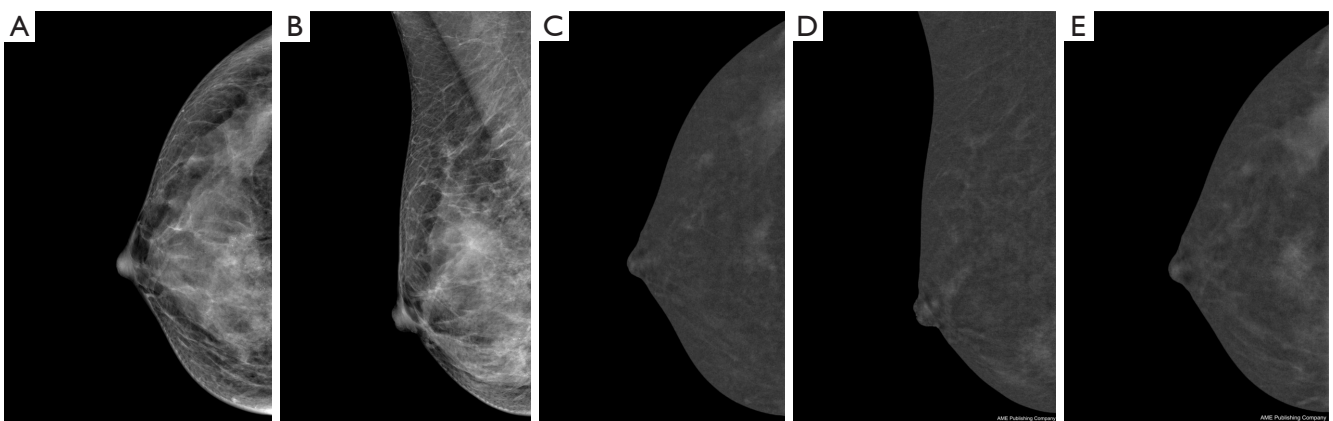


**Figure S1** A 41-year-old invasive ductal carcinomas (II) patient with breast microcalcifications. (A,B) low-energy images showed fine pleomorphic and linear microcalcifications that appear as clusters in the upper outer quadrant of the right breast, corresponding to BI-RADS (MG) category 4B. (C-E) recombined images showed a distinct non-mass enhancement [%RS(CC) =4.03%], characterized by focal distribution, heterogeneous enhancement, and a type III curve, corresponding to MCS =5. (F-H) MR images showed a distinct non-mass enhancement, characterized by focal distribution, heterogeneous enhancement, a type I curve, and an ADC value of  $1.43 \times 10^{-3} \text{ mm}^2/\text{s}$ , corresponding to the BI-RADS (MRI) category 3. %RS(CC), the percentage signal difference (in the craniocaudal oblique view); ADC, apparent diffusion coefficient; BI-RADS, Breast Imaging Reporting and Data System; MCS, Malignant Calcification Score; MG, mammography; MR, magnetic resonance; MRI, magnetic resonance imaging.



**Figure S2** A 36-year-old breast adenosis and intraductal papilloma patient with breast microcalcifications. (A,B) low-energy images showed fine pleomorphic microcalcifications with a regional distribution in the lower quadrant of the right breast, corresponding to the BI-RADS (MG) category 4A. (C-E) recombined images showed a slight non-mass enhancement [%RS(CC) =0.91%], characterized by focal distribution, heterogeneous enhancement, and a type I curve, corresponding to MCS =1. %RS(CC), the percentage signal difference (in the craniocaudal oblique view); BI-RADS, Breast Imaging Reporting and Data System; MCS, Malignant Calcification Score; MG, mammography.

**Table S1** Comparison of clinical data between CEM and MRI

Descriptors	CEM (n=42)	MRI (n=63)	t/ $\chi^2$ /Z	P value
Age (years)	49.00±10.020	49.00±9.375	-0.368	0.71
Onset time (days)	16.00 (9.50, 67.50)	20.00 (10.00, 90.00)	-0.151	0.88
Marital status			1.028	0.31
Yes	42 (100.00)	62 (98.41)		
No	0 (0.00)	1 (1.59)		
Childbearing history			2.069	0.15
Yes	42 (100.00)	61 (96.83)		
No	0 (0.00)	2 (3.17)		
Menopausal status			0.327	0.57
Yes	15 (35.71)	26 (41.27)		
No	27 (64.29)	37 (58.73)		
Family history of breast cancer			0.452	0.50
Yes	5 (11.90)	5 (7.94)		
No	37 (88.10)	58 (92.06)		
Dense breast			1.863	0.17
Yes	38 (90.48)	51 (80.95)		
No	4 (9.52)	12 (19.05)		
Microcalcification location			2.692	0.10
Upper-outer quadrant	22 (52.38)	43 (68.25)		
Other	20 (47.62)	20 (31.75)		
Microcalcification morphology			2.780	0.25
Amorphous/coarse	7 (16.67)	6 (9.52)		
Pleomorphic	15 (35.71)	17 (26.98)		
Linear/branching	20 (47.62)	40 (6.49)		
Microcalcification distribution			0.885	0.83
Diffuse	3 (7.14)	3 (4.76)		
Regional	14 (33.33)	17 (26.98)		
Grouped/clustered	14 (33.33)	24 (38.10)		
Segmental/linear	11 (26.19)	19 (30.16)		
Accompany architectural distortion or asymmetries			0.451	0.50
Yes	26 (61.90)	43 (68.25)		
No	16 (38.10)	20 (31.75)		
BPE			7.046	0.07
Minimal	20 (47.62)	25 (39.68)		
Mild	14 (33.33)	21 (33.33)		
Moderate	5 (11.90)	14 (22.22)		
Marked	3 (7.14)	3 (4.76)		
Size (cm <sup>2</sup> )	5.97 (1.13, 11.78)	5.54 (1.57, 16.31)	-0.316	0.62
%RS(CC) (%)	1.93 (1.04, 3.85)	3.19 (1.70, 4.03)	-0.713	0.48
Delayed %RS(CC) (%)	1.99 (1.42, 3.97)	2.30 (1.55, 4.14)	-0.621	0.53
mTIC			1.236	0.54
Type I	21 (50.00)	16 (25.40)		
Type II	11 (26.19)	14 (22.22)		
Type III	10 (23.81)	33 (52.38)		
Enhancement morphological distribution			1.716	0.63
Diffuse	3 (7.14)	6 (9.52)		
Regional	17 (40.48)	18 (28.57)		
Focal	15 (35.71)	28 (44.44)		
Segmental/linear	7 (16.67)	11 (17.46)		
Internal enhancement pattern			0.742	0.86
Homogeneous	8 (19.05)	14 (22.22)		
Heterogeneous	22 (52.38)	28 (44.44)		
Clumped	5 (11.90)	10 (15.87)		
Clustered ring	7 (16.67)	11 (17.46)		

Continuous variables are presented as mean  $\pm$  SD or median (IQR). Categorical variables are presented as n (%). %RS(CC), the percentage signal difference (in the craniocaudal oblique view); BPE, background parenchymal enhancement; CEM, contrast-enhanced mammography; MRI, magnetic resonance imaging; mTIC, modified time-signal intensity curve.