Package ‘CBCRisk’

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Type Package
Title Contralateral Breast Cancer Risk Prediction Tool
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Description Predicts the chance of developing contralateral breast cancer for a woman diagnosed with unilateral breast cancer.
License GPL-2
Depends R (>= 3.4.0), stats (>= 3.3.0), survival (>= 2.39.2)
NeedsCompilation no

R topics documented:

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CBCRisk-package Contralateral Breast Cancer Risk Prediction Tool

Description

Predicts the chance of developing contralateral breast cancer for a woman diagnosed with unilateral breast cancer.

Details

This package contains a function called 'cbcrisk' for calculating the absolute risk of contralateral breast cancer (CBC). The function predicts the chance of CBC for women who are affected with unilateral breast cancer.
cbcrisk predicts the risk of contralateral breast cancer

Description

cbcrisk is used to predict the chance of developing contralateral breast cancer for a woman whose current age (i.e., age at counseling) is within 18-89. This function gives the predictions starting at the current age (start.age) and then in increments of a specified number of years (pred.year) up to age 89.

Usage

cbcrisk(profile, start.age, pred.year, print.output)

Arguments

profile a vector containing the values of 8 variables in the following order: Age at first breast cancer (BC) diagnosis, Anti-estrogen therapy, Family history of BC, High Risk Preneoplasia status, Breast density (BI-RADS), Estrogen Receptor (ER) status, First BC type and Age at first birth. The possible values (categories) of each variable are listed below in the Details section.

start.age current age (i.e., age at counselling) of the woman. It must be equal to or greater than the age at first breast cancer diagnosis.

pred.year increments (in years) at which the predictions will be made, starting at start.age up to age 89. e.g; 2, 5, 10, ... . The default is 5 years.

print.output a logical indicating whether the output should be printed on R console. Defaults to TRUE. Setting it to FALSE suppresses the output.

Details

The cbcrisk function needs a vector of length 8 as a patient profile. The elements of the patient profile vector must consist of the numerical codes of the categories (noted in parentheses below) of the following risk factors:

Age at first BC diagnosis: <30 (1); 30-39 (2); 40+ (3).

Anti-estrogen therapy: Yes (1); No (2); Unknown (3).

1st degree family history of BC: Yes (1); No (2); Unknown (3).

High Risk Preneoplasia: Yes (1); No/Unknown (2).

Breast density: Extreme dense (1); Heterogeneously dense (2); Scattered (3); Almost Entirely fat (4); Unknown (5).

ER status: Negative (1); Positive (2); Unknown (3).

First BC type: Pure DCIS (1); Mixed (2); Pure Invasive (3).

Age at first birth: <30/Nulliparous (1); 30-39 (2); 40+ (3); Unknown (4).
cbcrisk

Value

cbcrisk returns a list of three objects— the patient profile provided by the user, the current age of the woman provided by the user, and the contralateral breast cancer risks until age 89.

- **profile**: the patient profile containing information about the 8 variables discussed above.
- **current.age**: current age of the woman.
- **risk**: the risks of contralateral breast cancer up to age 89.

Author(s)

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References


Examples

```r
## The profile vector
patient_profile= c(3, 2, 1, 2, 3, 2, 1, 2)

## install packages "survival" (if not already installed)
## install the "CBCRisk" package

library(CBCRisk)
cbcrisk(patient_profile, 55) #### risks at every 5 years (by default) starting at age 55
cbcrisk(patient_profile, 55, 10) ### risks at every 10 years starting at age 55
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