

Significance of lepidic growth component in the discrimination of multiple primary lung adenocarcinomas from intrapulmonary metastases

Dong-mei Lin MD., PhD.

**Department of Pathology, Cancer Institute/ Hospital
of Chinese Academy of Medical Sciences(CAMS),
Peking Union Medical College,
National Cancer Center (NCC)**

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**The authors declare that they have
no conflicts of interest.**

Introduction

- **Distinguishing primaries and metastases**
 - Importance for staging and therapeutic strategy
 - Good outcome for surgical resection
- **Methods for distinguishing**
 - Molecular analysis
 - Histologic analysis
 - Comprehensive Histologic Assessment (CHA)
 - Lepidic growth component (LG)

Patients and Methods

■ Patients

- 30 Patients
- 66 tumors (42 comparisons)

■ Histological Assessment

- Comprehensive Histologic Assessment (Method I)
- Method I combined with lepidic component (Method II)

Patients and Methods

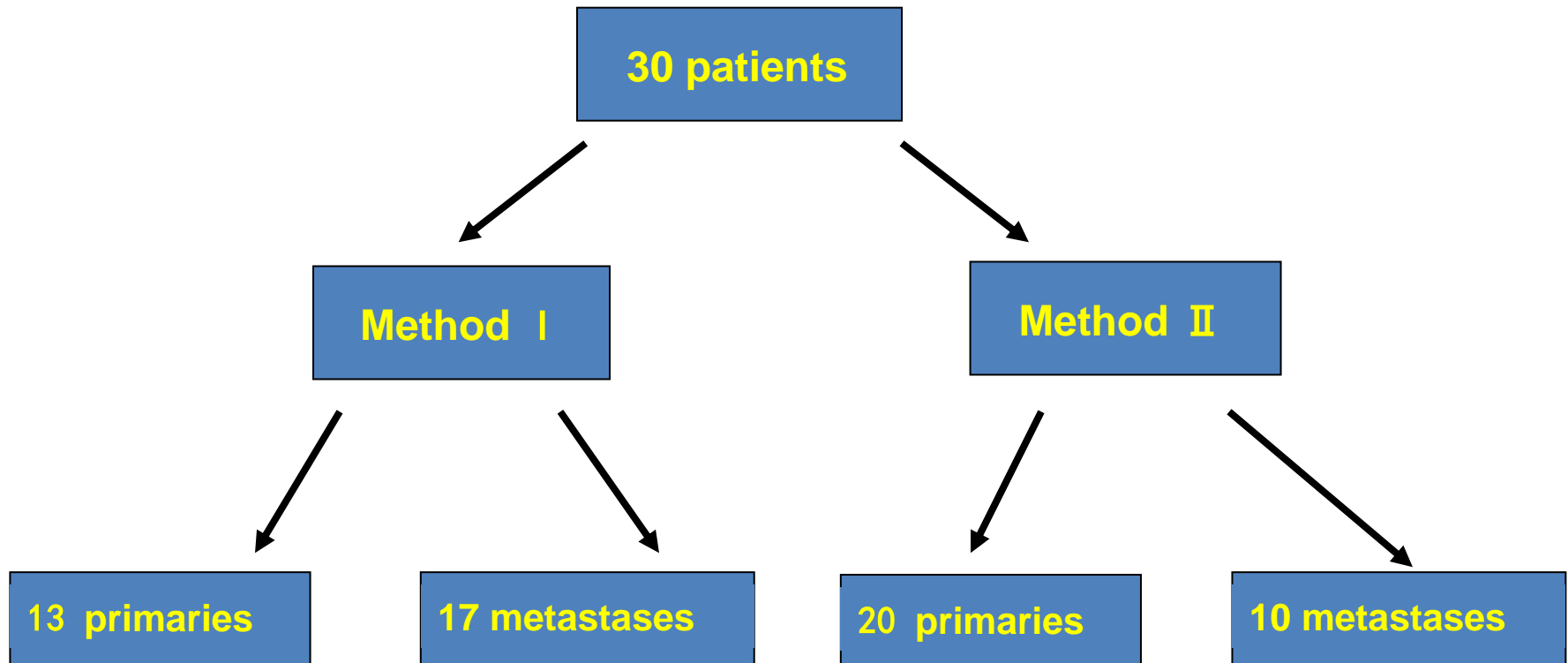
- **CT imaging**
 - 18 Patients
 - 40 tumors
- **Molecular analysis**
 - 8 patients with fresh-frozen tumors
 - Affymetrix SNP 6.0 (CNV)
- **Survival analysis**

CNV: copy number variation

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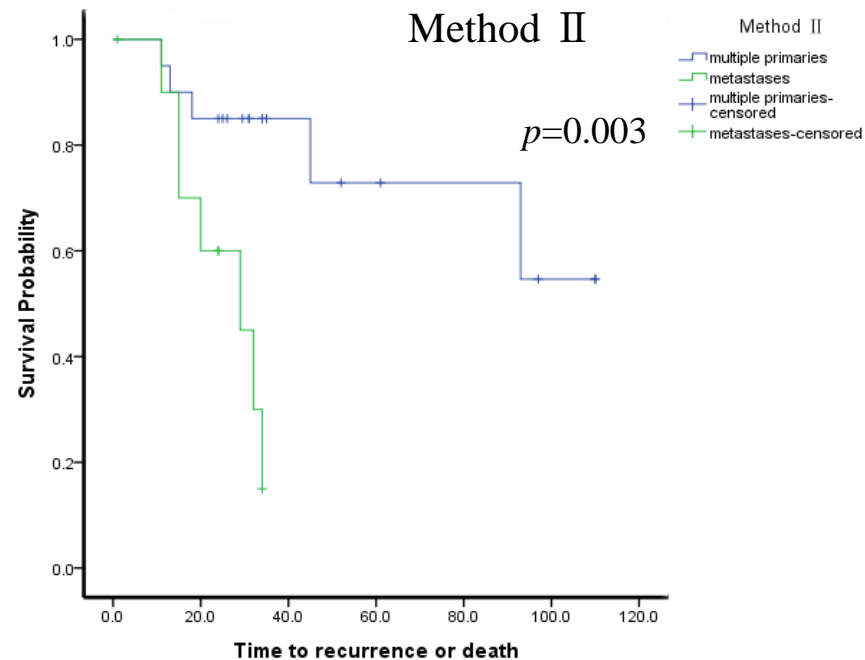
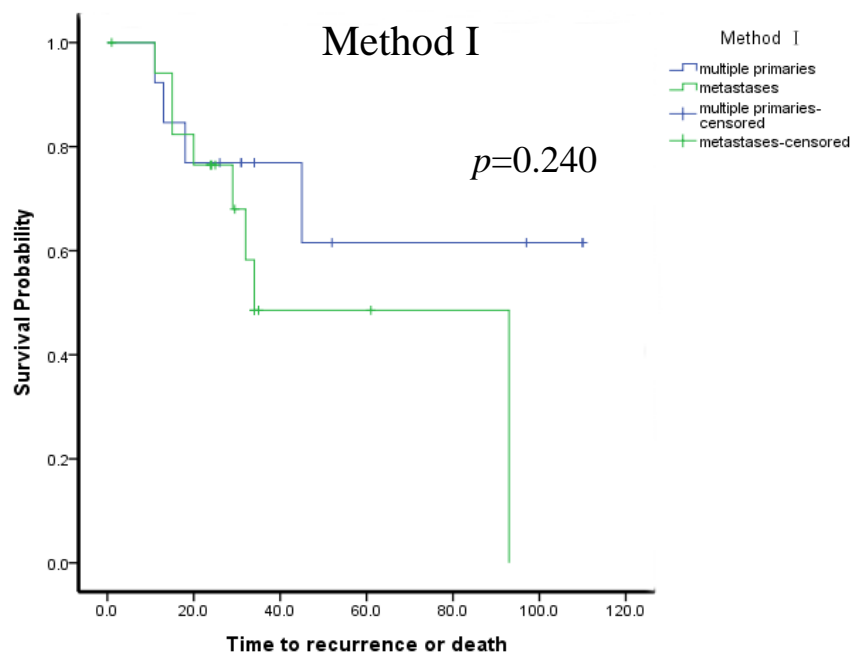
Histological Assessment

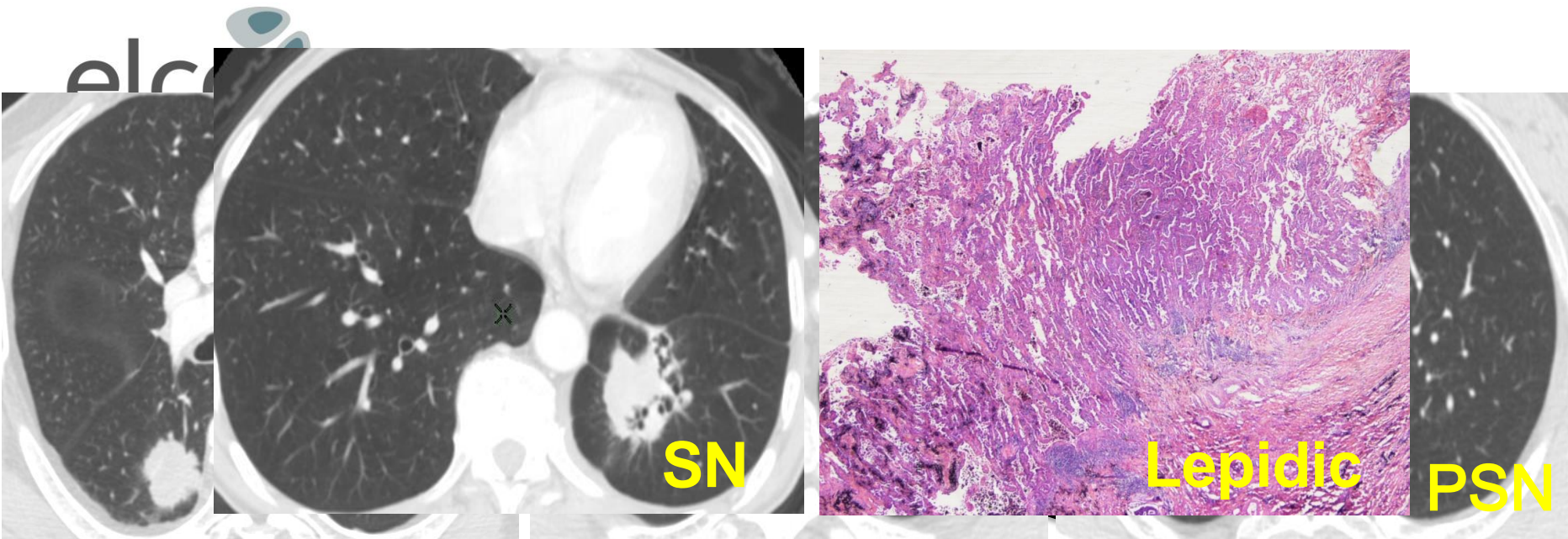


Patient characteristics(Method II)

	Multiple primaries	Metastasis	P value
Male	8	6	0.442
Female	12	4	
Mean Age(years, yr)	61.75	59.60	
synchronous	17	8	1.000
metachronous	3	2	
N status			
N0	15	4	0.484
N1	2	2	
N2	3	4	
Outcome			
Recurrence/death	5	7	0.045*
Disease-free survival	15	3	

Survival analysis





Inconsistent with histology

(13)

CT imaging Assessment
(primaries/ metastases)

GGN: ground-glass opacity nodule;
PSN: part-solid ground-glass opacity nodule;
SN: solid nodule.

Method I (44.7%)

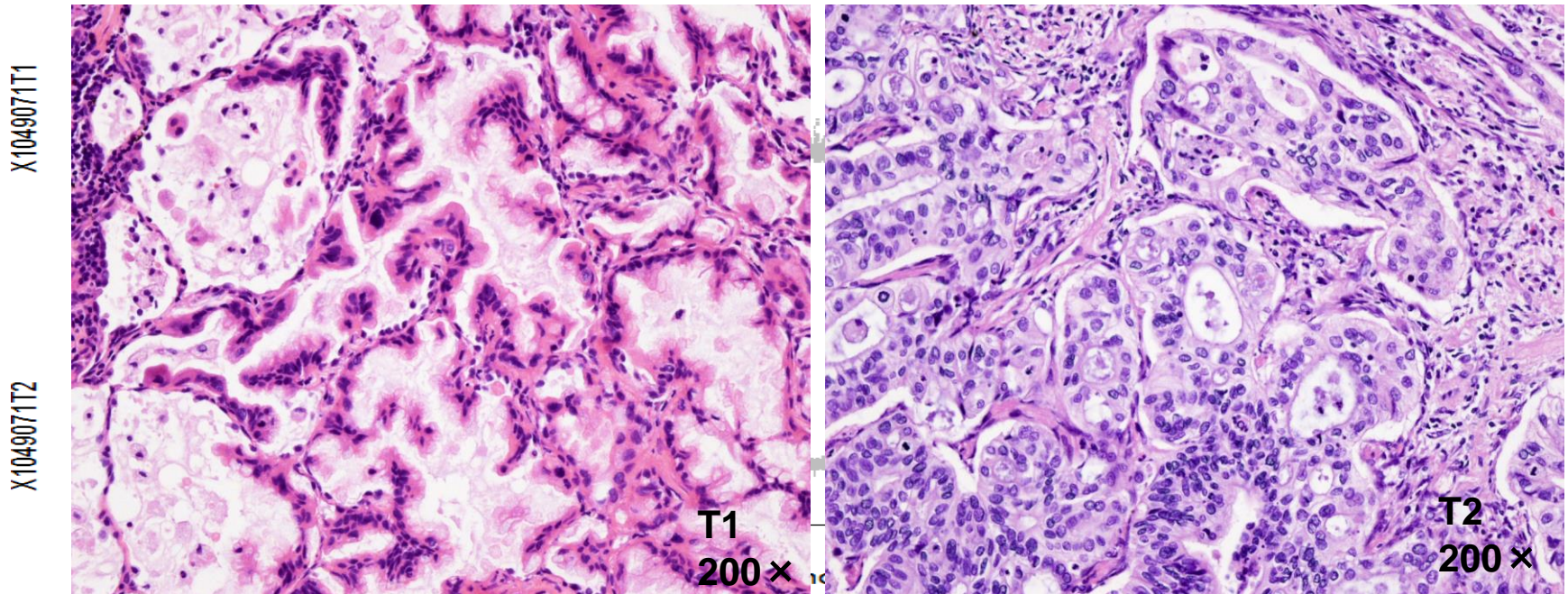
Method II (77.8%)

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Molecular analysis (CNV)

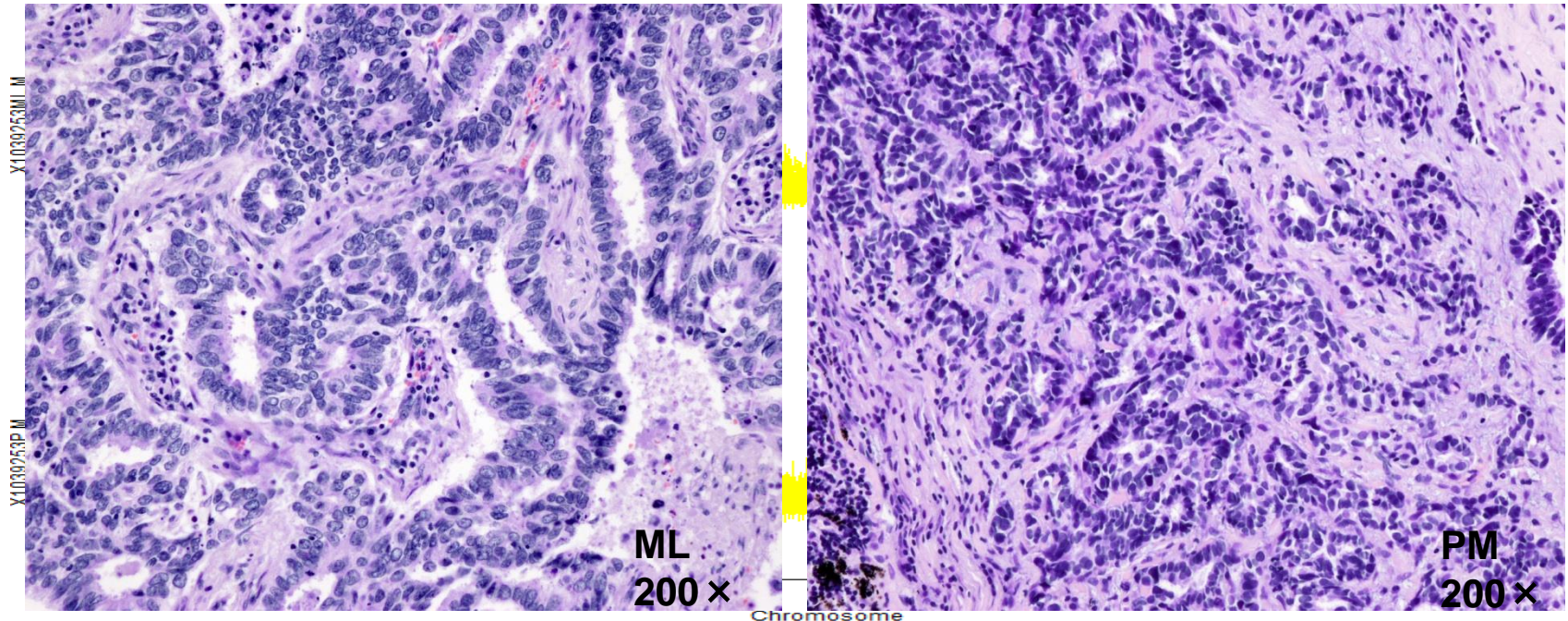


Multiple primaries

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Molecular analysis (CNV)



Metastases

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Conclusions and Limitations

■ Conclusions

- Lepidic growth component
 - Clue to define the tumor as primary
 - Complement for Comprehensive Histologic Assessment

■ Limitations

- Need more follow-up data
- Need enlargement the number of samples
- Evaluated further molecular pathology

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