

625: TELOMERE LENGTH AND SURVIVAL IN PATIENTS WITH UNRESECTABLE LOCALLY ADVANCED NON-SMALL CELL LUNG CANCER: IS THERE A RELATIONSHIP?

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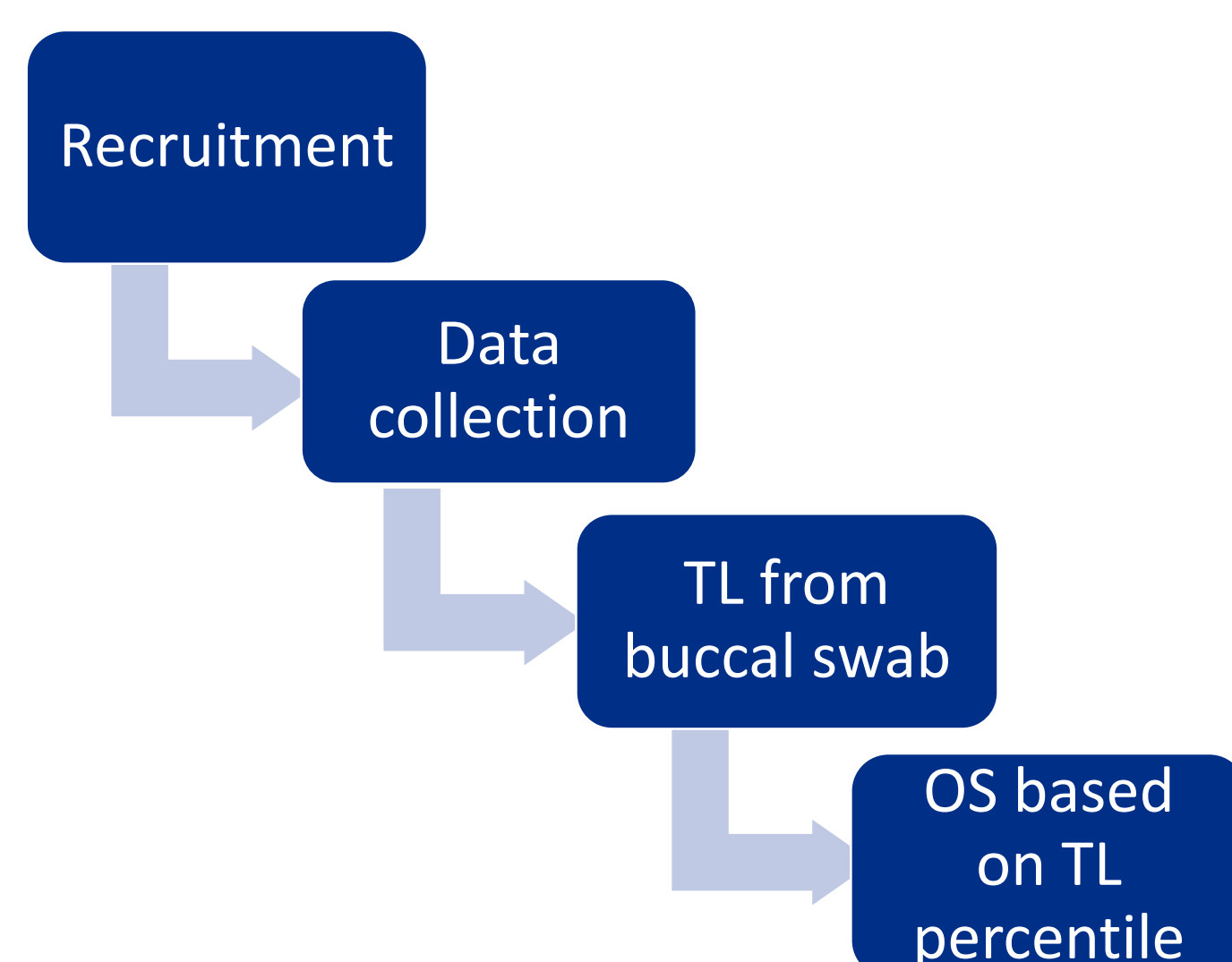
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INTRODUCTION

- Telomerase is overexpressed in 80% of tumors, preventing telomere shortening thus providing cellular immortality.
- Immunotherapy (IT) after concurrent chemoradioterhapy (CCRT) has a benefit in overall survival (OS) in locally advanced non-small cell lung cancer (NSCLC) PDL-1 positive patients.
- The aim of this study is to analyze the relationship between telomere length (TL) and OS in NSCLC PDL-1 positive patients treated with CCRT and IT.

METHODS

- An unicentric prospective study enrolled between 2018-2021.
- Clinical, analytical, TL, tumor and treatment data were collected.
- Patients were classified in two groups based on TL percentile: p<25 and p>25.
- OS was analyzed during follow-up until death or last visit using Kaplan-Meier.



DISCUSSION AND CONCLUSION

Actionable Take Away Message

- NSCLC patients had shorter TL than healthy population by indirect comparison.
- NSCLC patients treated with CCRT and IT with TL above the 25th percentile showed better OS than those with TL below the 25th percentile.
- Further studies to validate these findings will be needed.

Future Direction for Research

- Validating these findings could have an impact in predicting better OS in NSCLC patients treated with IT.

REFERENCES & ACKNOWLEDGEMENTS

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RESULTS

- 90 patients were recruited and their characteristics are shown in Table 1. Cancer patients had lower TL than healthy population, by indirect comparison (Fig. 1). No differences in OS were found between both groups (p=0.11). In the multivariate analysis (adjusted by V5, DLCO, FEV1, age, TL, NRL and emphysema) and stratifying by IT, those who received IT with “longer” TL had better OS (Fig. 2). No differences in OS were observed in patients without IT (Figure 3).

Table 1. Characteristics of the population

	Total (n=90)
Men, n (%)	81 (90)
Age, (years)	72 (6.3)
Tobacco	
- Non smoker, n (%)	3 (3)
- Smoker, n (%)	41 (46)
- Former smoker, n (%)	45 (51)
COPD, n (%)	47 (52)
FEV1 (%)	74 (60-85)
FVC (%)	90 (19)
DLCO (%)	60 [54-76]
Histology	
- Squamous, n (%)	49 (54)
- Adenocarcinoma, n (%)	12 (21)
- Other, n (%)	22 (24)
Immunotherapy, n (%)	36 (38)
Neutrophil-lymphocyte ratio	2,9[2,2 – 4,2]
Platelet-lymphocyte ratio	153,6[111 - 194]
Dosimetry, n (Gy)	
- V5	51 [39-56]
- V20	21 (8,1)
- PTV	483 [292-670]
Telomere length, n (%)	
- Percentile <25	35 (38)
- Percentile >25	56 (52)

Figure 1. Study population's telomere length.

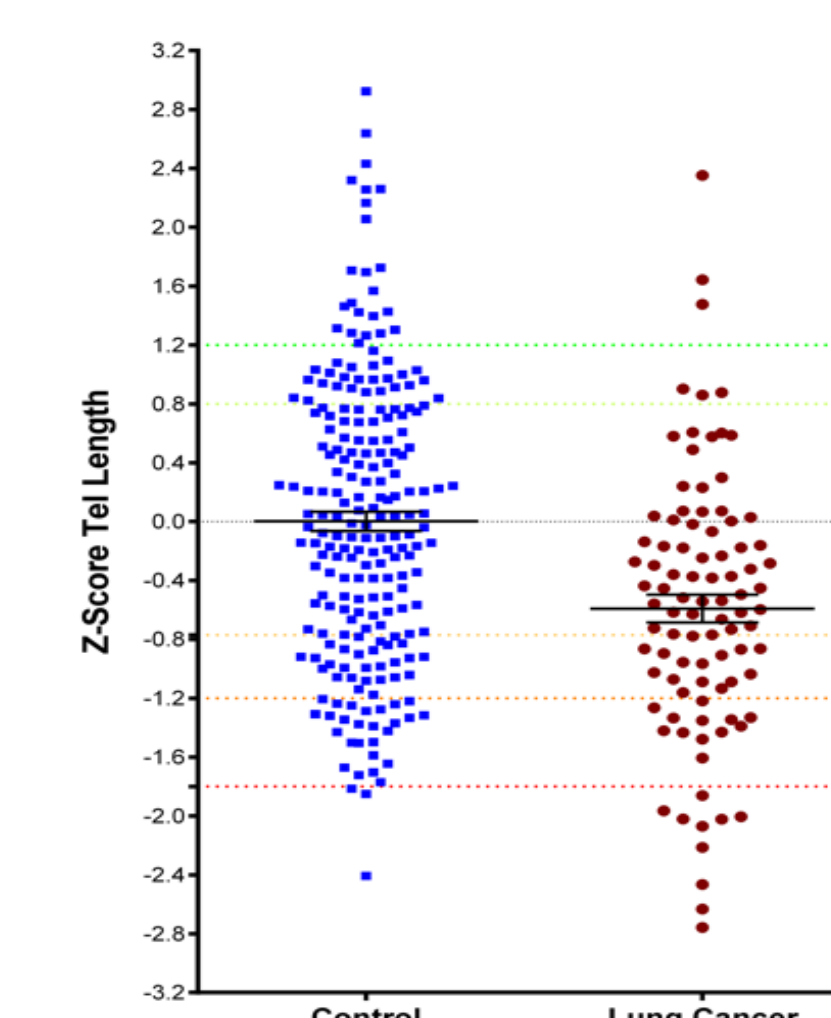


Figure 2. Overall survival without immunotherapy according to telomere length.

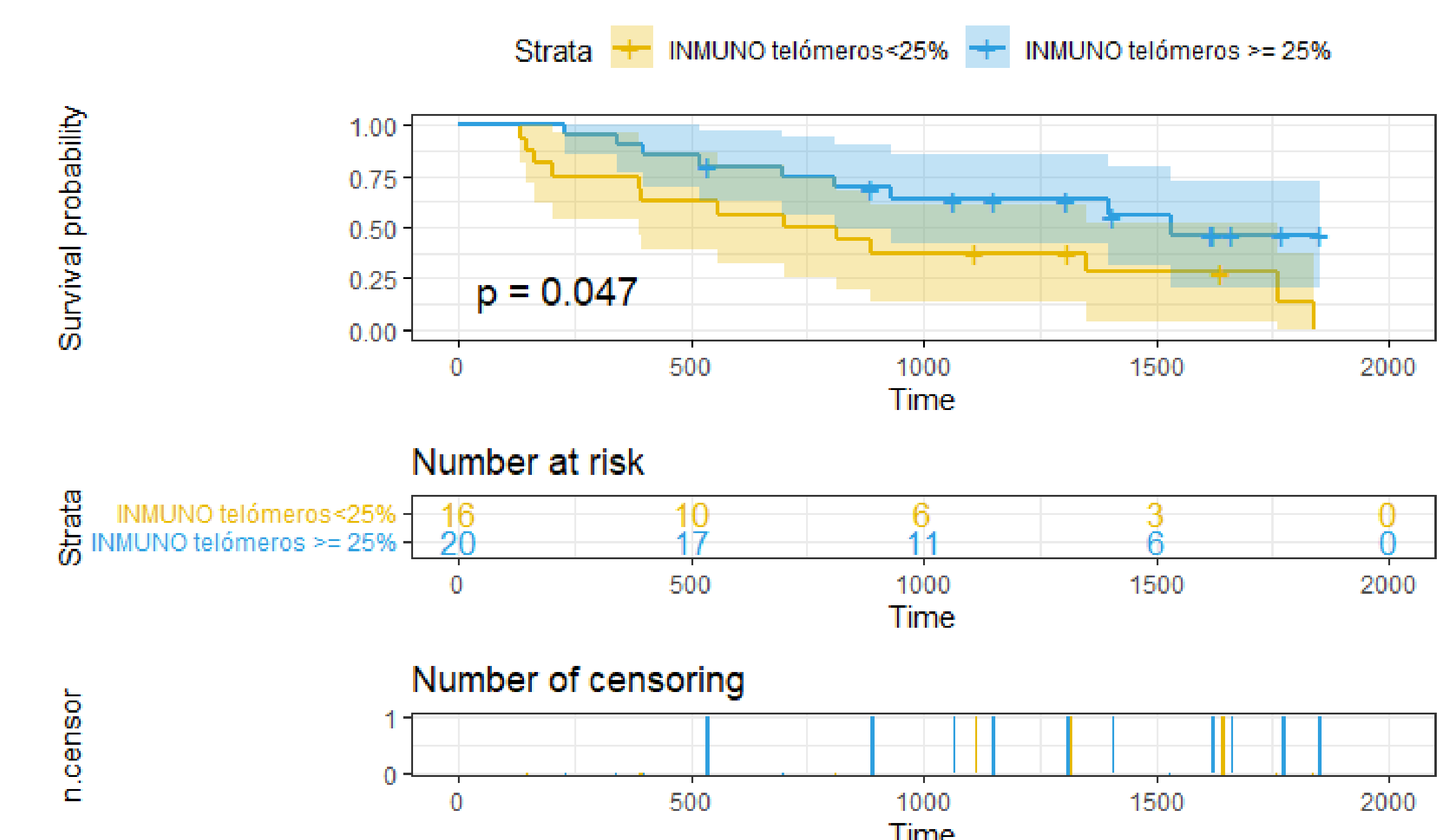


Figure 3. Overall survival without immunotherapy according to telomere length.

