

Facts for people and families with a faulty PALB2 gene

ID: 3428 v.2 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 PALB2 gene means for them.

Key Points

- Both men and women with a faulty PALB2 gene have an increased chance of developing breast and pancreatic cancer.
- Women with a faulty PALB2 gene have an increased chance of developing ovarian cancer.
- 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 PALB2 gene?

PALB2 is a 'cancer protection' gene that helps to protect against breast, ovarian and pancreatic cancer.

Everyone has two PALB2 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* PALB2 gene, or having a PALB2 *mutation*.

What is the risk of cancer for people with a faulty PALB2 gene?

- Women with a faulty PALB2 gene have about a 55% chance of developing breast cancer and about a 5% chance of developing ovarian cancer over their lifetime.
- Men with a faulty PALB2 gene have a 1% chance of developing breast cancer over their lifetime.
- Both men and women with a faulty PALB2 gene have about a 3% chance of developing pancreatic cancer over their lifetime.
- **Not everyone who has a faulty PALB2 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 PALB2 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 PALB2 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 PALB2 gene should have their ovaries and fallopian tubes removed (risk-reducing salpingo-oophorectomy or RRSO) from age 50 years.

Cancer in men:

- Men should have **any breast lumps or changes** checked by a doctor.

Cancer in men and women:

- **There is no reliable method of screening for pancreatic cancer.**
- To **reduce the chance of getting pancreatic cancer**, people with a faulty PALB2 gene should not smoke.

What does this mean for family members?

Adult family members of someone with a faulty PALB2 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 PALB2 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 PALB2 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
- Australian Pancreatic Cancer Genome Initiative – pancreaticcancer.net.au
- Breast Cancer Network Australia (BCNA) – bcna.org.au
- Facing Our Risk of Cancer Empowered (FORCE) – facingourrisk.org
- PALB2 Interest Group – palb2.org
- 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 2

Date	Summary of changes
01/05/2020	<p>Document reviewed in line with ID 1609. Approved for publication with the following changes made:</p> <ul style="list-style-type: none">• Key points:<ul style="list-style-type: none">◦ First and second bullet points combined to say: "Both men and women with a faulty PALB2 gene may have an increased chance of developing breast and pancreatic cancer"◦ Second bullet point added: "Women with a faulty PALB2 gene have an increased chance of developing ovarian cancer."• What is a faulty PALB2 gene? section:<ul style="list-style-type: none">◦ "... gene that helps to protect against breast and pancreatic cancer." changed to "...gene that helps to protect against breast, ovarian and pancreatic cancer."• What is the risk of cancer for people with a faulty PALB2 gene? section:<ul style="list-style-type: none">◦ "Women with a faulty PALB2 gene have a 30-55% chance of developing breast cancer..." changed to "Women with a faulty PALB2 gene have about a 55% chance of developing breast cancer and about a 5% chance of

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	<p>developing ovarian cancer over their lifetime."</p> <ul style="list-style-type: none"> ◦ "Men with a faulty PALB2 gene have a 1% chance of developing breast cancer over their lifetime." added ◦ "...may have an increased chance of developing pancreatic cancer ..." changed to "...have about a 3% chance of developing pancreatic cancer..." <ul style="list-style-type: none"> • How can this increased risk of cancer be managed? section: <ul style="list-style-type: none"> ◦ Cancer in women <ul style="list-style-type: none"> ■ First bullet point: "...This involves having a mammogram (and sometimes a breast MRI)..." changed to "...This involves having a breast MRI (and sometimes a mammogram)..." ■ "There is no reliable method of screening for ovarian cancer" added ■ "To reduce the chance of getting ovarian cancer, women with a faulty PALB2 gene should have their ovaries and fallopian tubes removed (risk reducing salpingo-oophorectomy or RRSO) from 50 years of age." added ◦ Cancer in men: <ul style="list-style-type: none"> ■ "Men should have any breast lumps or changes checked by a doctor." added <p>Updated to version V.2. To be reviewed again alongside protocol ID 1609 when next due for review.</p>
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.
11/06/2019	<p>What is the risk of cancer for people with a faulty PALB2 gene section:</p> <ul style="list-style-type: none"> • 'about a 30-55% chance' changed to 'a 30-55% chance'

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<https://www.eviq.org.au/p/3428>

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