



WHITE PAPER

Uncovering Disparities in Emergency Care for Liver Cancer Patients



Liver cancer is a devastating disease that disproportionately affects certain racial and ethnic groups. While researchers have long noted disparities in areas like screening and treatment, less is known about differences in how patients use emergency medical services.

[Christie Teigland, Ph.D.](#) and [Karl Kilgore, Ph.D.](#) explore this important aspect of cancer care in the U.S. [Their findings](#) reveal complex interactions between race, ethnicity, and economic status that are not readily observable but could have major implications for improving care.

The growing burden of liver cancer

Hepatocellular carcinoma (HCC) is a particularly deadly form of cancer. [It's the third leading cause of cancer deaths worldwide](#), and rates have been rising rapidly in many countries, including the U.S. Previous research has shown that Black and Hispanic patients are more likely to be diagnosed with advanced HCC and less likely to receive potentially curative treatments compared to White patients. They also tend to have shorter survival times.

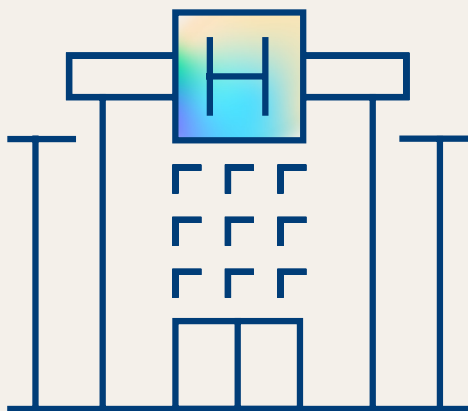
While these broad patterns are well-documented, researchers are still working to untangle the complex factors that drive them. Socioeconomic status, access to healthcare, and other [social drivers of health](#) (SDOH) likely play important roles alongside potential biological differences.

Examining emergency department use

Christie Teigland, Ph.D., and Karl Kilgore, Ph.D., worked with colleagues to focus on a specific aspect of cancer care that hadn't been well-studied in HCC patients: the use of emergency departments. These visits can be an important indicator of how well the regular healthcare system meets patients' needs. While the use of emergency departments is a governmental quality indicator, on a patient level, high rates of emergency department attendance for cancer patients are associated with a high risk of infection, less experienced staff, and higher costs.

The researchers examined records from over 22,000 patients diagnosed with HCC between 2015 and 2018. They looked at how often patients visited the emergency department, adjusting for factors like age, sex, and severity of illness. They also incorporated data on patients' race, ethnicity, and neighborhood-level socioeconomic characteristics.

The study revealed significant differences in emergency department use across racial and ethnic groups. Compared to White patients, Black patients had 27% more emergency department visits, and Hispanic patients had 17% more. In contrast, Asian patients had 36% fewer emergency department visits than White patients after statistically controlling for other demographics, clinical, and SDOH characteristics. These striking disparities suggest that Black and Hispanic patients may be facing greater challenges in managing their cancer care, leading to unplanned emergency room visits. The reasons for these differences are likely complex. They may reflect disparities in access to primary and specialty care, non-adherence to treatment regimens, challenges navigating the healthcare system, or differences in the stage and severity of disease at diagnosis.



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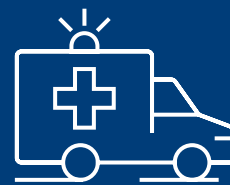
The surprising role of income

One of the most intriguing findings was how income level interacted with racial and ethnic disparities. The researchers divided patients into low, middle, and high-income groups based on neighborhood-level data. For White patients, emergency department use decreased as income increased. For Black and Hispanic patients, higher income was associated with more frequent emergency department use compared to White patients of similar economic status.

This finding suggests that rising income does not necessarily translate to better access to care or health outcomes for Black and Hispanic patients in the same way it does for White patients. This phenomenon, known as the “diminishing returns hypothesis,” has been observed in other areas of health research. It may reflect persistent structural barriers and discrimination that continue to affect minority patients even as their economic status improves.

Interestingly, Asian patients had lower emergency department use across all income levels. This highlights the importance of examining disparities among racial and ethnic subgroups that interacted with other social risk factors like income rather than broad categories or stratifications across one factor alone to surface these more complex relationships.

The study also identified several other factors associated with emergency department use. Patients under the age of 65 had higher emergency department use than older patients, and women had more frequent visits than men. Geography also played a role. Patients in rural areas generally had fewer visits than those in urban centers. This may reflect differences in hospital access or practice patterns.

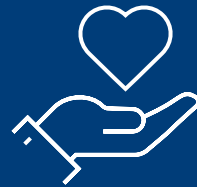


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Implications for improving care

These findings have important implications for reducing disparities and improving care for HCC patients. The research demonstrates the [need to look beyond single risk factors](#) when addressing disparities, as persistent gaps in care utilization likely reflect deeper structural issues that only emerge with a multi-dimensional view of outcomes.

Potential strategies to address these disparities include targeted outreach and education for high-risk groups, improved use of preventive services and care coordination to reduce reliance on emergency services, culturally competent care approaches, [addressing SDOH](#) like transportation and housing, and further research to understand barriers to care for specific populations. Overall, the research points to a need to create health systems that provide equitable, high-quality care for all patients, regardless of race, ethnicity, or economic status.



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Creating better outcomes for future patients

While this study provides valuable new insights, the researchers stress that more work is needed to fully understand the complex dynamics. The team aims to investigate the reasons behind the observed disparities, such as potential differences in symptom burden, care preferences, or other factors driving emergency department use. They also plan to examine how patterns of emergency care relate to long-term outcomes for HCC patients and explore potential interventions to reduce unnecessary emergency department visits and improve overall care quality.

The researchers view these findings as a starting point to spur [more research and action to address these critical disparities](#). By shedding light on previously unexplored aspects of cancer care utilization, this work represents an important contribution to the field. Furthermore, it underscores the need to consider the complex interplay of race, ethnicity, and socioeconomic factors when designing interventions to improve care for vulnerable populations.

As the burden of liver cancer continues to grow, addressing these disparities will be crucial for ensuring all patients have access to high-quality, equitable care. With further research and targeted interventions, there is hope for reducing the gaps and improving outcomes for everyone affected by this devastating disease.

Read the first and second installments of this three-part series on SDOH research, “[Improving Access to CAR T-Cell Therapy for Patients With Lymphoma](#)” and “[How Social Factors Impact Care for Patients With Bipolar Disorder](#)”

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Lin D, Tan R, Teigland C, Hernandez S, Kim S, Kilgore KM. Race/ethnicity and socioeconomic position in emergency department utilization in patients with hepatocellular carcinoma. *Future Oncol*. 2024 Apr 19. doi: 10.2217/fon-2023-0412. Epub ahead of print.

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Christie Teigland leads the design and implementation of studies focused on quality measurement, health equity, and health economics and outcomes research. She works closely with health plans, providers, and life science organizations to develop actionable, real-world data insights.

Dr. Teigland co-chaired the National Quality Forum (NQF) Scientific Methods Panel for four years and served on the Pharmacy Quality Alliance (PQA) Quality Measure Expert Panel and as co-chair of PQA's Health Equity Technical Expert Panel, as well as on many Centers for Medicare & Medicaid Services (CMS) expert panels. She has served as principal investigator on large foundation and government-funded projects over two decades focused on improving healthcare quality.

Dr. Teigland earned her Ph.D. in Economics and Econometric Forecasting from the University of New York at Albany.

[Karl Kilgore, Ph.D.](#)

Kilgore has over 30 years of experience designing and developing health economics and outcomes studies, descriptive and analytic epidemiology studies, outcomes-based marketing programs, and disease registries.

Dr. Kilgore's professional interests include social drivers of health, how social, behavioral and genetic factors interact to impact the health of individuals and populations, risk adjustment methodologies for health performance measurement and reimbursement, and real-world outcomes of novel therapies, particularly in oncology.

He received his Ph.D. in Psychology from the University of Chicago with concentration in Epidemiology, Statistical Analysis, Research Methods, and Psychometrics.