

**S1 Table.** Summary of previous risk-prediction models for breast cancer

Model/Study	Year	Target population	Risk factors	Discriminatory accuracy (AUC)	Calibration (E/O ratio)
BCRAT model (Modified Gail model)	1989	Caucasian, 20-79 yr	Age, age at menarche, number of previous biopsies, age at first birth, number of first-degree relatives with breast cancer, atypical ductal hyperplasia	None	None
BCSC model	2008	Multiple ethnicities, 35-84 yr	Age, ethnicity, breast density, number of previous biopsies, number of first-degree relatives with breast cancer	0.66	1.03
IBIS model (Tyrer-Cuzick model)	2004	Multiple ethnicities, age unspecified	Age, Gen phenotype, family history (n, relationship, age) menarche, age at first birth, menopause, atypical hyperplasia, lobular carcinoma in situ, height, BMI	None	None
KoBCRAT model (Park et al.)	2013	Korean, any age	1) Age < 50 years: family history, age at menarche, age at first birth, menopausal status, breastfeeding duration, oral contraceptive use, exercise	0.63 (age < 50 yr)	0.97
			2) Age ≥ 50 years: family history, age at menarche, menopausal status, age at menopause, parity number, BMI, oral contraceptive use, exercise	0.65 (age ≥ 50 yr)	0.96
Lee et al.	2015	Korean, any age	Age at first birth, parity number, age at menarche, BMI, family history, menopausal status, regular mammography, exercise, estrogen duration	0.6027 (age < 50 yr) 0.6290 (age ≥ 50 yr)	None
LASSO model (Wang et al.)	2016	Chinese, 20-84 years	Age, parity, number of first-degree relatives with breast cancer, exposure to light at night, and sleep quality 1) Premenopausal: alcohol consumption 2) Postmenopausal: BMI, age at menarche, age at first birth, breastfeeding, oral contraceptive use, hormone replacement treatment, history of benign breast diseases	0.640 (preMP) 0.655 (postMP)	None

AUC, area under curve; E/O, expected-to-observed ratio; MP, menopause.