

# ***The Outcome of Neoadjuvant Chemotherapy for patients with clinical Stage IIIA-N2 NSCLC in KCCH***

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# INTRODUCTION I

[Guidelines Index](#)  
[NSCL Table of Contents](#)  
[Staging Discussion References](#)

NCCN®

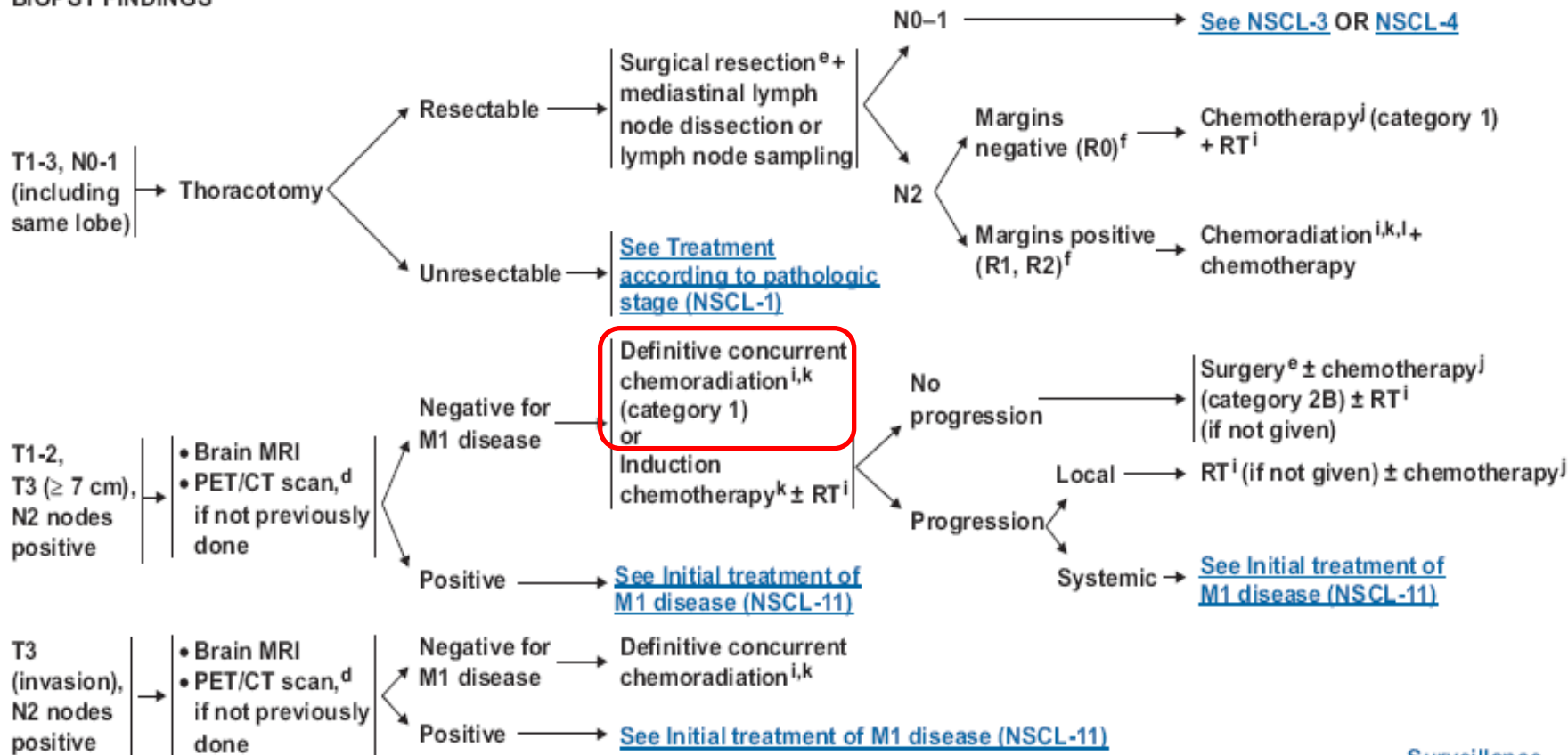
Practice Guidelines  
in Oncology – v.2.2010

## Non-Small Cell Lung Cancer

### MEDIASTINAL BIOPSY FINDINGS

### INITIAL TREATMENT

### ADJUVANT TREATMENT



[Surveillance \(NSCL-12\)](#)



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## INTRODUCTION II

### **ACCP Clinical Practice Guidelines for the Treatment of stage IIIA (N2) NSCLC, 2007**

*In NSCLC patients with N2 disease identified preoperatively (IIIA<sub>3</sub>), **platinum based combination chemoradiotherapy** is recommended as primary treatment.*

*Grade of recommendation, 1B*

# INTRODUCTION III

## Recent Randomized Platinum-Based Induction trials and pooled Analyses

<i>Trial</i>	<i>N</i>	<i>Stage</i>	<i>Chemotherapy</i>	<i>RR</i>	<i>Complete resection</i>	<i>Hazard ratio (95%CI)</i>	<i>p</i>
<b><i>Spain (Rosell)</i></b>	60	IIIA	MIP	60%	90/77	-	0.005
<b><i>M.D.Anderson (Roth)</i></b>	60	IIIA	CEP	35%	31/39	-	0.056
<b><i>French (Depierre)</i></b>	373	IB-IIIA	MIP	64%	83/80	0.78	0.15
<b><i>Japan (Nagai)</i></b>	62	IIIA	Cis, Vd	28%	65/77		0.52
<b><i>Meta (Berghmans)</i></b>	590	I-IIIA	Cisplatin-based	-		0.66	

# ***Retrospective comparative study (1998~2007)***

***Study group  
(A, n=95)***

- ***cIIIA-N2 resectable NSCLC***
- ***Neoadjuvant chemotherapy (+)***

***Control group  
(B, n=381)***

- ***pIIIA-N2 resected NSCLC***
- ***Neoadjuvant chemotherapy (-)***

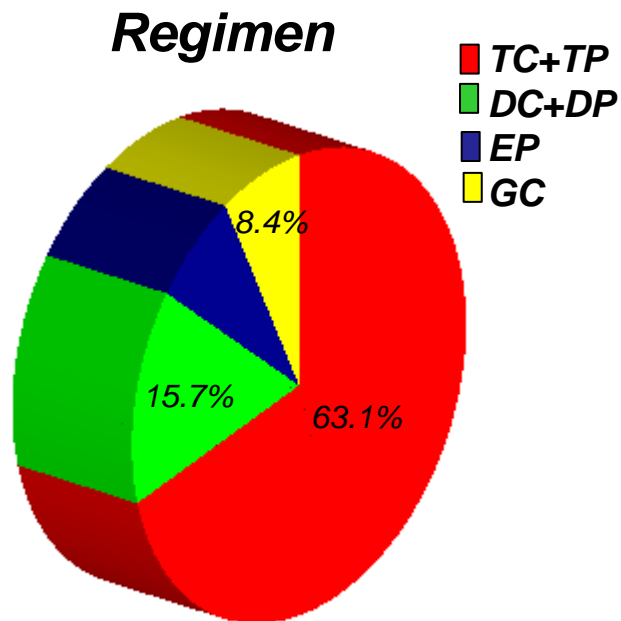
# Characteristics of patients (I)

		Group A	Group B	p
<b>Total number</b>		95	381	
<b>Age(years)</b>	Median	61	65	ns
<b>Sex</b>	M:F	88:7	297:84	0.01
<b>Histology</b>				
	Squamous cell carcinoma	49(51.5%)	203(53.2%)	ns
	Adenocarcinoma	32(33.6%)	164(43%)	
	others	14(14.7%)	14(3.6%)	
<b>Surgery</b>		<b>n=62(65.2%)</b>	n=381	
	Lobectomy or bilobectomy	45(72.5%)	241(63.2%)	0.30
	Pneumonectomy	16(25.8%)	137(35.9%)	
	Segmentectomy	1	3	

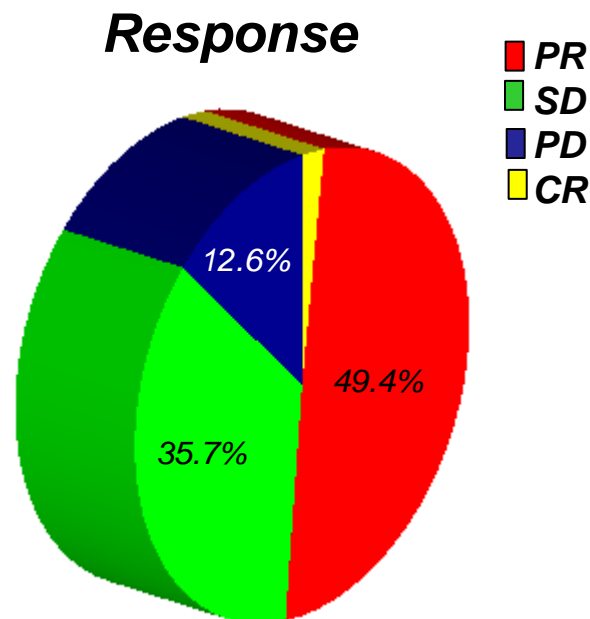
## Characteristics of patients (II)

		Group A-op(+)	Group B	<i>p</i>
		<i>n</i> =62	<i>n</i> =381	
<b>Pathologic T-stage</b>				
	<i>pT1</i>	19(30.6%)	39(10.2%)	0.00
	<i>pT2</i>	26(40.3%)	251(65.8%)	
	<i>pT3</i>	15(24.1%)	91(23.8%)	
	<i>pT4</i>	2(3.2%)	0	
<b>Pathologic N-stage</b>				
	<i>pN0</i>	27(43.5%)	0	0.00
	<i>pN1</i>	10(16.1%)	0	
	<i>pN2</i>	25(40.3%)	381	
<b>Multiple station <i>pN2</i></b>		12(19.3%)	205(53.8%)	0.00
<b>Adjuvant chemotherapy</b>		31(50%)	179(46.9%)	<i>ns</i>
<b>Adjuvant radiotherapy</b>		3(4.8%)	80(20.9%)	0.01
<b>Mortality</b>		3(4.8%)	9(2.3%)	<i>ns</i>

# Regimen of Neoadjuvant chemotherapy & Response rates (n=95)



**Mean 2.4 cycles**



**CR+PR 51.5%**

TC= Taxol+Carboplatin, TP=Taxol+Cisplatine, DC=Docetaxel+Carboplatin, DP= Docetaxel+Cisplatine, EP= Cisplatine+Etoposide, GC=Gemcitabine+Carboplatin



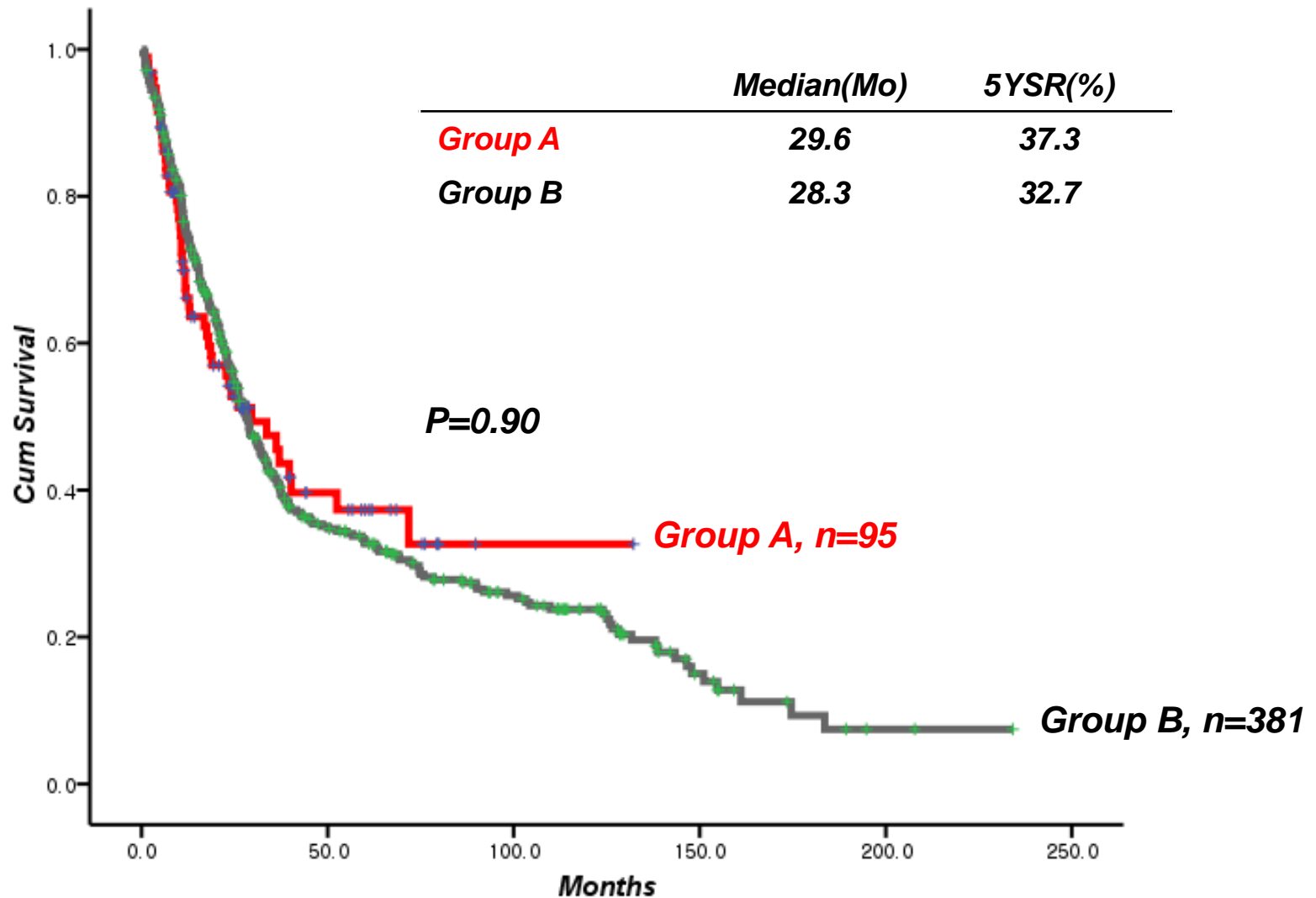
## ***Exclusion of surgery after Neoadjuvant chemotherapy (n=33)***

<b><i>Causes</i></b>	<b><i>Number of patients (%)</i></b>
<b><i>Refusal in the responder</i></b>	<b><i>12(36.3%)</i></b>
<b><i>Disease progression</i></b>	<b><i>11(33.3%)</i></b>
<b><i>Poor lung function</i></b>	<b><i>3(9%)</i></b>
<b><i>Unknown</i></b>	<b><i>7(21.2%)</i></b>
<b><i>Total</i></b>	<b><i>33/95 (34.7%)</i></b>

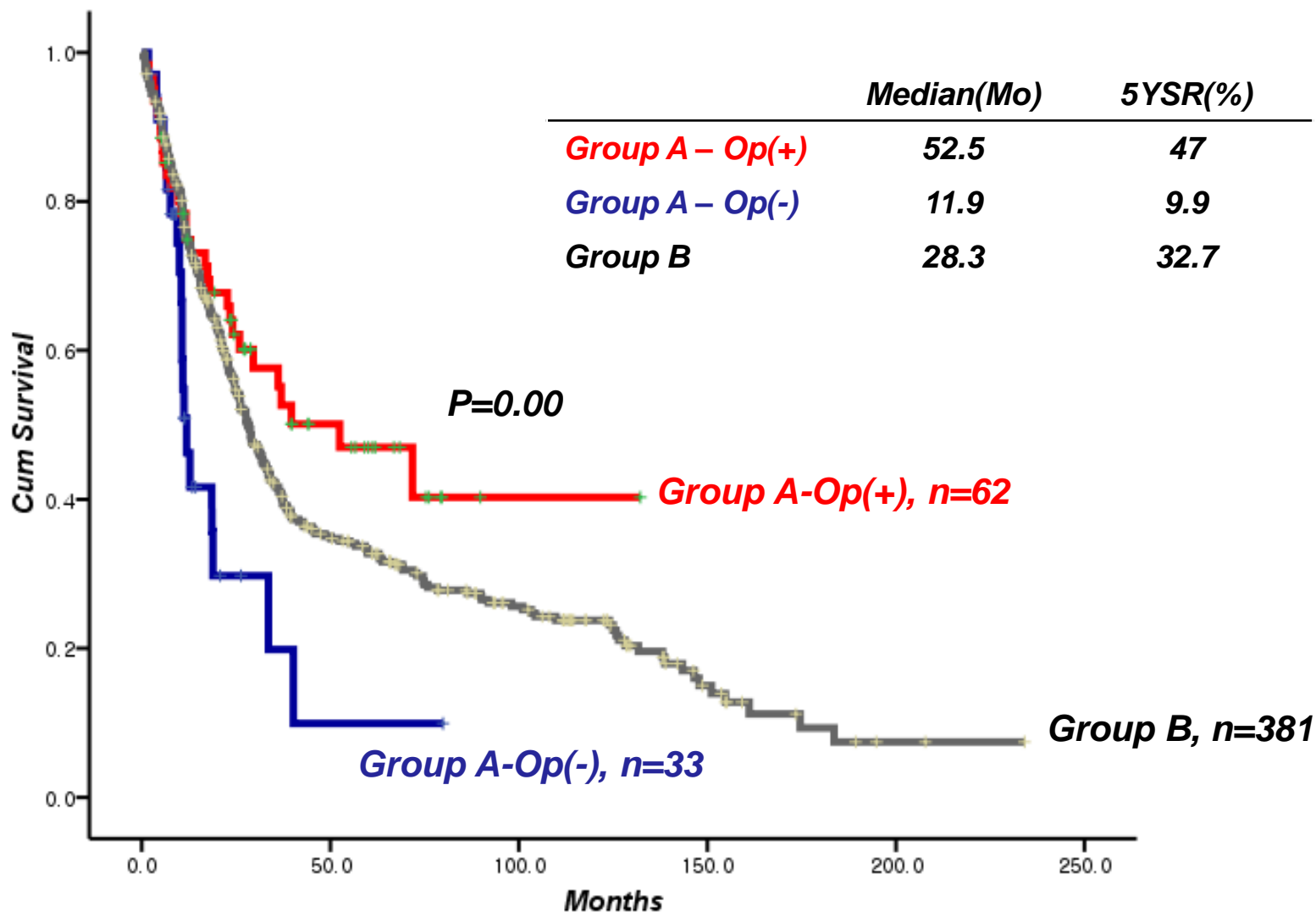
## ***Postoperative stage in Group A-op(+) (n=62)***

<b><i>Postoperative stage</i></b>	<b><i>Number of patients</i></b>	
<b><i>Complete pathologic response</i></b>	2	} 51.6%
<b><i>pStage IA</i></b>	9	
<b><i>pStage IB</i></b>	11	
<b><i>pStage IIA</i></b>	4	
<b><i>pStage IIB</i></b>	6	
<b><i>pStage IIIA</i></b>	28	
<b><i>pStage IIIB</i></b>	2	
<b><i>Total</i></b>	<b>62</b>	

# Survival difference between Group A & B



# Survival difference among Groups



# Conclusions

- *Surgery group with neoadjuvant chemotherapy had survival gain compared to the control group ( $p < 0.00$  ).*
- *Response rate (51%) and compliance of a cisplatin based neoadjuvant chemotherapy for our patients were relatively lower than previously reported western study.*
- *The role of neoadjuvant chemotherapy for stage IIIA(N2) NSCLC was not confirmed due to large number of unenrolled patients to surgery.*
- *We would like to recommend a large randomized prospective multicenter study for neoadjuvant chemotherapy in stage IIIA(N2) NSCLC in Asian patients.*

# ***Discussion***

- *The Role of Neoadjuvant chemotherapy or def.CCRT for the patients with IIIA(N2) NSCLC in Korea*
- *Definitive CCRT vs Induction CT + Surgery vs Surgery + Adjuvant CT for the patients with IIIA(N2) NSCLC in Korea*