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Analysıs of patıents wıth lung cancer treated surgıcally: Sıngle center experıence

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Abstract
Background: Lung cancer is among the most important health problems of today with increasing incidence and mortality rates. Despite advances in multidisciplinary approaches and increasing diagnostic methods, basic studies to raise awareness should be made, as they are often caught in advanced stages. In this respect, patients who underwent surgical resection for primary lung cancer in our clinic were evaluated retrospectively. We aimed to present the clinical and demographic characteristics of lung cancer and to reevaluate the cancer data according to the general characteristics of our country with the analysis of the data we obtained.
Materials and Methods: This study included 278 patients who underwent surgery between January 2016 and May 2019 with histopathological diagnosis of non-small cell lung carcinoma. The data of the patients were analyzed retrospectively in terms of age, sex, histological type, type of surgery, pathologic stage and tumor locations
Results: The most common age range was between the fourth and sixth decades. Male to female ratio was 9/1. 50% (139 patients) of the cases were squamous cell carcinoma. The most common localization in lung cancer was left upper lobe with 25,2%.
Conclusion: Five-year and longer-term survival rates in patients with early diagnosis and surgery in lung cancer reach 75%. Lung cancer deaths are usually caused by distant metastases. Therefore, early diagnosis and surgical planning of lung cancer is important.

Keywords: lung cancer, surgery, treatment

Introduction
Lung cancer usually proceeds asymptomatically for a long time and patients tend to be largely advanced when diagnosed [1]. Lung cancer remains important with this aspect. Curative treatment of patients with early stage [stage 1-2] non-small cell lung cancer with surgical resection is possible. and still seems to be the most effective method [2]. Long-term survival reaches 75% [3]. Selected patients in stage 3 and even some stage 4 patients have the potential to cure by resection, depending on the local invasion degree and the spread of the disease in the mediastinal lymph nodes. [4]. According to the 2014 statistical analysis of the Ministry of Health cancer war office in our country, lung cancer is observed in 21.1% of men when all age groups are examined. and it is the most common type of cancer. It is seen in 5% of women and ranks fifth after breast, thyroid, colorectal and uterine cancers [5].

Materıal and Methods
This study included 278 patients who underwent surgery between January 2016 and May 2019, whose histopathological diagnosis was non-small cell lung carcinoma. All patients were evaluated with preoperative history, physical examination, pulmonary function tests, DLCO, and VOmax, electrocardiography, blood values, thorax CT, PET CT, and cranial MR when necessary.
Endobronchial ultrasound (EBUS) or mediastinoscopy was performed in patients with centrally located tumors, adenocarcinoma patients larger than 3 cm in diameter, or tumors with invasive character and suspicious Mediastinal lymph node in PET CT. The data of the patients were analyzed retrospectively in terms of age, gender, histological type, pathological stage, and tumor locations.
SPSS program was used to analyze the data. Descriptive statistics were shown as mean + - standard deviation or median (minimum-largest) for continuous variables, and categorical variables as number of observations and (%).

Results
Twent three of the patients were female and 255 were male. When the age distribution of all cases was examined, 9 patients between the ages of 31-45 years, 144 patients between the ages of 46-60, 116 patients between the ages of 61-75, and 9 patients over the age of 76 were observed. DLCO test was performed in 71 patients. VOmax was calculated for 20 patients with limited cardiopulmonary reserve. A total of 38 patients underwent EBUS. Mediastinoscopy was performed on 25 patients. Patients with lymph node metastasis were referred to the medical oncology department for neoadjuvant therapy. 50% (139 patients) of the cases were squamoz cell carcinoma, 37.4% (104) adenocarcinoma, 2.9% large cell lung cancer, 0.4% (1) small cell and small cell mixed tumor, 1.1% (3 patients) pleomorphic carcinoma, and 0.4% (1patient) were reported as small cell and squamous cell component mixed tumor. The placement of the primary tumor was observed

bronchoscopically and radiologically in the left lung (52.2%) and in the right lung in 47.8%. In various publications, lung cancer is generally seen in the right lung and upper lobes, while the most frequently involved segment is the right lung upper lobe anterior [6, 7].
In our patients, the most common localization was found as the left upper lobe with 25.2%. Although the most seen side was right. Tumor placements are presented in table 1. While the most common type of surgery was left upper lobectomy with 15.8%, right upper lobectomy with 14.4% was the second common operation that followed.

Table 1: Tumor Locations

	No of Patients	Percentage
Right Upper Lobe	37	13,3
Right Hiler	33	11,9
Right Middle Lobe	7	2,5
Right Lower Lobe	68	24,5
Left Lower Lobe	33	11,9
Left Hiler	30	10,8
Left Upper Lobe	70	25,2
Totally	278	100,0

The diagnosis was made by transthoracic fine needle aspiration in 152 patients and FOB in 125 patients and thoracotomy in 1 patient. When the pathological stages were examined, the most common stage was 2b, while the least encountered stage was 3b. The distribution of pathological stages is given in table 2.

Tablo 2: Post Operative stage distribution

	Number of the patients	Percentage
1A2	19	6,8
1A3	39	14,0
1B	44	15,8
2A	34	12,2
2B	80	28,8
3A	57	20,5
3B	5	1,8
Total	278	100,0

Dıscussıon

Lung cancer is seen between the 4th and 7th decades. The age distribution of our patients was as follows.Our youngest patient was 37 years old and oldest patient was 81 years old. When we look at the age distribution, it was observed that the most common range of the disease was 46-75 years. Although epidemiological and demographic features differ in non-small cell lung cancers according to countries, the striking point in the studies is that the incidence of lung cancer in women is constantly increasing in line with the increase in smoking rate in women [8]. However, it is still more common in men in 90% of the studies [7]. In a study of 1403 patients diagnosed with lung cancer in 2004 (88.2% male, 11.8% female), the E / K ratio was 7.5 / 1 [9]. In our study, the male to female ratio was found to be 9/1. Lung cancers are more common on the right side than on the left side [6]. In our study, the most common tumor was found on the left side with a rate of 52.2%. The most common localization was found as 25.2% (in 70 patients) as the left upper lobe. In the second frequency, 24.5% of 68 patients were found as the right upper lobe. Incompatibility with the literature can be explained by the low number of patients. The most common histological type in our country is still flat cell carcinoma. Its rate varies between 39 and 69% [10]. In the study of Gönlügür *et al*., The most common cell type was flat cell carcinoma with 56.2%, while in our study, the most common cell type was epidermoid carcinoma with 50% [11]. Patients diagnosed with adenocarcinoma accounted for 37.4% of all our cases. It is seen that the rates of adenocarcinoma are lower in old publications. Today, an increase in the rates of adenocarcinoma is noteworthy. The increase in the diagnosis of in situ adenocarcinoma, formerly bronchoalveolar carcinoma, which makes the appearance of peripheral ground glass, plays a role in increasing the diagnosis of this adenocarcinoma. [12]. Adenocarcinoma is the most common type of lung cancer, especially in European countries [12, 13]. Although the success of fiberoptic bronchoscopy in establishing the first diagnosis of lung cancer varies according to the location of the tumor, it reaches up to 80% in central tumors. Fiberoptic bronchoscopy is used in masses located peripherally, and rigid bronchoscopy is preferred in central locations. While the rate of diagnosis of FOB is 78% in general, the rate of diagnosis is 80% in central lesions and 73% in peripheral locations [14]. In the study of Berktaş *et al*. The success of obtaining a diagnosis was found to be 57.1% in patients who underwent bronchoscopy with a suspicion of malignancy and who underwent biopsy [15]. The rate of diagnosis with transthoracic fine needle aspiration biopsy, which is usually accompanied by computed tomography, reaches 80-95%. [14]. While 45% of our patients were diagnosed with bronchoscopy, 54.7% were made with transthoracic fine needle aspiration biopsy. Regarding post operative pathological staging, the most common stage was 28.8% (80 patients) and stage 2B. When the tumor sizes were examined, it was observed that the most common tumor diameter was between 3-4 cm and 74%. While the most common type of surgery was left upper lobectomy with 15.8%, right upper lobectomy with 14.4% was the second type of surgery that followed it. Early diagnosis is the gold standard in lung cancer treatment. Although proven methods could not be specified for this, low-dose tomography scanning is recommended for NCCN (National Comprehensive Cancer Network) lung cancer screening guide for patients with a history of smoking for 30 packs or more, family history, fifth and seventh decades

Lımıtatıon Of The Study

The patient data are limited in comparison with the literature as they contain the last 3 years and do not include survival data since it has not been five years.

Results

Survival rates are high in patients diagnosed with lung cancer early and undergoing surgery. Lung cancer deaths often occur due to distant metastases. For this reason, early diagnosis and surgical planning is important in lung cancer. Sensitivities of non-invasive techniques were found low. However, it is recommended as a low dose CT scan test for people identified as high-risk individuals in the lung cancer screening guide. Who are in the fifth and seventh decade interval with a smoking history of over 30 pack years.

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