Understanding secondary cancer in the bone

> “I have made 3 very special friends from the hospital and we are very close and special to each other. My situation has even helped others in my social groups, with me offering help and advice.”

Helen, diagnosed with secondary cancer in the bone

About this booklet

This booklet is about secondary cancer in the bone. This is cancer that has spread to the bone from a cancer elsewhere in the body. It may also be called secondary bone cancer, metastatic cancer in the bone.

This booklet is for anyone who has secondary cancer in the bone. There is also information for carers, family members and friends.

The booklet explains the signs and symptoms of secondary cancer in the bone, and how it is diagnosed and treated. It also has information about feelings, practical and financial issues.

This booklet does not have information about primary bone cancer. Primary bone cancer is where the cancer starts in the bone. We have more information about this in our booklet **Understanding primary bone cancer** (page 82).

We hope this booklet helps you deal with some of the questions or feelings you may have. We cannot give advice about the best treatment for you. You should talk to your doctor, who knows your medical history.

How to use this booklet

This booklet is split into sections to help you find what you need. You do not have to read it from start to finish. You can use the contents list on page 3 to help you.

It is fine to skip parts of the booklet. You can always come back to them when you feel ready.

On pages 88 to 100, there are details of other organisations that can help.

Quotes

In this booklet, we have included quotes from people who have had secondary cancer in the bone, which you may find helpful. These are from people who have chosen to share their story with us. This includes Helen, who is on the cover of this booklet. To share your experience, visit **macmillan.org.uk/shareyourstory**

For more information

If you have more questions or would like to talk to someone, call the Macmillan Support Line free on **0808 808 00 00**, 7 days a week, 8am to 8pm, or visit **macmillan.org.uk**

If you would prefer to speak to us in another language, interpreters are available. Please tell us, in English, the language you want to use.

If you are deaf or hard of hearing, call us using NGT (Text Relay) on **18001 0808 808 00 00**, or use the NGT Lite app.

We have some information in different languages and formats, including audio, eBooks, easy read, Braille, large print and translations. To order these, visit **macmillan.org.uk/otherformats** or call **0808 808 00 00**.

Contents

Secondary cancer in the bone 5

Diagnosing secondary cancer in the bone 23

Treating secondary cancer in the bone 33

Your feelings and relationships 69

Work and financial support 75

Further information 81

Secondary cancer in the bone

What is cancer? 6

The lymphatic system 8

The bones 10

Secondary cancer in the bone 13

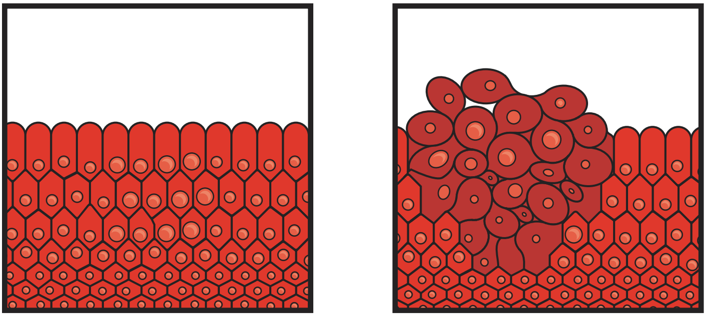
Signs and symptoms of secondary cancer in the bone 17

What is cancer?

Cells are tiny building blocks that make up the body's organs and tissues. Cells receive signals from the body, telling them when to grow and when to divide to make new cells. This is how our bodies grow and heal. These cells can become old, damaged or no longer needed. When this happens, the cell gets a signal from the body to stop working and die.

Sometimes these signals can go wrong, and the cell becomes abnormal. The abnormal cell may keep dividing to make more and more abnormal cells. These can form a lump, called a tumour.

Abnormal cells forming a tumour



Normal cells

Cells forming a tumour

Not all tumours are cancer. Doctors can tell if a tumour is cancer by taking a small sample of cells from it. This is called a biopsy. The doctors examine the sample under a microscope to look for cancer cells.

A tumour that is not cancer (a benign tumour) may grow, but it cannot spread to anywhere else in the body. It usually only causes problems if it grows and presses on nearby organs.

A tumour that is cancer (a malignant tumour) can grow into nearby tissue.

Sometimes cancer cells spread from where the cancer started (primary site) to other parts of the body. They can travel around the body in the blood or through lymph fluid which is part of the lymphatic system (pages 8 to 9). When these cancer cells reach another part of the body, they may grow and form another tumour. This is called a secondary cancer or a metastasis.

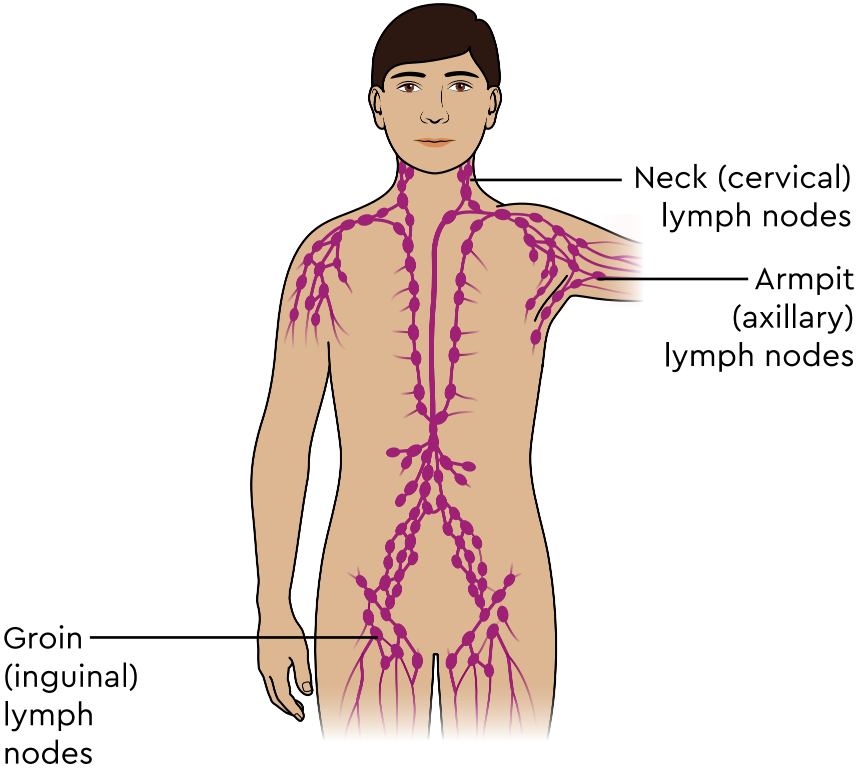
The lymphatic system

The lymphatic system helps protect us from infection and disease. It is made up of fine tubes called lymphatic vessels. These vessels connect to groups of small lymph nodes throughout the body. The lymphatic system drains lymph fluid from the tissues of the body before returning it to the blood.

Lymph nodes are sometimes called lymph glands. They filter bacteria (germs) and disease from the lymph fluid. When you have an infection, some lymph nodes may swell as they fight the infection.

We have more information about cancer and the lymphatic system on our website. Visit **macmillan.org.uk/lymphatic-system**

The lymphatic system



The bones

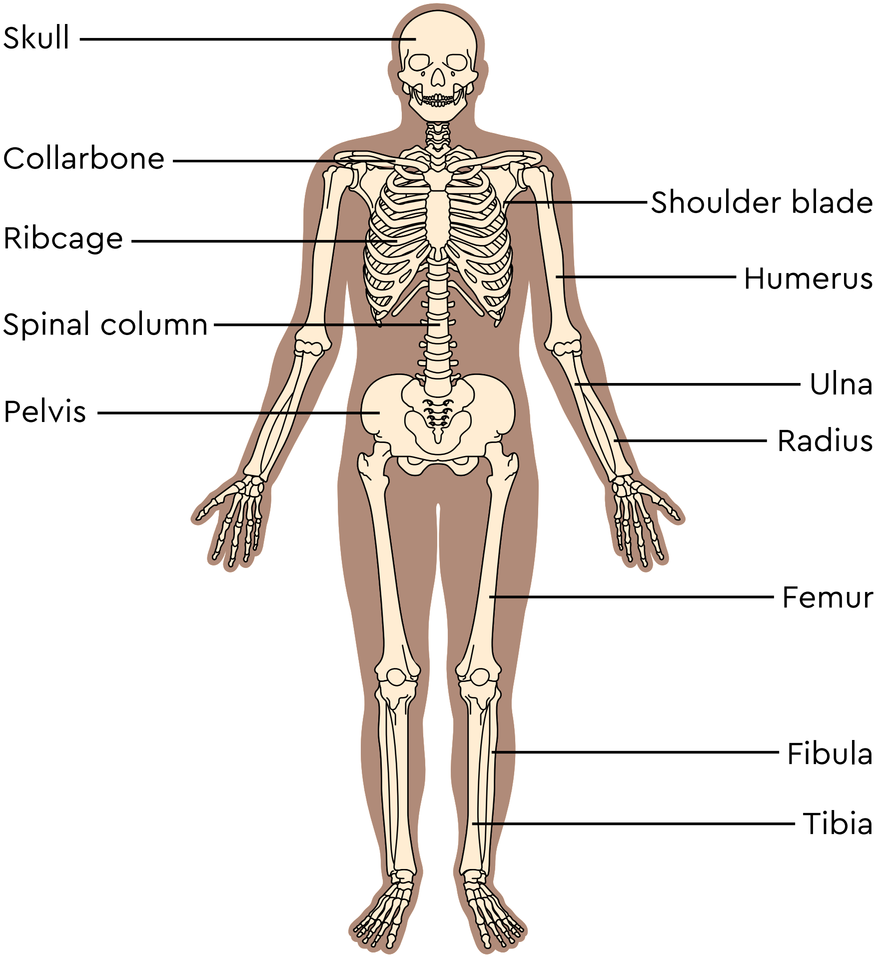
The human skeleton is made up of more than 200 bones of different shapes and sizes.

Bones are made of a type of protein called collagen and minerals such as calcium and phosphate. Bones do lots of important things:

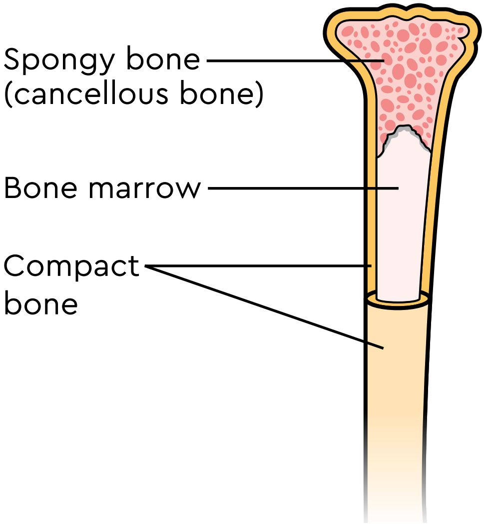
- They support our bodies. The joints at the end of bones act as levers. This is so we can move around.
- They protect parts of our bodies from injury. For example, the ribs protect the heart and lungs, and the skull protects the brain.
- They store important minerals that our bodies use, such as calcium.
- Some bones are filled with a soft, spongy material called bone marrow. This makes blood cells.

The joints at the end of bones are covered in cartilage. This allows joints to move smoothly.

The human skeleton



The structure of a long bone



Our bones are constantly breaking down and being replaced with new bone. This helps keep their strength and shape. Osteoclasts are cells that break down bone. Osteoblasts are cells that make new bone.

Bones have a good blood supply. This means that cancer cells can travel there from a different part of the body.

A secondary bone cancer can occur in any bone in the body. But the most affected areas are the:

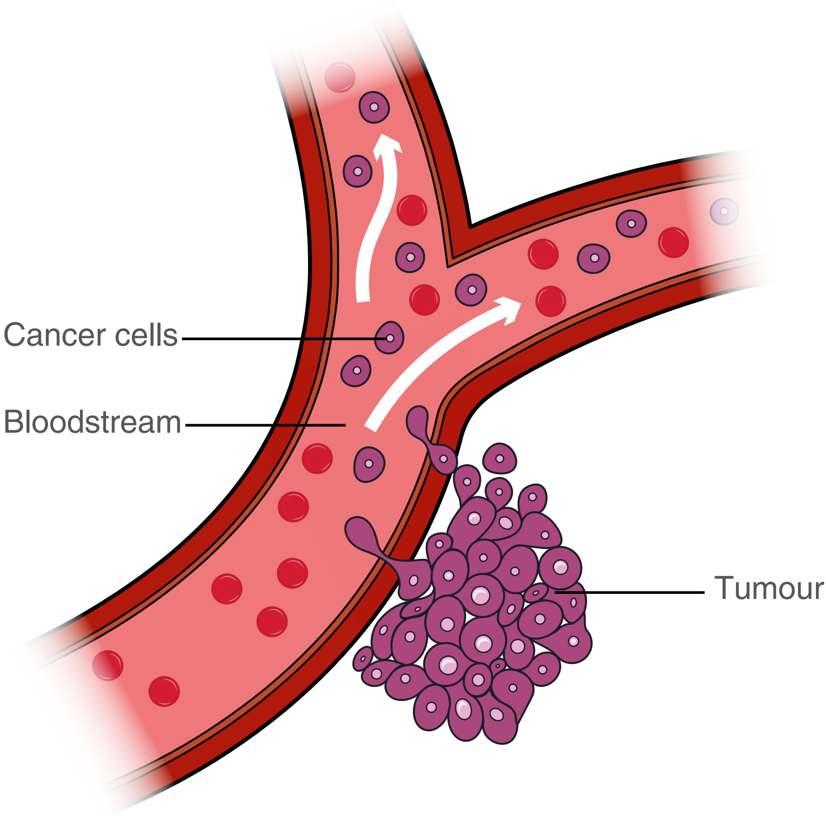
- spine and ribs
- pelvis – this is the bone that joins the hips to the spine
- bones in the upper arm – called the humerus
- bones in the upper leg – called the femur, including the hip
- skull.

Secondary cancer in the bone

The place where a cancer starts in the body is called the primary cancer. Sometimes cells break away from the primary cancer and are carried in the bloodstream or through the lymphatic systems to another part of the body (pages 8 to 9). The cancer cells may settle in that part of the body and form a new tumour.

Secondary cancer in the bone happens when cancer cells spread to the bone from a primary tumour somewhere else in the body. Secondary cancer in the bone is sometimes called secondary bone cancer or metastatic cancer in the bone.

Cancer cells entering the bloodstream



Sometimes only 1 area of bone is affected. But in most people the cancer will spread to a few different areas.

Any type of primary cancer can spread to the bone. But the most common types that do are:

- breast cancer
- kidney cancer
- lung cancer
- prostate cancer
- thyroid cancer
- myeloma.

People who develop secondary bone cancer usually know they have a primary cancer. Sometimes, a secondary bone cancer is found before, or at the same time, as the primary cancer. Occasionally the primary cancer cannot be found. This is called a cancer of unknown primary.

We have a booklet called **Understanding cancer of unknown primary** (page 82).

While secondary bone cancer is not currently curable, many people will have treatments that can control the cancer, sometimes for many years.

Cause

The cause of secondary bone cancer is always a primary cancer somewhere else in the body. We do not fully understand why some people develop secondary cancer in the bone and others do not, but this is an area of ongoing research.

> "At the time of diagnosis, I didn't really understand how it had spread to my bones from the breast and in such a short time."

Helen, diagnosed with secondary cancer in the bone

Signs and symptoms of secondary cancer in the bone

If you have secondary bone cancer you might experience 1 or more of these symptoms. Some people don't have any symptoms.

Bone pain

Pain is the most common symptom of secondary bone cancer. Everyone feels pain differently. Some people describe it as a constant, gnawing pain that gets worse over a few weeks. Others may feel a sharp pain.

The pain may also depend on which bones are affected:

- Secondary bone cancer in the spine can cause backache and pain in the arms and legs.
- Secondary bone cancer in the leg bones may cause pain when you are walking.
- In other parts of the body such as the ribs or spine, the pain may seem to vary in where it is and when it occurs.

It is important to let your doctor or nurse know if you have pain:

- in 1 or more areas that lasts for more than 2 weeks
- when you are moving
- that wakes you up at night
- in your back that moves (or 'shoots') down your arm or leg.

This is especially important if you have had cancer in the past.

Weak bones

Cancer in the bones can weaken them. Sometimes a bone weakened by cancer will break (fracture). This may happen even if you have not had an accident or fall. This is known as a pathological fracture.

Raised blood calcium level (hypercalcaemia)

Secondary cancer in the bone may cause increased amounts of calcium to be released from the bone into your blood. A high level of calcium in the blood is called hypercalcaemia. Hypercalcaemia may show up on a routine blood test. But it can also cause symptoms including:

- tiredness
- feeling sick (nausea)
- constipation
- increased thirst
- confusion
- peeing (passing urine) more often.

If you develop any of these symptoms, it is very important to let your doctor or specialist nurse know straight away.

Pressure on the spinal cord

Secondary cancer in the bones of the spine can put pressure on the nerves of the spinal cord. This is called malignant spinal cord compression (MSCC). It is rare but can be serious.

Symptoms of spinal cord compression include:

- back or neck pain, which may be mild at first but becomes severe
- weakness in your arms or legs
- numbness or pins and needles in your legs, hands, around your buttocks or anywhere else in your body
- problems controlling pee or peeing
- constipation or problems controlling your bowels.

If you develop any of these symptoms, it is very important to let your doctor or specialist nurse know straight away.

If you cannot contact your specialist team and you develop weakness in your legs or arms or problems controlling your bowel or bladder, **go to your local emergency department (A&E) straight away**.

If you have malignant spinal cord compression, you will need treatment as soon as possible. There is more information about how spinal cord compression (MSCC) is treated on page 65.

You can also find more about malignant spinal cord compression (MSCC) on our website at **macmillan.org.uk/malignant-spinal-cord-compression**

Effects on the blood

Sometimes secondary cancer in the bone can affect the way the bone marrow works.

The bone marrow produces different types of blood cells:

- red blood cells, which carry oxygen around the body
- white blood cells, which help to fight infection
- platelets, which help the blood to clot and prevent bleeding.

If the bone marrow does not produce enough red blood cells, you may become anaemic. This means the tissues and organs in your body might not get enough oxygen. This can make you feel tired and breathless.

If you have too few white blood cells, you will be more prone to infection.

And if you have a low platelet count, you may have bruising or bleeding.

Diagnosing secondary cancer in the bone

How secondary cancer in the bone is diagnosed 24

Your data and the cancer registry 31

How secondary cancer in the bone is diagnosed

You may see your GP or your cancer doctor. They will ask you about any symptoms you have, and may examine you. You might have some of the following tests and scans.

Blood tests

You may have a blood test to check your general health and the level of calcium in your blood. Increased calcium levels can be a sign of secondary cancer in the bone.

Bone x-ray

Bone x-rays can show changes in the bone such as a fracture, and may show a secondary bone cancer. Not all secondary bone cancers can be seen on an x-ray.

Bone scan

A bone scan looks for changes in the bones. It is more sensitive than an x-ray, as it shows any abnormal areas of bone more clearly.

Having a bone scan

The person who does the scan is called a radiographer. They inject a small amount of a radioactive substance through a cannula into a vein in your hand or arm. This is called a tracer. The amount of radiation used is small. It does not cause you any harm. You need to wait for 2 to 3 hours between having the injection and having the scan. You may want to bring something with you to help pass the time.

Areas of abnormal bone absorb more radiation than normal bone. This means the abnormal bone shows up more clearly on the scanner. The abnormal areas are sometimes called hot spots.

It is not always clear whether hot spots are caused by cancer or by other conditions, such as arthritis. Sometimes doctors also use a CT or MRI scan to help them decide. Some hospitals do an MRI scan of the whole skeleton instead of a bone scan. This is to check for signs of cancer in any other bones in the body.

After your bone scan

For the first 24 hours after your scan, you will be encouraged to drink plenty of fluids and to pee (pass urine) often. The radiographer will explain if you need to take any precautions after the scan.

> **"I had few symptoms, so it was quite a shock when I got my diagnosis."**
>
> Paul, diagnosed with secondary cancer in the bone

CT scan

A CT scan makes a detailed picture of the inside of the body. The picture is built up using x-rays taken by the CT scanner. The scan uses radiation, but this is very unlikely to harm you. It will not harm anyone you come into contact with.

You have the scan at a hospital. You will get an appointment letter explaining whether you need to do anything before the scan. You should tell the person doing the scan if you are pregnant or think you could be.

You may have a drink or injection of a dye. This is called a contrast. It helps show certain areas of the body more clearly. The contrast may make you feel hot all over for a few minutes. It is important to tell your doctor if you are allergic to iodine or have asthma. This is because you could have a more serious reaction.

The scan is painless. It usually takes 5 to 10 minutes. The scanner looks like a large, thick ring. You lie still on a narrow bed which moves slowly backwards and forwards through the ring.

We have more information about having a CT scan on our website at **macmillan.org.uk/ct-scan**

MRI scan

An MRI scan uses magnetism to build up a detailed picture of areas of the body.

The scanner is a powerful magnet. You will be asked to complete and sign a checklist to make sure it is safe for you. This will check whether you have any metal implants, such as a pacemaker or surgical clips. Tell your doctor if you have ever worked with metal. This is because tiny bits of metal can sometimes lodge in the body.

You have the scan in the x-ray department of a hospital. The person who does the scan is called a radiographer. They may give you an injection of a dye called a contrast. This helps show certain areas of the body more clearly.

During the scan, you need to lie still on a bed inside a long cylinder (tube). If you worry about being in small spaces (are claustrophobic), you may be able to have a sedative to help you relax. Talk to your GP or cancer doctor about this before the scan.

The scan usually lasts between 15 minutes and 1 hour. It is painless, but you may find it uncomfortable to lie still for that long.

We have more information about having an MRI scan on our website at **macmillan.org.uk/mri-scan**

PET-CT scan

A PET scan uses a low dose of radiation to check the activity of cells in different parts of the body.

You may have a PET scan and a CT scan together. This is called a PET-CT scan. It can give more detailed information about cancer or abnormal areas seen on other scans.

If you are pregnant or breastfeeding, call the scanning department before the scan for advice.

About 1 hour before the scan, the radiographer will inject a radioactive substance into a vein, usually in your arm. This is called a tracer. The radiographer will encourage you to drink water. This helps move the tracer around your body.

Very rarely, some people are allergic to the tracer. This can make them feel breathless, sweaty or weak. Tell the radiographer straight away if you feel unwell.

The scan takes about 30 to 60 minutes. The scanner looks like a large, thick ring. You lie still on a narrow bed which moves slowly backwards and forwards through the ring.

The amount of radiation used is very small. But the radiographer will advise you not to have close contact with pregnant people, babies and young children for up to 24 hours after the scan.

We have more information about PET and PET-CT scans on our website at **macmillan.org.uk/pet-ct-scan**

Bone sample (bone biopsy)

Sometimes, your doctors may still not be sure what is causing the changes in the bone. In this case, you may need to have a small sample of cells taken from the affected bone. This is called a biopsy.

There are 2 ways of taking a bone biopsy.

Core needle biopsy

You usually have a bone biopsy done using a local anaesthetic. Sometimes you may have a general anaesthetic. Your cancer doctor will discuss with you which is best for you.

Before the biopsy, you may be given a sedative to make you feel more relaxed and drowsy. Your doctor will give you an injection of local anaesthetic into the skin and around the bone to numb it.

The doctor will use a CT scanner or a technique called fluoroscopy to help them guide the needle into the right place.

They pass a special biopsy needle through your skin into the bone, and take a small amount of the bone tissue. They may take several samples.

The procedure does not take very long. You may have it as an outpatient and be able to go home afterwards. You are likely to be sore for a few days afterwards. Your doctor will prescribe painkillers for you if you need them.

Surgical biopsy

Very rarely, a small piece of bone is removed while you have a general anaesthetic.

The doctor makes a small cut in your skin above the affected bone so that the biopsy can be taken. They will give you more information if you need a surgical biopsy.

Diagnosing the primary cancer

Sometimes, a secondary bone cancer is found before the primary cancer is diagnosed.

If this happens your doctor may arrange for you to have tests to find out where the primary cancer is. Your doctor will be able to tell you more about these tests.

Our cancer support specialists on **0808 808 00 00** can also give you information about tests you may need to have.

Waiting for test results

Waiting for test results can be a difficult time. It may take from a few days to a couple of weeks for the results to be ready. You may find it helpful to talk with your partner, your family or a close friend. You can also get support from your specialist nurse or a support organisation (pages 88 to 100). Or you can talk to one of our cancer support specialists on **0808 808 00 00** (7 days a week, 8am to 8pm).

Your data and the cancer registry

When you are diagnosed with cancer in the UK, some information about you, your cancer diagnosis and your treatment is collected in a cancer registry. This is used to plan and improve health and care services. Your hospital will usually give this information to the registry automatically.

There are strict rules to make sure the information is kept safely and securely. It will only be used for your direct care or for health and social care planning and research.

Talk to your doctor or nurse if you have any questions. If you do not want your information included in the registry, you can contact the cancer registry in your country to opt out.

You can find details of the cancer registries on pages 99 to 100.

Preparing for radiotherapy

Treating secondary cancer in the bone

Treatment overview 34

Radiotherapy 42

Hormonal therapy 46

Chemotherapy 47

Targeted therapy 49

Immunotherapy 50

Other treatments 52

Clinical trials – research 53

After treatment 55

Surgery to strengthen a weakened bone 56

Bone-strengthening drugs 58

Managing symptoms of secondary cancer in the bone 63

Treatment overview

Treatment for secondary bone cancer is normally given with the aim of controlling the cancer rather than curing it.

However, many people live with secondary bone cancer for a long time.

Treatment usually aims to:

- relieve any symptoms, such as bone pain, or high calcium levels
- treat the cancer that is affecting the bone to stop it from growing
- reduce the risk of a bone fracture
- maintain or improve your quality of life.

Relieving symptoms

The most common symptom of secondary bone cancer is pain. Treatments to relieve pain may include painkillers, and other medications such as bisphosphonates to strengthen bones.

Radiotherapy can help to relieve bone pain and make you feel more comfortable. It is usually given using a machine similar to an x-ray machine. This is called external beam radiotherapy. You may also have internal radiotherapy using a radioisotope (a radioactive liquid). This may be given by injection, as a drip into a vein, or by mouth.

Treating the primary cancer affecting the bone

The treatment you have will depend on where your cancer started. This is because the secondary cancer cells in the bone have come from the primary cancer. This means they will usually respond to the same type of treatment. You may be offered:

- hormonal therapy
- chemotherapy
- targeted therapy
- immunotherapy
- surgery
- radiotherapy
- a combination of these.

We have more information about these treatments on our website. Visit **macmillan.org.uk/treatments-and-drugs**

Reducing the risk of fractures and hypercalcaemia

Your doctor may offer you drugs called bisphosphonates or a drug called denosumab. These are bone-strengthening drugs. They are used to reduce the risk of fractures or hypercalcaemia (a raised blood calcium level), and to relieve pain. We have more information about hypercalcaemia on page 66.

Some people may have an operation to strengthen or to remove and replace a weakened bone.

How your treatment is planned

After your test results, you and your doctor start to talk about your treatment. Your doctor usually meets with other specialists to get their opinions too.

Multidisciplinary team (MDT) meeting

A team of specialists meet to talk about the best treatment for you. They are called a multidisciplinary team (MDT).

The MDT looks at national treatment guidelines or the latest evidence for the type of cancer you have. If you have any treatment preferences, your doctor will tell them about this.

The MDT will usually include the following professionals:

- Surgeon – a doctor who does operations (surgery).
- Medical oncologist – a doctor who uses chemotherapy and other anti-cancer drugs to treat people with cancer.
- Clinical oncologist – a doctor who uses radiotherapy, chemotherapy and other anti-cancer drugs to treat people with cancer.
- Clinical nurse specialist (CNS) – a nurse who gives information about cancer, and support during treatment.
- Radiologist – a doctor who looks at scans and x-rays to diagnose problems.
- Pathologist – a doctor who looks at cells or body tissue under a microscope to diagnose cancer.

Depending on the type of cancer you have, the MDT may also include:

- a physiotherapist – someone who gives advice about exercise and mobility
- a dietitian – someone who gives information and advice about food and food supplements
- an occupational therapist (OT) – someone who gives information, support and aids to help people with tasks such as washing and dressing
- a counsellor – someone who is trained to listen to people's problems and help them find ways to cope
- a psychologist – someone who gives advice about managing feelings and behaviours
- doctors and nurses who are experts in symptom control.

Talking about your treatment plan

After the MDT meeting, you will usually see your cancer doctor and specialist nurse. They will talk to you about your treatment plan. It can help to write down your questions before you see them. You may want to ask a family member or friend to come with you. They can help remember what is said and talk with you about it afterwards. You need to know as much as possible before you can make any treatment decisions.

Your cancer doctor should explain:

- the aim of the treatment – whether it is to cure or control it
- the benefits of the treatment
- the disadvantages of the treatment – for example, the risks and side effects
- any other treatments that may be available
- what may happen if you do not have the treatment.

Cancer treatments can be complex. It can also be hard to concentrate on what you are being told if you are feeling anxious. If the doctor says something you do not understand, ask them to explain it again.

Most people worry about the side effects of treatment. Your doctor or nurse will explain how side effects can be controlled and what you can do to manage them. They can also tell you if your treatment is likely to cause any late effects and how these can be managed.

You may need more than 1 meeting with your doctor or nurse to talk about your treatment plan.

Making treatment decisions

You and your doctor can decide together on the best treatment plan for you. Your doctor is an expert in the best treatments. But you know your preferences and what is important to you. You can decide how involved you want to be in your treatment plan.

Choosing between treatments

Doctors sometimes ask you to choose between different treatments. This is usually when 2 treatments work equally well.

It can help to talk to your family or friends about your treatment options. Your doctor or nurse can help you with your decision. You do not usually need to decide straight away.

You could write a list of benefits and disadvantages for each treatment. When choosing a treatment, you may want to think about:

- how long you need to have it for
- how it may affect your everyday life
- how much time you will need to spend in hospital
- the different side effects and how they are likely to affect you
- any risks of the treatment.

Your doctor or nurse may give you printed information or show you videos about your treatment options. They might also show you online tools to help you make your decision (decision-making aids).

We have more information about this in our booklet **Making treatment decisions** (page 82).

Giving your permission (consent)

Doctors need your permission (consent) before you have any treatment. They will give you all the information you need to make your decision. We explain this in 'Talking about your treatment plan' (page 38).

You can give consent in writing when you sign a form that your doctor gives you, agreeing to a treatment. Or it can be a spoken agreement with your doctor. Your doctor records your consent in your patient notes.

You may decide not to have treatment even when your doctor advises you to have it. If you refuse treatment, your decision must be respected. But your doctor needs to make sure you have had all the information you need to make your decision. You need to understand all your treatment options and what will happen if you do not have the treatment. Always talk to your doctor about any concerns you have, so they can give you the best advice.

Second opinion

A second opinion is an opinion from a different doctor about your treatment. If you think you want a second opinion, talk to your cancer doctor or GP first. Tell them your concerns or ask them to explain anything you do not understand. This might help reassure you.

If you still want a second opinion, you can ask your cancer doctor or GP to arrange it. They are usually happy to do this. You may have to travel to another hospital to get a second opinion. Getting a second opinion could delay your treatment. Check with your doctor if this delay could be harmful to you.

If the doctor you see for the second opinion gives you the same advice, this can reassure you. Sometimes they give you other treatment options to think about. Find out more at **macmillan.org.uk/second-opinion**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Radiotherapy

Radiotherapy is often used to treat secondary bone cancer. It can help relieve symptoms such as pain. Radiotherapy uses high-energy rays to treat cancer. It destroys cancer cells in the area where the radiotherapy is given.

Some normal cells in the area being treated can also be damaged by radiotherapy. This can cause side effects. These normal cells are usually able to repair themselves, but cancer cells cannot. As the normal cells recover, the side effects usually get better. There are different ways of having radiotherapy. You may have external beam radiotherapy or radioisotope therapy.

External beam radiotherapy

External beam radiotherapy is given from a radiotherapy machine. You may have radiotherapy for secondary bone cancer as:

- a single treatment session
- a number of daily treatment sessions.

You usually have radiotherapy to the area of bone affected by the cancer. It may take 7 to 10 days for bone pain to start improving. It may take up to 6 weeks before you feel the full benefit of your treatment. Sometimes bone pain gets slightly worse before getting better.

It is important to continue taking any painkillers your healthcare professional prescribes. You can talk to your doctor or nurse about reducing your painkillers as your pain improves.

External radiotherapy does not make you radioactive. It is perfectly safe to be with other people after treatment, including children. Find out more on our website at **macmillan.org.uk/external-beam-radiotherapy**

Side effects of external radiotherapy

This type of radiotherapy usually causes very few side effects. Side effects will depend on where the treatment is given. Treatment to bones such as the ribs or the spine may make you feel sick for a couple of days afterwards. Some people may feel more tired or have some skin redness in the area where they have their treatment. Radiotherapy to your pelvis may also cause diarrhoea.

Your doctor, nurse or radiographer will discuss any possible side effects with you before your treatment starts. They will make sure you have any medication you need to manage side effects.

We have more information in our booklet **Understanding radiotherapy** (page 82), and on our website at **macmillan.org.uk/side-effects-radiotherapy**

Stereotactic ablative radiotherapy

Stereotactic ablative radiotherapy uses small beams of radiation to target the tumour. It is occasionally used to treat secondary bone cancer in the spine if only 1 or 2 areas are affected. If your doctor thinks this treatment is suitable for you, they will discuss it with you.

We have more information about stereotactic ablative radiotherapy on our website at **macmillan.org.uk/sabr**

Radioisotope therapy

Radioisotope therapy is an internal radiotherapy treatment where a radioactive material is put inside the body. Radioisotopes are radioactive substances. They may be given as a drink, capsules or an injection into a vein. Cancer cells absorb radioisotopes more than normal cells and get a higher dose of radiation.

All the bones affected by cancer will be treated. It can be a helpful treatment if several of your bones are affected.

There are different types of radioisotopes. The type you have will depend on the type of primary cancer you have:

- Radium-223 can be used to treat secondary cancer in the bone from prostate cancer that is no longer responding to hormonal therapy.
- Strontium-89 can be used to treat secondaries in the bone from prostate cancer and breast cancer.
- Iodine-131 can be used to treat secondaries in the bone from thyroid cancer.

Your cancer doctor will discuss your treatment with you and answer any questions you might have.

Side effects of radioisotope treatment

Radioisotopes such as radium-223 or strontium-89 can temporarily reduce the number of normal red and white blood cells produced by the bone marrow.

Your doctor will arrange blood tests before your treatment to check the level of your blood cells. If the number of your red blood cells is low (anaemia), you may feel tired and breathless. If they are very low, your doctors may give you a blood transfusion. When the number of white blood cells is low you are more likely to get an infection. If you do, your doctors will prescribe antibiotics.

Some people have swelling around the tumour area in the days following treatment. This is called tumour flare and can cause a temporary increase in pain and tenderness. You may need to take painkillers for a few days.

We have more information about this on our website at **macmillan.org.uk/internal-radiotherapy**

Hormonal therapy

You may be offered hormonal therapies to treat secondary cancer in the bone that has spread from breast or prostate cancer.

Hormones act as 'messengers' in the body and help control how cells and organs work. Some can affect the growth of breast cancer or prostate cancer cells. Hormonal therapies work by changing the way hormones are made or how they work in the body.

Hormonal therapies can slow down or stop the growth of cancer cells in the bone. They can shrink the cancer and reduce symptoms such as bone pain.

Different hormonal therapies work in different ways. Your doctors may give you 2 different types to take at the same time. They are given as tablets or injections.

Side effects

Hormonal therapy can cause side effects for some people. These can include hot flushes, having sweats and feeling tired.

Side effects can be mild for many people, but for others they may be more difficult to cope with. You may be at a higher risk of conditions such as osteoporosis or heart problems depending on:

- your diagnosis
- which drugs you are taking.

Your doctor will talk to you about the treatment and its possible side effects before you start. We have more information about hormonal therapies on our website at **macmillan.org.uk/hormonal-therapy**

Chemotherapy

Chemotherapy uses anti-cancer (cytotoxic) drugs to destroy cancer cells. Chemotherapy works by disrupting the way cancer cells grow and divide, but it also affects normal cells.

Your doctors may suggest chemotherapy if the primary cancer (where the cancer started in the body) can be treated with chemotherapy.

The drugs used to treat secondary bone cancer will be the same as those used to treat the primary cancer. For example, if you have breast cancer that has spread to the bones, you will have chemotherapy drugs that are used to treat breast cancer.

How you have chemotherapy will depend on the drugs you are having. You may have more than 1 chemotherapy drug. You usually have chemotherapy as several cycles of treatment. Each cycle includes the chemotherapy treatment and then a rest period to allow your body to recover.

Your doctor or nurse can tell you more about the drugs you may have and how many cycles of treatment you will need.

Side effects

Chemotherapy drugs can cause side effects. These vary depending on the drug being used.

Some common side effects include feeling tired, feeling sick or being at risk of infection.

Your doctor or nurse will give you telephone numbers for the hospital. If you feel unwell or need advice, you can call them at any time of the day or night. Save these numbers in your phone or keep them somewhere safe.

Side effects can usually be well controlled with medicines and will usually improve once treatment has finished. You can talk to your doctor or nurse about what to expect from your treatment.

We have more information about chemotherapy on our website at **macmillan.org.uk/chemotherapy**

> **"I wore a poncho during treatment to keep my shoulders and arms warm. If you have intravenous treatment it saves you stretching the sleeves on your tops. You can fall asleep and the nursing team can access your drips and tubes without disturbing you."**
>
> Helen, diagnosed with secondary cancer in the bone

Targeted therapy

Targeted therapies are substances that find and attack cancer cells. They are often used to treat kidney cancer that has spread to other parts of the body, including the bones. They are also sometimes used to treat other cancers that have spread, such as prostate, breast and lung cancer.

There are many types of targeted therapies that work in different ways. They can be given:

- as tablets or capsules
- by injection under the skin – this is called subcutaneously
- into a vein – this is called intravenously.

Side effects vary depending on the drug you are having. Common side effects include:

- a rash or skin changes
- raised blood pressure
- swelling in the feet, legs, hands or face.

Your hospital team can tell you more about your treatment and ways to manage side effects. We have more information about targeted therapy on our website at **macmillan.org.uk/targeted-therapy**

Immunotherapy

Immunotherapy treatments use the immune system to find and attack cancer cells. It is only suitable for some types of cancer.

There are different types of immunotherapy. Each type uses the immune system in a different way.

Some types of immunotherapy are also a targeted therapy.

How you have immunotherapy will depend on the drugs you are having. Your doctor or nurse can tell you more about this.

Side effects vary depending on the drug used. Common side effects include:

- feeling tired
- a rash or skin changes
- diarrhoea.

Your hospital team can tell you more.

Other treatments

Other treatments that may occasionally be used for secondary bone cancer include:

- high-intensity focused ultrasound (HIFU), which uses high-frequency focused sound waves to heat and destroy cancer cells
- radiofrequency ablation (RFA), which uses heat to destroy cancer cells
- cryotherapy, which uses very cold temperatures to destroy cancer cells.

Some people may be offered surgery to remove secondary bone cancer, but this is very rare. Surgery is usually only considered if the cancer only affects 1 bone and has not spread to other parts of the body.

These treatments are not widely available. You may have to travel to another hospital to have them.

Your doctor will tell you more about these treatments if they are suitable for you.

Clinical trials – research

Clinical trials are a type of medical research involving people. They are important because they show which treatments are most effective and safe. This helps healthcare teams plan the best treatment for the people they care for.

Trials may test how effective a new treatment is compared to the current treatment used. Or they may get information about the safety and side effects of treatments.

Some trials help answer questions about treatments we already use. They may test whether combining treatments is more effective. Or they may research different ways to give a treatment so it works better or causes fewer side effects.

Clinical trials also research other areas of cancer care. These include diagnosis and managing side effects or symptoms.

Taking part in a clinical trial

Your cancer doctor or specialist nurse may talk to you about taking part in a clinical trial. Or you could ask them if there are any trials suitable for you.

Joining a trial is always your decision. If you join and then change your mind, you can leave at any time. You do not have to give a reason. Your healthcare team will support you whatever you decide. You will always have the standard treatment for the type and stage of cancer you have.

Not all hospitals have the expertise or resources to take part in certain trials. This means for some trials you may have to travel to a different hospital.

A research nurse or doctor will give you information about the trial. You can ask them any questions you have. It is important to understand what is involved before you agree (consent) to take part – page 40. They will explain the possible benefits and any possible risks of the trial. Clinical trials are designed with safety measures to keep any risks to you as low as possible.

Some trials involve collecting samples of your blood or from a biopsy. This often happens as a standard part of your treatment. But your research nurse or doctor will explain if they need to take extra samples for the trial.

Your samples can only be stored and used for research if you give your permission. Your name is removed from the samples before they are used. This means you cannot be identified.

We have more information about clinical trials on our website at **macmillan.org.uk/clinical-trials**

After treatment

You will have regular contact with your doctor. They will continue to monitor your symptoms and give you further treatments if needed. You may have scans or blood tests to check the cancer or the effects of any treatment.

These appointments are a good chance to talk to your doctor about any worries or problems you have. If you notice any new symptoms or are anxious about anything else between appointments, contact your doctor or specialist nurse for advice.

> **"I have regular health checks with the hospital team. I know I can call them in between times if I have any concerns."**
>
> Helen, diagnosed with secondary cancer in the bone

Surgery to strengthen a weakened bone

Bones can sometimes be weakened by cancer cells. If this happens, it may be possible to treat them using surgery.

Sometimes an x-ray shows that a secondary cancer has weakened a long bone such as the thigh bone (femur) or upper arm bone (humerus). If there is a risk of the bone breaking, your surgeon may suggest an operation to help strengthen the bone. Or you may have surgery to replace it. Whether an operation is suitable for you will depend on:

- the cancer type
- which bone is affected
- the part of the bone the cancer is in
- other treatment you are having for the cancer
- your general health.

If you have any pain, it is important to tell your doctor so that any new fractures can be found and treated as early as possible.

Sometimes secondary bone cancer causes the bone to crack or break (fracture) before a strengthening operation can be done. If this happens, it may still be possible to repair the bone. Your doctor or specialist nurse will discuss this with you.

If secondary cancer has caused a lot of damage to your hip or shoulder joint, you may need an operation to replace the joint.

You may also have radiotherapy before or after these operations (or both) to try to destroy any cancer cells left in the area and help repair the bone – pages 42 to 45.

Percutaneous cementoplasty

This procedure may help strengthen a weakened bone and relieve bone pain. A doctor injects a special cement into the bone to strengthen it. It can be used to treat bones in the arm or leg.

If the procedure is used when a tumour is affecting the spine, it is called percutaneous vertebroplasty.

You will have a general anaesthetic or a sedative to make you feel drowsy. Using x-rays or CT scans (pages 24 to 26) to guide them, your doctor will put a needle through the skin and inject the cement into the weakened bone.

Your cancer doctor can tell you more and talk to you about whether percutaneous cementoplasty would be suitable for you.

Bone-strengthening drugs

Bisphosphonates and denosumab are drugs that strengthen bones and reduce the risk of bones breaking (fracture). They can also be used to treat a high level of calcium in the blood (hypercalcaemia). They may also help relieve bone pain.

Bisphosphonates and denosumab work in slightly different ways.

We have more information about the drugs listed below on our website. Visit **macmillan.org.uk/treatments-and-drugs**

Bisphosphonates

Cancer cells that spread to the bone can cause the cells that destroy old bone (osteoclasts) to become overactive, so more bone is broken down. This can cause small holes in the bone.

Bisphosphonates work by reducing the activity of the osteoclasts.

There are different types of bisphosphonates. The type you have will depend on your general health and the type of cancer you have. Commonly used bisphosphonates are:

- zoledronic acid
- disodium pamidronate
- sodium clodronate
- ibandronic acid.

You may have bisphosphonates as a drip (infusion) into a vein (intravenously). Usually, you have this treatment as an outpatient. You will have regular blood tests before and during the course of your treatment. Treatment is often given every 3 to 4 weeks and usually takes 15 to 60 minutes.

You may take a bisphosphonate as tablets or capsules. Your cancer doctor, nurse or pharmacist will explain how you should take your tablets. It is important that you take bisphosphonates exactly as you are told to.

Denosumab (Xgeva®, Prolia®)

Denosumab belongs to a group of targeted therapy drugs known as monoclonal antibodies.

There are 2 types of denosumab. The type you have will depend on your situation. Each has its own brand name.

- XGEVA may be given to prevent bone problems, such as fractures, if you have secondary bone cancer.
- Prolia may be given if you have prostate cancer and have weakened bones due to hormonal therapy (page 46). You might also have it if you have breast cancer and have weakened bones after going through the menopause.

How denosumab is given

You will have denosumab at the hospital as an outpatient. You have denosumab as an injection under the skin (subcutaneously). You have the injection in the thigh, stomach or upper arm.

- XGEVA is usually given once every 4 weeks.
- Prolia is given once every 6 months.

Possible side effects of bisphosphonates and denosumab

Side effects can vary between different bone-strengthening drugs.

Some common side effects of bisphosphonates and denosumab include:

- flu-like symptoms, such as pains in the muscles and joints, which usually settle after the first dose
- low levels of calcium in the blood – your doctor may advise you to take calcium and vitamin D supplements to prevent this
- shortness of breath
- diarrhoea
- indigestion or a sore throat – usually more common in people who are taking oral bisphosphonates
- excessive sweating – usually more common in people who are taking denosumab.

Your doctor can give you drugs to help control some side effects. It is important to take the drugs exactly as your specialist or pharmacist explains. This means they will be more likely to work for you. Your nurse will give you advice about managing your side effects. After your treatment is over, most side effects start to improve.

Jaw problems (osteonecrosis)

Rarely, these treatments can affect the jawbone. Healthy bone in the jaw becomes damaged and dies. This is called osteonecrosis of the jaw (ONJ). It can cause:

- pain
- loosening of the teeth
- problems with the way the gums heal.

The risk of jaw problems is higher:

- after some types of dental treatment
- in people who have gum disease
- if dentures do not fit well.

It is important to avoid having any dental treatment that could affect your jawbone when you are having bisphosphonates. This includes having a tooth or root removed, or dental implants put in. You can still have fillings, gum treatments or a scale and polish. Your healthcare team can tell you more.

> "My joints tend to seize up overnight so flexibility first thing in the morning was difficult on the first few steps. Regular sessions at the gym, focused on mobility and flexibility, has made a huge difference. „

Helen, diagnosed with secondary cancer in the bone

Managing symptoms of secondary cancer in the bone

Managing the symptoms of secondary bone cancer is an important part of your treatment. Symptoms of secondary cancer in the bone include:

- pain
- problems with daily activities
- malignant spinal cord compression (pressure on the nerves in the spine)
- raised blood calcium level (hypercalcaemia)
- effects on the bone marrow.

Pain

Pain is the most common symptom of secondary bone cancer.

There are different types of pain, and they may need different treatments.

There are many painkillers available. You may be given painkillers on their own or alongside other treatments. Other treatments that may be used to treat pain include:

- radiotherapy (pages 42 to 45)
- bisphosphonates (pages 58 to 60)
- surgery (pages 56 to 57).

Your doctor or specialist nurse will discuss your pain with you. It is important to let them know:

- where your pain is
- if the pain is not controlled
- if you get pain with tasks such as walking or lifting things.

You can ask your doctor to refer you to a palliative care nurse. They are specialists in advising on pain and symptom control. They can also advise on other ways to help you manage pain.

Walking and moving

Some people with secondary cancer in the bone may have difficulty walking or moving around. This may be more likely to happen if you have pain when you move.

Your doctor will want to check that the bones have not become weakened by the cancer. Weakened bones are more likely to break (fracture). You may be given bone-strengthening drugs, radiotherapy or, sometimes, an operation to strengthen the weakened bone.

If you have difficulty walking, a physiotherapist (page 37) can assess you to see if a walking stick or Zimmer™ frame may help. They can also help you with moving around at home.

Secondary bone cancer in your arms may make day-to-day tasks such as eating or drying your hair painful or difficult. An occupational therapist can suggest different ways of doing things, or equipment that can help make things easier for you.

Malignant spinal cord compression (MSCC)

Secondary bone cancer often affects the bones in the spine. This can cause back or neck pain. Tell your doctors if you have pain. They can give you painkillers.

Sometimes, the cancer can put pressure on the nerves in the spine. This is called malignant spinal cord compression (MSCC). It is rare but can be serious.

Symptoms of spinal cord compression include:

- back or neck pain, which may be mild at first but becomes severe
- weakness in your arms or legs
- numbness or pins and needles in your legs, hands, around your buttocks or anywhere else in your body
- problems controlling or passing urine (peeing)
- constipation or problems controlling your bowels.

If you develop any of these symptoms, it is very important to let your doctor or specialist nurse know straight away.

If you have malignant spinal cord compression, you will need treatment as soon as possible. The treatment aims to relieve the pressure and prevent permanent damage to the nerves.

Your doctor will give you high doses of steroids to reduce the swelling and pressure around the spine. You will usually also be given radiotherapy. Some people may have surgery to relieve pain and strengthen the spine.

We have more information in our **MSCC alert kit** (page 82).

Raised blood calcium level (hypercalcaemia)

Secondary cancer cells in the bone can cause calcium from the bone to be released into the blood. High levels of calcium in the blood (hypercalcaemia) can cause symptoms including:

- tiredness
- feeling sick (nausea)
- constipation
- increased thirst
- confusion
- passing urine more often.

If you develop any of these symptoms, it is very important to let your doctor or specialist nurse know straight away.

You may need to spend a few days in hospital having treatment to reduce your calcium levels.

Your doctor or nurse may ask you to drink a lot. They will probably also give you fluids into a vein in your arm (intravenous infusion). This helps your body to get rid of the calcium.

Your doctor may give you bisphosphonates through a drip to reduce the level of calcium in your blood. You can have this treatment more than once if the calcium levels rise again. You should feel much better within a couple of days.

Managing effects on the blood

If you have a low level of red blood cells (anaemia), you may feel breathless and get tired more easily. Your doctor may suggest that you have a blood transfusion.

Low levels of white blood cells make you more likely to get an infection. Your doctor can prescribe antibiotics if you do get an infection.

A low platelet count will increase your risk of bruising and bleeding. Occasionally, if your platelet count is very low, you may need a platelet transfusion.

Your doctor may suggest treatments that target the cancer to help reduce the effects on the bone marrow. This will depend on which type of primary cancer you have.

> **“I now undertake a 3-weekly treatment programme which I refer to as ‘maintenance’.”**
>
> Helen, diagnosed with secondary cancer in the bone

Your feelings and relationships

Your feelings 70

Relationships 72

Your feelings

It is common to have many different feelings when you are told you have cancer. You may feel shocked, scared, depressed, guilty or angry. This can be difficult to cope with. Partners, family and friends may also have some of the same feelings.

We have more information about emotions on our website and in our booklet **How are you feeling? The emotional effects of cancer** (page 82).

Your healthcare team will usually give you support. But you may feel you need more help. Talk to your cancer doctor, GP or specialist nurse. They can refer you to a specialist doctor, psychologist or counsellor who can help.

You can also call the Macmillan Support Line on **0808 808 00 00** and talk to one of our cancer support specialists.

Talking to family, friends or other people affected by cancer may help. For more information or for help finding local support groups, visit **macmillan.org.uk/supportgroups** Or talk to other people on our Online Community at **macmillan.org.uk/community**

There is more information on pages 84 to 87 about other ways we can help you.

Relationships

Cancer and its treatment are stressful and may affect your relationships. Your experience of cancer may strengthen your relationships with people close to you. Or it may put a strain on relationships. Any problems usually improve over time, especially if you talk openly with each other.

We have more information about relationships online and in our booklets **Talking about cancer** and **Cancer and relationships: support for partners, families and friends** (page 82).

If you are a family member or friend

If you know someone with cancer, you might find it hard to talk about the cancer or your feelings. You can support the person with cancer by listening and talking with them.

We have more information about supporting someone on our website and in our booklet **Talking with someone who has cancer**.

If you are looking after a family member or friend with cancer, you may be a carer. We have more information and practical tips for carers on our website and in our booklet **Looking after someone with cancer** (page 82).

Talking to children and teenagers

Deciding what to tell children or teenagers about cancer is difficult. It can be hard to know what to tell them, and you may be worried about upsetting them. It may be best to start by giving them small amounts of information, and then tell them more when they are ready. Use simple, straightforward language to explain what is happening. You can encourage them to talk to someone they trust, who can support them. They may also find support online.

The website **riprap.org.uk** offers information and support for teenagers who have a parent with cancer.

We have more information in our booklet **Talking to children and teenagers when an adult has cancer** (page 82).

Work and financial support

Help with money and benefits 76

Work 78

Help with money and benefits

When you are affected by cancer, you may need help with extra costs. Or you may need support with money if you have to stop working. We have more information online about Statutory Sick Pay and benefits you may be entitled to. We also have information for carers (page 82).

Benefits are payments from the government to people who need help with money. You can find out more about benefits and apply for them online. Go to:

- **gov.uk** if you live in England or Wales
- **socialsecurity.gov.scot** if you live in Scotland
- **nidirect.gov.uk** if you live in Northern Ireland.

The benefits system and other types of financial support can be hard to understand. Macmillan has experienced welfare rights advisers and financial guides. You can speak to them by calling the Macmillan Support Line on **0808 808 00 00**.

You can also get information about benefits and other types of financial help from Citizens Advice if you live in England, Scotland or Wales, or Advice NI if you live in Northern Ireland (pages 93 to 95).

Our booklet **Help with the cost of cancer** has lots more information (page 82).

Macmillan Grants

Macmillan Grants are small, mostly one-off payments to help people with the extra costs that cancer can cause. They are for people who have a low level of income and savings.

If you need things like extra clothing or help paying heating bills, you may be able to get a Macmillan Grant. A grant from Macmillan does not usually affect the benefits you are entitled to. It is an extra bit of help, not a replacement for other support.

To find out more, or to apply, call on **0808 808 00 00** or visit **macmillan.org.uk/grants**

Insurance

If you have cancer, you may find it hard to get certain types of insurance.

If you are thinking about buying insurance or making a claim, one of our financial guides can help. You can call them on **0808 808 00 00**.

We have more information in our booklet **Travel and cancer** (page 82). Our Online Community forum on **Travel insurance** may also be helpful. Visit **macmillan.org.uk/community**

☎ Call our welfare rights advisers on **0808 808 00 00**, Monday to Friday, 8am to 8pm, and Saturday to Sunday, 9am to 5pm.

Work

You may not know how cancer will affect your work, now or in the future.

It is a good idea to talk to your manager or human resources (HR) department soon after you are diagnosed. This will help them to support you better.

Your cancer doctor, GP or specialist nurse can help you decide whether you should go back to work, and when.

Our booklets **Work and cancer**, **Working while caring for someone with cancer** and **Self-employment and cancer** have more information that may be helpful. You can also find out more about your employment rights in our booklet **Your rights at work when you are affected by cancer** (page 82).

There is also lots more information online at **macmillan.org.uk/work**

Further information

About our information 82

Other ways we can help you 84

Other useful organisations 88

About our information

We provide expert, up-to-date information about cancer. And all our information is free for everyone.

Order what you need

You may want to order more booklets or leaflets like this one. Visit **be.macmillan.org.uk** or call us on **0808 808 00 00**.

We have booklets about different cancer types, treatments and side effects. We also have information about work, financial issues, diet, life after cancer treatment and information for carers, family and friends.

Online information

All our information is also available online at **macmillan.org.uk/information-and-support** You can also find videos featuring stories from people affected by cancer, and information from health and social care professionals.

Other formats

We also provide information in different languages and formats, including:

- audiobooks
- Braille
- British Sign Language
- easy read booklets
- eBooks
- large print
- translations.

Find out more at **macmillan.org.uk/otherformats**

If you would like us to produce information in a different format for you, email us at **cancerinformationteam@macmillan.org.uk** or call us on **0808 808 00 00**.

The language we use

We want everyone affected by cancer to feel our information is written for them.

We try to make sure our information is as clear as possible. We use plain English, avoid jargon, explain any medical words, use illustrations to explain text, and make sure important points are highlighted clearly.

We use gender-inclusive language and talk to our readers as 'you' so that everyone feels included. Where clinically necessary we use the terms 'men' and 'women' or 'male' and 'female'. For example, we do so when talking about parts of the body or mentioning statistics or research about who is affected. Our aims are for our information to be as clear and relevant as possible for everyone.

You can read more about how we produce our information at **macmillan.org.uk/ourinfo**

> **"I've got Macmillan as a backbone."**
>
> Paul, diagnosed with secondary cancer in the bone

Other ways we can help you

At Macmillan, we know how a cancer diagnosis can affect everything, and we are here to support you.

Talk to us

If you or someone you know is affected by cancer, talking about how you feel and sharing your concerns can really help.

Macmillan Support Line

Our free, confidential phone line is open 7 days a week, 8am to 8pm. We can:

- help with any medical questions you have about cancer or your treatment
- help you access benefits and give you financial guidance
- be there to listen if you need someone to talk to
- tell you about services that can help you in your area.

Our trained cancer information advisers can listen and signpost you to further support. Call us on **0808 808 00 00**. We are open 7 days a week, 8am to 8pm.

You can also email us, or use the Macmillan Chat Service via our website. You can use the chat service to ask our advisers about anything that is worrying you. Tell them what you would like to talk about so they can direct your chat to the right person. Click on the 'Chat to us' button, which appears on pages across the website.
Or go to **macmillan.org.uk/talktous**

If you would like to talk to someone in a language other than English, we also offer an interpreter service for our Macmillan Support Line. Call **0808 808 00 00** and say, in English, the language you want to use. Or send us a web chat message saying you would like an interpreter. Let us know the language you need and we'll arrange for an interpreter to contact you.

Information centres

Our information and support centres are based in hospitals, libraries and mobile centres. Visit one to get the information you need and speak with someone face to face. If you would like a private chat, most centres have a room where you can speak with someone confidentially.

Find your nearest centre at **macmillan.org.uk/informationcentres** or call us on **0808 808 00 00**.

Help with money worries

Having cancer can bring extra costs such as hospital parking, travel fares and higher heating bills. If you have been affected in this way, we can help. Please note the opening times may vary by service.

Financial guidance

Our financial team can give you guidance on mortgages, pensions, insurance, borrowing and savings.

Help accessing benefits

Our welfare rights advisers can help you find out what benefits you might be entitled to, and help you complete forms and apply for benefits. They can also tell you more about other financial help that may be available to you. We can also tell you about benefits advisers in your area. Visit **macmillan.org.uk/financialsupport** to find out more about how we can help you with your finances.

Help with energy costs

Our energy advisers can help if you have difficulty paying your energy bills (gas, electricity and water). They can help you get access to schemes and charity grants to help with bills, advise you on boiler schemes and help you deal with water companies.

Macmillan Grants

Macmillan offers one-off payments to people with cancer.

A grant can be for anything from heating bills or extra clothing to a much-needed break.

Call us on **0808 808 00 00** to speak to find out more about Macmillan Grants.

Help with work and cancer

Whether you are an employee, a carer, an employer or are self-employed, we can provide support and information to help you manage cancer at work. Visit **macmillan.org.uk/work**

Work support

Our dedicated team of work support advisers can help you understand your rights at work. Call us on **0808 808 00 00** to speak to a work support adviser.

Talk to others

No one knows more about the impact cancer can have on your life than those who have been through it themselves. That is why we help bring people together in their communities and online.

Support groups

Whether you are someone living with cancer or a carer, family member or friend, we can help you find support in your local area, so you can speak face to face with people who understand. Find out about support groups in your area by calling us or by visiting **macmillan.org.uk/selfhelpandsupport**

Online Community

Thousands of people use our Online Community to make friends, blog about their experiences and join groups to meet other people going through the same things. You can access it any time of day or night. Share your experiences, ask questions, or just read through people's posts at **macmillan.org.uk/community**

You can also use our Ask an Expert service on the Online Community. You can ask a financial guide, cancer information nurse, work support advisor or an information and support advisor any questions you have.

Macmillan healthcare professionals

Our nurses, doctors and other health and social care professionals give expert care and support to individuals and their families. Call us or ask your GP, consultant, district nurse or hospital ward sister if there are any Macmillan professionals near you.

Other useful organisations

There are lots of other organisations that can give you information or support. Details correct at time of printing.

Secondary cancer in the bone support organisations

Breast Cancer Now

Helpline **0808 800 6000**
www.breastcancernow.org
Provides information and support for anyone affected by breast cancer. Specialist breast care nurses run the helpline. Also committed to fighting breast cancer through research and awareness.

Butterfly Thyroid Trust

Helpline **0739 956 4463**
www.butterfly.org.uk
Offers information, support and encouragement for people with thyroid cancer. You can talk to others with thyroid cancer through their helpline, by email and telephone, or by arranging for a buddy to help you through the treatment process.

Prostate Cancer UK

Helpline **0800 074 8383**
www.prostatecanceruk.org
Information and support for anyone with concerns about prostate cancer. Has a helpline and leaflets to download or order and funds research into prostate cancer. Has a website with helpful information.

Roy Castle Lung Cancer Foundation

Tel **0333 323 7200**
www.roycastle.org
Works towards defeating lung cancer through research, campaigning and education. Aims to provide practical and emotional support for patients and all those affected by lung cancer and smoking. It also helps to enable children and young people to make informed decisions about smoking and the tobacco industry.

Kidney Cancer UK

Support line **0800 002 9002**
www.kcuk.org.uk
Provides patient information and support to anyone affected by kidney cancer. Supports research into the causes, prevention and treatment of the disease. You can talk to a specialist nurse on their support line or join their online community to chat to other people affected by kidney cancer.

General cancer support organisations

Cancer Black Care

Tel **0208 961 4151**
Offers UK-wide information and support for people from Black and ethnic minority communities who have cancer. Also supports their friends, carers and families.

Cancer Focus Northern Ireland

Helpline **0800 783 3339**
www.cancerfocusni.org
Offers a variety of services to people affected by cancer in Northern Ireland.

Cancer Research UK

Helpline **0808 800 4040**
www.cancerresearchuk.org
A UK-wide organisation that has patient information on all types of cancer. Also has a clinical trials database.

Cancer Support Scotland

Tel **0800 652 4531**
www.cancersupportscotland.org
Runs cancer support groups throughout Scotland. Also offers free complementary therapies and counselling to anyone affected by cancer.

Macmillan Cancer Voices

www.macmillan.org.uk/cancervoices
A UK-wide network that enables people who have or have had cancer, and those close to them such as family and carers, to speak out about their experience of cancer.

Maggie's

Tel **0300 123 1801**
www.maggies.org
Has a network of centres in many locations throughout the UK. Provides free information about cancer and financial benefits. Also offers emotional and social support to people with cancer, their family, and friends.

Marie Curie

Helpline **0800 090 2309**
www.mariecurie.org.uk
Marie Curie is the UK's leading end of life charity. They provide frontline nursing and hospice care, a free support line and a wealth of information and support on all aspects of dying, death and bereavement. They can help you to talk, plan and prepare, to get things sorted in advance.

Penny Brohn UK

Helpline **0303 300 0118**
www.pennybrohn.org.uk
Offers physical, emotional and spiritual support across the UK, using complementary therapies and self-help techniques.

Tenovus

Helpline **0808 808 1010**
www.tenovuscancercare.org.uk
Aims to help everyone in the UK get equal access to cancer treatment and support. Funds research and provides support such as mobile cancer support units, a free helpline, benefits advice and an online 'Ask the nurse' service.

General health information

Health and Social Care in Northern Ireland

www.northerntrust.hscni.net
Provides information about health and social care services in Northern Ireland.

NHS.UK

www.nhs.uk
The UK's biggest health information website. Has service information for England.

NHS 111 Wales

111.wales.nhs.uk
NHS health information site for Wales.

NHS Inform

Helpline **0800 224 488**
www.nhsinform.scot
NHS health information site for Scotland.

Counselling

British Association for Counselling and Psychotherapy (BACP)

Tel **0145 588 3300**
www.bacp.co.uk
Promotes awareness of counselling and signposts people to appropriate services across the UK. You can also search for a qualified counsellor on their 'How to find a therapist' page.

UK Council for Psychotherapy (UKCP)

Tel **0207 014 9955**
www.psychotherapy.org.uk
Holds the national register of psychotherapists and psychotherapeutic counsellors, listing practitioners who meet exacting standards and training requirements.

Emotional and mental health support

Mind

Helpline **0300 123 3393**
www.mind.org.uk
Provides information, advice and support to anyone with a mental health problem through its helpline and website.

Samaritans

Helpline **116 123**
Email **jo@samaritans.org**
www.samaritans.org
Provides confidential and non-judgemental emotional support, 24 hours a day, 365 days a year, for people experiencing feelings of distress or despair.

Financial support or legal advice and information

Advice NI

Helpline **0800 915 4604**
www.adviceni.net
Provides advice on a variety of issues including financial, legal, housing and employment issues.

Benefit Enquiry Line Northern Ireland

Helpline **0800 232 1271**
Textphone **028 9031 1092**
www.nidirect.gov.uk/money-tax-and-benefits
Provides information and advice about disability benefits and carers' benefits in Northern Ireland.

Carer's Allowance Unit

Tel **0800 731 0297**
Textphone **0800 731 0317**
www.gov.uk/carers-allowance
Manages state benefits in England, Scotland and Wales. You can apply for benefits and find information online or through its helplines.

Citizens Advice

Provides advice on a variety of issues including financial, legal, housing and employment issues. Use their online webchat or find details for your local office by contacting:

England

Helpline **0800 144 8848**
www.citizensadvice.org.uk

Scotland

Helpline **0800 028 1456**
www.cas.org.uk

Wales

Helpline **0800 702 2020**
www.citizensadvice.org.uk/wales

Civil Legal Advice

Helpline **0345 345 4345**
Textphone **0345 609 6677**
www.gov.uk/civil-legal-advice
Has a list of legal advice centres in England and Wales and solicitors that take legal aid cases. Offers a free translation service if English is not your first language.

Disability and Carers Service

Tel **0800 587 0912**
Textphone **0800 012 1574**
nidirect.gov.uk/contacts/disability-and-carers-service
Manages Disability Living Allowance, Attendance Allowance, Carer's Allowance and Carer's Credit in Northern Ireland. You can apply for these benefits and find information online or through its helplines.

GOV.UK

www.gov.uk
Has information about social security benefits and public services in England, Scotland and Wales.

Jobs and Benefits Office Enquiry Line Northern Ireland

Helpline **0800 022 4250**
Textphone **0800 587 1297**
www.nidirect.gov.uk/contacts/jobs-and-benefits-offices
Provides information and advice about disability benefits and carers' benefits in Northern Ireland.

Law Centres Network

www.lawcentres.org.uk
Local Law Centres provide advice and legal assistance. They specialise in social welfare issues including disability and discrimination.

Local councils (England, Scotland and Wales)

Your local council may have a welfare rights unit that can help you with benefits. You can also contact your local council to claim Housing Benefit and Council Tax Reduction, education benefits, and for help from social services (the Social Work department in Scotland).

You should be able to find your local council's contact details in your phone book or visit:

England

www.gov.uk/find-local-council

Scotland

www.cosla.gov.uk/councils

Wales

www.wlga.gov.uk/authorities

Macmillan Benefits Advice Service (Northern Ireland)

Tel **0300 1233 233**

Money Advice Scotland

www.moneyadvicescotland.org.uk
Use the website to find qualified financial advisers in Scotland.

NI Direct

www.nidirect.gov.uk
Has information about benefits and public services in Northern Ireland.

Northern Ireland Housing Executive

Tel **0344 8920 900**
www.nihe.gov.uk
Offers help to people living in socially rented, privately rented and owner-occupied accommodation.

StepChange Debt Charity

Tel **0800 138 1111**
www.stepchange.org
Provides free debt advice through phone, email, the website and online through live chats with advisers.

Unbiased.co.uk

Helpline **0800 023 6868**
www.unbiased.co.uk
You can search the website for qualified advisers in the UK who can give expert advice about finances, mortgages, accounting or legal issues.

Support for older people

Age UK

Helpline **0800 678 1602**
www.ageuk.org.uk
Provides information and advice for older people across the UK via the website and advice line. Also publishes impartial and informative fact sheets and advice guides.

LGBT-specific support

LGBT Foundation

Tel **0345 330 3030**
www.lgbt.foundation
Provides a range of services to the LGBT community, including a helpline, email advice and counselling. The website has information on various topics including sexual health, relationships, mental health, community groups and events.

Live Through This

www.livethroughthis.co.uk
A safe space for anybody who identifies as part of the queer spectrum and has had an experience with any kind of cancer at any stage. Also produces resources about LGBT cancer experiences. LTT runs a peer support group with Maggie's Barts.

Support for carers

Carers Trust

Tel **0300 772 9600**
www.carers.org
Provides support, information, advice and services for people caring at home for a family member or friend. You can find details for UK offices and search for local support on the website.

Carers UK

Helpline **0808 808 7777**
www.carersuk.org
Offers information and support to carers across the UK. Has an online forum and can put people in contact with local support groups for carers.

Cancer registries

The cancer registry is a national database that collects information on cancer diagnoses and treatment. This information helps the NHS and other organisations plan and improve health and care services. There is one in each country in the UK:

National Cancer Registration and Analysis Service (England)

digital.nhs.uk/ndrs/patients

Scottish Cancer Registry and Intelligence Service (SCRIS)

Tel **0345 646 0238**
beta.isdscotland.org/topics/scottish-cancer-registry-and-intelligence-service-scris

Welsh Cancer Intelligence and Surveillance Unit (WCISU)

Tel **0292 010 4278**
phw.nhs.wales/services-and-teams/welsh-cancer-intelligence-and-surveillance-unit-wcisu

Northern Ireland Cancer Registry

Tel **0289 097 6028**
www.qub.ac.uk/research-centres/nicr

You can call the Macmillan Support Line free on **0808 808 00 00**, 7 days a week, 8am to 8pm. ☎

Disclaimer

Thanks

This booklet has been written, revised and edited by Macmillan Cancer Support's Cancer Information Development team. It has been approved by our Chief Medical Editor, Prof Tim Iveson, Macmillan Consultant Medical Oncologist.

With thanks to: Linda Bedford, Macmillan Consultant Radiographer for Palliative Radiotherapy; Professor Janet E Brown, Professor of Medical Oncology, Head of the Academic Unit of Clinical Oncology; Fiona Castell, Consultant Clinical Oncologist; Paul Cool, Consultant Orthopaedic Oncological Surgeon; Charlotte Etheridge, Lead Macmillan Urology Clinical Nurse Specialist; Dr Jonathan Gregory, Regional Clinical Advisor Macmillan, Hon Research Fellow Imperial College London; Lara Mitchell, Clinical Nurse Specialist; and Jacque Warwick, Macmillan Acute Oncology Clinical Nurse Specialist.

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We welcome feedback on our information. If you have any, please contact **cancerinformationteam@macmillan.org.uk**

Sources

Below is a sample of the sources used in our secondary cancer in the bone information. If you would like more information about the sources we use, please contact us at **cancerinformationteam@macmillan.org.uk**

Coleman R, Body JJ, Aapro M, Hadji P, Herrstedt J. European Society for Medical Oncology (ESMO) Guidelines Working Group. Bone health in cancer patients: ESMO Clinical Practice Guidelines. Annals of Oncol. Sep;25, Supplement 3:iii124–37 [Internet], 2014. Available from https://pubmed.ncbi.nlm.nih.gov/24782453 [accessed May 2022].

Heindel W, Gübitz R, Vieth V, Weckesser M, Schober O, Schäfers M. The diagnostic imaging of bone metastases. Deutsches Ärzteblatt International. 111(44):741–747 [Internet], 2014. Available from https://aerzteblatt.de/int/archive/article/163246/The-diagnostic-imaging-of-bone-metastases [accessed May 2022].

National Institute for Health and Care Excellence. 2021. Osteoporosis – prevention of fragility fractures: Bisphosphonates. Available from https://cks.nice.org.uk/topics/osteoporosis-prevention-of-fragility-fractures/prescribing-information/bisphosphonates/?msclkid=b4a2263ca5de11ec8821ac315750b52e [accessed May 2022].

Can you do something to help?

We hope this booklet has been useful to you. It is just one of our many publications that are available free to anyone affected by cancer. They are produced by our cancer information specialists who, along with our nurses, benefits advisers, campaigners and volunteers, are part of the Macmillan team. When people are facing the toughest fight of their lives, we are here to support them every step of the way.

We want to make sure no one has to go through cancer alone, so we need more people to help us. When the time is right for you, here are some ways in which you can become a part of our team.

5 ways you can help someone with cancer

1. **Share your cancer experience**
   Support people living with cancer by telling your story, online, in the media or face to face.

2. **Campaign for change**
   We need your help to make sure everyone gets the right support. Take an action, big or small, for better cancer care.

3. **Help someone in your community**
   A lift to an appointment. Help with the shopping. Or just a cup of tea and a chat. Could you lend a hand?

4. **Raise money**
   Whatever you like doing you can raise money to help. Take part in one of our events or create your own.

5. **Give money**
   Big or small, every penny helps. To make a one-off donation see over.

Please fill in your personal details

Mr/Mrs/Miss/Other

Name

Surname

Address

Postcode

Phone

Email

Please accept my gift of £
(Please delete as appropriate)

I enclose a cheque / postal order / Charity Voucher made payable to Macmillan Cancer Support
OR debit my:
Visa / MasterCard / CAF Charity Card / Switch / Maestro

Card number

Valid from

Expiry date

Issue no

Security number

Signature

Date / /

Do not let the taxman keep your money

Do you pay tax? If so, your gift will be worth 25% more to us – at no extra cost to you. All you have to do is tick the box below, and the tax office will give 25p for every pound you give.

☐ I am a UK tax payer and I would like Macmillan Cancer Support to treat all donations I make or have made to Macmillan Cancer Support in the last 4 years as Gift Aid donations, until I notify you otherwise.

I understand that if I pay less Income Tax and/or Capital Gains Tax than the amount of Gift Aid claimed on all my donations in that tax year it is my responsibility to pay any difference. I understand Macmillan Cancer Support will reclaim 25p of tax on every £1 that I give.

Macmillan Cancer Support and our trading companies would like to hold your details in order to contact you about our fundraising, campaigning and services for people affected by cancer. If you would prefer us not to use your details in this way please tick this box. ☐

In order to carry out our work we may need to pass your details to agents or partners who act on our behalf.

If you would rather donate online go to **macmillan.org.uk/donate**

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Please cut out this form and return it in an envelope (no stamp required) to: Supporter Donations, Macmillan Cancer Support, FREEPOST LON15851, 89 Albert Embankment, London SE1 7UQ

MACMILLAN
CANCER SUPPORT

This booklet is about secondary cancer in the bone. This is cancer that has spread to the bone from a cancer elsewhere in the body. It may also be called secondary bone cancer or metastatic cancer in the bone.

The booklet talks about the signs and symptoms of secondary cancer in the bone. It explains how it is diagnosed and how it may be treated. It also has information about feelings, practical issues and money.

At Macmillan, we give people with cancer everything we've got. If you are diagnosed, your worries are our worries. We will help you live life as fully as you can.

For information, support or just someone to talk to, call **0808 808 00 00** or visit **macmillan.org.uk**

Would you prefer to speak to us in another language? Interpreters are available. Please tell us in English the language you would like to use. Are you deaf or hard of hearing? Call us using NGT (Text Relay) on **18001 0808 808 00 00**, or use the NGT Lite app.

Need information in different languages or formats? We produce information in audio, eBooks, easy read, Braille, large print and translations. To order these, visit **macmillan.org.uk/otherformats** or call our support line.

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