

P3.137: Histologic and Immunologic Contexture as Determined by TLS Maturation and Spatial Transcriptomics in Lung Adenocarcinoma

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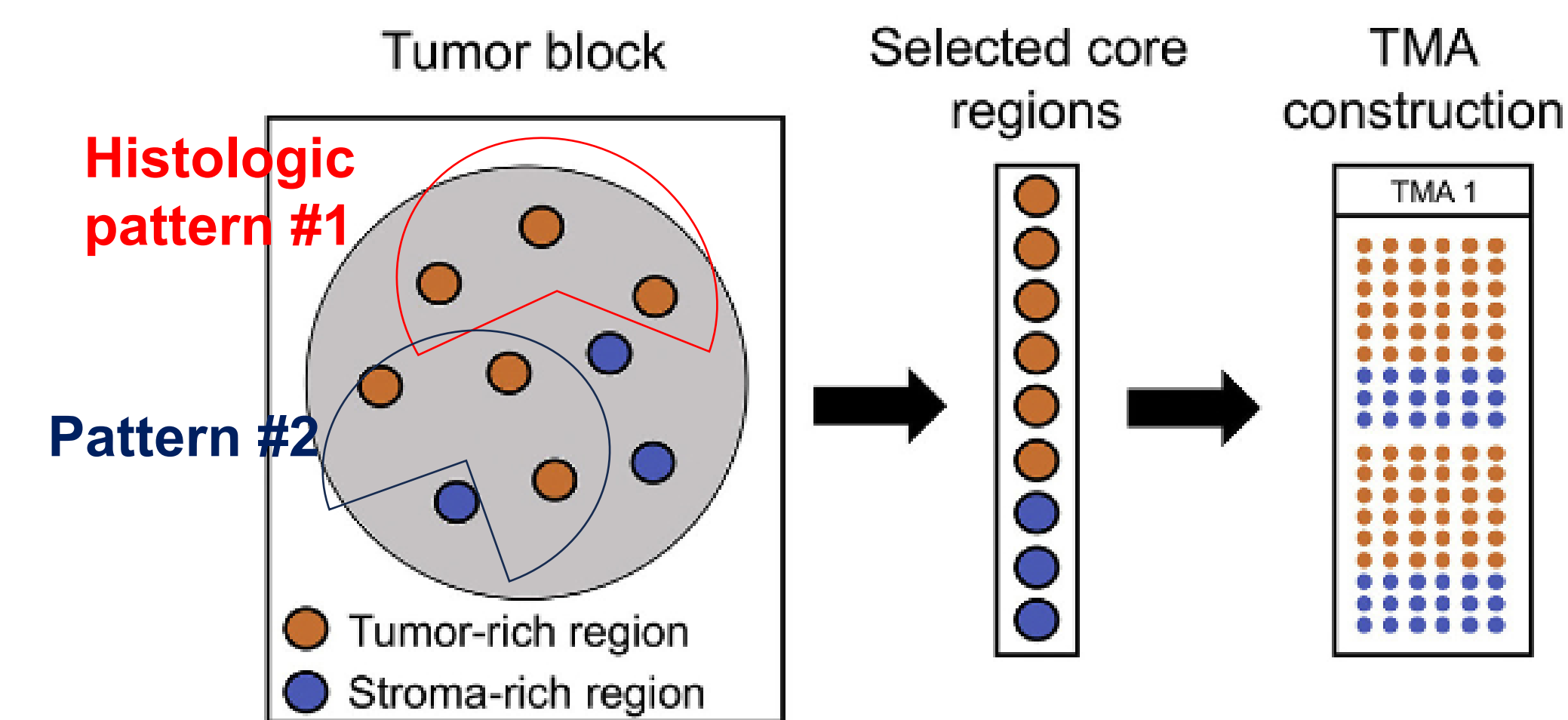
INTRODUCTION

Central hypothesis: Local histologic components shape TLS maturation to define spatially distinct immune niches within lung ADC.

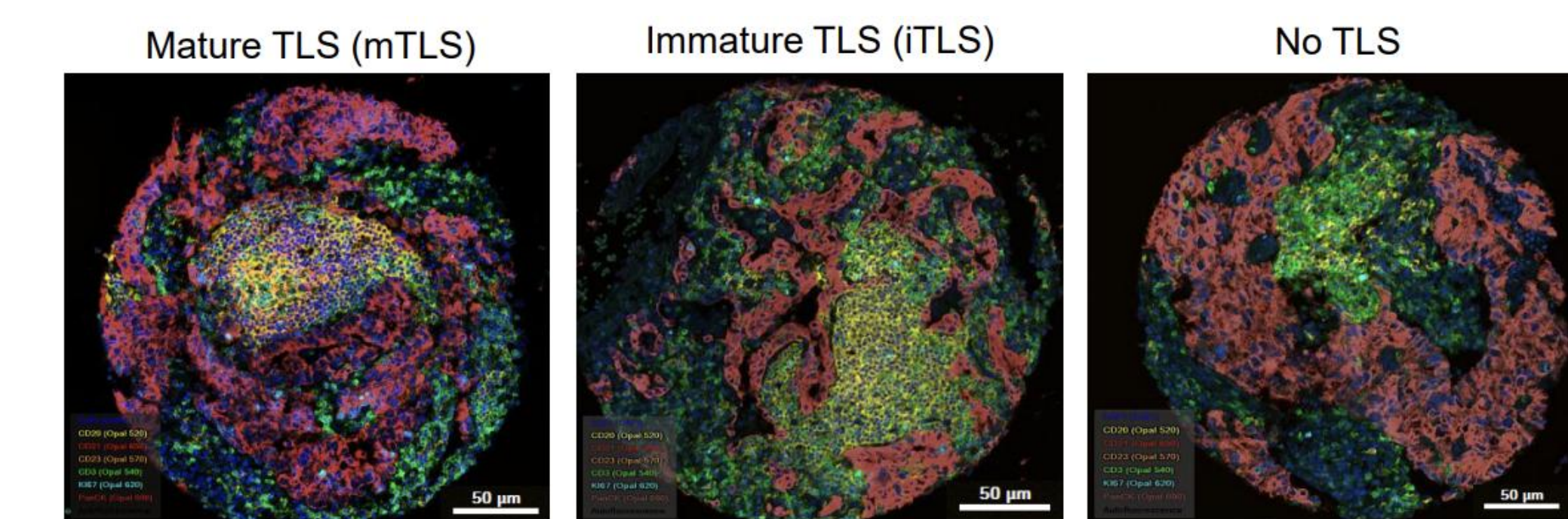
Aim: Histology-informed assessment of TLSs captures clinically meaningful immune heterogeneity

METHODS

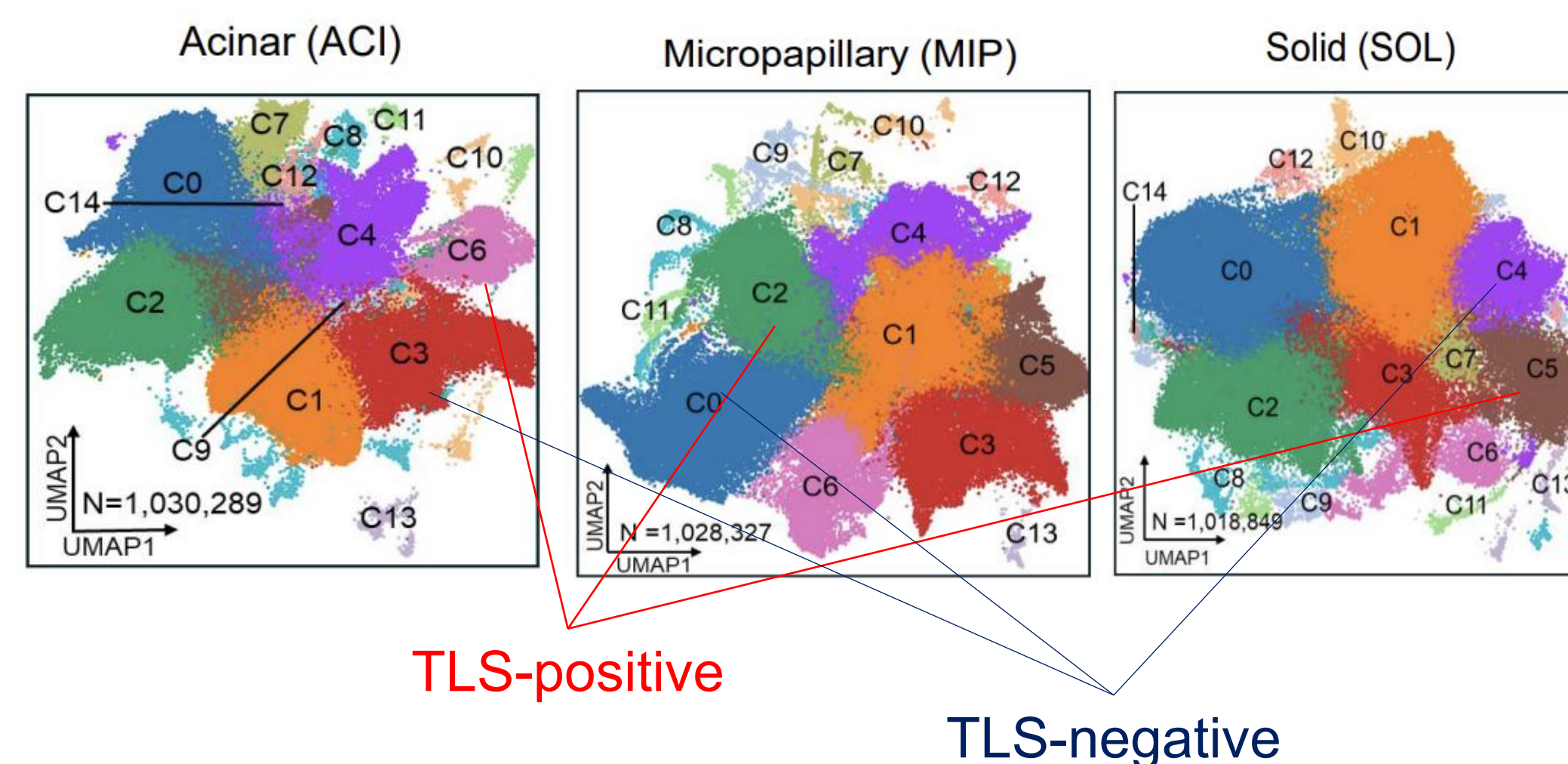
A. TMA construction (Total n=397)



B. Multiplex Immunofluorescence



C. Xenium Spatial Transcriptomics (n=6)



DISCUSSION AND CONCLUSION

Take Home Message

- Mature TLSs are preferentially maintained in lower-grade histologic regions and are progressively lost across aggressive architectural patterns.
- Lung ADC histologic architecture defines spatially distinct immune niches characterized by differential TLS maturation and divergent epithelial immune programs.

Future Direction

- Future immunotherapy investigations should assess histologic patterns, in addition to patient outcomes, to determine response to therapy.

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Artificial Intelligence (AI) Use Disclaimer

No AI or AI-assisted tools were used in any part of this work.

RESULTS

