) Abnormal folds. (f) Indistinct cartilage ring.

REFERENCE

1. The Japan Lung Cancer Society: Classification of Lung Cancer Kanehira & Co, Tokyo, 2000

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