Complete Summary

GUIDELINE TITLE

Cancer pain.

BIBLIOGRAPHIC SOURCE(S)

Singapore Ministry of Health. Cancer pain. Singapore: Singapore Ministry of Health; 2003 Mar. 88 p. [146 references]

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
QUALIFYING STATEMENTS
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SCOPE

DISEASE/CONDITION(S)

Cancer pain

GUIDELINE CATEGORY

Evaluation
Management
Treatment

CLINICAL SPECIALTY

Anesthesiology
Family Practice
Geriatrics
Internal Medicine
Neurological Surgery
Neurology
Nursing
Oncology
Pediatrics

Pharmacology
Radiation Oncology

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To optimize pain control in cancer patients
- To minimize side effects, adverse outcomes, and costs of pain therapy
- To enhance the physical, psychological and spiritual well-being of cancer patients and improve the quality of life of patients and their families
- To emphasize the need for:
    - Routine pain assessment
    - Proficiency in prescribing opioids, non-opioid analgesics, and adjuvant medications
    - An understanding of the potential benefits of antineoplastic, anaesthetic, neurosurgical, and behavioural modalities, which often require a coordinated multidisciplinary approach

TARGET POPULATION

Patients of all ages and with all types of cancer in Singapore

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

1. Evaluation of cancer pain
    - Self-report
    - Type and severity of pain
    - Effect of pain on patient prior to treatment
    - Psychosocial state
    - Cultural and ethnic factors
2. Formal assessment tools
    - Multidimensional pain assessment tools: Memorial Pain Assessment Card, Wisconsin Brief Pain Inventory, McGill Pain Questionnaire
    - Unidimensional pain assessment tools: Numeric Rating Scale (NRS), Visual Analogue Scale (VAS), Verbal Rating Scale (VRS), Faces Pain Scale

Management/Treatment

1. Multidisciplinary team involvement

2. Stepwise pharmacologic management using World Health Organization (WHO) analgesic ladder
    - Non-opioid analgesics, such as nonsteroidal anti-inflammatory drugs (NSAID) or paracetamol (±adjuvant) for pharmacologic management of mild pain
    - Weak opioid analgesics, such as codeine or tramadol, (±adjuvant) for management of mild to moderate pain
    - Strong opioid analgesic, such as morphine, fentanyl, methadone (±adjuvant) for management of moderate to severe pain
    - Spinal administration of opioid analgesics in combination with local anaesthetics or clonidine
    - Adjuvant drugs (e.g., tricyclic antidepressant and/or an anticonvulsant, steroids)
    - Bisphosphonates and calcitonin
    - Anti-tumour therapy (e.g., systemic chemotherapy, hormonal manipulation, radiotherapy)
    - Interventional techniques (e.g., coeliac plexus block; epidural, intrathecal, and intraventricular opioids)
3. Non-pharmacologic pain management strategies
    - Physical modalities, such as cutaneous stimulation techniques, exercise
    - Psychosocial modalities, such as education, peer support, and pastoral support
4. Ongoing assessment of pain and response to interventions
5. Interventions related to special populations

Note: The guideline developers discussed but did not recommend the following medications: agonist-antagonist opioids, pethidine (meperidine).

MAJOR OUTCOMES CONSIDERED

- Incidence and severity of pain
- Effectiveness and safety of pain relief measures
- Side effects, adverse outcomes, and costs of pain therapy
- Physical, psychological, and spiritual well-being of cancer patients
- Quality of life of patients and their families

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

Level Ia: Evidence obtained from meta-analysis of randomised controlled trials.

Level Ib: Evidence obtained from at least one randomised controlled trial.

Level IIa: Evidence obtained from at least one well-designed controlled study without randomisation.

Level IIb: Evidence obtained from at least one other type of well-designed quasi-experimental study.

Level III: Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies, and case studies.

Level IV: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grades of Recommendations

Grade A (evidence levels Ia, Ib): Requires at least one randomised controlled trial as part of the body of literature of overall good quality and consistency addressing the specific recommendation.

Grade B (evidence levels IIa, IIb, III): Requires availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation.

Grade C (evidence level IV): Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates absence of directly applicable clinical studies of good quality.

Good Practice Points: Recommended best practice based on the clinical experience of the guideline development group.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The recommendations that follow are those from the guideline's executive summary; detailed recommendations can be found in the original guideline document. Each recommendation is rated based on the level of the evidence and the grades of recommendation. Definitions of the grades of the recommendations (A, B, C, Good Practice Points) and level of the evidence (Level I-Level IV) are presented at the end of the Major Recommendations field.

General

A - Patients and their families should be reassured that most cancer pain can be relieved safely and effectively. (Grade A, Level Ib)

A - Involvement of a multidisciplinary team of specialists is associated with effective analgesia and better health outcomes. (Grade A, Level Ib)

GPP - Clinicians should assess patients for pain and provide optimal relief throughout the course of illness. (GPP)

Evaluation of Cancer Pain

A - Cancer pain should be comprehensively evaluated because this results in improved analgesia. (Grade A, Level Ib)

B - Health professionals should routinely ask about pain in cancer patients, and the patient's self-report should be the primary source of assessment. (Grade B, Level III)

B - An accurate assessment should be performed to determine the type and severity of pain and its effect on the patient prior to treatment. (Grade B, Level III)

B - A simple formal assessment tool should be used in the ongoing assessment of pain. (Grade B, Level III)

B - Clinicians should be aware of common pain syndromes, because prompt recognition allows early therapy and minimizes the morbidity of unrelieved pain. (Grade B, Level III)

B - A thorough assessment of the patient's psychosocial state should be carried out. The clinician should look for anxiety and depression and ascertain the patient's beliefs about his or her pain. (Grade B, Level III)

B - Attention should be given to cultural and ethnic factors which may have a bearing on the patient's response to pain and pain control. (Grade B, Level III)

C - Sudden severe pain in patients with cancer should be recognized as a medical emergency and patients should be promptly assessed and treated. (Grade C, Level IV)

GPP - Clinicians should document the efficacy of pain relief at regular intervals after starting or changing treatment. Documentation forms should be readily accessible to all clinicians involved in the patient's care. (GPP)

Principles of Cancer Pain Management

B - The principles of treatment outlined in the World Health Organization (WHO) Cancer Pain Relief Programme should be followed when treating pain in patients with cancer. (Grade B, Level III)

B - Medications for persistent cancer-related pain should be administered on a round-the-clock basis with additional "as needed" doses, because regularly scheduled dosing maintains a constant level of drug in the body and helps to prevent a recurrence of pain. (Grade B, Level III)

GPP - The simplest dosage schedules and least invasive pain management modalities should be used first. (GPP)

GPP - Placebos should not be used in the management of cancer pain. (GPP)

Choice of Analgesic Therapy

B - A patient's treatment should start at the step of the WHO analgesic ladder appropriate for the severity of the pain. (Grade B, Level III)

B - If pain severity increases, the next step of the analgesic ladder should be taken. Another analgesic of the same potency should not be used. (Grade B, Level III)

A - Pharmacologic management of mild pain should include a nonsteroidal anti-inflammatory drug (NSAID) or paracetamol at recommended doses, unless there is a contraindication. (Grade A, Level Ia)

A - Patients receiving an NSAID who are at risk of gastrointestinal side effects should be prescribed famotidine 40 mg twice a day, misoprostol 200 micrograms four times a day, or omeprazole 20 mg once a day. (Grade A, Level Ib)

A - When pain persists or increases, an opioid should be added to the analgesic regimen. (Grade A, Level Ia)

B - All patients with moderate to severe pain should receive a trial of an opioid analgesic, regardless of the aetiology of the pain. (Grade B, Level IIa and IIb)

B - If the effect of an opioid for mild to moderate pain at optimum dose is not adequate, move to step 3 of the analgesic ladder. (Grade B, Level III)

Use of Opioids in the Treatment of Moderate to Severe Pain

B - The opioid of first choice for moderate to severe pain is morphine. (Grade B, Level III)

B - The optimal route of administration is by mouth. There should ideally be two types of oral formulations: immediate-release for dose titration and controlled-release for maintenance treatment. (Grade B, Level III)

B - The opioid dose for each patient should be individually titrated to achieve maximum analgesia and minimum side effects. (Grade B, Level III)

C - Where possible, opioid dose titration should be carried out with an immediate-release morphine preparation given every four hours to maintain constant levels of analgesia. (Grade C, Level IV)

A - Once suitable pain control is achieved by use of immediate-release morphine, conversion to the same total daily dose of controlled-release morphine should be considered. (Grade A, Level Ib)

C - Every patient on opioids for moderate to severe pain should have access to breakthrough analgesia, usually in the form of immediate-release morphine. The breakthrough dose should approximate one-sixth of the total daily dose of oral morphine. (Grade C, Level IV)

C - If patients are unable to take opioids orally, the rectal, transdermal, or subcutaneous route may be used. There is no indication for use of the intramuscular route for chronic cancer pain because the subcutaneous route is associated with less risk and less pain. (Grade C, Level IV)

C - The average relative potency ratio of oral to parenteral morphine is 1:3. (Grade C, Level IV)

B - A small proportion of patients develop intolerable side effects with oral morphine. In such patients a change to an alternative opioid or a change in the route of administration should be considered. (Grade B, Level III)

A - Transdermal fentanyl is an effective alternative to oral morphine but is best reserved for patients with stable opioid requirements. (Grade A, Level Ib)

C - Methadone is an effective alternative drug but is more difficult to use than other opioids because of pronounced inter- and intra-individual differences in its duration of action and relative analgesic potency. Its use by non-specialist practitioners is not recommended. (Grade C, Level IV)

B - Patients receiving opioid agonists should not be given a mixed agonist-antagonist because of the risk of precipitating a withdrawal syndrome and exacerbation of pain. (Grade B, Level IIb)

B - Pethidine should not be used if continued opioid use is anticipated. (Grade B, Level IIa)

B - Spinal (epidural or intrathecal) administration of opioid analgesics in combination with local anaesthetics or clonidine should be considered in patients who derive inadequate analgesia or suffer intolerable side effects despite the optimal use of systemic opioids and non-opioids. (Grade B, Level III)

Specific Issues Regarding Opioid Use

A - Specific interventions to treat the adverse effects of opioid therapy are efficacious. (Grade A, Level Ib)

B - Constipation is a common problem associated with long-term opioid administration and should be treated prophylactically. (Grade B, Level III)

B - When naloxone is given to reverse opioid-induced respiratory depression, it should be titrated to improve respiratory function, but with preservation of analgesia. (Grade B, Level IIb)

C - Mental clouding or confusion due to opioid toxicity should be managed by reducing the dose of opioid, ensuring adequate hydration, and treating the agitation/confusion with a neuroleptic, such as haloperidol. (Grade C, Level IV)

B - Initiation of opioids should not be delayed due to unfounded fears concerning psychological dependence or addiction. (Grade B, Level III)

B - Patients prescribed opioids for pain should be reassured that they will not become psychologically dependent on or addicted to their opioid analgesia. (Grade B, Level III)

Adjuvant Drugs

A - Patients with neuropathic pain should have a trial of a tricyclic antidepressant and/or an anticonvulsant. (Grade A, Level Ia and Ib)

C - A trial of steroids should be considered for raised intracranial pressure, severe bone pain, nerve infiltration or compression, pressure due to soft tissue swelling or infiltration, and spinal cord compression. (Grade C, Level IV)

Bisphosphonates

A - Bisphosphonate treatment should be considered in addition to conventional analgesic techniques for all patients with multiple myeloma and for breast cancer patients who have pain due to metastatic bone disease. (Grade A, Level Ia and Ib)

Anti-tumour Therapy

C - Systemic chemotherapy should be considered for cancers which are highly chemosensitive. (Grade C, Level IV)

C - Hormonal manipulation may contribute to pain relief in hormone sensitive cancers. (Grade C, Level IV)

C - Radiotherapy is effective in relieving pain due to tumour infiltration. (Grade C, Level IV)

C - When using anti-tumour therapy, concomitant use of effective analgesics must not be neglected. (Grade C, Level IV)

Interventional Techniques

C - Professionals who manage patients with cancer pain should be aware of the range of interventional techniques available for the relief of pain and have access to a specialist pain clinic providing a range of interventional techniques. (Grade C, Level IV)

GPP- Non-invasive therapies should precede invasive treatments, except in rare instances. (GPP)

A - Coeliac plexus block should be considered in patients with upper abdominal pain, especially when secondary to pancreatic cancer. (Grade A, Level Ia and Ib)

A - Epidural, intrathecal, and intraventricular opioids should be considered in treatment of cancer pain not controlled with opioids by other routes. (Grade A, Level Ia and Ib)

Non-pharmacologic Management: Physical and Psychosocial Modalities

C - Cutaneous stimulation techniques, such as application of superficial heat and cold, massage, pressure, and vibration, may provide pain relief when the source of pain is associated with muscle tension or spasm. (Grade C, Level IV)

A - Patients should remain active and participate in self-care when possible. (Grade A, Level Ib)

B - Prolonged bed-rest for cancer patients should be avoided because prolonged immobilization may lead to joint contractures, muscle atrophy, cardiovascular deconditioning, and other undesirable effects. (Grade B, Level III)

A - Psychosocial interventions should be used concurrently with pharmacological treatment for pain as part of a multidisciplinary approach to pain management and not as substitutes for analgesics. (Grade A, Level Ib)

B - Education on effective pain control modalities and correction of misconceptions relating to the use of opioids should be a routine part of patient management. (Grade B, Level III)

GPP - Pastoral care team members should participate in health care team meetings that discuss the needs and treatment of patients. They should be conversant with community resources that provide spiritual care and support for patients and their families. (GPP)

Pain in Special Populations

B - Clinicians should give special attention to the assessment and treatment of pain in special populations, including the very young, the very old, the cognitively impaired, and known or suspected substance abusers. Aggressive pain assessment and management are as necessary for them as for the general population. (Grade B, Level III)

B - Behavioural observation should be the primary assessment method for preverbal and nonverbal children and should be used as an adjunct for assessment of verbal children. (Grade B, Level III)

B - In older children, assessment includes self-report using age-appropriate scales, such as the Faces Pain Scale and the Numeric Rating Scale. Observation should be used as an adjunct to self-report. (Grade B, Level IIb)

C - Oral medication in children with cancer pain should follow the WHO analgesic ladder, with dosage adjustments. The basic principles of opioid use are similar to those in adults. (Grade C, Level IV)

GPP - Assessment in the cognitively intact elderly patient with cancer pain should be done in ways similar to that of the general adult population. (GPP)

B - Behavioural observation should be an adjunct to cancer pain assessment in cognitively impaired adults. (Grade B, Level III)

C - Non-opioid analgesic modalities should not be substituted for opioid analgesics to treat severe pain in the suspected or known substance abuser. (Grade C, Level IV)

Definitions:

Grades of Recommendations

Grade A (evidence levels Ia, Ib): Requires at least one randomised controlled trial as part of the body of literature of overall good quality and consistency addressing the specific recommendation.

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Level III: Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies, and case studies.

Level IV: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Overall, guideline implementation is intended to:

- Optimize pain control in cancer patients
- Minimize side effects, adverse outcomes, and costs of pain therapy
- Enhance the physical, psychological and spiritual well-being of cancer patients and improve the quality of life of patients and their families

Guideline implementation will help to emphasize the need for:

- Routine pain assessment
- Proficiency in prescribing opioids, non-opioid analgesics, and adjuvant medications
- An understanding of the potential benefits of antineoplastic, anaesthetic, neurosurgical, and behavioural modalities, which often require a coordinated multidisciplinary approach

The World Health Organization (WHO) analgesic ladder is effective in relieving pain for approximately 90% of patients with cancer. This has been validated in many countries and different settings of care. A multidisciplinary approach to cancer pain improves analgesia as well as other clinical outcomes.

POTENTIAL HARMS

Side Effects of Medications

- Paracetamol has minimal toxicity at recommended doses (up to 4 g per day), but may cause fatal hepatotoxicity and renal damage at higher doses.
- Nonsteroidal anti-inflammatory drugs (NSAIDs) carry a significant risk of serious and potentially fatal side effects. Groups shown to be at high risk of gastrointestinal complications include the elderly (>60 years of age), patients with a previous history of peptic ulcer, and those receiving aspirin, oral steroids, or anticoagulants.
- The newer selective cyclooxygenase (COX) -2 inhibitors (coxibs) offer a reduced risk of gastrointestinal damage. Such agents are associated with fewer serious adverse gastrointestinal reactions in average-risk patients in short term studies, but there is little published data in high risk patients or chronic use. COX-2 inhibitors have not been shown to protect against the renal and cardiovascular toxicity of NSAIDs. There are no published trials of COX-2 selective agents in cancer pain to date.
- Common opioid side effects are constipation, nausea and vomiting, and sedation. Less common side effects include respiratory depression, confusion, myoclonus, pruritus, and urinary retention.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These guidelines are not intended to serve as a standard of medical care. Standards of medical care are determined on the basis of all clinical data available for an individual case and are subject to change as scientific knowledge advances and patterns of care evolve.
- The contents of the guideline document are guidelines to clinical practice, based on the best available evidence at the time of development. Adherence

to these guidelines may not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care. Each physician is ultimately responsible for the management of his/her unique patient in the light of the clinical data presented by the patient and the diagnostic and treatment options available.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Quality Indicators in Cancer Pain Management

System Indicators

Health care system factors can result in poor cancer pain management. These include a lack of emphasis on cancer pain treatment and fragmentation of care among the numerous health care specialists caring for cancer patients.

The successful implementation of these guidelines will require institutional support, a willingness to collaborate across clinical and paraclinical disciplines, as well as administrative coordination of hospital services.

- Formal means should be developed within each institution to evaluate cancer pain management practices.
- There should be clear lines of responsibility in cancer pain management, as well as in its institutional evaluation.
- Patients should have ready access to a specialist in pain relief, a palliative medicine specialist, and/ or an anaesthetist, depending on their clinical needs.

Process Indicators

The key items that need systematic assessment in a pain management evaluation programme are the severity and progress of cancer-related pain, the accuracy of diagnostic procedures, and the appropriate use of and referral for specialised analgesic techniques.

- All patients should be assessed for pain at points of transition in care (e. g., hospital to home, home to hospice).
- Information from the initial pain assessment and at follow-up visits, the proposed management, and the pain scale adopted should be clearly documented.
- Regular reviews of pain management should be made with a view to optimization of current pain therapy and further referral to more specialised services if appropriate.
- Standard procedures should be established regarding use of specialised analgesic techniques. The procedures should define appropriate acceptable level of patient monitoring as well as appropriate roles and limits of practice for the health care provider.

Outcome Indicators

Satisfactory pain control has a positive impact on quality of life and functional outcomes.

Pain intensity scores and satisfaction with pain management are key outcome indicators in the management of cancer pain.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

End of Life Care
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Singapore Ministry of Health. Cancer pain. Singapore: Singapore Ministry of Health; 2003 Mar. 88 p. [146 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2003 Mar

GUIDELINE DEVELOPER(S)

Singapore Ministry of Health - National Government Agency [Non-U.S.]

GUIDELINE DEVELOPER COMMENT

These guidelines were developed by a multidisciplinary workgroup brought together by the Council of the Pain Association of Singapore, the local chapter of the International Association for the Study of Pain (IASP).

SOURCE(S) OF FUNDING

Singapore Ministry of Health

GUIDELINE COMMITTEE

Workgroup on Cancer Pain

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Singapore Ministry of Health Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following is available:

- Patient education brochure on cancer pain. Singapore: Singapore Ministry of Health; 2003. 41 p.

Electronic copies: Available in Portable Document Format (PDF) from the Singapore Ministry of Health Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on November 28, 2003.

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Date Modified: 11/8/2004