

BMDA Tyrer-Cuzick Model or International Breast Cancer Intervention Study (IBIS) Tool Breast Cancer Risk Assessment Tool

The Tyrer-Cuzick Model or International Breast Cancer Intervention Study (IBIS) tool measures your risk for breast cancer. It estimates the chance of a woman developing breast cancer over the next 10 years and over the course of her lifetime. It also estimates the chance of being a BRCA1 or BRCA2 gene mutation carrier (these mutations place you at higher risk of developing breast and ovarian cancers).

The Tool

The tool estimates breast cancer risk based on the following factors:

Breast density measure: Breasts are made up of fatty, fibrous, and glandular tissue. Mammogram images show breasts that look denser when there is more glandular and fibrous tissue and less fatty tissue. If you have dense breast tissue, your risk of developing breast cancer goes up.

Current age, weight, and height: The older you are the more you are at risk of developing breast cancer. Your weight and height are used to calculate your body mass index (BMI). Your BMI helps determine if you are underweight, at a normal weight, overweight, or obese. Women who are overweight, especially after menopause, are at higher risk of breast cancer.

Age of first period: Women who began to have periods before age 12 have a higher risk of developing breast cancer.

Obstetric history: Women who have not had a pregnancy or their first pregnancy was after age 30, are at a higher risk of breast cancer.

Age of menopause: The older you are the more at risk you are of developing breast cancer. Most breast cancers are diagnosed after age 50.

Hormone replacement therapy (HRT): Women with a recent or history of long-term use of HRT, such as those with estrogen and progesterone, are at increased risk of breast cancer.

History of benign conditions or breast biopsies: Women who have had biopsies may have an increased risk of breast cancer. If the biopsy results show atypical cells (cells that are not typical in nature), your risk of developing breast cancer is greatly increased. The biopsy itself does not increase your risk.

History of ovarian cancer: Ovarian cancer can be caused by an inherited gene mutation such as BRCA1 and BRCA2. These genetic mutations can place you at high risk of breast cancer.

Family history of breast or ovarian cancer, Ashkenazi ancestry or genetic testing (if ever done):

- Women with a family history of breast cancer have an increased risk.
- Specific gene mutations, such as BRCA1 and BRCA2, increase the risk of developing cancer.
- Ashkenazi Jewish ancestry also increases your risk of having a BRCA mutation which increases your risk of developing breast cancer.

The Results

The Tyrer-Cuzick Model estimates your risk of developing breast cancer over the next 10 years and over your lifetime. Your risk is given a percentage. You have an increased risk of developing breast cancer if the result shows that:

- Your 10-year risk is 5% (this is 5 out of 100) or greater and/or
- Your lifetime risk is 20% (20 out of 100) or greater.

If you have an increased risk of breast cancer, talk with your health care team about ways to lower your risk. This may include lifestyle changes and/or medicines to reduce your risk of developing breast cancer.

When to Assess

The Tyrer-Cuzick Model or IBIS tool is used when trying to determine your need for additional breast screening or to determine if you should be tested for a BRCA gene mutation.

Women who are not at increased risk will have their risk routinely checked. Tell your health care team if you have a change in your breast health history (such as, a breast biopsy or if a close relative develops breast cancer). Your risk will be measured again.

Your Calculated Risk

Based on the Tyrer-Cusick Risk Assessment, your estimated 10-year risk for breast cancer is _____ and your lifetime risk is _____.