

# Physician-Focused Payment Model Technical Advisory Committee

## Overview of the PTAC Proposal Submission Process

Jeffrey Bailet, PTAC Chair  
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December 16, 2016

# PTAC's Statutory Charge

- The Physician-Focused Payment Model Technical Advisory Committee (PTAC) was created under the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA)
- The purpose of PTAC is to:
  - Review proposals submitted by individuals and stakeholder entities for physician-focused payment models (PFPMs); and
  - Provide comments and recommendations to the Secretary of Health and Human Services (the Secretary) regarding whether each proposal meets criteria for PFPMs established by the Secretary
- By statute, the Secretary of HHS must review the comments and recommendations of PTAC and post a detailed response on the website of the Centers for Medicare & Medicaid Services (CMS)

# PTAC: Goals and Process

PFPM = Physician-Focused Payment Model

Goal: to encourage new APM options for Medicare clinicians



# Criteria for Evaluating Models

- Scope of Proposed PFPM (high priority)
- Quality and Cost (high priority)
- Payment Methodology (high priority)
- Value over Volume
- Flexibility
- Ability to be Evaluated
- Integration and Care Coordination
- Patient Choice
- Patient Safety
- Health Information Technology

# What is a Physician-Focused Payment Model?

- A physician-focused payment model (PFPM) is an Alternative Payment Model:
  - In which Medicare is a payer;
  - In which eligible clinicians that are eligible professionals as defined in section 1848(k)(3)(B) of the Act are participants and play a core role in implementing the APM's payment methodology, and
  - Which targets the quality and costs of services that eligible professionals participating in the Alternative Payment Model provide, order, or can significantly influence.

# Characteristics of PFPMs Likely to be Recommended by PTAC

- PFPMs that require eligible professionals receiving the payment to take accountability for (1) reducing spending without reducing the quality care, (2) improving the quality of care without increasing spending, or (3) improving the quality of care and reducing spending.
- PFPMs that directly affect the method and/or amount of payments for one or more services delivered, ordered, managed, or coordinated by one or more types of eligible professionals.
- Unlikely to recommend a proposed PFPM if the only change it makes is to give an eligible professional the ability to bill for a single type of service that is not currently eligible for payment under the Medicare Physician Fee Schedule
- Will consider proposals for PFPMs that would need to be implemented through entities other than practices or groups consisting of one or more eligible professionals.
- PFPMs that change the method of payment for eligible professionals if the payment model also requires those receiving the payment to take accountability for controlling the costs and quality of care for the patients affected.

# Stakeholder Model Submissions

- PTAC began receiving letters of intent (LOIs) on October 1, 2016
  - LOIs must be submitted at least 30 days prior to full proposals
- Full proposals have been accepted since December 1, 2016
- LOIs and proposal submissions may be sent to PTAC through ScholarOne  
<https://mc04.manuscriptcentral.com/ptac>

# Opportunities for Public Participation

- All public meetings will be publicized on the Federal Register and announced through PTAC's listserv
- Public comments are invited at all public meetings and on all key documents
- We invite you to visit PTAC's website, <https://aspe.hhs.gov/ptac-physician-focused-payment-model-technical-advisory-committee>
- Email us at [PTAC@hhs.gov](mailto:PTAC@hhs.gov) with questions and join our listserv (<https://list.nih.gov/cgi-bin/wa.exe?A0=PTAC>) to stay updated on all PTAC activities
- Questions?

# Physician-Focused Payment Model Technical Advisory Committee

## PTAC Process for Reviewing and Evaluating Proposed Physician-Focused Payment Models & Discussion of Public Comments

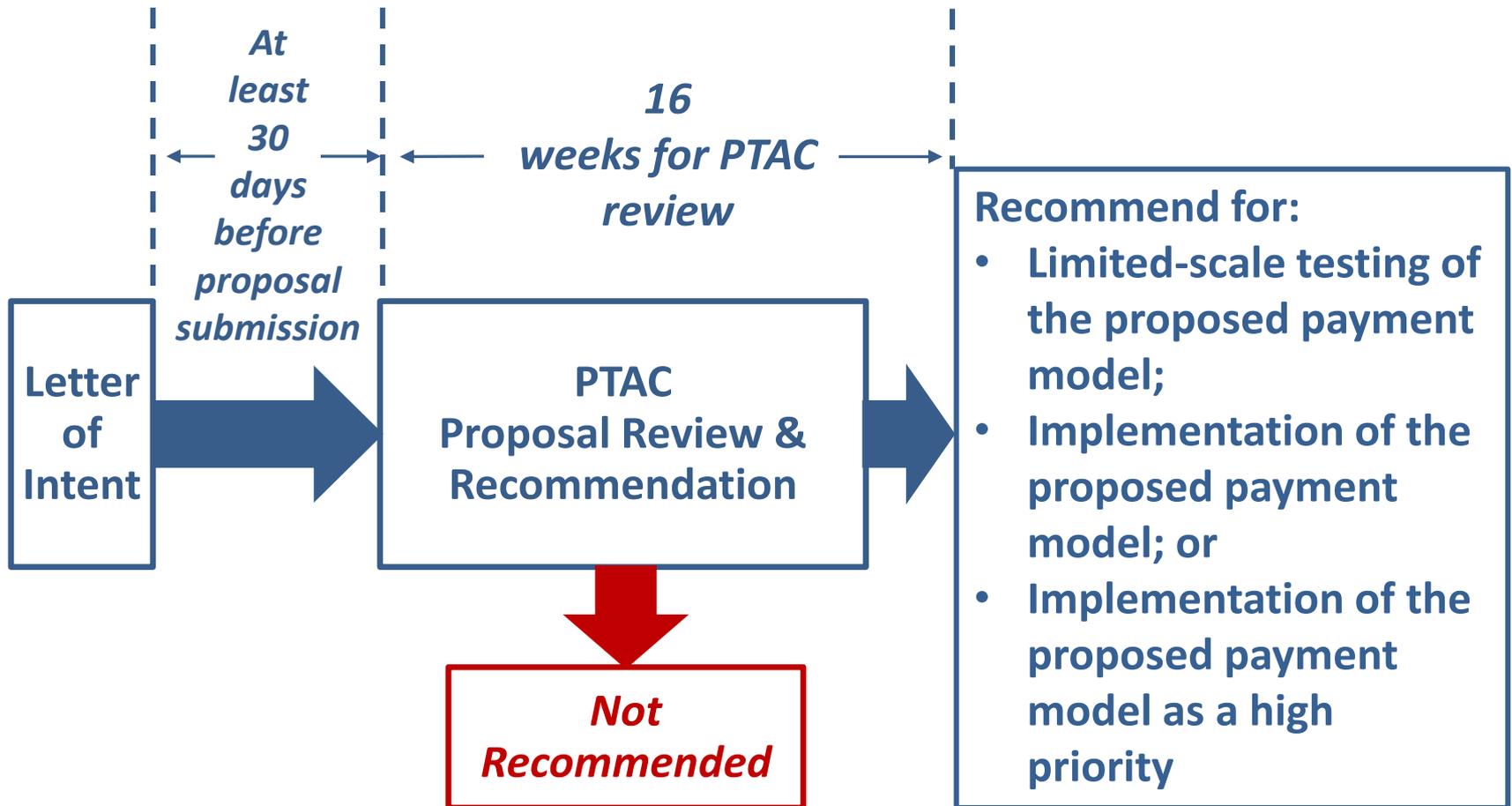
Bruce Steinwald, PTAC Member  
Kavita Patel, PTAC Member

December 16, 2016

# Development of PTAC Evaluation Process

- November 10, 2016: PTAC published draft “Processes for Reviewing and Evaluating Proposed Physician-Focused Payment Models”:  
<https://aspe.hhs.gov/documents-public-comment-physician-focused-payment-model-technical-advisory-committee>
- Document describes proposed processes to be used by PTAC to review and evaluate Physician-Focused Payment Models (PFPMs) submitted by stakeholders as provided for by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA).
- Document also describes how PTAC will develop comments and recommendations for the Secretary of Health and Human Services for each submitted PFPM.
- Written public comments were due December 9, 2016

# PTAC Aiming For a 16-Week Process



# Initial Review by Preliminary Review Team (PRT); then Deliberation by Full Committee

## **Composition of Preliminary Review Team:**

- Only members of PTAC
- At least one physician
- No one with a conflict of interest
- One individual as lead reviewer

## **Support for Preliminary Review Team:**

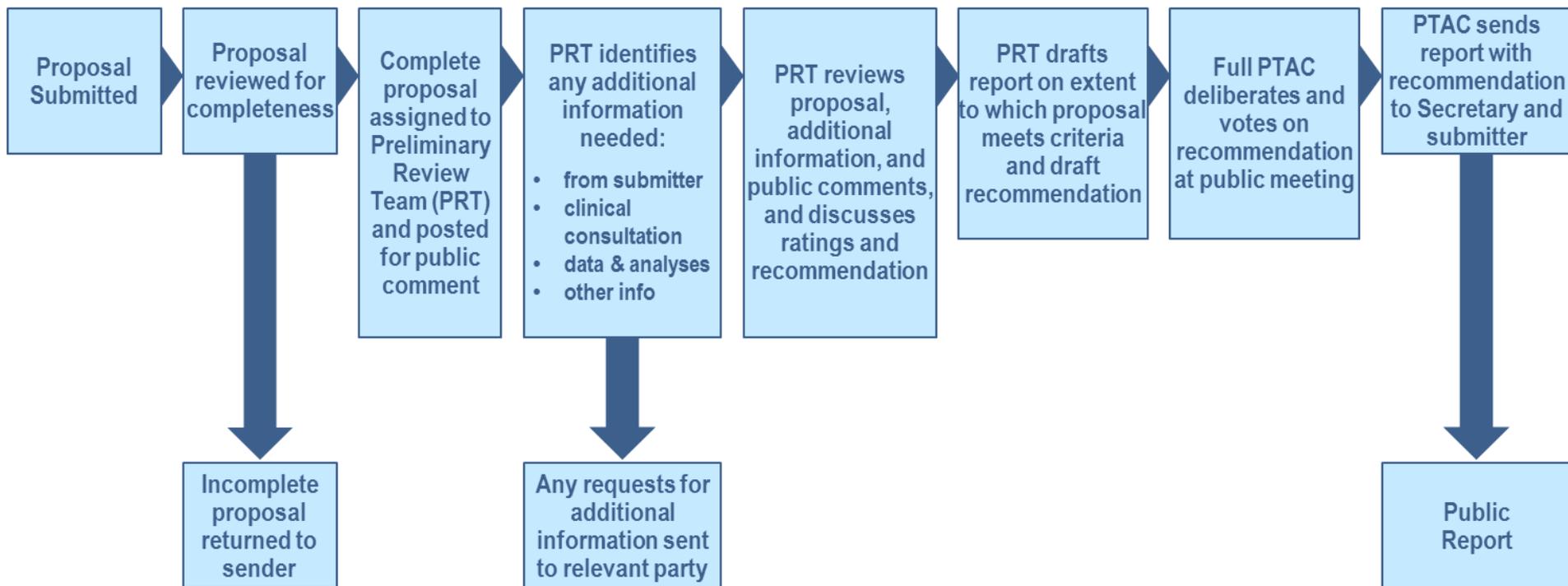
- ASPE Staff
- ASPE Contractors
  - Additional subject matter experts if needed
  - No conflicts of interest
  - Publicly identified

## **Factors Affecting Schedule for PTAC Deliberation Meeting**

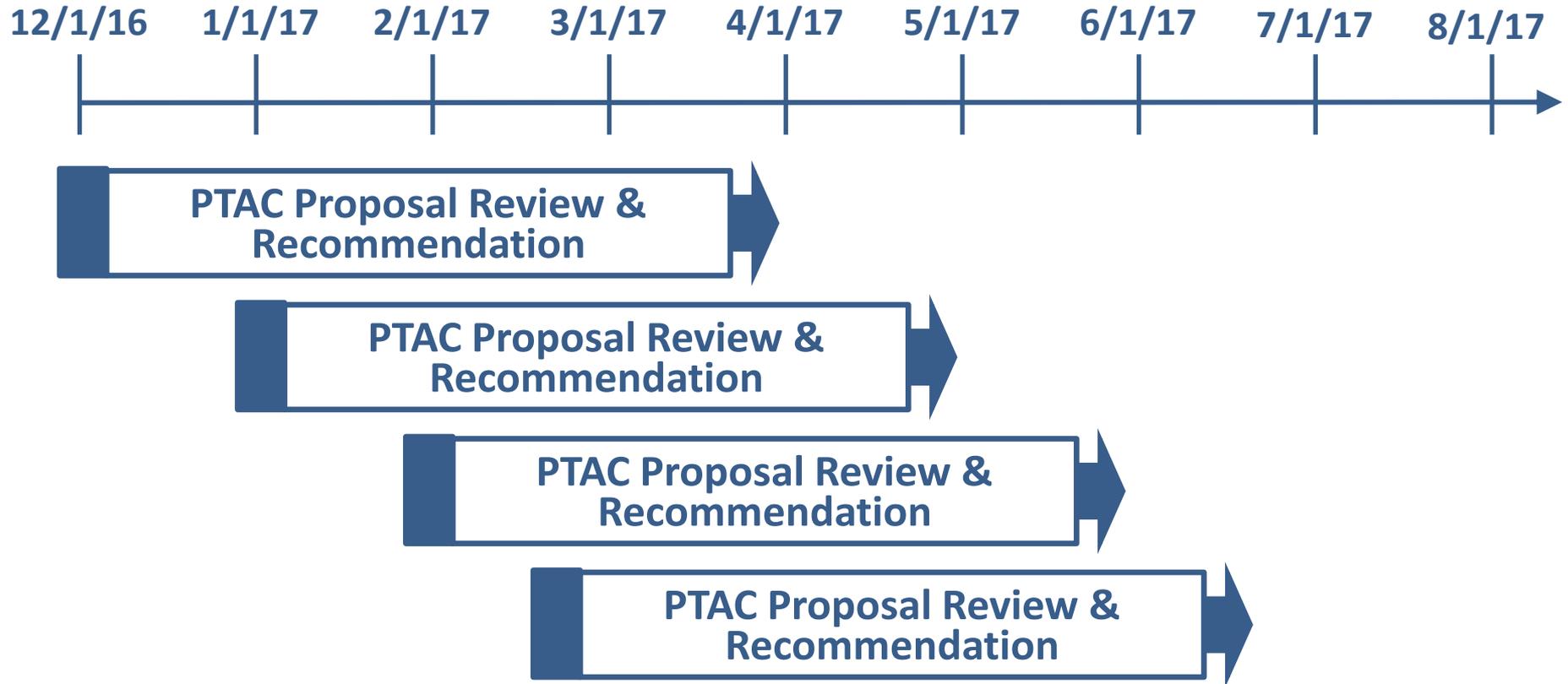
- Feasibility of submitter to attend
- Volume of applications

# PTAC Proposal Review and Recommendation Process

## PTAC Proposal Review & Recommendation Process



# No Deadlines on When Proposals Can Be Submitted; Rolling Reviews & Decisions



# Questions on Evaluation Document

- Will the PTAC review all PRT-reviewed proposals or only those that “meets the criterion” or “meets the criterion and deserves priority consideration?”
- Can a proposal have a “0” score in one or more criterion, for example in any or all of the “high priority criterion” and still receive a “meets” or “meets the criterion and deserved priority consideration” recommendation?
- The draft makes mention of “contractors.” What role/s will these contractors serve and will their expertise be available to organizations submitting and/or revising their PTAC proposals?
- What is the process in instances when the PRT does not reach a consensus?

# Questions on Evaluation Document

- The process says, “The PRT and ASPE staff and contractors will arrange any needed analyses so as to minimize the extra time required to review the proposal.” Will the submitter of the proposal be billed? Will PTAC absorb the costs of the needed analyses?
- Will PTAC have the discretionary authority to approve a plan for CMS review even if it does not meet all ten criteria but has an adequate explanation as to why it does not meet a particular criterion and perhaps proposes a possible substitute criterion?
- Will the submitter of the proposed model be provided with specific information on when the public meeting will be held or will that information only be available by monitoring the website?
- Will there be any opportunity to appeal, or should one just submit a new proposal once any defects have been cleared?
- Once a proposed model has been approved, can it then be implemented by any party? Would anyone with questions be told to contact the submitter or will questions be resolved by the PTAC?

Other comments or questions today?

# **ONCOLOGY CARE MODEL**

**USING AN EPISODE-BASED  
PAYMENT MODEL TO  
IMPROVE ONCOLOGY CARE**

**Center for Medicare & Medicaid Innovation**

# OCM Overview

# OCM TIMELINE

## Oncology Care Model Timeline

### February 2015

- U.S. Department of Health and Human Services announces new initiative to encourage better oncology care

### April 2015 & May 2015

- Letters of intent due from payers (April 2015) and providers (May 2015)

### June 2015

- Applications due to the Centers for Medicare & Medicaid Services

### April 2016

- Providers and payers notified of acceptance April 2016

### July 2016

- OCM launched with almost 200 participating physician practices and 16 payers

# MODEL OVERVIEW

Five-year, episode-based payment model (July 1, 2016-June 30, 2021)

- Payment model targets chemotherapy and related care during a 6-month period following the initiation of chemotherapy treatment

**Emphasizes practice transformation**

- Physician practices engage in practice transformation to deliver high quality care at lower cost

**Nation-wide scope with three overarching goals**

- Improve health outcomes for patients with cancer
- Improve quality of cancer care
- Reduce spending while achieving similar or greater quality for cancer treatment

**Multi-payer model**

# PRACTICE REDESIGN ACTIVITIES

## 1) Provide Enhanced Services

Provide OCM Beneficiaries with 24/7 access to an appropriate clinician who has real-time access to the Practice's medical records

Provide the core functions of patient navigation to OCM Beneficiaries

Document a care plan for each OCM Beneficiary that contains the 13 components in the Institute of Medicine Care Management Plan

Treat OCM Beneficiaries with therapies that are consistent with nationally recognized clinical guidelines

# **PRACTICE REDESIGN ACTIVITIES - CONTINUED**

## **2) Use certified electronic health record technology (CEHRT)**

OCM Practices must use CEHRT in a manner sufficient to meet the requirements of an “eligible alternative payment entity” under the MACRA rule implementing the Quality Payment Program.

## **3) Utilize data for continuous quality improvement**

Practices must collect and report clinical and quality data to the Innovation Center. In addition, the Innovation Center will provide participating practices with feedback reports for practices to use to continuously improve OCM patient care management.

# IOM CARE PLAN

- Patient name, DOB, medication list, allergies
- Diagnosis (stage, biomarkers, histology)
- Prognosis
- Treatment goals
- Treatment plan and duration
- Expected response to treatment
- Treatment benefits and harms
- Patient's anticipated experience with treatment
- Who takes responsibility for aspects of patient's care
- Advanced care plans
- Estimated total and out of pocket costs
- Plan for addressing psychosocial needs
- Survivorship plan

# OCM-FFS BENEFICIARY POPULATION

Medicare beneficiaries who meet each of the following criteria for the entire 6-month episode are included in OCM-FFS:

- Enrolled in Medicare Parts A and B;
- Does not receive the Medicare End Stage Renal Disease (ESRD) benefit;
- Medicare as his or her primary payer;
- Not covered under Medicare Advantage or any other group health program;
- Received an included chemotherapy treatment for cancer; and
- Has at least one Evaluation & Management (E&M) visit with an included cancer diagnosis during the 6 months of the episode.

# OCM PRACTICES

Nearly 200 oncology practices are participating in OCM.

## OCM Practices:

- Medicare-enrolled physician groups identified by a single Taxpayer Identification Number (TIN)
  - Composed of one or more physicians who treat Medicare beneficiaries diagnosed with cancer
  - Cover urban, suburban and rural areas
  - Range in size from solo oncologists to large practices with hundreds of providers
  - Individual practitioners identified by NPI/TIN combination
- 
- OCM excludes entities that are paid based on alternative payment methodologies, including PPS exempt cancer hospitals, Critical Access Hospitals, Federally Qualified Health Centers, Rural Health Clinics, and both Maryland hospitals and Maryland physician practices

# OCM PAYERS

- 16 commercial insurers are supporting OCM practices in their practice transformation efforts; payers include regional and national organizations
- The goal of multi-payer participation is to provide aligned financial support and quality measurement across a practice's patient population, in order to facilitate whole practice change
- CMS and the OCM payers will convene regularly throughout the model to share lessons learned on engaging in alternative payment model work that supports oncology practice transformation

# Episode Definition

# EPISODE DEFINITION

## Types of Cancer

- OCM includes nearly all cancer types

## Episode initiation

- Episodes initiate when a beneficiary starts chemotherapy
- The Innovation Center has devised a list of chemotherapy drugs that trigger OCM episodes, including endocrine therapies but excluding topical formulations of drugs

## Included services

- All Medicare A and B services that Medicare FFS beneficiaries receive during an episode
- Certain Part D expenditures are also be included

## Episode duration

- OCM episodes extend six months after a beneficiary's chemotherapy initiation
- Beneficiaries may initiate multiple episodes during the five-year model performance period

# DRUG LIST

## (INITIATORS OF EPISODE IN COMBINATION WITH QUALIFYING ICD 10 CODE)

- Include the vast majority of chemotherapy agents
- Does not include radiation sensitizing agents, supportive care medications or growth factors
- May not include drugs that are often used for non malignant conditions and generally used in combination with other chemotherapy drugs (prednisone)
- May not include drugs that are infrequently used in cancer but frequently used for non-malignant conditions (hydroxyurea, interferon alpha 2B)

# ATTRIBUTION/PARTICIPATION METHODOLOGY

- Each episode will be attributed to the practice that provided the most E&M visits with a cancer diagnosis during the episode (“plurality approach”)
- OCM practices are defined by the TIN used to bill for professional services
- OCM practitioners are defined by NPI. The TIN/NPI combination is used for purposes of identification

# Quality

# QUALITY MEASURES – OVERVIEW

Quality measures were selected for OCM across four of the National Quality Strategy (NQS) Domains, including:

- Communication and Care Coordination
- Person and Caregiver-Centered Experience and Outcomes
- Clinical Quality of Care
- Patient Safety

These measures were selected after extensive literature review, review by a Technical Expert Panel, and consideration of alignment with other quality reporting efforts.

To the extent possible, OCM utilizes existing data such as claims or data collected within other CMS programs in an effort to reduce burden on OCM Participants.

# CLAIMS-BASED QUALITY MEASURES

- Claims-based measures are pay-for-performance beginning in performance period one.
- Performance on claims-based measures are scored utilizing comparisons to national benchmarks.

Measure Name	OCM Measure Number	NQS Domain	Reporting Requirement
Risk-adjusted proportion of patients with all-cause hospital admissions within the 6-month episode	OCM-1	Communication and Care Coordination	Calculated by CMS using administrative data
Risk-adjusted proportion of patients with all-cause ED visits that did not result in a hospital admission within the 6-month episode	OCM-2	Communication and Care Coordination	Calculated by CMS using administrative data
Proportion of patients who died who were admitted to hospice for 3 days or more	OCM-3	Communication and Care Coordination	Calculated by CMS using administrative data

# PATIENT-REPORTED EXPERIENCE MEASURE

- The Patient-reported experience of care measure performance-based payment will be based on items recommended in the first Consumer Assessment of Healthcare Providers and Systems (CAHPS) for Cancer Care field test.
- Performance rates will be calculated using aggregated composite-level scores to create a summary “patient experience of care” score.
- The survey will be administered and collected by the OCM Evaluation contractor. OCM Participants are not required to administer or contract with a survey vendor to collect survey data.

Measure Name	OCM Measure Number	NQS Domain	Measure Source	Reporting Requirement
Patient-Reported Experience	OCM-6	Person and Caregiver-Centered Experience and Outcomes	Survey	CMS-Acquired Data

# PRACTICE-REPORTED MEASURES

Practice-reported measures are required to be reported by the OCM Participant to the OCM registry.

Practice-reported measures are aligned to measure specifications used in other CMS programs

- Measures are generally aligned to electronic Clinical Quality Measures (eCQMs) when available and feasible, to support electronic submission of data in an effort to reduce provider burden.
- Additional OCM measures are generally aligned to PQRS measure specifications when eCQMs are not available or feasible, and NQF specifications for measures not utilized in PQRS.
- In order to align to OCM requirements and criteria, OCM specific measures specifications are provided to identify the detailed implementation of the practice-reported measures for the model.

OCM Participants are required to report all practice-reported measures data as required for each measure for each reporting period, each of which is a calendar quarter.

# PRACTICE-REPORTED MEASURES – CONTINUED

Measure Name	OCM Measure Number	NQS Domain	Measure Source	Reporting Requirement
Oncology: Medical and Radiation – Pain Intensity Quantified (NQF 0384/PQRS 143)	OCM-4a	Person and Caregiver-Centered Experience and Outcomes	Registry (practice-reported)	Beneficiary Level - Payment
Oncology: Medical and Radiation – Plan of Care for Pain (NQF 0383/PQRS 144)	OCM-4b	Person and Caregiver-Centered Experience and Outcomes	Registry (practice-reported)	Beneficiary Level – Payment
Preventive Care and Screening: Screening for Depression and Follow-Up Plan (NQF 0418/ eCQM CMS2.6.3)	OCM-5	Person and Caregiver-Centered Experience and Outcomes	Registry (practice-reported)	Beneficiary Level - Payment
Prostate Cancer: Adjuvant Hormonal Therapy for High or Very High Risk Prostate Cancer (NQF 0390/PQRS 104)	OCM-7	Clinical Quality of Care	Registry (practice-reported)	Aggregate Level – Payment; Beneficiary Level - Monitoring
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)	OCM-8	Clinical Quality of Care	Registry (practice-reported)	Aggregate Level – Payment; Beneficiary Level - Monitoring

# PRACTICE-REPORTED MEASURES – CONTINUED

Measure Name	OCM Measure Number	NQS Domain	Measure Source	Reporting Requirement
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)	OCM-9	Clinical Quality of Care	Registry (practice-reported)	Aggregate Level – Payment; Beneficiary Level - Monitoring
HER2 targeted therapies received by patients with AJCC stage I (T1c) – IV and HER2 positive breast cancer receiving adjuvant chemotherapy (NQF 1858)	OCM-10	Clinical Quality of Care	Registry (practice-reported)	Aggregate Level – Payment; Beneficiary Level - Monitoring
Breast Cancer: Hormonal Therapy for Stage I (T1b)-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer (NQF 0387/eCQM CMS140v5.0)	OCM-11	Clinical Quality of Care	Registry (practice-reported)	Aggregate Level – Payment; Beneficiary Level - Monitoring
Documentation of Current Medications in the Medical Record (NQF 0419/eCQM CMS68v6.1)	OCM-12	Patient Safety	Registry (practice-reported)	Aggregate Level – Payment; Beneficiary Level - Monitoring

# QUALITY MEASUREMENT: DATA REGISTRY

- Biological and molecular characteristics of neoplasms relevant to cost and outcome
- Date of progression/relapse
- Date of death\*
- Quality measures
- Combination of automated data export and some manual entry

# QUALITY POINTS

- In the first two performance periods there will be a mix of pay-for-reporting (P4R) and pay-for-performance (P4P) measures.
- Generally, each measure will have a maximum of 10 points available; the exception is in the first two performance periods, when the P4R measures will have a maximum of 2.5 points available for each.
- All earned points will be summed and divided by the practice's or pool's total possible points to calculate the aggregate quality score (AQS). The AQS will map to a performance multiplier, which will affect the performance-based payment.

## Aggregate Quality Score Translated into Performance Multiplier

Aggregate Quality Score	Performance Multiplier
75% - 100%	100%
50% - 74%	75%
30% - 49%	50%
Below 30%	0%

# OCM Payment

# TWO PRONGED PAYMENT APPROACH

FFS payments continue as usual to participating practices

1. Monthly Enhanced Oncology Services (MEOS) payment: \$160
2. Semi-annual potential for performance-based payment for savings on total cost of care compared to a risk-adjusted target amount

(One-sided risk and two-sided risk arrangements available)

# MEOS PAYMENT

- Monthly \$160 payment for enhanced services for Medicare FFS beneficiaries with cancer who receive chemotherapy
  - Enhanced services include: 24/7 clinician access, patient navigation, care planning, and use of clinical guidelines
- OCM practices are eligible to bill the MEOS for each month of the 6-month episode, unless the beneficiary enters hospice or dies
- MEOS payments will be included in the practice's total cost of care for the purposes of calculating the performance-based payment
- MEOS payment amount estimated based on estimated time associated with requested practice redesign activities and staff salaries

# PERFORMANCE-BASED PAYMENT

## Performance Period

- Six-month performance periods

## Risk Arrangement Options

- One-sided: Medicare discount = 4%
  - OCM practices are NOT responsible for Medicare expenditures that exceed the target price
  - Must qualify for performance-based payment by mid-2019 to remain in one-sided risk
- Two-sided: Medicare discount = 2.75%
  - OCM practices are responsible for Medicare expenditures that exceed target price
  - Option to take two-sided risk begins in 2017
- Practices must either elect two-sided risk or achieve a performance-based payment by initial reconciliation of the fourth performance period to stay in the model.

## Performance-Based Payment (PBP)

- Most cancers eligible for PBP; those that are not are MEOS-only
- PBP based on difference between target amount versus actual episode expenditures

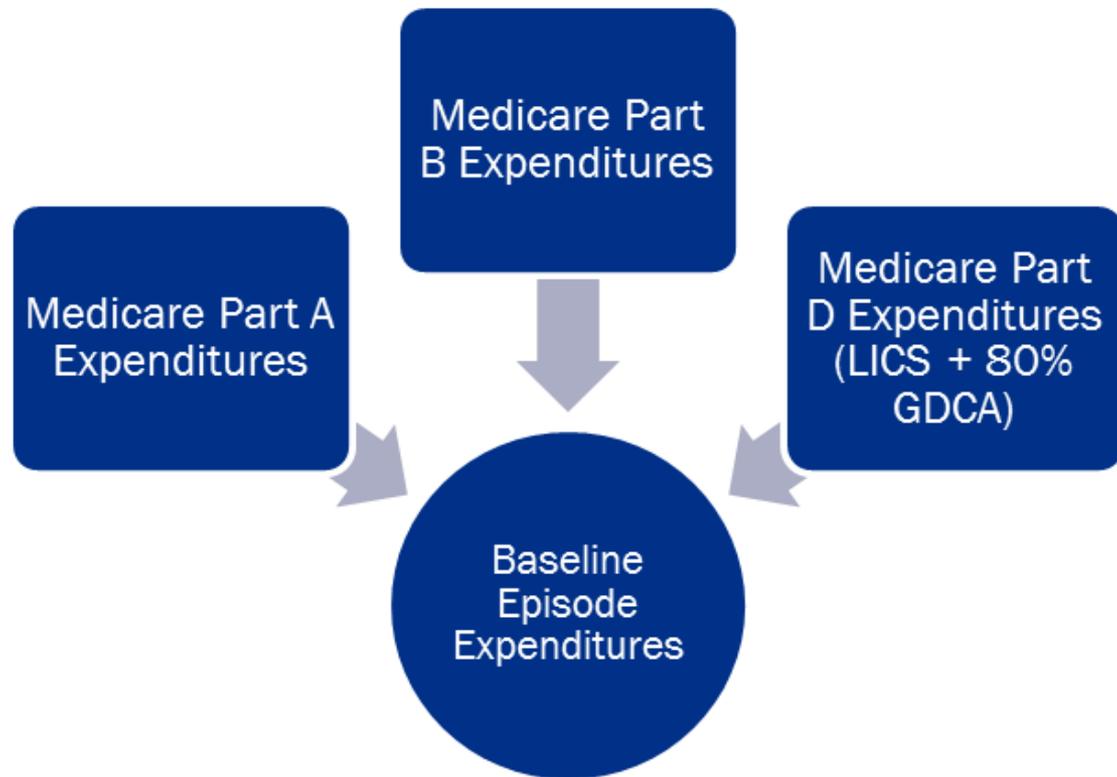
# TO CALCULATE THE PERFORMANCE-BASED PAYMENT:

1. Identify baseline episodes
2. Calculate baseline expenditures
3. Calculate the risk-adjusted target amount
4. Identify performance period episodes
5. Calculate actual episode expenditures
6. Calculate the performance multiplier
7. Calculate the performance-based payment

# 1. IDENTIFY BASELINE EPISODES

- Step 1: Identify episodes
  - Identify potential trigger events
  - Determine episode eligibility
  - Assign cancer type
- Step 2: Attribute episodes to practices

## 2. CALCULATE BASELINE EPISODE EXPENDITURES



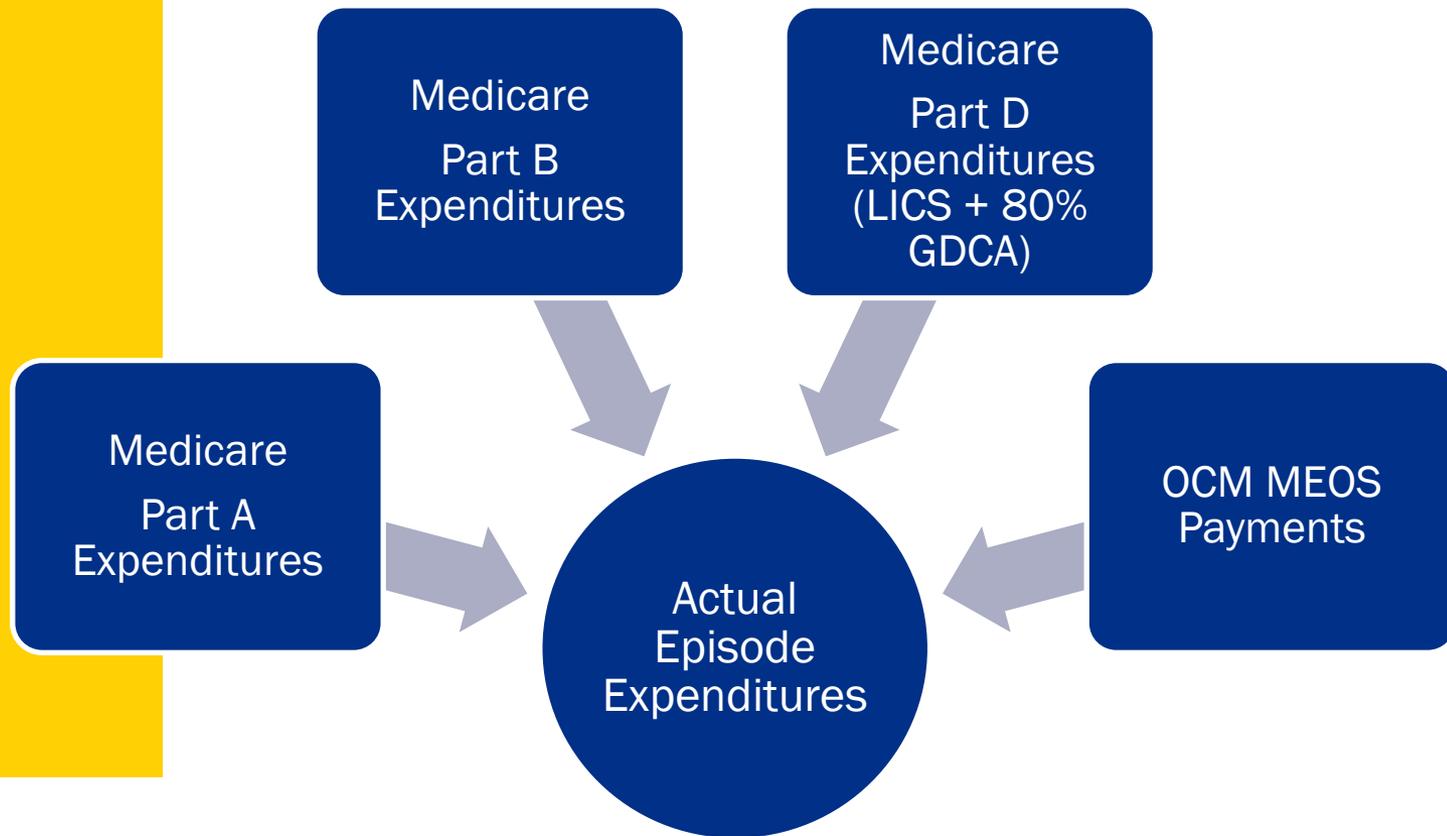
# 3. CALCULATE THE RISK-ADJUSTED TARGET AMOUNT

- Step 3A: Calculate the baseline price
- Step 3B: Calculate the benchmark price
- Step 3C: Calculate the target price
- Step 3D: Calculate the risk-adjusted target amount

# 4. IDENTIFY PERFORMANCE PERIOD EPISODES

- For each performance period, episodes will be identified and attributed to practices in the same way as for the baseline period, as previously described
- Recall that these were the steps involved
  - Step 1: Identify episodes
    - Step 1A: Identify potential trigger events
    - Step 1B: Determine episode eligibility
    - Step 1C: Assign cancer type
  - Step 2: Attribute episodes to practices

# 5. CALCULATE ACTUAL EPISODE EXPENDITURES



## 6. CALCULATE THE PERFORMANCE MULTIPLIER

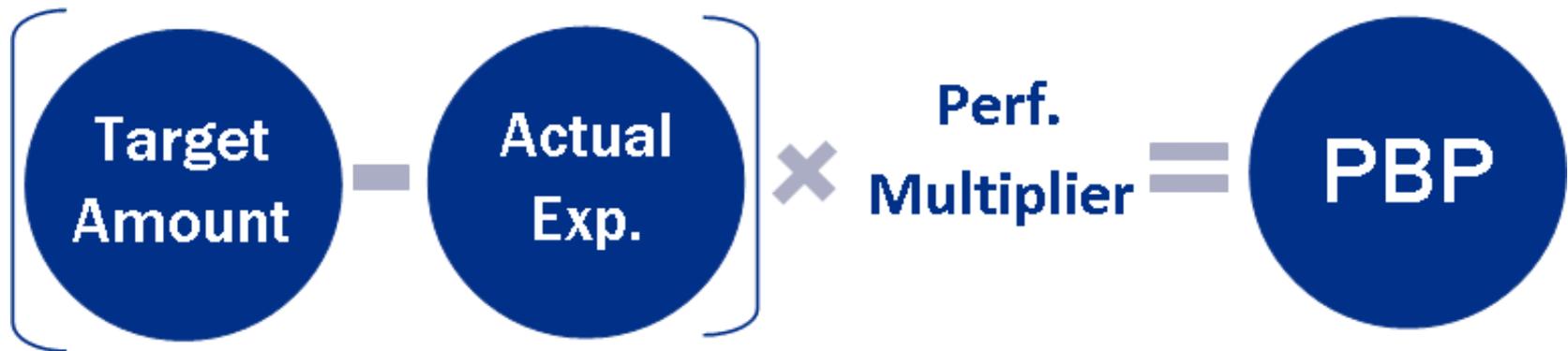
- The performance multiplier will be based on the AQS constructed from each practice's or pool's performance on the quality measures, as shown here

Aggregate Quality Score	Performance Multiplier
75% - 100%	100%
50% - 74%	75%
30% - 49%	50%
Below 30%	0%

- The AQS equals the sum of the points earned on all 12 measures divided by the maximum number of points available.

# 7. CALCULATE THE PERFORMANCE-BASED PAYMENT

- If actual episode expenditures are lower than the target amount: The practice may be paid the full difference (up to a stop gain amount), contingent on quality performance
- If actual episode expenditures are higher than the target amount: No PBP will be made
  - If the practice has elected the two-sided risk sharing arrangement for the performance period, the practice must pay CMS back the difference (up to a stop loss amount), reduced for sequestration



# REQUIREMENTS FOR RECEIVING A PERFORMANCE-BASED PAYMENT

In order to receive a performance-based payment, a practice or pool must meet the following requirements:

- Actual episode expenditures for the practice/pool must be lower than the target amount for the performance period.
- The practice/pool must have submitted the required data to the OCM data registry.
- The practice, or, in the case of a pool, each practice in the pool, implements all of the Practice Redesign Activities.
- The practice/pool must have achieved a minimum Aggregate Quality Score (AQS) of 30% (out of 100%).

# OCM-NOVEL THERAPIES

- Potential adjustment to reflect situations where a practice has a higher proportion of expenditures for the use of newly FDA-approved oncology drugs than what is reflected in the trended baseline prices.
  - Includes oncology drugs that received FDA approval after December 31, 2014
  - Use of the novel therapy must be consistent with the FDA-approved indications for inclusion in the adjustment
  - Oncology drugs are considered “new” for 2 years from FDA approval for that specific indication
- The novel therapies adjustment may lead to a higher benchmark only (i.e., it will never lower a benchmark)
- In the future, CMS may modify this adjustment to incorporate value of the novel therapies

# Monitoring/Evaluation/Learning

# MONITORING AND EVALUATION: OCM-FFS

Participant monitoring activities may include:

- Tracking of claims data
- Patient surveys
- Site visits
- Analysis of quality measurement data
- Time and motion studies
- Medical record audits, tracking of patient complications, and appeals

OCM will employ a non-randomized research design using matched comparison groups to detect changes in utilization, costs, and quality that can be attributed to the model

# LEARNING AND DIFFUSION (L&D)

The OCM Learning System will provide:

- Topic-specific webinars that allow OCM participants to learn from each other
- An online portal to support learning through shared resources, tools, ideas, discussions, and data-driven approaches to care
- Action Groups in which practices work together to virtually explore critical topics areas and build capability to deliver comprehensive oncology care
- Site visits to better understand how practices manage services, use evidence-based care, and practice patient-centered care
- Coaching to help practices overcome barriers to improvement

# CONTACT INFORMATION

## Oncology Care Model CMMI Patient Care Models Group

[OCMSupport@cms.hhs.gov](mailto:OCMSupport@cms.hhs.gov)

<http://innovation.cms.gov/initiatives/Oncology-Care/>

# Appendix

# CANCER BUNDLES

- 21 Cancer Bundles (**defined by qualifying ICD-10 code**) that are “reconciliation eligible” meaning that performance based payments will be calculated for those cancer types
- Include approximately 95% of cancer cases
- Remaining 5% are not “reconciliation eligible” but MEOS payments can be billed

# CANCER TYPE BUNDLES

## Caner Bundles

- Acute Leukemia
- Anal Cancer
- Bladder Cancer
- Breast Cancer
- Chronic Leukemia
- CNS Tumor
- Endocrine Tumor
- Female GU other than Ovarian
- Gastro-esophageal Cancer
- Head and Neck Cancer
- Intestinal Cancer
- Kidney Cancer
- Liver Cancer
- Lung Cancer
- Lymphoma
- Malignant Melanoma
- MDS
- Multiple Myeloma
- Ovarian Cancer
- Pancreatic Cancer
- Prostate Cancer

# PREDICTION MODEL VARIABLES

**Table 1: OCM Prediction Model Variables Variable Name**

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)
• 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_PART_D_ONLY_WITH_SURGERY	Breast cancer, only part D chemotherapy drugs, with surgery
• BREAST_PART_D_ONLY_WITHOUT_SURGERY	Breast cancer, only part D chemotherapy drugs, without surgery (reference group)
• BREAST_PART_B_WITH_SURGERY	Breast cancer, at least some Part B chemotherapy drugs, with surgery
• BREAST_PART_B_WITHOUT_SURGERY	Breast cancer, at least some Part B chemotherapy drugs, without surgery
• ANAL_WITH_SURGERY	Anal cancer, with surgery
• ANAL_WITHOUT_SURGERY	Anal cancer, without surgery
• BLADDER_WITH_SURGERY	Bladder cancer, with surgery
• BLADDER_WITHOUT_SURGERY	Bladder 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	Intestinal cancer, with surgery
• INTESTINAL_WITHOUT_SURGERY	Intestinal cancer, without surgery
• LIVER_WITH_SURGERY	Liver cancer, with surgery
• LIVER_WITHOUT_SURGERY	Liver cancer, without surgery

# PREDICTION MODEL VARIABLES - CONTINUED

**Table 1: OCM Prediction Model Variables**

Variable Name	Description (if value=1)
• 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
• PROSTATE_WITH_SURGERY	Prostate cancer, with surgery
• PROSTATE_WITHOUT_SURGERY	Prostate cancer, without surgery
• ACUTE_LEUKEMIA	Acute leukemia
• CHRONIC_LEUKEMIA	Chronic leukemia
• CNS	CNS tumor
• ENDOCRINE	Endocrine tumor
• KIDNEY	Kidney cancer
• 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

# PREDICTION MODEL VARIABLES - CONTINUED

Table 1: OCM Prediction Model Variables Variable Name	Description (if value=1)
• 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_182_183	Episode length 182 – 183 days
• HRR_RELATIVE_COST	Episode expenditures in beneficiary’s HRR relative to average episode expenditures in all HRRs