

Metastatic breast cancer
in the lung

hope
&hurdles



Metastatic breast cancer in the lung

Having a supportive circle of family, friends and health professionals has helped me deal with metastatic breast cancer in the lung by empowering me with knowledge and giving me the tools to live a balanced life. I still can't believe my cancer returned. It challenges my strength but it has made me into the fearless resilient woman I am now. - Marie

This booklet is for people who have been diagnosed with metastatic breast cancer in one or both of the lungs. It is designed to be read in conjunction with the *Metastatic Breast Cancer: Hope & Hurdles Information Guide* and the systemic treatment booklet relevant to your 'subtype' of breast cancer. The three subtypes of breast cancer described are hormone receptor positive (with oestrogen and/or progesterone receptors), HER2-positive (with over-expression of HER2 receptors) and triple negative (none of these receptors present).

If you have been diagnosed with metastatic breast cancer in the lung, it means that breast cancer cells have travelled from the original cancer in your breast to one or more sites in your lung. These cancer deposits are called lung metastases or secondaries. This is not the same as having lung cancer, where the cancer starts in the lung; it is still breast cancer and treatments used are breast cancer treatments.

The diagram opposite shows breast cancer that has spread from the breast to the lung (figure 1).

Other sites to which breast cancer can spread include bones, liver and, less frequently, the brain. Booklets on these types of metastatic breast cancer can also be ordered with *Metastatic Breast Cancer: Hope & Hurdles* (see back cover).

Metastatic breast cancer in the lung can be treated and may be controlled for long periods of time. While it can't be cured, people with lung metastases may live for years and enjoy a good quality of life.



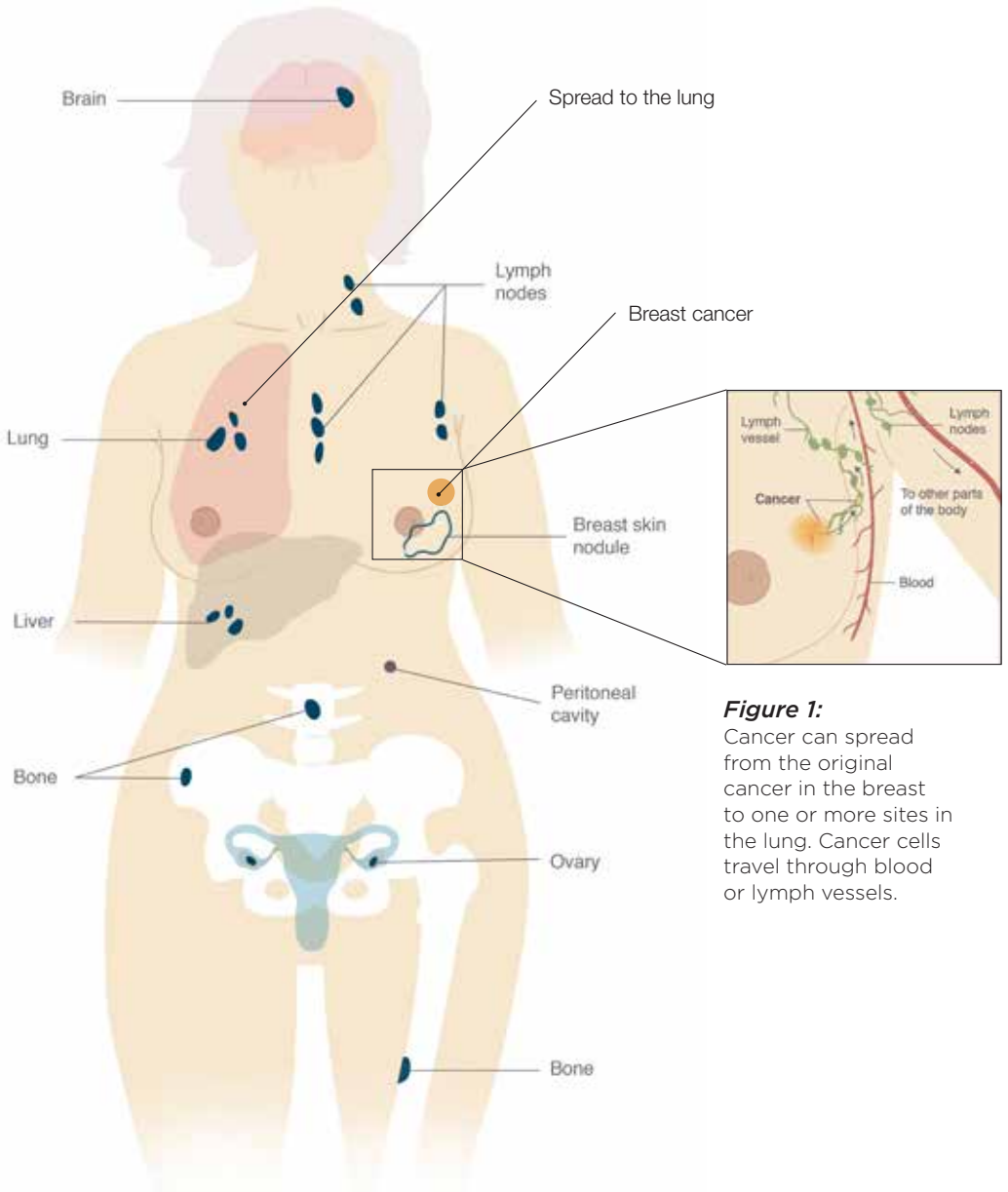


Figure 1: Cancer can spread from the original cancer in the breast to one or more sites in the lung. Cancer cells travel through blood or lymph vessels.

What happens in the lungs?

The lungs are air-filled sacs that sit inside the chest. They are covered by two layers of thin tissue called the pleura. The outer layer lines the inside of the chest wall and the inner layer covers the lungs. Between the two layers is a very narrow fluid-filled space, the pleural space, which allows the lungs to inflate and deflate as we breathe without rubbing against the chest wall.

Air enters the lungs through two tubes, the bronchi, which branch into smaller and smaller tubes until they end in very small sacs. These sacs are where the oxygen we inhale is absorbed into the bloodstream and carbon dioxide is removed from the bloodstream to leave the body when we exhale.

Breast cancer cells can spread to the lungs through either the blood vessels or the lymphatic system. They may also spread to lymph nodes located in the chest.

Symptoms of breast cancer in the lung

If you have developed metastatic breast cancer in the lung, you may have a number of different symptoms or you may have none at all. It's important to keep in mind that not everything mentioned in this booklet may apply to you. In addition to reading this booklet, you should talk to your medical team about your situation and what you might expect.

Many people with metastatic breast cancer in the lung do not have any symptoms and the lung metastases are only discovered on scans. If symptoms do occur, they can range from mild to severe, depending on how much of the lung is affected and other health issues you may have. You may have some or very few of the symptoms described. You should always tell your treating team about any symptoms you experience. Most symptoms can be managed and many respond quickly to treatment (see p. 12 for more information about managing symptoms).

Breathlessness (dyspnoea)

Breathlessness, or feeling short of breath, is one of the most common symptoms of metastatic breast cancer in the lung. You may find it uncomfortable to breathe, feel that you can't get enough air into your lungs or can only take very shallow breaths. This is often most noticeable when you are moving around but, depending on the cause, may be worse when you lie down.

Shortness of breath can happen for several reasons:

- the lung may be inflamed as a result of the cancer (lymphangitis)
- there may be a build-up of fluid in the pleural space (a pleural effusion), which compresses the lung preventing it from fully inflating
- metastases in the lung may reduce the ability of the lung to function
- a chest infection - the lung may be more prone to infection as a result of the cancer.

Cough

A persistent cough is another common symptom of metastatic breast cancer in the lung. It may be caused by the cancer itself or by an infection.

Loss of appetite and weight loss

Feeling less hungry can be an effect of the cancer itself or of treatment.

Tiredness and fatigue

Tiredness and fatigue can be caused by a number of things - breathlessness, poor appetite or the effects of the cancer itself.

Change in voice

If the cancer presses on the nerve that runs to the vocal cords, it can cause your voice to become hoarse.



Swelling of the face and neck

This can occur if the lymph nodes behind the sternum (a space called the mediastinum) become enlarged and compress the superior vena cava, which is the main vein that carries the blood from the head, neck and arms back to the heart. This is called superior vena cava obstruction (SVCO). It causes swelling of the face, neck and arms due to a build-up of fluid.

Diagnosing metastatic breast cancer in the lung

If you develop any symptoms that suggest metastatic breast cancer in the lung, your doctor will carry out a physical examination and may order tests to determine whether the breast cancer has spread to one or both of your lungs. Your doctor may be able to detect a pleural effusion or lymphangitis during the examination.

The tests will depend on your symptoms. They may include the following.

Chest X-ray

A chest X-ray is usually the first test your doctor will request. It can show a pleural effusion — a build-up of fluid in the pleura — but does not always show the cancer.

CT/CAT scan

Computerised tomography (CT) uses X-rays to build up a three-dimensional picture of the lungs. Before the scan a contrast material may be injected into a vein, usually in the arm, to help show any cancer deposits more clearly. Let your doctor know if you are allergic to iodine or seafood. The scan itself is painless but you need to lie very still for approximately 30 minutes.

PET scan

Positron emission tomography (PET) uses the detection of gamma rays (radioactive waves similar to those used in a bone scan) to create a three-dimensional picture of your body. You will require an injection of radioactive material 90 minutes before the scan and may require sedation. The scanning takes approximately 30 minutes and is painless.

PET scans can be useful in determining whether or not abnormalities seen on a CT scan are cancer.

Biopsy

A biopsy may be needed if there is uncertainty about the diagnosis. It is also useful for your doctor to re-check the receptors (ER, PR and HER2) as these can be different from your primary breast cancer and they're important in determining the best treatments for you. How the biopsy is performed will depend on where in the lung the lesion is located.

- **Bronchoscopy:** If the lesion is central in the chest and close to the main bronchi, a bronchoscopy can be performed under local anaesthetic. A small tube with a light at the end (bronchoscope) is passed through the mouth into a bronchus and a small piece of tissue is taken for pathology.
- **CT guided biopsy:** If the lesion or abnormality is near the surface of the lung, a small needle can be passed through the skin into the lung under the guidance of a CT scan.
- **Mediastinoscopy:** If there is an abnormality in the mediastinum (the space between the lungs and behind the breast bone [sternum]), a mediastinoscopy may be required. This is a type of keyhole surgery used to take a biopsy from this space.

Tumour markers

Tumour markers are substances, usually proteins such as CA15-3 and CEA, which are produced by the body in response to cancer or by the cancer tissue itself. If the levels are higher than normal this can help to determine whether metastases are present. However, they are most frequently used to determine whether or not the cancer is responding to treatment. It is important to remember that tumour markers are not always reliable or accurate – for example, your tumour markers may increase even though there is other evidence that the cancer is responding to treatment – and some breast cancers do not produce tumour markers at all. Some medical oncologists don't use tumour markers for these reasons. Others use them as just one of a number of measures to help determine whether the cancer is responding to treatment.

MRI scan

Magnetic resonance imaging (MRI) may be used to scan your lungs, although other tests such as CT and PET scans are more commonly used. MRI uses magnetic waves to scan the lungs and provides very detailed cross-sectional views. An MRI is not painful but it does require you to lie still in a cylinder for 30–45 minutes. Let your doctor know if you have claustrophobia so that you can discuss whether it may be helpful for you to have some sedation.

Other tests

The presence of lung metastases indicates that the breast cancer has spread from your breast into your body via the blood stream or lymphatic system. Other parts of your body may also be affected, so your doctor will recommend other tests. These tests are called 'staging' tests and will provide a more accurate picture of the extent of spread of the cancer so that treatment recommendations can be made. The number and type of tests advised will depend on your symptoms, the results of a clinical examination and your general health and wellbeing.

Treating metastatic breast cancer

The overall aim of treatment for metastatic breast cancer is to control the cancer for as long as possible and ensure the best possible quality of life with control of symptoms. This is done by regularly assessing the activity of the cancer and any problems it is causing, and treating accordingly. This means you may require regular blood tests and scans.

Anti-cancer treatments are generally used in sequence, sometimes with breaks between them when no treatment is required. For instance, for women with hormone positive breast cancer (ER+ and/or PR+), a hormone-blocking treatment is used until it is no longer working and then a new treatment, often a different hormone-blocking treatment, is used.

Chemotherapy may be given for a short period of weeks to months, or continued indefinitely until the cancer starts to grow again. Ongoing chemotherapy needs to be balanced against the side effects of treatment; if you have a problem with side effects, or have a special occasion or holiday coming up, you may be able to take a break from treatment.

 For information about taking a break from treatment, see the 'Treatment and side effects' section of the *Metastatic Breast Cancer: Hope & Hurdles Information Guide*.

Treating metastatic breast cancer in the lung

Treatments for lung metastases are often very effective at stopping the growth and/or decreasing the size of the cancer deposits in the lungs. The treatments recommended for you will depend on:

- your symptoms
- whether there is a pleural effusion
- whether there is cancer in other parts of the body
- how many lung metastases there are
- the pathology of the cancer (for instance, whether it is ER, PR, or HER2 receptor positive)
- the treatments you have had in the past
- your general health
- your personal preferences.

Your treatment may be managed by a multidisciplinary team and you will probably see a number of different health professionals at different times. These could include any or all of the following:

- medical oncologist
- radiation oncologist
- surgeon
- palliative care physician
- GP
- respiratory physician
- cardiothoracic surgeon
- breast care nurse
- oncology nurse
- psychologist
- dietitian
- physiotherapist
- social worker.

Other health professionals who may be involved in your care include:

- an ear, nose and throat (ENT) surgeon for voice problems.


Treatment for metastatic breast cancer in the lung can help to relieve symptoms and delay progression of the lung metastases.

There are two types of treatment for lung metastases:

- systemic treatment, which treats the whole body, e.g. chemotherapy and hormone-blocking therapy
- local treatment, which treats a single part of the body, e.g. surgery and drainage of pleural effusions.

Systemic treatment

Systemic treatments recommended for you will depend on the subtype of breast cancer you have. These include hormone-blocking therapies, chemotherapy and targeted therapies.

 For information on systemic treatments see the *Metastatic Breast Cancer: Hope & Hurdles* booklet on your subtype of breast cancer (hormone receptor positive, HER2-positive, triple negative).

Local treatment

Pleural drainage

If there is a build-up of fluid in the pleural space (pleural effusion), it can be drained under local anaesthetic. A small tube is inserted into one of the spaces between the ribs and then into the pleural space to remove the fluid. This is usually done in the radiology department. Once the pressure of the fluid has been taken off the lung, breathing is easier. This procedure can be repeated if necessary.

Pleurodesis

Pleurodesis can be done at the same time as pleural drainage under a local anaesthetic. Talc is introduced down the tube into the pleural space (between the lung and the chest wall), which makes the membranes stick together and prevents fluid recollecting. The procedure is not always effective.

Video assisted thoracoscopy (VATS) pleurodesis is becoming the most common and effective method of pleurodesis. VATS allows the surgeon to see inside the chest through small incisions using a tiny video camera.

It is a form of keyhole surgery so recovery time from this surgery is much quicker than for larger surgeries.

Surgery

Very occasionally, surgical removal of a single (solitary) lung metastasis may be considered. This would only be suggested if there are no other metastases anywhere in the body.

Radiotherapy

Radiotherapy is not generally used to treat lung metastases as normal lung tissue is too sensitive for effective levels of treatment to be safe. However, it may be used to localised areas if the cancer is causing symptoms such as cough, shortness of breath or pain. Stereotactic body radiation therapy (SBRT) targets high dose beams of radiation at the cancerous parts of the lung and minimizes exposure to healthy tissue near the tumour. Radiotherapy is an important part of treatment for superior vena cava obstruction, however, this requires treatment to the lymph nodes in the centre of the chest (mediastinum) and not the lungs themselves.



Managing the symptoms of metastatic breast cancer in the lung

Breathlessness

The treatment for breathlessness depends on the cause. It is important to seek medical attention if you suddenly become breathless, or your breathlessness suddenly worsens, as urgent treatment may be required. In addition to being caused by lung metastases themselves (lymphangitis), other possible causes of shortness of breath are:

- pleural effusion
- chest infection
- anaemia
- a blood clot travelling to the lung (pulmonary embolus)
- scarring of the lungs from radiotherapy
- a swollen abdomen causing pressure under the diaphragm
- pre-existing lung problems such as asthma or emphysema
- anxiety or fear.

The following treatments and techniques may help to relieve breathlessness:

- relaxation techniques, which control the breathing rate and depth and help to control anxiety
- breathing techniques, such as breathing with pursed lips
- oxygen – your doctor or palliative care team can arrange for you to have an oxygen supply at home
- a small dose of morphine – sometimes this can be inhaled through a nebuliser with good results
- other medications such as diuretics, steroids, blood thinners and antibiotics can also assist, depending on the cause
- a blood transfusion if you are anaemic
- drainage of fluid
- treatment of the cancer.

In addition, some people find that sitting upright and using a fan and/or sitting near an open window brings relief. Palliative care teams are very skilled in managing breathlessness and can coordinate the appropriate care for you.

Breathlessness can be emotionally distressing and physically exhausting. It is common to feel anxiety and even occasional panic. These symptoms can in turn make breathlessness worse. A member of your health care team, such as a psychologist, physiotherapist, occupational therapist or cancer care nurse, will be able to help you with relaxation and breathing exercises.

If anxiety is severe or persistent, medication can be helpful. You can discuss this with your doctor. It is also important to make sure that any problems with pain, fatigue or sleep are well managed as these can intensify anxiety.

Cough

The causes of cough are almost the same as the causes of breathlessness. Also, phlegm may build up in the chest and throat and be difficult to bring up. Cough medicines may help to loosen phlegm, and steam also helps to break it up so that it is easier to clear. A nebuliser can provide steam and administer drugs such as Ventolin to open the airways. Low dose morphine or codeine, which may be in syrup or tablet form, also helps to relieve a persistent cough.

Loss of appetite

If you have lost your appetite it may help to eat small amounts often, rather than sit down to normal-sized meals. When your appetite is limited taking nourishing drinks, such as Sustagen or homemade milkshakes, may also be easier than a normal meal. Your doctor may refer you to a dietitian for help. Nutritional supplements may be recommended if you are losing weight.

Fatigue

Gentle exercise, such as walking, can improve fatigue but it is important to pace yourself and have adequate rest.

Anaemia can contribute to fatigue. If your doctor suspects that you may be anaemic, you will need blood tests.

Poor nutrition can aggravate both fatigue and anaemia. Steroid medicines can boost energy and appetite.

Pain

It is important to know that pain can almost always be controlled.

The treatment for the cancer will usually help control any pain caused by the metastases in the lung. There are also many different pain relieving drugs (analgesics) which can be used singly or in combination.

Paracetamol is effective for mild pain and is most effective if you take it regularly rather than waiting until the pain returns or worsens.

Anti-inflammatory medications such as aspirin and ibuprofen (Nurofen) are also effective for mild pain. Codeine-containing analgesics such as Panadeine and Panadeine Forte are effective for moderate pain while opioid-based (morphine related) drugs such as Oxycontin, Targin, and Endone (containing oxycodone) and MS Contin, or Kapanol (containing morphine) and Journista and Dilaudid (containing hydromorphone) can control more severe pain.

The opioid pain killers provide the backbone of managing moderate or more severe pain. There are quite a number of different versions of opioid pain killers, and new ones are introduced from time to time. The usual approach is to use a slow-release form – these are either oral medications or patches that are placed on the skin and renewed every few days. Examples are:

- Oxycontin, Targin, MSContin, Journista (tablets)
- Fentanyl (Durogesic) patches.

You will also be able to take a dose of fast-acting (as opposed to slow-release) pain medication for what is called 'breakthrough pain' – pain that occurs despite the slow-release pain medication. Examples of these fast acting medications are:

- Endone, Dilaudid (tablets)
- Morphine mixture (liquid)
- Actiq (fentanyl lozenge)
- Abstral (fentanyl tablets).


The steroid medication dexamethasone can sometimes be very helpful for the pain associated with lung metastases.

It should be possible to achieve good control of your pain. It is very important for you to let your team know if your pain is not well controlled as a change in dose or use of different drugs may be very helpful. Sometimes, your oncologist may suggest input from someone who specialises in cancer pain management (palliative care physicians usually provide this advice in a cancer treatment team).

Complementary therapies such as relaxation therapy, acupuncture, gentle massage and hot or cold packs may also be helpful.

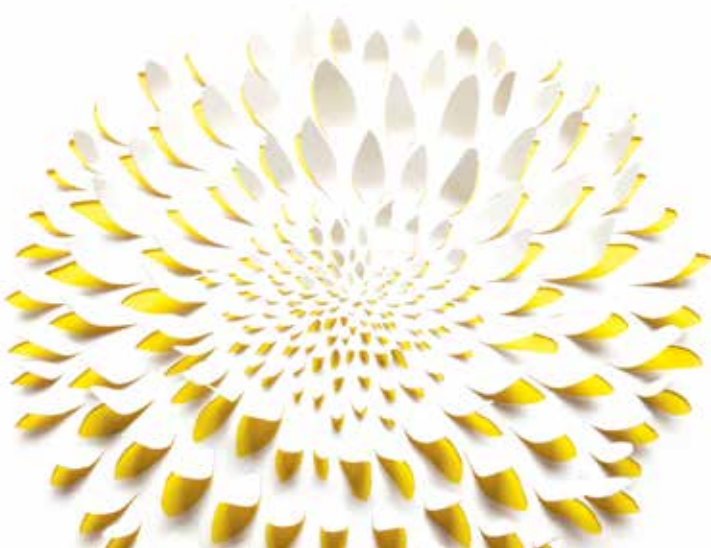
Pain can also affect your sleep. If you are having trouble sleeping, make sure you raise this with your oncologist at your next appointment.

 For more information on managing pain, see the 'Treatment and side effects' section of the *Metastatic Breast Cancer: Hope & Hurdles Information Guide*.

 Cancer Council has a free booklet *Overcoming cancer pain*, which provides information and strategies to help manage pain caused by cancer. You can order a copy by phoning **13 11 20** or download a PDF from your local Cancer Council website.

Voice changes


Hoarseness and voice changes can often be improved to make speaking easier. Referral to an ear, nose and throat (ENT) specialist is helpful.



Living with metastatic breast cancer in the lung

It is normal to experience a range of intense emotions when you learn that you have metastatic breast cancer in the lung. If you have been treated for early breast cancer, you may feel angry that the breast cancer has spread despite that treatment. There may be times when you feel isolated or overcome by fear, sadness, depression or anxiety. For many people, living with the uncertainty that comes with a diagnosis of metastatic breast cancer can be very difficult.

You may find you can cope with these feelings on your own or with support from family members and close friends. However, many people seek additional support and there are many places where you can find help. If you have one, your breast care nurse may be able to help you deal with some of these issues. Your GP is another good person to talk to and will be able to refer you to a counsellor or psychologist.

 You'll find more information about finding support in the 'Living well' section of the *Metastatic Breast Cancer: Hope & Hurdles Information Guide*.

Breast Cancer Network Australia's online network - **bcna.org.au** - is an excellent place to find support from others with metastatic breast cancer. There is an active group on the network who will welcome you into their fold and answer any questions you may have.

Many women tell us that they had never met another woman with metastatic breast cancer before joining the network, and that they found it a wonderful way to connect with others and share their experiences.

More information

Breast Cancer Network Australia

bcna.org.au

Phone **1800 500 258**

In addition to *Metastatic Breast Cancer: Hope & Hurdles* – BCNA's key information resource for people affected by metastatic breast cancer – BCNA produces a range of fact sheets and booklets on specific topics. These are available to download from BCNA's website bcna.org.au.

However, if you use a smartphone, tablet or computer with the internet, you might prefer to use the My Journey online tool which is regularly updated as new information about metastatic breast cancer becomes available. After entering some details about yourself and your diagnosis, the tool will direct you to information that is tailored to you and your needs, including services and practical supports that may be available in your area. Visit myjourney.org.au.



BCNA's free telephone counselling service provides one-on-one telephone counselling support to women and men with metastatic breast cancer and their family members. Phone **1800 500 258** for more information or to make an appointment.

BCNA's Helpline includes experienced cancer nurses who provide support and information about metastatic breast cancer and are available Monday to Thursday from 9.00 am to 6.00 pm and 9.00 am to 5.00pm on Friday. You can phone **1800 500 258** or email contact@bcna.org.au.

BCNA's website bcna.org.au includes a metastatic breast cancer section containing additional information.

The Beacon is BCNA's free twice-yearly magazine for people with breast cancer and their families and friends. It offers up-to-date information about breast cancer, events, programs and issues of importance delivered directly to your inbox. Call **1800 500 258** to order the magazine or go to bcna.org.au/news-events/subscribe to subscribe.

More information

Breast Cancer Network Australia

bcna.org.au

1800 500 258

More information is available in the *Metastatic Breast Cancer: Hope & Hurdles Information Guide* and in the Hope & Hurdles booklets:

- *Metastatic breast cancer in the bone*
- *Metastatic breast cancer in the liver*
- *Metastatic breast cancer in the brain*
- *Hormone receptor positive metastatic breast cancer*
- *HER2-positive metastatic breast cancer*
- *Triple negative metastatic breast cancer*
- *Planning ahead*

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About Breast Cancer Network Australia

Breast Cancer Network Australia (BCNA) works to support, inform, represent and connect Australians affected by breast cancer. We have a wide range of free information available including booklets, fact sheets, videos and podcasts. This information can be viewed or ordered at bcna.org.au or by calling our Helpline on **1800 500 258**.