Treatment of DCIS in NTUH

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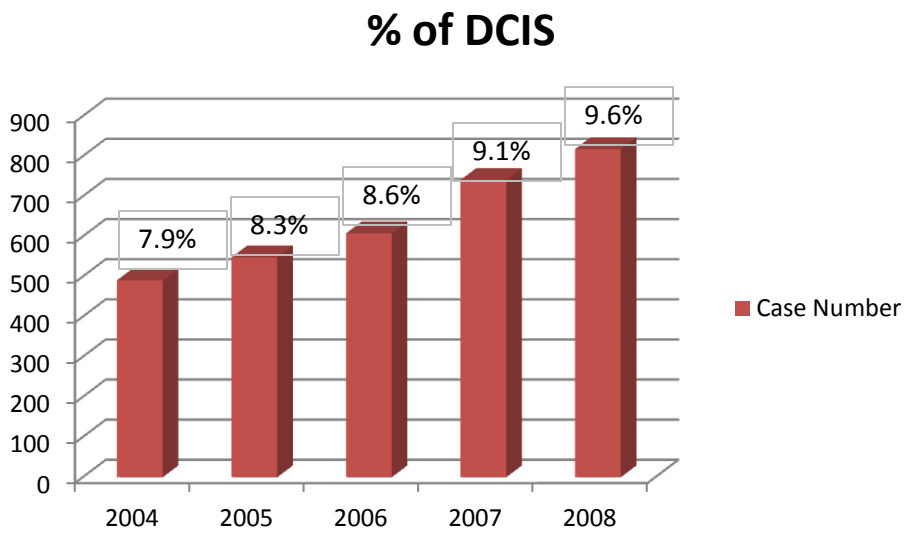
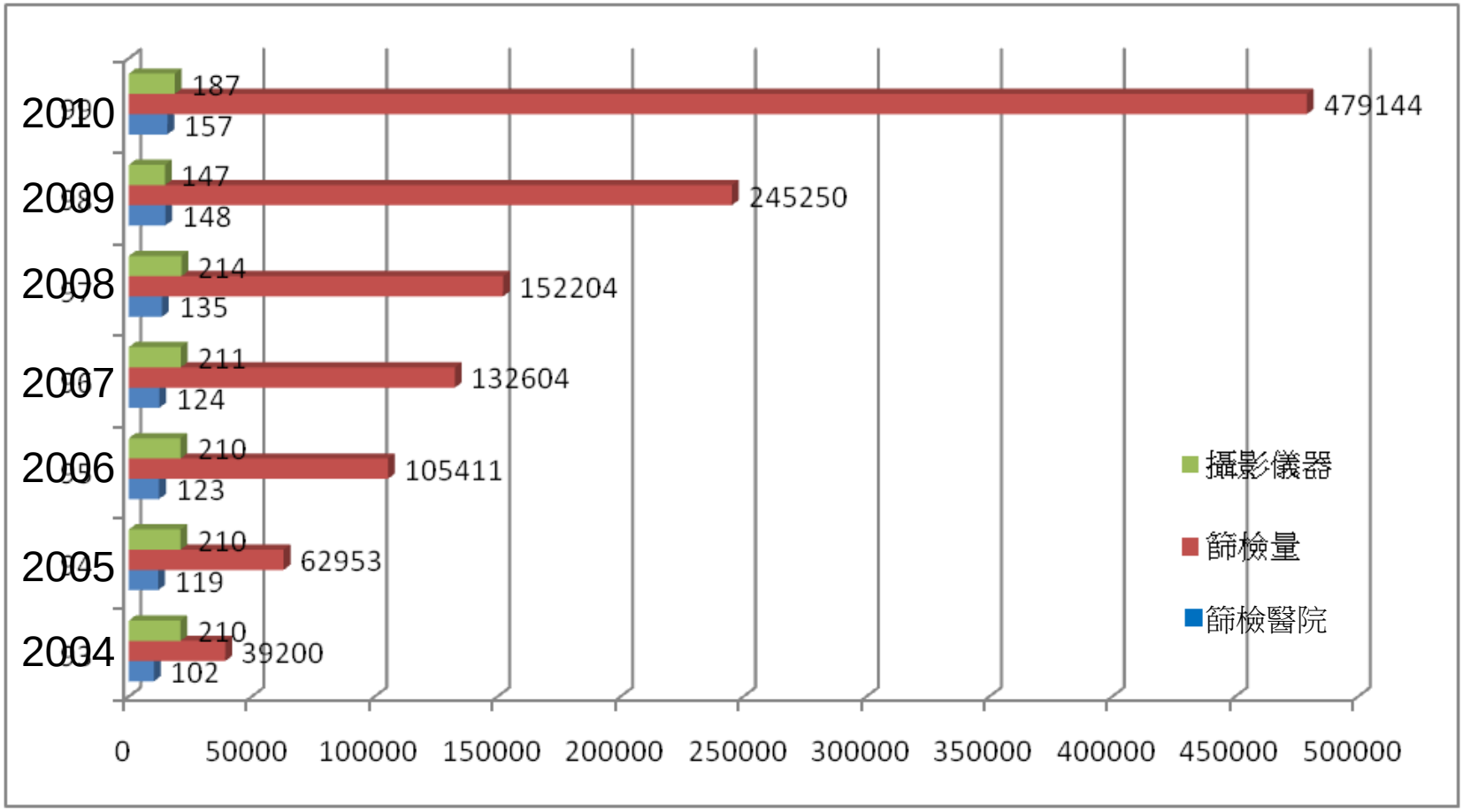
The Percentage of DCIS among Breast Cancers in Taiwan

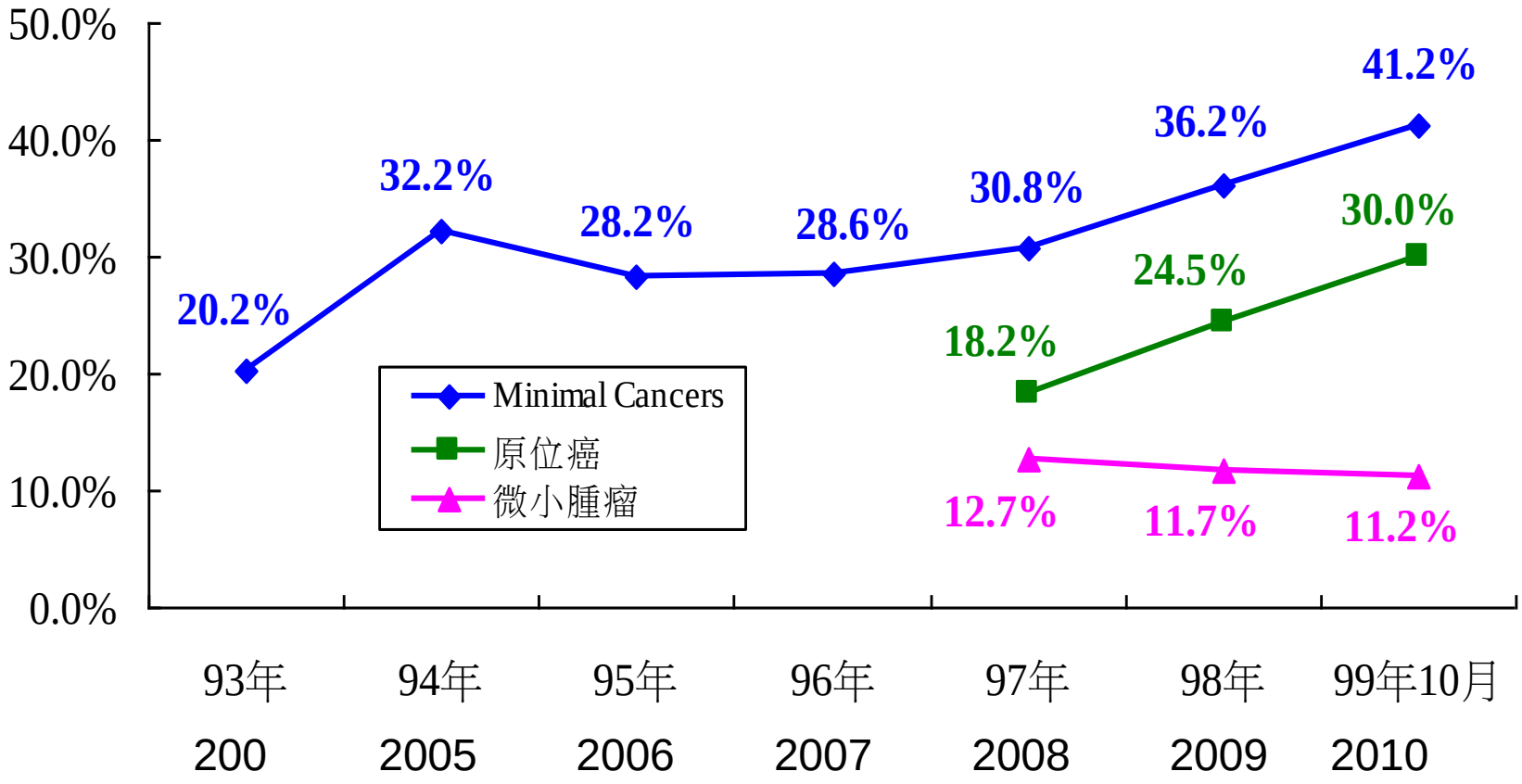
Year	Case Number	%
1995	-	4.67
2004	491	7.9
2005	548	8.3
2006	608	8.6
2007	741	9.1
2008	818	9.6



Number of women having undergone mammography screening in Taiwan, 2004-2010 (biannually for women older than 45)



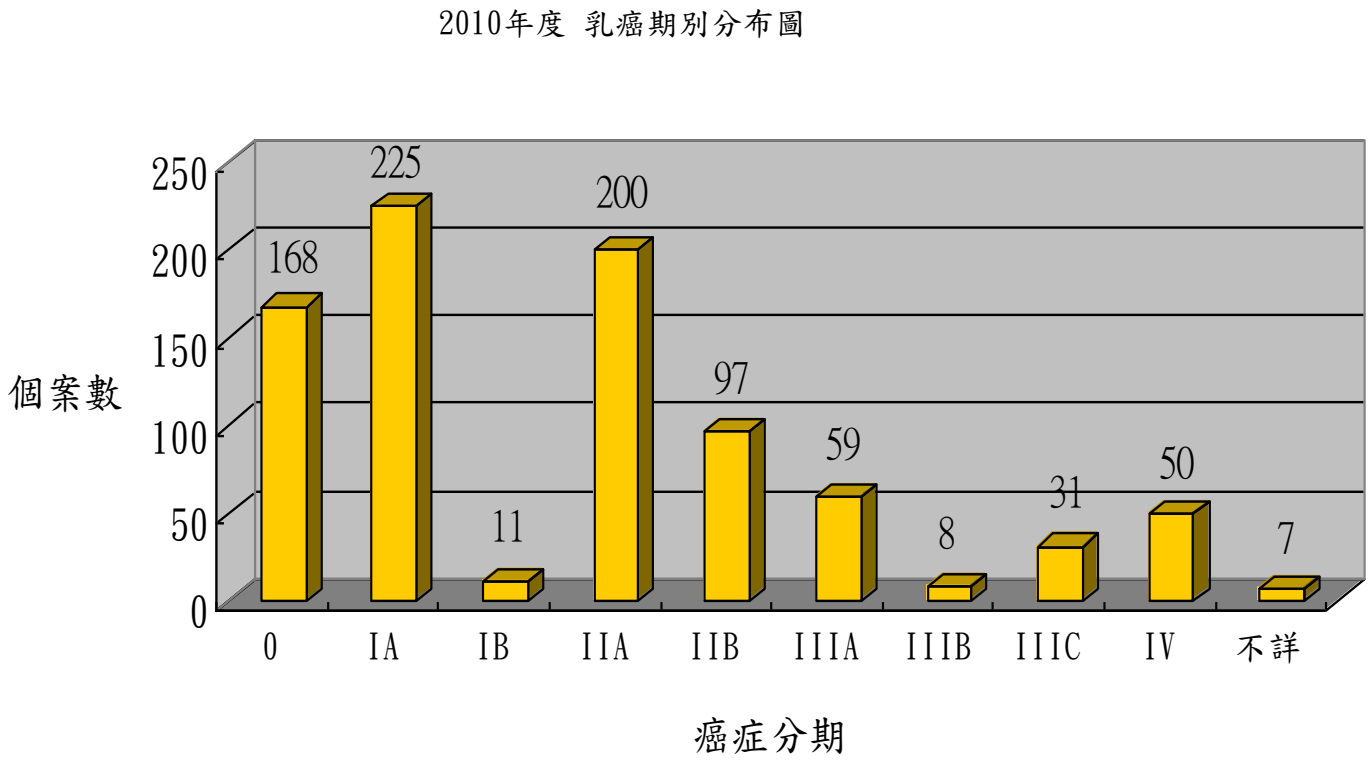
Minimal Cancer (DCIS and invasive tumor less than 10mm in diameter)



資料來源：國健局

Percentage of DCIS, 2010 National Taiwan University Hospital

- Stage 0 n=168(19.6%)



Positive Rate of Mammography-guided Biopsy in Breast Center, NTUH. 6. 2005-12. 2006

BIRADS	Positive rate	total	cancer	DCIS LCIS	Invasive cancer
4A	7.5%	147	11	7	4
4B	25.8%	128	33	27	6
4C	41.9%	31	13	7	6
5	66.7%	6	4	2	2
total	19.5%	312	61	43	18

Treatment of DCIS in Taiwan

Year		Op+Hr	Op+CT+Hr	Op+RT+Hr	Op+CT+RT+Hr	Op	Op+CT	Op+RT	Op+CT+RT	CT	RT
	Total	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
2005	270	100	4	47	1	88	2	16	1	1	4
	%	37.04	1.48	17.4	0.37	32.59	0.74	5.93	0.37	0.37	0.7
2007	721	261	7	147	4	225	12	48	5	1	0
	%	36.2	0.97	20.39	0.55	31.21	1.66	6.66	0.69	0.14	0
2008	779	297	12	131	6	250	7	56	1	1	0
	%	38.13	1.54	16.82	0.77	32.09	0.9	7.19	0.13	0.13	0

Treatment of DCIS in NTUH (2010)

Treatment	Stage 0 (%)
Op	37 (22.0%)
Op+HT	51 (30.4%)
Op+RT	15 (0.9%)
Op+RT+HT	46 (27.4%)
No treatment	19 (11.3%)
total	168 (100.0%)

Radiotherapy for DCIS in NTUH

- BCS + whole breast irradiation is a standard treatment for patients with DCIS
- For highly selected patient (VNPI: 4, 5, 6), adjuvant radiotherapy may be reserved if (1) patients accepted the low risk for local recurrence (2) other risk reduction treatment (ex. Tamoxifen) is given.

Surgical Procedures for DCIS in NTUH (2010)

Procedure	
Breast Conserving	60.4%
Total mastectomy	39.6%

- n=148
  - SLND：92
    - 49 MRM
    - 43 BCT
  - ALND：1

Why is SLN or ALN positive in DCIS?

- In **DCIS diagnosed preoperatively** –

  upstage at final surgery

  -The estimated incidence of positive SLN was **7.4%** in patients with preoperative diagnosis of DCIS, as shown in a meta-analysis of 11 studies. (British J Surg 2008: 547)

- In **DCIS diagnosed at final surgery** - underestimation of primary tumor

  -The incidence of positive SLN was only **1.4%**

Factors associated with Upstage of 200 DCIS diagnosed by CNB or Mammotome

Varibale	Postoperative Pathology: No. of patients		*P*
	Invasive (n=41)	Noninvasive (n=159)	
Type of lesion			
Calcifications	27 (16.7%)	134 (83.3%)	0.0079
Mass	14 (35.9%)	25 (64.1%)	
Size of lesion			
> 1.5cm	30 (30.3%)	69 (69.7%)	0.0007
≦1.5cm	11 (10.9%)	90 (89.1%)	
Nuclear grade			
High	40 (22.7%)	136 (77.3%)	0.0325
Low	1 (4.2%)	23 (95.8%)	
Lobular cancerization			
Present	15 (34.9%)	28 (65.1%)	0.0084
Absent	26 (16.6%)	131 (83.4%)	

Chi-Square or Fisher Exact Tests

Huo, Cancer 2006:1760

Understimation Rates of DCIS (n=1326)

Lesion Type		Biopsy Device		No. of Specimens per Lesion	
Mass	**Micro-calcifications**	**Large CNB**	**Vacuum-assisted biopsy**	**≦10**	**>10**
35/144 **24.3%***	148/1,182 **12.5%***	76/373 **20.4%**	107/953 **11.2%***	88/502 **17.5%†**	92/799 **11.5%†**

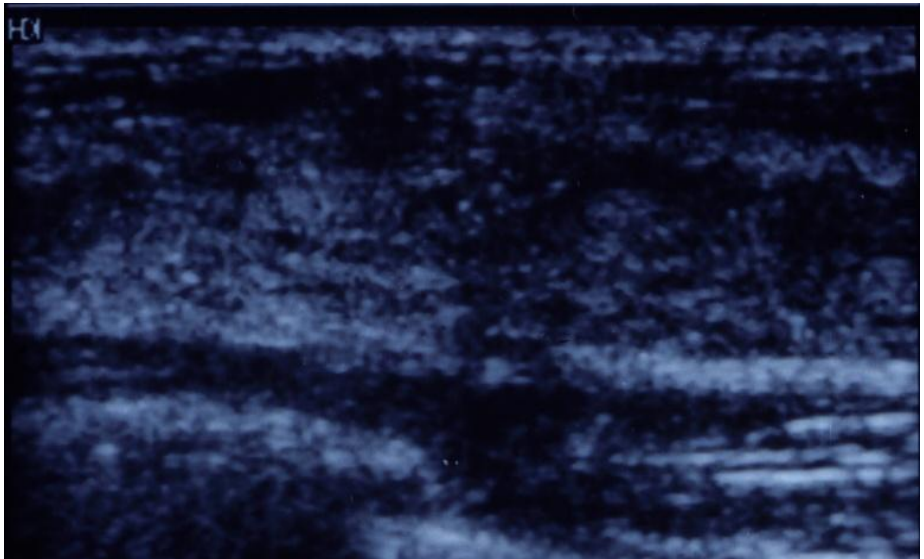
* *P* , .001, x2 test. † *P* , .02, x2 test.

Jackman Radiology 2001:497

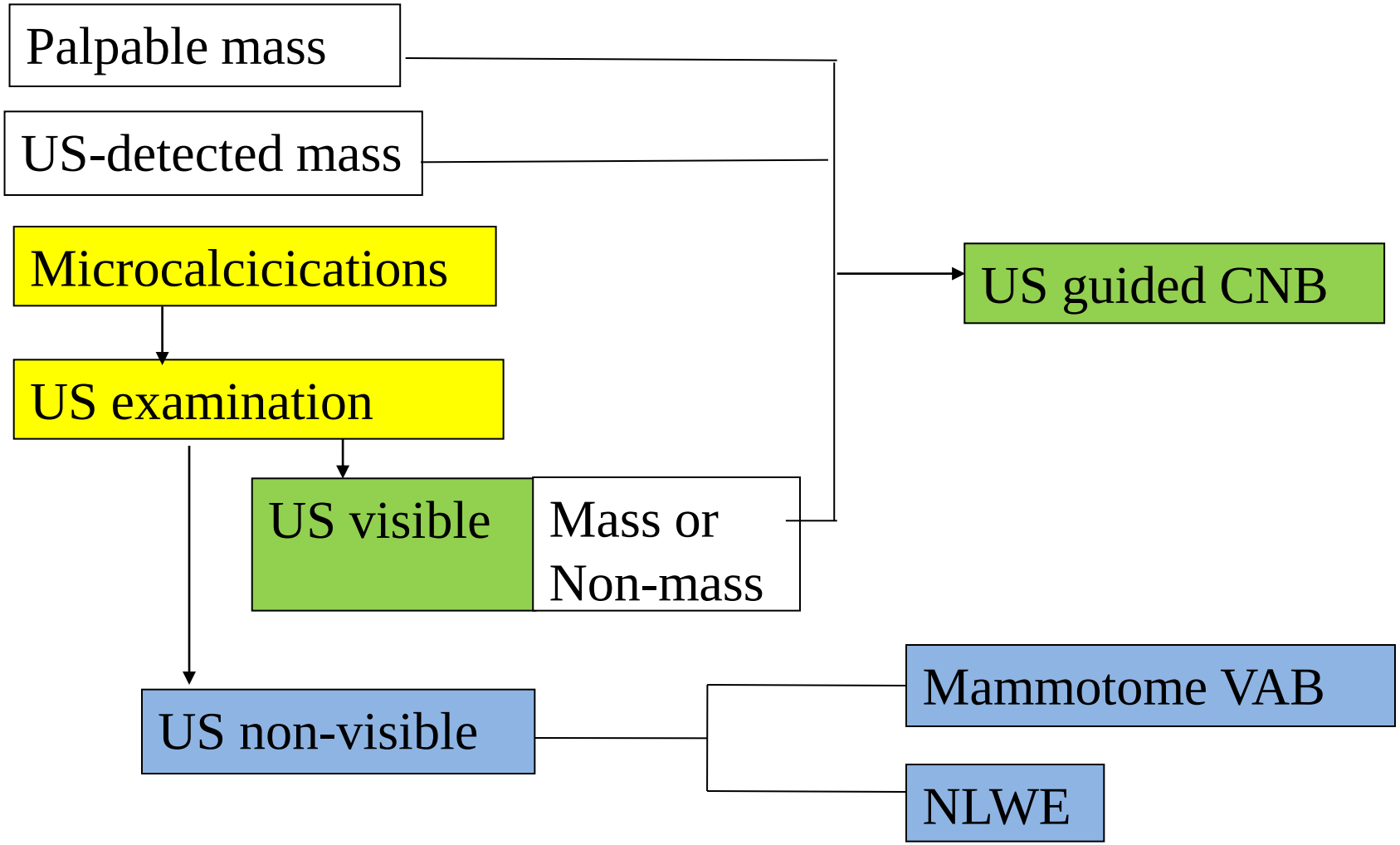
Ultrasound Obs Gyn, 13:431-436, 1999.

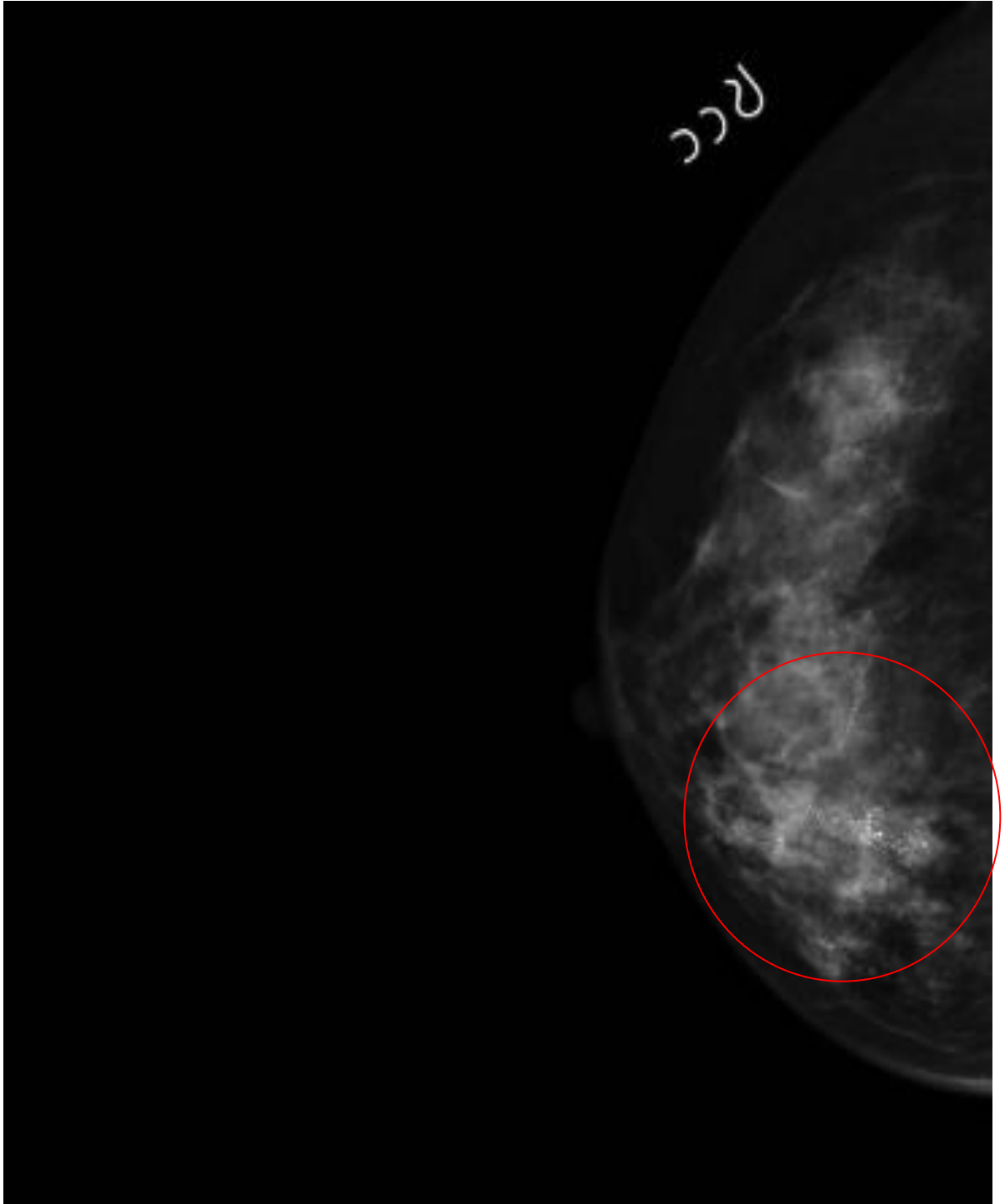
Microcalcifications of nonpalpable breast lesions detected by ultrasonography -correlation with mammography and histopathology

Huang CS, Wu CY, Chu JS, Lin JH, Hsu SM, Chang KJ



Diagnostic Algorithm in NTUH Breast Center



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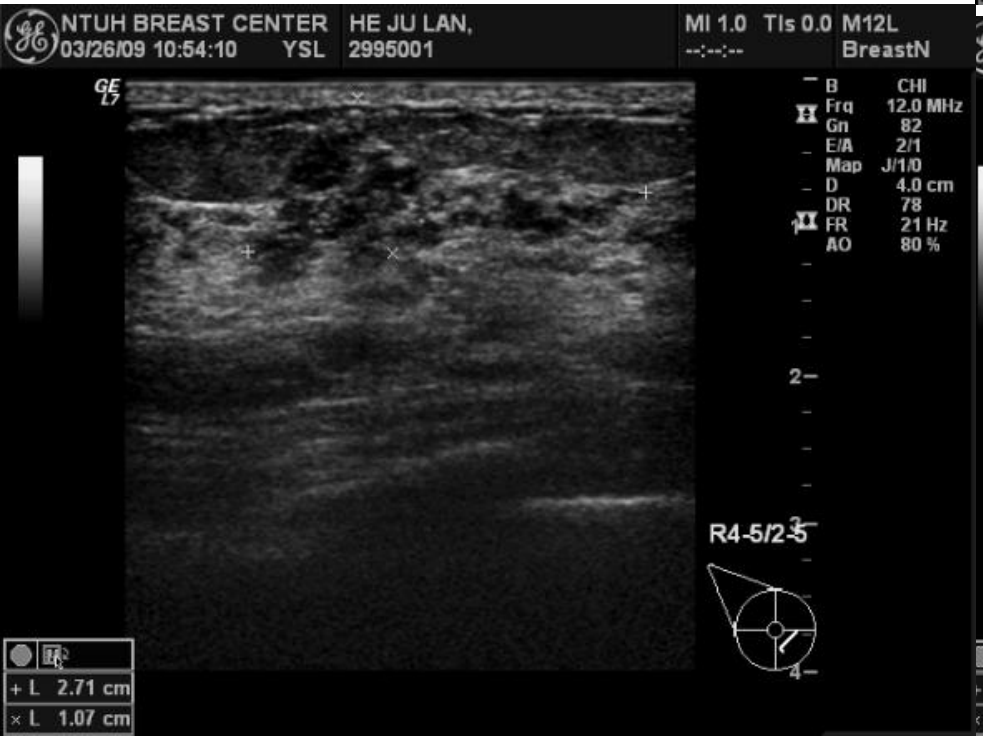
2995001
MI 1.0 TIs 0.0 M12L
--:--:-- BreastN
B CHI
Frq 12.0 MHz
Gn 82
E/A 2/1
Map J/1/0
D 4.0 cm
DR 78
FR 21 Hz
AO 80 %
R4/2
+ L 3.02 cm


NTUH BREAST CENTER
03/26/09 10:51:48 YSL
HE JU LAN,
2995001
MI 1.0 TIs 0.0 M12L
--:--:-- BreastN
B CHI
Frq 12.0 MHz
Gn 82
E/A 2/1
Map J/1/0
D 4.0 cm
DR 78
FR 21 Hz
AO 80 %
R4/2
+ L 1.92 cm
× L 0.72 cm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B CHI
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Gn 82
E/A 2/1
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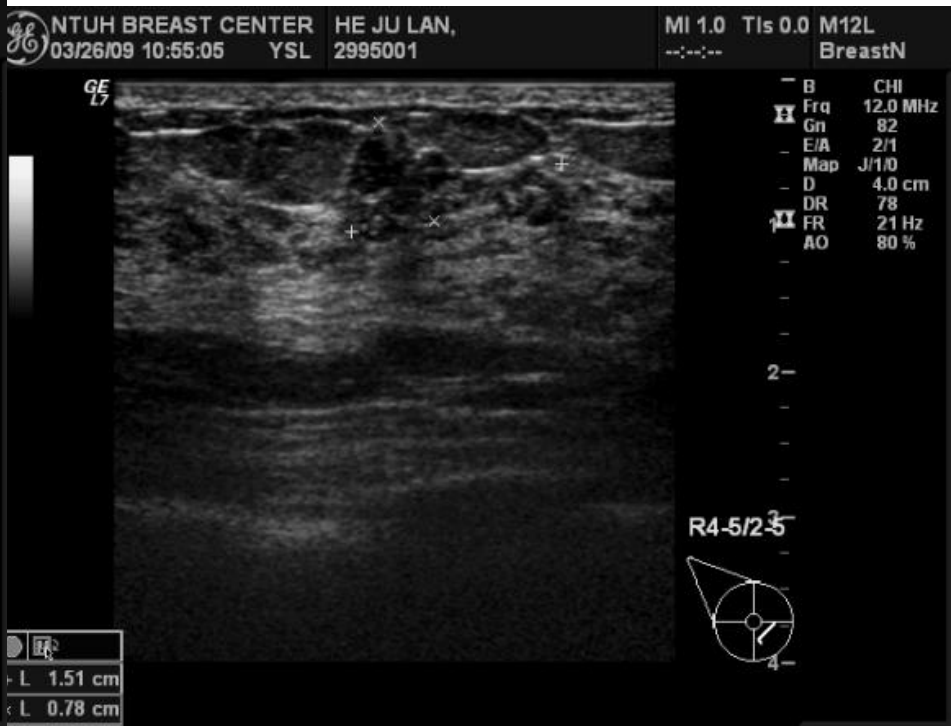
DR 78
FR 21 Hz
AO 80 %
R4-5/2-5
+ L 2.71 cm
× L 1.07 cm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2995001
MI 1.0 TIs 0.0 M12L
--:--:-- BreastN
B CHI
Frq 12.0 MHz
Gn 82
E/A 2/1
Map J/1/0
D 4.0 cm
DR 78
FR 21 Hz
AO 80 %
R4-5/2-5
L 1.51 cm
L 0.78 cm

The Rate of Upstage in Pre-operative Diagnosis of DCIS by Different Methods

	US-guided CNB (N=80) (%)	Mammotome/ NLWE (N=66) (%)
Consistent	30 (37.5%)	64 (97.0%)
Upstage	50 (62.5%)	**2** (3.0%)

One was diagnosed by mammotome and the other by NLWE due to at least semnental microcalcifications.

SLN was positive in 12 patients. All of them were upstaged.

CNB: core needle biopsy

Mammotome: mammotome vacuum-assisted biopsy

NLWE: needle localization and wide excision

Factors Predicting Upstage of DCIS Diagnosed by US-guided CNB

	Consistent	Upstage	p-value univariate	multivariate[1]
Pre_Op_Size				
≦1.5 cm (n=28)	15 (53.6)	13 (46.4)	**0.03**	**0.12**
＞1.5 cm (n=52)	15 (28.8)	37 (71.2)		
Mammography_finding				
Clustered MC[2] (n=21)	11 (52.4)	10 (47.6)		
Nonclustered MC[3] or mass	12 (26.1) 7	34 (73.9) 6	**0.04**	**0.06**
Negative or unknown				
Pre Op Grade (1+2 vs3)			0.11	
EIC(yes vs no)			0.96	
Lobular_cancerization (yes vs no)			0.52	

1. Adjusted by the other factors 2.MC= microcalcifications
3. Nonclustered MC=segmental, regional or extensive microcalcifications

Conclusion

- When pre-operative DCIS is visible on US and

diagnosed by US-guided CNB, the chance of upstage at final surgery is very high and hence SLND should be incorporated in the final surgery

- When DCIS is associated with clustered

microcalcifications, detected by MMG only, but not visible on US, and diagnosed by mammography-guided VAB or NLWE, SLND is not mandatory even when mastectomy is

Should SLND be considered in DCIS?

- When total mastectomy is the treatment after core biopsy
- If a preoperative diagnosis of DCIS can be further ensured by wide excision with a clear margin, SLND may not be necessary.
- SLND may fail after wide excision, especially in UOQ.
- No preoperative factors have been shown to predict upstage with high accuracy and can be considered as an indication of SLND in DCIS; however, SLND can be considered for palpable DCIS or US-detected DCIS.

Thank You