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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Title | Authors | Year | Country | Journal | Population | Study design | Aim | Palliative intervention | Main findings |
| Palliation and breast cancer | Cheng-Har Yip  | 2017 | Malaysia | Journal of Surgical Oncology | - | Review | To determine the importance of palliative surgery | PS | * In LMIC there is a greater number of patients with MBC who present large ulcerated lesions, in these cases a palliative mastectomy is required.
* The best palliative is a "toilet mastectomy" with or without axillary dissection.
 |
| Outcome and feasibility of palliative chemotherapy in very elderly patients with metastatic breast cancer | Audrey J. C. Overgaauw et al. | 2019 | Holland | The Breast Journal | 54 patients with MBC | Retrospective, cross-sectional | To retrospectively analyze the outcome and feasibility of palliative chemotherapy in elderly patients with MBC. | PCT | * In selected MBC patients aged 75 years or older, single-agent palliative chemotherapy is feasible and may have clinical benefit.
 |
| Transition to exclusive palliative care for women with breast cancer | Audrei Castro TellesPaulo; et al. | 2021 | Brazil | Revista Brasileira de Enfermagem | 28 health professionals | Qualitative | To analyze the perspectives that touch the process of transition to palliative careExclusive to women with breast cancer | Transition to PC | * The transition process was considered abrupt and originated from a fragmented structure, from a patterned routine in the dynamics of transfers between units.
* In general, women and family members resist referral because they do not know the PC.
 |
| A Case for Palliative Care of Cancer Patients | Martha Johnson-Scott | 2019 | USA | Journal of Palliative Medicine | 1 patient with MSC | Case report | - | - | * Cancer can be a comfortable and straightforward way to die, if one chooses comfort over cure.''
 |
| Patterns of Palliative Radiotherapy Utilization for Patients with Metastatic Breast Cancer in Harare, Zimbabwe | Melinda Mushonga, et al. | 2021 | Zimbabwe | JCO global oncology | 351 patients with breast cancer | Retrospective cohort | To report patterns of palliative use of RT for patients with MBC in a resource-limited setting in sub-Saharan Africa with access to RT from the public sector. | PRT | * PRT is rapid, inexpensive, and offers effective relief of focal symptoms of breast cancer metastases.
 |
| Palliative Local Surgery for Locally Advanced Breast Cancer Depending on Hormone Receptor Status in Elderly Patients | Hong Pan, et al | 2019 | USA | Clinical Breast Cancer | 2,616 women with breast cancer aged 70 and over | Cross | To determine the survival effect of palliative local surgery without definitive axillary surgery for LABC in elderly patients. | PS | * For elderly patients diagnosed with LABC, who are not candidates for standard therapies, mastectomy should be recommended as palliative therapy.
 |
| The will to live – breast cancer patients perceptions’ of palliative chemotherapy | Jenny Bergqvist &Peter Strang | 2017 | Stockholm | Acta Oncologia | 20 women on at least their second PCT line | Qualitative | To investigate the motives, perceptions, and experiences of breast cancer patients regarding the latest lines of palliative cancer treatment. | - | * All the women knew they had disseminated breast cancer, still expressed hope for cure, therefore death was more of a threat than a reality of imminent death.
 |
| The value of embedding: integrated palliative care for patients with metastatic breast cancer | M. Rabow, et al | 2017 | USA | Breast Cancer Research and Treatment | 578 patients with MBC | Cross | To assess referral patterns to specialized integrated PC service | - | * Integrated PC was well received by patients and oncologists, increased early PC referrals, and improved EOL care.
 |
| Palliative care delivery according to age in 12,000 women with metastatic breast cancer: Analysis in the multicentre ESME-MBC cohort 2008-2016 | Matthieu Frasca, et al. | 2020 | USA | European Journal of Cancer | 12,375 patients | Cross | To evaluate the cumulative incidence function of CNI delivery, as well as the influence of age. | - | * We found a low cumulative incidence of hospital PC and that age influenced the delivery of PC.
* Younger triple-negative and older non-triple-negative patients needed more PC in the short term.
 |
| The Shady Pink Elephant: End of Life Education for Young Women Affected by Breast Cancer | Jean Rowe & Tara Schapmire | 2018 | USA | Journal of Cancer Education | 36 women with breast cancer | Quasi-experimental trial | To assess the impact of The Shady Pink Elephant EOL educational series on participants' knowledge, attitudes and behaviors towards palliative care and EOL wishes | - | * The Shady Pink Elephant EOL educational series improved some aspects of the PC, after the intervention, the belief that palliative care is only for those in EOL, the belief that EOL discussions are only important for those in EOL, improved.
 |
| Retrospective analysis of the prevalence of specialised palliative care services for patients with metastatic breast cancer | Eva Maria Jäger, et al. | 2020 | Austria | ESMO Open | 932 patients | Cross-sectional, retrospective | To evaluate the referral strategy and the level of integration of MBC patients to SPC services | SPC | * Patients who received SPC lived significantly shorter than patients who were not referred to SPC services.
* Referral was often too late
 |
| Optimal Supportive Care for Patients with Metastatic Breast Cancer According to Their Disease Progression Phase | Kumiko Kida, et al. | 2021 | USA | JCO Oncolgy Practice | - | Review | To provide a practical guide for oncologists to understand supportive care priorities for patients with MBC |  | * The best time for advance care planning should be at the beginning of the MBC diagnosis using a multidisciplinary approach
* The integration of oncology and palliative care is crucial.
* Availability of a palliative oncologist with dual training in both palliative care and oncology.
 |
| Quality of life of women living with metastatic breast cancer and receiving palliative care: A systematic review | Sigrunn Drageset, et al | 2021 | Norway | Health care for women international | - | Review | To explore the quality of life of women living with MSC and receiving PC. |  | * Women with MBC need PC, but this was only partially offered. Typically, only treatments to prolong life and alleviate physical symptoms were offered.
 |
| Exploring Yamatji perceptions and use of palliative care: an ethnographic study | Melanie Dembinsky | 2014 | Australia | International Journal of Palliative Nursing | 28 interviews with doctors, patients, caregivers and families | Qualitative, ethnographic | To analyze their perceptions and use of palliative care services. |  | * Yamatji breast cancer patients underutilize PC services.
* Misperceptions about what PC implies, cultural and structural barriers to the adequate provision of services, and the inflexibility of institutionalized death.
 |
| Attitudes towards palliative care in primary metastatic cancer: a survey among oncologists | Katharina A Kierner, et al. | 2010 | Austria | Wiener klinische Wochenschrift | 785 oncologists | Cross | To assess attitudes towards palliative care in primary metastatic cancer |  | * Oncologists differ widely in their attitudes toward PC
* Most oncologists would engage PC services when the patient's Karnofsky Index (KI) was < 50, and Hospice services when the KI was < 40.
* The reasons for not involving PC, among others, "fear of destroying the patient's hopes".
* Only 25% discussed an advance directive.
 |
| Palliative radiotherapy for women with breast cancer | B Danielson 1, et al. | 2008 | Canada | Clinical oncology | 1,906 women died from breast cancer between 2000 and 2004 | Cross-sectional, Retrospective | To measure the use of PRT for women who have died of breast cancer in the Canadian province of Alberta and to identify factors that might affect this use. | PRT | * Factors associated with not receiving PRT for women living outside of cities with radiation therapy facilities were: age >75 years, community size >10,000, median income <$47,000, and RHA residence.
* For women living in cities with radiotherapy facilities, only age was significant.
 |
| Surgery for palliation and treatment of advanced breast cancer | Michael Alvarado, et al. | 2007 | USA | Surgical oncology | - | Review | - | PS | * Surgery continues to play a key role in the local control of advanced breast cancer as an effective palliative treatment for the pain, bleeding, infection, and foul-smelling drainage that can accompany locally advanced breast cancer.
 |
| Palliative care in the elderly breast cancer patient | B J A Laird 1, M T Fallon | 2009 | UK | Clinical oncology | - | Review | - | - | * Palliation of breast cancer in the elderly differs from that of younger patients due to physical and sociodemographic issues.
* Inefficient pain management due to other comorbidities (osteoarthritis)
* Older cancer patients are also less likely to report pain.
* End of life care; dignity therapy
 |
| Hospice utilization and end-of-life care in metastatic breast cancer patients at a comprehensive cancer center | Tracey L O'Connor, et al. | 2015 | USA | Journal of Palliative Medicine | 182 patients with deaths from breast cancer | Cross-sectional, Retrospective | To examine palliative care utilization, patient status at admission, and quality of care for patients treated for metastatic breast cancer | - | * 33% died without referral to hospice.
* Only 7% of patients who died without referral had a documented discussion of palliative care as a treatment option.
* Patients referred for palliative care were significantly more likely to have an advance directive and to die at home.
 |
| Optimisation of the continuum of supportive and palliative care for patients with breast cancer in low-income and middle-income countries: executive summary of the Breast Health Global Initiative, 2014 | Sandra R Distelhorst, et al. | 2015 | USA | The Lancet Oncology | - | Review | - | - | * Poor use of morphine in LMIC for pain management
* Palliative care and supportive care
* Poor use of morphine
* PC and health system support resources must be available to manage treatment-related side effects.
 |
| Breast Cancer Patients' Preferences for Truth Versus Hope Are Dynamic and Change During Late Lines of Palliative Chemotherapy | Jenny Bergqvist, et al | 2019 | Sweden | The Journal of Pain and Symptom Management | 20 women with metastatic breast cancer | Qualitative | To explore the preferences and perceptions of breast cancer patients about doctor-patient communication regarding the latest PCT continuous lines |  | * Women's preferences for truth versus hope in doctor-patient communication changed over time, increasing the risk of continued late lines of palliative chemotherapy.
* Clinicians need to individualize information, help patients find meaning in their lives, and allow hope to endure without more chemotherapy.
 |
| QOL-enhancing surgery for patients with HER2-positive metastatic breast cancer | Masaya Kai, et al. | 2019 | Japan | BMJ supportive & palliative care | 2 patients | Case report | To describe two cases of patients with stage IV HER2-positive breast cancer who underwent palliative mastectomy. | PS | * Local tumor control through palliative mastectomy was beneficial for aggressive symptomatic patients with HER2-positive breast cancer to improve their quality of life.
 |
| Palliation of Ulcerative Breast Lesions with Radiation | Prashant Vempati, et al. | 2016 | USA | Anticancer Research | 13 patients | Cross-sectional, Retrospective | To evaluate the role of PRT in the treatment of ulcerative breast lesions. | PRT | * PRT is an effective treatment for ulcerative breast cancer with minimal toxicity.
* Prior RT should not be a contraindication.
 |
| The role of a community palliative care specialist nurse team in caring for people with metastatic breast cancer | Maria Leadbeater | 2013 | UK | International Journal of Palliative Nursing | 113 people with breast cancer | Cross | To establish the role of the CPCSNEquipment to determine the disease trajectory of thisGroup of patients and identify any gaps in care | - | * Patients are referred late in their disease, often in the last weeks or months of life or when treatment is no longer available.
* The main reason for referral was for emotional support and symptom management.
 |
| The use of palliative radiotherapy in the management of breast cancer | E.J. Maher | 1992 | UK | European Journal of Cancer | - | Revision | - | PRT | * 8 to 12 Gy is the largest single dose tolerated by a mean palliative volume without unacceptable acute effects, eg, nausea and vomiting.
 |
| Depression symptoms and health-related quality of life among patients with metastatic breast cancer in programme of palliative cancer care. | Slovacek L; et al. | 2009 | Czech Republic | Neoplasma | 41 patients with metastatic breast cancer in palliative care program | Local and cross-sectional prospective | To assess the incidence and relevance of depression symptoms and the level of health-related quality of life (hrqol) among patients with metastatic breast cancer in a cancer palliative care program. | - | * The incidence of depression was 61%
* The HRQoL of patients with metastatic breast cancer is at an incredibly low level.
* There is still a clear association between metastatic breast cancer in a cancer palliative care program and depression.
 |
| Pattern of care at the end of life: does age make a difference in what happens to women with breast cancer? | Bruno Gagnon, et al. | 2004 | Canada | Journal of Clinical Oncology | 2,291 were classified as dying of breast cancer | Cross-sectional, Retrospective | To define to what extent women who die of breast cancer have access to palliative care. | - | * Only 6.9% of the women died at home, while 69.6% of them died in acute care beds.
* Younger women were less likely to receive PC.
* Women 70 years or older were more likely to receive PC.
 |
| Palliative care: a case study and reflections on some spiritual issues | Jillian Ireland | 2013 | Scotland | British Journal of Nursing | 1 patient | Case report | To discuss the need to systematically evaluateSpiritual needs and not be guided, in this case, by theEvident religious focus of the patient. | - | * The problem for the nurses lay in the feeling that it was difficult to discuss possibilities other than a cure.
* His religion encouraged denial of the possibility of death.
* Importance of spirituality as part of the PC.
 |
| Low dose reirradiation in combination with hyperthermia: A palliative treatment for patients with breast cancer recurring in previously irradiated areas | J. van der Zee, at al | 1988 | Holland | International journal of radiation oncology, biology, physics | 97 patients with recurrent breast cancer in a previously irradiated area (mean dose 44 Gy) | Cross-sectional, Prospective | - | reRT + HT | * Reirradiation with 8 x 4Gy in combination with twice weekly hyperthermia is a safe, effective, and well-tolerated method of palliative treatment.
 |
| [Medroxyprogesterone Acetate as Part of Palliative Care for Terminal-Stage Breast Cancer Patients--A Report of Two Cases] | Akiko Okamoto, et al. | 2016 | Japan | Gan To Kagaku Ryoho | 2 cases | Case report | - | - | * Their appetite and quality of life improved, and the patients became more active than when they had been on aggressive anticancer treatment.
* MPA may be a good option as part of palliative care.
 |
| Emerging breast cancer epidemic: impact on palliative care | Anne Merriman | 2010 | Uganda | Breast Cancer Research | - | Opinion article | - | - | * Pain, symptoms, and psychosocial, cultural, and spiritual issues are paramount in the care of these women.
* Morphine prescribing nurses
* We train people from Uganda and other African countries up to degree level in palliative care.
 |
| The importance of family caregiving to achieving palliative care at home: a case report of end-of-life breast cancer in an area struck by the 2011 Fukushima nuclear crisis: A case report | Akihiko Ozaki, et al. | 2017 | Japan | Medicine | 1 case | Case report | - | - | * Importance of the family to achieve the PC at home.
* Importance of communication between the medical team and the family.
 |
| Palliative chemotherapy for breast cancer: A population-based cohort study of emergency hospital admissions and place of death | Chloe J Bright, et al. | 2022 | UK | European journal of cancer care | 10,966 women treated with PCT | Cross-sectional, Retrospective | To examine the association between the use of CTX towards the end of life in patients with breast cancer and the results | PCT | * CTX towards the end of life is associated with higher odds of unplanned hospital admissions and hospital death
 |
| Activity and tolerability of a combined palliative chemotherapy with mitomycin C, folinate, and 5-Fluorouracil in patients with advanced breast cancer after intensive pretreatment: a retrospective analysis | Michael H R Eichbaum; Anne, et al. | 2007 | Germany | American Journal of Clinical Oncology | 76 patients with metastatic breast cancer | Cross-sectional, Retrospective | To assess the activity and toxicity of a combination chemotherapy containing mitomycin, folinate, and 5-fluorouracil (MiFoFU) in patients with advanced MSC and reduced performance status. | PCT | * MiFoFU combination chemotherapy is a well-tolerated treatment option in palliative therapy for patients with metastatic breast cancer.
 |
| 186Re-etidronate in breast cancer patients with metastatic bone pain | S H Han, et al | 1999 | Holland | The Journal of Nuclear Medicine | 24 patients with advanced breast cancer and bone pain | Cross | To assess the efficacy of 186Re-1,1-hydroxyethylidene diphosphonate (etidronate) in breast cancer patients with painful bone metastases. | RF | * 186Re-etidronate showed a 58% response in the palliative treatment of metastatic bone pain derived from breast cancer
 |
| Effective palliation of advanced breast cancer with weekly low dose epirubicin | W G Jones | 1989 | UK | European Journal of Cancer & Clinical Oncology | 56 patients | RCT phase II | To assess palliation of advanced breast cancer with weekly low-dose epirubicin | PCT | * Epirubicin is a single agent active in breast cancer.
* Because this weekly low-dose approach was so well tolerated, yet effective, useful palliation was achieved in this group of patients.
 |
| Hospice use by older women dying with breast cancer between 1991 and 1996 | Nuha A, at al. | 2003 | USA | Journal of palliative care | 25,161 women | Cross-sectional, Retrospective | To assess the use of palliative care by women dying of breast cancer based on time, geographic area, and patient characteristics. | - | * Only 20.7% enrolled in a hospice before they died.
* Use of PC was inversely proportional to age
* Younger women chose hospice care more than older women. Married women used hospice services more than single women.
 |
| Randomized Trial of a Palliative Care Intervention to Improve End-of-Life Care Discussions in Patients With Metastatic Breast Cancer | Joseph A Greer, et al. | 2022 | USA | Journal of the National Comprehensive Cancer Network | 120 women with MBC | RCT | To determine the effect of a structured PC intervention on the documentation of eol care discussions in the electronic health record (EHR). | - | * IG patients were more likely to report discussing their EoL care wishes with their physician and to receive PC services compared with usual care patients.
* The PC intervention significantly improved rates of discussion and documentation regarding EoL care and hospice service delivery among patients with MBC
 |
| Radical surgery for advanced and recurrent breast cancer. | Sweetland HM; et al. | 1995 | UK | Journal of the Royal College of Surgeons of Edinburgh | 5 women (21 with advanced disease, 14 with recurrent disease) | Cross | - | PS | * Radical mastectomy with replacement of the chest wall defect with a myocutaneous flap is an effective palliation method.
 |
| Bilateral approach of redistributed subclavian arterial infusion chemotherapy for locally advanced breast cancer spreading to the contralateral chest wall. | Koike Y; et al. | 2012 | Japan | Acta radiologica | 2 patients with advanced breast cancer | Case report | To report on the use of a catheter port system technique called redistributed subclavian arterial infusion (CMF) chemotherapy. | PCT | * When advanced breast cancer has spread to the contralateral chest wall, bilateral RESAIC may be useful for local control or palliation.
 |
| Palliative radiotherapy delivery by a dedicated multidisciplinary team facilitates early integration of palliative care: A secondary analysis of routinely collected health data. | Fairchild A; et al. | 2022 | Canada | Journal of medical imaging and radiation sciences | 194 patients | Cross-sectional, Retrospective | To estimate the proportion of patients dying with breast cancer seen in office for PRT, and the interaction between PRT delivery and SPC referral | PRT | * 11.3% received neither PRT nor SPC
* Fewer patients with advanced breast cancer who received PRT required an SPC consultation.
 |
| Treatment of advanced breast cancer with megestrol acetate after therapy with tamoxifen | M B Ross, et al. | 1982 | USA | Cancer | 49 patients | RCT | To determine the efficacy of megestrol acetate in the treatment of metastatic breast cancer in patients who initially respond and subsequently become refractory to tamoxifen. | PHT | * Megestrol acetate is an effective agent to palliate advanced breast cancer that relapses after response to tamoxifen treatment.
 |
| Palliative Chest Wall Reconstruction | Eric Vandeweyer, et al | 2000 | USA | Journal of pain and symptom management | 7 patients | Letter to the editor | To describe some cases of palliative reconstruction of the chest wall. | PS | * SP should be considered for patients presenting with debilitating disease-related symptoms.
* Surgery may be necessary to help patients enjoy life in the limited time they have left.
 |
| [Case report - interprofessional teamwork in palliative care] | Cristian Camartin | 2012 | Germany | Therapeutische Umschau. Revue thérapeutique. | 1 patient | Case report |  | - | * Pillars of PC: Symptom treatment, decision making, network building and family care.
* Importance of the multidisciplinary team in the palliative approach.
 |
| Living life in my own way--and dying that way as well | Amy Berman | 2012 | USA | Health Aff (Millwood) | 1 patient | Case report |  | - | * Importance of patient participation in decision-making regarding cancer treatment.
* Treat the patient not the disease
* Importance of an interdisciplinary palliative approach
 |
| [Palliation in patients with metastatic breast cancer often better with antitumour treatment than with only symptomatic treatment] | Soetekouw PM; et al. | 2007 | Germany | Nederlands tijdschrift voor geneeskunde | 2 patients | Case reports |  | - | * It is important to know the several types of therapy in metastatic breast cancer because palliative treatment is more than just symptomatic treatment.
 |
| Cross-over comparison of tamoxifen and aminoglutethimide in advanced breast cancer. | Harvey HA; et al. | 1982 | USA | Cancer Research | 66 postmenopausal patients with advanced breast cancer | Cross |  | PHT | * Tamoxifen and aminoglutethimide used sequentially are effective forms of palliative hormone therapy in metastatic breast cancer.
 |
| Palliative chemotherapy with CMF after the same adjuvant regimen for breast cancer. The Breast Cancer Study Group. | Gerritsen M; et al. | 1995 | Holland | The Netherlands journal of medicine | 56 patients previously treated with adjuvant CMF received palliative CMF for advanced disease. | Cross-sectional, Retrospective | - | PCT | * Palliative treatment with CMF should not be refused in patients who have relapsed after adjuvant chemotherapy with the same modality.
 |
| Does more intense palliative treatment improve overall survival in metastatic breast cancer patients? | J K Patel, et al. | 1986 | USA | Cancer | 483 women who had metastatic breast cancer | Cross-sectional, Retrospective | To examine the effects of aggressive and enhancing palliative modalities on patient survival | - | * Despite increasingly sophisticated palliative therapies, the survival time of patients with metastases did not appear to be significantly prolonged.
 |
| Transsphenoidal hypophysectomy in disseminated breast cancer | M Schwarz, et al. | 1981 | USA | Southern medical journal. | Sixty patients with metastatic breast cancer | Cross | To report the results of transsphenoidal hypophysectomy at Emory University Hospital | PS | * The technique of transsphenoidal hypophysectomy offers a substantial possibility of objective and subjective palliation with minimal morbidity in advanced breast cancer.
 |
| Subtotal-skin electron-beam therapy once a week for inflammatory breast carcinoma. | Nisce LZ; et al.. | 1979 | USA | Radiology | 22 patients with recurrent inflammatory breast carcinoma | Cross | - | Skin Subtotal Electron Beam Therapy | * The treatments were well tolerated.
* It is an excellent palliative method to treat this rapidly progressive disease.
 |
| Quality of life concerns in patients with breast cancer: evidence for disparity of outcomes and experiences in pain management and palliative care among African-American women. | Payne R; et al. | 2003 | USA | Cancer | - | Qualitative review | To identify racial disparities in the PC of cancer patients and their impact on the quality of life of African American women. | - | * There are differences in treatment patterns, pain management, and PC use between African American women and women of other ethnic groups.
* Absence of a standardized measure of quality of life in African-American women.
 |
| [Development and evaluation of "Hospice Smart Patient" service program]. | Park CS; et al. | 2011 | Korea | Journal of Korean Academy of Nursing | Breast cancer patients who underwent surgery, chemotherapy, radiotherapy, or who required PC | Non-equivalent pre-post quasi-experimental study | To develop and implement the Hospice Smart Patient program and evaluate its effectiveness | "Hospice Smart Patient" Program | * The "Hospice Smart Patient" Program is useful for cancer patients in decision-making, improving self-control and the choice of PC to improve their quality of life
 |
| Anna: an end-of-life narrative | Alun Charles Jones | 2012 | USA | Journal of palliative care | 1 patient with incurable breast cancer | Case report | - | - | * Hospice nurses can help people with serious illnesses conduct important grief work.
 |
| Acknowledging the 'elephant': communication in palliative care | Julie Griffie, et al | 2004 | USA | The American Journal of Nursing | 1 patient with incurable breast cancer | Case report | - | - | * Nurses collaborate so closely with patients, families, and other providers that they are best placed to lead that communication (change to PC)
* Pain management at the end of life is a vital concern in preparing an advance directive.
 |
| [Pain therapy in multiple bone metastases in breast carcinoma with rhenium 186 HEDP]. | Hauswirth AE; et al. | 1998 | Germany | Zentralblatt fur Gynakologie | 17 patients with painful bone metastases taking pain relievers | Cross-sectional, Prospective | To evaluate the efficacy of rhenium-186 HEDP to alleviate pain in patients with bone metastases in breast cancer | RF | * Rhenium-186 HEDP therapy can be used adjunctively to analgesic therapy and radiation in patients with painful disseminated bone metastases in breast cancer.
 |
| Retrospective evaluation of palliative care and hospice utilization in hospitalized patients with metastatic breast cancer. | Shin JA; et al. | 2016 | USA | Palliative medicine | 123 consecutive patients who were hospitalized for the first time with a diagnosis of MBC | Cross-sectional, Retrospective | To describe the reasons for admission and the frequency of PC and use of hospice in hospitalized patients with MBC. |  | * Only 29% were referred to PC after their last hospitalization.
* Hospitalized patients with metastatic breast cancer are commonly admitted with uncontrolled symptoms and have a poor prognosis. However, only a minority receive outpatient PC or are referred to hospice during their last hospitalization before death.
 |
| A prospective evaluation of the durability of palliative interventions for patients with metastatic breast cancer. | Morrogh M; et al. | 2010 | USA | Cancer | 91 patients with MBC | Cross-sectional, Retrospective | To report the frequency and duration of palliative procedures performed in the context of the CMM | - | * Palliative interventions for MBC symptoms are safe and provide lifelong symptom control in 70% of patients.
* The longer median survival for patients with MBC highlights the need to optimize symptom control to maintain quality of life.
 |
| Adrenalectomy as Palliative Treatment | C B Huggins | 1967 | USA | JAMA | - | Review | - | PS | * Consequently, bilateral adrenalectomy may be a useful therapy in cancer.
 |
| Prevalence, trend and disparities of palliative care utilization among hospitalized metastatic breast cancer patients who received critical care therapies. | Chen Y; et al. | 2020 | China | Breast | National sample of hospitalized patients for patients with MBC in the ICU | Cross | To describe the prevalence, time trend, and predictors of PC use in metastatic breast cancer. | - | * 15.09% received PC in the ICU.
* The PC usage rate increased significantly from 2.53% in 2005 to 25.96% in 2014.
 |
| Reirradiation combined with hyperthermia in recurrent breast cancer results in a worthwhile local palliation. | Van der Zee J; et al. | 1999 | Holland | British journal of cancer | 134 patients | Cross | To assess results in patients with recurrent breast cancer, treated at the Daniel den Hoed Cancer Center with reirradiation + HT | reRT+HT | * With this well tolerated treatment, palliation in most patients is achieved with local tumor control of a worthwhile duration.
 |
| Bone pain palliation with strontium-89 in breast cancer patients with bone metastases and refractory bone pain | Lluis Berna, et al. | 1995 | Spain | European Journal of Nuclear Medicine | 15 patients with breast cancer and skeletal metastases | Cross-sectional, Prospective |  | RF | * 89Sr is effective for palliation of bone pain in patients with bone metastases from breast cancer
 |
| Supportive and palliative care for metastatic breast cancer: resource allocations in low- and middle-income countries. A Breast Health Global Initiative 2013 consensus statement | James Cleary, et al. | 2013 | USA | Breast | - | International recommendations | - | - | * Differences between “supportive care” and “palliative care”.
* Recommendations for the education of health professionals in PC.
* Pain management and end-of-life care
 |
| Palliative treatment with carboplatin as late line therapy to patients with metastatic breast cancer. | Rosvig LH; et al. | 2018 | Denmark | Acta oncologica | 27 women in cohort 1 and 26 women in cohort 2 | Cross-sectional, Retrospective | To assess whether a carboplatin regimen might be suitable for late-line treatment of patients with disseminated breast cancer who have received intensive treatment. | PCT | * Treatments with carboplatin regimens showed encouraging effect and were well tolerated and may be candidates for late-line treatment of heavily pretreated metastatic breast cancer patients.
 |
| Oral metronomic cyclophosphamide with and without methotrexate as palliative treatment for patients with metastatic breast carcinoma. | Gebbia V; et al. | 2012 | Italy | Anticancer research | 61 patients with advanced breast carcinoma | Cross-sectional, Retrospective | - | PCT | * The data presented in this study support the use of oral metronomic chemotherapy for patients with metastases.
 |
| Palliative radiofrequency ablation of a fungating, symptomatic breast lesion. | Vansonnenberg E; et al. | 2005 | USA | American journal of roentgenology | 1 patients | Case report | - | Palliative radiofrequency ablation | * Effective palliation was achieved, improving the signs and symptoms and quality of life of the patient.
 |
| Photodynamic therapy for palliation of locally recurrent breast carcinoma | Schuh M; et al. | 1987 | USA | Journal of clinical oncology | 14 women with locally recurrent breast carcinoma on the chest wall | Cross | To determine the efficacy of PDT in the treatment of patients with locally recurrent breast carcinoma of the chest wall. | Photodynamic Therapy (PDT) | * PDT offers the potential to be used in conjunction with chemotherapy, hormonal therapy, surgical excision, and after radiation therapy.
* Effective local palliative control
 |
| Do patients with advanced breast cancer benefit from chemotherapy? | Ramirez AJ; et al. | 1998 | UK | British journal of cancer | 160 patients started treatment, of which | Consecutive series of cases | To define the proportion of patients reporting benefits from the first line of PCT in a consecutive series of women with advanced breast cancer. | PCT | * The results of this study suggest that first-line palliative chemotherapy for advanced breast cancer confers benefits to a substantial proportion of patients, with about a quarter feeling better after treatment and almost half feeling better or the same 4 to 6 months after treatment
 |
| Symptom palliation of hypofractionated radiotherapy for patients with incurable inflammatory breast cancer. | Choi HS; et al. | 2019 | Korea | Radiation oncology | 22 patients | Cross-sectional, retrospective | To retrospectively analyze the treatment efficacy and toxicities of patients with incurable and symptomatic IBC who underwent hypofractionated RT. | PRT | * Hypofractionated RT could safely and effectively alleviate symptoms among patients with symptomatic incurable IBC.
* there was no toxicity
 |
| Reirradiation + hyperthermia for recurrent breast cancer en cuirasse. | Oldenborg S; et al. | 2018 | Holland | Strahlentherapie und Onkologie | 196 patients | Cross-sectional, Retrospective | To evaluate the palliative effect of rert+HT for this patient population in terms of tumor remission and incidence of ≥grade 3 side effects. | reRT+HT | * ReRT+HT provides palliative tumor control, despite extensive and refractory tumor growth. Compared to currently available systemic treatment options, reRT+HT is more effective and less toxic.
 |
| Results of chest wall resection for recurrent or locally advanced breast malignancies. | Veronesi G; et al.. | 2007 | Italy | Breast | 15 women with primary or locally recurrent breast cancer. | Cross-sectional, retrospective | To report a recent experience usingSurgery for the management of recurrent breast carcinoma that invades the chest wall. | (FTCWR) + plastic reconstruction | * FTCWR is a safe procedure with low morbidity and mortality that can provide good symptom palliation in patients with locally advanced malignancies.
 |
| Increasing Information Dissemination in Cancer Communication: Effects of Using "Palliative," "Supportive," or "Hospice" Care Terminology. | Fishman JM; et al. | 2018 | USA | Journal of palliative medicine | 89 women decidedparticipate in this study | Quasi experimental | To assess whether the use of "palliative", "supportive" or "hospice" terminology can improve the dissemination of information among breast cancer patients | - | * The terms 'Palliative Care', 'Supportive Care' and 'Hospice Care' had different effects.
* Differences in terminology
 |
| Pain palliative therapy in women with breast cancer osseous metastatic disease and the role of specific serum cytokines as prognostic factors. | Iakovou I; et al. | 2014 | Greece | Cancer biotherapy & radiopharmaceuticals | Sixty-three female CaBr patients with MBD | Prospective, non-randomized study | To assess the efficacy of palliative radionuclide therapy (RPT) in women suffering from painful metastatic bone disease (MBD) due to breast cancer (brca) | RF | * All three radiopharmaceuticals were equally effective in relieving pain.
* Pain palliation was complete in 52% of patients, partial in 31%, and absent in 16%.
 |
| Intra-arterial chemotherapy for palliation of fungating breast cancer. A case report and review of the literature. | Bufill JA; Grace WR; Neff R | 1994 | USA | American journal of clinical oncology | 1 patient | Case report | - | PCT | * Intra-arterial administration of PCT offered an effective palliative for fungal breast cancer.
 |
| Half-body irradiation with tomotherapy for pain palliation in metastatic breast cancer. | Furlan C; Trovo M; Drigo A | 2014 | Italy | Journal of pain and symptom management | 13 patients with painful bony MMC in the lower half of the body | RCT | To assess the feasibility of lowering HBI with helical tomotherapy in patients with metastatic breast cancer in terms of acute toxicity. | Half Body PRT | * All but two patients had pain relief in the radiated field.
* The toxicity was acceptable
 |
| Strong in the Face of Adversity | Simoni Binoy | 2017 | India | Journal of pain & palliative care farmacotherapy | 1 patient | Case report | - | - | * Importance of PC in symptom management.
* Importance of palliative physiotherapy.
 |
| Palliative radiation therapy for symptomatic advance breast cancer. | Jacobson G; Kaidar-Person O; Haisraely O | 2021 | Israel | Scientific reports | 53 patients with breast cancer | Cross-sectional, retrospective | To assess the effectiveness of palliative breast radiotherapy (RT), with single fraction RT compared to fractionated RT | PRT | * PRT can provide long-lasting palliation, reducing pain and bleeding with minimal and tolerable toxicity, even when administered as a single fraction of RT.
* Fractionated therapy provides a longer lasting response
 |
| Intranasal dexmedetomidine: Procedural sedation in palliative care: A case report. | Ferguson L; Wilson M | 2021 | New Zealand | Palliative Medicine | 1 patient with breast cancer | Case report | - | Intranasal dexmedetomidine | * Intranasal dexmedetomidine is a potentially useful drug for procedural sedation in complex wound dressing management.
 |
| Metastatic bone pain palliation with 89-Sr and 186-Re-HEDP in breast cancer patients. | Sciuto R; Festa A; Pasqualoni R, et al. | 2001 | Italy | Breast cancer research and treatment | Fifty patients with painful multifocal bone metastases from breast cancer. | RCT | To assess the therapeutic efficacy of strontium-89 (89Sr) chloride and 186Re-1,1-hydroxyethylidene diphosphonate (186Re-HEDP) in the palliation of painful bone metastases from breast cancer. | RF | * Both 89Sr and 186Re-HEDP are effective and safe in alleviating bone pain in breast cancer, with the latter showing significantly faster pain relief.
 |
| Pain palliation with rhenium-186 HEDP in breast cancer patients with disseminated bone metastases | Palmedo H; Bender H; Dierke-Dzierzon C | 1999 | Germany | Clinical nuclear medicine | Thirty breast cancer patients who had painful bone metastases | RCT | To determine whether significant pain reduction in breast cancer patients can also be achieved with Re-186 HEDP. | RF | * A response to pain therapy was observed in 60% of patients.
* Patients with disseminated bone metastases resulting from breast cancer may benefit from Re-186 HEDP therapy.
 |
| Irinotecan as a palliative therapy for metastatic breast cancer patients after previous chemotherapy. | Lan H; Li Y; Lin CY | 2014 | China | Asian Pacific journal of cancer prevention | - | Review | To assess the efficacy and safety of irinotecan-based chemotherapy for the treatment of patients with MSC. | PCT | * Irinotecan-based regimens are beneficial and safe for the treatment of patients with MSC after other chemotherapy.
 |
| Weekly vinorelbine is an effective palliative regimen after failure with anthracyclines and taxanes in metastatic breast carcinoma | Zelek L; Barthier S; Riofrio M, et al. | 2001 | France | Cancer | 40 patients with measurable disease | RCT | To assess the tolerance and efficacy of weekly vinorelbine in MBC after failure with taxanes. | PCT | * Weekly vinorelbine is an active salvage therapy for metastatic breast carcinoma after failure with anthracyclines and taxanes, including in patients with taxane-refractory metastatic breast carcinoma.
 |
| Palliative chemotherapy after failure of high-dose chemotherapy in breast cancer--toxicity and efficacy. | Schrama JG; de Boer MM; Baars JW, et al. | 2003 | Holland | Anticancer research | 148 patients with primary or metastatic breast cancer treated with high-dose chemotherapy | RCT | To assess the toxicity and efficacy of the first palliative chemotherapy regimen after failure of high-dose chemotherapy. | PCT | * Conventional-dose PCT regimens may be safe and effective after failure of high-dose chemotherapy.
 |
| Safety of cyclin-dependent kinase4/6 inhibitor combined with palliative radiotherapy in patients with metastatic breast cancer. | Kim KN; Shah P; Clark A, et al. | 2021 | USA | Breast | 30 women with metastatic breast cancer | Cross-sectional, retrospective | To assess the safety of the combination of CDK 4/6 inhibitor and palliative RT. | RT+CDK4/6 | * The use of RT within 2 weeks of CDK4/6 inhibitors had acceptable low toxicity and high efficacy, suggesting that it is safe for MBC palliation.
 |
| Mitoxantrone, 5-fluorouracil, and high dose leucovorin (NFL) versus intravenous cyclophosphamide, methotrexate, and 5-fluorouracil (CMF) in first-line chemotherapy for patients with metastatic breast carcinoma: a randomized phase II trial. | Hainsworth JD; Jolivet J; Birch R, et al. | 2000 | USA | Cancer | 138 women receiving their first chemotherapy for metastatic breast carcinoma | Cross | To compare the NFL regimen with a standard CMF regimen in the first-line therapy of patients with metastatic breast carcinoma. | PCT | * NFL is an active and well-tolerated regimen for the treatment of MBC
* NFL is an excellent initial palliative treatment option for elderly patients or patients who have shown poor tolerance to other chemotherapy regimens.
 |
| Reirradiation and hyperthermia for irresectable locoregional recurrent breast cancer in previously irradiated area: Size matters. | Oldenborg S; Griesdoorn V; van Os R, et al. | 2015 | Holland | Radiotherapy and oncology | 414 patients treated with reirradiation + hyperthermia (reRT+HT) | Cross-sectional, retrospective | To describe the LC and long-term morbidity of rert + TH for unresectable recurrent breast cancer in the previously irradiated area | reRT+HT | * reRT+HT is a good palliative treatment option for patients with unresectable locoregional recurrent breast cancer in a previously irradiated area.
 |
| Mindful breathing for suffering. | Tung YZ; Tan SB | 2020 | Malaysia | BMJ supportive & palliative care | 1 patient | Case report | - | Conscious breathing | * The patient reported feelings of calm, peace, and relaxation after each session, with decreased suffering, negative emotions, and physical discomfort.
 |
| Eribulin Use and Palliative Care Referral Rates in Metastatic Breast Cancer: kent Oncology Centre Experience | Little, J; Burcombe, R; Parsons, E, et al. | 2020 | UK | Clinical oncology | 81 patients with MBC who started treatment with eribulin | Cross-sectional, retrospective | To assess whether patients who received third-line or later Eribulin had been referred to community PC services | - | * Less than half of the patients had been referred to PC teams when they started taking eribulin.
* Given the poor results with the third and subsequent lines of palliative chemotherapy, we recommend earlier referral to PC services.
 |
| Randomized trial of a collaborative palliative and oncology care intervention to improve communication about end-of-life care in patients with metastatic breast cancer | Temel, JS; Moy, B; El-Jawahri, A, et al. | 2020 | USA | Journal of clinical oncology | 120 patients with MBC and clinical indicators of poor prognosis | RCT | To assess the effect of a collaborative model of palliative and oncology care on communication about EOL care in patients with MBC. | Structured hospice visits, | * The intervention helped patients to discuss end-of-life PCs more and to inform their physician of their wishes.
 |
| Randomized trial to evaluate the impact in overall survival of early palliative care intervention among metastatic breast cancer patients. Preliminary results | Arce-Salinas, CH; et al | 2018 | USA | Supportive care in cancer | 53 patients with newly diagnosed or relapsed metastatic breast cancer | RCT | To assess the impact on overall survival with early palliative care intervention, among patients with metastatic breast cancer. | Intervention by a palliative team, psychological, nutritional and symptomatic support | * This small trial failed to demonstrate an overall survival benefit with early PC intervention.
 |
| Effect of palliative care on cognitive function among breast cancer patients in Eastern India | Datta, A; Guha, P; Mukhopadhyay, A | 2017 | India | Annals of oncology | 129 cases of breast cancer undergoing chemotherapy treatment | RCT | To assess the impact of the structured PC intervention on cognitive function and quality of life among breast cancer patients receiving chemotherapy. | - | * PC are an effective therapeutic option to treat mild cognitive impairment and improve the quality of life of breast cancer patients undergoing chemotherapy.
 |
| Impact of early palliative care in hospitalization and emergency room visits among breast cancer patients treated at Instituto Nacional De Cancerologia Mexico, City | Mendoza-Galindo, L; Arce-Salinas, C; Ramirez-Morales, R, et al. | 2018 | Mexico | Supportive care in cancer | 53 patients with newly diagnosed or relapsed metastatic breast cancer | RCT | To assess the reduction in length of hospitalization and emergency room visits with early PC intervention compared to patients treated with oncological recommendations. | Intervention by palliative team, which included psychological, nutritional and symptomatic support | * The PC intervention is associated with a reduction in emergency visits and hospitalizations for uncontrolled symptoms
 |
| Nursing care management for women with breast cancer in palliative chemotherapy | Cirilo, Juliana Dias; et al. | 2016 | Brazil | Texto & contexto enfermagem | eight nurses and ten patients | Qualitative | To understand and analyze nursing care management for women with breast cancer in PCT | - | * Nurses perceive the term “palliative” as one more phase of the disease.
 |
| Palliative care and older women with advanced breast cancer in Mexico | Cabrera-Galeana, P; et al | 2019 | Mexico | Cancer Research | 178 patients with advanced breast cancer, older than 65 years | Cross | To describe the characteristics of older women with BC who received PC in a multidisciplinary setting. | - | * Late referral to PC services that limited the impact of the multidisciplinary approach
 |
| Palliative Care in the Caribbean Through the Lens of Women with Breast Cancer: Challenges and Opportunities | Spence, D; et al. | 2018 | Caribbean | Current Breast Cancer Reports | - | Opinion article | To assess the challenges in the provision of palliative care for patients with breast cancer in the Caribbean. | - | * There is an urgent need to improve access to palliative care and pain relief across the region and multiple challenges.
 |
| Palliative surgery for giant mucinous carcinoma of the breast in an elderly patient: A rare case report | Takuwa, H; et al. | 2017 | Japan | Molecular and Clinical Oncology | 1 elderly patient | Case report | - | PS | * Palliative surgery improved the patient's quality of life and may be a viable option for patients with PMBC
 |
| Comparing the quality of life of women suffering from breast cancer receiving palliative care and ordinary care | Khalili, SM; et al. | 2020 | Iran | Immunopathologia Persa | 220 patients with breast cancer | Cross-sectional, comparative | To compare the quality of life in patients with breast cancer receiving palliative care and ordinary care. | - | * The PC group demonstrated a better quality of life compared to the ordinary care group.
* Functioning and global health scores were higher in palliative care.
 |
| Women with metastatic breast cancer: Perceptions of palliative care | Millstein, L; et al. | 1998 | USA | Journal Of Palliative Care | 15 women diagnosed with metastatic breast cancer | Qualitative | To explore the perceptions of patients about palliative care. | - | * There is a lack of knowledge about PC and interventions are needed to prepare patients and families.
* Information regarding the benefits of hospice services before the end of life is crucial
 |
| Disparities in receipt of supportive/palliative care services among women with breast cancer | Halpern, MT; Holden, et al. | 2010 | USA | Journal Of Clinical Oncology | 39,500 women diagnosed with breast cancer | Cross | To examine factors associated with supportive/palliative care services among women with breast cancer. | - | * Patients with distant or regional stage disease were less likely to receive pain control or PT or psychological treatment.
* Black women were less likely to receive pain control.
* Older patients were less likely to treat pain,
 |
| Health-Related Suffering and Palliative Care in Breast Cancer | Sunilkumar, MM; Finni, CG; Lijimol, AS, et al. | 2021 | India | Current Breast Cancer Reports | - | Review | To understand the suffering related to health in patients with breast cancer and identify the scope of PC in improving the quality of life of patients with breast cancer. | - | * PC can improve the quality of life of breast cancer patients and their families through the management of health-related suffering.
* Integrating PC in the treatment of breast cancer.
 |
| The Support, Education, and Advocacy (SEA) Program of Care for Women With Metastatic Breast Cancer: A Nurse-Led Palliative Care Demonstration Program | Victoria Reiser, et al.  | 2020 | USA | American Journal of Hospice and Palliative Medicine | 186 women diagnosed with CMM | Prospective cohort | To describe the effect of a quality improvement project for coordination of supportive care in CMM. | The Interdisciplinary Support, Education and Advocacy Program | * The program was effective in decreasing symptom distress, increasing general well-being, reducing anxiety, and utilizing acute care services by increasing supportive care.
 |
| Doctor-Patient Communication about Advance Directives in Metastatic Breast Cancer | Ozanne, EM; Partridge, A; Moy, B, et al | 2009 | USA | Journal of palliative medicine | 32 women with metastatic breast cancer and their providers | Prospective cohort | To examine whether patients with metastatic breast cancer had vads and, if so, with whom they discussed written plans for end-of-life decisions. | AD | * Most of the patients collected information about AD and had made plans in writing, however few discussed these plans with their providers.
* An explicit discussion of AD is missing.
 |
| Dexmedetomidine Continuous Infusion for Refractory Cancer Pain at End of Life: A Case Report | Byrne, JM; et al. | 2022 | USA | Journal Of Pain & Palliative Care Pharmacotherapy | 1 patient with BC at the end of life | Case report | - | Dexmedetomidine | * This case report highlights the clinical utility of Dexmedetomidine in a PC unit for refractory pain in EoL.
 |
| Comprehensive assessment during palliative radiotherapy consultation optimizes supportive care for patients with advanced breast cancer | Hill, J.; Alhumaid, M.; Ghosh, S, et al. | 2022 | Canada | Supportive Care Cancer | 130 patients evaluated for PRT | Cross-sectional, retrospective | To examine holistic assessment and delivery of PRT by practice setting. | PRT | * PRT assessment by a resolute multidisciplinary team provides a comprehensive picture of patient needs and expedites PRT delivery, essential for personalizing supportive care.
 |
| A Survey of Breast Cancer Patients’ Use of Cannabis During Radiation Therapy | Weiss, M.; Danese, S.; Ruiz, K.A, et al. | 2021 | USA | International Journal of Radiation Oncology, Biology, Physics | 612 patient with BC | Cross | To understand how and why cannabis is used among breast cancer patients undergoing adjuvant and palliative radiotherapy. | Use of medical cannabis | * 47% used cannabis during the PRT.
* For 87% pain was the most common reason for using.
* Also used for treatment of insomnia, anxiety, stress, nausea/vomiting, and anorexia
 |
| Aggressiveness of cancer care at end of life in patients with metastatic breast cancer: A regional perspective | Abunasser, M.K, et al. | 2021 | Jordan | Annals of Oncology | 431 patients with BC | Cross-sectional, retrospective | To assess the quality of end-of-life care for these patients treated at KHCC. | - | * Earlier referral to PC is associated with less aggressive end-of-life care.
 |
| Enhanced toxicity with CDK 4/6 inhibitors and palliative radiotherapy: Non-consecutive case series and review of the literature | David, S.; Ho, G.; Day, D, et al. | 2021 | Australia | Translational Oncology | 5 cases of BC | Number of cases | - | PRT + CDK 4/6 | * Increased radiation therapy toxicity was observed when palliative doses of RT were administered during or prior to treatment with a CDK 4/6 inhibitor.
 |
| Hypofractionated radiotherapy with SIB in advanced incurable breast cancer-HYPORT B study | Santosham R, et al. | 2020 | India | Radiotherapy and Oncology | 19 patients with metastatic or incurable locoregionally advanced breast cancer | RCT | To report the early clinical outcomes of a 5-day hypofractionated external-beam radiotherapy schedule with simultaneous integrated boost | PRT + SIB | * Hypofractionated radiotherapy with this 1-week schedule showed acceptable toxicity, good local control, and excellent palliation in patients with advanced incurable breast cancer.
 |
| Survey on knowledge and attitudes of emergency medicine physicians towards practice, scope and integration of palliative medicine services in the emergency - Part 2 - Decision making in terminal cancer and indications for a palliative medicine liaison in the emergency setting | Arora R.D. | 2020 | India | Annals of Oncology | 17 doctors | Cross | - | - | * A palliative medicine link is being considered after most acute care options have been exhausted.
 |
| Trends in palliative care utilization in patients with advanced breast cancer | Stahl, K.; Dodge, D.; Brooks, A, et al. | 2020 | USA | Annals of Surgical Oncology | Cohort of 57,444 patients | Cross-sectional, retrospective | - | - | * Elderly patients, white Hispanics, those from the Midwest, South Atlantic, and West Coast, and uninsured patients were less likely to receive PC
 |
| Resource utilization and cost for women with advanced hr+/her2- breast cancer in colombian health care settings | Franco S; Lobaton J.F; Aruachan S, et al. | 2019 | Colombia | Value in Health | 145 patients with BC | Cross-sectional, retrospective | To estimate the use of health resources and direct costs per line of treatment related to HR+/HER2− advanced breast cancer in Colombia. | - | * The main cost generator was the PC visit, which was used by three quarters of the patients at least once, representing 68.6% of the total costs.
 |
| Referral patterns among patients with metastatic breast cancer in an integrated palliative care program | Small, R.; Belkora, J.; Majure, M.C, et al. | 2016 | USA | Journal of Clinical Oncology | - | Cross-sectional, retrospective | To analyze referral patterns, program participation, and end-of-life quality outcomes from October 2014 to May 2015 | - | * Only 25% had received PC consultation early
* The addition and integration of a PC practice in breast oncology resulted in patients being seen sooner.
 |
| Comparative analysis between continuous vs biweekly hypofractionated palliative radiotherapy (RT) to the breast - a prospective single institutional study | Basu, P.; Bandyopadhyay, A.; Jena, R | 2019 | India | Breast | 36 patients with MBC | RCT | To assess the efficacy of a twice-weekly hypofractionated palliative RT program. | PRT | * This new RT regimen delivers a moderately high dose and is logistically simple for the patient. The improvement in response and quality of life in the hypofractionated arm justifies the dose increase.
 |
| Upper Extremity Subcutaneous Lymphatic Drainage "Lymphocentesis" for Symptom Relief in End-Stage Breast Cancer | Liao, P.; Rossini, K.; Sauls, R | 2019 | Canada | The American journal of hospice & palliative care | 1 patient with MBC | Case report | - | Lymphocentesis | * In general, subcutaneous drainage of lymphedema appears to be a beneficial and low-risk intervention in the PC setting.
 |
| Use of palliative care among patients with metastatic breast cancer at a safety net hospital | Bushan, S.; Li, H.C.; Syed, S.K, et al. | 2018 | USA | Journal of Clinical Oncology | 234 patients who were diagnosed with CMM | Cross-sectional, retrospective | To study the patterns of PC use in patients with MBC in a safety net hospital. | - | * Only 44.8% of patients with MBC were referred to PC.
* Only 32% had formal advance directive documentation.
* 76% had some discussion about PC before death.
 |
| Next steps: Incorporating patient-reported outcomes into palliative care referral for people with advanced breast cancer | Li, Y.R.; Marquez, C.D.; Rugo, H.S, et al. | 2018 | USA | Journal of Clinical Oncology | 74 patients with BC | Cross | - | - | * The decision to refer (or not refer) a patient to SPC is complex and tied to patient-specific factors, such as timing of additional visits and fear of end-of-life discussions
 |
| Palliative radiotherapy (RT) to the breast using a novel hypofractionated radiotherapy regime: Results of the HYPORT phase I/II study (CTRI/2015/12/006407) | Chatterjee, S.; Ahmed, R.; Chakraborty, S | 2018 | India | Journal of Clinical Oncology | 30 MBC patients with symptomatic breast lesions | RCT | To report on the safety and efficacy of a shortened biologically equivalent (EQD2 45.5 Gy 3 ) hypofractionated RT of 10 fractions (2 weeks). | PRT | * This new RT regimen is safe and effective in alleviating local symptoms. None of the patients had metabolic progression, while substantial clinical improvement in quality of life and psychological distress was observed.
 |
| Cost reduction in hospitalization and emergency room visits associated to early palliative care intervention among breast cancer patients | Ramirez-Morales, R.; et al. | 2018 | Mexico | Supportive Care Cancer | 53 patients with MBC | RCT | To analyze the cost of emergency visits and days of hospitalization in patients with early PC intervention in contrast to patients treated only with oncological intervention. | - | * The reduction in hospital stay costs was statistically significant in patients with early PC intervention compared with patients with only oncological intervention.
 |
| A multidisciplinary pain tumor board to improve quality of life | Zarrabi, A.J.; et al. | 2018 | USA | Journal of Palliative Medicine | 1 patient with MBC | Case report | - | - | * The case illustrates how the academic dialogue between disciplines can be a source of fast, effective and creative strategies to improve the quality of life of palliative patients.
 |
| Clinical outcomes of fungating breast cancer treated with palliative radiotherapy | Chia, D.; Tan, E.; Lu, J, et al. | 2016 | Singapore | Journal of Radiation Oncology | 35 patients with fungal breast cancer | Cross-sectional, retrospective | To document the results of patients with fungiform breast tumors who have been treated with PRT | PRT | * Radiotherapy is an effective palliative treatment for patients with fungal breast cancer.
 |
| Integration of palliative care for patients with metastatic breast cancer: Have we achieved quality end-of-life care? | Philip, J.; Collins, A.; Burchell, J, et al. | 2016 | Australia | Journal of Pain and Symptom Management | 3,205 mBR patients who died between 2003 and 2010 | Cohort retrospective | Identify transition points to improve the integration of palliative care for patients with MBC |  | * 60% had a PC approach at the time of death, however this occurred for the first time on final admission for 69%.
* Women who die of mBR have a late commitment to PC.
 |
| You can lead a patient to a hospice but you can’t make them enter the door | Colbourne, L.; et al | 2016 | UK | BMJ Supportive and Palliative Care | - | Opinion article | - | SPC | * Benefits of integrating a PC specialist into the oncology care team.
 |
| Integrating outpatient palliative care into a metastatic breast oncology clinic | Small, R.; Belkora, J.; Jow, A, et al. | 2015 | USA | Journal of Clinical Oncology | 43 women with stage IV BC | Prospective cross-sectional | To report early results from the development, implementation, and evaluation of the UCSF Advanced Breast Cancer program | Advanced Breast Cancer Program | * The ABC program demonstrates that early integration of oncology and palliative care is feasible and associated with psychosocial benefits
 |
| Management of fungating carcinoma breast using latissimus dorsi flap as a palliative measure in a third world setting | Cheema M.A. | 2014 | Pakistan | European Journal of Cancer | 30 patients with fungal carcinoma | Prospective cross-sectional | - | PS | * LD flap reconstruction is a useful and effective palliative method for wound closure after wide resection of locally advanced breast tumors.
 |
| How do women with metastatic breast cancer view palliative care? A qualitative study using a grounded theory approach to enable the views of women to be sought | Beaumont T. | 2013 | UK | Breast | 8 women with BC | Qualitative | To understand the perceptions that women with MBC have of palliative care in the UK | - | * Women's perceptions of PC changed after a positive experience that improved their quality of life.
 |
| Palliative care for terminal breast cancer patients: The role of nursing staff | Lavdaniti, M.; et al. | 2009 | Greece | Epitheorese Klinikes Farmakologias kai Farmakokinetikes | - | Review | To present the role of the nurse in the palliative care of terminal breast cancer | - | * The nurse provides care to patients on a physical, psychological, social and spiritual level, meeting the needs in each dimension.
* Research in the nursing area is not yet particularly advanced in PCs.
 |
| A phase II study of weekly paclitaxel for advanced or recurrent breast cancer | Wada, Y.; et al. | 2007 | Japan | Gan to kagaku ryoho | 37 patients with advanced breast cancer | RCT | To investigate the efficacy and safety of weekly administration of paclitaxel (PTX) in advanced or recurrent breast cancer. | PCT | * Weekly PTX is one of the treatment options in patients with advanced or recurrent breast cancer from the point of view of palliation.
 |
| Hyperthermia in combination with radiation therapy for treatment of advanced inoperable breast cancer | Iemwananonthachai, N. et al. | 2003 | Thailand | Journal of the Medical Association of Thailand | 12 breast cancer patients with inoperable locally advanced lesions | Cross-sectional Retrospective | - | HT + RT | * The combination of hyperthermia and radiation, with or without chemotherapy, is an effective treatment for the palliation of local symptoms, showing a tendency to achieve local control of advanced, ulcerative, and large breast lesions.
 |
| Cyclic and sequential therapy with tamoxifen and medroxyprogesterone acetate in metastatic breast cancer | Nemoto, T.; Patel, J.K.; Rosner, D, et al. | 1989 | USA | Journal of Surgical Oncology | 36 women with metastatic breast cancer | RCT | To assess the therapeutic efficacy of tamoxifen + medroxyprogesterone acetate and determine if tamoxifen would increase progesterone receptor (PR) levels | PHT | * No potentiation by tamoxifen was observed
* Tamoxifen and MPA should be administered independently for MBC palliation
* Administer MPA after tamoxifen therapy
 |
| Usefulness of strontium-89 for bone pain palliation in metastatic breast cancer patients. | Fuster, D.; et al. | 2000 | Spain | Nuclear medicine communications | 40 women with MBC | Prospective cross-sectional | To evaluate the usefulness of 89Sr to alleviate bone pain in breast cancer | RF | * Breast cancer patients with metastatic bone pain may benefit from 89Sr therapy
 |
| [Palliative home care for advanced and recurrence breast cancer--a six-case report]. | Ueno S; et al. | 2009 | Japan | Gan To Kagaku Ryoho | 6 patients | Prospective cross-sectional | - | Home PC | * The most important part of the PC at home is to prevent any physical and psychosocial problems between any type of occupation
 |
| Palliative radiotherapy for treating fungating breast cancer-a powerful treatment modality | Williams, C.P.; et al | 2021 | Australia | Australasian Medical Journal | 1 patient with fungal breast cancer | Case report | - | PRT | * The PRT achieved good long-lasting local control and symptomatic relief.
 |
| A survey of cannabis use for symptom palliation in breast cancer patients by age and stage | Weiss, M.C., et al. | 2020 | USA | Journal of Clinical Oncology | 612 patients with BC | Cross | - | Cannabis Use | * 42% of respondents have used medical cannabis to treat symptoms or side effects of breast cancer, especially pain in the MBC.
 |
| Percutaneous cryoablation for palliation of pain from breast cancer bone metastasis | Deipolyi, A.; et al. | 2018 | USA | Journal of Vascular and Interventional Radiology | 6 patients with MBC | Cross | To describe our experience in the treatment of patients with painful bone metastases. | Percutaneous cryoablation | * Cryoablation of painful bone metastases from breast cancer can be offered as a safe palliative treatment.
 |
| Difficulties in providing palliative care for metastatic breast cancer patients in rural India (West Bengal) - Experience of an NGO | Manna A | 2017 | India | European Journal of Cancer | Patients with advanced breast cancer who need PC | Cross | To identify the main difficulties in achieving the above objective in a rural village setting in India |  | * In most patients, control of pain and other symptoms was grossly inadequate due to the lack of a trained workforce in rural India.
* Regular home visits by a group of social workers were extremely helpful in the last months of life.
 |
| Palliative care & improving qol in breast cancer patients: Efforts by an non-govt-organization [NGO] in resource poor developing nations | Shankpal, V. | 2011 | India | Supportive Care Cancer | 55 women with breast cancer | Cross-sectional, prospective | To monitor rural women who need palliative care. | - | * 53% of women said religious/community/faith support was the most crucial factor in helping them cope with breast cancer.
* Significant correlations between higher spirituality scores with absence of depression.
 |
| Structural Challenges of Providing Palliative Care for Patients with Breast Cancer | Tahereh Khoubbin et al. | 2016 | Iran | Indian Journal of Palliative Care | 9 breast cancer patients and 10 healthcare providers | Qualitative | To highlight stakeholder views to learn about the challenges of providing PC to women with breast cancer. | - | * Structural challenges fall into two categories: Palliative care services not yet elaborated and insufficiency of health care providers
 |
| Spirituality-Focused Palliative Care to Improve Indonesian Breast Cancer Patient Comfort | Tuti Nuraini, et al. | 2018 | Indonesia | Indian Journal of Palliative Care | 308 patients with breast cancer | Cross | To develop a trajectory model of the relationships between nursing care variables, patient coping, family support, patient spirituality | - | * PC significantly improved the comfort of breast cancer patients by reducing anxiety and depression.
* Spirituality-focused PC are of fundamental importance for breast cancer patients
 |
| Psychosocial support, treatment of metastatic disease and palliative care | Michael A Ashby, et al. | 1996 | Australia | The Medical journal of Australia | - | Letter to the editor | - | - | * Early referral to a specialized source of PC should be considered for most patients with metastatic disease, to introduce future options in PC.
 |

LMIC- Low- or Middle-Income Country; MBC- Metastatic Breast Cancer; LABC- Locally Advanced Breast Cancer; PC- Palliative Breast; EOL- End-Of-Life; SPC- Specific palliative care; PRT- Palliative radiotherapy; HRQoL- Health-Related Quality of Life; MPA- Medroxyprogesterone; ICU- Intensive care unit; IBC- Inflammatory breast cancer; ReRT+HT- Re-irradiation and hyperthermia; PMBC- Pure type MBC; PCT - Chemotherapy Palliative; PHT: Palliative hormone therapy; RCT- Randomized Clinical Trial; AD- Advance directives; PS- Palliative Surgery