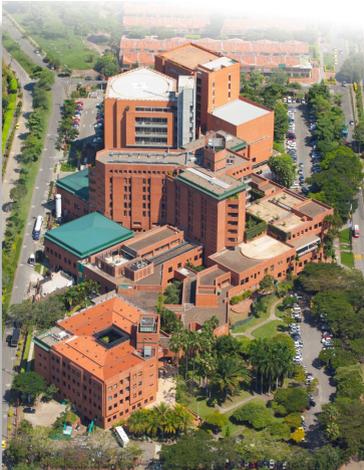


# Indications, Results and Complications of Flexible Bronchoscopy in the Intensive Care Unit of Fundación Valle del Lili, a University Hospital of Reference in Latin America

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## Introduction

In the present, the flexible bronchoscopy (FB) has become the procedure of election to explore the airways due to its diagnostic and therapeutic capacity in pulmonary pathology. In the critically ill patient this tool gains advantage since it provides the availability of being used at the bedside with few complications. In this study we describe the indications, results and complications associated to the performance of FB in the Intensive Care Unit of Fundación Valle del Lili, a University Hospital Reference in Cali, Colombia during 2013.

## Methods

A descriptive study was proposed and information was collected from medical records.

## Bibliography

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- Lucena CM, Martínez-Olondris P, Badia JR, et al. Fiberoptic bronchoscopy in a respiratory intensive care unit. *Med Intensiva*. 2012 Aug-Sep;36(6):389-95

## Results

A total of 240 FB were performed in 203 patients, 127 (62,6%) had invasive mechanical ventilation. The mean age was 61 years (RI: 38-73), presenting a bimodal distribution with one peak at 20-29 years and another at 60-70 years. The APACHE II during admission at Intensive Care Unit was 15,4±5, being the clinical diagnosis the most frequent (51,2%), followed by immunocompromise (32,5%). The more frequent indications were pulmonary infiltrates (70,8%), atelectasis (11,3%) and the study of nodules or mases (8,8%). The diagnostic techniques of major use were bronchoalveolar lavage (BAL) (80%) and the biopsy of bronchial tree (12,6%), being secretions management the most observed therapeutic technique. A microbiologic diagnosis was reported in 44,8% of BAL and a tumor diagnosis in 70% of the biopsies. Thirteen complications appeared, were hypoxemia was the most frequent (1,7%) without documenting mortal cases.

## Conclusions

Flexible bronchoscopy is a useful, effective and safe intervention for the study of pulmonary infiltrates and for the microbiologic and histopathologic diagnosis of lung parenchyma diseases.

Table 1. Clinical description of the serie in study

Characteristic	Total n (%)	IMV n (%)	NIMV n (%)
Total patients	203 (100)	127 (62.6)	76 (37.4)
Total procedures	240 (100)	150 (62.5)	90 (37.5)
Age, yrs. Median (IR)	61 (38-73)	62 (41-75)	57 (32-69)
Gender			
Female	96 (47.3)	58 (45.7)	38 (50)
Male	107 (52.7)	69 (54.3)	38 (50)
APACHE II at admission, X ± DS	15.4 ± 4.9	15.9 ± 5	14.6 ± 4.8
Diagnosis at admission			
Clinical	104 (51.2)	71 (55.9)	33 (43.4)
Immunosupression	66 (32.5)	38 (29.9)	28 (36.8)
Neurological	8 (3.9)	3 (2.4)	5 (6.6)
Surgical	18 (8.9)	12 (9.4)	6 (7.9)
Trauma	7 (3.4)	3 (2.4)	4 (5.3)
Mortality	75 (36.9)	60 (47.2)	15 (19.7)

IMV: Invasive mechanical ventilation; NIMV: Non-invasive mechanical ventilation

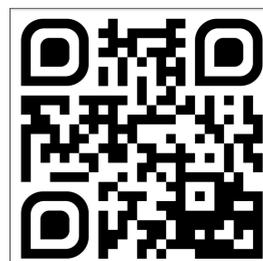
Table 2. Diagnostics established with the bronchoscopies performed

Diagnostics	Total 240 (%)	IMV n (%)	NIMV n (%)
<b>Infectious diagnostics</b>			
Bacterial infection	81 (33.8)	55(67,9)	26(32,1)
<i>Mycobacterium tuberculosis</i> infection	7 (2.9)	5(71,4)	2(28,6)
<i>Pneumocystis jirovecii</i> infection	3 (1.3)	2(66,7)	1(33,3)
<i>Aspergillus</i> infection	2 (0.8)	1(50)	1(50)
<i>Histoplasma</i> infection	1 (0.4)	0	1(100)
<b>Tumoral diagnostics</b>			
NSCLC Adenocarcinoma	6 (2.5)	2(33,3)	4(66,7)
NSCLC Squamous-cell type	3 (1.3)	0	3(100)
NSCLC undifferentiated	2 (0.8)	1(50)	1(50)
Small-cell carcinoma	1 (0.4)	1(100)	0(0)
Other primary lung tumors	4 (1.7)	3(75)	1(25)
Lung metastases from solid organ tumor	4 (1.7)	3(75)	1(25)
Lung compromise by hematologic malignancy	1 (0.4)	1(100)	0
<b>Non-tumoral diagnostics</b>			
Alveolar hemorrhage	5 (2.1)	3(60)	2(40)
Nonspecific interstitial pneumonia	1 (0.4)	1(100)	0
Obliterant pneumonitis with organized pneumonia	1 (0.4)	0	1(100)
<b>Endoscopic diagnostics</b>			
Endobronchitis	33 (13.8)	18(54,5)	15(45,5)
Tracheobronchomalacia	1 (0.4)	1(100)	0

IMV: Invasive mechanical ventilation; NIMV: Non-invasive mechanical ventilation



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