

# Clinico-Pathological Profile of Lung Cancer Patients: A Study from Rural Hospital

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## Abstract:

**Background:** Lung cancer accounts for 5.5% of all cancers in India as per the GLOBOCAN 2020 data. The utility of diagnostic methods and new targeted therapies made prolongation of survival. In this study we analyse demographic, clinical, histological and treatment patterns among lung cancer patients diagnosed in our centre.

**Materials and Methods:** This is a single centre, retrospective study done between 2021-22. Data from medical records retrieved to analyse the demographic, clinical pathological and treatment patterns among lung cancer patients.

## Results:

Between 2021-22, a total of 57 lung cancer cases were diagnosed with median age of 51 years (range 26-73). Males constituted 41 (72%) and tobacco usage noted in 37 (65%). Prior use of anti-tubercular drugs is seen in 18 patients (31%).

## Conclusion:

Lung cancer is common in males and strongly associated with tobacco use. Majority diagnosed in stage 4 with opposite lung being the most common site of metastasis. Adenocarcinoma is the common histology.

**Key Word:** lung carcinoma, histopathology, adenocarcinoma, smoking, males

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## I. Introduction

Lung cancer is major cause of mortality and cancer related deaths around the globe. In India approximately 5.5% diagnosed as per the new GLOBOCAN 2020 data. The strongest risk factor associated with lung cancer is tobacco use. In India majority of the cases were diagnosed in advanced stages similar to the western data. Lung cancer epidemiology in India has evolved from being dominated by histologic types, squamous and small cell to an era wherein adenocarcinoma became equiprevalent and now ultimately became the dominant type.

## II. Material And Methods

This retrospective, medical record based study was carried out on patients of Department of general Medicine at viswabharathi medical college and Hospital, RT Nagar, penchikalapadu, kurnool, Andhra Pradesh from January 2021 to April 2022. A total 57 adult subjects (both male and females) of aged  $\geq 18$ , years were for in this study.

**Study Design:** Retrospective, medical record based study

**Study Location:** This is a tertiary care teaching hospital based study done in Department of General Medicine, at viswabharathi medical college and Hospital, RT Nagar, penchikalapadu, kurnool, Andhra Pradesh.

**Study Duration:** January 2021 to April 2022.

**Sample size:** 57 patients.

**Sample size calculation:**

**Subjects & selection method:** The study population was drawn from medical records and patients who attended out patient department, at viswabharathi medical college and Hospital, Demographic features, clinical presentation, stage, sites of metastasis and histopathology type were collected between from January 2021 to

April 2022. All histologically confirmed lung cancers diagnosed between 2021- 2022 were retrieved for analysis.

**Procedure methodology**

This study was done from January 2021 to April 2022, a total of 57 lung cancer cases were diagnosed in our centre. The data was collected from both medical based records and patients who attended our out patient department, they were investigated and diagnosed. The parameters included were age, gender (both males and females) cough, shortness of breath, chest pain, fever, weight loss, anorexia, superior vena cava syndrome, tobacco usage, history of anti tubercular treatment, histopathology, TNM staging, treatment given, sites of metastasis.

**Statistical analysis**

Descriptive statistics were used for demographic features includes mean, median (for age).

**III. Result**

Between 2021-22, a total of 57 lung cancer cases were diagnosed with median age of 51 years (range 26-73). Males constituted 41 (72%) and tobacco usage noted in 37 (65%). Prior use of anti-tubercular drugs is seen in 18 patients (31%). A total of 57 lung cancer cases were diagnosed in our centre. . A preponderance was observed, with male to female ratio is 3:1.

At the time of diagnosis, cough is seen in 50 patients (87%), dyspnoea in 52 patients (91%), chest pain in 30 patients (52%) and anorexia is noticed in 46 patients (80%).

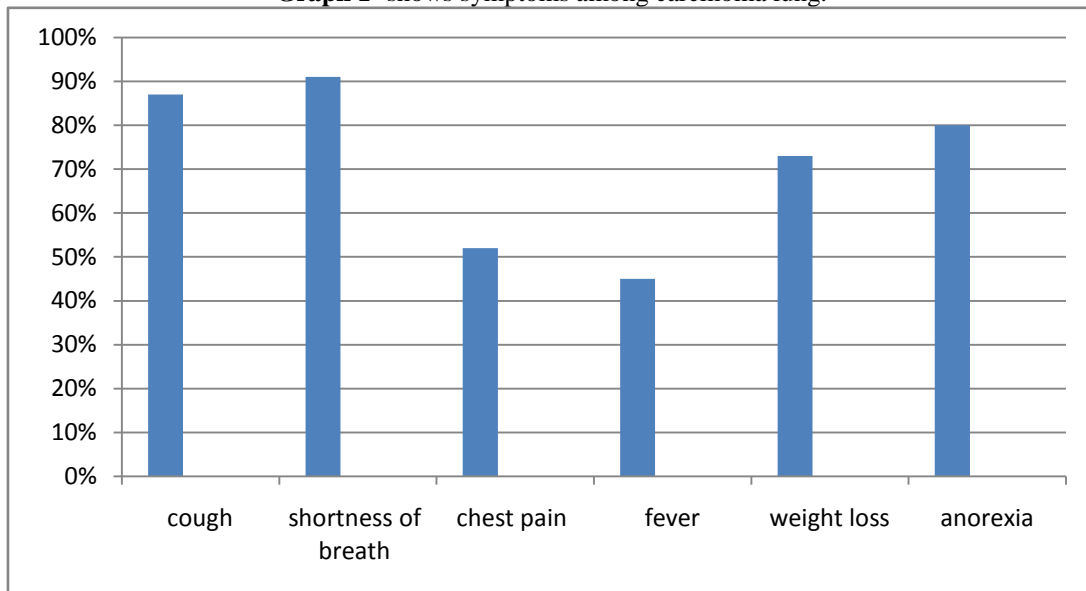
Prior usage of anti-tubercular therapy (ATT) is seen in 18 patients (31%).

Seven patients (13%) had superior vena cava syndrome as the presenting sign.

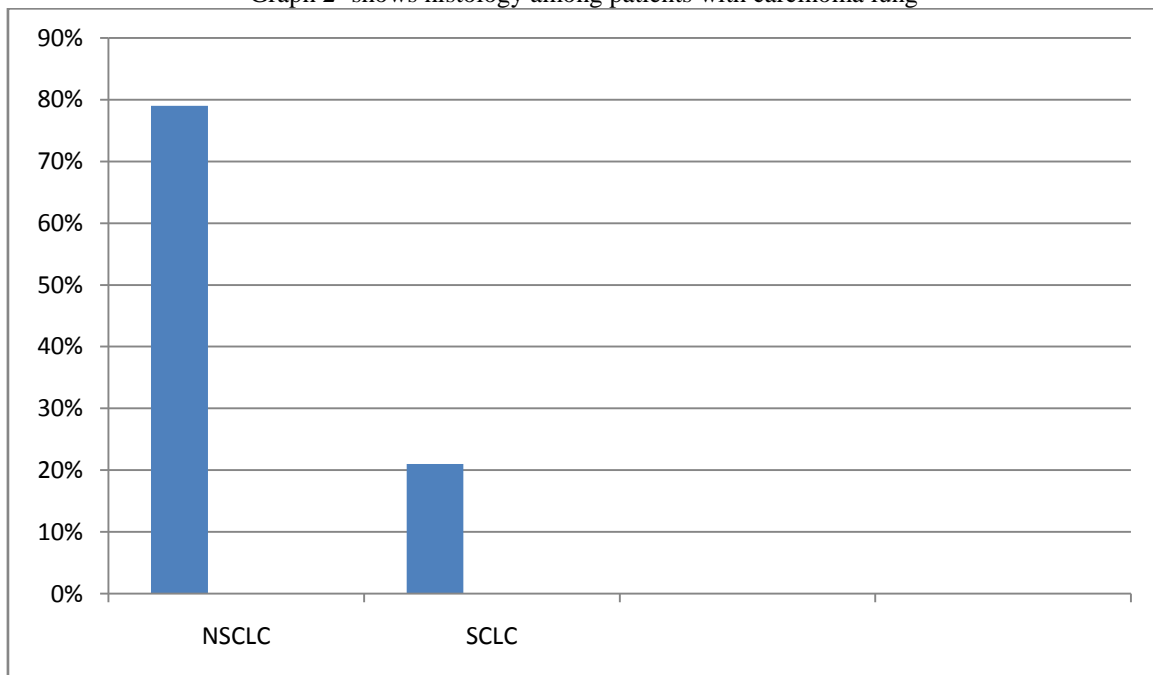
The demographic, clinical, histopathological and treatment details are as follows:

Parameter	Value N=57 (%)
Cough	50 (87%)
Shortness of breath	52 (91%)
Chest pain	30 (52%)
Fever	26 (45%)
Weight loss	42 (73%)
Anorexia	46 (80%)
SVC syndrome	7 (13%)
Histology	
NSCLC	45 (79%)
SCLC	12 (21%)
TNM staging	
I	0 (0%)
II	2 (4%)
III	11 (19%)
IV	44 (77%)
Sites of metastasis (n=44)	
Opposite Lung	29 (66%)
Adrenal gland	11 (25%)
Bones	8 (18%)
Brain	6 (17%)
Liver	5 (11%)
Other	3 (7%)
Therapy given	
Chemotherapy	50 (88%)
Radiotherapy	10 (17%)
Surgery	1 (2%)

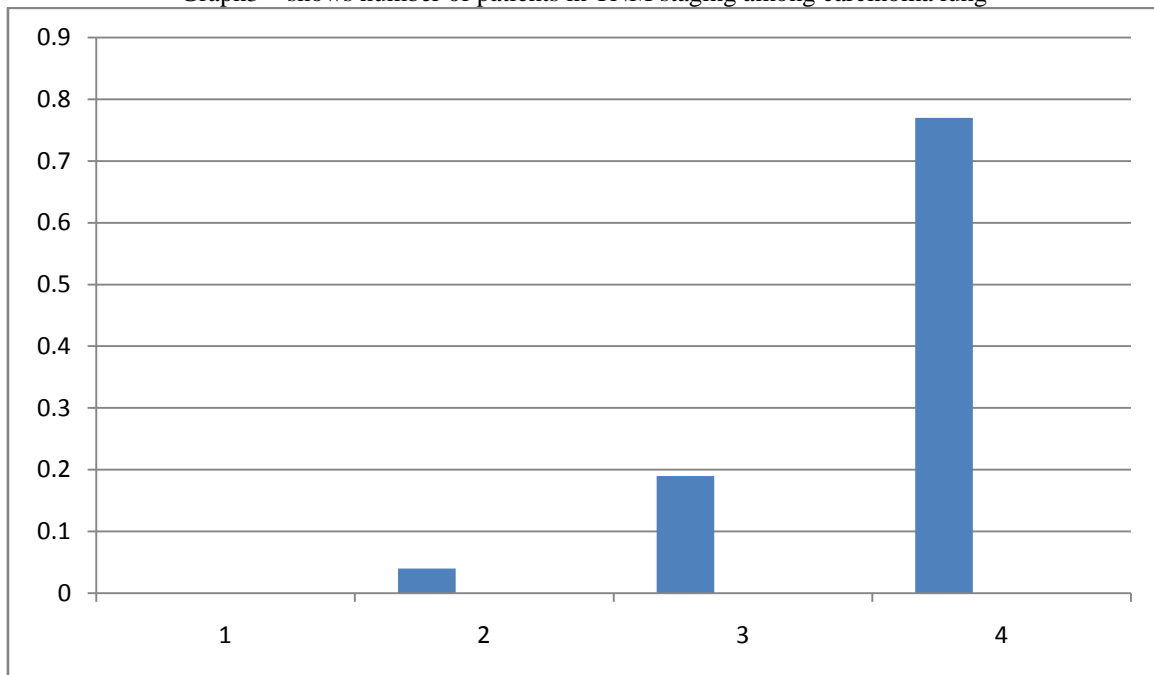
**Graph 1-** shows symptoms among carcinoma lung.



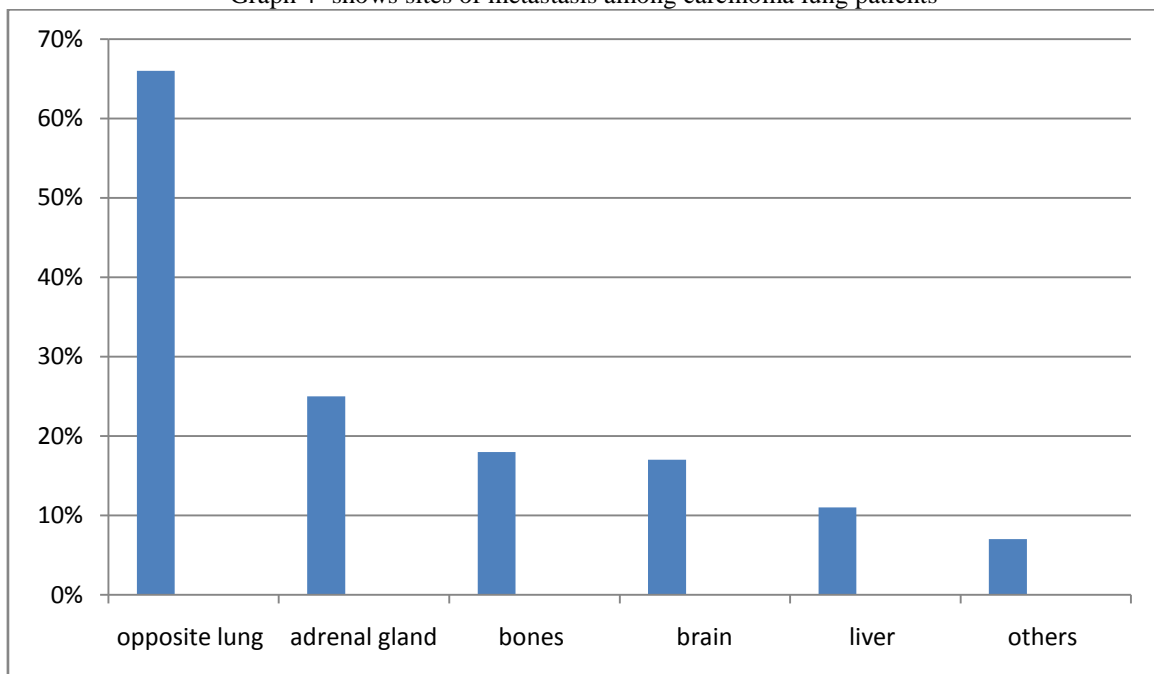
**Graph 2-** shows histology among patients with carcinoma lung



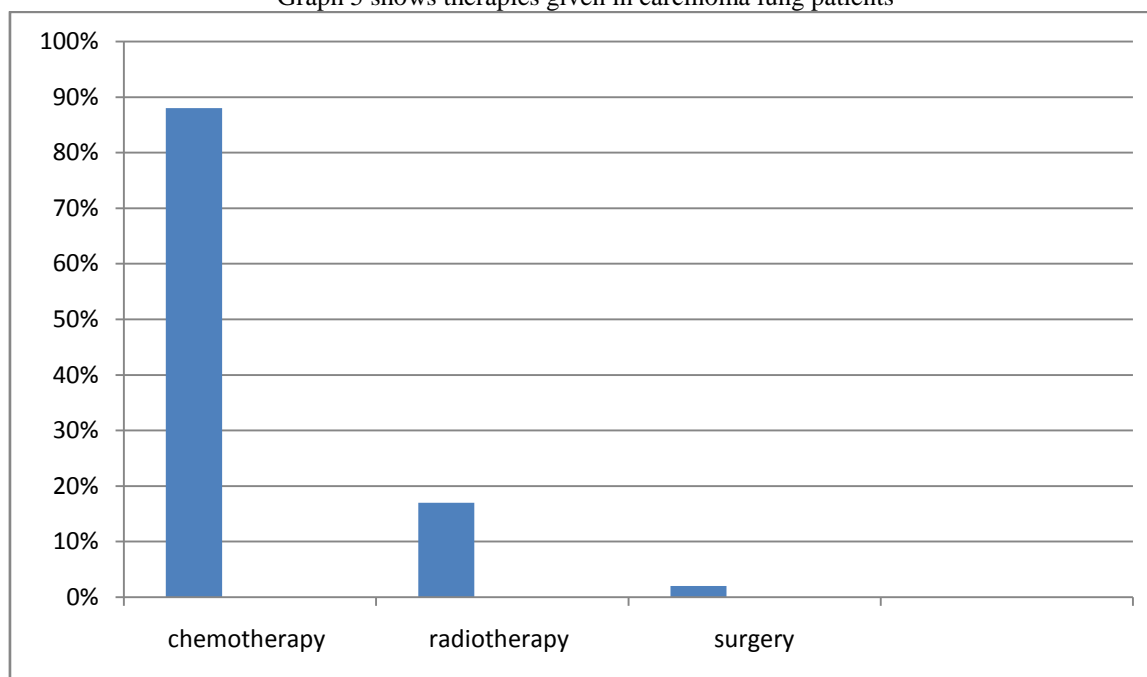
Graph3 – shows number of patients in TNM staging among carcinoma lung



Graph 4- shows sites of metastasis among carcinoma lung patients



Graph 5 shows therapies given in carcinoma lung patients



#### IV. Discussion

Lung carcinoma, the leading cause of cancer related deaths world wide. According to the GLOBOCON report 2018, lung cancer affected about 2.1 million persons(11.6% of all cancers) and caused 1.8 million deaths according to GLOBOCON 2022,5.5% diagnosed with lung cancer in India. The above report also estimated that in India, a total of 67,795 new lung cancer cases occurred(5.9% of all cancers) in 2018,of which 48,698(8.5%) occurred in males.(1) In the United States, cancer of the lung and bronchus ranks second in both genders, with an estimated 115,060 new cases in men(14% of all new cancers) and 106,070 in women(14% of all new cancers).(2)

The majority of patients were males and it remained unchanged over the time.The median age was 51 years in my study.cough was the most common symptom in my study and about 65% were smokers and 31% had previous history of anti tubercular drug usage.

In my study, there were 37 patients(65%) who were smokers.The prevalence of smoking in patients with lung cancer is nearly 80%.(3) The National Tobacco Control Program was launched by the government of India in 2007 to 2008 with the aim to raise awareness on the deleterious effects of tobacco, regulate tobacco production and consumption, enact and enforce cigarette and other tobacco product Act, strengthen and support tobacco cessation services and promote effective implementation of the strategies by the WHO Framework Convention of Tobacco control.(4)

Other symptoms like shortness of breath, chest pain, fever, weight loss and anorexia were found in my study, out of which cough and shortness of breath were frequently found. 13% of the patients had presented with superior vena syndrome on their initial presentation. Most of the patients presented in the 4<sup>th</sup> stage of the cancer.

Adenocarcinoma was found to be the most common histology in my study.In the last few years the incidence of adenocarcinoma has increased. Adenocarcinoma by itself accounts for 38.5% of all lung cancer cases, with squamous cell carcinoma accounting for 20% and large cell carcinoma accounting for 2.9%.(5)

Radiation therapy is an important aspect of the treatment of lung carcinoma.In my study 17% patients had taken radiotherapy and 50 patients had taken chemotherapy.surgery was done in only 2% of the patients. Combination of gefitinib with pemetrexed- carboplatin chemotherapy is a valid treatment strategy now,particularly for young and fit patients after the recent randomized phase 3 trial conducted at a large referral oncology centre in India.(6)

Most of the patients were found to be in metastatsis, especially to the opposite lung in my study.unfortunately, lung cancer continues to be diagnosed at an advanced stage in India in contrast to most western literature, where 30%-50% of cases are diagnosed at a relatively early stage which is potentially operable.(7)

Metastasis was found in adrenal gland, bones, brain and liver in my study.

## V. Conclusion

Indian population consume tobacco on large scale and third largest producer of tobacco in the world with approximately 28.6% of the Indian population use tobacco products and 267 million users across the world. Lung carcinoma is predominantly seen in males and smokers, where adenocarcinoma is the most common histology. Majority of the cases were diagnosed in stage 4 of the disease.

## References

- [1]. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin.* 2018;68:394-424. (8)
- [2]. Siegel R, Ward E, Brawley O, et al. cancer statistics, 2011: the impact of eliminating socioeconomic and racial disparities on premature cancer deaths. *CA Cancer J Clin.* 2011;61(4):212-236.
- [3]. Mohan A, Garg A, Gupta A, et al. clinical profile of lung cancer in North India: a 10 year analysis of 1862 patients from a tertiary care centre. *Lung India.* 2020;37:190-197.
- [4]. Navneet Singh, Sushma Agarwal, Lung cancer in India, issue 8, p1250-1266, august 01, 2021.
- [5]. Howlader N, Noone AM, Krapcho M, et al, editors SEER cancer statistics review, 1975-2008.
- [6]. Noronha V, Patil V, M. Joshi A, et al, Gefitinib versus gefitinib plus pemetrexed and carboplatin chemotherapy in EGFR mutated lung cancer. *J Clin Oncol.* 2020;38:124-136.
- [7]. Radzikowska E, Glaz P, Roszkowski K. Lung cancer in women: Age, smoking, histology, performance status, stage, initial treatment and survival. Population-based study of 20 561 cases. *Ann Oncol.* 2002;13:1087-93.

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