

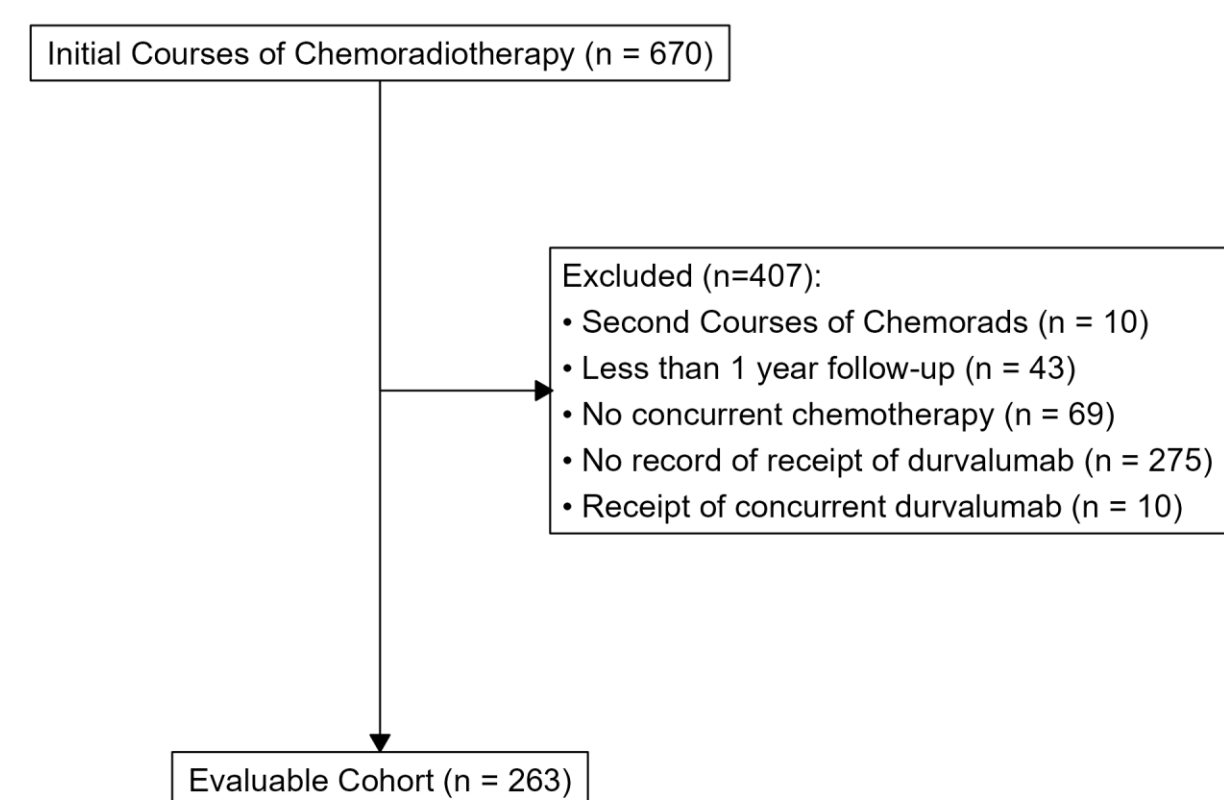
INTRODUCTION

- Post-hoc analysis of the PACIFIC study suggested that PD-L1 status might be prognostic of outcome, as PD-L1 negative patients did not demonstrate statistically improved PFS or OS.¹
- We evaluated PD-L1 status in a large cohort of patients treated with concurrent chemoradiotherapy and durvalumab consolidation (CRT-D), comparing them to a cohort treated with chemoradiotherapy only (CRT).

METHODS

Design:

- From 2015 – 2024, of 263 consecutive CRT-D pts, 127 with known PD-L1 status define the study cohort.



- 317 consecutive CRT “pre-PACIFIC” pts served as comparators.
- Missing data were imputed using chained random forests.
- We performed univariable (UVA) and multivariable (MVA) Cox proportional hazards testing in R (v 4.5.2).

DISCUSSION AND CONCLUSION

Take Home Messages

- PD-L1 negative CRT-D pts had non-significant improvement in OS compared to CRT patients (p = 0.07).
- PD-L1 negative CRT-D pts had minimal improvement in PFS compared to CRT patients (p = 0.05).

Future Direction for Research

- PD-L1 negative patients derive marginal benefit from durvalumab, at the expense of high cost and potentially-significant toxicity (not analyzed here).
- We are planning a cost-effectiveness analysis as well as analysis of a large, multi-institutional cohort.

REFERENCES & ACKNOWLEDGEMENTS

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Artificial Intelligence (AI) Use Disclaimer

No AI tools were used in the generation, analysis, or presentation of the data.

RESULTS

Variable	CRT-D N = 127 ¹	CRT N = 317 ²	p-value ³
Age	68.5 (62.4, 73.3)	67.0 (59.6, 73.0)	0.13
Gender			0.6
Female	62 (49%)	145 (46%)	
Male	65 (51%)	172 (54%)	
Race			0.8
American Indian or Alaska Native	0 (0%)	1 (0.3%)	
Asian	2 (1.6%)	4 (1.3%)	
Black /African American	5 (3.9%)	6 (1.9%)	
More than 1 race	0 (0%)	2 (0.6%)	
Other race	1 (0.8%)	4 (1.3%)	
White	119 (94%)	300 (95%)	
Smoking Status			<0.001
Current	39 (31%)	200 (63%)	
Former	73 (57%)	106 (33%)	
Never	15 (12%)	11 (3.5%)	
Pathology			0.2
Adenocarcinoma	60 (47%)	152 (48%)	
Non-Squamous	25 (20%)	41 (13%)	
Squamous Cell	42 (33%)	124 (39%)	
Radiation Technique			<0.001
3D Conformal	21 (17%)	159 (50%)	
IMRT	106 (83%)	158 (50%)	
Daily IGRT	116 (91%)	226 (71%)	<0.001
Stage (AJCC 8th ed)			0.3
IIIB	5 (3.9%)	25 (7.9%)	
IIIA	51 (40%)	115 (36%)	
IIIB	57 (45%)	151 (48%)	
IIIC	14 (11%)	26 (8.2%)	
Dose Prescribed			<0.001
6000	98 (77%)	45 (14%)	
6200	1 (0.8%)	0 (0%)	
6300	0 (0%)	1 (0.3%)	
6600	15 (12%)	14 (4.4%)	
7000	13 (10%)	257 (81%)	
Chemo Regimen			<0.001
Other	0 (0%)	8 (2.5%)	
Platinum, Etoposide	9 (7.1%)	67 (21%)	
Platinum, Pemetrexed	20 (16%)	89 (28%)	
Platinum, Taxane	98 (77%)	153 (48%)	

¹Frequency (%) or Median (IQR)

²Wilcoxon rank sum test; Pearson's Chi-squared test; Fisher's exact test

Table 1. Demographic/Treatment Characteristics. Nearly all CRT patients pre-date the CRT-D patients, reflectively temporal differences in treatment (beyond merely the use of durvalumab).

- Demographics did not differ between groups.
- Treatment changed over time, reflecting US practice patterns:
 - Reduced radiotherapy prescription dose
 - Increased use of IMRT and daily image guidance (IGRT)
 - Decreased use of platinum/etoposide chemotherapy
- Median FU was 43.5 months for CRT-D pts and 117 months for CRT pts.
- No statistical difference in OS or PFS between CRT-D pts with known vs unknown PD-L1 status (p = 0.5 and p = 0.3, respectively).
- PD-L1 score defined as negative (<1%), low (1-49%), and high (≥50%).
- OS varied greatly by PD-L1 score, though the difference between PD-L1 negative and pre-PACIFIC pts was not statistically significant (p = 0.07).
- In UVA, only PD-L1 score was statistically predictive of OS in CRT-D patients, though married pts tended to live longer (p = 0.07) and large cell neuroendocrine carcinoma less long (p = 0.09).
- In UVA, PD-L1 score was highly predictive of PFS, though the difference in PFS between PD-L1 negative and pre-PACIFIC patients was marginally significant (p = 0.05).
- No clinical parameter was predictive of PD-L1 negativity, though patients with “Carcinoma, NOS” pathology trended toward significance (p = 0.06).

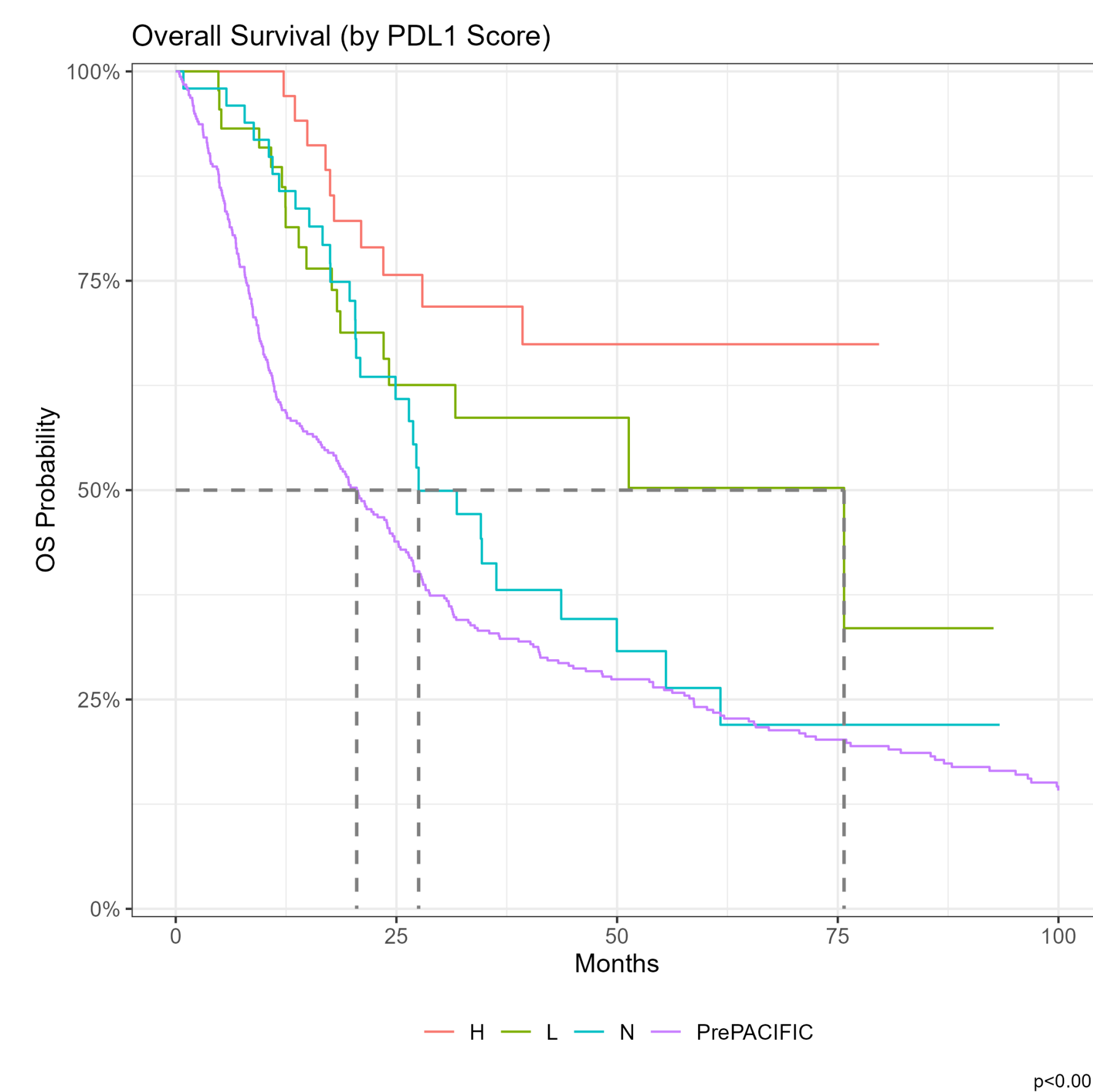


Figure 1. Overall survival (OS) stratified by PD-L1 score, compared to patients who did not receive durvalumab. Median OS for CRT pts, PD-L1 negative, low, and high were 20.5 months, 27.5 months, 75.7 months, and not reached, respectively.

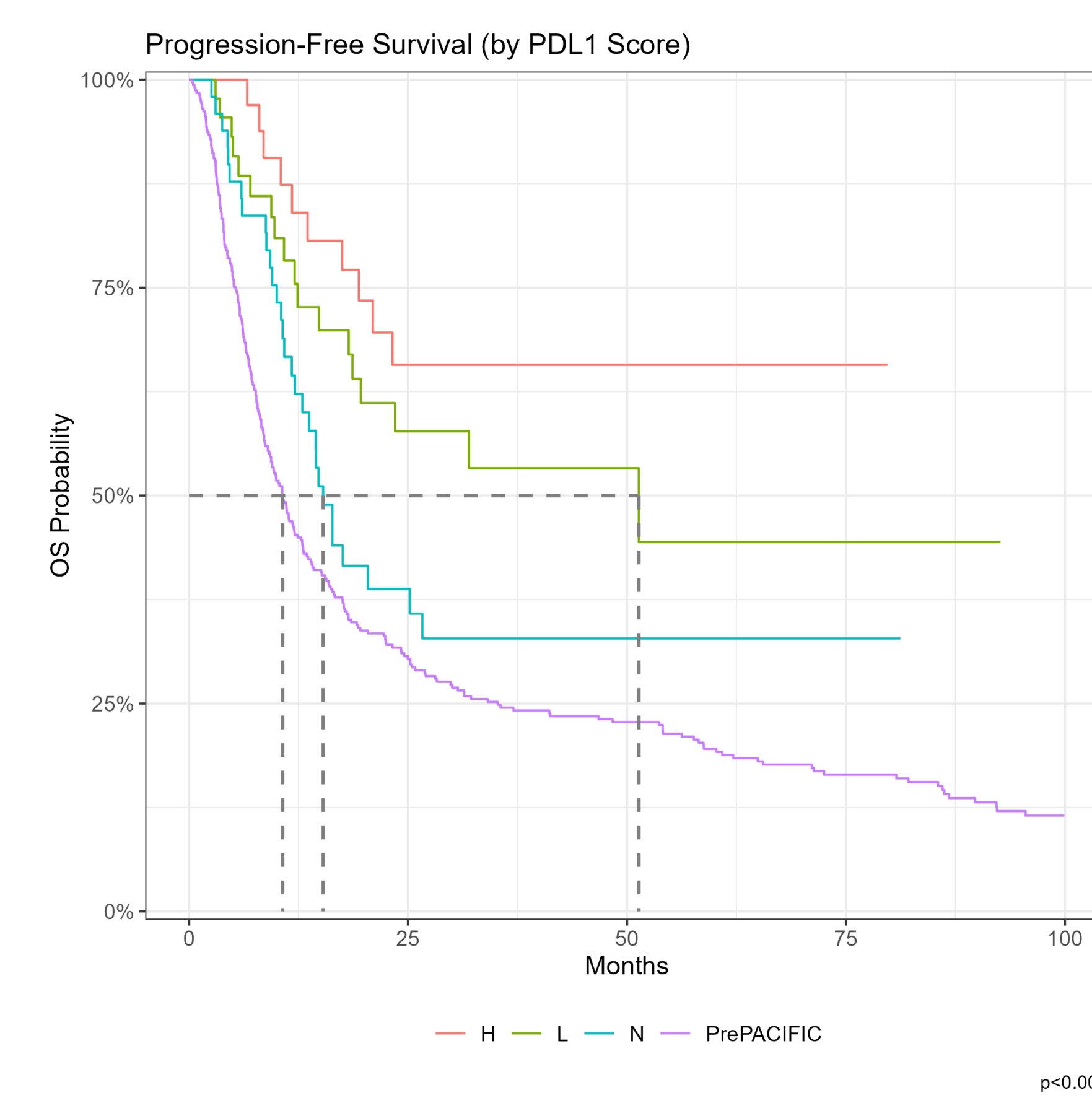


Figure 2. Progression-free survival (PFS) stratified by PD-L1 score, compared to patients who did not receive durvalumab. Median PFS for CRT pts, PD-L1 negative, low, and high were 10.7 months, 15.3 months, 51.4 months, and not reached, respectively.