ONCOLOGY CARE MODEL

OCM PERFORMANCE-BASED PAYMENT METHODOLOGY

Version 7.1
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CMS
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Revision History

Version	Date	Description of Changes
1.0	4/15/16	Initial version.
1.1	6/27/16	1. Revised Section 3.1.1, Prediction Model. 2. Revised Section 7.2, Performance Rates, to clarify minimum denominator size is over two performance periods. 3. Revised Section 7.3.3, Patient Experience of Care Scoring. 4. Added language to Section 7.4, Inapplicable Measures and Measures with Insufficient Denominator Size. 5. Removed Appendix A: OCM Included Cancer Diagnoses and Cancer Types and all references. This information is now located on the CMS OCM website. ICD9 diagnosis code 277.89 was removed from this list. As a result, the remaining appendices have been re-lettered. 6. Added a new appendix, Appendix F: Patient Experience of Care Measure Composites and Scoring. 7. Added a new section (Section 9) for OCM resource information. 8. Added links to the OCM Portal throughout where applicable.
2.0	12/27/16	1. Revised Introduction to reflect earlier availability of choice to elect two- sided risk. 2. Revised Section 7 (Quality Measures and Performance) to reflect modified reporting requirements for the first performance period. 3. Added a new appendix, Appendix D, for the baseline trend factors. As a result, remaining appendices were re-lettered. 4. Added a new appendix, Appendix E, for the baseline Winsorization thresholds. As a result, remaining appendices were re-lettered. 5. Updated measure names in Table 2 to be consistent with the OCM Measures Guide. 6. Updated language in Section 7.3.2 (Practice-Reported Measure Scoring) to modify references to PQRS data. 7. Revised Section 7.3.3 (Patient Experience of Care Scoring) to provide clarification around the scoring approach. 8. Updated links and references to external documents throughout as necessary.

Version	Date	Description of Changes
3.0	4/3/17	1. Updated Section 2 (Calculation of Baseline Episode Expenditures) and Section 5 (Calculation of Actual Episode Expenditures) to reflect changes in the way that episode expenditures will be measured, effective with episodes beginning after July 1, 2017. 2. Updated Section 3.1.1 (Prediction Model) to reflect that one of the risk adjustment factors applies to prostate and bladder cancer in addition to breast cancer, effective with episodes beginning after July 1, 2017. 3. Revised text and formulas in Section 3.1.2 (Experience Adjuster) and Appendix G (Mathematical Description of the Methodology for Establishing Target Amounts) to reflect a consistent definition of the experience adjuster. 4. Revised text in Section 7.3.1 (Claims-Based Measure Scoring) to reflect that performance thresholds have already been calculated and shared with OCM participants. 5. Updated Appendix D (Baseline Trend Adjustments) and Appendix E (Baseline Winsorization Adjustments) to reflect the baseline adjustments associated with the reconciliations for episodes beginning after July 1, 2017. 6. Added a new appendix, Appendix I, for the description of the OCM prediction model. 7. Updated links and references to external documents throughout as necessary.
3.1	6/26/17	1. Revised the quality scoring approach in Section 7 to reflect changes to when measures are counted as P4R and P4P. 2. Updated language in Section 7.3.3 to reflect that performance thresholds have been calculated for the patient-experience measure.

Version	Date	Description of Changes
3.2	12/27/2017	1. Updated language in Sections 3.2.1 (Trend Factor) and 3.2.2 (Adjustment for Novel Therapies) to specify the population used to determine trend and novel therapies adjustments. 2. Updated language in Section 6.2.1 (Geographic Variation Adjustment) to clarify the approach used to determine the geographic adjustment to the PBP. 3. Revised the quality scoring approach in Section 7 to reflect (1) changes to when measures are counted as P4R and P4P, (2) the reporting of OCM-4, OCM-5, and OCM-12 on an aggregate rather than individual basis, (3) the retirement of OCM-7, and (4) information on the data that will be used to score the practice-reported measures for each performance period. 4. Updated language in Section 7.3.3 (Patient Experience of Care Scoring) to reflect information on the surveys that will be used to score OCM-6 for each performance period.
4.0	4/30/2018	1. Clarified the tie-breaker logic used in assigning cancer type in Section 1.1.3 and Appendix B to be consistent with how it is applied. 2. Revised the logic for including MEOS payments in the episode expenditures in Section 5. 3. Revised the quality scoring approach in Section 7 to reflect changes to when measures are counted as P4R and P4P. 4. Revised the approach to episode definition in Appendix A to incorporate the use of chemotherapy and immunotherapy administration diagnosis codes Z51.11 and Z51.12.
5.0	6/11/2018	1. Incorporated throughout the criterion that "qualifying" E&M visits must have been provided by a TIN with at least one oncology provider (see Sections 1.1.2, 1.1.3, 1.2, and Appendix A). 2. Modified the pay-for-reporting scoring related to the OCM FFS Beneficiary measures in Section 7, adding and removing specified measures. 3. Added specifications for claims-based risk adjustment factors to Appendix I. 4. Revised Appendix I to update the definitions of "low risk" and "high risk" breast cancer that are used in the OCM prediction model and to update the terminology for "castration-sensitive" and "castration-resistant" prostate cancer to "low-intensity" and "high-intensity." 5. Replaced table values in Appendix D (Baseline Trend Adjustments) and Appendix E (Baseline Winsorization Adjustments) with "TBD."

Version	Date	Description of Changes
5.1	12/17/2018	1. Incorporated throughout the addition of the alternative two-sided risk arrangement. 2. Modified Section 7 to reflect the measure reduction effective with Performance Period 5. 3. Added a new appendix, Appendix J, for the description of the ACO Overlap calculation. 4. Updated Appendix D and Appendix E to include the corresponding values for the updated baseline.
6.0	2/2020	1. Modified Table 1 to reflect that PP9 episodes will begin through 12/31/2020 rather than 1/1/2021. 2. Added text and an additional subsection to Section 3, Calculation of Target Amounts, for the incorporation of the metastatic adjustment that begins in PP7. 3. Added text to Section 4, Determination of Performance Period Episodes, for the incorporation of CAR-T identification. 4. Revised Section 6, Reconciliation (previously named Calculation of Performance-Based Payment) to include more details on PBP and recoupment calculations for all risk arrangements. 5. Corrected the text in Section 7.1 which stated that OCM-8 – OCM-12 were optionally reported measures for PP3. OCM-12 was optionally reported in PP4. 6. Removed footnote to Table 3 indicating that OCM-4b is aligned with MIPS. 7. Referenced all external quality documents to the CMS OCM website rather than healthcarecommunities.org or OCM Connect.
7.0	2/1/2021	1. Added language throughout to incorporate changes related to the COVID-19 flexibilities for OCM. Updates have been made in the Introduction, Section 3.1.3, Section 4, Section 5.3, Section 6.1, Section 7, and Appendix B. 2. Added a new Appendix, Appendix K, to include a description of the COVID-19 flexibilities for OCM.
7.1	7/6/2021	1. Updated language where applicable to denote the sequestration suspension was extended through December 31, 2021. 2. Added language to reflect OCM policy on applying sequestration to PBP in Section 6.2. 3. Updated language in Section 3.1.3 regarding the requirements for episodes to be considered "metastatic." 4. Added language to reflect methodology for accounting for overlap with specified new CMMI models. 5. Updated specifications for identifying CAR-T in Appendix B.

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Introduction

This paper describes the technical details for the methodology that the Centers for Medicare & Medicaid Services (CMS) will use to determine a practice's or pool's performance-based payment or recoupment in the Oncology Care Model (OCM).

OCM is a payment model designed to test the effects of better care coordination, improved access to practitioners, and appropriate clinical care on health outcomes and costs of care for Medicare fee-for-service (FFS) beneficiaries with cancer who receive chemotherapy. OCM encourages participating practices to improve care and lower costs through episode-based payments that financially incentivize high-quality coordinated care. CMS expects that these changes made by the practices in response to OCM participation will result in better care, smarter spending, and healthier people.

OCM 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. There may be differences in certain model design aspects between the subset of OCM for Medicare FFS beneficiaries and the subset for other payer beneficiaries, such as specific payment incentives. However, the approach to practice transformation is consistent across OCM. This document reflects only the methodologies that will be used for Medicare FFS beneficiaries.

OCM targets physician group practices that prescribe chemotherapy for cancer and is centered on 6-month episodes of care triggered by receipt of chemotherapy. OCM incorporates a two-part payment system for participating practices, composed of a Monthly Enhanced Oncology Services (MEOS) payment and the potential for a retrospective performance-based payment. The MEOS payment will assist participating practices with effectively managing and coordinating care for oncology patients during episodes of care, whereas the potential for performance-based payment will incentivize practices to lower the total cost of care relative to a risk-adjusted target amount and to improve the quality of care for beneficiaries. Practices will be eligible to be paid the MEOS payment monthly for each beneficiary during an episode attributed to them regardless of cancer type, unless the beneficiary enters hospice or dies. Performance-based payments will be made only for higher-volume cancer types for which it is possible to calculate accurate benchmarks. These cancer types, and the lower-volume cancer types for which we will not calculate benchmarks, are listed in the document "OCM Cancer Type Mapping and Codes" that applies for each performance period.

Episodes will initiate upon the date of service for an initial Part B chemotherapy drug claim with a corresponding cancer diagnosis on the claim, or upon the fill date for an initial Part D chemotherapy drug claim with a corresponding Part B claim for cancer on the date of, or in the 59 days preceding, the drug claim. Episodes will continue for 6 months. Beneficiaries who continue to receive chemotherapy after completing the 6-month episode will initiate a new episode. Episodes will be organized by performance periods, which are the 6-month periods of time during which a cohort of episodes terminates and is reconciled together. OCM episode expenditures will consist of all Medicare Part A and Part B expenditures and certain Part D expenditures for a beneficiary's care throughout the 6 months. These expenditures will be compared to a risk-adjusted, practice-

specific target amount, which will be based on historical expenditures trended forward to the performance period and subject to a discount (representing Medicare savings).

OCM features three possible risk arrangements: a one-sided risk arrangement with a 4 percent discount, a two-sided risk arrangement with a 2.75 percent discount (original two-sided risk), and a two-sided risk arrangement with a 2.5 percent discount (alternative two-sided risk); in either two-sided risk arrangement, the practice or pool will be eligible for higher performance-based payments. The one-sided risk arrangement will apply to all practices and all episodes initiating July 1, 2016 – January 1, 2017 (the first performance period). The original two-sided risk arrangement will be available in all following OCM performance periods for practices that have signed and uploaded the Participation Agreement Risk Arrangement Amendment. The alternative two-sided risk arrangement will be available in Performance Period 6 at the earliest for practices that have signed and uploaded the amended and restated Participation Agreement.

Practices are allowed to request a change in risk arrangement semiannually. In response to the COVID-19 Public Health Emergency (PHE), CMS provided the option for practices to forgo upside and downside risk for specified performance periods.

Practices or pools that do not achieve a performance-based payment by the time of the initial reconciliation of the fourth performance period must exit the model or opt for a two-sided risk arrangement thereafter until achieving a performance-based payment. Eligibility for performance-based payments is contingent upon meeting certain quality thresholds and other requirements as articulated in the OCM Participation Agreement.

The model was originally scheduled to run for 5 years, beginning July 1, 2016, and ending June 30, 2021. In response to the COVID-19 PHE, CMS extended the model for an additional year and OCM will now end June 30, 2022, with a model closeout period after model completion. Calculation of performance-based payment will occur semi-annually and will include all episodes ending in a given 6-month period. Table 1 provides the dates associated with each of the eleven, 6-month performance periods, as well as the risk arrangements associated with each.

Table 1: OCM Performance Periods

Model Year	Performance Period	Episodes Beginning	Episodes Ending	Risk Arrangement
1	1	7/1/2016 – 1/1/2017	12/31/2016 – 6/30/2017	One-sided risk only
2	2	1/2/2017 – 7/1/2017	7/1/2017 – 12/31/2017	One- or Two-sided risk (original)
2	3	7/2/2017 – 1/1/2018	1/1/2018 – 6/30/2018	
3	4	1/2/2018 – 7/1/2018	7/1/2018 – 12/31/2018	
3	5	7/2/2018 – 1/1/2019	1/1/2019 – 6/30/2019	
4	6	1/2/2019 – 7/1/2019	7/1/2019 – 12/31/2019	One- or Two-sided risk (original or alternative)
4	7	7/2/2019 – 1/1/2020	1/1/2020 – 6/30/2020	
5	8	1/2/2020 – 7/1/2020	7/1/2020 – 12/31/2020	
5	9	7/2/2020 – 1/1/2021*	1/1/2021 – 6/30/2021	
6	10	1/2/2021 – 7/1/2021	7/1/2021 – 12/31/2021	
6	11	7/2/2021 – 12/31/2021	1/1/2022 – 6/30/2022	

*Practices who are not participating in PP10 and PP11 will not be attributed episodes that begin on 1/1/2021.

The following sections provide more detail on how we will calculate the performance-based payments. We calculate the target amounts using a period of baseline data with which we define a set of episodes and calculate the expenditures associated with those episodes. The method used to define those episodes is described in Section 1. The method used to calculate the expenditures associated with the historical episodes is described in Section 2. In Section 3 we describe the method used to determine the target amount for each practice, including the benchmarking model that will be used to estimate risk-adjusted target episode prices. In Section 4 we describe how we will identify episodes in each performance period, and in Section 5 we describe the method used to calculate the expenditures associated with the performance period episodes. In Section 6 we describe the reconciliation of performance period expenditures and the target amounts and the calculation of the performance-based payment and OCM recoupment, and in Section 7 we describe how we will determine the quality score used in the calculation of the performance multiplier. Finally, in Section 8 we present an example of a performance-based payment calculation.

Section 1: Determination of Baseline Episodes

The first step in determining performance-based payment is to define the set of historical episodes that will be used to develop the baseline episode expenditures on which the target amounts will ultimately be based. The historical period used to determine this set of episodes is January 2012– June 2015. All episodes included in the baseline begin between January 2012 and December 2014 and end between July 2012 and June 2015. Definition of the historical episodes consists of two major steps:

1. Identification of episodes.
2. Attribution of episodes to practices.

1.1   Episode Identification

We identify episodes by first identifying potential "trigger events" in the claims data that indicate the provision of chemotherapy, as described below in Section 1.1.1. We then determine if the beneficiary meets the eligibility criteria described in Section 1.1.2 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 months following. Subsequent episodes may be defined in the historical period once earlier episodes have completed. Once episodes have been defined, we assign a cancer type to the episode, described in Section 1.1.3.

1.1.1 Identification of Trigger Events

Each 6-month episode will begin on the date associated with a trigger event, identified as the first observed Part B chemotherapy drug claim in the historical period with a corresponding cancer diagnosis 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 Healthcare Common Procedure Coding System (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). All codes associated with these drugs are referred to as "initiating cancer therapies," and can be found in the list of "OCM Initiating Cancer Therapies and Codes" for each performance period. This list of codes will be updated periodically as new chemotherapy drugs become available.

We will 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, listed in the document "OCM Cancer Type Mapping and Codes" for each performance period. 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 OCM. 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 document "OCM Cancer Type Mapping and Codes" 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 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 will be accounted for in the benchmarking process.

Once an episode has begun, it will last for 6 calendar months, except in the case of death before 6 months have passed. Such episodes are the only ones that may end before 6 months. If a beneficiary dies mid-episode, the practice will no longer be eligible to be paid the MEOS payments after the date of death, but the episode will still be included in the benchmarking and performance-based payment aspects of the model. Likewise, if a beneficiary elects hospice mid-episode, the practice will no longer be eligible to be paid the MEOS payments after hospice election, but the episode will still be included in the benchmarking and performance-based payment aspects of the model. Medicare expenditures incurred after hospice election will be included in benchmarking and reconciliation.

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.

1.1.2 Episode Eligibility

A beneficiary must meet the following requirements for all 6 months of the episode, or in the event the beneficiary dies prior to 6 months, until the beneficiary's death, for that episode to be eligible for inclusion in OCM:

- Beneficiary is enrolled in Medicare Parts A and B;
- Beneficiary does not receive the Medicare End Stage Renal Disease (ESRD) benefit[1];
- Beneficiary has Medicare as his or her primary payer;
- Beneficiary is not covered under Medicare Advantage or any other group health program;
- Beneficiary received chemotherapy treatment for cancer (defined above in Section 1.1.1);
- Beneficiary has at least one qualifying Evaluation & Management (E&M) visit during the 6 months of the episode. A qualifying E&M visit is defined as having a HCPCS code in the ranges 99201-99205 or 99211-99215, a cancer diagnosis included in the document "OCM Cancer Type Mapping and Codes," and billed by a TIN with at least one oncology provider in the performance period. Oncology providers are those with a specialty code of Hematology/Oncology, Medical Oncology, Surgical Oncology, Radiation Oncology, and/or Gynecological/Oncology.

Episodes in which a beneficiary dies or elects hospice care before the end of 6 months are considered eligible; death will be the only case in which an episode will be shorter than 6 months.

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

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[1] ESRD status will be determined using information in the Medicare Enrollment Database.

1.1.3 Assignment of Cancer Type

Each episode will be classified by cancer type (e.g., prostate, lymphoma, breast). The cancer type will be used in categorizing episodes for reporting, monitoring, and risk adjustment purposes. Cancer type will be assigned using the plurality of diagnoses on qualifying E&M visits (see the definition above in Section 1.1.2) in the carrier file that occurred during the episode. The diagnosis code corresponding to (on the same line as) each E&M visit will be mapped to a cancer type. The mapping of diagnosis code to cancer type is included in the document "OCM Cancer Type Mapping and Codes" for each performance period. This document identifies the cancer types that are reconciliation-eligible (as defined in the OCM Participation Agreement), as well as those that are not reconciliation-eligible but are still eligible for the MEOS payment. The cancer type with the most qualifying E&M visits is the one that will be assigned to the episode. In the event of a tie, we will apply tie-breakers in the following order, assigning the cancer type associated with:

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

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

1.2 Episode Attribution

Each 6-month episode will be attributed to the TIN (in the case of non-OCM practices) or OCM ID (in the case of OCM practices) associated with the most qualifying E&M visits during the 6-month episode; this is known as the plurality approach. E&M visits will be defined by the HCPCS code ranges 99201 – 99205 and 99211 – 99215. For an E&M visit to qualify and be counted toward plurality, it must be associated with (on the same line item as) one of the cancer diagnosis codes included in the document "OCM Cancer Type Mapping and Codes" and must be billed by a TIN with at least one oncology provider. Oncology providers are those with a specialty code of Hematology/Oncology, Medical Oncology, Surgical Oncology, Radiation Oncology, and/or Gynecological/Oncology. We will use the Part B Carrier file to identify qualifying E&M visits.

During the baseline period, an OCM practice is generally defined by one OCM ID and one TIN. In cases where a participating OCM practice billed under multiple TINs or changed its TIN partway through the baseline time period used to determine attribution, we will associate some or all old and new TINs with the practice during that baseline time period for the purposes of attributing episodes. This will ensure that all qualifying E&M visits are found and used to determine the baseline attribution.

In a performance period, an OCM practice is defined by one OCM ID and one TIN. If the TIN on a qualifying claim is associated with a participating OCM practice, the visit will be credited to that practice. Otherwise, the visit will be credited to the TIN on the claim, which would be that of a practice not participating in OCM. We will add up all qualifying E&M visits occurring during the episode by practice and attribute the episode to the practice with the most qualifying E&M visits, which may be a participating OCM practice or not. In the case of a tie (i.e., two different practices

having the same number of qualifying E&M visits), we will attribute the episode to the practice with the most recent qualifying E&M visit(s) in the episode. If a tie still exists we will attribute the episode to the TIN or OCM ID with the lowest last digit of the TIN, lowest second-to-last digit, etc.

1.2.1 Attribution for Pooled Participants

As described above, each episode will be attributed to an individual practice, where a participating OCM practice is represented by one OCM ID. Some practices may choose or be required to participate in the model on a partnership basis by pooling with other practices. In such cases, we will still attribute the episodes to the individual practices within the pool. We will not combine visits to all TINs in a pool when determining plurality. Episodes attributed to the individual practices in a pool will be combined (summed) for the purposes of reconciliation and quality measurement, though information on the episodes attributed to each individual practice in the pool will be available.

The detailed specifications for episode attribution are located in Appendix C.

Section 2: Calculation of Baseline Episode Expenditures

Once baseline episodes have been identified and attributed to practices, we then add up the Medicare FFS expenditures incurred during each episode. Baseline episode expenditures will include expenditures for all claims where the service date is during the episode. 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.[2] 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.

2.1 Components of Baseline Expenditures

Baseline episode expenditures include all 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, Home Health Agency (HHA), and Hospice claims files. Medicare expenditures will be 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. The Part D expenditures come from the Part D claims files and include only the Low-Income Cost Sharing Subsidy (LICS) amount and 80 percent of the Gross Drug Cost above the Catastrophic (GDCA) threshold. Other Part D expenditures will not be included because they are paid on a capitated basis.

The Part A and Part B expenditures will be sourced from CMS' standardized payment files.[3] 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. These files have a "final maturity" of 12 months of claims run-out. That is, after 12 months has passed, they are no longer updated to account for additional claims or adjustments that have been submitted. Because OCM final reconciliations will include 14 months of claims run-out (see Section 6.2) there is a small possibility that some claims included in the final reconciliation (i.e., those submitted in months 13 and 14) will not have a corresponding standardized payment. In these cases, we will use the "unstandardized" payment from the claim.

Figure 1 shows the components of the baseline episode expenditures.

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

[3] https://www.resdac.org/articles/cms-price-payment-standardization-overview

Figure 1: Components of Baseline Episode Expenditures
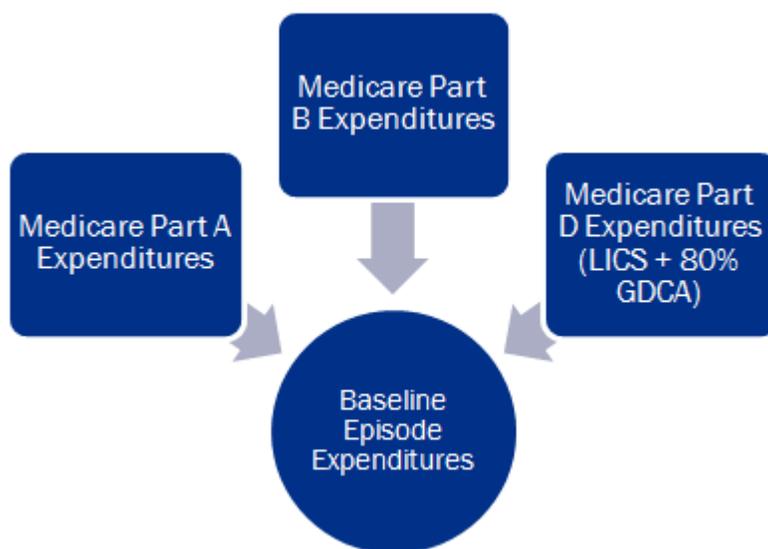
Before finalizing the baseline episode expenditures, we will apply four adjustments. The first is an adjustment to account for overlap of OCM episodes and other CMS models ([Section 2.2](#)); the second is an adjustment to remove the effects of sequestration ([Section 2.3](#)); the third is a trend adjustment ([Section 2.4](#)); and the fourth is an outlier adjustment called Winsorization ([Section 2.5](#)).

2.2   Accounting for Model Overlap in the Baseline

In the event that an OCM beneficiary was aligned with other CMS models during the baseline period, we will adjust the baseline expenditures accordingly, as described below.

Medicare Accountable Care Organizations (ACOs)
In all of the OCM actual episode expenditure calculations, we will account for any reductions in FFS payments for OCM beneficiaries aligned to Pioneer ACOs that elected population-based payments by adjusting the standardized paid amount on claims, as necessary, to reflect the amount that would have been paid in the absence of population based-payments. We will not include the Pioneer ACO's monthly payment for OCM beneficiaries aligned to Pioneer ACOs that elected population-based payments as OCM baseline expenditures.

Bundled Payments for Care Improvement Initiative (BPCI)
When a BPCI episode overlaps with an OCM episode in the baseline period, any expenditure reductions or increases will first accrue to the BPCI episode. We will prorate the BPCI reconciliation amount by the portion of the BPCI episode that overlapped with the OCM episode. This prorated BPCI reconciliation amount will be included in the baseline episode expenditures of that OCM beneficiary's care during the OCM episode.

2.3   Sequestration Adjustment

Beginning April 1, 2013, all Medicare expenditures were reduced by 2 percent due to sequestration. In the absence of sequestration, Medicare expenditures would be approximately 2 percent higher (technically 1/0.98 or 2.041 percent higher) than they actually were. OCM baseline claims occurring on and after April 1, 2013, were covered by sequestration and reflect the 2

percent sequestration decrease, and those occurring prior to April 1, 2013, do not. To ensure that the baseline expenditures do not contain some claims with the sequestration reduction and some without, we will 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 same adjustment will be made to performance period expenditures. Because any performance-based payments made under OCM may be subject to sequestration when payment is made, expenditure reductions will be calculated based on expenditures that do not reflect sequestration, so as not to double-count the sequestration reduction.

All non-DMEPOS claims with a through date of April 1, 2013, or after will be adjusted by dividing the Medicare payment by 0.98 (this reflects how sequestration was actually implemented). DMEPOS claims from April 1, 2013 or after will be adjusted by dividing the Medicare payment by 0.98. Dividing by 0.98 will increase the claim payments up to the amount that would have been paid in the absence of sequestration.

2.4   Baseline Trend

The trend adjustment will move all episode expenditures in the baseline period to the same level as the expenditures for episodes ending in the most recent 6-month historical period (January – June, 2015). We will adjust expenditures for episodes ending in the first historical period (July – December, 2012) by multiplying them by the ratio of average episode expenditures in the most recent historical period to average episode expenditures in the first historical period. A similar process will be followed for episodes ending in the second through fifth historical periods. This will bring all baseline episode expenditures forward to sixth historical 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 apply the fourth adjustment to the baseline expenditures, which is called Winsorization. Winsorization is a two-sided truncation adjustment that will limit the impact of outliers on the average expenditures. We will Winsorize episode expenditures at the 5th and 95th percentiles of per-episode expenditures by cancer type. Specifically, episode expenditures below the 5th percentile by cancer type will be set to the 5th percentile, and episode expenditures above the 95th percentile will be set to the 95th percentile within cancer type. Winsorization thresholds will be set using all episodes defined and attributed nationally, for both OCM and non-OCM practices. The Winsorization thresholds applied in the calculation of baseline expenditures are located in Appendix E.

Section 3: Calculation of Target Amounts

The target amount is a projection of what the Medicare expenditures would have been during the performance period for episodes attributed to the OCM practice or pool in the absence of OCM participation, reduced for the OCM discount; it is risk-adjusted and specific to each OCM practice. Only episodes that are assigned reconciliation-eligible cancer types, as defined by the OCM Participation Agreement, will be included in each practice's target amount. The target amount is based on baseline expenditures (see Section 2) that have been trended forward to the performance period and adjusted for the Medicare OCM discount (representing Medicare savings).

We first calculate a risk-adjusted *baseline price* for each episode. The baseline prices will be trended forward to the performance period and adjusted to reflect the costs of chemotherapy drugs that have received recent U.S. Food and Drug Administration (FDA) approval, as described in Section 3.2 below. The trended and adjusted baseline price is referred to as the *benchmark price*. The benchmark price will then be reduced by a CMS discount (4 percent in the one-sided risk arrangement, 2.75 percent in the original two-sided risk arrangement, and 2.5 percent in the alternative two-sided risk arrangement). The discounted benchmark price is the *target price*. The sum of the target prices for all episodes attributed to a practice in a given performance period is equal to the *target amount* that will be compared with that practice's actual episode expenditures (defined in Section 5).

Calculating the target amount for each practice involves the following steps:

1. Determining the baseline price for each episode (Section 3.1).
2. Determining the benchmark price for each episode (Section 3.2).
3. Determining the target price for each episode (Section 3.3)
4. Determining the benchmark and target amounts for each practice (Section 3.4).

In the event that a practice is participating in a pool, benchmark and target amounts will be based on episodes attributed to all practices within the pool.

3.1   Baseline Price (per Episode)

The baseline price for each episode will be calculated by first predicting the baseline expenditures associated with the specific characteristics of that episode, described below in Section 3.1.1, and then adjusting the prediction to account for the practice's own experience in the baseline period, described in Section 3.1.2, and for the metastatic status of certain episodes, described in Section 3.1.3.

3.1.1 Prediction Model

The baseline prices will be calculated using a prediction model that will be calibrated using the national set of baseline episodes described in Section 1 and the baseline episode expenditures described in Section 2. The prediction model will be estimated by regressing baseline episode expenditures on a list of covariates that have been determined to influence episode expenditures. The list of covariates may change over time and includes the following:

- Cancer type (those that are reconciliation-eligible, as defined in the document "OCM Cancer Type Mapping and Codes")
- Age
- Sex
- Dual eligibility for Medicaid and Medicare
- Selected non-cancer comorbidities
- Receipt of selected cancer-directed surgeries
- Receipt of bone marrow transplant
- Receipt of radiation therapy
- Type of chemotherapy drugs used during episode (for breast, prostate, and bladder cancers only)
- Institutional status
- Participation in a clinical trial
- History of prior chemotherapy use
- Episode length
- Hospital referral region

The functional form of the model will be a generalized linear model with a log link and gamma distribution. This type of model is commonly used in predicting health care expenditures and yields only positive predicted values. Because the most recent baseline year is likely to be the most important for predicting future expenditures, baseline expenditures will be weighted in the following manner: for episodes ending in the period July 2012 – June 2013, weight=0.5; for episodes ending in the period July 2013 – June 2014, weight=1.0; for episodes ending in the period July 2014 – June 2015, weight=1.5.

The coefficients from the prediction model will be used to calculate predicted baseline expenditures for each episode identified during the performance period. We will then apply an adjustment reflecting the experience of each practice or pool, as described in Section 3.1.2. Beginning with PP7, we will apply a second adjustment to the predicted baseline expenditures for specified cancer types, which will reflect the metastatic status at diagnosis of those episodes (described in Section 3.1.3 below). Detailed information about the covariates used in the prediction model is available in Appendix I and the document "OCM Prediction Model Code Lists," effective July 2, 2017.

3.1.2 Experience Adjuster

Because the prediction model may not fully control for all factors that affect episode expenditures, an additional adjustment at the practice or pool level will be applied to the predicted baseline expenditures to reflect the relative costliness of each participating practice or pool during the baseline period. The experience adjuster will control for unmeasured selection at the practice or pool. The experience adjuster will be calculated by first using the prediction model to predict the expenditures of each baseline episode for each participating practice or pool, as described above in Section 3.1.1. The average *actual* baseline expenditures will then be compared with the average *predicted* baseline expenditures for each practice or pool. The ratio of actual-to-predicted

average baseline expenditures will form the basis for a practice- or pool-specific experience adjuster that will be applied to the predicted baseline expenditures for each episode attributed to each participating practice or pool. Because average expenditures for individual practices tend to move toward average expenditures for all practices over time (a phenomenon known as "regression toward the mean") the ratios of actual-to-predicted average baseline expenditures will not be applied in their entirety to the predicted baseline expenditures. Rather, a weight of 50 percent will be applied to move them closer to a value of 1.0. For example, if the ratio of actual-to-predicted average baseline expenditures for a particular practice is 1.2, we would calculate the experience adjuster for that practice to be 1.1. The formula for this adjustment is:

Experience Adjuster = 50% * 1 + 50% * ratio of actual-to-expected average baseline expenditures

Experience adjusters will be calculated for each OCM practice and pool. Should an OCM practice undergo a change in organizational structure, such as an acquisition or merger, during the model, or the composition of an OCM pool change during the model's duration, we will recalculate the experience adjuster to reflect the baseline experience of the newly structured practice or pool.

3.1.3 Metastatic Adjustment

Beginning with PP7 (i.e., episodes beginning July 2, 2019 - January 1, 2020), an additional adjustment will be applied to predicted baseline expenditures that reflects the impact of metastatic status at diagnosis for certain cancer types. Metastatic status will be based on data reported by OCM practices to the OCM Data Registry.[4] As a result of the COVID-19 PHE, beneficiary-level reporting of clinical and staging data was made optional for performance periods affected by the PHE (see Appendix K for information on the COVID-19 flexibilities). Episodes attributed to practices that opt out of reporting clinical and staging data or that do not report clinical and staging data on at least the minimum percentage of attributed episodes ("complete reporting") will not have the metastatic adjustment applied to their predicted baseline expenditures.[5]

Episodes attributed to practices that report complete clinical and staging data and assigned one of three cancer types will receive an adjustment based on metastatic status: Breast Cancer, Lung Cancer, and Small Intestine/Colorectal Cancer. There are two adjusters for each cancer type; one for metastatic episodes and one for all other episodes. Note there are separate adjusters for high-risk and low-risk Breast Cancer episodes. The adjusters are designed to be "benchmark neutral" for the time period on which the adjusters were calculated, in that the average predicted baseline expenditures for all episodes of each applicable cancer type in that time period are the same with the implementation of the metastatic status adjustment as without it. The metastatic status adjusters are shown in Table 2 below.

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[4] The metastatic status adjustment will be based on the "M" value reported, which should reflect the patient's metastatic status at initial diagnosis, and will not use reported "Current Clinical Status" values at this time.
[5] The minimum threshold for complete reporting is currently 75%, though CMS may change the threshold in the future.

Table 2: Adjusters for Metastatic Status

Cancer Type	Adjuster – Metastatic	Adjuster – All Other
Breast Cancer, High Risk	1.11210398	0.95460032
Breast Cancer, Low Risk	1.60386626	0.98200003
Lung Cancer	1.12977857	0.90636138
Small Intestine / Colorectal Cancer	1.18048898	0.88779872
All Other Cancer Types OR practice opted out of reporting or did not report on at least 75% of attributed episodes*	1	1

*Episodes newly attributed to a practice in a first or second true-up reconciliation will also receive a metastatic adjuster of 1.0 if the practice did not optionally report the episode's staging and clinical data for the affected performance period at the time of the initial reconciliation.

Breast Cancer, Lung Cancer, and Small Intestine / Colorectal Cancer episodes attributed to a practice that reports on at least the minimum percentage of attributed episodes will be considered "metastatic" if at least one diagnosis code is reported to the OCM Data Registry for the episode and the reporting for that diagnosis code meets the following criteria:

1. The OCM practice to which the episode was attributed is the same as the practice reporting the data for that episode;
2. All required patient demographic information were reported to the OCM Data Registry for the beneficiary;
3. The cancer type assigned to the episode is the same as the cancer type associated with the diagnosis code reported to the OCM Data Registry;
4. The reporting for the diagnosis code is "staging complete," in that all staging and clinical data elements required by the OCM Staging and Clinical Data Specification for the diagnosis code were reported to the OCM Data Registry;
5. The reported AJCC Staging "M" value indicating metastatic status is in the set {M1, M1a, M1b, M1c, pM1, pM1a, pM1b, pM1c};
6. The relevant data were reported to the OCM Data Registry by the deadline specified for the performance period; and,
7. If the same diagnosis code was reported more than once for the beneficiary and each occurrence meets criteria 1-6 above, the tumor, node, and metastasis values (T, N, and M values) must be the same for each time the diagnosis code was reported (i.e., no conflicting T, N, or M values exist in the reporting of the diagnosis). Reported episodes where conflicting information exists will be adjusted in the "all other" group.

For information on reporting metastatic status to the OCM Data Registry, see the OCM Staging and Clinical Data Overview for each corresponding performance period on the CMS OCM website. All practices will continue to be subject to data validation audits, which may include validation of staging and clinical data reported to the OCM Data Registry.

The final baseline price for each episode in PP1 – PP6 will be calculated as follows:

Baseline Price = Predicted Baseline Expenditures * Experience Adjuster

The final baseline price for each episode in PP7 – PP11 will be calculated as follows:

Baseline Price = Predicted Baseline Expenditures * Experience Adjuster * Metastatic Adjustment

The baseline price for each episode will then be used as the basis for calculating the benchmarks for the performance period, which further incorporate the trend factor and novel therapies adjustment.

3.2 Benchmark Price (per Episode)

The benchmark price for each episode is equal to the baseline price multiplied by a trend factor and an adjustment for the use of novel cancer therapies; these adjustments are specific to each practice and pool. The trend factor will reflect underlying secular trends in episode expenditures between the baseline and performance periods. The novel therapy adjustment factor will increase the benchmark price to account for the appropriate use of newly approved oncology therapies; the novel therapy adjustment is applied only in cases where the practice's use of specified novel therapies is greater than that of practices not participating in OCM. The calculation of the trend factor is described below in Section 3.2.1. The calculation of the novel therapy adjustment is described in Section 3.2.2.

3.2.1 Trend Factor

Trend factors will be derived from expenditures for all episodes attributed to oncology practices not participating in OCM. The population of non-OCM oncology practices will be defined as all TINs with at least one provider with an oncology specialty who provided an E&M visit for cancer care during the performance period.[6] The ratio of non-participating practices' episode expenditures in the performance period to their episode expenditures in the baseline period will constitute the basis for the trend factor. We will use regression analysis to adjust the trend factor to the case mix of each participating practice or pool in the performance period. Specifically, we will estimate separate regression models on *performance period* expenditures among non-participating oncology practices and on *baseline* expenditures among non-participating oncology practices. These regression models will use the same functional form as the prediction model used to calculate the baseline prices and will use the same set of covariates. We will use coefficients from these two models to calculate two sets of predicted expenditures for each participating practice and pool during the performance period. For a given practice or pool, the ratio of predicted performance period expenditures to predicted baseline period expenditures represents the trend factor for that practice or pool. We will multiply the baseline price by the trend factor to calculate the trended baseline price for each episode.

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

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[6] Oncology specialties are Hematology/Oncology, Medical Oncology, Surgical Oncology, Radiation Oncology, and Gynecology Oncology. E&M visits for cancer care are defined as they are in Section 1.1.2 for episode eligibility.

3.2.2 Adjustment for Novel Therapies

Benchmark prices may be adjusted to reflect situations where a practice has a higher proportion of expenditures for the use of newly FDA-approved oncology drugs for the cancer types for which they are approved than what is reflected in the trended baseline prices. The FDA approves new oncology therapies each year, many of which are substantially more expensive than existing therapies.

Predicted episode expenditures based on trended historical data may not reflect the relative expense of these newly approved therapies, particularly in situations where a practice has a higher proportion of these expenditures than what is reflected in the trended baseline price. A potential adjustment may be available that will be based on the proportion of each practice's or pool's average episode expenditures for these new oncology therapies compared to the same proportion for episodes that are not part of OCM.

To qualify for adjustment, certain criteria would need to be met, including:

1. Only oncology drugs that received FDA approval after December 31, 2014, would be considered for inclusion.
2. Only practices with attributed beneficiaries who received the novel oncology therapies would be potentially impacted.
3. New oncology therapy expenditures will only be considered for adjustment if the use of the novel therapy is consistent with the FDA-approved indications.
4. Oncology drugs will be considered "new" for 2 years from FDA approval for that specific indication for the purpose of the adjustment. The "new" designation may extend past 2 years to align with the OCM reconciliation process.

For each performance period, we will calculate the percentage of actual episode expenditures associated with novel therapies for each practice and pool. As noted in #3 above, to be included in this amount, the use of the specified novel therapies must be consistent with the FDA-approved indications. 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 percent of the GDCA (as described in Section 2.1). This percentage will be compared to the percentage of actual episode expenditures associated with new oncology drugs among all episodes nationally not attributed to participating OCM practices. The population of episodes not attributed to participating OCM practices will be the same as defined for the purposes of calculating the trend factor, described in Section 3.2.1 above. If a given practice's or pool's new oncology drug expenditures as a percentage of its total episode expenditures is higher than that for episodes outside OCM, then an adjustment will be made to the trended baseline prices based on 80 percent of the difference between the practice's or pool's proportion and the non-participating practices' proportion. The novel therapies adjustment may lead to a higher benchmark only; it will never lower a benchmark.

CMS may opt to adjust the calculation of the novel therapies adjustment in the future. Expenditures for certain therapies with lower clinical effectiveness may be adjusted downward when calculating the relative proportion of novel therapy expenditures per episode. Any such adjustments would be applied no earlier than the third performance period reconciliation.

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

3.3   Target Price (per Episode)

After the adjustments are applied for trend and novel therapies to produce the benchmark price, the OCM discount will be applied to obtain a target price for each episode. The OCM discount is 4 percent under the one-sided risk sharing arrangement, 2.75 percent under the original two-sided risk arrangement, and 2.5 percent under the alternative two-sided risk arrangement. The target price is equal to the benchmark price multiplied by one minus the OCM discount, or,

Target Price = Benchmark Price * (1 – OCM discount).

3.4   Benchmark and Target Amounts (per Practice)

The benchmark amount is the sum of the benchmark prices for all episodes attributed to the practice for the performance period, as described in Section 3.2. The benchmark amount represents the projection of what the Medicare expenditures would have been during the performance period for episodes attributed to the OCM practice in the absence of OCM participation. The benchmark amount does not include the OCM discount.

The final target amount for each practice is equal to the sum of the target prices for all episodes attributed to the practice for the performance period.

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

Section 4: Determination of Performance Period Episodes

The episodes identified and attributed for each performance period will be defined in the same way as those for the baseline period, as described in Section 1. Each performance period, we will identify the national set of episodes meeting OCM criteria and will attribute them to all OCM practices as well as to non-OCM oncology practices (as defined by TIN). The episodes attributed to oncology practices not participating in OCM will be used for the development of the trend factor (see Section 3.2.1) and the adjustment for the use of novel therapies (see Section 3.2.2). The episodes attributed to each OCM practice will comprise the population for that practice and the actual episode expenditures associated with the performance period.

Starting with episodes initiating on or after 7/2/2017, episodes that include Adoptive Cell Transfer (ACT) therapies will be non-reconciliation eligible (i.e., MEOS-only) episodes. One example of an ACT therapy is 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, administrations. We will search for the presence of ACT therapies in all episodes in the Medicare claims data and reclassify those found as non-reconciliation eligible. These therapies will be identified in the Inpatient and Outpatient claims data. The specifications for identifying these claims are included in Appendix B.

Starting with episodes initiating on 7/2/2019, and for all performance periods thereafter that are affected by the COVID-19 PHE, episodes with a diagnosis of COVID-19 will be non-reconciliation eligible (MEOS-only) episodes. We will search for the presence of a COVID-19 diagnosis during all episodes in the Inpatient, Outpatient, and Carrier claims data. The specifications for identifying these claims are included in Appendix B. See Appendix K for information on the OCM COVID-19 Flexibilities.

Section 5: Calculation of Actual Episode Expenditures

Once performance period episodes have been identified and attributed to practices we then add up the Medicare FFS expenditures incurred during each episode. As with the baseline expenditures, actual episode expenditures will include expenditures for all non-MEOS claims where the service date is during the episode. 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.[7] 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.

MEOS claims may be billed during the episode as well as during the 90 days before and after each episode. Therefore, MEOS claims will first be associated with a specific episode and then added to the episode's expenditures, which could result in MEOS claims being included in an episode's expenditures that did not have a service date during the episode. No more than six MEOS payments will be included in the expenditures for each episode, and each MEOS payment will only be associated with one episode.

5.1   Components of Actual Episode Expenditures

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

Figure 2: Components of Actual Episode Expenditures
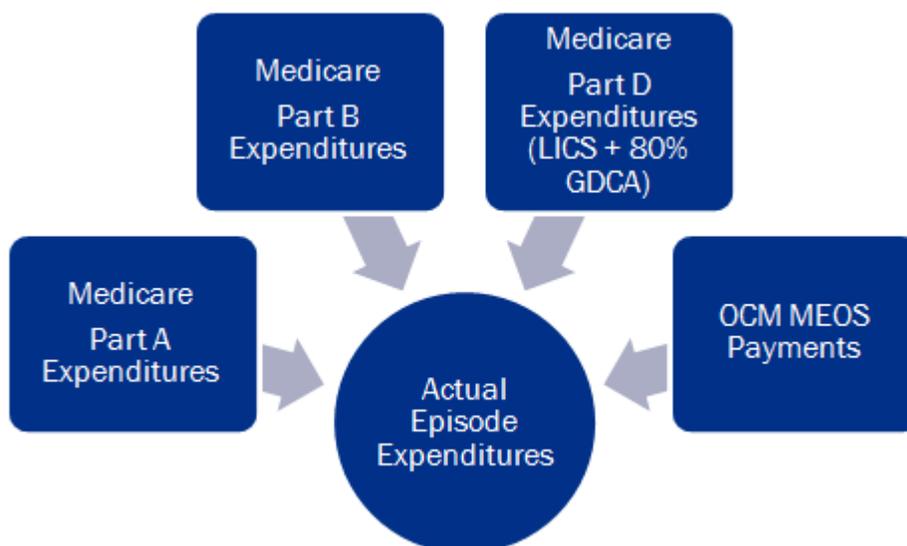
The Part A and Part B expenditures come from the Inpatient, SNF, Outpatient, Carrier, DMEPOS, HHA, and Hospice claims files. As with the baseline episode expenditures, actual Medicare

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

expenditures will be standardized to exclude IME and DSH payments, as well as inpatient pass-through amounts. Part D expenditures come from the Part D claims files and include only the LICS amount and 80 percent of the GDCA. Other Part D expenditures will not be included because they are paid on a capitated basis. The Part A and Part B actual expenditures will be sourced from CMS' standardized payment files (see Section 2.1).

Before finalizing the actual episode expenditures, we will 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 FFS models (Section 5.2 below), an adjustment to remove the effect of sequestration (as necessary, see Section 5.3 below) and the Winsorization adjustment (Section 2.5).

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   Accounting for Model Overlap

In order to ensure that duplicative incentive payments are not made for the same savings for the same beneficiary, we will follow certain procedures depending on the additional models in which the practice participates. In the event that new CMS models begin during OCM, we will make additional adjustments as needed to account for the overlap between OCM and those new models. We will account for beneficiary overlap with the models listed below in the calculation of actual expenditures.

Medicare Accountable Care Organizations

OCM practices and practitioners and their attributed beneficiaries may participate in (or, in the case of a beneficiary, be aligned to) a Medicare Shared Savings Program (MSSP), Pioneer, Next Generation ACO (all programs subsequently referred to as "ACOs"). In all of the OCM actual episode expenditure calculations, we will account for any reductions in FFS payments for OCM beneficiaries aligned to Medicare ACOs that have elected population-based payments by adjusting the standardized paid amount on claims, as necessary, to reflect the amount that would have been paid in the absence of population based-payments. We will not include as an expenditure in an OCM episode the ACO's monthly payment for OCM beneficiaries aligned to ACOs that have elected population-based payments.

For further accounting of ACO overlap in the performance-based payment calculation, see Section 6.2.2.

BPCI and Comprehensive Care for Joint Replacement (CJR)

OCM practices, practitioners, and their beneficiaries may participate (or, in the case of a beneficiary, be included) concurrently in BPCI and/or CJR. When a BPCI episode overlaps with an OCM episode, any reductions or increases in expenditures will first accrue to the BPCI episode. After BPCI performs its reconciliation calculations, we will prorate the BPCI reconciliation amount, a non-claims-based payment or recoupment, by the portion of the BPCI episode that overlapped with the OCM episode. This prorated BPCI reconciliation amount will be included in the actual episode expenditures of that OCM beneficiary's care during the OCM episode. This amount will be added to the OCM actual episode expenditures prior to the application of Winsorization. The same

approach will be taken in the event of contemporaneous attribution of a beneficiary to both an OCM episode and a CJR episode.

Medicare Care Choices (MCCM)

OCM practices, practitioners, and beneficiaries may participate (or, in the case of a beneficiary, be included) concurrently in MCCM. MCCM per beneficiary per month (PBPM) payments will be included in the actual episode expenditures of the OCM beneficiary's care during the OCM episode. No explicit adjustment will be required to be made to the actual expenditures, as the MCCM PBPM payments will appear as individual records in the claims data used to determine the actual episode expenditures.

Global and Professional Direct Contracting (GPDC) Model

OCM practices and practitioners and their attributed beneficiaries may participate in the GPDC model. OCM actual episode expenditure calculations for OCM beneficiaries aligned to GPDC entities will be based on what would have been paid in the absence of population-based payments or capitated claims payments. We will not include as an expenditure in an OCM episode the GPDC entities' capitated payments for OCM beneficiaries that are aligned with these models, and will instead include what would have been paid under normal Medicare Fee-for-Service processing.

Kidney Care Choices (KCC) Model

OCM actual episode expenditure calculations for OCM beneficiaries aligned to the KCC Model will be based on what would have been paid in the absence of population-based payments or capitated claims payments. We will not include as an expenditure in an OCM episode the KCC Model's capitated payments for OCM beneficiaries that are aligned with these models, and will instead include what would have been paid under normal Medicare Fee-for-Service processing.

Kidney transplant bonus payments associated with participation in the Kidney Care First Option of the KCC Model will not be included in any OCM reconciliation calculations.

5.3   Sequestration Adjustment

As described in Section 2.3, beginning April 1, 2013, all Medicare expenditures were reduced by 2 percent due to sequestration. Because any performance-based payments made under OCM may be subject to sequestration when payment is made, we adjust claim payment amounts to remove the effect of sequestration, so as not to double-count the sequestration reduction. However, 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. 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.

The standardized payment files, on which OCM 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 Acts. Therefore, standardized payments will continue to be adjusted to remove the effects of

sequestration, as described in Section 2.3. 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 6.4), will not require adjustment to remove the effects of sequestration if they occurred from May 1, 2020 through December 31, 2021.

Section 6: Reconciliation

Performance-based payments (PBP) and OCM recoupments will be calculated separately for each OCM practice and pool for each of the eleven performance periods defined in Table 1. For each performance period, we will calculate each practice's target amount as described in Section 3 and each practice's actual episode expenditures as described in Section 5. In this section, we describe how we will compare the actual episode expenditures with the target amount to determine if there were expenditure reductions in the performance period, how we will determine the amount of the eligible PBP if there were expenditure reductions, and how we will determine the amount of OCM recoupment if there were not expenditure reductions (as applicable). This process is called reconciliation. We describe these calculations for all three risk arrangements (one-sided, original two-sided, and alternative two-sided). We also describe three post-hoc adjustments that will be made to the PBP or OCM recoupment. Two of these adjustments, geographic variation and sequestration, will apply to all practices and pools and to both PBP (as applicable by law) and OCM recoupment. One of them, an adjustment for ACO overlap, will potentially apply to only those OCM participants who are also part of an ACO and for whom a PBP is calculated. Finally, we discuss the frequency with which the reconciliation process will occur.

6.1   Requirements for Receiving a Performance-Based Payment

In order to receive a performance-based payment, the following requirements must be met:

- The practice's target amount exceeds the actual episode expenditures of the episodes attributed to the practice, or, in the case of a pool, the sum of the target amounts for the practices comprising the pool exceeds the sum of the actual episode expenditures of the episodes attributed to the practices in the pool.
- The practice or pool achieves an Aggregate Quality Score (AQS) that meets or exceeds the minimum performance threshold of 30 percent (out of 100 percent). 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 how quality points are determined is located in Section 7.
- The practice, or, in the case of a pool, each practice in the pool, reports to the OCM Data Registry on all of the required practice-reported quality measures for the performance period, as identified in Section 7.1, Table 3.
- The practice, or, in the case of a pool, each practice in the pool, implements all of the Practice Redesign Activities.
- The practice or pool has not chosen the OCM COVID-19 Reconciliation Opt-out option for the performance period, if applicable.[8]

6.2   Calculation of Performance-Based Payment

To determine whether a PBP may be made to an individual practice, we will first compare the practice's actual episode expenditures with its target amount (which reflects the OCM discount) for the performance period. If the actual episode expenditures are lower than the target amount, a

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[8] In response to the COVID-19 PHE, CMS provided the option for practices to opt out of reconciliation for affected performance periods. See Appendix K for information on the COVID-19 flexibilities.

PBP may be made, contingent upon quality performance. The PBP in all risk arrangements will be equal to the difference between the actual episode expenditures and the target amount, multiplied by the performance multiplier, reduced for ACO overlap (see Section 6.5), adjusted for geographic variation (see Section 6.4), and reduced for sequestration (as applicable). All PBPs are subject to a "stop-gain" threshold, which limits the reduction in expenditures to which the performance multiplier will be applied. The stop-gain threshold is calculated in the same way for the one-sided and original two-sided risk arrangements and is calculated differently for the alternative two-sided risk arrangement, as described below.

6.2.1 PBP Under One-Sided and Original Two-Sided Risk Arrangements

In the one-sided and original two-sided risk arrangements, the reduction in expenditures (target amount minus actual expenditures) is limited to no more than 20 percent of the practice's benchmark amount. If the reduction in expenditures is greater than 20 percent of the benchmark amount, it will be set equal to 20 percent of the benchmark amount. The formula for the PBP under one-sided and original two-sided risk is as follows:

PBP = {[Minimum (Target – Actual, SG) * PM - ACO] * GA} * S, where

> PBP = performance-based payment
> Target - Actual = target amount minus actual episode expenditures
> SG = stop-gain threshold (20% of benchmark amount)
> PM = performance multiplier
> ACO = ACO overlap amount
> GA = geographic variation adjustment
> S = sequestration (equal to 0.98)

CMS will not apply the 2 percent sequestration reduction to any PBP for a performance period for which the initial reconciliation report was issued during the sequestration suspension period, including the initial, first true-up, and second true-up reconciliations for the performance period.

The performance multiplier will be 0 percent, 50 percent, 75 percent, or 100 percent, depending on the practice's or pool's AQS for the performance period. The method for determining the performance multiplier is described in Section 7.

6.2.2 PBP Under Alternative Two-Sided Risk Arrangement

In the alternative two-sided risk arrangement, the reduction in expenditures is limited to 16 percent of the "Total Part B Revenue" for the practice or pool. "Total Part B Revenue" is defined as the sum of (1) all Part B revenue for services billed under the practice's TIN during the 12-month time period spanned by a given performance period and (2) any additional Part B payments for chemotherapy drugs (as defined on the most current initiating therapies list at the time) and their administration for all episodes attributed to the practice or pool for the Performance Period. If the reduction in expenditures is greater than 16 percent of the Total Part B Revenue, it will be set equal to 16 percent of the Total Part B Revenue.

In the alternative two-sided risk arrangement, the reduction in expenditures is adjusted for geographic variation *before* being compared to the stop-gain threshold. This is because the

reduction in expenditures is in standardized dollars and the stop-gain threshold is not. For the same reason, the ACO overlap amount is also adjusted for geographic variation. The formula for the PBP under alternative two-sided risk is as follows:

PBP = {Minimum [(Target - Actual) * GA, SG] * PM – ACO*GA} * S, where

> PBP = performance-based payment
> Target - Actual = target amount minus actual episode expenditures
> GA = geographic variation adjustment
> SG = stop-gain threshold (16% of Total Part B Revenue)
> PM = performance multiplier
> ACO = ACO overlap amount
> S = sequestration (equal to 0.98)

CMS will not apply the 2 percent sequestration reduction to any PBP for a performance period for which the initial reconciliation report was issued during the sequestration suspension period, including the initial, first true-up, and second true-up reconciliations for the performance period.

6.3   Calculation of OCM Recoupment

In the one-sided risk arrangement, if the actual expenditures are greater than the target amount, no PBP will be made and no OCM recoupment will be calculated.

If the practice is in the original two-sided risk arrangement and the actual expenditures are greater than the *target* amount, or if the practice is in the alternative two-sided risk arrangement and the actual expenditures are greater than the *benchmark* amount, the practice must pay CMS back the difference (called a recoupment), subject to a maximum repayment (called the stop-loss threshold), adjusted for geographic variation and reduced for sequestration. The performance multiplier will not be applied to any OCM recoupment amounts, nor will any ACO Overlap amounts.

All OCM recoupments are subject to a "stop-loss" threshold, which limits the amount of OCM recoupment. The stop-loss threshold is calculated differently for the original and alternative two-sided risk arrangements, as described in the sections below.

6.3.1 OCM Recoupment Under Original Two-Sided Risk

In the calculation of OCM recoupment under the original two-sided risk arrangement, the difference between the actual episode expenditures and the *target* amount is limited to 20 percent of the practice's benchmark amount. If this difference is greater than 20 percent of the benchmark amount, it will be set equal to 20 percent of the benchmark amount. The formula for the OCM recoupment under original two-sided risk is as follows:

RCP = Minimum (Actual – Target, SL) * GA * S, where

> RCP = OCM recoupment
> Actual - Target = actual episode expenditures minus target amount
> SL = stop-loss threshold (20% of benchmark amount)
> GA = geographic variation adjustment
> S = sequestration (equal to 0.98)

Sequestration will be applied to all OCM recoupments, even those associated with performance periods where sequestration is suspended from PBP.

6.3.2 OCM Recoupment Under Alternative Two-Sided Risk

In the calculation of OCM recoupment under the alternative two-sided risk arrangement, the difference between the actual episode expenditures and the *benchmark* amount is limited to 8 percent of Total Part B Revenue, as defined in Section 6.2.2. If this difference is greater than 8 percent of Total Part B Revenue, it will be set equal to 8 percent of Total Part B Revenue.

Similar to the PBP calculation under alternative two-sided risk, the difference between the actual expenditures and the benchmark amount is adjusted for geographic variation *before* being compared to the stop-loss threshold. This is because this difference is in standardized dollars and the stop-loss threshold is not. The formula for the OCM recoupment under alternative two-sided risk is as follows:

RCP = Minimum [(Actual - Benchmark) * GA, SL] * S, where

RCP = recoupment
Actual - Benchmark = actual episode expenditures minus benchmark amount
GA = geographic variation adjustment
SL = stop-loss threshold (8% of Total Part B Revenue)
S = sequestration (equal to 0.98)

Sequestration will be applied to all OCM recoupments, even those associated with performance periods where sequestration is suspended from PBP.

If the practice is in the alternative two-sided risk arrangement and the actual expenditures are greater than the *target* amount but lower than the *benchmark* amount, the practice will not receive a performance-based payment nor will it owe an OCM recoupment.

6.4 Geographic Variation Adjustment

Before calculating the final performance-based payments and OCM recoupments, we will include an adjustment to account for differences in costs due to geographic location. As described in Section 2.1, we initially remove the effects of geographic variation in the calculation of the target amounts and the actual episode expenditures by using standardized payments, which include adjustments for the CMS Geographic Practice Cost Index (GPCI) and the Hospital Wage Index (HWI), among others. During reconciliation, the geographic variation will be reintroduced by multiplying PBPs and OCM recoupments by the ratio of actual to standardized payments for the reconciliation-eligible episodes attributed in each performance period, for each practice or pool. This approach directly reverses the effects of standardization, thereby reintroducing the original geographic variation in Medicare payments.

6.5 Adjustment for ACO and Other Model Overlap

OCM MEOS payments, performance-based payments, and recoupments will be eligible for inclusion in ACO shared savings calculations in the event that an OCM beneficiary is also aligned to an entity participating as an ACO. However, shared savings calculations for ACOs will not take

into account OCM discount amounts, which represent Medicare savings. Thus, CMS will perform separate calculations to identify these amounts. If a portion of the OCM discount is paid out as shared savings to an ACO under the same TIN as an OCM practice, and if the OCM participant has a PBP calculated for an overlapping time period, CMS will recover that portion from the OCM practice. The amount to be recovered will be equal to the ACO's shared savings percentage multiplied by the OCM discount amount associated with the overlapping beneficiaries' episodes.

Similarly, shared savings calculations for entities participating in the GPDC model or in any of the Comprehensive Kidney Care Contracting (CKCC) Options in the KCC Model will not take into account OCM discount amounts, which represent Medicare savings. As a result, **for PP11**, CMS will perform the same calculations as described above to identify these amounts and recover them from the OCM practice. See Appendix J for more details regarding the calculation of the ACO Overlap amount.

Whenever possible, the recovered amount will be subtracted from the performance-based payment for the current reconciliation. There may be cases where the calculation is unable to be made until after any performance-based payment has been made for the third reconciliation (described below in Section 6.6), in which case the practice would return the amount directly to CMS in the form of an external recoupment.

6.6   Frequency and Timing

We will carry out the calculations for each 6-month performance period three times. Each reconciliation will use more claims run-out (that is, claims submitted after the end of the performance period) than the one prior. The first reconciliation will include 2 months of claims run-out, the second reconciliation will include 8 months of claims run-out, and the third and final reconciliation will include 14 months of claims run-out. The results of the second and third reconciliations will be compared with those of the previous reconciliations, possibly resulting in changes to the performance-based payment or recoupment. Differences between the current and previous reconciliations will be added to or subtracted from the current reconciliation amount. If the revised reconciliation amount (the PBP or OCM recoupment) exceeds the original reconciliation amount, CMS will make an additional payment to the practice or pool. If the revised reconciliation amount is less than the original reconciliation amount, the practice or pool will be required to pay back the difference (under one-sided risk, the performance-based payment for a given performance period will never be less than zero).

Calculations for each reconciliation will begin once the last month of run-out for the reconciliation has been received, usually within 6 weeks after the end of the last month of run-out. In general, results of the first reconciliation will be communicated by the eighth month after the end of each performance period. The results of the second and third reconciliations will be communicated 6 and 12 months later, respectively.

6.7   Performance-Based Payments and OCM Recoupments for Pools

The actual expenditures for each pool will be the sum of the actual expenditures for all episodes attributed to the practices in the pool. The quantity to which a pool's actual expenditures will be compared will be the sum of the target amounts for all practices comprising the pool. Likewise, the performance multiplier will be based on the combined experience of all episodes attributed to

the practices in the pool, as described in Section 7.5. We will calculate one performance-based payment or OCM recoupment for the pool, and it will be paid to or owed by the pool's designated recipient as specified in the OCM Participation Agreement.

Performance-based payments for pools will be calculated in generally the same manner as described above for individual practices. To determine whether a performance-based payment may be made to a pool, we will first compare the pool's actual episode expenditures with the sum of the target amounts for the performance period for all practices in the pool. If the actual episode expenditures are lower than the sum of the practice target amounts, a performance-based payment may be made, contingent upon quality performance. The performance multiplier will be 0 percent, 50 percent, 75 percent, or 100 percent, depending on the pool's AQS for the performance period. The method for determining the performance multiplier is described in Section 7. PBP calculations for pools will follow those shown in Section 6.2.

If the pool is in the one-sided risk arrangement and the actual expenditures are greater than the sum of the target amounts, no performance-based payment will be made.

If the pool is in the original two-sided risk arrangement for the performance period and the actual expenditures are greater than the *target* amount, or if the pool is in the alternative two-sided risk arrangement for the performance period and the actual expenditures are greater than the *benchmark* amount, the pool must pay CMS back the difference (called a recoupment), subject to the stop-loss provisions described in Section 6.3 for the original and alternative two-sided risk arrangements, adjusted for geographic variation and reduced for sequestration (as applicable). OCM recoupment calculations for pools will follow those shown in Section 6.3.

The performance multiplier will not be applied to any recoupment amounts, nor will any ACO Overlap amounts.

Section 7: Quality Measures and the Performance Multiplier

As described above in Section 6, the final calculation of performance-based payment requires the application of a performance multiplier. This multiplier will determine the percentage of eligible performance-based payment (0 percent to 100 percent) that may be paid to each practice or pool. The multiplier will be based on the AQS constructed from each practice's or pool's performance on the quality measures. In Section 7.1, we describe the OCM quality measures and how they contribute to the determination of the performance multiplier. In Section 7.2 we describe the approach for calculating the measure performance rates. In Section 7.3, we describe the methods that will be used to assign quality points to each measure and to calculate the AQS. In Section 7.4 we address cases of inapplicable measures and measures with insufficient denominators. Finally, in Section 7.5 we address scoring for pooled practices.

7.1   Quality Measures and Quality Points

The performance multiplier will be based on a set of up to 14 measures that fall into four domains, shown in Table 3.[9] These measures were chosen after an extensive literature review, a review by a Technical Expert Panel, discussions with CMS, and consideration of alignment with other quality reporting efforts, including the Physician Quality Reporting System (PQRS). Measures are derived from claims, the OCM Data Registry (as reported by practices), and a patient experience of care survey that a CMS contractor will field.

Table 3: Measures to Be Used in OCM Performance Multiplier

Measure Name	OCM Measure Number	Measure Source
Communication and Care Coordination		
Risk-adjusted proportion of patients with all-cause hospital admissions within the 6-month episode[1]	OCM-1	Claims
Risk-adjusted proportion of patients with all-cause emergency department visits or observation stays that did not result in a hospital admission within the 6-month episode	OCM-2	Claims
Proportion of patients who died who were admitted to hospice for 3 days or more	OCM-3	Claims
Care Plan[2]	OCM-24	Registry (practice-reported)
Closing the Referral Loop: Receipt of Specialist Report[2]	OCM-30	Registry (practice-reported)
Person- and Caregiver-Centered Experience and Outcomes		

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[9] OCM-7 was retired effective with the March 2018 reporting period and will only be used in the quality scoring for Performance Period 1. OCM-8 through OCM-11 were retired effective with the March 2019 reporting period and will only be used in the quality scoring for Performance Periods 1 – 3. OCM-24 and OCM-30 were added effective with the March 2019 reporting period and will only be used in the quality scoring for Performance Period 4. OCM-1, OCM-12, OCM-24, and OCM-30 were retired effective with Performance Period 5.

Measure Name	OCM Measure Number	Measure Source
Pain Assessment and Management Composite[3]	OCM-4	Registry (practice-reported)
Preventive Care and Screening: Screening for Depression and Follow-Up Plan (CMS 2v6.3, NQF 0418)	OCM-5	Registry (practice-reported)
Patient-Reported Experience of Care	OCM-6	Survey
Clinical Quality of Care		
Prostate Cancer: Adjuvant Hormonal Therapy for High or Very High Risk Prostate Cancer (PQRS 104, NQF 0390)[4]	OCM-7	Registry (practice-reported)
Adjuvant chemotherapy is recommended or administered within 4 months (120 days) of diagnosis to patients under the age of 80 with AJCC III (lymph node positive) colon cancer (NQF 0223)[5]	OCM-8	Registry (practice-reported)
Combination chemotherapy is recommended or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1cN0M0, or Stage IB - III hormone receptor negative breast cancer (NQF 0559)[5]	OCM-9	Registry (practice-reported)
Trastuzumab administered to patients with AJCC stage I (T1c) - III and human epidermal growth factor receptor 2 (HER2) positive breast cancer who receive adjuvant chemotherapy (NQF 1858)[5]	OCM-10	Registry (practice-reported)
Breast Cancer: Hormonal Therapy for Stage I (T1b)-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer (CMS 140v5.0, NQF 0387)[5]	OCM-11	Registry (practice-reported)
Patient Safety		
Documentation of Current Medications in the Medical Record (CMS 68v6.1, NQF 0419)[6]	OCM-12	Registry (practice-reported)

1. OCM-1 was retired effective with Performance Period 5.
2. OCM-24 and OCM-30 were added effective with the March 2019 reporting period and retired with the September 2019 reporting period.
3. The composite measure, OCM-4, is comprised of two measures: OCM-4a, Oncology: Medical and Radiation – Pain Intensity Quantified (PQRS 143, NQF 0384), and OCM-4b, Oncology: Medical and Radiation – Plan of Care for Pain (NQF 0383).
4. OCM-7 was retired effective with the March 2018 reporting period.
5. OCM-8 – OCM-11 were retired effective with the March 2019 reporting period.
6. OCM-12 was retired effective with the September 2019 reporting period.

Table 4 summarizes the approach for phasing in the measures. In the first five performance periods there will be a mix of pay-for-reporting (P4R) and pay-for-performance (P4P) measures. P4R measures require only that each practice report data on a sufficient number of beneficiaries for the practice or pool to receive quality points. P4P measures are assigned quality points based on the practice or pool's performance as compared to set thresholds, called quality benchmarks.

For episodes ending in the first performance period, the three claims-based measures are P4P and five practice-reported measures (OCM-7 – OCM-11) are P4R. Note that the patient-reported experience of care measure (OCM-6) and five of the practice-reported measures (OCM-4, OCM-5, OCM-12, OCM-24, and OCM-30) *are not included* in the first performance period scoring.

For episodes ending in the second performance period, the three claims-based measures are P4P and seven practice-reported measures (OCM-4, OCM-5, and OCM-8 – OCM-12) are P4R (OCM-7 is retired as of the second performance period). The patient-reported experience of care measure (OCM-6) is not included in the second performance period scoring, nor are OCM-24 and OCM-30, which are effective in the fourth performance period.

For episodes ending in the third performance period, the three claims-based measures are P4P, the patient-reported experience of care measure (OCM-6) is P4P, and seven practice-reported measures are P4R (OCM-4, OCM-5, OCM-8 – OCM-12); however, OCM-8 – OCM-11 are optionally P4R. If OCM-8 – OCM-11 are reported, the maximum number of points available in the denominator in the third performance period is greater. OCM-24 and OCM-30 are not included in the third performance period and are effective in the fourth performance period.

For episodes ending in the fourth performance period, the three claims-based measures and the patient-reported experience of care measure (OCM-6) are P4P and five practice-reported measures are P4R (OCM-4, OCM-5, OCM-12, OCM-24, and OCM-30); however, OCM-12, OCM-24, and OCM-30 are optionally P4R. If any of OCM-12, OCM-24, or OCM-30 are reported, the maximum number of points available in the denominator in the fourth performance period is greater. OCM-8 – OCM-11 are retired as of the fourth performance period.

For episodes ending in the fifth performance period, two claims-based measures (OCM-2 and OCM-3) and the patient-reported experience of care measure (OCM-6) are P4P and two practice-reported measures (OCM-4 and OCM-5) are P4R. OCM-1, OCM-12, OCM-24, and OCM-030 are retired as of the fifth performance period.

For episodes ending in the sixth and subsequent performance periods, there will be five measures (OCM-2 – OCM-6), and all measures are P4P. In response to the COVID-19 PHE, reporting of OCM-4 and OCM-5 is optional for performance periods affected by the PHE.[10] See Appendix K for information on the COVID-19 flexibilities offered to practices. If OCM-4 and OCM-5 are both reported, and both were reported for the prior performance period, the maximum number of points available in the denominator for these performance periods is 50. If both OCM-4 and OCM-5 are not reported, the maximum number of points available in the denominator for these performance periods is 30.

In Table 4, "R" indicates only reporting of the measure will be required for the performance period, and "P" indicates the measure will be scored by comparison with a threshold (described in Section 7.3 below) for the performance period.

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[10] Practices that have previously failed OCM EHR Measure Validation and have not subsequently passed validation may not opt out of this reporting.

Table 4: OCM Measure Phase-in

OCM Measure Number	PP1	PP2	PP3	PP4	PP5	PP6, PP11	PP7-PP10
OCM-1	P	P	P	P	--	--	--
OCM-2	P	P	P	P	P	P	P
OCM-3	P	P	P	P	P	P	P
OCM-4	--	R	R	R	R	P	P*
OCM-5	--	R	R	R	R	P	P*
OCM-6	--	--	P	P	P	P	P
OCM-7	R	--	--	--	--	--	--
OCM-8	R	R	R*	--	--	--	--
OCM-9	R	R	R*	--	--	--	--
OCM-10	R	R	R*	--	--	--	--
OCM-11	R	R	R*	--	--	--	--
OCM-12	--	R	R	R*	--	--	--
OCM-24	--	--	--	R*	--	--	--
OCM-30	--	--	--	R*	--	--	--
# Measures	8	10	7 - 11	6 - 9	5	5	3 - 5

*Optionally reported.

Table 5 shows the maximum number of points available for each measure in each performance period.

Table 5: Maximum Points per Measure per Performance Period

OCM Measure Number	PP1	PP2	PP3	PP4	PP5	PP6, PP11	PP7 – PP10
OCM-1	10	10	10	10	--	--	--
OCM-2	10	10	10	10	10	10	10
OCM-3	10	10	10	10	10	10	10
OCM-4	--	2.5	2.5	2.5	2.5	10	10*
OCM-5	--	2.5	2.5	2.5	2.5	10	10*
OCM-6	--	--	10	10	10	10	10
OCM-7	2.5	--	--	--	--	--	--
OCM-8	2.5	2.5	2.5*	--	--	--	--
OCM-9	2.5	2.5	2.5*	--	--	--	--
OCM-10	2.5	2.5	2.5*	--	--	--	--
OCM-11	2.5	2.5	2.5*	--	--	--	--
OCM-12	--	2.5	2.5	2.5*	--	--	--
OCM-24	--	--	--	2.5*	--	--	--
OCM-30	--	--	--	2.5*	--	--	--

OCM Measure Number	PP1	PP2	PP3	PP4	PP5	PP6, PP11	PP7 – PP10
Total	42.5	47.5	47.5 - 57.5	45 - 52.5	35	50	30 - 50

*Optionally reported.

All P4P measures will have a maximum of 10 points available for each, and all P4R measures will have a maximum of 2.5 points available for each.

In the first performance period, there will be a maximum of 42.5 points available, 30 of which will come from P4P measures and 12.5 of which will come from P4R measures. Scoring in the first performance period will be calculated as follows:

- Maximum of 30 points for P4P measures (3 measures * 10 points each).
- Maximum of 12.5 points for P4R measures (5 measures * 2.5 points each).
- Maximum of 42.5 points total.

In the second performance period, there will be a maximum of 47.5 points available, 30 of which will come from P4P measures and 17.5 of which will come from P4R measures. Scoring in the second performance period will be calculated as follows:

- Maximum of 30 points for P4P measures (3 measures * 10 points each).
- Maximum of 17.5 points for P4R measures (7 measures * 2.5 points each).
- Maximum of 47.5 points total.

In the third performance period, there will be a maximum of 57.5 points available, 40 of which will come from P4P measures and 17.5 of which will come from P4R measures. Scoring in the third performance period will be calculated as follows:

- Maximum of 40 points for P4P measures (4 measures * 10 points each).
- Maximum of 17.5 points for P4R measures (7 measures * 2.5 points each).
- Maximum of 57.5 points total.

In the fourth performance period there will be a maximum of 52.5 points available, 40 of which will come from P4P measures and 12.5 of which will come from P4R measures. Scoring in the fourth performance period will be calculated as follows:

- Maximum of 40 points for P4P measures (4 measures * 10 points each).
- Maximum of 12.5 points for P4R measures (5 measures * 2.5 points each).
- Maximum of 52.5 points total.

In the fifth performance period there will be a maximum of 35 points available, 30 of which will come from P4P measures and 5 of which will come from P4R measures. Scoring in the fifth performance period will be calculated as follows:

- Maximum of 30 points for P4P measures (3 measures * 10 points each).
- Maximum of 5 points for P4R measures (2 measures * 2.5 points each).
- Maximum of 35 points total.

In the sixth and subsequent performance periods there will be a maximum of 50 points available. At this point, the two practice-reported P4R measures transition to P4P and all measures are weighted equally. Therefore, the scoring for the sixth and subsequent performance periods will be calculated as follows:

- Maximum of 50 points (5 measures * 10 points each)

In each performance period, we will calculate the AQS for each practice and pool, expressed as a percent ranging from 0 to 100, which will equal the sum of the points earned on all applicable measures divided by the maximum number of points available, where in the third and fourth performance periods the maximum number of points available may vary depending on which measures were reported, and in the performance periods affected by the COVID-19 flexibilities the maximum number of points available may vary depending on whether a practice opted out of reporting. The performance multiplier will depend upon the AQS. Section 7.2 describes how performance rates are calculated for each measure, and Section 7.3 describes how the reporting and performance rates determine the number of points earned for each measure.

7.2 Performance Rates

Performance rates on P4P measures will be calculated according to the specifications for each measure. Performance rates for claims-based measures (OCM-1 – OCM-3) will be calculated using Medicare administrative data only. Performance rates for the patient-reported experience of care measure (OCM-6) will be calculated using the survey data collected by the Evaluation Contractor and a methodology agreed upon by the Evaluation Contractor, the Implementation Contractor, and CMS. Performance rates for practice-reported measures (OCM-4 and OCM-5) will be calculated using data submitted to the OCM Data Registry by OCM practices.

Because certain measures may not generate denominators that are high enough to calculate stable performance rates in one 6-month performance period, we will use the average episode-weighted performance rate over two performance periods to calculate the quality score for all quality measures. Each calculation will cover the current performance period and the prior one. We will add the denominators and numerators from the current and prior performance periods and calculate one performance rate for each measure. This should help reduce the number of cases where a measure denominator is too low to calculate a statistically reliable performance rate with only 6 months of data. In order to calculate the average performance rates for practice-reported measures OCM-4 and OCM-5, practices must have reported both measures for both measurement periods on which the performance rate is based, even for measurement periods where reporting was optional.

For all measures except OCM-6, the required denominator size is 20 (i.e., 20 episodes, 20 visits, etc.) in the two performance periods combined. For OCM-6, the required "denominator" is 100 survey responses over two performance periods. See Section 7.4 for the treatment of measures where the denominator does not meet the minimum requirement. Only the claims-based measures will be scored based on performance in the first performance period, where there is no prior performance period with which to average. In this case, the performance rate will include

episodes terminating during the first half of 2016 as well as those terminating during the first performance period (first half of 2017).[11]

Since the model measures financial performance during 6-month episodes of chemotherapy, quality performance will also be based on 6-month episodes to the extent possible. As written above, each quality performance calculation will average the performance rates of the current performance period with the performance rates of the previous performance period. As such, measure calculations will include the applicable patients with episodes in those two performance periods and will include events for those patients occurring during their 6-month episodes, again, to the extent possible. In the context of this paper, "applicable patients" refers to the patients who qualify for a particular measure (for example, the breast cancer measures do not apply to patients who do not have breast cancer).

7.3 Measure Scoring and Aggregate Quality Score

The process of assigning quality points to each measure, called "scoring," will be based on practices' reporting and/or quality performance relative to set thresholds. Reporting performance is based on whether the practice reported data to the OCM Data Registry.

Performance thresholds will be determined based on the best data available for each type of measure. If national data are available, they will be employed first to set performance thresholds. If national data are not available (e.g., the patient-reported experience of care measure, for which there is no national data at this time) we will use other sources of information to set the thresholds. In the sections below (Section 7.3.1, Section 7.3.2, and Section 7.3.3) we describe the scoring approach for each measure type (claims-based, practice-reported, and patient-reported).

7.3.1 Claims-Based Measure Scoring

Performance thresholds for claims-based measures were determined using national historical Medicare claims data for OCM participating and non-participating practices. We developed a distribution of performance for all practices nationally to which episodes were attributed, following the same episode identification and attribution specifications defined in Section 1. The six performance periods covered by the OCM 3-year baseline time frame were aggregated into three 12-month periods, called "practice-years." Each practice-year contributed to the threshold calculations if at least a minimum number of episodes was attributed to it – a minimum of 100 episodes for OCM-1 and OCM-2 and a minimum of 20 episodes ending in death for OCM-3. Using this distribution, we set performance thresholds at each quintile. These quintiles determine the number of points awarded for each measure.

See Table 6 for the point structure that applies to each claims-based measure. For OCM-3, a higher rate on the performance measure results in a higher number of points being assigned. However, it is important to note that OCM-1 and OCM-2 have a reverse scoring structure, where a

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[11] Ideally, we would average episodes ending in the first half of 2017 with those ending in the last half of 2016, to use consecutive performance periods. However, this would cause significant overlap in episodes used, double-counting the same experience, since episodes will be 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 ending in the first half of 2016 (rather than the second half), we avoid this potential for double-counting.

lower rate on the performance measure indicates better quality and therefore results in a higher number of points being assigned. This reverse scoring structure is reflected in the performance thresholds in the document "OCM Claims Based Quality Measure Benchmarks," available on the CMS OCM website.

Table 6: Scoring of Claims-Based Measures

OCM-1 and OCM-2: Quality Performance Rate (P)	OCM-1 and OCM-2: Points Assigned	OCM-3: Quality Performance Rate (P)	OCM-3: Points Assigned
P ≤ 20th Percentile	10	P ≥ 80th Percentile	10
20th Percentile < P ≤ 40th Percentile	7.5	60th Percentile ≤ P < 80th Percentile	7.5
40th Percentile < P ≤ 60th Percentile	5	40th Percentile ≤ P < 60th Percentile	5
60th Percentile < P ≤ 80th Percentile	2.5	20th Percentile ≤ P < 40th Percentile	2.5
P > 80th Percentile	0	P < 20th Percentile	0

7.3.2 Practice-Reported Measure Scoring

In the first through fifth performance periods, the practice-reported measures (five measures in the first performance period, seven measures in the second, up to seven measures in the third performance period, up to five measures in the fourth performance period, and two measures in the fifth performance period) will be P4R. In the sixth and subsequent performance periods, all practice-reported measures will be P4P measures. Below we describe the approach we will use to score practice-reported measures when they are P4R and when they are P4P.

Pay-for-reporting

In all performance periods in which the OCM FFS Beneficiary and Practice-Level (All Payer) measures (OCM-4, OCM-5, OCM-7 – OCM-12, OCM-24, and OCM-30) are P4R, practices will receive the maximum number of reporting points (2.5) for those measures, as long as they have reported the measure, except in cases where the practice has no attributed OCM episodes for a Practice-Level (All Payer) measure's (OCM-7 – OCM-11) cancer type. For example, if a practice has no colon cancer episodes, OCM-8 will be inapplicable for that practice and will be excluded from scoring (see Section 7.4 for more information). Please note that CMS may reduce or eliminate a practice's reporting points in the event that an audit of a practice's medical records demonstrates that the quality measure data reported were not complete or accurate. For more information on the Practice-Level (All Payer) and OCM FFS Beneficiary measures, see the OCM Quality Measures Guide on the CMS OCM website.

Pay-for-performance

P4P measures (OCM-4 and OCM-5, beginning in the sixth performance period) will be scored based on the practice's performance on the measures as compared to set quality thresholds. At the beginning of OCM, there were no reliable national data available for the OCM practice-reported measures, as they were developed specifically for OCM. We have used the data reported by the OCM practices to calculate performance thresholds for these measures. These thresholds

are reflected in the document called "OCM Practice-Reported Measure Benchmarks," available on the CMS OCM website.

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

The AQS for each performance period will be based on the applicable OCM FFS Beneficiary measure results reported by each respective reporting deadline. The OCM FFS Beneficiary measures will not be updated after attribution is received or in the first or second true-up of each performance period.

Table 7 shows which registry data will be used in the scoring of the practice-reported measures for each performance period. Note that beginning with Performance Period 6, when the practice-reported measures become P4P, the quality scores will be determined using two measurement periods of data rather than one, per the description above whereby quality scores for each performance period will be calculated as the average of the scores for the current and previous performance periods. In order to receive scores for OCM-4 and OCM-5 under P4P, practices must have reported both measures for both measurement periods on which the performance rate is based, even for measurement periods where reporting is optional.

Table 7: Registry Data Used in Scoring Practice-Reported Measures, by Performance Period

Performance Period	Measurement Period(s)	Reporting Deadline(s)
1	January – June, 2017	October 2017
2	July – December, 2017	April 2018
3	January – June, 2018	September 2018
4	July – December, 2018	March 2019
5	January – June, 2019	September 2019
6	January – June, 2019 July – December, 2019	September 2019, March 2020
7	July – December, 2019 January – June, 2020	March 2020, September 2020
8	January – June, 2020 July – December, 2020	September 2020, March 2021
9	July – December, 2020 January – June, 2021	March 2021, September 2021
10	January – June, 2021 July – December, 2021	September 2021, March 2022
11	July – December, 2021 January – June, 2022	March 2022, September 2022

7.3.3 Patient Experience of Care Scoring

A multi-item survey to assess patient experience with chemotherapy care will be administered to a sample of patients at each practice. Twenty-six of the survey items will be based on the first Consumer Assessment of Healthcare Providers and Systems (CAHPS) for Cancer Care field test report and will center on five composites and one overall measure of patient experience.[12] In its current form, the CAHPS for Cancer Care composites include "Exchanging Information with Patients" (four scored items), "Access" (six scored items), "Shared Decision Making" (composite not scored), "Enabling Self-Management" (eight scored items), and "Affective Communication" (four scored items). Additional survey items will be drawn from various validated instruments (e.g., CAHPS for Cancer Care, CanCORS), but these items will not be used for scoring purposes.

We will use the responses to all composite-related items to create summary scores for each composite, except for the Shared Decision Making composite. Field tests to date have indicated that the Shared Decision Making composite is not sufficiently reliable for benchmarking and payment purposes. We will collect these data for monitoring purposes and may score this composite in the patient experience measure in future performance periods (not earlier than the third). We will also score the overall measure of patient experience. One aggregate "patient experience" score will then be calculated from the five scores (four composite scores and one summary item scores).

First, each beneficiary's responses to the individual survey items will be assigned point values ranging from 0 to 10. Then we will 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, we will calculate average composite point values over all surveyed beneficiaries in each practice or pool. Average composite values will be risk-adjusted to account for the characteristics of the episodes in the practice or pool. Covariates used in the risk adjustment will include characteristics that are predictive of patient experience such as age, sex, Medicaid status, cancer type, education level, self-reported health status, and HCC categories. Many of these variables are also used in the expenditure prediction model. Finally, we will calculate the aggregate patient experience of care score for each practice or pool as the average of the five scores. Appendix H lists the scored survey items in each of the four composites and in the overall measure of patient experience as well as the point values that will be assigned to each response.

As with several of the practice-reported measures, there are currently no external data available for the OCM patient experience of care measure. We have used the data from the surveys fielded during the early months of the model among all participants to calculate performance thresholds for this measure. These thresholds are reflected in the document called "OCM Patient Experience Measure Benchmarks," available on the CMS OCM website.

The patient experience survey will be administered each quarter to a sample of the beneficiaries who received cancer care at each OCM practice in a 6-month period. Each administration of the survey is referred to as a "wave." The survey waves overlap. For example, Wave 1 was

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[12] https://www.advisory.com/-/media/Advisory-com/Research/OR/Blog/2014/Cancer-CAHPS-Update.pdf

administered to beneficiaries who received cancer care at OCM practices between January and June of 2016 and Wave 2 was administered to beneficiaries who received cancer care at OCM practices between April and September of 2016. No beneficiary will be surveyed more than one time in a 12-month period. Table 8 shows the survey waves that will be used in the scoring for each performance period. Note that because the performance rate for OCM-6 will be based on data from the current performance period and the one prior, the final performance rate for each performance period will be based on five survey waves (due to the overlap of survey waves described above).

Table 8: Survey Waves Used in Scoring OCM-6, by Performance Period

Performance Period	Survey Waves	Dates Beneficiaries Received Care
1	n/a	n/a
2	n/a	n/a
3	Wave 4 – Wave 6 Wave 6 – Wave 8	October 2016 – September 2017 April 2017 – March 2018
4	Wave 6 – Wave 8 Wave 8 – Wave 10	April 2017 – March 2018 October 2017 – September 2018
5	Wave 8 – Wave 10 Wave 10 – Wave 12	October 2017 – September 2018 April 2018 – March 2019
6	Wave 10 – Wave 12 Wave 12 – Wave 14	April 2018 – March 2019 October 2018 – September 2019
7	Wave 12 – Wave 14 Wave 14 – Wave 16	October 2018 – September 2019 April 2019 – March 2020
8	Wave 14 – Wave 16 Wave 16 – Wave 18	April 2019 – March 2020 October 2019 – September 2020
9	Wave 16 – Wave 18 Wave 18 – Wave 20	October 2019 – September 2020 April 2020 – March 2021
10	Wave 18 – Wave 20 Wave 20 – Wave 22	April 2020 – March 2021 October 2020 – September 2021
11	Wave 20 – Wave 22 Wave 22 – Wave 24	October 2020 – September 2021 April 2021 – March 2022

7.3.4 Aggregate Quality Score

After points have been determined for each measure, all earned points will be summed and divided by the practice's or pool's total possible points to calculate the AQS. Practices or pools will then be awarded performance-based payments by comparing their AQS to a payment scale to determine the performance multiplier (in the case where the target amount exceeds the average episode expenditures in the performance period). Table 9 shows a mapping of the AQS to the performance multiplier.

Table 9: Aggregate Quality Score Translated into Performance Multiplier

Aggregate Quality Score (% of maximum points)	Performance Multiplier
75% – 100%	100%
50% – 74%	75%
30% – 49%	50%
Less than 30%	0%

In order to receive a performance-based payment, practices must have reported all applicable measures for the performance period to the OCM Data Registry, per the OCM Participation Agreement. Note that in the third and fourth performance periods, the optional measures need not be reported for a practice or pool to be eligible for a performance-based payment, and that in COVID-19 PHE affected performance periods where reporting is optional (the seventh through tenth performance periods), practices and pools need not report in order to be eligible for a performance-based payment.[13] A practice or pool that scores above the 30 percent minimum in Table 9, but does NOT report sufficiently to the OCM Data Registry, as applicable, will not receive a performance-based payment.

In Table 10, we show two examples of the quality score calculation, one for the third performance period and one for the sixth performance period.

Performance Period 3 Example: Assume that a practice reports all P4R measures in Performance Period 3, including the optional measures OCM-8 – OCM-11, as in the "Performance Period 3 Example" columns in Table 10. The practice receives the maximum number of points for the P4R measures (2.5 * 7 = 17.5 points). The practice also earns 7.5 quality points for each P4P measure (7.5 * 4 = 30 points). The sum of all quality points is 47.5 and the AQS is 82.6 percent (equal to 47.5 divided by 57.5). The practice would earn 100 percent of the eligible performance-based payment (if actual expenditures are lower than the target amount) for that performance period.

Performance Period 6 Example: Assume that a practice earns points for each measure as in the "Performance Period 6 Example" columns in Table 10 and that it reported all measures in the performance period. The sum of all quality points is 30 and the AQS is 60 percent (equal to 30 divided by 50). The practice would earn 75 percent of the eligible performance-based payment (if actual expenditures are lower than the target amount) for that performance period.

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[13] In PP7, which is affected by the COVID-19 PHE, practices and pools that report for PP7 must also have reported for PP6, when reporting was required, to be eligible for a performance-based payment.

Table 10: Illustrative Quality Scoring Examples

OCM Measure Number	Perf. Period 3 Example, Points Earned	Perf. Period 3 Example, Maximum Points	Perf. Period 6 Example, Points Earned	Perf. Period 6 Example, Maximum Points
OCM-1	7.5	10	--	--
OCM-2	7.5	10	7.5	10
OCM-3	7.5	10	7.5	10
OCM-4	2.5	2.5	2.5	10
OCM-5	2.5	2.5	5	10
OCM-6	7.5	10	7.5	10
OCM-8	2.5	2.5	--	--
OCM-9	2.5	2.5	--	--
OCM-10	2.5	2.5	--	--
OCM-11	2.5	2.5	--	--
OCM-12	2.5	2.5	--	--
OCM-24	--	--	--	--
OCM-30	--	--	--	--
P4R Points	17.5	17.5	NA	NA
P4P Points	30	40	30	50
Total Points	47.5	57.5	30	50
AQS	82.6%	--	60%	--
Performance Multiplier	100%	--	75%	--

7.4 Inapplicable Measures and Measures with Insufficient Denominator Size

We anticipate that OCM will include practices of varying sizes and specialties. As such, there may be practices that either 1) do not have enough episodes in the performance rate calculation to provide a statistically reliable denominator, or 2) do not treat patients with the type of cancer for which a measure is defined. For example, urology practices may not have breast or colon cancer episodes attributed, yet in some performance periods OCM includes four quality measures that are specific to breast and colon cancers.

If a practice or pool has no beneficiaries that meet the criteria for inclusion in the denominator of a practice-reported measure, we will exclude that measure from the calculation of the AQS for that performance period. Using the third performance period and a urology practice that sees no breast or colon cancer patients as an example, rather than having a maximum of 57.5 points available, the practice would have a maximum of 52.5 points available. Scoring on all other measures would remain as described previously.

If a practice or pool chooses not to report the optional measures in the third or fourth performance period, we will exclude those measures from the calculation of the AQS. Likewise, if a practice or pool chooses not to report the registry measures in the performance periods to which

the COVID-19 reporting flexibilities apply, we will exclude both measures from the calculation of the AQS.

In the same way, if a practice or pool does not have enough episodes in the calculation of the two-performance period average to comprise a minimum denominator of 20, we will exclude that measure from the calculation of that practice's or pool's AQS for that performance period.

Similarly, the patient experience of care measure must be based on a sufficient number of survey responses to provide a statistically reliable performance score. If a practice or pool does not have at least 100 survey responses over two performance periods, we will exclude the patient experience of care measure from the calculation of that practice's or pool's AQS for that performance period.

7.5 Scoring for Pooled Practices

OCM pools that are made up of more than one practice will have all of their episodes treated as if they belong to one practice for the purposes of quality scoring. This means we will sum the numerators and denominators for each practice in the pool before calculating pooled performance rates for each measure. For the patient experience of care measure, which is calculated at the practice level, we will calculate a weighted average of aggregate patient experience of care scores across all practices in the pool. The number of episodes in each practice during the performance period will serve as the weight. These methods implicitly or explicitly weight the performance for each practice in the pool by the number of episodes attributed to the practice in the performance period. The points for each pooled performance rate will be assigned and summed to produce the AQS in the same way as for individual practices.

Section 8: Example

The following example illustrates the calculation of the performance-based payment under the one-sided and two-sided risk arrangements. The example is for illustrative purposes only and does not necessarily reflect the experience expected during any given performance period.

In this example, the sum of baseline episode prices is calculated as $2.5 million for a practice with approximately 100 episodes. After application of a trend factor of 1.02 and an adjustment for novel therapies of 1.01, the benchmark amount is $2.576 million. After application of the OCM discount rate, the target amount is $2,472,480 for the performance period for the one-sided risk arrangement (4 percent discount), $2,504,674 for the original two-sided risk arrangement (2.75 percent discount), and $2,511,113 for the alternative two-sided risk arrangement (2.5 percent discount). The practice's actual episode expenditures for the performance period are $2.3 million and the performance multiplier is 75 percent. The performance multiplier is multiplied by the difference between the target amount and the actual episode expenditures to arrive at the performance-based payment for the practice. Finally, a geographic adjustment of 1.03 and the sequestration adjustment of 2 percent are applied to calculate the final performance-based payment of $130,576 under the one-sided risk arrangement, $154,948 under the original two-sided risk arrangement, and $159,823 under the alternative two-sided risk arrangement.

Table 11: Example Performance-Based Payment Calculation

		One-Sided Risk	Original Two-Sided Risk	Alternative Two-Sided Risk
A	Sum of Baseline Episode Prices	$2,500,000	$2,500,000	$2,500,000
B	Adjustment for Trend	1.02	1.02	1.02
C	Adjustment for Novel Therapies	1.01	1.01	1.01
D	Benchmark Amount (A * B * C)	$2,575,500	$2,575,500	$2,575,500
E	OCM Discount Rate	4.00%	2.75%	2.5%
F	OCM Discount Amount (D * E)	$103,020	$70,826	$64,388
G	Target Amount (D - F)	$2,472,480	$2,504,674	$2,511,113
H	Actual Episode Expenditures	$2,300,000	$2,300,000	$2,300,000
I	Difference (Target less Actual; G - H)	$172,480	$204,674	$211,113
J	Performance Multiplier	75%	75%	75%
K	Performance-Based Payment (I * J)	$129,360	$153,505	$158,334
L	Final Performance-Based Payment, after Geographic Adjustment and Sequestration (K * 1.03 * 0.98)	$130,576	$154,948	$159,823

Section 9: OCM Resources

OCM Connect: https://app.innovation.cms.gov/OCMConnect (for model participants only)

CMS OCM Website: https://innovation.cms.gov/initiatives/Oncology-Care

OCM Participant Portal: https://app.innovation.cms.gov/ocmpost

OCM Support: OCMSupport@cms.hhs.gov

1-844-711-2664 (1-844-711-CMMI), Option 2

Appendix A: Specifications for Episode Identification

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

- Step 1: Identify all possible claims that could trigger an episode ending in the performance period.
    - Carrier, DMEPOS (identification at the line level):
        - The claim must contain a line item HCPCS code indicating an included chemotherapy drug (initiating cancer therapy) in any line item.
        - The chemotherapy drug line item must have a "line first expense date" in the appropriate 6 month "Episodes Beginning" period in Table 1, inclusive of end dates.
        - The chemotherapy drug line item must not be denied (line allowed charge >0).
        - The chemotherapy drug line place of service must not be an inpatient hospital (21).
        - The chemotherapy drug claim must contain an included cancer diagnosis code (see "OCM Cancer Type Mapping and Codes") either:
            1) In any non-denied line item on the same claim (does not have to be same line as HCPCS code above) OR
            2) Anywhere in the claim header AND contains ICD10 code Z51.11 or Z51.12 or ICD9 code V58.11 or V58.12 as the principal diagnosis in the claim header.
        - The trigger date is the line first expense date on the qualifying chemotherapy drug line.

    - Outpatient (identification at the revenue center level):
        - The claim must contain a HCPCS code indicating an included chemotherapy drug (initiating cancer therapy) in any revenue center.
        - The "revenue center date" on the same revenue center in which the HCPCS code is found must be in the appropriate 6 month "Episode Beginning" period in Table 1, inclusive of end dates.
        - The claim must not be denied (Medicare non-payment reason code is not blank).
        - The revenue center in which the HCPCS code is found must not be denied ("revenue center total charge amount" minus "revenue center non-covered charge amount" > 0).
        - The claim header must contain an included cancer diagnosis code (see "OCM Cancer Type Mapping and Codes").
        - The trigger date is the revenue center date.

    - Part D (identification at the claim level):
        - The claim must contain an included chemotherapy drug (initiating cancer therapy) NDC code.
        - The claim "fill date" must be in the appropriate 6 month "Episode Beginning" period in Table 1, inclusive of end dates.

- – A non-denied Carrier (line allowed charge >0) or Outpatient (Medicare non-payment reason code is not blank) claim with an included cancer diagnosis code (see "OCM Cancer Type Mapping and Codes") 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 from date on the Outpatient claims to determine if the claim occurred on the fill date or in the 59 days prior.
  - – The trigger date is the fill date on the PDE claim.

- Step 2: Identify potential episodes
  - o For each potential trigger claim identified in Step 1, flag whether the 6 months following the trigger date meet the three criteria below. Episodes will 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.
    - – For all performance periods, the potential episode trigger date must not be included in any episode defined for a prior performance period.[14] Potential trigger claims occurring inside a previously defined episode cannot trigger a new episode.
    - – The 6 month period beginning with the trigger date must contain a non-denied Carrier claim with a qualifying E&M visit (HCPCS code 99201 – 99205, 99211 – 99215), an included cancer diagnosis code (see "OCM Cancer Type Mapping and Codes"), and be billed by a TIN with at least one oncology provider (see specifications below) on the same line item.
    - – The beneficiary must meet the criteria below for the entire 6 month period (or until death) beginning with the trigger date, inclusive of end dates:
      - Beneficiary is enrolled in Medicare Parts A and B;
      - Beneficiary does not receive the Medicare ESRD benefit, as determined by the Medicare Enrollment Database;
      - Beneficiary has Medicare as his or her primary payer;
      - Beneficiary is not covered under Medicare Advantage or any other group health program.

- Step 3: Identify final set of episodes.
  - o For each unique beneficiary, identify the first potential episode from Step 2 meeting all three criteria.
    - – Apply the following hierarchy if there is more than one trigger claim on the same day from different types of service: Outpatient, Carrier, DMEPOS, Part D
    - – If there is still more than one trigger claim on the same day within the same type of service, choose the claim with the first claim ID.

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

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[14] The model will only define episodes that began on or after July 1, 2016.

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:
  - o Have a "line first expense date" occurring between the earliest episode beginning date and the latest episode ending date for the performance period (i.e., between 7/2/2017 and 6/30/2018 for performance period 3);
  - o Have a HCPCS code in the range 99201 – 99205 or 99211 – 99215;
  - o Have "line allowed charge" > 0;
  - o Have a diagnosis code in the list of included cancer diagnoses (see "OCM Cancer Type Mapping and Codes");
  - o Have a provider specialty code of 83 (Hematology/Oncology), 90 (Medical Oncology), 91 (Surgical Oncology), 92 (Radiation Oncology), 98 (Gynecology 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

- Step 1: Identify all visits that count toward the assignment of a cancer type. Qualifying visits:
  - Appear in the Carrier claims file (i.e., have been billed on the CMS-1500 or electronic equivalent);
  - Are identified at the line item level (because visits on different days may be billed on a single claim);
  - Have a "line first expense date" occurring between the episode beginning and ending dates, inclusive of begin and end dates;
  - Have a HCPCS code in the range 99201 – 99205 or 99211 – 99215, which indicates an E&M service;
  - Have "line allowed charge" > 0, indicating that the line service was not denied by Medicare;
  - Have a diagnosis code in the list of included cancer diagnoses (see "OCM Cancer Type Mapping and Codes") on the same line as the E&M visit.
  - Are billed by a TIN with at least one oncology provider (see specifications in Appendix A).

- Step 2: Identify unique visits and count the number of visits associated with each cancer type.
  - Map the diagnosis code on the E&M line to a cancer type as defined in the document "OCM Cancer Type Mapping and Codes."
  - For the purposes of assigning a cancer type to the episode, a visit 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.
  - The TIN is the taxpayer identification number on the same line as the qualifying E&M visit.
  - This step should result in a file of visit counts by unique beneficiary-cancer type combinations.

- Step 3: Assign the episode the cancer type that has the most visits.
  - In the event of a tie, apply tie-breakers in the order below. Assign the cancer type associated with:
    - The most recent visit in the episode, second most recent visit, third most recent visit, etc.;
    - The cancer type that is reconciliation-eligible;
    - The lowest last digit of the TIN;
    - The highest claim ID.

- Step 4: Determine if the episode has received CAR-T, by the presence of either an inpatient or outpatient CAR-T claim:
  - Identify CAR-T claims in the inpatient files as:
    - Claim contains an ICD10 procedure code (1 – 25) of XW033C3 or XW043C3 OR claim contains a DRG code of 018[15], and

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[15] DRG 018 was new in 2021 and will apply beginning with PP9.

- The claim admission date falls between the first and last dates of the episode, inclusive.
    - o Identify CAR-T claims in the outpatient files as:
        - Claim contains a HCPCS code of Q2040, Q2041, or Q2042 and
        - If claim from date is in 2019, claim contains a HCPCS code of 0540T. Otherwise 0540T not required, and
        - The claim from date or claim thru date falls between the first and last dates of the episode, inclusive.

- Step 5: Identify episodes receiving CAR-T as non-reconciliation eligible, regardless of the cancer type previously assigned to the episode.

- Step 6: Determine if the episode had a claim with a COVID-19 diagnosis:
    - o Identify COVID19 claims in the inpatient files by:
        - The **claim admission date** falls between the first and last dates of the episode, inclusive; and,
        - Claim header (icd_dgns_cd1 - icd_dgns_cd25 or admtng_dgns_cd) contains an ICD10 diagnosis of B97.29, for claim admission dates on 1/27/20-3/31/20 OR an ICD10 diagnosis of U07.1, for claim admission dates on or after April 1, 2020; and
        - The Medicare nonpayment reason code on the claim is blank.

    - o Identify COVID19 claims in the outpatient files by:
        - The **claim from date or claim thru date** falls between the first and last dates of the episode, inclusive; and
        - Claim header (icd_dgns_cd1 - icd_dgns_cd25) contains an ICD10 diagnosis of B97.29, if the claim from or thru date is on 1/27/20-3/31/20, or an ICD10 diagnosis of U07.1, if the claim from or thru date is on or after April 1, 2020; and
        The claim is not denied (Medicare nonpayment reason code is blank).

    - o Identify COVID19 claims in the physician files by:
        - The **claim from date or claim thru date** falls between the first and last dates of the episode, inclusive; and
        - Claim <u>header</u> (icd_dgns_cd1 - icd_dgns_cd25 [or50]) contains an ICD10 diagnosis of B97.29, if the claim from or thru date is on 1/27/20-3/31/20, or an ICD10 diagnosis of U07.1, if the claim from or thru date is ON OR AFTER April 1, 2020; and
        - The claim is not denied (carrier claim payment denial code is one of: 1-9, A, B).

- Step 7: Identify episodes with a COVID-19 diagnosis as non-reconciliation eligible, regardless of the cancer type previously assigned to the episode.

Appendix C: Specifications for Episode Attribution

- Step 1: Identify all visits that count toward attribution. Qualifying visits:
  - Appear in the Carrier claims file (i.e., have been billed on the CMS-1500 or electronic equivalent);
  - Are identified at the line item level (because visits on different days may be billed on a single claim);
  - Have a "line first expense date" occurring between the episode beginning and ending dates, inclusive of begin and end dates;
  - Have a HCPCS code in the range 99201 – 99205 or 99211 – 99215, which indicates an E&M service;
  - Have "line allowed charge" > 0, indicating that the line service was not denied by Medicare;
  - Have a diagnosis code in the list of included cancer diagnoses (see "OCM Cancer Type Mapping and Codes") on the same line as the E&M visit.
  - Are billed by a TIN with at least one oncology provider (see specifications in Appendix A).

- Step 2: Count the number of qualifying visits to each TIN.
  - A visit is defined by the unique combination of beneficiary ID, TIN, and line first expense date.
  - Assign the visit to the TIN on the same line as the qualifying E&M visit. A TIN will either be associated with an OCM ID or it will not.
  - Sum the number of visits by beneficiary and TIN (in the case of non-OCM practices) or OCM ID (in the case of OCM practices). In the baseline period, in cases where an OCM ID has more than one TIN (i.e., a current and legacy TIN), sum the visits over all TINs associated with the OCM ID. (In a performance period, an OCM practice is always defined by one OCM ID and one TIN.)
  - This step results in a file of visit counts by unique beneficiary-TIN/OCM ID combinations.

- Step 3: Attribute the episode to the TIN or OCM ID with the most qualifying visits.
  - In the event of a tie, apply tie-breakers in the order below. Attribute the episode to the TIN/OCM ID with:
    - The most recent visit in the episode, second most recent visit, third most recent visit, etc.
    - The lowest last digit of the TIN, second lowest digit, etc.
  - In cases where practices have pooled together for the purposes of reconciliation, continue to attribute episodes to the individual OCM IDs within the pool. Do not combine visits across the OCM IDs in the pool for the purposes of determining plurality.

Appendix D: Baseline Trend Adjustments

The baseline trend adjustments were created to move all episode expenditures to the same level as the expenditures for episodes ending in the most recent 6-month baseline period (1/1/2015 – 6/30/2015). The adjustments reflect the impact of inflation and any changes in episode expenditures due to evolving patterns of care, Medicare payment policies, etc. during the baseline period. The adjustment factor for a given period was calculated by dividing average, un-Winsorized expenditures for episodes ending in the period 1/1/2015 – 6/30/2015 by the average, un-Winsorized expenditures for episodes ending in the period to be adjusted. The adjustment factor was then applied to the expenditures of each episode in the period undergoing adjustment. This brought all baseline episode expenditures forward to the latest 6-month baseline period. The baseline trend adjustments are shown below.

Table D-1: Baseline Trend Adjustments

Episode Ending Dates	Number of Episodes	Average Episode Expenditures[1]	Baseline Trend Adjustment
7/1/2012 - 12/31/2012	466,605	$25,009.02	1.0813338607
1/1/2013 - 6/30/2013	390,517	$25,611.27	1.0559060338
7/1/2013 - 12/31/2013	416,439	$25,973.30	1.0411881779
1/1/2014 - 6/30/2014	391,010	$26,181.15	1.0329224139
7/1/2014 - 12/31/2014	420,311	$26,793.53	1.0093144046
1/1/2015 - 6/30/2015	401,605	$27,043.10	1.0000000000

[1] Standardized, un-Winsorized dollars

Appendix E: Baseline Winsorization Adjustments

Winsorization is a two-sided truncation adjustment that limits the impact of outliers on predicted and actual expenditures, as explained in [Section 2.5](). Baseline 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 within cancer type. The Winsorization adjustments occur after baseline trending.

Winsorization thresholds for the 5th and 95th percentiles are listed in Table E-1 by cancer type.

Table E-1: Winsorization Thresholds

Cancer type	5th Percentile of Episode Expenditures[1]	95th Percentile of Episode Expenditures[1]
Acute Leukemia	$8,254.37	$151,268.63
Anal Cancer	$8,069.98	$81,512.63
Bladder Cancer	$2,066.46	$61,703.01
Breast Cancer	$461.09	$53,642.05
CNS Tumor	$9,185.23	$97,356.83
Chronic Leukemia	$4,317.93	$90,063.21
Endocrine Tumor	$7,838.61	$72,814.59
Female GU Cancer other than Ovary	$2,324.35	$65,449.71
Gastro/Esophageal Cancer	$8,135.86	$91,478.86
Head and Neck Cancer	$7,179.33	$92,646.06
Kidney Cancer	$4,980.39	$83,580.51
Liver Cancer	$7,398.50	$80,274.83
Lung Cancer	$7,626.05	$85,206.23
Lymphoma	$7,936.91	$97,294.36
MDS	$11,056.27	$108,103.78
MEOS, no PBP[2]	$837.68	$75,525.40
Malignant Melanoma	$3,759.67	$171,644.46
Multiple Myeloma	$11,202.91	$98,156.68
Ovarian Cancer	$3,932.29	$72,450.97
Pancreatic Cancer	$7,027.21	$76,767.31
Prostate Cancer	$1,406.69	$60,034.30
Small Intestine / Colorectal Cancer	$6,332.27	$85,498.09

[1] Standardized, trended dollars

[2] The "MEOS, no PBP" cancer type is not used in reconciliation.

Appendix F: Specifications for the Novel Therapies Adjustment

The adjustment for the use of novel therapies will be calculated based on the proportion of each practice's or pool's average episode expenditures for specified new oncology drugs compared to the same proportion for episodes that are not part of OCM. The method is described below.

- Step 1: Calculate Proportion of Episode Expenditures for Specified Novel Therapies at the Practice or Pool

  A. = the actual episode expenditures for all services for all episodes attributed to the practice or pool during the same performance period.

  B. = the actual episode expenditures associated with the new oncology therapies for all episodes attributed to a practice or pool where the cancer type assigned to the episode is the same as the cancer type for which the FDA has approved the new therapy.

  C. = the expenditures associated with the new oncology chemotherapy drugs as a proportion of actual episode expenditures. C equals B divided by A.

- Step 2: Calculate Proportion of Episode Expenditures for Specified Novel Therapies at All Non-Participating Practices

  o Perform the same calculations in Step 1 for the non-participating practices for the same time period. This is the amount that should already be incorporated into the overall trend factor for the specific therapies.

- Step 3: Compare Relative Proportions and Calculate Difference

  o Compare the proportions in Steps 1 and 2. If the proportion calculated for the non-participating practices is greater than that for the practice or pool, no adjustment will be made to the baseline prices. If the reverse is true, then the practice or pool had a higher proportion of expenditures for the new therapies than was the case at the non-participating practices and will qualify for an adjustment based on 80 percent of the difference in relative expenditures.

- Step 4: Calculate Adjustment and Apply to Baseline Prices

  o If the proportion of episode expenditures for novel therapies at the practice or pool exceeds the proportion for the non-participating practices then the adjustment can be calculated as shown in the example in Table F-1 below. In this example, the practice's actual episode expenditures are $2.3 million and the practice's expenditures associated with novel therapies are $149,500. The corresponding proportion of expenditures associated with novel therapies for this practice is 6.5 percent ($149,500 / $2.3 million). The analogous proportion for all practices not participating in OCM is 4 percent. We first determine the practice's additional expenditures on novel therapies in the performance period beyond what is reflected in the national non-OCM experience; this is equal to the practice's actual episode expenditures ($2.3 million) multiplied by the difference between the practice's novel therapy proportion and the national non-OCM novel therapy proportion, which is 2.5 percent (6.5 percent - 4 percent). These additional expenditures are $57,500 ($2.3 million * 0.025). Next, we multiply the additional expenditures by a policy factor of 80 percent ($57,500 * 0.8 = $46,000), and divide the reduced additional expenditures by

the sum of the practice's trended baseline prices ($2.5 million in the example) to calculate the novel therapy adjustment. In this example, the adjustment is 1.84 percent ($46,000 / $2.5 million). We will increase each trended baseline price by this percentage to determine the benchmark price. Every episode attributed to a practice will receive the same novel therapies adjustment.

Table F-1: Example: Application of Adjustment for Use of Novel Therapies

Row	Item	Amount
A	Practice's Actual Episode Expenditures	$2,300,000
B	Practice's Expenditures for Novel Therapies	$149,500
C	Practice's Proportion of Actual Episode Expenditures Due to Novel Therapies (B/A)	6.50%
D	National Proportion of Actual Episode Expenditures Due to Novel Therapies	4.00%
E	Practice's Additional Proportion of Novel Therapy Use Beyond National non-OCM Trend (C - D)	2.5%
F	Practice's Additional Expenditures for Novel Therapy Use Beyond National non-OCM Trend (E * A)	$57,500
G	Practice's Additional Expenditures for Novel Therapy Use Beyond National non-OCM Trend, Reduced by Policy Factor (F * 0.8)	$46,000
H	Sum of Practice's Trended Baseline Prices	$2,500,000
I	Adjustment for Novel Therapies (G/H)	1.84%
J	Practice's Benchmark Amount (H + H*I)	$2,546,000

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

The target amount for a given practice is the sum of the target prices of all episodes attributed to the practice in the performance period. The target price for a given episode i in the performance period can be represented by:

$TP_i = BP_i * TF * ND * (1\text{-}Discount)$, where

> TP_i = Target price for a given episode
>
> BP_i = Baseline price for episode i in the performance period
>
> TF = trend factor for the practice
>
> ND = Novel therapies adjustment for the practice (see [Appendix F](#))
>
> Discount = OCM discount (0.04 for one-sided risk, 0.0275 for original two-sided risk, 0.025 for alternative two-sided risk)
>
> The quantity $BP_i*TF*ND$ is referred to as the benchmark price for episode i.

The baseline price for episode i treated by a given practice in the performance period can be expressed as:

$BP_i = exp(X_i\boldsymbol{\beta}) * EA * MA_m$, where

> BP_i = Baseline price of the ith episode
>
> X_i = Characteristics of the ith episode (e.g., age, sex, cancer type, etc.)
>
> β = Vector of coefficients from the expenditure prediction model based on all episodes treated by all practices (participating and non-participating) in the baseline period
>
> EA = experience adjuster for the practice based on relative costliness in the baseline period
>
> MA_m = metastatic status adjuster for the reported metastatic status of the mth cancer type (if PP7, PP8 or PP9)

The trend factor for a given practice can be expressed by:

$TF = \sum_j exp(X_j\gamma) / \sum_j exp(X_j\delta)$, where

> TF = Trend factor for the practice
>
> X_j = Characteristics of the jth episode in the performance period
>
> γ = Vector of coefficients from the expenditure prediction model based on performance period episodes attributed to non-participating practices
>
> δ = Vector of coefficients from the expenditure prediction model based on baseline episodes attributed to non-participating practices.

The experience adjuster for a given practice can be expressed as:

$EA = 0.5 + 0.5 * \sum_k C_k / \sum_k exp(X_k\beta)$, where

EA = Experience adjuster for the practice

C_k = Actual expenditures for the kth episode attributed to the practice in the baseline period

X_k = Characteristics of the kth episode in the performance period

β = Vector of coefficients from the expenditure prediction model based on all episodes treated by all practices (participating and non-participating) in the baseline period

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

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, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Affective 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 or hormonal therapy?	Never; Sometimes; Usually; Always
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	

Item/Composite	Responses
In the last 6 months, did you and your Cancer Therapy Team talk about pain related to your cancer, or related to your chemotherapy or hormonal therapy?	No; Yes
In the last 6 months, did your Cancer Therapy Team advise you about or 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 or hormonal therapy?	No; Yes
In the last 6 months, did your Cancer Therapy Team advise you about or help you deal with 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 any emotional problems, such as anxiety or depression, related to your cancer or your chemotherapy or hormonal therapy?	No; Yes
In the last 6 months, did your Cancer Therapy Team advise you about or help you deal with these emotional problems (if emotional problems 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
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 or hormonal therapy 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 or hormonal therapy 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	
After it was decided that you would have chemotherapy or hormonal therapy, did your Cancer Therapy Team encourage you to contact them with questions between visits?	No; Yes, somewhat; Yes, definitely

Item/Composite	Responses
Did your Cancer Therapy Team tell you to call them immediately if you have certain symptoms or side effects?	No; Yes, somewhat; Yes, definitely
Did your Cancer Therapy Team give you clear instructions about how to contact them outside of regular office hours?	No; Yes, somewhat; Yes, definitely
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 procedures scheduled to be done as soon as you or your doctor thought you needed (if blood tests, x-rays, scans, or other procedures were done)?	Never; Sometimes; Usually; Always
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)

Appendix I: OCM Prediction Model

This appendix describes the definition and form of the covariates that are incorporated into the OCM prediction model. The covariates are listed below and are described in more detail in the subsequent sections. Some covariates may be refined over the course of OCM to improve the accuracy of the prediction model.

OCM Prediction Model Covariates:

1. Age/Sex
2. Cancer type
3. Chemotherapy drugs taken/administered during the episode (breast, bladder and prostate cancers only)
4. Receipt of cancer-related surgery
5. Part D eligibility and dual eligibility for Medicare and Medicaid
6. Receipt of radiation therapy
7. Receipt of bone marrow transplant
8. Clinical trial participation
9. Comorbidities
10. History of prior chemotherapy use
11. Institutional status
12. Episode length
13. Geographic location/Hospital Referral Region

These covariates are summarized with brief descriptions in Table I-1 at the end of this appendix. 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 the model:

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+

Cancer Type

There are 21 cancer types eligible for reconciliation, defined by specific diagnosis codes. The reconciliation-eligible cancer types are:

Acute Leukemia   Kidney Cancer
Anal Cancer   Liver Cancer
Bladder Cancer   Lung Cancer
Breast Cancer   Lymphoma
Chronic Leukemia   Malignant Melanoma

Central Nervous System (CNS) Tumor	Multiple Myeloma
Endocrine Tumor	Myelodysplastic Syndrome (MDS)
Female Genitourinary (GU) Cancer other than Ovarian	Ovarian Cancer
Gastro/Esophageal Cancer	Pancreatic Cancer
Head and Neck Cancer	Prostate Cancer
Small Intestine / Colorectal Cancer	

Specific variable names are provided in the section below on "Receipt of Cancer-Related Surgery." Information on the specific diagnosis codes that correspond to each of the reconciliation-eligible cancer types and how a cancer type is assigned to an episode is included in the document "OCM Cancer Type Mapping and Codes."

Chemotherapy Drugs Taken/Administered During the Episode (Breast, Prostate, and Bladder Cancers Only)

Additional considerations apply to breast cancer, bladder cancer, and prostate cancer episodes. Many breast cancer episodes represent women who are on long-term oral endocrine therapy such as tamoxifen or an aromatase inhibitor. Breast cancer episodes involving only long-term oral endocrine therapy tend to be much less costly than breast cancer episodes that include other therapies. Therefore, the OCM prediction model designates breast cancer episodes containing only long-term oral endocrine chemotherapy (receipt of anastrozole, exemestane, letrozole, and/or tamoxifen without any other chemotherapy) as low-risk and all other breast cancer episodes as high-risk.

Treatment of bladder and prostate cancer, as with other cancers, may have widely varying costs based on differences in treatment for different types of disease. CMS has noted that some oncology specialists may care for a greater proportion of low-risk bladder and low-intensity prostate cancer patients, while other oncology specialists may care for a greater proportion of high-risk bladder and high-intensity prostate cancer patients. CMS has observed significant differences in episode costs between these different types of cancer. Therefore, the OCM prediction model distinguishes between high- and low-risk bladder cancers and low-intensity and high-intensity prostate cancers.

For the purposes of establishing a target price, low-risk bladder cancer will be designated by the receipt of BCG (Bacillus Calmette-Guerin) and/or mitomycin **without any other chemotherapy.** High-risk disease will be designated by the receipt of chemotherapy other than these two designated drugs.

Similarly, for the purposes of establishing a target price, low-intensity prostate cancer will be designated by the receipt of either androgen deprivation and/or anti-androgen therapy **without any other chemotherapy.** High-intensity disease will be designated by the receipt of chemotherapy other than, or in addition to, androgen deprivation or anti-androgen therapy. The list of androgen deprivation and anti-androgen therapy drugs is contained in the document "OCM Prediction Model Code Lists," effective July 2, 2017.

Specific variable names for these covariates are provided in the section below on "Receipt of Cancer-Related Surgery." The specifications for identifying breast cancer episodes that contain only long-term oral endocrine chemotherapy in the Medicare claims data are as follows:

- o **Step 1: For all breast cancer episodes, identify all chemotherapy claims that occurred during the episode.** Chemotherapy for these purposes are:
  - o Carrier and DME lines where all criteria in Step 1 of Appendix A are met, with the exception that the line first expense date is during the episode (inclusive of start and end dates);
  - o Outpatient revenue centers where all criteria in Step 1 of Appendix A are met, with the exception that the revenue center date is during the episode (inclusive of start and end dates); and
  - o PDE claims where the fill date is during the episode (inclusive of start and end dates) and the claim contains an included chemotherapy drug (initiating cancer therapy) NDC.

- o **Step 2: Flag each chemotherapy claim found in Step 1 as long-term oral endocrine therapy or not.** Long-term oral endocrine therapy claims are those found in the PDE claims file with NDCs for anastrozole, exemestane, letrozole, and/or tamoxifen. All other claims are not long-term oral endocrine therapy.

- o **Step 3: Set the breast cancer "low risk" and "high risk" variables.**
  - o If the episode had any claims flagged as long-term endocrine therapy and NO claims flagged otherwise, the corresponding "low risk" breast cancer variable (with or without surgery, as appropriate) is set to one and the corresponding "high risk" breast cancer variable is set to zero.
  - o Otherwise, the corresponding "high risk" breast cancer variable (with or without surgery, as appropriate) is set to one and the corresponding "low risk" breast cancer variable is set to zero.

The specifications for identifying high- and low-risk bladder cancer episodes in the Medicare claims data are as follows:

- o **Step 1: For all bladder cancer episodes, identify all chemotherapy claims that occurred during the episode.** Chemotherapy for these purposes are:
  - o Carrier and DME lines where all criteria in Step 1 of Appendix A are met, with the exception that the line first expense date is during the episode (inclusive of start and end dates);
  - o Outpatient revenue centers where all criteria in Step 1 of Appendix A are met, with the exception that the revenue center date is during the episode (inclusive of start and end dates); and
  - o PDE claims where the fill date is during the episode (inclusive of start and end dates) and the claim contains an included chemotherapy drug (initiating cancer therapy) NDC.

- o **Step 2: Flag each chemotherapy claim found in Step 1 as BCG (Bacillus Calmette-Guerin) and/or mitomycin or not.**

o Step 3: Set the bladder cancer "low risk" and "high risk" variables.
  o If the episode had any chemotherapy claims flagged as BCG (bacillus calmette-guerin) live vax, intravesical), BCG LIVE VAX, intravesical, BCG (intravesical) per instillation, and/or mitomycin and NO claims flagged otherwise, the corresponding "low risk" bladder cancer variable (with or without surgery, as appropriate) is set to one and the corresponding "high risk" bladder cancer variable is set to zero.
  o Otherwise, the corresponding "high risk" bladder cancer variable (with or without surgery, as appropriate) is set to one and the corresponding "low risk" bladder cancer variable is set to zero.

The specifications for identifying low-intensity and high-intensity prostate cancer episodes in the Medicare claims data are as follows:

o **Step 1: For all prostate cancer episodes, identify all chemotherapy claims that occurred during the episode.** Chemotherapy for these purposes are:
  o Carrier and DME lines where all criteria in Step 1 of Appendix A are met, with the exception that the line first expense date is during the episode (inclusive of start and end dates);
  o Outpatient revenue centers where all criteria in Step 1 of Appendix A are met, with the exception that the revenue center date is during the episode (inclusive of start and end dates); and
  o PDE claims where the fill date is during the episode (inclusive of start and end dates) and the claim contains an included chemotherapy drug (initiating cancer therapy) NDC.

o **Step 2: Flag each chemotherapy claim found in Step 1 as androgen deprivation and/or anti-androgen therapy or not.** The list of androgen deprivation and anti-androgen therapy drugs is as follows (codes are contained in the document "OCM Prediction Model Code Lists," effective July 2, 2017): bicalutamide, degarelix, flutamide, goserelin, histrelin, leuprolide, nilutamide, triptorelin

o **Step 3: Set the prostate cancer "low-intensity" and "high-intensity" variables.**
  o If the episode had any chemotherapy claims flagged as androgen deprivation or anti-androgen therapy and NO claims flagged otherwise, the corresponding "low-intensity" prostate cancer variable (with or without surgery, as appropriate) is set to one and the corresponding "high-intensity" prostate cancer variable is set to zero.
  o Otherwise, the corresponding "high-intensity" prostate cancer variable (with or without surgery, as appropriate) is set to one and the corresponding "low-intensity" prostate cancer variable is set to zero.

Receipt of Cancer-Related Surgery

Thirteen of the cancer types have cancer-related surgeries that are controlled for in the OCM prediction model if the surgeries occur during an episode. The specific surgeries are listed in the document "OCM Prediction Model Code Lists," effective July 2, 2017, and are different for each cancer type. Each of the thirteen cancer types with cancer-related surgeries is represented by two variables in the model: one for episodes in which a cancer-related surgery was performed and one for episodes in which no cancer-related surgery was performed. Each cancer type that does not have a specific surgery adjustment is represented by a single variable in the model.

For breast and bladder cancers, we define four variables based on the presence of a surgery flag and risk level (low vs. high risk). The four variables denote: low-risk episodes with surgery; low-risk episodes without surgery; high-risk episodes with surgery; high-risk episodes without surgery. Similarly, for prostate cancer, we define four variables denoting: low-intensity episodes with surgery; low-intensity episodes without surgery; high-intensity episodes with surgery; high-intensity episodes without surgery.

The variables representing cancer types, surgery status, risk level, and intensity are summarized below:

Breast cancer

> BREAST_WITH_SURGERY_LOW_RISK
> BREAST_WITHOUT_SURGERY_LOW_RISK (reference group)
> BREAST_WITH_SURGERY_HI_RISK
> BREAST_WITHOUT_SURGERY_HI_RISK

Bladder Cancer

> BLADDER_WITH_SURGERY_LOW_RISK
> BLADDER_WITHOUT_SURGERY_LOW_RISK
> BLADDER_WITH_SURGERY_HI_RISK
> BLADDER_WITHOUT_SURGERY_HI_RISK

Prostate Cancer

> PROSTATE_WITH_SURGERY_LOW
> PROSTATE_WITHOUT_SURGERY_LOW
> PROSTATE_WITH_SURGERY_HIGH
> PROSTATE_WITHOUT_SURGERY_HIGH

Other cancer types with cancer-related surgeries

ANAL_WITH_SURGERY	ANAL_WITHOUT_SURGERY
FEMALE_GU_WITH_SURGERY	FEMALE_GU_WITHOUT_SURGERY
GASTRO_WITH_SURGERY	GASTRO_WITHOUT_SURGERY
HEAD_NECK_WITH_SURGERY	HEAD_NECK_WITHOUT_SURGERY
INTESTINAL_WITH_SURGERY	INTESTINAL_WITHOUT_SURGERY
LIVER_WITH_SURGERY	LIVER_WITHOUT_SURGERY
LUNG_WITH_SURGERY	LUNG_WITHOUT_SURGERY
OVARY_WITH_SURGERY	OVARY_WITHOUT_SURGERY
PANCREAS_WITH_SURGERY	PANCREAS_WITHOUT_SURGERY
KIDNEY_WITH_SURGERY	KIDNEY_WITHOUT_SURGERY

Cancer Types without cancer-related surgeries

ACUTE_LEUKEMIA	CHRONIC_LEUKEMIA	CNS
ENDOCRINE	LYMPHOMA	MDS
MELANOMA	MYELOMA	

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 identifying inpatient claims for each episode where:**
    - o The claim contains an ICD procedure code in the SurgeryCodes tab of the "OCM Prediction Model Code Lists" document;
    - o The claim admission date falls between the first and last dates of the episode, inclusive;
    - o The Medicare nonpayment reason code on the claim is blank; and,
    - o The claim contains a diagnosis code that maps to the cancer type associated with the procedure code in the SurgeryCodes table OR the cancer type assigned to the episode is the same as the cancer type associated with the procedure code in the SurgeryCodes table.

- **Step 2: Identify cancer-related surgery from the OUTPATIENT file by identifying outpatient claims for each episode where**
    - o The claim contains an ICD procedure code OR a HCPCS procedure code in the SurgeryCodes tab of the "OCM Prediction Model Code Lists" document;
    - o If a HCPCS code is found in the revenue centers, the revenue center date falls between the first and last dates of the episode, inclusive, AND the revenue center is not denied (revenue center total charge amount minus revenue center non covered charge amount > $0);
    - o If an ICD procedure code is found in the claim header, the corresponding procedure date falls between the first and last dates of the episode, inclusive;
    - o The claim is not denied (Medicare nonpayment reason code is blank); and,

- o The claim contains a diagnosis code that maps to the cancer type associated with the procedure code in the SurgeryCodes table OR the cancer type assigned to the episode is the same as the cancer type associated with the procedure code in the SurgeryCodes table.

- **Step 3: Identify cancer-related surgery from the CARRIER file by identifying carrier claims for each episode where:**
  - o The claim contains a line item with a HCPCS procedure code in the SurgeryCodes tab of the "OCM Prediction Model Code Lists" document;
  - o The line first expense date falls between the first and last dates of the episode, inclusive;
  - o The line item is not denied (line allowed charge >0); and,
  - o The claim contains a header diagnosis code that maps to the cancer type associated with the procedure code in the SurgeryCodes table OR the cancer type assigned to the episode is the same as the cancer type associated with the procedure code in the SurgeryCodes table.

- **Step 4: Set the cancer type-specific surgery variables.**
  - o If any claim is found meeting the criteria above, the corresponding cancer type variable "with surgery" is set to one and the corresponding cancer type variable "without surgery" is set to zero.
  - o Otherwise, the corresponding cancer type variable "without surgery" is set to one and the corresponding cancer type variable "with surgery" is set to zero.

Part D 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 normally 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 for full Medicaid benefits and Part D (measured at the beginning of the episode) in the OCM prediction model:

FULL_DUAL – Has full Medicaid benefits (including Part D and LIS)
PART_D_LIS – Does not have full Medicaid benefits but does have Part D with LIS
PART_D_NO_LIS – Has Part D enrollment but no LIS
NO_PART_D – Has no Part D enrollment (reference group)

These categories are mutually exclusive and exhaustive.

Receipt of Radiation Therapy

A single variable indicates whether radiation therapy was provided during the episode or not. The ICD and HCPCS procedure codes used to identify radiation therapy are contained in the document "OCM Prediction Model Code Lists," effective July 2, 2017. 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 was assigned a value of 1 (otherwise 0).

The specifications for identifying radiation therapy in the Medicare claims data are as follows:

- Step 1: Identify radiation from the INPATIENT file by identifying inpatient claims for each episode where:
    o The claim contains at least one of the ICD or HCPCS procedure codes in the Radiation tab of the "OCM Prediction Model Code Lists" document;
    o The claim admission date falls between the first and last dates of the episode, inclusive; and,
    o The claim is not denied (Medicare nonpayment reason code is blank).

- Step 2: Identify radiation from the OUTPATIENT files by identifying outpatient claims for each episode where:
    o The claim contains a HCPCS or ICD procedure code in the Radiation tab of the "OCM Prediction Model Code Lists" document;
    o If a HCPCS code is found in the revenue centers, the revenue center date falls between the first and last dates of the episode, inclusive, and the revenue center is not denied (revenue center total charge amount minus revenue center non covered charge amount > $0)
    o If an ICD procedure code is found in the claim header, the corresponding procedure date falls between the first and last dates of the episode, inclusive;
    o The claim is not denied (Medicare nonpayment reason code is blank).

- Step 3: Identify radiation from the PHYSICIAN files by identifying physician claims for each episode where:
    o The claim contains a line item with a HCPCS code in the Radiation tab of the "OCM Prediction Model Code Lists" document;
    o The line first expense date falls between the first and last dates of the episode, inclusive; and
    o The line item is not denied (line allowed charge > 0).

- Step 4: If a claim is found meeting the criteria above, RADIATION = 1, otherwise, RADIATION = 0.

Receipt of Bone Marrow Transplant

Two bone marrow transplant (BMT) variables are calculated: one for allogeneic BMTs (BMT_ALLOGENEIC) and one for autologous BMTs (BMT_AUTOLOGOUS). BMTs will be counted for five cancer types: Acute Leukemia, Chronic Leukemia, Lymphoma, Multiple Myeloma, and MDS. If both types of BMT appear in a given episode, the allogeneic BMT will take precedence. BMT procedures are identified by the codes included in the document "OCM Prediction Model Code Lists," effective July 2, 2017. The claim with the BMT procedure code or DRG must contain a diagnosis code for the same cancer type as the episode.

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

- **Step 1: Identify BMTs from the INPATIENT file by identifying inpatient claims for each episode where:**
    - The claim contains a DRG or ICD code listed in the BMT tab of the "OCM Prediction Model Code Lists" document (the list identifies which codes are autologous and which are allogeneic);
    - The claim admission date falls between the first and last dates of the episode, inclusive;
    - The Medicare nonpayment reason code on the claim is blank; and,
    - The episode's cancer type is Acute Leukemia, Chronic Leukemia, Lymphoma, Multiple Myeloma, or MDS.

- **Step 2: Identify BMTs from the OUTPATIENT files by identifying outpatient claims for each episode where:**
    - The claim contains a HCPCS or ICD procedure code in the BMT tab of the "OCM Prediction Model Code Lists" document;
    - If a HCPCS code is found in the revenue centers, the revenue center date falls between the first and last dates of the episode, inclusive, and the revenue center is not denied (revenue center total charge amount minus revenue center non covered charge amount > \$0);
    - If an ICD procedure code is found in the claim header, the corresponding procedure date falls between the first and last dates of the episode, inclusive; and,
    - The claim is not denied (Medicare nonpayment reason code is blank);
    - The episode's cancer type is Acute Leukemia, Chronic Leukemia, Lymphoma, Multiple Myeloma, or MDS.

- **Step 3: Flag the appropriate BMT variable.**
    - If a claim meeting the criteria above for an allogeneic BMT is found, BMT_ALLOGENEIC = 1, otherwise BMT_ALLOGENEIC = 0.
    - If a claim meeting the criteria above for an autologous BMT is found AND no claims meeting the criteria for an allogeneic BMT was found, BMT_AUTOLOGOUS = 1, otherwise BMT_AUTOLOGOUS = 0.

Clinical Trial Participation

A single variable (CLINICAL_TRIAL) indicates whether the beneficiary participated in a clinical trial during the episode. An ICD 9 diagnosis code of V70.7 or an ICD10 diagnosis code of Z00.6 must appear on a claim that also contains a cancer diagnosis and has a service date within the 6-month episode.

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 identifying inpatient claims for each episode where:**

- o The claim contains an ICD 9 diagnosis code of V70.7 or an ICD 10 diagnosis code of Z00.6;
- o The claim admission date falls between the first and last dates of the episode, inclusive;
- o The claim is not denied (Medicare nonpayment reason code is blank); and,
- o The claim contains a qualifying cancer diagnosis.

- **Step 2: Identify clinical trials from the OUTPATIENT file by identifying outpatient claims for each episode where:**
  - o The claim contains an ICD 9 diagnosis code of V70.7 or an ICD 10 diagnosis code of Z00.6;
  - o The claim from date or claim through date[16] falls between the first and last dates of the episode, inclusive;
  - o The claim is not denied (Medicare nonpayment reason code is blank); and,
  - o The claim contains a qualifying cancer diagnosis.

- **Step 3: Identify clinical trials from the PHYSICIAN and DME files by identifying physician and DME claims for each episode where:**
  - o The claim contains an ICD 9 diagnosis code of V70.7 or an ICD 10 diagnosis code of Z00.6 in the line item diagnoses or in the header diagnoses;
  - o If the diagnosis code is found in a line item, the line first expense date falls between the first and last dates of the episode and the line item is not denied (line allowed charge >0);
  - o If the diagnosis code is not found in 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;
  - o The claim is not denied (carrier claim payment denial code is one of: 1-9, A, B); and,
  - o Claim contains a qualifying cancer diagnosis in the line or header diagnoses.

- **Step 4: If any claim is found meeting the criteria above, CLINICAL_TRIAL = 1, otherwise CLINICAL_TRIAL = 0.**

Comorbidities

Comorbidities are measured through a subset of the CMS Hierarchical Condition Category (HCC) flags. These flags are created by CMS on a calendar year basis and indicate treatment for 70 different conditions in the prior calendar year. The number of HCC flags that are "turned on" in the calendar year in which the episode started is incorporated in the model because episode expenditures increase with higher numbers of pre-existing comorbidities. Condition flags related to cancer are not counted in the OCM prediction model because all beneficiaries in OCM episodes have cancer. Also, flags associated with opportunistic infections, protein-calorie malnutrition, severe hematological disorders, disorders of immunity, and coagulation defects and other specified hematological disorders are not counted because these conditions are often

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[16] This can't be the revenue center date (as with procedures) because there is no revenue center diagnosis code. This may result in the same claiming turning on the clinical trial participation flag for two separate episodes.

preventable or are a recognized aspect of the specified cancer, and are therefore already incorporated into baseline episode expenditures. The HCC-related variables are as follows:

> HCC_0 – No HCC flags turned on (reference group)
> HCC_1 – One HCC flag turned on
> HCC_2 – Two HCC flags turned on
> HCC_3 – Three HCC flags turned on
> HCC4_5 – Four or five HCC flags turned on
> HCC6_OR_MORE – Six or more HCC flags turned on
> NEW_ENROLLEE – No HCC flags because the enrollee was new to Medicare

The HCC categories used in the OCM model are listed in the document "OCM Prediction Model Code Lists," effective July 2, 2017. Note that some of the categories are hierarchical, consistent with the hierarchies established for Medicare Advantage payment policy. If flags for a more severe and a less severe version of a specific condition are present then only the flag associated with the more severe version of the condition is counted.

History of Prior Chemotherapy Use

Episodes where the beneficiary has a history of chemotherapy use often tend to be less expensive than those without such a history. The episode start date minus the date of the most recent chemotherapy claim before the episode start date is referred to as the "clean period." There are three variables related to length of the clean period:

> CLEAN_1_61 – Clean period between 1 and 61 days
> CLEAN_62_730 – Clean period between 62 and 730 days
> CLEAN_731+ – Clean period over 730 days or no prior chemo claims (reference group)

Beneficiaries with recent Medicare enrollment have little or no Medicare claims history and will be categorized in the CLEAN_731+ group if they have no observable prior chemotherapy use. These beneficiaries will be distinguished in the model by the NEW_ENROLLEE variable described in the "Comorbidities" section above.

The specifications for identifying prior chemotherapy use in the Medicare claims data are as follows:

- Step 1: Identify all possible qualifying chemotherapy claims in the two-year period prior to the episode start date.
    - Qualifying chemotherapy claims meet the same criteria in Step 1 of Appendix A.
- Step 2: Calculate the clean period as the difference between the chemotherapy claim date and the episode beginning date.
    - For Physician and DME claims the chemotherapy claim date is the line first expense date.
    - For Outpatient claims the chemotherapy claim date is the revenue center date.
    - For PDE claims the chemotherapy claim date is the fill date.
- Step 3: Set the clean period flag according to the clean period calculated in Step 2.
    - Clean_1_61 = 1 if 0 < clean period < 62; 0 otherwise
    - Clean_62_730 = 1 if 61 < clean period < 731; 0 otherwise

    o Clean_731+ = 1 if clean period > 730 OR there were no chemotherapy claims before the episode began; 0 otherwise.

Institutional Status

The variable INSTITUTIONAL_STATUS 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 skilled nursing facilities.

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.

Geographic Location/Hospital Referral Region

A geographic adjustment will be made to distinguish episodes occurring in high- and low-cost areas. The geographic unit will be hospital referral region (HRR). There are 307 such areas defined by the Dartmouth Institute for Health Policy and Clinical Practice to reflect regional healthcare markets for tertiary hospital care.[17] Beneficiary zip codes were mapped to the HRRs for purposes of assigning a specific HRR to each episode. The average baseline episode cost in each HRR was divided by the average baseline cost of all episodes to obtain a relative episode cost for each HRR. The geographic adjustment was then operationalized as:

HRR_RELATIVE_COST = [(Average episode cost for the HRR/Average episode cost across all HRRs) – 1] * 100.

By subtracting one from the ratio of average costs the variable is anchored at zero. Episodes in HRRs with higher than average costs will see an increase in predicted costs and episodes in HRRs with lower than average costs will see a decrease in predicted costs. The variable captures the percentage difference in average episode costs between a given HRR and all HRRs. This variable is continuous.

Prediction Model Variable Names

The table below lists all of the variables used in the OCM prediction model and their descriptions. All variables take values of either zero or one except for the HRR_RELATIVE_COST, which is a continuous variable. Model coefficients and other regression output are summarized in the document "OCM Prediction Model Code Lists," effective July 2, 2017.

Table I-1: OCM Prediction Model Variables

Variable Name	Description (if value=1)
FEMALE_AGE_18_64	Female, age 18 to 64
FEMALE_AGE_65_69	Female, age 65 to 69 (reference group)

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[17] Dartmouth Institute for Health Policy and Clinical Practice. The Dartmouth Atlas of Health Care. Available at http://www.dartmouthatlas.org/.

Variable Name	Description (if value=1)
FEMALE_AGE_70_74	Female, age 70 to 74
FEMALE_AGE_75_79	Female, age 75 to 79
FEMALE_AGE_80+	Female, age 80 or greater
MALE_AGE_18_64	Male, age 18 to 64
MALE_AGE_65_69	Male, age 65 to 69
MALE_AGE_70_74	Male, age 70 to 74
MALE_AGE_75_79	Male, age 75 to 79
MALE_AGE_80+	Male, age 80 or greater
BREAST_ WITH_SURGERY_LOW_RISK	Breast cancer, low risk episodes with surgery
BREAST_ WITHOUT_SURGERY_LOW_RISK	Breast cancer, low risk episodes without surgery (reference group)
BREAST_ WITH_SURGERY _HI_RISK	Breast cancer, high risk episodes with surgery
BREAST_ WITHOUT_SURGERY _HI_RISK	Breast cancer, high risk episodes without surgery
BLADDER_WITH_SURGERY_LOW_RISK	Bladder cancer, low risk episodes with surgery
BLADDER_WITHOUT_SURGERY_LOW_RISK	Bladder cancer, low risk episodes without surgery
BLADDER_WITH_SURGERY_HI_RISK	Bladder cancer, high risk episodes with surgery
BLADDER_WITHOUT_SURGERY_HI_RISK	Bladder cancer, high risk episodes without surgery
PROSTATE_WITH_SURGERY_LOW	Prostate cancer, low-intensity with surgery
PROSTATE_WITHOUT_SURGERY_LOW	Prostate cancer, low-intensity without surgery
PROSTATE_WITH_SURGERY_HIGH	Prostate cancer, high-intensity with surgery
PROSTATE_WITHOUT_SURGERY_HIGH	Prostate cancer, high-intensity without surgery
ANAL_WITH_SURGERY	Anal cancer, with surgery
ANAL_WITHOUT_SURGERY	Anal cancer, without surgery
FEMALE_GU_WITH_SURGERY	Female GU cancer other than ovary, with surgery
FEMALE_GU_WITHOUT_SURGERY	Female GU cancer other than ovary, without surgery
GASTRO_WITH_SURGERY	Gastro/Esophageal cancer, with surgery
GASTRO_WITHOUT_SURGERY	Gastro/Esophageal cancer, without surgery
HEAD_NECK_WITH_SURGERY	Head and neck cancer, with surgery
HEAD_NECK_WITHOUT_SURGERY	Head and neck cancer, without surgery
INTESTINAL_WITH_SURGERY	Small Intestine / Colorectal cancer, with surgery
INTESTINAL_WITHOUT_SURGERY	Small Intestine / Colorectal cancer, without surgery
KIDNEY_WITH_SURGERY	Kidney cancer, with surgery
KIDNEY_WITHOUT_SURGERY	Kidney cancer, without surgery
LIVER_WITH_SURGERY	Liver cancer, with surgery
LIVER_WITHOUT_SURGERY	Liver cancer, without surgery
LUNG_WITH_SURGERY	Lung cancer, with surgery
LUNG_WITHOUT_SURGERY	Lung cancer, without surgery
OVARY_WITH_SURGERY	Ovarian cancer, with surgery
OVARY_WITHOUT_SURGERY	Ovarian cancer, without surgery
PANCREAS_WITH_SURGERY	Pancreatic cancer, with surgery
PANCREAS_WITHOUT_SURGERY	Pancreatic cancer, without surgery
ACUTE_LEUKEMIA	Acute leukemia
CHRONIC_LEUKEMIA	Chronic leukemia
CNS	CNS tumor
ENDOCRINE	Endocrine tumor

Variable Name	Description (if value=1)
LYMPHOMA	Lymphoma
MDS	Myelodysplastic Syndrome
MELANOMA	Malignant melanoma
MYELOMA	Multiple myeloma
FULL_DUAL	Enrolled in Part D, full dual, LIS
PART_D_LIS	Enrolled in Part D, partial dual or LIS applicant, LIS
PART_D_NO_LIS	Enrolled in Part D, no LIS
NO_PART_D	Not enrolled in Part D (reference group)
RADIATION	Received radiation therapy during episode
BMT_ALLOGENEIC	Received allogeneic BMT during episode
BMT_AUTOLOGOUS	Received autologous BMT during episode
CLINICAL_TRIAL	Participated in a clinical trial for cancer during episode
HCC_0	No HCC flags turned on (reference group)
HCC_1	One HCC flag turned on
HCC_2	Two HCC flags turned on
HCC_3	Three HCC flags turned on
HCC4_5	Four or five HCC flags turned on
HCC6_OR_MORE	Six or more HCC flags turned on
NEW_ENROLLEE	New Medicare enrollee (no HCC flags turned on)
CLEAN_1_61	Clean period between 1 and 61 days
CLEAN_62_730	Clean period between 62 and 730 days
CLEAN_731+	Clean period over 730 days or no prior chemo claims (reference group)
INSTITUTIONAL_STATUS	Was institutionalized for more than 90 days as of the month the episode began
EP_183_184	Episode length 183 – 184 days
HRR_RELATIVE_COST	Episode expenditures in beneficiary's HRR relative to average episode expenditures in all HRRs

Appendix J: Calculation of Adjustment for Overlapping ACO and OCM Payments

The following steps are taken in the calculation of the ACO overlap adjustment:

1. Identify patients who have reconciliation-eligible episodes attributed to an OCM practice and who were also aligned with an ACO during the episode.
2. Identify the subset of episodes from Step 1 whose attributed practice's TIN was also an ACO participant for any part of the OCM 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 practice or pool by summing the prorated benchmark prices calculated in Step 4.
6. Determine whether the OCM participant's ACO received a shared savings payment in the ACO performance year overlapping with the current OCM performance period AND if the OCM participant has a PBP calculated for the current performance period.
    o   If either is not true, there is no ACO overlap adjustment.
    o   If both are true, go to Step 7.
7. Calculate the overlapping discount amount by multiplying the prorated benchmark amount by the OCM discount (4% in one-sided risk).
8. Multiply the overlapping discount amount by the ACO's sharing percentage. The result is the Adjustment for Overlapping Payments.

Note that some OCM performance periods overlap with one ACO performance year (i.e., a calendar year) and some OCM performance periods overlap with two ACO performance years. In the case where an OCM 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 OCM PBP.

See below for an example calculation. This example assumes the OCM practice is in the one-sided risk arrangement, with a 4% OCM discount.

OCM-999

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

GoodHealth ACO

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

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

Overlap between OCM-999 and GoodHealth ACO

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

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

Because OCM-999 saved over its target, it also saved the prorated OCM discount amount for the overlapping episodes, $160,000. This is $160,000 in OCM savings that will not be paid to the OCM practice as part of its OCM PBP, because in OCM CMS keeps the OCM discount amount. With no adjustment, GoodHealth ACO will have received a shared savings payment that includes a portion of the OCM savings (70% of $160,000, or, $112,000) that ought to have been retained by CMS.

Appendix K: COVID-19 Flexibilities

In response to the COVID-19 PHE, the CMS Innovation Center has made the following changes specifically for the Oncology Care Model:

<u>Timeline</u>

- The model was extended for 1 year through June 2022. This added performance periods 10 and 11, with episode beginning and ending dates as follows:
  - o Performance Period 10: Episodes beginning January 2, 2021 – July 1, 2021 and ending July 1, 2021 – December 31, 2021.
  - o Performance Period 11: Episodes beginning July 2, 2021 – December 31, 2021 and ending January 1, 2022 – June 30, 2022.

<u>Payment Methodology</u>

- OCM practices may elect to opt out of reconciliation for performance periods affected by the PHE ("Reconciliation Opt-out" option). Choosing the Reconciliation Opt-out option means that a practice would not have the obligation to repay episode expenditures above the benchmark or target amount, depending on their existing risk arrangement, but also would not be able to earn a performance-based payment (PBP) for the affected performance periods.

- For OCM practices that remain in one- or two-sided risk for the performance periods affected by the PHE, episodes with a COVID-19 diagnosis will be removed from reconciliation for the affected performance periods.

<u>Data Reporting</u>

- The following are optional for the affected performance periods:
  - o Aggregate-level reporting of quality measures
  - o Beneficiary-level reporting of clinical and staging data

<u>Other Reporting Requirements</u>

- Cost and resource utilization reporting and practice transformation plan reporting are no longer required