

# Impact of the COVID-19 Pandemic on Administration of Systemic Therapy in the Medicare Population

Peter Kardel, Michael A Kolodziej, Louis Jacques, Marc Samuels, Irene Varghese, Caitlin Sheetz  
ADVI Health, Washington, DC

ADVI

## Key Takeaways

- Systemic treatment dropped during 2020, most notably in colorectal cancer by 9%.
- Of those still receiving treatment, the average length rose during the pandemic, notably for cancers like breast, colorectal, lung, and prostate.
- Pandemic led to increased cancer treatment costs, with a TCOC rise in 2020 for all types.

## METHODS

- Using the Medicare Research Identifiable Files (2017-2022), we targeted patients diagnosed with breast, colorectal, lung, prostate, and lymphoma cancers. Our analysis covered their demographics, diagnoses, treatment regimens, and average monthly Total Cost of Care (TCOC).
- Selection criteria demanded patients to have continuous enrollment in Medicare Parts A, B, and D for a year and at least two identical therapy claims in a 60-day window. All demographic insights were derived from the Master Beneficiary Summary File (MBSF).

## RESULTS

**Table 1:** Counts of Medicare beneficiaries with cancer diagnoses in the calendar year

Cancer Type	2018	2019	2020	2021	2022
Breast	760,512	784,821	732,090	756,343	759,316
Colorectal	251,654	252,486	226,060	225,025	217,307
Lung	200,659	208,749	197,817	196,456	194,239
Lymphoma	305,139	317,579	307,801	316,736	317,516
Prostate	685,019	712,746	682,936	704,778	717,820

Average of 6% decrease across cancer types

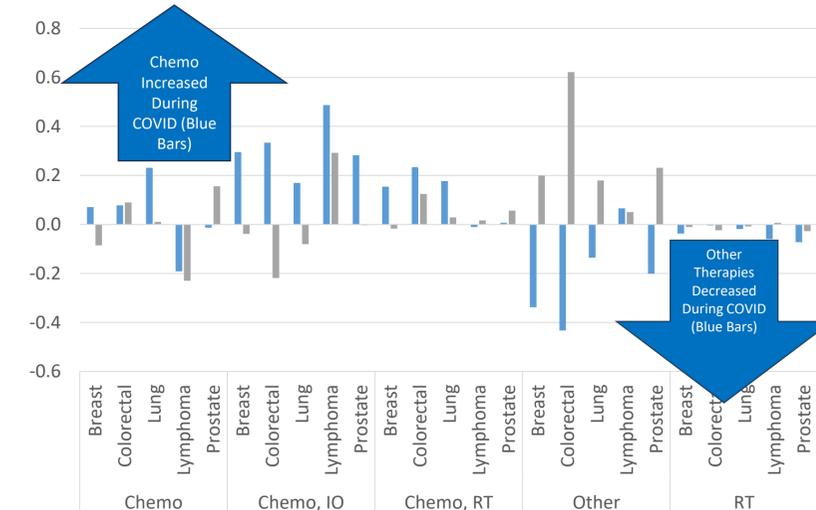
## CONCLUSION

- During the pandemic in 2020, a marked reduction in the number of cancer diagnoses among Medicare beneficiaries along with fewer that underwent systemic cancer treatments, with the most significant decline observed in colorectal cancer at 9%.
- However, of those that did begin system treatment during the pandemic, the average duration of their therapy slightly increased, with higher rates of chemotherapy (compared to previous years).

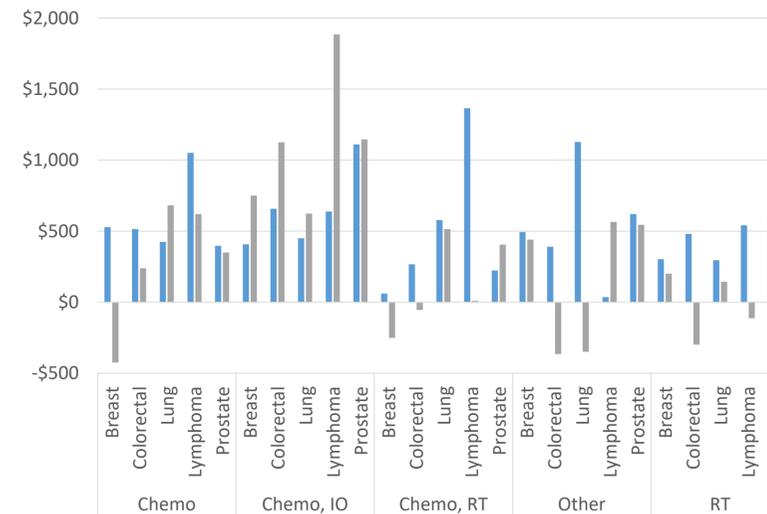
**Figure 1:** Yearly percentage change of Medicare beneficiaries receiving systemic therapy, 2018-2022. Assessed but not shown, race and socio-economic indicators were affected uniformly.



**Figure 2:** Change in average months on treatment between 2019-2020 (blue) and 2020-2021 (gray) periods.



**Figure 3:** Change in TCOC PMPM between 2019-2020 (blue) and 2020-2021 (gray) periods.



**Peter Kardel**  
 Chef Data Scientist | ADVI Health  
 Mobile: 202.420.0720  
 Email: peter.kardel@advi.com  
 www.advi.com

- Of those who did begin system treatment during the pandemic, the average Total Cost of Care (TCOC) per month in 2020 – across all cancer types and treatment modalities - experienced a slight increase compared to the previous year.
- This shows that while fewer people were being diagnosed and treated for oncologic care, the length of treatment and cost increased compared to previous years, the impact of COVID on systemic treatment of cancer was modest to the system overall.

## INTRODUCTION

- The COVID-19 pandemic created significant disruptions across healthcare, with cancer treatments being notably affected.
- Routine cancer screenings and surgeries often faced delays or cancellations, raising concerns about late-stage diagnoses and subsequent impact on patient outcomes.
- While immediate effects on screenings and surgeries are known, the broader impact on systemic therapies, pivotal for controlling tumor growth and improving patient longevity, remains less explored.

## OBJECTIVE

Understand and describe the COVID-19 pandemic impact on treatment patterns of systemic therapy among the Medicare population diagnosed with specific cancer types and evaluate changes in Total Cost of Care (TCOC) during this period.

## LENGEND

Chemo = Chemotherapy  
 IO = Immuno-Oncology Therapy  
 RT = Radiation Therapy