

**Supplementary Table 1. Main patient characteristics, univariate p-values (log-rank test) for disease-free survival (DFS) and overall survival (OS) and the mean  $\pm$  standard deviation (SD) of NANCI expression for each clinical characteristic compared by T-test or ANOVA test according TNM 8<sup>th</sup> edition.**

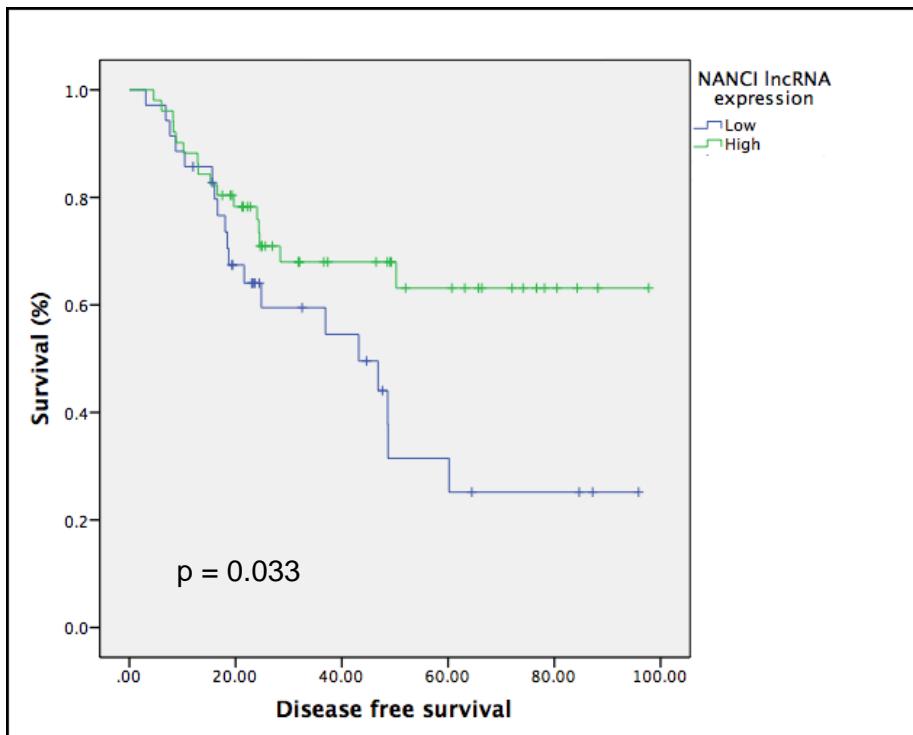
Characteristics	Value	N=86 (%)	DFS p-value	OS p-value	NANCI p-value
<b>Sex</b>	Male Female	73 (74.5) 25 (25.5)	<b>0.005</b>	<b>0.022</b>	0.102
<b>Age, yrs</b>	Mean (Range) ≤65 ≥65	67 (38-84) 42 (42.1) 56 (57.1)	0.697	0.361	0.118
<b>ECOG PS<sup>a</sup></b>	0 1	15 (17.4) 71 (82.6)	0.181	0.079	0.341
<b>Stage</b>	IA1 IA2 IA3 IB	4 (4.7) 27 (31.4) 34 (39.5) 21 (24.4)	0.615	0.797	0.170
<b>Histology</b>	ADK SCC Large cell carcinoma Adenosquamous carcinoma	53 (61.6) 29 (33.7) 3 (3.5) 1 (1.2)	0.287	0.370	0.065
<b>Type of surgery</b>	Lobectomy/bilobectomy Pneumonectomy Atypical resection Anatomical resection	68 (79) 2 (2.4) 8 (8.3) 8 (9.3)	0.816	0.844	0.440
<b>Smoking history</b>	Current smoker Former smoker Never smoker	25 (29.1) 48 (55.8) 13 (15.1)	0.308	0.312	0.118
<b>Relapse</b>	No Yes	63 (73.3) 23 (26.7)	-	-	0.745
<b>Emphysema</b>	Yes No Unknown	38 (53.5) 33 (46.5) 15 (17.4)	0.086	0.211	0.124
<b>COPD<sup>c</sup></b>	Yes No Unknown	51 (59.3) 24 (27.9) 11 (12.8)	0.838	0.765	0.098
<b>DLCO<sup>d</sup> (%)</b>	Mean (Range) ≥60% <60%	73.4 (35-101) 50/60 (83.3) 10/60 (11.6)	0.270	0.216	0.077
<b>Molecular Features</b>	TP53 mutation TP53 WT KRAS mutation KRAS WT EGFR mutation <sup>b</sup> EGFR WT <sup>b</sup>	17/64 (26.6) 47/64 (73.4) 10/66 (15.2) 56/66 (84.8) 8/30 (26.7) 22/30 (73.3)	0.358	0.875	<b>0.026</b>

<sup>a</sup> Eastern Cooperative Oncology Group performance status

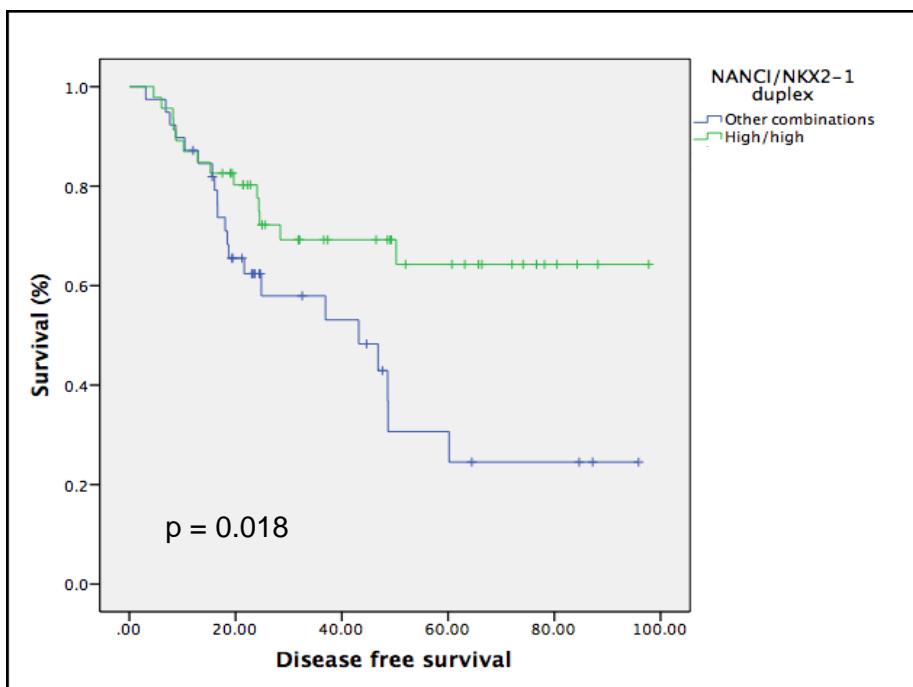
<sup>b</sup> EGFR mutational status was assessed only in adenocarcinoma patients.

<sup>c</sup> COPD Chronic Obstructive Pulmonary Disease.

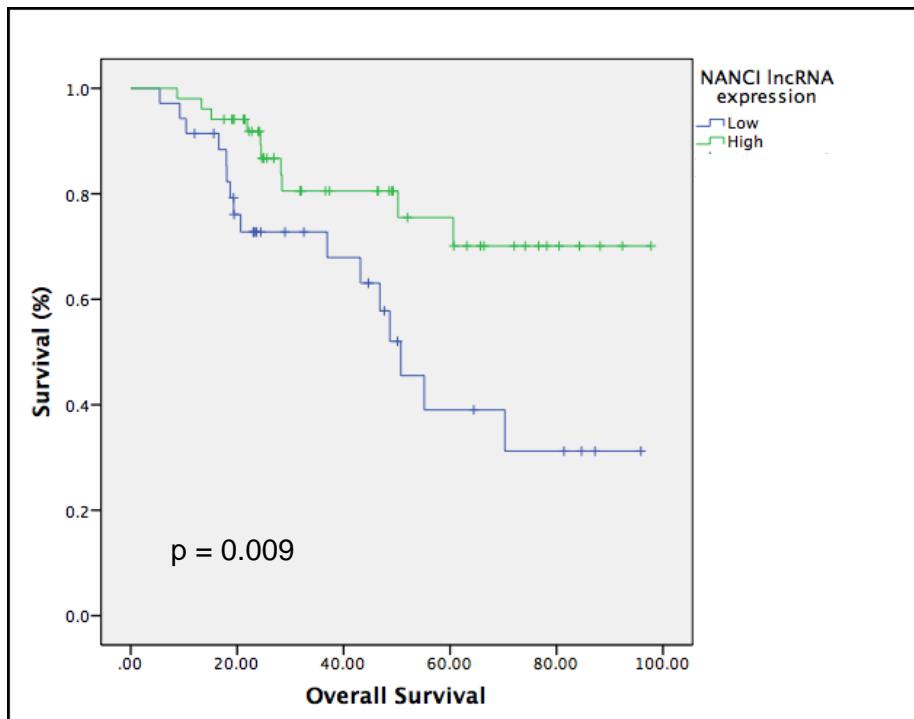
<sup>d</sup> DLCO Carbon monoxide diffusing capacity.



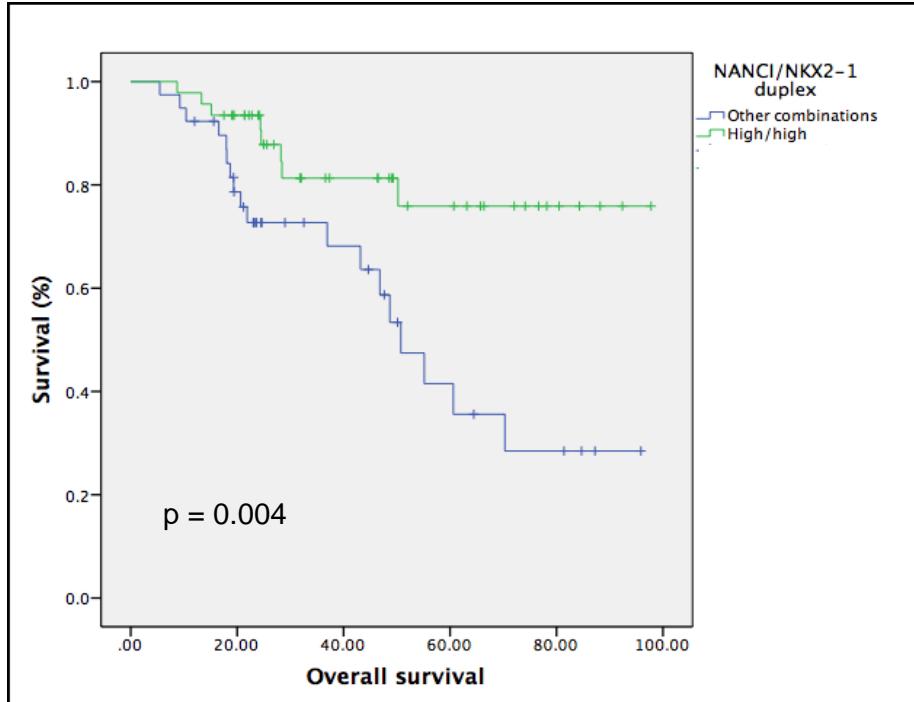
**Supplementary Figure 2.** Kaplan Meier analysis of disease-free survival DFS according to NANCI expression levels 8<sup>th</sup> TNM edition.



**Supplementary Figure 3.** Kaplan Meier analysis of disease-free survival DFS according to high/high NANCI/NKX2-1 duplex expression 8<sup>th</sup> TNM edition.



**Supplementary figure 4.** Kaplan Meier analysis of overall survival (OS) according to NANCI expression 8<sup>th</sup> TNM edition.



**Supplementary figure 5.** Kaplan Meier analysis of overall survival (OS) according to high NANCI/high NKX2-1 duplex expression 8<sup>th</sup> TNM edition.

**Supplementary Table 2. Multivariate analysis for DFS and OS according 8<sup>th</sup> TNM edition.**

<b><i>Disease free Survival</i></b>	<b><i>Hazard Ratio (95%CI)</i></b>	<b><i>p-value</i></b>
Male sex	3.063 (0.876-10.714)	0.080
Emphysema	1.810 (0.850-3.854)	0.124
High NANCI/High NKX2-1	0.488 (0.223-1.067)	0.072
<b><i>Overall Survival</i></b>	<b><i>Hazard Ratio (95%CI)</i></b>	<b><i>p-value</i></b>
Male sex	5.088(0.639-40.499)	0.124
Former/Current smoker	4.208 (0.339-52.158)	0.263
Emphysema	2.143 (0.846-5.425)	0.108
<b>High NANCI/High NKX2-1</b>	<b>0.291 (0.112-0.759)</b>	<b>0.012</b>