



P3.362: PD-L1 Expression on Tumor-Infiltrating Immune Cells is Associated with Favorable Prognosis in Resected Thymic Carcinoma

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INTRODUCTION

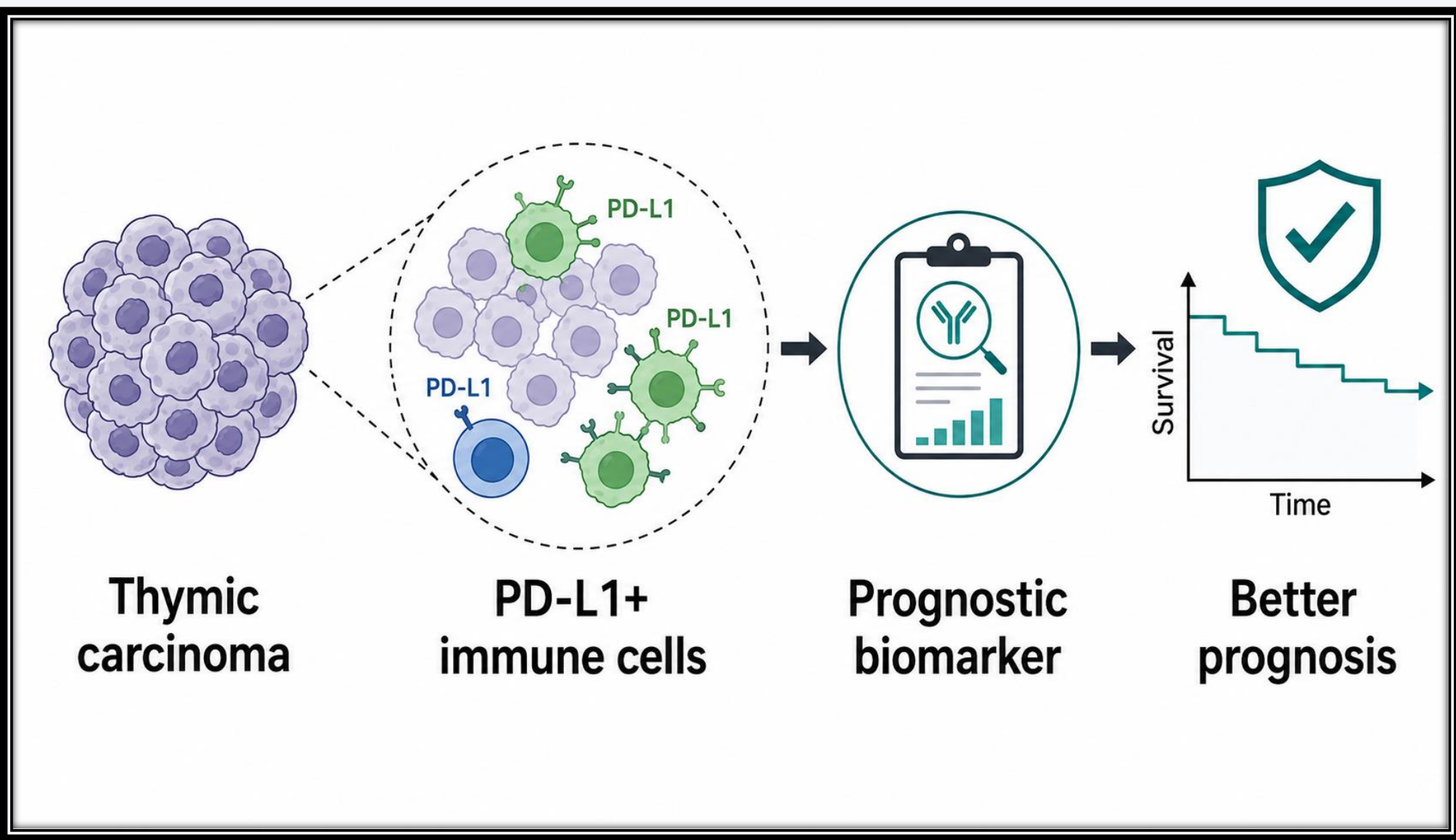
Programmed death-ligand 1 (PD-L1) expression is commonly assessed by tumor proportion score (TPS) in thoracic malignancies, whereas combined positive score (CPS), which incorporates PD-L1 expression on tumor-associated immune cells, is widely used in other solid tumors. However, the clinicopathological and prognostic significance of TPS and CPS in thymic carcinoma remains unclear. We investigated the clinicopathological and prognostic significance of PD-L1 expression assessed by TPS and CPS in resected thymic carcinoma.

METHODS

We retrospectively reviewed patients with thymic carcinoma who underwent surgical resection at Kyoto University Hospital between 2001 and 2017. PD-L1 expression was evaluated on whole-slide sections by immunohistochemistry using the Ventana PD-L1 (SP263) assay. TPS and CPS were categorized as <1%, 1–49%, and ≥50%. Associations between PD-L1 expression and clinicopathological variables were analyzed. Overall survival (OS) was estimated using the Kaplan–Meier method. To further assess PD-L1 expression on tumor-infiltrating immune cells, we additionally analyzed the difference between CPS and TPS (CPS–TPS).

DISCUSSION AND CONCLUSION

Actionable Takeaway Message



Future Direction for Research

- **Additional immune profiling**
- **Validation in a larger, multicenter cohort**

REFERENCES & ACKNOWLEDGEMENTS

References

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2. Sato J, Kitano S, Motoi N, Ino Y, Yamamoto N, Watanabe S, Ohe Y, Hiraoka N. CD20+ tumor-infiltrating immune cells and CD204+ M2 macrophages are associated with prognosis in thymic carcinoma. Cancer Sci. 2020 Jun;111(6):1921-1932. doi: 10.1111/cas.14409. Epub 2020 May 8. PMID: 32277550; PMCID: PMC7293080.

Disclosure

The authors declare no conflicts of interest.

Artificial Intelligence (AI) Use Disclaimer

ChatGPT (OpenAI) was used for language editing and graphical illustration. All scientific content and conclusions were reviewed by the authors.

RESULTS

Patient characteristics (n = 38)

Characteristic	Value
Age, median (range),	69 (28–86)
Sex	
Male	19 (50.0%)
Female	19 (50.0%)
Pathological stage	
I	11 (28.9%)
II	7 (18.4%)
III	8 (21.1%)
IV	12 (31.6%)
Histology	
Squamous c. ca.	31
Other	7

Non-squamous carcinomas more frequently showed low PD-L1 expression, whereas squamous cell carcinomas tended to show **higher** PD-L1 expression, particularly by CPS.

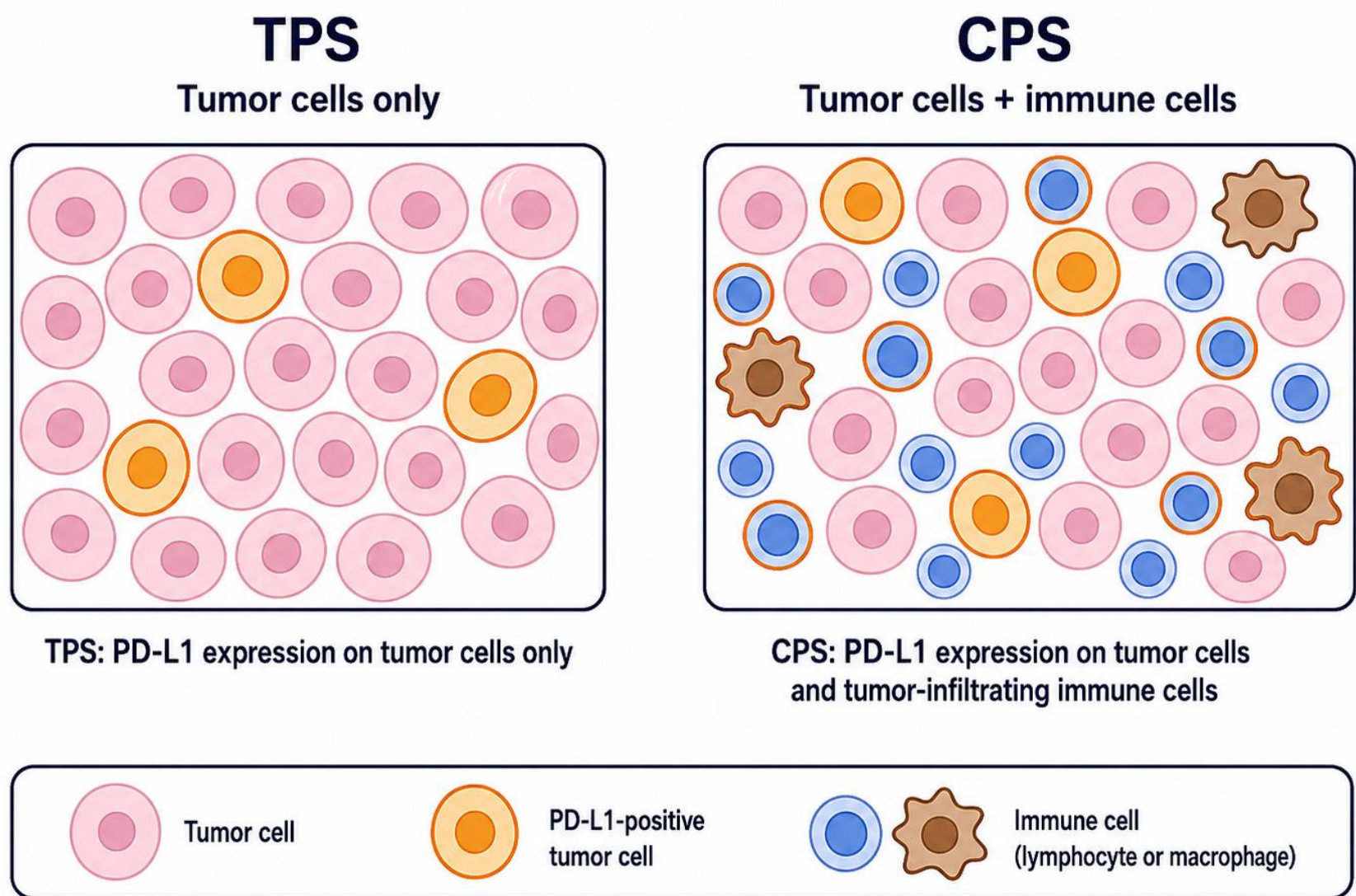
Clinicopathological Characteristics by TPS

Characteristics	n	<1%	1% - 49%	≥50%	p value
Gender					
Male	19	2	12	5	0.890
Female	19	4	8	7	
Age					
70≤	13	1	8	4	0.661
70>	25	5	12	8	
Pathological stage					
I	11	1	7	3	0.969
II	7	1	4	2	
III	8	1	4	3	
IV	12	3	5	4	
Histology					
Squamous cell carcinoma	31	3	19	9	0.0229
Non-squamous cell carcinoma	7	3	1	3	
Total number of patients	6	20	12		

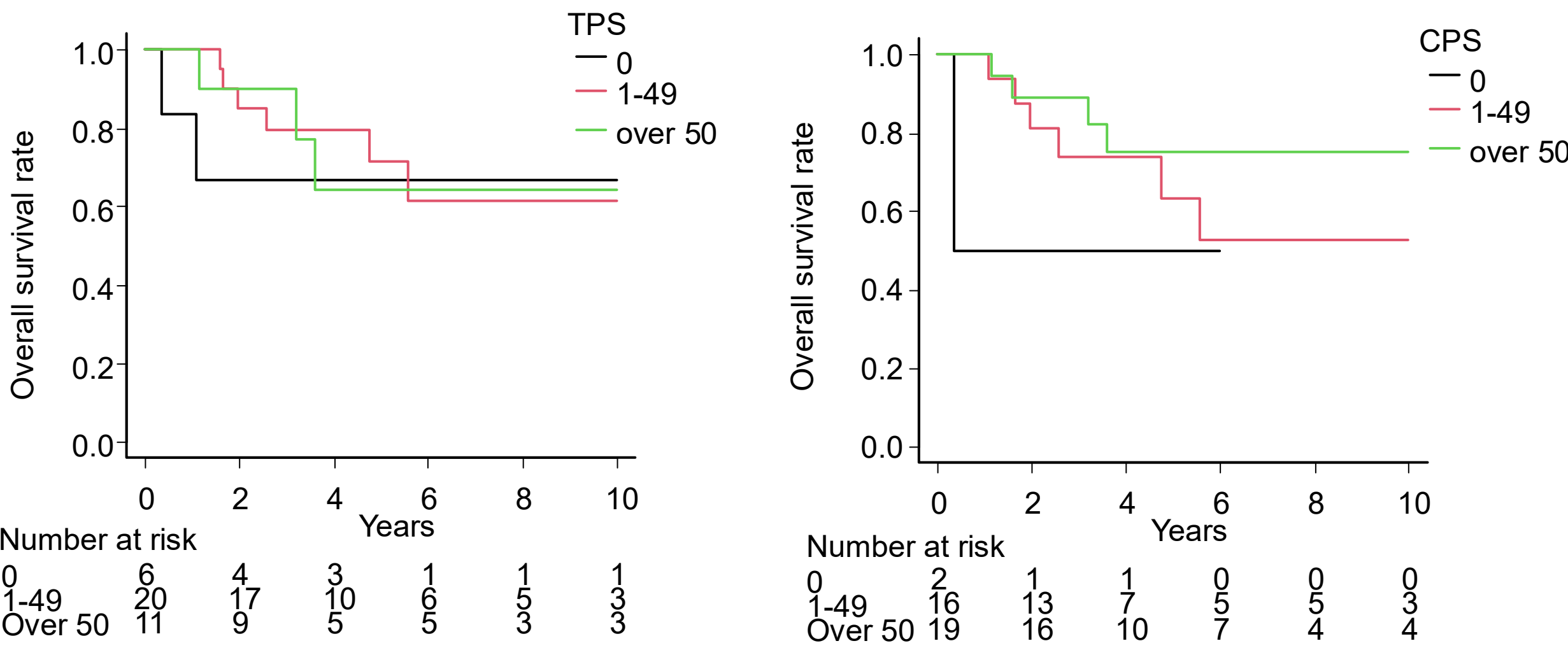
Clinicopathological Characteristics by CPS

Characteristics	n	<1%	1% - 49%	≥50%	p value
Gender					
Male	19	1	8	10	1.000
Female	19	1	8	10	
Age					
70≤	13	0	6	7	0.875
70>	25	2	10	13	
Pathological stage					
I	11	0	7	4	0.588
II	7	0	2	5	
III	8	1	3	4	
IV	12	1	4	7	
Histology					
Squamous cell carcinoma	31	0	14	17	0.0443
Non-squamous cell carcinoma	7	2	2	3	
Total number of patients	2	16	20		

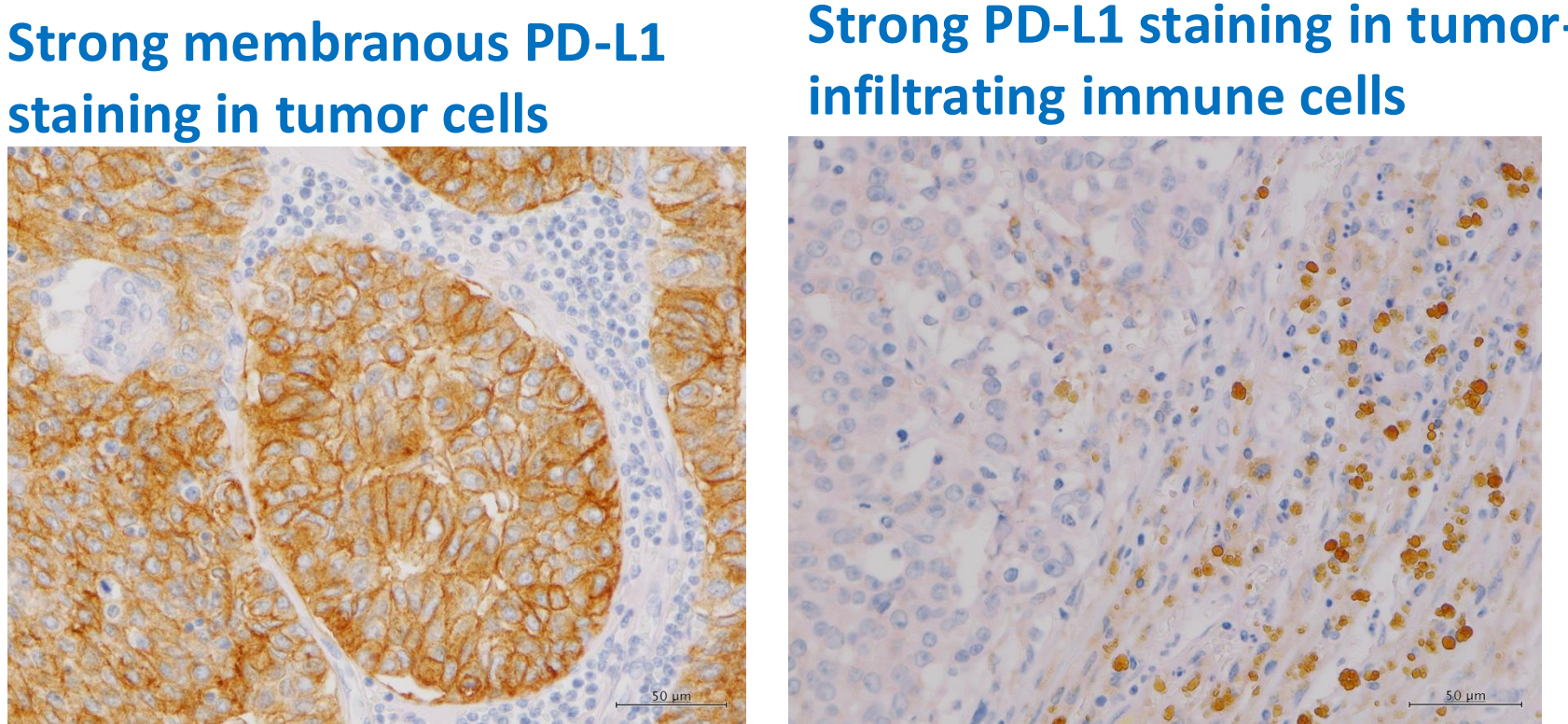
Whole-slide evaluation



Overall Survival According to TPS and CPS



Representative PD-L1 IHC (SP263)



Higher CPS–TPS difference → Better overall survival

