10550 Reductions in Cancer Screening: The Consequence of Changes in Routine Care During the COVID-19 Pandemic

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INTRODUCTION

- The COVID-19 pandemic imposes significant restrictions on daily activities as a result of public health orders and individual responses to the pandemic.
- Much of the direct or indirect impact due to the pandemic is potentially in reductions in healthcare encounters for services such as preventive care.
- Delayed routine preventive care, such as cancer screening, can have negative downstream impacts in terms of later stage cancer diagnoses, treatment delays, and clinical outcomes.[1-4]
- Cancer treatment delays of as little as four weeks have been associated with a statistically significant increase in mortality.[4]

OBJECTIVE

- To quantify changes in breast, cervical, prostate, lung, and colorectal cancer screening rates to better understand the impact of COVID-19 on health-seeking behaviors.

METHODS

- A retrospective analysis was conducted to examine changes in cancer screening rates during March-June 2019 (pre-COVID-19) and 2020 (post-COVID-19 restrictions implementation), using Optum's de-identified Clinformatics® Data Mart Database, which includes Medicare and commercially insured members.
- Eligible cancer screening cohorts were identified from insured members within March to June: 2019 (N=17,931,318); 2020 (N=17,521,411).
- Members meeting age and/or sex criteria as detailed in the United States Preventive Services Task Force (USPSTF) recommendations[5] for breast, cervical, prostate, lung, and colorectal cancer screening (Table 1) and without a history of corresponding cancer represented the eligible membership for screening.
    - Additional USPSTF criteria not available in the database were not included (e.g., For lung cancer screening: those with a 30 pack-year smoking history and currently smoke or quit within the past 15 years).

Table 1. USPSTF Cancer Screening Criteria

	Breast Cancer	Cervical Cancer	Prostate Cancer	Lung Cancer	Colorectal Cancer
Sex	Female	Female	Male	None	None
Age	50-74	21-65	55-69	55-80	50-75

- ICD-10 and CPT codes for procedure and laboratory services were used to identify those who received cancer screening; stand-alone diagnostic procedure codes were not included.
- Analyses were conducted cross-sectionally by cancer screening type.
- Subgroup analyses of cancer screening rates by age group, Charlson comorbidity index (CCI), insurance type, race, and region were also conducted.
    - Only subgroups with consistent trends across ≥4 cancer screening types were presented.

RESULTS

Figure 1. Percent Change in Eligible Members Screened for Cancer, March-June 2019 to 2020

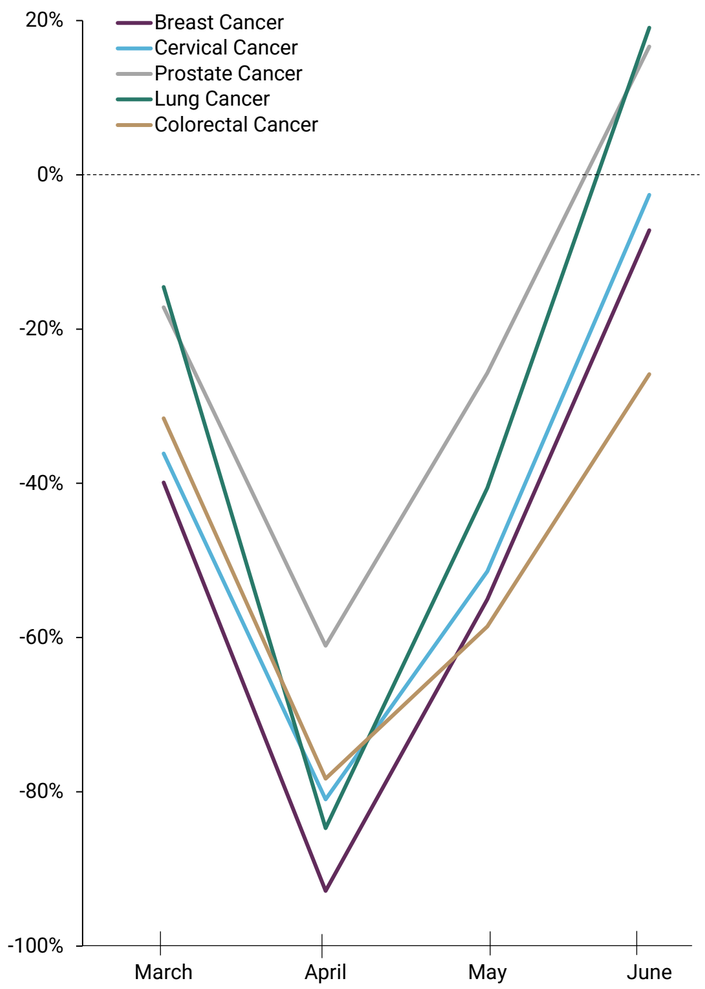


Table 2. Cancer Screening Rate Change, March-June 2019 to 2020

Cancer Screening Type	Month(s)				
	March	April	May	June	March-June
Breast	-39.9%	-92.9%	-55.0%	-7.2%	-49.5%
Cervical	-36.1%	-81.0%	-51.4%	-2.6%	-44.0%
Prostate	-17.2%	-61.1%	-25.7%	16.6%	-23.1%
Lung	-14.5%	-84.7%	-40.6%	19.1%	-31.5%
Colorectal	-31.6%	-78.3%	-58.6%	-25.9%	-49.1%

- From the March-June 2019 period to that of 2020, cancer screening rates decreased significantly for all 5 cancers ($p<0.0001$) (Figure 1, Table 2).
    - For the March-June 2020 period, breast and prostate cancer screenings demonstrated the largest and smallest decreases in rate, respectively.
    - Across all cancer screening types, the sharpest declines in screening rates were seen in April 2020, compared to April 2019.
    - By June 2020, all cancer screening rates displayed less of a decline.

Figure 2. Percent Change in Cancer Screening Rate by Race and Geographic Region, March-June 2019 to 2020

Figure 2a. Change in Cancer Screening Rate, by Race, March-June 2019 to 2020

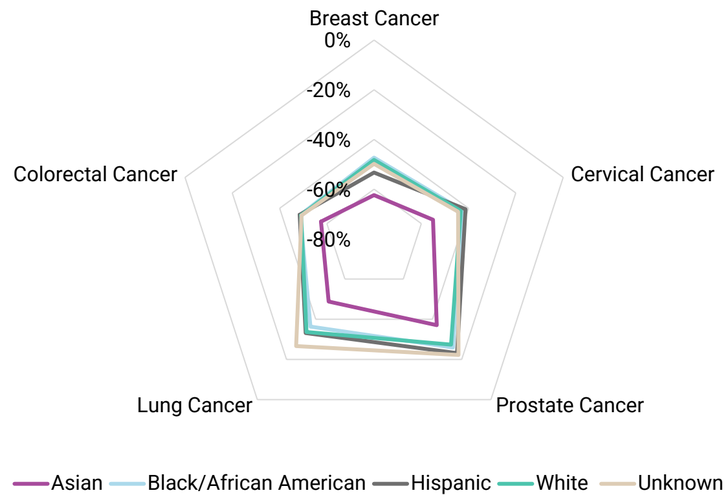
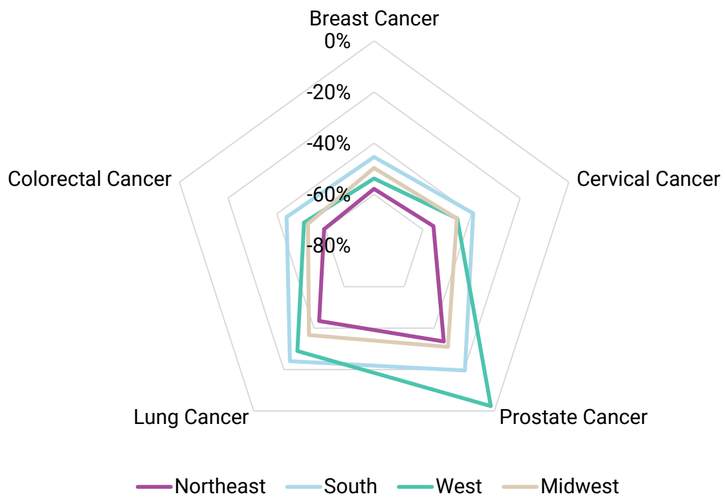


Figure 2b. Change in Cancer Screening Rate, by Region, March-June 2019 to 2020



- Subgroup analyses by race and geographic region demonstrated cancer screening rate trends from March-June 2019 to 2020 (Figure 2).
    - Differences in screening rates for March-June period across race and region categories were significant for all 5 cancers ($p<0.0001$).
    - Trends by month (data not shown), across race and region categories, followed the same patterns as observed in Figure 1.
- Asians displayed the largest declines in screening rate (Figure 2a).
    - Trends in other race categories were not consistent across cancer types.
- Largest screening rate declines were in the Northeast and smallest in the South (with exception of prostate cancer) (Figure 2b).
    - Trends in other region categories were not consistent across cancer types.

CONCLUSIONS

- Routine breast, cervical, prostate, lung, and colorectal cancer screening rates from March to June 2020 showed meaningful reductions when compared to the same period in 2019.
- The most substantial declines in cancer screening rate occurred during the initial peak of the pandemic in April 2020.
- Screening rates returned closer to baseline by June 2020.
- Certain subgroups appeared to be more negatively impacted by the COVID-19 pandemic in relation to their cancer screening practices, namely Asians and those residing in the Northeast.
- Screening rates may be impacted by variations in regional restrictions, where tighter regulations lead to larger screening reductions, and looser ones reflecting catch-up screening.
- Efforts to promote cancer screening in a safe and timely manner are crucial to enable timely diagnosis and treatment to improve patient outcomes.

References

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Disclosures

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