

Appendix 1. Search Strategy. (consultation date: 03/6/2024).

| Database | Search Strategy | Results |
|--|---|---------|
| PubMed | ((("Case Management"[Mesh]) OR ("Patient Navigation"[Mesh]) OR ("Critical Pathways"[Mesh])) AND ((("Neoplasms"[Mesh]) OR ("Palliative Care"[Mesh])) AND ("palliative care"[tiab] OR "Palliative Treatment"[tiab] OR "Palliative Treatments"[tiab] OR "Palliative Therapy"[tiab] OR "Palliative Supportive Care"[tiab] OR Tumor*[tiab] OR Tumour*[tiab] OR Cancer[tiab] OR Carcinoma[tiab] OR Neoplas*[tiab] OR Malignan*[tiab]) AND ("Case Manager"[tiab] OR "Case management"[tiab] OR "Care manager"[tiab] OR "Care management"[tiab] OR "nurse navigator"[tiab] OR "patient navigation"[tiab] OR "critical pathway"[tiab] OR "critical pathways"[tiab])) | 526 |
| Scopus | ("case manag*" OR "patient navigat*" OR "nurse navigat*" OR "critical path*" OR "care manag*") AND ("neoplasm*" OR "Cancer*" or "tumor*" or "tumour*") AND ("palliative care*" or "palliative treatment*" OR "Treatment Withdrawal" OR "palliative medicine" OR "terminal") | 635 |
| EMBASE | ("case manag*" OR "patient navigat*" OR "nurse navigat*" OR "critical path*" OR "care manag*") AND ("neoplasm*" OR "Cancer*" or "tumor*" or "tumour*") AND ("palliative care*" or "palliative treatment*" OR "Treatment Withdrawal" OR "palliative medicine" OR "terminal") | 1159 |
| CINAHL | ((MH "Case Management") OR "Case Management" OR (MH "Case Managers") OR ((MH "Patient Navigation") OR "Patient Navigation") OR ((MH "Critical Path") OR "critical path") OR "care management" OR "nurse navigator") AND ((MH "Neoplasms+") OR "Neoplasms" OR cancer*) AND ((MH "Palliative Care") OR "Palliative Care" OR (MH "Treatment Withdrawal") OR (MH "Palliative Medicine") OR "Palliative Treatment" OR (MH "Terminal Care (Saba CCC)+") OR (MH "Terminal Care+") OR (MH "Terminally Ill Patients+") OR "terminal") | 268 |
| PsycINFO | ("case manag*" OR "patient navigat*" OR "nurse navigat*" OR "critical path*" OR "care manag*") AND ("neoplasm*" OR "Cancer*" or "tumor*" or "tumour*") AND ("palliative care*" or "palliative treatment*" OR "Treatment Withdrawal" OR "palliative medicine" OR "terminal") | 95 |
| Web Of Science | ("case manag*" OR "patient navigat*" OR "nurse navigat*" OR "critical path*" OR "care manag*") AND ("neoplasm*" OR "Cancer*" or "tumor*" or "tumour*") AND ("palliative care*" or "palliative treatment*" OR "Treatment Withdrawal" OR "palliative medicine" OR "terminal") | 411 |
| Google Scholar | ("case manager" OR "patient navigator" OR "nurse navigator" OR "critical path" OR "care manag") AND ("neoplasm" OR "Cancer" or "tumor" or "tumour") AND ("palliative care" or "palliative treatment" OR "Treatment Withdrawal" OR "palliative medicine" OR "Terminal") | 111 |
| Keywords: Case Management; Cancer; Palliative Care. | | |

Appendix 2 – Reason for article exclusion

| N | AUTHOR | YEAR | TITLE | INCLUSION (Reason) |
|----|--------------------------|------|---|---|
| 1 | Yamarik | 2022 | Nurse-Led Telephonic Palliative Care A Case-Based Series of a Novel Model of Palliative Care Delivery | No (No Case manager) |
| 2 | Valenti | 2022 | Nurse-led telephone follow-up for early palliative care patients with advanced cancer | Yes |
| 3 | Fujita | 2017 | Analysis of team types based on collaborative relationships among doctors, home-visiting nurses and care managers for effective support of patients in end-of-life home care | No (Insufficient data) |
| 4 | Fillion | 2011 | Implementation of screening for distress with professional cancer navigators | No (Insufficient data) |
| 5 | Schindel | 2023 | Associations among navigational support and health care utilization and costs in patients with advanced cancer: An analysis based on administrative health insurance data | No (Insufficient data) |
| 6 | Knudsen | 2022 | The American Cancer Society and patient navigation: Past and future perspectives | No (Insufficient data) |
| 7 | Dwyer | 2022 | Collective pursuit for equity in cancer care: The National Navigation Roundtable | No (Insufficient data) |
| 8 | Miller | 2020 | Academic Nurse Navigation: Unique Aspects and Strategies for Success | No (Insufficient data) |
| 9 | Phillips | 2019 | In their own words: patient navigator roles in culturally sensitive cancer care | No (Lay navigators) |
| 10 | Lockhart | 2003 | The PhoenixCare Program | Yes |
| 11 | Head | 2010 | Palliative care case management: increasing access to community-based palliative care for Medicaid recipients | No (Insufficient data) |
| 12 | Meier | 2004 | Integrating case management and palliative care | No (Not oncological focus) |
| 13 | Franklin | 2022 | Solidifying roles, responsibilities, and the process of navigation across the continuum of cancer care: The Professional Oncology Navigation Task Force | No (Insufficient data) |
| 14 | Head | 2009 | Mark's journey: a study in medicaid palliative care case management | Yes |
| 15 | Wiederholt | 2007 | Bridging gaps in multidisciplinary head and neck cancer care: nursing coordination and case management | No (no palliative care) |
| 16 | Kuhn | 2012 | Identifying patients suitable for palliative care—a descriptive analysis of enquiries using a Case Management Process Model approach | Yes |
| 17 | Howell | 2004 | Enhancing the role of case managers with specialty populations: development and evaluation of a palliative care education program | No (Not oncological focus) |
| 18 | Jakobsen | 2014 | Case study shows that the case manager function for cancer patients is used unevenly across the different cancer forms | No (no palliative care) |
| 19 | Lee | 2021 | Patient navigator and community health worker attitudes toward end-of-life care | No (Not oncological focus) |
| 20 | Fischer | 2013 | Apoyo con carino: RCT of patient navigation to improve palliative care outcomes | No (Not oncological focus) |
| 21 | van der Plas | 2017 | Informal care givers' experiences with support in primary palliative care when a case manager is involved: A descriptive study in the Netherlands | No (secondary analysis of another included article) |
| 22 | van der Plas | 2015 | Palliative care case management in primary care: A descriptive study about referrals in relation to treatment aims | Yes |
| 23 | Oatley | 2020 | A nurse practitioner-led model of care improves access, early assessment and integration of oncology services: an evaluation study; | No (no palliative care) |
| 24 | Özçelik | 2014 | Case management based multidisciplinary care protocol in the palliative care of cancer patients | No (insufficient data) |
| 25 | Özçelik | 2014 | Examining the effect of the case management model on patient results in the palliative care of patients with cancer | Yes |
| 26 | Wu | 2014 | Economic value of a cancer case management program; | Yes |
| 27 | Mercadante | 2016 | The palliative-supportive care unit in a comprehensive cancer center as crossroad for patients' oncological pathway; | No (No Case manager) |
| 28 | Shah,S. H | 2005 | Integrated care pathway for the last days of life | No (insufficient data) |
| 29 | The Lancet | 2014 | Palliative care: More than one chance to get it right | No (insufficient data) |
| 30 | Simone C. | 2015 | Early palliative care and integration of palliative care models in modern oncology practices | No (insufficient data) |
| 31 | Fischer S. | 2007 | Patient navigation: A culturally competent strategy to address disparities in palliative care | No (insufficient data) |
| 32 | Bookbinder | 2005 | Improving End-of-Life Care: Development and Pilot-Test of a Clinical Pathway | Yes |
| 33 | Oncology Nursing Society | 2018 | Role of the Oncology Nurse Navigator Throughout the Cancer Trajectory | No (insufficient data) |
| 34 | Haylock | 2013 | Patient navigation in cancer care. Introduction | No (insufficient data) |
| 35 | Hospital case management | 2016 | When patients are stressed, in pain, suggest palliative care | No (insufficient data) |
| 36 | Wells,M | 2017 | Recognising European cancer nursing (RECaN): A systematic review of trial evidence that helps to identify the roles and interventions of nurses caring for patients with cancer | No (insufficient data) |
| 37 | Nadolny,S | 2021 | The character of early palliative care interventions on adult clinical oncology: Results of a systematic review | No (insufficient data) |
| 38 | Chan,Raymond J | 2013 | End-of-life care pathways for improving outcomes in caring for the dying | No (insufficient data) |
| 39 | Han,P. K. | 2010 | The coordination of primary and oncology specialty care at the end of life | No (insufficient data) |
| 40 | Addington-Hall | 1992 | Randomised controlled trial of effects of coordinating care for terminally in cancer patients | No (No Case manager) |
| 41 | Alfieri | 2023 | Characterizing Different Multidisciplinary Team Models Implemented Within One Comprehensive Cancer Center | No (No palliative care, no Case Manager) |
| 42 | Burbage | 2024 | Introduction . Patient Navigation in Cancer Care | No (no palliative care) |
| 43 | De Domenico | 2024 | Nurse Navigator of Cancer Patients: contributions to the discussion on the national stage | No (no palliative care) |
| 44 | Gerhardt | 2023 | Qualitative evaluation of a palliative care case management intervention for patients with incurable gastrointestinal cancer (PalMaGiC) in a hospital department | Yes |
| 45 | Madrigal | 2023 | Nurse-led supportive Coordinated Transitional Care (CTraC) program improves care for veterans with serious illness | Yes |
| 46 | Owens | 2024 | Needs of Oncology Nurse Navigators Serving Young or Metastatic Breast Cancer Patients | No (insufficient data) |
| 47 | Rodriguez | 2024 | TransitionalCareNavigation | No (insufficient data) |
| 48 | Shindel | 2022 | Associations among navigational support and health care utilization and costs in patients with advanced cancer: An analysis based on administrative health insurance data | Yes |
| 49 | Varanasi | 2024 | Patient navigation job roles by levels of experience: Workforce Development Task Group, National Navigation Roundtable | No (no palliative care) |
| 50 | Paranhos | 2023 | Metastatic Rectal Cancer in Young Adult After Child Cancer Survivor: Challenges for Nurse Navigator–A Case Study | No (insufficient data) |
| 51 | Bailey | 2023 | Implementation and Impact of an Oncology Nurse Navigator–Led Survivorship Program in a Hospital Outpatient Setting | No (insufficient data) |
| 52 | Zhang | 2024 | Multi-Voiced Narrative of Home-Based Palliative Care: Report of One Case | No (Insufficient data) |
| 53 | Fusetti | 2023 | Palliative Care Nursing Case Management in Young Adults With Advanced Rare Cancer: Case Discussion of a Multidisciplinary Approach | Yes |

Appendix 3 data charting from original studies

| First author | Year | Title | Study design | Country | Setting | Sample description (n) | Intervention | Monodisciplinary or multidisciplinary | Cm profession | Cm delivery |
|--------------|------|---|------------------------------|-------------|---------------------|---|--|---------------------------------------|---|--|
| Valenti | 2022 | Nurse-led telephone follow-up for early palliative care patients with advanced cancer | Observational, retrospective | Italy | In Hospital | patient and caregiver phone calls (323 phone calls for a total of 171 patients) | Palliative care nurse-led telephone case management | Monodisciplinary | PC nurse with training on medication and counselling | Phone |
| Lockhart | 2003 | The PhoenixCare Program | Model description | USA | Home based services | model description paper (136) | Defined set of home-based services addressing disease and symptom management, education to patient and family/caregiver, and social, psychological, and spiritual support services | Monodisciplinary | Three registered nurse case managers were the primary caregivers while a medical director, a half-time social worker, and a half-time pastoral counselor acted primarily as consultants to the case managers. All the team performed 2 weeks of specific training | Phone and home visits with adapted ration between disease acuity, CM Service outside hospital. |
| Head | 2009 | Mark's journey: a study in medicaid palliative care case management | case study | USA | Not stated | 1 | illustrate the implementation of palliative care case management by describing in detail the case management of a Medicaid recipient diagnosed with a life-threatening disease. | Multidisciplinary | PC nurse (RN with PC training) + social worker | not stated |
| Kuhn | 2012 | Identifying patients suitable for palliative care—a descriptive analysis of enquiries using a Case Management Process Model approach | Retrospective | Germany | In Hospital | 1000 enquiries | / | Monodisciplinary | PC experience nurse with additional training certified by the German Society of Care and Case Management | mostly telephone, but also fax, email and personal |
| Van Der Plas | 2015 | Palliative care case management in primary care: A descriptive study about referrals in relation to treatment aims | Cross-sectional survey | Netherlands | Home based services | questionnaires 687 pts 448 referrers | questionnaire completed by case managers and referrers to case management | Monodisciplinary | nurse with expertise in PC | home care |
| Wu | 2014 | Economic value of a cancer case management program | Retrospective | USA | Health care system | 8843 pts | telephonic interview | Monodisciplinary | experienced oncology nurses | phone |
| Bookbinder | 2005 | Improving End-of-Life Care: Development and Pilot-Test of a Clinical Pathway | Pilot | USA | In Hospital | 101+156 pts | chart audit tool | Multidisciplinary | advanced practice nurses, physicians, an ethicist, researchers, educators, a pharmacist, social workers, a dieticians, and chaplains. Two part-time advanced practice nurses coordinated the activities of the team | hospital |
| Ozcelik | 2014 | Examining the effect of the case management model on patient results in the palliative care of patients with cancer | Experimental investigation | Turkey | In Hospital | 22+22 | palliative care cancer case management intervention | Multidisciplinary | nurse (education not stated) with involvement of: social worker, psychiatrists, and dietician) | hospital |
| Gerhardt | 2023 | Qualitative evaluation of a palliative care case management intervention for patients with incurable gastrointestinal cancer (PalMaGiC) in a hospital department | Qualitative study | Denmark | In Hospital | 14 | palliative care cancer case management intervention | Monodisciplinary | Specialist nurses experienced in surgical gastroenterology and palliative care | In hospital, Phone |
| Madrigal | 2023 | Nurse-led supportive Coordinated Transitional Care (CTraC) program improves care for veterans with serious illness | Implementation study | USA | Health care system | 104 | a telephone-based, nurse-driven program shown to decrease readmissions | Monodisciplinary | RN NCM with experience in geriatrics and palliative care | Phone |
| Shindel | 2022 | Associations among navigational support and health care utilization and costs in patients with advanced cancer: An analysis based on administrative health insurance data | Secondary analysis | Germany | In Hospital | 717 patients | a telephone-based, nurse-driven program | Monodisciplinary | Social care nurses with a professional background and nursing training, occupational training as social worker, or a degree in social pedagogy | Phone, email, or in hospital |
| Fusetti | 2023 | Palliative Care Nursing Case Management in Young Adults With Advanced Rare Cancer: Case Discussion of a Multidisciplinary Approach | Case study | Italy | In Hospital | 1 patient and 2 caregivers | palliative care cancer case management intervention | Monodisciplinary | nurse with expertise in PC | Phone, In hospital |

Appendix 4. Analysis of case management activities derived from the studies, based on case management service delivery mode

| Case management Service Delivery Mode | Studies | Monthly case load estimation | Professional structure of case management service | Case Management Activities in Palliative Care Practice |
|---------------------------------------|--|------------------------------|---|--|
| Telephone | Valenti 2022 Wu 2014 Madrigal 2023 | 29 | Monodisciplinary (Nurse) | Management of cancer-related symptoms Medication and treatment education Medication refills Scheduling of appointments for patients Homecare organisation Hospice information Coordinating care Facilitate completion of advance directives and orders for life sustaining treatment Management of interdisciplinary issues Psychological, and emotional support and counselling Community/specialists resource referral Cost savings interventions Main family and patient referral and support Monitoring of pharmacotherapy Provision of medical/nursing/ practical knowledge and informations Assessment, Screening and Anticipation of care needs Reviewing pharmacotherapy Follow up Discharge plan Optimization |
| Home Care | Van der Plaas 2014 | 32 | Monodisciplinary (Nurse) | Coordinating care Management of interdisciplinary issues Advocacy within the system Bereavement management (assessment for patient and caregivers, education and support) Home visits Negotiation between patient and healthcare providers Main family and patient referral and support Monitoring of pharmacotherapy Provision of medical/nursing/ practical knowledge and informations Anticipating care needs Psychological, and emotional support and counselling Spiritual support and counselling |
| In Hospital | Bookbinder 2005 Ozcelik 2014 | 7 | Multidisciplinary team work approach (nurses, physicians, ethicist, researchers, educators, pharmacist, social workers, dieticians, and chaplains). Coordination of the activities by nurses Multidisciplinary team work approach | Management of cancer-related symptoms Advance Care Planning Tailored scheduling of appointments for patients Psychological, and emotional support and counselling Community/specialists resource referral Family meeting Coordinating care Bereavement management (assessment for patient and caregivers, education and support) Networking of healthcare providers through frequent communication for informations and advices Main family and patient referral and support Provision of medical/nursing/ practical knowledge and informations Provision of condolence and educational materials |
| Mixed (delivery mode structure) | Lockhart 2003 (mostly phone plus home visits) | 30-35 | 3 nurse case managers with a medical director, a social worker, and a pastoral counselor that acted as consultants. | Homecare organisation Coordinating care Management of healthcare documentation Emergency Response plan Advance Care Planning Psychological, and emotional support and counselling Spiritual support and counselling Community/specialists resource referral Comprehensive assessment and development of individualized plan of care Advocacy within the system Cost savings interventions |
| | Kuhn 2012 (mostly phone plus home visits) | / | Monodisciplinary (Nurse) | Justification of individualized, patient-focused services within the managed care organization Bereavement management (assessment for patient and caregivers, education and support) Join the funeral service Secure preauthorization for home administration of blood products and medications Family meeting |
| | Head 2003 (home, hospital, phone) | / | Multidisciplinary team work approach led by palliative care nurse and social worker | Arrangement of interdisciplinary meeting Assure healthcare resources provision in case of travel Networking of healthcare providers through frequent communication for informations and advices |
| | Fusetti 2023 Shindel 2022 Gerhardt 2023 | Phone In hospital | | In-patient admission Management of requests for the home care or palliative care Consultations service and related patients' allocation Identification of patients in need of case management Bed planning Management of pathway of care and transfert when patient is discharged Participation in the multi-professional team meetings Provision of medical/nursing/ practical knowledge and informations Triaging and monitoring needs and symptoms Contact person for patients and caregivers Support in decision making Management of barriers to access services |