ADVANCED BREAST CANCER

PALLIATIVE CARE APPROACHES

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Road map

- Introduction
- Palliative care need and their assessment
- Management of site specific metastases
- Loco-regional palliation
- Palliative psychosocial care
- Approach to palliation

Breast cancer presentation







Figure 1 Stage wise distribution at presentation.

Background

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- Approximately 6%–10% of newly diagnosed BC cases are metastatic, whereas 20%–50% of patients with early BC will eventually develop metastatic disease
- Though systemic treatment aims has improved survival in recent years – metastatic breast cancer (MBC) remains an incurable disease
- Hence palliation and supportive care gains importance

Difference between Supportive care and Palliative care

- European association of Palliative Care (EAPC)
- Supportive care is more appropriate for patients still receiving antineoplastic therapy /therapies
- Palliative care has its major focus on patients with far advanced diseases where anti neoplastic therapies have been withdrawn
- WHO –broader definition ; care from diagnosis or at the start of treatment

The BOW-TIE model



Palliative Care need assessment

1. Patient assessment

- disease status, expected disease progression, present functional level, symptoms, current therapies, and anticipated future problems
- Patients understanding of the current situation
- 2. Family assessment
 - Socio-econmic assessment, psychosocial concerns, and the adequacy and availability of supports
- 3. Health care provider assessment
 - Resources available
 - Competence and focus

Management strategies depend on

- Symptoms
- Location of the disease
- Burden of disease
- Tumor characteristics
- Patient factors
- Available treatment modalities
- Resources available



Bone metastases

- Bone is the most common site of recurrence in metastatic breast cancer
- reported in up to 70–80% of patients
- 48% of purely osteolytic, 38% being mixed, and 13% being purely osteoblastic
- Causes
 - bone pain
 - Hypercalcemia
 - pathologic fractures
 - spinal cord compression

Osteolytic vs Osteoblastic

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Bone metastases- management options

- Managing bone pain
 - Analgesics
 - Radiation
 - Surgical interventions
 - Bisphosphonates
 - Radiopharmaceuticals
- Managing established complication of bone Mets
 - Steroids
 - Surgery /radiotherapy
- Preventing complications of bone metastases
 - Bisphosphonates
 - Denosumab

Approach for Bone Management

Imaging for diagnosing bone mets

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lmaging modality	Anatom ic detail	Extent of imaging	Appearance of bone diseases	Diagnostic sensitivity	Diagnostic specificity	Cost
Bone scan	No	Whole body	Hot spots	Varies 62-100%	78-100%	Moderate
Xray	Yes	Local /regional/w hole body	Lytic/sclerotic/m ixed	Low 44-50%	-	Low
CT	Yes	Local/region al	Lytic/sclerotic for bone , higher attenuation for marrow	High 71-100%	-	Moderate
MRI	Yes	Regional	Lower or higher intensity on T1/T2 scans	High 71-100%	High 73-100%	Moderate
PET	No	Whole body	Hot spots	Varies 62-100%	High 96-100%	High

Diagnostic algorithm



Bone metastases- reactive focus model



Bone metastases- proactive model



Bone metastases- role of Surgery/interventions

- Surgery is usually not the primary choice of treatment in bone metastases
- □ The main goals of surgical treatment are
 - **to alleviate the pain**
 - to prevent an imminent fracture
 - to perform an osteosynthesis in cases of a pathological fracture
 - to restore patient mobility and
 - to improve the patient's quality of life.
- surgical intervention for patients with cancer with impending pathologic fractures lead better outcomes than established #

Bone metastases- role of Radiation

The goals of palliative radiotherapy

- pain alleviation
- recalcification and stabilization of the bone
- Minimising the risk of paraplegia

Options of radiotherapy

- Focal radiotherapy
- Hemibody radiation
- Radiopharmaceuticals

Bone metastases- role of Radiation : ASTRO guidelines

Ideal fractionation schedule

- Equivalence of various fractionation schedules; 30Gy/10#, 24Gyin 6#, 20Gy/5# and 8Gy single #.
- Fractionated RT 8% repeat treatment
- Single Fraction -20% repeat treatment
- □ When Single Fraction ?
- Any uncomplicated bone mets
- Spinal vs non-spinal-?

Bone metastases- role of Radiation : DEGRO guidelines

Therapeutic goal: pain reduction

 Single-dose radiotherapy 1 × 8 Gy (cave: > 8 Gy to the myelon may cause paresis; LoE III)

Therapeutic goal: stabilization, good prognosis

- Fractionated regimen preferable, e.g., 10–12 × 3 Gy (LoE IIb)
 Oligometastases
- Full-dose fractionated regimen recommended, e.g., 20–25 × 2 Gy to 40–50 Gy (LoE IIb, III)

Technical aspects

Target volume

- affected part of bone with additional margin (1-2cm)
- soft tissue component if present
- For vertebrae –whole of vertebral body , plus/minus adjacent vertebra
- Surgical clips/metal components of stabilisation to be included
- Technique
 - Most cases simple opposed fields /direct fields
 - Conformal techniques preferable when associated soft tissue component or near vital structures
- Prescription
 - Mid vertebral body

Radiation -generalised bone mets

Hemi body irradiation

- Radionuclide therapy (samarium-153 and strontium-89)
 - For multiple painful mets, greater in number that can be reasonably treated by EBRT
 - most active in areas of bone growth present in osteoblastic metastases
 - pain relief onset of 2- 3 weeks, partial response rates of 55-95%, complete response rates of 5-20%.
 - Side effects : pain flare in 10-40% & self-limiting myelosuppression

Bone metastases- role of bisphosphonates

- Bisphosphonates are an important class of therapeutics in reducing the frequency of skeletal-related events (30%– 40%) and improving bone pain (50%)
- Bisphosphonates inhibit osteoclasts by inducing apoptosis of osteoclasts, and are therefore potent inhibitors of bone resorption



Choice of Bisphosphonates

	Treatm	ent	Cont	rol		Risk ratio	Risk ratio
Study or subgroup	Events	Total	Events	Total	Weight	M-H, fixed, 95%Cl	M-H, fixed, 95%Cl
1.4.1 IV Zolendronate 4 mg							
Kohno 2005	35	114	59	113	8.5%	0.59 [0.42, 0.82]	
Subtotal (95% CI)		114		113	8.5%	0.59 [0.42, 0.82]	•
Total events	35		59				
Heterogeneity: Not app	olicable						
Test for overall effect:	Z = 3.18 (P = 0.0	01)				
1.4.2 IV Pamidronate	90 mg						
Aredia 2000	194	367	263	384	37.0%	0.77 [0.69, 0.87]	-
Subtotal (95% CI)		367		384	37.0%	0.77 [0.69, 0.87]	♦
Total events	194		263				
Heterogeneity: Not app	olicable						
Test for overall effect: 2	Z = 4.30 (P < 0.0	001)				
1.4.3 IV Ibandronate 6	6 mg						
Body 2003	78	154	98	158	13.9%	0.82 [0.67, 1.00]	
Subtotal (95% CI)		154		158	13.9%	0.82 [0.67, 1.00]	•
Total events	78		98				
Heterogeneity: Not app	olicable						
Test for overall effect:	Z = 2.01 (P = 0.0	(4)				
1.4.4 Oral Ibandronat	e 50 mg						
Body 2004	130	287	146	277	21.4%	0.86 [0.73, 1.02]	
Subtotal (95% CI)		287		277	21.4%	0.86 [0.73, 1.02]	•
Total events	130		146				
Heterogeneity: Not app	olicable						
Test for overall effect:	Z = 1.76 (P = 0.0	(8)				
Total (95% CI)		1130		1146	100.0%	0.79 [0.74, 0.86]	•
Total events	548		702			0.10 [0.14, 0.00]	· · · · ·
Heterogeneity: Chi ² = 6	3.06 df =	6 (P =	0 42) 12 =	1%			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Test for overall effect:	Z = 6.05 (P<00	00001)	1 /0			0.2 0.5 1 2 5
Total (95% CI) Total events Heterogeneity: Chi ² = 6 Test for overall effect: 2	548 6.06, df = Z = 6.05 (1130 6 (<i>P</i> = 0.0	702 0.42); l ² = 00001)	1146 • 1%	100.0%	0.79 [0.74, 0.86]	O.2 0.5 1 2 5 Favours treatment Favours control

Existing guidelines

- -

	When to start?	Which bisphosphonate?	When to stop?
ASCO guidelines 2011 ⁷⁰	Breast cancer + radiographic evidence of bone	• IV PAM 90 mg every 3-4 weeks OR	Once initiated, to continue until evidence
	destruction:	• IV ZOL 4 mg every 3-4 weeks OR	of substantial decline in patient's general
	 Lytic disease on x-ray 	 SC DMB 120 mg every 4 weeks 	performance status
	 Abnormal bone scan with CT/MR showing 		
	bone destruction		
	Starting bone modifying agents in women with abnormal		
	bone scan in the absence of bone destruction in		
	X-ray/CT/MR is not recommended.		
International expert panel	MBC + first sign of radiographic evidence of bone	Nitrogen-bisphosphonate	Continue beyond 2 years but always based on
guidelines 2008 ⁶⁶	metastases, even if patient is asymptomatic	 IV preferable (ZOL, IBA, PAM) 	individual risk assessment; should not discontinue
		 PO for patients who cannot or need not 	treatment once SRE occurs
		attend hospital care (CLO, IBA)	

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Metastatic spinal cord compression

Diagnostic steps for suspected MSCC

History with specific focus on

- Beginning of signs and symptoms
- Localization
- Character of pain (dependence on stress, motion and/or position)
- Time course
- Duration of neurologic deficit/back pain/loss of continence Clinical examination
- Neurologic examination (motor/sensory deficits)
- Clinical estimation of level of spinal compression
- Work-up of extent of extraspinal metastases
 Imaging

Targeted according to clinical examination

- MRI (extent; intradural/extradural/intraspinal masses)
- CT (stability; extent of destruction)
- (Conventional X-rays [extent of deformity, stability])



Guidelines for treatment of MSCC

Instability of vertebral column, bony compression and/or paresis/paraplegia

 Immediate (within maximally 24–48 h) surgical intervention and postoperative radiotherapy (LoE IIb)

Spinal cord compression without neurologic deficits

- In ambulatory patients: radiotherapy (LoE IIb)
- In case of analgesia as additional goal: short course of radiotherapy with increased single doses
- In case of remineralization as additional goal: fractionated radiotherapy with conventional single doses

Acute onset of paresis/paraplegia

- Surgical decompression followed by radiotherapy
- Radiotherapy when decompression is not possible (LoE III) Inoperability
- Radiotherapy; choice of fractionation depending on life expectancy (LoE III)

After surgical decompression

Radiotherapy (LoE IIb)

In case of (in-field) recurrence after previous radiotherapy

- Surgery (when possible)
- Reirradiation (using high-precision techniques; LoE IV)

Bone metastases -management

summary

Skeletal Related Event	Management	Effects		
Bone pain	NSAIDs, Opioids	Analgesic effects		
	Bisphosphonates	Inhibition of pathological bone resorption Analgesic effects		
	Denosumab	Inhibition of pathological bone resorption Analgesic effects		
	Radiation	Analgesic effects Tumor shrinkage		
Pathological bone fracture	Surgery	Stabilization of fracture		
	Radiation	Supportive therapy to prevent local recurrence		
	Bisphosphonates	Prophylaxis		
	Denosumab	Prophylaxis		
Spinal cord compression	Steroids	Stabilization of vascular membranes Reduction of inflammation and edema		
	Radiation	Tumor shrinkage effects		
	Surgery	Relief for the compression		
	Bisphosphonates	Prophylaxis		
	Denosumab	Prophylaxis		
Hypercalcemia	Hydration	Promotion of renal calciuresis		
	Loop diuretics	Promotion of renal calciuresis		
	Bisphosphonates	Inhibition of pathological bone resorption		
	Denosumab	Inhibition of pathological bone resorption		

Brain metastases

- Brain metastases in breast cancer patients represent a catastrophic event that portends a poor prognosis,
- median survival 2 to 25.3 months despite treatment
- □ Affects about 20% of patients
- the median time to the development of BM from the diagnosis of primary cancer 30–40 months
- Palliative treatment goals
 - Pain control
 - Improving neurologic function /prevention of deterioration
 - Improving quality of life

Prognostication

Prognosis of Patients With Brain Metastases by Diagnosis-Specific Graded Prognostic Assessment (DS-GPA) Score

Lung Cancer Prognostic Factor Age, years KPS ECM No. of BM	GPA Scoring Criteria 0 0.5 1.0 > 60 50–60 < 50 < 70 70–80 90–1 + n/a - > 3 2–3 1	00 Total Score =	÷	Total Score Lung Cancer 0–1.0 1.5–2.0 2.5–3.0 3.5–4.0	Median Survival Time in NSCLC 3.02 (2.63 to 3.84) 5.49 (4.83 to 6.40) 9.43 (8.38 to 10.80) 14.78 (11.80 to 18.80)	n Months (95% CI) SCLC 2.79 (1.83 to 3.12) 4.90 (4.04 to 6.51) 7.67 (6.27 to 9.13) 17.05 (4.70 to 27.43)
Melanoma Prognostic Factor KPS No. of BM	GPA Scoring Criteria 0 1.0 2.0 < 70 70–80 90–1 > 3 2-3 1	00 Total Score =	÷	Melanoma 0–1.0 1.5–2.0 2.5–3.0 3.5–4.0	3.38 (2.53 to 4.27) 4.70 (4.07 to 5.39) 8.77 (6.74 to 10.77) 13.23 (9.13 to 15.64)	
Breast Cancer Prognostic Factor KPS Subtype Age, years	GPA Scoring Criteria 0 0.5 1.0 ≤ 50 60 70–8 Basal n/a Lum ≥ 60 < 60 n/a	1.5 2.0 0 90–100 n/a A HER2 LumB n/a n/a Total Score =	÷	Breast Cancer 0–1.0 1.5–2.0 2.5–3.0 3.5–4.0	3.35 (3.13 to 3.78) 7.70 (5.62 to 8.74) 15.07 (12.94 to 15.87) 25.30 (23.10 to 26.51)	
Renal Cell Carcinoma Prognostic Factor KPS No. of BM	GPA Scoring Criteria 0 1.0 2.0 < 70 70–80 90–1 > 3 2–3 1	00 Total Score =	÷	Renal Cell Car 0–1.0 1.5–2.0 2.5–3.0 3.5–4.0	rcinoma 3.27 (2.04 to 5.10) 7.29 (3.73 to 10.91) 11.27 (8.80 to 14.80) 14.77 (9.73 to 19.79)	
GI Cancers Prognostic Factor KPS	GPA Scoring 0 1 2 < 70 70 80	Criteria <u>3 4</u> 90 100 Total Score =	→	GI Cancers 0-1.0 1.5-2.0 2.5-3.0 3.5-4.0	3.13 (2.37 to 4.57) 4.40 (3.37 to 6.53) 6.87 (4.86 to 11.63) 13.54 (9.76 to 27.12)	

- Symptomatic and supportive
 - Corticosteroids
 - Anti epileptics
 - Anticoagulation
- Local therapy
 - Surgical resection
 - Whole brain radiotherapy
 - SRT/SRS
- Systemic therapy
 - Chemotherapy and biologics

Symptomatic and supportive

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Corticosteroids

- Improve neurologic symptoms in up to 75% of patients with cerebral edema
- Dexamethasone is the corticosteroid of choice
- 4 to 8 mg is as good as 16mg per day
- 4 to 8mg per day in two divided doses- initial choice
- Higher doses if symptom not relieved within 48 hrs.
- No specific role in asymptomatic except to prevent radiation induced edema

Symptomatic and supportive

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- AEDs are indicated in the approximately 25% of patients who present with seizures
- No role of prophylactic AEDs
- In patients undergoing resection, short term prophylactic AED reduces risk of post op seizures by 40-50%
- Anticoagulation therapy
 - Can be safely given for patients with venous thromboembolism and brain Mets going for surgery

Multiple brain metastases

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Multiple brain metastases-initial management							
Prognostic category (^a)	Other features	Treatment options	Cli	Clinical benefit			
		(evidence grade) references		LC	WB control	Neurocognition	
Good prognosis Expected survival 3 mo or more	All brain metastases ≤3-4 cm ^b	 Radiosurgery and WBRT (level 1)^{51,53} Radiosurgery alone^{23,54} (level 1) WBRT (level 1)^{59,85} 		111		/	
Good prognosis	Brain metastasis/ metastases causing significant mass effect ^c	• Safe surgical resection of the brain metastasis/metastases causing significant mass effect and postoperative WBRT (level 3) ^{25,b}		-			
Expected survival 3 mo or more		• WBRT (level 3) ^{59,85}		-	-		
Poor prognosis Expected survival less than 3 mo		 WBRT (level 3)^{59,85} Palliative care without WBRT (level 3)^{59,85} 		-	-		

KPS, Karnofsky performance status; LC, local control; S, survival; WB, whole brain; WBRT, whole brain radiotherapy.

WBRT

- □ Goals of treatment
 - Response
 - palliation of symptoms
 - Brain only RFS
- □ Response (clinical and radiological)-> 50%
- □ Palliation > 60%

local therapy

- - the most frequently used treatment for multiple BM and improves neurologic symptoms and median survival, from 1 to 2 months without WBRT to 3 to 6 months with it.
 - multiple BMs, oligometastases with poorly controlled systemic disease, Large oligometastases
 - Re-irradiation after late WBRT failure
 - after surgery or SRS

Hippocampal sparing WBRT



- New neurons generation subgranular zone of hippocampal dentate gyrus
- Dose respose realtionship between dose to hippocampus and decline of of episodic memory
- IMRT –available technology
- Phase II study-hippocampal sparing leads to memory preservation
- Phase III trial NRG oncology CC001.

Leptomeningeal metastases

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- Diffuse or multifocal involvement of the subarachnoid space
- Poor prognosis- median overall survival <4 months
- Presents with focal /multifocal neurological signs/symptoms
- M/c –headache, cranial nerve palsies, radicular pain
- Gadolinium enhanced MRI –leptomeningeal enhancement in T1+C, often scattered over the brain in a '<u>sugar coated</u>' manner
- Gadolinium –enhanced MRI +ve in almost 50% with clinical findings & 60% in CSF negative patients



focal nodular enhancement and thickening on cerebellar follia

Leptomeningeal metastases

- CSF cytology is less sensitive but more specific
- CSF analysis
 - ↑pressure, ↑protein
 - Jglucose, Lymphocytic pleocytosis
- serial CSF study increases sensitivity



Liver metastases

Living with liver metastases

- Basic management of liver metastases includes pain control with analgesics and steroids, anti-emetics and antihistamines for nausea or pruritus.
- Biliary stents and percutaneous drainage foer obstructive jaundice
- Tumor embolization
- Liver resection

Liver metastases management approach



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Lung metastases

- Lung metastasis is common in recurrent /metastatic breast cancer -upto 71% in autopsy series
- cause respiratory compromise by
 - direct effect of the metastases on lung tissue
 - airway obstruction
 - from pleural effusion
- Although surgical resection may prolong survival it is not recommended
- Management
 - opioids, anxiolytics, antipsychotics & steroids
 - Radiotherapy for haemoptysis and obstruction

Malignant pleural effusion

- Malingnant Pleural effusion implies terminal stage of the disease
- MPE –av survival 6-36 months
- M/c symptoms dyspnoea /breathlessness
- Local plus systemic therapy improves survival then systemic alone
- Goals of treatment
 - Removal of fluid
 - Prevent re –accumulation

Malignant pleural effusion – mangement strategies

- Nonsurgical interventions
 - Repeated thoracentesis
 - Low success
 - Suboptimal quality of life
 - TIPC/IC drainage
 - Improve symptoms
 - Spontaneous pleurodesis in 50%
 - Increased risk of infection
 - Potential Nutritional loss
 - Chemical Pleurodesis –asbestos free talc
 - Safe and effective (97% success)
 - Recommended for those with >6 months survival
 - May develop fatal complications Palliative approaches: ICRO BREAST CANCER : 2019





Malignant pleural effusion – mangement strategies

- Surgical interventions
 - VATS technique

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- Helps identifying candidates for complete lung expansion and pleurodesis
- VATS decortication removal of the pleura or part of it by thoracoscopic ports



Initial success rate of 90%

Reports of survival of 17 months Palliative approaches: ICRO BREAST CANCER : 2019



Breathlessness- other causes

Underlying cause	Potential treatment
Anemia	Blood transfusion
Acidosis	HCO ₃
Bronchospasm	Bronchodilator therapy
Pneumonia	Antibiotic therapy
Pulmonary embolus	Anti-coagulate
Pneumonitis	Steroids
Atrial fibrillation	Anti-arrhythmic
Congestive cardiac failure	Diuretic
Pericardial tamponade	Drainage
Pleural effusion	Thoracentesis
Endobronchial tumor	Endobronchial laser
Extrinsic compression of bronchus	Radiotherapy
Carcinomatous lymphangitis	Steroids (anecdotes only)
Lung metastases	Chemotherapy/hormonal therapy

Bowel obstruction

Physiopathology of MBO

Factors directly related to intra-abdominal tumor growth Extrinsic intestinal compression Endoluminal intestinal obstruction Intramural intestinal infiltration Infiltration of the mesenterium and plexus Factors not directly related to intra-abdominal tumor growth Paraneoplastric neuropathy Chronic constipation Opioid-induced intestinal dysfunction Adynamic ileum Inflammatory intestinal disease Renal insufficiency/dehydratation Mesenteric thrombosis Postsurgical adherences Radiogenic fibrosis

Bowel obstruction



- Deterioration general, metabolic and hemodynamic status
- Diaphragmatic elevation: ventilatory restriction

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Bowel obstruction –management options

- GI decompression
- Surgery
- Endoscopic Palliation and stenting
- Percutaneous endoscopic gastrostomy
- Parenteral nutrition
- Pharmacological treatments
 - Morphine
 - Antiemetics
 - Anti secretory drugs
 - Corticosteroids
 - Octeotride



Management of locoregional issues /complications

Fungating lesions

- Chronic pain
- Malodorous discharges
- Bleeding
- Exudative secretions
- Frequent infections
- Maggots

Implications

Physical Psychological Social

Assessment guide for Malodour

Strong

Odour is evident on entering the room (2–3 metres from the patient) when the dressing is intact

Moderate

Odour is evident on entering the room (2–3 metres from the patient) when the dressing is removed

Slight

Odour is evident at close proximity to the patient when the dressing is removed

No odour

No odour is evident, even at the patient's bedside, when the dressing is removed

Malodor -Local care

Synthesis of Evidence Regarding the Topical Treatment of the Fetid Odor of MFWs $(n=11)$					
Topical Intervention	Citations in Studies, $n \ (\%)^a$	Highest Level of Evidence Achieved	Highest Grade of Recommendation Achieved		
Metronidazole	10 (50)	2b	В		
Mesalt [®] dressing	1 (5)	2b	В		
Curcumin ointment	1 (5)	2c	В		
Activated carbon dressing	2 (10)	2c	В		
Topical arsenic trioxide	1 (5)	4	С		
Essential oils	4 (20)	4	С		
Green tea extract	1 (5)	4	С		
Hydropolymer dressings	1 (5)	4	С		
Antiseptic solutions	1 (5)	5	D		
Hydrogels	1 (5)	5	D		
Debridement enzymes	1 (5)	5	D		

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Malodor -Local care

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- Malodor causes social embarassment for the patient and her family and can be psychologically devastating
- The mainstay of treatment include anticancer therapy, local wound care and local therapy like radiation and surgery.
- Palliative care with highest level of evidence includes
- metronidazole
- mesalt dressing
- activated carbon dressing
- and curcumin ointment

Surgery

- Rationale
 - A reduction in the number of cancer cells/resistant clones
 - debulking
 - Immunocmpetency
 - Palliation
- Disadvantages
 - Accelerated regrowth or relapse- release on angiogenic factors and growth factors
 - Complications
- local treatments to palliative management of uncontrolled local and/or regional disease –toilet mastectomy
- bulk of retrospective data suggesting the importance of local treatment of primary tumor in non-oligometastatic breast cancer Palliative approaches: ICRO BREAST CANCER : 2019

Surgery for fungating wounds



Outcomes

Management and Reconstruction in the Breast Cancer Patient With a Fungating T4b Tumor

Aditya Sood, MD, MBA, Lily N. Daniali, MD, Kameron S. Rezzadeh, BA, Edward S. Lee, MD, and Jonathan Keith, MD

			n (%)
Variable	<i>n</i> (%)	Surgical site at 6-wk follow-up	
Location of first presentation		Healed Open wound requiring dressings	7 (58)
Emergency department	3 (25)	Not reported	2 (17)
Charity care clinic/community clinic	7 (58)	Postoperative pain palliation	
Private office	2 (17)	Reduced pain	9 (75)
Chief complaint on presentation		Persistent or increased pain	2 (17)
Open wound and/or skin involvement	12 (100)	Not reported	1 (8)
Pain	8 (66)	Postoperative wound palliation	
Malodorous drainage	3 (25)	Improved wound qualities (odor, drainage)	10 (84)
Breast mass increasing in size	3 (25)	Unimproved wound qualities	1 (8)
		Not reported	1 (8)
		Adjuvant therapy	
		Chemotherapy	4 (33)
		Radiation	1 (8)



Breast surgery for metastatic breast cancer (Review)

Tosello G, Torloni MR, Mota BS, Neeman T, Riera R



Radiotherapy for fungating wounds

- Numerous observational and single arm studies
- palliative radiation has a high response rate and is associated
- with a median local progression-free survival of 10 months.
- linear correlation between tumor dose and local control such that a 15 Gy increase in dose potentially increases local control by twofold.
- Best control rates with doses above 30Gy
- most prevalent fractionation scheme is 30 Gy in 10
- fractions- though wide variation; single fraction to upto 30 # are reported
- Tangential beam most commonly used , though VMAT for complex volumes

Palliation achieved

Original Article

Palliative radiotherapy for breast cancer patients with skin invasion: a multi-institutional prospective observational study

Naoki Nakamura^{1,2,*}, Jiro Kawamori², Osamu Takahashi³,

Malodor scores

Pain scores



Pain management

Assessment of pain

Evaluating the cause of pain
 FREEDOM FROM PAIN



Pain management –modified ladder



Pain management –modified ladder

Intrathecal opioids (tunneled catheters, implantable pumps) Peripheral neurodestruction (alcohol/phenol blocks,

radiofrequency procedures, etc.)

Spinal cord or peripheral nerve stimulation

Psychological counseling

± Nonopioid analgesics

± Adjuvant therapy

Considered in patients who failed all nonsurgical treatment options or developed severe side effects from conventional opioid therapy and have life expectancy more than 3 months

Central neurodestructive procedures (rhizotomy, ganglionectomy, cordotomy, myelotomy, tractotomy, thalamotomy, etc.) Operations on limbic system (cingulotomy) Psychological counseling ± Intrathecal opioids ± Adjuvant therapy Rarely used nowadays but may be still considered if all other treatment modalities fail particularly in patients with life expectancy less then 3 months

Palliative psychosocial care

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

	Basic	Limited	Enhanced	Maximal
Pain Management ^a	Pain consideration ^b (simple assessment) Pain drugs ^a , including morphine (basic) Management of pain-related physical symptoms CAM and non-drug pain management	Other pain drugs ^a 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 (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 ^c : emotional aspects of death 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 ^b Spiritual support: community based		Clinic or hospital associated spiritual support Hospital or hospice spiritual reflection and meditation space	

Evaluation and management of common psychological symptoms

Anxiety

Anxiolytic pharmacotherapy

- Benzodiazepines and nonbenzodiazepine anxiolytics
- Nonpharmacological interventions
 - Supportive psychotherapy and behavioral interventions
- Depression
 - Pharmacological
 - SSRI third generation preferred (venlaflaxine /trazodone)
 - TCA for those suffering from agitation
 - Psychostimulants –methylphenidate (rapid action)
 - Non pharcmacological
 - supportive psychotherapy, cognitive-behavioral techniques
- Existential suffering

Conclusion

- Patients with advanced breast cancer and their families have complex needs, which, when unmet, can result in severe distress and undermine their quality of life.
- The management depends on patient symptoms, location of the metastases, burden of disease, co-morbidities and other patient factors along with resource availability
- Management of the physical complications of metastatic disease involves similar interventions as the management of early-stage disease
- 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
- Optimizing and individualizing therapy requires the full engagement of an interdisciplinary approach to palliative care with strong emphasis on the assessment of needs and anticipated needs