CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Metastatic spinal disease

What you're feeling

The pain from cancer that has spread to the spine usually starts in the middle or lower back, because the vertebral body (the block of bone at the front of each spine bone) is where it settles first. It often builds over months before any nerve symptoms appear, though it can also come on suddenly if the weakened bone collapses into a compression fracture. Night pain that wakes you, or pain that keeps going long after an injury should have settled, are both warning signs worth taking seriously.

You may notice the pain is there at rest, not just when you move. Sitting up in bed, getting out of a chair, bending to load the washing machine, or standing while you cook can all become harder. If the tumour presses on the nerves or spinal cord, you might feel numbness, pins and needles, or weakness in your legs, and walking may become unsteady. New problems with bladder or bowel control need urgent attention.

Some people find out by accident, when a bone scan done as part of routine cancer checks picks up a spot in the spine before they feel anything at all. Others come in with back pain and no history of cancer, and tests are needed to work out whether the cause is thin bones (osteoporosis) or something else. Unexplained weight loss alongside back pain is another sign your doctors will want to investigate.

If you have been treated for a compression fracture thought to be from osteoporosis but the pain does not settle, or the bone keeps breaking down, further tests including a small needle biopsy can find the true cause. Finding out early matters, because a delay can let the disease progress and affect nerve function.

What's actually happening

Your spine is a stack of bones with a protective tunnel running down the back of them, and inside that tunnel sit the spinal cord and the nerves that carry messages between your brain and your legs, your bladder and your bowel. The front part of each spine bone, the block of bone called the vertebral body, does most of the weight-bearing work, a bit like the load-bearing pillars in a building. When cancer spreads to the spine, it almost always settles in that front block first, and only later reaches the back parts of the bone.

As the tumour takes up space inside the bone, the bone is gradually eaten away and weakened. The trouble is that this happens quietly: the bone usually does not show up as damaged on a plain X-ray until more than 30% of it has been destroyed. So the bone can lose a lot of its strength before you feel much at all. The pain you read

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about in the section above is the result of that weakening, and if the bone gets weak enough it can collapse, which is the compression fracture described earlier.

If the tumour or a collapsed bone then presses on the spinal cord or the nerves in the tunnel behind it, that is when numbness, pins and needles, weakness or trouble with bladder or bowel control can appear. The section of spine between the shoulder blades matters here, because the tunnel for the cord is at its narrowest in that region, so there is less spare room before pressure causes problems.

Cancers that most often spread to bone include breast, lung, thyroid, kidney, bowel and prostate cancers. The lower parts of the spine are affected more often than the neck. The aim of any treatment, including surgery where it is appropriate, is to steady the spine, take pressure off the nerves and settle the pain, so you can stay on your feet and keep your quality of life for as long as possible.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, matches the treatment to your condition and your life expectancy, because both shape what is worth doing. Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. We assess you with a history, an examination and imaging where needed, and we work with your cancer team to decide what will help you stay comfortable and on your feet.

Some cancers respond well to treatment without surgery. If the tumour is the kind that shrinks with radiotherapy, chemotherapy or hormone therapy, that may be all you need. Radiotherapy is often used when there is pain but the nerves are not yet under pressure and the bone is not about to collapse. It is also used for tumours such as lymphoma and myeloma, which respond to radiation even when the cord is already compressed. A short course of strong steroid medication can reduce the swelling around the tumour and ease the pressure on nerves. Radiotherapy may also be the choice when other health problems make surgery unsafe, when time is short, or when several spine bones are involved. One option we can offer is Cyberknife radiosurgery, a computer-guided treatment that aims many small beams of radiation at the tumour from different directions. It is done as an outpatient in one to three sessions and can suit people who have already had radiation. Another is vertebroplasty, where bone cement is placed into the weakened spine bone to steady it and settle pain, used when the bone has not become unstable and the nerves are not compressed.

Surgery is considered when the tumour keeps growing despite radiation, when bone from the tumour is pressing on the spinal cord or nerves, when a weakened bone is about to collapse or has already broken, or when the spine has become unstable. It is also considered when pain or nerve problems do not settle with radiation. Combining surgery to take pressure off the cord with radiation works better than radiation alone for keeping people walking. The aim of surgery is to relieve pain, take pressure off the nerves and rebuild stability so you can keep moving. It is a shared decision, made with you, your family and your cancer team, based on what your body can tolerate and what you want to achieve.

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What to expect

Cancer that has spread to the spine is a serious condition, and treatment is usually a major undertaking with a real recovery period. But it can also make a genuine difference to your day-to-day life. Surgery for spinal metastases can reduce pain and improve how well you function, and it can help you stay on your feet and keep doing more for yourself. Where the cancer has spread to only one spot in the spine, or where the nerves are under pressure, surgery can improve your living conditions and quality of life.

The main goal of treatment is not to cure the cancer. It is to steady the spine, take pressure off the nerves and settle the pain, so your quality of life improves for as long as possible. Surgery may not extend your life, but it generally makes the time you have more comfortable and more mobile. Most people who have palliative surgery for spinal metastases find they can do more of their daily activities afterwards, whatever their age. For tumours in the neck, surgery gives good outcomes and is often a treatment of choice.

There are honest limits to what surgery can achieve. The complication rate for this kind of surgery is comparable to other complex spine surgery, and sometimes problems during or after the operation can be serious. Some factors work against a good result, including a tumour where the neck meets the chest, and cancer that has spread widely in the spine or beyond it. Your general health and the type of cancer you have also shape what surgery can achieve, and your team will weigh these up with you before recommending anything.

Leaving the spine untreated carries its own risks. If a weakened bone collapses or the tumour keeps pressing on the spinal cord, paralysis and loss of bladder or bowel control can follow, and that damage may not undo itself. Treatment that combines taking pressure off the cord with radiation works better than radiation alone for keeping people walking. Your cancer team, your GP and your surgeon will work together to plan the approach that gives you the most comfortable and independent time possible.

When to see someone

This is not a condition to wait out. Go to an emergency department the same day if you have new weakness, numbness or pins and needles in your legs, or new trouble controlling your bladder or bowel. These mean the spinal cord may be under pressure, and that damage can become permanent if it is not dealt with quickly.

Ask for a specialist review if you have cancer and develop back pain that builds over weeks or months, pain that wakes you at night, or pain that comes on suddenly with no injury. Also ask if you are over 50, have lost weight without trying, or have back pain with no clear cause that is not settling.

See your GP first if you have been treated for a compression fracture thought to be from thin bones, but the pain does not improve or the bone keeps breaking down. Your GP can arrange tests and refer you on if needed.

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