QUICK REFERENCE FOR HEALTHCARE PROVIDERS

MANAGEMENT OF CANCER PAIN

Ministry of Health Malaysia

Malaysian Association for the Study of Pain

Academy of Medicine of Malaysia

KEY MESSAGES

1. Pain occurs in over 50% of cancer patients and at least 1/3 of these patients experience moderate to severe pain. In Malaysia, less than 20% of patients with moderate to severe cancer pain receive opioid analgesia.

2. Successful cancer pain management requires comprehensive assessment, a multidisciplinary approach and participation of patients and their family members/carers.

3. Management of cancer pain should follow the WHO Analgesic Ladder.

4. Morphine is the opioid analgesic of choice for moderate to severe cancer pain.

5. Common side effects of opioid analgesics should be addressed to ensure compliance and effective pain control.

6. Difficult pain syndromes particularly neuropathic pain may require the use of adjuvant analgesics and other interventions.

7. Paediatric cancer pain is managed based on similar principles as adults although assessment tools and drug dosages may differ.

8. The concept of "Total Pain" includes psychological, social and spiritual issues which may modulate the perception of pain in cancer patients.

9. Education of healthcare providers, patients and family members is important to overcome the barriers to effective pain management.

CLASSIFICATION OF CANCER PAIN

Nociceptive Pain	
• Somatic Pain	- Character is aching, stabbing or throbbing, and usually well localised. - Examples: bone metastases, ulcers
• Visceral Pain	- Character is cramping or gnawing when due to obstruction pain of hollow viscus; aching, sharp or throbbing when due to tumour involvement of organ capsule. - Pain is usually diffuse and difficult to localise and may be referred to somatic structures. - Examples: intestinal obstruction, liver metastases
Neuropathic Pain	- Character is burning, pricking, electric-like, shooting or stabbing, and sometimes may have a deep aching component. - Pain is often associated with loss of sensation in the painful region. - Allodynia or dysaesthesia may be present.

This Quick Reference provides key messages and a summary of the main recommendations in the Clinical Practice Guidelines (CPG) Management of Cancer Pain (July 2010).

Details of the evidence supporting these recommendations can be found in the above CPG, available on the following websites:

Ministry of Health Malaysia : http://www.moh.gov.my Academy of Medicine Malaysia : http://www.acadmed.org.my

POINTS FOR HISTORY TAKING

Characteristics of pain	• Site – single/multiple • Intensity – pain score • Quality – sharp/dull/throbbing/colicky, etc. • Radiation of pain • Timing – persistent/episodic/ on movement/spontaneous • Aggravating and relieving factors • Associated symptom – numbness/abnormal sensation/hyperalgesia/ allodynia, etc.
Cancer history	• Site(s) – primary/metastatic • Treatment(s) – surgery/chemotherapy/radiotherapy
Medication	• Analgesia • Side effects • Concurrent medications including traditional/alternative medications • Treatment response/adherence
Co-morbidities	• Renal/liver disease • Cardiac/respiratory disease • Previous alcohol or drug abuse • Cognitive impairment • Other pain conditions – acute/chronic
Psychosocial	• Emotional/psychological – depression/anxiety/stress, etc. • Effects on ADL/appetite/sleep • Effects on socio-economics functioning • Perception of pain and pain medications

PAIN SCALES RECOMMENDED FOR USE IN ADULTS AND PAEDIATRICS

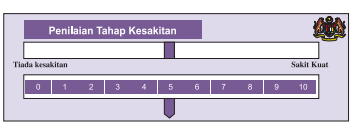
1. For adult patients, use the combined Numerical Rating Scale/Visual Analogue Scale (NRS/VAS)
2. For paediatric patients 1 month to 3 years old, use the FLACC Scale
3. For paediatric patients >3 - 7 years old, use the Wong-Baker Faces Scale
4. For paediatric patients >7 years old, use the combined NRS/VAS Scale (same as for adults)

Note:

i. All scales are scored from 0 (zero) to 10 (ten)
ii. Always use the same scale for the same patient

Pain Scales Recommended

1. Combined NRS/VAS



2. Wong-Baker Faces Scale

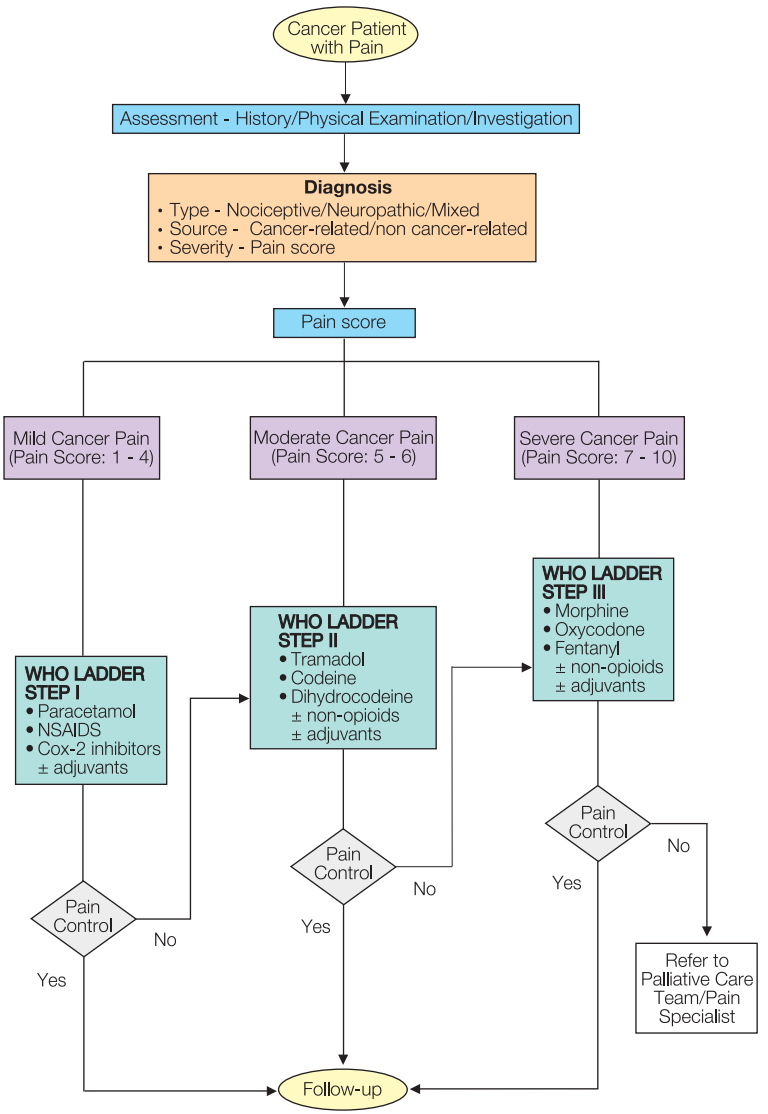
The Wong-Baker faces scale (adapted from Wong DL et *al, eds, Whaley and Wong's essentials of pediatric nursing* 5th ed. St Louis, MO: Mosby, 2001)

3. FLACC Scale

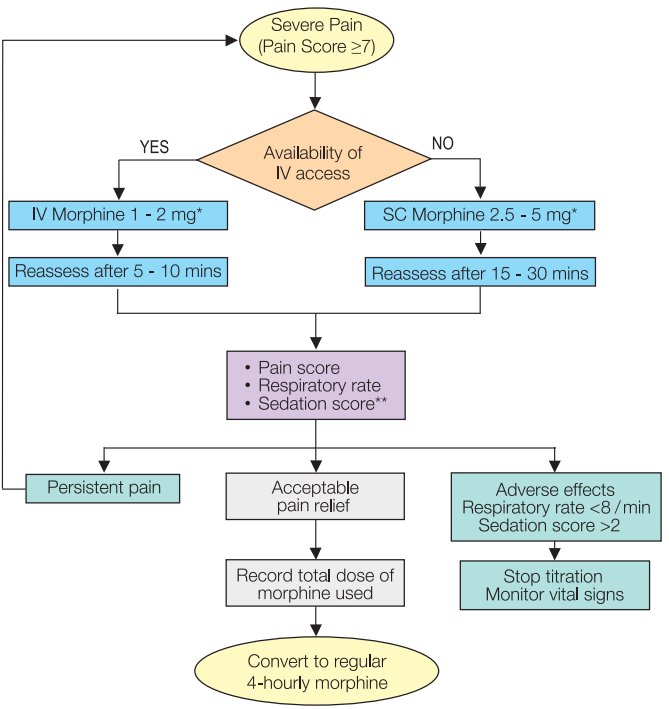
CATEGORY	SCORING		
	0	1	2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers; occasional complaints	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging or being talked to distractable	Difficult to console

Each of the five categories (F) face, (L) legs, (A) activity, (C) cry and (C) consolability is scored from 0-2, resulting in total range of 0-10

ALGORITHM FOR MANAGEMENT OF CANCER PAIN



ALGORITHM FOR TITRATION OF MORPHINE FOR RAPID PAIN RELIEF IN ADULTS



* For patients already on opioids, the bolus dose of morphine should be 10% of the total 24-hour morphine requirement converted to IV/SC equivalent.

* For elderly, frail or renal impaired patients, use lower dose of the range given.

**Sedation score

Score	Sedation level	Clinical findings
0	None	Patient is awake and alert
1	Mild	Occasionally drowsy, easy to rouse, and can stay awake once awoken
2	Moderate	Constantly drowsy, still easy to rouse, unable to stay awake once awoken
3	Severe	Somnolent, difficult to rouse, severe respiratory depression

Using morphine in paediatric cancer pain:

- Oral morphine is the opioid of choice
- Starting doses in opioid naive children:
  <1 year old : 80 mcg/kg 4-hourly
  1 - 12 years old : 200 - 400 mcg/kg 4-hourly (not to exceed 5 mg)
  >12 years old : 5 mg 4-hourly
- Dose of breakthrough oral morphine is 50 - 100% of 4-hourly dose and titrated accordingly
- SC and IV routes of administration are alternatives to oral
- Oral to parenteral conversion ratio is 3:1
- Recommended IV morphine infusion rate is 0.02 - 0.03 mg/kg/hr in children over the age of 3 months and 0.015 mg/kg/hr in younger infants

SUGGESTED DOSE CONVERSION RATIO IN THE DIRECTION SPECIFIED

FROM \ TO	Oral codeine mg/day	Oral morphine mg/day	SC morphine mg/day	Oxycodone mg/day	Fentanyl TD mcg/h
Oral codeine mg/day		8	20	12	24
Oral morphine mg/day	8		2.5	1.5	3
SC morphine mg/day	20	2.5		0.6	1.2
Oxycodone mg/day	12	1.5	0.6		2
Fentanyl TD mcg/h	24	3	1.2	2	

1. This conversion chart should only be used as a guide and treatment must be individually tailored for patients based on clinical assessment.
2. Add current opioid dose to get total mg per 24 hours (for fentanyl, note the total hourly rate in mcg)
3. Begin at the left hand column and identify the opioid currently in use
4. Select the alternative opioid from the top row
5. Identify the box where the column and row intersect and determine the conversion factor to divide or multiply in order to obtain 24 hours dose of the alternative opioid
6. Divide 24 hours dose according to dosing frequency required (examples BD dosing divide by 2 and 4-hourly dosing divide by 6)

MULTIPLY **DIVIDE** **Additional conversion: Morphine 40 mg/day PO = Tramadol 200 mg/day PO**

OTHER TREATMENT MODALITIES

Treatment modalities	Indications	Who to refer to
Anticancer therapy		
• Radiotherapy	• Painful bone metastases • Pain related to advanced cancer	Oncologist
• Anticancer therapy	• Chemo or hormone therapy sensitive cancers	Oncologist / Haematologist
Interventional techniques		
• Neurolytic sympathetic plexus blocks	• Coeliac plexus block for upper GI cancer • Superior hypogastric plexus block for pelvic cancer	Anaesthesiologist / Pain specialist / Interventional radiologist
• Neuraxial opioid therapy	• Failed conservative management • Significant pain from locally advanced cancer • Difficult /diffuse pain from advanced cancer	
• Vertebroplasty	Bone pain from malignant vertebral collapse / pelvic bone metastasis	Orthopaedic surgeon / Interventional radiologist
Others		
Psychosocial interventions	• Severe depression / anxiety • Pain behaviour • Socioeconomic constraints	Psychiatrist / Psychologist / Counsellor / Medical social worker
Physical therapies	• Muscle pain • Muscle disuse	Physiotherapist / Occupational Therapist

IMPORTANT DRUGS IN CANCER PAIN MANAGEMENT

Drug	Starting dose	Maximum dose	Side effects/ remarks
Simple analgesic			
Paracetamol	0.5 - 1 gm, 6 - 8-hourly	4 gm/day	Rare
Non-Selective NSAIDs			
Ibuprofen	200 - 400 mg, 8-hourly	2400 mg/day	Peptic ulcer, GI bleed, platelet dysfunction, renal failure, hypertension, increase in CVS events
Mefenemic Acid	250 - 500 mg, 8-hourly		
Diclofenac Sodium	50 - 150 mg daily, 8 - 12-hourly	200 mg/day	
Meloxicam	7.5 - 15 mg daily	15 mg/day	
Selective Cox-2 Inhibitors			
Celecoxib	200 - 400 mg, 12 - 24-hourly	800 mg/day	Renal impairment, increase in CVS events
Etoricoxib	60 - 90 mg daily, 120 mg daily in acute pain	90 mg/day	Hypertension, renal impairment, increase in CVS events
Weak opioids			
Tramadol	50 - 100 mg, 6 - 8-hourly	400 mg/day	Dizziness, nausea, vomiting, drowsiness constipation
Dihydrocodeine tartrate (DF118)	30 - 60 mg, 6 - 8-hourly	240 mg/day	Nausea, vomiting, constipation, drowsiness
Strong opioids			
Morphine	Starting dose (oral): 5 - 10 mg, 4-hourly of Immediate-release (IR) Elderly: 2.5 - 5 mg, 4 - 6-hourly of IR Sustained-release (SR) oral morphine: to be given in 12-hourly dosing	No maximum dose	Common: Nausea, vomiting, drowsiness, constipation, sedation Not common in cancer pain: Sweating, euphoria, respiratory depression, pruritus, myoclonus
Transdermal fentanyl	Equianalgesic dose of total 24 hours opioid requirement (refer Conversion Table)		
Oxycodone	Starting dose (oral): 5 mg of IR 4 - 6-hourly CR oxycodone: to be given 12-hourly dosing		

Drug	Starting dose	Maximum dose	Side effects/ remarks
Anticonvulsants			
Carbamazepine	100 - 200 mg/day	1600 mg/day	Dizziness, ataxia, fatigue, leucopenia, nausea, vomiting, drowsiness, allergic reaction
Gabapentin	Day 1: start at 300 mg nocte Day 2: 300 mg 12-hourly Day 3: 300 mg 8-hourly Thereafter, increase by 300 mg/day every 1- 7 days	2400 mg/day	Drowsiness, dizziness, GI symptoms, mild peripheral oedema
Sodium Valproate	400 mg/day in 2 divided doses. May be increased by 200 mg at 3 days interval	1600 mg/day	Fatigue, loss of appetite, vomiting, dizziness
Bisphosphonates			
Pamidronate	60 - 90 mg as a single IV infusion over 2 - 4 hrs every 4 weeks		Asymptomatic hypocalcaemia, hypophosphataemia, hypomagnesaemia, flu-like symptoms, mild fever, local injection site reactions, malaise, rigor
Zoledronate Acid	4 mg as 15 min IV infusion every 3 - 4 weeks		Rise in body temperature, flu-like symptoms, headache, hypersentivity reactions, osteonecrosis of the jaw
Laxatives			
Lactulose	15 - 45 ml orally, 6 - 8-hourly		Bloating, epigastric pain, flatulence, nausea, vomiting, cramping
Bisacodyl	5 - 10 mg orally, 1 - 2 times daily	30 mg/day	Atony of colon
Antiemetics			
Metoclopramide	10 - 20 mg, 6 - 8-hourly		Extrapyramidal reactions, dizziness, drowsiness
Haloperidol	0.5 - 3 mg single dose nocte		Extrapyramidal symptoms, dystonia, prolonged QT interval, neuroleptic malignant syndrome
Prochlorperazine	5 - 10 mg, 8 - 12-hourly		Extrapyramidal symptoms, dry mouth

CLINICAL PRACTICE GUIDELINES SECRETATIAT
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