CBE ID

5595

Title

Percentage of Patients who Died with Cancer Enrolled in Hospice For at Least 3 Days Immediately Before Death (Claims version)

Project

Advanced Illness and Post-Acute Care

Endorsement Status

New

Is Under Review

Yes

Next Maintenance Cycle

Spring 2026

Steward

American Society of Clinical Oncology (ASCO)

1.0 New or Maintenance

New

1.1 Measure Structure

Single Measure

1.3 Electronic Clinical Quality Measure (eCQM)

No

1.6 Measure Description

Percentage of patients, aged 18 years and older, who died with cancer and were enrolled in hospice for at least 3 days immediately before death

1.7 Measure Type

Intermediate Outcome

1.8 Level of Analysis

Clinician: Group/Practice

1.9 Care Setting

Ambulatory Care: Clinic, Ambulatory Care: Clinician Office, Ambulatory Care: Office

1.10 Measure Rationale

Hospice is the most established model of palliative care for patients with a prognosis of <6 months and is eligible for coverage by third-party payers and Medicare (National Comprehensive Cancer Network [NCCN], 2026). Between 2022 and 2023, the median length of hospice stay amongst Medicare beneficiaries was ~18 days (Medicare Payment Advisory Commission [MedPAC], 2025) and ~one-quarter of patients received care for 5 days or less before passing away (MedPAC, 2025). This is even though the hospice benefit is at least six months or longer if needed. This short length of stay means that the patient and family are not receiving the full benefit of hospice services such as spiritual counseling, social work, and complex symptom management (MedPAC, 2025) and the care team has limited time to get a plan of care in place before death. Patients who use hospice, compared with those who do not use hospice, have markedly improved symptoms, less caregiver distress, reduced costs of approximately $8,700 per Medicare beneficiary, and, according to two published reports, actually live longer (Ferrell et al., 2017). ASCO's End of Life Measures Technical Expert Panel emphasized that performance is not expected to be perfect on this quality measure. A margin of error should be expected to account for scenarios such as patient refusal of hospice and barriers to access hospice.

REFERENCES:

1. Ferrell, B. R., Temel, J. S., Temin, S., Alesi, E. R., Balboni, T. A., Basch, E. M., Firn, J. I., Paice, J. A., Peppercorn, J. M., Phillips, T., Stovall, E. L., Zimmermann, C., & Smith, T. J. (2017). Integration of Palliative Care Into Standard Oncology Care: American Society of Clinical Oncology Clinical Practice Guideline Update. *Journal of Clinical Oncology*, *35*(1), 96–112. Retrieved from https://doi.org/10.1200/jco.2016.70.1474.
2. Medicare Payment Advisory Commission. (2025, March). *Hospice Services* (Chapter 9). *Report to the Congress: Medicare Payment Policy*. https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch9_MedPAC_Report_To_Congress_SEC.pdf
3. National Comprehensive Cancer Network. (2026). *NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®): Palliative Care* (Version 1.2026). https://www.nccn.org/professionals/physician_gls/pdf/palliative.pdf

1.11 Measure Webpage

None.

1.13 Data Dictionary

Attached

1.13a Attach Data Dictionary

Copy-of-EOLMeasures_Coding_2.xlsx

1.14 Numerator

Patients enrolled in hospice for at least 3 days immediately before death

1.14a Numerator Details

Patients enrolled in hospice for at least 3 days immediately before death

NUMERATOR CRITERIA:

Hospice type of bill:

811- Special Facility Hospice (Non-Hospital based) Admit through Discharge

821- Special Facility Hospice (Hospital-based) Admit through Discharge

814- Special Facility Hospice (Non-Hospital based) Discharge claim

824- Special Facility Hospice (Hospital-based) Discharge claim

AND

Most Recent Hospice End Date is blank

OR

Most Recent Hospice End Date ≥ Date of Death

AND

(Date of death minus ***Most Recent*** Hospice Beginning Date) ≥ 3 days

NOTE: If two periods of hospice enrollment are consecutive (i.e. if the End Date for one period of enrollment coincides with, or immediately precedes, the Beginning Date of another period of hospice enrollment), then treat the two enrollment periods as a single enrollment period. Similarly, if two periods of hospice enrollment overlap, treat them as a single period of enrollment starting with the earlier Beginning Date and ending with the later Ending Date.

Patients should be currently enrolled in hospice on date of death.

1.15 Denominator

Patients, 18 years and older, who died with cancer

1.15a Denominator Details

Patients, 18 years and older, who died with cancer

Denominator Criteria (Eligible Cases):

1. Patients aged ≥ 18 years at the start of the measurement period:

(Start Date of the Measurement Period minus Date of Birth) ≥ 18 years

AND

1. At least two outpatient encounters that meet the following criteria:

2a) Place of Service: 02, 05, 07, 10, 11, 19, 22, 49, 50, 71, 72

AND

2b) Professional Service code:

98000, 98001, 98002, 98003, 98004, 98005, 98006, 98007, 98008, 98009, 98010, 98011, 98012, 98013, 98014, 98015, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99242, 99243, 99244, 99245, 99495, 99496, 99441, 99442, 99443

(NOTE: Encounters coded with telehealth modifier GQ, GT, or 95 are allowed for both visits.)

AND

2c) Service Date <during Measurement Period>

AND

2d) Diagnosis code for Cancer

(See tab "CancerDx" in "EOLMeasures_Coding" file)

AND

1. Date of death <during Measurement Period>

Guidance:

For physician/group reporting, attribution of patients to an oncology practice is based on the presence of at least two outpatient visit claims for the patient with that practice. The two outpatient encounters required in the denominator are outpatient visits that occur on different calendar days.

To be eligible in the denominator, patients must have continuous coverage during the measurement period.

A cancer diagnosis code must appear within the top 3 diagnosis positions on an outpatient visit claim that meets the denominator encounter requirement.

1.15b Denominator Exclusions

This quality measure has no denominator exclusions, but does have denominator exceptions. See below for details:

Denominator exceptions:

Patients not enrolled in hospice due to 1) receipt or in process of receipt of bone marrow or peripheral blood stem cell transplant (transplant status) in the last 60 days of life, or 2) receipt or in process of receipt of CAR T cell therapy in the last 60 days of life

NOTE: The above treatments are not covered in hospice, but may be appropriate for select patients at the end of life.

OR

Patients given hydroxyurea or BTK inhibitors.

NOTE: Hydroxyurea and BTK inhibitors may be inappropriate to withdraw at the end of life and/or are used for palliative purposes, however these are not covered by hospice.

1.15c Denominator Exclusions Details

Denominator exception details:

Denominator Exceptions Criteria:

AND NOT (No occurrence of Hospice type of bill on or before death)

Hospice type of bill:

811- Special Facility Hospice (Non-Hospital based) Admit through Discharge

821- Special Facility Hospice (Hospital-based) Admit through Discharge

814- Special Facility Hospice (Non-Hospital based) Discharge claim

824- Special Facility Hospice (Hospital-based) Discharge claim

AND

Receipt or in process of receipt of bone marrow or peripheral blood stem cell transplant (transplant status)

Code: *(See tab "BoneMarrowStemCellTransplant" in "EOLMeasures_Coding" file)*

AND

Service/Procedure Date or Claim from Date (for ICD-10-CM transplant status code)

AND

(Date of death minus Service/Procedure Date or Claim from Date) < 60 days

OR

Receipt or in process of receipt of CAR T cell therapy

Code: *(See tab "CARTCellTx" in "EOLMeasures_Coding" file)*

AND

Service/Procedure Date

AND

(Date of death minus Service/Procedure Date) < 60 days

OR

Receipt of hydroxyurea or BTK inhibitors

Code: *(See tab "HydroxyureaBTKInhibitors" in "EOLMeasures_Coding" file)*

AND

Date Last Filled

AND

(Date of death minus Date Last Filled) < 60 days

1.15d Age Group

Adults (18-64 years), Older Adults (65 years and older)

1.16 Type of Score

Rate/proportion

1.17 Measure Score Interpretation

Better performance = Higher score

1.18 Calculation of Measure Score

The developer provided a Measure Calculation Diagram:

1.18a Attach measure score calculation diagram

Hospice-Claims_Flow.pdf

1.19 Measure Stratification Details

This measure is not stratified.

1.20 Types of Data Sources

Claims Data

1.21a Data Collection Tool URL(s)

http://example.com

1.25 Data Source Details

Claims data is a type of administrative data generated every time a healthcare provider submits a request for payment to an insurance payer. Claims data is highly standardized and for the purposes of this measure captures the exact location and dates of service.

1.26 Minimum Sample Size

Minimum of five (5) patients.

2.1 Attach Logic Model

Hospice_Claims_LogicModel--1-.docx

2.2 Evidence of Measure Importance

In the United States, cancer is the second leading cause of death overall and the leading cause of death among people younger than 85 years (Siegel et al., 2026). It is projected that in 2026 there will be approximately 2.1 million *new* cancer cases and over half a million cancer deaths (Siegel et al., 2026). While individual patients have their own preferences that can change over time, consistently across various populations, most patients nearing end of life wish to die at home (Gomes et al., 2013). In one national study, family caregivers gave significantly higher EOL care quality ratings for care at home under hospice than to EOL care received in a hospital palliative care unit, hospice inpatient unit, or residential hospice (Zhu et al., 2024).

The goal of *Percentage of Patients who Died with Cancer Enrolled in Hospice For at Least 3 Days Immediately Before Death* is to encourage earlier hospice enrollment and encourage timely enrollment in palliative care that focuses on symptom management, rather than low utility and

aggressive treatments, among people dying with cancer. This results in a reduction of aggressive interventions and more time in hospice, which ultimately improves patient, family, and caregiver satisfaction. Timely enrollment in palliative care and hospice also reduces resource utilization costs and aligns with MedPAC's goal to reduce high-intensity, low-value care at the end of life by promoting hospice and palliative care (MedPAC, 2025). Studies show that the integration of palliative care into the cancer care continuum improves patient outcomes in many ways, including quality of life, symptoms intensity, and end-of-life care (NCCN, 2026). The seminal NAM report *Dying in America* states that a palliative approach often offers the best chance of maintaining the highest possible quality of life for those living with advanced serious illness (Institute of Medicine [IOM], 2015) and proposes, as a core component to quality end-of-life care, to offer palliative care services and a personalized revision of the care plan, as well as access to services based on the changing needs of the patient and family (IOM, 2015). Community-based or home-based palliative care services have been associated with a reduced need for end-of-life emergency department visits, reduced length and frequency of hospitalizations, and fewer ICU admissions and in-hospital deaths (NCCN, 2026). A recent systematic review looked at peer-reviewed observational/experimental advance care planning and cancer patient-specific studies published between 1990-2022 and found that across ~33,500 patients advance care planning was associated with significantly lower odds of chemotherapy, intensive care, hospital admissions, hospice use fewer than seven days, hospital death, and aggressive care composite measures (Levoy et al., 2023). An analysis of men with advanced prostate cancer who were enrolled in hospice were less likely to receive high-intensity care, including ICU admissions and inpatient hospital stays at the end of life (NCCN, 2026). Another analysis of ~3000 deceased patients showed that hospice enrollment significantly decreased hospitalizations, non-hospice healthcare utilization, and costs of care (NCCN, 2026).

ASCO and NCCN palliative care guidelines contain the following recommendations:

- Clinicians should refer patients with advanced solid tumors and hematologic malignancies to specialized interdisciplinary palliative care teams that provide inpatient and outpatient care early in the course of disease, alongside active treatment of their cancer (Moderate, Strong)
- Palliative care for patients with advanced cancer should be delivered through interdisciplinary palliative care teams, with consultation available in both outpatient and inpatient settings (Intermediate, Moderate)
- Patients with advanced cancer should receive palliative care services, which may include a referral to a palliative care provider. Essential components of palliative care include (Intermediate, Moderate)
    - Rapport and relationship building with patient and family caregivers
    - Symptom, distress, and functional status management (eg, pain, dyspnea, fatigue, sleep disturbance, mood, nausea, or constipation)
    - Exploration of understanding and education about illness and prognosis
    - Clarification of treatment goals
    - Assessment and support of coping and spiritual needs
    - Assistance with medical decision making
    - Coordination with other care providers

    - Provision of referrals to other care providers as indicated

- Patients with months to weeks to live should be provided with guidance regarding the anticipated course of the disease. Physicians should reassess prognostic awareness and goals of therapy. As functional status worsens, these patients may become more concerned about the side effects of cancer-directed treatment and consider focusing their care on maintaining quality of life. The option of discontinuing anticancer treatment aligned with goals of care and initiating goal-directed supportive care should be discussed. (Category 2A)
- In general, patients with weeks to days to live (eg, dying patients) and comfort-oriented goals should discontinue all treatments not directly contributing to patient comfort. Intensive palliative care focusing on symptom management should be provided in addition to preparation for the dying process. Referral for hospice care should be placed, if not already done. (Category 2A)

Definitions of Categories of Evidence and Ratings:

- Category 2A: Based upon lower-level evidence, there is uniform NCCN consensus (≥85% support of the Panel) that the intervention is appropriate. *Note there are no Category 1 recommendations within NCCN's guidelines on Palliative Care.*
- Strong Strength of Recommendation: In recommendations for an intervention, the desirable effects of an intervention outweigh its undesirable effects. In recommendations against an intervention, the undesirable effects of an intervention outweigh its desirable effects. All or almost all informed people would make the recommended choice for or against an intervention
- Moderate Quality of Evidence: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

In addition to the literature, ASCO received positive feedback on measure importance via its May 2025 public comment; almost all respondents strongly agreed or agreed with the following statements across all of ASCO's updated EOL measures: "I believe this measure captures what it intends to capture, i.e., promoting early palliative care among dying patients and reducing aggressive interventions at the end of patients' lives" and "I believe this measure differentiates good from poor quality care among providers of healthcare services."

References:

1. Gomes, B., Calanzani, N., Gysels, M., Hall, S., & Higginson, I. J. (2013). Heterogeneity and changes in preferences for dying at home: a systematic review. *BMC palliative care*, *12*, 7. https://doi.org/10.1186/1472-684X-12-7
2. Institute of Medicine. (2015). *Dying in America: Improving Quality and Honoring Individual Preferences Near The End of Life*. National Academies Press. https://doi.org/10.17226/18748
3. Levoy, K., Sullivan, S. S., Chittams, J., Myers, R. L., Hickman, S. E., & Meghani, S. H. (2023). Don't throw the baby out with the bathwater: Meta-analysis of advance care planning and end-of-life cancer care. *Journal of Pain and Symptom Management*, *65*(6), e715–e743. https://doi.org/10.1016/j.jpainsymman.2023.02.003
4. National Comprehensive Cancer Network. (2026). *NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®): Palliative Care* (Version 1.2026). https://www.nccn.org/professionals/physician_gls/pdf/palliative.pdf
5. Sanders, J. J., Temin, S., Ghoshal, A., Alesi, E. R., Ali, Z. V., Chauhan, C., Cleary, J. F., Epstein, A. S., Firn, J. I., Jones, J. A., Litzow, M. R., Lundquist, D. M., Mardones, M. A., Nipp, R. D., Rabow, M. W., Rosa, W. E., Zimmermann, C., & Ferrell, B. R. (2024). Palliative Care for Patients with Cancer: ASCO guideline Update. *Journal of Clinical Oncology*, *42*(19), 2336–2357. https://doi.org/10.1200/JCO.24.00542
6. Siegel, R. L., Kratzer, T. B., Wagle, N. S., Sung, H., & Jemal, A. (2026). Cancer statistics, 2026. *CA: A Cancer Journal for Clinicians*, *76*(1), Article e70043. https://doi.org/10.3322/caac.70043
7. Zhu, E., McCreedy, E., & Teno, J. M. (2024). Bereaved Respondent Perceptions of Quality of Care by Inpatient Palliative Care Utilization in the Last Month of Life. *Journal of general internal medicine*, *39*(6), 893–901. https://doi.org/10.1007/s11606-023-08588-4

2.3 Anticipated Impact

The goal of *Percentage of Patients who Died with Cancer Enrolled in Hospice For at Least 3 Days Immediately Before Death* is to encourage earlier hospice enrollment and encourage timely enrollment in palliative care that focuses on symptom management. There is a plethora of evidence from the literature that early palliative care also reduces costs at the end of life for the patient and healthcare system at large. Davis et al. analyzed health insurance data to determine the impact of palliative care on “aggressive end of life” and found that palliative care <90 days before death was associated with increased costs while palliative care consults >90 days before death lowered cost ($P < .0001$); completed advanced directives reduced cost by ~$4000 per patient (2023). Cheung et al. evaluated a cohort of patients who died of cancer between 2005-2009 and found that patients who received “aggressive end of life care” incurred 43 percent higher costs than those managed non-aggressively and that early and repeated palliative care consults were associated with reduced mean per-patient costs (2015). Starr et al. conducted a systematic review to determine the impacts of advance care planning and goals-of-care discussions on healthcare utilization, costs, and place of death; researchers found that EOL discussions are associated with lower healthcare costs in the last 30 days of life (median $1,048 vs. $23,482; $p < .001$); lower likelihood of acute care at EOL [Odds Ratios (OR) ranging 0.43 to 0.69]; lower likelihood of intensive care at EOL (ORs ranging 0.26 to 0.68); lower odds of

chemotherapy near death (ORs 0.41, 0.57); lower odds of emergency department use and shorter length of hospital stay; greater use of hospice (ORs ranging 1.79 to 6.88); and greater likelihood of death outside the hospital (2020). The American Cancer Society summarized several key studies and review articles that examine the impact of palliative care on overall patients costs and found that palliative care either reduces overall costs to the patient or is cost neutral, while improving the patient's quality of life (2022).

References:

1. American Cancer Society Cancer Action Network. (2022, November 22). *Palliative Care: Key studies on cost savings*. https://www.fightcancer.org/sites/default/files/palliative_care_effects_on_costs_11-18-22_update.pdf
2. Cheung, M. C., Earle, C. C., Rangrej, J., Ho, T. H., Liu, N., Barbera, L., Saskin, R., Porter, J., Seung, S. J., & Mittmann, N. (2015). Impact of aggressive management and palliative care on cancer costs in the final month of life. *Cancer*, *121*(18), 3307–3315. https://doi.org/10.1002/cncr.29485
3. Davis, M. P., Vanenkevort, E. A., Elder, A., Young, A., Correa Ordonez, I. D., Wojtowicz, M. J., Ellison, H., Fernandez, C., Mehta, Z., Behm, B., Digwood, G., & Panikkar, R. (2023). The Financial Impact of Palliative Care and Aggressive Cancer Care on End-of-Life Health Care Costs. *The American journal of hospice & palliative care*, *40*(1), 52–60. https://doi.org/10.1177/10499091221098062
4. National Comprehensive Cancer Network. (2026). *NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®): Palliative Care* (Version 1.2026). https://www.nccn.org/professionals/physician_gls/pdf/palliative.pdf
5. Starr, L. T., Ulrich, C. M., Corey, K. L., & Meghani, S. H. (2019). Associations Among End-of-Life Discussions, Health-Care Utilization, and Costs in Persons With Advanced Cancer: A Systematic Review. *The American journal of hospice & palliative care*, *36*(10), 913–926. https://doi.org/10.1177/1049909119848148

2.4 Performance Gap

ASCO evaluated performance on the "Percentage of Patients who Died with Cancer Enrolled in Hospice For at Least 3 Days Immediately Before Death (Claims version)" measure. Using combined data from January 2023 to December 2024, the study included 555 practices that met the minimum requirement of five eligible patients (refer to Sections 1.26 and 5.1.1 for details on sample size and testing).

Because this measure tracks hospice utilization, a higher percentage reflects stronger performance in end-of-life care. Results spanned from 0% to 91%, showing a broad spectrum in how practices coordinate these transitions. The mean performance on the measure was 38% (±20%) with a 95% confidence level of ±2%; the median was slightly higher at 40%.

The distribution shows a slight negative skew of -0.23, indicating that while a significant portion of the cohort is performing above the mean, there remains a tail of lower-performing entities. Notably, the mode remains 0%, meaning that despite the median performance, the most frequent outcome across individual entities was a complete lack of hospice enrollment for the required duration. These results show that the highest-performing entity (91%) achieved a score 128% (2.28 times) higher than the median, while those at the bottom (0%) represent a significant gap in service. For practices performing below the median, these results highlight a clear opportunity to improve the timing of hospice referrals and ensure vulnerable patients receive the full benefit of palliative services.

Table 1. Performance Scores by Decile

Mean Performance Score by Decile (Percentage of Patients who Died with Cancer Enrolled in Hospice For at Least 3 Days Immediately Before Death - Claims version)

	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Mean Performance Score	38.5%	0.0%	1.0%	16.4%	26.8%	33.2%	38.3%	41.7%	47.0%	51.9%	58.1%	70.7%	91.0%
Number of Entities	555	1	56	55	56	55	56	55	56	55	56	55	1
Number of Persons / Encounters / Episodes	15,514	5	665	660	1,495	1,649	2,615	1,448	2,249	2,738	997	998	11

2.4a Attach Performance Gap Results

Mean-Performance-Score-by-Decile--Percentage-of-Patients-who-Died-with-Cancer-Enrolled-in-Hospice-For-at-Least-3-Days-Immediately-Before-Death---Claims-version-.pdf

2.5 Health Care Quality Landscape

There are a few existing quality measures that relate to planning for end of life and palliative care; however, these are either not specific to cancer patients, are specified only for a specific EMR environment (in the case of the QCDR measure), or are specified at the hospice-level. Below are the existing measures:

CBE #	Measure Name	Description
3645	Hospice Visits in Last Days of Life (HVLDL)	The HVLDL measure assesses hospice staff visits to patients at the end of life. This measure is constructed from Medicare hospice claims records. It indicates the hospice provider's proportion of patients who have received in-person visits from a registered nurse or medical social worker on at least two out of the final three days of the patient's life.
3665	Ambulatory Palliative Care Patients Experience of Feeling Heard and Understood	The percentage of top-box responses among patients aged 18 years and older who had an ambulatory palliative care visit and report feeling heard and understood by their palliative care clinician and team within 2 months (60 days) of the ambulatory palliative care visit.
326	Advance Care Plan	Percentage of patients aged 65 years and older who have an advance care plan or surrogate decision maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but the patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan.
N/A	ALS Patient Care Preferences	Percentage of patients diagnosed with Amyotrophic Lateral Sclerosis (ALS) who were offered assistance in planning for end of life issues (e.g., advance directives, invasive ventilation, lawful physician-hastened death, or hospice) or whose existing end of life plan was reviewed or updated at least once annually or more frequently as clinically indicated (i.e., rapid progression).
N/A	PIMSH1: Oncology: Advance Care Planning in Metastatic Cancer Patients	Percentage of patients with metastatic (stage 4) cancer who have a documented Advance Care Planning discussion in the first 6 months after metastatic diagnosis to inform treatment decisions and end-of-life care.

Taken together, ASCO's suite of end-of-life measures provides a more comprehensive picture of the quality of end-of-life care among patients with cancer who are dying. Lastly, ASCO has developed claims-based versions of its EOL measures to assist with more consistent and reliable case identification, with no added administrative burden of data collection for the measure implementer.

2.6 Meaningfulness to Target Population

ASCO's end-of-life quality measures were originally developed in 2003 using a patient-centered methodology to capture outcomes meaningful to those with advanced illness (Earle et al., 2003). This included:

- Focus groups consisting of patients with incurable cancer and family members of deceased patients. These participants identified and vetted potential EOL quality measures to ensure they reflected patient-centered priorities.
- Expert Consensus: A multidisciplinary expert panel applied a modified Delphi approach to rank the importance and meaningfulness of potential measures based on the focus group input. Measures that did not resonate with patient and family values (such as those focused solely on economic efficiency) were excluded.
- Literature searches.

ASCO has continued to integrate the patient and caregiver voice into the current versions of these measures:

- Expert Panel Participation: A family caregiver representative served as a formal member of the 2023–2024 ASCO EOL Expert Panel, providing direct input during the review and updating of the measures.
- May 2025 Public Comment Period: Following the updates, ASCO held a public comment period to ensure the measures remained valuable to stakeholders. Of the respondents, which included a patient representative, a significant majority agreed that the measures effectively differentiate between high- and low-quality care and assess what they intend to assess (i.e., quality of end-of-life care).

References:

Earle, C. C., Park, E. R., Lai, B., Weeks, J. C., Ayanian, J. Z., & Block, S. (2003). Identifying potential indicators of the quality of end-of-life cancer care from administrative data. *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology*, *21*(6), 1133–1138. https://doi.org/10.1200/JCO.2003.03.059

3.1 Contributions Towards Closing Care Gaps

A recent systematic review and meta-analysis looked at aggressive EOL cancer care among ~2.7 million patients across 129 studies and found that aggressive EOL care is a common global practice (Ma et al., 2024):

- Repeated hospital admissions (>1) in the last 30 days of life: 17.9%.
- Repeated emergency room visits (>1) in the last 30 days of life: 14.8%.
- Intensive care unit (ICU) stays in the last 30 days of life: 14.4%.
- **Hospice enrollment less than 3 days before death: 14.4%.**
- Chemotherapy in the last 14 days of life: 11.6%.

Additionally, of the studies using a composite score, more than half of the patients experienced at least one measure of aggressive care at the end of their lives. The research also showed that patients with hematologic malignancies were significantly more likely to receive aggressive care, including higher rates of late hospice enrollment, ICU stays, and chemotherapy in the last weeks

of life, compared to those with solid tumors (Ma et al., 2024).

There is evidence of gaps in care among lower-level studies as well. A retrospective review evaluated 2,844 patients in a multistate, community-based hospital network with stage IV NSCLC and found that only 8 percent of patients were referred for outpatient palliative care (Meggyesy et al., 2022).

CMS launched the Enhancing Oncology Model (EOM) in July 2023. EOM is a voluntary, episode-based model that 44 oncology practices treating patients with high-risk cancer participate in. Per the 2025 Enhancing Oncology Model – First Evaluation Report, only 51.1% of EOM patients who died were admitted to hospice for at least 3 days before their death, indicating much room for improvement on this measure (CMS, 2025).

References:

1. Centers for Medicare & Medicaid Services. (2025). *EOM First Evaluation Main Report*. https://www.cms.gov/priorities/innovation/data-and-reports/2025/eom-1st-eval-report
2. Ma, Z., Li, H., Zhang, Y., Zhang, L., Huang, G., Zhang, Y., Shi, L., Liu, W., An, Z., & Guan, X. (2024). Prevalence of aggressive care among patients with cancer near the end of life: a systematic review and meta-analysis. *EClinicalMedicine*, *71*, 102561. https://doi.org/10.1016/j.eclinm.2024.102561
3. Meggyesy, A. M., Buehler, K. E., Wilshire, C. L., Chiu, S. T., Chang, S.-C., Rayburn, J. R., Gilbert, C. R., & Gorden, J. A. (2022). Utilization of palliative care resource remains low, consuming potentially avoidable hospital admissions in stage IV non-small cell lung cancer: A community-based retrospective review. *Supportive Care in Cancer*, *30*(12), 10117–10126. https://doi.org/10.1007/s00520-022-07364-0

4.1a Data Structure and Availability

Data Generation and Availability

As this is a claims-based measure, the data elements required are routinely generated during the delivery of care as part of the standard billing and reimbursement cycle. These data are 100% available in electronic sources via HIPAA-standard electronic data interchange (EDI) transactions.

Data Structure

All required data elements are housed in structured fields within the claims database. The

measure does not rely on unstructured data or free-text clinical notes, ensuring high consistency and ease of extraction.

Inaccuracies and Missing Data

As with all administrative data, this measure is primarily susceptible to inaccuracies related to "claims lag" (the delay between service delivery and claim finalization) and potential coding omissions where secondary diagnoses may not be captured if they do not impact reimbursement. Additionally, while rare in structured claims, "missing data" may occur if a provider fails to populate non-mandatory fields.

Data Integrity and Auditability

Data integrity is maintained through the payer’s internal validation and adjudication engines. This process is highly rigorous, involving extensive financial and clinical reconciliation to ensure fiscal accuracy and adherence to billing regulations. Furthermore, the data is fully auditable; each record is linked to a unique Claim Control Number (CCN) and provider National Provider Identifier (NPI), allowing for a direct reconciliation path back to the original clinical source of truth should a discrepancy be detected.

Annual Specification Maintenance and Data Mapping
For ongoing maintenance, changes to measure specifications (such as annual ICD-10 or CPT code updates) are managed through a standard yearly mapping review process. These updates impact the data structure by requiring new code strings to be added to the measure logic, but they do not affect the overall availability of the electronic data.

4.1b Implementation Costs and Burden

Costs and Administrative Burden
As a claims-based measure, there is negligible administrative burden and no direct implementation cost for the measured entities. Data collection is "passive," utilizing administrative claims that are already generated as part of the standard billing and reimbursement cycle. No manual data abstraction, registry reporting, or additional data entry is required.

Impact on Clinical Workflow and Interaction
This measure has no impact on clinician workflow, diagnostic thought processes, or the patient-physician interaction. Because the data is captured retrospectively through existing ICD-10 and CPT codes, clinicians do not need to modify their documentation habits or navigate additional EHR alerts. This ensures that the clinician's focus remains entirely on clinical decision-making rather than the reporting process.

Barriers and Stakeholder Feedback
ASCO continues to monitor feedback from stakeholders; to date, there have been no concerns regarding implementation burden or patient confidentiality, as the measure relies on de-identified administrative data. Potential barriers are limited to the inherent limitations of claims data, such as claims lag or coding variability. However, because the measure specifications rely on standardized, mandated code sets, these barriers are mitigated by the existing high-compliance environment of healthcare billing.

4.1c Confidentiality

Data collection for this measure is conducted in strict accordance with HIPAA Privacy and Security Rules. Confidentiality is maintained because the measure utilizes de-identified administrative claims data sourced from private payers. Direct identifiers are removed or masked prior to the data being made available for measure calculation, ensuring that the analysis remains focused on clinical patterns rather than individual identities.

To mitigate the risk of re-identification in small patient populations (the "Small N" problem), a minimum threshold of five (5) patients is suggested for performance reporting. This recommended suppression guideline is intended to prevent "deductive disclosure," where an individual's identity could potentially be inferred from a very small data set or outlier results. By suggesting this minimum volume, the measure balances the need for transparent reporting with the highest standards of patient privacy.

Finally, confidentiality risks associated with patient surveys are not applicable to this measure, as it relies entirely on administrative claims data with no direct patient interaction or survey-based data collection.

4.3 Feasibility Informed Final Measure

Based on the feasibility results, no major structural changes were necessary for the core data elements. As the data requisite for measure calculation are routinely generated during the delivery of care, feasibility considerations were effectively validated during the formulation of the measure specifications. The final specifications focus on the use of high-fidelity, structured billing codes to ensure the measure remains reliable and easily implementable across all participating federal and private payers

4.4 Proprietary Information

Proprietary measure or components with fees

4.4a Fees, Licensing, or Other Requirements

As the world's leading professional organization for physicians and others engaged in clinical cancer research and cancer patient care, American Society of Clinical Oncology, Inc. ("Society") and its affiliates1 publishes and presents a wide range of oncologist-approved cancer information, educational and practice tools, and other content. The ASCO trademarks, including without limitation ASCO®, American Society of Clinical Oncology®, JCO®, Journal of Clinical Oncology®, Cancer.Net™, QOPI®, QOPI Certification Program™, and Conquer Cancer®, are among the most highly respected trademarks in the fields of cancer research, oncology education, patient information, and quality care. This outstanding reputation is due in large part to the contributions of ASCO members and volunteers. Any goodwill or commercial benefit from the use of ASCO content and trademarks will therefore accrue to the Society and its respective affiliates and further their tax-exempt charitable missions. Any use of ASCO content and trademarks that may depreciate their reputation and value will be prohibited.

ASCO does not charge a licensing fee to not-for-profit hospitals, healthcare systems, or practices to use the measure for quality improvement, research or reporting to federal programs. ASCO encourage all of these not-for-profit users to obtain a measure library license so ASCO can:

- Keep users informed about measure updates and/or changes
- Learn from measure users about any implementation challenges to inform future measure updates and/or changes
- Track measure utilization (outside of federal reporting programs) and performance rates

ASCO has adopted the Council of Medical Specialty Society's Code for Interactions with Companies (https://cmss.org/wp-content/uploads/2026/04/CMSS-Code-for-Interactions-...), which provides guidance on interactions with for-profit entities that develop produce, market or distribute drugs, devices, services or therapies used to diagnose, treat, monitor, manage, and alleviate health conditions. The Society's Board of Directors has set Licensing Standards of American Society of Clinical Oncology (https://cdn.bfldr.com/KOIHB2Q3/as/bsrth8mwgbsrpvrsbt6gxqb/2023-ASCO-Lic...) to guide all licensing arrangements.

In addition, ASCO has adopted the Council of Medical Specialty Society's Policy on Antitrust Compliance (https://cmss.org/statements/cmss-policy-on-antitrust-compliance/), which provided guidance on compliance with all laws applicable to its programs and activities, specifically including federal and state antitrust laws, including guidance to not discuss, communicate, or make announcements about fixing prices, allocating customers or markets, or unreasonably restraining trade.

5.1.1 Data Used for Testing

Testing for this measure was conducted using administrative claims data from two primary, high-volume sources: a major national federation of independent commercial health insurers and The US Oncology Network (USON)/McKesson claims databases. The data utilized provided comprehensive national geographic coverage across urban, suburban, and rural regions. The initial data sets identified 1,327 reporting entities from the national health insurance federation

and 9 large-scale practices within the USON/McKesson network.

5.1.1a Dates of Testing Data

The testing period for both data sources encompassed the timeframe from January 1, 2023, to December 31, 2024. This two-year window ensures the measure was validated against the most current coding standards and clinical practice patterns, providing a stable and contemporary baseline for analysis.

5.1.2 Differences in Data

There are specific differences in the sample sizes used for various aspects of testing, driven by the clinical sensitivity of the measure and the statistical requirements of the analysis:

Performance Gap and Validity Testing

Threshold: Entities with a minimum of five (5) patients meeting the measure denominator.

Sample Size: 555 reporting entities (derived from the national insurance federation and USON/McKesson administrative claims data, Jan 1, 2023 – Dec 31, 2024).

Rationale for the Sample: This is an end-of-life hospice utilization measure. Because hospice enrollment is a critical quality indicator in oncology, ASCO determined that "each patient matters" in the assessment of care delivery. A lower threshold of N ≥ 5 was utilized to prioritize "Visibility over Volatility."

- **Health Equity:** Utilizing a broader inclusion criteria prevents quality "blind spots" in community-based or rural oncology settings where EOL events are significant but may occur less frequently. High thresholds would effectively penalize these practices by making their care invisible to the measure.
- **Clinical Significance:** While smaller denominators inherently have a higher standard error, the clinical priority of ensuring timely hospice access outweighs the statistical risk of "noisy" scores at the individual entity level.

Reliability Testing

Threshold: Entities with a minimum of twelve (12) patients meeting the measure denominator.

Sample Size: 271 reporting entities (a subset of the administrative claims data described above).

Rationale: A higher threshold of N ≥ 12 was applied specifically for reliability testing to maintain psychometric rigor.

- **Signal-to-Noise Ratio:** For a measure’s reliability coefficient (Beta) to be stable, there must be enough patient volume to distinguish true clinical variation from random statistical

noise.
- **Instrument Validation:** Using these 271 higher-volume entities ensures that the reliability of the "measurement instrument" itself is validated on a stable data set before being applied to the broader clinical population.

Exclusions and Risk Adjustment

No other differences in data sources or timeframes were utilized for exclusions or risk-adjustment testing.

5.1.3 Characteristics of Measured Entities

For performance gap and validity testing, the sample included 546 entities from a national federation of independent commercial insurers and nine USON/McKesson practices. For reliability testing, this cohort was refined to 262 national federation entities and nine USON practices. The resulting testing group represents a national cross-section of oncology care across all 50 U.S. states, including independent practices, hospital-affiliated groups, and integrated delivery networks. By applying an N ≥ 5 threshold for the performance gap analysis, the study successfully captured diverse clinical settings - ranging from high-volume academic hubs to rural providers where hospice access may be limited.

Selection was based on the availability of structured claims data, ensuring a sample that reflects the national oncology landscape without regional payer bias. The inclusion of USON practices highlights the experience of community oncologists, while the variety of practice sizes supports the "Each Patient Matters" philosophy, ensuring an equitable assessment of hospice utilization across all provider tiers.

5.1.4 Characteristics of Units of the Eligible Population

Data Source and Sampling

The descriptive statistics for the eligible population were derived from The US Oncology Network (USON)/McKesson database for the period of January 1, 2023, to December 31, 2024. This sample includes 2,655 unique patients who met the measure's denominator criteria. No sampling was used; all patients within the nine (9) high-volume USON practices who met the clinical requirements were included, as 100% of these practices exceeded the minimum threshold of N ≥ 5.

Representativeness

The USON cohort serves as a robust proxy for the national oncology population. As a network of independent and community-based practices, it captures a diverse mix of patients mirroring the demographic distribution seen in the broader national insurance federation data.

Descriptive Statistics: USON Patient Population (N = 2,655)

Race	Number (n)	Percentage (%)
White	2,371	89.3%
Hispanic	102	3.8%
Black	69	2.6%
Other or Unknown	56	2.1%
Asian / Pacific Islander	41	1.5%
American Indian / Alaska Native	16	0.6%
Grand Total	**2,655**	**100%**

Gender	Number (n)	Percentage (%)
Female	1,327	50.0%
Male	1,323	49.8%
Other or Unknown	5	0.2%
Grand Total	**2,655**	**100%**

5.2.1 Level(s) of Reliability Testing Conducted

Person or encounter level (i.e., data element) (e.g., inter–abstractor reliability), Accountable entity level (i.e., measure score) (e.g., signal-to-noise analysis)

5.2.2 Method(s) of Reliability Testing

Person or Encounter Level (Data Element) Testing

End-of-life (EOL) care is a foundational quality metric in oncology, and administrative claims data serve as the primary vehicle for its assessment. Enrollment in hospice represents a "hard" event in administrative records. Unlike nuanced clinical symptoms, hospice care triggers a specific billing stream - notably Type of Bill codes 081x or 082x - which are required for the hospice agency to receive per diem reimbursement. Because these claims are the sole mechanism for payment and require a formal physician certification of terminal illness, they are highly reliable and rarely missing from the administrative record.

Consequently, ASCO utilized foundational evidence to establish the reliability of the numerator, denominator, and numerator exclusions:

- **Denominator (Identification of Cancer Decedents):** Research confirms that administrative claims are highly reliable for identifying the patient population. Studies using diagnostic codes to identify cancer patients have shown a Positive Predictive Value (PPV) of up to 99.68% (Shin et al., 2019).

- **Numerator (Hospice Admission 3 or More Days Before Death):** Earle et al. (2005) evaluated the accuracy - defined as percent agreement within +/- 1 day - specifically for the timing of hospice enrollment relative to the date of death. By comparing Medicare claims from 48,906 cancer decedents against a clinical gold standard of 150 medical records, the accuracy for the timing of hospice admission was calculated as 0.97.

References

1. Earle, C. C., Neville, B. A., Landrum, M. B., Souza, J. M., Weeks, J. C., Block, S. D., Grunfeld, E., & Ayanian, J. Z. (2005). Evaluating claims-based indicators of the intensity of end-of-life cancer care. *International Journal for Quality in Health Care*, *17*(6), 505–509. https://doi.org/10.1093/intqhc/mzi061
2. Shin, D. W., Cho, J. H., Kim, S. Y., Guallar, E., & Cho, J. (2019). Validation of Administrative Big Database for Colorectal Cancer Searched by International Classification of Disease 10th Codes. *Journal of Cancer*, *10*(15), 3381–3387. https://doi.org/10.7150/jca.30454

Accountable Entity Level (Measure Score) Testing

An assessment of the measure's reliability was performed through the utilization of signal-to-noise analysis, a method that determines the precision of the actual construct in comparison to the random variation. The signal-to-noise ratio is determined by calculating the ratio of between-unit variance to total variance. This analysis provides valuable insight into the measure's reliability and its ability to produce consistent results by describing how well one can confidently distinguish the performance of one clinician group from another.

Based on the hierarchical modeling approach for provider profiling, the following steps were taken:

- **Data Aggregation:** Patient-level data were captured as binary (pass/fail) events and aggregated to the clinician group level to determine the numerator and denominator for each practice.
- **Model Selection:** We utilized a Beta-Binomial model, which is the natural fit for estimating the reliability of simple pass/fail rate measures.
- **Variance Partitioning:** The model partitioned the total observed variability in practice scores into two components: between-unit variance (the "signal," or true differences in practice quality) and within-unit variance (the "noise," or random sampling error).
- **Reliability Calculation:** For each clinician group, a reliability coefficient (R) was calculated using the ratio of the estimated provider-to-provider variance to the sum of the provider-to-provider variance and the binomial error variance (p(1-p)/n).
- **Threshold Application:** The analysis focused on identifying the stability of these scores for practices meeting a minimum patient count of 12.

5.2.3 Reliability Testing Results

Reliability was assessed at the clinician group level using a beta-binomial signal-to-noise analysis, which partitions total observed variation into true performance differences and random sampling

error. Across 271 entities and 13,457 encounters, the measure yielded a mean reliability of 0.744, exceeding the >0.60 target threshold. Results confirmed that statistical stability scales with patient volume; while the first decile averaged 0.575, the second reached 0.652, validating the 12-patient minimum for consistently distinguishing performance. Practices in the highest decile achieved a reliability of 0.941, confirming the measure provides a highly stable performance signal with minimal influence from random noise.

5.2.4 Interpretation of Reliability Results

Person or Encounter Level (Data Element) Testing

An accuracy value of 0.97 for the numerator indicates an exceptionally high level of agreement between administrative enrollment dates and clinical reality. Because this measure relies on the precise calculation of days between two administrative "anchors" (hospice election date and death date), a 97% agreement rate confirms that the risk of miscalculating a patient's length of stay is negligible. Moreover, the Positive Predictive Value (PPV) of 99.68% for the denominator ensures that the identification of the target population is highly precise. This high PPV confirms that patients identified as cancer decedents in the administrative record are almost certainly true cases, virtually eliminating the risk of "false positives" or the inclusion of patients who do not meet the clinical criteria. Collectively, these metrics prove that for the purposes of national endorsement, administrative claims are a highly reliable instrument for monitoring the timeliness of hospice referrals, ensuring provider performance is assessed on a transparent and verifiable basis.

References

1. Earle, C. C., Neville, B. A., Landrum, M. B., Souza, J. M., Weeks, J. C., Block, S. D., Grunfeld, E., & Ayanian, J. Z. (2005). Evaluating claims-based indicators of the intensity of end-of-life cancer care. *International Journal for Quality in Health Care*, *17*(6), 505–509. https://doi.org/10.1093/intqhc/mzi061
2. Shin, D. W., Cho, J. H., Kim, S. Y., Guallar, E., & Cho, J. (2019). Validation of Administrative Big Database for Colorectal Cancer Searched by International Classification of Disease 10th Codes. *Journal of Cancer*, *10*(15), 3381–3387. https://doi.org/10.7150/jca.30454

Accountable Entity Level (Measure Score) Testing

The results support a strong inference of reliability, as the mean coefficient of 0.744 indicates that the "signal" of true performance differences significantly outweighs random sampling error. Because high reliability is essential for confidently distinguishing the performance of one provider from another, these scores demonstrate the measure's suitability for comparative profiling. The decile distribution further supports this inference, as 90% of the sample deciles met or exceeded the >0.60 benchmark. Specifically, reaching a mean reliability of 0.652 in the second decile validates that a 12-patient minimum threshold provides a sufficient sample to mitigate the probability of misclassifying practices due to random noise. Collectively, these findings demonstrate that the measure provides a stable, repeatable, and precise assessment of clinician

group performance.

Table 2a. Accountable Entity Level Reliability Testing Results by Denominator, Target Population Size

Percentage of Patients who Died with Cancer Enrolled in Hospice For at Least 3 Days Immediately Before Death

	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Reliability	0.744	0.556	0.575	0.652	0.677	0.657	0.692	0.772	0.78	0.829	0.868	0.941	0.984
Mean Performance Score	40.1%	43.7%	41.8%	36.5%	37.1%	36.7%	43.3%	34.7%	41.6%	39.8%	46.7%	43.1%	55.3%
Number of Entities	271	16	28	27	27	27	27	27	27	27	27	27	1
Number of Persons / Encounters / Episodes	13457	192	348	391	436	496	607	764	982	1317	2036	6080	704

Table 2b. Accountable Entity Level Reliability Testing Results by Reliability Score

Percentage of Patients who Died with Cancer Enrolled in Hospice For at Least 3 Days Immediately Before Death

	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Reliability	0.744	0.506	0.531	0.585	0.62	0.663	0.71	0.764	0.811	0.86	0.916	0.983	1

5.3.1 Level(s) of Validity Testing Conducted

Person or encounter level (i.e., data element) (e.g., sensitivity and specificity), Accountable entity level (i.e., measure score) (e.g., criterion validity)

5.3.2 Type of Accountable Entity Level Validity Testing Conducted

Empirical validity testing at the accountable entity-level (e.g., criterion validity, construct validity, known groups analysis)

5.3.3 Method(s) of Validity Testing

Methodology and Statistical Analysis

To evaluate the validity of the measure set at the accountable entity level, we conducted a

convergent and divergent validity analysis using Pearson's product-moment correlation coefficient (r).

Steps Conducted:

- **Data Aggregation:** Performance rates were calculated for each measure at the accountable entity level.
- **Hypothesis Formulation:** We hypothesized that measures reflecting high-intensity care (Systemic Cancer-Directed Therapy [SCDT], ICU Admissions, ED/Obs Visits, and Multiple Hospitalizations) would show **positive correlations** with one another. Conversely, we hypothesized these measures would show a **negative correlation** with the Hospice Enrollment measure, as hospice utilization represents a transition toward comfort-oriented care.
- **Correlation Calculation:** Pearson's r was calculated for all pairs of measures within the set to determine the linear relationship between performance rates.
- **Significance Testing:** Two-tailed p-values were calculated for each pair to determine the statistical significance of the associations.

5.3.4 Validity Testing Results

Refer to the attached Validity-Results.zip file for details.

5.3.4a Attach Additional Validity Testing Results

Validity-Results.zip

5.3.5 Interpretation of Validity Results

Person or Encounter Level (Data Element) Testing

End-of-life (EOL) care is a foundational quality metric in oncology, and administrative claims data serve as the primary vehicle for its assessment. Enrollment in hospice represents a "hard" event in administrative records. Unlike nuanced clinical symptoms, hospice care triggers a distinct facility billing stream - notably Type of Bill codes 081x or 082x - which are required for the hospice agency to receive per diem reimbursement. Because these claims are the sole mechanism for payment and require a formal physician certification of terminal illness, they are highly reliable and rarely missing or erroneously coded in the administrative record.

Consequently, ASCO utilized foundational evidence to establish the validity and scientific acceptability of the numerator and denominator:

- **Denominator (Identification of Cancer Decedents):** Research confirms that administrative claims are highly valid for identifying the intended patient population. Validation studies using ICD-10 codes to identify cancer patients have demonstrated a sensitivity of 100% and a specificity of 98.86% (Shin et al., 2019). This ensures the measure accurately targets patients with a confirmed cancer diagnosis while successfully excluding

non-cancer decedents.
- **Numerator (Hospice Admission 3 Days or More Before Death):** Earle et al. (2005) evaluated the performance of claims-based indicators against the clinical gold standard of medical record review. For the indicator regarding the timing of hospice enrollment, the administrative claims data demonstrated a sensitivity of 0.97 and a specificity of 1.00.

References

1. Earle, C. C., Neville, B. A., Landrum, M. B., Souza, J. M., Weeks, J. C., Block, S. D., Grunfeld, E., & Ayanian, J. Z. (2005). Evaluating claims-based indicators of the intensity of end-of-life cancer care. *International Journal for Quality in Health Care*, *17*(6), 505–509. https://doi.org/10.1093/intqhc/mzi061
2. Shin, D. W., Cho, J. H., Kim, S. Y., Guallar, E., & Cho, J. (2019). Validation of Administrative Big Database for Colorectal Cancer Searched by International Classification of Disease 10th Codes. *Journal of Cancer*, *10*(15), 3381–3387. https://doi.org/10.7150/jca.30454

Accountable Entity Level (Measure Score) Testing

- **Hypothesized Relationships:** The empirical results strongly support the conceptual framework of the measure set. All indicators of high-intensity end-of-life care demonstrated positive correlations with each other, confirming they are capturing related facets of aggressive medical utilization.
- **Validation Rationale:** Divergent validity was confirmed by the Hospice Enrollment measure, which exhibited a statistically significant negative correlation with every high-intensity care indicator. Notably, the strongest positive associations were found between the two treatment strata (SCDT 14d and 30d, $r = 0.627$) and between outpatient and inpatient acute transitions (ED/Obs and Greater than 1 Hospitalization, $r = 0.489$).
- **Statistical Significance:** Every correlation in the matrix reached statistical significance ($p < 0.01$), providing robust evidence that these measures move in the hypothesized directions at the entity level.

5.4.1 Methods Used to Address Risk Factors

No risk adjustment or stratification

5.4.1b Rationale For No Adjustment or Stratification

The decision to maintain unadjusted performance scores for these end-of-life measures is rooted in the philosophy that quality palliative care and clinical stewardship represent universal standards that should not fluctuate based on patient complexity. Unlike outcomes heavily influenced by biological variance, metrics such as systemic therapy administration and ICU utilization reflect direct clinical decision-making and provider agency; therefore, risk adjustment could inadvertently "normalize" aggressive care by suggesting that medical complexity justifies a departure from palliative best practices. Furthermore, because these measures are calculated using a denominator of patients who have already deceased, the cohort is inherently characterized by high clinical risk, making additional adjustment statistically redundant and potentially misleading. By prioritizing unadjusted data, ASCO maintains a transparent view of the raw clinical reality, ensuring that gaps in service and health inequities remain visible rather than being

masked by statistical smoothing. Ultimately, this approach upholds the principle that every patient, regardless of their diagnosis or comorbidities, deserves a timely transition to hospice and a coordinated, comfort-focused end-of-life experience.

6.1.1 Current Status

Not in use

6.1.2 Current or Planned Use(s)

Payment Program, Professional Certification or Recognition Program, Other

6.1.4 Attributes for Accountability Use

1. Target Populations
The measure is applicable to adult patients (aged 18 and older) with a confirmed diagnosis of cancer.

2. Accountable Entities
Accountability is attributed at the level of the Oncology Physician Group Practice (PGP) or individual Clinician Group/Practice.

- Attribution Logic: Patients are attributed to the entity that provides the plurality of oncology-related services or manages the "episode of care" (e.g., the 6-month period following the start of chemotherapy).
- Responsibility: The entity is held accountable for the patient's clinical outcomes, resource utilization (e.g., avoidable ER visits), and adherence to evidence-based pathways.

3. Care Settings
The primary care setting is the Outpatient Oncology Clinic, including:

- Community-based oncology practices.
- Hospital Outpatient Departments (HOPDs).
- Infusion Centers.

Note on Care Settings: *Clinical oncologists provide care within the outpatient setting; however, this measure set monitors related clinical outcomes across multiple sites of service. Evaluated events include, but are not limited to, inpatient/outpatient hospital infusions, ICU stays, and emergency department encounters stemming from complications of the outpatient treatment.*

6.2.1 Actions of Measured Entities to Improve Performance

There is evidence that there are interventions that can be put in place to increase time spent in hospice, therefore improving the performance on the measure score:

- In general, patients with weeks to days to live (eg, dying patients) and comfort-oriented goals should discontinue all treatments not directly contributing to patient comfort.

Intensive palliative care focusing on symptom management should be provided in addition to preparation for the dying process. Referral for hospice care should be placed, if not already done. (Category 2A) (NCCN, 2026)

- Clinicians should refer patients with advanced solid tumors and hematologic malignancies to specialized interdisciplinary palliative care teams that provide inpatient and outpatient care early in the course of disease, alongside active treatment of their cancer (Moderate, Strong) (Sanders et al., 2024)
- Palliative care for patients with advanced cancer should be delivered through interdisciplinary palliative care teams, with consultation available in both outpatient and inpatient settings (Intermediate, Moderate) (Sanders et al., 2024)
- Patients with advanced cancer should receive palliative care services, which may include a referral to a palliative care provider. Essential components of palliative care include (Intermediate, Moderate) (Sanders et al., 2024)
    - Rapport and relationship building with patient and family caregivers
    - Symptom, distress, and functional status management (eg, pain, dyspnea, fatigue, sleep disturbance, mood, nausea, or constipation)
    - Exploration of understanding and education about illness and prognosis
    - Clarification of treatment goals
    - Assessment and support of coping and spiritual needs
    - Assistance with medical decision making
    - Coordination with other care providers
    - Provision of referrals to other care providers as indicated

- Patients with months to weeks to live should be provided with guidance regarding the anticipated course of the disease. Physicians should reassess prognostic awareness and goals of therapy. As functional status worsens, these patients may become more concerned about the side effects of cancer-directed treatment and consider focusing their care on maintaining quality of life. The option of discontinuing anticancer treatment aligned with goals of care and initiating goal-directed supportive care should be discussed. (Category 2A) (NCCN, 2026)

The below outlines the difficulty of the actions described above and how measures entities can overcome those difficulties:

Action	Difficulty Level	Why it is Difficult	How to Overcome

Early Referral	Moderate	Shortage of specialist palliative care clinicians and the stigma that palliative care means "giving up." Clinician reluctance to initiate "hospice" talk, often due to a desire to pursue further curative lines of therapy.	In addition to physicians, oncology nurses can be positioned to provide primary palliative care and provide increased advance care planning with patients with advanced cancer (NCCN, 2026). The <NCCN> Panel emphasizes the importance of initiating or continuing advance care planning conversations and systematically reviewing advance care plans to ensure ongoing accuracy as illness or situation evolves. To avoid demeaning the value of end of life care, palliative and/or hospice care should not be framed as “giving up” but instead refocusing the care plan to achieve a better quality of life (NCCN, 2026) Frame hospice as an "extra layer of support" that maximizes quality of life (QOL) alongside or following treatment.
ACP Documentation	High	These conversations are time-intensive and clinicians often lack training in high-stakes communication.	Embed ACP templates in the EHR. Use a "primary care/oncology" shared model where social workers or nurses lead initial goals of care discussions.
Prognostication Accuracy	High	Difficulty accurately predicting a <6 month life expectancy, particularly in cancers with fluctuating trajectories.	Use prognostic tools and multidisciplinary team reviews (doctors, nurses, social workers) to assess decline more holistically.
Patient/Family Resistance	High	Misperception that hospice is "giving up" or only for the actively dying.	Provide education on the broad palliative services covered, including symptom management and bereavement support for the family.

References:

1. National Comprehensive Cancer Network. (2026). *NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®): Palliative Care* (Version 1.2026). https://www.nccn.org/guidelines/guidelines-detail?id=1454
2. Sanders, J. J., Temin, S., Ghoshal, A., Alesi, E. R., Ali, Z. V., Chauhan, C., Cleary, J. F., Epstein, A. S., Firn, J. I., Jones, J. A., Litzow, M. R., Lundquist, D. M., Mardones, M. A., Nipp, R. D., Rabow, M. W., Rosa, W. E., Zimmermann, C., & Ferrell, B. R. (2024). Palliative Care for Patients with Cancer: ASCO guideline Update. *Journal of Clinical Oncology*, *42*(19), 2336–2357. https://doi.org/10.1200/JCO.24.00542

6.2.5a Potential Unintended Consequences

ASCO’s End of Life Measures Technical Expert Panel emphasized that performance is not expected to be perfect on this quality measure. A margin of error should be expected to account for patient preferences, lack of access to hospice, etc.

7.1 Supplemental Attachment

CBE-5595_ClaimsSpec.pdf

Developer POC email

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Measure Developer POC

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The measure developer is different from the measure steward

No

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