Assessing a family history of bowel cancer

Bowel cancer, also known as colorectal cancer, is cancer of the large bowel. This is made up of the colon and rectum. It often begins with small growths called polyps in the lining of the bowel. Polyps are common in people over the age of 50. They are usually benign, however some polyps can become cancerous.

Checking a family history
The two most important risk factors for getting bowel cancer are:
• growing older
• having a family history of bowel cancer.

Bowel cancer is common in Australia. If you have a relative who has died from bowel cancer it is unlikely that it was due to a faulty gene and more likely linked to lifestyle factors such as diet, or due to chance. This means that you have not inherited a genetic change that puts you or your family at greater risk of developing bowel cancer.

Who can assess a family history of cancer?
A GP or a specialist medical practitioner is able to assess a family history to determine the level of risk for developing cancer. This involves drawing up a family tree and knowing the causes and ages of deaths from cancer in the family.

Family Cancer Centres (FCC)
Victoria has four Family Cancer Centres. The staff at the centres can assess both the individual and the family’s level of risk of developing cancer.

You can contact the FCC directly or your doctor may recommend you make an appointment. An information gathering sheet is sent to all new clients of the centres. When this is returned, the staff will contact the client to discuss the next steps.

To contact an FCC call the Cancer Council on 13 11 20.

In Australia, one in 10 men and one in 14 women will get bowel cancer before the age of 85. Bowel cancer is most common in people aged 50 or older.

Some people have a higher chance of getting bowel cancer. This is due to a change in a gene that normally protects against bowel cancer. This gene change will have been inherited (passed on) from a parent.
What if there is a family history of cancer on both sides of a family?
If there is a history of bowel cancer on both sides of a family, each side of the family is assessed separately.

How is the risk calculated?
The doctor or FCC will use information from the family history to:
• assess the individuals in a family
• decide the level of risk for family members of getting cancer
• make recommendations about what the individual and family can do next.

What are the different levels of risk?

1. Average risk (slightly above population risk)
If there is only one family member with bowel cancer and they got it in their 60s or 70s, other relatives are not usually at a higher risk of cancer. Their risk is similar to that for the general population.

In these cases, the family is seen as having an average risk. Genetic testing is not needed for this group.

2. Moderately increased risk (above average)
In these families, there is:
• a “cluster” of relatives with bowel cancer, or
• a single family member who had bowel cancer before the age of 55.

However, there is no clear pattern to suggest that the cancers are from an inherited gene change.

These clusters of bowel cancer may be due to:
• a combination of genes
• shared environmental factors
• shared lifestyle factors
• chance.

About 15 per cent of people who get bowel cancer have a moderately (somewhat) higher family history risk.

The FCC would assess close relatives of a person who has bowel cancer who is in this risk group. Genetic testing can sometimes be offered to families in this group.

3. Potentially high risk families (inherited predisposition)
In these families, the family history of cancer suggests a gene that protects against bowel cancer may not be working properly. People in a high risk group might have:
• three or more relatives on the same side of the family with bowel cancer, often in two or more generations
• other cancer types, such as cancer of the uterus, stomach or ovary
• relatives who got cancers when they were in their 30s, 40s and 50s
• the presence of many polyps
• had two or more separate cancers, such as two cases of bowel cancer or bowel and uterine cancer, for example
• a relative who has been found to carry a faulty gene that increases the risk of cancer.

About five per cent of people who get bowel cancer have a high risk family history.

The FCC would assess close relatives of a person who has bowel cancer in the high risk group. These families may be offered genetic testing to look for the known gene changes that increase their chance of getting bowel cancer. Three main gene changes responsible for familial bowel cancer lead to conditions known as:
• Lynch Syndrome
• MYH-Associated Polyposis
• Familial Adenomatous Polyposis.
Bowel Cancer Risk Calculator
This online interactive risk calculator uses evidence-based guidelines and includes family and personal history to determine an individual’s risk of developing bowel cancer. It provides screening and surveillance recommendations and addresses modifiable lifestyle risk factors.

Find the calculator at:

What that word means
average risk This means that someone’s chance of getting a disease is the same as any other person in the population. This may also be called population risk.

moderately increased risk This means that someone’s chance of getting a disease in the future is higher than average.

potentially high risk This means that someone’s chance of getting a disease in the future is higher than average. This is due to a:
• family history of the disease and/or;
• a change in a gene known to make the person more likely to get that disease.

People ‘at high risk’ should consider ways to lower their risk. They should discuss the options available with their medical team, these may include:
• frequency of screening and age to start
• lifestyle changes, known to reduce the risk of developing cancer
• medical or surgical prevention strategies.

Family Cancer Centre (FCC) A centre where people can get information about a family history of cancer. The centre offers:
• genetic counselling
• genetic testing
• medical advice
• psychological support
• information about research to individuals and families.

family history A careful look at the medical history of family members of an individual who has bowel cancer. This may involve:
• getting information from death certificates
• questioning other family members.

This information helps your medical team understand your family’s level of risk of getting cancer.

gene change A change somewhere in a gene. A change may be:
• inherited
• caused by a mistake while a cell is reproducing itself
• caused by some chemicals or viruses
• caused by events that science is yet to find.

A change in a gene may lead to the gene not working in the right way. This can make the person more likely to get cancer. A gene change is also known as a gene alteration or gene mutation. Not all people with gene changes get cancer.

genetic testing Testing for gene changes which may explain why a disease has happened or whether a disease is more likely to happen.

risk factor Something that causes someone to have a higher chance of getting a disease. Risk factors for cancer include:
• exposure to harmful substances, such as cigarette smoke
• inheriting a change in a gene that gives that person a higher chance of getting cancer.

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