

# Understanding Peritoneal Mesothelioma

## Information for people affected by cancer

This fact sheet has been prepared to help you understand more about peritoneal mesothelioma. It includes basic information about this form of mesothelioma and how it is diagnosed and treated.

We recommend that you also read Cancer Council's free booklet, *Understanding Pleural Mesothelioma*. Many of the practical and support issues discussed in this booklet apply to all people affected by mesothelioma.

### The peritoneum

Peritoneal refers to the peritoneum. The peritoneum is a thin membrane lining the abdomen that supports the organs and provides a pathway for nerves, blood and lymph vessels. It releases a lubricating fluid to help organs to slide smoothly against each other as the body moves around.

The peritoneum has two layers:

- **Outer layer (visceral)** – lines the surface of the organs in the abdomen and pelvis
- **Inner layer (parietal)** – lines the walls of the abdomen and pelvis.

The space between these two layers is called the peritoneal cavity or sac. It is made of mesothelial cells and connective tissue.

### What is mesothelioma?

Mesothelioma is a type of cancer that starts in the mesothelial cells. These cells line the outer surface of most of the body's internal organs, forming a membrane called the mesothelium. The mesothelium covering the abdomen and pelvis is called the peritoneum.

### What are the different types?

There are two main types of mesothelioma, which are classified according to the area affected:

- **Peritoneal mesothelioma** – develops in the lining of the abdomen (peritoneum).
- **Pleural mesothelioma** – forms in the covering of the lungs (pleura).

Rarely, mesothelioma occurs in the membrane around the heart (pericardium) or the membrane around the testicles (tunica vaginalis).

It is rare for a person to be diagnosed with mesothelioma in more than one place, however it may spread to other parts of the body.

### Cell types of mesothelioma

Mesothelioma is also grouped according to how the cells look under a microscope. There are three main types:

<b>Epithelioid</b>	Cells look similar to normal mesothelial cells. This is the most common type, making up about 60% of cases.
<b>Sarcomatoid</b>	Cells have changed and look like cells from fibrous tissue. Accounts for about 15% of cases.
<b>Mixed or biphasic</b>	Includes epithelioid and sarcomatoid cells. These make up about 25% of cases.

Mesotheliomas can differ in the way they grow. Some form a mass (tumour), while others grow along the peritoneum, forming a thick covering on the abdomen.

# Understanding Peritoneal Mesothelioma

## How common is peritoneal mesothelioma?

Mesothelioma is a rare type of cancer, affecting about 700 Australians each year. Fewer than 70 of the people are diagnosed with peritoneal mesothelioma (less than 10% of cases).

Mesothelioma is more common in older people; about 85% of those diagnosed are aged over 65.

## What are the risk factors?

Exposure to asbestos is the main cause of mesothelioma. Very rarely patients develop mesothelioma after radiotherapy to the chest.

Asbestos is the name of a group of naturally occurring minerals that are resistant to high temperatures and humidity. It was used in many building products in Australia from the 1940s until 1987. From 31 December 2003 Australia banned asbestos being sold, reused and/or imported into the country.

People who have worked in the construction or transport industries are most likely to have been exposed to asbestos.

It can take many years after being exposed to asbestos for mesothelioma to develop. This is called the latency period or latent interval, and is usually between 20 and 60 years.

## What are the symptoms?

The earliest signs of mesothelioma are often vague and similar to other conditions. It is only later, when the cancer moves into the underlying tissues or causes fluid to leak into the cavity in the abdomen, that symptoms appear.

### Mesothelioma in the peritoneum may cause:

- abdominal pain
- a swollen abdomen
- poor appetite
- nausea and vomiting
- fever
- bowel or urinary problems.

## Diagnosis

Your doctor (usually GP) will examine you and ask about your general health, family history and symptoms. If you believe you have been exposed to asbestos, mention this during your appointment. You will probably be asked to have tests and you may be referred to a specialist, such as a gastroenterologist. A gastroenterologist is a doctor who specialises in the diagnosis and treatment of diseases of the digestive system.

Peritoneal mesothelioma can be difficult to diagnose. You are likely to have quite a few tests and there will be different health professionals involved. Each person's pathway to diagnosis is unique.

### Blood test

A blood test will not detect mesothelioma, but it can let your doctors know how your blood cells, liver and kidneys are working.

### X-ray

This scan will look for any abnormalities in the abdomen, such as fluid and thickening in the peritoneum. If changes are found, you will need more tests to find the cause, as it can also be due to other conditions. A lung x-ray may also be done to check if the lungs are also affected.

### CT scan

This scan uses x-ray beams to create a detailed 3D picture of the inside of the body. It provides accurate information about the location and thickness of the tumour(s) in the abdomen. It can show if the mesothelioma has spread to other organs.

The CT scan is also used to help determine the best way of obtaining tissue for examination (biopsy).

### MRI scan

An MRI scan uses magnetic waves to create detailed cross-sectional pictures of the soft tissues in your body. These show the exact location and extent of the tumour.

You should let your medical team know if you have a pacemaker, as the magnetic waves can interfere with some pacemakers.

## Understanding Peritoneal Mesothelioma



### PET scan

A PET scan is a specialised imaging test available at most major hospitals. It is used to find cancer cells that may not have been detected from other tests, and it can show if the mesothelioma has spread to lymph nodes or other parts of the body.

### Biopsy

During a biopsy, a small sample of thickened tissue is removed from the abdomen. The cells are examined under a microscope to determine if the tumour is mesothelioma and, if so, what type of cells are present, i.e. epithelioid, sarcomatoid or biphasic.

A biopsy can be taken in two ways:

- **CT-guided core biopsy** – A CT scan is used to guide the needle into the tissue. This is done under local anaesthetic (the skin is numbed).
- **Laparoscopy** – A thin tube called a laparoscope is inserted into your body. Through this tube, the doctor removes tissue samples for biopsy. A small camera is also used to look for signs of tumours and to see if they have spread. You will be admitted to hospital and given a general anaesthetic for this procedure.

### Paracentesis (fluid drainage/tap)

You may have a build-up of peritoneal fluid in your abdomen; this is called ascites or peritoneal effusion. This may happen because the mesothelioma cells irritate the area. The extra fluid can cause abdominal swelling, tightness and pain.

A specialist can drain the fluid from your abdomen by using a local anaesthetic, inserting a needle through the skin and drawing fluid into the syringe. A sample can be tested for mesothelioma. Removing the fluid can also improve your symptoms.

### Staging

Staging is a way to describe how far the disease has spread in the body. Using the results from the tests taken to diagnose mesothelioma, your medical team will discuss with you how far it has spread.

### Making decisions about treatment

Understanding the available treatment and possible side effects can help you weigh up the pros and cons

People who develop mesothelioma due to asbestos exposure may be able to claim compensation. It's important to get legal advice from an experienced lawyer as soon as possible after diagnosis. Speak with an asbestos disease support organisation for more information (see page 5).

of different options. You may want to get a second opinion from another specialist to confirm or clarify your doctor's recommendations.

### Treatment

For most people treatment for peritoneal mesothelioma is given to control symptoms and to slow its growth. Occasionally, more aggressive treatment is offered if a better outcome is considered possible.

Your doctor will recommend the best treatment for you, depending on:

- whether the mesothelioma has spread
- your age, fitness and general health
- your preferences.

### Paracentesis

As well as being used to diagnose mesothelioma, paracentesis can also provide pain relief in patients with ascites. A small tube is inserted to allow fluid to flow out of the abdomen into a bottle.

### Surgery

For many people peritoneal mesothelioma is diagnosed at an advanced stage, when it is aggressive or has spread through the body. This means surgery is not suitable for most people.

If you have advanced mesothelioma, you may be offered debulking surgery. During this procedure, as much of the cancer is removed as possible in the hope of stopping the spread of disease and relieving pressure on vital organs.

Debulking surgery is generally regarded as palliative treatment, which means it helps to reduce symptoms and improve quality of life, but does not aim to cure the cancer.

If the cancer is not widespread, it is possible for some people to have an operation called a peritonectomy

## Understanding Peritoneal Mesothelioma

(or cytoreductive surgery). During this procedure, a surgeon removes the parts of the peritoneum where the mesothelioma is growing.

The aim is to achieve the complete removal of the cancer to reduce symptoms, improve quality of life and increase life expectancy.

For a small number of carefully selected people, peritonectomy may be combined with heated intraoperative intraperitoneal chemotherapy (HIPEC). This is when chemotherapy drugs are heated to 42°C and inserted into the abdomen for 60-90 minutes during the operation.

After surgery, a course of chemotherapy may be delivered directly into the abdomen through a thin tube, called early postoperative intraperitoneal chemotherapy (EPIC).

Peritonectomy surgery is complex and has an extended recovery time. It is performed by a limited number of surgeons in Australia. It is recommended you seek an opinion from one of these surgeons if considering this surgery. For more information call Cancer Council 13 11 20.

### Chemotherapy

Chemotherapy may be offered as part of a treatment plan. This is a way to treat cancer using anti-cancer (cytotoxic) drugs. It aims to kill off or shrink the mesothelioma and keep it under control for as long as possible.

Chemotherapy can be delivered through a vein (intravenously). In this case, it is given on a regular basis (weekly or every 2-3 weeks) over a period of time. Chemotherapy can also be injected directly into the abdomen, through a thin tube called a catheter. This is called intraperitoneal chemotherapy.

Chemotherapy may be given on its own or before, during or after surgery.

### Taking part in a clinical trial

Doctors and researchers are working to improve the diagnosis and treatment of mesothelioma. You may be offered treatment as part of a clinical trial. Over the years, trials have improved treatments and led to better outcomes for people diagnosed with cancer.

It may be helpful to talk to your specialist or clinical trials nurse, or to get a second opinion. If you decide to take part in a trial, you can withdraw at any time.

For more information, call Cancer Council 13 11 20 for a free copy of *Understanding Clinical Trials and Research*, or download it from your local Cancer Council website. You can also visit the Australian Cancer Trials website at [australiancancertrials.gov.au](http://australiancancertrials.gov.au) for more details.

### Palliative care

Palliative treatment helps to improve a person's quality of life by reducing pain and managing other physical and emotional symptoms. Treatment may include paracentesis, debulking surgery, chemotherapy or other medicines.

Because palliative treatment is not intended to cure the cancer, it is often assumed that it is only for people at the end of life. However, it is beneficial for people at any stage of a mesothelioma diagnosis. Contacting the palliative care team soon after diagnosis gives them the opportunity to get to know you, your family and your circumstances.

Although other professionals will be responsible for your treatment in the earlier part of your diagnosis, the palliative care team can become involved when needed and manage your care when active medical management becomes less effective.

### Living with mesothelioma

Being diagnosed with mesothelioma can be a shock and upsetting for you, your family and friends. You may have questions about how to look after yourself and the impact the mesothelioma will have on those around you. Some people seek practical and financial support or information about making a claim for compensation.

Cancer Council's *Understanding Pleural Mesothelioma* booklet has information on these topics, which is relevant to people with all forms of mesothelioma. Refer to the following sections:

- Living with pleural mesothelioma
- Making a claim for compensation
- Looking after yourself
- Seeking support.

Call 13 11 20 to request a free copy and for further information and support.

## Understanding Peritoneal Mesothelioma

### Question checklist

This checklist may be helpful when thinking about the questions you want to ask your doctor about your disease and treatment. If your doctor gives you answers that you don't understand, ask for clarification.

- What treatment do you recommend and why?
- Will my treatment be carried out by a doctor who specialises in mesothelioma?
- How do I get a second opinion?
- Are there any clinical trials of new treatments that I could join?
- What are the risks and possible side effects of each treatment? Will the treatment affect me sexually?
- Is there anything that can be done to help control the side effects?
- How long will the treatment take? How much will it affect my everyday activities?
- How much will treatment cost? How can the cost be reduced?
- Is it harmful to take supplements or vitamins while I am having treatment?
- What if I decide not to have any treatment?
- Am I likely to have pain from the mesothelioma? What can be done about this?
- Who can I see if I am worried in between my appointments?
- Is there a likelihood that others in my family will be at risk of developing mesothelioma?
- Is my illness something I can claim compensation for?

### Asbestos diseases support organisations

#### National

- Bernie Banton Foundation  
1800 031 731  
[berniebantton.com.au](http://berniebantton.com.au)

#### New South Wales

- Asbestos Diseases Foundation of Australia (ADFA)  
1800 006 196  
[adfa.org.au](http://adfa.org.au)

#### Northern Territory

- Asbestos Disease Support Society  
1800 776 412  
[asbestos-disease.com.au](http://asbestos-disease.com.au)

#### Queensland

- Asbestos Disease Support Society  
1800 776 412  
[asbestos-disease.com.au](http://asbestos-disease.com.au)

- Asbestosis and Mesothelioma Association of Australia (AMAA)  
1800 017 758  
[asbestosassociation.com.au](http://asbestosassociation.com.au)

#### Tasmania

- Asbestos Free Tasmania Foundation  
[asbestosfreetasmania.org.au](http://asbestosfreetasmania.org.au)

#### South Australia

- Asbestos Diseases Society South Australia (ADSSA)  
1800 157 540  
[adssa-inc.com.au](http://adssa-inc.com.au)

- Asbestos Victims Association SA Inc  
08 8212 6008  
1800 665 395  
[avasa.asn.au](http://avasa.asn.au)

#### Victoria

- Asbestoswise  
03 9654 9555  
[asbestoswise.com.au](http://asbestoswise.com.au)

- Asbestos Council of Victoria-GARDS  
03 5127 7744  
[gards.org](http://gards.org)

#### Western Australia

- Asbestos Diseases Society of Australia Inc (ADSA)  
1800 646 690  
[asbestosdiseases.org.au](http://asbestosdiseases.org.au)

## Understanding Peritoneal Mesothelioma

### Where to get help and information

Call Cancer Council 13 11 20 for more information about mesothelioma. Trained health professionals can listen to your concerns, provide additional information and put you in touch with local services. Ask for free copies of other booklets that may be relevant to you, such as *Nutrition and Cancer*, *Emotions and Cancer*, *Caring for Someone with Cancer* and *Cancer and your Finances*.

- **ACT**  
actcancer.org
- **NSW**  
cancerCouncil.com.au
- **NT**  
nt.cancer.org.au
- **QLD**  
cancerqld.org.au
- **SA**  
cancersa.org.au
- **TAS**  
cancertas.org.au
- **VIC**  
cancervic.org.au
- **WA**  
cancerwa.asn.au

### Acknowledgements

We gratefully acknowledge the late Lyall Watts, whose donation funded the development of this fact sheet and helped produce the 2011 Cancer Council Victoria booklet *Mesothelioma – a guide for people with cancer, their families and friends*.

This information is based on the expertise of clinicians who work in this area and on consumers' experiences. This fact sheet was reviewed by: Prof Paul Moroz, Professor of Surgery, University of Western Australia and Director of the Western Australian Peritonectomy Service, Joondalup Health Campus, WA; Carole Arbuckle, 13 11 20 nurse, Cancer Council Victoria, VIC; Sharyn Fenech, consumer; Dr Vinod Ganju, Head of Translational Research, Monash Cancer Centre, VIC; Vicki Hamilton, CEO, Asbestos Council of Victoria-GARDS, VIC; Dr Tom John, Medical Oncologist, Austin Hospital, VIC; Victoria Keena, Executive Officer, Asbestos Diseases Research Institute, NSW; Prof David Morris, University of New South Wales, Department of Surgery, St George Hospital, NSW; Evelyn Ramirez, consumer; Rod Smith, Bernie Banton Foundation; Elaine Spellman, Peritonectomy, Clinical Nurse Specialist, Joondalup Health Campus, WA; Prof Nico van Zandwijk, Director of the Asbestos Diseases Research Institute and Professor of Medicine, University of Sydney, NSW and A/Prof Winston Liauw, Cancer Services Stream Director, South Eastern Sydney Local Health District, NSW.

### Note to reader

Always consult your doctor about matters that affect your health. This fact sheet is intended as a general introduction and is not a substitute for professional medical, legal or financial advice. Information about cancer is constantly being updated and revised by the medical and research communities. While all care is taken to ensure accuracy at the time of publication, Cancer Council Australia and its members exclude all liability for any injury, loss or damage incurred by use of or reliance on the information provided in this fact sheet.



For information and support on cancer-related issues, call Cancer Council 13 11 20. This is a confidential service.