

Key Features of Provider-Guided Risk Assessment Tools

This resource was developed by the American Cancer Society National Breast Cancer Roundtable (ACS NBCRT) to support providers in conducting breast cancer risk assessment. The tools included in this table are based on clinically validated models and intended for use by healthcare professionals - not patients - to estimate breast cancer risk or *BRCA1/BRCA2* mutations and inform screening or referral decisions. This table outlines the key features of various breast cancer risk assessment tools/models to aid in the tool selection process.

See the [digital toolkit](#) for more breast cancer risk assessment resources.

Tool/Model	Scope			Family History			Patient Features					Risk Time Horizon		Target Population					Other	
	Informs about the risk of developing breast cancer	Informs the likelihood of carrying a <i>BRCA1/BRCA2</i> mutation	Informs the risk of having ovarian cancer	Includes 2 nd -degree relatives	Includes 3 rd -degree relatives	Includes paternal family history of breast cancer	Breast density	Reproductive features	Genetic information	Benign breast biopsy	Non-breast cancer history	Ethnicity and race	Informs 5-year risk	Informs ≥10-year risk	Includes those <35 years old	Includes those >70 years old	Includes women with a history of breast cancer, DCIS, or LCIS	Includes men or male sex assigned at birth	For a strong family history of breast and ovarian cancer	Freely available

Check the “must have” features for your practice:

BOADICEA (The Breast and Ovarian Analysis of Disease Incidence and Carrier Estimation Algorithm)- CanRisk Tool^{a,b}	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes								
BRCAPro	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	NS	NS	Yes	Yes	Yes	No ^c

Tool/Model	Scope			Family History			Patient Features						Risk Time Horizon		Target Population					Other
	Informs about the risk of developing breast cancer	Informs the likelihood of carrying a BRCA1/BRCA2 mutation	Informs the risk of having ovarian cancer	Includes 2 nd -degree relatives	Includes 3 rd -degree relatives	Includes paternal family history of breast cancer	Breast density	Reproductive features	Genetic information	Benign breast biopsy	Non-breast cancer history	Ethnicity and race	Informs 5-year risk	Informs ≥10-year risk	Includes those <35 years old	Includes those >70 years old	Includes women with a history of breast cancer, DCIS, or LCIS	Includes men or male sex assigned at birth	For a strong family history of breast and ovarian cancer	
																				Freely available

Check the “must have” features for your practice:

	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No ^d	No	Yes	Yes	NS	Yes	No	Yes	Yes
IBIS Breast Cancer Risk Evaluation Tool (v8)	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No ^d	No	Yes	Yes	NS	Yes	No	Yes	Yes
Breast Cancer Surveillance Consortium (BCSC) Risk Calculator	Yes	No	No	Yes	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes
Breast Cancer Risk Assessment Tool (BCRAT) / Gail Model^e	Yes	No	No	No	No	No	No	Yes	No	Yes	No	Yes	Yes	Yes ^f	No	Yes	No	No	No	Yes
Black Women’s Health Study (BWHS) Risk Calculator^g	Yes	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	No	NS	No	No	Yes
Penn II Model	No	Yes	No	Yes	Yes	Yes ^h	No	No	No	No	No	No	No	No	NS	NS	NS	Yes	Yes	Yes

Footnotes:

^a Registration is required to view the tool.

^b We could not find the accuracy validation for predicting *BRCA 1/BRCA2* mutations in American cohorts.

^c It is available upon request, and licensing might apply.

^d The IBIS model only considers Ashkenazi ancestry.

^e The Gail model should not be used for those with a predisposing *BRCA1/BRCA2* mutation, a strong family history of breast or ovarian cancer suggestive of a genetic predisposition, a prior history of thoracic radiation, invasive breast cancer, DCIS, or LCIS.

^f The NCCN guidelines only consider the 5-year risk determined by the modified Gail model and not the lifetime breast cancer risk (<https://www.nccn.org>). Five-year risk assessment $\geq 1.67\%$ is used to assess eligibility for a risk-reducing agent (<https://www.nccn.org>).

^g This tool is only for Black women.

^h Maternal and paternal cases should be evaluated separately.

Key:

DCIS – ductal carcinoma in situ

LCIS – lobular carcinoma in situ

NS – not specified.