Supplementary Table 1. Model-fit statistics for the prespecified ordinal logistic regression analyses

Model	n	Final −2 log-likelihood	Likelihood-ratio χ^2	df	*P* value	Nagelkerke pseudo-R^2
Ultrasound-only	607	275.08	64.11	7	< 0.001	0.234
Clinical-only	610	317.05	22.54	5	< 0.001	0.085
Clinical + mammographic	536	255.02	35.53	6	< 0.001	0.153
Combined clinical + ultrasound	607	260.47	78.72	13	< 0.001	0.284

The dependent variable was the reduced three-category pathological outcome (benign → borderline → malignant). Overall model significance was assessed using the likelihood-ratio chi-square test. Nagelkerke pseudo-R^2 is reported as a measure of model explanatory performance.

Supplementary Table 2. Prespecified multivariable ordinal logistic regression analyses

Model	Variable	OR (95% CI)	*P* value
Ultrasound-only (n = 607)	Architectural distortion	**8.40 (3.89–18.16)**	**< 0.001**
	Posterior acoustic shadowing	**4.76 (1.84–12.28)**	**0.001**
	Vascularity	**2.69 (1.22–5.97)**	**0.015**
	Distribution pattern	2.52 (0.85–7.46)	0.095
	Echogenicity	0.80 (0.49–1.31)	0.380
	Parenchymal pattern	0.66 (0.31–1.40)	0.280
	Calcifications	1.81 (0.56–5.86)	0.320
Clinical-only (n = 610)	Second ipsilateral non-mass focus in newly diagnosed breast cancer	**10.93 (2.37–50.35)**	**0.002**
	Palpability	**6.64 (1.51–29.19)**	**0.012**
	First-degree family history	1.34 (0.66–2.71)	0.418
	Personal history of breast cancer	0.40 (0.12–1.36)	0.140
	Genetic mutation	Estimate unstable because of sparse data	0.867
Clinical + mammographic (n = 536)	Mammographic correlate	**8.49 (3.87–18.62)**	**< 0.001**
	Breast density	1.12 (0.61–2.04)	0.715
	Second ipsilateral non-mass focus in newly diagnosed breast cancer	5.08 (0.73–35.24)	0.100
	Palpability	2.89 (0.48–17.61)	0.249
	First-degree family history	1.76 (0.82–3.79)	0.148
	Personal history of breast cancer	0.46 (0.13–1.62)	0.228
	Genetic mutation	Estimate unstable because of sparse data	0.999
Combined clinical + ultrasound (n = 607)	Architectural distortion	**7.81 (3.43–17.78)**	**< 0.001**
	Posterior acoustic shadowing	**5.37 (1.95–14.82)**	**0.001**
	Vascularity	**2.64 (1.16–6.03)**	**0.021**
	Second ipsilateral non-mass focus in newly diagnosed breast cancer	6.47 (0.91–45.80)	0.062
	First-degree family history	2.16 (0.98–4.77)	0.056
	Palpability	3.02 (0.57–15.98)	0.194
	Echogenicity	0.73 (0.43–1.26)	0.264
	Parenchymal pattern	0.64 (0.30–1.38)	0.253
	Calcifications	1.04 (0.24–4.57)	0.961

OR, odds ratio; CI, confidence interval.

Supplementary Table 3. Analytic cohorts used in the study

Analysis	n	Explanation
Overall non-mass cohort	610	Majority-classified non-mass lesions
Majority score–based diagnostic performance	603	Seven cases had complete 1–2–3 observer disagreement and no majority clinical concern score
Multivariable ultrasound analyses	607	Background parenchymal pattern was unavailable in three mastectomy cases