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## A Study on Clinical Profile and Treatment Pattern of Lung Cancer in a Tertiary Care Teaching Hospital, Kerala, India.

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### ABSTRACT

Lung cancer has become the number one killer among cancers worldwide. It is a common malignancy globally amongst males as well as for both gender combined. No screening test is recommended to identify lung cancer patients at earlier stages, when the cure rates are much higher than that at more advanced stages. Thus, many lung cancers go undetected until they are advanced because individuals who have a long history of cigarette smoking are unlikely to notice the early symptoms of cough or dyspnoea. It is often symptoms associated with large tumours or metastatic disease that prompt medical attention. The present study was undertaken to determine the incidence of Lung cancer among patients, receiving treatment in Department of Oncology, in a tertiary Hospital. Both inpatients and outpatients were included in the study. Males (79%) were more frequently affected than females (21%); Peak incidence was in the 61-70 age groups. Based on the stage of tumour, (21%) of lung cancer were diagnosed at localised, (23%) at regional, (56%) at distant stage. Based on treatment pattern, majority undergone Radiotherapy (37%), followed by Chemotherapy (16%), Chemotherapy + Radiotherapy (16%), Surgery + Chemotherapy (9%), Surgery (8%), Surgery + Chemotherapy + Radiotherapy (7%), Surgery + Radiotherapy (7%).

**Keywords:** Lung cancer, surgery, chemotherapy, radiotherapy

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## INTRODUCTION

Lung cancer is one of the commonest malignant neoplasms all over the world and is increasingly being recognized in India. It was considered to be rare in the beginning of the century but has now reached almost epidemic proportions. It is the leading Cause of cancer deaths in developed countries and is also rising at alarming rates in developing countries. Deaths due to lung cancer are more than those due to colorectal, breast and prostate cancers put together. Smoking is responsible for upwards of 80% of all lung cancers worldwide. Non-smokers account for 15% of lung cancer cases and these cases are often attributed to a combination of genetic factors, radon gas, asbestos, pesticides and air pollution including passive hand static smoking. Farmers mostly end up with lung cancer, may be because they rely heavily on the use of chemical pesticides to get rid of their pest problems. Because lung cancer is usually diagnosed at later stages, early detection as a result of screening may offer the best opportunity to decrease lung cancer mortality. Histological diagnosis and staging is essential for selecting the mode of therapy in patients with lung cancer. Surgery, radiotherapy and chemotherapy are the various options available for the management of lung cancer. The most appropriate treatment is determined by the size and location of the tumour, extent of lymph node spread, presence or absence of metastatic sites, and the performance status of the patient. Stages I and II are amenable to surgery. While, advanced stage III and IV need an individualized combination of surgery, chemotherapy and radiotherapy [1-8].

## METHODOLOGY

It was a prospective, observational study was conducted in a Tertiary care Hospital with study duration of 2 years. 430 patients were included in this study based upon the inclusion and exclusion criteria. The data were collected using standard data collection form.

### Inclusion criteria.

- All newly diagnosed patients with Lung cancer
- Both genders
- Inpatients and outpatients
- Patients with age group of 50-80 years.

### Exclusion criteria

- Patients with incomplete data.
- Patients having any other pre-existing malignancies
- Patient whose Biopsy report not available.
- Patient who is not willing for the treatment.

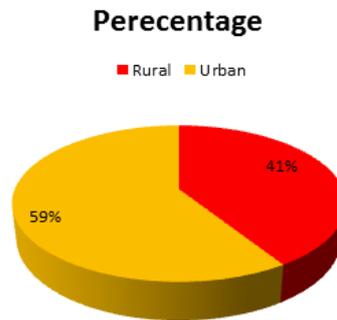
## RESULT AND DISCUSSION

A total of 430 patients were included in the study sample. Males (339) were more frequently affected than females (91). Majority of the patients are elderly. It is evident from the study that Peak incidence was in the year 61-70 age group for both men and women .Based on the area of residence of the Lung cancer patients, (41%) of the patients were from urban area and the remaining (59%) of patients belongs to urban area. Smoking status of the Lung cancer patients, shows that (44%) of the patients were smokers and the remaining (56 %) of patients were non smokers. (73.53%) of patients take mixed diet and the remaining (26.47%) vegetarians. Based on family history of cancer in Lung cancer patients, (40%) shows a positive family history of cancer and (60%) patients showed a negative family history of cancer. According to the distribution based on stages of tumour, (21%) of Lung cancer were diagnosed at localised, (23%) at regional, (56%) at distant stage. Based on treatment pattern (8%) patients undergone Surgery, Radiotherapy (37%), Chemotherapy (16%), Surgery + Radiotherapy (7%), Surgery + Chemotherapy (9%), Chemotherapy + Radiotherapy (16%), Surgery + Chemotherapy + Radiotherapy (7%).

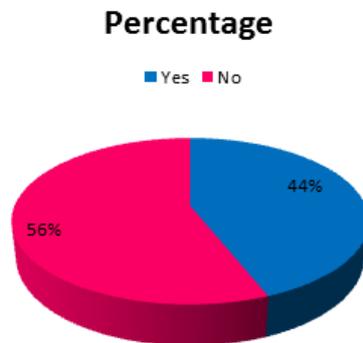
**Table 1: Age and Sex Distribution of patients in study population**

Age group	Male	Female	Total
0-10	0	0	0
11-20	0	1	1
21-30	0	1	1
31-40	5	4	9
41-50	28	20	48
51-60	87	27	114
61-70	117	29	146
71-80	102	9	111
Total	339	91	430

**Figure 1: Area of Residence of patients in the study population**



**Figure 2: Smoking status of patients in the study population**



**Figure 3: Diet pattern of patients in the study population**

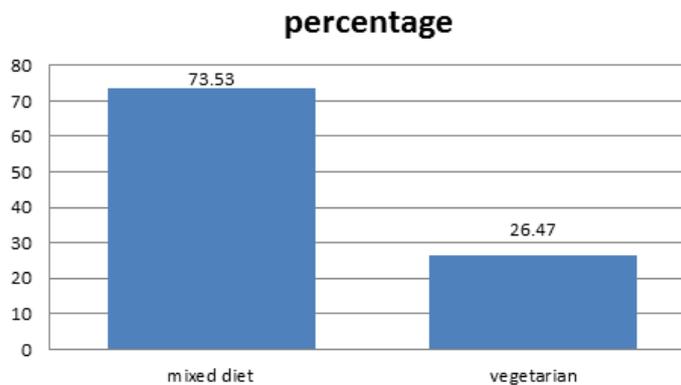


Figure 4: Family History of Lung cancer patients in the sample population

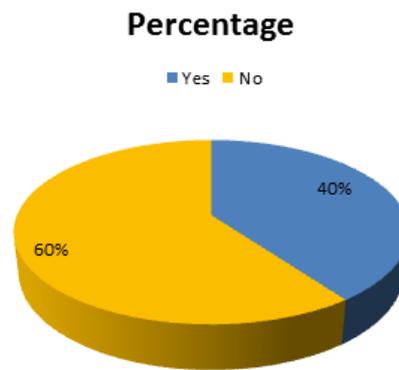


Figure 5: Distribution of different stages of cancer in the sample population

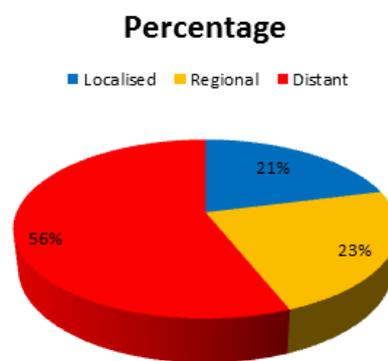
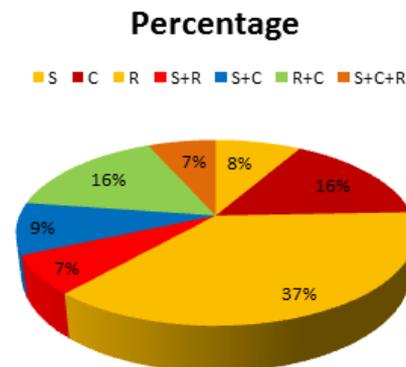


Figure 6: Type of Regimen in the sample population



**CONCLUSION**

Because of the magnitude of Lung cancer and trends reported, serious thought to be given to plan for prevention and early detection of premalignant and malignant Lung cancer. In addition to imparting awareness on harmful effects of Environmental and Occupational risk factors and how to prevent the disease to general population is the need of this region.

**REFERENCES**

[1] Julian R Molina, Ping Yang, Stephen D. Cassivi, Steven E. Schild, Alex A Adje. Mayo Clin Proc 2008; 83(5): 584–594.

[2] Imran Ali, Waseem A. Wani, Kishwar Saleem. Cancer Therapy 2011;(8) :56-70



- [3] D Behera and T Balamugesh. The Indian J Chest Dis Allied Sci 2004;( 46):621-627
- [4] Rudi Bao, Pokman Chan. J Exp Pharmacol 2011;(8): 21–34
- [5] R William Field, Brian L Withers. Clin Chest Med 2012; 33(4): 112-121
- [6] D Behera. JIACM 2012; 13 (12): 131- 137
- [7] Paolo Baffetta. Oncogene 2004; 23: 6392- 6403
- [8] Noronha V, Dikshit R, Raut N et al. Indian J Cancer 2012; 49(1):74-81