

The terminology and diagnostic standard of non-mass lesions (3)

Clustered Microcysts detected By Breast Ultrasound

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< Introduction >

- Clustered microcysts are categorized as abnormal findings by the Japan Association Breast and Thyroid Sonology (JABTS) on the guidelines of the ultrasound for the breast and thyroid.
- Usually many of the clustered microcysts are due to mastopathy (fibrocystic change) , but a small number of clustered microcysts are detected as a malignant lesion.
- Actual condition of the clustered microcysts is unclear.
- We investigate and report on how often we find clustered microcysts and the rate of malignant lesions in clustered microcysts.

< Clustered Microcysts >

- Microcysts are **anechoic** and recognized as **small cysts**.
- **Multiple** microcysts as small as **a few millimeters** exist in the mammary gland.
- Breast with diffuse multiple microcysts are not considered abnormal, usually it is due to mastopathy (fibrocystic change).
- If microcysts are **clustered locally** in the mammary gland, or many microcysts are distributed **segmentally**, we categorize it as an abnormal finding, since malignant lesions may be

< Patients and Methods

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- Study period : Jan. 2005 to Dec. 2009
- Total US cases : 8,626 cases
- Clustered microcysts : 39 cases
- Sex : all patients were women
- Range of the patients'age : 28 ~ 76 (mean 44.8)

Reviewed cases that had clustered microcysts by ultrasound and investigated histopathological findings.

< Models of the Ultrasound >

- Logic 9 12MHz (GE)
- Aplio XG 12MHz (Toshiba)
- EUB-7500 14-16MHz (Hitachi)

< Study Objectives >

- The frequency of the clustered microcysts detected by ultrasound and the proportion of malignancy in these lesions.
- Findings of final histopathological diagnosis.

< Results (1) :

Evaluations >

Total US cases : 8,626 cases

Clustered microcysts : 39 cases (0.45%)

No histological
evaluations:
9 cases (23.1%)

Histological
evaluations:
22 cases (56.4%)

Cytological
diagnosis:
8 cases
(20.5%)

Core needle
biopsy:
8 cases

Vacuum-assisted breast
biopsy:
14 cases

< Results (2) : Histopathological Findings

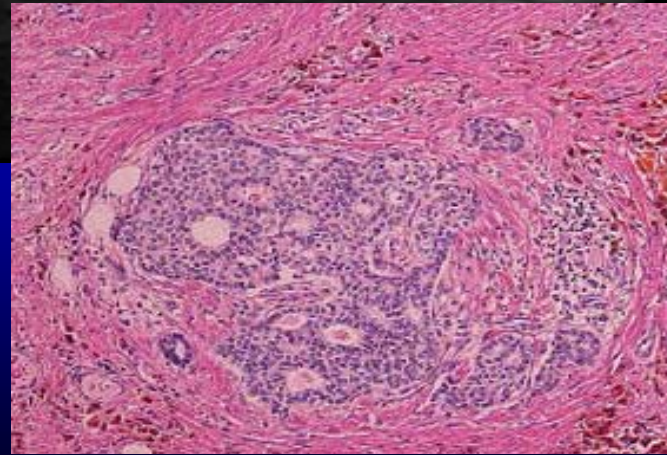
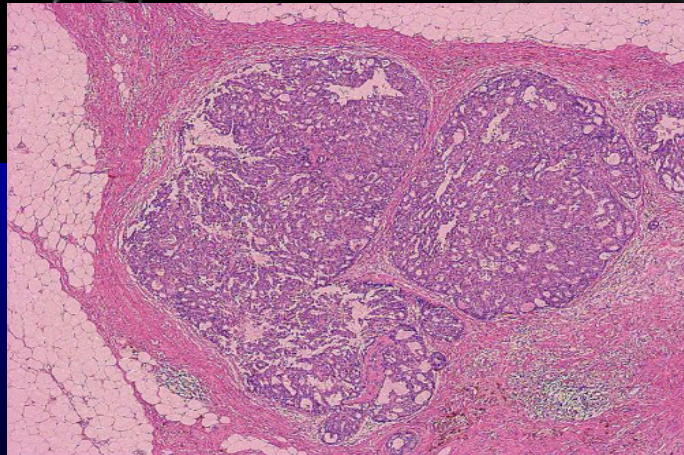
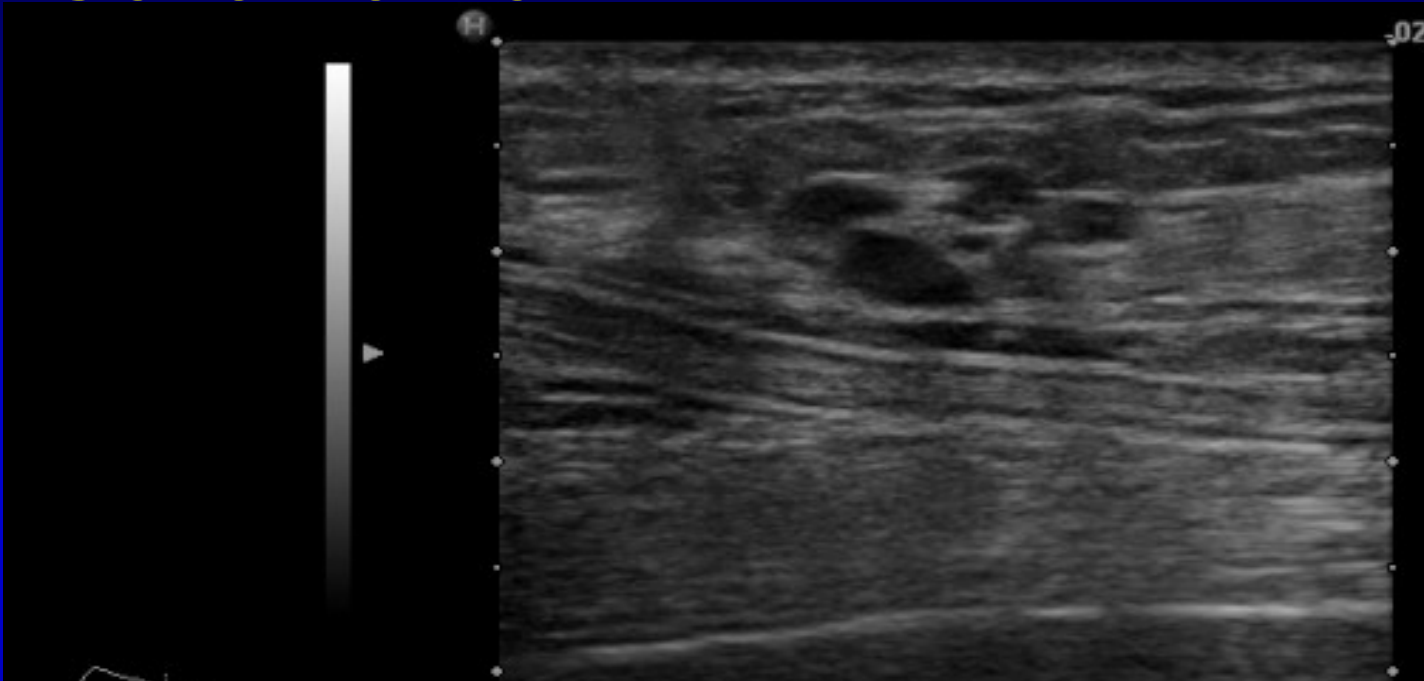
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Histopathological evaluation was made in 30 cases

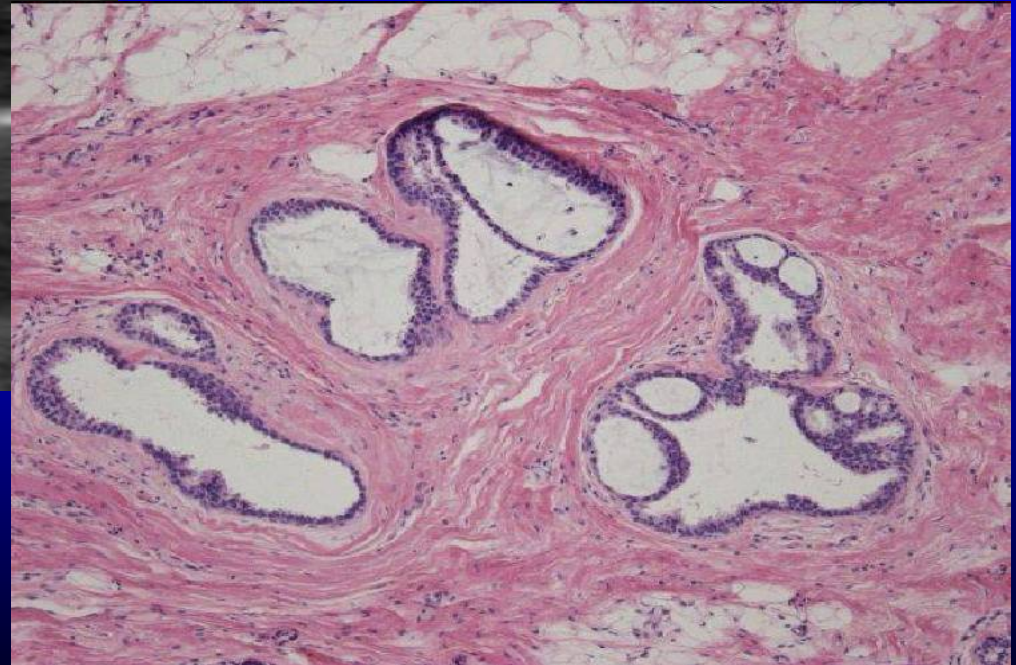
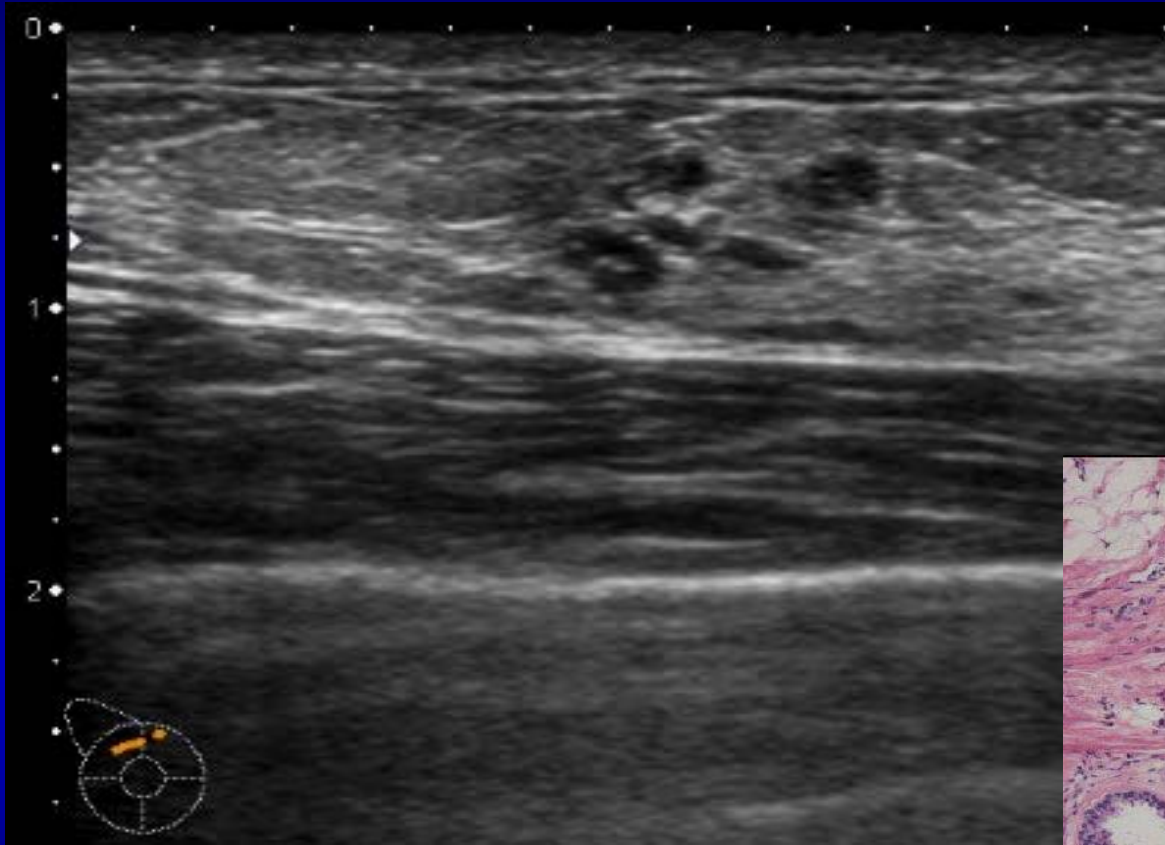
	Benign lesion	Malignant lesion	
		DCIS	IDC
Cytological diagnosis : 8	8	0	0
Core needle biopsy : 8	5	1	2
Vacuum-assisted breast biopsy : 14	6	5	3
30 (0.35)	19 (0.22)	6 (0.07)	5 (0.06)

() : the percentage in all study cases

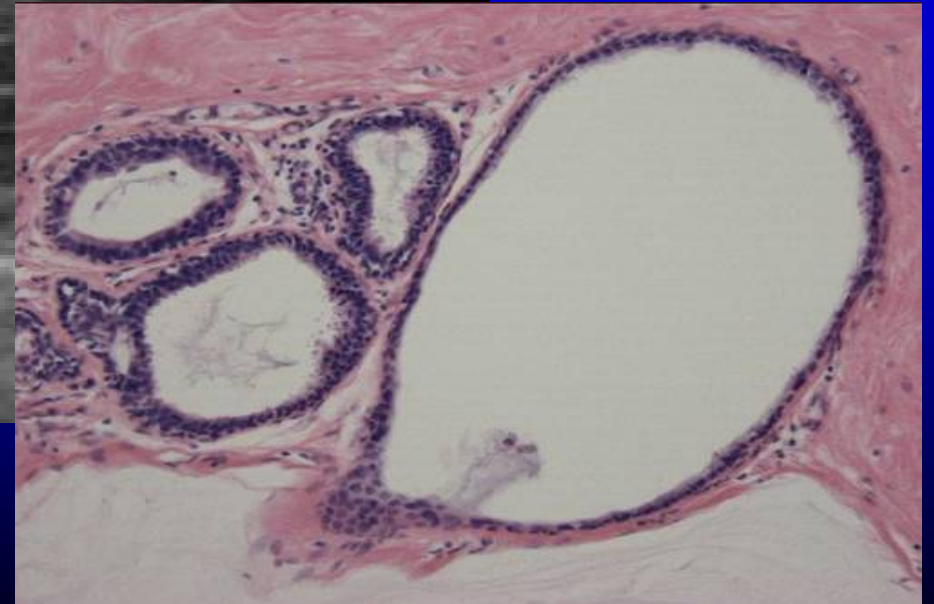
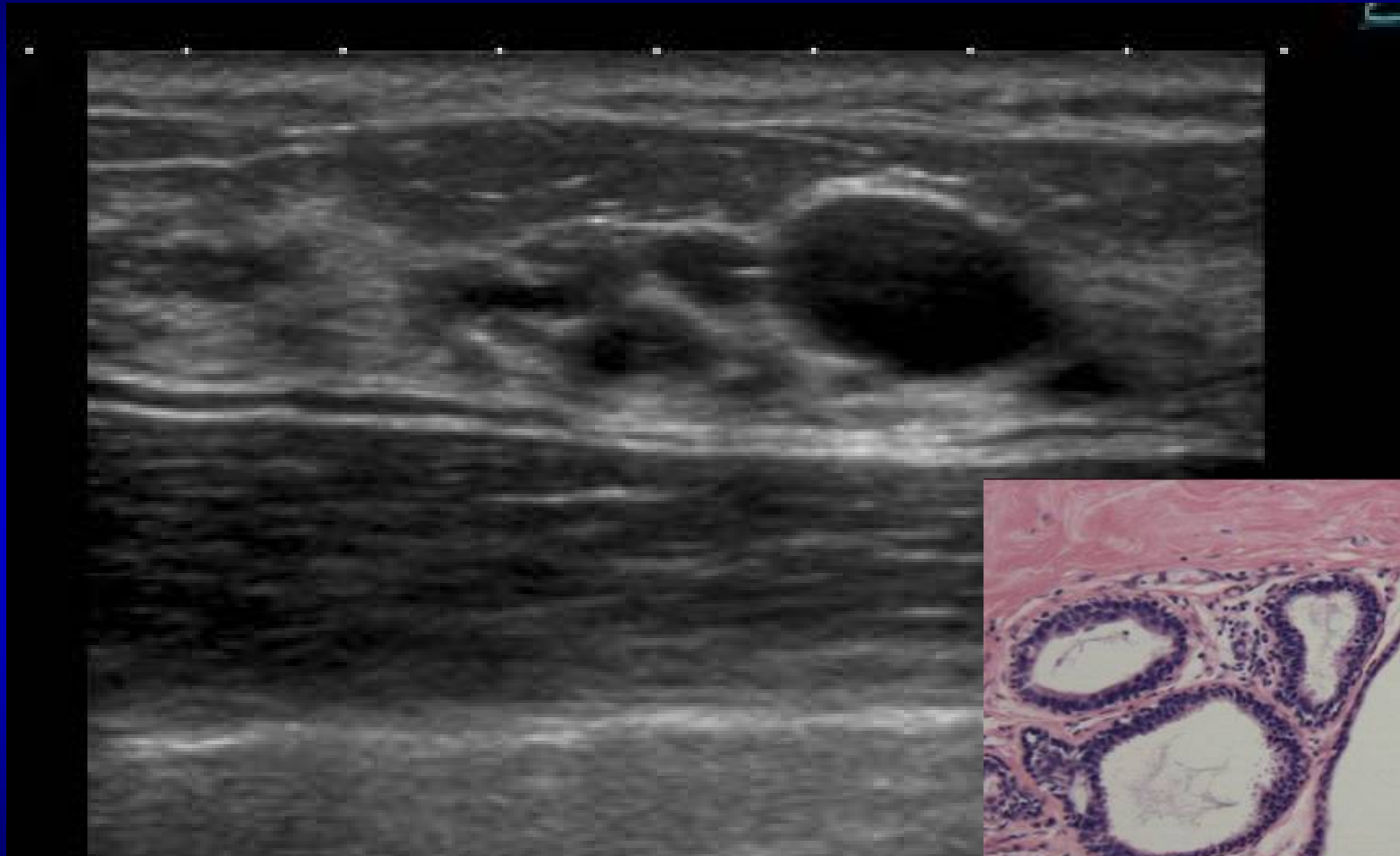
Case (1) : Invasive Ductal Carcinoma



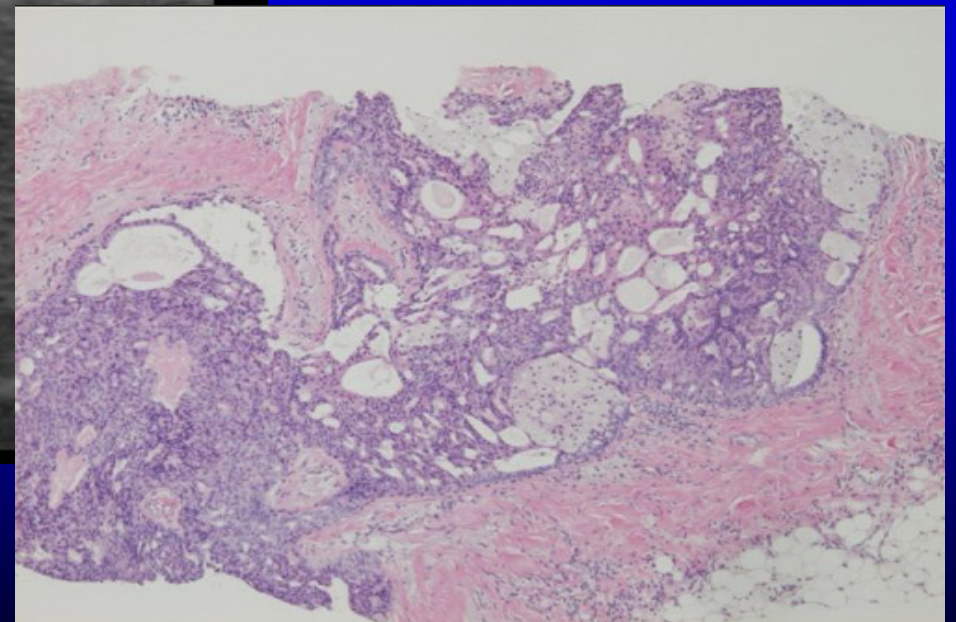
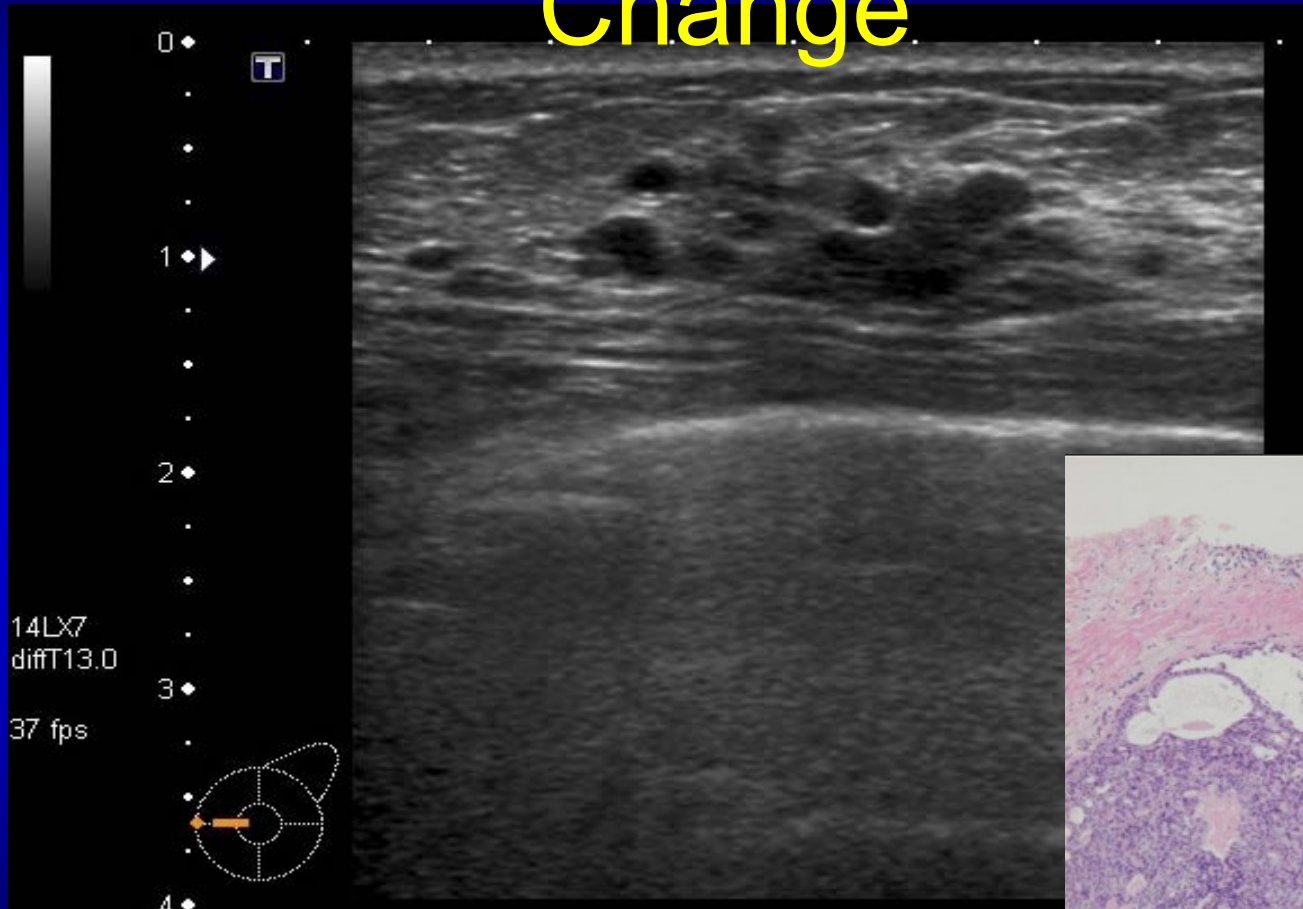
Case (2) : DCIS



Case (3) : DCIS



Case (4) : Fibrocystic Change



< Discussion >

- Frequency of clustered microcysts on ultrasound was very low (0.45% of all cases) , and its malignant lesions were less frequent (0.13% of all cases) .
- It is difficult to distinguish clustered microcysts between malignant and benign by ultrasound findings alone.
- Histopathological diagnostic procedure may be considered.

< Conclusion >

- Clustered microcysts are not generally accepted as abnormal findings.
- Although the frequency of clustered microcysts is very low, possibility of malignancy should be considered.