

SA Palliative Care Community Pharmacy Update

A joint initiative of South Australian Palliative Care Services

Skeletal related events (SREs) are common complications of some malignancies. Bone metastases are the most common cause of SRE. These result in further events which can affect a patient's quality of life.

Skeletal Related Events

SREs are associated with significant decreases in health-related quality of life as resultant physical pain can decrease the ability to carry out normal activities. This can contribute to depressive and anxiety symptoms as well.

Bone Metastases

Malignancies most commonly associated with spread to the bones are breast, lung and prostate cancers as well as multiple myeloma via a different mechanism.

Secondary SREs

- > *Bone pain* can sometimes be the first symptom of bone metastases.
- > *Pathological fractures* can result from the bone metastases which compromise the bone structure and integrity.
- > *Spinal cord compression* from vertebral metastases is an oncological emergency and may result in irreversible paraplegia or incontinence, or both if not identified and managed quickly.
- > *Hypercalcaemia* is due to increased bone resorption via osteoclast activation. It causes non-specific symptoms and cardiac conduction abnormalities. It is common in advanced disease and associated with decreased survival.

Management of SREs

- > *Analgesia* including NSAIDs and opioids are commonly used to manage bone pain. Antidepressants can be used to treat neuropathic pain from nerve compression without cord compression.
- > *Radiation therapy* can be effectively used to treat bone pain and minimise use of analgesia. A single, dose or 'fraction' can significantly improve pain.

- > *Surgery* is the main treatment for stabilising pathological fractures.
- > *High-dose steroids* are used to manage spinal cord compression symptoms. Radiation usually follows and in palliative care, neurosurgical intervention is rare.
- > *Rehydration* with parenteral fluids is key for managing hypercalcaemia. Increasing the intravascular volume dilutes the calcium concentration and promotes urinary excretion.
- > *Bisphosphonates* (commonly IV pamidronate or zoledronate) can effectively treat bone pain and rapidly reduce calcium concentration by minimising osteoclast activity. They should be used with caution in patients with renal impairment and osteonecrosis of the jaw is most commonly reported when used for this indication
- > *Denosumab* has been shown to be more effective than bisphosphonates in preventing first and subsequent SREs. However, there is no difference in time to overall disease progression.

Useful resources

- > [Therapeutic Guidelines \(Palliative Care\) 3rd Edition](#)
- > Wilkinson AN, Viola R, Brundage MD. [Managing skeletal related events resulting from bone metastases](#). BMJ. 2008 Nov 3;337:a2041.

[Previous editions of the newsletter](#) are available.

For more information

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This update is intended to provide practical up to date and factual information relating to pharmacy and medicines management in the setting of Palliative Care and is based on critical review of available evidence. Individual patient circumstances must be considered when applying this information. Please feel free to distribute this update further to interested colleagues.