# Neoadjuvant treatment Response to Combination Chemotherapy and Immunotherapy in a Patient with High PD-L1 Expressing Adenosquamous Cell Carcinoma of the Pancreas

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## Introduction

-Pancreatic cancer remains one of the most lethal malignancies.

-Adenosquamous carcinoma (ASC) of the pancreas: rare type <1%, aggressive, chemoresistant, poor outcomes.

-In ASC, neoadjuvant treatment converted unresectable case into resectable case has not been reported.

-This case illustrates a potentially meaningful neoadjuvant role for chemoimmunotherapy in PD-L1–high ASC.

## Treatment Courses

-December 2023, 70 y/o gentleman presented with progressive abdominal pain and weight loss. Diagnosed with pancreatic head ASC, cT1N0M0, borderline resectable.

-After 4 cycles of Neoadjuvant FOLFIRINOX, tumor progression: 2.1X1.9X1.9 cm-> 2.6X1.8X2.9 cm, with increased vascular involvement->unresectable.

-Switched to gemcitabine and Abraxane. Tempus™: PD-L1 TPS 55% (Figure-1)->added pembrolizumab at cycle 2.

-After two cycles of combination chemoimmunotherapy-> 2.0X1.5X1.2 cm -> 1.6 cm by cycles 6, with no metastases.

-Concurrent chemoradiation (weekly gemcitabine for 3 weeks) -> residual 1.3 cm mass (Figure-2).

## Treatment Courses

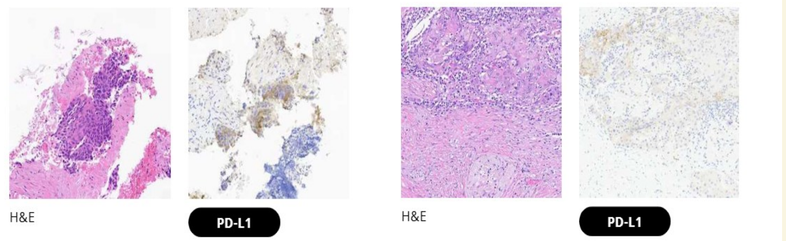
-01/2025, Whipple procedure with portal vein resection and reconstruction. Partial response, ypT1cN1 (1/14), LVI+, PNI+.

-The residue tumor is almost entirely of squamous morphology (90%). Repeat Tempus™ on residual tumor revealed PD-L1 TPS 1% (Figure-1).

-Adjuvant pembrolizumab X 7 cycles. 08/2025, stopped pembrolizumab treatment due to side effects.

-12 months after his surgery, recurrence with 2 hepatic lesions in seg 7 and seg 8, no other metastasis -> CT guided microwave ablation of liver lesions.

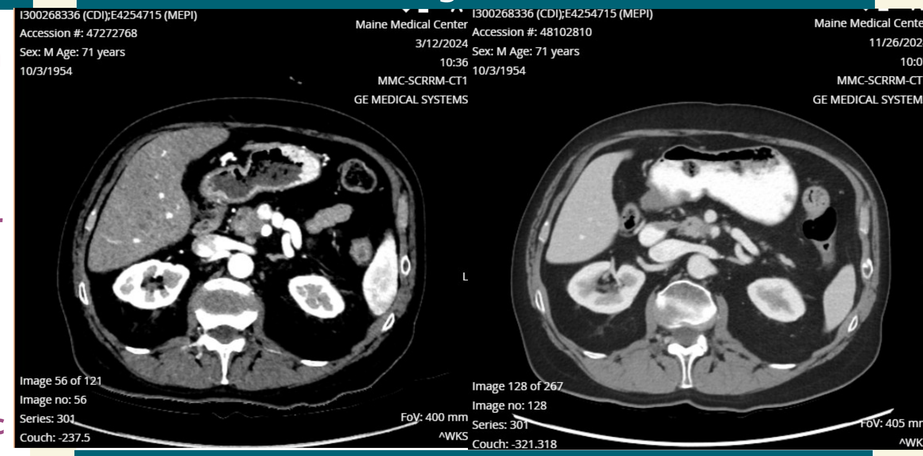
## Figure-1




## Acknowledgement

I would like to thank the patient and the family for granting permission to publish this clinical case and for their trust in the care we provided.

## Figure-2




## Discussion

- **Re-evaluating the Role of PD-L1 Testing in Pancreatic Cancer**
- **Importance of Histologic Subtype Awareness**
- **Potential Synergy Between Chemotherapy and Immunotherapy in ASC type**
- **Tumor Heterogeneity**

## Conclusion

This case illustrates a durable response of PD-L1–high pancreatic adenosquamous carcinoma to neoadjuvant Gemcitabine/Abraxane and pembrolizumab, followed by successful surgical resection.

This findings underscores the potential value of PD-L1 testing in rare pancreatic subtypes and suggests that chemoimmunotherapy may represent a viable neoadjuvant strategy for selected patients.