ENHANCING ONCOLOGY MODEL (EOM) PAYMENT METHODOLOGY

Version 7.0

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Introduction

This document describes the technical details for the methodology that the Centers for Medicare & Medicaid Services (CMS) uses to perform reconciliation calculations for the Enhancing Oncology Model (EOM).

EOM is an Alternative Payment Model (APM) designed by the Center for Medicare & Medicaid Innovation to promote better care coordination, improve access to care, reduce costs, and improve outcomes for Medicare fee-for-service (FFS) beneficiaries with cancer who receive chemotherapy. EOM builds on lessons from the Oncology Care Model (OCM) and shares certain features with OCM, including episode-based payments that financially incentivize physician group practices (PGPs) to improve care and lower costs. However, EOM diverges in key ways including:

(1) Two-sided risk from the start of the model;
(2) A focus on common, higher risk cancers; and
(3) Cancer type-specific benchmarking.

EOM is a multi-payer model that includes Medicare FFS and other payers to leverage the opportunity to transform care for oncology patients across the population. The emphasis on practice transformation and payments for Enhanced Services and performance is consistent across EOM, although EOM-aligned models developed by payers may differ from the model for Medicare FFS beneficiaries in certain design aspects, such as specific payment incentives. This document reflects only the methodology applicable to Medicare FFS beneficiaries.

EOM targets oncology PGPs that prescribe chemotherapy for cancer and is centered on 6-month episodes of care triggered by receipt of chemotherapy.[1] Seven cancer types are included in the model:

- Breast cancer[2]
- Chronic leukemia
- Lung cancer
- Lymphoma
- Multiple myeloma
- Prostate cancer[3]
- Small intestine/colorectal cancer.

Episodes initiate upon the date of service for an initial Part B chemotherapy drug claim with a corresponding cancer diagnosis (for an included cancer type) on the claim, or upon the fill date for an initial Part D chemotherapy drug claim with a corresponding Part B claim for an included cancer type on the date of, or in the 59 days preceding, the drug claim. Episodes continue for 6 months. Beneficiaries who continue to receive chemotherapy after completing the 6-month

[1] Throughout this document, the term "chemotherapy" is used broadly to refer to systemic cancer therapies for included cancer types. Therapies eligible to trigger an EOM episode are specified in the Initiating Therapies List, which is available on the EOM website. Please note that the PP1-PP7 Initiating Therapies Lists may include certain hormonal therapies that are generally used to treat advanced and/or metastatic cancers. These therapies are generally excluded from the PP8-PP13 Initiating Therapies Lists. All Initiating Therapies Lists will exclude hormonal therapies for non-metastatic low-risk breast and low-intensity prostate cancers.

[2] Low-risk breast cancer is not included in EOM. For the purposes of EOM, low-risk breast cancer is defined as breast cancer treated with only long-term oral endocrine chemotherapy.

[3] Low-intensity prostate cancer is not included in EOM. For the purposes of EOM, low-intensity prostate cancer is defined as prostate cancer treated with either androgen deprivation and/or anti-androgen therapy without any other chemotherapy.

episode may initiate a new episode. Episodes are organized into performance periods, each containing a cohort of episodes that initiate during the same 6-month period and are financially reconciled together. Each episode is attributed to a specific oncology PGP based on evaluation and management (E&M) services furnished during the episode.

In addition to Medicare FFS billing, EOM includes the:

1) Option to bill a Monthly Enhanced Oncology Services (MEOS) payment
2) Potential to *earn* a retrospective performance-based payment (PBP) for each performance period
3) Potential to *owe* a retrospective performance-based recoupment (PBR) for each performance period.

The MEOS payment assists EOM participants with effective care management and coordination for oncology patients. EOM participants are eligible to receive a MEOS payment for each month of every EOM episode attributed to them, or for every month of the episode until the beneficiary enters hospice or dies. (MEOS payments cannot be billed with a date of service after the date on which a beneficiary enters hospice or dies.) No more than six MEOS payments are allowed per episode.

The potential to earn a PBP or owe a PBR incentivizes participants to lower the total cost of care below a risk-adjusted target amount while improving care quality. EOM participants are accountable for the total cost of care for all attributed episodes; participants in a pool[4] are jointly accountable for the total cost of care for all episodes attributed to participants in their pool. EOM episode expenditures consist of all non-excluded Medicare Part A and Part B expenditures (including the base amount of up to six MEOS payments) and certain Part D expenditures. An EOM participant or pool may earn a PBP for a given performance period if total expenditures for their attributed episodes are below their target amount (subject to quality performance and other PBP eligibility criteria as detailed in the participation agreement.) An EOM participant or pool owes a PBR if their total expenditures exceed the threshold for recoupment. An EOM participant or pool falls into the neutral zone (neither earning a PBP nor owing a PBR) if total expenditures are above their target amount and below the threshold for recoupment. PBP and PBR amounts are adjusted for performance on selected quality measures.

Reconciliation occurs semi-annually and the episodes from each performance period are reconciled twice: an initial reconciliation begins 1 month after the end of the performance period and a true-up reconciliation begins 13 months after the end of the performance period. During reconciliation, total expenditures for each EOM participant or pool are compared to their target amount and their threshold for recoupment. The target amount and the threshold for recoupment are calculated as percentages of a risk-adjusted benchmark amount specific to the EOM participant or pool. Benchmark amounts are established by predicting expenditures for each performance period episode using cancer type-specific price prediction models (see Section 4.1.1); applying an experience adjuster (see Section 4.1.2); applying any applicable clinical adjuster(s) (see Section 4.1.3); applying a cancer type-specific trend factor (see Section 4.2.1); applying a cancer type-specific novel therapy adjustment, if applicable (see Section 4.2.2); and summing the resulting benchmark prices for all attributed episodes.

[4] Pools refer to two or more EOM participants who have entered into a pooling arrangement and whose expenditures are aggregated for reconciliation purposes. Pools may be voluntary or mandatory (due to billing overlap in excess of the mandatory pooling threshold; see Appendix J for further details.)

All EOM participants and pools will take on downside risk from the start of the model. Participants and pools will select between two risk arrangements: Risk Arrangement 1 (RA1) and Risk Arrangement 2 (RA2). RA1 has a target amount of 96% of the benchmark amount, a downside risk (or stop-loss) limit of 2% of the benchmark amount, and an upside risk (or stop-gain) limit of 4% of the benchmark amount. RA2 has a target amount of 97% of the benchmark, a downside risk (or stop-loss) limit of 6% of the benchmark amount, and an upside risk (or stop-gain) limit of 12% of the benchmark amount. RA2 qualifies as an Advanced APM. Under both risk arrangements, the threshold for recoupment is 98% of the benchmark amount for PP1-PP3, and 100% of the benchmark amount for PP4-PP13.

The model will run for 7 years, beginning July 1, 2023, and ending June 30, 2030, with a model closeout period after model completion. There are two cohorts of PGPs participating in EOM. Cohort 1 began participating in EOM on July 1, 2023, while cohort 2 started their EOM participation on July 1, 2025. Calculation of PBP and PBR will occur semi-annually and will include all episodes initiating in a given 6-month period. The episode initiation dates and end dates for each performance period are listed in Table 1.

Table 1: Performance Periods

Performance Period	Episode Initiation Dates	Episode End Dates	Participating Cohort(s)
1	7/1/2023–12/31/2023	12/31/2023–6/29/2024	Cohort 1
2	1/1/2024–6/30/2024	6/30/2024–12/29/2024	Cohort 1
3	7/1/2024–12/31/2024	12/31/2024–6/29/2025	Cohort 1
4	1/1/2025–6/30/2025	6/30/2025–12/29/2025	Cohort 1
5	7/1/2025–12/31/2025	12/31/2025–6/29/2026	Cohort 1 Cohort 2
6	1/1/2026–6/30/2026	6/30/2026–12/29/2026	Cohort 1 Cohort 2
7	7/1/2026–12/31/2026	12/31/2026–6/29/2027	Cohort 1 Cohort 2
8	1/1/2027–6/30/2027	6/30/2027–12/29/2027	Cohort 1 Cohort 2
9	7/1/2027–12/31/2027	12/31/2027–6/29/2028	Cohort 1 Cohort 2
10	1/1/2028–6/30/2028	6/30/2028–12/29/2028	Cohort 1 Cohort 2
11	7/1/2028–12/31/2028	12/31/2028–6/29/2029	Cohort 1 Cohort 2
12	1/1/2029–6/30/2029	6/30/2029–12/29/2029	Cohort 1 Cohort 2
13	7/1/2029–12/31/2029	12/31/2029–6/29/2030	Cohort 1 Cohort 2

The following sections provide more detail about the EOM payment methodology. As in OCM, many elements of the EOM payment methodology are developed from national expenditure and utilization patterns during a historical period known as the model baseline period. The method

used to define baseline period episodes is described in Section 1. The method used to calculate baseline period episode expenditures is described in Section 2. In Section 3, we describe how we identify performance period episodes. In Section 4, we describe the method used to determine a risk-adjusted target amount for each EOM participant or pool, and in Section 5, we describe the method used to calculate actual expenditures for performance period episodes. In Section 6, we describe the reconciliation process, including determinations of PBPs, PBRs, and neutral zone performance. Section 7 describes quality scoring and the calculation of the performance multipliers. Section 8 presents examples of reconciliation calculations.

The additional technical documents (e.g., EOM Cancer Type Mapping and Codes; EOM Initiating Therapies List) that are referenced in the following sections are located on the EOM website.

Section 1: Determination of Baseline Period Episodes

The model baseline period includes historical episodes of oncology care that are used to develop the price prediction models and other elements of the EOM payment methodology. For PP1-PP7 the model baseline period includes episodes initiating July 2016–June 2020 (original model baseline). For PP8-PP13 the model baseline period includes episodes initiating January 2019–December 2022 (new model baseline). Both the original and the new model baselines are divided into eight baseline periods, as shown in Table 2 and Table 2, respectively. These tables also note the presence of the coronavirus disease of 2019 (COVID-19) during specific baseline periods. Episodes with a diagnosis of COVID-19 are excluded from both model baseline periods.

Table 2: Original EOM Baseline Periods (PP1-PP7)

Baseline Period	Episode Initiation Dates	Episode End Dates	COVID?
1	7/1/2016–12/31/2016	12/31/2016–6/29/2017	No
2	1/1/2017–6/30/2017	6/30/2017–12/29/2017	No
3	7/1/2017–12/31/2017	12/31/2017–6/29/2018	No
4	1/1/2018–6/30/2018	6/30/2018–12/29/2018	No
5	7/1/2018–12/31/2018	12/31/2018–6/29/2019	No
6	1/1/2019–6/30/2019	6/30/2019–12/29/2019	No
7	7/1/2019–12/31/2019	12/31/2019–6/29/2020	Yes
8	1/1/2020–6/30/2020	6/30/2020–12/29/2020	Yes

Table 3: New EOM Baseline Periods (PP8-PP13)

Baseline Period	Episode Initiation Dates	Episode End Dates	COVID?
1	1/1/2019–6/30/2019	6/30/2019–12/29/2019	No
2	7/1/2019–12/31/2019	12/31/2019–6/29/2020	Yes
3	1/1/2020–6/30/2020	6/30/2020–12/29/2020	Yes
4	7/1/2020–12/31/2020	12/31/2020–6/29/2021	Yes
5	1/1/2021–6/30/2021	6/30/2021–12/29/2021	Yes
6	7/1/2021–12/31/2021	12/31/2021–6/29/2022	Yes
7	1/1/2022–6/30/2022	6/30/2022–12/29/2022	Yes
8	7/1/2022–12/31/2022	12/31/2022–6/29/2023	Yes

The determination of the baseline period episodes consists of three major tasks:

1. Identification of oncology TINs
2. Identification of baseline period episodes
3. Attribution of baseline period episodes to oncology Tax Identification Numbers (TINs)

1.1 Identify Oncology TINs

A list of qualifying oncology PGPs identified by their TINs is developed for each baseline period (BP1–BP8). A qualifying oncology TIN is defined as having at least one National Provider Identifier (NPI) with a specialty of either Hematology/Oncology OR Medical Oncology who provided at least one qualifying E&M visit within the baseline period. A qualifying E&M visit is defined as having a Healthcare Common Procedure Coding System (HCPCS) code in the ranges 99201–99205 or

99211–99215 and a cancer diagnosis, as specified in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources.

1.2 Episode Definition

We define episodes by first identifying potential "trigger events" in the claims data that indicate the provision of chemotherapy, as described in Section 1.2.1. We then determine if the beneficiary meets certain eligibility criteria, described in Section 1.2.2, for the 6 months following each trigger event. Episodes initiate on the date of the first trigger event for which the beneficiary meets all eligibility criteria in the 6 subsequent months. Subsequent episodes involving the same beneficiary may be defined in the model baseline period once earlier episodes have completed. Once baseline period episodes have been identified, we assign a cancer type to the episode, as described in Section 1.2.3. Each episode is attributed to a specific TIN, according to the rules described in Section 1.3 below.

NOTE: Episode ending dates are defined by calendar month, not by a uniform number of days. For example, an episode beginning January 14 ends on July 13.

1.2.1 Identification of Trigger Events

Each episode begins on the date associated with a trigger event, identified as the first observed Part B chemotherapy drug claim in the baseline period with a corresponding cancer diagnosis[5] on the claim OR the first Medicare Part D chemotherapy drug claim with a corresponding Part B claim for cancer. Many chemotherapy drugs are identifiable from HCPCS codes, which are the basis of payment for services billed under Medicare Part B. Chemotherapy drugs not covered under Part B are covered under Medicare Part D and are identifiable by National Drug Codes (NDCs). These drugs are referred to as "initiating cancer therapies." The HCPCS codes and NDCs corresponding to initiating therapies for the model baseline periods can be found in the "Initiating Therapy HCPCS" and "Initiating Therapy NDCs" tabs of the document EOM Technical Payment Resources[6]. CMS releases a new Initiating Therapies List for each performance period to reflect newly approved cancer therapies.

We identify trigger events by examining chemotherapy drug claims in the Part B (outpatient, carrier, and durable medical equipment, prosthetics/orthotics, and supplies [DMEPOS]) and Part D claims files. A Part B claim qualifies as a trigger event if it contains both an initiating cancer therapy and a cancer diagnosis included in the model, as listed in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources. The Part B claim must not have a place of service code indicating an inpatient hospital setting because chemotherapy administered in a hospital does not qualify as a trigger event for EOM. When the trigger event is a Part B drug claim, the episode beginning date is the date of service on the Part B chemotherapy drug claim.

A Part D claim qualifies as a trigger event if it contains an initiating cancer therapy *and* if a Part B claim with an included cancer diagnosis in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources can be found on the prescription fill date or in the 59 days preceding the fill date (because Part D claims do not contain diagnosis codes). When the trigger

[5] As described in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources.
[6] Note that the Initiating Therapies List used for the original baseline period includes certain hormonal therapies that are generally used to treat advanced and/or metastatic cancers, as well as some non-metastatic cancers. The Initiating Therapies List used for the new baseline period excludes most hormonal therapies.

event is a Part D claim, the episode beginning date is the fill date on the Part D chemotherapy drug claim.

There is no requirement that a chemotherapy-free period exist before the beginning of any episode. The existence of chemotherapy claims in the pre-episode period is accounted for in the benchmarking process.

Once an episode has begun, it lasts for 6 calendar months. If a beneficiary dies mid-episode, the participant cannot be paid MEOS payments for that beneficiary with dates of service after the date of death, but the episode is still included in benchmarking and reconciliation calculations. Likewise, if a beneficiary elects hospice mid-episode, the participant cannot be paid MEOS payments for that beneficiary with a date of service after the date of hospice election, but the episode is still included in benchmarking and reconciliation calculations. Medicare expenditures incurred after hospice election are included as episode expenditures.

Subsequent episodes of chemotherapy may begin after earlier episodes have been completed; chemotherapy claims during an episode do not trigger new episodes. Subsequent episodes have the same requirements for trigger events as prior episodes; any amount of time may pass between the end of one episode and the beginning of the next.

1.2.2 Episode Eligibility

A beneficiary must meet the following requirements for the 6 months (or in the event the beneficiary dies during the episode, until the beneficiary's death) beginning on the date of the trigger event for that episode to be eligible for inclusion in EOM:

- Beneficiary is enrolled in Medicare Parts A and B, AND
- Beneficiary does not receive the Medicare End Stage Renal Disease (ESRD) benefit,[7] AND
- Beneficiary has Medicare as his or her primary payer, AND
- Beneficiary is not covered under Medicare Advantage or any other Medicare-sponsored group health program.

In addition, the beneficiary must also have at least one qualifying E&M visit during the 6 months beginning on the date of the trigger event. A qualifying E&M visit is defined as a Part B carrier claim having a HCPCS code in the ranges 99201–99205 or 99211–99215, a cancer diagnosis included in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources, and billed by a TIN with at least one oncology provider in the applicable baseline period. Oncology providers are those with a specialty code of Hematology/Oncology or Medical Oncology as described in Section 1.1.

Episodes in which a beneficiary dies or elects hospice care before the end of 6 months are eligible for inclusion in EOM.

The detailed specifications for identifying eligible episodes are located in Appendix A.

1.2.3 Assignment of Cancer Type

Each episode is classified by cancer type (e.g., prostate, lymphoma, breast). The cancer type is used in categorizing episodes for reporting, monitoring, and risk adjustment purposes. Cancer

[7] ESRD status is determined using information in the Medicare Enrollment Database.

type is assigned using the plurality of diagnoses on qualifying E&M services (see the definition above in Section 1.2.2) that occurred during the episode, as reflected in the carrier file. The diagnosis code corresponding to (i.e., on the same line as) each E&M service is mapped to a cancer type. The mapping of diagnosis codes to cancer types is included in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources. The cancer type with the most qualifying E&M services is the one that is assigned to the episode. In the event of a tie, we apply tie-breakers in the following order, assigning the cancer type associated with:

1. The most recent qualifying E&M service during the episode, then the second-most recent qualifying E&M service, etc.;
2. The lowest last digit of the Taxpayer Identification Number (TIN) associated with the visit; and,
3. The highest claim ID.

The detailed specifications for assigning cancer type are included in Appendix B.

1.2.4 Episode Exclusions

Episodes are excluded from both the original and the new baseline periods if they include the provision of chimeric antigen receptor-T cell (CAR-T) therapy, a new generation of immunotherapies that provide promising outcomes, but are associated with a single (or very few), potentially high-cost administration(s). Episodes with a diagnosis of COVID-19 are also excluded from both the original and new baseline periods. In addition, episodes including receipt of bispecific antibodies are excluded from the new baseline period. The methodology for identifying episodes with CAR-T therapy, bispecific antibodies, or a COVID-19 diagnosis is included in Appendix B.

1.3 Episode Attribution

Each episode is attributed to the TIN that provided the first qualifying E&M service during the episode, if this TIN also provided at least 25% of the total qualifying E&M services for the episode. If the TIN that provided the first qualifying E&M service did not render at least 25% of the total qualifying E&M services, then the attribution is based on plurality of qualifying E&M services and the episode is attributed to the TIN providing the largest proportion of qualifying E&M services during the episode.

For an E&M service to qualify and be counted toward plurality, it must have a HCPCS code in the range 99201–99205 or 99211–99215, it must be associated with (i.e., on the same line item as) one of the cancer diagnosis codes included in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources, and it must be billed by an oncology TIN as defined in Section 1.1.

In the case of a tie on the first E&M service (i.e., two or more different TINs providing the first E&M service on the same date and each provided at least 25% of the total qualifying E&M services) we attribute the episode to the TIN in the tie with the highest proportion of E&M services (plurality method). If the tie still persists, we select the TIN with:

1. The most recent qualifying E&M service during the episode, then second most recent, etc.; then
2. The highest claim ID on the most recent qualifying E&M service.

If the TIN that provided the first qualifying E&M service does not provide at least 25% of the qualifying E&M services and the plurality method yields a tie (i.e., two or more practices have the same highest proportion of qualifying E&M services) we attribute the episode to the TIN with:

1. The most recent qualifying E&M service during the episode, then second most recent, etc.; then,
2. The highest claim ID.

Every episode defined for a baseline period is attributed to a TIN.

Section 2: Calculation of Baseline Period Episode Expenditures

Once baseline period episodes are defined and attributed to TINs, we tabulate the Medicare FFS expenditures incurred during each episode. Baseline period episode expenditures include Medicare expenditures for items and services provided to the beneficiary with a date of service during the episode, subject to certain exclusions.

For inpatient and skilled nursing facility (SNF) services, the service date is the date the beneficiary was admitted to the facility (the admission date on the claim). For outpatient services, the service date is the revenue center date on the claim.[8] For carrier and DMEPOS services, the service date is the line-item date on the claim. For Part D claims, the service date is the date the prescription was filled. For all other services (home health agency (HHA), hospice), the service date is the "from date" on the claim.

2.1 Components of Baseline Period Episode Expenditures

Baseline period episode expenditures include all non-excluded Medicare Part A and Part B FFS expenditures (payments) and certain Part D expenditures (see Figure 1 below). The Part A and Part B expenditures come from the inpatient, SNF, outpatient, carrier, DMEPOS, HHA, and hospice claims files. Through use of the standardized payment files, Medicare expenditures are adjusted to exclude indirect medical education (IME) and disproportionate share hospital (DSH) payments, as well as inpatient pass-through amounts, which include direct graduate medical education (GME), capital-related costs, and bad debt. Additional information on these adjustments is provided below. In addition, expenditures for inpatient care related to certain Medicare Severity Diagnosis Related Groups (MS-DRGs), such as for certain transplants or trauma procedures, are excluded from all baseline period episode expenditures. The MS-DRGs for which inpatient expenditures are excluded can be found in the tab "DRG Exclusion List" of the EOM Technical Payment Resources file, available on the EOM website.

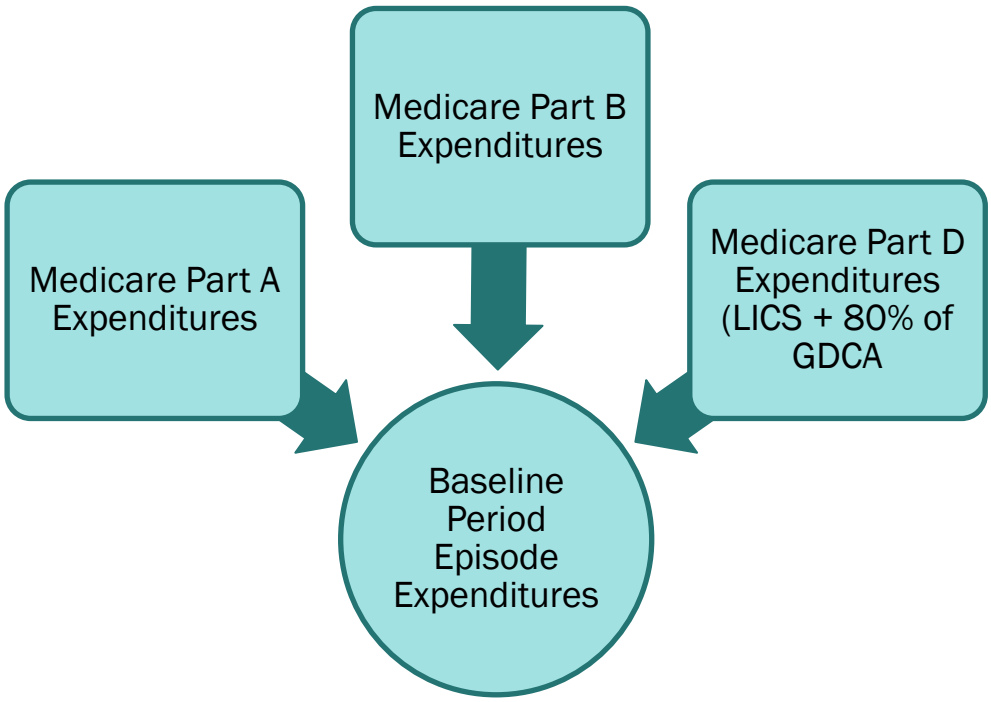
The Part A and Part B expenditures are sourced from CMS' standardized payment files.[9] These files remove geographic pricing differences and payments made from special Medicare programs that are not directly related to services provided (IME, GME, DSH) and do not include the effects of upward or downward payment adjustments related to other CMS programs, such as the Hospital Acquired Condition Reduction Program, the Electronic Health Record Incentive Program, and the Hospital Value-based Purchasing Program. If a standardized payment is not available for a particular service, we use the "non-standardized" (actual) payment from the claim.

The Part D expenditures come from the Part D Event (PDE) files and include only the Low-Income Cost Sharing Subsidy (LICS) amount and 80% of the Gross Drug Cost above the Catastrophic (GDCA) threshold. Other Part D expenditures are not included because they are paid on a capitated basis.

Figure 1 shows the components of the baseline period episode expenditures.

[8] Outpatient outlier amounts, which are not included in the outpatient revenue center payments, are included in episode expenditures based on "from date" on the claim.
[9] https://www.resdac.org/articles/cms-price-payment-standardization-overview

Figure 1: Components of Baseline Period Episode Expenditures



Before finalizing the baseline period episode expenditures, we apply four adjustments. The first is an adjustment to account for overlap of EOM episodes and other CMS models (see Section 2.2); the second is an adjustment to remove the effects of sequestration (see Section 2.3); the third is a trend adjustment (see Section 2.4); and the fourth is an outlier adjustment using a method called Winsorization (see Section 2.5).

2.2 Accounting for Model Overlap in the Model Baseline Period

In the event that a beneficiary was also attributed to, or engaged with, a participant in another payment model being tested by CMS or other similar CMS initiatives, we make certain adjustments to the baseline period episode expenditures to account for overlaps in beneficiaries and participants between EOM and other CMS initiatives, as described below. The list of potentially overlapping CMS initiatives below reflects those that were operating during the model baseline period.

Medicare Accountable Care Organizations (ACOs)

When calculating the baseline period episode expenditures, CMS determines whether the beneficiaries in those episodes were also aligned to ACOs participating in the Next Generation ACO Model or the Vermont Medicare ACO Initiative during the model baseline period. For those Next Generation ACOs or Vermont ACOs participating in All-Inclusive Population-Based Payment (AIPBP) or Population-Based Payment (PBP), CMS makes a monthly payment to the ACO based on an estimate of total annual expenditures for care furnished to beneficiaries aligned to the ACO by AIPBP- or PBP- participating providers and suppliers. Medicare then makes a corresponding reduction in Medicare FFS payments to these providers and suppliers. To avoid any artificial reduction in spending due to the reduction in Medicare FFS payments to AIPBP- and PBP-participating providers and suppliers, CMS adjusts the paid amount on claims, as necessary, to reflect the amount that would have been paid by Medicare in the absence of such fee reductions.

To avoid double counting these payment amounts, CMS does not include the portion of the monthly AIPBP or PBP payments made to Next Generation ACOs or Vermont ACOs attributable to EOM beneficiaries aligned to the relevant Next Generation ACO or Vermont ACO in the EOM baseline period episode expenditures.

Of note, incentive payments made to Next Generation ACOs, Vermont ACOs, or Shared Savings Programs ACOs are not included in the baseline period episode expenditures as these payments are not beneficiary-specific.

Bundled Payments for Care Improvement (BPCI), Bundled Payments for Care Improvement Advanced (BPCI-A), Comprehensive Care for Joint Replacement (CJR), and Medicare Care Choices Model (MCCM)

Baseline period episode expenditures will include payments resulting from beneficiary attribution to participants of the Bundled Payments for Care Improvement (BPCI) and BPCI Advanced Models, the Comprehensive Joint Replacement (CJR) Model, and the Medicare Care Choices Model (MCCM). When a BPCI, BPCI-A, or CJR episode overlaps with an EOM episode in the baseline period, any expenditure reductions or increases will first accrue to the BPCI, BPCI-A, or CJR episode. To avoid double counting episode expenditures across episode payment models we prorate the BPCI/BPCI-A reconciliation or CJR reconciliation amount (Net Payment Reconciliation Amount or Repayment Amount) that was paid for a BPCI/BPCI Advanced or CJR episode, as applicable, by the portion of the BPCI/BPCI-A or CJR episode that overlapped with the relevant EOM baseline period episode. This prorated BPCI/BPCI Advanced or CJR reconciliation amount is included as an expenditure for that beneficiary's EOM baseline period episode.

In the event that any beneficiaries were enrolled in MCCM during the baseline period, the per beneficiary per month (PBPM) payments paid by Medicare to MCCM participants during the baseline period are included as part of the baseline period episode expenditures. The payments associated with MCCM are reflected directly in standardized claims, so no additional accounting for overlap is needed when calculating baseline period episode expenditures.

Oncology Care Model (OCM)

In order to avoid advantaging or disadvantaging former OCM participants who subsequently participate in EOM, all OCM-specific payments and recoupments—including MEOS payments, MEOS recoupments, PBPs, and PBP recoupments—are excluded from EOM baseline period episode expenditures.

Comprehensive Primary Care Plus (CPC+) Model

When calculating the baseline period episode expenditures, we determine whether the beneficiaries in those episodes were also attributed to a practice participating in the Comprehensive Primary Care Plus (CPC+) Model during the model baseline period.

There were two tracks in the CPC+ Model: in Track 1, participating primary care practices were paid a care management fee (CMF) and a performance based-incentive payment (PBIP). In Track 2, participating primary care practices were paid a CMF, a PBIP, and a capitated payment (Comprehensive Primary Care Payments (CPCPs)) which partially replaced FFS payments for certain E&M services. If a practice participating in Track 2 of the CPC+ Model billed for those E&M services, they received a CPCP and a proportionally reduced FFS payment. To account for any potential overlap in beneficiaries that were attributed to a practice participating in the CPC+ Model during the model baseline period, we include prorated CMFs in the calculation of the baseline period episode expenditures, but we exclude the PBIPs because the PBIPs were not

beneficiary-specific. We also exclude the CPCPs made to Track 2 CPC+ participants from the baseline period episode expenditures. Instead of the CPCPs, we include in the baseline period episode expenditures the standardized paid amounts for FFS claims that Track 2 CPC+ participants would have received for certain E&M services in the absence of the CPCPs and reduced FFS amounts under the CPC+ Model.

Maryland Total Cost of Care (TCOC) Model and Pennsylvania Rural Health Model (PARHM)

CMS expects there may be beneficiaries in EOM episodes included in the Maryland Total Cost of Care (TCOC) Model and the Pennsylvania Rural Health Model (PARHM) during the model baseline period.

The Maryland TCOC Model includes three programs: (1) the Hospital Payment Program, (2) the Care Redesign Program (CRP), and (3) the Maryland Primary Care Program (MDPCP). In the Hospital Payment Program, participating hospitals receive a global budget that they must stay within when they bill Medicare FFS claims– a form of capitation. To account for the total cost of care for beneficiaries in EOM baseline period episodes in the Maryland TCOC Model, CMS utilizes the Medicare standardized paid amount to reflect what the actual Medicare payment amount would have been in the absence of the Maryland TCOC Model.

Hospital Payment Program participant hospitals may also participate in the Care Redesign Program under the Maryland TCOC Model. The Care Redesign Program (CRP) tests whether allowing Maryland hospitals to incent nonhospital providers and suppliers to engage in care redesign activities that support state-wide efforts to reduce the growth in total cost of care for Medicare beneficiaries will create meaningful partnerships that improve the quality of care and reduce potentially avoidable hospitalizations. Under the CRP, participating hospitals may enter into financial arrangements with Care Partners (enrolled Medicare providers or suppliers that are mostly physician group practices) and may pay Care Partners incentive payments or non-monetary remuneration for performing certain care redesign interventions. The CRP does not involve payment of Medicare dollars and thus is not relevant to the EOM payment methodology.

The third Maryland TCOC Model program, the MDPCP, currently offers two tracks. Track 1 provides participating primary care providers a care management fee (CMF) and a performance based-incentive payment (PBIP) and participating practices continue to bill for items and services using the conventional FFS structure. Track 2 also provides a CMF and a PBIP, but also includes a capitated payment (Comprehensive Primary Care Payments (CPCPs)) which partially replace FFS payments for certain E&M services. If a practice participating in Track 2 of MDPCP billed for those E&M services, they received a CPCP and a proportionally reduced FFS payment. For any potential overlap in beneficiaries between the MDPCP program and EOM, we include the prorated CMFs in the calculation of the baseline period episode expenditures, but we exclude the PBIP because the payment is not beneficiary-specific. While we also exclude the partial CPCPs made to Track 2 participants, we adjust the reduced FFS payments to reflect what would have been paid in the absence of the capitated payments.

Under the PARHM, participating rural hospitals are paid by CMS and other participating payers under a global budget that is set in advance to cover all inpatient and hospital-based outpatient services. CMS makes biweekly payments equivalent to 1/26 of the approved Medicare FFS portion of each hospital's global budget. Participating hospitals continue to submit Medicare FFS claims for services covered by the global budget which are processed as no-pay claims. We exclude the global budget payments and instead use the Medicare FFS claims submitted by participating hospitals to calculate the baseline period episode expenditures under EOM.

2.3 Sequestration Adjustment

Beginning April 1, 2013, all Medicare expenditures were reduced by 2% due to sequestration. In the absence of sequestration, Medicare expenditures would have been approximately 2% higher (technically 1/0.98 or 2.041% higher) than they actually were. Section 4408 of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) suspended the 2% sequestration reduction from May 1, 2020, through December 31, 2020, which is a period that coincides with the EOM baseline.

EOM baseline period claims occurring after April 1, 2013 and before May 1, 2020 were subject to sequestration and reflect the 2% sequestration decrease, and those occurring on or after May 1, 2020 were not subject to sequestration. To ensure that the baseline period episode expenditures do not contain some claims with the sequestration reduction and some without, we adjust the expenditures at the claim level, based on the date of service, to yield an amount equal to what the expenditures would have been in the absence of sequestration.

The standardized payment files on which EOM episode expenditures are based have been constructed to continue to reflect sequestration reductions, even during the period of suspension, though non-standardized payments to providers did not reflect sequestration, as mandated by the Act. Therefore, standardized payments are adjusted to remove the effects of sequestration, by dividing the Medicare payment by 0.98. Dividing by 0.98 increases the claim payments up to the amount that would have been paid in the absence of sequestration. However, non-standardized payments, which are used in rare cases when a standardized payment is not available, do not require adjustment to remove the effects of sequestration if they occurred from May 1, 2020, through December 31, 2021.[10]

2.4 Baseline Trend

The cancer type-specific trend adjustment makes all baseline period episode expenditures comparable to episode expenditures from the most recent baseline period (episodes initiating between January 1, 2020–June 30, 2020 for the original baseline period and episodes initiating between July 1, 2022- December 31, 2022 for the new baseline period).

Separately for each included cancer type, we adjust expenditures for BP1 episodes (initiating July 1–December 31, 2016 for the original baseline period and January 1, 2019-June 30, 2019 for the new baseline period) by multiplying them by the ratio of average episode expenditures in BP8 to average episode expenditures in BP1. We follow a similar process for episodes ending in the second through seventh baseline periods. This brings all baseline episode expenditures forward to the eighth baseline period. The baseline trend factors are located in Appendix D.

2.5 Winsorization

After applying the adjustments for model overlap, sequestration, and baseline trend, we Winsorize the baseline period expenditures. Winsorization is a two-sided adjustment that limits the impact of outliers on the average expenditures. For each included cancer type, we Winsorize episode expenditures at the 5th and 95th percentiles of expenditures (determined from all episodes of that cancer type during the model baseline period). Specifically, episode expenditures below the 5th percentile for a given cancer type are set to the 5th percentile for that cancer type, and episode

[10] Non-DMEPOS claims are adjusted for sequestration based on the "through date" on the claim. DMEPOS claims are adjusted based on the "from date" on the claim.

expenditures above the 95th percentile for a given cancer type are set to the 95th percentile for that cancer type. These cancer type-specific Winsorization thresholds are located in Appendix E.

Section 3: Determination of Performance Period Episodes

For each performance period, we define the national set of episodes meeting EOM criteria according to the same episode definition process described for baseline period episodes in Section 1. See the "EOM Initiating Therapies List" available on the EOM website for the HCPCS codes and NDCs that are used to trigger episodes for each performance period. Beginning with Performance Period 2 (episodes initiating January 1, 2024 and after), we exclude episodes in which the beneficiary receives bispecific antibodies (BsAbs).

We identify CAR-T therapies and BsAbs in all episodes in the Medicare claims data and exclude those episodes from reconciliation. These therapies are identified in the inpatient, outpatient, carrier (BsAbs), and DME (BsAbs) claims data. The specifications for identifying these claims are included in in Appendix B. Similarly, episodes with a diagnosis of COVID-19 are also excluded from the model. We identify COVID-19 diagnoses during episodes using the inpatient, outpatient, and carrier claims data. The specifications for identifying these claims are included in in Appendix B.

Following the episode attribution methodology described in Section 1.3, we attribute each performance period episode to an EOM participant or to a non-EOM oncology PGP (as defined by TIN). If the TIN on the claim for a qualifying E&M service is associated with an EOM participant, the visit is credited to that participant. If the TIN on the claim is a non-EOM oncology PGP, the E&M service is credited to that TIN. We add up all qualifying E&M services occurring during the episode by TIN and attribute the episode to the TIN that provided the first qualifying E&M service, if that TIN also provided at least 25% of the total E&M services for that episode. If the TIN providing the first qualifying E&M service did not provide at least 25% of the total E&M services, then we attribute the episode to the TIN providing the most qualifying E&M services.

Performance period episodes attributed to non-EOM oncology PGPs are used in the development of cancer type-specific trend factors (see Section 4.2.1) and cancer type-specific adjustments for the use of novel therapies (see Section 4.2.2).

3.1 Attribution for Pool Members

As described above, each episode is attributed to an individual oncology TIN. Some EOM participants may enter into voluntary or mandatory pooling arrangements with other EOM participants. In such cases, we still attribute the episodes to the individual EOM participants within the pool. We do not combine visits to all TINs in a pool when determining the first qualifying E&M service or plurality. Episodes attributed to the individual EOM participants in a pool are combined (summed) for the purposes of reconciliation and quality measurement, though information on the episodes attributed to each individual EOM participant in the pool is available.

Detailed specifications for episode attribution are contained in Appendix C.

Section 4: Calculation of Performance Period Target Amounts

An EOM participant or pool may potentially earn a PBP (subject to quality performance and other eligibility criteria) if actual expenditures for their attributed episodes are below their target amount. The target amount represents projected Medicare expenditures for all attributed performance period episodes in the absence of EOM, less an EOM discount. The target amount is risk-adjusted, specific to each EOM participant or pool, and specific to the performance period. Calculating the target amount for each practice or pool involves the following steps:

1. Determining the baseline price for each episode (Section 4.1).
2. Determining the benchmark price for each episode (Section 4.2).
3. Determining the benchmark amount for each EOM participant or pool (Section 4.3).
4. Determining the target amount for each EOM participant or pool (Section 4.4).

Benchmark amounts and target amounts for pools are based on episodes attributed to all EOM participants within the pool.

4.1 Baseline Price

Episode baseline prices are calculated using a set of cancer type-specific price prediction models to generate the predicted episode expenditures (described below in Section 4.1.1), applying an experience adjuster that reflects regional and participant-specific variation in the historical cost of providing oncology care (described in Section 4.1.2), and applying any applicable clinical adjuster(s) (described in Section 4.1.3).

4.1.1 Price Prediction Models

The EOM price prediction models are developed using the national set of baseline period episodes described in Section 1 and the baseline period episode expenditures described in Section 2. There is a separate price prediction model for each of the seven cancer types for both the original and new baselines. The original baseline models are used to predict baseline expenditures for episodes initiating in PP1-PP7 and the new baseline models are used to predict baseline expenditures for episodes initiating in PP8-PP13. The prediction models are estimated by regressing baseline period episode expenditures on a list of covariates that have been determined to be associated with episode expenditures. The list of covariates may be updated over time and includes the following:

- Age
- Sex
- Dual eligibility for Medicaid and Medicare
- Medicare Part D enrollment and low-income subsidy (LIS)
- Eight comorbidities defined by a combination of Hierarchical Condition Categories (HCC) and RxHCCs:
    - Obesity
    - COPD
    - Dementia
    - Hypertension
    - Hematologic disease
    - Autoimmune disorders

  - Endocrine disorders
  - Heart disease
- A count of costly HCC conditions not included in the eight comorbidities described above
- Receipt of selected cancer-directed surgeries
- Receipt of bone marrow transplant
- Receipt of radiation therapy
- Institutional status
- Participation in a clinical trial
- History of prior chemotherapy use
- Episode length

The covariates are unique to each of the seven prediction models. For example, each model includes a count of HCCs that are significantly associated with higher episode costs for that cancer type. Detailed information about the covariates used in the prediction models is available in Appendix I and in the "Price Prediction Models" tabs of the document EOM Technical Payment Resources. The price prediction models are estimated with weighted least squares regression methods. Because more recent baseline periods are likely to be the most important for predicting future expenditures, the original baseline period expenditures are weighted in the following manner:

- Original baseline periods 1–2, weight=10%,
- Original baseline periods 3–4, weight=25%,
- Original baseline periods 5–6, weight=40%,
- Original baseline periods 7–8, weight=25%.

Original baseline periods 7–8 are not weighted as heavily as they would otherwise be because the COVID-19 pandemic occurred during that time and disrupted normal utilization and expenditure patterns.

New baseline period expenditures are weighted in the following manner:

- New baseline periods 1–2, weight=10%,
- New baseline periods 3–4, weight=20%,
- New baseline periods 5–6, weight=30%,
- New baseline periods 7–8, weight=40%.

The coefficients from the price prediction models are used to calculate predicted expenditures for each performance period episode. We then apply a participant-specific experience adjuster (described in Section 4.1.2) that reflects a blend of national, regional, and participant-specific experience during the model baseline period. We also apply any relevant clinical adjuster(s) (described in Section 4.1.3 below).

4.1.2 Experience Adjuster

The purpose of the experience adjuster is to account for regional and participant-specific variation in the cost of oncology care that is not otherwise incorporated in the price prediction models. The experience adjuster is unique to each EOM participant and is created following the process described below. To align with the correct set of prediction models, the experience adjusters for PP1-PP7 are calculated using the original baseline period episodes and the experience adjusters

for PP8-PP13 are calculated using the new baseline period episodes.

First, we use the cancer type-specific price prediction models to predict the expenditures for each baseline period episode, as described above in Section 4.1.1.

The components of the experience adjuster are ratios of the average actual episode expenditures to the average predicted expenditures for each included cancer type during the model baseline period. These averages are trended, Winsorized, and use the same baseline period weights applied during the creation of the price prediction models. The ratio of average actual expenditures to average predicted expenditures is calculated separately by cancer type and at three levels of aggregation:

- National ratio: the national set of baseline period episodes of the included cancer type.
- Regional ratio: for each of 9 census divisions, the set of baseline period episodes of the included cancer type that are attributed to oncology PGPs (including EOM participants and non-EOM oncology PGPs) located within that region. Each EOM episode attributed to either an EOM participant or a non-EOM PGP is assigned to one of the nine census divisions based on the provider zip code from the first E&M claim provided by their attributed TIN.
- EOM participant-specific ratio: for each EOM participant, the set of baseline period episodes of the included cancer type that are attributed to that EOM participant.[11]

Next, we use this set of ratios to calculate a set of seven cancer type-specific blended experience adjusters for each EOM participant. Each blended experience adjuster is a weighted average of the national, regional, and participant-specific ratios for a given cancer type. For instance, an EOM participant's blended experience adjuster for lung cancer is a weighted average of the national ratio for lung cancer, the regional ratio for lung cancer (for the specific region(s) to which the EOM participant's episodes have been assigned),[12] and the EOM participant-specific ratio for lung cancer. As detailed in Table 3 below, the EOM participant's number of attributed baseline period episodes of a given cancer type determines the relative weights given to each ratio when calculating the EOM participant's blended experience adjuster for that cancer type. If an EOM participant had fewer than 50 attributed episodes of a given cancer type during the model baseline period, CMS does not weight the participant's own history at all for that cancer type, and instead uses a blend of 50% of the national ratio and 50% of the regional ratio to calculate the experience adjuster for that cancer type.

[11] Each baseline period episode is attributed to a specific oncology TIN; if an EOM participant billed under multiple TINs or changed TINs during the model baseline period, we include all baseline period episodes attributed to those TINs when calculating the participant-specific ratios. Likewise, the weights assigned to national, regional, and participant-specific ratios and the weights assigned to the seven cancer type-specific blended experience adjusters are determined using the number of baseline period episodes attributed to the EOM participant during the model baseline period, even if these baseline period episodes were billed under multiple TINs.

[12] If an EOM participant has multiple sites, and these sites operate in different regions, the regional component is the weighted average of the regional ratios for each cancer type, where the percent of episodes attributed to the EOM participant in each region will constitute the weights.

Table 4: Weighting of National, Regional, and EOM Participant-Specific Ratios to Calculate Cancer Type-Specific Blended Experience Adjusters

EOM Participant's Number of Attributed Episodes During Model Baseline Period (Cancer Type-Specific)	National Ratio Weight (Cancer Type-Specific)	Regional Ratio Weight (Cancer Type-Specific)	EOM Participant-Specific Ratio Weight (Cancer Type-Specific)
Fewer than 50 episodes	50%	50%	0%
50 to 99 episodes	50%	30%	20%
100 or more episodes	50%	15%	35%

The final step is to create a single experience adjuster for each EOM participant by calculating a weighted average of that participant's cancer type-specific blended experience adjusters. The weights assigned to each cancer type-specific blended experience adjuster are unique to the EOM participant and match the share of episodes from each included cancer type among the episodes attributed to the EOM participant throughout the model baseline period. For instance, if lung cancer accounted for 20% of an EOM participant's attributed baseline period episodes, the weight assigned to that EOM participant's blended experience adjuster for lung cancer would be 20%. If an EOM participant did not have any attributed episodes of a certain cancer type during the model baseline period, the blended experience adjuster for that cancer type would be given a weight of zero and thus would not contribute to that EOM participant's final blended experience adjuster.

An EOM participant's experience adjuster is applied to the predicted expenditures for each of their attributed performance period episodes. When an episode is attributed to an EOM participant in a pool, the experience adjuster applied is that of the participant—there is not a separate pool-level experience adjuster.

4.1.3 Clinical Adjusters

CMS applies clinical adjusters during the calculation of baseline prices for episodes involving certain cancer types. When applicable, these clinical adjusters account for differences in episode expenditures by:

- Ever-metastatic status (any current or history of metastatic disease including at time of diagnosis or subsequently), and,
- Human epidermal growth factor receptor 2 (HER2) status

These clinical adjusters are based on participant-reported clinical data and may be updated over time. The EOM Clinical Data Elements Guide provides detailed technical guidance about reporting clinical and staging data to the EOM Innovation Support Platform (ISP) Health Data Reporting (HDR) application.

Breast cancer, lung cancer, and small intestine/colorectal cancer episodes are adjusted for ever-metastatic status. Such episodes are considered "Ever-Metastatic" if the following criteria are met:

- The episode was reported to the HDR by the deadline specified for the performance period;

- All required information for the episode was reported to the HDR;
- The cancer type assigned to the episode is the same as the cancer type associated with the reported diagnosis code; and
- One of the following is true:
    - "Metastasis (M)" was reported with a value containing "M1," OR
    - "Current Clinical Status Trend" was reported as "Distant metastasis present," OR
    - "History of Metastatic Cancer"[13] was reported as "Yes."

Episodes not meeting the criteria above are considered "Never-Metastatic." The values of the clinical adjusters for lung cancer and small intestine/colorectal cancer are shown in Table 4.

Table 5: Clinical Adjusters for Lung Cancer and Small Intestine/Colorectal Cancer Episodes

Cancer type	Ever-Metastatic	Never-Metastatic
Lung	1.06061273	0.93381332
Small intestine /colorectal	1.10108496	0.89955301

Breast cancer episodes are additionally adjusted for HER2 status. Breast cancer episodes are considered "HER2 Positive" if:

- The episode was reported to the HDR by the deadline specified for the performance period;
- All required information for the episode was reported to the HDR;
- The cancer type assigned to the episode is the same as the cancer type associated with the reported diagnosis code; and
- "Result of HER2 Test (Qualitative)" was reported with a value of "Positive" or "Equivocal."

All other breast cancer episodes, including those not reported, are considered "Not HER2 Positive."

The values of the clinical adjusters for breast cancer are shown in Table 5.

Table 6: Clinical Adjusters for Breast Cancer Episodes

HER2 Status	Ever-Metastatic	Never-Metastatic
HER2 Positive	1.23161427	1.11563469
Not HER2 Positive	0.98631569	0.86109513

The clinical adjusters are designed to be "benchmark neutral" for the time period on which the adjusters were calculated. In other words, the average predicted baseline expenditures for all episodes of each applicable cancer type in that time period are the same with and without the application of the clinical adjusters.

Please note that episodes of the applicable cancer types may only receive the applicable clinical adjustments if the EOM participant to whom the episode is attributed reported valid clinical and staging data for at least 90% of their total attributed episodes for the relevant performance

[13] This data element was called "Current or History of Metastatic Disease" in PP1 reporting.

period.[14] Episodes of the applicable cancer types attributed to members of a pool may only receive the applicable clinical adjustments if every member of that pool reported valid clinical and staging data for at least 90% of their total attributed episodes for the relevant performance period. If a participant or at least one member of a pool reports valid clinical and staging data for less than 90% of their total attributed episodes, the clinical adjusters in Table 4 and Table 5 will not be applied.

For each performance period, participating PGPs will have the opportunity to report the clinical and staging data for their attributed beneficiaries during the initial reconciliation. During the true-up, EOM participants will have the opportunity to submit additional clinical and staging data for:

- New beneficiaries attributed to the EOM participant at the true-up,
- Beneficiaries attributed during the initial reconciliation period who were assigned a different cancer type at the true-up, and
- Beneficiaries for which the EOM participant did not report any clinical and staging data during the initial reconciliation.

All EOM participants are subject to data validation audits, which may include validation of staging and clinical data reported to the ISP HDR.

4.1.4 Calculation of Baseline Price

The baseline price for each episode is calculated as follows:

> Baseline Price = Predicted Baseline Expenditures * Experience Adjuster * Clinical Adjuster(s)

These baseline prices are the basis for calculating the benchmark prices for episodes, benchmark amounts for EOM participants and pools, and target amounts for EOM participants and pools.

4.2 Benchmark Price

The benchmark price for each episode is calculated by applying two additional adjustments to the baseline price of the episode: a cancer type-specific trend factor (described in Section 4.2.1) and a cancer type-specific adjustment for the use of novel therapies by the EOM participant or pool (described in Section 4.2.2).

4.2.1 Trend Factors

Trend factors adjust for inflation and other changes in expenditure patterns for specific cancer types between the model baseline period and a given performance period. Trend factors are cancer type-specific and are derived from expenditures for baseline period episodes and performance period episodes attributed to non-EOM oncology PGPs.

For a given performance period, the trend factor for each included cancer type is the ratio of average performance period episode expenditures to average baseline period episode expenditures, specifically among episodes of that cancer type attributed to non-EOM oncology PGPs (Episodes attributed to former EOM participants who have terminated their model

[14] As noted in the EOM Participation Agreement, CMS may revise this minimum percentage under certain conditions (e.g., under the Extreme and Uncontrollable Circumstances policy).

participation are excluded from trend factor calculations.). For PP1-PP7, the trend factor denominators are the original baseline period expenditures; for PP8-PP13, the trend factor denominators are the new baseline period expenditures.

We multiply the baseline price of each performance period episode by the appropriate cancer type-specific trend factor to calculate the trended baseline price.

4.2.2 Novel Therapy Adjustments

The Food and Drug Administration (FDA) approves new oncology therapies each year, many of which are substantially more expensive than existing therapies. Trend factors may not initially capture the full cost of these newly approved therapies, particularly if some EOM participants or pools are early adopters of these therapies and use them to a greater extent than non-EOM oncology PGPs.[15]

Novel therapy adjustments increase the benchmark prices for all episodes of a specific cancer type attributed to a specific EOM participant (or for all episodes of that cancer type attributed to the participants in a specific pool) for a given performance period when certain conditions are met, including:

- Newly FDA-approved oncology drugs account for a higher share of total expenditures among the episodes of that cancer type attributed to the participant (or attributed to participants in the pool) than the average share of such expenditures among all episodes of that cancer type attributed to non-EOM oncology PGPs for the same performance period.
- The use of these novel therapies is consistent with the FDA-approved indications.

As novel therapy adjustments are cancer type-specific, a participant or pool may potentially qualify for a novel therapy adjustment for one or more included cancer types, while also receiving no novel therapy adjustment for other cancer types. For instance, a participant would receive a novel therapy adjustment to their attributed lung cancer episodes if their share of lung cancer expenditures from newly FDA-approved therapies exceeds the average share of expenditures from newly FDA-approved therapies among lung cancer episodes attributed to non-EOM oncology PGPs. However, the same participant would not receive a novel therapy adjustment for their attributed breast cancer episodes if their share of breast cancer expenditures from newly FDA-approved therapies is below the average share for breast cancer episodes attributed to non-EOM oncology PGPs.

For each performance period, CMS identifies a set of new oncology drugs for the purposes of determining novel therapy adjustments (which will be available on the EOM website). CMS also includes new combination therapies, as applicable, for the purposes of determining novel therapies adjustments. Only oncology drugs or combinations that received FDA approval after June 30, 2021 are considered for inclusion. Oncology drugs or applicable combinations are considered "new" for 2 years from FDA approval for that specific indication. The "new" designation may extend past 2 years to align with the EOM reconciliation process.

For each performance period, we calculate each EOM participant's or pool's cancer type-specific

[15] Since trend factors are based on expenditure patterns among non-EOM oncology PGPs, they reflect the average level of novel therapy use in episodes attributed to non-EOM oncology PGPs and the corresponding impact on expenditures. Novel therapy adjustments increase benchmark prices for a specific cancer type when a participant's or pool's above-average use of novel therapies is likely to increase expenditures for that cancer type beyond the level already captured in the trend factor.

percentages of actual episode expenditures from novel therapies. For Part B drugs, the cost of new oncology drugs includes the full Medicare expenditure amount; for Part D drugs, the relevant costs include the LICS amount and 80% of the GDCA for claims July 1, 2023-December 31, 2024 and 20% of GDCA for claims January 1, 2025 and later (as described in Section 2.1 above and Section 5.1 below). The novel therapy drug and any corresponding combination therapies must occur within the EOM episode (inclusive of episode beginning date and episode ending date) and on or after the FDA approval date. For combination therapies, the novel therapy drug and the corresponding combination therapies can be prescribed in any order and do not need to occur within a specified timeframe. Only the expenditures of the novel therapy drug are included in the percentages of actual expenditures from novel therapies. The expenditures of the corresponding combination therapies will not contribute to the novel therapies adjustment.

For each performance period, we also calculate the cancer type-specific percentages of actual episode expenditures from novel therapies among all episodes of that cancer type attributed to non-EOM oncology PGPs. (Episodes attributed to former EOM participants who have terminated their model participation are excluded from this calculation.) The attribution of performance period episodes to non-EOM oncology PGPs is described in Section 3.

Separately for each cancer type, we compare the percentage of episode expenditures from novel therapies for the EOM participant or pool to the percentage among episodes attributed to non-EOM oncology PGPs to determine whether the participant or pool qualifies for a novel therapy adjustment for that cancer type. A participant's or pool's novel therapy adjustment for a given cancer type is based on 80% of the difference between these two percentages. Novel therapy adjustments may only result in a higher benchmark price; they will never lower a benchmark price.

Appendix F provides detailed specifications and an example calculation of the adjustment for the use of novel therapies.

4.3 Benchmark Amount

The benchmark amount for an EOM participant or pool is the sum of the benchmark prices for all episodes attributed to the EOM participant (or for all episodes attributed to participants in the pool, as applicable) for a given performance period. The benchmark amount represents projected Medicare expenditures for attributed performance period episodes in the absence of EOM. The benchmark amount is the basis for determining the target amount for an EOM participant or pool for a given performance period.

4.4 Target Amount

The final target amount for each EOM participant or pool is equal to the benchmark amount minus the applicable EOM discount. The EOM discount under RA1 is 4%; the EOM discount under RA2 is 3% (see Section 6.2). The target amount equals the benchmark amount multiplied by one minus the applicable EOM discount:

Target Amount = Benchmark Amount * (1 – EOM discount).

Appendix G provides a mathematical description of the methodology for calculating target amounts in the performance period.

Table 7: Summary of Steps to Calculate Target Amounts for EOM Participants or Pools

Step	Description
1	Establish predicted baseline expenditures for each performance period episode, using cancer type-specific price prediction models created from the corresponding baseline period episodes
2	Apply EOM participant's experience adjuster
3	Apply clinical risk adjustments (for certain cancer types) to obtain baseline price for each performance period episode
4	Apply cancer type-specific trend factor
5	Adjust for EOM participant's or pool's cancer type-specific use of novel therapies (if applicable) to obtain benchmark price for each performance period episode
6a	*For EOM participants not in a pool*: Sum benchmark prices for all performance period episodes attributed to the EOM participant to calculate the benchmark amount
6b	*For pools*: Sum benchmark prices for all performance period episodes attributed to all EOM participants in the pool to calculate the benchmark amount
7	Apply appropriate EOM discount (corresponding to the EOM participant's or pool's selected risk arrangement) to the benchmark amount to obtain target amount

Section 5: Calculation of Actual Episode Expenditures

After identifying performance period episodes and attributing them to EOM participants and non-EOM oncology PGPs, we tabulate the Medicare FFS expenditures incurred during each episode.

Actual performance period episode expenditures include Medicare expenditures for all items and services provided to the EOM beneficiary (subject to certain exclusions) with a service date during the episode, including items and services provided by any Medicare providers or suppliers—including the EOM participant to whom the episode is attributed, its EOM practitioners and Care Partners, non-EOM oncology PGPs, and non-oncology providers and suppliers.

For inpatient and SNF services, the service date is the date the beneficiary was admitted to the facility (the admission date on the claim). For outpatient services, the service date is the revenue center date on the claim.[16] For carrier and DMEPOS services, the service date is the line-item date on the claim. For Part D claims, the service date is the date the prescription was filled. For all other services (HHA, Hospice), the service date is the "from date" on the claim.

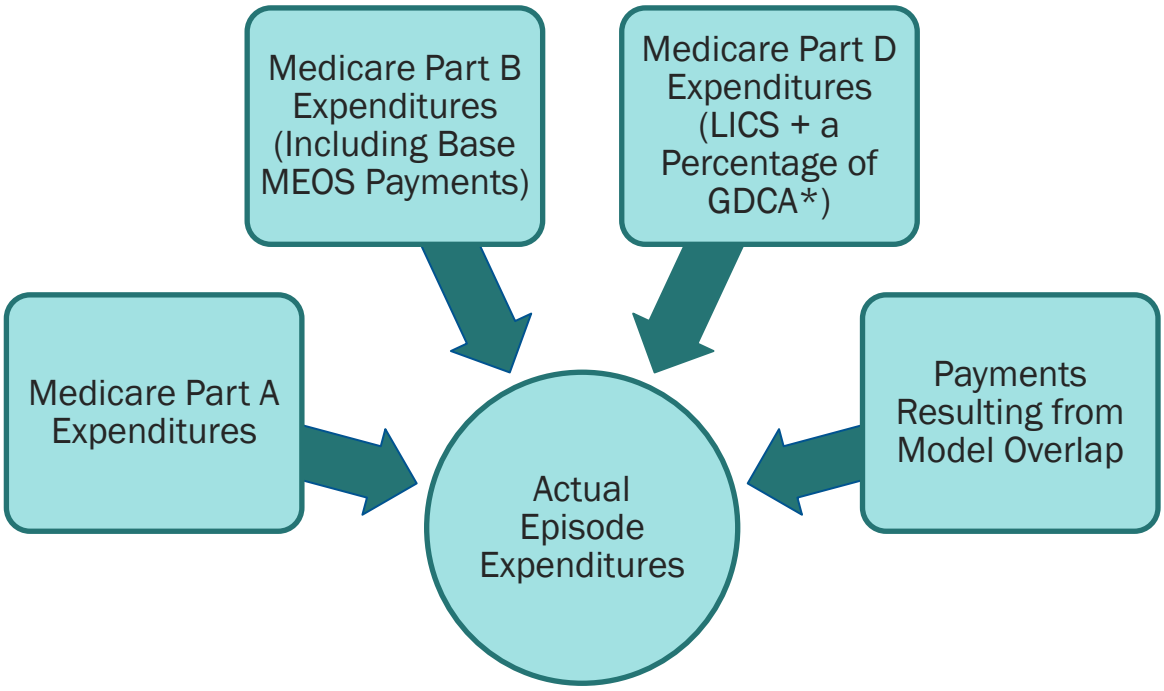
EOM participants may submit MEOS claims with a date of service falling during an attributed episode or during the 30 days before and after the episode. Therefore, MEOS claims are first associated with a specific episode and then added to the episode's expenditures, which may result in MEOS claims that did not have a service date during the episode being included in an episode's expenditures. No more than six MEOS payments are included in the expenditures for each episode, and each MEOS payment is only associated with one episode. The base MEOS payment amount is $70 per EOM beneficiary per month for services provided July 1, 2023 – December 31, 2024, and $110 per EOM beneficiary per month effective January 1, 2025. For episodes involving a beneficiary who is dually eligible for Medicare and Medicaid, CMS pays an additional $30 per dually eligible beneficiary per month, for a total MEOS payment of $100 or $140 per beneficiary per month, depending on the date of service. The additional $30 per dually eligible beneficiary per month does not count toward the EOM participant's total cost of care responsibility; only the base MEOS payment is included in episode expenditures.

5.1 Components of Actual Episode Expenditures

Actual episode expenditures include all non-excluded Medicare Part A and Part B FFS expenditures (which will include the base MEOS payments), certain Part D expenditures, and payments resulting from overlapping participation in other CMS models and initiatives (see Figure 2 below).

[16] Outpatient outlier amounts, which are not included in the outpatient revenue center payments, are included in episode expenditures based on "from date" on the claim.

Figure 2: Components of Actual Episode Expenditures



*80% of GDCA for claims July 1, 2023-December 31, 2024; 20% of GDCA for claims January 1, 2025 and later.

The Part A and Part B expenditures come from the inpatient, SNF, outpatient, carrier, DMEPOS, HHA, and hospice claims files. As with the baseline episode expenditures, actual Medicare expenditures are standardized to exclude IME and DSH payments, as well as inpatient pass-through amounts. In addition, expenditures for inpatient care related to certain MS-DRGs, such as those related to certain transplant and trauma procedures, are excluded from all performance period episode expenditures. The MS-DRGs for which inpatient expenditures are excluded can be found in the tab "DRG Exclusion List" of the EOM Technical Payment Resources file. The Part A and Part B actual expenditures are sourced from CMS' standardized payment files (see Section 2.1). Part D expenditures come from the Part D claims files and include only the LICS amount and the Medicare liability for the GDCA (see Section 5.3 for details). Other Part D expenditures are not included because they are paid on a capitated basis.

Before finalizing the actual episode expenditures, we apply similar adjustments as those made to the baseline expenditures—an adjustment to account for potential overlap of shared savings or performance-based payments that may be earned through participation in multiple CMS models or initiatives (Section 5.2 below), an adjustment to remove the effect of sequestration (as necessary, see Section 5.4 below), and cancer type-specific Winsorization adjustments. Performance period episode expenditures are Winsorized at the 5th and 95th percentiles, which are determined from the national set of episodes of each cancer type from that specific performance period (including episodes attributed to an EOM participant and episodes attributed to a non-EOM oncology PGP).

Additional adjustments to the actual episode expenditures will be made as needed to account for changes in Federal regulation or other new models.

5.2 Additional Adjustment for ACO and Other Model Overlap during the Performance Period

Medicare Accountable Care Organizations (ACO) Initiatives in the Model Performance Period

The ACO Realizing Equity, Access, and Community Health (REACH) Model, the Medicare Shared Savings Program (Shared Savings Program), and the three Comprehensive Kidney Care Contracting (CKCC) Options in the Kidney Care Choices (KCC) Model are ACO initiatives. In addition, we treat overlap between EOM and the Kidney Care First (KCF) Option of the KCC Model in the same manner as overlap between EOM and ACO initiatives.

In all of the EOM performance period episode expenditure calculations, we account for any reductions in FFS payments for services furnished to EOM beneficiaries who are also aligned to Medicare ACOs or other similar entities that are participating in population-based payments. The paid amount on claims is adjusted, as necessary, to reflect the amount that would have been paid in the absence of population-based payments. To avoid double counting these payment amounts, we do not include the portion of the monthly capitation payment to an ACO or similar entity that has elected population-based payments that is attributable to EOM beneficiaries aligned to that ACO or similar entity in actual episode expenditure calculations under EOM. Moreover, we exclude kidney transplant bonus payments in all four options of the KCC Model and the Performance Based Adjustments (PBAs) from the KCF Option from EOM performance period expenditures for any shared beneficiaries. Of note, beneficiaries diagnosed with ESRD are excluded from EOM.

Non-claims-based payments and recoupments received under the Shared Savings Program, other ACO initiatives, or the KCF option are not included in the EOM performance period expenditures for overlapping beneficiaries, however, adjustments for such payments, if they exist, are accounted for in the calculation of the PBP. See Section 6.6 for information on this adjustment.

BPCI Advanced and Comprehensive Care for Joint Replacement (CJR) Model in the Model Performance Period

An EOM beneficiary may be attributed to a participant in either the BPCI Advanced Model or the CJR Model during an EOM performance period episode. When a BPCI Advanced or CJR Model episode overlaps with an EOM episode, any reductions or increases in expenditures first accrue to the BPCI Advanced or CJR Model episode. After BPCI Advanced or the CJR Model performs its reconciliation calculations, CMS prorates the BPCI Advanced or CJR Model reconciliation amount, a non-claims-based payment or recoupment, by the portion of the BPCI Advanced or CJR episode(s) included in the reconciliation calculations that overlapped with the EOM episode. This prorated BPCI Advanced or CJR Model reconciliation amount is included in the EOM participant's or pool's performance period episode expenditures prior to the application of sequestration (if applicable) and Winsorization.[17]

Primary Care First (PCF) Model in the Model Performance Period

CMS accounts for any financial overlap if a beneficiary in an EOM episode is also attributed to a participant in the PCF Model. The model payments in the PCF Model include a professional population-based payment (PCF PBP) and a flat visit fee (FVF), both of which are subject to adjustments based on performance through the Performance-Based Adjustment (PBA).

The PCF PBP is designed to partially replace Medicare FFS practice revenue for primary care services. In all of the EOM performance period episode expenditure calculations, we account for

[17] Winsorization is a two-sided truncation adjustment that limits the impact of outliers on the average performance period episode expenditures without removing these episodes from the performance period.

any reductions in FFS payments for services furnished to EOM beneficiaries who are also attributed to a PCF practice by adjusting the paid amount on claims, as necessary, to reflect the amount that would have been paid in the absence of the PCF PBP and including that amount in the EOM performance period episode expenditure calculations. To avoid double counting these payment amounts, we do not include the portion of the monthly capitation payment to a PCF participant that is attributable to EOM beneficiaries aligned to that PCF participant in actual episode expenditure calculations under EOM. To avoid increasing Medicare expenditures and to accurately account for the total cost of care for EOM beneficiaries, we adjust any PCF FVF payments received by an EOM participant during the performance period to reflect what the actual Medicare FFS reimbursement amount would have been in the absence of participation in the PCF Model. We include the actual Medicare FFS reimbursement amount for FVF services in the EOM performance period expenditures for EOM beneficiaries who are also attributed to a PCF practice.

Maryland TCOC Model and PARHM in the Model Performance Period

We adjust for payments from the Maryland TCOC Model and PARHM in the calculation of the performance period episodes for EOM in the same way the adjustments are described in the calculation of the total expenditures for EOM baseline period episodes as described in Section 2.2. Expenditures for episodes overlapping with EOM and MDPCP Track 3 are adjusted in the same manner as PCF overlap, described above.

Additionally, the HEART payment, paid to participating MDPCP Track 1 and Track 2 practices as part of the MDPCP CMF, is excluded from the performance period episode expenditures under EOM as to not disadvantage EOM participants serving high-risk beneficiaries who reside in areas with a high area deprivation index (ADI).

Making Care Primary (MCP) Model

When calculating the EOM performance period episode expenditures, CMS identifies EOM beneficiaries who were attributed to a participant in the Making Care Primary (MCP) Model at any time during their EOM episodes. Participants in the MCP Model may be eligible to receive multiple types of MCP model payments, depending on their track and performance. MCP payments may include an upfront infrastructure payment (UIP) for infrastructure building, a per-beneficiary per-month prospective enhanced services payment (ESP), a performance incentive payment (PIP), and/or a capitated Prospective Primary Care Payment (PPCP). PPCPs partially or fully replace FFS payments for certain E&M services and other specified services. MCP participants in tracks 2 and 3 may bill for MCP e-Consults (MEC), and their Specialty Care Partners may bill for an ambulatory co-management code (ACM) in track 3.

To account for any potential overlap in beneficiaries that are attributed to a participant in the MCP Model at any time during their EOM episodes, CMS includes in the calculation of the performance period episode expenditures the portion of the MCP ESPs that corresponds to the time period during which a beneficiary was attributed to a practice in the MCP Model while also in an EOM episode. CMS excludes the MCP PIPs and UIPs from the calculation of the performance period episode expenditures. The PPCPs in MCP will also be excluded from the EOM performance period episode expenditures. CMS includes the standardized paid amounts for FFS claims that MCP participants would have received for certain E&M and other specified services in the absence of the PPCP. CMS includes the MCP MEC and ACM payments in the EOM performance period episode expenditures.

Guiding an Improved Dementia Experience (GUIDE) Model

When calculating the EOM performance period episode expenditures, CMS identifies EOM beneficiaries who were aligned to a participant in the Guiding an Improved Dementia Experience (GUIDE) Model at any time during their EOM episodes. Practices participating in the GUIDE Model can bill Medicare for a per-beneficiary per-month Dementia Care Management Payment (DCMP), which replaces FFS payment for certain covered services. Additionally, GUIDE Model participants are able to bill the Innovation Center for up to $2,500 per aligned eligible beneficiary per year for GUIDE Respite Services. Certain safety net providers participating in the GUIDE Model are also eligible to receive a one-time infrastructure payment.

To account for any potential overlap in beneficiaries that are aligned to a practice participating in the GUIDE Model at any time during their EOM episodes, CMS includes in the calculation of the performance period episode expenditures the portion of the GUIDE DCMP that corresponds to the time period during which a beneficiary was aligned to a practice in the GUIDE Model while also in an EOM episode. CMS excludes the payment for the GUIDE Respite Services and the one-time infrastructure payment for safety net providers when calculating an EOM participant's performance period expenditures.

ACO Primary Care Flex Model (ACO PC Flex Model)

Overlap between EOM and the ACO PC Flex Model is permitted and handled consistently with policies for overlap with existing ACO initiatives, including the ACO Realizing Equity, Access, and Community Health (REACH) Model and the Medicare Shared Savings Program.

In alignment with existing policies, in all EOM performance period episode expenditure calculations, CMS accounts for any reductions in fee-for-service (FFS) payments for services furnished to EOM beneficiaries who are also aligned to the ACO PC Flex Model. Prospective Primary Care Payments (PPCPs) will not be counted toward episode expenditures, but CMS includes the standardized paid amounts that would have been received for FFS claims in the absence of the PPCP.

Advanced Shared Savings Payments to ACO PC Flex Model participants will not be included in EOM episode expenditures.

Increasing Organ Transplant Access (IOTA) Model

Beneficiary and participant overlap is permitted between EOM and the IOTA Model. IOTA Model Performance-Based Payments and Performance-Based Recoupments will not be counted toward EOM episode expenditures.

Achieving Healthcare Efficiency through Accountable Design (AHEAD) Model

Beneficiary and participant overlap will be permitted between EOM and the AHEAD Model. CMS will exclude AHEAD Cooperative Agreement Funding from EOM participants' performance period expenditures. CMS will also exclude AHEAD global budget payments and Enhanced Primary Care Payments, and will instead use Medicare standardized paid amounts for fee-for-service claims to reflect what the actual Medicare payment amount would have been in the absence of the AHEAD Model.

Innovation in Behavioral Health (IBH) Model

Beneficiary and participant overlap will be permitted between EOM and the Innovation in Behavioral Health (IBH) Model. IBH Infrastructure Funding will not be counted toward EOM episode expenditures.

Transforming Episode Accountability (TEAM) Model (start date January 1, 2026)

Overlap between EOM and TEAM will be permitted and handled consistently with policies for overlap with the Bundled Payments for Care Improvement Advanced (BPCI Advanced) and Comprehensive Care for Joint Replacement (CJR) Models. An EOM beneficiary may be attributed to a TEAM participant during an EOM performance period episode. When a TEAM episode overlaps with an EOM episode, any reductions or increases in expenditures first accrue to the TEAM episode. After TEAM performs its reconciliation calculations, CMS prorates the TEAM reconciliation amount, a non-claims-based payment or recoupment, by the portion of the TEAM episode(s) included in the reconciliation calculations that overlapped with the EOM episode. This prorated TEAM reconciliation amount is included in the EOM participant's or pool's performance period episode expenditures prior to the application of sequestration (if applicable) and Winsorization.

5.3 Adjustments for Provisions of the Inflation Reduction Act

The Inflation Reduction Act (IRA) was signed into law on August 16, 2022. Under section 11403 of the IRA, Medicare payment for certain biosimilar biological products is required to be the average sales price (ASP) plus 8% (rather than 6%) of the ASP of the reference biological for a 5-year period beginning on October 1, 2022. The EOM performance period episode expenditure calculations will reflect the amount that would have been paid in the absence of such changes. The additional 2% of the ASP of the reference biological is excluded from episode expenditures.

Section 11101 of the IRA reduced beneficiary cost-sharing amounts beginning April 1, 2023, in cases where the price of Part B rebatable drugs increases faster than the rate of inflation. When a Part B coinsurance percentage lower than 20% applies for a rebatable drug for a calendar quarter, the Medicare reimbursement to providers is increased to account for the lower coinsurance amount. The EOM performance period episode expenditure calculations will not reflect this increase in Medicare payment. Performance period episode expenditures will include the amount that would have been paid by Medicare in the absence of the IRA and reflect a 20% beneficiary coinsurance payment as applicable. Note that qualifying biosimilar biological products are not Part B rebatable drugs during the same calendar quarter.

Under section 11201 of the IRA, Medicare's share of the GDCA will decrease from 80% to 40% for generic drugs and to 20% for brand-name drugs, effective January 1, 2025. So that EOM participants are not accountable for a higher percentage of generic drug costs versus brand-name drugs, the EOM performance period episode expenditures will include 20% of the GDCA for all Part D drugs (whether generic or brand-name) provided to an EOM beneficiary during their episode with a fill date on or after January 1, 2025.

See Appendix M for the specifications for implementing the IRA adjustments to EOM episode expenditures.

5.4 Sequestration Adjustment

As described in Section 2.3, beginning April 1, 2013, all Medicare expenditures were reduced by 2% due to sequestration, with a suspension of sequestration enacted effective May 1, 2020 and eventually lifted effective July 1, 2022. Because any performance-based payments made under EOM may be subject to sequestration when payment is made, CMS adjusts claim payment amounts to remove any effect of sequestration, so as not to double-count the sequestration reduction.

Of note, sequestration may be suspended by Congress in the future for a certain period of time.[18]

The standardized payment files on which EOM episode expenditures are based are constructed to continue to reflect sequestration reductions, even during a period of suspension, though non-standardized payments to providers do not reflect sequestration. Therefore, standardized payments are adjusted to remove the effects of sequestration, as described in Section 2.3, even during a period of suspension. However, non-standardized payments, which are used in rare cases when a standardized payment is not available and to calculate the geographic adjustments (see Section 6.5), do not require adjustment to remove the effects of sequestration if they occur during a period of suspension.

5.5 Actual Expenditures for an EOM Participant or Pool

For an EOM participant that is not in a pool, the actual expenditures for a given performance period are calculated by summing the actual episode expenditures for all performance period episodes attributed to that participant.

For pools, the actual expenditures for a given performance period are calculated by summing the actual episode expenditures for all performance period episodes attributed to EOM participants in the pool.

[18] For example, Congress has previously suspended sequestration: Section 4408 of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) suspended the 2 percent sequestration reduction from May 1, 2020 through December 31, 2020. The suspension was extended through March 31, 2021 as part of the Consolidated Appropriations Act, 2021, and again through December 31, 2021 as part of an Act to Prevent Across-the-Board Direct Spending Cuts, and for Other Purposes.

Section 6: Reconciliation

For each performance period, EOM participants and pools have the potential to earn a PBP, owe a PBR, or fall into the neutral zone (neither earning a PBP nor owing a PBR). We make this determination for each EOM participant and pool by comparing their actual expenditures for the performance period (described in Section 5) to their target amount (described in Section 4) and the threshold for recoupment. This process is called reconciliation. In this section, we describe reconciliation calculations for both risk arrangements (RA1 and RA2). We also describe post-hoc adjustments applied to all PBP and PBR amounts, including a performance multiplier, a geographic adjustment, and a sequestration adjustment (if applicable). Finally, we discuss the frequency and timing of the reconciliation process.

6.1 Requirements for Receiving a Performance-Based Payment

In order to receive a PBP for a particular performance period, all of the following requirements must be met:

- The EOM participant's or pool's actual episode expenditures for attributed episodes are below their target amount.
- The EOM participant or pool achieves an Aggregate Quality Score (AQS) that meets or exceeds the minimum performance threshold. The AQS is equal to the total quality points earned divided by the maximum quality points in the performance period. Information on the quality measures and scoring is located in Section 7.
- The EOM participant (or in the case of a pool, each EOM participant in the pool) fulfills all requirements for data reporting,[19] including the accurate, complete, and timely submission of all required participant-reported quality measures (Section 7.1), clinical data elements (Clinical Data Elements Guide), and sociodemographic data (Sociodemographic Data Elements Guide).
- The EOM participant (or in the case of a pool, each EOM participant in the pool) implements all Participant Redesign Activities.
- The EOM participant (or in the case of a pool, each EOM participant in the pool) fulfills all PBP eligibility criteria set forth in the participation agreement.

6.2 Risk Arrangements

EOM participants and pools are in a two-sided risk arrangement, either RA1 or RA2, for the full duration of their participation in EOM. Participants in a pooling arrangement must select a single risk arrangement for the pool. By default, EOM participants and pools are in RA1 unless they request to be in RA2. Participants and pools have the opportunity to move from one risk arrangement to the other risk arrangement on a semi-annual basis prior to the start of the next performance period.

Under RA1, the EOM discount is 4% of the benchmark amount. The target amount (the benchmark amount less the EOM discount) is therefore 96% of the benchmark amount. The

[19] For PP1, CMS updated the required reporting threshold for clinical data elements to 0%. This threshold determines the level of CDE reporting that is necessary to remain in compliance with model policies and to maintain eligibility for a potential PBP. However, clinical adjusters were only applied during the calculation of PP1 benchmark prices if the participant reported CDEs for at least 90% of their attributed PP1 episodes.

downside risk (or stop-loss) limit is 2% of the benchmark amount and the upside risk (or stop-gain) limit is 4% of the benchmark amount. RA1 qualifies as a Merit-based Incentive Payment System (MIPS) APM, but not as an Advanced APM.

Under RA2, the EOM discount is 3% of the benchmark amount. The target amount (the benchmark amount less the EOM discount) is therefore 97% of the benchmark amount. The downside risk (or stop-loss) limit is 6% of the benchmark amount and the upside risk (or stop-gain) limit is 12% of the benchmark amount. RA2 qualifies as an Advanced APM.

Table 8: Comparison of RA1 and RA2

Risk Arrangement	Maximum Downside Risk (Stop-Loss)	Maximum Upside Risk (Stop-Gain)	EOM Discount	MIPS APM	Advanced APM
RA1	2% of benchmark	4% of benchmark	4% of benchmark	Yes	No
RA2	6% of benchmark	12% of benchmark	3% of benchmark	Yes	Yes

The threshold for recoupment represents the total expenditure amount at which an EOM participant or pool whose performance period expenditures exceed their target amount is subject to recoupment. In both risk arrangements, the threshold for recoupment is 98% of the benchmark amount in PP1-PP3, and 100% of the benchmark amount in PP4-PP13. That is, EOM participants and pools will owe a PBR in PP1-PP3 if their performance period expenditures are greater than 98% of their benchmark amount. In PP4-PP13, EOM participants and pools will owe a PBR if their performance period episode expenditures are greater than 100% of their benchmark amount.

Both risk arrangements include a neutral zone in which an EOM participant or pool does not earn a PBP nor owe a PBR. The neutral zone includes the range between the target amount and the threshold for recoupment:

- Neutral zone in RA1: performance period expenditures above the target amount (96% of the benchmark amount) and below or equal to the threshold for recoupment (98% of the benchmark amount in PP1-PP3, 100% of the benchmark amount in PP4-PP13)
- Neutral zone in RA2: performance period expenditures above the target amount (97% of the benchmark amount) and below or equal to the threshold for recoupment (98% of the benchmark amount in PP1-PP3, 100% of the benchmark amount in PP4-PP13)

Figure 3 below illustrates the maximum PBP and PBR amounts (as a percentage of the benchmark amount) that an EOM participant or pool may potentially earn or owe under RA1 and RA2 in PP1-PP3. Figure 3 also indicates the placement of the target amount, threshold for recoupment, neutral zone, point at which the stop-gain limit is reached, and point at which the stop-loss limit is reached under each risk arrangement. Figure 4 shows the same information for PP4-PP13, reflecting the higher threshold for recoupment (100% of the benchmark amount).

Figure 3: Performance Period Expenditures as a Percentage of the Benchmark Amount, by Risk Arrangement: PP1-PP3

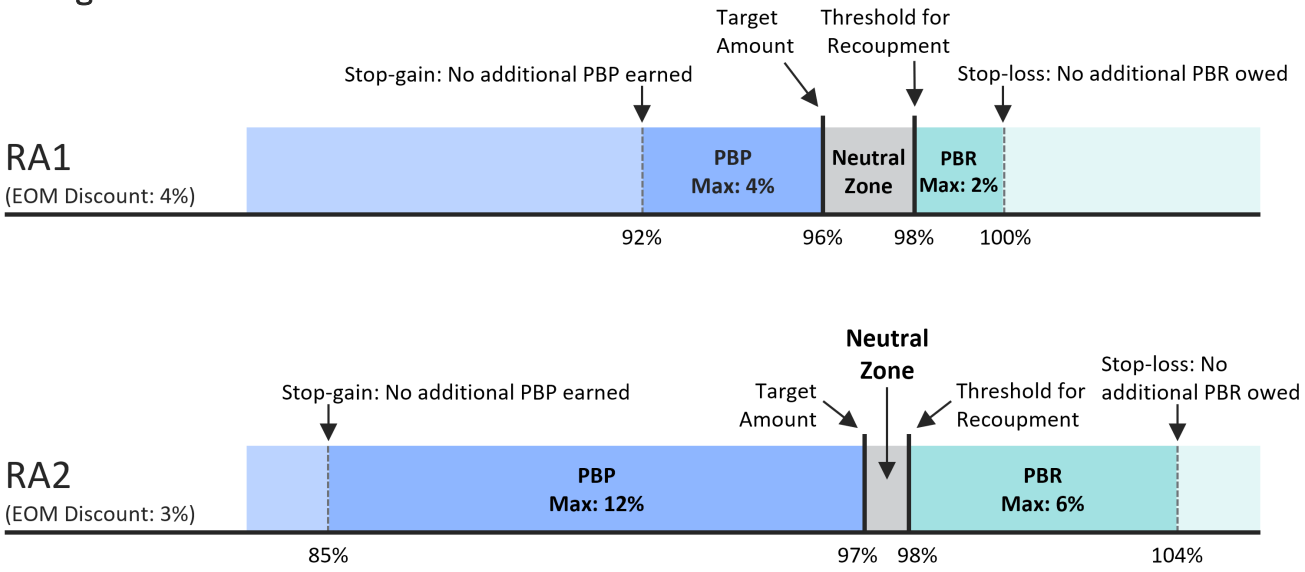
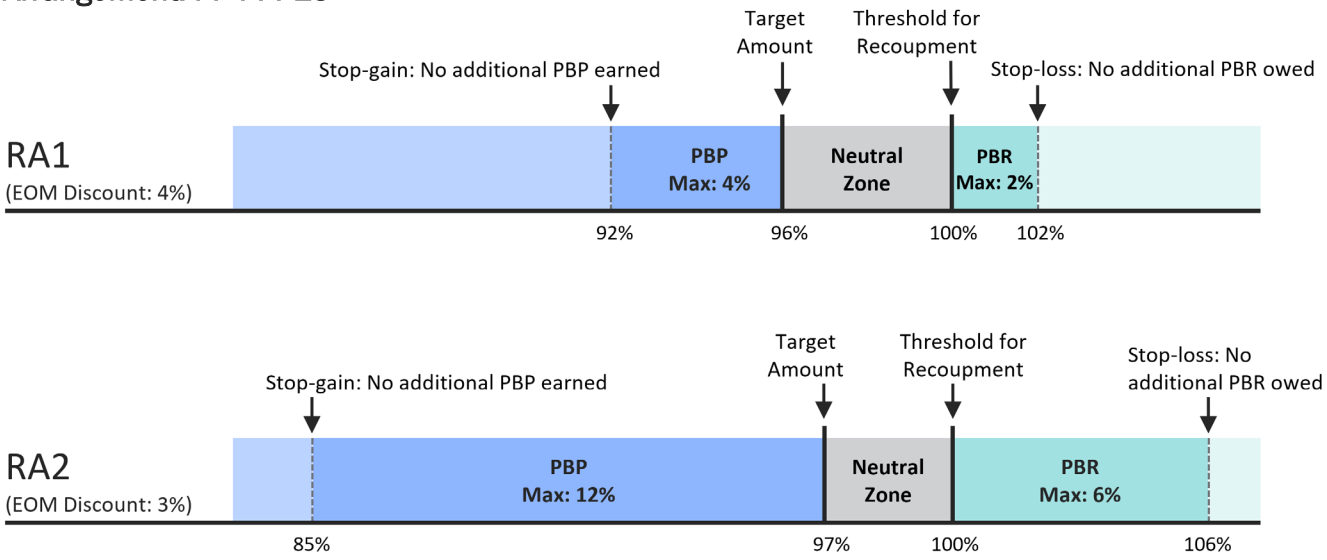


Figure 4: Performance Period Expenditures as a Percentage of the Benchmark Amount, by Risk Arrangement: PP4-PP13



6.3 Calculation of PBPs

To determine whether an EOM participant or pool has potentially earned a PBP, we compare the actual episode expenditures for attributed episodes (or for episodes attributed to all EOM participants in the pool) to the participant's or pool's target amount for the performance period. EOM participants or pools may earn a PBP if their actual episode expenditures are below their target amount (although PBPs are contingent upon quality performance and other PBP eligibility criteria detailed in the participation agreement). The PBP amount equals the difference between actual episode expenditures and the target amount, multiplied by the applicable performance multiplier, adjusted for geographic variation (see Section 6.5), and reduced for sequestration (as applicable). PBP amounts are subject to a stop-gain limit, which limits the amount that can be

earned for a single performance period. The stop-gain limit is defined as a percentage of the benchmark amount and differs by risk arrangement.

6.3.1 PBP Formula

The formula for the PBP amount under both risk arrangements is as follows:

PBP = [Minimum of (Target – Actual, SG) * PM – ACO] * GA * S, where
PBP = performance-based payment amount
Target - Actual = target amount minus actual episode expenditures
SG = stop-gain (percentage of benchmark amount)
PM = performance multiplier (as applicable for PBP)
ACO = ACO overlap amount (see Section 6.6)
GA = geographic adjustment, described in Section 6.5.
S = sequestration (equal to 1 minus the sequestration reduction percentage in effect on the final day on which episodes from the performance period could have ended)

The performance multiplier used for PBP calculation depends on the AQS for the performance period. The method for determining the performance multipliers is described in Section 7.

6.4 Calculation of PBRs

To determine whether an EOM participant or pool owes a PBR for a given performance period, we compare their actual episode expenditures for attributed episodes to the threshold for recoupment (98% of the benchmark amount in PP1-PP3, 100% of the benchmark amount in PP4-PP13). EOM participants or pools owe a recoupment if the actual episode expenditures are higher than the threshold for recoupment. The amount of the PBR is contingent upon quality performance; that is, high performance on quality measures during the performance period may reduce the amount owed (see Section 7). The PBR amount equals the difference between threshold for recoupment and the actual episode expenditures, multiplied by the applicable performance multiplier, adjusted for geographic variation (see Section 6.5), and reduced for sequestration (as applicable). PBRs are subject to a stop-loss limit, which limits the amount that can be owed for a single performance period. The stop-loss limit is defined as a percentage of the benchmark amount and differs by risk arrangement.

6.4.1 PBR Formula

The formula for the PBR amount under both risk arrangements is as follows:

PBR = [Minimum (Actual – Recoupment Threshold, SL] * PM * GA * S, where
PBR = performance-based recoupment amount
Actual – Recoupment Threshold = actual episode expenditures minus recoupment threshold (98% of benchmark in PP1-PP3, 100% of benchmark in PP4-PP13)
SL = stop-loss (percentage of benchmark amount)
PM = performance multiplier (as applicable for PBR)
GA = geographic variation adjustment, described in Section 6.5.
S = sequestration (equal to 1 minus the sequestration reduction percentage in effect on the final day on which episodes from the performance period could have ended)

The performance multiplier used for PBR calculation depends on the AQS for the performance period. The method for determining the performance multipliers is described in Section 7.

6.5 Geographic Adjustment

To calculate the final PBP and PBR amounts, we adjust for differences in costs due to geographic location. As described in Section 2, we initially remove the effects of geographic variation in the calculation of target amounts and actual episode expenditures by using standardized payments, which include adjustments to remove the effects of the CMS Geographic Practice Cost Index (GPCI) and the Hospital Wage Index (HWI), among other factors. During reconciliation, the geographic variation is reintroduced by multiplying PBP and PBR amounts by the ratio of actual to standardized payments for the performance period episodes attributed to the EOM participant (or to all EOM participants in a pool). This approach directly reverses the effects of standardization, thereby reintroducing the original geographic variation in Medicare payments.

6.6 Adjustment for ACO Overlap

EOM MEOS payments, PBP, and PBR are eligible for inclusion in ACO shared savings calculations in the event that an EOM beneficiary is also aligned to an entity participating as an ACO. However, shared savings calculations for ACOs will not take into account EOM discount amounts, which represent Medicare savings. Thus, CMS performs separate calculations to identify these amounts.

If a portion of the EOM discount is paid out as shared savings to an ACO or similar entity that includes a health care provider or supplier who bills under the same TIN as an EOM participant, and if the EOM participant has a PBP calculated for an overlapping time period for which shared savings were calculated, we recover that portion of the PBP from the EOM participant. However, if the ACO initiative uses retrospective growth rates which reflect concurrent, actual growth in expenditures between the initiative's benchmark and performance year, such as in the case of the Shared Savings Program, we do not recover the overlapping EOM PBP as the earned EOM PBP is not viewed as an overpayment. The retrospective growth rate captures the EOM participant's performance in EOM insofar as lower actual expenditures at the EOM participant reduces actual expenditures used in the numerator of the growth rate, effectively dampening the growth rate and setting a lower target for the Shared Savings Program.

The method for calculating the adjustment for ACO Overlap is described in Appendix K.

6.7 Frequency and Timing

We carry out reconciliation calculations twice for each performance period. The true-up reconciliation uses more claims run-out (that is, claims submitted after the end of the performance period) than the initial one. The initial reconciliation includes at least 1 month of claims run-out, and the true-up reconciliation includes at least 13 months of claims run-out. The true-up reconciliation may potentially result in a different outcome (PBP, PBR, or neutral zone) or changes to the amount of any PBP or PBR earned or owed from the initial reconciliation.

The results of the true-up reconciliation are netted against the previous reconciliation to determine whether additional payments or recoupments are required. We make an additional payment to the EOM participant (or to the pool's designated recipient; see Section 6.7) if the revised PBP amount exceeds the original PBP amount, or if an EOM participant or pool that owed a recoupment or fell into the neutral zone in the initial reconciliation is determined to have earned a PBP in the true-up reconciliation. If the revised PBP amount is less than the original PBP

amount, the EOM participant (or the pool's designated recipient) is required to pay back the difference.

We follow a similar process with respect to PBRs: an EOM participant (or a pool's designated recipient) will owe an additional recoupment if the revised PBR amount exceeds the original PBR amount, or if an EOM participant or pool that earned a PBP or fell into the neutral zone in the initial reconciliation is determined to owe a PBR in the true-up reconciliation. If the revised PBR amount is less than the original PBR amount, CMS pays back the difference.

In general, results of the initial reconciliation are communicated by the seventh month after the end of each performance period. The results of the true-up reconciliation are communicated approximately 12 months after the results of the first reconciliation.

6.8 Performance-Based Payments and Performance-Based Recoupments for Pools

EOM participants in pools are jointly accountable for the total cost of care for all performance period episodes attributed to EOM participants in the pool. If a pool earns a PBP or owes a PBR for a given performance period, we calculate a single PBP or PBR for the pool that is paid to or owed by the pool's designated recipient (the "pooled payee") as specified in the pooling arrangement and the participation agreement.

Section 7: Quality Measures and the Performance Multiplier

As described above in Section 6, the calculation of PBP and PBR amounts requires the application of a performance multiplier. This multiplier is based on the AQS constructed from each EOM participant's or pool's performance on the quality measures. The performance multiplier determines the percentage of the potential PBP amount (0% to 100%) that may be paid to each EOM participant or pool that has earned a PBP, or the percentage of the potential PBR amount (90% to 100%) that is imposed on each EOM participant or pool that owes a PBR. In other words, high performance on quality measures may reduce the amount of a PBR that is collected from an EOM participant or pool. A participant or pool can receive a PBP, owe a PBR, or neither receive nor owe a payment if their expenditures are in the neutral zone (for details see Section 6).

In Section 7.1, we describe the EOM quality measures and how they contribute to the determination of the performance multipliers. In Section 7.2, we describe the methods used to calculate performance rates, assign quality points, and calculate the AQS. In Section 7.3 we address cases of inapplicable measures and measures with insufficient denominators. Finally, in Section 7.4 we address scoring for EOM pools.

7.1 Quality Measures and Quality Points

The performance multiplier is based on a set of six measures, shown in Table 8.[20] These measures were chosen after an extensive literature review and consideration of alignment with other quality reporting efforts, including MIPS. Measures are derived from claims, participant reported aggregate measures, and a patient experience of cancer care survey that a CMS contractor fields. As described in the EOM Quality Measures Guide, EOM Participants are required to utilize the CMMI ISP HDR application to submit aggregate quality measure data.

[20] Note that CMS reserves the right to modify the measures listed in Table 8 as described in the Participation Agreement (PA).

Table 9: Measures Used in EOM AQS

Measure Title	EOM Measure Number	Domain	Measure Source	Type of Reporting by EOM Participant
Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy (OP-35 Respecified)	EOM-1	Avoidable acute care utilization	Claims-based	None. Calculated by CMS using Administrative Data
Proportion of Patients who Died who Were Admitted to Hospice for 3 Days or More	EOM-2[21]	Management of end of life care	Claims-based	None. Calculated by CMS using Administrative Data
Percentage of Patients who Died from Cancer Receiving Chemotherapy in the Last 14 Days of Life	EOM-3[22]	Management of end of life care	Claims-based	None. Calculated by CMS using Administrative Data
Pain Assessment and Management Set: a) Oncology: Medical and Radiation - Pain Intensity Quantified (NQF 0384; CMS Quality ID # 143) b) Oncology: Medical and Radiation - Plan of Care for Pain (NQF 0383; CMS Quality ID #144)	EOM-4 (comprised of EOM-4a and EOM-4b)	Management of symptoms toxicity	EOM Participant Reported	Reported in aggregate across all patients
Preventive Care and Screening: Screening for Depression and Follow-Up Plan (NQF 0418; CMS Quality ID #134)	EOM-5	Management of psychosocial health	EOM Participant Reported	Reported in aggregate across all patients
Patient-Reported Experience of Cancer Care Survey	EOM-6	Patient Experience	Patient Reported	None. Patient-reported; CMS fields survey

In Performance Period 1 (PP1), there is a maximum of 48 points available. Scoring in PP1 is calculated as follows:

- Maximum of 36 points for claims-based measures (3 measures * 12 points each for EOM-1, EOM-2, and EOM-3).
- Maximum of 12 points for the patient-reported measure (1 measure * 12 points).
- Maximum of 48 points total.

[21] Note that this measure was adapted from an NQF-endorsed measure (Combination of NQF 0215 and NQF 0216), the measure specifications were changed for use in the Enhancing Oncology Model. NQF has not reviewed or approved the revised measure specifications.

[22] Note that this measure was adapted from an NQF-endorsed measure (NQF 0210) the measure specifications were changed for use in the Enhancing Oncology Model. NQF has not reviewed or approved the revised measure specifications.

In PP2 and PP3 there is a maximum of 72 points available. Scoring in these performance periods is calculated as follows:

- Maximum of 36 points for claims-based measures (3 measures * 12 points each for EOM-1, EOM-2, and EOM-3).
- Maximum of 24 points for EOM participant-reported measures (2 measures * 12 points each for EOM-4 and EOM-5).
- Maximum of 12 points for the patient-reported measure (1 measure * 12 points).
- Maximum of 72 points total.

In PP4 through PP13 there is a maximum of 69 points available. Scoring in these performance periods is calculated as follows:

- Maximum of 33 points for claims-based measures (9 points for EOM-1 and 12 points each for EOM-2 and EOM-3).
- Maximum of 24 points for EOM participant-reported measures (2 measures * 12 points each for EOM-4 and EOM-5).
- Maximum of 12 points for the patient-reported measure (1 measure * 12 points).
- Maximum of 69 points total.

7.2 Measure Scoring and Aggregate Quality Score

The process of assigning quality points to each measure, called "scoring," is based on EOM participants' and pools' quality performance relative to set thresholds. Calculating the quality performance for the EOM participant-reported measures is also based on whether the participants reported data to the EOM ISP for all applicable performance periods.

Performance thresholds are determined based on the best data available for each type of measure. When available, national data were employed first to set performance thresholds. If national data were not available, we used other data sources to set the thresholds. In the sections below (Section 7.2.1, Section 7.2.2, and Section 7.2.3) we describe the scoring approach for each measure type (claims-based, participant-reported, and patient-reported).

7.2.1 Claims-Based Measure Scoring

The following three measures are claims-based:

1. EOM-1: Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy
2. EOM-2: Proportion of Patients who Died who Were Admitted to Hospice for 3 Days or More
3. EOM-3: Percentage of Patients who Died from Cancer Receiving Chemotherapy in the Last 14 Days of Life

Performance rates for these measures are calculated using Medicare administrative data only, according to the specifications for each measure. Because the claims-based measures may not generate denominators that are high enough to calculate stable performance rates in one performance period, we use the average episode-weighted performance rate over two consecutive performance periods to calculate the quality scores. This reduces the number of cases where a measure's denominator is too low to calculate a statistically reliable performance rate with only one performance period of data. For cohort 1 PGPs, for the first performance period, where there

is no prior performance period with which to calculate an average, the performance rate includes episodes initiating during the second half of 2022 as well as those initiating during the first performance period (second half of 2023).[23] The performance rates for cohort 2 PGPs' first performance period (PP5) will include episodes initiating during PP4 and PP5.

For EOM-1, the required denominator size to score the measure is 50 episodes over the two performance periods used to score the measure. For EOM-2 and EOM-3, the required denominator size is 20 episodes over the two performance periods used to score the measure. See Section 7.3 for the treatment of measures where the denominator does not meet the minimum requirement.

The claims-based measures are scored based on a comparison of the measure performance rates, as calculated above, to the performance thresholds, or benchmarks, set for each measure. Performance thresholds for the claims-based measures were determined using national historical Medicare claims data for EOM participants and non-EOM oncology PGPs. For each measure, CMS developed a distribution of performance for all EOM participants and non-EOM oncology PGPs nationally to which episodes were attributed, following the same episode identification and attribution specifications defined in Section 1. For the original and new baselines, respectively, CMS aggregated eight baseline periods into four 12-month periods, called "TIN-years." Each TIN-year contributed to the threshold calculations if at least a minimum number of episodes was attributed to it—a minimum of 50 episodes for EOM-1 and a minimum of 20 episodes for EOM-2 and EOM-3. CMS set benchmarks at selected percentiles of the distribution for each measure. For EOM-1, the selected benchmarks are the 20th, 40th, 60th and 80th percentiles. For EOM-2 and EOM-3, the selected benchmarks are the 25th, 50th, and 75th percentiles. For EOM-1, CMS calculates the benchmarks for PP1-PP13 using the original baseline period (see Section 1 for more details). For EOM-2 and EOM-3 the original baseline period informs the benchmarks for PP1-PP7 and the new baseline period informs the benchmarks for PP8-PP13. Tables 9A and 9B show the benchmarks for the three claims-based measures.

Table 10: Benchmarks for the Claims-Based Measures for Performance Periods 1-7

Benchmark	EOM-1	Benchmark	EOM-2	EOM-3
20th Percentile	17.37%	25th percentile	42.86%	9.52%
40th Percentile	18.30%	50th percentile	50.00%	13.23%
60th Percentile	19.12%	75th percentile	56.52%	17.39%
80th Percentile	20.16%			

Table 11: Benchmarks for the Claims-Based Measures for Performance Periods 8-13

Benchmark	EOM-1	Benchmark	EOM-2	EOM-3
20th Percentile	17.37%	25th percentile	43.48%	9.38%
40th Percentile	18.30%	50th percentile	50.35%	13.13%
60th Percentile	19.12%	75th percentile	56.98%	17.50%
80th Percentile	20.16%			

[23] Ideally, we would average episodes starting in the second half of 2023 (PP1) with those starting in the first half of 2023, to use consecutive performance periods. However, this would cause significant episode overlap, double-counting the same experience, because episodes are defined anew for the first performance period. If the set of episodes that is averaged with those in the first performance period is limited to those starting in the second half of 2022 (rather than the first half of 2023), we avoid this potential double-counting.

These benchmarks determine the number of points awarded for each measure. Table 10 below includes the point structure that applies to each claims-based measure. Note that EOM-1 and EOM-3 have an inverse scoring structure, where lower performance rates indicate better quality performance.

Table 12: Scoring of Claims-Based Measures for Performance Periods 1-7

EOM-1 Performance Range	EOM-1 Points Assigned: PP1-PP3	EOM-1 Points Assigned: PP4-PP13
P ≤ 17.37%	12	9
17.37% < P ≤ 18.30%	9	7
18.30% < P ≤ 19.12%	6	5
19.12% < P ≤ 20.16%	3	3
P > 20.16%	0	0
EOM-2 Performance Range	**EOM-2 Points Assigned: PP1-PP3**	**EOM-2 Points Assigned: PP4-PP13**
P ≥ 56.52%	12	12
50.00% ≤ P < 56.52%	8	8
42.86% ≤ P < 50.00%	4	4
P < 42.86%	0	0
EOM-3 Performance Range	**EOM-3 Points Assigned: PP1-PP3**	**EOM-3 Points Assigned: PP4-PP13**
P ≤ 9.52%	12	12
9.52% < P ≤ 13.23%	8	8
13.23% < P ≤ 17.39%	4	4
P > 17.39%	0	0

Table 13: Scoring of Claims-Based Measures for Performance Periods 8-13

EOM-1 Performance Range	EOM-1 Points Assigned: PP1-PP3	EOM-1 Points Assigned: PP4-PP13
P ≤ 17.37%	12	9
17.37% < P ≤ 18.30%	9	7
18.30% < P ≤ 19.12%	6	5
19.12% < P ≤ 20.16%	3	3
P > 20.16%	0	0
EOM-2 Performance Range	**EOM-2 Points Assigned: PP1-PP3**	**EOM-2 Points Assigned: PP4-PP13**
P ≥ 56.98%	12	12
50.35% ≤ P < 56.98%	8	8
43.48% ≤ P < 50.35%	4	4
P < 43.48%	0	0
EOM-3 Performance Range	**EOM-3 Points Assigned: PP1-PP3**	**EOM-3 Points Assigned: PP4-PP13**
P ≤ 9.38%	12	12
9.38% < P ≤ 13.13%	8	8
13.13% < P ≤ 17.50%	4	4
P > 17.50%	0	0

7.2.2 Participant-Reported Measure Scoring

The following two measures are participant-reported:

1. EOM-4: Pain Assessment and Management Set, with its two components:
    a. Oncology: Medical and Radiation - Pain Intensity Quantified
    b. Oncology: Medical and Radiation - Plan of Care for Pain
2. EOM-5: Preventive Care and Screening: Screening for Depression and Follow-Up Plan

Performance rates for these measures are calculated using data submitted to the EOM ISP HDR application by EOM participants. To minimize EOM participant reporting burden and to align with CMS and the Innovation Center's quality strategy, the two participant-reported quality measures will follow the MIPS guidelines for reporting.

Participants report EOM-4 and EOM-5 annually to the EOM ISP HDR application, starting in 2025 for cohort 1 and starting in 2027 for cohort 2. EOM participants are required to report aggregate quality measure results for all patients that qualify for the measure for the PGP TIN using the MIPS Clinical Quality Measure specifications (CQMs). Starting with PP2 for cohort 1 and PP6 for cohort 2, the data reported for the Calendar Year (CY) in which the episodes initiate are used to calculate the performance rates, as shown in Table 11 below. The same reported data are used to score the two performance periods with episodes initiating during the CY. In order to calculate the performance rates for EOM-4 and EOM-5, participants must have reported both measures for the CY on which the performance rate is based, as applicable.

Table 14: EOM-4 and EOM-5 Submission Window by Performance Period

Performance Period (Based on Episode Initiation Dates)	Performance Year	Aggregate Measure Result Submission Windows
PP1	N/A	N/A
PP2 **PP3**	January–December 2024	January–Mid-February 2025
PP4 **PP5**	January–December 2025	January–Mid-February 2026
PP6 **PP7**	January–December 2026	January–Mid-February 2027*
PP8 **PP9**	January–December 2027	January–Mid-February 2028
PP10 **PP11**	January–December 2028	January–Mid-February 2029
PP12 **PP13**	January–December 2029	January–Mid-February 2030

*Cohort 2 PGPs will begin submitting EOM aggregate quality measure data in early 2027.

The required denominator size for EOM-4 is 20 encounters (each for EOM-4a and EOM-4b) and for EOM-5 is 20 patients for the CY used to determine performance. See Section 7.3 for the treatment of measures where the denominator does not meet the minimum requirement.

Each participant, regardless of whether they participate individually or as part of a pool, is required to report data for EOM-4 and EOM-5, as detailed in the EOM Quality Measures Guide. All pool members must submit data for the two measures for the pool-level measure to be calculated

(i.e., if not all pool members submit data, the measures will not be calculated for the pool and the pool will receive a score of 0).

EOM-4 and EOM-5 are scored based on the participant's or pool's performance on the measures as compared to the thresholds shown in Table 12.

Table 15: Benchmarks for Participant-Reported Measures

Benchmark Number	Performance Range (q=reported performance rate)
1	$0 \leq q < 55$
2	$55 \leq q < 64$
3	$64 \leq q < 72$
4	$72 \leq q < 79$
5	$79 \leq q < 85$
6	$85 \leq q < 90$
7	$90 \leq q < 94$
8	$94 \leq q < 97$
9	$97 \leq q < 99$
10	$99 \leq q \leq 100$

Please note that CMS may reduce or eliminate an EOM participant's or pool's performance points, regardless of their performance rates as compared to the established MIPS thresholds for each measure, in the event that an audit of an EOM participant's or pool member's medical records demonstrates that the quality measure data reported were not complete or accurate.

EOM-4, the Pain Assessment and Management Set, is a composite measure that includes EOM-4a, Oncology: Medical and Radiation - Pain Intensity Quantified, and EOM 4b, Oncology: Medical and Radiation - Plan of Care for Pain. EOM participants or pools can earn up to 10 points for EOM-4a and up to 10 points for EOM-4b, for a total of up to 20 raw points for the EOM-4 composite. To normalize the 20 raw points to a 12-point scale, we apply a weight of 12/20 to each EOM participant or pool's raw points obtained for EOM-4 composite.

EOM participants and pools can earn up to 10 raw points for EOM-5. To normalize the 10 raw points to a 12-point scale, we apply a weight of 12/10 to each EOM participant or pool's raw points obtained for EOM-5.

To convert the performance rates obtained by EOM participants and pools into points, we follow the MIPS scoring strategy as outlined below:

$$Raw\ Points = X + \frac{(q-a)}{(b-a)}, up\ to\ a\ maximum\ of\ 10$$

Where: X=benchmark number
q=reported performance rate
a=bottom of benchmark category range
b=bottom of next benchmark category range

The two examples below illustrate the scoring of EOM-4 and EOM-5.

Example 1: An EOM participant has a performance rate of 28.99 for EOM-4a. This will translate to 1.5 points for EOM-4a, since the performance rate falls within the first

benchmark range. The detailed calculation of this raw score is:

$$Raw\ Points = 1 + \frac{(28.99 - 0)}{(55 - 0)} = 1.5$$

The participant has a performance rate of 88.15 for EOM-4b, translating to 6.6 points, as shown here:

$$Raw\ Points = 6 + \frac{(88.15 - 85)}{(90 - 85)} = 6.6$$

The raw point total earned for EOM-4 is then 1.5 + 6.6 = 8.1. We then prorate the raw point total by 12/20 to calculate 4.9 (8.1 * 12/20) points for the EOM-4 composite.

Example 2: An EOM participant has a performance rate of 95.89 for EOM-5. The participant earns 8.6 raw points as shown here:

$$Raw\ Points = 8 + \frac{(95.89 - 94)}{(97 - 94)} = 8.6$$

We prorate the raw points by 12/10 to calculate 10.4 (8.6*12/10) points for EOM-5.

7.2.3 Patient Experience of Cancer Care Scoring

EOM-6: Patient-Reported Experience of Cancer Care Survey is the only patient-reported measure. Performance rates for EOM-6 are calculated using the survey data collected by the Implementation and Monitoring Contractor and a methodology agreed upon by the Implementation and Monitoring Contractor and CMS.

Survey items used in the calculation of the patient-reported experience measure for the PBP or PBR calculation are based on the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) for cancer drug therapy [CAHPS Cancer Care Survey: Drug Therapy (ahrq.gov)]. Additional survey items are drawn from various validated instruments, including, but not limited to, items from the CAHPS Cancer Care Supplemental Survey [CAHPS ® Cancer Care Supplemental Items (ahrq.gov)] and from other validated surveys to assess end-of-life and hospice care (CAHPS® Hospice Survey | CMS). These additional survey items are used to support evaluation of EOM but are not used for scoring purposes.

In its current form, the survey composites include “Exchanging Information with Patients” (four scored items), “Access” (three scored items), “Shared Decision Making” (four scored items), “Enabling Self-Management” (eight scored items), and “Communication” (four scored items).

Responses to all composite-related items are used to create summary scores for each composite. The overall measure of patient experience will also be scored. One aggregate “patient experience” score will then be calculated from the six scores (five composite scores and one overall score).

First, each beneficiary’s responses to the individual survey items are assigned point values ranging from 0 to 10. Then we determine the average point value over all survey items in each composite as the sum of the points assigned to each survey item divided by the number of survey items in the composite. This is done at the beneficiary level. Next, average composite point values over all surveyed beneficiaries for each EOM participant or pool are calculated.

Average composite values are risk-adjusted to account for the characteristics of the episodes for the EOM participant or pool. Covariates used in the risk adjustment are characteristics that are predictive of patient experience such as age, sex, cancer type, education level, and self-reported health status. Many of these variables are also used in the expenditure prediction model. Finally, the aggregate patient experience of care score for each EOM participant or pool is calculated as the average of the six risk-adjusted composite scores. Appendix H lists the scored survey items in each of the five composites and in the overall measure of patient experience as well as the point values that are assigned to each response.

To determine benchmarks for this measure, we used the historical data collected for the patient experience survey for OCM from April 2016 through September 2021. The benchmarks were determined using the mean and standard deviation for the historical score distribution as shown in Table 13. Each participant receives 12, 9, 6, 3 or 0 points (as shown in Table 14) based on their aggregate patient experience of care score relative to these benchmarks.

Table 16: Benchmarks for Patient Experience of Care

Benchmark	Benchmark Value
Mean+1SD	8.3466
Mean	8.1107
Mean-1SD	7.8748
Mean-2SD	7.6389

Table 17: Points for Patient Experience of Care

Score	Points
8.3466 ≤ Score	12
8.1107 ≤ Score < 8.3466	9
7.8748 ≤ Score < 8.1107	6
7.6389 ≤ Score < 7.8748	3
Score < 7.6389	0

The patient experience survey is administered each quarter to a sample of the beneficiaries who received cancer care at each EOM participant in a 6-month period. Each administration of the survey is referred to as a "wave." The survey waves may overlap. No beneficiary is surveyed more than one time in a 12-month period.

In order to increase the stability of the EOM-6 performance rates, multiple survey waves are used for each performance period and the true-up uses additional survey waves that become available after the initial reconciliation. For the initial reconciliation of each cohort's first performance period (PP1 for cohort 1 and PP5 for cohort 2), three survey waves are used, as that is all the data available at the time. For the true-up reconciliation of each cohort's first performance period, five survey waves are used. Starting with PP2 for cohort 1 and PP6 for cohort 2, because the performance rate for EOM-6 is based on data from the current performance period and the one prior, the performance rate for each performance period's initial reconciliation is based on five survey waves (due to the overlap of survey waves described above), and the performance rate for each true-up reconciliation is based on seven survey waves. Table 15 shows the survey waves that are used in the scoring for each performance period.

Table 18: Survey Waves Used in Scoring EOM-6, by Performance Period

Performance Period	Survey Waves, Initial	Survey Waves, True-Up	Dates Beneficiaries Received Care, Initial	Dates Beneficiaries Received Care, True-Up
1	Waves 1–3	Waves 1–5	Apr 2023–Mar 2024	Apr 2023–Sep 2024
2	Waves 1–3 Waves 3–5	Waves 1–5 Waves 3–7	Apr 2023–Mar 2024 Oct 2023–Sep 2024	Apr 2023–Sep 2024 Oct 2023–Mar 2025
3	Waves 3–5 Waves 5–7	Waves 3–7 Waves 5–9	Oct 2023–Sep 2024 Apr 2024–Mar 2025	Oct 2023–Mar 2025 Apr 2024–Sep 2025
4	Waves 5–7 Waves 7–9	Waves 5–9 Waves 7–11	Apr 2024–Mar 2025 Oct 2024–Sep 2025	Apr 2024–Sep 2025 Oct 2024–Mar 2026
5*	Waves 7–9 Waves 9–11	Waves 7–11 Waves 9–13	Oct 2024–Sep 2025 Apr 2025–Mar 2026	Oct 2024–Mar 2026 Apr 2025–Sep 2026
6	Waves 9–11 Waves 11–13	Waves 9–13 Waves 11–15	Apr 2025–Mar 2026 Oct 2025–Sep 2026	Apr 2025–Sep 2026 Oct 2025–Mar 2027
7	Waves 11–13 Waves 13–15	Waves 11–15 Waves 13–17	Oct 2025–Sep 2026 Apr 2026–Mar 2027	Oct 2025–Mar 2027 Apr 2026–Sep 2027
8	Waves 13–15 Waves 15–17	Waves 13–17 Waves 15–19	Apr 2026–Mar 2027 Oct 2026–Sep 2027	Apr 2026–Sep 2027 Oct 2026–Mar 2028
9	Waves 15–17 Waves 17–19	Waves 15–19 Waves 17–21	Oct 2026–Sep 2027 Apr 2027–Mar 2028	Oct 2026–Mar 2028 Apr 2027–Sep 2028
10	Waves 17–19 Waves 19–21	Waves 17–21 Waves 19–23	Apr 2027–Mar 2028 Oct 2027–Sep 2028	Apr 2027–Sep 2028 Oct 2027–Mar 2029
11	Waves 19–21 Waves 21–23	Waves 19–23 Waves 21–25	Oct 2027–Sep 2028 Apr 2028–Mar 2029	Oct 2027–Mar 2029 Apr 2028–Sep 2029
12	Waves 21–23 Waves 23–25	Waves 21–25 Waves 23–27	Apr 2028–Mar 2029 Oct 2028–Sep 2029	Apr 2028–Sep 2029 Oct 2028–Mar 2030
13	Waves 23–25 Waves 25–27	Waves 23–27 Waves 25–29	Oct 2028–Sep 2029 Apr 2029–Mar 2030	Oct 2028–Mar 2030 Apr 2029–Jun 2030

* Only survey waves 9-11 will be used to score EOM-6 in the PP5 initial reconciliation for cohort 2, and only survey waves 9-13 will be used for the PP5 true-up reconciliation for cohort 2. Cohort 1 and cohort 2 will follow the same scoring approach for PP6-PP13.

The required denominator size for EOM-6 is 50 survey responses over all survey waves used to score the measure in each performance period. See Section 7.3 for the treatment of measures where the denominator does not meet the minimum requirement.

7.2.4 Aggregate Quality Score

After points have been determined for each measure, all earned points are summed and divided by the EOM participant's or pool's total possible points to calculate the AQS. The AQS determines the performance multiplier that is applied to the EOM participant's or pool's PBP or PBR amount (if any). Table 16 shows a mapping of the AQS to the performance multipliers.

Table 19: Aggregate Quality Score Translated into Performance Multipliers

AQS Range (Percentage of maximum points)	Performance Multiplier (PBP)	Performance Multiplier (PBR)
AQS ≥ 75%	100%	90%
50% ≤ AQS < 75%	75%	95%
30% ≤ AQS < 50%	50%	100%
AQS < 30%	0%	100%

To receive a PBP, or to have the PBR amount reduced due to high quality performance, EOM participants or pools must have reported all applicable measures for the performance period to the EOM ISP, per the EOM Participation Agreement. An EOM participant or pool that scores above the 30% minimum AQS but does NOT report sufficiently to the EOM ISP, as applicable, will not receive a PBP, nor will their PBR amount be reduced based on quality performance.

In Table 17, we show two examples of the quality score calculation, one for the first performance period and one for the sixth performance period.

PP1 Example: In PP1, participants are not required to report the participant-reported quality measures EOM-4 and EOM-5, and these two measures will not be included in the AQS calculation. Assume that a participant earns 9 quality points for EOM-1 and EOM-6, 12 quality points for EOM-2 and 8 quality points for EOM-3 for a total of 38 quality points (9+9+12+8 = 38 points). The AQS for this participant is 79.2 percent (equal to 38 divided by 48). The participant would earn 100% of their potential PBP amount (if their actual expenditures are lower than the target amount) for that performance period or will qualify for a reduction of 10% of their PBR amount (if their actual expenditures are higher than the threshold for recoupment).

PP6 Example: Assume that a participant earns points for each measure as in the "PP6 Example" columns in Table 17. All participant-reported measures were reported in the performance period. The sum of all quality points is 41 and the AQS is 59.4% (equal to 41 divided by 69). The participant would earn 75% of their potential PBP amount (if their actual expenditures are lower than the target amount) or would qualify for a 5% reduction in their PBR amount (if their actual expenditures are higher than the threshold for recoupment).

Table 20: Illustrative Quality Scoring Examples

EOM Measure Number	PP1 Example, Points Earned	PP1 Example, Maximum Points	PP6 Example, Points Earned	PP6 Example, Maximum Points
EOM-1	9	12	6	9
EOM-2	12	12	4	12
EOM-3	8	12	8	12
EOM-4	N/A	N/A	6.5	12
EOM-5	N/A	N/A	4.5	12
EOM-6	9	12	12	12
Total Points	**38**	**48**	**41**	**69**
AQS	79%	100%	59%	100%
Performance Multiplier (PBP)	100%	100%	75%	100%
Performance Multiplier (PBR)	90%	90%	95%	90%

7.3 Measures with Insufficient Denominator Size

We anticipate that EOM will include participants of varying sizes and specialties. As such, there may be participants that do not have enough episodes in the performance rate calculation of some measures to provide a statistically reliable denominator.

The minimum required denominator size for each measure is as follows (denominator refers to the number of units meeting the measure's denominator criteria):

- EOM-1: 50 episodes in the current and prior performance periods combined
- EOM-2 and EOM-3: 20 episodes in the current and prior performance periods combined
- EOM-4: 20 encounters each, for EOM-4a and EOM-4b
- EOM-5: 20 patients
- EOM-6: 50 survey responses over all survey waves included in the scoring for the performance period

If an EOM participant or pool does not have enough episodes to meet the minimum denominator for a measure, that measure is excluded from the calculation of that EOM participant's or pool's AQS for that performance period. For example, if in PP2, an EOM participant does not have a minimum of 20 beneficiaries that died during PP1 and PP2 combined, then EOM-2 and EOM-3 would not count towards their AQS and the total possible points for that participant for PP2 would be 48 rather than 72.

7.4 Scoring for Pools

Quality measure data for each member of a pool are aggregated and the pool treated as a single entity for the purposes of quality scoring. This means that the numerators and denominators for each member of the pool are combined before calculating pooled performance rates for each measure. These methods implicitly weight the performance for each pool member by the number of episodes attributed to that pool member in the performance period. The points for each pooled performance rate are assigned and summed to produce the AQS in the same way as for individual EOM participants.

Section 8: Example

The following example illustrates PP5 reconciliation calculations for a hypothetical EOM participant under both risk arrangements. Please note that this example reflects the 100% of benchmark recoupment threshold applicable to PP4-PP13. For PP1-PP3, the threshold for recoupment equals 98% of the benchmark amount. This example is provided for illustrative purposes only and does not necessarily reflect the experience of an actual EOM participant during any given performance period. Predicted and actual episode expenditures are hypothetical, as are the PBP and PBR amounts. Similarly, the EOM participant's experience adjuster, cancer type-specific trend factors, cancer type-specific novel therapy adjustments, performance multipliers, and geographic adjustment were assigned values within a plausible range for the purposes of this example, but they do not necessarily reflect the magnitude of such adjustments when applied during the reconciliation of real performance period episodes. Finally, for the purposes of this example, the baseline prices, benchmark prices, benchmark amount, PBP amounts, and PBR amounts are rounded to the nearest dollar.

The hypothetical EOM participant in this example has 10 attributed breast cancer episodes and 6 attributed lung cancer episodes in this hypothetical performance period, for a total of 16 episodes.

The first step (not shown in the following tables) is the calculation of a baseline price for each episode. Cancer type-specific price prediction models (see the "Price Prediction Models" tabs of the document EOM Technical Payment Resources) are used to obtain the predicted expenditures for each episode. (These predicted expenditures are risk-adjusted for characteristics likely to be associated with higher expenditures, such as beneficiary age and selected comorbidities.) The predicted expenditures for each episode are multiplied by the participant's experience adjuster (see Section 4.1.2) and any appropriate clinical adjuster(s) (see Section 4.1.3) to obtain the baseline price for each episode.

Table 18 demonstrates the subsequent steps to determine benchmark prices for each episode and the hypothetical EOM participant's benchmark amount for the performance period. The adjustments applied to baseline prices are cancer type-specific and thus are demonstrated separately for breast cancer episodes and for lung cancer episodes. First, the baseline prices for each episode are multiplied by the appropriate cancer type- specific trend factor (for details on trend factors see Section 4.2.1). In this example, the trend factor for breast cancer was 1.14 and the trend factor for lung cancer was 1.09. Next, these trended baseline prices are multiplied by the EOM participant's cancer type-specific novel therapy adjustment (if applicable; for details on novel therapy adjustments see Section 4.2.2).

The fictitious EOM participant's share of breast cancer episode expenditures from newly FDA-approved therapies was above the average share of such expenditures among all breast cancer episodes attributed to non-EOM oncology PGPs for this performance period. Consequently, baseline prices for all 10 breast cancer episodes attributed to this participant are multiplied by a novel therapy adjustment of 1.05. However, the EOM participant had a below-average share of lung cancer expenditures from novel therapies. As described in Section 4.2.2, the novel therapy adjustment will never lower an episode's benchmark price; when an EOM participant's use of novel therapies for a given cancer type is below the average level in non-EOM episodes of that cancer type, the participant's novel therapy adjuster for that cancer type is set to 1.00.

The resulting benchmark prices for the 16 episodes attributed to this hypothetical EOM participant are summed to obtain the participant's benchmark amount of $1 million for this

hypothetical performance period (as shown in Table 18). All remaining reconciliation calculations are performed at the level of the EOM participant (rather than at the level of specific episodes).

Table 19 demonstrates reconciliation calculations for this EOM participant under RA1. The target amount for the EOM participant is $960,000, or 96% of the benchmark amount of $1 million. The participant's threshold for recoupment is $1,000,000 or 100% of the benchmark amount for PP5. The stop-gain corresponding to a benchmark amount of $1 million under RA1 is $40,000, and the stop-loss is $20,000.

Table 20 demonstrates reconciliation calculations for this EOM participant under RA2. The target amount for the EOM participant is $970,000, or 97% of the benchmark amount of $1 million. The participant's threshold for recoupment is $1,000,000, or 100% of the benchmark amount for PP5. The stop-gain corresponding to a benchmark amount of $1 million under RA2 is $120,000, and the stop-loss is $60,000.

The tables below present multiple scenarios with respect to actual expenditures for the performance period. Potential outcomes include earning a PBP, owing a PBR, or falling into the neutral zone (neither earning a PBP nor owing a PBR). The hypothetical EOM participant can potentially earn a PBP if actual expenditures are below the target amount; the PBP amount will not exceed the stop-gain under the EOM participant's selected risk arrangement. The hypothetical EOM participant will owe a PBR if actual expenditures exceed the threshold for recoupment; the PBR amount will not exceed the stop-loss under the EOM participant's selected risk arrangement.

PBP amounts are multiplied by PBP performance multiplier (75% in this example) and PBR amounts are multiplied by a PBR performance multiplier (95% in this example). The performance multipliers are determined by this EOM participant's hypothetical quality performance during the performance period, and they do not differ between risk arrangements.

These quality-adjusted PBP or PBR amounts are multiplied by a geographic adjustment and a sequestration adjustment to calculate the final PBP or PBR amount.

Table 21: Calculation of a Hypothetical EOM Participant's Benchmark Amount for PP5

CELL	Episode-Level: Cancer Type Specific Calculations Breast Cancer Episodes	Ep. 1	Ep. 2	Ep. 3	Ep. 4	Ep. 5	Ep. 6	Ep. 7	Ep. 8	Ep. 9	Ep. 10
A1	Baseline prices[1]	$54,109	$56,405	$58,405	$43,021	$92,869	$66,940	$40,175	$54,177	$54,817	$56,197
B1	Trend factor for breast cancer	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
C1	Participant's novel therapy adjustment for breast cancer	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
D1	Benchmark prices[2] [A1*B1*C1]	$64,768	$67,517	$69,911	$51,496	$111,164	$80,127	$48,089	$64,850	$65,616	$67,268
CELL	Lung Cancer Episodes	Ep. 1	Ep. 2	Ep. 3	Ep. 4	Ep. 5	Ep. 6				
A2	Baseline prices[1]	$58,643	$59,900	$45,085	$34,110	$37,878	$48,048				
B2	Trend factor for lung cancer	1.09	1.09	1.09	1.09	1.09	1.09				
C2	Participant's novel therapy adjustment for lung cancer	1.00	1.00	1.00	1.00	1.00	1.00				
D2	Benchmark prices[2] [A2*B2*C2]	$63,921	$65,291	$49,143	$37,180	$41,287	$52,372				
CELL	EOM Participant-Level: All Cancer Types	All Episodes									
E	Benchmark amount[3] [D1 + D2]	$1,000,000									

1: Baseline prices are calculated for each episode by multiplying predicted expenditures for the episode (Section 4.1.1) by the participant's experience adjuster (Section 4.1.2) and any applicable clinical adjuster(s) (Section 4.1.3).
2: Benchmark prices are calculated for each episode by multiplying the baseline price for the episode by the participant's cancer type-specific trend factor (Section 4.2.1) and the participant's cancer type-specific novel therapy adjustment (if applicable) (Section 4.2.2). For the purposes of this example, benchmark prices are rounded to the nearest dollar.
3: Benchmark amounts are the sum of all benchmark prices for all attributed episodes (or for pools, the sum of benchmark prices for all episodes attributed to all participants in the pool).

Table 22: Reconciliation for Hypothetical EOM Participant Under RA1 in PP5

Row	Amount	Example A (PBP with stop-gain)	Example B (PBP)	Example C (Neutral zone)	Example D (PBR)	Example E (PBR with stop-loss)
F	Target amount [96% of E[1]]	$960,000	$960,000	$960,000	$960,000	$960,000
G	Threshold for recoupment [100% of E]	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
H	Neutral zone [interval between F and G]	$960,000-$1,000,000	$960,000-$1,000,000	$960,000-$1,000,000	$960,000-$1,000,000	$960,000-$1,000,000
I	Stop-gain [4% of E]	$40,000	$40,000	$40,000	$40,000	$40,000
J	Stop-loss [2% of E]	$20,000	$20,000	$20,000	$20,000	$20,000
K	Actual expenditures	$850,000	$925,000	$975,000	$1,010,000	$1,025,000
L	Savings relative to target amount [F-K]	$110,000	$35,000	N/A	N/A	N/A
M	Expenditures exceeding threshold for recoupment [K-G]	N/A	N/A	N/A	$10,000	$25,000
N	Basis for PBP [Smaller of I or L]	$40,000	$35,000	N/A	N/A	N/A
O	Basis for PBR [Smaller of J or M]	N/A	N/A	N/A	$10,000	$20,000
P	PBP (PBR) performance multiplier[2]	0.75	0.75	N/A	0.95	0.95
Q	Quality-adjusted PBP (PBR)[3] [PBP: N*P; PBR: O*P]	$30,000	$26,250	N/A	($9,500)	($19,000)
R	Final PBP (PBR), after geographic adjustment [1.03] and sequestration [0.98]	$30,282	$26,497	N/A	($9,589)	($19,179)

Notes:
1: E refers to the benchmark amount calculated for this hypothetical EOM respondent in cell E of Table 18.
2: PBP and PBR performance multipliers are based on quality performance during the performance period (see Section 7).
3: For the purposes of this example, PBP and PBR amounts [Q and R] are rounded to the nearest dollar.

Table 23: Reconciliation for Hypothetical EOM Participant Under RA2 in PP5

Row	Amount	Example A (PBP with stop-gain)	Example B (PBP)	Example C (Neutral zone)	Example D (PBR)	Example E (PBR with stop-loss)
F	Target amount [97% of E[1]]	$970,000	$970,000	$970,000	$970,000	$970,000
G	Threshold for recoupment [100% of E]	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
H	Neutral zone [interval between F and G]	$970,000-$1,000,000	$970,000-$1,000,000	$970,000-$1,000,000	$970,000-$1,000,000	$970,000-$1,000,000
I	Stop-gain [12% of E]	$120,000	$120,000	$120,000	$120,000	$120,000
J	Stop-loss [6% of E]	$60,000	$60,000	$60,000	$60,000	$60,000
K	Actual expenditures	$750,000	$925,000	$975,000	$1,045,000	$1,070,000
L	Savings relative to target amount [F-K]	$220,000	$45,000	N/A	N/A	N/A
M	Expenditures exceeding threshold for recoupment [K-G]	N/A	N/A	N/A	$45,000	$70,000
N	Basis for PBP [Smaller of I or L]	$120,000	$45,000	N/A	N/A	N/A
O	Basis for PBR [Smaller of J or M]	N/A	N/A	N/A	$45,000	$60,000
P	PBP (PBR) performance multiplier[2]	0.75	0.75	N/A	0.95	0.95
Q	Quality-adjusted PBP (PBR)[3] [PBP: N*P; PBR: O*P]	$90,000	$33,750	N/A	($42,750)	($57,000)
R	Final PBP (PBR), after geographic adjustment [1.03] and sequestration [0.98]	$90,846	$34,067	N/A	($43,152)	($57,536)

Notes:
1: E refers to the benchmark amount calculated for this hypothetical EOM respondent in cell E of Table 18.
2: PBP and PBR performance multipliers are based on quality performance during the performance period (see Section 7).
3: For the purposes of this example, PBP and PBR amounts [Q and R] are rounded to the nearest dollar.

Appendix A: Specifications for Episode Identification

Below are the detailed specifications for identifying initial and subsequent episodes in a performance period. Performance periods are defined as in Table 1.

- **Step 1: Identify all possible claims that could trigger an episode in the performance period.**
    - Carrier, DMEPOS (identification at the line level):
        - Contains a chemotherapy drug HCPCS code (see the "EOM Initiating Therapies List" available on the EOM website) in any line item, AND
        - The chemotherapy line has a "line first expense date" in the episode beginning date range for a performance period (see Table 1), AND
        - The line item is not denied (line allowed charge > $0), AND
        - The claim is not denied. The Carrier Claim Payment Denial Code is not one of the following codes: ("0","D","E","F","G","H","J","K","P","Q","T","U","V","X","Y","00","12", "13","14","15","16","17","18","21","22","25","26","39","41","42","43") AND
        - Line place of service is not an inpatient hospital (21), AND
        - Contains an included cancer diagnosis code (see the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources) either:
            - In any non-denied line item on the same claim (does not have to be same line as HCPCS code above), OR
            - Anywhere in the claim header AND contains ICD10 code Z51.11 or Z51.12 in the principal diagnosis field on the claim header.
        - The trigger date is the line first expense date on the qualifying line.
    - Outpatient (identification at revenue center level):
        - Contains a chemotherapy drug HCPCS code (see "EOM Initiating Therapies List" available on the EOM website) in any revenue center, AND
        - Revenue Center Date is in the episode beginning date range for a performance period (see Table 1) AND
        - The claim is not denied (Medicare nonpayment reason code is blank), AND
        - The revenue center is not denied (revenue center total charge amount minus revenue center non-covered charge amount > $0), AND
        - Contains an included cancer diagnosis code (as specified in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources) anywhere in the claim header.
        - The trigger date is the revenue center date.
    - Part D:
        - Contains a chemotherapy drug NDC code (see "EOM Initiating Therapies List available on the EOM website), AND
        - Fill date is in the episode beginning date range for a performance period (see Table 1), AND
        - A non-denied carrier or outpatient claim with an included cancer diagnosis code (see the tab "Cancer Type Mapping" of the document EOM Technical Payment

Resources) in any line item (carrier) or in the header (outpatient) can be found on the fill date or in the 59 days preceding the fill date. Use line first expense date on the carrier claims and claim from date on the outpatient claims to determine if the claim fell on the fill date or in the 59 days prior.

- The trigger date is the fill date on the PDE claim

- **Step 2: Identify potentially eligible episodes**
  - For each trigger claim, flag whether the 6 months following the trigger date (inclusive of the trigger date) meet the criteria below. Episodes should be end-dated 6 calendar months after the trigger date, even in the case of death before 6 months. A trigger claim initiates an episode only when all of the below criteria are met.
    - The 6 months following the trigger claim (including the trigger date) must contain a non-denied carrier claim with a qualifying E&M visit. A qualifying E&M visit is a carrier line that:
      - Has a HCPCS code of 99201–99205, 99211–99215, AND
      - Has an included cancer diagnosis code (see the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources), AND
      - Is not denied (line allowed charge > $0), AND
      - Has a line first expense date occurring between the potential trigger date and six months after, inclusive of begin and end dates, AND
      - Was billed by a TIN with at least one oncology provider (see Section 1.1 and Oncology TIN specifications) during the individual performance period that corresponds to the potential trigger date.
    - The beneficiary must meet all criteria below for all 6 months of the potentially eligible episode (or until death), inclusive of episode begin and end dates:
      - Be enrolled in Medicare Parts A and B, AND
      - Have Medicare as the primary payer (not be Working Aged (A), Working Disabled (G), or an ESRD beneficiary in the 30-month coordination period with an employer group health plan (B)), AND
      - Not be enrolled in Medicare Advantage, PACE, United Mine Workers of America, or other group health plan, AND
      - Not have ESRD.
- **Step 3: Identify final set of episodes.**
  - For each unique beneficiary, identify the first potential episode from Step 2 that does not have a trigger date that is within a prior episode.
    - Apply the following hierarchy if there is more than one trigger claim on the same day from different types of service: outpatient, carrier, DMEPOS, PD.
    - If there is still more than one trigger claim on the same day within the same type of service, choose the claim with the lowest claim ID.

This is the episode for the current performance period, and could be the beneficiary's first episode in EOM or an episode subsequent to an episode defined for a prior performance period. Identify the

beginning and ending dates of the episode.

Below are the specifications for determining whether a TIN has at least one oncology provider during the performance period. These specifications require access to all Medicare claims data in a performance period.

- **Step 1: Identify all carrier claim lines that:**
    - Have a "line first expense date" occurring between the earliest episode beginning date and the latest episode ending date for the performance period, AND
    - Have "line allowed charge" > $0 (the line item is not denied), AND
    - Have an E&M HCPCS code in the range 99201–99205 or 99211–99215, AND
    - Have a diagnosis code in the list of included cancer diagnoses (see the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources), AND
    - Have a provider specialty code of 83 (Hematology/Oncology) or 90 (Medical Oncology).

- **Step 2: Identify the TIN on each of the claim lines identified in Step 1.** The unique list of these TINs constitutes the list of TINs with an oncology provider in the performance period.

Appendix B: Specifications for Assignment of Cancer Type and Episode Exclusion

- **Step 1: Identify cancer type associated with each episode.**
    - ICD codes are mapped to cancer types as outlined in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources. Final cancer type is determined by the plurality of cancer type designations associated with the qualifying E&M services occurring during the episode. E&M services from the carrier file count toward plurality if they:
        - Have a HCPCS code in 99201–99205, 99211–99215, AND
        - Have an included cancer diagnosis code for one of the EOM cancer types (see the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources), AND
        - Have a line first expense date occurring between the episode beginning and ending dates, inclusive of begin and end dates, AND
        - Have "line allowed charge" > $0 (the line item is not denied), AND
        - Are billed by a TIN with at least one oncology provider during the period (see Section 1.1 and Oncology TIN specifications).
    - The TIN and NPI on the line do not impact the determination. An E&M service is defined by the unique combination of beneficiary ID, TIN, line first expense date, and cancer type associated with the diagnosis code on the line. Qualifying lines in the same claim but with different dates will count as separate services.
    - In the case where more than one cancer type has the plurality of services, i.e., there is a tie, apply tie-breakers in the order below:
        - The most recent qualifying E&M service during the episode, then the second most recent qualifying E&M service during the episode, etc., THEN
        - The lowest last digit of the TIN associated with the visit, THEN
        - The highest claim ID.
- **Step 2: Identify episodes during which the beneficiary receives CAR-T therapy. CAR-T is identified as follows:**
    - Inpatient claims:
        - Claim contains an ICD10[24] procedure code included in the list of procedures codes in the Bispecific Antibody and CAR-T Code List on EOM Connect; and
        - Claim contains DRG code 018 (this DRG was new in FY2021, and expanded in FY2022 to include immunotherapies); and
        - The claim is not denied (Medicare nonpayment reason code on the claim is blank); and
        - The **claim admission date** falls between the first and last dates of the episode, inclusive.

[24] The entire array of claim diagnoses (1 through 25) is checked.

  - Outpatient claims:
    - Claim contains a non-denied revenue center (revenue center total charge amount minus revenue center non-covered charge amount > $0) with a HCPCS code indicating administration of CAR-T (0540T for claims before 2025 and 38228 for claims on or after January 1, 2025); and
    - Claim contains a non-denied revenue center (revenue center total charge amount minus revenue center non-covered charge amount > $0) with a HCPCS code included in the Bispecific Antibody and CAR-T Code List on EOM Connect; and
    - The **claim from date or claim thru date** falls between the first and last dates of the episode, inclusive.
  - Carrier claims:
    - Claim contains a non-denied line item (lie allowed charge > $0) with a HCPCS code included in the Bispecific Antibody and CAR-T Code List on EOM Connect and a "line first expense date" that falls between the first and last dates of the episode, inclusive.
- **Step 3: Identify episodes during which the beneficiary receives BsAbs. BsAbs are identified as follows:**
  - Inpatient claims:
    - Claim contains an ICD10 procedure code included in the list of procedures codes in the "BsAb Codes" tab of the Bispecific Antibody and CAR-T Code List on EOM Connect; and
    - The claim is not denied (Medicare nonpayment reason code on the claim is blank); and
    - The **claim admission date** falls between the first and last dates of the episode, inclusive.
  - Outpatient claims (identification at the revenue center level):
    - Revenue center contains a HCPCS code included in the "BsAb Codes" tab of the Bispecific Antibody and CAR-T Code List on EOM Connect; and
    - Revenue center is not denied (revenue center total charge amount minus revenue center non-covered charge amount > $0); and
    - The **claim from date or claim thru date** falls between the first and last dates of the episode, inclusive.
  - Carrier, DME (identification at the line level):
    - Line contains a HCPCS code included in the "BsAb Codes" tab of the Bispecific Antibody and CAR-T Code List on EOM Connect; and
    - Line is not denied (line allowed charge > $0); and
    - Line has a "line first expense date" that falls between the first and last dates of the episode, inclusive.
- **Step 4: Identify COVID-19 based on diagnosis of COVID-19 during the episode. COVID-19 claims are identified as follows:**
  - Inpatient claims:

        - The claim admission date falls between the first and last dates of the episode, inclusive, AND
        - Claim header[25] contains an ICD10 diagnosis of B97.29, for claim admission dates on 1/27/2020–3/31/2020, OR an ICD10 diagnosis of U07.1, for claim admission dates ON OR AFTER April 1, 2020, OR an ICD10 diagnosis of J12.82—Pneumonia due to COVID-19—if the claim from or thru date/claim admission date is on or after January 1, 2021, AND
        - The claim is not denied (Medicare nonpayment reason code on the claim is blank).
    - Outpatient claims:
        - The claim from date or claim thru date falls between the first and last dates of the episode, inclusive; and
        - Claim header[15] contains an ICD10 diagnosis of B97.29, if the claim from or thru date is on 1/27/2020–3/31/2020, OR an ICD10 diagnosis of U07.1, if the claim from or thru date is ON OR AFTER April 1, 2020, OR an ICD10 diagnosis of J12.82 – Pneumonia due to COVID-19—if the claim from or thru date/claim admission date is on or after January 1, 2021, AND
        - The claim is not denied (Medicare nonpayment reason code is blank).
    - Carrier claims:
        - The claim from date or claim thru date falls between the first and last dates of the episode, inclusive; and
        - Claim header[26] contains an ICD10 diagnosis of B97.29, if the claim from or thru date is on 1/27/2020 - 3/31/2020, OR an ICD10 diagnosis of U07.1, if the claim from or thru date is ON OR AFTER April 1, 2020, OR an ICD10 diagnosis of J12.82 – Pneumonia due to COVID19 – if the claim from or thru date/claim admission date is on or after January 1, 2021 AND
        - The claim is not denied (carrier claim payment denial code is one of: 1-9, A, B).

Episodes including CAR-T therapy, BsAbs, or a COVID19 diagnosis are excluded from EOM.

[25] Claim diagnoses 1 through 25
[26] Claim diagnoses 1 through 12

Appendix C: Specifications for Episode Attribution

- **Step 1: Identify all E&M services that count toward attribution. Qualifying E&M services:**
    1. Appear in the carrier claims file (i.e., have been billed on the CMS-1500 or electronic equivalent), AND
    2. Are identified at the line item level (because visits on different days may be billed on a single claim), AND
    3. Have a "line first expense date" occurring between the episode beginning and ending dates, inclusive of begin and end dates, AND
    4. Have a HCPCS code in the range 99201 – 99205 or 99211 – 99215, which indicates an E&M service, AND
    5. Have "line allowed charge" > $0, indicating that the line service was not denied by Medicare, AND
    6. Have an ICD-10 diagnosis code in the list of included high risk cancer diagnoses (see the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources) on the same line as the E&M service, AND
    7. Are billed by a TIN with at least one oncology provider (see specifications in Appendix A.).
- **Step 2: Count the number of qualifying E&M services from each oncology TIN.**
    1. A unique E&M service for the purposes of attribution is defined as a unique combination of Episode ID [i.e., beneficiary ID, episode begin date, episode end date], line first expense date, TIN.
    2. The TIN is the tax identification number on the same line as the qualifying E&M service.
- **Step 3: Attribute the episode to the oncology TIN with the first qualifying E&M service on or after the episode initiating chemotherapy visit, within the episode, as long as that TIN also billed at least 25% of the qualifying E&M services associated with the episode.**
    1. If more than one TIN provided the "first" qualifying E&M services on the same day after episode initiation, and each provided at least 25% of the qualifying E&M services during the episode, attribute to the TIN in the tie with the plurality of qualifying E&M services during the episode. If there is still a tie, select the TIN with:
        - The most recent qualifying E&M service during the episode, then second most recent, etc., THEN
        - The highest claim ID.
    2. In the event that no oncology TIN with the first qualifying E&M service billed at least 25% of qualifying E&M services during the episode, then the attribution defaults to the oncology TIN with the plurality of qualifying E&M services during the episode. If the plurality method produces a tie, then select the oncology TIN with:
        - The most recent qualifying E&M service during the episode, then second most recent, etc., THEN
        - The highest claim ID.

Appendix D: Baseline Trend Adjustments

The baseline trend adjustments are designed to make baseline period episode expenditures comparable across the entire model baseline period. The adjustments reflect the impact of inflation and any systematic changes in episode expenditures due to evolving patterns of care, Medicare payment policies, etc. during the model baseline period. The baseline trend adjustment for a given period is calculated by dividing average, un-Winsorized expenditures for episodes from the most recent baseline period (BP8) by the average, un-Winsorized expenditures for episodes from the specific baseline period to be adjusted. This baseline trend adjustment is then applied to the expenditures of each episode in the baseline period undergoing adjustment. This process makes all baseline period episode expenditures comparable to baseline period expenditures from BP8. The original baseline applies to PP1-PP7 and the new baseline period applies to PP8-PP13. For details on the original and new baseline periods see Section 1. The baseline trend adjustments are shown below.

Appendix Table D-1A: Breast Cancer Baseline Trend Adjustments (Original Baseline)

Baseline Period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	47,703	$40,426.58	1.20
BP2	44,377	$41,966.70	1.15
BP3	41,177	$43,831.03	1.10
BP4	42,545	$45,629.33	1.06
BP5	39,454	$46,075.43	1.05
BP6	41,971	$49,108.24	0.98
BP7	40,947	$48,404.15	1.00
BP8	40,321	$48,370.51	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-1B: Breast Cancer Baseline Trend Adjustments (New Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	42,435	$51,315.24	1.08
BP2	37,172	$53,596.68	1.04
BP3	35,111	$53,632.55	1.04
BP4	31,782	$52,211.11	1.06
BP5	32,199	$53,115.28	1.05
BP6	28,977	$50,981.44	1.09
BP7	29,211	$54,461.08	1.02
BP8	27,740	$55,548.57	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-2A: Chronic Leukemia Baseline Trend Adjustments (Original Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	17,328	$48,389.64	1.23
BP2	16,550	$51,084.30	1.16
BP3	15,665	$50,097.60	1.19
BP4	14,973	$54,047.15	1.10
BP5	12,821	$51,930.71	1.14
BP6	14,026	$56,250.34	1.06
BP7	15,193	$54,836.69	1.08
BP8	14,932	$59,421.05	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-2B: Chronic Leukemia Baseline Trend Adjustments (New Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	16,470	$52,648.38	1.16
BP2	16,377	$55,033.33	1.11
BP3	15,399	$59,424.37	1.02
BP4	15,175	$56,171.16	1.08
BP5	16,123	$61,928.40	0.98
BP6	14,221	$57,965.85	1.05
BP7	13,616	$63,528.20	0.96
BP8	12,957	$60,841.24	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-3A: Lung Cancer Baseline Trend Adjustments (Original Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	47,681	$46,917.55	1.40
BP2	42,259	$50,814.99	1.30
BP3	39,794	$53,813.97	1.22
BP4	41,875	$58,040.16	1.14
BP5	41,722	$61,456.13	1.07
BP6	45,165	$64,821.48	1.02
BP7	43,727	$64,624.77	1.02
BP8	41,388	$65,876.55	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-3B: Lung Cancer Baseline Trend Adjustments (New Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	54,040	$63,439.38	1.11
BP2	46,994	$65,121.47	1.08
BP3	42,698	$65,564.14	1.07
BP4	39,261	$66,551.07	1.06
BP5	39,709	$68,864.19	1.02
BP6	34,835	$68,397.82	1.03
BP7	34,812	$71,478.34	0.98
BP8	32,745	$70,286.25	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-4A: Lymphoma Baseline Trend Adjustments (Original Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	30,246	$48,403.40	1.18
BP2	25,737	$50,200.63	1.14
BP3	23,411	$52,547.10	1.09
BP4	23,862	$55,150.06	1.04
BP5	22,633	$56,631.72	1.01
BP6	24,165	$58,191.90	0.98
BP7	22,975	$57,705.45	0.99
BP8	21,583	$57,083.16	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-4B: Lymphoma Baseline Trend Adjustments (New Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	30,276	$55,816.99	1.00
BP2	24,583	$57,075.64	0.97
BP3	21,854	$57,148.04	0.97
BP4	20,139	$56,047.50	0.99
BP5	20,998	$57,091.81	0.97
BP6	17,317	$56,202.91	0.99
BP7	16,911	$57,768.60	0.96
BP8	15,759	$55,556.99	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-5A: Multiple Myeloma Baseline Trend Adjustments (Original Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	27,167	$64,456.86	1.38
BP2	27,115	$67,944.27	1.31
BP3	25,860	$71,490.97	1.24
BP4	27,160	$78,345.60	1.13
BP5	26,736	$79,968.32	1.11
BP6	28,379	$84,773.16	1.05
BP7	28,016	$83,172.13	1.07
BP8	27,422	$88,910.87	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-5B: Multiple Myeloma Baseline Trend Adjustments (New Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	31,914	$81,380.38	1.13
BP2	30,271	$84,208.38	1.09
BP3	29,032	$87,398.41	1.05
BP4	27,054	$88,374.17	1.04
BP5	28,693	$95,773.99	0.96
BP6	25,526	$93,595.77	0.98
BP7	25,652	$99,868.11	0.92
BP8	24,470	$92,177.56	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-6A: Prostate Cancer Baseline Trend Adjustments (Original Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	17,172	$48,298.25	1.03
BP2	14,900	$50,751.30	0.98
BP3	15,108	$52,639.71	0.94
BP4	17,552	$55,524.29	0.89
BP5	16,587	$52,727.32	0.94
BP6	17,902	$53,853.52	0.92
BP7	17,903	$49,280.80	1.01
BP8	18,755	$49,679.19	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-6B: Prostate Cancer Baseline Trend Adjustments (New Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	7,669	$53,835.99	1.38
BP2	5,980	$56,457.52	1.32
BP3	5,836	$56,105.46	1.33
BP4	5,673	$56,731.16	1.31
BP5	6,249	$58,651.12	1.27
BP6	5,441	$58,175.37	1.28
BP7	5,774	$61,119.03	1.22
BP8	6,163	$74,415.60	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-7A: Small Intestine / Colorectal Cancer Baseline Trend Adjustments (Original Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	27,854	$36,530.04	1.08
BP2	24,028	$38,120.84	1.04
BP3	21,772	$38,299.77	1.03
BP4	22,649	$39,163.59	1.01
BP5	21,296	$39,542.53	1.00
BP6	22,295	$40,183.71	0.98
BP7	21,215	$39,818.78	0.99
BP8	20,371	$39,535.40	1.00

[1] Standardized, un-Winsorized dollars

Appendix Table D-7B: Small Intestine / Colorectal Cancer Baseline Trend Adjustments (New Baseline)

Baseline period	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
BP1	27,332	$38,733.50	1.03
BP2	22,526	$40,294.41	0.99
BP3	20,812	$39,426.58	1.01
BP4	18,629	$39,141.26	1.02
BP5	19,602	$39,815.57	1.00
BP6	17,511	$38,343.76	1.04
BP7	17,624	$39,352.02	1.01
BP8	16,643	$39,916.22	1.00

[1] Standardized, un-Winsorized dollars

Appendix E: Baseline Period Winsorization Thresholds

Winsorization is a two-sided adjustment that limits the impact of outliers on predicted and actual expenditures, as explained in Section 2.5. Baseline period episode expenditures are Winsorized at the 5th and 95th percentiles by cancer type. Specifically, episode expenditures below the 5th percentile by cancer type were set to the 5th percentile, and episode expenditures above the 95th percentile were set to the 95th percentile for the relevant cancer type. The Winsorization adjustments occur after baseline trending.

For the original baseline, Winsorization thresholds for each included cancer type are listed below in Appendix Table E-1A. For the new baseline, Winsorization thresholds for each included cancer type are listed below in Appendix Table E-1B.

Appendix Table E-1A: Winsorization Thresholds (Original Baseline)

Cancer type	5th Percentile of Episode Expenditures[1]	95th Percentile of Episode Expenditures[1]
Breast Cancer	$9,235.32	$103,511.54
Chronic Leukemia	$7,000.07	$115,856.35
Lung Cancer	$15,263.08	$128,401.50
Lymphoma	$12,702.61	$129,636.67
Multiple Myeloma	$19,942.49	$176,597.56
Prostate Cancer	$7,651.10	$106,248.61
Small Intestine / Colorectal Cancer	$5,434.75	$90,951.28

[1] Standardized, trended dollars.

Appendix Table E-1B: Winsorization Thresholds (New Baseline)

Cancer type	5th Percentile of Episode Expenditures[1]	95th Percentile of Episode Expenditures[1]
Breast Cancer	$8,031.35	$116,942.49
Chronic Leukemia	$2,666.22	$122,225.65
Lung Cancer	$15,398.04	$135,737.94
Lymphoma	$9,939.84	$144478.71
Multiple Myeloma	$15,182.21	$188,812.65
Prostate Cancer	$8,819.22	$185,134.93
Small Intestine / Colorectal Cancer	$4,379.30	$99,084.99

[1] Standardized, trended dollars.

Appendix F: Specifications for the Novel Therapies Adjustments

Adjustments for the use of novel therapies are based on a comparison of the share of episode expenditures from specified new oncology drugs between 1) an EOM participant's or pool's attributed episodes of a given cancer type and 2) all episodes of that cancer type attributed to non-EOM oncology PGPs for the same performance period. A novel therapy adjustment can only increase an EOM participant's or pool's benchmark prices for a given cancer type; it never decreases the benchmark prices. The method for calculating novel therapy adjustments is described below. These calculations are performed separately for each of the seven included cancer types for each EOM participant or pool in each performance period.

Step 1: Calculate proportion of episode expenditures from specified novel therapies among all episodes of a given cancer type attributed to the EOM participant (or attributed to the EOM participants in a pool)

A = actual standardized, Winsorized episode expenditures for all attributed episodes of a given cancer type
B = standardized episode expenditures from new oncology therapies among attributed episodes of that cancer type, adjusted for Winsorization. (The use of these new therapies must be consistent with FDA-approved indications.)
C = cancer type-specific proportion of episode expenditures from novel therapies [C=B/A]

Step 2: Calculate proportion of episode expenditures from specified novel therapies among all episodes of that cancer type attributed to non-EOM oncology PGPs

Perform the same calculation in Step 1 among episodes of the same cancer type attributed to non-EOM oncology PGPs for the same performance period.

Step 3: Compare EOM participant's or pool's cancer type-specific use of novel therapies to use of novel therapies within episodes of the same cancer type attributed to non-EOM oncology PGPs

Compare the proportions from Steps 1 and 2. If the EOM participant or pool has a lower proportion of episode expenditures from new therapies (compared to episodes of that cancer type attributed to non-EOM oncology PGPs for the same performance period), no adjustment is made to the EOM participant's or pool's baseline prices for episodes of that cancer type. If the EOM participant or pool had a higher proportion of episode expenditures from new therapies, the participant or pool qualifies for an adjustment to the baseline price for attributed episodes of that cancer type.

Step 4: Calculate EOM participant's or pool's cancer type-specific novel therapy adjustment and apply to baseline prices for attributed episodes of that cancer type

The novel therapy adjustment is determined by the share of an EOM participant's or pool's novel therapy use that exceeds the level occurring in episodes of a given cancer type attributed to non-EOM oncology PGPs. (The cancer type-specific level of novel therapy use among non-EOM oncology PGPs, and its impact on episode expenditures, is already captured in the relevant trend factor.)

The difference in proportions calculated in Step 3—representing novel therapy use above the level occurring among non-EOM oncology PGPs—is multiplied by the EOM participant's or pool's total standardized, Winsorized episode expenditures for the relevant cancer type. The resulting quantity is the portion of an EOM participant's or pool's episode expenditures corresponding to their above-average use of novel therapies. 80% of this quantity is divided by the EOM participant's or pool's total trended baseline prices from episodes of the relevant cancer type to obtain that participant's or

pool's novel therapy adjustment for that cancer type.

During reconciliation calculations for this performance period, the baseline prices for all attributed episodes of that cancer type are multiplied by this cancer type-specific novel therapy adjustment. As noted above, the novel therapy adjustment can only result in a higher benchmark price, never a lower benchmark price. When an EOM participant or pool has lower expenditures from novel therapies in attributed episodes of a certain cancer type, compared to episodes of the same cancer type attributed to non-EOM oncology PGPs, no novel therapy adjustment is made.

The example in Appendix Table F-1 below demonstrates the calculation of a novel therapy adjustment for breast cancer episodes for a hypothetical EOM participant with above-average use of novel therapies in a hypothetical performance period.

Appendix Table F-1: Calculation of a Hypothetical EOM Participant's Novel Therapy Adjustment for Breast Cancer in a Hypothetical Performance Period

Row	Item	Amount
A	EOM participant's actual standardized, Winsorized episode expenditures for attributed breast cancer episodes	$2,300,000
B	EOM participant's expenditures from novel therapies in attributed breast cancer episodes, adjusted for Winsorization	$149,500
C	EOM participant's proportion of expenditures from novel therapies in attributed breast cancer episodes **[B/A]**	6.50%
D	Proportion of actual episode expenditures due to novel therapies among all breast cancer episodes attributed to non-EOM oncology PGPs for this performance period	4.00%
E	Difference in the proportion of breast cancer expenditures from novel therapies between EOM participant and non-EOM breast cancer episodes **[C – D]**	2.5%
F	Portion of EOM participant's breast cancer expenditures corresponding to novel therapy use above the non-EOM level **[E * A]**	$57,500
G	80% of EOM participant's breast cancer expenditures corresponding to novel therapy use above the non-EOM level **[F * 0.8]**	$46,000
H	Sum of EOM participant's trended baseline prices for attributed breast cancer episodes	$2,500,000
I	EOM participant's novel therapy adjustment for breast cancer **[G/H]**	1.84%

In a given performance period, every episode of the same cancer type attributed to the same EOM participant (or to EOM participants in the same pool) receives the same novel therapy adjustment.

However, the novel therapy adjustments calculated for a given EOM participant or pool may differ by cancer type, given that the EOM participant's or pool's use of novel therapies may differ by cancer type. (This approach differs from OCM, which calculated a single novel therapy adjustment based on an OCM participant's or pool's use of novel therapies across all cancer types.)

Appendix G: Mathematical Description of the Methodology for Establishing Target Amounts

In a given performance period, the target amount for an EOM participant or pool is the benchmark amount reduced by the EOM discount. The benchmark amount is the sum of the benchmark prices for all episodes attributed to an EOM participant (or for a pool, the sum of the benchmark prices for all episodes attributed to participants in the pool).

The target amount for a participant or pool in a given performance period can be represented by:

$TA = (1\text{-}Discount) * \sum (Bp_i * TF * NTA)$, where

TA = target amount for a participant or pool
Discount = EOM discount (0.04 for risk arrangement RA1, 0.03 for risk arrangement RA2)
Bp_i = Baseline price for attributed episode i in the performance period
TF = Cancer type-specific trend factor for the EOM participant or pool
NTA = Cancer type-specific novel therapies adjustment for the EOM participant or pool. The novel therapy adjustment for an EOM participant or pool is determined separately for each of the seven cancer types.
The quantity Bp_i*TF*NTA represents the benchmark price for attributed episode i.
The quantity $\sum_i$ (Bpi * TF * NTA) represents the benchmark amount for an EOM participant or pool.

The baseline price for episode i attributed to a given EOM participant in the performance period can be expressed as:

$Bp_i = [\alpha + (X_i\beta)] * EA * CL_{im}$, where

Bp_i = Baseline price of the i^{th} episode
α = Intercept from the price prediction model for the relevant cancer type (a cancer type-specific constant).
X_i = Characteristics of the i^{th} episode (e.g., beneficiary age, beneficiary sex, etc.)
β = Vector of coefficients from the price prediction model created from all baseline period episodes of a given cancer type. There is a separate price prediction model for each of the seven included cancer types.
EA = Experience adjuster for the EOM participant based on relative costliness in the model baseline period. It has national, regional, and participant-specific components (see Section 4.1.2).
CL_{im} = Clinical adjusters pertaining to the m^{th} cancer type (ever-metastatic status for breast, lung, and small intestine/colorectal cancers; HER2 status for breast cancer) for the i^{th} episode

The cancer type-specific trend factor for a given EOM participant or EOM pool can be expressed by:

$TF_m = \sum_m (N_m * R_m) / \sum_m (N_m)$, where

TF_m = Trend factor for the EOM participant or EOM pool for the m^{th} cancer type
N_m = Number of attributed episodes of the m^{th} cancer type
R_m = Ratio of average episode expenditures of the m^{th} cancer type among non-EOM oncology PGPs in the model performance period to the average episode expenditures of the m^{th} cancer type among non-EOM oncology PGPs in the baseline period

The cancer type-specific experience adjuster consists of a weighted sum of three components – a

national component, a regional component, and a participant-specific component. The weights vary according to the number of attributed episodes for a given practice (see Section 4.1.2).

For each included cancer type, the national component is the same for all EOM participants and can be expressed as:

$NC_c = \Sigma_n (Exp_n * w_{bp}) / \Sigma_n [\alpha + (X_n\beta)]$, where

NC_c = Cancer type-specific national component of the experience adjuster
n = Represents each baseline period episode of a given cancer type (from national set of baseline period episodes)
Exp_n = Standardized, Winsorized expenditures for a given episode n
w_{BP} = Weight assigned to a specific baseline period. These are the same weights that are used in the price prediction models.
α = Intercept from the price prediction model for the relevant cancer type (a cancer type-specific constant).
X_n = Characteristics of the n^{th} baseline episode (e.g., beneficiary age, beneficiary sex, etc.)
B = Vector of coefficients from the relevant cancer type-specific price prediction model

For each included cancer type, the regional component is the same for all oncology PGPs in a given census division and can be expressed as:

$RC_c = \Sigma_r (Exp_r * w_{bp}) / \Sigma_r [\alpha + (X_r\beta)]$, where

RC_c = Cancer type-specific regional component of the experience adjuster
r = Represents each baseline period episode of a given cancer type attributed to an oncology PGP located in a given census division
Exp_r = Standardized, Winsorized expenditures for a given episode r
w_{BP} = Weight assigned to a specific baseline period. These are the same weights that are used in the price prediction models.
α = Intercept from the price prediction model for the relevant cancer type (a cancer type-specific constant).
Xr = Characteristics of the r^{th} baseline episode (e.g., age, sex, etc.)
β = Vector of coefficients from the relevant cancer type-specific price prediction model

For each included cancer type, the EOM participant-specific component is unique to each EOM participant and can be expressed as:

$PC_c = \Sigma_j (Exp_j * w_{bp}) / \Sigma_j [\alpha + (X_j\beta)]$, where

PC_c = Cancer type-specific, EOM participant-specific component of the experience adjuster
j = Represents each baseline period episode of a given cancer type attributed to a given EOM participant
Exp_j = Standardized, Winsorized expenditures for a given episode j
w_{BP} = Weight assigned to a specific baseline period. These are the same weights that are used in the price prediction models.
α = Intercept from the price prediction model for the relevant cancer type (a cancer type-specific constant).
Xj = Characteristics of the j^{th} baseline episode (e.g., age, sex, etc.)
β = Vector of coefficients from the relevant cancer type-specific price prediction model

For each EOM participant, each cancer type-specific blended experience adjuster is a weighted average of the cancer type-specific national, regional, and EOM participant-specific components. The

weights applied to the national, regional, and EOM participant-specific components of the experience adjuster depend on the EOM participant's number of attributed baseline period episodes and are specified in Section 4.1.2.

$CEA_c = NC_c * w_{nc} + RC_c * w_{rc} + PC_c * w_{pc,}$ where

- CEA_c = an EOM participant's cancer type-specific blended experience adjuster
- c = represents each included cancer type
- NC_c = Cancer type-specific national component of the experience adjuster
- RC_c = Cancer type-specific regional component of the experience adjuster
- PC_c = Cancer type-specific EOM participant-specific component of the experience adjuster
- W_{nc} = National component weight
- W_{rc} = Regional component weight
- W_{pc} = EOM participant-specific weight

The final experience adjuster for each EOM participant is a weighted average of the EOM participant's seven cancer-specific blended experience adjusters. The weight applied to each cancer type-specific blended experience adjuster matches the proportion of baseline period episodes of that cancer type attributed to the EOM participant, among all baseline period episodes attributed to the EOM participant.

$EA = \sum_c (CEAc * w_c) / \sum_c (w_c)$, where

- EA = EOM participant's final experience adjuster
- c = represents each included cancer type
- CEA_c = cancer type-specific blended experience adjuster for the EOM participant
- w_c = Number of baseline period episodes of included cancer type *c* attributed to the EOM participant

Appendix H: Patient Experience of Care Measure Composites and Scoring

In Table H-1, there are four different response schemes for individual survey items. The points associated with each response are shown below.

1. **Never; Sometimes; Usually; Always**
   Never = 0 points
   Sometimes = 3 1/3 points
   Usually = 6 2/3 points
   Always = 10 points
2. **Never; Sometimes; Usually; Always – INVERSE SCORE**
   Never = 10 points
   Sometimes = 6 2/3 points
   Usually = 3 1/3 points
   Always = 0 points
3. **No; Yes**
   No = 0 points
   Yes = 10 points
4. **No; Yes, somewhat; Yes, definitely**
   No = 0 points
   Yes, somewhat = 5 points
   Yes, definitely = 10 points

Appendix Table H-1: Patient Experience of Care Measure Composites and Survey Items

Item/Composite	Responses
Overall Rating	
Using any number from 0 to 10, where 0 is the worst cancer therapy team possible and 10 is the best cancer therapy team possible, what number would you use to rate your cancer therapy team over the last 6 months?	0 to 10
Communication Composite	
In the last 6 months, how often did your cancer therapy team show respect for what you had to say?	Never Sometimes Usually Always
In the last 6 months, how often did your cancer therapy team listen carefully to you?	Never Sometimes Usually Always
In the last 6 months, how often was your cancer therapy team direct and straightforward when talking with you about your cancer and chemotherapy?	Never Sometimes Usually Always

Item/Composite	Responses
In the last 6 months, how often did your cancer therapy team spend enough time with you?	Never Sometimes Usually Always
Enabling Self-Management Composite	
In the last 6 months, did you and your cancer therapy team talk about pain related to your cancer or related to your chemotherapy?	No or Yes
In the last 6 months, did your cancer therapy team try to help you deal with this pain (if pain was identified as a problem)?	No Yes, somewhat Yes, definitely
In the last 6 months, did you and your cancer therapy team talk about any changes in your energy levels related to your cancer or your chemotherapy?	No or Yes
In the last 6 months, did your cancer therapy team try to help you deal with these changes in your energy levels? (if energy levels were identified as a problem)	No Yes, somewhat Yes, definitely
In the last 6 months, did you and your cancer therapy team talk about depression or anxiety related to your cancer or cancer treatments?	No or Yes
In the last 6 months, did your cancer therapy team try to help you deal with this depression or anxiety (if depression or anxiety were identified)?	No Yes, somewhat Yes, definitely
In the last 6 months, did you and your cancer therapy team talk about additional services to manage your cancer care at home, such as home health care, special medical equipment, or special supplies?	No Yes, somewhat Yes, definitely
In the last 6 months, did you and your cancer therapy team talk about things you can do to maintain your health during cancer treatment, such as what to eat and what exercises to do?	No Yes, somewhat Yes, definitely
Exchanging Information Composite	
Since it was decided that you would have chemotherapy to treat your cancer, did your cancer therapy team clearly explain how this treatment could affect your normal daily activities?	No Yes, somewhat Yes, definitely
In the last 6 months, did your cancer therapy team tell you what the next steps in your chemotherapy would be?	No Yes, somewhat Yes, definitely
In the last 6 months, how often did your cancer therapy team explain test results in a way that was easy to understand?	Never Sometimes Usually Always
In the last 6 months, did your cancer therapy team explain what that medicine was for in a way that was easy to understand (if medicine was prescribed that you had not taken before)?	No Yes, somewhat Yes, definitely
Access Composite	
How often were these office visits scheduled at times that were convenient for you (if visits occurred in the last 6 months)?	Never Sometimes Usually Always
How often were the blood tests, x-rays, scans, or other tests done as soon as you or your doctor thought you needed (if blood tests, x-rays, scans, or other tests were done)?	Never Sometimes Usually Always

Item/Composite	Responses
In the last 6 months, how often did you have to wait longer for your test results than you expected?	Never Sometimes Usually Always (inversely scored)
Shared Decision-Making Composite	
Since your cancer was diagnosed, did a doctor or other member of your cancer therapy team talk with you about the reasons you might want to have chemotherapy?	No Yes, somewhat Yes, definitely
Since your cancer was diagnosed, did a doctor or other member of your cancer therapy team talk with you about the reasons you might not want to have chemotherapy?	No Yes, somewhat Yes, definitely
Did a doctor or other member of your cancer therapy team ask for your opinion about whether or not to have chemotherapy?	No Yes, somewhat Yes, definitely
Did a doctor or other member of your cancer therapy team involve you in decisions about your chemotherapy as much as you wanted?	No Yes, somewhat Yes, definitely

Appendix I: Price Prediction Models

This appendix describes the definition and form of the covariates that are incorporated into the price prediction models, both original and new. There are seven price prediction models, one for each included cancer type in EOM. The covariates are listed below and are described in more detail in the subsequent sections. Some covariates apply to only a subset of the seven prediction models.

Price Prediction Model Covariates:

- Age/Sex
- Receipt of cancer-related surgery
- Part D enrollment, low-income subsidy (LIS), and dual eligibility for Medicare and Medicaid
- Receipt of radiation therapy
- Receipt of bone marrow transplant
- Clinical trial participation
- Specific comorbidities
- Count of costly conditions
- History of prior chemotherapy use
- Institutional status
- Episode length

These covariates are described in more detail below. Covariates that serve as reference groups in the prediction model are noted.

Age and Sex

Age is calculated as of the first day of the episode. Ten age/sex categories are included in all models except breast cancer:

Female, age 18-64	Male, age 18-64
Female, age 65-69 (reference group)	Male, age 65-69
Female, age 70-74	Male, age 70-74
Female, age 75-79	Male, age 75-79
Female, age 80+	Male, age 80+

Only the breast cancer model includes the following categories:

Age, 18-64
Age, 65-69 (reference group)
Age, 70-74
Age, 75-79
Age, 80+
Male

All age/sex categories above are included in both the original and new baseline prediction models.

Receipt of Cancer-Related Surgery

Predicted expenditures are adjusted if certain cancer-related surgeries were performed during the episode. As EOM beneficiaries may require surgery during an episode for a cancer type other than the one they were assigned, the price prediction models control for certain other cancer surgeries in

addition to surgeries for included cancer types. The cancer types with relevant surgeries included in the EOM price prediction models are as follows:

- Anal cancer
- Bladder cancer
- Breast cancer
- Female genitourinary cancer other than ovary
- Gastrointestinal / esophageal cancer
- Head & neck cancer
- Kidney cancer
- Liver cancer
- Lung cancer
- Ovarian cancer
- Pancreatic cancer
- Prostate cancer
- Small intestine / colorectal cancer

The cancer-related surgery covariate is included in both the original and new baseline prediction models for all EOM cancer types. The specifications for identifying cancer-related surgery in the Medicare claims data are as follows:

- **Step 1: Identify cancer-related surgery from the inpatient file by pulling inpatient claims that meet the following criteria for each episode:**
    - Claim contains an ICD10 procedure code listed in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources, AND
    - The claim admission date falls between the first and last dates of the episode, inclusive, AND
    - The Medicare nonpayment reason code on the claim is blank, AND
    - One of the following is true:
        - The cancer type assigned to the episode is the same as the cancer type associated with the procedure code in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources, OR
        - The claim contains a diagnosis code that maps to a cancer type in the tab "Cancer Mapping for Surgery" of the document EOM Technical Payment Resources that is the same as the cancer type associated with the procedure code in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources.
- **Step 2: Identify cancer-related surgery from the outpatient file by pulling outpatient claims that meet the following criteria for each episode:**
    - Claim contains an ICD10 procedure code, OR a HCPCS procedure code in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources, AND
        - If an ICD10 procedure is found on the claim header, the procedure date falls between the first and last dates of the episode, inclusive, OR
        - If a HCPCS code is found in the revenue centers, the revenue center is not denied (revenue center total charge amount minus revenue center non-covered

charge amount > $0) and the revenue center date falls between the first and last dates of the episode, inclusive, AND
    - The claim is not denied (Medicare nonpayment reason code is blank), AND
    - One of the following is true:
        - The cancer type assigned to the episode is the same as the cancer type associated with the procedure code in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources, OR
        - The claim contains a diagnosis code that maps to a cancer type in the tab "Cancer Mapping for Surgery" of the document EOM Technical Payment Resources that is the same as the cancer type associated with the procedure code in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources
- **Step 3: Identify cancer-related surgery from the carrier file by pulling carrier claims that meet the following criteria for each episode:**
    - Claim contains a line item with a HCPCS procedure code in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources, AND
    - The line first expense date falls between the first and last dates of the episode, inclusive, AND
    - The line item is not denied (line allowed charge > $0), AND
    - One of the following is true:
        - The cancer type assigned to the episode is the same as the cancer type associated with the procedure code in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources, OR
        - The claim contains a line or header diagnosis code that maps to a cancer type in the tab "Cancer Mapping for Surgery" of the document EOM Technical Payment Resources that is the same as the cancer type associated with the procedure in the tab "Cancer Surgery Codes" of the document EOM Technical Payment Resources.

Part D Enrollment, Low Income Subsidy Eligibility, and Dual Eligibility for Medicare and Medicaid

Dual eligibility refers to beneficiaries who are enrolled in both Medicare and Medicaid. Full dual eligibility refers to eligibility for full Medicaid benefits; these beneficiaries are entitled to Part D enrollment with a low-income subsidy (LIS). Beneficiaries with partial Medicaid benefits and other low-income beneficiaries without Medicaid may also qualify for Part D and the LIS. The following set of variables defines eligibility and enrollment for full Medicaid benefits, LIS, and Part D (measured at the beginning of the episode) in the EOM prediction models:

1. Not full dual, not enrolled in Part D (reference category)
2. Not full dual, enrolled in Part D, not LIS recipient
3. Not full dual, enrolled in Part D, LIS recipient
4. Full dual, enrolled in Part D, LIS recipient

These categories are mutually exclusive and exhaustive.

The original lung and prostate cancer prediction models collapsed the second and third categories above into a single category for beneficiaries without full dual status who are enrolled in Part D (a

variable called PART_D). All seven new baseline prediction models include each of the four separate categories above.

Receipt of Radiation Therapy

A single variable indicates whether radiation therapy is provided during the episode or not. The ICD10 and HCPCS procedure codes used to identify radiation therapy are contained in the "Radiation Therapy Codes" tabs of the document EOM Technical Payment Resources. The codes are restricted to those indicating the delivery of radiation therapy, and do not include planning or preparation for radiation therapy. If any claim during an episode had one of the procedure codes listed for radiation delivery, the RADIATION variable is assigned a value of 1 (otherwise 0).

The radiation covariate is included in both the original and new baseline prediction models for all EOM cancer types. The specifications for identifying radiation therapy in the Medicare claims data are as follows:

- **Step 1: Identify radiation from the inpatient file by pulling inpatient claims that meet the following criteria for each episode:**
  - Claim contains at least one of the ICD10 procedure codes in the tab "Radiation Therapy Codes" of the document EOM Technical Payment Resources AND
  - The claim admission date falls between the first and last dates of the episode, inclusive, AND
  - The claim is not denied (Medicare nonpayment reason code is blank).
- **Step 2: Identify radiation from the outpatient files by pulling outpatient claims that meet the following criteria for each episode:**
  - Claim contains at least one of the HCPCS or ICD10 procedure code in the tab "Radiation Therapy Codes" of the document EOM Technical Payment Resources, AND
  - If an ICD10 procedure code is found on the claim header, the procedure date falls between the first and last dates of the episode, inclusive, AND
  - If a HCPCS code is found in the revenue centers, the revenue center is not denied (revenue center total charge amount minus revenue center non-covered charge amount > $0) and the revenue center date falls between the first and last dates of the episode, inclusive, AND
  - The claim is not denied (Medicare nonpayment reason code is blank).
- **Step 3: Identify radiation from the carrier files by pulling carrier claims that meet the following criteria for each episode:**
  - Claim contains a line item with a HCPCS code in the tab "Radiation Therapy Codes" of the document EOM Technical Payment Resources, AND
  - The line first expense date falls between the first and last dates of the episode, inclusive, AND
  - The line item is not denied (line allowed charge > $0).

Receipt of Bone Marrow Transplant

Two bone marrow transplant (BMT) variables are calculated: one for allogeneic BMTs and one for autologous BMTs. BMTs are counted for three cancer types: chronic leukemia, lymphoma, and multiple myeloma. If both types of BMT appear in a given episode, the allogeneic BMT takes precedence. BMT procedures are identified by the codes included in the "BMT Codes" tabs of the

document EOM Technical Payment Resources.

The two separate BMT covariates are included in both the original and new baseline prediction models for lymphoma and multiple myeloma. The original baseline chronic leukemia model included one covariate for either type of BMT, however the new baseline chronic leukemia model includes the two separate covariates.

The specifications for identifying bone marrow transplants in the Medicare claims data are as follows:

- **Step 1: Identify BMT from the inpatient file by pulling inpatient claims that meet the following criteria for each episode:**
  - Claim contains a DRG or ICD10 procedure code listed in the tab "BMT Codes" of the document EOM Technical Payment Resources AND
  - The claim admission date falls between the first and last dates of the episode, inclusive, AND
  - The Medicare nonpayment reason code on the claim is blank, AND
  - The episode's cancer type is chronic leukemia, lymphoma, or multiple myeloma.
- **Step 2: Identify BMT from the outpatient files by pulling outpatient claims that meet the following criteria for each episode:**
  - Claim contains a HCPCS or ICD10 procedure code in the tab "BMT Codes" of the document EOM Technical Payment Resources, AND
  - If an ICD10 procedure is found on the claim header, the procedure date falls between the first and last dates of the episode, inclusive, AND
  - If a HCPCS code is found in the revenue centers, the revenue center is not denied (revenue center total charge amount minus revenue center non-covered charge amount > $0) and the revenue center date falls between the first and last dates of the episode, inclusive, AND
  - The claim is not denied (Medicare nonpayment reason code is blank), AND
  - The episode's cancer type is chronic leukemia, lymphoma, or multiple myeloma.

Clinical Trial Participation

A single variable indicates whether the beneficiary participated in a clinical trial during the episode. An ICD10 diagnosis code of Z00.6 must appear on a claim that also contains an included cancer diagnosis and has a service date within the 6-month episode.

All original baseline prediction models except breast and lung cancer include a covariate for clinical trial participation. All new baseline prediction models except lung and prostate cancer include a covariate for clinical trial participation (i.e., the covariate was added to the breast cancer model and removed from the prostate cancer model, with no changes to inclusion or exclusion in the other cancer models.)

The specifications for identifying clinical trial participation in the Medicare claims data are as follows:

- **Step 1: Identify clinical trials from the inpatient file by pulling inpatient claims that meet the following criteria for each episode:**
  - Claim contains an ICD10 diagnosis code of Z00.6 in header diagnoses, AND
  - The claim admission date falls between the first and last dates of the episode, inclusive, AND



  - The Medicare nonpayment reason code on the claim is blank, AND
  - The claim contains a diagnosis of cancer listed in the tab "Cancer Mapping for Surgery" of the document EOM Technical Payment Resources.
- **Step 2: Identify clinical trials from the outpatient file by pulling outpatient claims that meet the following criteria for each episode:**
  - Claim contains an ICD10 diagnosis code of Z00.6 in header diagnoses; AND
  - The claim from date or claim thru date falls between the first and last dates of the episode, inclusive, AND
  - The claim is not denied (Medicare nonpayment reason code is blank); AND
  - The claim contains a diagnosis of cancer listed in the tab "Cancer Mapping for Surgery" of the document EOM Technical Payment Resources.
- **Step 3: Identify clinical trials from the carrier and DMEPOS files by pulling DMEPOS and carrier claims that meet the following criteria for each episode:**
  - Claim contains an ICD10 diagnosis code of Z00.6 in the line item diagnoses or in the header diagnoses, AND
  - If the diagnosis code is found on a line item, the line first expense date falls between the first and last dates of the episode, inclusive, and the line item is not denied (line allowed charge > $0), AND
  - If the diagnosis code is not found on a line item but appears in the claim header, the claim from date or claim thru date falls between the first and last dates of the episode, inclusive, AND
  - The claim is not denied (carrier claim payment denial code is one of: 1-9, A, B), AND
  - Claim contains a line item diagnosis or header diagnosis of cancer listed in the tab "Cancer Mapping for Surgery" of the document EOM Technical Payment Resources.

Primary Comorbidities

There are up to eight primary comorbidities accounted for in each prediction model, defined by a combination of HCC and RxHCC flags, listed below. The HCC and RxHCC flags for a specific calendar year, which indicate treatment for dozens of different conditions in the prior calendar year, are defined by CMS and used in the determination of the risk scores used to pay Medicare Advantage plans. The primary comorbidities in the EOM prediction models are:

- Obesity
- Chronic obstructive pulmonary disease (COPD)
- Autoimmune disorders
- Endocrine disorders
- Dementia
- Heart disease
- Hematological disorders
- Hypertension

Two updates were made to the specification of these variables between the original and new baseline models. First, the HCC data used to define each condition was updated from model version 22 (V22) in the original models to model version 28 (V28) in the updated models. In 2024, CMS-HCC model V28 underwent significant clinical revision from prior versions, with 114 HCCs as compared to 79 HCCs in V22. The clinical revision included addition, removal, or renumbering of some HCCs. Both

sets of V22 and V28 HCCs are shown in Table I-1 below, which shows both the HCC and RxHCC components of each primary comorbidity. The comorbidities in both baseline prediction models are defined using RxHCC version 05. Beginning in PP4 (episodes initiating January–June 2025), EOM will define primary comorbidities using the updated RxHCC version 08, which was not available at the time either baseline was constructed.

Appendix Table I-1: Primary Comorbidity Definitions by Performance Period

Primary Comorbidity	HCC V22 (Used PP1-PP7 and in original models)	HCC V28 (Used PP8-PP13 and in updated models)	RxHCC V05 (Used PP1-PP3 and in both original and updated models)	RxHCC V08 (Used PP4-PP13)
Obesity	HCC22	HCC48	RxHCC43	None
COPD	HCC111	HCC280	None	None
Dementia	None	HCC125, HCC126, HCC127	RxHCC111, RxHCC112	RxHCC111, RxHCC112
Hypertension	HCC107, HCC108	HCC264, HCC267, HCC383	RxHCC187, RxHCC215	RxHCC187, RxHCC215
Hematological Disorders	HCC46, HCC48	HCC107, HCC108, HCC109, HCC111, HCC112	RxHCC95, RxHCC96, RxHCC98	RxHCC95, RxHCC96
Autoimmune Disorders	HCC40, HCC75, HCC77	HCC93, HCC94, HCC193, HCC195, HCC196, HCC198, HCC278	RxHCC82, RxHCC83, RxHCC84, RxHCC159, RxHCC160	RxHCC81, RxHCC82, RxHCC83, RxHCC84, RxHCC157, RxHCC158, RxHCC159
Endocrine disorders	HCC17, HCC18, HCC19, HCC23, HCC122	HCC36, HCC37, HCC38, HCC49, HCC50, HCC51, HCC298	RxHCC30, RxHCC31, RxHCC40, RxHCC41, RxHCC42, RxHCC241	RxHCC30, RxHCC31, RxHCC40, RxHCC41, RxHCC42, RxHCC43, RxHCC44, RxHCC98
Heart Disease	HCC84, HCC85, HCC86, HCC87, HCC88, HCC96	HCC213, HCC222, HCC224, HCC225, HCC226, HCC227, HCC228, HCC229, HCC238	RxHCC185, RxHCC186, RxHCC188, RxHCC193	RxHCC183, RxHCC184, RxHCC186, RxHCC188, RxHCC193

The second update to the primary comorbidities involved changes to the inclusion of specific comorbidities in certain cancer-specific models, as shown below.

Appendix Table I-2: Change in Primary Comorbidities Used in Original and Updated Prediction Models

Primary Comorbidity	Breast	Chronic Leukemia	Lung	Lymphoma	Multiple Myeloma	Prostate	Small Intestine/ Colorectal
Obesity	Kept	Dropped	Kept	Kept	Kept	Kept	Kept
COPD	Dropped	Kept	Added	Dropped	Dropped	Dropped	Kept
Hypertension	Dropped	Dropped	Kept	Dropped	Dropped	Dropped	Kept
Hematologic Disorders	Kept	Kept	Dropped	Dropped	Kept	Dropped	Kept
Autoimmune Disorders	Dropped	Dropped	Added	Kept	Kept	Kept	Kept
Endocrine Disorders	Kept	Dropped	Kept	Kept	Dropped	Kept	Kept

Primary Comorbidity	Breast	Chronic Leukemia	Lung	Lymphoma	Multiple Myeloma	Prostate	Small Intestine/ Colorectal
Heart Disease	Kept	Kept	Kept	Kept	Dropped	Kept	Kept
Dementia	Continued Exclusion			Added	Added	Dropped	Continued Exclusion

Specifications for the primary comorbidities are as follows:

Step 1: Create a flag (0/1) for each of the eight primary comorbidities.

- New enrollees are identified in the HCC files and are attributed an HCC score by the HCC algorithm that does not depend on HCC condition flags
- Identify new enrollees in Medicare's HCC files. Assign a separate flag for new enrollees=1 if score_new_enrollee is not missing. If the HCC variables have missing values, create a flag HCC_Missing=1;
- If New_enrollee=1 or HCC_missing=1 then HCC_NEW=1; else HCC_NEW=0
- For each primary comorbidity, for beneficiaries that are NOT flagged as HCC_NEW, assign a value of "1" to the primary comorbidity flag if any of the relevant HCC or RxHCC flags from the Primary Comorbidities is present.

Count of Costly Conditions

In addition to the primary comorbidities, there are many other conditions that may be associated with higher episode expenditures. For each included cancer type we identified a select list of conditions that are associated with significantly higher episode costs. These conditions exclude those that comprise the eight primary comorbidities or that are cancer-related. Condition flags related to cancer are not counted in the price prediction models because all beneficiaries in EOM episodes have cancer. Also, flags associated with opportunistic infections, protein-calorie malnutrition, and disorders of immunity are not counted because these conditions are often preventable or are a recognized aspect of the specified cancer, and are therefore already incorporated into baseline episode expenditures.

The costly condition count categories used in the original prediction models are as follows:

- No costly conditions (reference group)
- One costly condition
- Two costly conditions
- Three costly conditions
- Four or more costly conditions

New enrollees are automatically assigned a value of 0 for the costly condition flags and are assigned a value of 1 for HCC_NEW.

There were two updates made to the specification of these variables in the new baseline prediction models. First, as described above for the primary comorbidities, the HCCs used to define costly conditions were updated from using V22 to V28. Second, the category that includes those with the highest number of costly conditions (four or more) was modified for some models.

For the lung cancer and multiple myeloma models, the highest costly condition count category is now three or more rather than four or more. For the prostate cancer model, the highest costly condition count category is now two or more. All other models will retain the highest costly condition count

category of four or more.

The HCCs used in each price prediction model are listed in Table I-3 and Table I-4. Note that some of the categories are hierarchical, consistent with the hierarchies established for Medicare Advantage payment policy. If HCCs for a more severe and a less severe version of a specific condition are present, then only the HCC associated with the more severe version of the condition is counted.

Appendix Table I-3: HCC Costly Conditions, Original Prediction Models (PP1-PP7)

Cancer Type Model	HCC V22
Breast Cancer	HCC1, HCC2, HCC27, HCC33, HCC34, HCC35, HCC70, HCC71, HCC72, HCC78, HCC79, HCC80, HCC83, HCC104, HCC115, HCC124, HCC135, HCC137, HCC157, HCC158, HCC161, HCC169, HCC170, HCC176, HCC186
Chronic Leukemia	HCC1, HCC2, HCC35, HCC39, HCC55, HCC57, HCC58, HCC72, HCC76, HCC79, HCC80, HCC104, HCC106, HCC110, HCC112, HCC114, HCC115, HCC124, HCC135, HCC157, HCC158, HCC161, HCC166, HCC170, HCC173, HCC176, HCC186
Lung Cancer	HCC1, HCC2, HCC29, HCC39, HCC58, HCC70, HCC71, HCC72, HCC78, HCC79, HCC80, HCC82, HCC83, HCC99, HCC103, HCC104, HCC106, HCC114, HCC124, HCC135, HCC157, HCC158, HCC161, HCC170
Lymphoma	HCC1, HCC2, HCC29, HCC35, HCC39, HCC58, HCC70, HCC72, HCC73, HCC78, HCC79, HCC80, HCC106, HCC110, HCC112, HCC114, HCC115, HCC124, HCC134, HCC135, HCC158, HCC161, HCC162, HCC170, HCC176, HCC186, HCC189
Multiple Myeloma	HCC1, HCC2, HCC35, HCC39, HCC54, HCC70, HCC71, HCC72, HCC103, HCC112, HCC114, HCC115, HCC124, HCC157, HCC158, HCC161, HCC169, HCC170, HCC176, HCC186
Prostate Cancer	HCC1, HCC2, HCC28, HCC34, HCC35, HCC39, HCC71, HCC72, HCC74, HCC78, HCC79, HCC80, HCC83, HCC104, HCC106, HCC112, HCC124, HCC134, HCC135, HCC136, HCC157, HCC158, HCC161, HCC169, HCC170, HCC173, HCC176, HCC186, HCC188, HCC189
Small Intestine / Colorectal Cancer	HCC1, HCC2, HCC27, HCC29, HCC39, HCC58, HCC78, HCC80, HCC106, HCC110, HCC112, HCC114, HCC115, HCC124, HCC134, HCC135, HCC136, HCC137, HCC158, HCC161, HCC169, HCC176, HCC186, HCC188

Appendix Table I-4: HCC Costly Conditions, Updated Prediction Models (PP8-PP13)

Cancer Type Model	HCC V28
Breast Cancer	HCC1, HCC64, HCC78, HCC79, HCC80, HCC92, HCC114, HCC151, HCC152, HCC154, HCC155, HCC180, HCC181, HCC182, HCC190, HCC197, HCC199, HCC201, HCC202, HCC263, HCC279, HCC282, HCC300, HCC327, HCC328, HCC329, HCC379, HCC380, HCC398, HCC401, HCC402, HCC454, HCC463
Chronic Leukemia	HCC1, HCC2, HCC6, HCC35, HCC92, HCC114, HCC115, HCC137, HCC151, HCC153, HCC154, HCC155, HCC180, HCC181, HCC182, HCC197, HCC201, HCC279, HCC282, HCC300, HCC379, HCC382, HCC399, HCC454

Cancer Type Model	HCC V28
Lung Cancer	HCC1, HCC114, HCC115, HCC155, HCC180, HCC181, HCC182, HCC190, HCC199, HCC201, HCC202, HCC248, HCC253, HCC300, HCC379, HCC380, HCC381, HCC401, HCC402, HCC454
Lymphoma	HCC1, HCC2, HCC6, HCC62, HCC65, HCC80, HCC92, HCC114, HCC115, HCC152, HCC154, HCC155, HCC180, HCC181, HCC182, HCC191, HCC199, HCC201, HCC202, HCC221, HCC249, HCC263, HCC276, HCC279, HCC282, HCC283, HCC300, HCC379, HCC380, HCC381, HCC382, HCC387, HCC397, HCC398, HCC399, HCC401, HCC402, HCC409, HCC454, HCC463
Multiple Myeloma	HCC1, HCC2, HCC6, HCC77, HCC78, HCC81, HCC92, HCC114, HCC115, HCC154, HCC180, HCC181, HCC182, HCC190, HCC200, HCC263, HCC277, HCC279, HCC282, HCC300, HCC381, HCC387, HCC379, HCC401, HCC402, HCC454
Prostate Cancer	HCC1, HCC2, HCC63, HCC64, HCC92, HCC115, HCC138, HCC152, HCC199, HCC202, HCC223, HCC300, HCC329, HCC401, HCC405, HCC409, HCC454, HCC463
Small Intestine / Colorectal Cancer	HCC1, HCC2, HCC6, HCC35, HCC63, HCC68, HCC79, HCC80, HCC92, HCC94, HCC114, HCC115, HCC137, HCC155, HCC180, HCC182, HCC199, HCC202, HCC263, HCC279, HCC282, HCC300, HCC326, HCC327, HCC328, HCC329, HCC379, HCC380, HCC381, HCC382, HCC401, HCC454, HCC463

History of Prior Chemotherapy Use

History of chemotherapy prior to an episode is associated with higher episode expenditures. The period between the most recent chemotherapy and the episode start date is referred to as the "prior chemo period." We calculate the "prior chemo period" as the episode start date minus the date of the most recent non-denied chemotherapy claim before the episode start date. The most recent chemotherapy claim must satisfy episode trigger requirements regarding presence of a cancer diagnosis listed in the "Prior Chemo Codes" tabs of the document EOM Technical Payment Resources. Prior chemotherapy use can be determined as far back as 2 years before episode initiation. For most of the original prediction models, there are three variables related to length of the prior chemo period.

- For all cancer types EXCEPT lymphoma:
  - Receipt of chemotherapy within 1-60 days prior to episode start
  - Receipt of chemotherapy within 61-720 days prior to episode start
  - No chemotherapy prior to episode start OR received chemotherapy more than 720 days prior to episode start (reference category)
- For lymphoma:
  - Receipt of chemotherapy within 1-30 days prior to episode start
  - Receipt of chemotherapy within 31-60 days prior to episode start
  - Receipt of chemotherapy within 61-90 days prior to episode start
  - Receipt of chemotherapy within 91-120 days prior to episode start
  - Receipt of chemotherapy within 121-150 days prior to episode start
  - Receipt of chemotherapy within 151-180 days prior to episode start

  - Receipt of chemotherapy within 181-270 days prior to episode start
  - Receipt of chemotherapy within 271-360 days prior to episode start
  - Receipt of chemotherapy within 361-450 days prior to episode start
  - Receipt of chemotherapy within 451-540 days prior to episode start
  - Receipt of chemotherapy within 541-630 days prior to episode start
  - Receipt of chemotherapy within 631-720 days prior to episode start
  - No chemotherapy prior to episode start OR received chemotherapy more than 720 days prior to episode start (reference category)

For the new prediction models, all cancer types except lymphoma will use the following categories related to the length of the prior chemotherapy period:

- Receipt of chemotherapy within 1-30 days prior to episode start
- Receipt of chemotherapy within 31-61 days prior to episode start
- Receipt of chemotherapy within 62-730 days prior to episode start
- No chemotherapy prior to episode start OR received chemotherapy more than 730 days prior to episode start (reference category)

For lymphoma, the updated prediction model categories are:

- Receipt of chemotherapy within 1-30 days prior to episode start
- Receipt of chemotherapy within 31-120 days prior to episode start
- Receipt of chemotherapy within 121-360 days prior to episode start
- Receipt of chemotherapy within 361-730 days prior to episode start
- No chemotherapy prior to episode start OR received chemotherapy 731 or more days prior to episode start

Beneficiaries with recent Medicare enrollment have little or no Medicare claims history and are categorized in the ”no chemotherapy prior” group if they have no observable prior chemotherapy use. These beneficiaries are distinguished in the model by the HCC_NEW variable described in the Primary Comorbidities section above.

Institutional Status

The variable LTI measures whether the beneficiary had been institutionalized in a long-term care facility for more than 90 days as of the month in which the episode started. This variable is obtained from CMS’ HCC files, which contain monthly indicators for residence in a long-term care facility. CMS derives these monthly indicators from the Minimum Data Set (MDS), which contains assessment information collected from nursing facilities.

All original models included a covariate for institutional status. Institutional status was removed from the new models for chronic leukemia, lymphoma, and prostate cancer.

Episode Length

Episodes have a fixed length of 6 calendar months, which results in a variable number of days (181 – 184 days) depending on which calendar months are included in the episode. The variable EP_183_184 represents episodes with a length of 183 or 184 days compared to those with a length of 181 or 182 days.

Episode length is included in both the original and new baseline prediction models for all EOM cancer types

Prediction Model Variables

All variables used in the prediction models take values of either zero or one. The variables specific to each cancer's model, and their coefficients, are summarized in the "Price Prediction Models" tabs of the document EOM Technical Payment Resources

Appendix J: Billing Overlap & Mandatory Pooling

EOM participants are permitted to maintain a limited level of billing overlap with other oncology PGPs (EOM participants and/or non-EOM oncology PGPs) or pools without being required to form a mandatory pool. An EOM participant or pool whose billing overlap with another oncology PGP or pool exceeds the mandatory pooling threshold must either:

- Form a mandatory pool with that oncology PGP or pool;
- Reduce the level of billing overlap with that oncology PGP or pool below the mandatory pooling threshold;
- Terminate their participation in EOM.

(Note: If an EOM participant or pool intends to form a mandatory pool with a non-EOM oncology PGP, that non-EOM oncology PGP must apply to become an EOM participant, be offered a participation agreement by CMS, and execute a participation agreement before the start of the performance period for which the pool is mandated. Oncology PGPs that join EOM in this manner are subject to the same eligibility criteria, including a favorable PI screening, as other EOM participants.)

There are no restrictions on billing overlap between EOM participants that have entered together into a voluntary or mandatory pooling arrangement. However, pools remain subject to the mandatory pooling threshold to the extent that there is billing overlap between:

- The pool and an EOM participant that is not in the pool
- The pool and a non-EOM oncology PGP
- The pool and a second pool

CMS makes mandatory pooling determinations separately for each performance period, based on the billing overlap in episodes that initiate during a specific 6-month reference period. These reference periods are listed in Appendix Table J-1.

Appendix Table J-1: Reference Periods for Mandatory Pooling Determinations by Performance Period

Performance Period	Performance Period Episode Initiation Dates	Reference Period* for Mandatory Pooling Determinations
PP1	07/01/2023 – 12/31/2023	07/01/2021 – 12/31/2021
PP2	01/01/2024 – 06/30/2024	01/01/2022 – 06/30/2022
PP3	07/01/2024 – 12/31/2024	07/01/2022 – 12/31/2022
PP4	01/01/2025 – 06/30/2025	01/01/2023 – 06/30/2023
PP5	07/01/2025 – 12/31/2025	07/01/2023 – 12/31/2023
PP6	01/01/2026 – 06/30/2026	01/01/2024 – 06/30/2024
PP7	07/01/2026 – 12/31/2026	07/01/2024 – 12/31/2024
PP8	01/01/2027 – 06/30/2027	01/01/2025 – 06/30/2025
PP9	07/01/2027 – 12/31/2027	07/01/2025 – 12/31/2025
PP10	01/01/2028 - 06/30/2028	01/01/2026 - 06/30/2026

Performance Period	Performance Period Episode Initiation Dates	Reference Period* for Mandatory Pooling Determinations
PP11	07/01/2028 – 12/31/2028	07/01/2026 - 12/31/2026
PP12	01/01/2029–06/30/2029	01/01/2027–06/30/2027
PP13	07/01/2029–12/31/2029	07/01/2027–12/31/2027

*Episodes that begin during the 6-month reference period are used for mandatory pooling determinations. For the purposes of determining mandatory pooling for PP1 – PP4, whose reference periods occur before the start of the model performance period, CMS defines episodes during the reference period following the method described in Section 1.2.

The EOM mandatory pooling threshold is based on a pairwise billing overlap percentage. That is, CMS calculates a billing overlap percentage for each pair of oncology PGPs and/or pools to determine whether the pair exceeded the mandatory pooling threshold during a given reference period. The following sections describe the calculation of this pairwise billing overlap percentage.

Definition of Billing Overlap

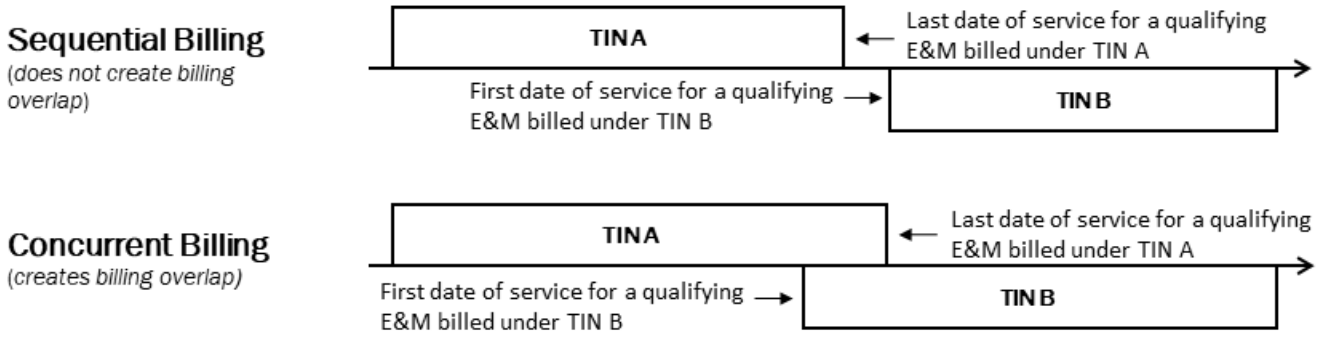
For the purposes of EOM, billing overlap exists when one or more practitioners concurrently bill Medicare under multiple oncology TINs for qualifying E&M services for episodes initiating during the same 6-month reference period:

- *Billing overlap between two oncology PGPs*: any concurrent billing by the same practitioner(s) under the TINs of both oncology PGPs
- *Billing overlap between a pool and an oncology PGP*: any concurrent billing by the same practitioner(s) under the TIN of at least one EOM participant in the pool and under the TIN of an oncology PGP that is not in the pool
- *Billing overlap between two pools*: any concurrent billing by the same practitioner(s) under the TINs of at least one EOM participant from each pool

Qualifying E&M services are E&M services that count toward plurality for determining episode attribution, according to the criteria described in Section 1.3: the E&M service must have a HCPCS code from 99201 – 99205 and 99211 – 99215, it must be associated with (i.e., on the same line item as) one of the cancer diagnosis codes included in the tab "Cancer Type Mapping" of the document EOM Technical Payment Resources, and it must be billed by an oncology TIN as defined in Section 1.1. Although billing overlap calculations include only E&M services that are associated with episodes and *count toward episode attribution*, they are not limited to E&M services *for attributed episodes*. That is, all qualifying E&M services billed under the relevant TINs are considered when determining billing overlap, even if none of these TINs is attributed to the episode.

Concurrent billing within a reference period means that the dates of service for E&Ms that the practitioner billed under one TIN overlap with the dates of service for the E&M services that the same practitioner billed under an additional TIN. *Only concurrent billing by the same practitioner(s) under two or more TINs contributes to billing overlap*. Sequential billing—in which a practitioner bills qualifying E&M services under multiple TINs during episodes that initiate in the same reference period but does not bill qualifying E&M services under multiple TINs in an overlapping manner—does not contribute to billing overlap. Figure J-1 below contrasts a concurrent billing scenario that would result in billing overlap between two oncology PGPs with a sequential billing scenario that would not result in billing overlap.

Figure J-1: Concurrent and Sequential Billing



As depicted above, a practitioner employed by one oncology PGP who leaves their position and is employed by another oncology PGP shortly thereafter would not necessarily create billing overlap between this pair of oncology PGPs, even if the practitioner billed for qualifying E&Ms under both TINs for episodes initiating in the same reference period. Billing overlap would exist between these two oncology PGPs if the practitioner billed any qualifying E&M services at the second oncology PGP with dates of service on or before the date of service for the last qualifying E&M service the practitioner billed at the first oncology PGP.

In the following calculations, we refer to any practitioner(s) creating pairwise billing overlap through concurrent billing for qualifying E&M services as the "shared practitioner(s)" for a pair of oncology PGPs and/or pools.

For a given reference period, a pair of oncology PGPs and/or pools exceeds the EOM mandatory pooling threshold if their shared practitioners billed over 20% of all qualifying E&M services that were billed for reference period episodes under the TINs included in this pair.

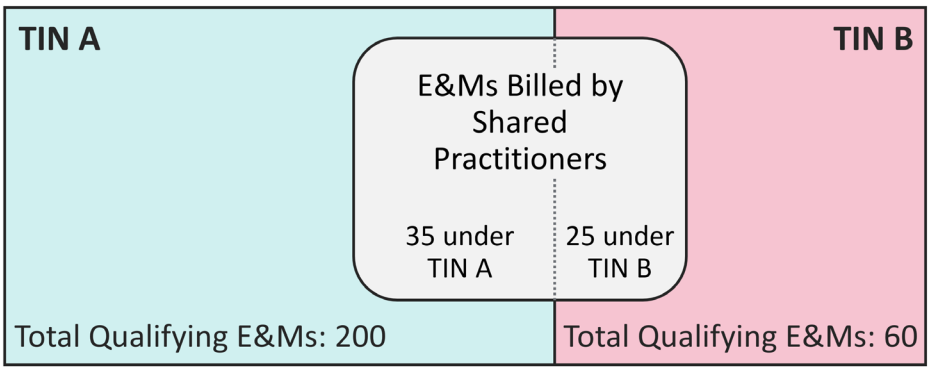
The calculation of this billing overlap percentage is described below. Examples are provided for illustrative purposes only and do not reflect the actual experience of any EOM participant or pool.

Calculation of Pairwise Billing Overlap Between Two Oncology PGPs

For a pair of oncology PGPs, the billing overlap percentage for a given reference period is calculated as follows:

$$\frac{\text{\# qualifying E\&Ms billed by shared practitioner(s) under either TIN}}{\text{\# qualifying E\&Ms billed under either TIN}} * 100$$

Figure J-2: Example of Billing Overlap Percentage Calculation for Two Hypothetical PGPs



The billing overlap percentage for TIN A and TIN B is: $\frac{35 + 25}{200 + 60} = \mathbf{23.1\%}$

Calculation of Pairwise Billing Overlap Between a Pool and an EOM Participant, another Pool, or a Non-EOM Oncology PGP

When two or more EOM participants have entered into a pooling arrangement for a given performance period, CMS combines pooled participants' data from the corresponding reference period to determine whether their pool has billing overlap in excess of the mandatory pooling threshold with any other EOM participant, non-EOM oncology PGP, or pool. That is, CMS treats each pool as a single entity in order to:

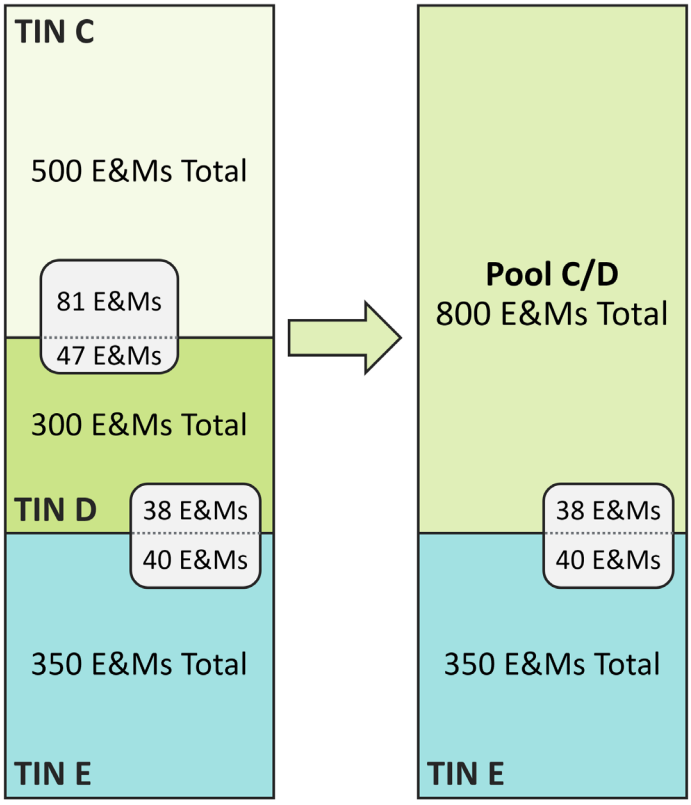
- identify practitioners shared between the pool and some other oncology PGP or pool;
- calculate pairwise billing overlap percentages between the pool and other oncology PGPs and pools; and
- make (further) determinations about mandatory pooling.

The calculation of pairwise billing overlap involving a pool follows the same underlying logic as the pairwise billing overlap for two oncology PGPs: the billing overlap percentage indicates the proportion of qualifying E&M services billed concurrently by shared practitioners among all qualifying E&M services billed within the pair during episodes that initiate in the reference period. A notable difference for pools is that the E&M totals that make up the numerator and the denominator will include E&M services billed under at least three TINs, because each pair is composed of either one pool and one additional oncology PGP or two pools.

For a pool and a single oncology PGP, the billing overlap percentage for a given reference period is calculated as follows:

$$\frac{\text{\# qualifying E\&Ms billed by shared practitioner(s) under TINs in pool or TIN of single PGP}}{\text{\# qualifying E\&Ms billed under TINs in pool or TIN of single PGP}} * 100$$

Figure J-3: Example of Billing Overlap Percentage Calculation for a Hypothetical Pool and a Hypothetical PGP

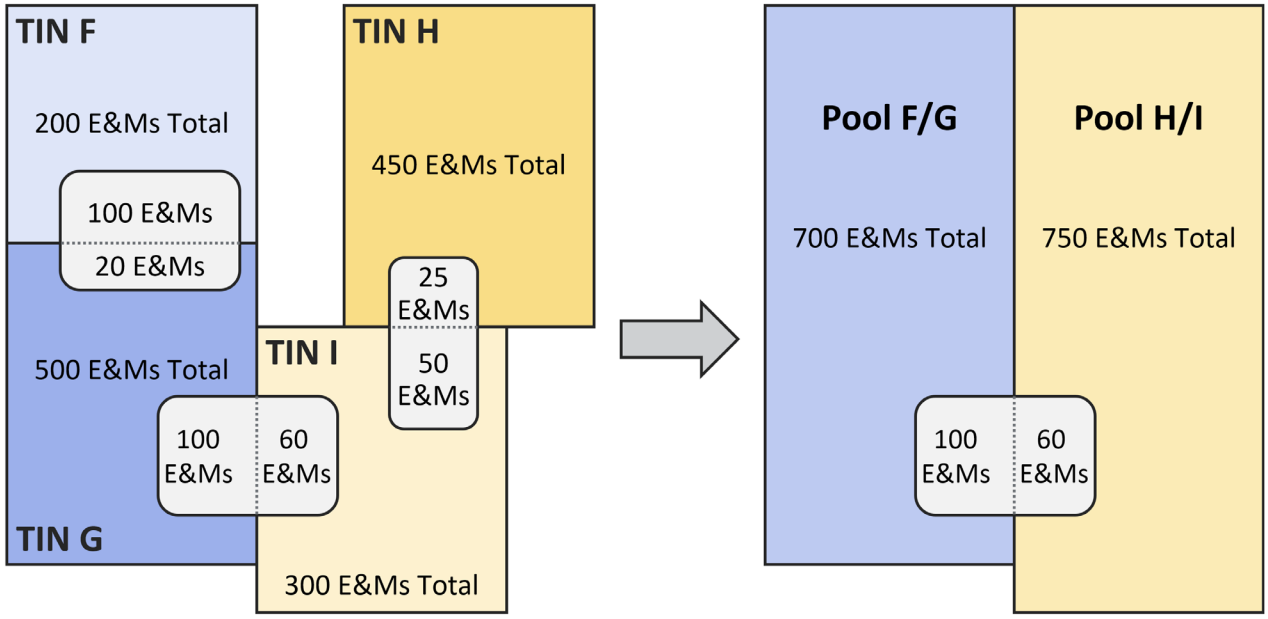


The billing overlap percentage for Pool C/D and TIN E is: $\frac{38 + 40}{800 + 350} = 6.8\%$

For two pools, the billing overlap percentage for a given reference period is calculated as follows:

$$\frac{\text{\# qualifying E\&Ms billed by shared practitioner(s) under TINs in either pool}}{\text{\# qualifying E\&Ms billed under all TINs in either pool}} * 100$$

Figure J-4: Example of Billing Overlap Percentage Calculation for Two Hypothetical Pools



The billing overlap percentage for Pool F/G and Pool H/I is: $\frac{100 + 60}{700 + 750} = 11.0\%$

Appendix K: Calculation of Adjustment for Overlapping ACO and EOM Payments

The following steps are taken in the calculation of the ACO overlap adjustment, for EOM participants who have earned a PBP:

1. Identify patients who have reconciliation-eligible episodes attributed to an EOM participant and who were also aligned with an ACO during the episode.
2. Identify the subset of episodes from Step 1 whose attributed participant's TIN was also an ACO participant for any part of the EOM performance period.
3. Determine the percentage of each episode that overlaps with the ACO performance year by dividing the number of days of overlap by the length of the episode.
4. Calculate the prorated benchmark price for each episode by multiplying the overlap percentage calculated in Step 3 by the episode's benchmark price.
5. Calculate the prorated benchmark amount for each participant or pool by summing the prorated benchmark prices calculated in Step 4.
6. Determine whether the EOM participant's ACO received a shared savings payment in the ACO performance year overlapping with the current EOM performance period.
    - If not true, there is no ACO overlap adjustment.
    - If true, go to Step 7.
7. Calculate the overlapping discount amount by multiplying the prorated benchmark amount by the EOM discount (4% in RA1 and 3% in RA2).
8. Multiply the overlapping discount amount by the ACO's sharing percentage. The result is the Adjustment for Overlapping Payments.

Note that some EOM performance periods overlap with one ACO performance year (i.e., a calendar year) and some EOM performance periods overlap with two ACO performance years. In the case where an EOM performance period overlaps with two ACO performance years, two separate calculations are performed, one for each ACO performance year, and the resulting adjustments are summed before subtracting from the EOM PBP.

See below for example calculations for both RA1 and RA2.

EOM-PGP-0999

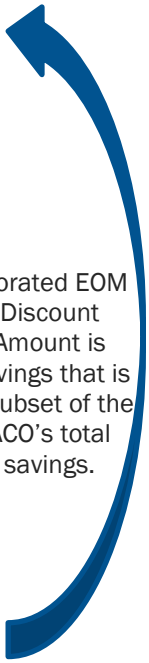
	Formula	RA1	RA2
Total Episodes		1,200	1,200
Benchmark Amount		$40,000,000	$40,000,000
Target Amount	Benchmark * (1 – 0.04) (RA1) Benchmark * (1 – 0.03) (RA2)	$38,400,000	$38,800,000
Actual Expenditures		$38,000,000	$38,000,000
Savings over Benchmark	Benchmark Amount – Actual Expenditures	$2,000,000	$2,000,000
Savings over Target Amount	Target Amount – Actual Expenditures	$400,000	$800,000
Percentage Savings over Benchmark	Savings over Benchmark / Benchmark Amount	5%	5%
Percentage Savings over Target Amount	Savings over Target Amount / Target Amount	1%	2%

GoodHealth ACO

	Formula	Amount
Total ACO Beneficiaries		67,250
ACO Benchmark		$690,000,000
ACO Actual Expenditures		$683,100,000
ACO Savings	ACO Benchmark – ACO Actual Expenditures	$6,900,000
ACO Percentage Savings	ACO Savings / ACO Benchmark	1%
ACO Sharing Rate		70%
ACO Shared Savings Payment	ACO Sharing Rate * ACO Savings	$4,830,000

Overlap between EOM-PGP-0999 and GoodHealth ACO

	Formula	RA1	RA2
Overlapping Episodes		120	120
Prorated Benchmark Amount (Steps 1-2)		$4,000,000	$4,000,000
Prorated EOM Discount Amount (Steps 3-5, 7)	4% * Prorated Benchmark Amount (RA1) 3% * Prorated Benchmark Amount (RA2)	$160,000	$120,000
Adjustment for Overlapping ACO Shared Savings Payments* (Step 8)	ACO Sharing Rate * Prorated EOM Discount Amount	$112,000	$84,000



Prorated EOM Discount Amount is savings that is a subset of the ACO's total savings.

*The adjustment for overlapping ACO shared savings payments is subtracted from the EOM participant's PBP.

Because EOM-PGP-0999 saved over its target amount, it also saved the prorated EOM discount amount for the overlapping episodes, $160,000 for RA1 or $120,000 for RA2. These are $160,000 and $120,000, respectively, in EOM savings that will not be paid to the EOM participant as part of its EOM PBP, because in EOM CMS keeps the EOM discount amount. With no adjustment, GoodHealth ACO will have received a shared savings payment that includes a portion of the EOM savings (70% of $160,000 for RA1 or 70% of $120,000 for RA2) that ought to have been retained by CMS.

Appendix L: Additional Resources for Pools

Forming a Pool

EOM participants who intend to form a new pool (whether voluntary or mandatory) effective for an upcoming performance period must provide CMS with a written Notice of Pooling Arrangement (NPA).

The NPA provides CMS with the information needed to finalize a pool and fulfills the requirement set forth in Article VI, Section 6.2 of the EOM Participation Agreement to submit written notice of any new Pooling Arrangement to CMS. The NPA will list the pool members, identify the pooled payee, and certify that the pool members have executed a Pooling Arrangement that meets the requirements set forth in Article VI, Section 6.2.B of the EOM Participation Agreement.

The NPA form will be available in EOM Connect. Each member of the intended pool must complete the NPA form electronically and submit it to the EOM Support Help Desk (EOM@cms.hhs.gov) by the deadline. Before approving a pool, CMS will review the NPAs submitted by each intended member and will require revisions if members of the same intended pool provide incomplete or conflicting information. After approving a pool, CMS will update the EOM Participant Portal to reflect the creation of the new pool, the effective date, and the list of members.

Members of an existing pool may request modifications to their pool effective for the next performance period (e.g., to add or remove a member). For more information about this process, please see Article VI, Section 6.2.D of the EOM Participation Agreement.

Pooled Payee

Each pool must designate one member as the pooled payee. If a pool earns a PBP, it is the responsibility of the pooled payee to receive the PBP on behalf of the pool and distribute portions of the PBP ("PBP shares") to pool members. If the pool owes a PBR, it is the responsibility of the pooled payee to pay the PBR to CMS on behalf of the pool and collect portions of the PBR ("PBR shares") from pool members. Members of a pool must mutually agree upon a methodology for calculating individual members' PBP shares and PBR shares. CMS will neither collect nor review this methodology. However, pool members must certify in their NPAs that their Pooling Arrangement specifies this methodology, as required by Article VI, Section 6.2.B.6 of the EOM Participation Agreement.

Pools may designate a new pooled payee at any time, including retrospectively, with the unanimous consent of all pool members. For more information, please see Article VI, Section 6.2.D.5 of the EOM Participant Agreement.

Reconciliation Reports for Pools

To assist the pooled payee in implementing the pool's chosen methodology for calculating PBP shares and PBR shares, CMS will issue an extended version of the pool's reconciliation report to the pooled payee. Each member of the pool will receive a reconciliation report detailing the pool's reconciliation results and providing certain information about the report recipient's own individual performance (e.g. benchmark prices and episode expenditures for attributed episodes for the relevant performance period). In addition to the pool's reconciliation results, the version of the reconciliation report issued to the pooled payee will include the target amount, episode expenditures, and AQS for each member of the pool.

If the pooled payee changes during or after a performance period, CMS will generally issue the pooled payee's version of the reconciliation report to the member of the pool that was the pooled

payee during the performance period at issue. CMS may issue the pooled payee's version of the reconciliation report to the new pooled payee, in the event of a pooled payee change with a retrospective effective date.

Appendix M: Inflation Reduction Act (IRA) Adjustments

The Medicare standardized payments reflect the amounts paid in accordance with the IRA, rather than pre-IRA amounts. As a result, we calculate our own standardized payment for applicable claims.

The drugs subject to the IRA are identified in files available on the CMS website. For the list of physician/DME drugs affected, use the ASP pricing files located at https://www.cms.gov/medicare/payment/part-b-drugs/asp-pricing-files. For the list of outpatient drugs affected, use the Addendum B files located at https://www.cms.gov/medicare/payment/prospective-payment-systems/hospital-outpatient/addendum-a-b-updates. These files are updated quarterly and are not cumulative. Four files (one for each quarter) are needed to cover an entire performance period. Each drug claim's service date (CLM_LINE_FROM_DT for physician and DME, CLM_LINE_INSTNL_REV_CTR_DT for outpatient) determines which quarterly files are required.

IRA Adjustments to Physician/DME Claims

- **Step 1: Identify all physician and DME lines with a CLM_LINE_HCPCS_CD in the appropriate quarterly ASP pricing file where the HCPCS code is indicated for IRA-adjusted pricing.** This is indicated where the "Notes" column includes the text "Inflation-adjusted coinsurance" or "8% of reference add-on applied." Keep the "Notes" column.

- **Step 2: Calculate the EOM Allowed Amount (EOM_ALOWD).**
    - If the Notes column for the HCPCS_CD includes the text "Inflation-adjusted coinsurance" then EOM_ALOWD = CLM_LINE_ALOWD_CHRG_AMT.
    - If the Notes column for the HCPCS_CD includes the text "8% of reference add-on applied" then EOM_ALOWD = CLM_LINE_ALOWD_CHRG_AMT * (1.06/1.08). Round to 2 decimal places.

- **Step 3: Calculate the EOM deductible (EOM_DDCTBL).**
    - EOM_DDCTBL equals the minimum of LINE_BENE_PTB_DDCTBL_AMT and EOM_ALOWD.

- **Step 4: Calculate the EOM coinsurance (EOM_COIN).**
    - If LINE_COINSRNC_AMT = 0 then EOM_COIN = 0.
    - If the Notes column for the HCPCS_CD includes the text "Inflation-adjusted coinsurance" then EOM_COIN = (CLM_LINE_ALOWD_CHRG_AMT - LINE_BENE_PTB_DDCTBL_AMT) * 0.2. Round to 2 decimal places.
    - If the Notes column for the HCPCS_CD includes the text "8% of reference add-on applied" then EOM_COIN = max((CLM_LINE_ALOWD_CHRG_AMT * (1.06/1.08) - LINE_BENE_PTB_DDCTBL_AMT),0) * 0.2. Round to 2 decimal places.

- **Step 5: Calculate the EOM Payment (EOM_PMT).**
    - EOM_PMT = EOM_ALOWD – EOM_DDCTBL – EOM_COIN.
    - This payment is a pre-sequestration amount. Do not divide by 0.98.

IRA Adjustments to Outpatient Claims

- **Step 1: Identify all outpatient revenue centers with a CLM_LINE_HCPCS_CD in the appropriate quarterly Addendum B file where the HCPCS code is indicated for IRA-adjusted pricing.** This is indicated where the "Notes" column includes the text "Inflation-adjusted coinsurance" or "8% of reference add-on applied." Keep the "Payment Rate" and "Notes" column.

- **Step 2: Calculate the actual allowed amount (ACTL_ALOWD).**
    - ACTL_ALOWD = CLM_LINE_PRVDR_PMT_AMT + REV_CNTR_CASH_DDCTBL_AMT + REV_CNTR_COINSRNC_WGE_ADJSTD_C.
    - If ACTL_ALOWD = 0, then EOM_PMT = 0. Do not proceed any further.

- **Step 3: Calculate the EOM Allowed Amount (EOM_ALOWD).**
    - Payment Rate is included on the Addendum B file.
    - If the Notes column for the HCPCS_CD includes the text "Inflation-adjusted coinsurance" then EOM_ALOWD = Payment Rate * CLM_LINE_SRVC_UNIT_QTY. Round to 2 decimal places.
    - If HCPCS_CD includes "8% of reference add-on applied" in the Notes column, then EOM_ALOWD = Payment Rate * CLM_LINE_SRVC_UNIT_QTY * (1.06/1.08). Round to 2 decimal places.

- **Step 4: Calculate the EOM deductible (EOM_DDCTBL).**
    - EOM_DDCTBL equals the minimum of REV_CNTR_CASH_DDCTBL_AMT and EOM_ALOWD.

- **Step 5: Calculate the EOM coinsurance percentage (EOM_COIN_PER).**
    - If the Notes column for the HCPCS_CD includes the text "Inflation-adjusted coinsurance" then EOM_COIN_PER = (ceiling(Payment Rate * .2 * 100) / 100) / Payment Rate. Do not round.
    - If the Notes column for the HCPCS_CD includes the text "8% of reference add-on applied" then EOM_COIN_PER = (ceiling(Payment Rate * .2 * 100 * (1.06/1.08)) / 100) / (Payment Rate * (1.06/1.08)). Do not round.

- **Step 6: Calculate the EOM coinsurance (EOM_COIN).**
    - If REV_CNTR_COINSRNC_WGE_ADJSTD_C = 0 then EOM_COIN = 0.
    - If the Notes column for the HCPCS_CD includes the text "Inflation-adjusted coinsurance" then EOM_COIN = max((Payment Rate * CLM_LINE_SRVC_UNIT_QTY – REV_CNTR_CASH_DDCTBL_AMT) ,0) * EOM_COIN_PER. Round to 2 decimal places.
    - If the Notes column for the HCPCS_CD includes the text "8% of reference add-on applied" then EOM_COIN = max((Payment Rate * CLM_LINE_SRVC_UNIT_QTY * (1.06/1.08) – REV_CNTR_CASH_DDCTBL_AMT),0) * EOM_COIN_PER. Round to 2 decimal places.

- **Step 7: Calculate the EOM Payment (EOM_PMT).**
    - EOM_PMT = EOM_ALOWD – EOM_DDCTBL – EOM_COIN.
    - This payment is a pre-sequestration amount. Do not divide by 0.98.

Revision History

Version	Revision Date	Description of Change
1.0	7/18/2022	Initial Version
2.0	6/1/2023	1. Updated Section 4.1.2 Experience Adjuster. 2. Updated Section 4.1.3 Clinical Adjuster. 3. Updated Section 5.2 Additional Adjustment for ACO and Other Model Overlap during the Performance Period. 4. Added Section 5.3 to reflect the calculation of episode expenditures as related to the Inflation Reduction Act. 5. Updated Section 7: Quality Measures and the Performance Multiplier. 6. Updated Appendix B: Specifications for Assignment of Cancer Type 7. Updated Appendix H: Patient Experience of Care Measure Composite Scoring. 8. Removed former Appendix K (Clinical Data Elements), which will be replaced by the separately issued Clinical Data Elements Guide. 9. Removed former Appendix L (Sociodemographic Data), which will be replaced by the separately issued Sociodemographic Data Elements Guide. 10. Added appendix for calculation of the ACO overlap adjustment (see current Appendix K). 11. Added appendix for additional resources for pools (see current Appendix L).

Version	Revision Date	Description of Change
3.0	12/13/2023	1. Updated Section 3, Determination of Performance Period Episodes, to reflect the exclusion of episodes receiving bispecific antibodies (BsAbs). 2. Updated Section 4.1.2, Experience Adjuster, to clarify calculations for multi-site EOM participants. 3. Updated Section 4.2.2, Novel Therapies Adjustments, to incorporate language addressing combination therapies. 4. Renamed Appendix B to "Specifications for Assignment of Cancer Type and Episode Exclusions." 5. Updated Appendix B, Specifications for Assignment of Cancer Type and Episode Exclusions, to: (1) clarify the tie-breaking mechanism for assigning cancer type; (2) incorporate specifications for identifying episodes with use of BsAbs; (3) Replace specific procedure codes for CAR-T identification with references to the Bispecific Antibody and CAR-T Code List.
4.0	6/5/2024	1. Updated tables throughout to indicate two additional EOM performance periods. 2. Updated Introduction and Section 6, Reconciliation, to reflect changes to the Threshold for Recoupment. 3. Updated Section 5, Calculation of Actual Episode Expenditures, to reflect the increase in MEOS payment effective January 1, 2025. 4. Updated Section 5.2. Additional Adjustment for ACO and Other Model Overlap During Performance Period to account for any overlap with two new CMS initiatives: (1) Making Care Primary (MCP) Model and (2) Guiding an Improved Dementia Experience (GUIDE) Model 5. Updated Section 5.3 to reflect a change in included Part D expenditures as a result of the IRA. 6. Updated Section 7.2.2, Participant-Reported Measures Scoring, to include the benchmarks and a modified scoring approach. 7. Updated Section 7.2.3, Patient Experience of Care Scoring, to reflect updates to the number of survey waves included for scoring EOM-6. 8. Updated Appendix I Table I-2 to remove HCC 51 and HCC 52 because V22 does not have these HCCs.

Version	Revision Date	Description of Change
4.1	3/24/2025	1. Updated document in line with CMS Innovation Center priorities. 2. Corrected Table 14.
5.0	5/2/2025	1. Updated language to reflect timing for EOM's second cohort in Sections 1, 7.2.2, and 7.2.3. 2. Corrected a reference in Section 1.2.1, Identification of Trigger Events. 3. Updated Section 3, Determination of Performance Period Episodes, to include a reference to the location of updated EOM Initiating Therapies lists for each performance period. 4. Updated Section 4.1.3, Clinical Adjusters, to (1) include the requirements for "Ever-Metastatic" and "HER2 Positive" statuses and (2) indicate that clinical data may be reported for true-up reconciliations. 5. Updated Section 5.2, Additional Adjustment for ACO and Other Model Overlap during the Performance Period, to address the ACO PC FLEX and IOTA models. 6. Updated Section 6.3.1, PBP Formula, to reflect the ACO Overlap adjustment. 7. Updated Section 7.1, Quality Measures and Quality Points and Tables 10 and 17 to reflect updated scoring for EOM-1 starting in PP4. 8. Updated Section 7.2.2, Participant-Reported Measure Scoring, to (1) indicate that the maximum number of raw points assigned to EOM-4a, EOM-4b, or EOM-5 is 10 and (2) clarify that the minimum denominator requirement for EOM-4 to be scored applies separately to each component measure EOM-4a and EOM-4b. 9. Updated Appendix B, Specifications for Assignment of Cancer Type and Episode Exclusions, to add a new procedure code for CAR-T administration. 10. Added Appendix M: Inflation Reduction Act (IRA) Adjustments
6.0	11/3/2025	1. Updated Section 5.2, Additional Adjustment for ACO and Other Model Overlap during the Performance Period, to address the AHEAD, IBH, and TEAM models. 2. Updated Appendix B, Specifications for Assignment of Cancer Type and Episode Exclusions, to include carrier claims in the identification of CAR-T.

Version	Revision Date	Description of Change
7.0	9/14/2026	1. Updated Section 1 and other sections throughout to describe and include references to the new baseline period 2. Updated Section 7.2.1 Claims Based Measure Scoring to include the updated EOM-2 and EOM-3 benchmarks for PP8-PP13 3. Updated Appendix D Baseline Trend Adjustments to include those for the new baseline 4. Updated Appendix E Baseline Period Winsorization Thresholds to include the thresholds for the new baseline 5. Updated Appendix I Price Prediction Models to include differences between the original baseline models (applied to PP1-PP7) and the new baseline models (applied to PP8-PP13) and to reflect the HCCs identified with RxHCC V08 for PP5-PP7