Objective
“Bronchoalveolar lavage” The first line of investigation for a myriad of pulmonary problems associated with abnormal imaging findings. Sackner et al; a safe and reliable method for sampling of material from distal airways and alveoli.

1970s – numerous studies: in assessing interstitial lung diseases. The use of Bronchoalveolar lavage in the diagnosis of pulmonary malignant neoplasms was not appreciated although the criteria of cytologic diagnosis of lung cancer have been established in the past.

In the diagnosis of lung lesions the use of cytologic methods have been acclaimed as one of its most successful applications. Flexible fibre-optic bronchoscope revolutionized respiratory cytology as techniques like Bronchoalveolar lavage (BAL) became more popular in diagnosing various lesions of respiratory tract.

In this context the incidence and prevalence of various lung lesions from the specimens obtained through broncho-alveolar lavage were studied to prove its utility in diagnosing lung malignancies.

Methods
Broncho-alveolar lavage specimens studied from the records of Pathology, Nizam’s Institute of Medical Sciences forms the material of the study. The study period includes a retrospective analysis of 11 years i.e., from 1997-2007, n=1398. Specimens obtained from broncho-alveolar lavage stained with May-Grunwald Giemsa and Papanicolaou were studied and analysed. Special stains such as Ziehl Neelsen, Periodic Acid Schiff and Gomori’s-methenamine Silver done were also studied. Cancer cell types – “criteria listed by Johnson and Frable and Linder and Rennard”

Results
A total of 1398 specimens (n=1398) were studied during the period of 1997-2007 i.e., 11 years. Of them, inflammatory smears were 1273 (91.1%), fungal 8 (0.6%), tubercular lesions 6 (0.4%), viral 2 (0.1%) and malignancies were 109 (7.8%). Malignant lesions again were divided into frank malignancy and suspicious were 20 (18.3%). The malignant lesions again were categorized into non Small Cell and Small Cell Carcinomas. Among the 89 malignancies (89.9%) cases were Non Small Cell and 9 (10.1%) were Small Cell Carcinomas.

Conclusion
Broncho-alveolar lavage is a useful method in diagnosing various lung lesions. Though the routine inflammatory smears are predominant in the present study, Broncho-alveolar lavage has a specific role in diagnosing malignancies.

References

Gender wise distribution of lung lesions diagnosed on bronchoalveolar lavage

Age Incidence

Inflammatory
Fungal
Tubercular
Parasitic + Fungal
Malignant – Non Small Cell Carcinoma (SQCC, ADC, LCUDC)
Small Cell Carcinoma
Suspicious of Malignancy
Metastasis