

Results of cytopathological studies and mutation analysis in cancer patients from a reference center in western Greece

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Abstract

The aim of this study was to present the results of cytopathological studies, performed on samples obtained from patients undergoing bronchoscopy for suspected lung malignancy, in a 12-month period

Methodology

Between December 2015 and December 2016, 193 patients underwent bronchoscopy for suspected lung malignancy. The cytopathological results were available for 182 patients. Endobronchial biopsies were taken in 61 patients, cytological samples (from bronchial washes and bronchial brushings) were obtained from 79 patients. Transbronchial needle aspiration (TBNA) of lymph nodes of groups 4 and 7 was performed in 23 patients. Cytology samples were obtained from all 23 patients undergoing TBNA and histology samples were obtained from 20 patients. The EGFR and ALK status were determined for the tumors of 18 and 6 patients, respectively.

Results

Of the 182 patients, 62 (34.1%) had cancer. Cytology samples were positive in 34.2% of cases, while endobronchial biopsies and TBNA were positive in 57.4% and 60.9% of cases, respectively. All of the tumors examined were negative for the expression of ALK, whereas 2 (11.1%) of those examined expressed EGFR. Non Small Cell Lung Cancer (NSCLC) made up 74.2% of cases (of which squamous cell carcinoma 27.4%, adenocarcinoma 25.8% and non-otherwise specified 21%) and of SCLC was 25.8%. The results are summarised in Table 1 and Table 2.

Table 1 Comparison of diagnostic modalities in the diagnosis of lung cancer

	Total	Positive
Bronchoscopies	182	62 (34.1%)
Endobronchial biopsy	61	35 (57.4%)
Cytology	79	27 (34.2%)
TBNA LN4,7	23	14 (60.9%)
EGFR	18	2 (11.1%)
ALK	6	0

Table 2 Comparison of diagnostic modalities in the diagnosis of each different type of lung cancer

	Total	Endobronchial biopsy	Cytology	TBNA
SCLC	16 (25.8%)	6	12	3
Squamous cell carcinoma	17 (27.4%)	12	4	0
Adenocarcinoma	16 (25.8%)	7	8	9
Non otherwise specified	13 (21%)	10	3	2

Conclusion

Compared to the international literature¹ the distribution of histological forms of NSCLC appears to differ, with the incidence of squamous carcinoma being higher in our series (38.6%, compared to 16.8% in the literature) while the incidence of adenocarcinoma was lower (36.4%, versus 59.7% in the literature). This difference is probably due to the fact that the present study includes specimens exclusively from bronchoscopies, therefore cases of peripheral adenocarcinomas, in which samples were obtained through CT guided transthoracic biopsies, were not included. EGFR mutation rates are similar to ones described in the literature.²

References

1. Ho C, Tong KM, Ramsden K, Ionescu DN, Laskin J. Histological classification of non-small-cell lung cancer over time: reducing the rates of not-otherwise-specified. *Current oncology*. 2015;22(3):e164.
2. Sampsonas F, Ryan D, McPhillips D, P Breen D. Molecular testing and personalized treatment of lung cancer. *Current molecular pharmacology*. 2014;7(1):22–32.