

Real-World Insights of Immunotherapy in Lung Cancer from Western India: A Retrospective Analysis

A. Rajbhoj (drashwinrajbhoj@mocindia.co.in), K. Joshi, P. Kalaskar, U. Maheshwari, D. Morzaria, A. Joshi, V. Maniar, C. Pethe, B. Shah, A. Kakroo, S. Bhosale, R. Dave, T. Sethjiwala, S. Jagiasi, M. Randive, A. Tongaonkar, N. Bayas, A. Pathan, R. Khwaja, T. Patil, R. Wategaonkar

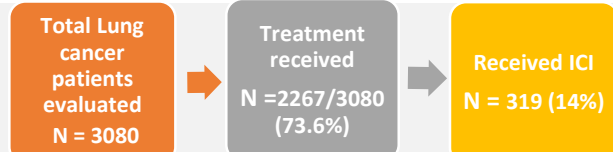
Introduction

Immune checkpoint inhibitors (ICIs) have become integral to the management of non-squamous non-small cell lung cancer (NSCLC), offering durable responses with a favorable tolerability profile. This study provides real-world insights into ICI utilization patterns within community oncology practice in a resource-constrained, developing country setting.

Methods

This retrospective study included consecutive Lung cancer patients diagnosed between March 2018 and December 2025. Clinical characteristics, treatment records and outcomes were retrieved from the EMR. Survival outcomes were calculated using the Kaplan-Meier analysis

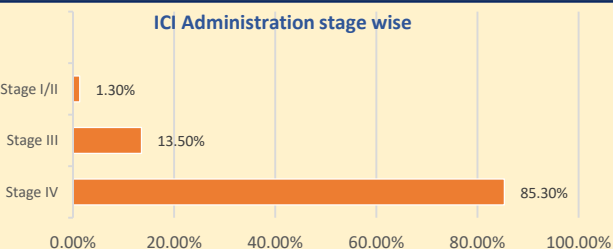
Results



Descriptive Details :

Median age = 65 years (IQR 58.0- 71.0)
Male : Female Ratio = 2.7:1
ECOG PS 0-1 = 92.8%
Comorbidities = 52.7%
Thyroid dysfunction = 17.2% (N = 55)

ICI administration stagewise :

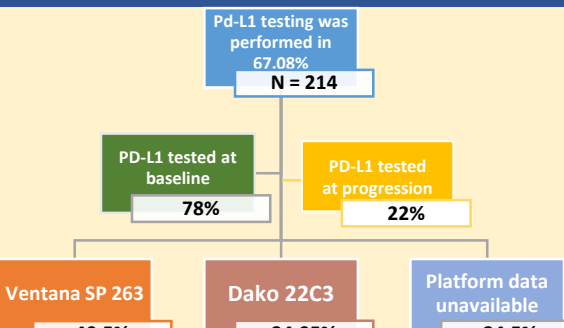


Types of Lung cancer :

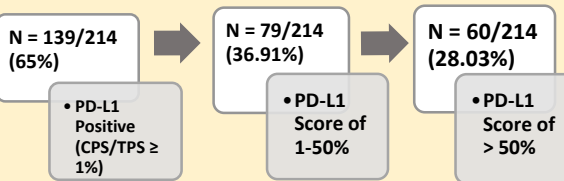
Non small cell lung cancer N = 279 (91.2%)	Small cell lung cancer N = 22 (6.9%)
Adenocarcinomas (70.8%)	
Squamous cell carcinomas (19.2%)	

Biomarkers for Immunotherapy (PD-L1, MSI, TMB) :

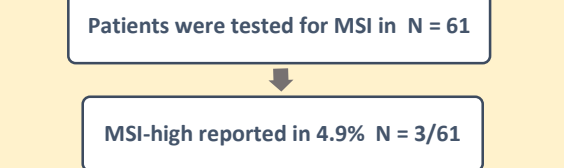
PD-L1 Results :



PD-L1 positivity rates -



MSI Results :



TMB Results :

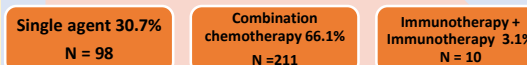


Immune checkpoint inhibitor Treatment :

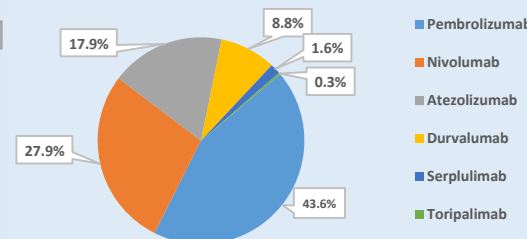
ICI were predominately used -



ICI administration details -

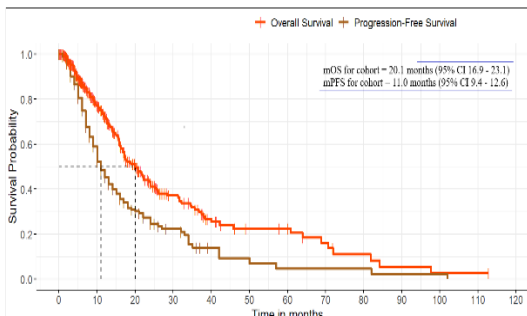


1st line ICI received N = 224

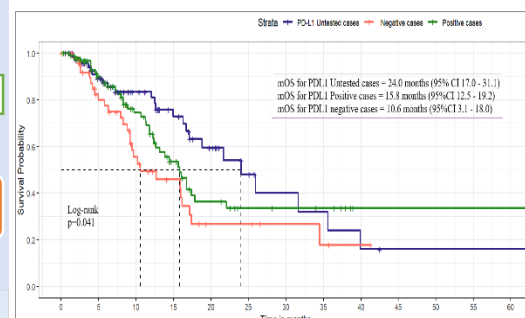


Median follow-up of cohort = 27.0 months

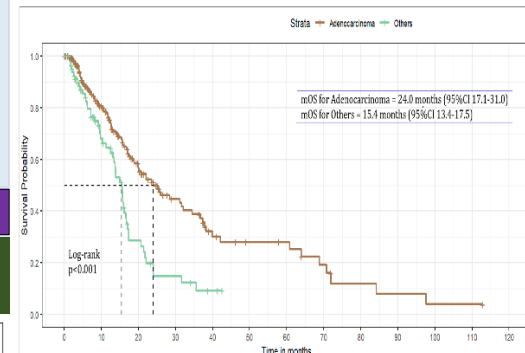
median overall survival (mOS) of the cohort was 20.1 months(95% CI 16.9-23.1)
median PFS was 11.0 months (95% CI 9.4-12.6)



mOS was 24.0 months (95% CI 17.0-31.1) in PD-L1 untested cases, 15.8 months (95% CI 12.5-19.2) in PD-L1 positive cases, 10.6 months (95% CI 3.1-18.0) in PD-L1 negative cases (p=0.041).



mOS for adenocarcinoma was 24.0 months (95% CI 17.1-31.0) vs 15.4 months (95% CI 13.4-17.5) for other histologies p<0.001



Conclusions

In this real-world Western Indian cohort, immunotherapy showed meaningful survival despite limited biomarker testing, highlighting the need for better patient selection and improved access in resource-constrained settings.