Facts for people and families with a faulty RAD51D gene

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This fact sheet contains general information. Each person should be referred to a genetic service for further information and advice about what a faulty RAD51D gene means for them.

Key Points

- Women with a faulty RAD51D gene have an increased chance of developing ovarian and breast cancer.
- Both men and women can be referred to a genetic service where experts can provide information, advice and support about their chance of developing cancer and the option of genetic testing.

What is a faulty RAD51D gene?

RAD51D is a 'cancer protection' gene that helps to protect against ovarian and breast cancer.

Everyone has two RAD51D 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 RAD51D gene*, or having a *RAD51D mutation*.

What is the risk of cancer for people with a faulty RAD51D gene?

- Women with a faulty RAD51D gene have about a 10% chance of developing ovarian cancer over their lifetime.
- Most women with a faulty RAD51D gene have about a 20% chance of developing breast cancer over their lifetime. The chance of developing breast cancer will be lower or higher than 20% for some women, depending on their family history of breast cancer.
- **Not everyone who has a faulty RAD51D gene will develop cancer**.

How can this increased risk of cancer be managed?

- **There is no reliable method of screening for ovarian cancer.**
- To **reduce the chance of getting ovarian cancer**, women with a faulty RAD51D gene should consider having their ovaries and fallopian tubes removed (risk-reducing salpingo-oophorectomy or RRSO) between age 45-50 years.
- To **find breast cancer early**, women with a faulty RAD51D gene should have breast cancer screening every year between age 40-50 years. This involves having a mammogram, plus a breast check by a doctor. After age 50 years, women with a faulty RAD51D gene should have breast cancer screening every 2 years.
- To **reduce the chance of getting breast cancer**, women with a faulty RAD51D gene may take medications such as tamoxifen or raloxifene.

What does this mean for family members?

Adult family members of someone with a faulty RAD51D 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 RAD51D 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 RAD51D 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
- COSA - Medications to lower the chance of breast cancer: information for women – cosa.org.au/groups/cancer-genetics/resources/

History

Version 1

Date	Summary of changes
10/05/2021	Consumer information sheet developed in conjunction with associated risk management protocol ID 3872 following the August 2020 cancer genetics reference committee meeting. Document approved for publication as V.1. To be reviewed alongside ID 3872 when next due for review.

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