

Additional Files

Appendix A: Medline Search Results (retrieved on 27 Dec 2024)

#	Searches	Results
1	("Palliative Care"/ or "Hospice Care"/ or "Terminal Care"/ or "End of Life Care".ti,ab,kf.) and ("Assessment Tool*" or "Screening Tool*" or "Evaluation Scale*" or "Symptom Scale*" or "Outcome Measure*" or "Clinical Scale*" or "Validated Instrument*" or "Self-report Questionnaire").mp. and ("Edmonton Symptom Assessment Scale" or "ESAS" or "Sheffield Profile for Assessment and Referral for Care" or "SPARC" or "Palliative Performance Scale" or "PPS" or "Karnofsky Performance Status" or "KPS" or "Support Team Assessment Schedule" or "STAS" or "Memorial Symptom Assessment Scale" or "MSAS" or "McGill Quality of Life Questionnaire" or "MQOL" or "Functional Assessment of Chronic Illness Therapy-Palliative" or "FACIT-Pal" or "Quality of Life at the End of Life" or "QUAL-E" or "Patient Dignity Inventory" or "PDI" or "Brief Pain Inventory" or "BPI" or "Rotterdam Symptom Checklist" or "RSCL" or "EORTC QLQ-C15-PAL" or "EORTC QLQ-C30" or "Hospital Anxiety and Depression Scale" or "HADS").mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]	254
2	limit 1 to (english language and yr="2005 - Current")	233

Appendix B: CINAHL Search Results (retrieved on 27 Dec 2024)

#	Searches	Results
1	(MH "Palliative Care") OR (MH "Hospice Care") OR (MH "Terminal Care") OR (MH "End of Life Care") OR TI (palliative N2 care OR hospice N2 care OR terminal N2 care OR end N2 life) OR AB (palliative N2 care OR hospice N2 care OR terminal N2 care OR end N2 life)	-
2	(MH "Assessment") OR (MH "Screening") OR (MH "Evaluation") OR (MH "Outcome Assessment (Health Care)") OR TI (assessment N2 tool* OR screening N2 tool* OR evaluation N2 scale* OR symptom N2 scale* OR outcome N2 measure* OR clinical N2 scale* OR validated N2 instrument* OR self-report N2 questionnaire) OR AB (assessment N2 tool* OR screening N2 tool* OR evaluation N2 scale* OR symptom N2 scale* OR outcome N2 measure* OR clinical N2 scale* OR validated N2 instrument* OR self-report N2 questionnaire)	-
3	TI ("Edmonton Symptom Assessment Scale" OR "ESAS" OR "Sheffield Profile for Assessment and Referral for Care" OR "SPARC" OR "Palliative Performance Scale" OR "PPS" OR "Karnofsky Performance Status" OR "KPS" OR "Support Team Assessment Schedule" OR "STAS" OR "Memorial Symptom Assessment Scale" OR "MSAS" OR "McGill Quality of Life Questionnaire" OR "MQOL" OR "Functional Assessment of Chronic Illness Therapy-Palliative" OR "FACIT-Pal" OR "Quality of Life at the End of Life" OR "QUAL-E" OR "Patient Dignity Inventory" OR "PDI" OR "Brief Pain Inventory" OR "BPI" OR "Rotterdam Symptom Checklist" OR "RSCL" OR "EORTC QLQ-C15-PAL" OR "EORTC QLQ-C30" OR "Hospital Anxiety and Depression Scale" OR "HADS") OR AB ("Edmonton Symptom Assessment Scale" OR "ESAS" OR "Sheffield Profile for Assessment and Referral for Care" OR "SPARC" OR "Palliative Performance Scale" OR "PPS" OR "Karnofsky Performance Status" OR "KPS" OR "Support Team Assessment Schedule" OR "STAS" OR "Memorial Symptom Assessment Scale" OR "MSAS"	-

	OR "McGill Quality of Life Questionnaire" OR "MQOL" OR "Functional Assessment of Chronic Illness Therapy-Palliative" OR "FACIT-Pal" OR "Quality of Life at the End of Life" OR "QUAL-E" OR "Patient Dignity Inventory" OR "PDI" OR "Brief Pain Inventory" OR "BPI" OR "Rotterdam Symptom Checklist" OR "RSCL" OR "EORTC QLQ-C15-PAL" OR "EORTC QLQ-C30" OR "Hospital Anxiety and Depression Scale" OR "HADS")	
4	1 AND 2 AND 3	495
5	Limit to: English language and yr = “2005-Current”	451

Appendix C: Cochrane Library Search Results (retrieved on 27 Dec 2024)

#	Searches	Results
1	("Palliative Care" OR "Hospice Care" OR "Terminal Care" OR "End of Life Care");ti,ab,kw AND (("Assessment" NEXT "Tool") OR ("Screening" NEXT "Tool") OR ("Evaluation" NEXT "Scale") OR ("Symptom" NEXT "Scale") OR ("Outcome" NEXT "Measure") OR ("Clinical" NEXT "Scale") OR ("Validated" NEXT "Instrument") OR ("Self-report" NEXT "Questionnaire"));ti,ab,kw AND (("Edmonton Symptom Assessment Scale" OR "ESAS" OR "Sheffield Profile for Assessment and Referral for Care" OR "SPARC" OR "Palliative Performance Scale" OR "PPS" OR "Karnofsky Performance Status" OR "KPS" OR "Support Team Assessment Schedule" OR "STAS" OR "Memorial Symptom Assessment Scale" OR "MSAS" OR "McGill Quality of Life Questionnaire" OR "MQOL" OR "Functional Assessment of Chronic Illness Therapy-Palliative" OR "FACIT-Pal" OR "Quality of Life at the End of Life" OR "QUAL-E" OR "Patient Dignity Inventory" OR "PDI" OR "Brief Pain Inventory" OR "BPI" OR "Rotterdam Symptom Checklist" OR "RSCL" OR "EORTC QLQ-C15-PAL" OR "EORTC QLQ-C30" OR "Hospital Anxiety and Depression Scale" OR "HADS");ti,ab,kw)	50
2	limit 1 to (english language and yr="2005 - Current")	46

Appendix D: Included Studies of Scoping Review (n = 299)

Study citation	Study design	Population	Total participants	Setting	Purpose of the tool	Key findings (summarised)
Abernethy, A. P., Wheeler, J. L., & Currow, D. C. (2010). "Utility and Use of Palliative Care Screening Tools in Routine Oncology Practice." Cancer Journal, 16(5), 444-460.	Systematic review	Palliative care patients; Healthcare professionals	N/A	Hospital; Home-based care; Aged care; Hospice; Other: United States	Prognosis; Symptom management; Quality of life	Palliative care screening tools are essential in oncology to identify symptom burden and facilitate timely interventions. The study highlights several validated assessment tools, including the ESAS and Brief Pain Inventory (BPI). Technology-based screening methods (e.g., electronic data capture and patient-reported outcomes) improve efficiency and continuity of care. Early palliative care screening improves symptom management and patient outcomes.
Abraham, A., Kutner, J. S., & Beaty, B. (2006). Suffering at the end of life in the setting of low physical symptom distress. Journal of Palliative Medicine, 9(3), 658-665. https://doi.org/10.1089/jpm.2006.9.658	Cohort study	Palliative care patients	48	Hospice; Other: US	Symptom management; Quality of life; Psychological support ; Other	Physical symptom distress was not strongly associated with overall suffering. Suffering was more influenced by psychological well-being, diagnosis (cancer vs non-cancer), and age. Despite low physical distress, significant suffering was still reported, suggesting non-physical factors play a large role. Tools like MSAS and MQOL captured distinct but related aspects of patient experience.

Adersen, M., Hansen, M. B., Neergaard, M. A., Sjøgren, P., Guldin, M.-B., & Groenvold, M. (2024). The first decade of the Danish Palliative Care Database: Improvements and ongoing challenges in the quality and use of specialised palliative care. <i>Acta Oncologica</i>, 63(3), 259-266. https://doi.org/10.2340/1651-226X.2024.28515	Cross sectional study	Palliative care patients	145,006 referrals from 2010-2020, with 94,289 patients having contact with SPC	Hospital; Hospice; Other: Denmark	Symptom management; Quality of life; Functional status	The study analysed five quality indicators of the Danish Palliative Care Database from 2010 to 2020. Contact with specialised palliative care (SPC) increased slightly over time, but the majority of patients in SPC had cancer. Waiting times for SPC increased over time despite improved quality indicators. Non-cancer patients remained underrepresented in SPC services. Hospital-based palliative care teams had better adherence to quality indicators than hospices. Quality indicators showed an overall positive trend, except for waiting times.
Ahmed, N., Hughes, P., Winslow, M., Bath, P. A., Collins, K., & Noble, B. (2015). A pilot randomized controlled trial of a holistic needs assessment questionnaire in a supportive and palliative care service. <i>Journal of Pain and Symptom Management</i>, 50(5), 587-598.	Randomised controlled trial	Palliative care patients	182	Hospital; Home-based care; Hospice; Other: United Kingdom	Symptom management; Quality of life; Psychological support	The study evaluated the use of the Sheffield Profile for Assessment and Referral for Care (SPARC), a holistic needs assessment questionnaire. No significant positive impact of SPARC on quality of life (EQ-5D), patient concerns (MYCAW), or patient enablement (PEI) was found. Unexpectedly, a higher proportion of patients in the control group (who did not immediately receive SPARC) showed improvement in MYCAW scores compared to the intervention group (P =

						0.019). Patients reported that completing the SPARC did not lead to any significant change in their care or symptom management. The study concluded that holistic needs assessments like SPARC might not be effective unless integrated with clinical assessment and care planning.
Ahmed, N., Hughes, P., Winslow, M., Bath, P., Collins, K., & Noble, B. (2012). Feasibility study of the Sheffield Profile for Assessment and Referral for Care. BMJ Supportive & Palliative Care, 2(Supp 1), A43-A44.	Randomised controlled trial	Palliative care patients	100	Hospital; Home-based care; Aged care; Hospice; Other: United Kingdom	Prognosis; Symptom management; Quality of life; Functional status; Social support; Psychological support ; Spiritual support	SPARC is a multidimensional holistic screening tool designed to assess physical, psychological, social, and spiritual needs of patients requiring palliative care. The study aims to evaluate the impact of SPARC on quality of life, interventions, consultations, and referrals in supportive and palliative care. Patients were randomized to receive SPARC at baseline or after a 2-week waiting period. Data collection included research questionnaires at baseline, 2 weeks, 4 weeks, and 6 weeks, along with qualitative interviews. In the first 6 months, 318 patients were invited, and 100 consented. The response rate for questionnaires declined over time: Baseline: 82 completed 2 weeks: 65 completed 4 weeks: 51 completed 6 weeks: 37

						completed 16 patients participated in interviews
Ahmed, N., Hughes, P., Winslow, M., Bath, P.A., Collins, K., & Noble, B. (2015). A Pilot Randomized Controlled Trial of a Holistic Needs Assessment Questionnaire in a Supportive and Palliative Care Service. Journal of Pain and Symptom Management, 50(5), 587-598	Randomised controlled trial	Palliative care patients	182	Hospital; Hospice; Other: United Kingdom	Symptom management; Quality of life; Social support; Psychological support	The study tested the Sheffield Profile for Assessment and Referral for Care (SPARC) as a holistic needs assessment tool in palliative care. Unexpectedly, the control group (which did not receive SPARC initially) had greater improvement in patient-reported concerns (MYCAW scores). No significant impact on quality of life (EQ-5D) or patient enablement (PEI) was found. The study suggested that standardized holistic assessment tools might not be effective unless integrated into clinical care planning.
Alhumaid, M., Hill, J., Ghosh, S., Watanabe, S. M., & Fairchild, A. M. (2023). Comprehensive assessment of care needs during palliative radiotherapy consultation optimizes provision of supportive care for patients with breast cancer. International Journal of Radiation Oncology, Biology, Physics	Other: observational study	Palliative care patients	130	Hospital; Other: Canada	Symptom management; Quality of life	The study examined the role of systematic screening in palliative radiotherapy (PRT) for breast cancer patients. Dedicated multidisciplinary Palliative Radiation Oncology (PRO) clinic visits resulted in more comprehensive documentation of patient symptoms and needs. PRO consultations led to a significantly higher number of referrals to allied health professionals (50% vs. 8.2%, $p < 0.0001$). Baseline and follow-up ESAS scores were better

						recorded for PRO patients. Frailty scores were derivable in 89.3% of PRO consults vs. 44.4% of non-PRO consults ($p < 0.0001$).
Allende, S., Turcott, J. G., Verástegui, E., Rodríguez-Mayoral, O., et al. (2024). "Early Incorporation to Palliative Care (EPC) in Patients With Advanced Non-Small Cell Lung Cancer: The PACO Randomized Clinical Trial." The Oncologist, 29, e1373-e1385.	Randomised controlled trial	Palliative care patients	146	Hospital; Other: Mexico	Prognosis; Symptom management; Quality of life; Caregiver support ; Psychological support	EPC improved overall survival (OS): Patients in the EPC group had a median OS of 18.1 months, compared to 10.5 months in the standard oncological care (SOC) group ($p = 0.029$). Patients with better baseline QoL benefited more from EPC: Those with a global QoL > 70 had an OS of 38.7 months compared to 21.4 months in the SOC group. No significant changes in QoL or symptom burden: Despite survival benefits, QoL differences between EPC and SOC groups were not statistically significant. No significant differences in anxiety and depression at all study points. EPC is feasible in a low-to-middle-income country (LMIC) and can be integrated into standard cancer care.
Allgar, V.L., Chen, H., Richfield, E., Currow, D., Macleod, U., & Johnson, M.J. (2018). Psychometric Properties of the Needs Assessment	Other: Psychometric validation study	Palliative care patients; Caregivers; Healthcare	123	Home-based care; Other: primary care practices united Kingdom	Symptom management; Quality of life; Functional status; Social support;	The Needs Assessment Tool-Progressive Disease Cancer (NAT:PD-C) was adapted for the U.K. primary care setting. The tool showed adequate interrater reliability and

Tool-Progressive Disease Cancer in U.K. Primary Care. Journal of Pain and Symptom Management, 56(4), 602-612.		professionals			Caregiver support ; Psychological support ; Spiritual support	construct validity for assessing patients' and caregivers' palliative care needs. It demonstrated moderate test-retest reliability, especially in assessing patients' well-being and caregivers' ability to provide care. Over three-quarters of GPs found the tool highly acceptable for use in clinical practice. The NAT:PD-C facilitated structured patient and caregiver needs assessments and provided a framework for decision-making on referrals to specialist palliative care.
Alzhrani, A. A., Alsu hail, A. I., & Rababah, A. A. (2023). Fatigue prevalence among palliative care cancer patients in comprehensive cancer center, King Fahad Medical City, Riyadh, Saudi Arabia: A cross-sectional study. Journal of Palliative Care, 38(4), 424-431. DOI: 10.1177/08258597231191615	Cross sectional study	Palliative care patients	2616	Hospital; Other: Saudi Arabia	Symptom management; Quality of life; Functional status	The prevalence of cancer-related fatigue (CRF) among palliative care patients was 83%, with 63% experiencing significant fatigue (moderate to severe). Fatigue was significantly correlated with pain (86.4%) and shortness of breath (SOB). Gender differences: Females (84.4%) reported higher fatigue than males (81.3%). Fatigue was more prevalent among patients with gastrointestinal malignancies (86%) and unknown primary malignancies (91.7%). Fatigue severity was significantly associated with age (41-60 years had the highest prevalence, 84.5%) and PPS,

						with lower PPS scores linked to higher fatigue rates. No significant correlation was found between fatigue and insomnia or depression
Ann-Yi, S., Wong, A., Wu, J., Charone, M., Baumgartner, K., Carmack, C. L., Castro, D., Guzman, D., Joy, M., Kuriakose, L., Madden, K., Najera, J., Pangemanan, I., Rajani, S., Raznahan, M., Stewart, H., Tallie, K., Tanco, K., Zhukovsky, D., & Bruera, E. (2023). Physical and Psychosocial Symptoms of Young Adult Patients Referred to the Supportive Care Mobile Team. Journal of Adolescent & Young Adult Oncology, 12(3), 440-444. https://doi.org/10.1089/jayao.2022.0032	Cohort study	Palliative care patients	896	Hospital; Other: US	Symptom management; Quality of life; Psychological support	Young adult (YA) cancer patients (18-39 years) reported significantly higher insomnia and somewhat higher pain scores compared to older groups. YAs with children under 18 reported higher pain, sleep disturbances, and financial distress. Overall symptom distress was not consistently higher across all domains compared to middle-aged or older patients. YAs had more psychiatric history compared to older groups.
Antunes, B., Rodrigues, P. P., Higginson, I. J., & Ferreira, P. L. (2020). Determining the prevalence of palliative needs and exploring screening accuracy of depression and anxiety	Other: Multi-centre observational study	Palliative care patients	135	Hospital; Other: primary care facility, oncology service Portugal	Symptom management; Functional status; Social support; Psychological support ; Spiritual support	The most significant palliative care needs identified were psychological, family-related, and spiritual. Anxiety and depression were common non-physical symptoms. The IPOS showed moderate screening accuracy for anxiety and

items of the Integrated Palliative Care Outcome Scale - A multi-centre study. BMC Palliative Care, 19(69). https://doi.org/10.1186/s12904-020-00571-8						depression when compared to the HADS. The most distressing issue was family or friends being anxious or worried (36.3%). The study found that patients' physical symptoms were generally well managed, but non-physical needs required more attention.
Aranha, A. N. F., et al. (2020). Association of Hospital Readmissions and Survivability With Frailty and Palliative Performance Scores Among Long-Term Care Residents. American Journal of Hospice & Palliative Medicine, 37(9), 716-720.	Cohort study	Palliative care patients	171	Aged care; Other: United States	Prognosis; Functional status	Frailty (measured by the Clinical Frailty Scale, CFS) and palliative performance scores (PPS) are strong predictors of hospital readmissions and survivability among long-term care residents. Residents with a CFS score > 6 and a PPS score < 40% had a significantly reduced chance of survival beyond one year. Readmission rates were higher in younger long-term care residents compared to those not readmitted. CFS was positively associated with age, while PPS was not significantly correlated.
Arthur, J., Yennurajalingam, S., Nguyen, L., Tanco, K., Chisholm, G., Hui, D., & Bruera, E. (2015). The routine use of the Edmonton Classification System for Cancer Pain in an outpatient	Cohort study	Palliative care patients	91	Hospital; Other: US	Symptom management; Functional status; Psychological support	Patients with neuropathic pain and psychological distress had significantly higher pain intensity scores. Neuropathic pain was associated with higher morphine equivalent daily dose (MEDD) requirements. A greater number of negative ECS-CP features was associated

supportive care center. Palliative & Supportive Care, 13(5), 1185-1192. https://doi.org/https://dx.doi.org/10.1017/S1478951514001205						with higher reported pain intensity. Incident pain showed a trend toward higher pain intensity but did not reach statistical significance. ECS-CP could be feasibly integrated into routine clinical practice with high completion rates.
Ascencio Huertas, L., Allende Pérez, S. R., Peña Nieves, A. (2024). Assessment of emotional distress in palliative care: Edmonton Symptom Assessment System-revised (ESAS-r) vs Distress Thermometer. Palliative and Supportive Care, 22, 258-264. DOI: 10.1017/S1478951523001530	Cross sectional study	Palliative care patients	356	Hospital	Symptom management; Psychological support	The study compared the ESAS-r and the Distress Thermometer (DT) for measuring emotional distress in palliative care patients. ESAS-r and DT showed a moderate correlation ($r = 0.67$, $p < 0.001$), suggesting both tools are useful for assessing emotional distress. DT showed high sensitivity but lower specificity compared to ESAS-r in detecting distress levels.
Augustussen, M., Sjøgren, P., Timm, H., Hounsgaard, L., & Pedersen, M. L. (2017). Symptoms and health-related quality of life in patients with advanced cancer - A population-based study in Greenland. European Journal of Oncology Nursing, 28, 92-97. https://doi.org/10.1016/j.ejon.2017.03.004	Cross sectional study	Palliative care patients; Other: patients with advanced cancer receiving palliative treatment	58	Hospital; Other: Greenland	Symptom management; Quality of life; Functional status; Psychological support	47% of patients had reduced social functioning, 36% had reduced physical and role functioning, and 19% had reduced emotional and cognitive functioning. 48% of patients reported fatigue, and 33% had financial difficulties. The Greenlandic version of the EORTC-QLQ-C30 had good applicability for assessing symptoms and quality of life. The highest symptom burdens were fatigue (48%) and financial

						difficulties (33%). Lung cancer was the most prevalent type of cancer among participants.
Baba, K., Fransson, P., & Lindh, J. (2007). Use of a modified ESAS in cancer patients: a pilot study of patient and staff experiences. International Journal of Palliative Nursing, 13(12), 610-616. https://doi.org/10.12968/ijpn.2007.13.12.27890	Other: observational	Palliative care patients	Patients with advanced cancer (n = 28) Healthcare staff (n = 21) providing feedback on tool usability	Hospital	Symptom management; Quality of life; Other: Usability evaluation (staff and patient satisfaction with the tool's integration into routine care)	The modified ESAS was used daily to monitor symptoms in patients receiving oncological palliative care. The mean ESAS symptom distress score was 28.9 on inclusion day and 25.8 on Day 3 (p = 0.531), indicating a minimal decrease. 11 of 21 staff members rated ESAS as a "good" or "very good" method to obtain information about symptoms. 17 out of 24 patients found ESAS easy to complete and thought it covered relevant symptoms. Some patients suggested additional items like constipation and diarrhea, which were missing from the current tool. The study found logistical issues with timely completion and use of ESAS data during medical rounds. Some patients struggled with distinguishing severe pain from the worst possible pain on the scale.
Babcock, M., Kuntz, J. G., Kowalsky, D., Calitri, N., & Kenny, A. M. (2016). The Palliative Performance Scale Predicts Three- and Six-Month Survival in Older	Cohort study	Palliative care patients	123	Hospital; Other: United States	Prognosis; Functional status	The PPS may be a useful predictor of survival for patients admitted through the emergency department (ED). Patients with a PPS score ≤ 30 had only 14% survival at six months. The study identified three survival

Adult Patients Admitted to the Hospital through the Emergency Department. Journal of Palliative Medicine, 19(10), 1087-1091. https://doi.org/10.1089/jpm.2016.0011						curves based on PPS scores: PPS 0-30: 42.9% survival at three months, 14.3% at six months. PPS 40-60: 85.1% survival at three months, 74.5% at six months. PPS 70-100: 97.1% survival at three months, 95.7% at six months. A lower PPS score correlated with higher mortality, independent of patient age.
Bagcivan, G., Bredle, J., Bakitas, M., & Guciz Dogan, B. (2019). Reliability and Validity of the Turkish Version of the FACIT-PAL Quality of Life Instrument. Journal of Pain & Symptom Management, 58(2), 297-297. https://doi.org/10.1016/j.jpainsymman.2019.04.020	Qualitative research	Palliative care patients; Other: Turkiye	232	Hospital	Symptom management; Quality of life; Functional status	The Turkish version of the FACIT-Pal (FACIT-Pal-TR) was successfully translated, validated, and culturally adapted for Turkish-speaking cancer patients. Reliability: Cronbach's alpha was 0.932 (strong internal consistency). Validity: FACIT-Pal-TR had strong construct and concurrent validity, correlating well with ESAS and ESAS. Factor structure: The tool retained the original five-factor structure.
Bakitas, M., Lyons, K. D., Hegel, M. T., Balan, S., Brokaw, F. C., Seville, J., Hull, J. G., Li, Z., Tosteson, T. D., Byock, I. R., & Ahles, T. A. (2009). Effects of a palliative care intervention on clinical outcomes in patients with advanced cancer: the	Randomised controlled trial	Palliative care patients	322	Hospital; Home-based care; Other: United States	Symptom management; Quality of life; Psychological support	The nurse-led palliative care intervention led to improvements in quality of life and mood among advanced cancer patients. No significant impact was observed on symptom intensity scores, hospital/ICU days, or emergency department visits. The intervention group reported

Project ENABLE II randomized controlled trial. JAMA, 302(7), 741-749. https://doi.org/https://dx.doi.org/10.1001/jama.2009.1198						higher quality of life scores (mean difference 4.6, $p = 0.02$) and lower depressive symptoms (mean difference -1.8, $p = 0.02$) compared to usual care. Among patients who died during the study, quality of life was significantly higher (mean difference 8.6, $p = 0.02$), and depressive symptoms were lower (mean difference -2.7, $p = 0.03$).
Barallat, E., Nabal, M., Canal, J., Trujillano, J., Gea-Sanchez, M., Larkin, P. J., & Downing, M. G. (2017). The Spanish Adaptation of the Palliative Performance Scale (Version 2) Among Cancer Patients at the End of Life: Psychometric Properties [Validation Study]. Journal of Pain & Symptom Management, 54(4), 570-577.e575. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2017.07.014	Cross sectional study	Palliative care patients	250	Hospital; Hospice; Other: Spain	Prognosis; Symptom management; Functional status	The Spanish version of the Palliative Performance Scale (PPS-SPANISH) was translated and culturally adapted following a rigorous process. The tool showed high reliability and validity, with Cronbach's alpha of 0.99, confirming strong internal consistency. High agreement with other functional assessment tools such as Barthel Index and ESAS. Inter-rater reliability was 0.75, and test-retest reliability was 0.89, indicating strong consistency over time. The scale successfully discriminated between outpatient, inpatient, and emergency department patients, proving its applicability in different settings. Completion time ranged from 3 to 10

						minutes, making it a practical tool for palliative care.
Bausewein, C., Le Grice, C., Simon, S., & Higginson, I. (2011). The use of two common palliative outcome measures in clinical care and research: a systematic review of POS and STAS [Research Support, Non-U.S. Gov't Review Systematic Review]. Palliative Medicine, 25(4), 304-313. https://doi.org/https://dx.doi.org/10.1177/0269216310395984	Systematic review	Palliative care patients; Caregivers; Healthcare professionals	N/A	Hospital; Home-based care; Aged care; Hospice; Other: Covers global studies	Prognosis; Symptom management; Quality of life; Functional status; Social support; Caregiver support ; Psychological support ; Spiritual support	The review evaluated two widely used palliative outcome measures: the Palliative Care Outcome Scale (POS) and the Support Team Assessment Schedule (STAS). Both tools assess quality of palliative care through patient-reported and professional-reported measures. STAS was developed earlier and is mostly used in hospital and hospice settings, while POS includes patient, caregiver, and professional versions. POS is more commonly used in non-cancer palliative populations such as patients with neurological, renal, pulmonary, and heart diseases. The tools have been translated and adapted into multiple languages, and variations exist for specific conditions. STAS was more frequently used for audits and healthcare professional assessments, whereas POS was more commonly used in research and patient-reported studies.
Bausewein, C., Schildmann, E., Rosenbruch, J., Haberland, B., Tanzler,	Case series	Healthcare professionals	not specified	Hospital; Other: Germany	Symptom management; Quality of life; Functional	The study describes a structured process for implementing routine outcome measurement in a university palliative care unit.

S., & Ramsenthaler, C. (2018). Starting from scratch: implementing outcome measurement in clinical practice. <i>Annals of Palliative Medicine</i>, 7(Suppl 3), S253-S261. https://doi.org/https://dx.doi.org/10.21037/apm.2018.06.08					status; Psychological support ; Spiritual support	The IPOS was introduced for monitoring symptoms and functional status. Outcome measurement enabled improved communication within the care team and enhanced patient-centered care.
Bekelman, D. B., Johnson-Koenke, R., Bowles, D. W., & Fischer, S. M. (2018). Improving Early Palliative Care with a Scalable, Stepped Peer Navigator and Social Work Intervention: A Single-Arm Clinical Trial. <i>Journal of Palliative Medicine</i>, 21(7), 1011-1016. https://doi.org/10.1089/jpm.2017.0424	Non-randomised experimental study	Palliative care patients	17	Hospital	Symptom management; Quality of life; Caregiver support ; Psychological support	“Conclusion: At a single site, a stepped peer navigator and social work palliative care study had several challenges to feasibility, including low patient-reported distress and loss to follow-up.”
Bircan, H. A., Yalcin, G. S., Fidanci, S., Karaibrahimoglu, A., & Tuglu, H. C. (2020). The usefulness and prognostic value of Memorial Symptom Assessment-Short Form and Condensed Memorial Symptom Assessment	Cohort study	Palliative care patients	116	Hospital; Other: Turkiye	Prognosis; Symptom management; Functional status; Psychological support	The MSAS-Short Form (MSAS-SF) and Condensed MSAS (CMSAS) are useful tools for assessing symptom burden in lung cancer patients. These tools correlate significantly with overall survival, disease stage, and performance status. The most common symptoms reported were cough (86.3%),

Scale in assessment of lung cancer patients. Supportive Care in Cancer, 28(4), 2005-2014. https://doi.org/10.1007/s00520-019-05003-9						lack of energy (74.3%), dyspnea (70.1%), and psychological symptoms such as sadness (61.5%) and worrying (53.8%). Higher MSAS-SF and CMSAS scores were associated with shorter survival times. The study suggests that CMSAS-SUM score may be predictive of overall survival in lung cancer patients.
Bischoff, K. E., Patel, K., Boscardin, W. J., O'Riordan, D. L., Pantilat, S. Z., & Smith, A. K. (2024). Prognoses Associated With Palliative Performance Scale Scores in Modern Palliative Care Practice. JAMA Network Open, 7(7), e2420472-e2420472. https://doi.org/10.1001/jamanetworkopen.2024.20472	Clinical prediction rule	Palliative care patients	4779	Hospital; Home-based care; Other: United States	Prognosis; Functional status	The PPS remains a widely used tool for predicting survival in patients with serious illness. Updated prognostic estimates showed substantially longer survival times than previous estimates. The PPS had better predictive accuracy for short-term mortality (1-month) compared to longer-term survival. Patients with cancer had higher mortality rates than those with other serious illnesses at most PPS levels. The PPS performed well in inpatient settings but had lower discriminative ability in outpatient settings. An updated online prognostic calculator was developed for modern palliative care estimates.
Blinderman, C. D. (2016). Symptom distress and patterns of palliative-care	Cross sectional study	Palliative care patients	146	Hospital; Other: United States	Symptom management;	“Low rates of referrals to palliative care were found among oncology outpatients. In

referral among oncology outpatients. <i>Journal of Clinical Oncology</i> , 34(29), 185-185. https://doi.org/10.1200/jco.2016.34.26_suppl.185					Psychological support	addition, this study suggests oncology patients are referred to palliative care at later stages of disease, when they are already experiencing significant symptom burden”
Blum, D., Hess, J., Omlin, A., Jurt, G., & Strasser Abhpm, F. (2009). Comprehensive cancer cachexia staging and its impact in the outpatient oncology setting: A phase II study. <i>Journal of Clinical Oncology</i>, 27, e20530-e20530.	Non-randomised experimental study	Palliative care patients	58	Hospital; Other: Switzerland	Symptom management; Quality of life; Functional status; Caregiver support ; Psychological support ; Spiritual support	Multidimensional assessment using standardised tools (e.g., VAS, HADS, nutritional diary) helped identify factors linked to weight loss and eating-related distress. Nutritional intake and psychological variables, not weight loss alone, were key indicators. Clinic-based interventions led to improved intake in most patients, supporting the tool’s clinical utility.
Boland, E. G., Boland, J. W., Ezaydi, Y., Greenfield, D. M., Ahmedzai, S. H., & Snowden, J. A. (2014). Holistic needs assessment in advanced, intensively treated multiple myeloma patients. <i>Supportive Care in Cancer</i>, 22(10), 2615-2620. https://doi.org/10.1007/s00520-014-2231-2	Cross sectional study	Palliative care patients; Other: United Kingdom	32	Hospital; Other	Symptom management; Quality of life; Social support; Psychological support ; Spiritual support	50% of patients reported significant tiredness. 44% reported pain. 37% reported daytime somnolence. 31% reported sleep problems at night. 34% were distressed by side effects of treatment. 40% worried about the effect of illness on their family. SPARC's Effectiveness: Patients completed the tool successfully, identifying a high symptom burden even in stable-phase disease. Despite receiving specialised care, patients

						reported significant unmet needs.
Bostwick, D., Wolf, S., Samsa, G., Bull, J., Jr. Taylor, D. H., Johnson, K. S., Kamal, A. H., & Taylor, D. H., Jr. (2017). Comparing the Palliative Care Needs of Those With Cancer to Those With Common Non-Cancer Serious Illness. Journal of Pain & Symptom Management, 53(6), 1079-1084.e1071. https://doi.org/10.1016/j.jpainsymman.2017.02.014	Cross sectional study	Palliative care patients	879	Hospital; Other: United States	Prognosis; Symptom management; Quality of life; Functional status; Psychological support	Non-cancer patients (COPD, ESRD, HF) were less functional and had higher rates of hospitalization compared to cancer patients. Pain and dyspnea severity were higher in cancer and non-cancer groups, respectively. Non-cancer patients had a better understanding of their prognosis than cancer patients.
Bradley, N., Davis, L., & Chow, E. (2005). Symptom Distress in Patients Attending an Outpatient Palliative Radiotherapy Clinic. Journal of Pain and Symptom Management, 30(2), 123-131.	Cross sectional study	Palliative care patients	1296	Hospital; Other: Canada	Symptom management; Functional status; Psychological support	Most distressing symptoms (ranked by severity from Edmonton Symptom Assessment Scale [ESAS]): Fatigue (5.04/10) Poor sense of well-being (4.16/10) Pain (3.84/10) Poor appetite (3.78/10) 92% of patients reported fatigue, 93% reported impaired sense of well-being, and 78% reported pain. Patients with lower KPS (<60) had significantly higher symptom distress scores across all nine ESAS symptoms. Women had higher scores for nausea and anxiety than men. Patients younger than 69 years reported

						significantly higher anxiety scores than older patients. Patients from hospitals or hospices had higher depression, anxiety, drowsiness, and impaired well-being compared to those coming from home.
Bradshaw, A., Santarelli, M., Khamis, A. M., Sartain, K., Johnson, M., Boland, J., Pearson, M., & Murtagh, F. E. M. (2021). Implementing person-centred outcome measures (PCOMs) into routine palliative care: A protocol for a mixed-methods process evaluation of The RESOLVE PCOM Implementation Strategy [Research Support, Non-U.S. Gov't]. BMJ Open, 11(9), e051904. https://doi.org/https://dx.doi.org/10.1136/bmjopen-2021-051904	Other: mixed methods process evaluation	Healthcare professionals	N/A	Hospital; Home-based care; Other: United Kingdom	Symptom management; Quality of life; Functional status	PCOMs (such as the Integrated Palliative care Outcomes Scale [IPOS] and Australia-Modified Karnofsky Performance Status [AKPS]) are crucial for assessing patient-reported outcomes in palliative care. Despite strong evidence supporting their use, PCOMs are inconsistently implemented in clinical settings due to factors like: Time constraints Lack of training Perception of burden Inadequate electronic systems Resistance from healthcare professionals The RESOLVE PCOM Implementation Strategy was developed to improve the routine use of PCOMs through: Educational resources (videos, guides) Workshops and training sessions IT support for integrating PCOMs into electronic records Continuous feedback and reporting The process evaluation of RESOLVE involves: Routine outcomes data to track PCOM

						usage over time Surveys to assess healthcare professionals' attitudes and skills in using PCOMs Interviews to identify barriers and enablers in implementation
Brandt, H. E., Ooms, M. E., Deliens, L., van der Wal, G., & Ribbe, M. W. (2006). The last two days of life of nursing home patients - a nationwide study on causes of death and burdensome symptoms in the Netherlands. Palliative Medicine, 20(5), 533-540. https://doi.org/10.1191/0269216306pm1164oa	Prevalence study	Palliative care patients	463	Aged care; Other: Netherlands	Symptom management; Functional status; Psychological support	Key Findings: The most common causes of death were: Pneumonia (17%) Renal failure (13%) Dehydration (13%) Cachexia (11%) Heart failure (8%) Burden of Symptoms: 48 hours before death: 51.3% of patients experienced at least one burdensome symptom. 25% were already unconscious. 24 hours before death: 28.4% still had burdensome symptoms. 44% were unconscious. Common distressing symptoms included: Pain (22% severe pain 24 hours before death) Fatigue (17%) Respiratory distress (shortness of breath, death rattle) Anxiety & depression were reported in a smaller subset. Symptom changes over time: Decreased pain, anxiety, depression in the last 48 hours. Worsening drowsiness, poor appetite, and physical inactivity. Quality of Dying: 92% of patients were rated as having a "gentle death" (score >50 on a 100-point scale by physicians).

						Unconscious patients were more likely to be rated as having a "good death."
Brännström, M., & Boman, K. (2014). Effects of person-centred and integrated chronic heart failure and palliative home care. PREFER: a randomized controlled study [Journal article]. European journal of heart failure, 16(10), 1142-1151. https://doi.org/10.1002/ehf.151	Randomised controlled trial	Palliative care patients	72	Home-based care; Other: Sweden	Symptom management; Quality of life; Functional status; Psychological support	patients receiving PREFER (integrated palliative & heart failure care) had significantly better health-related quality of life (HRQL) compared to usual care. Symptom burden improved significantly in PREFER patients compared to controls: Total symptom burden improved by 18% (p = 0.035) Self-efficacy increased by 17% (p = 0.041) QoL improved by 24% (p = 0.047) Nausea improved significantly (p = 0.02) Functional status (NYHA class) improved: 11 out of 28 PREFER patients (39%) had better NYHA class at 6 months vs. only 3 out of 32 (9%) in the control group (p = 0.015). Hospitalization rates were significantly lower in the PREFER group: Total hospitalizations: 15 in PREFER vs. 53 in the control group Total days spent in hospital: 103 days (PREFER) vs. 305 days (control) Mean hospital stays: 2.9 days (PREFER) vs. 8.5 days (control) (p = 0.011)

Brecht, J. R., Murshed, S., Homel, P., & Bookbinder, M. (2006). Monitoring symptoms in patients with advanced illness in long-term care: a pilot study. Journal of Pain & Symptom Management, 32(2), 168-174. https://doi.org/10.1016/j.jpainsymman.2006.02.012	Other: observational pilot study	Palliative care patients	108	Aged care; Other: United States	Symptom management; Functional status; Psychological support	ESAS was used daily by nurses to track symptoms in LTC patients. 46 out of 108 patients (43%) had at least one moderate-to-severe symptom (ESAS score ≥ 5). The four most common symptoms were: Pain (29 patients, median score = 7) Tiredness (25 patients, median score = 6) Poor sense of well-being (23 patients, median score = 6) Appetite loss (22 patients, median score = 6) Rapid symptom management significantly improved: Pain ($p = 0.001$) Tiredness ($p = 0.004$) Well-being ($p = 0.003$) Depression ($p = 0.009$) Insomnia ($p = 0.001$) Symptom burden was reduced within 48 hours in most cases. Daily assessments were feasible, and nurse adherence to the protocol improved (>90% compliance after 4 weeks).
Brenne, E., Loge, J. H., Lie, H., Hjerstad, M. J., Fayers, P. M., & Kaasa, S. (2016). The Edmonton Symptom Assessment System: Poor performance as screener for major depression in patients with incurable cancer. Palliative	Cross sectional study	Palliative care patients	969	Hospital; Hospice; Other: Multinational (8 countries included)	Symptom management; Functional status; Psychological support	The ESAS includes a depression item (0-10 scale), often used in palliative care to monitor emotional distress. The study compared ESAS-Depression with the Patient Health Questionnaire-9 (PHQ-9) to determine its accuracy in detecting major depressive episodes (MDEs). Results:

Medicine, 30(6), 587-598. https://doi.org/10.1177/0269216315620082						13.7% of patients (133 out of 969) had a major depressive episode (MDE) based on PHQ-9. ESAS-Depression showed poor screening ability: Sensitivity at a cut-off of ≥ 2: 0.69 Specificity at a cut-off of ≥ 2: 0.60 Sensitivity at a cut-off of ≥ 4: 0.51 Specificity at a cut-off of ≥ 4: 0.82 Area under the receiver operating characteristic (ROC) curve was 0.71, indicating limited discrimination ability. Adding ESAS-Anxiety to ESAS-Depression did not improve screening performance. The study concluded that ESAS-Depression does not adequately detect major depression and should not be used as a standalone screening tool.
Brody, L., Sadowska, K., Ekwebelem, M., Hollingsworth, A., Ong, M., Subramanian, T., Wright, D., Phongtankuel, V., Reid, M. C., Silva, M. D., & Shalev, D. (2024). Interventions for behavioral health comorbidities in the hospice setting: a scoping review [Scoping Review]. Annals of Palliative	Other: scoping review	Palliative care patients	N/A	Hospice; Other: Multinational (16 regions, United Kingdom most represented with 13 studies)	Symptom management; Quality of life; Caregiver support ; Psychological support	Behavioral health comorbidities are prevalent in hospice patients, with 40% experiencing significant depression and/or anxiety. Types of behavioral health interventions studied: Psychotherapeutic interventions (n=10) Psychopharmacologic interventions (n=10) Other non-pharmacologic interventions (n=11) Duration of interventions: Average intervention time: 47 minutes per session Average number of

Medicine, 13(3), 575-597. https://doi.org/https://dx.doi.org/10.21037/apm-23-508						sessions: six sessions Effectiveness of interventions: 18 studies reported statistically significant results. Most common outcomes: Depression reduction (n=9 studies) Anxiety reduction (n=6 studies) Pain relief (n=4 studies) Common interventionists: Music therapists (n=3) Massage therapists/acupuncturists (n=3)
Broese, J. M. C., van der Kleij, R. M. J. J., Kerstjens, H. A. M., Verschuur, E. M. L., Engels, Y., & Chavannes, N. H. (2020). A cluster randomized controlled trial on a multifaceted implementation strategy to promote integrated palliative care in COPD: study protocol of the COMPASSION study. BMC Palliative Care, 19(1), N.PAG-N.PAG. https://doi.org/10.1186/s12904-020-00657-3	Randomised controlled trial	Palliative care patients	not specified	Hospital; Home-based care; Other: Netherlands	Symptom management; Quality of life; Functional status; Social support; Caregiver support ; Psychological support ; Spiritual support	Integrated palliative care intervention for COPD was developed based on guidelines, literature review, and patient/professional input. The implementation strategy includes: A toolbox Communication training for healthcare providers Collaboration support Action planning Monitoring and evaluation The study will evaluate: Primary outcome: Quality of life (FACIT-Pal) at 6 months. Secondary outcomes: Spiritual well-being Anxiety and depression Unplanned healthcare use Informal caregiver burden Healthcare professionals' self-efficacy in providing palliative care The implementation process will be assessed using a mixed-methods evaluation, covering: Context

						Reach Dose delivered/received Fidelity Implementation level Recruitment and maintenance Acceptability
Brooks, J. V., Poague, C., Formagini, T., Sinclair, C. T., & Nelson-Brantley, H. V. (2020).	Other: Mixed - methods study - qualitative and quantitative	Palliative care patients	31	Hospital; Other: United States	Symptom management; Quality of life; Caregiver support ; Psychological support	The ESAS plays a significant role in structuring patient-physician communication during palliative care visits. Qualitative findings from interviews with patients and caregivers: Patients found ESAS beneficial in guiding their conversations with physicians. Some patients struggled with rating symptoms numerically, particularly for well-being and the 24-hour timeframe. The ESAS helped patients reflect on and prioritize their symptoms before appointments. Patients valued physicians referring to the ESAS during consultations, reinforcing that their responses were considered. Quantitative findings from medical records: Excellent agreement was found between patient-reported ESAS scores and physician-assessed ESAS scores for most symptoms (ICC range: 0.946-0.982). Drowsiness had slightly lower agreement (ICC = 0.837) compared to other symptoms. Patients rated their physical symptoms higher than

						physicians, while physicians rated psychological symptoms (e.g., depression, anxiety) higher than patients.
Brown, M. A., Collett, G. K., Josland, E. A., Foote, C., Li, Q., & Brennan, F. P. (2015). CKD in elderly patients managed without dialysis: survival, symptoms, and quality of life. Clinical Journal of the American Society of Nephrology, 10(2), 260-268.	Cohort study	Palliative care patients	467	Hospital; Other: Australia	Prognosis; Symptom management; Quality of life; Functional status; Psychological support	Validated tools (MSAS, POS-S Renal, SF-36) were used to assess symptoms and QOL in elderly CKD patients opting for supportive care. One-third survived beyond 12 months post-eGFR decline without dialysis. Symptom burden and QOL remained stable or improved in over half the patients, highlighting the utility of structured palliative assessment in non-dialysis care.
Bruera, E., Hui, D., Dalal, S., Torres-Vigil, I., Trumble, J., Roosth, J., et al. (2013).	Randomised controlled trial	Palliative care patients	129	Hospice; Other: United States	Symptom management; Quality of life; Functional status; Psychological support	Fatigue, assessed using FACIT-F and ESAS, was significantly associated with multiple physical and psychological symptoms, including pain, drowsiness, anorexia, and anxiety. Performance status and well-being were key correlates. Findings highlight the importance of using multidimensional tools to evaluate fatigue in palliative care, though further validation is needed.

Buck, H. G., & McMillan, S. C. (2008). The unmet spiritual needs of caregivers of patients with advanced cancer. <i>Journal of Hospice & Palliative Nursing</i>, 10(2), 91-99. https://doi.org/10.1097/01.njh.0000306737.08850.71	Cross sectional study	Caregivers	110	Home-based care	Caregiver support ; Psychological support ; Spiritual support	Spiritual needs among caregivers: Measured using the Spiritual Needs Inventory (SNI), which evaluates the frequency of spiritual needs and whether they are unmet. Caregivers had a mean total SNI score of 56.4 (range: 32-85, max possible 85), indicating moderate-to-high spiritual needs. The most frequently cited spiritual needs included: Seeing smiles Thinking happy thoughts Laughing Being with family Praying Lower-ranked needs: Reading religious texts, attending religious services, talking about spiritual issues. Unmet spiritual needs: 49.1% of caregivers reported no unmet spiritual needs. The most commonly unmet needs were: Being with family (19.6%) Laughing (16%) Being with friends (12%) Seeing smiles of others (12%) Relationship between unmet needs and caregiver burden: Higher patient distress scores (measured by the MSAS) correlated with more unmet needs in caregivers ($R = 0.17$, $p < 0.05$). Caregivers' depressive symptoms (measured by the Center for Epidemiological Studies
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						Depression Scale [CES-D]) were significantly associated with unmet spiritual needs (F [1,106] = 13.41, p < 0.05). As the number of unmet spiritual needs increased, caregiver depression scores also increased.
Bülbül, Y., Ozlu, T., rinc, S., Ozyurek, B., Gunbatar, H., Senturk, Bahadir, Ozcelik, M., Yilmaz, U., kbay, M. O., Saglam, L., Kilic, T., Kirkil, G., Ozcelik, N., Tatar, D., Baris, S., Yavsan, D. M., Sen, H. S., Berk, S., & cat, M. (2017). Assessment of Palliative Care in Lung Cancer in Turkey. Medical Principles & Practice, 26(1), 50-56. https://doi.org/10.1159/000452801	Cross sectional study	Palliative care patients	1245	Hospital; Other: Turkiye	Symptom management; Quality of life; Psychological support	The majority of lung cancer patients in Turkey do not receive adequate palliative care, despite high symptom burden. Pain, fatigue, dyspnea, and psychological distress were the most prevalent symptoms reported. Only 34% of patients had access to a formal palliative care program. Significant gaps in pain management were identified, with opioids being underutilized in 62% of cases. Early palliative care intervention was associated with improved symptom control and quality of life.
Burton, A. W., Chai, T., & Smith, L. S. (2014). Cancer pain assessment [Review]. Current Opinion in Supportive & Palliative Care, 8(2), 112-116. https://doi.org/https://dx.doi.org/10.1097/SPC.000000000000047	Other: Narrative review study	Palliative care patients	N/A	Other: General Overview across care settings	Symptom management; Quality of life; Psychological support	Cancer pain is a multidimensional experience requiring valid and reliable assessment tools for effective management. No consensus on an ideal pain assessment tool, though various validated measures exist. Unidimensional pain assessment tools (measuring intensity only) include: Numerical Rating Scale

						(NRS) (0-10 pain scale) Verbal Rating Scale (VRS) (mild, moderate, severe pain) Visual Analogue Scale (VAS) (10 cm line with pain severity) Multidimensional pain assessment tools provide a more comprehensive evaluation of cancer pain: Brief Pain Inventory (BPI) - assesses pain intensity and its interference with daily life McGill Pain Questionnaire (MPQ) - measures pain characteristics (e.g., throbbing, burning, stabbing) MD Anderson Symptom Inventory (MDASI) - assesses multiple symptoms, including pain, fatigue, nausea, and emotional distress ESAS - rates common cancer-related symptoms, including pain Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) - identifies neuropathic cancer pain Recent developments in pain assessment tools: Increasing use of electronic pain assessment tools (tablet-based assessments and digital pain body maps). Studies are working toward developing an internationally recognized cancer pain classification system
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						to predict pain progression and response to treatment.
Carli Buttenschoen, D., Stephan, J., Watanabe, S., & Nekolaichuk, C. (2014). Health care providers' use and knowledge of the Edmonton Symptom Assessment System (ESAS): is there a need to improve information and training? Supportive Care in Cancer, 22(1), 201-208. https://doi.org/https://dx.doi.org/10.1007/s00520-013-1955-8	Cross sectional study	Healthcare professionals	83	Hospital; Home-based care; Other: Canada	Symptom management; Quality of life; Psychological support	ESAS is a widely used clinical symptom assessment tool in palliative care but presents challenges in understanding and application among healthcare professionals (HCPs). 77% of HCPs reported good knowledge of ESAS terms, but misinterpretations were common, particularly in distinguishing tiredness from drowsiness (25%) and shortness of breath from objective symptoms (19%). 14% of HCPs did not correctly indicate the patient's current symptom level, and some misinterpreted the reverse scoring for well-being (13%) and appetite (9%). Challenges in using ESAS included: Misinterpretation of ESAS terms (50%) Assessing patients with impaired communication (27%) Lack of time for proper administration (14%) Reliability issues with caregiver-assisted assessments Training needs identified: More standardized definitions of ESAS terms Guidelines on how to explain symptom ratings to patients Regular training

						sessions to improve knowledge retention
Carpenter, B. D. (2014). Contemporary Psychological Approaches to Life at the End of Life. Occupational Therapy in Health Care, 28(1), 31-41. https://doi.org/10.3109/07380577.2013.867090	Text and opinion	Palliative care patients; Healthcare professionals	N/A	Hospital; Home-based care; Aged care; Hospice; Other: United States	Symptom management; Quality of life; Psychological support ; Spiritual support	Psychological distress is a major but under-recognized issue in palliative care. A bio-psycho-social-spiritual model is essential for quality end-of-life care, integrating mental health alongside physical, social, and spiritual concerns. Psychological distress at the end of life is common but treatable through assessment and targeted interventions. Mental health challenges range from frank psychopathology (e.g., major depression, anxiety) to existential distress (e.g., meaning-making, acceptance of mortality). Common mental health concerns at the end of life: Depression and anxiety are highly prevalent but often overlooked. Grief and bereavement processes should be distinguished from clinical depression. Suicidal ideation vs. a desire for hastened death requires careful differentiation. Assessment Tools for Psychological Distress: HADS Patient Health Questionnaire-9 (PHQ-9) Geriatric Depression Scale (GDS) Beck Anxiety Inventory (BAI) Therapeutic

						Approaches: Cognitive-behavioral therapy (CBT), Acceptance and Commitment Therapy (ACT), existential therapy, and Dignity Therapy are effective for addressing psychological distress in palliative patients. Occupational therapists can play a significant role in promoting meaningful activities to maintain mental well-being.
Carrillo González, G. M., Vargas Rosero, E., Yesid Franco-Rocha, O., Forero Piraneque, J. L., Moreno Castro, A., & Castellanos, M. (2022). Cultural adaptation and validity of the memorial symptom assessment scale in adults with cancer in Colombia. Nursing Practice Today, 9(2), 136-144.	Diagnostic test accuracy study	Palliative care patients	249	Hospital; Other: Colombia	Symptom management; Quality of life; Psychological support	The MSAS was culturally adapted and validated for use in Colombian cancer patients. Factor analysis confirmed two primary symptom dimensions: Physical symptoms (pain, dry mouth, nausea, vomiting, appetite loss, constipation, dizziness, etc.). Psychological symptoms (sadness, irritability, nervousness, difficulty concentrating). The final adapted version of MSAS demonstrated strong validity and reliability, with Cronbach's Alpha ranging from 0.75 to 0.79. Women scored higher on psychological symptoms, while men reported slightly more physical symptoms, though these differences were not statistically significant. Three problematic items were adjusted

						for Colombian patients: "Feeling bloated" → changed to "Feeling bloated or inflamed." "Numbness/tingling in hands/feet" → changed to "Cramping/tingling in hands/feet." "Dizziness" → changed to "Itching." The adapted scale enables accurate symptom tracking for cancer patients in Colombia and may improve symptom management strategies.
Carson, S. S., Cox, C. E., Wallenstein, S., Hanson, L. C., Danis, M., Tulsky, J. A., Chai, E., & Nelson, J. E. (2016). Effect of Palliative Care-Led Meetings for Families of Patients With Chronic Critical Illness: A Randomized Clinical Trial. JAMA: Journal of the American Medical Association, 316(1), 51-62. https://doi.org/10.1001/jama.2016.8474	Randomised controlled trial	Palliative care patients	365	Hospital; Other: United States	Caregiver support ; Psychological support	The family-support intervention improved surrogate decision-makers' understanding of patient prognosis and their emotional well-being. Primary outcome: No significant difference in length of ICU stay between the intervention and control groups. Secondary outcomes: Surrogates in the intervention group reported less anxiety ($p = 0.002$) and depression ($p = 0.02$) compared to the control group. Greater alignment between patient preferences and care received was reported in the intervention group. Improved patient-centered communication led to higher satisfaction scores for surrogate decision-makers. The intervention did not impact patient mortality rates or the

						decision to withdraw life-sustaining treatment.
Cartwright, J. C., Hickman, S., Perrin, N., & Tilden, V. (2006). Symptom experiences of residents dying in assisted living. Journal of the American Medical Directors Association, 7(4), 219-223. https://doi.org/10.1016/j.jamda.2005.09.011	Cross sectional study	Other: family members of deceased residents	25	Other: Assisted living. United states	Symptom management; Quality of life; Caregiver support ; Psychological support	Using the modified FMSAS-GDI, this study found that symptom distress (e.g., fatigue, pain, anorexia) in assisted living was comparable to other settings. While families were generally satisfied with care, they identified gaps in provider communication and staff expertise in symptom management, indicating a need for structured end-of-life assessment processes in assisted living.
Carvajal, A., Martínez, M., & Centeno, C. (2012). The ESAS in patients with advanced cancer: a review of studies of the Spanish version. European Journal of Palliative Care, 19(2), 77-81.	Other: psychometric validation study	Palliative care patients	171	Hospital; Hospice; Other: Spain	Symptom management; Quality of life	The ESAS was evaluated for reliability and validity in Spanish-speaking advanced cancer patients. Factor analysis confirmed two major symptom domains: Physical symptoms (pain, nausea, fatigue, appetite loss, shortness of breath, drowsiness). Emotional symptoms (depression, anxiety, well-being). Internal consistency was high (Cronbach's Alpha = 0.87), indicating strong reliability. ESAS scores correlated significantly with other validated symptom scales,

						confirming its construct validity. Cultural adaptation changes included: Clarification of the term “drowsiness” due to potential misinterpretation. Modifications in scoring interpretation to align with patient-reported experience.
Casarett, D. J., Farrington, S., Craig, T., Slattery, J., Harrold, J., Oldanie, B., et al. (2012). The art versus science of predicting prognosis: Can a prognostic index predict short-term mortality better than experienced nurses do? Journal of Palliative Medicine, 15(6), 703-708. https://doi.org/10.1089/jp m.2011.0531	Diagnostic test accuracy study	Palliative care patients	21074	Hospice; Other: United States	Prognosis; Functional status	A prognostic index using PPS, admission source, and gender predicted 7-day hospice mortality more accurately than nurse judgment alone. The model showed strong discrimination (c-statistic = 0.84–0.86) and highlighted the utility of structured, electronic health record-based tools in short-term prognostication.
Chan, K. Y., Chan, M. L., Yau, T. C., Li, C. W., Cheng, H. W., & Sham, M. K. (2012). Quality of life for Hong Kong Chinese patients with advanced gynecological cancers in the palliative phase of care: a cross-sectional study. Journal of Palliative Care, 28(4), 259-266.	Cross sectional study	Palliative care patients	53	Hospital; Other: China	Quality of life; Functional status; Social support; Psychological support	Emotional distress and physical symptoms were the primary factors affecting QoL. Higher pain and fatigue scores were significantly associated with poorer quality of life. Depression and anxiety were prevalent and strongly correlated with worse functional well-being. Palliative care interventions improved symptom management, but psychological distress remained

						a significant challenge. Patients with better family and social support reported higher QoL scores, highlighting the role of community and family care in palliative settings.
Chan, K.-Y., Yip, T., Yap, D. Y. H., Sham, M. K., & Tsang, K. W. (2020). A Pilot Comprehensive Psychoeducation Program for Fluid Management in Renal Palliative Care Patients: Impact on Health Care Utilization. Journal of Palliative Medicine, 23(11), 1518-1524. https://doi.org/10.1089/jpm.2019.0424	Cohort study	Palliative care patients	138	Hospital; Other: Hong Kong	Symptom management; Quality of life; Psychological support ; Spiritual support	The ASA psychoeducational program, supported by ESAS-based symptom assessment, significantly reduced fluid overload-related admissions and improved symptom burden in elderly ESRD patients receiving conservative care. The findings highlight the value of structured, nurse-led palliative assessment and education in managing complex symptoms.
Chan, W. C. H. (2021). Future provision of home end-of-life care: Family carers' willingness for caregiving and needs for support [Research Support, Non-U.S. Gov't]. Palliative & Supportive Care, 19(5), 580-586. https://doi.org/https://dx.doi.org/10.1017/S1478951520001273	Cross sectional study	Caregivers	89	Home-based care; Other: Hong Kong	Social support; Caregiver support ; Psychological support	63.8% of family carers were willing to provide end-of-life care at home, increasing to 78.5% if support needs were met. Top three needs for support: Understanding the relative's illness Knowing what to expect in the future Knowing who to contact for concerns High psychological distress carers had greater perceived caregiving difficulties and required more emotional support. Lack of knowledge and

						support negatively impacted carers' willingness and confidence in providing EOL care.
Chang, P.-J., Lin, C.-F., Juang, Y.-H., Chiu, J.-Y., Lee, L.-C., Lin, S.-Y., & Huang, Y.-H. (2023). Death place and palliative outcome indicators in patients under palliative home care service: an observational study. BMC Palliative Care, 22(1), 1-9. https://doi.org/10.1186/s12904-023-01167-8	Cohort study	Palliative care patients	56	Hospital; Home-based care; Other: Taiwan	Prognosis; Symptom management; Quality of life; Functional status; Psychological support ; Spiritual support	Place of death was influenced by family preferences, disease severity, and frequency of hospital admissions. Patients who died at home: Had greater cancer disease severity and were more likely to have family support for home death. Showed worsening of sleep, appetite, and breathing problems toward the end of life. Had improved physician-reported psychological/spiritual well-being before death. Patients who died in the hospital: Had less severe disease progression and were more likely to be readmitted before death. Reported pain improvement but no significant change in psychological/spiritual well-being. Physical performance declined in both groups, requiring increased resource utilisation for symptom management.
Cheung, W. Y., Barmala, N., Zarinehbab, S., Rodin, G., Le, L. W., & Zimmermann, C. (2009). The association of	Cohort study	Palliative care patients	198	Hospital; Other: Canada	Prognosis; Symptom management; Quality of life	Total Symptom Distress Score (TSDS) and Physical Symptom Burden (PHS) were significantly associated with time to death (p = 0.001). Symptoms that

physical and psychological symptom burden with time to death among palliative cancer outpatients. Journal of Pain & Symptom Management, 37(3), 297-304. https://doi.org/10.1016/j.jpainsymman.2008.03.008						worsened closer to death: Loss of appetite ($p = 0.001$) Drowsiness ($p = 0.006$) Dyspnea ($p = 0.009$) Fatigue ($p = 0.01$) Psychological symptoms (anxiety and depression) were not significantly correlated with time to death ($p = 1.0$). Outpatients had higher pain levels than inpatients.
Cheung, W. Y., Le, L. W., Zimmermann, C., Cheung, W. Y., Le, L. W., & Zimmermann, C. (2009). Symptom clusters in patients with advanced cancers. Supportive Care in Cancer, 17(9), 1223-1230. https://doi.org/10.1007/s00520-009-0577-7	Cross sectional study	Palliative care patients	1366	Hospital	Symptom management; Quality of life; Psychological support	Two major symptom clusters were identified using Principal Component Analysis (PCA): Cluster 1: Fatigue, drowsiness, nausea, appetite loss, dyspnea (45% variance) Cluster 2: Anxiety and depression (10% variance) Cluster variation by cancer type: Pain and drowsiness clustered together in CNS and head & neck cancers. Appetite loss and poor well-being were more prevalent in gastrointestinal, genitourinary, gynecological, breast, and lung cancers. Hematological malignancies had a unique cluster: anxiety, drowsiness, fatigue, and dyspnea. Anxiety and depression consistently clustered together across all solid tumours.
Chi-Leung, C., Sing-Hung, L., & Agarwal, A. (2018). Prognostic factors	Cohort study	Palliative care patients	85	Hospital; Other: China	Prognosis; Symptom management	Using ESAS primarily for survival prediction, along with ESAS) ESAS score and KPS

for survival prediction in advanced cancer patients and development of a simple survival prediction tool for application in a community palliative care setting: A retrospective cohort study. <i>Journal of Pain Management</i> , 11(1), 53-62.						independently predicted survival. Higher ESAS scores (≥ 25) were associated with a shorter median survival (10 days) compared to lower ESAS scores (< 25) (105 days). Patients stratified into three risk groups based on ESAS and KPS showed significant survival differences. ESAS could serve a dual role as a symptom assessment and survival prediction tool, especially in resource-limited palliative care settings.
Chi-Yin, K., Wen-Yu, H., Tai-Yuan, C., & Ching-Yu, C. (2014). Effects of the hospital-based palliative care team on the care for cancer patients: An evaluation study. <i>International Journal of Nursing Studies</i> , 51(2), 226-235. https://doi.org/10.1016/j.ijnurstu.2013.05.008	Other: experimental study	Palliative care patients	60	Home-based care; Other: Taiwan	Symptom management; Quality of life; Psychological support ; Spiritual support	Intervention group showed significant improvement in edema, fatigue, dry mouth, abdominal distention, and spiritual well-being. No between-group difference in anxiety, depression, or social support. Both groups improved in pain, dyspnea, and dysphagia.
Chinda, M., Jaturapatporn, D., Kirshen, A. J., & Udomsubpayakul, U. (2011). Reliability and Validity of a Thai Version of the Edmonton Symptom Assessment	Cross sectional study	Palliative care patients	81	Hospital; Other: Thailand	Symptom management; Quality of life	Translation & validation process followed international guidelines, including forward-backward translation, expert review, and pretesting. Reliability results: Inpatient setting: Cronbach's alpha = 0.75 Outpatient setting: Cronbach's

Scale (ESAS-Thai). Journal of Pain & Symptom Management , 42(6), 954-960.						alpha = 0.89 (higher reliability after word modifications). Face validity: 91.8% of patients found the questionnaire clear and easy to complete. Conceptual equivalence: Some Thai patients struggled with terms like "well-being," "fatigue," and "shortness of breath," requiring modifications. Cultural considerations: Thai cultural beliefs (Buddhism and karma) may affect symptom reporting, particularly regarding pain perception.
Chishi, K. V., Patel, B. C., Umrana, R. A., Sanghavi, P. R., Yadav, V. S., & Raval, L. V. (2023). Prevalence of Delirium in Advance Cancer Patients Admitted in Hospice Centre and Outcome after Palliative Intervention. Indian Journal of Palliative Care , 29(1), 82-88. https://doi.org/https://dx.doi.org/10.25259/IJPC_114_2022	Other: prospective analytical study	Palliative care patients	147	Hospice; Other: India	Prognosis; Symptom management	Delirium prevalence was 31.29% among advanced cancer patients in the hospice setting. The most common delirium subtypes were hypoactive (34.7%) and mixed (34.7%), followed by hyperactive (30.4%). Resolution of delirium was higher in hyperactive cases (78.57%), followed by mixed (50%) and hypoactive (12.5%). Mortality was highest among patients with hypoactive delirium (81.25%), followed by mixed (43.75%) and hyperactive (14.28%). Risk factors for delirium included brain metastasis, dehydration, cachexia, dyselectrolytemia, and myiasis. Poor ECOG status and

						high Palliative Prognostic Score (PaP) were significantly associated with delirium diagnosis. Palliative interventions, including pharmacological and non-pharmacological approaches, improved delirium management outcomes
Chochinov, H. M., Johnston, W., McClement, S. E., Hack, T. F., Dufault, B., Enns, M., Thompson, G., Harlos, M., Damant, R. W., Ramsey, C. D., Davison, S., Zacharias, J., Milke, D., Strang, D., Campbell-Enns, H. J., & Kredentser, M. S. (2016). Dignity and Distress towards the End of Life across Four Non-Cancer Populations [Multicenter Study Research Support, Non-U.S. Gov't]. PLoS ONE [Electronic Resource], 11(1), e0147607. https://doi.org/https://dx.doi.org/10.1371/journal.pone.0147607	Other: prospective study	Palliative care patients	404	Hospital; Aged care; Other: Canada	Quality of life; Psychological support ; Spiritual support	Prevalence of Dignity-Related Distress: 41% of patients reported moderate-to-severe dignity-related distress. ALS patients had the highest levels of distress (50.8%), followed by COPD (42.6%), ESRD (34.8%), and IFE (30.2%). Main factors contributing to distress: Loss of independence Unmet existential and spiritual needs Feelings of being a burden to others Patients who felt they were a burden experienced significantly higher levels of distress. Dignity-related distress was strongly correlated with depression and anxiety scores ($p < 0.001$).
Chochinov, H. M., Kristjanson, L. J., Breitbart, W.,	Randomised controlled trial	Palliative care patients	326	Hospital; Home-based care;	Quality of life; Psychological	Dignity Therapy was rated significantly higher than standard palliative care and

McClement, S., Hack, T. F., Hassard, T., Harlos, M., Chochinov, H. M., Kristjanson, L. J., Breitbart, W., McClement, S., Hack, T. F., Hassard, T., & Harlos, M. (2011). Effect of dignity therapy on distress and end-of-life experience in terminally ill patients: a randomised controlled trial. <i>Lancet Oncology</i>, 12 1077-4114 (Print)(8), 753-762. https://doi.org/10.1016/S1470-2045(11)70185-1				Hospice; Other: Canada	support ; Spiritual support	client-centered care in improving: Sense of dignity (p=0.002) Quality of life (p=0.001) Family appreciation of the patient (p<0.0001) Reduction in sadness and depression (p=0.009) Spiritual well-being (p=0.006) No significant differences in distress levels between groups before and after intervention. No significant difference in survival times post-intervention.
Chow, E., Abdoell, M., Panzarella, T., Harris, K., Bezjak, A., Warde, P., & Tannock, I. (2008). Predictive model for survival in patients with advanced cancer. <i>Journal of Clinical Oncology</i>, 26(36), 5863-5869.	Other: prospective cohort study	Palliative care patients	1307	Hospital; Other: Canada	Prognosis	Developed a three-variable predictive model based on: Primary cancer site Site of metastases Karnofsky Performance Score (KPS) Stratification of patients into three prognostic groups: Best prognosis: Median survival ~60 weeks Intermediate prognosis: Median survival ~26 weeks Worst prognosis: Median survival ~9-10 weeks The model was validated in both temporal and external datasets, maintaining predictive accuracy.
Chow, E., Davis, L., Holden, L., Tsao, M., & Danjoux, C. (2005).	Other: prospective	Palliative care patients	170	Hospital; Other: Canada	Symptom management; Quality of life	Patient-rated symptoms worsened following whole brain radiotherapy, as measured by

Prospective assessment of patient-rated symptoms following whole brain radiotherapy for brain metastases. Journal of Pain & Symptom Management, 30(1), 18-23. https://doi.org/10.1016/j.jpainsymman.2005.02.009	observational study					the ESAS. Significant deterioration in fatigue, drowsiness, and appetite post-treatment. Median survival for the entire cohort was 8 weeks, with survival significantly predicted by Karnofsky Performance Score (KPS). Higher KPS correlated with longer survival, while weight loss and low KPS predicted worse outcomes. Short-term palliative benefits unclear, as symptom burden increased despite treatment.
Chow, S., Wan, B. A., Pidduck, W., Zhang, L., DeAngelis, C., Chan, S., Yee, C., Drost, L., Leung, E., Sousa, P., Lewis, D., Lam, H., Chow, R., Lock, M., & Chow, E. (2019). Symptoms Predictive of Overall Quality of Life Using the Edmonton Symptom Assessment Scale in Breast Cancer Patients Receiving Radiotherapy [Research Support, Non-U.S. Gov't]. Clinical Breast Cancer, 19(6), 405-410. https://doi.org/https://dx.doi.org/10.1016/j.clbc.2019.05.007	Other: observational study	Palliative care patients	1224	Hospital; Other: Canada	Symptom management; Quality of life	Before radiotherapy: Pain, tiredness, anxiety, depression, and loss of appetite significantly associated with QOL. At the end of radiotherapy: Pain, tiredness, and anxiety were the strongest predictors of QOL. After radiotherapy: Pain, tiredness, anxiety, depression, loss of appetite, and drowsiness had the strongest correlation with QOL.

Chua, G. P., Pang, G. S. Y., Yee, A. C. P., Neo, P. S. H., Zhou, S., Lim, C., Wong, Y. Y., Qu, D. L., Pan, F. T., & Yang, G. M. (2020). Supporting the patients with advanced cancer and their family caregivers: what are their palliative care needs? BMC Cancer, 20(1), 768. https://doi.org/https://dx.doi.org/10.1186/s12885-020-07239-9	Cross sectional study	Palliative care patients; Caregivers	1198	Hospital; Other: Singapore	Symptom management; Quality of life; Social support; Psychological support	Both patients and caregivers ranked "Information" and "Practical Support" as their top needs. Patients reported "Psychological Problems" as their second most significant need, whereas caregivers prioritized "Healthcare Staff Support". The most highly rated need in the "Information" category was financial support from government or private organizations. Inpatients and their caregivers had higher overall needs scores than outpatients. Patients with lower ESAS scores had higher needs. Patients and caregivers receiving palliative care reported higher total needs scores than those not receiving palliative care.
Claessens, P., Menten, J., Schotsmans, P., & Broeckaert, B. (2011). Development and Validation of a Modified Version of the Edmonton Symptom Assessment Scale in a Flemish Palliative Care Population. American Journal of Hospice & Palliative Medicine, 28(7), 475-482.	Other: Descriptive, comparative, longitudinal study	Palliative care patients	23	Hospital	Other: Symptom assessment Validation of modified ESAS	Content Validity: Three symptoms were added (dry mouth, constipation, disturbed sleep). Some terms were reworded for clarity. Face Validity: Most participants understood the tool; minor revisions were made. Concurrent Validity: Patients with lower functional status and higher depression scores reported higher symptom distress. Construct Validity:

https://doi.org/10.1177/10499091111400724						Symptom occurrence and distress were related but distinct concepts. Internal Consistency: Correlation matrices indicated weak-to-moderate relationships between symptoms, suggesting they should not be summed into a single score.
Collette, N., Güell, E., Fariñas, O., & Pascual, A. (2021). Art Therapy in a Palliative Care Unit: Symptom Relief and Perceived Helpfulness in Patients and Their Relatives. Journal of Pain & Symptom Management, 61(1), 103-111. https://doi.org/10.1016/j.painsymman.2020.07.027	Non-randomised experimental study	Palliative care patients; Caregivers	85	Hospital; Other: Spain	Symptom management; Social support; Psychological support ; Spiritual support	Significant reductions in pain, anxiety, depression, and distress after each session. Moderate effect on anxiety and distress/well-being, small effect on pain and depression. 100% of patients found art therapy helpful after 5 sessions. Relatives also benefited, with 89% reporting indirect help for themselves. Patients associated benefits with relaxation, emotional expression, distraction, and legacy creation.
Collins, E. S., Witt, J., Bausewein, C., Daveson, B. A., Higginson, I. J., & Murtagh, F. E. M. (2015). A Systematic Review of the Use of the Palliative Care Outcome Scale and the Support Team Assessment Schedule in Palliative Care. Journal of Pain & Symptom Management, 50(6), 842-853.e819.	Systematic review	Palliative care patients	N/A	Hospital; Home-based care; Aged care	Symptom management; Quality of life; Functional status; Social support; Caregiver support ; Spiritual support	The use of the Palliative Care Outcome Scale (POS) and the Support Team Assessment Schedule (STAS) has increased significantly in Europe and Africa. POS has been translated into 13 new languages, expanding its accessibility and application. The majority of studies utilized these tools for assessing symptoms and evaluating care rather than conducting further validation

https://doi.org/10.1016/j.painsymman.2015.07.015						studies. Non-cancer palliative care populations are increasingly using POS and STAS for symptom and quality of life assessments. Cognitive impairment and difficulty in completing patient-reported outcome measures were identified as key challenges.
Costantini, M., Rabitti, E., Beccaro, M., Fusco, F., Peruselli, C., La Ciura, P., Valle, A., Suriani, C., Berardi, M. A., Valenti, D., Mosso, F., Morino, P., Zaninetta, G., Tubere, G., Piazza, M., Sofia, M., Di Leo, S., & Higginson, I. J. (2016). Validity, reliability and responsiveness to change of the Italian palliative care outcome scale: a multicenter study of advanced cancer patients. BMC Palliative Care, 15, 1-12. https://doi.org/10.1186/s12904-016-0095-6	Other: multicentre, mixed methods study	Palliative care patients	150	Hospital; Home-based care; Other: Italy	Symptom management; Quality of life; Functional status; Social support; Caregiver support ; Psychological support ; Spiritual support	Significant improvements in symptoms, patient and family anxiety, information provision, and feeling at peace. Good convergent validity with strong and moderate correlations ($r = 0.5-0.8$) between POS, QLQ-C15-PAL, and FACIT-Sp. Acceptable to good test-retest reliability for six items. POS effectively captured clinical improvements within the first week of palliative care.
Cotogni, P., & De Carli, L. (2025). Near-Death Quality of Life in Cancer Patients on Home Parenteral Nutrition. Nutrients, 17(2), 271.	Other: Secondary analysis of a prospective, longitudinal,	Palliative care patients	84	Hospital; Home-based care	Symptom management; Quality of life	HPN is associated with significant improvements in global QoL and symptom scale in the last two months before death. At 31-60 days before death (M2), QoL scores showed

https://doi.org/10.3390/nu17020271	observational study					significant improvement in both global QoL ($p < 0.001$) and symptom scales ($p < 0.033$) compared to baseline. At 0-30 days before death (M1), QoL improvements persisted in the global QoL scale ($p < 0.035$). HPN did not significantly impact financial burden, fatigue, nausea/vomiting, or appetite loss in the near-death phase.
Cotogni, P., A, D. E. L., Evangelista, A., Filippini, C., Gili, R., Scarmozzino, A., Ciccone, G., & Brazzi, L. (2017). A simplified screening tool to identify seriously ill patients in the Emergency Department for referral to a palliative care team [Observational Study]. Minerva Anestesiologica, 83(5), 474-484. https://doi.org/https://dx.doi.org/10.23736/S0375-9393.16.11703-1	Other: observational study	Palliative care patients	257	Hospital; Other: Italy	Prognosis; Symptom management; Functional status	35% (91/257) of patients assessed in the emergency department met criteria indicating a need for palliative care. Developed a Simplified Screening Tool (SST) combining: PPS score <50 Plus at least one of: ≥ 1 admission in past 12 months, hospital admission from healthcare services, awaiting admission to long-term care or hospice, dialysis, home oxygen use, or non-invasive ventilation. SST showed excellent agreement with the more detailed SIAARTI screening tool: Sensitivity: 97.8% Specificity: 92.8% Accuracy: 94.5% SST was easy to apply, taking an average of 11 minutes per patient.
Covarrubias-Gómez, A., Hernández-Martínez, E. E., Ruiz-Ramírez, S., &	Other: Retrospective study	Other: patients with	38	Other: Mexico	Symptom management; Quality of life;	ESAS Significant increase in symptom intensity from initial visit to last visit before death in:

López Collada-Estrada, M. (2014). Assessment of Pain and Other Symptoms in Mexican Patients With Advanced Illness. Journal of Pain & Palliative Care Pharmacotherapy, 28(4), 394-398. https://doi.org/10.3109/15360288.2014.959235	(observational study)	advanced illness (all diagnosed with end-stage cancer)			Functional status; Psychological support ; Spiritual support	Weakness: 4.8 → 6.2 ($p < 0.05$) Dyspnea: 1.1 → 2.8 ($p < 0.05$) Somnolence: 2.6 → 4.9 ($p < 0.05$) Other symptoms such as pain, nausea, depression, anxiety, anorexia showed variable trends but were not statistically significant. The ESAS was validated as a useful tool for monitoring end-of-life symptom progression in a Spanish-speaking population.
Cruz-Oliver, D. M., Milner, G. E., Mensh, K., Bugayong, M., Blinka, M. D., Durkin, N., Abshire Saylor, M., Budhathoki, C., & Oliver, D. P. (2024). Promising Impact of Telenovela Intervention for Caregivers of Hospice Patients: A Pilot Study. American Journal of Hospice & Palliative Medicine, 41(12), 1400-1407. https://doi.org/https://dx.doi.org/10.1177/10499091241228835	Non-randomised experimental study	Caregivers	59	Hospice; Other: United States	Quality of life; Caregiver support ; Psychological support	The NOVELA intervention, a telenovela-style educational video, aimed to reduce anxiety and improve self-efficacy in hospice caregivers. 85.7% of caregivers were satisfied or very satisfied with the intervention. The study showed a trend toward: Higher self-efficacy (Cohen's $d = -0.08$) Lower anxiety (Cohen's $d = 0.2$) A higher number of sessions (>2) led to greater anxiety reduction ($p=0.02$) and increased self-efficacy ($p=0.03$). Completion rates: 68% of caregivers completed outcome measures. 62% completed all 4 sessions.
Cui, J., Fang, F., Shen, F., Song, L., Zhou, L., Ma, X., & Zhao, J. (2014). Quality of life in patients with advanced cancer at	Cross sectional study	Palliative care patients	531	Hospital; Other: China	Symptom management; Quality of life	The McGill Quality of Life Questionnaire (MQOL) was adapted for use in China to assess QoL in advanced cancer patients. Physical symptoms

the end of life as measured by the McGill quality of life questionnaire: a survey in China. <i>Journal of Pain & Symptom Management</i>, 48(5), 893-902. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2014.02.016						most commonly reported: Pain (39.4%) Loss of appetite (25.6%) Fatigue (23.9%) Weakness (20.0%) Dyspnea (19.2%) Highest-rated subscale: Support (6.82) Lowest-rated subscale: Existential well-being (4.65) Significant correlations found between: ESAS scores and QOL measures ($P < 0.05$). Existential well-being and overall QOL.
Currow, D. C., Davis, W., Connolly, A., Krishnan, A., Wong, A., Webster, A., Barnes-Harris, M. M., Daveson, B., & Ekström, M. (2021). Sleeping-related distress in a palliative care population: A national, prospective, consecutive cohort. <i>Palliative Medicine</i>, 35(9), 1663-1670. https://doi.org/10.1177/0269216321998558	Cross sectional study	Palliative care patients	531	Hospital; Other: Australia	Quality of life	Sleeping-related distress was reported in 11.9% of all palliative care assessments. It was more prevalent in males (12.7%) than females (10.9%). Younger patients (<50 years) reported higher distress (16.2%) than older patients (11.5%). Cancer patients had higher rates of sleeping-related distress (12.3%) compared to those with non-cancer diagnoses (10.0%). Strong associations found between sleeping-related distress and: Pain distress (OR 6.6; 95% CI 6.3, 6.9) Breathing distress (OR 6.2; 95% CI 5.8, 6.6) Fatigue distress (OR 10.4; 95% CI 9.99, 10.8) Sleeping-related distress peaked at a Karnofsky Performance Status (AKPS) score of 40-60, meaning patients in mid-range

						decline experienced the most distress. Inpatient settings: 11.1% reported moderate/severe sleep distress. Community settings: 13.2% reported moderate/severe sleep distress. Symptom Assessment Scale (SAS)
Da Rocha Rodrigues, M. G., Pautex, S., & Shaha, M. (2016). Revie : the influence of a life review intervention including a positive, patient-centered approach towards enhancing the personal dignity of patients with advanced cancer-a study protocol for a feasibility study using a mixed method investigation. Pilot & Feasibility Studies, 2, 63. https://doi.org/https://dx.doi.org/10.1186/s40814-016-0101-z	Other: Mixed-method feasibility study	Palliative care patients	40	Other: Switzerland	Quality of life; Psychological support ; Spiritual support	The study aims to evaluate the feasibility of a new life review intervention (Revie) designed to promote personal dignity and personal growth in patients with advanced cancer. Intervention Structure: Positive, patient-centered approach Life review intervention (LRI) that reflects on personal growth and meaning-making rather than distress. Outcome Measures: Patient Dignity Inventory (PDI) Posttraumatic Growth Inventory (PTGI) Satisfaction With Life Scale (SWLS) Qualitative Methods: Semi-structured interviews will assess patient experiences with the intervention. Feasibility Factors: Process feasibility (can the intervention be implemented as planned?) Resource feasibility (availability of trained professionals, time, and costs) Scientific feasibility (validity of methods, participant retention

Damen, A., Exline, J., Pargament, K., Yao, Y., Chochinov, H., Emanuel, L., Handzo, G., Wilkie, D. J., & Fitchett, G. (2021). Prevalence, Predictors and Correlates of Religious and Spiritual Struggles in Palliative Cancer Patients. Journal of Pain & Symptom Management, 62(3), e139-e147. https://doi.org/10.1016/j.jpainsymman.2021.04.024	Cross sectional study	Palliative care patients	331	Hospital; Other: United States	Symptom management; Quality of life	66% of patients reported some level of religious or spiritual (R/S) struggle, while 20% experienced moderate to high struggle on at least one item. R/S struggles were significantly associated with greater symptom burden, dignity-related problems, and poorer quality of life. Higher symptom burden (Edmonton Symptom Assessment Scale - ESAS) was correlated with more R/S struggles. Higher dignity-related distress (Patient Dignity Inventory - PDI) was the strongest predictor of overall R/S struggles. Lower Quality of Life at End of Life (QUAL-E) scores were associated with greater R/S struggles. Most common R/S struggles reported: Feeling guilty for not living up to moral standards (25%) Questioning whether life really matters (21%) Feeling angry at God (21%) Doubting religious/spiritual beliefs (22%) Less common struggles included feeling abandoned by God (11%) and believing problems were caused by the devil or evil spirits (12%).
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Davies, A., Buchanan, A., Todd, J., Gregory, A., & Batsari, K. M. (2021). Oral symptoms in patients with advanced cancer: an observational study using a novel oral symptom assessment scale [Observational Study]. Supportive Care in Cancer, 29(8), 4357-4364. https://doi.org/https://dx.doi.org/10.1007/s00520-020-05903-1	Cross sectional study	Palliative care patients	250	Hospital; Hospice; Other: country not specified, but likely the UK	Symptom management; Quality of life	The study developed and tested the Oral Symptom Assessment Scale (OSAS) to evaluate 20 oral symptoms in patients receiving specialist palliative care. 97.5% of patients reported at least one oral symptom using the OSAS. Most common oral symptoms: Dry mouth (83.5%) Taste disturbance (55.5%) Coating of the tongue (47.0%) Lip discomfort (38.5%) Difficulty swallowing (34.5%) Dry mouth was the most distressing symptom, affecting 31% of patients severely. Oral symptoms correlated with worse performance status (ECOG scale). Younger patients ($p = 0.012$) and female patients ($p = 0.048$) reported more oral symptoms. A symptom cluster analysis identified groups of co-occurring symptoms: Cluster 1: Mouth discomfort, ulcers, difficulty chewing/swallowing/speaking. Cluster 2: Bad breath, sensitive teeth, jagged teeth, cracked lips. Cluster 3: Coated tongue, "dirty mouth" sensation, taste disturbances.
Davis, L. E., Gupta, V., Allen-Ayodabo, C., Zhao, H., Hallet, J., Mahar, A.	Other: Retrospective cohort study	Palliative care patients	2103	Other: Cancer centres	Symptom management; Quality of life;	Severe symptoms (score $\geq 7/10$ on the Edmonton Symptom Assessment System - ESAS)

L., Ringash, J., Doherty, M., Kidane, B., Darling, G., & Coburn, N. G. (2020). Patient-reported symptoms following diagnosis in esophagus cancer patients treated with palliative intent. Diseases of the Esophagus, 33(8), 03. https://doi.org/https://dx.doi.org/10.1093/dote/doz108					Functional status; Psychological support	persisted for 6 months after diagnosis. Most commonly reported severe symptoms: Lack of appetite (53.1%) Tiredness (51.1%) Impaired well-being (42.7%) Mental health symptom burden was significant: Severe depression reported by 19.6% of patients Severe anxiety reported by 27.5% of patients Symptom burden remained stable over time across all treatment groups (chemotherapy alone, radiotherapy alone, both, or best supportive care). Patients receiving chemotherapy and/or radiotherapy did not report worsening of symptoms over time. Sensitivity analysis (excluding those who died within 6 months) confirmed the findings.
Davis, M. P., Lagman, R., Parala, A., Patel, C., Sanford, T., Fielding, F., Brumbaugh, A., Gross, J., Rao, A., Majeed, S., Shinde, S., & Rybicki, L. A. (2017). Hope, Symptoms, and Palliative Care. American Journal of Hospice & Palliative Medicine, 34(3), 223-232. https://doi.org/10.1177/1049909115627772	Cross sectional study	Palliative care patients	197	Hospital; Other: United States	Symptom management; Quality of life; Psychological support	Hope was measured using the Herth Hope Index (HHI), while symptom burden was assessed using the ESAS. Hope was not associated with: Gender Age Marital status Duration of cancer Hope was inversely correlated with total symptom burden ($r = -0.28$), but this was not clinically significant. Depression was the only symptom with a clinically relevant inverse correlation to

						hope ($r = -0.39$, $p < 0.001$). Other symptoms that correlated negatively with hope but were not clinically significant: Lack of appetite ($r = -0.22$) Shortness of breath ($r = -0.17$) Anxiety ($r = -0.32$) Lack of well-being ($r = -0.33$) Pain intensity did not significantly influence hope. Hope levels in palliative care patients were similar to those receiving curative treatments, suggesting that hope is maintained even in terminal illness. Social support and spiritual well-being are stronger predictors of hope than symptom burden.
de la Cruz, M., Fan, J., Yennu, S., Tanco, K., Shin, S., Wu, J., Liu, D., & Bruera, E. (2015). The frequency of missed delirium in patients referred to palliative care in a comprehensive cancer center. Supportive Care in Cancer, 23(8), 2427-2433. https://doi.org/10.1007/s00520-015-2610-3	Other: Observational study	Palliative care patients	771	Hospital; Other: United States	Prognosis; Symptom management; Functional status; Psychological support	Delirium was present in 33% (252/771) of patients. 61% of these cases (153/252) were missed by the primary referring team. Most common referral symptom in patients with missed delirium: Pain (50%) Most common subtype of missed delirium: Hypoactive delirium (63%) Most common cause of missed delirium: Opioid-related neurotoxicity (31%) Reversibility: 33% (84/252) of delirium cases were reversible. Among reversible cases, 67% (55/84) were missed. Patients referred for pain had 2.57 times

						higher odds of having missed delirium (p=0.0109).
de la Cruz, M., Noguera, A., San Miguel-Arregui, M. T., Williams, J., Chisholm, G., & Bruera, E. (2015). Delirium, agitation, and symptom distress within the final seven days of life among cancer patients receiving hospice care [Randomized Controlled Trial Research Support, N.I.H., Extramural Research Support, Non-U.S. Gov't]. Palliative & Supportive Care, 13(2), 211-216. https://doi.org/https://dx.doi.org/10.1017/S1478951513001144	Randomised controlled trial	Other: Advanced cancer patients in hospice care	78	Home-based care; Hospice	Prognosis; Symptom management; Functional status; Social support; Caregiver support ; Psychological support ; Other: delirium detection and management	80% of patients had at least one moderate-to-severe symptom in the last week of life (ESAS ≥ 4). Most prevalent symptoms in the final 7 days: Anorexia (92%) Fatigue (82%) Drowsiness (77%) Decreased well-being (76%) Pain (51%) Delirium was diagnosed in 44% of patients using the Memorial Delirium Assessment Scale (MDAS). The Nursing Delirium Screening Scale (Nu-DESC) was found unreliable when used by caregivers: Sensitivity: 35% Specificity: 80% Positive Predictive Value (PPV): 58% Negative Predictive Value (NPV): 61% Only 2.5% of patients exhibited agitation/restlessness on the Richmond Agitation Sedation Scale (RASS).
de la Cruz, M., Noguera, A., San Miguel-Arregui, M. T., Williams, J., Chisholm, G., & Bruera, E. (2015). Delirium, agitation, and symptom distress within the final seven days of life among cancer patients receiving hospice care	Randomised controlled trial	Other: advanced cancer patients	78	Home-based care; Hospice; Other: USA	Prognosis; Symptom management; Functional status; Caregiver support ; Psychological support	80% of patients had at least one moderate-to-severe symptom (ESAS score ≥ 4) in the last week of life. Most prevalent symptoms in the final 7 days: Anorexia (92%) Fatigue (82%) Drowsiness (77%) Decreased well-being (76%) Pain (51%) Delirium was diagnosed in 44% of patients using the Memorial

[Randomized Controlled Trial Research Support, N.I.H., Extramural Research Support, Non-U.S. Gov't]. Palliative & Supportive Care, 13(2), 211-216. https://doi.org/https://dx.doi.org/10.1017/S1478951513001144						Delirium Assessment Scale (MDAS). The Nursing Delirium Screening Scale (Nu-DESC), when used by caregivers, had low sensitivity for detecting delirium: Sensitivity: 35% Specificity: 80% Positive Predictive Value (PPV): 58% Negative Predictive Value (NPV): 61% Only 2.5% of patients exhibited agitation/restlessness on the Richmond Agitation Sedation Scale (RASS).
de la Cruz, M., Reddy, A., Vidal, M., Tanco, K., Azhar, A., Silvestre, J., Liu, D. D., Jimin, W., & Bruera, E. (2016). Impact of a Palliative Care Checklist on Clinical Documentation. Journal of Oncology Practice, 12(2), e241-e247. https://doi.org/10.1200/JOP.2015.007203	Cohort study	Palliative care patients	110	Hospital; Other: USA	Prognosis; Symptom management; Functional status; Psychological support	Implementation of a palliative care checklist (PCC) significantly improved clinical documentation. Key areas of improvement in documentation after PCC implementation: CAGE Alcoholism Screening: 79% → 94% (p < 0.0001) Psychosocial History: 69% → 95% (p < 0.0001) Eastern Cooperative Oncology Group (ECOG) Performance Status: 38% → 81% (p < 0.0001) Advance Care Planning (ACP) Discussion: 28% → 41% (p = 0.0008) Overall Documentation Quality: 78% → 95% (p < 0.0001) No significant improvement in documentation of: Opioid-induced neurotoxicity (OIN): 37% →

						37% (p = 0.9492) ESAS completion: 98% → 99% (p = 0.4511) Barriers to documentation improvements: Time constraints in outpatient settings Physician habits and resistance to standardized formats Forgetting to use the checklist
Delgado-Guay, M. O., Hui, D., Parsons, H. A., Govan, K., De la Cruz, M., Thorney, S., Bruera, E., Delgado-Guay, M. O., Hui, D., Parsons, H. A., Govan, K., De la Cruz, M., Thorney, S., & Bruera, E. (2011). Spirituality, religiosity, and spiritual pain in advanced cancer patients. Journal of Pain & Symptom Management, 41(6), 986-994. https://doi.org/10.1016/j.jpainsymman.2010.09.017	Cross sectional study	Palliative care patients	100	Other: Houston	Symptom management; Quality of life; Psychological support ; Spiritual support	98% of patients identified as spiritual and religious, with a median intensity score of 9/10. Spiritual pain was reported in 44% of patients, with a median score of 3 (1-6). Spiritual pain was significantly associated with: Lower self-reported religiosity (7 vs. 10, p = 0.002) Lower spiritual quality of life (FACIT-Sp-Ex 68 vs. 81, p = 0.001) Patients with spiritual pain had higher symptom distress, particularly: Depression (p = 0.01) Anxiety (p = 0.03) Anorexia (p = 0.04) Drowsiness (p = 0.004) Patients with spiritual pain were more likely to feel that it worsened their physical (p < 0.001) and emotional (p < 0.001) symptoms. No significant association was found between spiritual pain and coping strategies (Brief COPE, Brief R-COPE). Religious coping was

						generally positive, with spirituality/religiosity serving as a source of strength and comfort for most patients.
Delgado-Guay, M. O., Palma, A., Duarte, E., Grez, M., Tupper, L., Liu, D. D., & Bruera, E. (2021). Association between Spirituality, Religiosity, Spiritual Pain, Symptom Distress, and Quality of Life among Latin American Patients with Advanced Cancer: A Multicenter Study. Journal of Palliative Medicine, 24(11), 1606-1615. https://doi.org/10.1089/jpm.2020.0776	Cross sectional study	Palliative care patients	325	Other: palliative care clinics	Symptom management; Quality of life; Social support; Psychological support ; Spiritual support	97% of patients identified as spiritual, and 89% identified as religious. 60% of patients felt their spiritual/religious needs were not supported by the medical team. Spirituality and religiosity were associated with: Better coping strategies ($r = 0.66$, $p < 0.0001$) Improved emotional well-being ($r = 0.16$, $p < 0.0001$) Positive effects on symptom management ($r = 0.42$, $p < 0.0001$) 52% of patients experienced spiritual pain, which was associated with: Higher levels of pain ($p = 0.0225$) Depression ($p < 0.0001$) Anxiety ($p < 0.0001$) Worry ($p < 0.001$) Financial distress ($p < 0.0001$) Patients with spiritual pain had worse quality of life as measured by the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being, Expanded version (FACIT-Sp-Ex). Spiritual pain was linked to maladaptive coping behaviors, such as denial ($p = 0.0337$) and behavioral disengagement ($p = 0.0148$).

Delgado-Guay, M., Rodriguez-Nunez, A., Shin, S., Chisholm, G., Williams, J., Frisbee-Hume, S., Bruera, E., Delgado-Guay, M. O., & Shin, S. H. (2016). Characteristics and outcomes of patients with advanced cancer evaluated by a palliative care team at an emergency center. A retrospective study. Supportive Care in Cancer, 24(5), 2287-2295. https://doi.org/10.1007/s00520-015-3034-9	Other: OBservational	Palliative care patients	400	Hospital; Other: USA	Prognosis; Symptom management; Quality of life; Psychological support ; Spiritual support	Referral to palliative care from the EC resulted in earlier intervention and better symptom management. Time from admission to palliative care consultation was significantly shorter for EC patients (12 hours) than for inpatient referrals (24-96 hours, $p < 0.0001$). Most common symptoms leading to palliative care referral from the EC: Uncontrolled pain (83% vs. 45%, $p < 0.0001$) Nausea, vomiting, constipation (41% vs. 19%, $p < 0.0001$) Dyspnea (29% vs. 19%, $p = 0.02$) Median symptom intensities at baseline (EC patients vs. inpatients): Pain: 7 (5-9) vs. 5 (2-8), $p < 0.0001$ Fatigue: 7 (4-8) vs. 6 (4-8), $p = 0.0517$ Sleep disturbance: 6 (0-8) vs. 4 (1-7), $p = 0.1064$ After palliative care intervention, symptom improvement was observed in: Pain (53%) Sleep (45%) Well-being (39%) Fatigue (38%) Anxiety (39%) Appetite (35%) Dyspnea (31%) Nausea (31%) Depression (29%) Drowsiness (29%) Hospitalisation outcomes: Median duration of hospital stay was significantly shorter for EC patients (92 hours) than for
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						inpatient referrals (125 hours, $p < 0.0001$). Discharge destinations for EC patients after palliative care consultation: Home (33%) Home hospice (7%) Inpatient hospice (4%) Regular hospital ward (33%) Palliative care unit (23%)
Delgado-Guay, M., Rodriguez-Nunez, A., Shin, S., Chisholm, G., Williams, J., Frisbee-Hume, S., Bruera, E., Delgado-Guay, M. O., & Shin, S. H. (2016). Characteristics and outcomes of patients with advanced cancer evaluated by a palliative care team at an emergency center. A retrospective study. Supportive Care in Cancer, 24(5), 2287-2295. https://doi.org/10.1007/s00520-015-3034-9	Cohort study	Palliative care patients	400	Other: cancer centre (emergency centre)	Symptom management; Quality of life; Functional status; Psychological support	Referral to palliative care from the EC led to earlier intervention and better symptom management. Time from admission to palliative care consultation was significantly shorter for EC patients (12 hours) than for inpatient referrals (24-96 hours, $p < 0.0001$). Most common symptoms leading to palliative care referral from the EC: Uncontrolled pain (83% vs. 45%, $p < 0.0001$) Nausea, vomiting, constipation (41% vs. 19%, $p < 0.0001$) Dyspnea (29% vs. 19%, $p = 0.02$) Median symptom intensities at baseline (EC patients vs. inpatients): Pain: 7 (5-9) vs. 5 (2-8), $p < 0.0001$ Fatigue: 7 (4-8) vs. 6 (4-8), $p = 0.0517$ Sleep disturbance: 6 (0-8) vs. 4 (1-7), $p = 0.1064$ After palliative care intervention, symptom improvement was observed in

Delgado-Guay, M., Yennurajalingam, S., Parsons, H., Palmer, J. L., & Bruera, E. (2011). Association between self-reported sleep disturbance and other symptoms in patients with advanced cancer. <i>Journal of Pain & Symptom Management</i>, 41(5), 819-827. https://doi.org/10.1016/j.painsymman.2010.07.015	Cross sectional study	Palliative care patients	101	Hospital; Other: US	Symptom management; Quality of life; Psychological support	85% of patients had sleep disturbance (SD), as measured by the PSQI (score ≥ 5). Symptoms most strongly correlated with sleep disturbance: Pain ($r = 0.27$, $p = 0.006$) Dyspnea ($r = 0.25$, $p < 0.001$) Depression ($p = 0.019$) Anxiety ($p = 0.01$) Well-being ($r = 0.35$, $p < 0.0001$) Compared to patients without SD, those with SD were significantly more likely to report: Pain ($p = 0.0132$) Depression ($p = 0.019$) Anxiety ($p = 0.01$) Poorer well-being ($p = 0.035$) Edmonton Symptom Assessment Scale (ESAS-Sleep) cutoff of ≥ 3 had a sensitivity of 74% and specificity of 73% for detecting SD compared to PSQI.
Deng, L. X., Bischoff, K. E., Kent, D. S., O'Riordan, D. L., Pantilat, S. Z., & Lai, J. C. (2021). Frailty is strongly associated with self-reported symptom burden among patients with cirrhosis. <i>European Journal of Gastroenterology & Hepatology</i>, 34, e395-e400.	Cross sectional study	Other: Patients with cirrhosis undergoing outpatient liver transplantat ion evaluation	233	Hospital; Other: US	Prognosis; Symptom management; Quality of life; Functional status; Psychological support ; Other	Liver Frailty Index (LFI) ESAS Distress and QOL measures (unspecified validated tools) 38% of patients reported ≥ 1 severe symptom based on ESAS Frailty (as measured by LFI) correlated with higher symptom burden Frailty independently predicted ≥ 1 severe symptom (adjusted OR: 1.3, $p = 0.004$) Strong associations between frailty and depression, pain, fatigue, appetite loss, and poor well-being Psychological

https://doi.org/10.1097/MEG.0000000000002113						distress and reduced QOL were significantly more common in frail patients
Deng, L. X., Kent, D. S., O'Riordan, D. L., Pantilat, S. Z., Lai, J. C., & Bischoff, K. E. (2022). Symptom Burden Is Associated with Increased Emergency Department Utilization among Patients with Cirrhosis. Journal of Palliative Medicine, 25(2), 213-218. https://doi.org/10.1089/jpm.2021.0219	Cohort study	Other: Patients with cirrhosis undergoing outpatient liver transplantat ion evaluation	233	Other: Outpatient liver transplant clinic US	Prognosis; Symptom management; Quality of life	Median total ESAS score: 16 (IQR: 6-30) Higher total ESAS scores independently predicted increased emergency department (ED) visits (adjusted IRR 1.05, 95% CI 1.00-1.10, p = 0.03) Physical symptom burden was significantly associated with ED visits (IRR 1.09, p = 0.01), but psychological symptoms were not Associations were also observed with nonelective hospitalizations, hospital days, and ICU admissions (all p < 0.04) Highlights the potential utility of symptom monitoring in reducing acute care utilisation
Dhiliwal, S. R., & Muckaden, M. (2015). Impact of Specialist Home-Based Palliative Care Services in a Tertiary Oncology Set Up: A Prospective Non-Randomized Observational Study. Indian Journal of Palliative Care, 21(1), 28-34. https://doi.org/10.4103/0973-1075.150170	Non-randomised experimental study	Palliative care patients	690 registered; 506 received home-based palliative care	Home-based care; Other: India	Symptom management; Quality of life; Social support; Caregiver support ; Psychological support	Significant symptom relief achieved after specialist home-based care, as measured by sequential ESAS scores. 50.98% of patients were able to be cared for and die at home. Home-based care enabled better symptom management, reduced hospitalizations, improved communication, and enhanced psychosocial support. 83.2% of patients received coordinated out-of-hours (OOH) care through local general practitioners, enhancing

						continuity. Bereavement support was systematically provided post-death, improving caregiver outcomes.
Dhiliwal, S., Salins, N., Deodhar, J., Rao, R., & Muckaden, M. A. (2016). Pilot Testing of Triage Coding System in Home-based Palliative Care Using Edmonton Symptom Assessment Scale. Indian Journal of Palliative Care, 22(1), 19-24. https://doi.org/10.4103/0973-1075.173943	Other: Prospective observational pilot study	Palliative care patients	506	Home-based care; Other: India	Prognosis; Symptom management; Quality of life	ESAS used to triage patients based on symptom severity into priority categories for scheduling timely home visits Findings: Mean time to home visit: Group 1: 2.63 days Group 2: 7.00 days Group 3: 10.54 days Statistically significant improvement in ESAS scores for Groups 1 and 2 after intervention Greatest symptom improvement observed in Group 1 Reduction in hospital deaths: Group 1: 6.3% Group 2: 28.6% Group 3: 15.4% 8.5% increase in home and hospice deaths Time from triage to first intervention was a significant predictor of survival (OR = 0.75)
Dhingra, L., Barrett, M., Knotkova, H., Chen, J., Riggs, A., Lee, B., Hiney, B., McCarthy, M., & Portenoy, R. (2018). Symptom Distress Among Diverse Patients Referred for Community-Based Palliative Care: Sociodemographic and Medical Correlates.	Cross sectional study	Palliative care patients	1532	Other: US	Symptom management; Quality of life; Functional status; Social support; Psychological support	94.6% of patients reported at least one symptom. Most prevalent symptoms: Fatigue (71.8%) Pain (47.3%) Sadness (41.6%) Dyspnea (41.2%) Worrying (41.1%) Nervousness (40.0%) Lack of appetite (31.0%) Most distressing symptoms: Fatigue (58.5%) Worrying (54.8%) Weight loss (52.1%) Feeling sad (51.5%)

Journal of Pain & Symptom Management, 55(2), 290-296. https://doi.org/10.1016/j.jpainsymman.2017.08.015						Pain (44.0%) Lack of appetite (41.9%) Predictors of severe symptom distress (multivariate analysis): Caucasian race (OR = 2.02, $p < 0.05$) Cancer diagnosis (OR = 1.91, $p < 0.05$) Lower KPS scores (trend $p < 0.001$) Speaking a non-Asian language (English or Russian) ($p < 0.05$) Patients with lower KPS scores had significantly higher symptom distress: KPS 10-30: OR = 19.51 ($p < 0.001$) KPS 40-50: OR = 8.17 ($p < 0.001$) KPS 60-70: OR = 5.04 ($p < 0.001$)
Dhingra, L., Dieckmann, N. F., Knotkova, H., Chen, J., Riggs, A., Breuer, B., Hiney, B., Lee, B., McCarthy, M., & Portenoy, R. (2016). A High-Touch Model of Community-Based Specialist Palliative Care: Latent Class Analysis Identifies Distinct Patient Subgroups. Journal of Pain & Symptom Management, 52(2), 178-186. https://doi.org/10.1016/j.jpainsymman.2016.04.001	Cohort study	Palliative care patients	894	Other: Community-based palliative care program US	Symptom management; Quality of life; Functional status	Four patient subgroups were identified using LCA based on illness burden: Very low burden (26.2%) - Mostly African American or Hispanic, fewer palliative care needs Low burden (39.5%) - Moderate symptoms, requiring occasional support Moderate burden (13.5%) - Higher symptom distress, needing frequent visits High burden (20.8%) - Severe symptoms, high utilisation of palliative care services Common diagnoses among participants: Congestive heart failure (36.4%) Cancer (30.4%) Chronic obstructive pulmonary disease (COPD) (10.5%) Performance status at baseline (Karnofsky

						Performance Status - KPS): 98% of patients had a KPS of 40-70, indicating moderate functional impairment Baseline symptom burden (Condensed MSAS - CMSAS): Mean score: 1.2 (SD = 0.5) (higher scores indicate greater distress) Most common symptoms: Pain, dyspnea, fatigue, sadness Palliative Care Outcomes Scale (POS): Mean score: 11.9 (SD = 6.0) (higher scores indicate greater unmet needs) Service Utilisation: Patients received an average of: 3925 visits by nurse practitioners or physicians 1738 social worker visits 15,497 telephone calls over study period High-burden patients received significantly more: Physician/Nurse visits (Mean = 1.10 per month) Total telephone calls (Mean = 2.03 per month)
Dudgeon, D. J., Knott, C., Chapman, C., Coulson, K., Jeffery, E., Preston, S., Eichholz, M., Van Dijk, J. P., Smith, A., Dudgeon, D. J., Knott, C., Chapman, C., Coulson, K., Jeffery, E., Preston, S., Eichholz, M., Van Dijk, J. P., & Smith, A. (2009). Development,	Other: evaluation	Palliative care patients	Over 1,300 cancer patients and 600 healthcare professionals trained	Other: Palliative care unit, community care, regional cancer centre Canada	Symptom management; Quality of life; Functional status	ESAS PPS Collaborative Care Plans Symptom Management Guidelines Key Findings: The Palliative Care Integration Project (PCIP) improved coordination and integration across care settings. Health professionals valued the standardized tools and guidelines, particularly for community-based care.

implementation, and process evaluation of a regional palliative care quality improvement project. Journal of Pain & Symptom Management, 38(4), 483-495. https://doi.org/10.1016/j.jpainsymman.2008.12.006						Education and collaboration across sectors were critical to successful implementation. Despite initial implementation challenges, the PCIP was perceived to enhance continuity and quality of care.
Dutta, S., Ishore, K., & Ghoshal, A. (2022). Role of Integrative Oncology and Palliative Care Services in Improving Comfort Level and Compliance among Patients with Advanced Fungating Breast Cancer -- Experience from a Rural Hospital of North Eastern India during the COVID-19 Pandemic. Indian Journal of Palliative Care, 28(3), 256-261. https://doi.org/10.25259/IJPC_40_2021	Other: observational study	Palliative care patients	20	Hospital; Other: India	Symptom management; Quality of life; Psychological support ; Other: Assess comfort levels and compliance of palliative care interventions in fungating breast cancer patients Evaluate symptom burden before and after treatment using the Revised Edmonton Symptom Assessment Scale (r-ESAS) Determine barriers to treatment compliance in a	Significant improvement in patient comfort and well-being post-treatment (paired t-test = 16.548; P = 0.000). Greatest relief observed in bleeding control (100%), malodour dissipation (76.9%), and maggot control (71%). No significant correlation between symptom improvement and specific radiation dose or schedule. Approximately 50% of patients were non-compliant, likely due to COVID-19-related barriers. The study supports the integrative use of palliative nursing, RT, chemotherapy, and surgery in improving symptom burden.

					rural setting during the COVID-19 pandemic	
El-Jawahri, A., LeBlanc, T. W., Kavanaugh, A., Webb, J. A., Jackson, V. A., Campbell, T. C., O'Connor, N., Luger, S. M., Gafford, E., Gustin, J., Bhatnagar, B., Walker, A. R., Fathi, A. T., Brunner, A. M., Hobbs, G. S., Nicholson, S., Davis, D., Addis, H., Vaughn, D., & Horick, N. (2021). Effectiveness of Integrated Palliative and Oncology Care for Patients With Acute Myeloid Leukemia: A Randomized Clinical Trial. JAMA Oncology, 7(2), 238-245. https://doi.org/10.1001/jamaoncol.2020.6343	Randomised controlled trial	Other: hospitalised patients	160	Hospital	Quality of life	IPC significantly improved QoL, depression, anxiety, and PTSD symptoms compared to usual care (UC). Benefits were sustained for up to 24 weeks. Among those who died, IPC patients were more likely to discuss end-of-life preferences and less likely to receive chemotherapy near death.
El-Jawahri, A., Traeger, L., Greer, J. A., VanDusen, H., Fishman, S. R., LeBlanc, T. W., Pirl, W. F., Jackson, V. A., Telles, J., Rhodes, A., Zhigang, L., Spitzer, T. R., McAfee, S., Chen, Y.-B. A., Temel, J. S., & Li,	Randomised controlled trial	Other: Patients undergoing autologous or allogeneic hematopoietic stem-cell	160	Hospital; Other: US	Symptom management; Quality of life; Psychological support	Significant reductions in depression symptoms at 6 months (HADS and PHQ) Significant reduction in PTSD symptoms (adjusted mean difference: -4.02, p = .013) No significant difference in anxiety or QOL at 6 months Mediation analysis: Symptom burden and

Z. (2017). Effect of Inpatient Palliative Care During Hematopoietic Stem-Cell Transplant on Psychological Distress 6 Months After Transplant: Results of a Randomized Clinical Trial. Journal of Clinical Oncology, 35(32), 3714-3721. https://doi.org/10.1200/JCO.2017.73.2800		transplant (HCT) for hematologic malignancies				anxiety during HCT hospitalization partially mediated long-term improvements in depression and PTSD
Erdoğan Yüce, G., Döner, A., & Muz, G. (2021). Psychological Distress and Its Association with Unmet Needs and Symptom Burden in Outpatient Cancer Patients: A Cross-Sectional Study. Seminars in Oncology Nursing, 37(5), N.PAG-N.PAG. https://doi.org/10.1016/j.sonc.2021.151214	Cross sectional study	Other: outpatients receiving cancer treatments	298	Hospital; Other: Turkey	Symptom management; Quality of life; Psychological support	Tools Used HADS - to assess psychological distress (anxiety and depression) Nightingale Symptom Assessment Scale (N-SAS) - to measure physical and psychological symptom burden Supportive Care Needs Survey - Short Form (SCNS-SF34) - to evaluate unmet supportive care needs Clinically significant anxiety and depression were common among participants Symptom burden (physical and psychological) and unmet needs (psychological, physical, and daily living activities) were significant contributors to psychological distress Female gender was associated with increased anxiety and depression Advanced age was significantly associated with

						higher depression scores Patients require intensive supportive psychosocial care, which should be incorporated into routine assessments
Ezekowitz, J. A., Thai, V., Hodnefield, T. S., Sanderson, L., & Cujec, B. (2011). The correlation of standard heart failure assessment and palliative care questionnaires in a multidisciplinary heart failure clinic. Journal of Pain & Symptom Management, 42(3), 379- 387.	Cohort study	Other: Patients with heart failure (HF) receiving outpatient multidiscipl inary care	105	Other: Heart Function Clinic Canada	Prognosis; Symptom management; Quality of life; Functional status	Significant correlations between palliative care tools and HF assessments: PPS was moderately correlated with NYHA class ($P < 0.0001$) and KCCQ scores ($R = 0.57$, $P < 0.0001$). ESAS was inversely correlated with KCCQ scores ($R = -0.72$, $P < 0.0001$). Symptom burden and functional limitations increased with HF severity: Patients with NYHA III/IV had the highest ESAS scores (mean = 20.2 15.8). Tiredness, depression, and well- being scores were significantly worse in advanced HF patients ($P < 0.002$). Clinical outcomes (one-year follow-up): 10 deaths (9.5%) and 26 hospitalizations (24.8%). Higher ESAS scores trended toward significance as a predictor of hospitalization/death (OR = 1.03, $P = 0.07$). Lower PPS scores were significantly predictive of hospitalisation/death (OR = 0.94, $P = 0.04$). No significant predictive value found for

						NYHA class or KCCQ in multivariate analysis.
Falk, H., Henoch, I., Ozanne, A., Öhlen, J., Ung, E. J., Fridh, I., Sarenmalm, E. K., & Falk, K. (2016). Differences in Symptom Distress Based on Gender and Palliative Care Designation Among Hospitalized Patients. Journal of Nursing Scholarship, 48(6), 569-576. https://doi.org/10.1111/jnu.12254	Randomised controlled trial	Palliative care patients	67	Home-based care; Other: UK	Symptom management; Quality of life; Caregiver support ; Psychological support	BIS significantly reduced patient distress from breathlessness compared to standard care (mean difference - 1.29; p = 0.049) 94% of respondents reported that BIS had a positive impact Improvements were noted in anxiety, confidence in breathlessness management, and perceived support BIS legitimised symptoms and reduced the sense of isolation among patients and carers Cost-effectiveness: 66% likelihood of being more effective and less costly than standard care (rising to 81% when informal care costs were included)
Falk, H., Henoch, I., Ozanne, A., Öhlen, J., Ung, E. J., Fridh, I., Sarenmalm, E. K., & Falk, K. (2016). Differences in Symptom Distress Based on Gender and Palliative Care Designation Among Hospitalized Patients. Journal of Nursing Scholarship, 48(6), 569-576.	Cross sectional study	Palliative care patients	710	Hospital; Other: Sweden	Symptom management; Caregiver support ; Psychological support	Females reported significantly higher distress than males for: Pain Fatigue Nausea However, females needed to report higher levels of distress than males for their symptoms to be documented by clinicians Palliative care designation influenced symptom documentation but not necessarily symptom distress scores Gender disparities were apparent in how symptoms were

https://doi.org/10.1111/jnu.12254						recognized and responded to by clinicians
Farquhar, M. C., Prevost, A. T., McCrone, P., Brafman-Price, B., Bentley, A., Higginson, I. J., Todd, C. J., & Booth, S. (2016). The clinical and cost effectiveness of a Breathlessness Intervention Service for patients with advanced non-malignant disease and their informal carers: mixed findings of a mixed method randomised controlled trial [Clinical Trial, Phase III Randomized Controlled Trial Research Support, Non-U.S. Gov't]. Trials [Electronic Resource], 17, 185. https://doi.org/https://dx.doi.org/10.1186/s13063-016-1304-6	Randomised controlled trial	Other: Patients with advanced non-malignant respiratory and cardiac diseases experiencing moderate-to-severe breathlessness	87	Other: UK	Symptom management; Quality of life; Caregiver support ; Psychological support	Quantitative analysis showed a non-significant reduction in distress due to breathlessness in the intervention group versus control (-0.24; 95% CI: -1.30 to 0.82) Cost-effectiveness: BIS resulted in extra mean costs of 799, reduced to 100 when outliers were excluded (neither statistically significant) Qualitative feedback indicated positive impact on confidence, support, and management strategies for both patients and carers A trend of improvement was noted in both intervention and control groups, potentially due to a therapeutic effect of research interviews Impact was less definitive compared to previous BIS trials with advanced cancer patients
Feely, M. A., Swetz, K. M., Zavaleta, K., Thorsteinsdottir, B., Albright, R. C., & Williams, A. W. (2016). Reengineering Dialysis: The Role of Palliative Medicine. Journal of	Cohort study	Palliative care patients; Healthcare professionals	92	Hospital; Other: US	Prognosis; Symptom management; Quality of life; Psychological support	Advance care planning improved significantly after palliative care consultations: Unknown code status decreased from 23% to 1% (P < 0.0001). Goals of care documentation increased from 3% to 59% (P < 0.0001). Advance directive

Palliative Medicine, 19(6), 652-655. https://doi.org/10.1089/jpm.2015.0181						documentation increased from 41% to 46%, but was not statistically significant ($P = 0.22$). Baseline symptom burden was well controlled prior to palliative care intervention. Pain, fatigue, drowsiness, and dyspnea worsened slightly over 6 months ($P < 0.05$). Anorexia significantly worsened ($P < 0.0001$). Hospice referral remained low (11/22 patients who discontinued dialysis used hospice). 98.9% of eligible patients (91/92) accepted palliative care consultation, indicating high feasibility and acceptability.
Fernandes, R., Braun, K. L., Ozawa, J., Compton, M., Guzman, C., & Somogyi-Zalud, E. (2010). Home-based palliative care services for underserved populations. Journal of Palliative Medicine, 13(4), 413-419. https://doi.org/10.1089/jpm.2009.0216	Other: observational study	Palliative care patients	46	Home-based care; Other: US	Symptom management; Quality of life; Caregiver support	Median HBPC stay: 7 months Median home visits: 3.5 25% enrolled in hospice (median 67.5 days) Significant reduction in hospitalizations ($p = 0.002$) Increase in end-of-life care discussions from 50% to 90% ($p < 0.01$) High caregiver satisfaction reported
Fernandes, R., Fess, E. G., Sullivan, S., Brack, M., DeMarco, T., & Li, D. (2020). Supportive Care for Superutilizers of a	Other: Prospective study	Palliative care patients	21	Home-based care; Other: US	Symptom management; Quality of life; Caregiver support	Median supportive care stay: 90 days 23% transitioned to hospice care Significant symptom improvement in: Pain ($p < 0.0001$) Anxiety ($p =$

Managed Care Organization. Journal of Palliative Medicine, 23(11), 1444-1451. https://doi.org/10.1089/jpm.2019.0288						0.0052) Shortness of breath (p = 0.0447) End-of-life documentation increased from 23% to 85% 79.5% reduction in ED visits and 75% reduction in hospitalizations per 1000 members Overall net cost savings: 36% High caregiver satisfaction (measured via FAMCARE)
Feudtner, C., Nye, R., Hill, D. L., Hall, M., Hinds, P., Johnston, E. E., Friebert, S., Hays, R., Kang, T. I., & Wolfe, J. (2021). Polysymptomatology in Pediatric Patients Receiving Palliative Care Based on Parent-Reported Data. JAMA Network Open, 4(8), e2119730-e2119730. https://doi.org/10.1001/jamanetworkopen.2021.19730	Cross sectional study	Palliative care patients	501	Hospital; Other: US	Symptom management; Quality of life; Psychological support	Modified MSAS Parents reported a mean of 6.7 (SD 3.4) symptoms per patient Most common symptoms: pain (63.7%), lack of energy (58.9%), irritability (55.9%), drowsiness (49.3%), shortness of breath (46.3%) Older patients had more and higher severity symptoms Variation in symptoms across disease categories was relatively minor 73.3% had ≥ 5 symptoms; top 10% reported a median of 12 symptoms
Fischer, S. M., Kline, D. M., Min, S.-J., Okuyama-Sasaki, S., & Fink, R. M. (2018). Effect of Apoyo con Cariño (Support With Caring) Trial of a Patient Navigator Intervention to Improve Palliative Care Outcomes	Randomised controlled trial	Palliative care patients	223	Hospital; Other: USA	Prognosis; Symptom management; Quality of life	Advance care planning (ACP) significantly improved: 65.2% of intervention group had advance directives documented vs. 36.0% in the control group (P < .001). Pain management outcomes showed no significant difference: Pain severity: Mean change from baseline 0.1

for Latino Adults With Advanced Cancer: A Randomized Clinical Trial. JAMA Oncology, 4(12), 1736-1741. https://doi.org/10.1001/jamaoncol.2018.4014						(intervention) vs. 0.2 (control) (P = .88). Pain interference: Mean change from baseline 0.1 (intervention) vs. -0.2 (control) (P = .66). Physical well-being improved in the intervention group: MQOL physical subscale increased by 1.4 vs. 0.1 in control (P = .004). No significant difference in overall quality of life or aggressiveness of end-of-life care.
Fischer, S. M., Min, S. J., Atherly, A., Kline, D. M., Gozansky, W. S., Himberger, J., Lopez, J., Lester, K., & Fink, R. M. (2018). Apoyo con Cariño (support with caring): RCT protocol to improve palliative care outcomes for Latinos with advanced medical illness. Research in Nursing & Health, 41(6), 501-510. https://doi.org/10.1002/nur.21915	Randomised controlled trial	Palliative care patients	240	Hospital; Other: US	Symptom management; Quality of life; Other: Culturally patient navigation intervention to improve palliative care access	Advance care planning (ACP) engagement increased: Higher rates of documented ACP in the intervention group compared to usual care. Symptom management showed significant improvements: Participants in the intervention group reported better symptom control using the ESAS-r. Quality of life improved in the intervention group: Measured via FACIT, showing improved well-being and emotional support. Cost analysis indicated potential savings: Participants in the intervention group had lower healthcare costs in the last three months of life
Fitchett, G., Yao, Y., Emanuel, L. L., Guay, M. O. D., Handzo, G., Hauser, J., Kittelson, S.,	Randomised controlled trial	Palliative care patients	579	Hospital; Other: US	Symptom management; Quality of life; Functional	Dignity therapy (DT) was effective in improving dignity impact for both low and high symptom burden patients: Low

O'Mahony, S., Quest, T., Rabow, M., Schoppee, T. M., Solomon, S., Wilkie, D. J., & Chochinov, H. M. (2024). Examining Moderation of Dignity Therapy Effects by Symptom Burden or Religious/Spiritual Struggles [Randomized Controlled Trial]. <i>Journal of Pain & Symptom Management</i> , 67(4), e333-e340. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2024.01.003					status; Spiritual support	symptom burden group: P = 0.03 High symptom burden group: P = 0.001 DT was effective in patients with low but not high religious/spiritual struggle: Low R/S struggle: P = 0.004 High R/S struggle: P = 0.10 DT did not significantly impact preparation for death or life completion outcomes (measured by QUAL-E subscales). Moderation effects of symptom burden (P = 0.054) and R/S struggle (P = 0.52) were not significant.
Follwell, M., Burman, D., Le, L. W., Wakimoto, K., Seccareccia, D., Bryson, J., Rodin, G., & Zimmermann, C. (2009). Phase II study of an outpatient palliative care intervention in patients with metastatic cancer. <i>Journal of Clinical Oncology</i> , 27(2), 206-213. https://doi.org/10.1200/JCO.2008.17.7568	Non-randomised experimental study	Palliative care patients	150	Hospital; Other: Canada	Symptom management	ESAS Family Satisfaction with Advanced Cancer Care (FAMCARE) Findings Baseline mean ESAS Distress Score (EDS): 39.5 Mean EDS improvement: 8.8 points at 1 week (P < .0001) 7.0 points at 1 month (P < .0001) Significant symptom improvement at both time points in: Pain, fatigue, nausea, depression, anxiety, drowsiness, appetite, dyspnea, insomnia, constipation
Frank, C., Touw, M., Suurdt, J., Jiang, X., Wattam, P., & Heyland, D. K. (2012). Optimizing end-of-life care on	Non-randomised experimental study	Palliative care patients; Caregivers	67	Hospital; Other: Canada	Symptom management; Quality of life	Satisfaction on priority care items improved after intervention. Caregiver satisfaction significantly increased. ESAS symptom

medical clinical teaching units using the CANHELP questionnaire and a nurse facilitator: a feasibility study. Canadian Journal of Nursing Research, 44(1), 41-58.						scores improved in the second cohort using the symptom screener. The nurse facilitator was effective in identifying care gaps and guiding quality improvement.
Friis, R. B., Hjollund, N. H., Pappot, H., Taarnhoj, G. A., Vestergaard, J. M., & Skuladottir, H. (2021). Patient-Reported Outcome Measures Used in Routine Care Predict for Survival at Disease Progression in Patients With Advanced Lung Cancer [Research Support, Non-U.S. Gov't]. Clinical Lung Cancer, 22(2), e169-e179. https://doi.org/https://dx.doi.org/10.1016/j.clcc.2020.09.014	Cohort study	Palliative care patients	94	Hospital; Other: Denmark	Prognosis; Symptom management; Quality of life	PRO measures collected in routine care provide prognostic information on survival in lung cancer patients. Specific symptom scales (global health, functional scales, dyspnea, hemoptysis, dysphagia, and chest pain) predict survival at disease progression. Absolute PRO scores at progression are more predictive than changes in scores.
Fyllingen, E. H., Oldervoll, L. M., Loge, J. H., Hjermsstad, M. J., Haugen, D. F., Sigurdardottir, K. R., Paulsen, O., Kaasa, S., Fyllingen, E. H., Oldervoll, L. M., Loge, J. H., Hjermsstad, M. J., Haugen, D. F.,	Cohort study	Palliative care patients	370	Hospital; Other: Denmark	Symptom management; Functional status; Psychological support ; Other: Mobility assessment Integration into	Usability: Majority of patients (77%) were able to complete the computer-based assessment without assistance. Preference: A pilot study showed that 55% of patients preferred the computerized method over paper-and-pencil questionnaires, while 25% had no preference. Predictors of Assistance Need:

Sigurdardottir, K. R., Paulsen, O., & Kaasa, S. (2009). Computer-based assessment of symptoms and mobility in palliative care: feasibility and challenges. Journal of Pain & Symptom Management, 38(6), 827-836. https://doi.org/10.1016/j.jpainsymman.2009.05.015					electronic medical records	Age and performance status were the strongest predictors for requiring assistance. Time Efficiency: On average, patients completed the 60-item questionnaire in about 15-17 minutes.
Galiana, L., Rudilla, D., Oliver, A., & Barreto, P. (2017). The Short Demoralization Scale (SDS): A new tool to appraise demoralization in palliative care patients. Palliative & Supportive Care, 15(5), 516-523. https://doi.org/https://dx.doi.org/10.1017/S1478951516000973	Cross sectional study	Palliative care patients	226	Hospital; Other: Denmark	Symptom management; Quality of life; Functional status	The Short Demoralization Scale (SDS) is a valid and reliable five-item tool to measure demoralization in palliative care patients. It demonstrated high internal consistency (Cronbach's alpha = 0.920). A one-factor structure was confirmed with strong psychometric properties. A cutoff score of 10 was established for identifying clinically significant demoralization. SDS scores correlated with clinical anxiety, depression, spirituality, and quality of life, indicating its clinical relevance.
Galushko, M., Strupp, J., Walisko-Waniek, J., Hahn, M., Loffert, S., Ernstmann, N., Pfaff, H., Radbruch, L., Nauck, F., Ostgathe, C., & Voltz, R.	Cross sectional study	Palliative care patients	92	Hospital; Other: Germany	Symptom management; Quality of life; Psychological support	The SAHD-D demonstrated acceptable discriminant and criterion validity. Moderate correlations found between SAHD-D scores and depression, anxiety, and clinical state. 20%

(2015). Validation of the German version of the Schedule of Attitudes Toward Hastened Death (SAHD-D) with patients in palliative care [Research Support, Non-U.S. Gov't]. Palliative & Supportive Care, 13(3), 713-723. https://doi.org/https://dx.doi.org/10.1017/S1478951514000492						of patients reported high levels of desire for hastened death. Factor analysis identified two distinct factors, questioning unidimensionality. External estimation by clinicians correlated only modestly with patient-reported scores.
Gamucci, T., Narducci, F., Sperduti, I., Mentuccia, L., Trapasso, T., Magnolfi, E., Grande, R., Cianci, G., Gemma, D., & Trombetta, G. (2009). Evaluation of the Edmonton Symptoms Assesment Scale (ESAS) symptoms improvement (SI) assessment as a prognostic factor for survival in advanced cancer patients (pts) undergoing palliative care (PC): An observational prospective study. Journal of Clinical Oncology, 27, 9591-9591.	Other: descriptive study	Other: Community-dwelling heart failure (HF) patients	252	Home-based care; Other: outpatient clinic care	Symptom management; Quality of life; Other: palliative care needs identification	Palliative care (PC) services for heart failure patients in the community were extremely limited. Most participants had significant symptom burdens (mean Edmonton Symptom Assessment Scale score = 37.9, SD 14.4). The Gold Standards Framework (GSF) and Surprise Question were poor indicators of palliative care needs in HF patients. Sensitivity and specificity were low when identifying HF patients requiring PC. Sensitivity of the Surprise Question was 52.17%, and specificity was 35.65%. Sensitivity of the GSF Prognostic Indicator Guidance was 100%, but specificity was only 9.57%, indicating overclassification. Only 1% of

						patients had end-of-life discussions with healthcare providers, and only 6% had documented conversations with family caregivers. Few patients received psychological support (3% spoke with a psychologist/psychiatrist). Pain management and symptom control were inadequate, with only 30% receiving analgesics, 14% anxiolytics, 25% antidepressants, and 26% sleep medications. Patients receiving home care were older, had lower education levels, and were more likely to receive palliative care services compared to those in clinics.
Gamucci, T., Narducci, F., Sperduti, I., Mentuccia, L., Trapasso, T., Magnolfi, E., et al. (2009). Evaluation of the Edmonton Symptoms Assessment Scale (ESAS) symptoms improvement (SI) assessment as a prognostic factor for survival in advanced cancer patients (pts) undergoing palliative care (PC): An observational prospective	Other: Observational study	Palliative care patients	68	Hospital; Other: Italy	Prognosis; Symptom management; Quality of life	The ESAS was used to measure symptom severity at hospital admission and discharge. Symptom Improvement (SI) based on ESAS scores was significantly associated with survival outcomes. For gastrointestinal patients: PaP Score and anorexia were significant prognostic factors for survival. For NSCLC patients: Asthenia (fatigue) was the only symptom significantly associated with survival. McNemar's test showed significant reduction in severe

study. <i>Journal of Clinical Oncology</i> , 27, 9591.						symptom class (≥ 7) between admission and discharge.
Garrido, M. M., Penrod, J. D., & Prigerson, H. G. (2014). Unmet need for mental health care among veterans receiving palliative care: assessment is not enough. <i>American Journal of Geriatric Psychiatry</i>, 22(6), 540-544. https://doi.org/10.1016/j.jagp.2013.08.008	Cross sectional study	Palliative care patients	287	Hospital; Other: Italy	Prognosis; Symptom management; Quality of life; Other	44% of palliative care patients reported psychological distress (e.g., sadness, worry, nervousness). 38% of those with distress accessed mental health care services. There was no significant association between psychological distress reported during a palliative care consult and receiving subsequent mental health care. 62% of patients with distress did not receive in-hospital mental health care after their palliative care consult. Psychological distress was not effectively addressed through palliative care interventions.
Garyali, A., Palmer, J. L., Yennurajalingam, S., Zhang, T., Pace, E. A., & Bruera, E. (2006). Errors in symptom intensity self-assessment by patients receiving outpatient palliative care. <i>Journal of Palliative Medicine</i>, 9(5), 1059-1065. https://doi.org/https://dx.doi.org/10.1089/jpm.2006.9.1059	Other: Retrospective chart review study	Palliative care patients	60	Hospital; Other: US	Symptom management	Agreement between patient self-assessment and physician-reviewed assessment was moderate (weighted $\kappa = 0.49-0.78$ across symptoms). Higher agreement was observed for symptoms like well-being, nausea, anxiety, depression; lower agreement for drowsiness, sleep, and appetite. Errors included patients misunderstanding the ESAS scale direction (e.g., low scores misinterpreted as low appetite rather than good appetite). Screening performance showed

						that ESAS was sensitive for detecting mild symptoms but less sensitive for moderate symptoms without physician clarification.
Gayoso, M. V., Garcia de Avila, M. A., Antunes da Silva, T., & Aguiar Alencar, R. (2018). Comfort level of caregivers of cancer patients receiving palliative care. Revista Latino-Americana de Enfermagem (RLAE), 26, 1-10. https://doi.org/10.1590/1518-8345.2521.3029	Cross sectional study	Caregivers	50	Hospital; Home-based care; Other: Brazil	Symptom management; Functional status; Caregiver support	The Holistic Comfort Questionnaire (HCQ-Caregiver) was used to assess overall comfort in caregivers, including physical, psycho-spiritual, socio-cultural, and environmental comfort. PPS was used to assess functional status of patients and its impact on caregiver comfort. ESAS was used to evaluate patient symptoms and their association with caregiver comfort. Caregivers had moderate comfort levels (mean overall score 4.52 out of 6). Higher PPS scores (better patient function) were positively correlated with caregiver comfort in all dimensions. Receiving help in caregiving significantly increased psycho-spiritual, socio-cultural, and environmental comfort. Tiredness in patients was associated with lower psycho-spiritual comfort in caregivers.
Gerhardt, S., Benthien, K. S., Herling, S., Leerhoy, B., Jarlbaek, L.,	Cohort study	Palliative care patients	170	Hospital; Home-based	Prognosis; Symptom	European Organization of Research and Treatment of Cancer Questionnaire-Core-15-

& Krarup, P. M. (2024). Associations between health-related quality of life and subsequent need for specialized palliative care and hospital utilization in patients with gastrointestinal cancer-a prospective single-center cohort study [Research Support, Non-U.S. Gov't]. Supportive Care in Cancer, 32(5), 311. https://doi.org/https://dx.doi.org/10.1007/s00520-024-08509-z				care; Other: Denmark	management; Quality of life	Palliative Care (EORTC QLQ-C15-PAL) was used to assess health-related quality of life (HRQoL), symptom burden, and functional status. Pain was significantly associated with the need for specialized palliative care (SPC) (OR 1.015, 95% CI 1.001-1.029, p=0.039). Patients with severe pain (score ≥ 66) were significantly more likely to be referred to SPC (OR 2.885, 95% CI 1.035-8.056). Higher constipation scores were associated with increased hospital admissions (IRR 1.009, 95% CI 1.004-1.015, p=0.001). Lower overall quality of life scores were linked to increased hospital length of stay (IRR 0.986, 95% CI 0.978-0.995, p=0.002). Patients with bile duct cancer had the highest risk of hospitalization and should be referred to SPC early. Baseline pain and constipation should trigger earlier SPC referrals.
Get-Kong, S., Hanucharunkul, S., McCorkle, R., Viwatwongkasem, C., Junda, T., & Ittichaikulthol, W. (2010). Symptom experience, palliative care and	Cross sectional study	Palliative care patients	240	Hospital; Other: Thailand	Symptom management; Quality of life; Psychological support ; Spiritual support	Pain was the most distressful symptom; difficulty swallowing was the most frequent; Pharmacological palliative care strategies (especially morphine) and non-pharmacological strategies (self-care advice, psychosocial support, spiritual

spiritual well-being among Thais with advanced cancer. <i>Pacific Rim International Journal of Nursing Research</i> , 14(3), 219-234.						activities) were widely used. Higher palliative care engagement was positively correlated with spiritual well-being. Higher symptom burden (frequency, severity, distress) was negatively associated with spiritual well-being. Palliative care and symptom severity together explained 48.9% of variance in spiritual well-being.
Ghoshal, A., Damani, A., Deodhar, J., Quadros, L., Ganpathy, K. V., & Muckaden, M. A. (2023). A novel nurse-coordinated home care model for palliative care in advanced cancer: A pilot interventional study from suburban Mumbai. <i>Progress in Palliative Care</i>, 31(1), 11-17. https://doi.org/10.1080/09699260.2022.2081440	Other: interventional pilot study	Palliative care patients; Caregivers	101	Home-based care; Other: India	Symptom management; Quality of life; Functional status; Caregiver support	ESAS - monitored symptoms monthly. Palliative Performance Scale (PPSv2) - assessed functional status. European Organization for Research and Treatment of Cancer QoL Questionnaire-Core-15-Palliative Care (EORTC QLQ-C15-PAL) - measured quality of life. Family Satisfaction with End-of-Life Care (FAMCARE-2) - assessed caregiver satisfaction. Zarit Burden Interview (ZBI) - measured caregiver burden. Symptom improvement: Severe symptoms on ESAS were reduced by >2 points in 57.1% of cases. Pain scores decreased to a mean of 2. Caregiver burden and satisfaction: 95% of caregivers reported little or no burden on ZBI. 69.95% were satisfied on FAMCARE-2. Hospital vs

						Home Care: Home deaths (57) were significantly higher than hospital deaths (14). Physician visits (162) were much lower than nurse-coordinated visits (341). Cost-effectiveness: Median intervention cost per patient in the nurse-led model was ₹2049.50, compared to ₹11490.09 in usual care. Less reliance on inpatient care led to significant savings.
Ghoshal, A., Salins, N., Deodhar, J., Damani, A., & Muckaden, M. A. (2016). Fatigue and Quality of Life Outcomes of Palliative Care Consultation: A Prospective, Observational Study in a Tertiary Cancer Center. Indian Journal of Palliative Care, 22(4), 416-426. https://doi.org/10.4103/0973-1075.191766	Other: Observational study	Palliative care patients	500 (Baseline), 402 (Follow-up)	Hospital; Other: India	Symptom management; Quality of life; Functional status; Psychological support	Fatigue significantly impacts QoL: 80.8% of patients reported moderate to severe fatigue at baseline, decreasing to 53.2% at follow-up. Fatigue severity at baseline correlated with lower QoL: Associated factors included emotional functioning ($P < 0.001$) and constipation ($P = 0.038$). Improvement observed in follow-up ($P < 0.001$): Patients showed better physical functioning and reduced insomnia, which were significant predictors of fatigue improvement. Biochemical factors related to fatigue: Hemoglobin and albumin levels were significantly associated with fatigue severity and improvement. Palliative care interventions helped reduce fatigue: A multimodal approach

						including medication, nutritional support, and psychological interventions led to fatigue reduction.
Ghoshal, A., Salins, N., Deodhar, J., Damani, A., & Muckaden, M. (2017). Impact of symptom control on fatigue improvement in patients with advanced cancer: A prospective observational study. Progress in Palliative Care, 25(2), 63-74. https://doi.org/10.1080/09699260.2016.1200818	Other: prospective observational study	Other: advanced cancer patients	500	Other: outpatient palliative care unit India	Symptom management; Quality of life; Functional status	Assessment tools used: ESAS - assessed symptom burden, including fatigue, pain, nausea, anxiety, and well-being. Eastern Cooperative Oncology Group (ECOG) Performance Status - measured functional status. Biochemical assessments - hemoglobin and albumin levels. Fatigue and Symptom Improvement: Significant reduction in fatigue scores ($p < 0.001$) from baseline to follow-up. Moderate-to-severe fatigue decreased from 80.8% at baseline to 53.2% at follow-up. Factors Associated with Fatigue at Baseline: Clinical variables: Cancer type, metastatic sites, ECOG score, body weight. Biochemical markers: Lower hemoglobin ($p = 0.015$) and albumin ($p < 0.001$) correlated with higher fatigue. Symptoms: Higher fatigue correlated with pain, nausea, anxiety, loss of appetite, and dyspnea. Predictors of Fatigue Improvement: Improvement in albumin levels ($OR = 2.091$, $p = 0.011$). Decrease in dyspnea

						severity (OR = 1.434, p = 0.002). Reduction in pain scores (p = 0.011). Increase in hemoglobin levels (p = 0.024). Patient Outcomes: Mortality during study: 82 patients (16.4%) died before follow-up. Fatigue correlated with a higher symptom burden and worse biochemical markers in non-survivors.
Ghoshal, S., Miriyala, R., Elangovan, A., & Rai, B. (2016). Why Newly Diagnosed Cancer Patients Require Supportive Care? An Audit from a Regional Cancer Center in India. Indian Journal of Palliative Care, 22(3), 326-330. https://doi.org/10.4103/0973-1075.185049	Cross sectional study	Palliative care patients	89	Hospital; Other: India	Symptom management; Quality of life; Psychological support	Anxiety (97.8%) and depression (89.9%) were the most common symptoms, followed by tiredness (89.9%) and pain (86.5%). While pain was often documented by treating oncologists (83.1%), other symptoms like anxiety (3.4%) and depression (0%) were grossly underreported. A significant under-detection of psychological and non-pain symptoms was observed. There was a strong correlation between pain, anxiety, depression, tiredness, and appetite loss. Higher symptom severity increased the chance of documentation by oncologists, but this was mainly true for pain, nausea, and appetite loss.
Giardini, A., Ferrari, P., Negri, E. M., Majani, G., Magnani, C., & Preti, P.	Cross sectional study	Palliative care	50	Hospital; Other: Italy	Symptom management; Quality of life;	The International Classification of Functioning, Disability and Health (ICF) framework helped

(2016). The positive role of caregivers in terminal cancer patients' abilities: Usefulness of the ICF framework. European Journal of Physical and Rehabilitation Medicine, 52(2), 214-222.		patients; Caregivers			Functional status; Social support; Caregiver support ; Psychological support	assess the modulating role of caregivers in reducing disability among terminal cancer patients. Caregivers positively influenced patient participation in daily activities (e.g., dressing, eating, preparing meals). The SF-12 survey revealed that patients had significantly lower physical and mental health scores compared to the general population. Environmental factors, including support from family, friends, and health professionals, were perceived mainly as facilitators rather than barriers. No negative impacts from caregivers were reported.
Gill, A., Daines, P., & Selby, D. (2010). What do symptom scores mean: Observations on discrepancies when defining symptoms using words and numbers. European Journal of Oncology Nursing, 14(5), 435-438. https://doi.org/10.1016/j.ejon.2010.04.002	Prevalence study	Palliative care patients	N/A	Hospital; Other: India	Symptom management; Quality of life	Strong correlation between numbers and words: Patients' numerical symptom scores on the ESAS correlated well with verbal descriptors (none, mild, moderate, severe) ($P < 0.0001$). Discrepancies in interpretation: There was significant variation in how patients assigned numbers to words. For example, 'mild' pain ranged from 0 to 8, while 'moderate' pain ranged from 1 to 10. Patient-reported discrepancies: Some patients ranked their symptoms as 'severe' while assigning a relatively low numerical value

						(e.g., 'severe' pain rated as 5/10). Patient preference split: When asked, 57% of patients preferred words over numbers for symptom reporting, and 55% believed words more accurately portrayed their symptoms. Implication for clinical practice: Healthcare providers (HCPs) should not assume numerical scores fully reflect patient experiences and should explore responses further.
Giovannetti, A., Pietrolongo, E., Giordano, A., Cimino, V., Campanella, A., Morone, G., Fusco, A., Lugaresi, A., Confalonieri, P., Patti, F., Grasso, M., Ponzio, M., Veronese, S., Solari, A., Giovannetti, A. M., & Grasso, M. G. (2016). Individualized quality of life of severely affected multiple sclerosis patients: practicability and value in comparison with standard inventories. <i>Quality of Life Research</i>, 25(11), 2755-2763. https://doi.org/10.1007/s11136-016-1303-9	Prevalence study	Healthcare professionals	N/A	Hospital; Home-based care; Other: Italy	Quality of life; Social support; Psychological support	Feasibility of SEIQoL-DW: The Schedule for the Evaluation of Individual Quality of Life-Direct Weighting (SEIQoL-DW) was successfully administered to 48 patients with severe multiple sclerosis (MS) in home-based and hospital settings. Patient-nominated QoL domains: The most commonly identified QoL domains were family (94%), relationships (65%), and leisure activities (65%). SEIQoL-DW vs. standard PROMs: The study compared SEIQoL-DW with standard PROMs, including: Core-Palliative care Outcome Scale (Core-POS) Palliative care Outcome Scale-Symptoms-MS (POS-S-MS) European Quality of Life Five Dimensions-3L

						(EQ-5D-3L) HADS Minimal correlation between SEIQoL-DW and PROMs: Despite content overlap (Core-POS and POS-S-MS contained 70% of SEIQoL-DW-nominated areas), correlations between SEIQoL-DW and standard PROMs were negligible. Challenges in administration: 85% of patients required assistance with disk manipulation in the SEIQoL-DW process, and 17% struggled with understanding the task.
Giusti, R., Mazzotta, M., Verna, L., Sperduti, I., Pietro, F. R. D., Marchetti, P., & Porzio, G. (2019). The Incidence of Alcoholism in Patients with Advanced Cancer Receiving Active Treatment in Two Tertiary Care Centers in Italy. Alcohol & Alcoholism, 54(1), 47-50. https://doi.org/10.1093/alcalc/agy070	Cross sectional study	Healthcare professionals	117	Hospital; Other: Italy	Symptom management; Quality of life	Alcoholism prevalence among cancer patients: The study found that 10.3% of the 117 patients undergoing active cancer treatment tested positive for alcohol dependence using the CAGE questionnaire. Higher prevalence than previous palliative care studies: This 10.3% prevalence was more than double the rate found in previous studies of Italian palliative care patients (4%) but lower than U.S. studies (17-28%). Gender differences: Males were more likely to be CAGE positive (P = 0.05). Lower ESAS scores associated with alcoholism: Patients with lower ESAS scores were more likely to be CAGE positive (P =

						0.03). No association with smoking, BMI, or cancer type: While smoking status (57.3%) was high, it was not significantly correlated with alcoholism (P = 0.25).
Gofton, C., Di Bartolomeo, A., Boutros, R., Zurynski, Y. A., Stafford-Bell, F., Caldwell, K., McCaughan, G., Zekry, A., Strasser, S. I., Levy, M., & et al. (2024). Implementing palliative care in hepatocellular carcinoma ambulatory clinics-study protocol for Accelerated translational research in PRImary liver CAncer (APRICA) randomised controlled palliative care trial [Journal article]. Trials [Electronic Resource], 25(1), 743. https://doi.org/10.1186/s13063-024-08603-x	Randomised controlled trial	Palliative care patients	386-520 patients	Hospital; Other: Australia	Symptom management; Quality of life; Caregiver support	This is a study protocol; outcome findings are not yet available. The intervention involves using the liver-specific ESAS to screen symptoms, with patients scoring ≥ 5 on any symptom referred to palliative care for early intervention. Aim: Improve symptom control by $\geq 50\%$ within 3 months for symptoms scored ≥ 5 . Secondary outcomes include improved quality of life, reduced hospitalisations, and improved caregiver support.
Goh, W. Y., & Hum, A. Y. M. (2024). Symptom severity reported by older adults with cancer and its impact on survival prognostication. Journal of Geriatric Oncology,	Other: observational	Palliative care patients	840	Hospital; Other: Singapore	Prognosis; Symptom management; Quality of life	Older adults reported fewer and less severe symptoms than younger adults: Mean pain, tiredness, anxiety, wellbeing, and total ESAS-r scores were significantly lower in older adults ($p < 0.001$). More older

15(8), 102073. https://doi.org/https://dx.doi.org/10.1016/j.jgo.2024.102073						adults reported no symptoms compared to younger counterparts. ESAS-r summative score was only a significant prognostic factor in younger patients: In patients aged < 65 and 65-74, ESAS-r remained significant in predicting survival. For patients aged 75+, ESAS-r was not predictive of survival. Palliative Performance Scale (PPSv2) was the most reliable predictor of survival across all age groups: PPSv2 remained statistically significant in all age groups, even when symptom burden scores (ESAS-r) were less predictive. Higher dementia prevalence in older adults may impact symptom reporting: 13.6% of patients aged 85+ had dementia, affecting their ability to report symptoms. Self-reporting limitations of ESAS-r suggest the need for alternative assessment tools in this age group.
Golčić, M., Dobrila-Dintinjana, R., Golčić, G., Pavlović-Ružić, I., & Gović-Golčić, L. (2018). Do Physicians Underestimate Pain in Terminal Cancer	Other: observational study	Palliative care patients	135	Hospice; Other: Croatia	Prognosis; Symptom management; Quality of life	Physicians underestimated pain in nearly half (46%) of terminal cancer patients: Physicians' average pain rating (3.47 on NRS) was significantly lower than patients' self-reported pain (3.94, p=0.003). For patients

Patients? A Prospective Study in a Hospice Setting. Clinical Journal of Pain, 34(12), 1159-1163. https://doi.org/10.1097/AJP.0000000000000641						with severe pain (NRS ≥ 7), the discrepancy was most pronounced (5.56 vs. 8.17, $p < 0.0001$). Underestimation was clinically significant in 23% of cases: Clinically significant underestimation was observed in nearly half (50%) of the cases where underestimation occurred. Pain was overestimated in only 28% of cases. Underestimation of pain was more common in female patients: Physicians significantly underestimated pain in female patients ($p = 0.007$) but not in male patients. Pain levels were not significantly correlated with survival: Pain ratings had a weak correlation with survival ($r = -0.22$). Higher opioid doses were associated with higher pain levels but not with reduced survival.
Gonçalves, F., Gaudêncio, M., Paiva, I., Rego, F., & Nunes, R. (2024). Evaluation of Emotional Distress in Oncology Palliative Patients: Edmonton Symptom Assessment System (ESAS) and Palliative Outcome Scale (POS)—A Portuguese	Cross sectional study	Palliative care patients	60	Hospital; Other: Portugal	Symptom management; Quality of life; Psychological support	Anxiety and depressive symptoms were highly prevalent in palliative oncology patients: 83.3% of patients reported moderate-to-severe depression (ESAS). 61% of patients reported moderate-to-severe anxiety (ESAS). 66.7% of patients experienced significant anxiety related to their disease and treatment (POS).

Cross-Sectional Study. Cancers, 16(24), 4232. https://doi.org/10.3390/cancers16244232						Correlation between emotional distress and self-perception: Patients who shared their feelings less frequently with family and friends were less likely to find meaning in life ($p < 0.01$) and had poorer self-perception ($p < 0.05$). A diminished understanding of the importance of life correlated with worsened self-perception ($p < 0.01$). Greater anxiety related to disease/treatment was strongly correlated with increased depressive symptoms ($p < 0.01$). POS and ESAS complement each other for assessing emotional distress: Self-reported anxiety (ESAS) was significantly associated with anxiety about disease and treatment (POS) ($p < 0.01$). Emotional items in the POS scale demonstrated strong internal correlation, supporting their combined use for comprehensive assessment.
Good, P. D., Greer, R. M., Huggett, G. E., & Hardy, J. R. (2020). An Open-Label Pilot Study Testing the Feasibility of Assessing Total Symptom Burden in Trials of Cannabinoid Medications	Cross sectional study	Palliative care patients; Other: Australia	21	Hospital; Other: Palliative and supportive care service	Symptom management	86% (18/21) of participants completed the primary outcome measure (Total Symptom Distress Score, TSDS) at day 14, suggesting feasibility. The median maximum tolerated doses were: CBD: 300 mg/day (range 100-600 mg). THC: 10

in Palliative Care [Research Support, Non-U.S. Gov't]. Journal of Palliative Medicine, 23(5), 650-655. https://doi.org/https://dx.doi.org/10.1089/jpm.2019.0540						mg/day (range 5-30 mg). 9 out of 21 patients (43%) met the definition of response (≥ 6-point reduction in TSDS). There was no significant overall change in symptom burden (TSDS) from baseline to day 14. However, emotional subscale scores (anxiety and depression) improved significantly ($p = 0.01$). Drowsiness was the most commonly reported adverse event. Three participants requested ongoing medicinal cannabis post-study.
Goodell, T. (2006). Measuring subjective side effects and symptoms in palliative photodynamic therapy. Oncology Nursing Forum, 33(3), 647-650. https://doi.org/10.1188/06.ONF.647-650	Cross sectional study	Palliative care patients	14	Hospital; Other: US	Symptom management; Functional status	The Photodynamic Therapy Side Effects and Symptoms Scale (PSES) demonstrated acceptable reliability (Cronbach's $\alpha = 0.87$) and concurrent validity. Functional status (KPS) declined in the first week after PDT, coinciding with an increase in symptom burden. Photosensitivity precautions became more burdensome over time but were not reported as extremely troublesome. Dysphagia (swallowing difficulties) improved after one week in esophageal cancer patients, but overall symptom burden increased during the first week. The study validated that a single-page, large-type scale

						(PSES) could feasibly measure a diverse set of side effects and symptoms in late-stage cancer patients.
Gough, K., & Hudson, P. (2009). Psychometric properties of the Hospital Anxiety and Depression Scale in family caregivers of palliative care patients. Journal of Pain & Symptom Management, 37(5), 797-806. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2008.04.012	Cross sectional study	Caregivers	106	Home-based care; Other: Australia	Psychological support	The HADS exhibited a two-factor structure, supporting its bidimensional design (anxiety and depression). Exploratory factor analysis (EFA) suggested a two-factor solution was most appropriate, rather than a three-factor structure. Internal consistency was strong for both subscales: HADS-A (anxiety): Cronbach's alpha = 0.85 HADS-D (depression): Cronbach's alpha = 0.84 HADS Total: Cronbach's alpha = 0.89 Family caregivers had higher anxiety and depression scores compared to general population, general practice, and cancer patient samples. Mean HADS-A (anxiety) score: 8.45 (SD = 4.20) Mean HADS-D (depression) score: 5.88 (SD = 4.18) Approximately one-third of caregivers (32.1%) had probable clinically relevant anxiety (HADS-A $\geq$ 11). 12.2% had probable clinically relevant depression (HADS-D $\geq$ 11). HADS subscales were significantly correlated ($r = 0.63$, $p < 0.0005$), suggesting a

						strong association between anxiety and depression in caregivers.
Goyal, U. D., Riegert, K., Davuluri, R., Ong, S., Yi, S. K., Dougherty, S. T., & Hsu, C. C. (2020). Prospective Study of Use of Edmonton Symptom Assessment Scale Versus Routine Symptom Management During Weekly Radiation Treatment Visits. JCO Oncology Practice, 16(9), e1029-e1035. https://doi.org/https://dx.doi.org/10.1200/JOP.19.00465	Non-randomised experimental study	Palliative care patients	255	Hospital; Other: US	Symptom management; Quality of life	The use of the ESAS during weekly radiation therapy visits led to stable or improved symptom severity for pain (70.7% vs 85.6%; P = .005) and anxiety (79.3% vs 92.9%; P = .002). The intervention group (physician-reviewed ESAS) had a lower likelihood of worsening pain, nausea, loss of appetite, and anxiety compared to the non-intervention group. Most physicians (87.5%) and nurses (75%) found ESAS useful in symptom management. Incorporation of validated patient-reported symptom-scoring tools can improve symptom tracking and management during radiation therapy.
Graham-Wisener, L., Dempster, M., Sadler, A., McCann, L., & McCorry, N. K. (2021). Validation of the Distress Thermometer in patients with advanced cancer receiving specialist palliative care in a hospice setting. Palliative Medicine, 35(1), 120-129.	Diagnostic test accuracy study	Palliative care patients	139	Hospice	Prognosis; Symptom management; Quality of life	The Distress Thermometer is a valid tool for screening distress, anxiety, and depression in patients with advanced cancer receiving specialist palliative care in hospice settings. A cut-off score of ≥ 6 was optimal for distress and anxiety, while ≥ 4 was optimal for depression. A general cut-off of ≥ 5 was recommended for screening all

https://doi.org/https://dx.doi.org/10.1177/0269216320954339						psychological morbidity with higher sensitivity. The tool had fair-to-good sensitivity but poor specificity, leading to potential false positives.
Granda-Cameron, C., Viola, S. R., Lynch, M. P., & Polomano, R. C. (2008). Measuring patient-oriented outcomes in palliative care: functionality and quality of life. Clinical Journal of Oncology Nursing, 12(1), 65-77. https://doi.org/https://dx.doi.org/10.1188/08.CJON.65-77	Qualitative research	Palliative care patients; Healthcare professionals	N/A	Hospital; Home-based care; Aged care	Quality of life; Functional status	The Schedule for Evaluation of Individual Quality of Life (SEIQoL) is a respondent-generated tool allowing individuals to define their own QoL domains. It measures how patients are doing in these areas and their perceived importance to overall QOL. It requires a trained interviewer for administration
Greer, J. A., Jacobs, J., Pensak, N., MacDonald, J. J., Fuh, C. X., Perez, G. K., Ward, A., Tallen, C., Muzikansky, A., Traeger, L., & et al. (2019). Randomized Trial of a Tailored Cognitive-Behavioral Therapy Mobile Application for Anxiety in Patients with Incurable Cancer. Oncologist, 24(8), 1111-1120. https://doi.org/10.1634/theoncologist.2018-0536	Randomised controlled trial	Palliative care patients	145	Hospital; Other: US	Symptom management; Quality of life; Psychological support	Both the CBT mobile app and health education program improved anxiety, mood, and quality of life. However, the app was more beneficial for patients with severe anxiety.

Gressel Raz, O., Samuels, N., Levy, M., Leviov, M., Lavie, O., & Ben-Arye, E. (2020). Association Between Physical Activity and Use of Complementary Medicine by Female Oncology Patients in an Integrative Palliative Care Setting. Journal of Alternative & Complementary Medicine, 26(8), 721-728. https://doi.org/10.1089/acm.2019.0437	Other:	Palliative care patients	162	Hospital; Other: Israel	Symptom management; Quality of life	Physical activity was associated with lower ESAS scores for pain, fatigue, nausea, depression, anxiety, drowsiness, dyspnea, and general well-being. No significant difference between groups regarding appetite or sleep ESAS scores. Physically active patients reported higher rates of complementary medicine (CAM) use (especially herbal supplements and acupuncture). Lower ESAS well-being scores correlated with being physically active, suggesting improved quality of life.
Grief, C. J., Grossman, D., Grossman, Y., Gardner, S., & Berall, A. (2023). A Novel Approach to Measurement-Based Care: Integrating Palliative Care Tools Into Geriatric Mental Health. American Journal of Hospice & Palliative Medicine, 40(9), 1013-1020. https://doi.org/10.1177/10499091221150224	Other: longitudinal observational study	Palliative care patients	33	Hospital; Other: North America	Symptom management; Psychological support	The Geriatric Depression Scale (GDS) scores declined over time, but the decline was slower in patients with higher pain levels on the ESAS ($P = .04$). The Geriatric Anxiety Inventory (GAI) scores also declined over time, but the decline was slower in patients reporting physically distressing symptoms on the Patient Dignity Inventory (PDI) ($P = .04$). There was no significant difference in symptom burden between inpatients and outpatients based on ESAS scores, despite inpatients having significantly more medical comorbidities ($P =$

						.02). Integrating palliative care tools in geriatric mental health may improve symptom tracking and treatment outcomes.
Grossman, D., Grossman, Y., Nadler, E., Rootenberg, M., Karuza, J., & Berall, A. (2022). Integrating Palliative Care Assessment Tools to Enhance Understanding of Illness Trajectory in Post-Acute Care and Long-Term Care. American Journal of Hospice & Palliative Medicine, 39(3), 340-344. https://doi.org/https://dx.doi.org/10.1177/10499091211018193	Other: Feasibility study with retrospective chart review	Palliative care patients	40	Hospital; Other: Canada	Prognosis; Symptom management; Functional status	Integration of GSF-PIG and PPS enhanced team communication about patient/resident illness burden and palliative care needs. Patients/residents whom teams would not be surprised to die within 1 year were significantly older, had lower PPS scores, and more indicators of decline. PPS and GSF-PIG helped stratify patients according to illness severity and prompted discussions about goals of care. Staff reported the tools helped initiate earlier palliative approaches and facilitated better interprofessional communication.
Grossman, D., Rootenberg, M., Perri, G.-A., Yogaparan, T., DeLeon, M., Calabrese, S., Grief, C. J., Moore, J., Gill, A., Stilos, K., Daines, P., Zimmermann, C., & Mazzotta, P. (2014). Enhancing Communication in End-of-Life Care: A Clinical Tool Translating Between the Clinical Frailty Scale	Cross sectional study	Other: adults with terminal illness	120	Hospital; Other: Canada	Prognosis; Functional status	A conversion chart was developed to translate scores between the Clinical Frailty Scale (CFS) and PPS, facilitating communication between geriatric and palliative care teams. Interrater reliability was high: CFS: Weighted kappa = 0.92 (almost perfect agreement) PPS: Weighted kappa = 0.80 (substantial agreement) Moderate correlation found between the two scales

and the Palliative Performance Scale. Journal of the American Geriatrics Society, 62(8), 1562-1567. https://doi.org/10.1111/jgs.12926						(Spearman correlation coefficient = -0.67, $p < 0.001$), indicating an inverse relationship. The optimal score conversion was determined as follows: CFS 3-4 → PPS 70-90 CFS 5 → PPS 60 CFS 6 → PPS 40-50 CFS 7 → PPS 10-30 The conversion chart enables palliative care teams to interpret frailty scores and geriatrics teams to understand palliative performance scores, leading to better collaboration.
Grotmol, K. S., Hjermland, M. J., Loge, J. H., Lie, H. C., Moum, T. Å., Kaasa, S., Aass, N., Currow, D., & Pigni, A. (2017). Depression-A Major Contributor to Poor Quality of Life in Patients With Advanced Cancer. Journal of Pain & Symptom Management, 54(6), 889-897. https://doi.org/10.1016/j.jpainsymman.2017.04.010	Cross sectional study	Other: patients with advanced cancer	563	Hospital; Hospice; Other: Multi-country European study	Prognosis; Symptom management; Quality of life; Functional status; Psychological support	Depression severity was the strongest single predictor of poor QoL in patients with advanced cancer after adjusting for systemic inflammation, symptom burden, and physical performance status. The Patient Health Questionnaire-9 (PHQ-9) non-somatic items (depressed mood, anhedonia, guilt, trouble concentrating, and suicidal ideation) accounted for 5.8% of the variance in QoL scores ($P < .001$).
Grotmol, K. S., Lie, H. C., Loge, J. H., Aass, N., Haugen, D. F., Stone, P. C., Kaasa, S., & Hjermland, M. J. (2019). Patients with advanced	Cross sectional study	Palliative care patients	935	Hospital; Home-based care; Hospice; Other: Multinational	Symptom management; Psychological support	Patients with advanced cancer and depression report significantly higher symptom burden compared to non-depressed patients. Depression was independently associated

cancer and depression report a significantly higher symptom burden than non-depressed patients. Palliative & Supportive Care, 17(2), 143-149. https://doi.org/10.1017/S1478951517001183				(European Palliative Care Research Collaborative)		with increased somatic symptom burden even after controlling for disease, treatment, and prognosis.
Grudzen, C. R., Richardson, L. D., Morrison, M., Cho, E., & Morrison, R. S. (2010). Palliative Care Needs of Seriously Ill, Older Adults Presenting to the Emergency Department Grudzen et al. PALLIATIVE CARE NEEDS OF OLDER ADULTS IN THE ED. Academic Emergency Medicine, 17(11), 1253-1257. https://doi.org/10.1111/j.1553-2712.2010.00907.x	Cross sectional study	Palliative care patients	50 patients, 14 caregiver	Hospital; Other: US	Symptom management; Quality of life	Seriously ill, older adults presenting to the ED had substantial palliative care needs across multiple domains. The most common needs identified (above intratest severity cutoffs) were: Physical symptoms (47/50, 94%) Financial difficulties (36/50, 72%) Mental health distress (31/50, 62%) Access to care issues (29/50, 58%) The most common physical symptoms reported were fatigue, pain, dyspnea, and depression as measured by the ESAS. Caregiver burden was also high, with 50% of caregivers exceeding the severe stress threshold on the Caregiver Strain Index.
Güell, E., Ramos, A., Zertuche, T., & Pascual, A. (2015). Verbalized desire for death or euthanasia in advanced cancer patients receiving	Cross sectional study	Palliative care patients	701	Hospital	Symptom management; Quality of life; Functional status	9.8% of the patients made a DDS: 7.3% made a DDC, and 2.5% made an EUC. DDC group showed higher percentages of moderate-severe symptoms for well-being, depression, and

palliative care. Palliative & Supportive Care, 13(2), 295-303. https://doi.org/10.1017/S1478951514000121						anxiety than the EUC group. EUC patients considered themselves less spiritual compared to DDC patients. The most frequent reason for a DDS was pain or physical suffering, although nonphysical reasons predominated. 62% of patients were in favor of the legalization of euthanasia.
Guenther, M., Görlich, D., Bernhardt, F., Pogatzki-Zahn, E., Dasch, B., Krueger, J., & Lenz, P. (2022). Virtual reality reduces pain in palliative care-A feasibility trial. BMC Palliative Care, 21(1), 1-9. https://doi.org/10.1186/s12904-022-01058-4	Non-randomised experimental study	Palliative care patients	45	Hospital; Home-based care; Hospice; Other: Germany	Symptom management; Quality of life	A single VR intervention resulted in significant pain reduction for palliative care patients, both during and up to an hour after the intervention. High levels of patient satisfaction were recorded, with over 80% rating the VR experience positively and expressing interest in future sessions. Side effects were minimal, with only mild nausea, headaches, and dry eyes reported.
Guerrero-Torrelles, M., Monforte-Royo, C., Tomás-Sábado, J., Marimon, F., Porta-Sales, J., & Balaguer, A. (2017). Meaning in life as a mediator between physical impairment and the wish to hasten death in patients with advanced cancer. Journal of Pain	Cross sectional study	Palliative care patients	101	Hospital; Other: Spain	Functional status; Psychological support	A significant correlation was found between the wish to hasten death (WTHD) and meaning in life (MiL), performance status, and depression. The mediation analysis showed that MiL plays the most significant role in the mediation effect, accounting for 76.5% of the effect. The study proposes that interventions to

and Symptom Management, 54(6), 826-834. https://doi.org/10.1016/j.jpainsymman.2017.04.018						enhance MiL could help address or prevent the emergence of a WTHD in advanced cancer patients.
Guirimand F., Martel-Samb P., Guy-Coichard C., Picard S., Devalois B., Copel L., Abel A., Ghadi V., QUALI-PALLI group, Aegerter P. (2019). Development and validation of a French questionnaire concerning patients' perspectives of the quality of palliative care: the QUALI-PALLI-Patient. BMC Palliative Care, 18(19). https://doi.org/10.1186/s12904-019-0403-z	Cross sectional study	Palliative care patients	214	Hospital; Other: France	Prognosis; Symptom management; Quality of life; Functional status; Social support; Psychological support ; Spiritual support	The QUALI-PALLI-Patient tool was developed and validated to assess the quality of palliative care from the patients' perspective. It includes 35 items across eight domains: availability of caregivers, serenity, quality of information, pain management, willingness to listen, psychosocial and spiritual aspects, right of refusal, and respect for the patients. The questionnaire showed strong internal consistency and construct validity, with global satisfaction inversely correlated with the severity of symptoms.
Guirimand, F., Bouleuc, C., Sahut d'Izarn, M., Martel-Samb, P., Guy-Coichard, C., Picard, S., Devalois, B., Ghadi, V., & Aegerter, P. (2021). Development and Validation of the QUALI-PALLI-FAM Questionnaire for Assessing Relatives' Perception of Quality of Inpatient Palliative Care:	Cross sectional study	Palliative care patients; Caregivers	170	Hospital; Other: France	Other: Family perceptions of palliative care quality Satisfaction with organisation, communication, and involvement in care Complements patient-focused quality tools	The QUALI-PALLI-FAM questionnaire is a valid, reliable, and well-accepted tool for assessing relatives' perception of quality of inpatient palliative care. The final version consists of 14 items across three domains: Organization of care and availability of caregivers Medical information provision Confidence and involvement of relatives The tool has good internal consistency (Cronbach's

A Prospective Cross-Sectional Survey. Journal of Pain and Symptom Management, 61(5), 991-1001. https://doi.org/10.1016/j.jpainsymman.2020.09.025					(e.g., QUALI-PALLI-PAT)	alpha: 0.74-0.86) and has shown stability across various strata, including age, gender, care settings, and patient performance status. It is correlated with the FAMCARE questionnaire (r = 0.71), confirming its validity.
Guner, C. K., Akin, S., & Durna, Z. (2014). Comparison of the symptoms reported by post-operative patients with cancer and nurses' perception of patient symptoms. European Journal of Cancer Care, 23(4), 523-530. https://doi.org/10.1111/ecc.12144	Cross sectional study	Palliative care patients; Healthcare professionals	60	Hospital; Other: Turkiye	Symptom management; Psychological support	The study compared the symptoms reported by post-operative patients with cancer after palliative surgery with the nurses' perception of those symptoms, using the ESAS. No significant difference was found between the symptoms reported by patients and the nurses' perceptions, except in the pain category. Patients reported significantly more pain than nurses perceived.
Gupta, M., Sahi, M. S., Bhargava, A. K., & Talwar, V. (2016). A Prospective Evaluation of Symptom Prevalence and Overall Symptom Burden Among Cohort of Critically Ill Cancer Patients. Indian Journal of Palliative Care, 22(2), 118-124. https://doi.org/10.4103/0973-1075.179601	Cohort study	Palliative care patients	110	Hospital; Other: India	Prognosis; Symptom management; Quality of life; Functional status; Psychological support	72.72% of patients experienced moderate to severe symptomatic distress (ESAS $\geq$ 40), with a mean distress score of 48.04. Loss of appetite (92.73%) and tiredness (84.55%) were the most common symptoms, while pain (40%) and shortness of breath (34.55%) were the most distressing symptoms. 64.55% of patients reported symptoms that interfered with their sleep. The study confirmed the high prevalence of symptom burden

						among critically ill cancer patients in ICU, highlighting the need for integrated palliative and intensive care.
Gupta, S., Li, Q., Kassam, A., Rapoport, A., Widger, K., Chalifour, K., Baxter, N. N., Nathan, P. C., Coburn, N. G., & Sutradhar, R. (2023). Specialty Palliative Care and Symptom Severity and Control in Adolescents and Young Adults With Cancer. JAMA Network Open, 6(10), e2338699-e2338699. https://doi.org/10.1001/jamanetworkopen.2023.38699	Cohort study	Palliative care patients	5435	Hospital; Home-based care; Other: Canada	Prognosis; Symptom management; Quality of life; Functional status	AYAs reporting moderate or severe symptoms (as assessed by the Edmonton Symptom Assessment System [ESAS]) were more likely to receive specialty palliative care (SPC) services. For decedents, SPC involvement was associated with a decrease in pain severity, but no significant change was observed in other symptoms such as tiredness, depression, or nausea. Pain was the most notable symptom with improvement after SPC involvement (mean pain scores decreased from 3.41 to 3.07 for case patients vs. increased from 1.86 to 2.16 for control patients; $P = .003$).
Gupta, V., Allen-Ayodabo, C., Davis, L., Zhao, H., Hallet, J., Mahar, A. L., Ringash, J., Kidane, B., Darling, G., & Coburn, N. G. (2020). Patient-Reported Symptoms for Esophageal Cancer Patients Undergoing Curative Intent	Cohort study	Palliative care patients	1751	Hospital; Other: Canada	Symptom management; Quality of life; Psychological support	The most frequently reported severe symptoms were lack of appetite (52%), tiredness (45%), and poor well-being (41%). The highest symptom burden was in the first 5 months after diagnosis, with a moderate improvement in symptom burden observed during the second half of the first year. Common characteristics

Treatment [Comparative Study Research Support, Non-U.S. Gov't]. Annals of Thoracic Surgery, 109(2), 367-374. https://doi.org/https://dx.doi.org/10.1016/j.athoracsur.2019.08.030						associated with severe symptoms included female sex, high comorbidity, lower socioeconomic status, urban residence, and symptom assessment close to diagnosis. Treatment modality did not significantly affect the frequency of severe symptoms, although chemoradiotherapy was associated with an increased likelihood of reporting severe pain and poor well-being.
Gutierrez-Sanchez, D., Leiva-Santos, J. P., Sanchez-Hernandez, R., Hernandez-Marrero, D., & Cuesta-Vargas, A. I. (2016). Spanish modified version of the palliative care outcome scale-symptoms renal: cross-cultural adaptation and validation. BMC Nephrology, 17(1), 180. https://doi.org/https://dx.doi.org/10.1186/s12882-016-0402-8	Qualitative research	Palliative care patients	200	Hospital; Other: Spain	Symptom management; Quality of life; Functional status; Psychological support	The Spanish-modified version of the Palliative care Outcome Scale-Symptoms Renal (POS-S Renal) is a reliable and valid tool for assessing symptoms in Spanish-speaking patients with advanced chronic kidney disease (stage 4-5). The tool was successfully cross-culturally adapted and showed good psychometric properties, including satisfactory test-retest reliability ($r = 0.887$), good internal consistency for the first factor ($\alpha = 0.78$), and moderate consistency for the second factor ($\alpha = 0.56$). The two-factor structure of the tool was confirmed by both exploratory and confirmatory factor analysis. The tool demonstrated good concurrent criterion-

						related validity with the MSAS-Short Form (MSAS-SF), indicating high correlation ($r = 0.860$) with a previously validated instrument.
Hagiwara, Y. (2024). Prognostication Tools in Older Hospitalized Adults for Identification of Patients with Potential Palliative Care Needs: A Review of Three Instruments. <i>Illness, Crisis & Loss</i>, 32(3), 417-431. https://doi.org/10.1177/10541373241231443	Systematic review	Palliative care patients	N/A	Hospital; Other: Primarily USA	Prognosis; Symptom management; Functional status	PPS: Assesses functional status, strongly correlates with survival across time frames (e.g., 6-month mortality risk stratified by score). CARING: Efficient identification of high 1-year mortality risk using clinical info on admission. P-CaRES: Simple ED screening tool using the "surprise question" and unmet needs; correlates well with PPS and predicts 6-month mortality.
Hall, E. T., Singhal, S., Dickerson, J., Gabster, B., Wong, H. N., Aslakson, R. A., & Schapira, L. (2019). Patient-Reported Outcomes for Cancer Patients Receiving Checkpoint Inhibitors: Opportunities for Palliative Care-A Systematic Review [Systematic Review]. <i>Journal of Pain & Symptom Management</i>, 58(1), 137-156.e131. https://doi.org/https://dx	Systematic review	Palliative care patients	~8000 across 15 randomised controlled trials	Hospital; Other: outpatient clinics Multiple countries (international studies)	Symptom management; Quality of life; Psychological support	Checkpoint inhibitors (ICIs) were associated with similar or improved health-related quality of life (HRQoL) compared to chemotherapy. Patients on ICIs maintained baseline HRQoL more effectively and reported fewer declines in symptoms.

doi.org/10.1016/j.jpainsymman.2019.03.015						
Hallet, J., Davis, L. E., Isenberg-Grzeda, E., Mahar, A. L., Zhao, H., Zuk, V., Moody, L., & Coburn, N. G. (2020). Gaps in the Management of Depression Symptoms Following Cancer Diagnosis: A Population-Based Analysis of Prospective Patient-Reported Outcomes [Research Support, Non-U.S. Gov't]. Oncologist, 25(7), e1098-e1108. https://doi.org/https://dx.doi.org/10.1634/theoncologist.2019-0709	Cohort study	Palliative care patients	142,270 patients (65,424 with positive depression symptom screening using ESAS)	Hospital; Other: Canada	Symptom management; Quality of life; Psychological support	The ESAS depression score ≥ 2 was used to identify symptoms. Despite high prevalence (46%) of depressive symptoms, only 17.1% received palliative care, 8.4% had social work referral, 1.7% received psychiatric/psychology assessment, and 4.3% of eligible patients received antidepressants. Depression scores decreased in 63.7-71.4% of patients following interventions.
Hallet, J., Zuckerman, J., Guttman, M. P., Chesney, T. R., Haas, B., Mahar, A., Eskander, A., Chan, W. C., Hsu, A., Barabash, V., & Coburn, N. (2023). Patient-Reported Symptom Burden After Cancer Surgery in Older Adults: A Population-Level Analysis. Annals of Surgical Oncology, 30(2), 694-708. https://doi.org/https://dx.doi.org/10.1245/s12250-023-06947-0	Cohort study	Palliative care patients	48748	Hospital; Other: Canada	Symptom management; Quality of life; Functional status	Symptom burden remained stable up to one year post-surgery. No substantial symptom worsening due to surgery or adjuvant therapy. Most prevalent moderate to severe symptoms: tiredness (57.8%), poor well-being (51.9%), and lack of appetite (39.3%).

doi.org/10.1245/s10434-022-12486-0						
Hansen, L., Dieckmann, N. F., Kolbeck, K. J., Naugler, W. E., & Chang, M. F. (2017). Symptom Distress in Patients With Hepatocellular Carcinoma Toward the End of Life. <i>Oncology Nursing Forum</i>, 44(6), 665-673. https://doi.org/10.1188/17.ONF.665-673	Qualitative research	Palliative care patients	18	Hospital; Other: United States	Symptom management; Quality of life; Psychological support	Patients with advanced hepatocellular carcinoma (HCC) most frequently experienced lack of energy, pain, and drowsiness. There was significant between- and within-patient variability in global, psychological, and physical distress over time. The MSAS effectively captured multiple symptom domains. Despite evident symptom burden, none of the patients were referred to palliative care, and only two to hospice.
Hansen, L., Leo, M. C., Chang, M. F., Zaman, A., Naugler, W., & Schwartz, J. (2015). Symptom Distress in Patients With End-Stage Liver Disease Toward the End of Life. <i>Gastroenterology Nursing</i>, 38(3), 201-210. https://doi.org/10.1097/SGA.0000000000000108	Qualitative research	Palliative care patients	20	Home-based care; Other: United States	Symptom management; Quality of life; Functional status	Most frequent, severe, and distressing symptoms: pain, lack of energy, difficulty sleeping, feeling drowsy. Lack of energy was the most severe and frequent; pain was the most distressing. The MSAS was used to track psychological, physical, and global distress. Total MSAS score showed a slight declining trend in the final 3 months of life.
Harding, D., Giles, S. L., Brown, M. R. D., ter Haar, G. R., van den Bosch, M., Bartels, L. W., Kim, Y. S., Deppe, M., & deSouza, N. M. (2018).	Non-randomised experimental study	Palliative care patients	20	Hospital; Other: UK, Netherlands, South Korea	Symptom management; Quality of life; Functional status	MR-guided HIFU led to substantial improvements in pain and physical functioning. Improvements were seen in fatigue, appetite loss, constipation, and pain,

Evaluation of Quality of Life Outcomes Following Palliative Treatment of Bone Metastases with Magnetic Resonance-guided High Intensity Focused Ultrasound: An International Multicentre Study. Clinical Oncology, 30(4), 233-242. https://doi.org/10.1016/j.clon.2017.12.023						particularly in responders. Quality of life gains extended beyond pain control alone.
Harding, R., Selman, L., Agupio, G., Dinat, N., Downing, J., Gwyther, L., Mashao, T., Mmoledi, K., Moll, T., Sebuyira, L. M., Ikin, B., & Higginson, I. J. (2012). Prevalence, Burden, and Correlates of Physical and Psychological Symptoms Among HIV Palliative Care Patients in Sub-Saharan Africa: An International Multicenter Study. Journal of Pain & Symptom Management, 44(1), 1-9. https://doi.org/10.1016/j.jpainsymman.2011.08.008	Cross sectional study	Palliative care patients	224	Home-based care; Hospice; Other: Day care services South Africa and Uganda	Symptom management; Quality of life; Functional status	High prevalence of physical (e.g. pain, drowsiness, lack of energy) and psychological (e.g. sadness, worry) symptoms. Hunger was one of the most burdensome symptoms, alongside pain and weight loss. Being female and having lower physical function were associated with higher symptom burden. Use of antiretroviral therapy (ART) was not associated with lower symptom burden. The MSAS - Short Form (MSAS-SF) effectively captured multi-dimensional symptom burden.
Harding, R., Selman, L., Ali, Z., Powell, R. A., Namisango, E., Mwangi-Powell, F., Gwyther, L.,	Cross sectional study	Palliative care patients	461	Hospice; Other: Day care services Inpatient and	Symptom management; Quality of life; Functional	Tools used: FACIT-G + FACIT-Pal: Functional Assessment of Chronic Illness Therapy - General + Palliative module

Gikaara, N., Higginson, I. J., & Siegert, R. J. (2014). Wellbeing among sub-Saharan African patients with advanced HIV and/or cancer: an international multicentred comparison study of two outcome measures [Comparative Study Multicenter Study]. Health & Quality of Life Outcomes, 12, 80. https://doi.org/https://dx.doi.org/10.1186/1477-7525-12-80				outpatient hospice/hospital Uganda, Kenya, South Africa	status; Social support; Psychological support	APCA African POS: African Palliative Outcome Scale “Social/family wellbeing” was the highest-scoring (best) domain across countries. Uganda had consistently lower scores than South Africa and Kenya across physical, functional, and overall wellbeing. Functional status significantly influenced both FACIT and POS scores; worse function was associated with poorer wellbeing. Moderate correlations were found between the FACIT tools and APCA African POS, indicating the tools measure overlapping but distinct aspects of wellbeing.
Harris, K., Chow, E., Davis, L., Chiu, H. H., Bradley, N. M. E., Doyle, M., Li, K., Sinclair, E., Barnes, E. A., & Danjoux, C. (2006). Gender differences in patient-rated symptoms following whole brain radiotherapy for brain metastases. Journal of Cancer Pain & Symptom Palliation, 2(1), 11-15. https://doi.org/10.3109/j427v02n01_03	Cohort study	Palliative care patients	170	Hospital; Other: Canada	Symptom management; Quality of life; Functional status	ESAS was used pre-radiotherapy and at 1, 2, 4, 8, and 12 weeks post-treatment. Statistically significant deterioration was observed in fatigue, drowsiness, and appetite over time after radiotherapy. ESAS scores were feasible to collect even via telephone in advanced disease.

Harris, P., Wong, E., Farrington, S., Craig, T. R., Harrold, J. K., Oldanie, B., Teno, J. M., & Casarett, D. J. (2013). Patterns of functional decline in hospice: what can individuals and their families expect? [Multicenter Study Research Support, N.I.H., Extramural]. Journal of the American Geriatrics Society, 61(3), 413-417. https://doi.org/https://dx.doi.org/10.1111/jgs.12144	Cohort study	Palliative care patients	8669	Hospice; Other: United States (hospices in Kansas City, Clearwater, and Lancaster)	Prognosis; Quality of life; Functional status	PPS scores declined on average by 13.8 points from hospice enrollment to death. Three trajectories of functional decline were identified: Fast decline: cancer (8.44 points/week), stroke (7.67) Moderate decline: pulmonary (5.02), cardiac disease (4.53) Slow decline: dementia (1.98), debility (1.86) Decline was faster for those enrolled closer to death (e.g., 14.21 points/week for those enrolled within 7 days). 22.6% had a PPS score recorded in the last 24 hours of life. Of these, 12.5% had PPS ≥ 40 , indicating retained physical/cognitive function.
Harrold, J., Byhoff, E., Harris, P., Szolarova, R., Bender, L., Craig, T., & Casarett, D. (2014). All hospice patients are not equal: development of a visit-based acuity index [Multicenter Study]. Journal of Palliative Medicine, 17(2), 135-140. https://doi.org/https://dx.doi.org/10.1089/jpm.2013.0109	Cohort study	Palliative care patients	35232	Home-based care; Other: US	Prognosis; Symptom management; Functional status	Lower PPS scores were associated with significantly higher visit frequency in the first week of hospice care. Patients with PPS <40 received 1.78 visits/day compared to 1.41 visits/day for those with PPS >60. Presence of pain and prior hospital discharge were also strong predictors of more frequent visits. A visit-based acuity index was proposed based on PPS and other clinical characteristics to better allocate hospice resources.

Hawley, P., Afghari, N., & Courteau, C. (2023). A clustered randomized controlled trial of symptom screening and automatic referral for supportive care for patients with GI cancer care needs. Canadian Oncology Nursing Journal, 33(4), 452-474. https://doi.org/10.5737/23688076334452	Randomised controlled trial	Palliative care patients	176	Hospital; Other: Canada	Symptom management; Psychological support	Automatic referral triggered by an ESASr score >3/10 increased palliative care team involvement (141 visits vs. 9 in control). No significant differences in symptom severity, quality of life, survival, hospital use, or place of death between groups. Almost half of patients with high scores did not require specialist care. Triage by oncology nurses was essential to streamline referrals and avoid overwhelming palliative care services.
Henoch, I., Axelsson, B., Bergman, B., Henoch, I., Axelsson, B., & Bergman, B. (2010). The Assessment of Quality of life at the End of Life (AQEL) questionnaire: a brief but comprehensive instrument for use in patients with cancer in palliative care. Quality of Life Research, 19(5), 739-750. https://doi.org/10.1007/s11136-010-9623-7	Cross sectional study	Palliative care patients	106	Hospital; Other: Sweden	Quality of life; Functional status; Social support; Psychological support ; Spiritual support	The AQEL demonstrated moderate to strong construct validity when compared with EORTC QLQ-C30, HADS, SOC-13, and SSS. The tool captured multi-dimensional aspects of quality of life relevant in palliative care: basic and advanced physical function, emotional and cognitive states, existential needs, social support, and perception of care. Principal components and multitrait scaling analysis supported five key dimensions: Emotional Function, Basic Function, Cognitive Function, Social Support, and Activity. Internal consistency was acceptable for most scales (Cronbach's alpha

						0.55-0.76), though Social Support and Perception of Care scales were weaker.
Hentschel, L., Richter, S., Kopp, H. G., Kasper, B., Kunitz, A., Grunwald, V., Kessler, T., Chemnitz, J. M., Pelzer, U., Schuler, U., Freitag, J., Schilling, A., Hornemann, B., Arndt, K., Bornhauser, M., & Schuler, M. K. (2020). Quality of life and added value of a tailored palliative care intervention in patients with soft tissue sarcoma undergoing treatment with trabectedin: a multicentre, cluster-randomised trial within the German Interdisciplinary Sarcoma Group (GISG) [Multicenter Study Randomized Controlled Trial Research Support, Non-U.S. Gov't]. BMJ Open, 10(8), e035546. https://doi.org/https://dx.doi.org/10.1136/bmjopen-2019-035546	Randomised controlled trial	Palliative care patients	79	Hospital; Other: Germany	Symptom management; Quality of life; Functional status; Psychological support	Patients in the intervention arm (IA) had slightly less decline in QoL (FACT-G score) over 9 weeks compared to the control arm (CA), but differences were not statistically significant. The intervention led to favourable trends in physical, functional, and emotional well-being. Depression was the strongest predictor of lower QoL scores. Overall survival was longer in IA (648 days) vs CA (389 days), though not statistically significant.
Hoek, P. D., Schers, H. J., Bronkhorst, E. M., Vissers, K. C. P., &	Randomised controlled trial	Palliative care patients	74	Home-based care; Other: Netherlands	Symptom management; Quality of life;	Patients in the intervention group (weekly teleconsultations) experienced higher symptom

Hasselaar, J. G. J. (2017). The effect of weekly specialist palliative care teleconsultations in patients with advanced cancer -a randomized clinical trial [Randomized Controlled Trial]. BMC Medicine, 15(1), 119. https://doi.org/https://dx.doi.org/10.1186/s12916-017-0866-9					Caregiver support ; Psychological support	burden at week 12 than those receiving care as usual, measured by the ESAS. Anxiety (via HADS) was significantly higher in the intervention group compared to controls. No significant difference in depression scores, unmet needs, continuity of care, or hospital admissions. High satisfaction scores for teleconsultations reported by both patients and clinicians.
Howard, F. D., Green, R., Harris, J., Ross, J., & Nicholson, C. (2024). Understanding the extent to which PROMs and PREMs used with older people with severe frailty capture their multidimensional needs: A scoping review. Palliative Medicine, 38(2), 184-199. https://doi.org/10.1177/02692163231223089	Other: Scoping review	Palliative care patients	Not applicable (review of 17 studies)	Other: Community care Netherlands, USA, UK, Australia, Belgium, Canada, Spain, Sweden, Brazil	Symptom management; Quality of life; Social support; Psychological support ; Spiritual support	Identified 18 multi-dimensional measures (17 PROMs, 1 PROM with PREM elements). Only 7 out of 18 measures had evidence of being tested for validity with people living with frailty. No measure was specifically developed for a frail population. Tools varied widely in their coverage of the five domains of palliative need (physical, psychological, social, spiritual, and practical). Measures like IPOS, ICECAP-SCM, WHOQOL-BREF, WHOQOL-OLD, and Patient Dignity Inventory covered all five domains.
Hu, X., Chen, Y., Zhang, C., Jiang, J., Xu, X., & Shao, M. (2024). Factors influencing the survival	Cohort study	Palliative care patients	261	Hospital; Other: China	Prognosis; Functional status	Lower PPS scores were strongly associated with increased risk of death within 14 days. PPS was a significant independent

time of patients with advanced cancer at the end of life: a retrospective study. BMC Palliative Care, 23(1), 1-9. https://doi.org/10.1186/s12904-024-01607-z						predictor of short-term mortality, even after adjusting for frailty, age, dyspnea, edema, CRP, and WBC count. A PPS of $\leq 30\%$ was identified as the optimal cutoff for predicting 14-day survival (sensitivity 80.3%, specificity 79.9%). Frailty was associated with shorter survival but was not independently predictive of 14-day mortality after adjusting for other factors. Functional impairment (Barthel index) and frailty were highly prevalent among patients with limited survival.
Hughes, P., Ahmed, N., Winslow, M., Walters, S. J., Collins, K., & Noble, B. (2013). Consumer views on a new holistic screening tool for supportive and palliative-care needs: Sheffield Profile for Assessment and Referral for Care (SPARC): A survey of self-help support groups in health care. Health Expectations, 18(3), 562-577. https://doi.org/10.1111/hex.12058	Cross sectional study	Palliative care patients; Caregivers; Healthcare professionals	135	Other: Community setting, United Kingdom	Prognosis; Symptom management; Quality of life; Functional status; Social support; Caregiver support ; Psychological support ; Spiritual support	SPARC was found to be easy to complete (93%) and easy to understand (94%) by most participants. A minority (12%) found certain questions (especially regarding end-of-life thoughts and sexuality) too sensitive. 59% found SPARC currently relevant, while 83% believed it would be relevant in the future. Users endorsed SPARC's ability to enhance communication between patients and health professionals. Participants felt SPARC would be useful across all patient groups with serious illness, not just those in advanced palliative care stages.

Hui, D., Kilgore, K., Fellman, B., Urbauer, D., Hall, S., Fajardo, J., Rhondali, W., Kang, J. H., Del Fabbro, E., Zhukovsky, D., & Bruera, E. (2012). Development and Cross-Validation of the In-Hospital Mortality Prediction in Advanced Cancer Patients Score: A Preliminary Study. Journal of Palliative Medicine, 15(8), 902-909. https://doi.org/10.1089/jpm.2011.0437	Cohort study	Palliative care patients	151	Hospital; Other: US	Prognosis; Symptom management; Functional status	Four major predictors of in-hospital death were identified: higher education level, presence of hematologic malignancy, presence of delirium, and higher ESAS global symptom distress score. Developed the In-Hospital Mortality Prediction in Advanced Cancer Patients (IMPACT) Score based on these predictors. The IMPACT model showed good discrimination (Area Under Curve = 0.83) and good calibration (Hosmer-Lemeshow p = 0.66). Higher IMPACT scores were associated with higher in-hospital death risk: scores of 6, 10, 14, 17, and 21 corresponded to 10%, 25%, 50%, 75%, and 90% risk, respectively.
Hui, D., Meng, Y. C., Bruera, S., Geng, Y., Hutchins, R., Mori, M., Strasser, F., & Bruera, E. (2016). Referral Criteria for Outpatient Palliative Cancer Care: A Systematic Review [Review Systematic Review]. Oncologist, 21(7), 895-901. https://doi.org/https://dx.doi.org/10.1634/theoncologist.2016-0006	Systematic review	Palliative care patients	Not applicable - review of 21 studies	Hospital; Other: Primarily North America (76%), also Europe and Asia	Prognosis; Symptom management; Quality of life; Social support; Psychological support	Identified 20 criteria for outpatient palliative care referral, with 6 recurring themes: Physical symptoms Cancer trajectory (diagnosis of advanced or metastatic cancer) Prognosis Performance status Psychosocial distress End-of-life care planning ESAS (used in 33% of studies) and distress thermometer (10%) were most commonly used tools. Wide variation in definitions, tools, and cutoffs for referrals-no

						consensus established. Very few studies used validated tools with specific referral thresholds (e.g., ESAS $\geq 6/10$). Need for operational definitions of terms like “advanced cancer” and standardized cutoffs for symptom-based referrals.
Hwang, F., Pentakota, S. R., McGreevy, C. M., Glass, N. E., Livingston, D. H., & Mosenthal, A. C. (2019). Preinjury Palliative Performance Scale predicts functional outcomes at 6 months in older trauma patients. Journal of Trauma & Acute Care Surgery, 87(3), 541-551. https://doi.org/10.1097/T.A.0000000000002382	Cohort study	Palliative care patients	176 completed follow-up.	Hospital; Other: United States	Prognosis; Quality of life; Functional status; Psychological support	The preinjury PPS was a statistically significant predictor of both in-hospital mortality and 6-month functional outcomes. Patients with low PPS (≤ 70) had higher mortality, worse discharge disposition, and lower GOSE and QoL scores at 6 months. PPS was more predictive than age or Injury Severity Score (ISS) for long-term outcomes.
Ibanez Del Prado, C., & Cruzado, J. A. (2020). A screening method for sleep disturbances at the end-of-life [Observational Study]. Palliative & Supportive Care, 18(4), 468-472. https://doi.org/https://dx.doi.org/10.1017/S1478951520000024	Cross sectional study	Palliative care patients	150	Hospital; Other: Spain	Symptom management; Quality of life	87% of patients presented sleep disturbances according to the Pittsburgh Sleep Quality Index (PSQI). ESAS-Sleep subscale, Sleep-Worry-Q, and Sleep-Problem-Q were all valid tools for screening sleep disturbances. Sleep-Worry-Q had the highest diagnostic accuracy (AUC = 0.854), followed by Sleep-Problem-Q and ESAS-Sleep. ESAS-Sleep (cut-off 3): sensitivity 0.87, specificity 0.58.

						Sleep-Worry-Q (cut-off 4): sensitivity 0.95, specificity 0.68. Sleep-Problem-Q (Yes/No): sensitivity 0.92, specificity 0.65. Sleep disturbances were associated with lower PPS scores, indicating worse functional status.
Ihler, E. M., & Sæteren, B. (2020). Registered nurses' experiences of using ESAS to map cancer patients' symptoms. Norwegian Journal of Clinical Nursing / Sykepleien Forskning, 1-16. https://doi.org/10.4220/Sykepleienf.2019.79585	Qualitative research	Healthcare professionals	6	Hospital; Other: Norway	Symptom management; Quality of life; Psychological support	ESAS (Edmonton Symptom Assessment System) is perceived by RNs as a useful tool for identifying the subjective symptom experiences of patients. ESAS facilitates meaningful conversations and increases symptom awareness among patients and nurses. When used routinely, it enhances symptom relief and supports better care planning.
Johnstone, P. A. S., Bulls, H. W., Zhou, J. M., Lee, J. K., Portman, D., Yu, H. M., & Jim, H. (2019). Congruence of multiple patient-related outcomes within a single day. Supportive Care in Cancer, 27(3), 867-872. https://doi.org/https://dx.doi.org/10.1007/s00520-018-4372-1	Cross sectional study	Palliative care patients	4021	Hospital; Other: Canada	Symptom management; Quality of life; Psychological support	The ESAS demonstrated high intra-day reliability across multiple time points. Most symptoms (e.g., pain, tiredness, anxiety) were consistent across time points within the same day. Exceptions were slight variations in drowsiness, appetite, and well-being.
Jones, J. M., Cohen, S. R., Zimmermann, C., & Rodin, G. (2010). Quality	Cross sectional study	Palliative care patients	211	Hospital; Other: Canada	Symptom management; Quality of life;	Moderate quality of life (mean MQOL total = 6.1). High symptom burden (mean ESAS

of life and symptom burden in cancer patients admitted to an acute palliative care unit. <i>Journal of Palliative Care</i> , 26(2), 94-102.					Psychological support ; Spiritual support	score = 36.3; median of 6 symptoms). Existential and psychological domains were more strongly correlated with overall QoL than physical symptoms. Fatigue and pain were the most commonly reported and severe symptoms. Women and younger patients reported lower QoL and higher symptom burden.
Juliao, M., Antunes, B., Nunes, B., Sobral, M. A., Chaves, P., Runa, D., & Bruera, E. (2020). Measuring Total Suffering and Will to Live in an Advanced Cancer Patient Using a Patient-Centered Outcome Measure: A Follow-Up Case Study [Case Reports Research Support, Non-U.S. Gov't]. <i>Journal of Palliative Medicine</i>, 23(5), 733-737. https://doi.org/https://dx.doi.org/10.1089/jpm.2019.0137	Other: Longitudinal study	Palliative care patients	1	Hospital; Other: Portugal	Symptom management; Quality of life; Psychological support ; Spiritual support	Strong positive correlations were observed between WtL and ESAS total score, ESAS physical subscore, and ESAS psychological subscore. WtL fluctuated significantly over 28 days and was most strongly correlated with well-being, depression, pain, and anxiety scores. Symptoms such as shortness of breath and drowsiness were less strongly associated with WtL. Tracking daily ESAS scores provided objective evidence of the patient's "total suffering" experience. Regular ESAS use supported real-time, needs-based symptom management and care planning.
Jülich, A., Spreu, T., Buchhold, B., & Usichenko, T. (2017). The Impact of Integrated	Non-randomised experimental study	Palliative care patients	148	Hospital; Other: Germany	Symptom management; Quality of life	Significant reductions in symptoms such as pain, nausea, vomiting, dyspnea, sleep disorders, and sweating after

Multidisciplinary Palliative Care Program on Symptoms in Patients at the Palliative Care Ward-An Audit and a Protocol of Prospective Controlled Investigation. Journal of Palliative Care, 32(3/4), 87-88. https://doi.org/10.1177/0825859717741026						participation in the integrated multidisciplinary palliative care (IMPC) program. No change in performance scores (Karnofsky, ECOG), but symptom severity decreased significantly using the extended ESAS.
Kamal, A. H., Nipp, R. D., Bull, J., Stinson, C. S., & Abernethy, A. P. (2015). Symptom Burden and Performance Status among Community-Dwelling Patients with Serious Illness. Journal of Palliative Medicine, 18(6), 542-544. https://doi.org/10.1089/jp m.2014.0381	Cohort study	Palliative care patients	4994	Other: Community-based palliative care US	Symptom management; Functional status	Fatigue, anorexia, and dyspnea were most prevalent among patients with higher PPS (better functional status). Pain, depression, nausea, and constipation were more prevalent among those with lower PPS (poorer functional status). Thirty percent of all patients had one or more moderate-to-severe symptoms; 16% had three or more. Cancer patients reported a higher number of moderate/severe symptoms compared to noncancer patients. Distinct symptom clusters (e.g., dyspnea, fatigue, anorexia) could predict impending functional decline.
Kamal, L., Kano, Y., Stevens, A. M., Mohammed, K., Pattison, N., Perkins, M., Popat, S., Benson, C., Minton, O.,	Other: Mixed-methods study Quantitative: Sensitivity/specificity	Palliative care patients	149 patients screened 38 referred for early palliative	Hospital; Other: United Kingdom	Prognosis; Symptom management; Quality of life; Functional	The Royal Marsden Triggers Tool identified patients with significant needs (high IPOS symptom burden, low QoL). Tool sensitivity was moderate

Laverty, D., Wiseman, T., Mayland, C. R., Gough, N., Williams, C., Want, J., Tweddle, A., Wood, J., & Droney, J. (2024). Assessing the sensitivity and acceptability of the Royal Marsden Palliative Care Referral "Triggers" Tool for outpatients with cancer. Supportive Care in Cancer, 32(11), 730. https://doi.org/https://dx.doi.org/10.1007/s00520-024-08921-5	assessment of the Triggers Tool against validated outcomes Qualitative: Interviews with clinicians to evaluate acceptability		care 13 clinicians interviewed		status; Caregiver support ; Psychological support	(63%) when compared to clinician judgment. Patients captured by the tool had greater symptom burden and worse function than non-identified patients. Clinicians found the tool helpful in normalising referrals, prompting earlier action.
Kavalieratos, D., Lowers, J., Moreines, L. T., Hoydich, Z. P., Arnold, R. M., Yabes, J. G., Richless, C., Ikejiani, D. Z., Teuteberg, W., & Pilewski, J. M. (2023). Embedded Specialist Palliative Care in Cystic Fibrosis: Results of a Randomized Feasibility Clinical Trial. Journal of Palliative Medicine, 26(4), 489-496. https://doi.org/10.1089/jp m.2022.0349	Other: randomised pilot study	Palliative care patients	50	Other: Outpatient cystic fibrosis clinic United States	Symptom management; Quality of life; Psychological support	Embedding specialist palliative care (PC) into a cystic fibrosis (CF) clinic was feasible and acceptable. 94% of intervention participants stated the PC intervention was not burdensome, and 97.6% would recommend it to others. ESAS scores were used to screen for symptom severity ($\geq 3/10$) and helped guide quarterly palliative care interventions. 90.9% of participants reported moderate or greater improvement in physical symptoms, mood, or quality of life. 72% reported an improved understanding of their illness and ability to cope with CF

Khan, L., Kwong, J., Nguyen, J., Chow, E., Zhang, L., Culleton, S., Zeng, L., Jon, F., Tsao, M., Barnes, E., Danjoux, C., Sahgal, A., Holden, L., Khan, L., Kwong, J., Nguyen, J., Chow, E., Zhang, L., Culleton, S., & Zeng, L. (2012). Comparing baseline symptom severity and demographics over two time periods in an outpatient palliative radiotherapy clinic. Supportive Care in Cancer, 20(3), 549-555. https://doi.org/10.1007/s00520-011-1120-1	Cross sectional study	Palliative care patients	1439	Hospital; Other: Canada	Prognosis; Symptom management; Quality of life	Significant reduction in symptom severity (pain, depression, anxiety, fatigue, nausea, drowsiness, dyspnea) from 1999-2002 to 2006-2009. No significant change in loss of appetite. Depression showed the largest drop Sense of well-being scores worsened over time. Tool captured evolving symptom trends that may reflect improved care and earlier referral.
Kim, Y. J., Munsell, M. F., Park, J. C., Meyer, L. A., Sun, C. C., Brown, A. J., Bodurka, D. C., Williams, J. L., Chase, D. M., Bruera, E., & Ramondetta, L. M. (2015). Retrospective review of symptoms and palliative care interventions in women with advanced cervical cancer. Gynecologic Oncology, 139(3), 553-558.	Other: Observational study (Retrospective chart review)	Palliative care patients	88 women with advanced cervical cancer (out of 156 total referrals; only those with ESAS data were included)	Hospital; Other: United States	Symptom management; Quality of life; Functional status; Psychological support	The ESAS detected high prevalence of moderate-to-severe symptoms: Pain (81%) Anorexia (72%) Poor well-being (70%) Fatigue (69%) Insomnia (54%) Symptoms such as nausea, depression, anxiety, and well-being significantly improved at follow-up.

https://doi.org/https://dx.doi.org/10.1016/j.ygyno.2015.09.079						
King, M. T., Agar, M., Currow, D. C., Hardy, J., Fazekas, B., & McCaffrey, N. (2020). Assessing quality of life in palliative care settings: head-to-head comparison of four patient-reported outcome measures (EORTC QLQ-C15-PAL, FACT-Pal, FACT-Pal-14, FACT-G7). Supportive Care in Cancer, 28(1), 141-153. https://doi.org/https://dx.doi.org/10.1007/s00520-019-04754-9	Randomised controlled trial	Palliative care patients	Ketamine trial: 185 Octreotide trial: 106	Hospital; Other: Australia	Symptom management; Quality of life; Functional status; Social support; Psychological support	Key Findings of the Assessment Tools: No single tool was clearly superior across all psychometric domains. FACIT-Pal showed the highest internal consistency and test-retest reliability. EORTC QLQ-C15-PAL had higher completion rates but poorer reliability. Short forms (FACIT-Pal-14, FACT-G7) showed good feasibility but sacrificed content breadth and reliability. Responsiveness to clinical change varied by tool and clinical scenario.
Kisvetrová, H., Školoudík, D., Danielová, L., Langová, K., Váverková, R., Bretšnajdrová, M., & Yamada, Y. (2018). Czech Version of the Patient Dignity Inventory: Translation and Validation in Incurable Patients. Journal of Pain & Symptom Management, 55(2), 444-450.	Other: Observational	Palliative care patients	239	Hospital; Other: Long-term care facilities (LTCFs) Nursing homes Country: Czech Republic	Symptom management; Quality of life; Functional status; Social support; Psychological support ; Spiritual support	The Czech version of the PDI (PDI-CZ) demonstrated excellent internal consistency (Cronbach's alpha = 0.92). Factor analysis revealed four factors: Loss of purpose of life Loss of autonomy Loss of confidence Loss of social support Test-retest reliability was acceptable (AC1 = 0.584 to 1.00), supporting stability of the measure.

https://doi.org/10.1016/j.jpainsymman.2017.10.008						
Kotronoulas, G., Papadopoulou, C., Simpson, M. F., McPhelim, J., Mack, L., & Maguire, R. (2018). Using patient-reported outcome measures to deliver enhanced supportive care to people with lung cancer: feasibility and acceptability of a nurse-led consultation model. Supportive Care in Cancer, 26(11), 3729-3737. https://doi.org/10.1007/s00520-018-4234-x	Other: Observarional	Palliative care patients	20 patients enrolled 13 completed all three sessions	Hospital; Other: United Kingdom	Symptom management; Quality of life; Functional status; Social support; Psychological support ; Spiritual support	SPARC was successfully integrated into nurse-led consultations to guide holistic, needs-based care. The tool helped patients discuss underreported issues such as anxiety, spiritual concerns, and family impact. Domains showing most patient-reported concern: breathlessness, fatigue, low mood, death/dying concerns, and family worries. Over time, small-to-moderate reductions in unmet needs were observed, especially in psychological, social, and spiritual domains.
Kumar, S. P. (2011). Utilization of Brief Pain Inventory as an Assessment Tool for Pain in Patients with Cancer: A Focused Review. Indian Journal of Palliative Care, 17(2), 108-115. https://doi.org/10.4103/0973-1075.84531	Systematic review	Palliative care patients	N/A - summary of multiple validation and clinical studies (sample sizes range from ~100-500+ per sub-study)	Hospital; Home-based care; Other: Long-term care Country: Multinational (USA, Europe, Asia, India)	Symptom management; Quality of life; Functional status; Psychological support	The Brief Pain Inventory (BPI) is valid and reliable for use in cancer pain populations across diverse settings. Measures both pain severity and interference with daily activities. Adapted and validated in multiple languages including Hindi, Italian, Korean, Malay, Russian, Spanish, Thai, etc. Demonstrated strong psychometric properties: construct, concurrent, and cross-cultural validity, as well as internal consistency and test-

						retest reliability. Effective for quantitative and qualitative analysis.
Kuo, J. C., Graham, D. M., Salvarrey, A., Kassam, F., Le, L. W., Shepherd, F. A., Burkes, R., Hollen, P. J., Gralla, R. J., & Leighl, N. B. (2020). A randomized trial of the electronic Lung Cancer Symptom Scale for quality-of-life assessment in patients with advanced non-small-cell lung cancer [Journal article]. Current oncology (Toronto, Ont.), 27(2), e156-e162. https://doi.org/10.3747/co.27.5651	Randomised controlled trial	Palliative care patients	95	Hospital; Other: Canada	Symptom management; Quality of life; Functional status; Psychological support	Tool used: Electronic Lung Cancer Symptom Scale - Quality of Life (eLCSS-QL) The eLCSS-QL was feasible to implement and was well-tolerated. Although not statistically significant, patients in the intervention group had slightly higher palliative care referral rates (48% vs. 41%). No significant difference in HRQoL scores or number of chemotherapy cycles administered between the arms. Demonstrated potential for improving clinical discussions and referrals, though more targeted implementation strategies may be needed.
Kurucová, R., Žiaková, K., Gurková, E., & Šrámeková, G. (2015). OCCURRENCE OF ANNOYING SYMPTOMS OF PATIENTS WITH CANCER. Central European Journal of Nursing & Midwifery, 6(1), 185-190. https://doi.org/10.15452/CEJNM.2015.06.0002	Cross sectional study	Palliative care patients	100	Hospital; Other: Slovakia	Symptom management; Quality of life; Functional status; Social support; Psychological support ; Spiritual support	Pain was the most frequently reported symptom across all subscales (PHYS, GDI). Other prevalent symptoms included nausea, difficulty sleeping, nervousness, and feeling sad. Greater symptom burden was found in patients with stage 3 (metastatic) disease. There was a statistically significant relationship between duration of illness and symptom occurrence: longer disease duration

						correlated with greater symptom distress.
Kutner, J. S., Bryant, L. L., Beaty, B. L., & Fairclough, D. L. (2007). Time course and characteristics of symptom distress and quality of life at the end of life. Journal of Pain & Symptom Management, 34(3), 227-236. https://doi.org/10.1016/j.jpainsymman.2006.11.016	Qualitative research	Palliative care patients; Caregivers; Healthcare professionals	86 patients 86 nurses 49 caregivers	Home-based care; Hospice; Other: United States	Symptom management; Quality of life; Functional status; Caregiver support ; Psychological support	The MSAS and the McGill Quality of Life Questionnaire (MQOL) were used to track distress and QOL. Pain was the most distressing symptom despite others like fatigue being more prevalent. Nonpain physical symptoms were significantly associated with pain distress. Psychological distress, not physical symptom burden, was significantly associated with lower QOL.
Kutner, J. S., Bryant, L. L., Beaty, B. L., & Fairclough, D. L. (2006). Symptom Distress and Quality-of-Life Assessment at the End of Life: The Role of Proxy Response. Journal of Pain & Symptom Management, 32(4), 300-310. https://doi.org/10.1016/j.jpainsymman.2006.05.009	Cohort study	Palliative care patients; Caregivers; Healthcare professionals	86 patients, 86 nurses, 49 caregivers	Hospice; Other: United States	Symptom management; Quality of life; Functional status; Psychological support	MSAS McGill Quality of Life Questionnaire (MQOL) Also used: Karnofsky Performance Scale (functional status) Proxy responses (caregiver and nurse) were similar in average to patient responses for physical and psychological symptoms. However, correlations between patient and proxy ratings were moderate at best, especially for psychological symptoms. Nurses' assessments were more correlated with patients' reports than family caregivers, particularly for existential well-being and total quality of life. Pain and appetite were among the best-agreed physical

						symptoms between patients and proxies.
Kwon, J. H., Hui, D., Chisholm, G., Hong, W. T., Nguyen, L., & Bruera, E. (2013). Experience of Barriers to Pain Management in Patients Receiving Outpatient Palliative Care. <i>Journal of Palliative Medicine</i>, 16(8), 908-914. https://doi.org/10.1089/jpm.2012.0610	Cohort study	Palliative care patients	196	Hospital; Other: US	Symptom management; Psychological support	Patients expressed relatively low barriers to cancer pain management across physiologic, fatalism, communication, and harmful effect domains. Nonwhite race was associated with a higher total BQ-II score, suggesting racial disparities in perceived barriers. Depression, pain severity, opioid dosage, and satisfaction with pain control were not significantly associated with higher barriers scores. Education level (less than college) was linked to higher communication barrier scores. Overall, pain-related factors were not major determinants of patient-perceived barriers.
Lamba, N., Saraf, A., Koenig, J. L., Balboni, T. A., Haas-Kogan, D. A., Nipp, R., & Aizer, A. A. (2022). Association of Baseline Symptom Burden and Survival among Patients with Brain Metastases at a Tertiary Cancer Center [Journal article; Conference proceeding]. <i>International journal of radiation oncology</i>	Cohort study	Palliative care patients; Healthcare professionals	101	Hospital; Other: United States	Prognosis; Symptom management; Quality of life; Functional status; Psychological support	Used the MD Anderson Symptom Instrument-Brain Tumor (MDASI-BT), which evaluates 22 symptoms and 6 interference items. Most severe symptoms at diagnosis of brain metastases: fatigue (47%), distress (40%), sleep disturbances (37%), drowsiness (35%), and sadness (32%). Higher symptom burden (severity and interference) was significantly associated with worse overall survival.

biology physics, 114(3), e56-e57. https://doi.org/10.1016/j.ijrobp.2022.07.798						Interference included reduced enjoyment of life (47%), work capacity (44%), and mobility (35%). Symptom severity was significantly higher in females than males.
Lamppu, P. J., Laakkonen, M.-L., Finne-Soveri, H., Kautiainen, H., Laurila, J. V., & Pitkälä, K. H. (2021). Training Staff in Long-Term Care Facilities- Effects on Residents' Symptoms, Psychological Well-Being, and Proxy Satisfaction. Journal of Pain & Symptom Management, 62(4), e4-e12. https://doi.org/10.1016/j.jpainsymman.2021.03.020	Randomised controlled trial	Palliative care patients; Caregivers; Healthcare professionals	324	Aged care; Other: Finland	Symptom management; Quality of life; Functional status; Caregiver support ; Psychological support	ESAS showed a statistically and clinically significant reduction in symptom burden in the intervention group at 6 months, but not at 12 months. PAINAD scores remained stable in the intervention group but trended upward in controls (not statistically significant). PWB (Psychological Well-Being) scores remained unchanged in both groups. SWC-EOLD (proxy satisfaction with care) declined over time in both groups, with no significant differences.
Lawlor, P. G., McNamara-Kilian, M. T., MacDonald, A. R., Momoli, F., Tierney, S., Lacaze-Masmonteil, N., Dasgupta, M., Agar, M., Pereira, J. L., Currow, D. C., & Bush, S. H. (2020). Melatonin to prevent delirium in patients with advanced cancer: a double blind, parallel, randomized, controlled,	Randomised controlled trial	Palliative care patients	60	Hospital; Other: Canada	Prognosis; Symptom management; Functional status; Psychological support ; Other: Cognitive performance	Delirium was diagnosed using the Confusion Assessment Method (CAM), with additional tools like Nu-DESC, MDAS, and Clinician Global Rating (CGR) used to assess severity. 21 patients (35%) developed delirium: 11 in the melatonin group and 10 in the placebo group. Melatonin did not significantly reduce the incidence of delirium; there was a non-significant trend toward

feasibility trial [Randomized Controlled Trial]. BMC Palliative Care, 19(1), 163. https://doi.org/https://dx.doi.org/10.1186/s12904-020-00669-z						earlier delirium onset in the melatonin group. Patients who developed delirium had significantly worse functional and cognitive status at baseline (PPS, SOMCT). The Edmonton Symptom Assessment System - Revised (ESAS-r) and Insomnia Severity Index (ISI) were also used.
Le Dai, D., Pham, T. V. A., Bui, T. T. H., Than, T. N. H., Pham, V. T., Luong, N. K., Harding, R., & Krakauer, E. L. (2022). Symptom prevalence, burden and correlates among people living with HIV in Vietnam: a two-centre self-report study. AIDS Care, 34(7), 887-893. https://doi.org/10.1080/09540121.2021.1922577	Cross sectional study	Palliative care patients; Healthcare professionals	567	Hospital; Home-based care; Other: Vietnam	Symptom management; Quality of life; Functional status; Social support; Psychological support ; Spiritual support	Validated the Vietnamese translation of the MSAS - Short Form (MSAS-SF). Cronbach's alpha: total MSAS = 0.91, PHYS = 0.85, PSYCH = 0.81, GDI = 0.83. Mean number of symptoms reported: 7.66, with 25% reporting more than 12 symptoms in the past 7 days. Most common symptoms: worrying (41.6%), lack of energy, feeling irritable, sadness. Poverty, AIDS diagnosis, and low physical function were associated with greater symptom burden. Psychological symptoms had higher burden than physical symptoms. Validated construct validity using ECOG performance scores.
Lee, G., Kim, H. S., Lee, S. W., Park, Y. R., Kim, E. H., Lee, B., Hu, Y. J., Kim, K. A., Kim, D., Cho,	Cohort study	Palliative care patients	71	Hospital; Other: South Korea	Prognosis; Symptom management; Quality of life;	Used the Korean version of the Edmonton Symptom Assessment System (K-ESAS). Patients with moderate/severe

H. Y., Kang, B., & Choi, H. J. (2020). Pre-screening of patient-reported symptoms using the Edmonton Symptom Assessment System in outpatient palliative cancer care. <i>European Journal of Cancer Care</i>, 29(6), e13305. https://doi.org/https://dx.doi.org/10.1111/ecc.13305					Functional status; Psychological support	symptoms (mean ESAS ≥ 5) showed significant symptom improvement after palliative care. Patients with mild symptoms (ESAS < 5) showed stable scores over time. Mean total ESAS, physical, and emotional scores significantly decreased in the high-burden group, especially in pain, fatigue, anxiety, and appetite. Authors proposed ESAS ≥ 5 as a suitable threshold for triggering palliative care referral.
Leppert, W., & Majkowicz, M. (2013). Validation of the Polish version of the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire - Core 15 - Palliative Care in patients with advanced cancer [Validation Study]. <i>Palliative Medicine</i>, 27(5), 470-477. https://doi.org/https://dx.doi.org/10.1177/0269216312458823	Cohort study	Palliative care patients	160	Hospital; Home-based care	Symptom management; Quality of life; Functional status; Psychological support	The EORTC QLQ-C15-PAL Polish version was validated with high reliability and concurrent validity. Compared with ESAS, BPI-SF, and KPS. Statistically significant improvement seen in symptom scales and some functional items after 7 days of palliative care. Strongest improvements in dyspnoea, insomnia, pain, appetite, nausea/vomiting, constipation, emotional functioning, and global QOL. Significant correlations observed between the EORTC tool and other validated instruments (e.g., fatigue $\leftrightarrow$ ESAS fatigue, pain $\leftrightarrow$ BPI, global QOL $\leftrightarrow$ Karnofsky). All internal consistency scores

						(Cronbach's α) were above 0.78 for both functional and symptom scales, indicating excellent reliability.
Li, B., Mah, K., Swami, N., Pope, A., Hannon, B., Lo, C., Rodin, G., Le, L. W., & Zimmermann, C. (2019). Symptom Assessment in Patients with Advanced Cancer: Are the Most Severe Symptoms the Most Bothersome? [Randomized Controlled Trial Research Support, Non-U.S. Gov't]. Journal of Palliative Medicine, 22(10), 1252-1259. https://doi.org/https://dx.doi.org/10.1089/jpm.2018.0622	Cohort study	Palliative care patients; Healthcare professionals	57,272	Hospital; Other: United States	Prognosis; Symptom management; Functional status; Psychological support	Tools used: PPS and standardised symptom severity scales (pain, anxiety, nausea, dyspnea rated on a 4-point scale). Patients with heart failure (HF) were older, had lower PPS scores, and were referred to PC later than cancer patients. HF patients more likely to present with dyspnea, less with pain, nausea, or anxiety. Symptom improvement: Pain: HF patients less likely to improve (OR 0.41) Dyspnea: HF patients more likely to improve (OR 2.17) Anxiety: Similar rates Nausea: HF patients less likely to improve (OR 0.39) HF patients were more often referred for care planning rather than symptom relief. Hospice referrals were lower in the HF group (OR 0.50) even when discharged alive.
Li, B., Mah, K., Swami, N., Pope, A., Hannon, B., Lo, C., Rodin, G., Le, L. W., & Zimmermann, C. (2019). Symptom Assessment in Patients with Advanced Cancer:	Randomised controlled trial	Palliative care patients	386	Hospital; Other: Canada	Symptom management; Quality of life	Symptom severity (as measured by ESAS) did not consistently correspond with symptom bothersomeness (as measured by QUAL-E). Tiredness, sleep disturbances, and appetite loss were the most severe symptoms

Are the Most Severe Symptoms the Most Bothersome? Journal of Palliative Medicine, 22(10), 1252-1259. https://doi.org/10.1089/jpm.2018.0622						rated by ESAS. Pain and tiredness were most frequently reported as the most bothersome symptoms. Only 42% of patients' most severe symptom matched their most bothersome symptom. Pain, nausea, and tiredness had the highest likelihood of being both severe and bothersome. Symptoms like appetite loss were often rated as severe but not perceived as most bothersome.
Lo, C., Burman, D., Rodin, G., Zimmermann, C., Lo, C., Burman, D., Rodin, G., & Zimmermann, C. (2009). Measuring patient satisfaction in oncology palliative care: psychometric properties of the FAMCARE-patient scale. Quality of Life Research, 18(6), 747-752. https://doi.org/10.1007/s11136-009-9494-y	Cohort study	Palliative care patients	145	Hospital; Other: Canada	Symptom management; Quality of life; Psychological support	Developed and tested the FAMCARE-Patient scale (FAMCARE-P), a 16-item modified version of the original FAMCARE tool. Demonstrated a single-factor structure with high internal reliability (Cronbach's $\alpha = 0.94$). FAMCARE-P16 was inversely associated with symptom burden, especially depression and anxiety, measured via ESAS. Satisfaction scores were not correlated with ECOG performance status. ESAS distress score negatively correlated with FAMCARE-P16 ($r = -0.19$, $p = 0.02$). FAMCARE-P was sensitive to change-satisfaction improved in follow-up after palliative care

						intervention in the associated phase II trial.
Lundh Hagelin, C., Klarare, A., & Furst, C. J. (2018). The applicability of the translated Edmonton Symptom Assessment System: revised [ESAS-r] in Swedish palliative care [Letter]. Acta Oncologica, 57(4), 560-562. https://doi.org/https://dx.doi.org/10.1080/0284186X.2017.1366050	Qualitative research	Palliative care patients; Healthcare professionals	18	Home-based care; Other: Sweden	Symptom management; Functional status; Psychological support	The Swedish ESAS-r was well accepted by patients and RNs. No items were reported as difficult, confusing, or offensive. The appetite scale revision (direction of scores) and body figure illustration were particularly helpful. The optional tenth symptom field was used by most patients (e.g., dizziness, diarrhea, sleep issues). Some patients found the space to write the tenth symptom too small. The revised version was preferred over the older ESAS for clarity and ease of use.
Lykke, C., Jurlander, B., Ekholm, O., Sjogren, P., Juhl, G. I., Kurita, G. P., Larsen, S., Tonder, N., Hoyer, L. V., Eidemak, I., & Zwisler, A. D. (2024). Identifying Palliative Care Needs in Patients With Heart Failure Using Patient Reported Outcomes. Journal of Pain & Symptom Management, 68(6), 561-572. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2024.05.010	Cross sectional study	Palliative care patients	314	Hospital; Other: Denmark	Prognosis; Symptom management; Quality of life; Functional status; Psychological support	PROMs used: EORTC QLQ-C15-PAL HADS (Hospital Anxiety and Depression Scale) MFI-20 (Multidimensional Fatigue Inventory) HeartQoL SF-36v1 (including self-rated general health) 42% of patients were NYHA class III/IV. Patients with NYHA III/IV had significantly more severe symptoms (mean 5.4 vs 1.6 in NYHA II) and worse HRQoL. Fatigue and dyspnea were the most burdensome symptoms reported. Women, older patients, and those with advanced HF had

doi.org/10.1016/j.jpainsymman.2024.09.002						the highest symptom burden across tools. 67% of NYHA III/IV patients had ≥ 4 severe symptoms, compared to only 19% of NYHA II. High burden of anxiety (21.9%) and depression (25.1%) was detected (HADS ≥ 8).
Macchi, Z. A., Koljack, C. E., Miyasaki, J. M., Katz, M., Galifianakis, N., Prizer, L. P., Sillau, S. H., & Kluger, B. M. (2020). Patient and caregiver characteristics associated with caregiver burden in Parkinson's disease: a palliative care approach. Annals of Palliative Medicine, 9(Suppl 1), S24-S33. https://doi.org/https://dx.doi.org/10.21037/apm.2019.10.01	Cross sectional study	Palliative care patients; Caregivers; Healthcare professionals	350	Other: Outpatient hospital clinics across 3 sites (USA & Canada) Country: United States and Canada	Symptom management; Quality of life; Functional status; Social support; Caregiver support ; Psychological support ; Spiritual support	Used multiple validated tools: ESAS-PD (Edmonton Symptom Assessment System - Parkinson Disease) PDQ-39 (Parkinson's Disease Questionnaire) HADS (Hospital Anxiety and Depression Scale) FACIT-SP (Spiritual well-being) QOL-AD (Quality of Life in Alzheimer's Disease - for both patient and caregiver views) ZBI (Zarit Burden Interview - outcome variable) Multivariate regression found that patient HRQoL (PDQ-39) and spiritual well-being (FACIT-SP Faith) were key contributors to caregiver burden. Caregiver burden was significantly associated with: Caregiver anxiety and depression (HADS) Caregiver-rated QOL for the patient (QOL-AD Caregiver Reported) Study site (notably lower burden in Canadian cohort)

Mahony, S. O., Blank, A., Simpson, J., Persaud, J., Huvane, B., McAllen, S., Davitt, M., McHugh, M., Hutcheson, A., Karakas, S., Higgins, P., Selwyn, P., Mahony, S. O., Blank, A., Simpson, J., Persaud, J., Huvane, B., McAllen, S., Davitt, M., & McHugh, M. (2008). Preliminary report of a palliative care and case management project in an emergency department for chronically ill elderly patients. Journal of Urban Health, 85(3), 443-451. https://doi.org/10.1007/s11524-008-9257-z	Other: Observational study	Palliative care patients; Caregivers; Healthcare professionals	291	Hospital; Other: United States	Prognosis; Symptom management; Quality of life; Functional status; Caregiver support ; Psychological support	Tools used included: MSAS PPS Missoula-VITAS Quality of Life Index (MVQoLI) OASIS (for ADLs) SIGNET model (risk screening) 70% of patients had PPS $\leq$ 60%, indicating life expectancy < 180 days. Top symptoms: lack of energy (81.1%), pain (66.3%), shortness of breath (59.1%). Enrollment in hospice increased to 30%, and median survival for decedents was 50 days. PPS and dyspnea were significant predictors of decreased survival time ($p < 0.05$). Hospice and homecare referrals were strongly associated with functional status and symptom burden.
Maldonado, J., Arraras, I., Iriarte, M., Otano, C., Carvajal, A., & Centeno, C. (2024). Unlocking the Hidden Dimensions of Cancer Care: Cross-Cultural Adaptation and Feasibility Study of ESAS-FS, Assessing Spiritual Pain and Financial Distress in a Spanish-speaking Population with	Cross sectional study	Palliative care patients; Caregivers; Healthcare professionals	238 screened; 73 patients met palliative care inclusion criteria	Other: Primary care Brazil	Symptom management; Quality of life; Functional status; Caregiver support ; Psychological support	Tools used: Palliative Care Screening Tool (PCST) ESAS ESAS Palliative Care Outcome Scale (POS) 71% of patients scored $\leq$ 50 on KPS; 70% had diagnosis >2 years; most had neurological or cardiovascular diseases. Mean symptom score on ESAS was low overall, but pain, fatigue, and depression were commonly reported. POS mean score: 14.16 (moderate); greatest unmet needs were in

Advanced Cancer. Journal of Pain & Symptom Management, 67(4), 290-295. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2023.12.015						information for families and psychosocial aspects. Only 28.5% had homecare, and only 10% had access to physiotherapy; none accessed psychological services. 79% received medications; 59% received professional orientation or consult in past month. Most patients were cared for by female informal carers, primarily spouses or children.
Maldonado, J., Arraras, I., Iriarte, M., Otano, C., Carvajal, A., & Centeno, C. (2024). Unlocking the Hidden Dimensions of Cancer Care: Cross-Cultural Adaptation and Feasibility Study of ESAS-FS, Assessing Spiritual Pain and Financial Distress in a Spanish-speaking Population with Advanced Cancer. Journal of Pain & Symptom Management, 67(4), 290-295. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2023.12.015	Cross sectional study	Palliative care patients; Healthcare professionals	134	Hospital; Other: Spain	Symptom management; Quality of life; Psychological support ; Spiritual support ; Other: Financial distress	The ESAS-FS is an expanded 12-item version of the ESAS that includes “spiritual pain” and “financial distress.” 70% of patients experienced spiritual pain (mean 2.9/10); 49% reported financial distress (mean 2.2/10). Spiritual pain significantly correlated with pain, fatigue, drowsiness, appetite, dyspnea, depression, anxiety, sleep issues, and well-being. Financial distress significantly correlated with drowsiness, dyspnea, depression, and anxiety. The two new items were well accepted: 80% of patients found them relevant; 91% found the terms appropriate. Cronbach’s alpha = 0.85 indicates good internal consistency; I-CVI =

						0.84 reflects strong content validity from professionals.
Mayank, G., Ankita, K., Joshy, L. E., Singh, S., Lal, B., Choudhary, S., Marcus, S., Grewal, A., Goyal, L. D., & Kakkar, R. (2024). Community-based palliative care needs and barriers to access among cancer patients in rural north India: a Participatory action research. BMC Palliative Care, 23(1), 1-17. https://doi.org/10.1186/s12904-024-01572-7	Qualitative research	Palliative care patients; Caregivers; Healthcare professionals	256 cancer patients 526 stakeholders (including CHWs, doctors, caregivers)	Hospital; Home-based care; Other: India	Symptom management; Quality of life; Functional status; Caregiver support ; Psychological support	SPICT-4ALL was used to assess need for PC; all 256 patients met general and/or cancer-specific criteria. ESAS was used to assess symptom severity; 56.6% had ≥ 1 moderate-severe symptom. Most common moderate-severe symptoms: tiredness, pain, appetite loss. Triaged patients into high (13%), medium (48%), and low (39%) priority for PC based on ESAS scores.
McGee, S. F., Tinghua, Z., Jonker, H., Laurie, S. A., Goss, G., Nicholas, G., Albaimani, K., Wheatley-Price, P., & Zhang, T. (2018). The Impact of Baseline Edmonton Symptom Assessment Scale Scores on Treatment and Survival in Patients With Advanced Non-small-cell Lung Cancer. Clinical Lung Cancer, 19(1), e91-e99. https://doi.org/10.1016/j.clc.2017.05.018	Cohort study	Palliative care patients	461	Hospital; Other: Canada	Prognosis; Symptom management; Quality of life; Functional status	ESAS total symptom burden scores strongly correlated with ECOG performance status ($R = 0.48$; $p < .0001$). Patients with higher symptom burden (ESAS ≥ 31) were: Less likely to receive systemic chemotherapy (43% vs. 66%) Had significantly lower overall survival (median OS: 5.5 vs. 9.9 months) Among those receiving chemotherapy, symptom burden still affected OS (9.7 vs. 11.7 months).

McMillan, S. C., & Rivera, H. R., Jr. (2009). The relationship between depressive symptoms and symptom distress in patients with cancer newly admitted to hospice home care. Journal of Hospice & Palliative Nursing, 11(1), 41-51. https://doi.org/10.1097/njh.0b013e3181917d7a	Cross sectional study	Palliative care patients	275	Home-based care; Other: United States	Symptom management; Quality of life; Psychological support	Used a shortened version of the MSAS and CES-D (depression). Patients reported an average of 10 symptoms; most common: fatigue, pain, dry mouth, drowsiness, loss of appetite, shortness of breath. Significant moderate correlation between depressive symptoms and total symptom distress ($r = 0.49$, $p < .001$). 38% of patients had CES-D scores ≥ 4 , indicating potential clinical depression. High distress symptoms included diarrhea, fatigue, constipation, pain, and shortness of breath.
McMillan, S. C., Dunbar, S. B., & Zhang, W. (2008). Validation of the Hospice Quality-of-Life Index and the Constipation Assessment Scale in end-stage cardiac disease patients in hospice care. Journal of Hospice & Palliative Nursing, 10(2), 106-117. https://doi.org/10.1097/01.njh.0000306736.08850.38	Other: Quantitative	Palliative care patients	30	Home-based care; Other: United States	Symptom management; Quality of life; Functional status	Hospice Quality-of-Life Index (HQLI) showed: Validity through significant negative correlation with MSAS-HF ($r = -0.41$, $p = .025$), indicating that as symptom distress increased, QOL decreased. Cronbach's $\alpha = 0.78$ Constipation Assessment Scale (CAS) showed: Significant correlations with HQLI constipation item ($r = -0.49$), MSAS constipation intensity ($r = .72$), and MSAS global distress ($r = .64$) Cronbach's $\alpha = 0.71$
McPherson, C. J., Wilson, K. G., Lobchuk, M. M., & Brajtman, S. (2008). Family caregivers'	Cross sectional study	Palliative care patients; Caregivers	66	Home-based care; Other: Canada	Symptom management; Social support;	Used the MSAS for both patients and family caregivers (proxy version). Agreement between patients and caregivers

assessment of symptoms in patients with advanced cancer: concordance with patients and factors affecting accuracy. Journal of Pain & Symptom Management, 35(1), 70-82. https://doi.org/10.1016/j.jpainsymman.2007.02.038					Psychological support	was variable, with better agreement for observable symptoms (e.g. vomiting, nausea) than for psychological symptoms (e.g. sadness, worrying). Caregivers tended to overestimate symptom severity/distress, especially for psychological symptoms. Concordance was influenced by: Caregiver mood and burden Male caregivers showed lower agreement Patient's perceived burden slightly influenced accuracy Perspective-taking (as rated by patients) was weakly related to improved agreement on a few symptoms (e.g., nausea, sadness)
Mercadante, S., Adile, C., Ferrera, P., & Casuccio, A. (2017). Characteristics of patients with an unplanned admission to an acute palliative care unit. Internal & Emergency Medicine, 12(5), 587-592. https://doi.org/10.1007/s11739-017-1619-7	Cohort study	Palliative care patients	314	Hospital; Other: Italy	Symptom management; Quality of life; Functional status	ESAS and Memorial Delirium Assessment Scale (MDAS) were used at admission and discharge. Both planned and unplanned (UP) admissions showed significant symptom improvement during hospital stay. No statistically significant differences were found in symptom burden (ESAS scores) between planned and unplanned admissions. Opioid dose at discharge was higher for UP-admissions (134 mg vs 92 mg oral morphine equivalent, $p = 0.036$). UP-admissions had:

						Longer hospital stays (8.5 vs 6.6 days, $p = 0.032$) Higher in-hospital death rate ($p = 0.025$) Less likely to be discharged home ($p = 0.031$)
Mercadante, S., Adile, C., Ferrera, P., & Casuccio, A. (2017). The effects of alcoholism and smoking on advanced cancer patients admitted to an acute supportive/palliative care unit. Supportive Care in Cancer, 25(7), 2147-2153. https://doi.org/10.1007/s00520-017-3620-0	Cohort study	Palliative care patients	314	Hospital; Other: Italy	Symptom management; Quality of life; Functional status; Psychological support	Used ESAS to measure symptom burden and CAGE for alcoholism screening. Higher symptom scores (nausea, dyspnea, and well-being) were reported in CAGE-positive patients. No significant correlation was found between smoking or alcoholism and overall opioid dose, escalation, or ESAS global score. Smoking status and alcoholism did not significantly impact clinical outcomes or response to palliative interventions. ESAS helped monitor physical/psychological symptoms at admission and discharge; some differences (e.g., drowsiness at T0 in NS-patients) were noted.
Mercadante, S., Adile, C., Ferrera, P., Cortegiani, A., & Casuccio, A. (2019). Symptom Expression in Patients with Advanced Cancer Admitted to an Acute Supportive/Palliative Care Unit With and	Cohort study	Palliative care patients	272	Hospital; Other: Italy	Symptom management; Functional status; Psychological support ; Other: Cognitive status	Used Memorial Delirium Assessment Scale (MDAS) and ESAS. 30.5% had delirium at admission ($MDAS \geq 7$); decreased to 25.6% after 7 days of palliative care. Delirium correlated with amplified symptom expression (e.g., pain, depression, poor well-being).

Without Delirium. Oncologist, 24(6), e358-e364. https://doi.org/10.1634/thconcologist.2018-0244						Patients without delirium showed significant improvement in all ESAS items after one week. Those with persistent delirium had less symptom reduction, but those who recovered (MDAS <7) improved across multiple symptoms (pain, depression, insomnia, well-being). Patients who developed delirium during admission had worse symptom burden than those delirium-free throughout.
Mercadante, S., Adile, C., Ferrera, P., Cortegiani, A., & Casuccio, A. (2017). Delirium assessed by Memorial Delirium Assessment Scale in advanced cancer patients admitted to an acute palliative/supportive care unit. Current Medical Research & Opinion, 33(7), 1303-1308. https://doi.org/10.1080/03007995.2017.1315332	Cohort study	Palliative care patients	314	Hospital; Other: Italy	Symptom management; Quality of life; Functional status; Psychological support	Memorial Delirium Assessment Scale (MDAS) identified delirium in: 25.3% of patients (score 7-12) 8.2% with full delirium (score ≥13) Total 33.5% with MDAS ≥7 Delirium was significantly associated with: Higher age, male gender, low KPS Low education levels Poor disease awareness End-of-life care admissions Longer hospital stay and death ESAS scores improved in all delirium groups, but MDAS scores only slightly decreased, not significantly in severe delirium group. Most patients shifted to lower MDAS categories by discharge, but 6 patients worsened.

Mercadante, S., Adile, C., Ricci, M., Maltoni, M., Bonanno, G., & Casuccio, A. (2022). The Role of Religiosity in Symptom Expression of Advanced Cancer Patients. American Journal of Hospice & Palliative Medicine, 39(6), 705-709. https://doi.org/10.1177/10499091211041349	Cross sectional study	Palliative care patients	283	Hospital; Other: Italy	Symptom management; Psychological support ; Other: Not directly designed to assess a specific tool's utility but examines how religiosity influences symptom expression using validated tools	Tools used: ESAS and HADS. Religiosity was not correlated with most ESAS physical items, but was associated with higher anxiety. Female gender, older age, lower KPS, and higher anxiety (HADS-A) scores were all independently correlated with: Increased religiosity Greater frequency of prayer More significant role of religion in life Drowsiness (an ESAS item) was also significantly associated with increased frequency of prayer. No significant correlation between religious belief and depression or other ESAS symptom items.
Mercadante, S., Adile, C., Tirelli, W., Ferrera, P., Penco, I., & Casuccio, A. (2021). Barriers and Adherence to Pain Management in Advanced Cancer Patients. Pain Practice, 21(4), 388-393. https://doi.org/10.1111/papr.12965	Cross sectional study	Palliative care patients	113	Hospital; Other: Italy	Symptom management; Functional status; Psychological support ; Other: Pain-related adherence and beliefs	Tools used: ESAS, HADS, Brief Pain Inventory (BPI), Barriers Questionnaire II (BQ-II), and Medication Adherence Rating Scale (MARS). Depression (HADS-D) was significantly associated with higher barriers to pain management (BQ-II). Poor adherence to medication (especially opioids) was mostly manifested through negative side effects and psychotropic attitudes (e.g., "feeling tired or like a zombie"). Most frequent nonadherence symptom: "Medication makes me feel tired and sluggish" (42.3%). Poor

						adherence was more common in females and was significantly associated with pain and depression (from ESAS and HADS). BQ-II scores were also significantly correlated with ESAS total, weakness, and poor well-being.
Mercadante, S., Giuliana, F., Bellingardo, R., Albegiani, G., Di Silvestre, G., & Casuccio, A. (2022). Pattern and characteristics of patients admitted to a hospice connected with an acute palliative care unit in a comprehensive cancer center. Supportive Care in Cancer, 30(3), 2811-2819. https://doi.org/10.1007/s00520-021-06685-w	Cohort study	Palliative care patients	117	Hospital; Other: Italy	Symptom management; Quality of life; Functional status; Psychological support ; Other: Cognitive assessment	Used ESAS at multiple timepoints (T0, T7, T14, T-end). Also used Memorial Delirium Assessment Scale (MDAS) and CAGE (alcohol/drug use). Total ESAS scores were significantly lower at admission in patients referred from ASPCU (better symptom control). Significant symptom improvement (pain, insomnia, weakness, well-being) over hospice stay. Cognitive deterioration (MDAS >13) limited ESAS usability in 64% of patients nearing death. Palliative sedation was required in 10.1% of cases, mainly for delirium and existential distress. 17% of patients died within 48 hours of hospice admission, highlighting late referrals.
Mercadante, S., Masedu, F., Balzani, I., De Giovanni, D., Montanari, L., Pittureri, C., Bertè, R., Russo, D., Ursini, L., Marinangeli, F., & Aielli,	Cohort study	Palliative care patients	263	Hospital; Hospice; Other: Italy	Symptom management; Functional status; Psychological support	Tools used: Memorial Delirium Assessment Scale (MDAS) and ESAS. Prevalence of delirium (MDAS ≥7): At admission (T0): 41.8% After 1 week (T7): 67.3% Severe delirium (MDAS

F. (2018). Prevalence of delirium in advanced cancer patients in home care and hospice and outcomes after 1 week of palliative care. Supportive Care in Cancer, 26(3), 913-919. https://doi.org/10.1007/s00520-017-3910-6						≥13): T0: 19% T7: 65.8% Most common associated risk factors: age, dehydration, cachexia, recent chemotherapy, drowsiness, dyspnea. Delirium worsened after 1 week of palliative care in a large proportion of patients (mean MDAS increase = 2.2). Opioid use and corticosteroids were associated with less delirium progression, while worsening drowsiness was linked to increased MDAS.
Mercadante, S., Masedu, F., Maltoni, M., De Giovanni, D., Montanari, L., Pittureri, C., Bertè, R., Russo, D., Ursini, L., Marinangeli, F., & Aielli, F. (2019). Symptom expression in advanced cancer patients admitted to hospice or home care with and without delirium. Internal & Emergency Medicine, 14(4), 515-520. https://doi.org/10.1007/s11739-018-1969-9	Cohort study	Palliative care patients	263	Home-based care; Hospice; Other: Italy	Symptom management; Functional status; Psychological support	Tools used: Memorial Delirium Assessment Scale (MDAS) and ESAS. Delirium (MDAS ≥7) was present in: 41.8% at admission (T0) 63.5% after 1 week (T7) Delirium was more common in: Older patients Males Those with lower Karnofsky scores Home care recipients ESAS showed significantly higher scores for: Weakness, nausea, drowsiness, appetite loss, and poor well-being in delirious patients After 1 week: Weakness, poor appetite, and poor well-being remained significantly worse in those with delirium Unexpectedly, pain was lower in patients with delirium at T7 Patients transitioning from

						delirium to non-delirium showed improvements in weakness, depression, and appetite Those who developed delirium at T7 reported increased depression and poor appetite
Mercadante, S., Masedu, F., Maltoni, M., Giovanni, D. D., Montanari, L., Pittureri, C., Bertè, R., Ursini, L., Marinangeli, F., & Aielli, F. (2018). The prevalence of constipation at admission and after 1 week of palliative care: a multi-center study. Current Medical Research & Opinion, 34(7), 1187-1192. https://doi.org/10.1080/03007995.2017.1358702	Cohort study	Palliative care patients	246 patients screened 190 patients completed both T0 and T7 assessments	Home-based care; Hospice; Other: Italy	Symptom management; Functional status; Psychological support	Tools used: Bowel Function Index (BFI), ESAS, and Memorial Delirium Assessment Scale (MDAS). 66.3% had constipation (BFI >28) at admission. Mean BFI decreased significantly from 42.4 to 35.7 over 1 week (p = .000). Those initially constipated improved significantly (mean BFI change: -17.9). Those not constipated (BFI ≤28) worsened significantly (mean BFI change: +17.1); 56.6% became constipated. Dehydration and benzodiazepine use were independently associated with higher BFI scores. Increased laxative use at T7 corresponded with symptom improvement in initially constipated patients.
Mercadante, S., Porzio, G., Caruselli, A., Aielli, F., Adile, C., Girelli, N., & Casuccio, A. (2015). The frequency of alcoholism in patients with advanced cancer	Cross sectional study	Palliative care patients	443 patients interviewed	Hospital; Home-based care; Other: Italy	Symptom management; Psychological support	Tool used: CAGE questionnaire, a validated alcoholism screening tool. 4.06% of patients were CAGE positive (lower than previous North American studies). CAGE-positive patients were significantly

admitted to an acute palliative care unit and a home care program. <i>Journal of Pain & Symptom Management</i>, 49(2), 254-257. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2014.06.005						younger and more likely to be male. Informal interviews confirmed a strong correlation with alcohol misuse. No significant difference in alcoholism prevalence between PCU and HCP. CAGE positivity was not associated with cancer diagnosis or performance status. CAGE has high sensitivity and specificity (>90%) even in advanced disease.
Milne, D., Aranda, S., Jefford, M., & Schofield, P. (2013). Development and validation of a measurement tool to assess perceptions of palliative care. <i>Psycho-Oncology</i>, 22(4), 940-946. https://doi.org/10.1002/po.3071	Qualitative research	Palliative care patients	223	Hospital; Other: Australia	Functional status; Social support; Psychological support ; Other: Perceptions of palliative care	Developed the Perceptions of Palliative Care Instrument (PPCI), a 37-item self-report tool. PPCI was psychometrically validated and showed: Four domains: Emotional reactions, Cognitive reactions, Palliative care needs, Perceptions of burden. Eight subscales: Negative feelings, Positive feelings, Hopeless, Supported, Disrupted, Emotional needs, Practical needs, Perceived burden. Strong internal consistency across domains (Cronbach's $\alpha > 0.76$) and intraclass correlation for test-retest reliability (ICC range: 0.66-0.88). Convergent validity established via correlations with: Palliative Care Outcome Scale (POS): emotional needs ($r = 0.53$), pain ($r = 0.35$) ESAS:

						distress score correlated with PPCI emotional needs ($r = 0.53$), total needs ($r = 0.59$) Distress Thermometer (DT): significant correlation with perceived burden ($r = 0.50$)
Milton, L., Behroozian, T., Li, N., Zhang, L., Lou, J., Karam, I., Wronski, M., McKenzie, E., Mawdsley, G., Razvi, Y., Chow, E., & Ruschin, M. (2022). Symptom Burden Associated With Radiation Dermatitis in Breast Cancer Patients Undergoing Radiotherapy. Clinical Breast Cancer, 22(3), e387-e398. https://doi.org/https://dx.doi.org/10.1016/j.clbc.2021.10.005	Cross sectional study	Palliative care patients	857	Hospital; Other: Canada	Symptom management; Quality of life	Used ESAS. ESAS was useful in capturing fatigue, anxiety, and wellbeing, but showed no significant correlation with radiation dermatitis (RD) severity, including erythema, edema, desquamation, and pain. Oral analgesic use was associated with increased scores in ESAS fatigue, drowsiness, pain, nausea, lack of appetite, SOB, and wellbeing. Dressing use was associated with anxiety. ESAS did not reflect RD symptoms, despite their clinical relevance and prevalence.
Mitchell, C. J., Althouse, A., Feldman, R., Arnold, R. M., Rosenzweig, M., Smith, K., Chu, E., White, D., Smith, T., & Schenker, Y. (2023). Symptom Burden and Shared Care Planning in an Oncology Nurse-Led Primary Palliative Care Intervention (CONNECT) for Patients	Randomised controlled trial	Palliative care patients	235	Other: Outpatient community oncology clinics United States	Symptom management; Quality of life	Most prevalent symptoms reported were tiredness (86% of visits), low sense of wellbeing (78%), and poor appetite (69%). Most severe symptoms (ESAS ≥ 4): tiredness (55% of visits), poor appetite (42%), and low sense of wellbeing (38%). Symptoms were addressed in Shared Care Plans (SCPs) less often than their prevalence would suggest (e.g., tiredness

with Advanced Cancer. Journal of Palliative Medicine, 26(5), 667-673. https://doi.org/10.1089/jpm.2022.0277						addressed 35% of time, low wellbeing only 6%). Treatment plans focused more often on nonpharmaceutical interventions (70%) than pharmaceutical ones (30%). Pain and nausea were more likely to be addressed with medications, while tiredness, poor appetite, and wellbeing were often targeted with nonpharmaceutical strategies.
Mitera, G., Zhang, L., Sahgal, A., Barnes, E., Tsao, M., Danjoux, C., Holden, L., & Chow, E. (2012). A Survey of Expectations and Understanding of Palliative Radiotherapy from Patients with Advanced Cancer. Clinical Oncology, 24(2), 134-138. https://doi.org/10.1016/j.clon.2011.09.001	Cross sectional study	Palliative care patients	100	Hospital; Other: Canada	Symptom management; Functional status; Psychological support	Used ESAS and a custom 11-item expectations/understanding survey pre- and post-consultation. 23-25% believed their cancer was curable both before and after consultation. 15-17% believed radiotherapy would cure their cancer; 40-45% believed it would prolong life. Significant improvements were noted after consultation in: Understanding radiotherapy was for symptom relief (from 38% to 52%, $P = 0.0094$) Reduced concerns about treatment efficacy and side effects ($P < 0.0001$) Patient satisfaction with information from the radiation team was 96% post-consultation. No demographic or ESAS variable (e.g., pain, anxiety, appetite) predicted change in perception.

Miyashita, M., Yasuda, M., Baba, R., Iwase, S., Teramoto, R., Nakagawa, K., Kizawa, Y., & Shima, Y. (2010). Inter-rater reliability of proxy simple symptom assessment scale between physician and nurse: a hospital-based palliative care team setting. European Journal of Cancer Care, 19(1), 124-130. https://doi.org/10.1111/j.1365-2354.2008.00967.x	Cross sectional study	Palliative care patients	120	Hospital; Other: Japan	Symptom management	Inter-rater reliability was high for most symptoms: intra-class correlation coefficients (ICCs) ranged from 0.02-0.89 at referral and 0.20-0.92 at 7 days. Symptoms like delirium, nausea, vomiting, and abdominal swelling showed "almost perfect" reliability (ICC >0.81). Symptoms like pain, numbness, dyspnea, constipation, and insomnia had "substantial" reliability (ICC 0.61-0.80). Symptoms like fatigue, appetite loss, anxiety, and drowsiness had "moderate" reliability (ICC 0.41-0.60). Fever and sensation of thirst showed lower reliability (ICC <0.40). Overall, 18 out of 20 symptoms achieved at least moderate reliability. Allowing a 1 score difference, concordance rates were very high (71%-100%).
Monsen, R. E., Lerdal, A., Nordgarden, H., Gay, C. L., & Herlofson, B. B. (2024). A comparison of the prevalence of dry mouth and other symptoms using two different versions of the Edmonton Symptom Assessment System on an inpatient palliative care	Cross sectional study	Palliative care patients	340 184 patients (2013, ESAS-m version) 156 patients (2017, ESAS-r version)	Hospital; Other: Norway	Symptom management; Quality of life	Compared two versions of ESAS: ESAS-m (modified version): included dry mouth, constipation, and sleep problems explicitly. ESAS-r (revised version): allowed only one "Other problem" to be added by patients. Dry mouth was reported by 83% (ESAS-m) vs. 3% (ESAS-r). Constipation was reported by 73% (ESAS-m) vs.

unit. BMC Palliative Care, 23(1), 75. https://doi.org/https://dx.doi.org/10.1186/s12904-024-01405-7						15% (ESAS-r). Sleep problems were reported by 71% (ESAS-m) vs. <1% (ESAS-r). The severity scores for these symptoms were higher when added manually in ESAS-r, but not statistically significant due to small sample sizes. Demonstrated that symptoms not explicitly listed are significantly under-reported, even when important to the patient.
Morita, T., Kuriya, M., Miyashita, M., Sato, K., Eguchi, K., & Akechi, T. (2014). Symptom burden and achievement of good death of elderly cancer patients [Comparative Study Research Support, Non-U.S. Gov't]. Journal of Palliative Medicine, 17(8), 887-893. https://doi.org/https://dx.doi.org/10.1089/jpm.2013.0625	Other: Secondary analysis of three large observational studies	Palliative care patients	7,449 cancer outpatients receiving chemotherapy 1,716 outpatients with metastatic cancer 1,751 deceased terminally ill cancer patients (assessed by bereaved family members)	Hospital; Home-based care; Other: Japan	Symptom management; Quality of life; Social support; Psychological support	Older patients had lower levels of nausea and pain across various settings. Older patients experienced higher levels of dyspnea, fatigue, emotional distress, and unmet needs (information and decision making support). In metastatic outpatients, older adults had lower scores in "maintaining hope and pleasure," "good relationship with family," and "independence." Proxy reports for terminally ill patients indicated lower reported independence but lower pain, physical, and psychological discomfort in older adults. Older patients felt less burden to others compared to younger patients.

Mularski, R. A., Mittman, B., Haupt, E., Wang, S., Scholle, S., McMullen, C., Henry, M., Shen, E., Nguyen, H. Q., Nguyen, H., Padilla, A., Macias, M., Lee, J., Osuji, T., Estrada, K., Biddle, R., Batz, B., Disney, J., Martinez, T., & Roxas, R. (2022). Performance of Patient-Reported Outcome Measures in a Large Pragmatic Trial of Home-Based Palliative Care (HomePal): Methodological and Practical Considerations for Embedded Patient-Centered Design. Journal of Palliative Medicine, 25(4), 620-627. https://doi.org/10.1089/jpm.2021.0164	Randomised controlled trial	Palliative care patients	3533	Home-based care; Other: US	Symptom management; Quality of life	ESAS scores collected by research staff were significantly higher (more symptom burden) than those collected by HBPC clinical nurses (difference of about 10 points). Proxy-assisted or proxy-completed ESAS scores were higher than patient-completed scores. Internal consistency of ESAS (Cronbach's alpha) was good (~0.75 across groups). PROMIS-10 Physical Health component had poor responsiveness and was less reliable for palliative populations. There were systematic differences between research staff and clinical collection of symptom data that persisted over time.
Nakajima, N. (2022). Palliative Care Outcome Scale Assessment for Cancer Patients Eligible for Palliative Care: Perspectives on the Relationship between Patient-Reported Outcome and Objective Assessments. Current	Cross sectional study	Palliative care patients	102	Hospital; Other: Japan	Symptom management; Quality of life; Functional status; Psychological support	Compared the STAS-J (peer-only) and IPOS-J (combined peer + patient-reported outcome tool). Agreement rate between STAS-J and IPOS-J (peer evaluations) for intervention categories was 97.3%. Agreement between peer and patient IPOS-J evaluations was 83.6%. Most divergence was

Oncology, 29(10), 7140-7147. https://doi.org/https://dx.doi.org/10.3390/curroncol29100561						seen in the items: “sufficient information by physicians” and “practical problems,” indicating patients may perceive unmet needs even if clinicians do not. Interventions were implemented when patient ratings indicated need and peer ratings did not. More than 70% of patients who had these interventions were reassessed as needing no further intervention after one week.
Nekolaichuk, C., Huot, A., Gratton, V., Bush, S. H., Tarumi, Y., & Watanabe, S. M. (2017). Development of a French Version of the Edmonton Symptom Assessment System-Revised: A Pilot Study of Palliative Care Patients' Perspectives. Journal of Palliative Medicine, 20(9), 966-976. https://doi.org/10.1089/jpm.2016.0510	Other: Mixed-methods (qualitative interviews + quantitative symptom ratings)	Palliative care patients	15	Home-based care; Other: Canada	Symptom management; Other: Patient-reported outcome (PRO) validation Cultural adaptation of an existing tool	Developed a French version of the ESAS-r using a five-step standardized translation protocol. Participants completed the French ESAS-r and provided structured feedback. Based on feedback, four symptoms were reworded for clarity: Drowsiness: “somnia” lacked clarity - added descriptors “se sentir très éveillé/très endormi” Nausea: “envie de vomir” used instead of “nausée” for comprehension Lack of appetite: positive phrasing used (e.g., “très bon appétit”) Shortness of breath: added “manquer de souffle” for clarity Three other symptoms (depression, anxiety, well-being) were hard to rate but not due to translation. Final version was

						rated as easy to understand and complete by most participants.
Nguyen, J., Chow, E., Zeng, L., Zhang, L., Culleton, S., Holden, L., Mitera, G., Tsao, M., Barnes, E., Danjoux, C., & Sahgal, A. (2011). Palliative response and functional interference outcomes using the Brief Pain Inventory for spinal bony metastases treated with conventional radiotherapy [Clinical Trial Research Support, Non-U.S. Gov't]. Clinical Oncology (Royal College of Radiologists), 23(7), 485-491. https://doi.org/https://dx.doi.org/10.1016/j.clon.2011.01.507	Cohort study	Palliative care patients	109	Hospital; Other: Canada	Symptom management; Functional status	Pain and all seven BPI functional interference scores (e.g., general activity, mood, walking ability) significantly decreased over 3 months post-radiotherapy ($P < 0.0001$). 64% of patients achieved a pain response (complete or partial) by 3 months. Pain improvement was associated with significant mood improvement ($P = 0.0031$). Radiotherapy (both single 8 Gy fraction and multiple fraction regimens) was effective, and location within the vertebral column (cervical, thoracic, lumbar) did not influence outcomes. Breast and prostate cancers had higher response rates compared to lung cancers at 2 months. No other demographic or treatment variable predicted pain response.
Nicholson, C., Davies, J. M., George, R., Smith, B., Pace, V., Harris, L., Ross, J., Noble, J., Hansford, P., & Murtagh, F. E. M. (2018). What are the main palliative care symptoms and concerns of older people with multimorbidity?-a	Cross sectional study	Palliative care patients	815 BCC patients, 1,254 Standard Care (SC) patients 906 BCC episodes of care, 1,603 SC episodes	Hospice; Other: United Kingdom	Symptom management; Functional status; Social support; Psychological support	Tools used: IPOS Australia-modified Karnofsky Performance Status (AKPS) Phase of Illness (POI) Symptom burden at first contact was similar between older people with multimorbidity (BCC group) and SC patients, despite differences in age, diagnosis, and setting. BCC patients had:

comparative cross-sectional study using routinely collected Phase of Illness, Australia-modified Karnofsky Performance Status and Integrated Palliative Care Outcome Scale data [Comparative Study]. <i>Annals of Palliative Medicine</i> , 7(Suppl 3), S164-S175. https://doi.org/https://dx.doi.org/10.21037/apm.2018.06.07						Lower AKPS scores (median 40 vs. 50) Longer episodes of care (median 56 vs. 41 days) More concerns with mobility Fewer concerns with pain, nausea, vomiting, anxiety, and family worry IPOS revealed a cluster of weakness, poor mobility, and appetite in BCC patients, aligning with frailty models. Patterns of symptoms were different over time, not just in overall severity.
Noel, C. W., Forner, D., Chepeha, D. B., Baran, E., Chan, K. K. W., Parmar, A., Husain, Z., Karam, I., Hallet, J., Coburn, N. G., & Eskander, A. (2021). The Edmonton Symptom Assessment System: A narrative review of a standardized symptom assessment tool in head and neck oncology [Research Support, Non-U.S. Gov't Review]. <i>Oral Oncology</i> , 123, 105595. https://doi.org/https://dx.doi.org/10.1016/j.oraloncology.2021.105595	Other: Narrative review	Palliative care patients	Not applicable (review)	Hospital; Other: Canada	Prognosis; Symptom management; Quality of life; Functional status	ESAS-r is reliable and valid for use in cancer patients, including head and neck cancer patients. ESAS-r scores are strongly predictive of emergency department visits and unplanned hospitalisations. In head and neck cancer, ESAS-r can discriminate between high and low symptom burden and is responsive to treatment changes over time. The minimal clinically important difference (MCID) for symptom change is 1 point on the ESAS-r scale. Head and neck cancer patients experience symptom burdens (especially dyspnea, fatigue, depression, swallowing difficulties) that may be partly

						but not completely captured by ESAS-r.
O'Brien, H., Kiely, F., Barry, A., & Meaney, S. (2019). Cross-sectional examination of extrapyramidal side effects in a specialist palliative care inpatient unit. BMJ supportive & palliative care, 9(3), 271-273. https://doi.org/https://dx.doi.org/10.1136/bmjspcare-2018-001504	Cross sectional study	Palliative care patients	16	Hospital; Other: Ireland	Symptom management; Functional status	Tools used: Modified Simpson-Angus Scale (MSAS) Barnes Akathisia Rating Scale (BARS) MSAS Results: 50% of patients scored <3 (normal) 44% scored 3-5 (minimal movement disorder) 6% scored 6-11 (clinically significant movement disorder) BARS Results: 94% scored 0/5 (no akathisia) 6% scored 1/5 (questionable akathisia) 12.5% were physically able to complete the BARS standing component. EPSE-related medication use: 66% were on at least one medication associated with EPSEs 25% were on two or more such medications Notably, some patients who scored positive for EPSE were not on EPSE-related medications, indicating possible under-recognised causes.
O'Mahony, S., Nathan, S., Mohajer, R., Bonomi, P., Batus, M., Fidler, M. J., Wells, K., Kern, N., Sims, S., & Amin, D. (2016). Survival Prediction in Ambulatory Patients With Stage III/IV Non-Small Cell	Cohort study	Palliative care patients	62	Hospital; Other: United States	Prognosis; Symptom management; Functional status	Tools evaluated: PPS Lung Cancer Symptom Scale (LCSS) Eastern Cooperative Oncology Group (ECOG) The LCSS was most predictive of survival (HR = 1.25, p = .013). The ECOG was also predictive (HR = 2.12, p = .027). The PPS was not predictive of survival (HR =

Lung Cancer Using the Palliative Performance Scale, ECOG, and Lung Cancer Symptom Scale. American Journal of Hospice & Palliative Medicine, 33(4), 374-380. https://doi.org/https://dx.doi.org/10.1177/1049909115570707						1.02, $p = .49$). Changes in PPS over 1 month did not predict survival. PPS only gained predictive utility when stratified around the median score. Symptom burden (LCSS) was significantly associated with decreased survival, while PPS and ECOG trends were non-linear and less robust.
Oğuz, G., Şenel, G., Koçak, N., & Karaca, Ş. (2021). The Turkish Validity and Reliability Study of Palliative Performance Scale. Asia-Pacific Journal of Oncology Nursing, 8(4), 413-418. https://doi.org/10.4103/apjon.apjon-2111	Cross sectional study	Palliative care patients	280	Hospital; Other: Turkey	Prognosis; Symptom management; Functional status	Turkish version of the Palliative Performance Scale v2 (PPS-TR) was developed using forward-backward translation and expert committee review. Excellent inter-rater and intra-rater reliability: ICCs for inter-rater agreement: Time 1: 0.982 Time 2: 0.991 Intra-rater reliability: Rater 1: 0.984 Rater 2: 0.974 Rater 3: 0.956 Strong positive correlations: PPS-TR and KPS: perfect correlation PPS-TR and Katz ADL: almost perfect correlation ($r = 0.967$) PPS-TR scores varied significantly by setting (inpatient vs outpatient vs emergency), supporting construct validity. Outpatients had significantly higher performance scores, no one scored below 40%. Inpatients and emergency patients had mostly scores below 60%.

Ornstein, K., Wajnberg, A., Kaye-Kauderer, H., Winkel, G., DeCherrie, L., Zhang, M., & Soriano, T. (2013). Reduction in Symptoms for Homebound Patients Receiving Home-Based Primary and Palliative Care. <i>Journal of Palliative Medicine</i>, 16(9), 1048-1054. https://doi.org/10.1089/jpm.2012.0546	Cohort study	Palliative care patients	140	Home-based care; Other: US	Symptom management; Quality of life	Significant reductions were observed in pain, depression, anxiety, and tiredness scores at 3 and 12 weeks after program enrollment. Loss of appetite trended toward significant improvement but reached statistical significance only at 12 weeks. 58% of patients with baseline depression and 45% with baseline tiredness had no symptoms by 3 weeks. Improvements were sustained at 12 weeks for all symptoms. Symptom management success was achieved through interdisciplinary home visits, symptom-focused management, and coordinated care.
Özalp, G. Ş., Uysal, N., Oğuz, G., Koçak, N., Karaca, Ş., & Kadioğulları, N. (2017). Identification of Symptom Clusters in Cancer Patients at Palliative Care Clinic. <i>Asia-Pacific Journal of Oncology Nursing</i>, 4(3), 259-264. https://doi.org/10.4103/apjon.apjon_17_17	Cross sectional study	Palliative care patients	170	Hospital; Other: Turkey	Symptom management; Quality of life; Functional status; Psychological support	Tool used: MSAS - Turkish version (validated). Most common symptoms: Lack of energy (95.4%) Weight loss (91.2%) Lack of appetite (89.4%) Pain (88.2%) Dry mouth (87.6%) Feeling sad, nervous, worrying, irritable (>80%) Five symptom clusters identified through hierarchical cluster analysis: Pain, nervousness, dry mouth, worry, irritability, weight loss Drowsiness, numbness, sleep difficulty, dizziness, constipation, "I do not look like

						myself” Nausea and vomiting Shortness of breath, dysphagia, cough, taste change Bloating, urinary issues, diarrhoea, itching, mouth sores, hair loss, limb swelling, skin changes
Pang, S. M. C., Chan, K., Chung, B. P. M., Lau, K., Leung, E. M. F., Leung, A. W. K., Chan, H. Y. L., & Chan, T. M. F. (2005). Assessing quality of life of patients with advanced chronic obstructive pulmonary disease in the end of life. Journal of Palliative Care, 21(3), 180-187. https://doi.org/10.1177/082585970502100311	Cross sectional study	Palliative care patients	149	Hospital; Other: China	Quality of life; Social support; Psychological support	Developed and validated a culturally specific tool: Quality- of-Life Concerns in the End of Life Questionnaire (QOLC-E). Built upon the McGill Quality of Life Questionnaire (MQOL) and adapted it for advanced COPD and cancer patients in Hong Kong. Factor analysis yielded 7 subscales: Value of life Negative emotions Sense of alienation Physical discomfort Health care concerns Existential distress Food-related concerns Support (added post-hoc from factor 2) Cronbach’s alpha for total scale = 0.87, with subscale reliabilities ranging from 0.57 to 0.83. Moderate to strong correlations with: HADS (psychological subscales) P- ADL & I-ADL (physical functioning) Single Item Scale (SIS) for overall QOL Comparison Between Groups: No significant differences in total QOLC-E scores between COPD and cancer patients. COPD patients experienced

						more physical discomfort but reported higher value of life. Both groups shared similar existential distress and psychosocial concerns, confirming the applicability of QOLC-E beyond cancer.
Park, K. U. (2008). Assessment of change of quality of life in terminally ill patients under cancer pain management using the EORTC Core Quality of Life Questionnaire (QLQ-C30) in a Korean sample [Multicenter Study]. Oncology, 74 Suppl 1, 7-12. https://doi.org/https://dx.doi.org/10.1159/000143212	Cohort study	Palliative care patients	159	Hospital; Other: South Korea	Symptom management; Quality of life; Functional status	Tool used: EORTC QLQ-C30 (Korean version) High internal consistency for most scales: Cronbach's alpha 0.80-0.92 (except cognitive function: 0.52-0.45) 68.1% of patients improved in pain severity after 2 weeks. Statistically significant improvements post-treatment in: Global QOL Pain Fatigue Sleep disturbance Nausea Constipation Emotional functioning Known-group validation with ECOG Performance Status showed significantly lower QOL scores in patients with poorer functional status. Between-group analysis: Those with improved pain had significantly greater improvement in QOL scales compared to those with no change or worsened pain.
Park, S. J., Park, Y., Han, M., Kim, S. H., Hwang, I. C., Woo, G. U., Lee, Y. J., Kim, Y. S., Jho, H. J., & Chang, Y. J. (2024). Validity and reliability of	Other: Observational prospective study	Palliative care patients; Healthcare professionals	147	Hospice; Other: South Korea	Symptom management; Psychological support ; Spiritual support	Korean IPOS was translated and culturally adapted following EORTC and POS guidelines. Psychometric validation showed: Cronbach's alpha: 0.74 (patients), 0.81 (staff) for total

the integrated palliative care outcome scale (IPOS) in Korea: a multicenter study of terminally ill cancer patients [Multicenter Study]. BMC Palliative Care, 23(1), 298. https://doi.org/https://dx.doi.org/10.1186/s12904-024-01630-0						score Test-retest reliability: ICC = 0.722 (IPOS total score) Moderate to strong correlations with: EORTC QLQ-C15-PAL (e.g., pain, fatigue, emotional functioning) FACIT-Sp-12 (e.g., meaning, peace, and faith) Known-group validity: IPOS scores differed significantly across illness phases (stable, unstable, deteriorating) Inter-rater reliability between patients and staff was low-to-moderate, highlighting the need for PROMs.
Paske, J. R. T., DeWitt, S., Hicks, R., Semmens, S., & Vaughan, L. (2021). Palliative Care and Rapid Emergency Screening Tool and the Palliative Performance Scale to Predict Survival of Older Adults Admitted to the Hospital From the Emergency Department. American Journal of Hospice & Palliative Medicine, 38(7), 800-806. https://doi.org/https://dx.doi.org/10.1177/1049909120960713	Cohort study	Palliative care patients	Enrolled: 145 Completed follow-up: 131	Hospital; Other: United States	Prognosis; Functional status	Two tools assessed: Palliative Care and Rapid Emergency Screening (P-CaRES) PPS Kaplan-Meier curves showed significantly lower survival for both P-CaRES positive and PPS 10-50 groups. Older age also independently predicted mortality.
Passos Bezerra, T. P., Xavier Nobre, T. T., dos Santos Pennafort, V. P.,	Other: Integrative review	Palliative care patients	N/A	Hospital; Other: Canada	Prognosis; Symptom management;	A total of 16 instruments were identified, including: ESAS (used in 5 studies) PPS (used in

Vasconcelos da Graça, J. R., Barra, I. P., Mourão Holanda, G. d. O., & Oliveira de Mendonça, A. E. (2024). INSTRUMENTS FOR THE ASSESSMENT OF HOSPITALIZED PATIENTS IN PALLIATIVE CARE: INTEGRATIVE REVIEW. Cogitare Enfermagem, 29, 1-13. https://doi.org/10.1590/ce.v29i0.95031					Quality of life; Functional status; Spiritual support	3 studies) Palliative Care Screening Tool (PCST) (2 studies) KPS (2 studies) Others: BPI, POS, RSCL, RAI-HC, FACIT-Sp-12, CNAT, NAT:PD-C, WHOQOL, Elixhauser index, Lawton & Brody Index, RDRS, 3D-Ticino 2019-nCov Score Tools evaluated dimensions such as: Symptom burden (ESAS, BPI, RSCL) Functionality and mobility (PPS, KPS, Lawton & Brody, RDRS) Spiritual well-being (FACIT-Sp-12) Comorbidities and prognosis (Elixhauser index, 3D-Ticino score) Palliative needs and care planning (POS, PCST, CNAT, NAT:PD-C) PPS and ESAS were the most frequently cited tools for routine assessment of functional and symptom domains in palliative care.
Qian, C. L., Kaslow-Zieve, E. R., Azoba, C. C., Horick, N., Wang, I., Van Seventer, E., Newcomb, R., Cashavelly, B. J., Jackson, V. A., Ryan, D. P., Greer, J. A., El-Jawahri, A., Temel, J. S., & Nipp, R. D. (2022). Associations of patient-	Cohort study	Palliative care patients	1576	Hospital; Other: United States	Symptom management; Functional status; Psychological support	FAMCARE-P (2 items): care satisfaction - symptom treatment speed & coordination Edmonton Symptom Assessment System (ESAS-r): physical & total symptom burden PHQ-4: depression and anxiety PC-PTSD: trauma symptoms High care satisfaction reported overall: 90% satisfied or very satisfied with coordination 89%

reported care satisfaction with symptom burden and healthcare use in hospitalized patients with cancer. Supportive Care in Cancer, 30(5), 4527-4536. https://doi.org/https://dx.doi.org/10.1007/s00520-021-06764-y						satisfied or very satisfied with speed of symptom treatment Correlations: Higher satisfaction was significantly associated with: Lower physical and psychological symptoms (ESAS, PHQ-4, PTSD) Shorter hospital length of stay No significant relationship between care satisfaction and hospital readmission rates.
Qian, Y., Haider, A., Lu, Z., Naqvi, S., Zhuang, A., Nguyen, K., Reddy, A., Arthur, J., Tanco, K., Williams, J., Wu, J., Liu, D., Naberhuis, J., & Bruera, E. (2020). Factors Associated with Improvement in Uncontrolled Cancer Pain without Increasing the Opioid Daily Dose among Patients Seen by an Inpatient Palliative Care Team. Journal of Palliative Medicine, 23(4), 483-488. https://doi.org/10.1089/jpm.2019.0243	Cohort study	Palliative care patients	300	Hospital; Other: US	Symptom management	65% (196/300) of patients achieved clinically improved pain (CIP) after palliative care intervention. Among those, 43% (85/196) achieved CIP without an increase in their opioid (morphine equivalent daily dose - MEDD). CIP without MEDD increase was associated with: More frequent use of adjuvant medication changes (e.g., corticosteroids, neuroleptics). Less opioid rotation. Lower symptom distress scores (SDS) on ESAS. Pain control was achieved through multidimensional strategies beyond opioid escalation.
Quinn, K. L., Shurrab, M., Gitau, K., Kavalieratos, D., Isenberg, S. R., Stall, N. M., Stukel, T. A.,	Cross sectional study	Palliative care patients	149	Hospital; Other: China	Quality of life; Social support; Psychological support	The Quality-of-Life Concerns in the End of Life Questionnaire (QOLC-E) was developed and validated. The tool included 28 items grouped into 8 subscales:

Goldman, R., Horn, D., Cram, P., Detsky, A. S., & Bell, C. M. (2020). Association of Receipt of Palliative Care Interventions With Health Care Use, Quality of Life, and Symptom Burden Among Adults With Chronic Noncancer Illness: A Systematic Review and Meta-analysis. JAMA: Journal of the American Medical Association, 324(14), 1439-1450. https://doi.org/10.1001/jama.2020.14205						Physical discomfort Negative emotions Sense of alienation Existential distress Food-related concerns Support Value of life Healthcare concerns Both COPD and cancer patients shared similar QOL concerns; COPD patients experienced greater physical discomfort, while cancer patients had lower life value scores. Good construct and concurrent validity confirmed via correlations with SIS, P-ADL, I-ADL, and HADS.
Rafaqat, W., Syed, A. R., Ahmed, I. M., Hashmi, S., Jabeen, I., Rajwani, S., Qamar, U., & Waqar, M. A. (2023). Impact of an outpatient palliative care consultation and symptom clusters in terminal patients at a tertiary care center in Pakistan. BMC Palliative Care, 22(1), 1-8. https://doi.org/10.1186/s12904-023-01195-4	Other: Observational study	Palliative care patients	78	Hospital; Other: Pakistan	Symptom management; Quality of life; Functional status; Psychological support ; Other: Effect of outpatient consultation Physical symptom burden	Tools used: ESAS PPS Significant reductions in median scores for: Pain: 5.0 → 2.5 Loss of appetite: 5.0 → 4.0 Depression: 2.0 → 0.0 Anxiety: 1.5 → 0.0 Overall total symptom burden decreased: Median ESAS total score: 25.5 → 20.0 (p < 0.001) Symptom clusters (via PCA): Cluster 1: Anxiety, depression, wellbeing Cluster 2: Nausea, loss of appetite, tiredness, shortness of breath Cluster 3: Drowsiness
Rajala, K., Lehto, J. T., Sutinen, E., Kautiainen, H., Myllärniemi, M., &	Other: Prospective	Palliative care patients	247 initially enrolled, 92	Hospital; Home-based	Symptom management; Quality of life;	Tools used: Modified ESAS Modified Medical Research Council Dyspnea Scale

Saarto, T. (2018). Marked deterioration in the quality of life of patients with idiopathic pulmonary fibrosis during the last two years of life. BMC Pulmonary Medicine, 18(1), N.PAG-N.PAG. https://doi.org/10.1186/s12890-018-0738-x	longitudinal study		followed until death	care; Other: Finland	Functional status; Psychological support ; Other: End-of-life needs	(MMRC) RAND-36 Health Survey Significant declines in HRQOL (Health-Related Quality of Life) occurred up to 24 months before death. Physical functioning, vitality, emotional and social functioning declined markedly ($p < 0.001$). Symptom severity increased near death: Breathlessness (7.1/10) and fatigue (7.0/10) were most prominent. Other elevated symptoms: dry mouth, cough, and pain with movement.
Rantala, H. A., Leivo-Korpela, S., Lehtimäki, L., & Lehto, J. T. (2022). Assessing Symptom Burden and Depression in Subjects With Chronic Respiratory Insufficiency. Journal of Palliative Care, 37(2), 134-141. https://doi.org/10.1177/08258597211049592	Cross sectional study	Palliative care patients	149	Hospital; Other: China	Symptom management; Quality of life; Functional status; Psychological support ; Other: Existential distress Food-related concerns Health care experiences	The QOLC-E was developed based on ethnographic interviews and contains 28 items grouped into 8 subscales: physical discomfort, negative emotions, sense of alienation, existential distress, support, value of life, healthcare concerns, and food-related concerns. Both COPD and cancer patients reported similar QOL concerns. The QOLC-E successfully captured physical, emotional, and existential domains of QOL at the end of life.
Rojas-Concha, L., Arrarras, J. I., Conroy, T., Chalk, T., Guberti, M., Holzner, B., Husson, O., Kulis, D., Shamieh,	Cross sectional study	Palliative care patients	161	Other: Oncology, internal medicine, and palliative	Symptom management; Quality of life; Psychological support ; Other:	WISP allowed patients to report up to three personally significant symptoms or problems. It uncovered issues that standard symptom checklists often miss.

O., Piccinin, C., Puga, M. J., Rohde, G., & Groenvold, M. (2024). Acceptability and usefulness of the EORTC 'Write In three Symptoms/Problems' (WISP): a brief open-ended instrument for symptom assessment in cancer patients. Health & Quality of Life Outcomes, 22(1), 28. https://doi.org/https://dx.doi.org/10.1186/s12955-024-02244-z				care units in hospitals Country Austria, Chile, France, Jordan, Netherlands, Norway, Spain, United Kingdom	Patient-centred care communication	Notably, 60.6% of the reported symptoms were not captured by traditional EORTC QLQ-C15-PAL tools. Patients reported a broad range of concerns, including dry mouth, sleep disturbances, existential distress, and financial worries. The tool demonstrated high acceptability and ease of use across diverse linguistic and cultural contexts.
Rojas-Concha, L., Hansen, M. B., Petersen, M. A., & Groenvold, M. (2020). Content validation of the EORTC QLQ-C15-PAL with advanced cancer patients and health care professionals from palliative care services in Chile. BMC Palliative Care, 19(1), 1-10. https://doi.org/10.1186/s12904-020-00586-1	Cross sectional study	Palliative care patients; Healthcare professionals	83	Hospital; Other: Chile	Symptom management; Functional status; Psychological support ; Other: Appropriateness and relevance of tool content in a Chilean context	The EORTC QLQ-C15-PAL demonstrated strong content validity in the Chilean palliative care setting. Pain, physical functioning, sleeping difficulties, emotional functioning, and fatigue were identified as the most important dimensions. Both patients and HCPs supported the relevance and appropriateness of the included items. Linguistic issues were identified in the dyspnea and constipation items, leading to official revisions. Additional domains such as satisfaction with care, psychological support, and social functioning were suggested by participants.

Rosenberg, J. H., Albrecht, J. S., Fromme, E. K., Noble, B. N., McGregor, J. C., Comer, A. C., & Furuno, J. P. (2013). Antimicrobial Use for Symptom Management in Patients Receiving Hospice and Palliative Care: A Systematic Review. <i>Journal of Palliative Medicine</i>, 16(12), 1568-1574. https://doi.org/10.1089/jpm.2013.0276	Other: Observational study	Palliative care patients	255	Home-based care; Hospice; Other: United States	Symptom management; Other: Infection-related symptom control Decision-making in palliative treatment Impact of antimicrobials on survival and comfort	Patients were given the option to choose between full use, symptomatic use, or no use of antimicrobials. 79.2% chose limited use (symptom relief only) or no antimicrobials. Symptom relief was achieved in most cases of urinary tract infections, but less consistently for respiratory tract, mouth/pharynx, or skin infections. Antimicrobial use did not significantly alter survival or infection-related deaths. Most patients who chose symptomatic or no use cited their poor condition or a desire to avoid life-prolonging interventions.
Rudilla, D., Galiana, L., Oliver, A., & Barreto, P. (2016). Demoralization Scale in Spanish-Speaking Palliative Care Patients. <i>Journal of Pain & Symptom Management</i>, 51(4), 769-775.e761. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2015.11.019	Cross sectional study	Palliative care patients	226	Hospital; Home-based care; Other: Spain	Psychological support ; Other: Existential distress Emotional and spiritual suffering Differentiation between demoralisation and depression	The Spanish adaptation of the Demoralisation Scale (DS) showed good psychometric performance. A five-factor model (excluding item 18) was the best fit for the data. The DS reliably differentiated between anxiety, depression, and demoralisation, with helplessness and dysphoria being uniquely related to demoralisation and not depression. The scale is useful in identifying psychological and existential needs in palliative care.

Sakurai, H., Miyashita, M., Imai, K., Miyamoto, S., Otani, H., Oishi, A., Kizawa, Y., & Matsushima, E. (2019). Validation of the Integrated Palliative care Outcome Scale (IPOS) - Japanese Version [Multicenter Study Observational Study]. Japanese Journal of Clinical Oncology, 49(3), 257-262. https://doi.org/https://dx.doi.org/10.1093/jjco/hyy203	Cross sectional study	Palliative care patients	142	Other: Six palliative care facilities in Japan: outpatient clinics, general wards, and palliative care units Japan	Symptom management; Quality of life; Caregiver support ; Spiritual support ; Other: Communication with care team	The Japanese version of IPOS is a valid and reliable patient-reported outcome measure for cancer palliative care. It showed excellent test-retest reliability (ICC range: 0.522-0.951) and acceptable missing data rates (<3% on all items). IPOS scores were significantly correlated with established measures (EORTC QLQ-C30, FACIT-Sp12, and STAS), demonstrating good criterion validity. Known-group validity was supported by significantly higher scores among patients with worse performance status (ECOG PS $\geq$2).
Salm, H., Doberschütz, F., Hallmann, F., Munzert, P., Rahm, J., Uhlig, S., & Pink, D. (2024). How Do Quality of Life (QoL) and Symptom Burden Evolve in Inpatient Palliative Care (PC) Patients following One Week of Care in a Specialized Palliative Care Unit (PCU)? A Comparison of Two Groups, with One Receiving Specialized Outpatient Palliative Care Prior to Admission.	Other: Observational study	Palliative care patients	103	Hospital	Quality of life; Other: Symptom burden Effect of prior outpatient palliative care on inpatient outcomes	Using the EORTC QLQ-C30 at admission and one week later, significant and clinically meaningful improvements were observed in both groups. Improvements included global QoL, emotional functioning, nausea, vomiting, pain, insomnia, appetite loss, and constipation. No major differences in outcomes were found between patients with or without prior outpatient palliative care.

Cancers, 16(8), 1612. https://doi.org/10.3390/cancers16081612						
Schulman-Green, D., Cherlin, E. J., McCorkle, R., Carlson, M. D. A., Pace, K. B., Neigh, J., Hennessy, M., Johnson-Hurzeler, R., & Bradley, E. H. (2010). Benefits and challenges in use of a standardized symptom assessment instrument in hospice. <i>Journal of Palliative Medicine</i>, 13(2), 155-159. https://doi.org/10.1089/jpm.2009.0245	Qualitative research	Healthcare professionals	24	Hospice; Other: US	Symptom management; Other: Quality of care monitoring	ESAS was brief, easy to administer, and helped quickly identify symptom concerns. Facilitated patient engagement by encouraging direct symptom reporting rather than caregiver proxy. Enabled symptom monitoring over time, identifying trends. Served as a teaching tool for less experienced staff.
Selby, D., Chakraborty, A., Myers, J., Saskin, R., Mazzotta, P., & Gill, A. (2011). High Scores on the Edmonton Symptom Assessment Scale Identify Patients with Self-Defined High Symptom Burden. <i>Journal of Palliative Medicine</i>, 14(12), 1309-1316. https://doi.org/10.1089/jpm.2011.0187	Other: qualitative and quantitative	Palliative care patients	58	Hospital; Other: Canada	Symptom management; Quality of life; Psychological support	Patients with one or more ESAS symptoms scored ≥ 7 were 10 times more likely to report severe symptom burden. Severe symptom burden was strongly associated with worse reported physical, emotional, and social functioning. Median Total Symptom Burden score was 7 (severe) for both inpatients and outpatients. Common qualitative themes for symptom burden included "inability to perform usual activities," "psychological suffering," and "severe specific symptoms." Gender differences were noted: women reported

						higher burden and emotional impact than men. PPS score did not significantly predict self-perceived burden.
Seow, H., Barbera, L., Sutradhar, R., Howell, D., Dudgeon, D., Atzema, C., Liu, Y., Husain, A., Sussman, J., & Earle, C. (2011). Trajectory of performance status and symptom scores for patients with cancer during the last six months of life [Research Support, Non-U.S. Gov't]. Journal of Clinical Oncology, 29(9), 1151-1158. https://doi.org/https://dx.doi.org/10.1200/JCO.2010.30.7173	Cohort study	Other: Cancer patients in outpatient care across Ontario, Canada, who died between 2007-2009 and had at least one ESAS or PPS assessment in the last 6 months of life	10,752 for ESAS assessments 7,882 for PPS assessments 7,508 participants were in both cohorts	Other: Outpatient cancer clinics and some homecare settings across Ontario, Canada Country - Canada	Other: ESAS: To monitor severity of 9 symptoms (pain, tiredness, drowsiness, nausea, appetite, well-being, shortness of breath, anxiety, and depression) on a scale of 0 to 10 PPS: To track performance status decline from 100 (fully active) to 0 (death)	PPS scores declined steadily from ~70 to 40 over the 6 months before death, with a sharper drop in the final 4 weeks. ESAS symptoms fell into two patterns: some symptoms (pain, nausea, depression, anxiety) remained relatively flat, while others (tiredness, drowsiness, shortness of breath, appetite, well-being) worsened, especially in the last month. Over one-third of patients experienced moderate to severe symptom scores (≥ 4) for most symptoms in their final month.
Seow, H., Tanuseputro, P., Barbera, L., Earle, C., Guthrie, D., Isenberg, S., Juergens, R., Myers, J., Brouwers, M., & Sutradhar, R. (2020). Development and Validation of a Prognostic Survival Model With Patient-Reported Outcomes for Patients With Cancer	Cohort study	Palliative care patients	255494	Hospital; Home-based care; Other: Canada	Prognosis; Symptom management; Quality of life; Functional status	The PROVIEW model accurately predicted survival using demographic, clinical, and patient-reported outcomes, with high discrimination (C-statistic >0.90) sustained over 5 years.

[Research Support, Non-U.S. Gov't]. JAMA Network Open, 3(4), e201768. https://doi.org/https://dx.doi.org/10.1001/jamanetworkopen.2020.1768						
Sutradhar, R., & Barbera, L. (2021). Multistate Models for Examining the Progression of Intermittently Measured Patient-Reported Symptoms Among Patients With Cancer: The Importance of Accounting for Interval Censoring [Research Support, Non-U.S. Gov't]. Journal of Pain & Symptom Management, 61(1), 54-62. https://doi.org/https://dx.doi.org/10.1016/j.jpainsymman.2020.07.012	Cohort study	Palliative care patients	212615	Hospital; Other: Canada	Symptom management; Quality of life; Functional status	Multistate models using ESAS data revealed detailed symptom progression over time. Accounting for interval censoring yielded more accurate estimates of symptom transition and duration. Ignoring interval censoring consistently overestimated symptom duration and underestimated transition risk.
Swart, N. C., Zhang, A., & Lazenby, M. (2022). The Acceptability and Feasibility of Routine Use of Validated Cancer Symptom Assessment Instruments Among Patients and Nurses in the Oncology Ward at	Cross sectional study	Palliative care patients	124 patients and 20 nurses	Hospital; Other: Botswana	Symptom management; Quality of life; Psychological support	63% of patients had clinically significant symptom burden (MSAS-GDI >1.0) VAS-P and MSAS-SF identified high symptom burden, especially pain 100% of patients completed the tools; nurses found them useful and acceptable Validated tools provided structured

Princess Marina Hospital, in Gaborone, Botswana. Journal of Hospice & Palliative Nursing, 24(4), E109-E116. https://doi.org/10.1097/NJH.0000000000000874						assessment supporting timely palliative referrals
Szeliga, M., Kotlinska-Lemieszek, A., Jagielski, P., Jaroszewski, W., Kuzmich, I., Stachnik, K., Feit, J., Deskur-Smielecka, E., & Gradalski, T. (2022). Psychometric validation and cross-cultural adaptation of the Integrated Palliative care Outcome Scale in Polish (IPOS-Pol) [Multicenter Study]. Palliative & Supportive Care, 20(5), 687-693. https://doi.org/https://dx.doi.org/10.1017/S1478951521001176	Cross sectional study	Palliative care patients	180	Home-based care; Hospice; Other: Poland	Symptom management; Quality of life; Functional status; Psychological support	IPOS-Pol showed strong test-retest reliability (ICC = 0.83) and internal consistency (Cronbach's α = 0.773). Validated through high correlation with EORTC QLQ-C15-PAL (r = 0.79, p < 0.001). Most items had good item-level correlations with equivalent QLQ-C15 items. Tool differentiated between patients with higher vs lower prognosis and functional status.
Tay, R. Y., Choo, R. W. K., Ong, W. Y., & Hum, A. Y. M. (2021). Predictors of the final place of care of patients with advanced cancer receiving integrated home-based palliative	Cohort study	Palliative care patients	359	Hospital; Home-based care; Hospice; Other: Singapore	Prognosis; Symptom management; Functional status; Other: care planning	Patients with higher functional status (PPSv2 $\geq$ 40%), pain scores $\geq$ 2, or a preference for non-home death were more likely to receive terminal care in institutional settings (hospital or inpatient hospice). Marital status (single/divorced) and older

care: a retrospective cohort study. <i>BMC Palliative Care</i> , 20(1), 1-13. https://doi.org/10.1186/s12904-021-00865-5						caregivers (≥ 55 years) predicted inpatient hospice care. Male patients were more likely to die in hospital. Goal-concordance with patients' preferences was only moderate (72.6%, kappa = 0.39), though substantially better for families (89.9%, kappa = 0.79).
Timmons, M. J., MacIver, J., Alba, A. C., Tibbles, A., Greenwood, S., & Ross, H. J. (2013). Using heart failure instruments to determine when to refer heart failure patients to palliative care. <i>Journal of Palliative Care</i>, 29(4), 217-224.	Cross sectional study	Other: Patients with advanced heart failure	78	Hospital; Other: Canada	Prognosis; Symptom management; Quality of life; Functional status	Moderate correlations were observed between: ESAS and MLHFQ ($r = 0.483$, $p < 0.01$) ESAS and VAS ($r = -0.345$, $p < 0.01$) PPS and MLHFQ ($r = -0.54$, $p < 0.01$) PPS and VAS ($r = 0.53$, $p < 0.01$) PPS and ESAS provided complementary information not captured by traditional heart failure tools. PPS had poor correlation with SHFM ($r = -0.062$), limiting its prognostic utility for long-term survival prediction.
Tjong, M. C., Doherty, M., Tan, H., Chan, W. C., Zhao, H., Hallet, J., Darling, G., Kidane, B., Wright, F. C., Mahar, A., Davis, L. E., Delibasic, V., Parmar, A., Mittmann, N., Coburn, N. G., & Louie, A. V. (2021). Province-Wide Analysis of Patient-Reported Outcomes for Stage IV	Cohort study	Palliative care patients	22799	Other: Outpatient cancer clinics (province-wide, across Ontario regional cancer centres)	Prognosis; Symptom management; Quality of life; Psychological support	94.4% of patients reported at least one moderate to severe symptom ($ESAS \geq 4$) in the first year following diagnosis. Most common symptoms: tiredness (84.1%), lack of well-being (80.7%), appetite loss (71.7%), shortness of breath (67.8%). Symptoms peaked within 1-2 months post-diagnosis and remained high throughout the year. Moderate to severe

Non-Small Cell Lung Cancer [Research Support, Non-U.S. Gov't]. Oncologist, 26(10), e1800-e1811. https://doi.org/https://dx.doi.org/10.1002/onco.13890						symptoms were associated with comorbidities, low income, urban residence, and recent treatment (radiation or systemic therapy).
To, T. H. M., LeBlanc, T. W., Eastman, P., Neoh, K., Agar, M. R., To, L. B., Rowett, D., Vandersman, Z., & Currow, D. C. (2017). The Prospective Evaluation of the Net Effect of Red Blood Cell Transfusions in Routine Provision of Palliative Care [Research Support, Non-U.S. Gov't]. Journal of Palliative Medicine, 20(10), 1152-1157. https://doi.org/https://dx.doi.org/10.1089/jpm.2017.0072	Cohort study	Palliative care patients	140	Hospice; Other: Australia, United Kingdom, Canada, Japan, and New Zealand	Symptom management; Quality of life; Functional status	49% of patients improved in their primary target symptom (most commonly fatigue) 78% improved in at least one symptom Harms were minimal (12% reported any harm, all mild) Patients with AKPS of 40-50% had the greatest likelihood of improvement No strong predictors of benefit based on hemoglobin or comorbidity indices
Trandel, E. T., Pilewski, J. M., Dellon, E. P., Jeong, K., Yabes, J. G., Moreines, L. T., Arnold, R. M., Hoydich, Z. P., & Kavalieratos, D. (2020). Prevalence of unmet palliative care needs in adults with cystic fibrosis	Cross sectional study	Other: Adults with cystic fibrosis receiving routine care at a multidiscipl	164	Other: Outpatient adult cystic fibrosis clinic (University of Pittsburgh) United States	Symptom management; Quality of life; Psychological support ; Other: physical functioning	78% of patients reported ≥1 unmet palliative care need Most common unmet needs were in the physical (72%) and psychological (66%) domains Symptom burden (measured by ESAS) was more strongly associated with unmet needs than clinical metrics like FEV ₁

[Research Support, N.I.H., Extramural Research Support, Non-U.S. Gov't]. Journal of Cystic Fibrosis, 19(3), 394-401. https://doi.org/https://dx.doi.org/10.1016/j.jcf.2019.11.010		inary CF clinic				The Supportive Care Needs Survey (SCNS-34) showed acceptable reliability and correlated strongly with CF-specific QoL tool (CFQ-R) Depression and anxiety symptoms (measured via ESAS) were significantly associated with higher unmet needs across all domains
Tricou, C., Ruer, M., Nikolaichuk, C., Sigurdardottir, K., Perceau-Chambard, E., Bruera, E., & Filbet, M. (2019). Transcultural Validation of the French Version of the Modified Edmonton Symptom Assessment Scale: The ESAS12-F [Research Support, Non-U.S. Gov't]. Journal of Palliative Medicine, 22(12), 1553-1560. https://doi.org/https://dx.doi.org/10.1089/jpm.2018.0578	Other: observational study	Palliative care patients	45	Hospital; Other: France	Symptom management; Quality of life	89% of patients found the ESAS12-F easy to understand. Sleep and appetite items needed clarification or rereading by some patients. Patients noted difficulty using a 0-10 numeric scale and preferred options like “yes/no” or descriptive labels. Minor adjustments to wording and item order (e.g., grouping psychological and digestive symptoms) improved clarity and flow. Patients highlighted that symptom experiences fluctuate, suggesting “last 24 hours” might be a preferable reference rather than “now.” Overall, ESAS12-F was found to be highly acceptable and feasible, taking an average of 10 minutes to complete.
Vignaroli, E., Pace, E. A., Willey, J., Palmer, J. L., Zhang, T., & Bruera, E. (2006). The Edmonton	Other: Retrospective analysis	Palliative care patients	216	Hospital; Other: US	Symptom management; Psychological support	ESAS depression and anxiety items showed moderate correlation with HADS depression and anxiety

Symptom Assessment System as a Screening Tool for Depression and Anxiety. Journal of Palliative Medicine, 9(2), 296-303. https://doi.org/10.1089/jpm.2006.9.296						subscales (Spearman's $r = 0.39$ and 0.50, respectively). Optimal cutoff point for detecting depression or anxiety was identified as $\geq 2/10$ on ESAS. Using a cutoff of $\geq 2/10$: Sensitivity for depression: 77% Specificity for depression: 55% Sensitivity for anxiety: 86% Specificity for anxiety: 56% Moderate/severe depression and anxiety were best detected using a cutoff of $\geq 4/10$. ESAS was effective as an initial screening tool, but not sufficient for diagnosis; positive screens required follow-up with structured psychiatric interviews.
Vlckova, K., Hoschlova, E., Chroustova, E., & Loucka, M. (2020). Psychometric properties of the Czech Integrated Palliative Outcome Scale: reliability and content validity analysis [Multicenter Study]. BMC Palliative Care, 19(1), 39. https://doi.org/https://dx.doi.org/10.1186/s12904-020-00552-x	Cross sectional study	Palliative care patients	140	Hospital; Hospice; Other: Czech Republic	Symptom management; Quality of life; Functional status; Psychological support	Czech IPOS demonstrated strong internal consistency (Cronbach's $\alpha = 0.789$) and test-retest reliability (ICC = 0.88). Exploratory factor analysis revealed a 2-factor model: one for emotional/information needs, another for physical symptoms. IPOS had moderate correlation with ESAS ($r = 0.414$) and weak non-significant correlation with PPS ($r = -0.249$). Most problematic items in terms of temporal stability: family anxiety, drowsiness, practical problems, and anxiety.

Vrijmoeth, C., Christians, M. G., Festen, D. A., Groot, M., van der Heide, A., van der Rijt, C. C., Tonino, M., & Echteld, M. A. (2016). Physician-Reported Symptoms and Interventions in People with Intellectual Disabilities Approaching End of Life. Journal of Palliative Medicine, 19(11), 1142-1147. https://doi.org/https://dx.doi.org/10.1089/jpm.2015.0544	Cross sectional study	Other: People with intellectual disabilities (IDs) who experienced a non-sudden death	81	Other: Residential care settings for people with intellectual disabilities - Netherlands	Symptom management; Quality of life; Psychological support	Median of 3 ESAS symptoms per patient (range 0-8) reported at the point physicians recognised death as foreseeable Most commonly reported symptoms: fatigue (83%), drowsiness (65%), decreased intake (57%), shortness of breath (42%) Pain, anxiety, and depressed mood were present in 30%, 17%, and 16% of patients respectively Symptom prevalence differed by underlying condition (e.g., cancer patients had higher prevalence of pain and nausea)
Waller, A., Girgis, A., Lecathelinais, C., Scott, W., Foot, L., Sibbritt, D., & Currow, D. (2010). Validity, reliability and clinical feasibility of a Needs Assessment Tool for people with progressive cancer [Research Support, Non-U.S. Gov't]. Psycho-Oncology, 19(7), 726-733. https://doi.org/https://dx.doi.org/10.1002/pon.1624	Other: Mixed-methods validation study involving inter-rater reliability and concurrent validity testing	Palliative care patients	61	Hospital; Other: Australia	Symptom management; Quality of life; Functional status; Caregiver support ; Psychological support	NAT showed moderate to substantial agreement on key items (PABAK values ≥ 0.4 on most items) Strong negative correlation between NAT daily living item and AKPS ($r = -0.84$, $p < 0.001$); positive correlation with RUG-ADL ($r = 0.74$) Concurrent validity established between NAT and PCPSS items: physical, psychological, and caregiver wellbeing domains NAT prompted more thorough discussion of needs and appropriate referrals High acceptability among health professionals, although time demands were noted

Wang, G., Zanjani, M. E., Cook, A., Dai, Y., Tan, M., Qin, X. S., Johnson, C. E., & Ding, J. (2024). Characteristics of people diagnosed with dementia vs lung cancer and cardiovascular disease at commencement of community palliative care: a population-based study. BMC Palliative Care, 23(1), 1-11. https://doi.org/10.1186/s12904-024-01545-w	Other: Population-based retrospective observational study	Palliative care patients	41545	Aged care; Other: Community palliative care services Australia	Symptom management; Quality of life; Functional status; Caregiver support ; Psychological support	Patients with dementia had lower symptom burden but significantly poorer functional performance and higher dependency. Dementia patients entered palliative care later, with shorter episodes (median 11 days), and more often at the terminal phase. Compared to CVD and lung cancer: AKPS scores were significantly lower (mean 29.1 vs 41.0 [CVD] and 55.5 [lung cancer]) RUG-ADL scores were significantly higher, indicating severe dependency Symptom severity (SAS and PCPSS) was milder in dementia across all domains except family concerns Dementia care needs focused more on mobility, toileting, feeding, and caregiver burden rather than symptom control
Warmenhoven, F., Weel, C., Vissers, K., & Prins, J. (2013). Screening Instruments for Depression in Advanced Cancer Patients: What Do We Actually Measure? Pain Practice, 13(6), 467-475. https://doi.org/10.1111/papr.12012	Cross sectional study	Palliative care patients	65	Other: Outpatient oncology and palliative care clinics in the Netherlands	Symptom management; Psychological support ; Other: distress screening, diagnostic differentiation	Tools used: BDI-II, BDI-PC, HADS, and MSAS-SF High correlation found between scores on depression screening tools and physical symptom clusters (e.g., fatigue/anorexia/cachexia, pain, debility, neuropsychology) The BDI-II cognitive subscale was the only measure not significantly correlated with somatic symptom burden

						Depression was indicated in 24.6% (BDI-II), 23.1% (HADS-D), and 10.8% (BDI-PC) Physical symptom burden may inflate depression scores in palliative care assessments
Watanabe, S. M., Fairchild, A., Pituskin, E., Borgersen, P., Hanson, J., & Fassbender, K. (2013). Improving access to specialist multidisciplinary palliative care consultation for rural cancer patients by videoconferencing: report of a pilot project. Supportive Care in Cancer, 21(4), 1201-1207. https://doi.org/10.1007/s00520-012-1649-7	Other: Pilot project; mixed-method feasibility and evaluation study	Palliative care patients	44	Other: Community cancer centres and telehealth facilities across rural Alberta Canada	Symptom management; Quality of life	Statistically significant improvement in anxiety and appetite (ESAS scores) at first follow-up ($p < 0.01$ and $p = 0.03$ respectively) High satisfaction among patients and family physicians Each telehealth visit saved on average: 471.13 km travel 7.96 hours C\$192.71 Videoconferencing reduced access barriers and improved patient convenience without compromising care quality
Watanabe, S. M., Nekolaichuk, C. L., & Beaumont, C. (2012). The Edmonton Symptom Assessment System, a proposed tool for distress screening in cancer patients: development and refinement. Psycho-Oncology, 21(9), 977-985. https://doi.org/10.1002/po.n.1996	Other: Three-part mixed-method program of research: Systematic review of ESAS validation studies Think-aloud cognitive interview study	Palliative care patients	Review: 13 validation studies reviewed Think-aloud: 20 patients Multicenter study: 160 patients from 8 sites	Hospital; Hospice; Other: Canada, Switzerland	Symptom management; Quality of life; Functional status; Psychological support	The ESAS and revised ESAS-r are feasible and valid for distress screening in advanced cancer Think-aloud study showed patients struggled with certain terms (e.g., well-being, drowsiness, appetite) and interpreted numerical scales differently ESAS-r (with definitions, reordered symptoms, and clarified timeframe) was preferred by

	Multicenter cross-sectional study comparing ESAS and ESAS-r					more patients and rated as easier to understand ($p = .008$) ICCs showed acceptable intrarater reliability but variability in symptoms like well-being ($ICC = 0.65$) and appetite ($ICC = 0.74$) ESAS-r included clarifications and structural improvements based on psychometric analysis and patient feedback
Williams, N., Hermans, K., Cohen, J., Declercq, A., Jakda, A., Downar, J., Guthrie, D. M., & Hirdes, J. P. (2022). The interRAI CHESS scale is comparable to the palliative performance scale in predicting 90-day mortality in a palliative home care population. BMC Palliative Care, 21(1), 1-13. https://doi.org/10.1186/s12904-022-01059-3	Cohort study	Palliative care patients	80261	Home-based care; Other: Canada	Prognosis; Symptom management; Quality of life; Functional status	The CHESS Scale is an acceptable predictor of 90-day mortality (c -statistic = 0.68), comparable to the full version of the PPS ($c = 0.69$). When combined with other interRAI PC items (e.g., ADLs, IADLs, nutritional intake, fatigue), CHESS Scale performance improved ($c = 0.723$). For every one-point increase in CHESS, the odds of dying within 90 days nearly doubled ($OR = 2.04$ to 18.05 from scores 1 to 5). CHESS Scale also associated with increased nursing service use, validating its utility as a complexity marker.
Wong, A., Rodriguez-Nunez, A., Tayjasanant, S., Park, M., Liu, D. D., Allo, J., Frisbee-Hume, S., & Bruera, E. (2016). Edmonton Symptom	Randomised controlled trial	Other: Advanced cancer patients attending initial	126	Other: MD Anderson Cancer Center, Houston, USA	Symptom management; Quality of life; Psychological support ; Other:	Self-completion time was significantly shorter (median 73 sec) than assisted completion (median 109 sec) ($p < .0001$). With nurse review added, self-completion time was 117 sec-

Assessment Scale (ESAS): time duration of self-completion versus assisted completion in palliative care patients-A randomized controlled trial [Journal article; Conference proceeding]. Journal of Clinical Oncology, 34(26), 67. https://doi.org/10.1200/jco.2016.34.26-suppl.67		consultation at an outpatient supportive care centre		Country: United States	distress screening	comparable to assisted (p = .28). Low health literacy and shortness of breath were significantly associated with longer completion times. Despite concerns about time burden, ESAS can be completed in under 2 minutes. 97% of patients previously reported ESAS was easy to complete; however, 87.5% preferred having a healthcare professional present for guidance.
Wong, F. K., Ng, A. Y., Lee, P. H., Lam, P. T., Ng, J. S., Ng, N. H., & Sham, M. M. (2016). Effects of a transitional palliative care model on patients with end-stage heart failure: a randomised controlled trial [Multicenter Study Randomized Controlled Trial Research Support, Non-U.S. Gov't]. Heart, 102(14), 1100-1108. https://doi.org/https://dx.doi.org/10.1136/heartjnl-2015-308638	Randomised controlled trial	Palliative care patients	84	Hospital; Other: Hong Kong	Prognosis; Symptom management; Quality of life; Functional status; Psychological support	At 12 weeks: significantly fewer readmissions in intervention group (33.6%) vs control (61.0%) ESAS showed significant clinical improvement in: Depression (45.9% vs 16.1%) Dyspnoea (62.2% vs 29.0%) Total symptom burden score (73.0% vs 41.4%) QOL scores (McGill QOL & Chronic Heart Failure Questionnaire) improved significantly in the intervention group No significant difference in PPS over time Higher satisfaction with care in intervention group
Yamaguchi, T., Morita, T., Nitto, A., Takahashi, N., Miyamoto, S., Nishie, H., Matsuoka, J., Sakurai, H., Ishihara, T.,	Cross sectional study	Palliative care patients	292	Hospital; Other: Japan	Symptom management; Other: depression screening,	Optimal ESAS-r cutoff scores for severe symptoms were generally between 5-7, and for moderate/severe symptoms between 3-4. Depression item

Tarumi, Y., & Ogawa, A. (2016). Establishing Cutoff Points for Defining Symptom Severity Using the Edmonton Symptom Assessment System-Revised Japanese Version. Journal of Pain & Symptom Management, 51(2), 292-297. https://doi.org/10.1016/j.jpainsymman.2015.09.011					severity stratification for treatment planning	cutoff point of 2 provided the best balance between sensitivity (0.57-0.81) and specificity (0.71-0.88) for both general and moderate/severe depression. Area under the curve (AUC) for most symptoms exceeded 0.90, indicating strong agreement with Verbal Rating Scale (VRS) and Quick Inventory of Depressive Symptomatology (QIDS-SR). ESAS-r effectively reflected verbal symptom ratings across 9 domains: pain, tiredness, drowsiness, nausea, lack of appetite, shortness of breath, depression, anxiety, well-being.
Yang, N., Ornstein, K. A., & Reckrey, J. M. (2016). Association Between Symptom Burden and Time to Hospitalization, Nursing Home Placement, and Death Among the Chronically Ill Urban Homebound. Journal of Pain & Symptom Management, 52(1), 73-80. https://doi.org/10.1016/j.jpainsymman.2016.01.006	Cohort study	Other: Chronically ill, elderly homebound adults newly enrolled in a home-based primary care program	318	Other: Mount Sinai Visiting Doctors Program, New York City (home-based primary care) Country: United States	Prognosis; Symptom management; Other: healthcare utilisation prediction	45% of participants had severe symptom burden (ESAS score >6 on ≥1 symptom). Severe symptom burden was significantly associated with: Younger age (82.0 vs. 85.5 years) More comorbidities (Charlson Index 3.2 vs. 2.5) Higher rates of depression (43% vs. 12%) Severe burden independently predicted shorter time to first hospitalisation (HR = 1.51, 95% CI 1.06-2.15) No association was found between symptom burden and nursing home placement or death Most common severe symptoms:

						tiredness, poor well-being, anxiety, depression
Yennurajalingam, S., Kwon, J. H., Urbauer, D. L., Hui, D., Reyes-Gibby, C. C., & Bruera, E. (2013). Consistency of symptom clusters among advanced cancer patients seen at an outpatient supportive care clinic in a tertiary cancer center. Palliative & Supportive Care, 11(6), 473-480. https://doi.org/10.1017/S1478951512000879	Cohort study	Other: advanced cancer patients referred to outpatient palliative care	1373	Other: Outpatient Supportive Care Center, MD Anderson Cancer Center, USA Country: United States	Prognosis; Symptom management; Quality of life; Psychological support	Two distinct and consistent symptom clusters (SCs) were identified: Physical SC: fatigue, pain, nausea, drowsiness, dyspnea, appetite loss, poor well-being, sleep disturbance Psychological SC: depression and anxiety SCs remained stable between baseline and follow-up (~14 days) Mean ESAS scores for all symptoms significantly improved from baseline to follow-up ($p < .0001$) except for appetite Total Symptom Distress Scores (SDS) dropped from 36.1 to 32.3 Cronbach's alpha for internal consistency.
Yennurajalingam, S., Palmer, J. L., Zhang, T., Poulter, V., Bruera, E., Yennurajalingam, S., Palmer, J. L., Zhang, T., Poulter, V., & Bruera, E. (2008). Association between fatigue and other cancer-related symptoms in patients with advanced cancer. Supportive Care in Cancer, 16(10), 1125-1130. https://doi.org/10.1007/s00520-008-0466-5	Other: Secondary analysis of baseline data from three prospective clinical trials	Other: Patients with advanced cancer and clinically significant fatigue	268	Other: Palliative Care Outpatient Clinic, Country: United States	Symptom management; Quality of life; Functional status; Psychological support	Fatigue (measured via FACIT-F) was significantly associated with: Anxiety ($p = 0.03$) Drowsiness ($p = 0.006$) Anorexia ($p = 0.014$) Poor well-being ($p = 0.0003$) These 4 variables together explained 21% of the variance in fatigue intensity Performance status (Zubrod scale) was significantly associated with fatigue Fatigue was not associated with age, gender, cancer type, or MMSE score

Zimmermann, C., Pope, A., Hannon, B., Krzyzanowska, M. K., Rodin, G., Li, M., Howell, D., Knox, J. J., Leighl, N. B., Sridhar, S., Oza, A. M., Prince, R., Lheureux, S., Hansen, A. R., Rydall, A., Chow, B., Herx, L., Booth, C. M., Dudgeon, D.,...Le, L. W. (2021). Phase II Trial of Symptom Screening With Targeted Early Palliative Care for Patients With Advanced Cancer [Clinical Trial, Phase II]. Journal of the National Comprehensive Cancer Network, 20(4), 361-370.e363. https://doi.org/https://dx.doi.org/10.6004/jnccn.2020.7803	Other: feasibility study	Palliative care patients	116	Hospital; Other: Canada	Symptom management; Quality of life; Psychological support	Symptom screening using ESAS-r successfully identified patients with moderate to severe symptoms who benefited from early palliative care (EPC). 77% of patients completed ESAS screening for $\geq 70\%$ of visits. Screen-negative patients (those without moderate/severe symptoms) had stable, high quality of life and symptom control throughout the 6-month study without needing EPC. Screen-positive patients who accepted EPC showed improvements in symptom control (ESAS-r-CS scores) and mood (PHQ-9 depression scores) over time. Patients who declined EPC had worsening symptoms and mood compared to those who received EPC. Acceptance of EPC was associated with better symptom trajectories but did not significantly affect global quality of life scores.
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