

The following pain management protocol is tiered to ensure a global relevance, recognizing that not all analgesic modalities are available to veterinary practitioners and vary from region to region around the world. Its implementation will be guided by the various analgesic modalities available along with the needs of the individual patient requiring treatment. This protocol is reproduced from the WSAVA Global Pain Treatise, a succinct yet comprehensive review of pain assessment, various pain modalities, and the treatment of various clinically painful scenarios in both dogs and cats. The WSAVA GPC Pain Treatise published in the *Journal of Small Animal Practice* and is available for open access at the GPC pages of www.wsava.org.

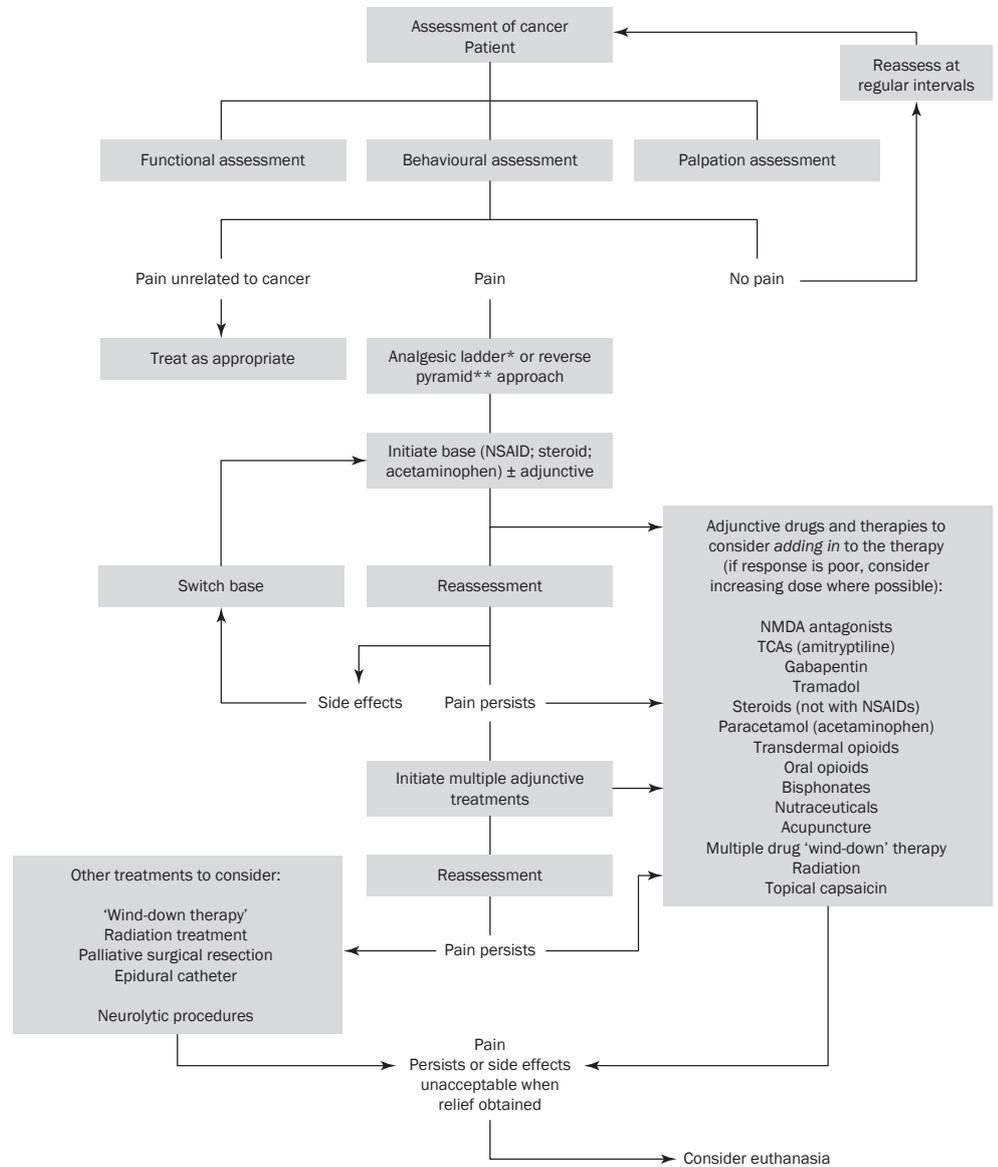
Cancer-related pain

Cancer pain has varying degrees of severity that is dependent on duration, location and type of cancer. Inflammation due to tumour necrosis or direct pressure causes pain. Pain may originate from nerve root compression, from muscle spasms in the area of the lesions or directly from lesions, or from tissue that has been infiltrated. Most patients with cancer suffer pain to some degree. Some cancers such as lymphomas and leukaemia have a lower incidence of pain suffering in humans. However, even in these, the pain can be excruciating. The incidence and severity of pain associated with various cancer types in animals is not well documented.

One of the best documented is bone pain. Metastatic involvement of bone is a frequent cause of pain results from direct invasion of the bone, microfractures, increased pressure of endosteum, distortion of the periosteum or perilesional inflammation. Another important mechanism in the genesis of bone pain is the release of chemical mediators such as amines, peptides, fatty acids, potassium and prostaglandins. Cancer pain, and bone pain in particular, is often associated with neuropathic like clinical signs. Therapies that decrease tumour activity, are anti-inflammatory, or are targeted against the changes in neuropathic pain can all have efficacy in cancer pain.

A particular type of bone pain is called 'incident' or 'movement-related pain'. In humans, the pain is described as dull, constant and gradually increasing in intensity; movement and pressure worsen it. Incident pain usually has a sudden onset, reaching peak pain intensity within a few minutes and is a cause of breakthrough pain in a large number of human patients.

A multimodal drug approach to the control of cancer pain is recommended. NSAIDs are recommended with the addition of opioids and adjunctive drugs (such as gabapentin) as needed. Other modalities that can prove beneficial are bisphosphonates (clodronate, disodium pamidronate, ibandronate), chemotherapy and radiotherapy. Non-drug therapies should be used concurrently. The combination of acupuncture with drug therapy appears to be superior to either alone. Other forms of adjunctive therapy tend to improve quality of life in cancer patients, although it is not known if they directly induce analgesia.



* analgesic ladder, gradual addition of analgesic medications until adequate comfort is achieved
 ** reverse pyramid, initial aggressive multimodal approach, removing analgesic medications providing comfort maintained

The above algorithm is suggested. Dosages for analgesics selected can be found in the respective Sections of the full Guidelines.

For additional pharmaceutical dosing information, see the dosing tables in the WSAVA GPC Treatise at www.wsava.org