New Interactive Map of Oncology Puts COVID-19, Equity Data Into Perspective

ASCO's new data visualization tool highlights cancer care inequities during the COVID-19 pandemic.

May 27, 2022 By American Society of Clinical Oncology

By generating, analyzing, and making its oncology data widely available, the American Society of Clinical Oncology (ASCO) aims to foster innovation in research and patient care.

To highlight cancer care inequities during the COVID-19 pandemic, ASCO launched a data visualization tool that allows users to explore geographic distribution of systemic and socioeconomic factors that influence cancer care delivery in the United States. In the Interactive Map of Oncology, users can view U.S. population-based oncology-related data by state and county from government and other authoritative sources overlaid with COVID-specific data, including state-level data from the ASCO Survey on COVID-19 in Oncology Registry (ASCO Registry).

The tool uses a two-panel visualization technique that allows users to activate different data points on each map, providing a side-by-side customized visualization. For example, oncology practice data can be overlaid with age-adjusted incidence rates and risk factors, as well as with socioeconomic data to show patient populations compared with care availability in both urban and rural areas.

According to the 2022 State of Cancer Care in America data published by ASCO, only 10.5% of the 13,365 oncologists—defined as physicians active in patient care who report medical oncology or hematology/oncology as their primary specialty—practiced in rural areas of the United States. ASCO's Interactive Map of Oncology allows users to see these statistics in a way that better allows for a sense of scale, more fully highlighting care inequities. When adding the COVID-related data, underserved regions with high COVID-19 and high cancer incidence and low vaccination rates become more apparent.

"The new Interactive Map of Oncology mashes up cancer and COVID-19 data sources in a novel way, presenting ASCO Registry data alongside public data for U.S. population demographics, socioeconomic factors, disease and risk information, as well as details on the oncology workforce," explained ASCO CEO Clifford A. Hudis, MD, FACP, FASCO. "We can now better identify inequities and steer resources to help us better serve all patients."

In addition, physicians can use the tool to better understand the patient population they serve. Because demographics related to age, gender, cancer type, and risk factors can be easily filtered, prior to patient visits physicians can use the map data to discern key factors proximate to their location and close any knowledge gaps related to social, economic, and other area-based characteristics that may impact a patient's health and well-being.

The map illustrates workforce distribution across geography—rural areas vs. urban areas—and the density of oncologists relative to the population. In addition, the number of new COVID-19 cases is updated daily, and the number of confirmed COVID-19 cases is updated hourly. Information about vaccination rates by county and state is also available and updated periodically.

The Full Picture: COVID-19's Impact on Cancer Care

The ASCO Registry was launched in April 2020 to help the oncology community learn more about patterns, symptoms, and severity of COVID-19 among patients with cancer, as well as treatment delays and outcomes. The registry collects longitudinal data on more than 6,000 patients from about 70 U.S. practices.

Data from the ASCO Registry is already beginning to inform and influence patient care. Several abstracts based on research using the ASCO Registry data will be published or highlighted in conjunction with the 2022 ASCO Annual Meeting, including:

- Breakthrough COVID-19 cases and hospitalization risk: ASCO COVID-19 Registry
- COVID-19 vaccine uptake in patients with cancer and SARS-CoV-2 infection in 2020: Results from the ASCO Registry
- The role of rurality in cancer treatment disruptions among cancer patients diagnosed with SARS-CoV-2: An analysis of the ASCO COVID-19 and Cancer Registry (funded by 2021 ASCO Registry Research Grant from Conquer Cancer, the ASCO Foundation)
- Racial/ethnic disparities of cancer treatment delays or discontinuation among breast cancer patients diagnosed with SARS-CoV-2 infection: An analysis of the U.S. ASCO COVID-19 and Cancer Registry (funded by 2021 ASCO Registry Research Grant from Conquer Cancer).

Research based on ASCO Registry data is being conducted by several ASCO Registry Research Grant Recipients. These individuals received a 1-year grant of $30,000 and access to deidentified ASCO Registry data. This program is supported by the Conquer Cancer COVID-19 Initiative.

The 2021 recipients were:

- Jessical Islam, Phd, MPH, of H. Lee Moffitt Cancer Center & Research Institute
- Adana Llanos, PhD, MPH, of Rutgers School of Public Health and Cancer Institute of New Jersey

- Samyukta Mullangi, MD, MBA, of Memorial Sloan Kettering Cancer Center

“The ASCO Registry is improving our understanding of the effects of COVID-19 on treatment plans and outcomes for patients with cancer,” said ASCO chief medical officer Julie R. Gralow, MD, FACP, FASCO. “This meticulous collection of data from practices across the country has already begun to inform us about commonalities and best practices across cancer types.”

Both the Interactive Map of Oncology and the ASCO Registry’s Data Dashboard provide visual representations of data including age at COVID-19 diagnosis, race/ethnicity, and cancer type. The Data Dashboard illustrates COVID severity by population demographics, using deidentified baseline data and follow-up data. Users can filter the existing charts, tables, and graphs in the Data Dashboard according to factors such as smoking status, comorbidities, and cancer type.

“ASCO realizes that data can often be dense and difficult to visualize,” Dr. Gralow said. “Tools like the Interactive Map of Oncology provide the next level of data visualization, allowing users to see an actual illustration of the data as comparisons are made and data points are filtered.”

Both the ASCO Registry and the Data Dashboard are supported by Conquer Cancer’s COVID-19 Initiative.

Research Patients Need, Data You Can Trust

The initial report of the ASCO Registry data was published in JCO Oncology Practice (see below), and the associated data set is available by application through the Data Library, a repository of ASCO data from the ASCO Practice Census, Quality Oncology Practice Initiative (QOPI), the Medical Oncology In-Training Exam, scientific meeting abstracts, and more. All data may be requested for research use by qualified individuals and organizations. Those projects that address the needs of patients with cancer, including marginalized populations and communities, will be prioritized.

In addition to provision of data sets, ASCO provides a valuable tool for posing pressing clinical questions to ASCO members who participate in the Research Survey Pool. Through this service, ASCO members can connect with fellow ASCO members around the world, in all specialties, all career levels, and all practice settings, to conduct survey research projects.

ASCO COVID-19 Registry Study Highlights

- Patients ages 61 to 70 with B-cell malignancies had twice the mortality risk and patients over 70 had 4.5 times the mortality risk, compared to patients younger than 60.
- Current and previous tobacco use also increased risk of mortality, with a 30-day mortality estimate of 21% for tobacco users, compared with 11% for those who never used tobacco.
- All other risk factors (e.g., race, ethnicity) that are associated with poor outcomes in

unvaccinated patients with COVID-19 and without cancer are mitigated in this patient population. That is, in the presence of cancer, for example, race and/or ethnicity does not appear to be associated with mortality risk. This suggests that cancer displaces certain other risk factors as they relate to mortality and severity of COVID-19.

- 49% of patients undergoing drug-based anticancer therapy delayed one or more anticancer treatments. An additional 16% discontinued one or more treatments. Another 35% continued their treatment without change.

This news release was published by the American Society of Clinical Oncology on May 25, 2022.

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http://beta.docker.cancerhealth.com/article/new-interactive-map-oncology-puts-covid19-equity-data-perspective