

INTRODUCTION

BRAF mutations represent a rare but actionable subset of lung cancers, yet data on their clinical characteristics, treatment patterns & outcomes in Indian community oncology settings are limited

METHODS

This retrospective study included consecutive lung cancer patients with BRAF mutations treated at community oncology centers in Western India between March 2018 and December 2025 to evaluate real-world clinical practice. Clinical data, including molecular testing modalities, mutational profiles, and survival outcomes, were extracted from electronic medical records. Survival outcomes were analyzed using the Kaplan–Meier method, a standard approach for time-to-event analyses that accounts for censored observations.

RESULTS

Total lung Cancer patients N=3080
Tested for Molecular Alteration-61.1%(n=1882)
Patients with molecular alteration- 65.7% (n=1236)
BRAF mutation detected- 3.2% (n=40)

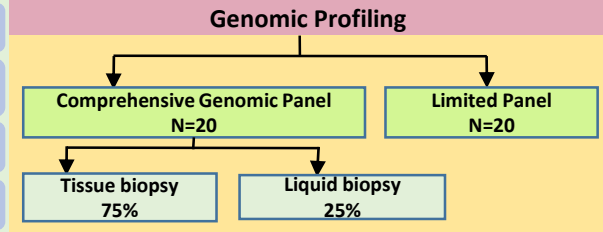
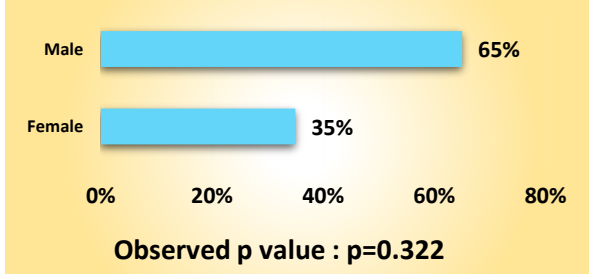
Descriptive Details

Median age : 66.0 years (IQR 60.25-73.0)
Male : Female ratio : 1.9:1
ECOG status 0-1 : 95%
Diagnosed at stage IV : 87.5% (n=35)

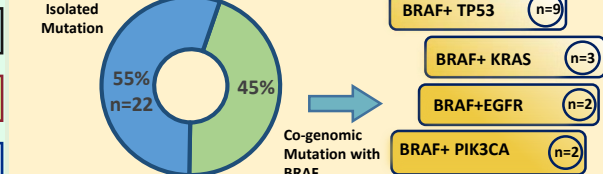
Common Metastatic sites

Lymph Nodes n=12
Bone n=11
Liver n=10

Prevalence of BRAF mutation



BRAF Mutation Distribution



PD-L1 Expression Status

PD-L1 Test Performed 77.5% (n=31)
Positive (CPS/TPS ≥1%) 58.1% (18/31)
High Expression (CPS/TPS >50%) 25.8% (8/31)

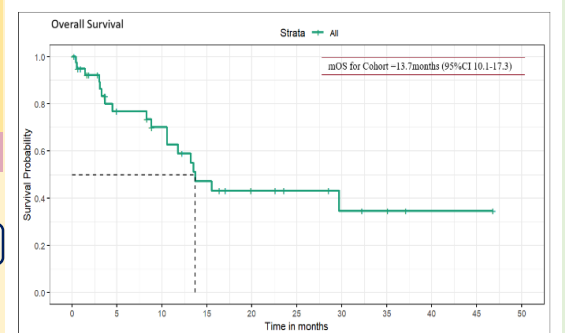
Treatment Profile

First Line of Therapy 82.5% (33/40)
Chemotherapy n=27
Targeted Therapy n=5
Debrafinib + Trametinib n=3
Trametinib n=2

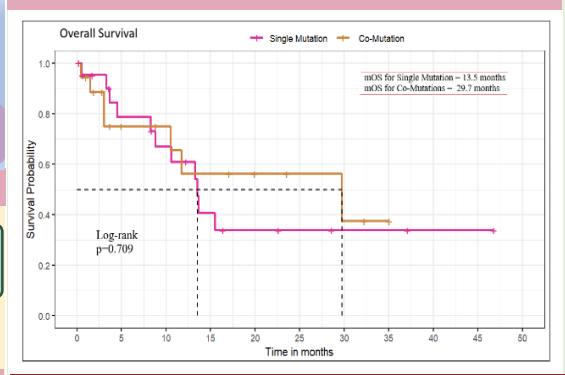
Treatment Outcomes

Complete Response 3.0%
Partial Response 33.3%
Stable Disease 15.1%

median follow-up – 19.9 months
mOS for cohort – 13.7 months
(95% CI 10.1-17.3)



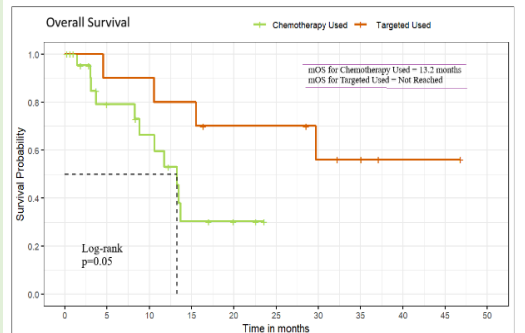
mOS for Single Mutation – 13.5 months
mOS for Co-mutation – 29.7 months



CONCLUSION

This real-world study highlights the clinical heterogeneity of BRAF-mutated lung cancer & demonstrates the potential benefit of targeted therapies and biomarker-driven treatment strategies in community oncology settings

mOS for Chemotherapy Used – 13.2 months
mOS for Targeted Therapy Used – Not reached



mOS for Dabrafenib + Trametinib – Not Reached
mOS for Trametinib = 4.5 months

