

A SEASON OF DISCOVERY

Hope, evidence & equity in cancer care

Every data point is a person.
Celebrating a season of
discovery, impact, and
recognition.



INSIDE THIS ISSUE

From award-winning achievements and cutting-edge research to community-driven initiatives making a real difference.

Each story reflects our shared commitment to advancing population health, expanding health equity, and reducing the burden of cancer disparities. Dive in to discover the people, partnerships, and progress shaping a healthier future.

- Meet Dr. Tomi Akinyemiju
- Four studies, three countries
- Team culture & student spotlight
- Six discoveries, one mission
- Awards & recognition
- How to get involved

OUR MISSION

We are driven by a deep commitment to understanding why some patients face more aggressive cancers or poorer outcomes — looking at the full picture, from individual experiences to neighborhood environments to the policies that shape healthcare access.

Every person deserves the best chance at healing, hope, and a future free from cancer.

We do this work to make care more equitable, outcomes more just, and lives healthier — everywhere.

Meet Dr. Tomi Akinyemiju

PRINCIPAL INVESTIGATOR, PHD



Dr. Tomi Akinyemiju, Principal Investigator of REGAL



Speaking at the Cancer Center Community Impact Forum

"I hope our legacy is not simply that we documented unequal cancer outcomes, but that we helped change them."

Dr. Tomi Akinyemiju grew up moving between Nigeria and the United States — two very different systems, two very different sets of odds. "I saw that where people live, the resources available to them, and the systems surrounding them can greatly influence whether they remain healthy, receive an early diagnosis, or have access to effective treatment," she says. Health disparities were never an abstraction to her.

That early awareness drew her to cancer research — not as a single discipline, but as a place where biology, environment, healthcare access, and social conditions collide. "Behind every dataset is a person, a family, and a community affected by cancer. That keeps the work grounded and gives it urgency." Why cancer outcomes differ so substantially across populations and places — and how that knowledge leads to equitable solutions — is the question driving REGAL today.

Through research in the U.S. and West Africa, her team has expanded what's known about breast cancer risk, tumor biology, obesity, immune function, and survival in historically underrepresented populations. None of it happens alone. "High-quality cancer research depends on trusted relationships, carefully collected data and biospecimens, strong local leadership, and long-term institutional commitment."

That commitment is already visible. Through MEND in Nigeria, REGAL's work on metabolically healthy obesity contributed to a new metabolic clinic within Nigeria's cancer program. In North Carolina, work with Native American communities now informs collaborative cancer-prevention efforts across Duke, UNC, and Wake Forest. Her advice to young scientists is simple: "Choose questions that genuinely matter to you, because meaningful research takes time and persistence. "

Six discoveries, one mission

This year the team advanced our understanding of breast and ovarian cancer across tumor biology, microbiome science, social determinants of health, and participant-centered methods. Here is each discovery — and why it matters beyond publication.

Immune signatures open a door to new treatments

Dr. Jovita Byemerwa

Triple-negative breast tumors in Nigerian women carried immune cells and heightened inflammatory markers — differences that had gone unseen, and that hold real potential for immunotherapy.

[Read the study →](#)

The microbiome as an early messenger

Dr. April Deveau

Fewer than half of the ovarian cancer patients studied had a microbiome dominated by protective bacteria, with differences by age and race — patterns that may help us see risk earlier.

[Read the study →](#)

A gentler path to earlier answers

Dr. Oyomoare Osazuwa-Peters

Samples participants collected themselves, at home, revealed more than 1,000 metabolites. Discovery no longer has to depend on a clinic visit or an invasive procedure.

[Read the study →](#)

Lifetime hormone exposure and risk

Dr. Jovita Byemerwa

Greater cumulative lifetime estrogen exposure was linked to breast cancer, especially its most aggressive subtype — helping prevention advice fit the lives of African women.

[Read the study →](#)

Where you live shapes how long you live

Anjali Gupta & Dr. Tomi Akinremiju

Patients in states with higher levels of cultural racism faced greater mortality risk, most sharply just after diagnosis. Survival is written partly in policy — so policy can rewrite it.

[Read the study →](#)

Participants said yes — overwhelmingly

Dr. April Deveau

Women with ovarian cancer were remarkably willing to take part in self-collected biospecimen research. Their generosity proves inclusive science is not only possible; it is welcomed.

[Read the study →](#)

Four studies, three countries, one shared question

Each study approaches the same problem from a different angle—the cell, the household, the map, the clinic, the state line.



MEND

Mechanisms for Established and Novel Risk Factors of Breast Cancer in Women of African Descent



Collaboration in Nigeria with LUTH PI, Dr. Gabriel Ogun

Growing impact across continents.

In 2026, MEND opened recruitment at Edward Francis Small Teaching Hospital in The Gambia and expanded through Duke's breast cancer clinics — strengthening a West African research network and opening the door to cross-population comparisons no single site could support alone.

WHAT MEND HAS DISCOVERED

- Metabolic syndrome was tied to higher risk of triple-negative breast cancer, even without obesity.
- Fathers with more education had daughters less likely to be diagnosed with aggressive disease.
- Unhealthy cholesterol and blood fat levels were linked to a higher chance of diagnosis.
- Higher C-reactive protein — a sign of inflammation — accompanied more aggressive disease.
- In West Africa, higher body weight was associated with lower risk, especially in younger women.



ORCHiD

Ovarian Cancer Epidemiology, Healthcare Access and Disparities



Packets hand-assembled in English and Spanish

Renewed for five more years.

ORCHiD secured new NIH/NCI funding to continue the mission, with a mailing event expanding direct outreach to ovarian cancer patients across participating states. A new personalized text-messaging platform keeps participants connected — improving survey completion, supporting biospecimen collection, and lowering barriers to taking part.

850+

surveys completed by ovarian cancer patients

~275

biospecimen kits generously returned

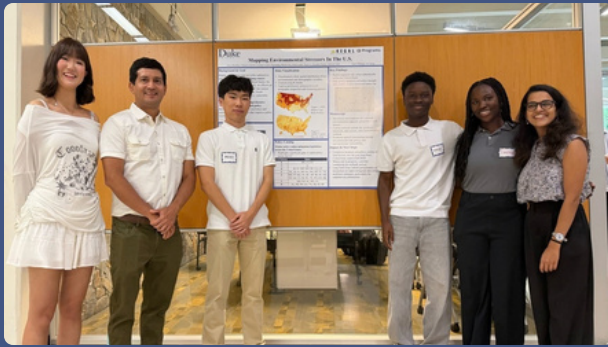
WHAT ORCHiD HAS DISCOVERED

- Fewer than 40% of ovarian cancer patients in the U.S. receive the recommended standard of surgery and chemotherapy.
- Differences in healthcare access — not biology alone — explain much of the racial gap in treatment quality. Access to a gynecologic oncologist strongly shaped whether patients received guideline-concordant surgery. Access barriers also drove disparities in end-of-life care quality and in overall survival.



CLOVER

ClimateImpact on Lung Cancer
via Exposure to Radon



Climate+ students present their summer research with REGAL advisors

Training tomorrow's public health leaders.

With undergraduate researchers in Duke's Climate+ Summer Research Program, REGAL is mapping how radon exposure, air quality, housing conditions, and environmental policy intersect across North Carolina. The work identifies where healthier environments are within reach — and prepares the next generation to keep reaching.

WHAT CLOVER HAS DISCOVERED

- Radon risk in North Carolina clusters in particular counties, and rarely aligns with where testing actually happens.
 - Housing age and condition shape indoor exposure as much as the geology beneath a home.
 - Air quality and climate stressors compound lung cancer risk in the same communities.
- Mapping exposure alongside policy shows where prevention could be expanded first.



STRIDE

Societal Stressors and Cancer
Disparities



Cultural Racism Factor across the U.S.

Naming what could not previously be measured.

REGAL researchers built the first measure of cultural racism — the Cultural Racism Factor — from nine indicators across all fifty states. Each one-unit rise accompanied roughly 136 additional deaths per 100,000 people and about a full year of life expectancy lost, across racial lines. The CRF scale gives policymakers a new tool to address a root cause of health disparities.

WHAT STRIDE HAS DISCOVERED

- Cultural racism can be measured: nine state-level indicators combine into a single Cultural Racism Factor.
- Each one-unit rise in the factor accompanied roughly 136 additional deaths per 100,000 people.
- It also tracked with about a full year of life expectancy lost — for residents across racial groups.
- The scale gives states a concrete way to monitor a root cause of health disparities over time.

Celebrating the people behind the progress

This year REGAL team members received awards recognizing their contributions to research, mentorship, professional development, and service.



Dr. Tomi Akinyemiju

RESEARCH MENTORING IN
CANCER DISPARITIES AWARD
Duke School of Medicine

For exemplary mentorship and sustained commitment to the success of emerging researchers.



Dr. Oyomoare Osazuwa-Peters

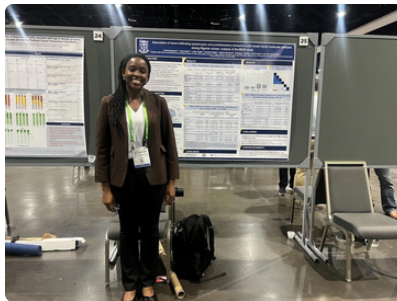
MINORITY IN CANCER RESEARCH
AWARD
American Association for Cancer
Research
For outstanding contributions
to cancer research and
leadership in advancing equity
in science.



Ashwini Joshi

DEAN'S VALUED STAFF AWARD
Duke University School of
Medicine

For exceptional service and leadership advancing research operations and team success.



Dr. Jovita Byemerwa

POSTDOCTORAL PROFESSIONAL
DEVELOPMENT AWARD
Duke Office of Postdoctoral
Services

In recognition of professional growth, scholarly achievement, and career development.



Dr. Hugo Quezada-Pinedo

BEST PRESENTATION AWARD
American Society of Preventive
Oncology

For one of the conference's top scientific presentations in cancer prevention research.

COMMUNITY, CONNECTION,
COLLABORATION

Good science grows in good company



Beyond research, the team prioritizes chances to connect, collaborate, and celebrate — from team-building outings to scientific retreats. These gatherings strengthen our culture, spark innovation, and create real opportunities to learn from one another.

STUDENT SPOTLIGHT



Kamalakanta Gahan
Congratulations on completing Duke's MS in Population Health Sciences. His catalog of structural, cultural, and interpersonal racism measures has become a working resource for our health equity research.

GET INVOLVED TODAY

There is a place for you here

Whether you are a patient considering a study, a clinician with a question worth chasing, a researcher across an ocean, or a neighbor who wants to help — our strength has always been collective, and every partnership widens the circle this work can reach.

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Feedback Form

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National Institutes of Health

National Cancer Institute

National Heart, Lung, and Blood
Institute

Duke Cancer Institute

Duke Global Health Institute

Duke Office of Climate and
SustainabilityDuke Department of Population
Health SciencesSusan G. Komen Breast Cancer
FoundationV Foundation for Cancer
Research

Gilead Sciences, Inc.

Josiah Charles Trent Memorial
Foundation Endowment Fund

WITH GRATITUDE

Thank you for being part of the REGAL community

To our patients, participants, collaborators, and neighbors — your trust and partnership make every discovery in these pages possible. We look forward to all we will accomplish together in the year ahead.

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