Unrelieved pain is the most feared symptom of cancer and occurs in over 75% of people with advanced disease [1]. Pain relief in palliative care was founded on the oral administration of morphine regularly "by the clock", initiated by the late Dame Cicely Saunders in the 1950s in London, and promoted by the WHO in 1986 as the third step of the analgesic ladder [2] for pain relief in cancer in developing countries around the world. Studies have shown that at least 20–40% of cancer pain is not adequately relieved by application of the analgesic ladder [3, 4]. The long-term adverse effects of opioids on cognitive function, and on the immune and endocrine systems [5] have been largely ignored in palliative care but are significant in cancer survivors [6]. Advances in cancer pain management are evolving but the aim now is to manage complex and difficult pain while minimizing the adverse effects of sedating drugs.

This review will highlight several advances in this area:

(a) The mechanisms of cancer pain, and how knowledge of these mechanisms may lead to the development of novel analgesic agents.

(b) advances in drug therapy.

(c) Intrathecal drug therapy.

(d) Vertebroplasty and kyphoplasty.

(e) Useful interventional therapies, such as cordotomy, coeliac plexus block, intrathecal neurolysis, and ultrasound guided techniques.

(f) the pain relieving role of chemotherapy and radiotherapy.

(g) neuromodulation.

(h) and other techniques.

Notes: