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Association of TP53/KEAP1 Co-Mutation With Clinical Outcomes in Stage II-III NSCLC Treated With Chemoradiotherapy and Durvalumab

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Introduction

- TP53 and KEAP1 are commonly mutated in NSCLC, occurring in approximately 46% and 17% of lung adenocarcinomas, respectively.
- KEAP1 alterations have been associated with treatment resistance and inferior outcomes in NSCLC.
- The clinical significance of TP53/KEAP1 mutations after definitive CRT and durvalumab remains uncertain.
- Objective:** To evaluate whether TP53/KEAP1 co-mutation is associated with worse survival or metastatic outcomes in patients with stage II-III NSCLC treated with the PACIFIC regimen.

Methods

- 263 patients with stage II-III NSCLC treated with CRT + durvalumab
- Out of those patients, 114 patients without baseline sequencing were excluded.
- Genomic profile of included patients:
 - 12 KEAP1 mutated
 - 10 TP53/KEAP1 co-mutated
 - 104 without TP53/KEAP1 co-mutation
- Primary outcomes: OS, BMFS, DMFS

Patient Characteristics

Characteristic	TP53/KEAP1 co-mutated (N=10)	No co-mutation (N=104)	p-value
Median age, years	62.9	68.6	0.108
Female sex	60%	53.8%	0.753
Current/former smoker	90%	75.0%	0.82
Stage IIIB-IIIC	60%	51%	0.922
PD-L1 $\geq 1\%$	20%	38.5%	0.498

Results

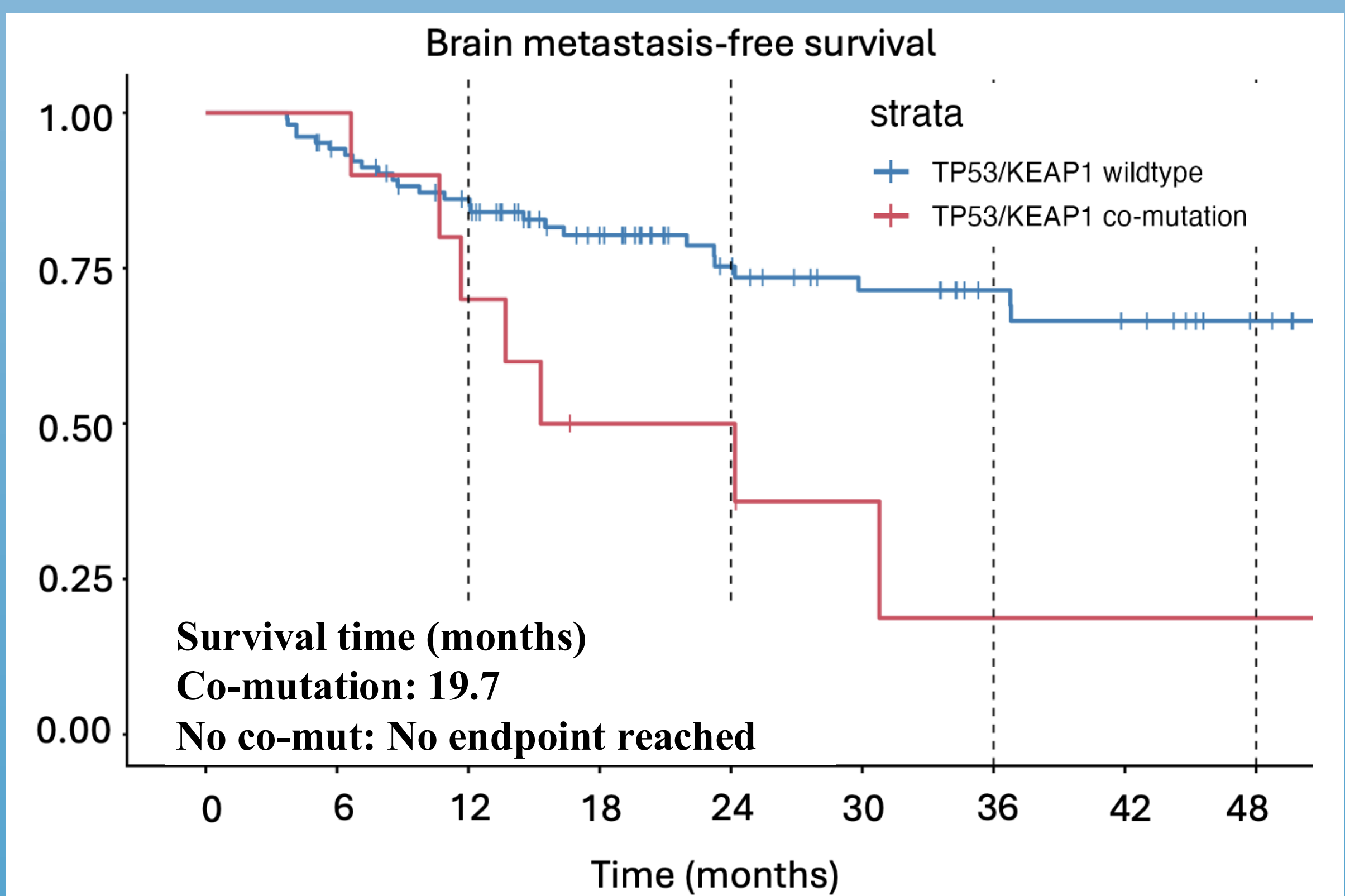
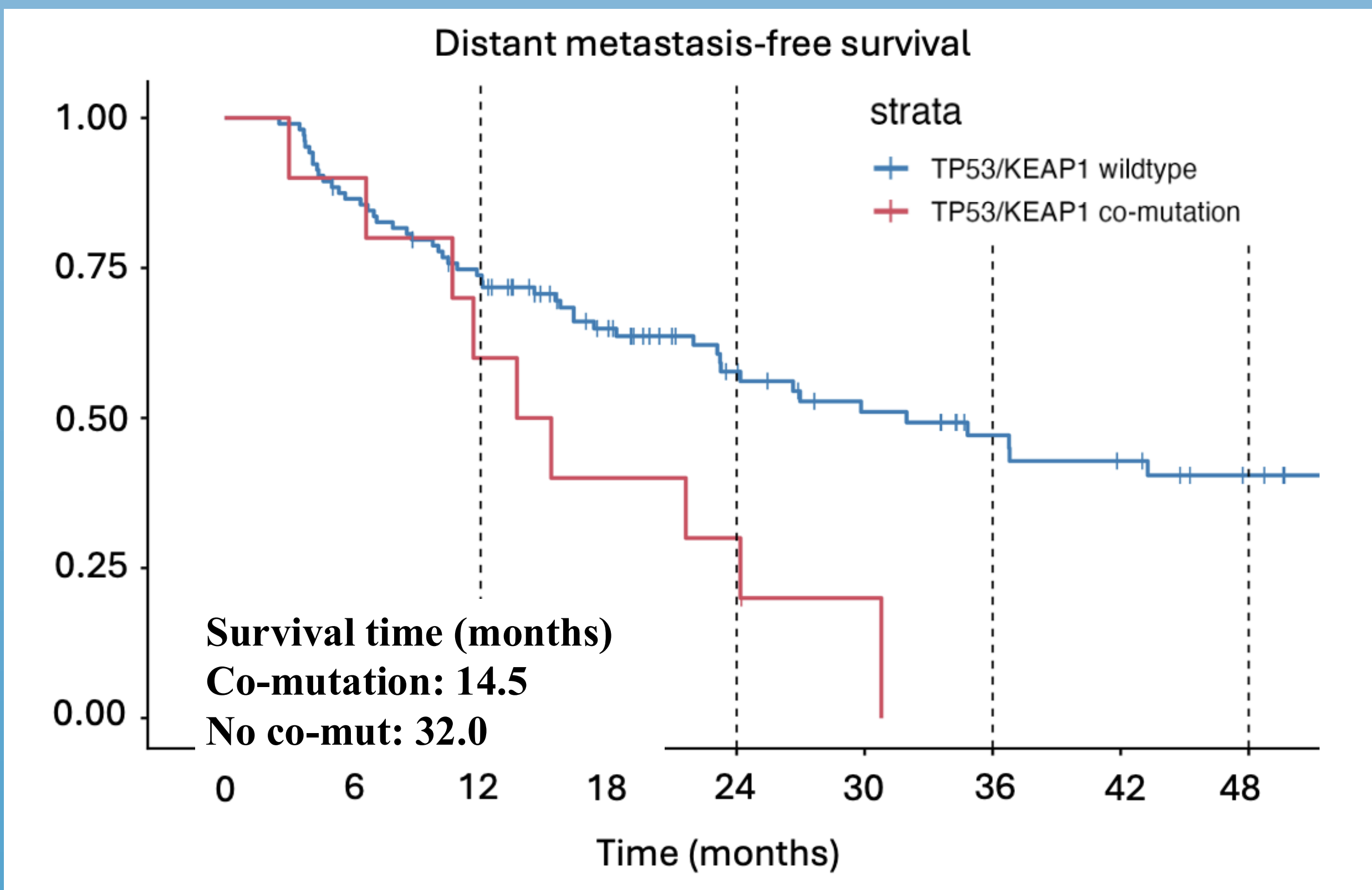
Event	Co-mutated	No co-mutation
Distant metastasis	90%	47%
Brain metastasis	70%	25%
Death	60%	47%
Locoregional recurrence	0%	20%
In-field recurrence	0%	13%

Discussion & Conclusions

- TP53/KEAP1 co-mutation was associated with significantly shorter DMFS and BMFS in patients with stage II–III NSCLC treated with definitive CRT and durvalumab.
- Failures in the co-mutated cohort were predominantly distant, with no observed locoregional or in-field recurrence, suggesting a metastatic pattern of progression.
- Future studies should validate these findings in larger, multi-institutional cohorts and evaluate whether TP53/KEAP1 co-mutation can inform therapy or intensified surveillance.

Results

- DMFS: HR 2.47, 95% CI 1.20-5.07, p=0.011**
- BMFS: HR 3.08, 95% CI 1.33-7.11, p=0.0058**
- OS: HR 1.33, 95% CI 0.57-3.13, p=0.51



References & Acknowledgement

Swanton C, Govindan R. *N Engl J Med.* 2016; 374:1864-73.
Dempke WCM, Reck M. *Lung Cancer.* 2021; 159:10-17.
Erickson S. *J Clin Oncol.* 2026;44(suppl 16):e20042.

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