

**BREAST
CANCER
INITIATIVE 2.5**
Making breast health a global priority



PALLIATIVE CARE

Palliative Care for Metastatic Breast Cancer

Knowledge Summary



INTRODUCTION

WHO defines palliative care as “an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.” Palliative care may be referred to as supportive care, symptom management or comfort care. For the purposes of this series the term palliative care is used throughout.

A large percentage of women in low- and middle-income countries (LMICs) who develop breast cancer present with advanced (metastatic) disease. In the majority of these cases, treatment with curative intent is not possible. The survival of patients after a diagnosis of metastatic cancer depends on tumor characteristics and available therapies, but ranges from several months to several years, therefore palliative care represents a substantial contribution to breast cancer programs.

Management of metastatic disease varies based on patient symptoms and the sites of the metastases. Introducing palliative care at the time of diagnosis of metastatic disease can improve quality of life. Historically, palliative care has been viewed as end-of-life care, offered late in the disease process and given a low priority within health systems. Currently, the value of early palliation is recognized and the approach to palliative care is changing. Nevertheless, obstacles to timely and appropriate introduction of services include lack of referral standards, clinician fear of “letting go” of patients and logistical (e.g., distance from home to available palliative care) or other patient or health system factors. Tailored screening tools that help identify women in need of palliative care services can facilitate access to those services [see Table 1]. There are a number of international palliative care organizations that can provide information about palliative care program development, such as the WHO guide ‘Planning and implementing palliative care services: a guide for programme managers’. The importance of quality and culturally sensitive end-of-life care cannot be understated. It is an issue of human rights, justice and dignity.

KEY SUMMARY

Palliative Care for Metastatic Breast Cancer

- Palliative care is an integral part of cancer care and should be introduced to patients at the time of diagnosis.
- Pain management (including access to morphine) and psychosocial and spiritual services are core components of palliative care.
- Basic palliative care services can be introduced (hospital, community-based or home-based) at a low cost and can reduce long-term costs on the health system. Even the most basic palliative care services can improve the overall health and quality of life of a woman who is dying from cancer.
- Palliative care for metastatic breast cancer may require medical management of site-specific metastases (e.g., bone, brain, liver, lung metastases), as well as general late-stage disease management, including pain management and psychosocial and spiritual aspects of late-stage disease.
- Management of site-specific metastases will vary based on the location and burden of metastases. In low-resource settings, management may focus on symptomatic relief with drug therapy. As more resources become available, palliative radiotherapy and surgery can be used to assist with symptom management.

Health systems and workforce capacity

- Include training for health care professionals in pain management and culturally sensitive patient-provider communication skills that focus on patient-centered care.
- Most health systems already have the existing expertise and resources for basic palliative care services (e.g. palliative care for HIV/AIDS), which can be expanded to include or augment breast cancer care.
- Palliative care requires a multidisciplinary or interdisciplinary care approach and benefits from community-based support and involvement of family caregivers.

Resource-stratified pathway across the continuum of care

- Follow a resource-stratified pathway to allow for coordinated incremental program improvement across the continuum of care, including palliative care [see Tables 1-3].
- Basic palliative care services are essential to any breast cancer program and can be expanded as resources become available.



POINTS FOR POLICYMAKERS:

OVERVIEW

Preplanning

- Identify existing palliative care services for breast cancer care.
- Identify stakeholders, key decision-makers and champions.
- Identify who will lead the efforts.

Planning Step 1: Where are we now?

Investigate and assess

- Conduct a self-assessment using standardized tools. Toolkits are available to assess and support palliative care program development. Assessments can be performed without prohibitive costs.
- Assessment tools have been developed to identify treatment-related physical and psychosocial complications. These tools can be used to improve patient-provider communication, strengthen referral systems and inform future health system supportive care expansion.
- Assessments should review protocols and determine who is providing services [e.g., family members, community volunteers, health workers] as well as the population covered by existing services.

Planning Step 2: Where do we want to be?

Set objectives and priorities

- Offer palliative care focused on symptom management and quality of life to all women diagnosed with metastatic disease.
- Basic palliative care services can be introduced at a low cost and can reduce long-term costs on the health system. Even the most basic palliative care services can improve the overall health and quality of life of a woman who is dying from cancer.
- Palliative care for metastatic breast cancer may require medical management of site-specific metastases [e.g., bone, brain, liver, lung metastases], as well as general late-stage disease management, including pain management and psychosocial and spiritual aspects of late-stage disease.

Planning Step 3: How do we get there?

Implement and evaluate

- Developing a resource-stratified approach to palliative care should be part of long-term breast cancer program planning and requires consideration of available treatments, their anticipated toxicities/complications and available services [see Tables 1-3].

WHAT WE KNOW

Palliative care options, including management of pain and psychosocial and spiritual support, should be introduced at the time of diagnosis of metastatic disease. Metastatic disease can be identified by clinical exam and/or staging studies (e.g., x-ray) and should be suspected when a woman presents with clinical symptoms of metastatic breast cancer (e.g., bone pain, shortness of breath, skin nodules, confusion, abdominal pain or distention) [see *Diagnosis: Clinical Assessment, Diagnostic Imaging and Staging*]. Management strategies depend on patient symptoms, the location and burden of metastases, tumor characteristics and patient factors (e.g., co-morbidities, age, preferences), as well as available treatment modalities and health workforce capacity within the health system. The most common sites of breast cancer metastases or complications are bone, brain, liver, lung, nervous system and skin. There is a limited role for additional staging studies or surveillance once a diagnosis of metastatic cancer is established; confirmation testing for symptomatic patients is recommended. Diagnostic testing must remain available for confirmation of late-disease complications such as spinal cord compression [see Table 1].

Management of site-specific metastases

Bone metastasis: Bone is the most common site of breast cancer metastasis reported in up to 70–80% of patients with metastatic disease. It is associated with significant morbidity, including bone pain, hypercalcemia, pathologic fractures and spinal cord compression—an oncologic emergency causing pain and potentially irreversible neurologic loss. However, bone metastases generally have an indolent course (i.e., a period of slow progression or stability during which there is little or no pain) and over 75% of patients respond to palliative treatment. Patients with new or worsening back bone pain must be assessed for spinal cord compression and fracture risk. The assessment should consider imaging studies (i.e., x-rays) if available. Urgent treatment of spinal cord compression with radiotherapy or surgery can prevent paralysis.

Possible palliative therapies include pharmacologic therapy, radiotherapy and surgery. Pharmacologic therapy includes steroids, nonsteroidal anti-inflammatory drugs (NSAIDs), opioids and co-analgesics [see *WHO Model List of Essential Medicines and WHO Cancer Pain Ladder recommendations*]. Palliative radiotherapy can provide some relief from bone pain. Therapy that combines radiotherapy and steroids can help reduce spinal cord compression risk or progression, reduce bone pain and assist with re-calcification and stabilization. Bisphosphonates can reduce pain intensity, treat malignancy-associated hypercalcemia and prevent or delay onset of skeletal-related disease or treatment sideeffects when used with endocrine therapy [see Table 2].

Bowel obstruction: Breast cancer metastasis to the bowel is rare, and the prognosis is poor. Symptoms can be severe, including malignant bowel obstruction with nausea, vomiting, pain and constipation. Distinguishing a mechanical bowel obstruction caused by metastatic disease from severe constipation should be done before initiating treatment. If a mechanical

obstruction is suspected, immediate surgical evaluation is warranted. Bowel rest, opioids, laxatives and anti-emetics can provide symptomatic relief of bowel obstruction, although opioids can also exacerbate some symptoms, especially constipation. As more resources become available, additional forms of analgesia should be introduced.

Brain metastasis: Brain metastases is reported in approximately 20% of advanced breast cancer cases. Brain metastasis can cause edema. Symptoms include headache, seizures and neurologic disturbances. The median survival depends on tumor characteristics and available therapies, but ranges from a few months to several years.

Control of symptoms consists of control of edema (with steroids such as dexamethasone), analgesia and treatment of seizures. Nausea and vomiting can be managed with anti-emetics and steroids. Anticonvulsants should be available for patients with a history of seizures but should not be used prophylactically. Additional treatment options, when health system resources are available, include radiotherapy, stereotactic radiosurgery and surgical resection. Before initiating additional therapies, the potential benefits should be weighed against potential adverse neurocognitive effects [see Table 2].

Liver metastasis: The liver is the initial site of distant metastasis in 5–20% of patients with metastatic breast cancer. However, more than half of women with metastatic disease develop liver involvement at some point in their clinical course. The symptoms of liver tumor burden include pain (from capsular stretch), jaundice, abdominal fullness and pruritus (itching). The median survival of treated patients ranges from 4 to 24 months depending on treatment modality used.

Basic pharmacologic symptom management includes analgesics and antiemetics and antihistamines for nausea or pruritus. When health system resources are available, other more invasive techniques [see Table 2] may reduce symptom burden but these techniques have not been shown to improve survival in breast cancer. Before initiating additional therapies, the potential benefits should be balanced against potential adverse effects.

Lung metastasis: Lung metastasis may occur in up to 70% of breast cancer patients with metastatic disease. Metastasis can occur in the lung tissue or the pleura (lining of the lung). Isolated lung metastasis occurs in 10–25% of patients. When considering diagnosis and treatment, a solitary lung nodule in a woman with breast cancer is more likely to represent a second primary cancer originating in the lung than a metastasis from breast cancer. Common symptoms of lung metastasis include shortness of breath, exertional dyspnea (labored breathing), pleuritic chest pain, cough, hemoptysis (coughing up blood) and respiratory distress (often a direct result of metastases on lung tissue), pleural effusions and airway obstruction. Patients may also be asymptomatic

Therapy for breathlessness includes drug therapy (e.g., opioids, steroids, anxiolytics and antipsychotics). Palliative thoracentesis (removal of excess fluid in the pleural space) should be available, as well as oxygen for chronic hypoxemia. When more



resources are available, local management of lung metastasis can include radiotherapy, pleurodesis [by pleural drains], thoracotomy and video-assisted thoracic surgery [VATS]. Surgical resection should not be considered standard care, but can be offered to a subset of patients, such as those with a solitary pulmonary metastasis [see Table 2].

Local skin invasion, metastasis and complications: Breast cancer is the most common cancer to directly invade or infiltrate the skin. Locally advanced breast cancer may cause fungating [ulcerating] wounds, resulting in physical and psychosocial distress. Surgical resection of fungating masses is often complicated by impaired wound healing because of tumor presence at the margin of skin resection. Breast cancer can also metastasize to the skin and cause chronic skin wounds. Preventative measures to avoid skin breakdown should be used. When a wound appears, a woman should undergo immediate care and counseling to avoid progression. Training for professionals in basic wound care is a priority, and the creation of wound care teams should be introduced where resources are available.

Management of skin complications includes wound and skin assessment. Topical therapies include washing with soap and water, applying an aqueous cream to maintain skin moisture and integrity, topical metronidazole and activated charcoal for malodorous lesions and short-term corticosteroids to manage itching and burning. Analgesics, dressings and skin barriers should be available and patients and families should be taught simple wound dressing techniques. If infection complications develop, advanced wound care may be required. For example, surgical debridement [i.e., removal of dead, damaged or infected tissue] and palliative radiotherapy can be considered for necrotic skin complications if expertise and resources are available. Topical hemostasis agents [e.g., silver nitrate] should be available to treat bleeding. More sophisticated dressing materials, calcium alginate and stoma/wound therapy can be considered when more health system resources are available. In high-resource settings, plastic surgery, negative pressure wound therapy and mechanical beds can be considered [see Table 2].

Palliative systemic therapy: Systemic therapy for metastatic breast cancer may prolong life and can improve quality of life by reducing cancer-related symptoms. The type and duration of systemic therapy will depend on the type of breast cancer,

disease stage and location of metastases [see *Systemic Therapy: Chemotherapy and Systemic Therapy: Hormonal Therapy and Targeted Agents*]. A woman's preference, age, comorbid status and prior treatments will influence palliative systemic therapy options. Possible regimens include endocrine therapy [including ovarian ablation] and/or cytotoxic treatments. Generally, if a patient's cancer is hormone receptor-positive, hormonal therapy is used, and chemotherapy is reserved for patients who have rapidly progressive metastatic disease, visceral involvement or who present with evidence of end-organ dysfunction due to cancer. In hormone receptor-negative patients, or in hormone receptor-positive patients whose tumor no longer responds to hormonal therapy, single-agent chemotherapy may improve patient symptoms. There is no predetermined duration of treatment; response to therapy informs treatment duration and possible subsequent patient regimens. Monitoring should be done with routine history and physical exams, carefully evaluating the patient for control of symptoms. Imaging or laboratory studies are often used; however, high-frequency serial imaging should be avoided. Criteria for withdrawing treatment due to treatment failure [ineffective treatment] include clinical deterioration, evidence of new metastases and increasing size of previously documented lesions.

Resection of primary tumor in stage IV breast cancer:

Resection of the primary breast tumor can provide palliation of bleeding, infection or ulceration. Prospective studies of resection of the primary breast tumor in stage IV breast cancer have not consistently shown a survival benefit. Longer follow up of ongoing studies will provide additional data. The potential benefits of surgery on local control must be weighed against the negative aspects of surgery. Decisions about surgery must be made on a case-by-case basis until further data from additional trials are available.

Pain management: Pain is a major symptom reported by breast cancer patients with metastatic disease. Patients with metastatic disease may experience pain from bone involvement, spinal cord compression, bowel obstruction, abdominal swelling, skin complications, neurologic symptoms and non-specific pain. Pain can be managed with pharmacologic and nonpharmacologic interventions, but requires regular assessment for optimal management [see Table 3]. Pain screening tools can improve patient-provider understanding of pain symptoms. A multimodal approach can often successfully

reduce symptoms and minimize side effects. The WHO Cancer Pain Ladder provides guidance on pain medication and nonpharmacologic pain management strategies, such as patient educational interventions and comfort therapies. Patient-controlled pain management has been shown to result in effective pain management with lower levels of opioid use. Surgical care for spinal cord compression, fractures or bowel obstruction are considered a routine part of advanced pain management. When available, palliative radiation therapy and physical and occupational therapy may help selected patients. Advanced pain control remedies include opioid pumps and transdermal fentanyl patches. Consultation with a pain specialist and advanced management of complex pain are goals for high-resource settings. Locoregional and spinal analgesia, such as neuraxial infusion of opioids and spinal cord stimulation may be considered in high-resource settings [see Table 3]. Obstacles to adequate pain management include regulatory limitations on opioid use and fear of opioids among the public, professionals and administrators. Other obstacles to effective pain management include insufficient capacity for nonpharmacologic interventions, lack of coordination between services and limited patient-provider visit time.

Palliative psychosocial care: Many women diagnosed with metastatic breast cancer experience psychosocial symptoms including anxiety, fear and distress that can be exacerbated in settings without access to palliative treatments or supportive health services. Psychosocial support requires effective, culturally appropriate patient-provider communication. It can be introduced informally through patient-provider discussion or formally with validated assessment tools. Support begins by letting breast cancer patients know that many women report psychosocial issues, including distress, fear and concerns about pain and end-of-life issues, and that support services are available. Patients should be referred to appropriate community-based psychosocial and/or bereavement support services as needed. Pharmacologic treatment of depressive symptoms with antidepressants can be effective and may be available before advanced psychosocial services, such as those provided by psychiatrists and psychologists, are available [see Tables 1 and 3].

WHAT WORKS

Coordination of care: Effective palliative care requires an interdisciplinary team approach, health system and community collaboration, culturally sensitive communication and routine assessment and reassessment of patient status. Metastatic disease management is complex and includes site-specific management, as well as general late-stage disease management that focuses on quality of life, such as pain management and psychosocial and spiritual considerations.

Health professional training: Health professionals working with breast cancer patients should be trained to recognize and manage site-specific metastases at presentation and

throughout a patient's treatment course [see *Early Detection: Breast Physiology and Clinical Breast Exam*]. Training in pain management should include the safe and effective prescribing and use of opioids for pain relief; other pharmacologic options and differences between medications; monitoring patients for medication affect on pain levels and quality of life and identifying pain-related emergencies [e.g., spinal cord compression, infection]. Pain assessment tools may be used to inform patient-provider discussion about pain control. These tools should be simple and consider patient health literacy. Examples of pain assessment tools include Numeric Pain Rating, Visual Analogue Scale, Brief Pain Inventory and the Edmonton Symptom Assessment System [ESAS], available in multiple languages. Health professionals should routinely discuss with their patients symptoms of pain, including location, extent and severity.

Training health professionals in basic psychosocial aspects of late-stage disease, including assessment and referral for supportive care and bereavement support for families, should be a health system palliative care priority. Assessment tools for depression and distress as well as for spiritual well-being have been adapted for use in different resource settings, and can facilitate identification of psychosocial issues and aid in patient-provider discussions.

Communication training: Effective provider-provider and provider-patient palliative care communication is instrumental in coordinating patient care and is associated with patient satisfaction with palliative care. Training in effective provider-patient communication should be culturally sensitive and recognize that a woman's needs may differ based on her age, culture, religion, nationality and experiences.

Patient and family education: Patients with metastatic disease and their families should be informed about which symptoms warrant further clinical evaluation. Although the type of patient education [community-based or hospital-based] will depend on the resources available, counseling and education should be conducted according to a patient's preference, level of health literacy and cultural or family traditions [see Table 1]. Culturally sensitive conversations between providers and patients that address spiritual well-being can improve patient satisfaction with the care they receive. When possible, spiritual support may be provided at hospital or hospice sites and may include a spiritual reflection or meditation space [see Table 3].

End-of-life care: A patient's preferred location for end-of-life care is a central palliative care consideration. A patient's preference may change over time, and efforts should be made to adjust palliative care plans accordingly. Barriers to providing home care include a lack of adequate home care, the high cost of providing home care and the lack of available home care support. Trained community volunteers can help reduce inpatient admissions and overall financial costs. [see Table 1].

PLANNING STEP 1: WHERE ARE WE NOW?

Investigate and assess

Assess the breast cancer burden and palliative care needs

- Assess palliative care capacity in relation to the number of breast cancer patients on active treatment as well as in follow up care.
- All patients with metastatic breast cancer should be considered for palliative care services. Patients with metastatic disease have more immediate palliative care needs including relief of cancer-related symptoms, pain control and management of psychosocial and spiritual concerns.

Assess existing palliative care resources

- Review existing legislation, protocols and guidelines for provision of services as well as training of health care providers.
- Review where palliative care services are provided, or could be provided, to ensure equitable access to patients.
- Consider expanding and incorporating existing palliative care services into breast cancer programs.
- Include family caregivers in palliative care planning. Educational and support services should be available to caregivers.
- Assess health professional training in palliative care, including assessment and management of metastatic disease symptoms (including referrals as needed), assessment and management of pain symptoms and assessment and management of psychosocial and spiritual aspects of metastatic disease.
- Identify who is providing services (e.g., family members, community volunteers, health workers) as well as the population covered by existing services.
- Assess access and availability of opioids, including how drugs are regulated and prescribed to ensure equitable access to patients.

Assess patient access and barriers to palliative care

- Identify structural, sociocultural, personal and financial barriers to accessing palliative care.
- Structural barriers may include a lack of available staff or limited health professional education and training in appropriate pain assessment and management, lack of government commitment and obstacles to obtaining adequate opioids and pain relief medications (e.g., the regulatory and legal environment).
- Sociocultural and personal barriers may include concepts of health, dying with dignity, psychosocial distress and spiritual well-being and misconceptions among health professional and patients about the use of pain medications.
- Review patient-provider communication and patient education practices. Ineffective communication between health professionals and patients as well as inadequate patient counseling can increase barriers to patient adherence and to effective care.

- Consider focus groups with patients to understand social or cultural barriers to participating in palliative care.
- Assess outreach to rural or hard-to-reach communities and marginalized populations.
- Engage community leaders in program development to help ensure activities are implemented in a manner relevant to the community.

Assess health system capacity

- Assess human resource capacity for providing palliative care services. Integration of palliative care into breast cancer programs requires an interdisciplinary team approach.
- Assess health professional training in palliative care, including assessment and management of metastatic disease symptoms (including referrals as needed), assessment and management of pain symptoms and assessment and management of psychosocial and spiritual aspects of metastatic disease.
- Assessing and managing psychosocial complications during treatment may require targeted training of existing health professionals and partnering with community services.
- Assess the referral system and coordination of care between active treatment of the cancer and palliative care services.

Assess monitoring and evaluation capacity

- Review monitoring of treatment-related complications as a routine part of breast cancer care, including monitoring for psychosocial complications, reproductive or sexual health issues, surgical complications such as lymphedema and systemic therapy complications such as musculoskeletal, gastrointestinal, nervous system, hematologic and skin and nail toxicities and pain management.
- Quality assurance programs should be in place to reduce treatment-related complications of surgical procedures, radiotherapy and systemic therapy.



PLANNING STEP 2: WHERE DO WE WANT TO BE?

Set objectives and priorities

Define target population and approach

- Use available data on cancer incidence and demographic data to determine the services most needed and match the palliative care services to the treatment options available.
- All patients receiving treatment for breast cancer are at risk for treatment-related toxicities and may have unmet palliative care needs, including pain management.

Identify community and health system partnerships

- Implementation of palliative care interventions requires community support, political will and health system investment.
- Identify partners and other resources within the health care system that can be leveraged to provide palliative care for breast cancer [e.g., community health workers trained in palliative care for HIV/AIDS patients].
- Examine existing and potential collaborations with survivor and advocacy groups. Advocacy groups can provide a range of support from promotion of programs to direct provision of palliative services.

Identify gaps and barriers

- Identify attitudes and misconceptions about palliative care services and pain management. Barriers often include political, regulatory, medical and societal barriers, and thus require political support.

Set achievable objectives

- Identify specific palliative care services that should be available for breast cancer patients [pain control, management of site-specific metastases, psychosocial support].
- Develop or update legislation or guidelines as needed and establish clear protocols for the provision of care.
- Include evaluation for psychosocial issues as well as treatment-related toxicities and complications as a routine part of patient care.
- Raising the public profile of palliative care can help inform populations about available services and promote palliative care as an important community and health system priority.
- Access to pain medication and management of psychosocial distress are ethical issues and should be considered health priorities for every health system.

Set priorities and determine feasibility of interventions

- Follow a resource-stratified pathway to ensure basic care services are available, and increase care services in a coordinated manner as more resources become available.
- Emphasize integration of services and expansion of existing services.
- Phased implementation or demonstration projects with measurable outcomes may help ensure feasibility prior to large-scale implementation.

PLANNING STEP 3: HOW DO WE GET THERE?

Implement and evaluate

Establish financial support and partnerships

- An interdisciplinary and multisector approach can optimally address palliative care needs in a community, and should include support from health policymakers, regulatory agents, patient advocates, community and spiritual leaders and health care providers.
- Partner with medical and education institutions to integrate training into existing programs.
- Public and patient education efforts and health professional training programs can help generate support and momentum for palliative care programs.
- Advocacy groups can be a valuable resource for palliative care. Advocacy groups in LMICs can raise community awareness regarding palliative care services, or may provide direct patient support such as peer counseling. Advocacy groups can play a pivotal role in encouraging health systems to adopt palliative care services.

Implement and disseminate

- Use a multidisciplinary team approach to optimize care.
- Educate health professionals through guideline development and continuing education programs.
- Ensure the availability of essential drugs for the management of pain and other symptoms. Safe and reliable access to pain medication is essential to effective palliative care.
- Expand and adapt existing education programs to include palliative care training.
- Develop palliative care programs within primary care networks.
- Train community volunteers and family caregivers to provide palliative care support.
- Coordinate palliative care services with other care services along a resource-stratified pathway to avoid deficits in essential supportive care services.

Monitor and evaluate

- Monitor programs for quality of service, coverage of existing needs, sustainability and access to financial resources.
- Collect data on breast cancer recurrence and treatment-related complications to inform future program direction and breast cancer treatment quality control programs.

CONCLUSION

Palliative care services are an essential component of breast cancer programs and should be introduced at the diagnosis of metastatic disease. Palliative care programs support a patient-centered approach to care and the human rights of patients in need of quality of life and end-of-life care. Effective palliative care requires health planning and interdisciplinary involvement (physicians, nurses, mental health specialists, social workers, spiritual caregivers and others), but it is cost effective and can reduce overall costs to a health system. Trained volunteers can also be integrated into a palliative care team.

Women with metastatic breast cancer have unique physical and psychosocial needs. The management of metastatic disease is complex and depends on patient symptoms, location of the metastases, burden of disease, co-morbidities and other patient factors. Management of the physical complications of metastatic disease involves similar interventions as the management of early-stage disease (pharmacotherapy, surgery, radiotherapy). Many of the resources needed for palliative care already exist within a health system. Additional palliative care needs include supportive care services that can address end-of-life symptom and pain management, as well as psychosocial and spiritual concerns. It is important to recognize that the management of pain, emotional distress and spiritual needs can be a higher priority for some patients than cancer therapies during end-stage treatment.

Table 1. Health system resource allocations: health professional education, patient education, care models and diagnostic testing

	Basic	Limited	Enhanced	Maximal
Health professional education	<ul style="list-style-type: none"> Appropriate use of clinical practice guidelines (CPG) Awareness of complementary and alternative medicine (CAM) used by patients PC pain assessment and management; side effects of pain drugs Skin complications Psychosocial (end-of-life) Spiritual (end-of-life) Health literacy, cultural literacy, communication skills 	<ul style="list-style-type: none"> Appropriate referral to specialists Pain syndromes; referral strategies Emotional/spiritual aspects of death and dying 	<ul style="list-style-type: none"> Palliative care (PC) training for nursing staff In-service PC updates 	
Patient and family education	<ul style="list-style-type: none"> Late-disease risks, complications of advanced disease, PC treatment Pain self-assessment Skin care Psychosocial (end-of-life) Spiritual (end-of-life) 	<ul style="list-style-type: none"> Emotional and spiritual aspects of death and dying Advanced care planning 		
Care models	<ul style="list-style-type: none"> Patient-centered decision making Clinical communication with patient and family (e.g., conferences) Trained PC volunteers Home-based PC with community and family support Hospital-based PC with community and family support 	<ul style="list-style-type: none"> Home-based PC with trained PC nursing support Hospital-based PC with trained PC nursing support Outpatient PC with trained PC nursing support PC consulting services (referrals) Multidisciplinary team approach* 	<ul style="list-style-type: none"> Home-based PC with clinical and hospital back up Outpatient PC with trained PC physicians PC inpatient units PC training center Quality assurance system Interdisciplinary team approach* 	
Diagnostic testing	<ul style="list-style-type: none"> Confirmation tests for metastasis in symptomatic patients 			

Multidisciplinary team approach refers to a patient care model that includes experts from different disciplines, whereas an interdisciplinary team approach requires a more integrated and coordinated approach to patient care where experts from different disciplines establish shared patient care goals.

Note: Patient, family and caregiver education may be the primary intervention for some supportive care services.

Note: The table stratification scheme implies incremental increasing resource allocations at the basic, limited and enhanced levels. Maximal-level resources should not be targeted for implementation in LMICs, even though they may be used in some higher-resource settings.

Source: the 2013 BHGI consensus statements, *Supportive and palliative care for metastatic breast cancer: resource allocations in low- and middle-income countries. A Breast Health Global Initiative 2013 consensus statement* with permission from Elsevier.

Table 2. Supportive care resource allocations: organ-based (site-specific) metastatic disease management

	Basic	Limited	Enhanced	Maximal
Bone metastases	Drug therapy: steroids, nonsteroidal anti-inflammatory drugs (NSAIDs), opioids [e.g., oral and parenteral morphine], co-analgesics Consider spinal cord compression and fractures	Radiotherapy Surgery Routine evaluation for spinal cord compression and fractures	Radioisotopes Bone-modifying agents	Radiofrequency ablation/ cryoablation
Bowel obstruction	Drug therapy: morphine [e.g., oral and parenteral], steroids, laxatives, antiemetics, anticholinergics Nasogastric (NG)-tube	Non-morphine opioids	Venting gastric (G)-tube	Somatostatin analogues
Brain metastases	Drug therapy: analgesics, steroids, antiemetics, anticonvulsants	Whole brain radiotherapy	Stereotactic radiotherapy Surgery	
Liver metastases	Drug therapy: analgesics, steroids, antiemetics, antihistamines		Biliary stents Percutaneous drainage Embolization	Liver resection
Lung metastases	Drug therapy for breathlessness: opioids, anxiolytics and antipsychotics, steroids Thoracentesis Oxygen therapy for hypoxemic patients	Pleurodesis: Thoracotomy, video-assisted thoracic surgery (VATS) Radiotherapy		
Skin metastases/ complications	Wound and skin assessment Drug therapy: analgesics, broad-spectrum antibiotics Simple dressings and skin barriers Activated charcoals; metronidazole Teaching wound dressing to patients and family	Silver nitrate Radiotherapy Debridement surgery	More sophisticated dressing material Calcium alginate for hemostasis Stoma/wound therapy Air mattress, egg-crate mattress	Plastic surgery Vacuum [negative-pressure] wound therapy Mechanical bed

Note: The table stratification scheme implies incrementally increasing resource allocations at the basic, limited, and enhanced levels. Maximal-level resources should not be targeted for implementation in LMICs.

Source: the 2013 BHGI consensus statements, "Supportive and palliative care for metastatic breast cancer: resource allocations in low- and middle-income countries. A Breast Health Global Initiative 2013 consensus statement" with permission from Elsevier.

Table 3. Palliative care resource allocations: pain management and end-of-life care with metastatic disease

	Basic	Limited	Enhanced	Maximal
Pain Management ^a	Pain consideration (simple assessment) Pain drugs, including morphine (basic) Management of pain-related physical symptoms CAM and non-drug pain management	Other pain drugs Radiotherapy (single- and multi-fraction) PT and OT for functional limitations or pain management	Pain screening Pain care plan Opioid pumps, methadone, fentanyl patch Consultation with specialist in pain therapy Surgery (spinal cord compression, fracture, obstruction)	Locoregional anesthesia, spinal analgesia
Psychosocial (end-of-life)	Psychosocial (end-of-life) consideration ^b Patient, family and caregiver education ^c Psychosocial support: community-based Bereavement support: community-based	Patient, family and caregiver education: emotional aspects of death and dying Advanced care planning	Screening and referrals for depression/distress by mental health specialist Psychosocial counseling by mental health specialist Antidepressants Social services for financial, legal and family matters	Psychiatrist-, psychologist- or social-worker-coordinated mental health care
Spiritual (end-of-life)	Spiritual consideration Spiritual support: community-based		Clinical- or hospital-associated spiritual support Hospital or hospice spiritual reflection and meditation space	

Abbreviations: **CAM**, complementary and alternative medicine; **PT**, physical therapy; **OT**, occupational therapy.

^a Pain management should follow the WHO Pain Ladder. Morphine should be available and easily accessible at a basic level of resources.

^b 'Consideration' is a term used in this table to refer to basic patient evaluation through patient-provider interactions, including dialogue, observations, and other appropriate means of evaluation.

^c Patient, family and caregiver education may be the primary intervention for some supportive care services.

Note: The table stratification scheme implies incremental increasing resource allocations at the basic, limited, and enhanced levels. Maximal-level resources should not be targeted for implementation in LMICs, even though they may be used in some higher resource settings.

Source: the 2013 BHGI consensus statements, "Supportive and palliative care for metastatic breast cancer: resource allocations in low- and middle-income countries. A Breast Health Global Initiative 2013 consensus statement" with permission from Elsevier.

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