



Lower respiratory tract cytology

Behdad Shambayati



Summary

- The main role of cytology in the lower respiratory tract is in the diagnosis of lung cancer.
- Respiratory cytology is heavily dependent on good sample preparation; the involvement of an appropriately trained cytologist during sample collection at bronchoscopy or FNA procedures ensures sample adequacy.
- Infective agents are occasionally encountered in cytological samples and those with specific features, such as herpes simplex virus, *Pneumocystis jiroveci*, and *Aspergillus*, amongst others, may be reported.
- Lung cancer is divided into two main types: non-small cell and small cell lung cancer. The treatment for these subtypes is very different and it is vital to have an accurate cytological or histological diagnosis. Light microscopy of respiratory samples when combined with appropriate immunocytochemical markers provides the clinician with a highly accurate diagnostic modality that can be used for definitive treatment of the patient.