

New Study Reveals How Extreme Heat Shapes Cancer Care Decisions

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In South Florida, heat shapes daily routines long before summer officially arrives. For people living with cancer, that heat can feel like an added, continuous health burden that influences daily decisions about care, movement and energy.

Extreme heat refers to significantly hotter and often more humid periods than average for a given place and time, according to the U.S. Environmental Protection Agency. As global temperatures continue to rise, creating longer heat seasons and more frequent extreme heat days, researchers are beginning to examine how these conditions affect people managing serious illness.

New research from [Sylvester Comprehensive Cancer Center](#), part of the University of Miami Miller School of Medicine, and the University of Miami's [Rosenstiel School of Marine, Atmospheric, and Earth Science](#) and [School of Nursing and Health Studies](#), finds that extreme heat is already shaping how people with cancer manage their health. [Published in Environmental Research: Climate](#), the study examines the intersection of climate stress and cancer care in one of the nation's most heat-exposed regions.

A Team-Science Approach

The project exemplifies the University of Miami's team science approach to addressing complex real-world problems at the intersection of environment, health and clinical care. Funding was provided by the [University of Miami ULink Program](#), which supports interdisciplinary teams working across schools and disciplines. In this study, faculty and researchers from across UM, led by Amy Clement, PhD, a professor of atmospheric sciences at the Rosenstiel School, joined forces to explore how environmental stress affects people already navigating serious illness. This approach could inform health systems elsewhere.

"This question underscores the need to understand how medicine, a person's environment and lived experience intersect," said Sylvester member [Sophia George, PhD](#), an associate professor in the Miller School's [Department of Obstetrics, Gynecology and Reproductive Sciences](#) and senior author of the study. "You can't understand it from just one discipline. Team science was essential for this work for the environmental perspective, the cancer science and the clinical experience."

Listening to People With Cancer

Despite growing evidence that environmental conditions pose health risks, little research has focused specifically on how extreme heat affects people with cancer. To address that gap, the researchers turned directly to those experiencing it.

The qualitative study, “When It Comes to Heat, I Retreat”: Heat Impacts and Adaptation Practices Among People With Cancer,” included in-depth interviews with 20 adults across 18 ZIP codes in South Florida. All participants had a history of cancer diagnosis or treatment and described how heat affects their health, access to care, finances and social lives.

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Interviews were conducted in English and Haitian Creole, capturing experiences across communities and highlighting how heat stress can compound existing health and financial challenges.

“What we heard was that heat touches nearly every part of people’s routines,” said Kilan Ashad-Bishop, PhD, assistant professor, affiliate member of Sylvester and lead author of the study. “It affects when people go outside, whether they adhere to medical advice, how connected they feel and how much they spend just to stay safe and comfortable.”

Coping Comes at a Cost

Participants described adapting in creative ways, like limiting outdoor activity, planning errands during

cooler hours, staying indoors and relying heavily on air conditioning. But those adaptations often came with tradeoffs that affected health, independence and quality of life.

Some patients delayed or skipped medical visits to avoid heat exposure. Others reduced physical activity, social interaction or essential errands. For individuals already managing treatment side effects, fatigue or financial strain, heat became another force narrowing their choices.

“We saw people making calculations as constant as heat stress in South Florida,” Dr. Ashad-Bishop said. “They’re weighing comfort against care, safety against necessity. Those decisions add up.”

Rather than triggering sudden crises, the researchers found that heat strain often works incrementally through a series of small compromises that can quietly shape long-term well-being.

Why This Matters Now

South Florida is warming faster than many parts of the country, with longer heat seasons and more frequent extreme heat days. Because of these conditions, the region offers an early view into challenges that health systems elsewhere may soon face.

As extreme heat becomes a more constant presence, the study highlights the need to integrate environmental risk into cancer care planning, from clinical conversations and appointment planning to caregiver guidance and community support. Climate conditions must be acknowledged as a growing factor in patient-centered oncology care.

“This isn’t just about weather advisories,” Dr. George said. “It’s about recognizing heat as a health stressor and helping patients plan for it as part of everyday care.”

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