For Black Americans With Colorectal Cancer, Late Diagnosis and Delayed Treatment Worsen Outcomes and Mortality Rates

Analysis of Real-World Patient Journeys Spotlights Key Drivers of Racial Disparities in Colorectal Cancer Care

KEY FINDINGS:

- **Black Patients Wait Eight Days Longer for Treatment:** Among patients who underwent chemotherapy or surgery, Black patients waited an average of eight days longer than White patients for treatment following an initial colorectal cancer diagnosis.

- **Black Patients Present With More Advanced Disease:** Among patients newly diagnosed with colorectal cancer, 20.9% of Black patients were diagnosed after their cancer had already metastasized. This compares with 18.6% of White patients.

- **Colorectal Cancer Diagnoses Continue to Lag Since Pandemic:** Among both racial groups, new colorectal cancer diagnoses continued to lag significantly below the historical average throughout the pandemic. Between July 2020 and July 2021, the number of new cases vacillated between 7% and 27% below the pre-pandemic average.

EXECUTIVE SUMMARY:

Black Americans with colorectal cancer (CRC) experience significantly worse health outcomes than other racial or ethnic groups. Black Americans are roughly 20% **more likely to be diagnosed** with CRC and 40% more likely to die from the disease compared with non-Hispanic White Americans. In fact, the Black population has the **lowest five-year survival rate** for CRC of any racial group in the U.S.

This trend persists despite an expansive body of research pinpointing the **structural drivers** of racial disparities in care, namely racism and its impact on access, quality, and affordability of healthcare services. Due to structural racism, Black Americans are more likely to experience barriers to health-promoting resources (like reliable transportation to healthcare and green spaces to exercise) alongside increased exposure to health-harming factors (like environmental toxins and food deserts).

While this research has improved our understanding of many of the underpinnings of racial disparities in our healthcare system and CRC care, there remains a need to better identify the exact moments where the care provided (or diagnosis received) is fundamentally different for a Black patient than for someone of another racial or ethnic group. In order to deepen understanding of gaps in care and identify opportunities for change, healthcare leaders need more insight on the divergent systemic points of impact along the CRC patient journey. Komodo Health has teamed up with BLKHLTH to identify and explore these disparities using Komodo's **Healthcare Map™**, which tracks the complete patient journeys of more than 330 million de-identified patients in the United States.

By highlighting racial disparities in disease progression at first diagnosis and tracking the time lapse from diagnosis to the initiation of chemotherapy or surgical treatment, this analysis helps pinpoint the specific health system touch points where disparities manifest themselves. In addition, the analysis tracks the impact of the COVID-19 pandemic on new CRC diagnosis rates in Black and White patient populations.

METHODOLOGY:

This analysis used Komodo's Healthcare Map, the industry's largest and most complete database of de-identified, real-world patient journeys in the United States, to understand racial differences in the diagnosis and treatment of colorectal cancer (CRC). The analysis focused on differences in the patient journey between Black patients and White patients with CRC.

Patients newly diagnosed with CRC between January 1, 2019, and August 31, 2020, were identified using ICD-10 codes and monitored for one year following diagnosis. ICD-10 codes for secondary neoplasms were also used to identify metastatic cancer at the time of CRC diagnosis. The frequency of metastatic disease at diagnosis in both racial groups was evaluated. Treatment patterns in both racial groups were also evaluated by examining medical activity for one year following diagnosis for chemotherapy or surgery procedures. The time between diagnosis and first treatment was compared between racial groups to evaluate differences in treatment delay.

This analysis also assessed the impact of COVID-19 on identification and diagnosis in a longitudinal analysis, by identifying Black and White patients diagnosed with CRC between January 1, 2019, and August 31, 2021. Diagnoses each month after the onset of COVID-19 in March 2020 were compared to the pre-pandemic monthly average to quantify delays and deficiencies in diagnosis due to the pandemic.

RESULTS:

Among patients who underwent chemotherapy or surgery, Black patients waited an average of eight days longer than White patients for treatment after a CRC diagnosis.

For Black patients, chemotherapy or surgery treatment was first initiated an average of 67 days after diagnosis, compared with 59 days for White patients. Black patients were also 6.8% more likely to experience a treatment delay of 60 days or more from the time of diagnosis (this length of delay occurs in 38.7% of Black patients vs 31.9% of White patients).

**AVERAGE NUMBER OF DAYS BETWEEN DIAGNOSIS AND TREATMENT**

	Black	White
Days	67	59
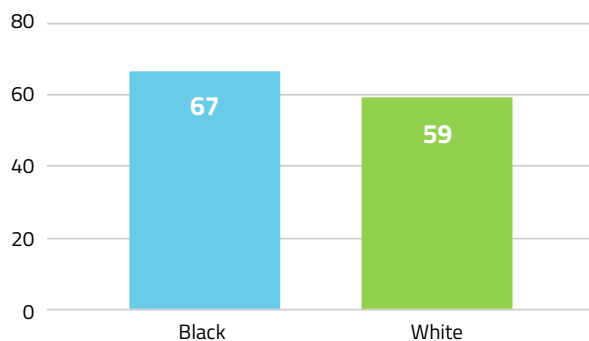
PERCENT OF PATIENTS WITH MORE THAN 60 DAYS BETWEEN DIAGNOSIS AND TREATMENT

	Black	White
Percent	38.7%	31.9%
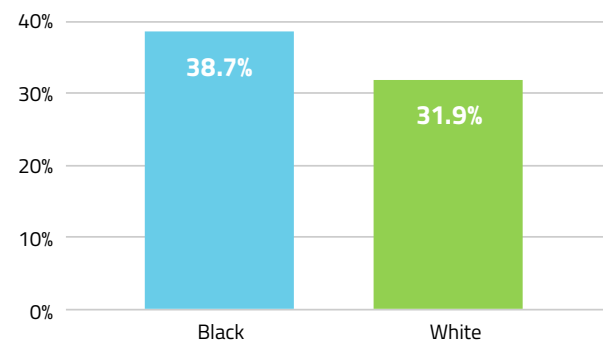
Black patients were 2.3% more likely to be diagnosed with CRC after their cancer had already metastasized, relative to White patients.

Black patients were significantly more likely to present with more severe CRC. Specifically, 20.9% of Black patients were diagnosed after their CRC had already metastasized, compared with 18.6% of White patients.

SHARE OF PATIENTS WITH METASTATIC CANCER

	Metastatic at Diagnosis	Not Metastatic at Diagnosis
Black	20.9%	79.1%
White	18.6%	81.4%
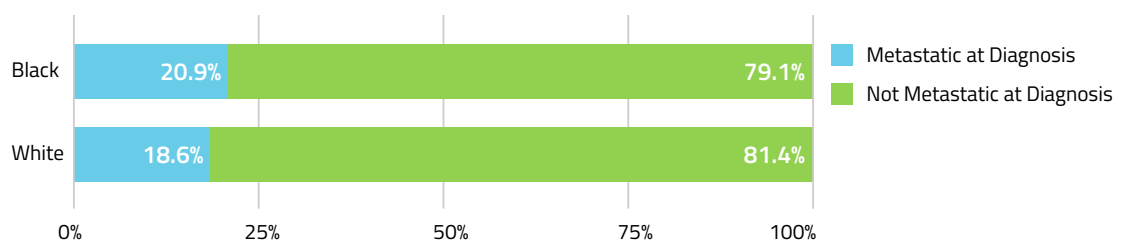
CRC diagnosis rates remained lower than the 2019 baseline throughout the entirety of the pandemic, having yet to rebound.

The onset of the pandemic initiated a significant decline in new CRC diagnoses. This decline appears to have affected Black and White populations similarly. While the drop in new cases rebounded somewhat after lockdown was lifted, it had far from returned to the pre-pandemic average as of July 2021. In the months between July 2020 and July 2021, the number of new cases vacillated between 7% and 27% below the pre-pandemic average.

NEW CRC DIAGNOSES
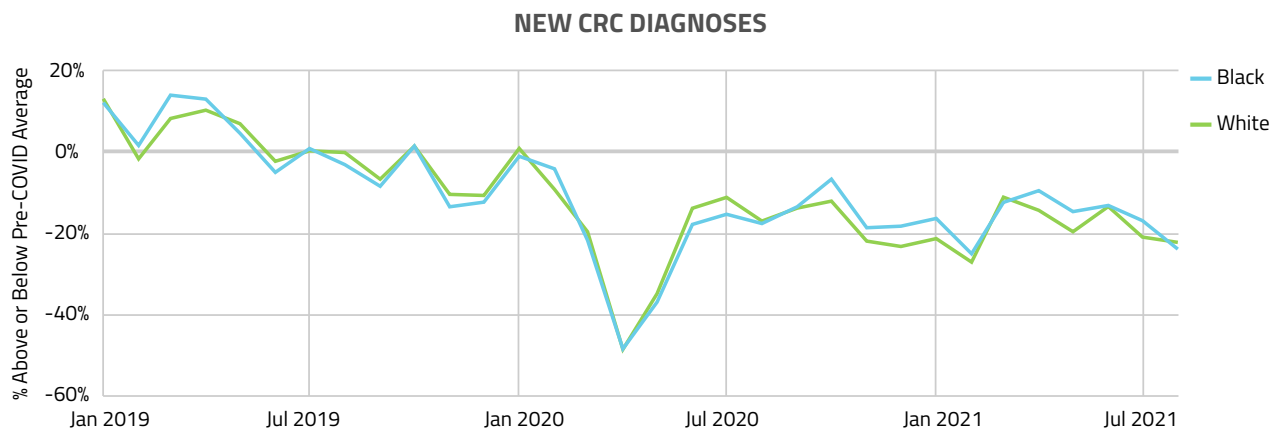
DISCUSSION:

The results from this study align with existing research on racial health inequities in CRC and further elucidate potential points of impact. We found that Black patients experience longer treatment delays and are more likely to be diagnosed after their cancer has metastasized. Treatment delays may lead to worse outcomes from disease and cause unnecessary emotional and medical stressors to an already vulnerable population. The cause of these treatment delays may be systemic racial bias in healthcare and barriers of access to care in the Black patient population.

Additional factors contributing to a higher likelihood of post-metastatic diagnosis may include lower screening rates and a **younger average age of disease onset** in the Black patient community. This finding in combination with the identified treatment delays paints a compoundingly worse picture than either finding standing alone. As found in a previously published analysis by Komodo Health, **younger patients especially tend to be diagnosed at later stages of disease**, likely due to differently presenting symptoms and less screening in younger patients. Inequities in social determinants of health and socioeconomic factors that preclude access to health-promoting goods and services have been **identified** in prior research as contributors to CRC disparity.

This analysis identified similar declines in CRC diagnoses in Black and White adults throughout the pandemic. While the increased risks of COVID-19 for populations of color have been well documented, the similarity seen here indicates a persisting delay in routine screenings across the board. A rate similar to the 2019 baseline would be expected if missed screenings were being compensated for on top of a return to normal screening protocols. This underscores the need for a concerted public health effort to address delayed and deferred screenings related to the pandemic. Further delays will contribute to critical health challenges in the future and poorer outcomes for patients.

This analysis had limitations inherent to all retrospective cohorts studies in claims data. Data lag was a limitation in this analysis that the authors attempted to control for. Additionally, uninsured patients were not captured. Future directions for research should investigate potential systemic contributors to longer time lapses to initial treatment in Black CRC patients.

Closing the Racial Gap Between First Diagnosis and Treatment

This brief demonstrates the persistent disparities in care Black Americans face in CRC. Given that early detection and treatment are vital steps in reducing racial health inequities in CRC outcomes, changes in healthcare systems could lead to significant improvements in care for this population.

Prior research has shown an elevated risk of CRC-related death in patients who lack insurance and that Medicare/Medicaid patients experience significantly higher postsurgical complications and in-hospital mortality. Racial inequities in access to and affordability of healthcare services directly impede many Black Americans' ability to receive adequate care across the CRC continuum of care. Black Americans are significantly more likely to be uninsured and underinsured than non-Hispanic White Americans. Twenty-five percent of Black adults **report** not having a personal healthcare provider and 15% of Black adults report not seeing a doctor in the past 12 months because of cost.

Healthcare delivery systems play an important role in reducing barriers to diagnosis and treatment across the CRC journey for Black communities. Within the hospital system, using existing technology, understanding the social needs of patients, and requiring competency around health equity and anti-racism would all have significant benefits. For example, with a complete view of the patient journey, health systems can better leverage population health management programs within electronic health record systems to identify patients **most at risk** for delays in CRC screening and treatment. Healthcare systems can also better address the **health-related social needs** of patients that create barriers to CRC care through improved social support navigation and coordination efforts. Structural competency around health equity and anti-racism within healthcare systems is also important to ensuring that providers and administrators are equipped to critically engage with racism and take action in reducing CRC-related inequities.

Lastly, community engagement is a critical, often undervalued component of ensuring that Black communities have the information, services, and resources needed to achieve optimal health. BLKHLTH has been actively involved in multiple community engagement efforts and has spearheaded the national joint campaign **#GoodDownThere** with Cottonelle, focused on Black populations and CRC.

Deepening our understanding of exactly when, where, and how patients experience racial gaps in care will help inform our strategies to begin closing those gaps. Insights from real-world patient experiences and outcomes are important, but not always enough in pinpointing goals for impact. The tools to close the racial health gaps in CRC outcomes are available. It is timelier than ever to use them.

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About BLKHLTH

BLKHLTH is a 501(c)(3) nonprofit organization that aims to critically challenge racism to improve health outcomes for Black people. We work to disrupt the pathways through which structural racism diminishes the health and well-being of Black communities by facilitating anti-racism workshops, creating engaging and educational social media content, and hosting powerful community-focused events to share knowledge and resources.

The BLKHLTH x Cottonelle #GoodDownThere campaign is a health equity–centered campaign with the goal of decreasing barriers to care, increasing access to needed resources, and reducing the stigma around colorectal cancer for Black Americans. The multipronged initiative includes the distribution of at-home colorectal cancer screening tests to Black Americans in communities across the country, provision of health education in partnership with Black community-based organizations and Black healthcare providers, and the creation of a financial assistance fund in partnership with the Colorectal Cancer Alliance to support access to colonoscopies for Black patients in need.

About Komodo Health

Komodo Health builds groundbreaking software solutions powered by our Healthcare Map – the industry's largest and most comprehensive database of real-world, patient-level data. With access to data from over 330 million patients, Komodo Health's next-generation analytics make it easy to unlock meaningful insights and create more cost-effective, value-driven solutions. We help stakeholders in Life Sciences, patient advocacy groups, and healthcare payers and providers answer healthcare's most complex questions in our mission to reduce the global burden of disease.