

# Black voices in cancer research and oncology

Kilan C. Ashad-Bishop, Onyinye D. Balogun, Runcie C. W. Chidebe, Leah M. Cook & Christina Towers



**Over the past few years, there has been an increasing realization that we need a more equal, diverse and inclusive culture for truly successful cancer research to happen. Moreover, that research itself must be relevant to and engage a diverse patient population to achieve effective cancer care. Now is the time for action, so how do we attract and retain more diverse researchers to the cancer community, and how do we begin to close the gap in cancer disparities. We asked five Black cancer researchers and clinicians to present their ideas for bringing about positive change.**

**What does black in cancer research and oncology mean to you?**

**Kilan C. Ashad-Bishop:** Every superhero's origin story begins with a tragic accident that left them scarred, but also resulted in their supernatural powers. I have found this to be the case among many Black scientists as well; in fact, I have heard stories like this so often that I now realize that my origin story in science was a shared experience. As a child, I lost my grandfather to a disease I could not understand at the time, and seeing the toll it took on my family, I chose to study science so that I might eventually prevent other families from experiencing that type of loss. As I have grown up, trained and heard the origin stories of other Black scientists, women scientists, I have come to realize just how many of us have a first-hand experience with disease, often paired with loss, that inspires us to action, to work to make a change.

Black people in the USA bear a disproportionate burden of cancer, including the highest mortality and the lowest survival of any racial or ethnic group for most cancer types and other leading causes of death, including heart disease, stroke and diabetes<sup>1</sup>. Black, a Western classification of race, encompasses African Americans born in the USA, many of whom bear the legacy of African enslavement, but also more recent global immigrants

of African descent. Unfortunately, although Black people are the most impacted by cancer and other chronic diseases, Black and Hispanic people are also historically under-represented among those earning degrees in science, technology, engineering and mathematics (STEM), especially research doctorates. Both of these phenomena are not coincidence, but are the manifestations of the legacy of structural racism in the USA<sup>2</sup>. I did not know any of this when I chose science, but I soon learnt that I had chosen a field of endeavour not built in my image. Being a young Black woman scientist in cancer research and oncology meant eventually coming to the realization that the same structural inequities that rendered my grandfather vulnerable to the chronic disease that ultimately took his life are also the reason that I have been systematically under-represented in most of the scientific training environments and workplaces I have been a part of.

**Runcie C. W. Chidebe:** Black in cancer research and oncology is defined by struggles, inequities, non-inclusion and a lack of trust, visibility, honour and recognition. To understand these, it is important to interrogate the question from different viewpoints. The meaning attached to Blacks in cancer research and oncology is that of a population with the worst cases in any frame of reference group. The stark racial inequities facing the Blacks are interrelated to power and leadership. Whether you are a Black in Africa, African-American, Afro-Caribbean, Afro-Latin American or other Black variation anywhere in the world; being Black in cancer research and oncology comes with a lot of burden. The story is the same.

First, the systemic under-representation in oncology manifests itself through the limited number of Black scientists, and a lack of recognition, and absence of acknowledgement of the contributions of Black people in oncology research. Although many Black residents struggle to get accepted for oncology subspecialty fellowships, the existing Black oncology specialist workforce is shrinking because of retirement. Many Black junior investigators struggle to choose an area of oncology research because they cannot find senior scientists who are Black – those who can understand them and their passion.

Second, securing research grants is difficult for everyone, but for Black researchers, it is tougher and a struggle. Black oncology researchers struggle and endure multiple grant rejections for several reasons, including racial bias and lack of diversity of reviewers. Without equity in access to research grants and funding, the growth of Blacks in oncology research will remain stunted, and optimum care for Black patients with cancer will remain a dream. Many Blacks in cancer research and oncology are good for Black History Month spotlights, but they are not good enough for grants.

Finally, diversity, equity and inclusion have become the catchwords for getting funded for oncology research and many health projects. Just like underserved, disadvantaged, impoverished, deprived, under-representation and many others. On this premise, we now have non-Black scholars and scientists leading oncology research projects and interventions for Black populations with their own race and ethnic lenses. You cannot understand the cancer disparities of the Black population more than the Black people and Black scientists. There is an urgent need to rethink inclusion in a way that studies focused on under-represented populations are designed to find solutions, conducted with respect and reported in a non-judgemental way.

**Leah M. Cook:** First, I am a woman of African descent, and a descendant of slaves, a product of the transatlantic slave trade. It is extremely humbling to be doing what I do. It is sometimes surreal that I am actively pursuing my dream, while also holding a space that no one else in my family has held. When I try to think of what being Black in cancer research and oncology means to me, many different words come to mind: humbling, isolating, inspiring, invigorating, ..., exhausting. It is all these things, but collectively being 'Black in cancer research and oncology' equals resilience.

What is it like to be a Black woman principal investigator (PI), leading my own research team? It is many things, including:

- Being able to lead my own ideas towards combatting cancer, which feels amazing
- The task, and honour, of being a leader in my own community with the hopes

of inspiring (and helping) other African Americans and people of African descent to pursue a career in science

- An extra level of imposter syndrome owing to people questioning my position and attributing my position and accomplishments to affirmative action
- A substantial amount of pressure to overcome stereotypes that are projected onto me and to prove that I belong here
- Being asked to contribute to diversity initiatives across campus, to the point where it takes me away from my own research
- Although I strive for my research to reduce cancer disparities of heightened cancer risk and deaths in African Americans (Americans of African descent), my mission does extend to all who are experiencing cancer, despite the fact that not all of those people look at me and consider me relevant, important or human.

And so, resilience is the word I think of the most when I think of ‘what it means to be Black in cancer research and oncology’. It is the realization that there will always be rooms that I will walk into where I will get stares, my intellect and belonging will be questioned, and there will be confusion as to how I even got there. But as long as I keep pushing forward, keep my eyes on my mission (driven by the people in my life and also marginalized people whom I do not even know), I will be successful in decoding at least of some of the many mysteries of cancer that continue to take our loved ones from us.

**Christina Towers:** I am mixed Black and Puerto Rican. I am also a dedicated cancer researcher, mentor, mother and activist for diversity, equity and inclusion (DEI) and belonging across academia. I am unapologetically all of these things simultaneously. I cannot separate myself out. I cannot be one of these people at one moment and a different person another based on the convenience of the situation. I cannot be Black when I champion DEI initiatives but not Black when I present my research at a conference. Just as I cannot be Puerto Rican when I raise my kids but not Puerto Rican when I mentor trainees from all walks of life. I must bring my whole identity with me in all that I do professionally and personally, or else all that I do is devoid of me and therefore a waste of my time and effort.

My scientific mission is to identify the most pertinent questions related to cancer cell metabolism; those whose answers will lead to a better understanding of the pathways to

## The contributors

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**Onyinye Balogun** is an assistant professor of radiation oncology at Weill Cornell Medicine specializing in the treatment of breast and gynaecological malignancies. She has conducted and published breast cancer research in novel therapeutics for triple-negative breast cancer and brain metastases. She is also engaged in gynaecological cancer research, as well as global health activities, with a focus on improving the delivery of radiation therapy in low-income and middle-income countries.

**Runcie C. W. Chidebe** is an oncology researcher, patient advocate and global health innovator and the founder/executive director of Project PINK BLUE. He supports people battling cancer, drives policy advocacies and founded the first oncology patient navigation in Nigeria. He is currently a doctoral student of social gerontology in the Department of Sociology and Gerontology, Miami University, Oxford, Ohio, USA. His research

interests are in aging and cancer, metastatic cancer, sexual health and Black patients, and global disparities in clinical trials. He is a leading voice advocating for global cancer equity and believes that geography should not determine whether patients with cancer live or die.

**Leah M. Cook** is a tenured associate professor in the Department of Pathology and Microbiology at the University of Nebraska Medical Center. She earned her PhD in molecular and cellular pathology at the University of Alabama at Birmingham, where she focused on breast cancer metastasis suppressor proteins in metastasis mouse models. She completed her postdoctoral training at Moffitt Cancer Center where she examined mechanisms of bone metastatic prostate cancer. Her laboratory is investigating novel neutrophil interactions that contribute to metastatic prostate cancer growth in bone. Her goal is to identify novel immunotherapeutic targets for treating and curing metastatic cancer.

**Christina Towers** is an assistant professor at The Salk Institute. Her work is focused on understanding the complex roles of the cellular recycling process, autophagy, in cancer. She discovered that although many cancer cells rely on autophagy for survival, some can employ novel mechanisms to circumvent autophagy inhibition. She launched her independent research programme in 2021 in which her group is developing new tools to understand canonical and non-canonical mechanisms of autophagy. Her work leverages fundamental cell biology discoveries to predict and prevent acquired resistance in pancreatic and lung cancer.

which cancer cells are addicted to in human patients. My team and I will take the time to read the literature, perform rigorous experimentation and use unbiased interpretation of our results to draw conclusions and generate a new set of questions. I am passionate about my science. But, I am also the first African American professor at my Institute; and, while I am honoured to be the first, I refuse to be the only. I am committed to not only increasing the diversity on campus at all levels but also creating an inclusive and welcoming environment.

Many people have offered me well-meaning advice by suggesting that as I launch my laboratory, I need to stay focused on the science. That is like asking me to not be Black and a scientist at the same time. I cannot focus on my science while knowing thousands of talented and motivated Black and brown students will have an unfair uphill battle to break into the ivory towers of academia. I must, and I will, do my science while also supporting and promoting change for the better. I have had the privilege to meet many other talented faculty, administrators, trainees and staff from all different races, ethnicities and backgrounds who feel the same pull to commit 100% effort to both their science and DEI.

## How do we improve Black representation across all levels of cancer research and oncology?

**K.C.A.-B.:** As a scientific community, we are still battling our biases regarding what scientists look like, how they act, where they come from and what makes them capable, to list a few. By actively addressing these biases and intentionally creating space for the next generation of scientists to impart their knowledge and experiences to us to inform systemic change, we can begin to enhance recruitment and retention of Black scientists across the cancer care continuum. Recent qualitative work found that welcoming environments, financial stability, the desire to serve communities as role models and opportunities to innovate, learn and grow were important contributors to Black women staying in STEM professions<sup>3</sup>. Fostering these things often requires a critical look at the systems and structures that govern our classrooms, training environments and work environments to identify levers for lasting change. They also require us to understand and elevate the importance of these levers for change so that our actions are appropriately aligned with the issues they seek to address, and so that

progress is measured and evaluated. In the meantime, support for counterspaces, such as [Black in Cancer](#) and [STEMNoire](#), that can offer support and foster a sense of belonging among Black scientists is crucial.

**Onyinye D. Balogun:** Over the past two decades (and with special fervor in the past 3 years), there has been much hand wringing and consternation regarding the plight of young Black researchers. However, focused, effective strategies remain few and far between. To meaningfully influence the trajectory of young Black researchers, I humbly share the following thoughts:

1) Young Black researchers pursuing a medical degree need time outside the clinic to effectively pursue their research interests. When recruiting young Black researchers, both the researchers and their employers should assess their startup packages critically. Is it competitive, tantamount to what has been offered to their peers within and outside their department? Have they been given time and financial resources to begin their academic pursuits with clear objectives and timelines or is there a nebulous arrangement regarding their time outside the clinic?

Didactic seminars on how to conduct research are well-meaning but more powerful when paired with funding that will enable them to have protected time to conduct research and provide resources to perform clinical studies. The Robert A. Winn Diversity in Clinical Trials Award provides a solid example of the type of programmes that are needed.

2) Support the unconventional research interests of researchers. Black individuals are more likely to undertake research that is community-focused and less likely to be funded, such as health disparities research and patient-focused interventions<sup>4</sup>.

3) Do not automatically assume that the Black researcher in your department wants to be your DEI or Wellness expert. That may not be their aspiration. Ask them.

In particular, women, including Black women, are reflexively seen as nurturers or caretakers<sup>5</sup>, when men can also easily assume these roles. If they do choose to take on these roles, remember that titles, time and resources to fulfil the duties of the role matter. Titles bestow formality and are evidence of leadership track record, which can be helpful for promotion.

**R.C.W.C.:** The problem is that many people think that the best way to improve Black representation in oncology and science is to

spotlight them during Black History Month. We need to rethink Black representation with an open heart and realize that representation is beneficial to the world and not just a favour to Black people. My suggestions are, first, there is a need for actionable and intentional oncology research for Black people by Black people. For instance, Black men are more likely to develop prostate cancer, their tumours are more likely to progress to become metastatic and they are more likely to die of the disease<sup>6</sup>, yet only 5% of Black patients with prostate cancer were included in clinical trials over the past 20 years, whereas over 96% were white<sup>7</sup>. Second, Black representation can improve through equity in leadership opportunities. In my estimation, Black lives will never matter until Black leadership matters. Why? Because leadership has one of the most crucial roles in who lives or dies in the world today. When Black scientists begin to be in oncology leadership positions, then, we will begin to see representation.

Third, closing the funding gap is a major step in the right direction. Hence, funding for Blacks in cancer research and oncology will improve Black representation. Finally, accountability from key players is a pathway to Black representation. Specifically, public and private funding bodies should begin to hold clinicians accountable for the diversity of participants and non-inclusion of Black people. Similarly, journal editors have an important role to play in Black representation. Why should a journal publish a manuscript where data were collected from a Black community or African population and yet the authors or the majority of those authors were non-Black? The journal editors have an ethical responsibility to ask questions about DEI. Although journal editors are gatekeepers for science, their gatekeeping must include a science that is inclusive, diverse and has a sense of equity.

**L.M.C.:** To improve Black representation in cancer research, there has to be a conscious effort across the board; from educational programmes and providing access to science early in education, to improved recruitment at the graduate and faculty level, and something that is often overlooked, retention efforts at the graduate and faculty position level. In 2020, the [National Center for Education Statistics](#) reported that out of 1.5 million academic faculty in the USA, only 6% were tenure track Black faculty, and likely fewer than 5% had been promoted to tenure. Notably, the average salary is significantly lower for Black women than their white male counterparts

while demonstrating a significantly longer time to promotion and tenure when comparing qualifications. There needs to be a deep dive into a correlation between Black faculty retention and the time to promotion and tenure. There must also be concerted efforts into understanding and improving mentoring experiences for Black trainees. Create safe spaces for Black students and faculty to share their thoughts on whether they feel included, respected and their overall experience and then address those aspects that need attention. There have been lots of conversations as to what is needed to improve representation but these conversations should only be had if the intention is to then generate actionable items that can be addressed and applied towards progress. Importantly, institutional inherent bias needs to be addressed because it impacts recruitment and retention. Institutions need to do the work to make sure that leadership and faculty understand the need for representation, a requirement towards the most efficient and continued progress in research. Recruitment of Black faculty and trainees is not synonymous with recruitment of underqualified individuals. I cannot stress this point enough; it is ignorant to assume that Black people are less qualified than individuals of other races and to implement concessions to fill certain quotas of representation.

My entrance into the world of cancer research happened when my undergraduate biology teacher at community college shared with me an opportunity for a summer research programme, an intentional programme focused on providing research experiences for under-represented minorities in science. That was my first experience in the laboratory and opened up the possibility of scientific careers, which I had no idea about until that experience. To be clear, my biology teacher approached me with a research opportunity because I had the highest grade in her class and always asked questions, not to fill a quota, and it exposed me to a career I had never known about. As a graduate student, there were groups on campus, specifically the Black Graduate Student Association, that provided a community for me with other African-American and African PhD students on campus that understood me as an individual and my cultural experience as a graduate student. This was so important for my retention and success as a graduate student, outside of the laboratory.

When I was a graduate student, I had no PIs around me that looked like me. When I started my tenure in cancer research, I was fortunate



to find and have mentors who pushed me and did not show bias because of my skin colour; they were and are allies, who sincerely saw my potential and pushed me to do my best. Also, it must be understood that the responsibility cannot be placed solely on Black individuals to lead the task because we are tired. We can guide but there are leaders outside our space that need to step forward and do what they know to be right.

**C.T.:** We ensure that people can be their entire selves in academia. We ensure that they have the resources to run successful scientific programmes, make impactful discoveries to improve patient care, train the next generation of empathetic and rigorous scientists and also champion DEI. These resources include financial means of course, but other critical resources are time, people and mental bandwidth.

For example, when I launched my laboratory at The Salk Institute in 2021, I also aspired to launch new summer programmes at Salk too. When I proposed these ideas to my senior colleagues and the administration, they provided me not only with wholehearted support but also agreed to provide the funds to see it through and the support staff to ensure optimal use of my mental bandwidth and time. This kind of support ensures fantastic pipeline programming while also safeguarding the faculty that lead these efforts. Ultimately, we need both the programmes and the programme leaders. We need to block the leaky pipelines in grade school (or primary schools outside the USA) that allow talented Black students to lose their passion for science before their careers even start. But we also need to focus on retention of those leading these efforts. Too many administrators, faculty and trainees are burning out from leading these efforts with no support, reward or acknowledgement. I benefited immensely from pipeline programmes as an undergraduate student and during my PhD studies. These programmes must continue to help level the playing field for students and trainees who come from minoritized backgrounds. But who will run these programmes if we all burn out?

We must also ensure that young trainees and students can be their authentic selves. Each person has a unique story and background, and they bring a unique perspective to the table. This diversity in perspective leads to innovative thought and approaches that will push the boundaries of cancer research and treatment. We must ensure that younger trainees, whether still in grade school, Bachelor's degree

programmes or PhD programmes, feel they can be authentic to who they are and what they are passionate about.

## **What advice would you give to a young Black person wanting to pursue a career in cancer research or oncology?**

**K.C.A.-B.:** After years spent in graduate school, I realized that the molecular science I love may never truly address the societal ills I cared to address throughout my career, so I began to take an active part in redirecting my career. It took my lived experience as a child growing up in Oakland, CA, my undergraduate experience at my historically Black university (Morgan State University in Baltimore, MD), my wet laboratory graduate training, and three postdoctoral fellowships to fully realize the way in which I wanted the content of my science and my approach to the work to reflect my origin story. That was a very crooked road, from molecular cancer biology to environmental justice to education to cancer epidemiology, and then to justice-oriented research that pulls equally from each of those experiences. To the younger Black folks who have not quite crafted that science identity, I say there is room for all of you in the science that you choose to conduct and in the scientific community that you will become a part of.

**R.C.W.C.:** From my experiences, I advise young Black scientists wanting to pursue a career in cancer research and oncology to be racially colour-blind but also colour-smart. The global cancer control community and oncology clinical space are looking for one answer – which is the prevention of and cure for cancer; hence, if you have any scientific contributions to make, approach anybody and make your voice count. I founded [Project PINK BLUE](#) – a cancer non-profit organization in 2013 with the goal of empowering my community against cancer. As of today, we have partnered with people of diverse races and different countries. Being racially colour-blind is important in helping young Black scientists to engage and network with anybody, no matter their race or ethnicity. However, being colour-smart is equally crucial, this is the ability to understand when racial bias and discrimination are at work. Additionally, young Black scientists should continue to believe in themselves at any time and never be discouraged. The success of most humans begins and ends with themselves. The background, stories and lived experiences of being Black may be overwhelming, however, do not allow those issues to become barriers to

your scientific prospects. Rather, they should be the propeller driving you to innovate and make exploits in oncology research.

**L.M.C.:** My advice to any Black person (persons) wanting to pursue a cancer research career is to keep pushing forward because your perspective matters. Your unique voice will continue to make space for itself and break down any barriers that try to remain intact.

**C.T.:** First, please know that YOU belong in every academic room you find yourself. Even if you find yourself alone in that room, you belong there. Academia is flawed without a doubt, but it is still an amazing environment to push the boundaries of science, technology and medicine. I truly believe that we can all thrive in academia. One of the most important things that helped me navigate the academic space was strategic mentorship. I had several different kinds of mentors, all of whom played an irreplicable role in my journey. I had mentors who I could personally identify with, who looked like me and shared a similar backstory. But I also had other mentors who advocated for me but could not relate to me personally. Finally, I had mentors who advised me on small and large decisions. I had all of these mentors simultaneously and together they synergized to help guide me through the winding road of academia. I would not be where I am today without these amazing people in my life.

## **How do we reduce cancer disparities and improve cancer care for the Black community?**

**K.C.A.-B.:** To address cancer disparities in the Black community, we must first come to the consensus that Black life is of value. The Black community has historically carried the burden of mortality from disease, and that is by social and structural design, so the solutions must also be designed to address the multilevel, structural determinants of these disparities. I think the most promise is in structural quality improvement interventions such as the Accountability for Cancer Care through Undoing Racism and Equity (ACCURE) intervention, which targeted systems of care at two cancer centres in the USA and has proven success<sup>8</sup>. The ACCURE intervention eliminated the Black–white racial disparity in treatment completion among patients with breast and lung cancer in the pilot sites, but it will take a lot of resources to see widespread implementation and evaluation of similar programmes. So that goes back to my first question – do we

as an academic, scientific and medical community deem Black life worthy of that investment?

**R.C.W.C.:** Simply put, I think we need to fund Black researchers and scientists in oncology. Without funding for Black researchers, Black communities will continue to be the reference group for the worst cancer issues in the world. Furthermore, Black scientists in cancer research must collaborate with other Black scientists.

**L.C.:** Although we continue to make progress in understanding cancer progression and the development of novel therapies, personalized therapeutic approaches based on preclinical and clinical studies that truly reflect the heterogeneity of the Black community will contribute to reducing cancer disparities.

To that end, there must be some accountability; we cannot expect there to be improvements in cancer disparities and cancer care without accountability and acknowledgement of how we got here. The USA has a complicated history with African Americans in clinical trials and this must be acknowledged in community outreach, in raising awareness of cancer disparities, and reinforcing community trust to increase recruitment of African Americans (and people of African descent) into clinical trials.

Furthermore, there is a need for more pre-clinical cancer models that represent the Black community (or ancestral origins). For example, in prostate cancer research, the majority of research is performed using a set of standard use cell lines, derived from Caucasian men; however, African-American men have a significantly greater risk of getting (and dying from) prostate cancer than Caucasian men. Preclinical prostate cancer studies are often compared with clinical data sets with

10% or less African-American men represented in the cohort<sup>9</sup>. This has resulted in many of the previously identified therapies being developed based on data from Caucasian-derived models, when there is a substantial amount of evidence<sup>10</sup> demonstrating that ancestral origins dictate genomic profile differences that can affect cancer aetiology, progression and even response to therapy.

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## Additional information

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**Black in Cancer:** [blackincancer.com](https://blackincancer.com)  
**National Center for Education Statistics:** <https://nces.ed.gov/>  
**Project PINK BLUE:** <http://www.projectpinkblue.org/>  
**STEMNoire:** [STEMNoire.org](https://stemnoire.org)

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