Facts for people and families with a faulty BRCA1 gene

ID: 3426 v.3 **Endorsed**

This fact sheet contains general information. Each person should be referred to a genetic service for further information and advice about what a faulty BRCA1 gene means for them.

Key Points

- Women with a faulty BRCA1 gene have an increased chance of developing breast and ovarian cancer.
- Men with a faulty BRCA1 gene have a slightly increased chance of developing prostate and breast cancer.
- Men and women can be referred to a genetic service where experts can provide information, support and advice about their chance of developing cancer and the option of genetic testing.

What is a faulty BRCA1 gene?

BRCA1 is a 'cancer protection' gene that helps to protect against breast, ovarian and prostate cancer.

Everyone has two BRCA1 genes (one from their mother, and one from their father). If one of the genes is not working, this is known as having a *faulty BRCA1 gene*, or having a *BRCA1 mutation*.

What is the risk of cancer for people with a faulty BRCA1 gene?

- Women with a faulty BRCA1 gene have about a 70% chance of developing breast cancer and about a 45% chance of developing ovarian cancer over their lifetime.
- Men with a faulty BRCA1 gene have about a 30% chance of developing prostate cancer and about a 1% chance of developing breast cancer over their lifetime.
- **Not everyone who has a faulty BRCA1 gene will develop cancer.**

How can this increased risk of cancer be managed?

Cancer in women:

- To **find breast cancer early**, women with a faulty BRCA1 gene should have breast cancer screening every year from age 30 years. This involves having a breast MRI (and sometimes a mammogram), plus a breast check by a doctor.
- To **reduce the chance of getting breast cancer,** women with a faulty BRCA1 gene may take medications such as tamoxifen or raloxifene. Some women may consider breast surgery (risk-reducing mastectomy or RRM).
- **There is no reliable method of screening for ovarian cancer.**
- To **reduce the chance of getting ovarian cancer**, women with a faulty BRCA1 gene should have **their ovaries and fallopian tubes removed** (risk reducing salpingo-oophorectomy or RRSO) after they have finished having children, or from age 35 years.

Cancer in men:

- To **find prostate cancer early**, men with a faulty BRCA1 gene should consider having prostate cancer screening every year from age 40 years. This involves having a blood test called a PSA, and a prostate check by a doctor.
- Men should have **any breast lumps or changes** checked by a doctor.

What does this mean for family members?

Adult family members of someone with a faulty BRCA1 gene can have genetic testing to check who has the faulty gene and who does not. Their doctor can refer them to a genetic service to find out more about their chance of developing cancer and what genetic testing involves.

If a person **does have** the faulty BRCA1 gene:

- they can pass it on to their children
- each child has a 50% (1 in 2) chance of being born with it. Pregnancy planning options are available to people who want to prevent the faulty gene from being passed on.

If a person **does not have** the faulty BRCA1 gene:

- they have the same chance of developing cancer as the general population (unless there are other factors that increase this risk)
- they cannot pass it on to their children.

People who decide not to have genetic testing should still get advice about managing their chance of developing cancer.

More information and support

- Centre for Genetics Education NSW Health: Contact details for local genetics services –genetics.edu.au/SitePages/Genetic-Services.aspx
- Genetic Alliance Australia – geneticalliance.org.au
- Cancer Australia – canceraustralia.gov.au
- Breast Cancer Network Australia (BCNA) – bcna.org.au
- Facing Our Risk of Cancer Empowered (FORCE) – facingourrisk.org
- Gene Connect – cancervic.org.au/get-support/connect-and-learn/cancer_connect
- Pink Hope – pinkhope.org.au
- COSA - Medications to lower the chance of breast cancer: information for women – cosa.org.au/groups/cancer-genetics/resources/

History

Version 3

Date	Summary of changes
30/08/2021	Consumer information sheet reviewed in line with risk management protocol (ID 656). Approved for publication with the following changes made: • What is the risk of cancer for people with a faulty BRCA1 gene? ◦ 'Men with a faulty BRCA1 gene have about a 9% chance of developing prostate cancer...' changed to 'Men with a faulty BRCA1 gene have about a 30% chance of developing prostate cancer...' • How can this increased risk of cancer be managed? ◦ '...men with a faulty BRCA1 gene should have prostate cancer screening every year from their early 40s.' changed to '...men with a faulty BRCA1 gene should consider having prostate cancer screening every year from age 40 years.' Version changed to V.3. To be reviewed alongside risk management protocol at next scheduled review.

Version 2

Date	Summary of changes
21/06/2019	Consumer information sheet updated to align with changes to risk management protocol (ID 170): **How can this increased risk of cancer be managed** section: • Recommendation for age of RRSO changed from "at around 40 years of age" to "from 35 years of age". Version changed to V.2. To be reviewed alongside risk management protocol at next major review.
02/09/2020	Document reviewed alongside ID 3814. Nil changes made. To be reviewed alongside risk management protocol at next major review.
12/05/2021	More information and support: Link to COSA - Medications to lower the chance of breast cancer: information for women inserted

Version 1

Date	Summary of changes
27/04/2018	Developed in conjunction with consumer information sheet working group and presented at the November 2017 Cancer Genetics meeting. Discussions continued over email and document approved for publication. V.1.

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The currency of this information is guaranteed only up until the date of printing, for any updates please check:
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