

Background

- The Oncology Care Model (OCM) is a voluntary five-year bundled payment program developed by the Center for Medicare & Medicaid Innovation (CMMI). Started in 2016, the OCM is one of the first physician-led specialty care models created by CMMI with the aim to improve quality and reduce the cost of cancer care. There are 179 oncology practices, representing more than 6,500 practitioners, and 13 payers across the US participating in the model.
- The episode payment approach in the OCM introduces performance-based payments (PBPs) alongside traditional fee-for-service reimbursements to physicians. There is not yet a clear understanding of the impact of the OCM's implementation on oncology practices in terms of the number of participants receiving performance-based payments and their impact on treatment patterns.

Objective

To assess costs of care and the implications for OCM performance-based payments for each of the 21 OCM cancer types.

Methods

- OCM episodes were constructed and analyzed using Medicare Part A/B FFS claims and Part D prescription drug event (PDE) data under a CMS research data use agreement. We analyzed a cohort of patients including all cancer patients receiving cancer treatment that represented less than 20% of total Medicare beneficiaries.
- Average actual Medicare costs and 'predicted costs', as determined by the OCM Prediction Model, were compared for each of the 21 types of cancers included in OCM benchmarks during the baseline period from January 2012 through June 2015.
- Cost performance is measured in the OCM by comparing actual Medicare costs for a participant's patients with their benchmark amount of Medicare costs. Benchmarks are designed to represent what Medicare costs would have been for a participant's patients in the absence of OCM participation. Benchmark amounts are mostly the result of predicted costs along with adjustments for the use of novel therapies.
- OCM methodology developed by CMMI was replicated for calculating actual and predicted episode costs to determine if 'average cost performance' (average actual costs relative to predicted costs) for some types of cancers would contribute positively or negatively toward a participant's ability to earn performance-based payments.
- OCM methodology was also replicated for calculating aggregate quality scores for the claims-based quality measures to determine if 'average performance' for some types of cancers would contribute positively or negatively toward a participant's ability to earn performance-based payments.
- Episodes were not attributed to OCM participants--instead, episodes were constructed for all eligible Medicare FFS beneficiaries.
- The most recent list (as of July 2018) of Part B and Part D cancer drugs eligible to trigger OCM episodes was used to identify episodes in the Parts A/B/D Medicare data.
- To estimate actual episode costs, baseline trend and Winsorization adjustments published in the OCM payment methodology document¹ were applied to the Medicare payment amounts estimated using the Parts A/B/D Medicare data. For Part D, Medicare costs include both the federal share of gross drug costs above the out-of-pocket (OOP) threshold and low-income subsidies (LIS) for cost sharing.
- To estimate predicted episode costs, the covariate coefficients (updated version for Performance Period 3 and forward) published by CMS were used. Parts A/B/D Medicare data were used to identify the presence or absence of covariates for each episode. To estimate predicted costs for each episode, the OCM Prediction Model uses a generalized linear regression approach to estimate coefficients for covariates that include: cancer type, patient age, medical procedures (e.g. surgeries, radiation therapy, bone-marrow transplants) performed during episodes, patient history of chemotherapy, non-cancer comorbidities, etc.
- To estimate average aggregate quality scores for each type of cancer, average quality scores were estimated for each of the three claims-based OCM quality measures (OCM-1: Proportion of patients with all-cause hospital admissions, OCM-2: Proportion of patients with all-cause emergency department visits not resulting in a hospital admission, OCM-3: Proportion of patients who died who were admitted to hospice for 3 days or more). Average quality measure scores were then compared with OCM quality measure performance thresholds published by CSI Solutions in Healthcare Communities.

Note: The original abstract was submitted based on analysis performed using the 5% sample of Medicare Part A and B FFS claims. This poster contains new results based on updated analysis performed using access to 100 percent of Medicare Part A and Part FFS claims, plus Part D PDE data.

Results

- 1,921,600 episodes were identified in baseline period.
- More than half (62%) of cancer episodes occurring during the OCM baseline period fall within 2 cancer types: breast and prostate (Figure 1).

Figure 1: Composition of Cancer Types During the OCM Baseline Period (Jan 2012 – Jun 2015) Across All Eligible Medicare FFS Beneficiaries

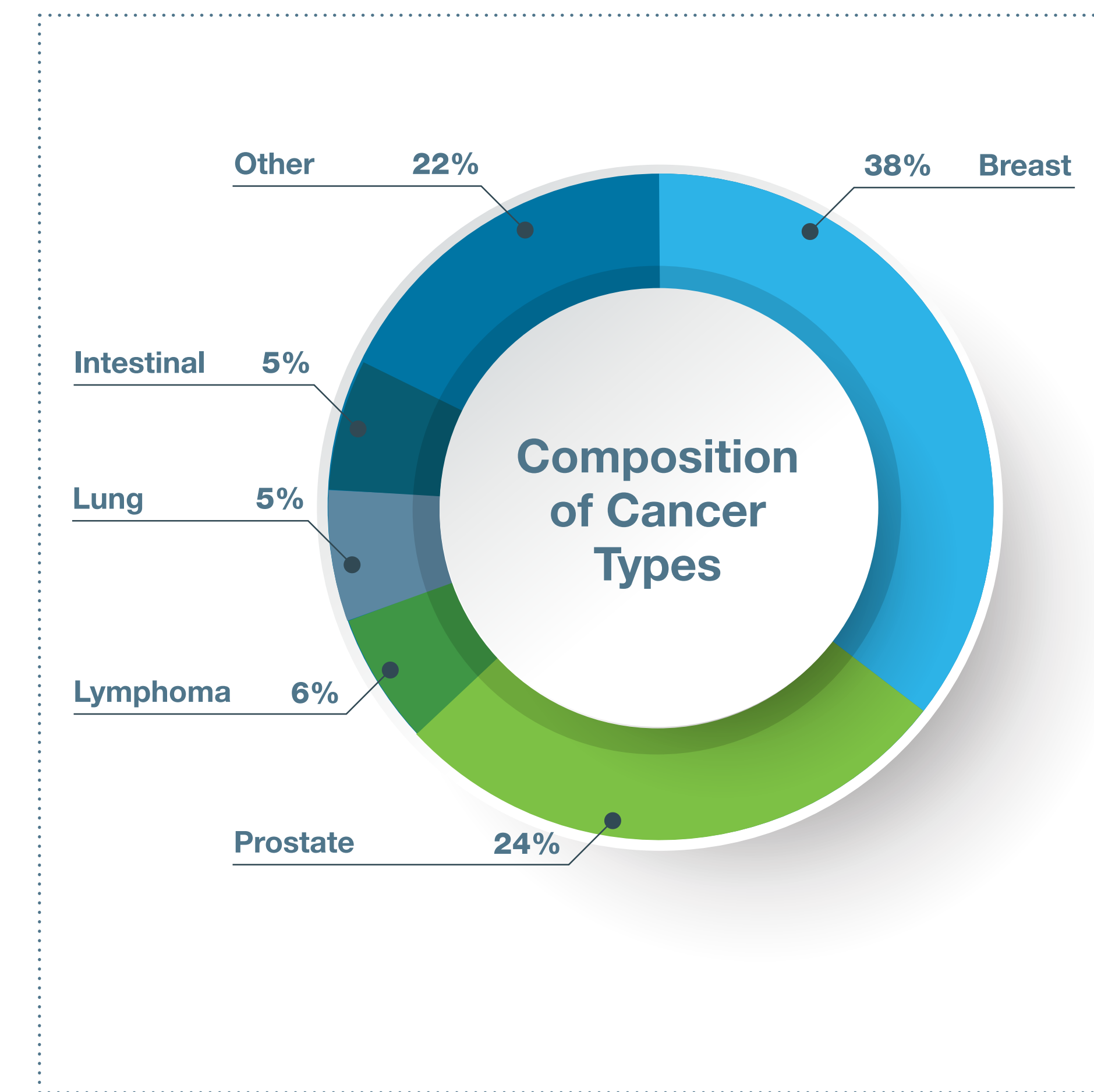


Figure 2: Comparing Average Actual Medicare Costs vs Average Predicted Costs By Cancer Type, During the OCM Baseline Period 2012-2015

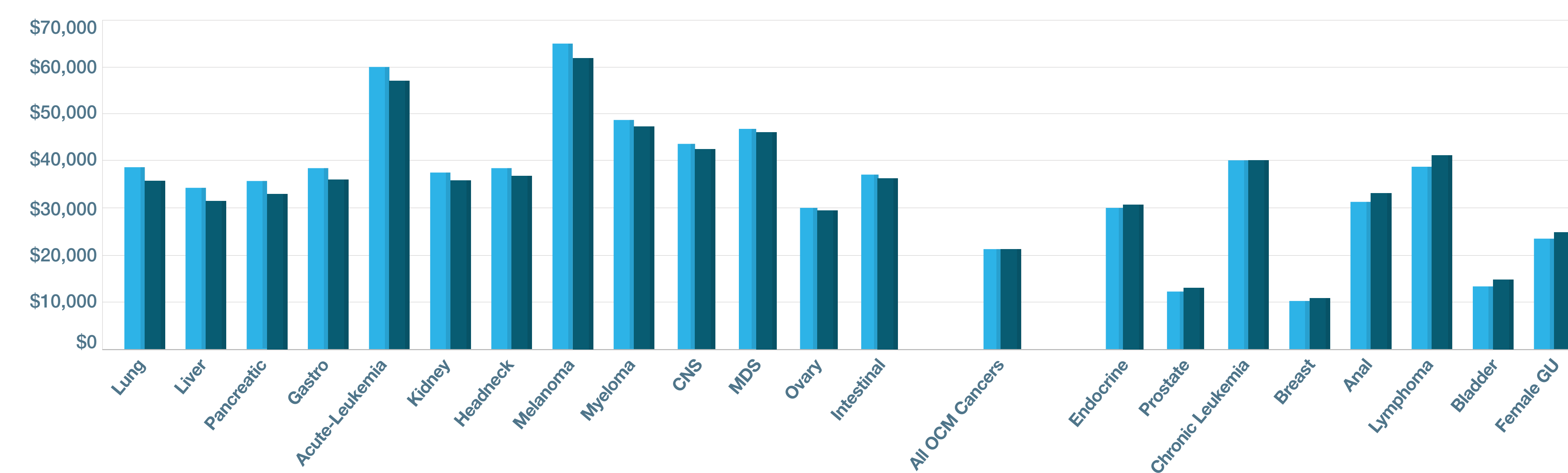
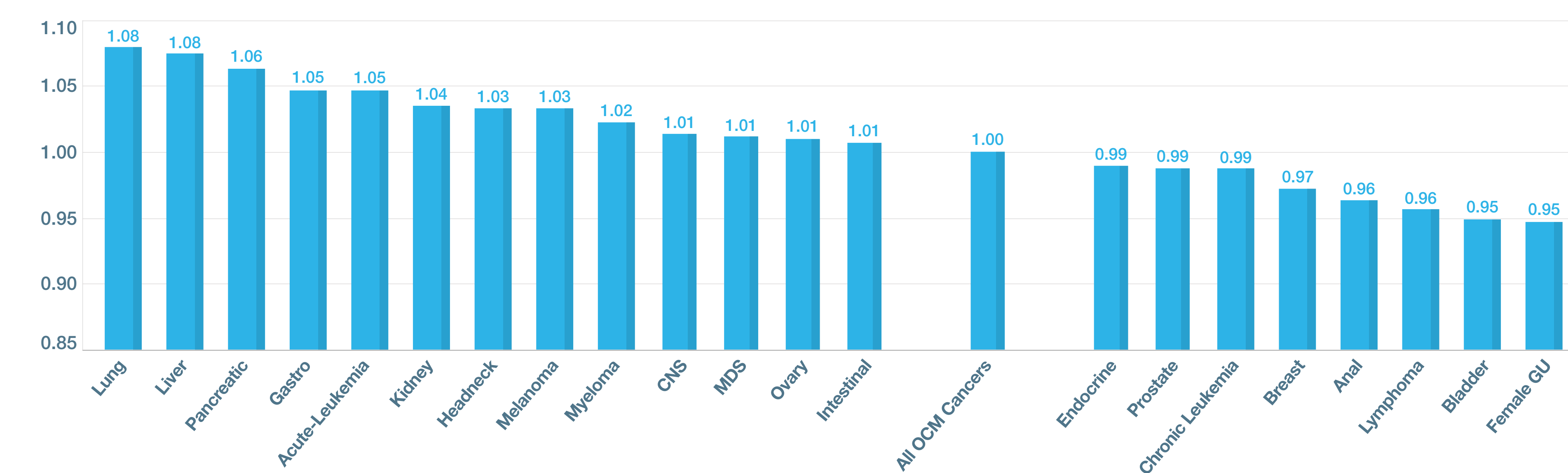


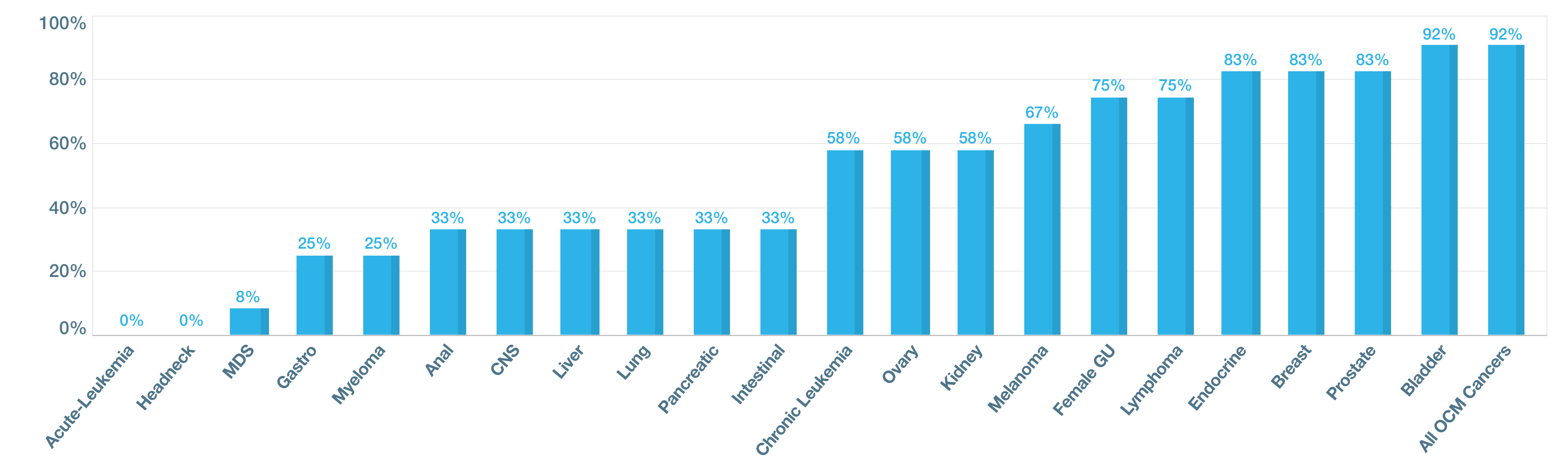
Figure 3: Comparing Average Actual-to-Predicted Medicare Cost Ratios By Cancer Type, During the OCM Baseline Period 2012-2015



- Across all OCM cancer types, an OCM episode's average actual and predicted cost for the baseline period was \$20,900. For individual cancer types, average actual and predicted costs differed [Figure 2].
- Actual costs differed from predicted costs more for some types of cancer than others [Figure 3].
 - For lung and liver cancer episodes, actual costs were, on average, 8 percent higher than predicted costs.
 - For bladder and female GU cancers other than ovarian, actual costs were, on average, 5 percent lower than predicted costs.
 - Eight cancer types have actual costs that, on average, exceed predicted costs by 3 percent or more. These eight cancers account for 10 percent of OCM episodes.
 - Five cancer types have actual costs that, on average, fall below predicted costs by three percent or more. These five cancers account for almost 50 percent of OCM episodes—however, excluding breast cancer, the other four cancers account for 11 percent of OCM episodes.
 - Eight cancer types have actual costs that, on average, are within +/- 3 percent of predicted costs. These eight cancers account for 41 percent of OCM episodes.

- Based on the OCM's claims-based quality measures, performance on aggregate quality scores was lower for some types of cancers than others. For acute leukemia and head-and-neck cancers, on average, none of the possible quality points were achieved. For bladder cancers, 92 percent of the possible quality points were achieved, on average [Figure 4].²
 - Eleven cancer types achieved, on average, less than 50 percent of the possible quality points. These eleven cancers account for 20 percent of OCM episodes.
 - Ten cancer types achieved, on average, greater than 50 percent of the possible quality points. These eight cancers account for 80 percent of OCM episodes.

Figure 4: Aggregate Quality Scores for Claims-Based Quality Measures By Cancer Type During the OCM Baseline Period (Jan 2012 – Jun 2015) Across All Eligible Medicare FFS Beneficiaries



- The majority of cancer types that had high actual-to-predicted cost ratios had low aggregate claims-based quality scores, and the majority of cancer types that had low actual-to-predicted cost ratios had high aggregate claims-based quality scores [Figure 3, 4].
 - Of the eight cancer types having actual costs that exceeded predicted costs by 3 percent or more, six achieved less than 50 percent of the possible quality points.
 - Of the five cancer types having actual costs that fell below predicted costs by 3 percent or more, four achieved greater than 50 percent of the possible quality points.
 - The aggregate quality score for 'All OCM cancers' is 92% because: the total number of cancers is heavily weighted toward breast and prostate cancers, which have high quality scores.

Conclusion

- This analysis suggests that the ability of a participant to succeed in the OCM can vary depending on the types of cancers treated by the practice.
- Episodes for which actual costs exceed predicted costs and quality scores are low will contribute negatively toward a participant's potential to earn performance-based payments.
- Cancers types in which actual costs were higher than predicted costs were not necessarily the cancer types with higher aggregate claims-based quality scores.
- Identifying ways to account for differences in the predicted cost and the actual cost of cancer treatment will be important to ensuring that patient selection is neither a successful nor necessary strategy for OCM participants to earn performance-based payments. Identifying such opportunities are essential to allowing OCM to reward efficient high-quality care.

References

- Oncology Care Model Performance-Based Payment Methodology, Version 3.2 27 December 2017
- Healthcare Communities, <https://www.healthcarecommunities.org/ResourceCenter.aspx>, 1 August 2018

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