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INTRODUCTION

Impact on survival according to the type and extent of lymphadenectomy performed remains unclear. While some studies have not observed any difference related to lymphadenectomy practice, others have observed survival benefit according to the type of lymphadenectomy, number of resected lymph nodes (LN) and number of LN stations explored.

OBJECTIVE

To analyse **survival differences** according to the **intraoperative nodal assessment** performed in patients with resected lung cancer

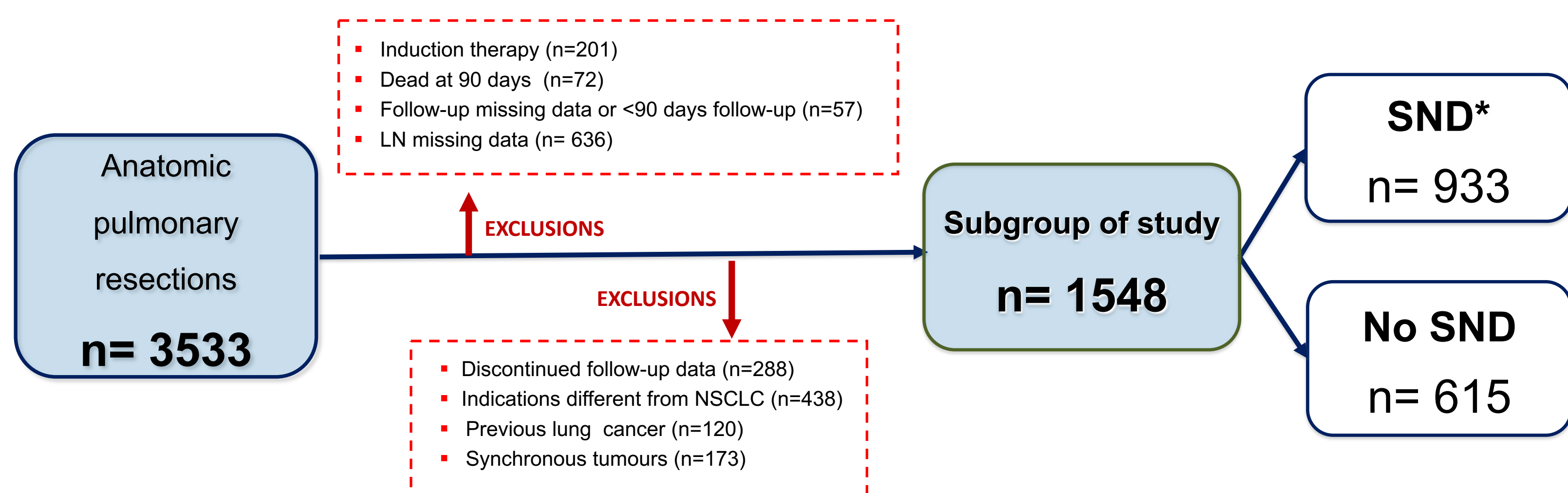
METHODS

DESIGN: prospective, observational and multicentre study of all anatomic pulmonary resections for lung cancer registered in the GEVATS database

INCLUSION PERIOD: December 2016 - March 2018 (15 months)

FOLLOW-UP: completed in September 2022

PATIENTS:



*Systematic nodal dissection (SND) definition: removal or sampling of a minimum of 6 LN (always subcarinal station)

STATISTIC ANALYSIS:

- Homogeneity analysis: Chi-square, Fisher, Student's t, Mann-Whitney U
- Overall (OS) and cancer-specific (CSS) survival analysis: Kaplan-Meier, Cox regression analysis

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RESULTS

BIVARIATE ANALYSIS

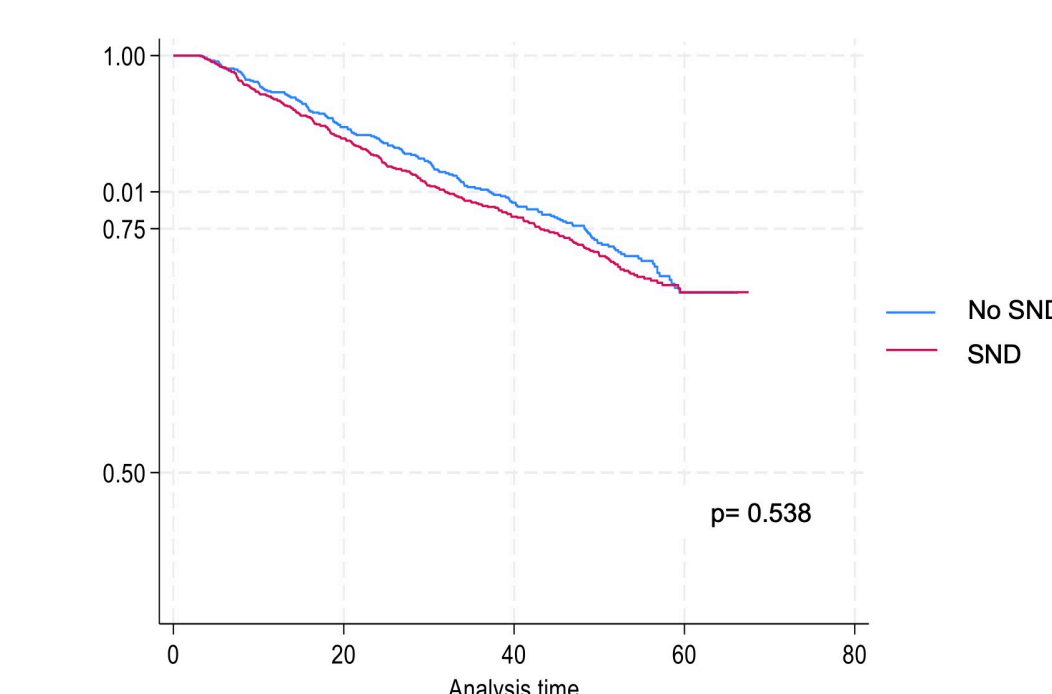
Variable	SND; n (%)	No SND; n (%)	p value
Number of patients	933 (60.3%)	615 (39.7%)	
Number of LN (IQR 25-75%)	10 (8-15)	4 (3-5)	<0.0001
Gender: male	655 (60.5%)	428 (39.5%)	0.798
Age (years)	65.7 (SD 9.6)	65.3 (SD 10.5)	0.421
Smoking habit: <ul style="list-style-type: none"> Never Active Ex-smoker 	110 (11.8%) 297 (31.8%) 514 (55.1%)	88 (14.3%) 193 (31.4%) 322 (52.3%)	0.481
Preop functional tests: <ul style="list-style-type: none"> FVC (%) FEV1 (%) DLCO (%) 	87.5 (SD 20.4) 95.5 (19.6) 81.8 (SD 21.5)	89.2 (SD 19.2) 97 (SD 18) 85.3 (SD 21.4)	0.101 0.162 0.005
Invasive staging: <ul style="list-style-type: none"> Yes No 	212 (67.7%) 721 (58.4%)	101 (32.3%) 514 (41.6%)	0.003
cN (PET-TC +/- invasive): <ul style="list-style-type: none"> cN0 cN1 cN2 cN3 	766 (59.3%) 91 (70%) 39 (75%) 2 (66.7%)	519 (40.4%) 39 (30%) 13 (25%) 1 (33.3%)	0.020
pN: <ul style="list-style-type: none"> pN0 pN1 pN2 	688 (57.1%) 139 (70.6%) 106 (73.6%)	517 (42.9%) 58 (29.4%) 38 (26.4%)	<0.001
Tumor size (mm) (IQR 25-75%)	28 (17-44)	24 (15-36)	<0.0001
Tumour histology: <ul style="list-style-type: none"> Adenocarcinoma Squamous cell c. Carcinoid Other 	512 (60.5%) 312 (65.3%) 50 (43.1) 59 (54.6%)	334 (39.5%) 166 (34.7%) 66 (56.9%) 49 (45.4%)	<0.001
Location: <ul style="list-style-type: none"> Right lung Left lung 	558 (63.1%) 375 (56.5%)	326 (36.9%) 289 (43.5%)	0.008
Surgical approach: <ul style="list-style-type: none"> Thoracotomy VATS 	512 (60.5%) 312 (65.3%)	334 (39.5%) 166 (34.7%)	<0.001
Follow-up (months) (IQR 25-75%)	52.5 (33.6-57.9)	52.6 (39-58.5)	0.441

MULTIVARIATE ANALYSIS

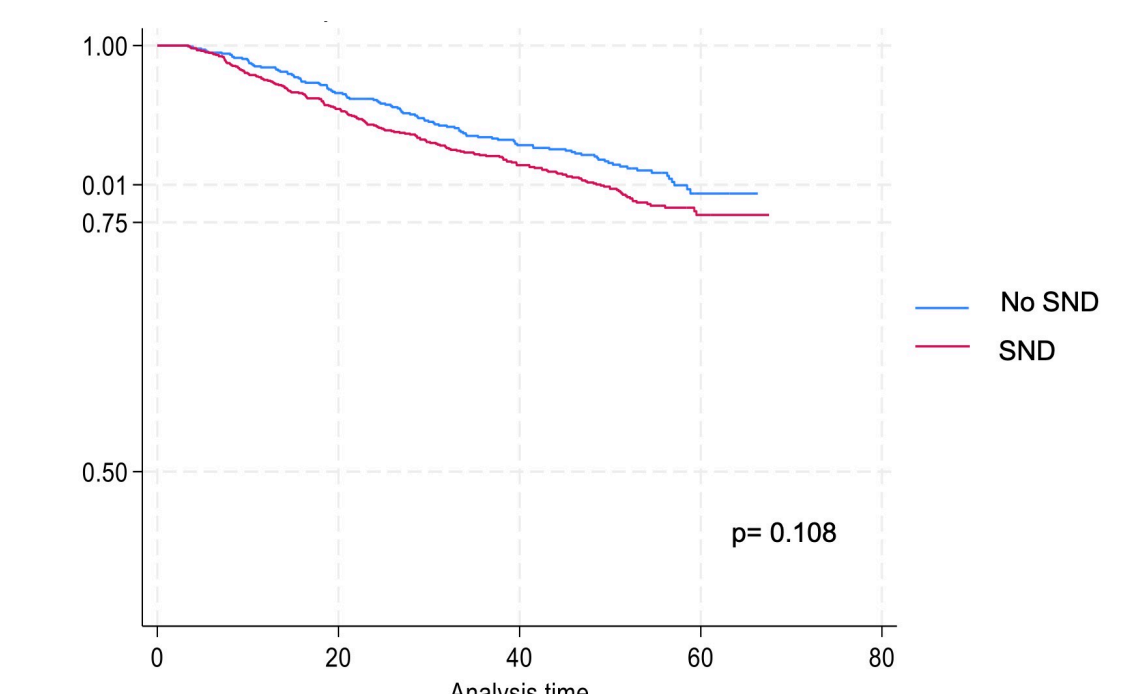
Multivariate analysis for CSS (patients with pN2)				Multivariate analysis for CSS (patients with pN1)				Multivariate analysis for CSS (pN1 + tumour size >3 cm)			
VARIABLES	HR	95% CI	p	VARIABLES	HR	95% CI	p	VARIABLES	HR	95% CI	p
SND (vs no SND)	1.52	0.79-2.89	0.203	SND (vs no SND)	0.68	0.42-1.11	0.123	SND (vs no SND)	0.49	0.27-0.88	0.017
Age	1.01	0.98-1.03	0.583	Age	1.01	0.98-1.03	0.434	Age	1.02	0.98-1.05	0.310
Gender (men vs women)	1.33	0.76-2.33	0.320	Gender (men vs women)	1.09	0.60-1.99	0.776	Gender (men vs women)	1.32	0.57-3.04	0.513
Tumor size > 3cm (vs <3 cm)	1.70	1-2.90	0.050	Tumour location (left vs right)	1.64	0.99-2.71	0.054	Invasive staging (vs no invasive staging)	0.58	0.32-1.07	0.082
								Tumour location (left vs right)	1.66	0.90-3.06	0.107
								Surgical approach (thoracotomy vs VATS)	1.99	0.99-4.02	0.053

SURVIVAL ANALYSIS

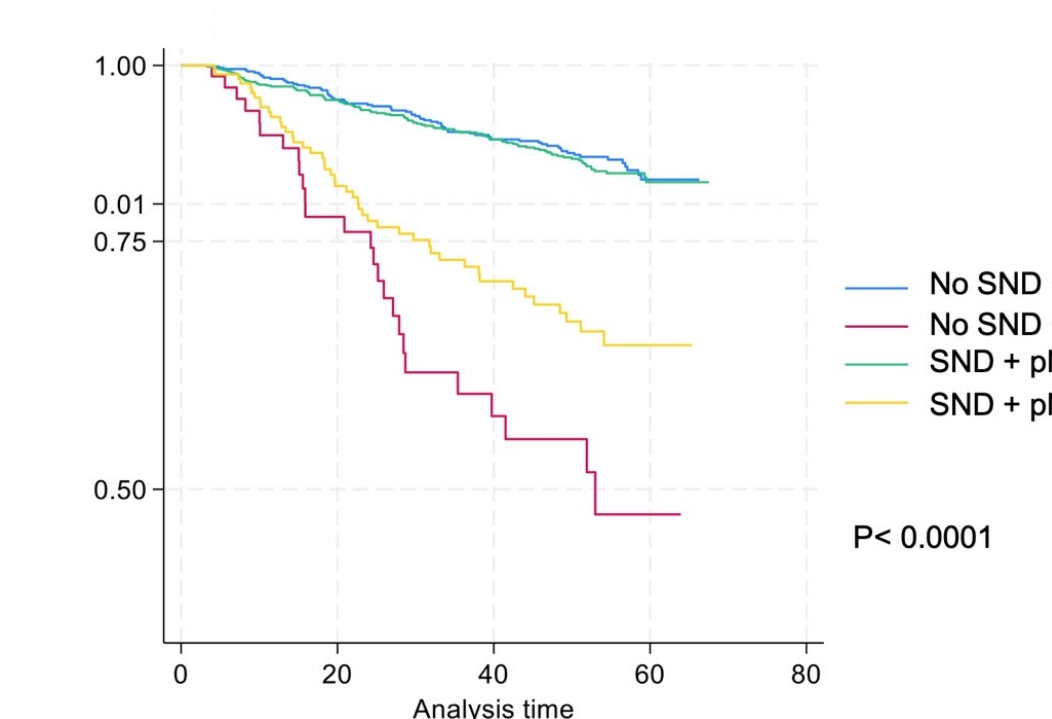
OS according to SND practice



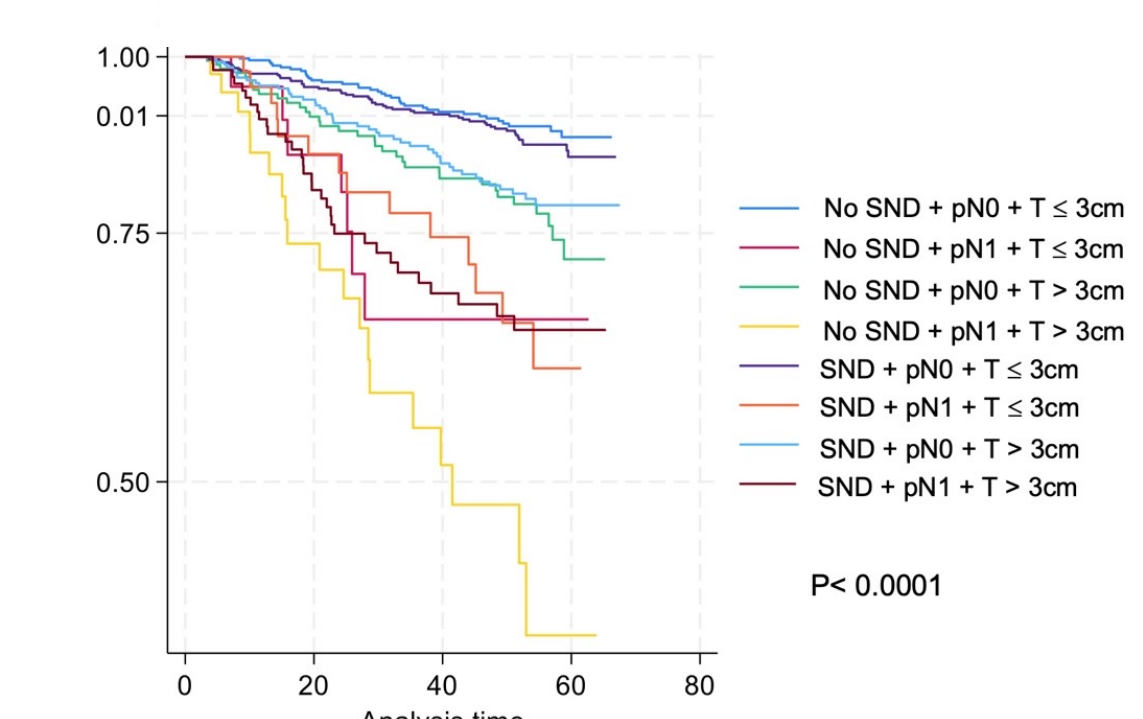
CSS according to SND practice



CSS according to SND practice and pN category



CSS according to SND practice, pN category and tumour size ≤ or > 3cm



SUMMARY & CONCLUSIONS

In GEVATS cohort:

- ✓ **SND was not associated** with better OS and CSS
- ✓ In patients with **pN1** and **T>3cm** tumours, SND was associated with **better OS and CSS**

❖ **SND should be performed routinely, considering the survival benefit observed in patients with pN1 and tumour size >3cm tumours.**

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