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CANCERWORLD

MISSION 2027

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NOT FOR SALE

In oncology, progress is measured in survival rates, response curves, and treatment gains. But those numbers rest on a quieter assumption: that health systems can deliver what science makes possible. When they cannot, progress becomes uneven—not in discovery, but in reality. What does advancement mean when its impact depends as much on context as on knowledge?

Each issue of *CancerWorld* examines the people and ideas shaping oncology. This month, the tension between progress and delivery is especially clear. Scientific advances continue to expand what is possible, but health systems, geography, and inequality continue to shape what is actually achieved in practice.

The May issue opens in Rwanda, where ambition has become operational. Under the leadership of **Dr Sabin Nsanzimana**, "Mission 2027" seeks to eliminate cervical cancer ahead of the World Health Organization target — transforming a global aspiration into a national programme defined by urgency, coordination, and execution.

Physician, epidemiologist, and key architect of Rwanda's post-genocide health system, Nsanzimana leads within a context shaped by the legacy of the 1994 genocide against the Tutsi, where progress is measured less in intent than in delivery. In this interview, he reflects on the making of a doctor in a rebuilding nation and the long arc of reform that has carried Rwanda's health system from recovery to global reference point.

There are careers that unfold alongside the evolution of a discipline, and then there is **Dr Charles Balch.** For more than half a century, his work has helped define surgical oncology, shape the structure of modern cancer centers, and influence the global architecture of oncology itself.

Yet his legacy is not measured in institutional milestones alone. It is reflected in continuity — in the generations of physicians and researchers who carried forward the systems, standards, and ideas he helped establish.

In cancer care, some of the most important shifts are structural rather than visible. Through **Dr Lazaros Papadopoulos,** we see a surgeon shaped by loss, mentorship, and restraint. His work reflects a broader move in oncology toward care that is not only effective, but deliberately measured.

Some of the most consequential developments begin outside the clinic. In **Robin Toft's** experience, early detection becomes a dividing line between survival and loss. Meanwhile, in San Diego, cancer research is shaped by an alignment of science, philanthropy, and policy operating as an ecosystem rather than an isolated effort.

From Silence to Presence, **Dr Christian Ntizimira** reframes end-of-life care as presence rather than withdrawal. Grounded in post-genocide Rwanda and global practice, his work challenges a core assumption in medicine: that technical success alone defines good care. In his model, dignity is defined not only by symptom control, but by the absence of abandonment.

Immunotherapy has expanded the boundaries of cancer care while introducing new complexity. **Dr Ricky Dylan Frazer** describes a field defined by longer survival and harder decisions. **Dr Yinghong Wang** highlights a quieter shift: immune-related toxicities are now central to oncology, requiring systems that can manage not only treatment, but its consequences.

Metastatic pancreatic cancer has long been defined by stagnation, but emerging RAS-targeted approaches are beginning to challenge that narrative. Early data on daraxonrasib, explored by **Dr Shiraj Sen**, suggest a possible shift in a disease driven almost universally by RAS mutations.

Cancer treatment may depend not only on what is given, but when it is given. A Spanish study led by Pablo Huertas shows circadian regulation of DNA repair affects tumour sensitivity, opening a new dimension in precision oncology. **Janet Fricker** explores this emerging role of timing in treatment.

As survival improves, another gap becomes more visible beyond treatment itself. **Adrian Pogacian** highlights survivorship as an unstructured phase where psychological and social needs remain unmet. Oncology has become precise in treating disease, but care beyond disease remains uneven.

Across all these stories, a single thread runs through: oncology is advancing rapidly, and its impact is increasingly defined by how far and how effectively that progress is carried into practice. From national programmes to individual care, from discovery to survivorship, the central question is not only what is known, but how consistently it improves outcomes for patients.

This issue closes on that tension—running through every story in these pages, and continuing to shape oncology in practice.

Knarik Arakelyan, Managing Editor, CancerWorld

MISSION 2027

The Minister of Health of Rwanda Dr Sabin Nsanzimana on medicine, 1994 genocide against the Tutsi, leadership, workforce, technology, and the ambition to eliminate cervical cancer

MISSION IS POSSIBLE

By Gevorg Tamamyan

The latest interview for *CancerWorld* features Dr Sabin Nsanzimana, Minister of Health of Rwanda, physician, epidemiologist, and a key contributor to Rwanda's public health transformation. In this conversation, he reflects on why he chose medicine, the realities of training in post-genocide Rwanda, the country's remarkable health reforms, and the bold ambition behind one of Africa's most inspiring public health goals: **Mission 2027** — the effort to eliminate cervical cancer in Rwanda ahead of the global 2030 target.

For Dr Nsanzimana, medicine was never simply a profession. It was a calling shaped by community, history, and responsibility.

"Doctors Save People's Lives"

Why did he decide to become a doctor?

His answer begins with something simple and deeply human: what children see around them.

"Doctors save people's lives. And it wasn't a difficult choice to make, to be honest, because we all grew up in communities. We've been at the clinic, at the hospitals. And we've seen how health professionals are very important people in the community."

As a child growing up in Rwanda, he saw health professionals not as distant experts, but as central figures in everyday life.

"So becoming one of them hasn't been a difficult choice for me and for many other young people who are just beginning their career or starting university."

But there was another force shaping that decision — the history of Rwanda itself.

"Another reason probably is associated with the history of my country, Rwanda. Three decades ago, we went into a genocide that took one million people's lives in just 100 days. So I was a young man just growing up into adolescence. Having lived that impacted many of us, including the choice of becoming one of the health professionals."

Those two realities — the example of doctors in the community, and the trauma of a nation rebuilding after devastation — stayed with him.

"So briefly, these are the two main reasons. And I believe if I have to go back, I'll make the same choice."

A Medical Student in a Country Rebuilding Itself

Entering medical school in Rwanda was never easy.

"To go into medicine, there are very strict criteria for entry. It's not just a choice. It's also how you evolved in high school, which section you've chosen."

Competition was intense.

"Out of 100 asking to go through medicine, you probably talk about 1% or less. In our class, I remember, we were taking only 50 people. In the entire country, only 50 people enter medical school in the first year."

Only students with a strong science background could even be considered.

"Only if you have done biology, chemistry, physics, and mathematics as basic high school education."

His own path in latin and sciences through seminary education gave him that foundation.

"That helped because the seminaries were considered at that time having the top schools in terms of education in science, which I had a chance to go through."

Medical school itself was shaped by the realities of a country facing severe shortages of health professionals.

"The first two years are basic sciences. And then in the third year, you start to go into hospital practice."

Because Rwanda urgently needed doctors, students were exposed early to clinical responsibility.

"Given the shortage of health personnel in our time, students in medicine were exposed to so many advanced procedures from year three, year four.

Including some surgical procedures in gynecology, obstetrics and surgery. So at the end of the six years as a young doctor, you have acquired so many skills because you're expected to do almost everything in a country that had very few specialists; a country that had just lost 80% of its health workforce during the genocide against the Tutsis in 1994."

From the Wards of HIV to the Discipline of Epidemiology

When Dr Nsanzimana completed medical school, Rwanda's dominant health burden was still infectious disease.

"...primarily HIV, malaria, tuberculosis, diarrhea, so many outbreaks like cholera, meningitis. This is in the aftermath of the genocide."

He remembers vividly what he saw in Kigali.

"I always remember the last year of training that I spent in the largest teaching hospital of Kigali (CHUK). The hospital had patients hospitalized for HIV and associated opportunistic infections to the level that there were two entire blocks that were dedicated for them."

Those words became symbolic in Rwanda's public health memory.

"They were known at that time, even in Rwanda, many still have that memory of Ward 4 and Ward 5. These are big wards where these HIV patients would go through before they die."

At that time, treatment was only beginning to emerge globally, and had not yet reached most African settings.

"There was no treatment available. These programs like PEPFAR, Global Fund, were not yet in place. They were just coming in."

His transition from medical school brought him directly into that frontline.

"My transition from the hospital went straight into that clinic. In 2005, the TRAC clinic (Treatment and Research for AIDS Center) , I remember, had 5,000 patients living with HIV... And my choice to go into epidemiology was likely based on the need that was there."

He would go on to pursue a master's degree and then a PhD, while continuing to work.

"From a personal perspective, from personal growth, career growth, I did most of my education also at work. After general medicine, I went into epidemiology masters at work, HIV was still the focus, then a PhD as well, with a model going for a couple of months, coming back to work, going back to Switzerland."

In many ways, his career grew inside Rwanda's public health institutions as the country itself evolved.

"That institution was like the driving entity to contain the largest health system challenge, HIV, TB, malaria... Later on, the institution grew up to become the Rwanda Biomedical Centre (RBC)."

He stayed in that ecosystem for around 15 years, witnessing one of the most important epidemiologic transitions in modern African health systems - "where infectious diseases were more or less contained, shifted into non-communicable diseases."

Looking back now, from the office of Minister of Health, he describes that journey with characteristic humility and humor.

"Twenty years on, now serving as Minister of Health, with a bit less hair and in a similar public office; I remain grateful for the impact we've been able to make collectively."

"I never saw this coming"

Why was he appointed Minister of Health?

He simply replies.

"I don't know."

Then he pauses, reflects, and reframes the question.

"There's always a journey that you have to go through to be where you were supposed to be."

For more than two decades, he had worked in public service, but never with a political appointment in mind.

With a background mainly in data, epidemiology, and analysis, the appointment was not an obvious one, including to me

At that point, I had spent nine months leading a university teaching hospital in southern Rwanda. Following 15 years in the capital city and three years of intense COVID-19 response, I was appreciating a calmer, more rural pace.

Still, if one quality defines him, it may be readiness.

"I've always been ready."

He is drawn to difficult targets, innovation, and the challenge of building what does not yet exist.

Dr. Sabin Nsanzimana speaking at the Africa HealthTech Summit 2025 in Kigali, Rwanda. Photo source: Africa HealthTech Summit 2025

"I enjoy discussing numbers, data. I enjoy challenging things, looking at how technology can help. I enjoy big targets, goals, and how we can get there."

And perhaps most revealingly:

"When you achieve something that is difficult to achieve, or maybe has been before not tested or not tried, you feel that there's a lot in this world that we can create, we can innovate."

The Big Five

Dr Nsanzimana says he always asks himself what he will leave behind.

"My team and I always five things in mind"

Those priorities are not abstract. They are concrete, measurable, and deeply aligned with Rwanda's needs.

1. Workforce: from one to four

The first priority is people.

"The first thing we did when we started the office was to look at the areas with the biggest need or the biggest challenge. So, we realised that we have a very limited number of health professionals in all areas."

That led to an ambitious workforce plan.

"We created a programme called "4×4"s, quadrupling the workforce. It's a programme of four years."

The name reflects a stark reality.

"Our ratio, health providers per population was one per 1,000 people. And the World Health Organization recommends that at least the minimum for a health system to not collapse, you need four providers for 1,000 people."

So the challenge became simple to state, if difficult to achieve.

"Our goal was, how can we move from one to four? It's to quadruple our workforce."

Without disruption, he says, the gap would take generations to close.

"Our estimate was that if we don't do it now, it will take us 185 years to reach this ratio."

So Rwanda chose not to wait.

"We had to disrupt the system by bringing this ambitious target."

2. Technology as equalizer

The second priority is technology.

"We're doing a lot into making technology our ally, our equaliser. All these gaps, all this legacy of a system that was destroyed, we're trying to build, can be done faster with technology."

This includes AI, digital systems, imaging connectivity, and tools in the hands of frontline health workers.

"We have connected all health facilities, we are centralising imaging interpretation centres, so that with technology, you don't rely on heavy human individuals everywhere."

He sees Rwanda's young population and national investment in connectivity as a major advantage.

"Having the chance of having young people, very vibrant, with a country that has also been investing in connectivity, internet, is something that can actually be

applied in other countries with similar resources."

3. Strengthening primary health care

The Ministry's third priority is primary health care and he speaks about it with particular conviction.

"If you want to spend less, ten times less, prevent diseases and treat people near their households."

He gives a powerful example from malaria.

"We're talking about equipping neighbours (community health workers) and training them so they treat their neighbours for malaria with one rapid test and treatment tablets, that would cost less than $1 for one person."

Delay, by contrast, is devastating both medically and economically.

"But if you delay and that person has to go to the hospital, you're talking about the cost moving ***from less than $1 to $1,000."***

Why? Because untreated disease triggers a chain reaction: transport, hospitalization, family burden, lost time, higher risk, and more suffering.

"So, treating at the community level is cheaper, faster, is not only a priority, it's actually the best way to protect the health care system."

In Rwanda, community health workers are not symbolic. They are the cornerstone.

"Equipping community health workers with smart phones, with BP machines, with glucometers, rapid testing devices, so that they manage complex diseases before they come to the clinic and they screen diseases before they appear and we can see it at the national health intelligence center."

4. Emergency medical services

The fourth priority is emergency medical services.

"How do you save someone's life within the golden hours?''

You're talking about someone, a pregnant mother who may have high blood pressure and impact her life and the baby. How do we intervene quickly?

Again, the answer returns to systems, speed, and technology.

5. Maternal, neonatal, and flagship disease priorities

The fifth priority includes maternal and neonatal health, but also Rwanda's most visible flagship public health mission: cervical cancer elimination.

"Cervical cancer elimination is a very important priority.

It's actually the current elimination plan of any single disease that we are talking about today in Rwanda."

And it has a name that now carries energy across the country.

"Mission 2027."

Mission 2027

When Dr Nsanzimana speaks about Mission 2027, his tone changes. There is urgency, but also pride.

"When we talk about it, everyone is smiling and happy, because achieving that will mean you have removed something from your list of issues."

Mission 2027 is Rwanda's effort to eliminate cervical cancer by 2027 — ahead of the global WHO target of 2030.

"This Mission 2027 is particular, is unique."

But he is careful to stress that this did not begin from zero.

"It doesn't start now. It's something we've been doing before with HPV vaccination."

The campaign is rooted in prior public health successes and in sustained national leadership.

"It is championed by **Her Excellency, the First Lady of the Republic of Rwanda, Mrs Jeannette Kagame,** *who has been a very active force in the health and education sectors through the* **Imbuto Foundation.**

Under her leadership, we achieved Hepatitis C elimination... and now, the second to be eliminated is cervical cancer, with the same team, same leadership, *same goal, same ambition."*

And then, simply:

"So, Mission 2027 is happening. So, the battle is ongoing."

Why Rwanda Works

What is the key to Rwanda's progress in health?

His answer starts with one word.

"Leadership."

For Dr Nsanzimana, that is the central explanatory force behind Rwanda's transformation.

"The leadership has been a key transformative factor of Rwanda to recover from the 1994 genocide against the Tutsi."

But leadership, in his description, is not about hierarchy alone.

"It's not about the years of service or the age you have... To be a cabinet member and to lead a ministry is the added value you bring into your institution."

He also credits Rwanda's whole-of-government approach.

"In Rwanda, the system works as one government, one government handling issues."

He gives the example of outbreak response.

"When we had an outbreak, the response is, of course, technically led by the Ministry of Health, but you will see the Ministry of Local Government, the Ministry of Interior, people in finance involved. You form one team."

That approach attracts people.

''Partners are always attracted to places where they see progress and momentum. No one wants to work in an environment where they have to persuade the government to take action. Rwanda has consistently taken the opposite approach - setting clear plans and goals, and inviting partners who are interested in working together to achieve impactful results at scale.''

He returns often to accountability.
"Fight corruption, making sure this money is spent in the right place. Accountability is a key pillar of leadership in Rwanda."

Then he recalls a defining national principle articulated by H.E President Paul Kagame after the genocide: **"We have to make a choice to live/stay together, to think big, and to be accountable."**

For Dr Nsanzimana, health has been central to all three.

Paul Farmer, Butaro, and the Future of Cancer in Africa

When discussing cancer care in Rwanda, Dr Nsanzimana remembers the late Paul Farmer with warmth and respect.

"Paul Farmer came to Rwanda, and he went to the most remote areas, because he also had this will to make changes in an equitable manner."

Their collaboration began early, in HIV care.

"I knew Paul Farmer when I was just starting as a young doctor."

Later, as cancer began to emerge as a major health challenge, that collaboration evolved.

"In 2019, before COVID, actually, we were together, Paul Farmer and I, opening a rural facility for cancer patients in Butaro."

The house provided dignity for patients traveling long distances for treatment.

"As the first cancer centre was introduced there, patients could come from all provinces, but didn't get where to sleep before they got their medication. So Paul mobilised resources, built that house, went there, and we opened it together. Unfortunately, that was the last time I saw him in person."

What stayed with him most was Farmer's foresight.

"He said cancer is going to become the major threat and pressure to health systems across Africa in the coming years."

Today, Dr Nsanzimana says, that warning has become reality.

"He was predicting exactly what we're seeing today, that cancer is the main cause of death in Rwanda and in Africa, followed by cardiovascular diseases."

Mentors, Influence, and One Constant Voice

Asked about mentors, he resists naming just one.

"I had the opportunity to meet so many great people who brought something of who I am today."

He sees himself as shaped by many contributors — supervisors, scientists, public servants, leaders, colleagues.

"I don't have a specific mentor whom I would say I've been really growing, evolving under someone's 100% support. But there is an inspiration you get just by meeting someone for just an hour or a few minutes. And you pick something, you learn, and then you combine."

Yet one person stands apart.

"I think my dad is probably the main advisor."

His father is not a doctor. He was a teacher. But his influence has been profound.

"He's still the person I ask about everything, including health. Every time I have a confusing situation, I always call him or go to see him."

And then, with a touch of wonder:

"He seems to understand everything about health and about politics in general. His answers have always been actually more accurate than I think."

The Person He Wants the World to Hear Next

At the end of the conversation, when asked whom he would like to see interviewed next, Dr Nsanzimana does not mention a famous scientist, a politician, or an international expert.

Instead, he points toward the foundation of Rwanda's health system.

"A voice of someone who is being treated in the community, community health worker or beneficiary of this program, could be someone who survived a disease because of a successful program, someone in far rural Rwanda or somewhere else.

Recently, I went to visit a community health worker who has been for the past 19 years treating neighbors. And he understands and knows everyone's life he has saved...

That is the person I wish to see interviewed after me."

He explains that every week he asks his team the same question:

"What are we going to achieve today that will make a difference for someone in a village who doesn't know we even exist?"

That question, perhaps more than any slogan, captures his philosophy of leadership: it must remain citizen-centered, and public service is meaningful only when its impact reaches every citizen.

Mission Possible

There is something striking about the way Dr Sabin Nsanzimana speaks. He is modest, often almost disarmingly so, yet everything in his story points to disciplined ambition.

He speaks the language of data, systems, and accountability. But he also speaks the language of possibility.

He believes a country can rebuild after a catastrophe.

He believes a workforce gap can be disrupted.

He believes technology can act as an equalizer.

He believes primary care can save both lives and systems.

And he believes cervical cancer can be eliminated not someday, but soon.

"Mission 2027 is happening."

In Rwanda. Now.

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REWRITING THE SURGICAL NARRATIVE

Dr Lazaros Papadopoulos On Breast Cancer Care, Mentorship, and the Meaning of Small Changes

By Knarik Arakelyan

"Life is often a sequence of chance events, and many times we are called to rewrite our own narrative."

For Dr Lazaros Papadopoulos, that idea is not abstract. It is the thread that connects a childhood shaped by admiration for his father, an early dream of becoming a pilot, and a medical career defined by unexpected turns, formative encounters, and a steady movement toward breast surgical oncology.

Becoming a doctor, he admits, was not his first ambition. As a child, he wanted to follow in his father's footsteps, whom he describes as a model of "transparency, integrity, and constant self-audit"—qualities that remain his personal compass. Over time, however, something shifted.

"The instincts of adolescence, the rush, the adrenaline, the boiling blood, gave way to reason, realism, and a deeper desire to offer something meaningful to other people."

That path eventually led him to Italy for medical school and into surgery. He was initially drawn to plastic surgery for its reconstructive and aesthetic dimension, and to abdominal surgery for its urgency and decisiveness. The decisive turn came later, in Athens, through a combination of circumstance and personal loss, when he met the late Dr G. Asimakopoulos, one of Greece's pioneers in breast surgical oncology.

"I realised I could unite my love for aesthetic and reconstructive work with the principles of general surgery and surgical oncology within one field. That field was breast surgery."

A Moment in Düsseldorf

If that was the beginning, a second moment transformed direction into commitment.

In 2015, still early in his career, Papadopoulos attended the Düsseldorf Breast Cancer Symposium organised by Dr M. Rezai. Invited by Dr Asimakopoulos, he found himself sitting at a table with some of the most influential figures in breast cancer care, including M. Morrow, V. Galimberti, and B. Gulluoglu.

"I remember that evening very clearly. For me, it was a gift, but also a sign. There was a path in front of me, and it should not be wasted."

That sense of direction soon became a clear professional commitment.

Learning Across Europe and Bringing it Home

His training took him across Italy, Germany, and Ireland, where he encountered different healthcare systems and, importantly, more structured models of cancer care.

Greece, he reflects, sits at a crossroads between East and West—reflected in both patient expectations and clinical practice. While still deeply patient-centred, important structural gaps remain.

Ireland, in particular, shaped his thinking. There, multidisciplinary teams, standardised pathways, and quality frameworks were not aspirational, they were routine.

"Patients should ideally be treated within an MDT environment, in recognised centres, by surgeons with appropriate expertise and case volume."

Returning to Greece, he brought back not only technical experience, but a systems-based mindset, including MDT culture, the importance of preoperative diagnosis, and modern axillary management after neoadjuvant treatment. He also adopted newer technologies such as paramagnetic seed localisation and magnetic tracers.

"To me, innovation means improving efficiency, simplifying workflows, and introducing better systems—always within an oncologically safe framework."

The COVID-19 pandemic, which coincided with his fellowship, added another layer of complexity. Screening stopped, operative volumes dropped, and trainees competed for fewer cases.

"It was a difficult period, with reduced exposure and many trainees trying to gain experience in a limited space."

It reinforced for him that surgical training must be structured, not dependent on chance.

ESO, Mentorship, and the Apprentice Mindset

A central influence throughout his career has been the European School of Oncology (ESO). From Clinical Fellowship to postgraduate training and later his role within the ESO College Council, he describes ESO less as a list of achievements and more as a continuous formative process.

"Titles and distinctions, in themselves, have little value. What matters is the process."

That process, he explains, is about exposure to different systems, different ways of thinking, and a culture of reflection and responsibility.

"ESO teaches you how to think, how to communicate, and how to take responsibility."

Members of the elected board of the ESO college with CEO Alberto Costa and Chairman Alexandru Eniu

Now, as an ESO Ambassador and College Council member, he sees his role as contributing to a more unified European approach to oncology training.

"As a European community, we need to think and act more as one."

He advocates for a modern, evolving curriculum that includes not only core oncological principles, but also advanced oncoplastic surgery, endoscopic techniques, localisation technologies, and surgeon-performed ultrasound. For him, training must be standardised, not left to geography or opportunity.

Despite his experience, he resists the idea of arrival.

"I still see myself as an apprentice."

It is a philosophy shaped by mentorship. He speaks of learning not only how to operate, but also how not to operate, and how to understand judgement, restraint, and responsibility.

"I have learned not only how to operate, but also how not to operate."

Among those who have influenced him, he cites Dr A. Costa, Dr C. Tinterri, Mr J. Gerraghty, Mr D. McCartan, Dr B. Gulluoglu, Dr G. Pechlivanides, Mr V. Gruzman, Dr G. Asimakopoulos and his current director, Dr G. Xepapadakis.

Each contributed in distinct ways—some shaping his character, others refining his surgical expertise, and several influencing both. Drawing selectively from these mentors, he has developed a professional identity that extends beyond technical proficiency, embracing a patient-centred approach that prioritises meaningful communication and human connection alongside clinical care.

Patients, Precision, and the Power of Small Change

In daily practice, Papadopoulos places strong emphasis on shared decision-making.

"Patients need more than facts. They need context, clarity, and, whenever possible, numbers."

He is equally aware of the emotional fragility of these conversations.

"Our role is not only to inform, but to do so without making them feel overwhelmed, uncomfortable, or confused."

This balance between clarity and compassion runs through his entire surgical philosophy. While he values oncoplastic techniques, he remains grounded in oncological safety and restraint.

"I always want to understand what is acceptable to my patients, but also what is acceptable to me as a surgeon."

And always, he returns to a simple principle:

"Less is very often more."

Looking ahead, he does not speak of transformation,

Dr G. Xepapadakis

but of accumulation—small, evidence-based improvements: fewer unnecessary mastectomies, reduced axillary surgery, stronger preoperative diagnosis, greater MDT integration, and increased engagement in clinical trials.

"Our treatment decisions must always be justified by data, not habit."

Beyond the Operating Theatre

Papadopoulos sees Greece as having strong potential in regional and international oncology collaboration not because of infrastructure alone, but because of people.

"It is a resource-rich environment in terms of human potential and clinical experience."

What is needed, he argues, is openness.

"Extroversion in medicine is not superficial. It is productive. It allows ideas, energy, and good practice to circulate."

Maintaining balance in such a demanding field requires both distance and connection. Family provides grounding; patients provide perspective. Outside medicine, he turns to kitesurfing.

"When I am on the sea, I think only of the wind and the waves, nothing else."

Finally, when asked whom he would recommend for a future interview, his answer is immediate: his director, Dr G. Xepapadakis.

"He is a legend in our field. He has operated on more than 15,000 women, manages over 600 cancer cases per year, and has a story that is still not widely known."

For Papadopoulos, the essence of his journey is continuity rather than arrival—a constant process of learning, refining, and working within a team.

"No matter our age, we must keep learning and we must learn to function as part of an MDT."

About the Author

Knarik Arakelyan (PhD) is a psychologist and communications professional with over 14 years of experience in public relations, health communication, and public awareness campaigns. She is currently the Managing Editor of "CancerWorld" magazine, Head of the "OncoDaily TV," and serves as PR and Communications Officer at "EMERTÉ" Clinic.

A SURVIVOR'S PERSPECTIVE

San Diego's Rise as a National Cancer Research Hub

By Robin Toft

How policy, philanthropy, and scientific collaboration are reshaping the cancer research landscape and why early detection can be the difference between life and death.

Twenty years ago, I received a diagnosis that changed everything and led me to dedicate the rest of my life to transforming cancer care. I was in my early forties—well under the then-prevailing threshold of fifty for routine colorectal cancer screening. An MRI in the emergency room for gastrointestinal pain revealed an intestinal obstruction, leading to emergency surgery with no warning. I was fortunate: diagnosed with stage two colorectal cancer before the disease had spread to my lymph nodes. Six months of aggressive chemotherapy followed, and I have gone on to live a full life.

Under the guidelines of that era, my cancer might have gone undetected for years. It was only in 2021 that the U.S. Preventive Services Task Force formally lowered its recommended colorectal cancer screening age from 50 to 45, driven by evidence of rising incidence in younger adults. Research has since confirmed that the risk of colorectal cancer at age 45 today mirrors the risk at age 50 twenty years ago, and the policy change has already produced measurable increases in early-stage detection, translating directly into lives saved.

Battling cancer and learning to thrive as a survivor has shaped my life's purpose and is why I find myself writing about something larger than my own experience: the emergence of San Diego as one of the world's most dynamic cancer research ecosystems, and why the structures that support discovery matter as profoundly as the science itself.

A Rare Concentration of Scientific Talent

San Diego is not the story of one great institution. It is the story of deliberate, decades-long investment in the conditions for scientific collaboration. The region is home to UC San Diego's Moores Cancer Center, one of only 57 NCI-Designated Comprehensive Cancer Centers in the United States and the only one in San Diego, ranked number one in the region by U.S. News & World Report. San Diego also hosts two of the nation's only seven NCI-Designated Basic Laboratory Cancer Centers: the Salk Institute and Sanford Burnham Prebys, which together with UC San Diego formed the San Diego NCI Cancer Centers Council to advance joint research and clinical translation.

2025 Curebound Cancer Challenge at UC San Diego / photo credit to Asilomar Photography

Beyond these flagships, the region encompasses more than 3,000 life sciences companies, world-class research universities, Rady Children's Health, and major oncology firms including Pfizer, AstraZeneca, and Illumina. In 2024, San Diego's life sciences sector employed approximately 57,000 people, secured more than $1.1 billion in NIH (National Institutes of Health) funding, and raised nearly $2 billion in venture capital. The threads of academia, clinical care, industry, and philanthropy are now being woven together in ways that define the region's future research landscape.

That integration was on global display in April 2026 when the American Association for Cancer Research held its Annual Meeting in San Diego, the world's largest professional oncology gathering, reflecting recognition that the region is contributing not only important science but viable models for organizing, funding, and translating that science into patient benefit.

Discovery Research at a Crossroads

The most vulnerable point in any cancer research pipeline is also its most consequential: discovery research, where bold hypotheses are tested and new approaches take shape. The NIH has historically sustained this work, but competition for grants has intensified sharply, success rates have narrowed, and review processes increasingly reward incremental advances over high-risk, high-reward science. A recent $1.8 billion reduction across NIH capacity has deepened these pressures, elevating the strategic importance of philanthropic and community-based funding in ways few anticipated even five years ago. The consequences of these funding gaps are not measured in dollars. They are measured in lives.

Philanthropy as Strategic Infrastructure

Against this backdrop, Curebound, a community-powered cancer research accelerator headquartered in San Diego, has emerged as a distinctive and increasingly essential part of the ecosystem. Since its founding, Curebound has awarded more than $50 million across 170 study grants spanning 23 cancer types, created impact including researchers receiving over $166 million in follow-on funding, and has seed-funded four companies. What sets Curebound apart is its structural insistence on cross-institutional collaboration: every grant requires interdisciplinary teams working together, embedding cooperation as a condition of funding rather than a cultural aspiration. Its portfolio spans Discovery Grants of up to $250,000 for early-stage, high-potential research, Targeted Grants of $500,000 for projects approaching clinical translation, a $1 million Cure Prize awarded to improve the standard of care within 3–5 years, Catalyst Grants of $250,000 for early-stage San Diego biotech companies, and Equity Grants of $250,000 targeting cancer health disparities in underserved communities.

Ludmil Alexandrov, PhD, of UC San Diego / photo credit to Asilomar Photography

The 2025 Cure Prize, Curebound's flagship award of $1 million, was granted to Ludmil Alexandrov, PhD, of UC San Diego for AI-driven research identifying mutational signatures in cancer genomes. By mapping the biological fingerprints left by cancer-causing cellular processes, his work aims to improve early detection across tumor types and populations. This is precisely the kind of research that demands interdisciplinary teams, sophisticated computational infrastructure, and diverse datasets—resources that early-stage federal grants cannot easily supply. Strategic philanthropy bridges that gap.

Community engagement amplifies this work. In 2025, Curebound's Concert for Cures featured Elton John and drew more than 27,000 attendees and raised $11.5 million, becoming the largest single cancer research fundraiser in San Diego history.

Curebound Concert for Cures with Elton John at Petco Park in San Diego, 2025 / photo credit to Alex Matthews

This spring, P!nk will headline the event, honoring her late father. Over the past twelve years, the Curebound Cancer Challenge has united over 20,000 participants and raised $32.5 million for early-phase research. These are not peripheral contributions. In a constrained funding environment, they are essential.

A Model Worth Studying

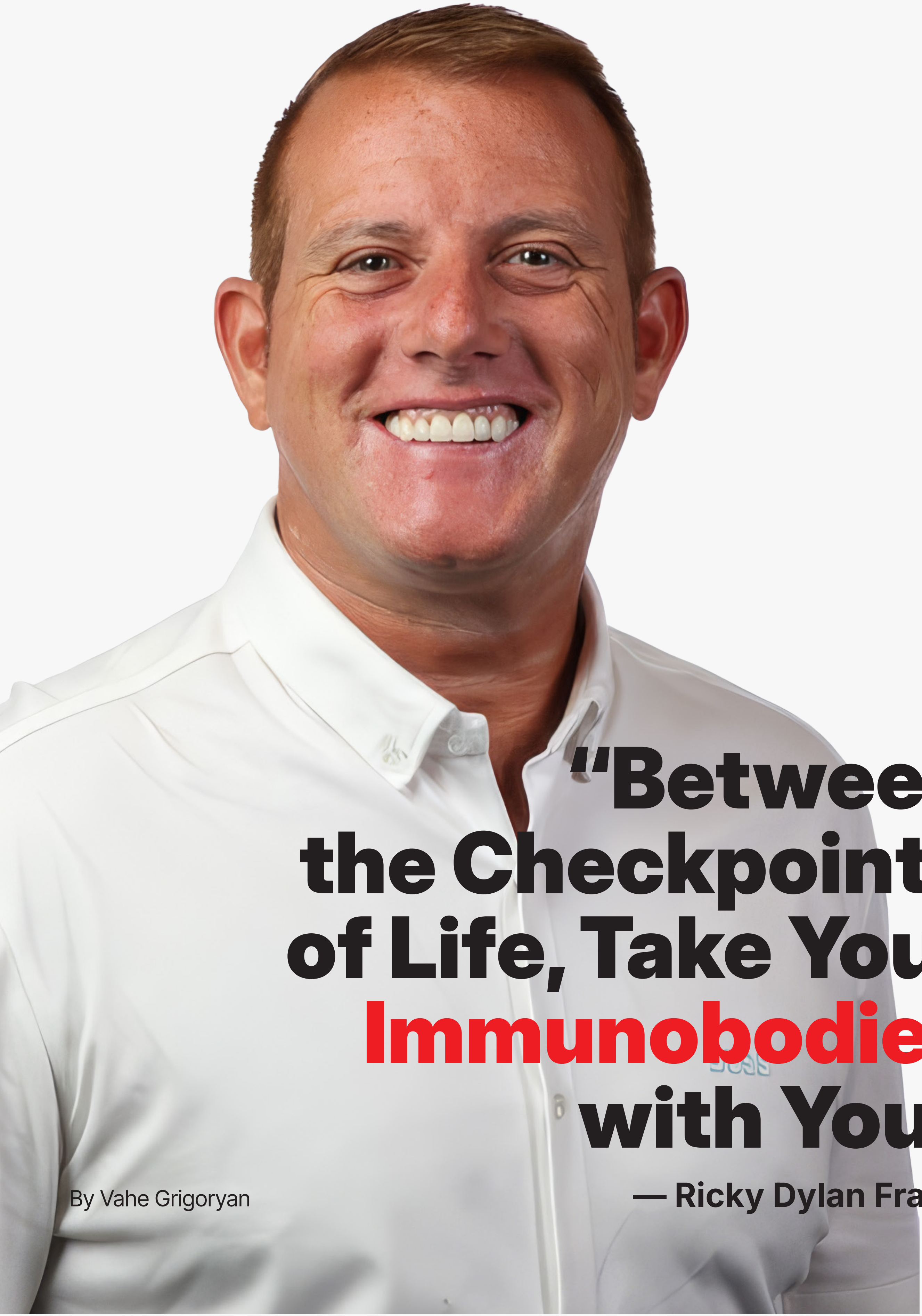
San Diego's experience holds clear lessons. For policymakers: federal funding remains indispensable, but is most powerful when complemented by agile, regionally anchored models that reduce administrative barriers and reward collaboration. For donors: strategic philanthropy focused on early discovery, coordination, and infrastructure accelerates progress in ways that project-based giving cannot. For scientific leaders: collaborative governance, shared data infrastructure, and cross-sector partnerships are not preferences—they are the organizational conditions under which contemporary cancer science progresses.

I was lucky. My cancer was detected early, before it spread. I know, more personally than any statistic can convey, that early detection is not just a public health talking point. It is the difference between a diagnosis that reshapes a life and one that ends it far too soon. None of what San Diego has built happened by accident. It happened because institutions, health systems, philanthropists, funders, and communities made deliberate decisions to invest in the conditions for discovery.

The cancer research enterprise is at an inflection point. Scientific opportunities have never been greater. Whether the structures that support early discovery can keep pace with science is the defining question of this moment. San Diego's experience suggests they can, and my second chance at life is the reason I work every day to ensure they do.

About the Author

Robin Toft is a 20-year colon cancer survivor, an advocate for cancer research, and currently serves as CEO of Curebound, raising money to fund cancer discovery. Before joining Curebound, she built and sold an executive search firm focused on improving cancer care. She currently also serves on the Board of Directors for the American Cancer Society's San Diego Chapter and the La Jolla Institute of Immunology.



“Between the Checkpoints of Life, Take Your Immunobodies with You”

— Ricky Dylan Frazer

By Vahe Grigoryan

The conversation starts with a small detail that quickly becomes memorable.

There is no coffee.

On a podcast built around conversations over coffee, Ricky Dylan Frazer, Consultant Medical Oncologist at Velindre Cancer Centre, Deputy CEO of the Immuno-Oncology Clinical Network, Co-Founder of The Immunobuddies Podcast, and Honorary Lecturer at Cardiff University, joins with a glass of water and mentions, almost in passing, that he has never tried coffee or tea. It is early, he jokes (or not), too early for cider.

From there, the discussion moves quickly into his clinical work, which sits at the intersection of immunotherapy, acute oncology, and complex cancer care. When asked how he arrived at this focus, his answer is direct.

"I just absolutely love it," he says.

For him, immunotherapy represents a way of practicing oncology that requires continuous problem-solving. Unlike more traditional pathways, it involves multiple organ systems, uncertain presentations, and the need to make decisions without always having clear precedent. It is, as he describes it, a space that rewards clinicians who are comfortable thinking through complexity.

At the same time, it is also a field defined by a significant shift in outcomes. The possibility of long-term survival in metastatic disease has changed not only treatment strategies but also the nature of conversations with patients.

"We've got a chance here of durability," he explains.

A Conversation That Turned Into a Network

Frazer remembers standing in Paris during a European Society for Medical Oncology Congress meeting, talking with his colleague and close collaborator, Anna Olsson-Brown. Around them, immunotherapy was already gaining momentum, but something felt incomplete. The treatments were advancing rapidly, but the structures around them — the shared knowledge, the guidance, the support — were not keeping pace.

"It was a community that was developing," he says. *"But it needed something more."*

With Anna Olsson-Brown

What followed was not a formal plan, at least not at the beginning. It was a question. What if there were a way to bring people together, to create a space where clinicians could learn from each other in real time, where uncertainty could be shared rather than carried alone?

That question became the foundation of the Immuno-Oncology Clinical Network.

Looking back, what is striking is how naturally he describes it, not as a major initiative or achievement, but as a response to a need that felt obvious once it was named.

When Progress Outpaces Structure

As the field expanded, so did the challenges. And many of them, Frazer explains, were not about the drugs themselves.

Immunotherapy introduced a new kind of duality. On one side, there was the possibility of long-term survival, even a cure, in settings where that had once seemed impossible. On the other, there were toxicities that did not fit neatly into existing frameworks, complications that could affect almost any organ system and often required expertise beyond oncology alone.

"You can have patients who do incredibly well," he says, *"but patients can also die from their toxicity."*

That tension between promise and risk created gaps — in education, in research, in guidelines. Clinicians were often navigating unfamiliar territory, borrowing approaches from other specialties, making decisions without robust evidence, and doing so under pressure.

For many, these cases were rare but high-stakes.

"You might only see one or two," he says. "But when you do, you need to know what to do."

The network, in that sense, became less about knowledge in the abstract and more about access to experience, to advice, to a community that could respond quickly when needed.

Work That Exists Outside the Clock

What he doesn't romanticize, however, is the effort required to build something like that.

"It's a lot of work," he says, and this time there is a trace of fatigue in the honesty.

Meetings before the day begins. Planning after it ends. Webinars, guidelines, collaborations, discussions — much of it happening outside formal working hours, layered on top of clinical responsibilities.

"6:30 this morning," he mentions in passing, referring to a meeting with Anna to plan the week ahead.

There is no complaint in the way he says it. If anything, there is a sense that this is simply what the work demands.

"It's a labor of love."

And then, almost immediately: *"I absolutely love it."*

A Different Kind of Conversation with Patients

If there is one place where the impact of immunotherapy becomes most visible, it is not in guidelines or networks, but in the consultation room.

Frazer reflects on how those conversations have changed over time, particularly in diseases like melanoma. There was a time when the discussion, while difficult, was relatively straightforward: limited options, limited expectations.

Now, the landscape is entirely different.

"I can say to patients with stage IV disease that there's about a 50% chance they'll be alive in 10 years."

He pauses, as if weighing the significance of that shift.

"It's a wonderful problem to have," he says. "But it's a challenge."

Because hope, while powerful, introduces complexity. It requires careful framing, ongoing communication, and a system that can support both success and complication. It also requires bringing others — intensive care teams, primary care, non-oncology colleagues — into that new reality.

"This isn't something we can just teach once," he says. *"We have to keep doing it."*

The South East Wales Immunotherapy Toxicity Service

Still Learning

One of the most striking parts of the conversation comes when he speaks about uncertainty, not as a limitation, but as a constant.

"I still underestimate how complex this can be."

It is not a statement you hear often from someone so deeply involved in a field. But he says it without hesitation.

New toxicities continue to emerge. Conditions he has not thought about since medical school resurface in unexpected ways. Cases arrive that do not fit established patterns.

And in those moments, the response is not to retreat into certainty, but to reach outward.

"I've had emails this morning from colleagues asking what I would do."

There is a quiet sense of responsibility in the way he describes it, but also something else — a recognition that no one is navigating this alone.

Seeing Medicine From the Other Side

A significant turning point in Frazer's perspective came when he became a patient himself, following a diagnosis of Guillain-Barré syndrome. He spent several months in hospital, experiencing care from the other side of the system.

"I went from being almost a consultant to being bedbound," he says.

What stayed with him were not only the major clinical decisions, but the details, the routines that structure a patient's day and that often go unnoticed by those providing care.

The early morning water jug.

The effort it takes to get out of bed.

The uncertainty of not knowing a test result.

"I used to write, 'patient not in bed, will review tomorrow,'" he reflects. *"But I didn't understand what had already happened before I arrived."*

It is a quiet realization, but a powerful one. That much of a patient's experience exists outside the moments clinicians are present. And those moments still matter.

What Comes Next

Looking ahead, Frazer does not speak about the future of oncology in terms of individual breakthroughs. Instead, he describes something broader, a shift in what it means to be an oncologist.

Science is becoming more complex. The systems are becoming more interconnected. The role itself is expanding beyond clinical care into leadership, collaboration, and change.

"We're going to need a different skill set," he says.

And perhaps, more than anything else, a different mindset.

"Remain curious," he says, when asked what matters most. *"And never die wondering."*

Between the Checkpoints

At the end of the conversation, I asked him how he would describe his life in a single line. He pauses for a moment, then answers with something that feels both personal and quietly symbolic.

"Between the checkpoints of life, take your immunobuddies with you."

It is a phrase that stays with you. Because it captures something essential about the way he works: not alone, but alongside others. Not building knowledge in isolation, but sharing it, shaping it, and passing it forward.

In a field that continues to grow more complex by the day, that may be one of the most important contributions of all.

Not just advancing oncology. But making sure no one has to navigate it alone.

About the Author

Vahe Grigoryan is a final-year medical student at Yerevan State Medical University, Assistant Managing Editor at *"OncoDaily,"* and host of the *"ONCOFFEE"* podcast. He hopes to pursue a career in oncology, with a strong interest in science, people, and stories behind cancer medicine.

A MATTER OF TIMING

Radiotherapy Efficacy Linked to Circadian Regulation

By Janet Fricker

Timing of radiotherapy administration may significantly influence treatment efficacy in breast and prostate cancer. A Spanish study, published in Nature Communications, demonstrates that circadian oscillation of Cryptochrome 1 (CRY1) modulates DNA double-strand break (DSB) repair, making radiotherapy more effective in the afternoon and evening.

"We showed that when CRY1 levels are low, typically in the afternoon or evening, DNA repair slows down, making cancer cells more vulnerable to radiation than in the morning," **lead investigator Pablo Huertas** tells *CancerWorld*. *"The take-home message is that a greater understanding of chronoradiotherapy and adjusting the timing of radiotherapy could benefit some patients."*

For the study, Huertas, from the University of Seville, Spain, and the Andalusian Centre for Molecular Biology and Regenerative Medicine (CABIMER), worked with investigators from the Virgen Macarena University Hospital, Seville.

Circadian rhythms are innate, internal biological clocks that help the body anticipate and adapt to the changing demands of the day–night cycle. They regulate patterns such as sleep, alertness, and hunger, explaining why we tend to feel tired or hungry at certain times of day. Jet lag occurs when our internal clock becomes misaligned with the external light–dark cycle, such as after rapid travel across time zones. Circadian rhythms are controlled by a series of proteins, including CRY1, whose presence in cells follows a 24-hour cycle. *"CRY1 accumulates during the day, peaking late in the evening. During the night, its levels are naturally reduced, with lower expression at dawn,"* explains Huertas.

CRY1 has also been implicated in DNA double-strand break repair, the process that rejoins two DNA strands. Multiple cancer treatments, including radiotherapy, work by generating DNA breaks, leading to the hypothesis that high levels of CRY1 might increase treatment effectiveness by preventing repair from taking place.

CRY1 Links The Body Clock to DNA Repair

In the current study, Huertas and colleagues set out to explore whether circadian rhythms influence DNA double-strand break repair. They used a range of human and mouse cell lines, with a particular focus on the osteosarcoma-derived U2OS cell line, which has been well characterised in homologous recombination studies.

First, the team 'reset' cell lines with high-dose dexamethasone, known to mimic the natural signals triggered by sunlight exposure at the start of the day. Next, DNA double-strand breaks were induced either by ionising radiation mimicking clinically relevant damage or through a site-specific endonuclease system, allowing precise control over break location and timing. The efficiency of homologous recombination (one DNA repair pathway) was assessed by monitoring DNA end resection, the initiating step in a high-fidelity repair pathway using markers of single-stranded DNA formation and downstream repair activity. Markers including RPA and RAD51 foci were quantified by immunofluorescence microscopy.

Across the circadian cycle, the team observed a clear oscillation in DNA end resection activity, indicating that homologous recombination is temporally regulated. CRY1 levels were then manipulated using genetic approaches: siRNA technology was used to reduce levels (mimicking dawn conditions), while additional gene copies were introduced to increase levels (mimicking dusk conditions). Loss of CRY1 led to increased DNA end resection and abolished the observed rhythmicity, while overexpression suppressed DNA end resection. These findings identify CRY1 as a negative regulator of homologous recombination.

Mechanistic experiments further showed that CRY1 is recruited to sites of DNA damage, where it promotes retention of the resection inhibitor CCAR2, which in turn limits the activity of CtIP, the key nuclease required to initiate resection. "Our work led to the hypothesis that tumour cells would be more sensitive to radiotherapy when they are less able to deal with DNA breaks and CRY1 levels are high. This would result in greater tumour cell killing in the evening, and hence better overall patient survival," explains Huertas.

Afternoon Treatment Shows Clinical Benefit Selectively

Using data from The Cancer Genome Atlas, the team found that breast cancer patients whose tumours had high CRY1 expression survived longer after radiotherapy than those with low-CRY1 tumours, with a median difference of around 18 months. High levels of CCAR2 showed an even larger gap, of roughly two and a half years. In mouse xenograft experiments, tumours engineered to lack CRY1 grew faster and were less affected by chemotherapy.

To test whether these findings held true in the clinic, the team undertook a retrospective study using patient records from the Radiotherapy Service at Virgen Macarena University Hospital. In total, 5,751 patients treated primarily with radiotherapy between 2018 and 2023 were grouped according to the time of day they received treatment, with results stratified by tumour type.

The results showed that prostate and breast cancer patients clearly benefited from afternoon irradiation, with increased overall survival. By contrast, patients with lung cancer, gliomas, and head and neck cancers did not. The likely explanation, suggests Huertas, is that tumours that do not respond to treatment timing may have compromised circadian clocks. Lung cancers, for example, are prone to losing CRY1 expression; if CRY1 is absent, tumours are unlikely to respond differently at different times of day.

"Our current hypothesis is that some tumours benefit from afternoon irradiation because timing increases radiation toxicity in cancer cells. Due to circadian clock disruption, other tumours may not respond to treatment timing. However, in such cases, neighbouring healthy tissue is likely to be more resistant to irradiation damage in the morning. For these patients, we would propose morning irradiation, as it is less likely to cause adverse secondary effects." Ultimately, he adds, CRY1 levels could serve as a biomarker to guide treatment timing—morning irradiation to reduce toxicity, or afternoon irradiation to increase tumour lethality.

Looking ahead, the team aims to correlate response to radiotherapy with CRY1 expression across a wider range of tumour types. They also plan to co-culture healthy and tumour cells to better understand differential responses and to explore how irradiation timing influences secondary effects in healthy tissue.
In theory, adds Huertas, these findings could be extrapolated to any treatment that works by inducing DNA breaks, including PARP and topoisomerase inhibitors.

About the Author

Janet Fricker is a UK medical writer with an MA in Physiology from the University of Oxford. She is the News Editor of CancerWorld. Janet has worked for the Cancer Drug Development Forum, Cancer Research UK, Lancet Oncology, European Journal of Cancer, Molecular Oncology, Ecancer Medical Science, and European School of Oncology (where she wrote the Oncopaedia sections on breast cancer). She has written for consumer publications including The Times, The Economist, The Daily Mail, The Independent and Marie Claire.

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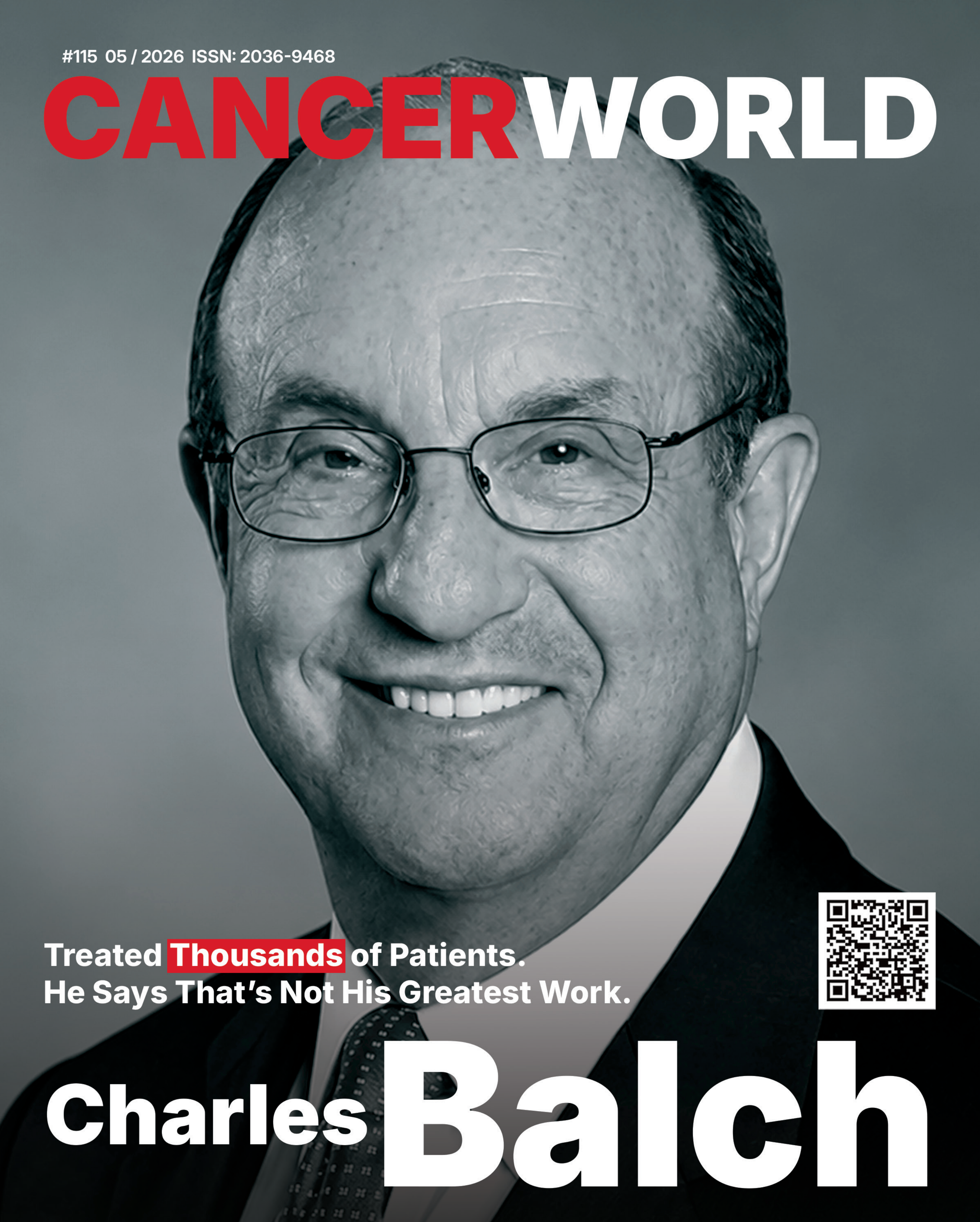

Treated **Thousands** of Patients. He Says That's Not His Greatest Work.

Charles Balch

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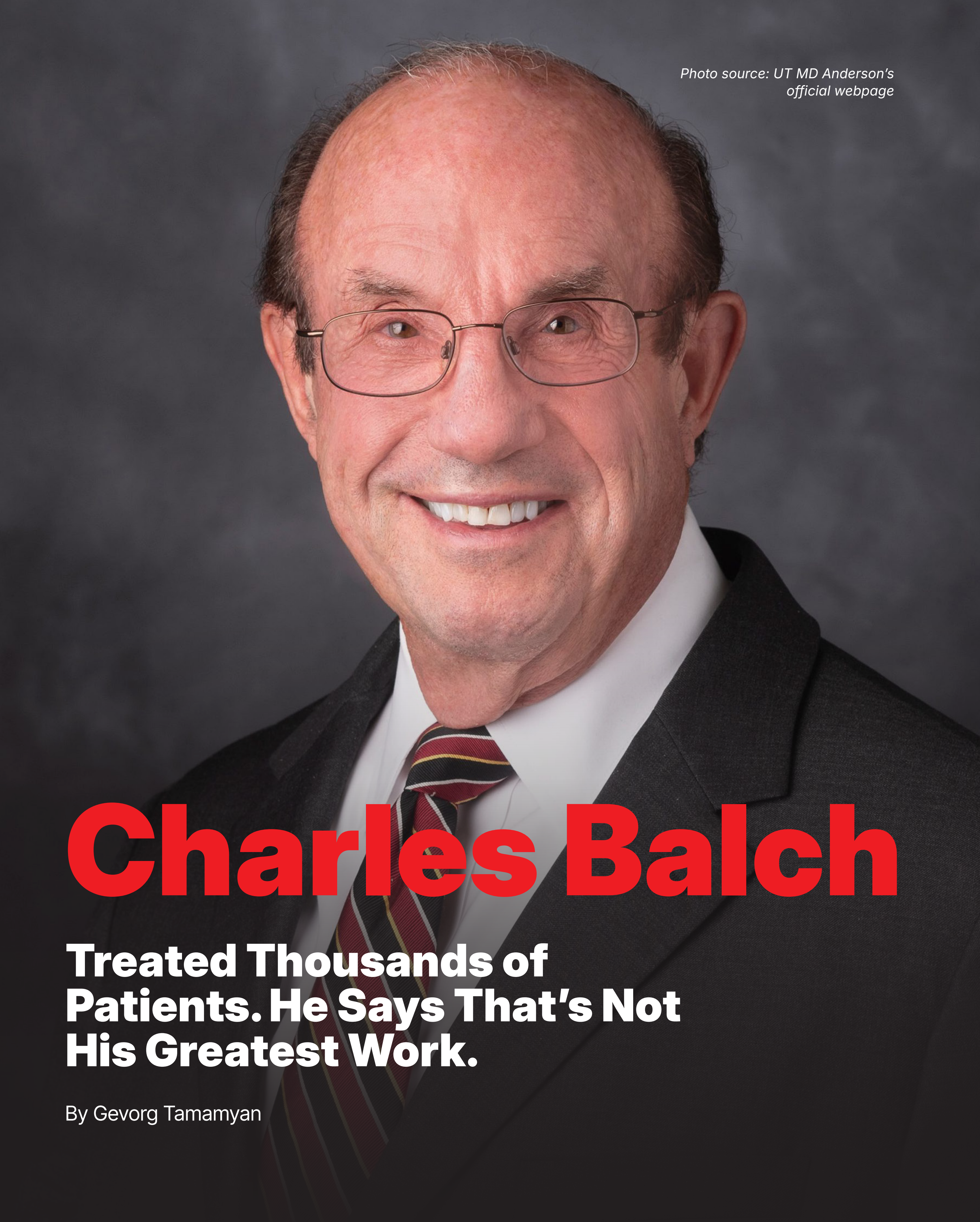

Photo source: UT MD Anderson's official webpage

Charles Balch

Treated Thousands of Patients. He Says That's Not His Greatest Work.

By Gevorg Tamamyan

If you try to list everything Charles Balch has done, you quickly realize the list does not help you understand the man.

He has led some of the most important institutions in oncology. He has built systems that are now standard across the world. But when he speaks about his life, he does not begin with titles. He does not begin with what he built. He begins with what he inherited. He begins with his father.

"I was a war baby," he says. *"My father was a research chemical engineer during the war. He invented the commercial production of rayon, because they couldn't get nylon anymore."*

A wartime problem. A practical solution. A legacy built not from ambition alone, but from necessity needing imagination.

Later, his father would build a company that developed the commercial production of saccharin, then move into academia, becoming an engineering department chair and a dean. But what stayed with Charles Balch was not the positions—it was the pattern beneath them.

"He had a vision. He started things that had value to society. And he left behind a real legacy."

That idea — that work should outlast the individual — is not a philosophy he arrived at. It is one he was born into. Fifty years later, it remains the standard against which he measures everything...Including himself.

"You Won't Know Unless You Try"

Charles Balch grew up in Toledo, Ohio, far from the centers of academic power. He worked hard, excelled, but stayed within what seemed realistic.

Until a mentor said something that took about four seconds and changed everything.

"I was applying to local medical schools," he recalls. *"And a surgeon I worked with said, why don't you apply to Harvard and Columbia?"*

Charles laughed. *"I said, I'd never get in."*

The answer came back without hesitation.

"You won't know unless you try."

He tried.

He got in.

"That," he says, "was transformational."

It would not be the last time. Throughout his career, at every critical turn, someone would appear who could see further down the road than he could.

It was a pattern he would eventually recognize as one of the quiet gifts of mentorship: being seen more clearly than you see yourself.

What it really taught him was this: the ceiling is usually someone else's assumption, not your own limit.

It is a conviction he would later find already waiting for him — embedded in the DNA of the institution he would help define, in the words of a man he considers among the greatest in the history of oncology.

R. Lee Clark — MD Anderson's founding President — left behind a mandate as simple and as demanding as anything in medicine: *"Make no small plans."*

Falling into the Future Before it was Visible

His early career followed the academic training script precisely—surgery at Duke University, then the National Institute of Health.

But at NIH, something shifted.

"I took master's courses in immunology," he says. *"And my mentor was Nobel laureate Baruj Benacerraf."*

The field was young. Uncertain. Not yet central to oncology.

"It was just intuitive," he says. *"I really liked it."*

No grand strategy. No calculated pivot. Just curiosity, pulling him somewhere he hadn't planned to go.

At Scripps Clinic, he overturned an assumption the field had held for years — demonstrating that T lymphocytes originated not from the thymus, as most assumed, but from the bone marrow. The work would later be recognized as foundational to modern immunology and cancer immunotherapy.

And yet, for all the pull of the laboratory, something older and deeper kept drawing him back.

Cardiovascular surgery had been the plan for years — a distinguished, demanding, certain future. Then it wasn't.

"I was slated to be a cardiovascular surgeon," he says. *"But I fell in love with general surgery and surgical oncology."*

Some detours, it turns out, become the main road.

Building a Field that Didn't Yet Exist

When Charles Balch entered surgical oncology, he was, quite literally, entering a surgical specialty that did not yet exist.

"My chairman wasn't sure it was a legitimate specialty," he recalls.

"So, for two years, I did transplantation half the time and surgical oncology the other half—in case it failed."

It did not fail. It became so fundamental to cancer care that the original skepticism now seems like a historical curiosity.

Prof. Balch became one of the central figures defining what surgical oncology should be.

He led transformational changes in the Society of Surgical Oncology and founded its journal, the Annals of Surgical Oncology. Now the largest and most prestigious in the field.

"We had to define what a surgical oncologist actually was," he says. "Because it didn't exist formally."

What began as a fight for legitimacy became the architecture of a discipline — the definitions and certification standards that would determine, for generations of surgeons after him, what it meant to treat cancer rather than simply operate on it.

Fifty years later, it is impossible to imagine oncology without its surgical perspective. The integration of surgery into the broader oncology team — alongside medical and radiation oncologists, guided by evidence rather than tradition — is now simply how cancer care works.

At the time, none of it was certain. Not the discipline. Not its future. Not the young surgeon betting his career on both.

Professors Charles Balch and Armando Giuliano (back row, first and second from right) exchange ideas with the oncology and breast surgery teams | Photo source: KIANG WU HOSPITAL's official webpage

At MD Anderson

He had already transformed the surgical programs, established new specialty departments, and launched research and training initiatives across the multiple surgery departments. He thought he understood the trajectory of his career at MD Anderson.

Then came the Saturday morning phone call.

"The president called me," he says. *"He said, starting Monday, I want you to run the hospital and clinics."*

There was no long preparation. No gradual transition. Just responsibility — handed across a desk on a Saturday, effective immediately.

"I was surprised," he admits. *"But we gathered a great team and what we built together became a model other institutions would spend years replicating."*

Rebuilding the System Around the Patient

For decades, the hospital was organized around its

Having lunch at UT MD Anderson Cancer Center Department of Surgical Oncology | Photo source: LinkedIn

own convenience. Patients moved through it like visitors who hadn't been invited — from clinic to clinic, department to department, carrying their records and repeating their stories to each new face.

Charles Balch and his team reversed that logic.

"We reorganized the entire delivery system around diseases," he says.

Instead of moving the patient from clinic to clinic, the system moved to the patient.

What seems like common sense now was, at the time, an act of institutional courage.

"The patient comes to one site," he explains. *"And every doctor, nurse, therapist—everyone—is there focused on managing that one type of cancer."*

"The patients loved it," he says simply.

The structural change was visible. The cultural change ran deeper.

"A hospital should be a hotel for sick people," he says — a place where compassionate care, human dignity, and genuine hospitality are extended as naturally as medical treatment. Because a person with cancer does not arrive alone. They arrive with fear, with family, with a life that has been violently interrupted.

The disease is only part of what walks through the door.

What followed would reshape how cancer care is delivered at the largest cancer center in the world, and far beyond it.

Leadership without Pretense

Charles Balch does not romanticize leadership.

He dissects it.

"My success is not about me," he says. *"It's about the team."*

"My role is vision and strategy," he explains. *"I'm not as strong in the details of implementation."*

He says it without apology. Without qualification. As a fact about himself that he discovered early and has never found reason to hide.

Some leaders deny that the gap exists. He treats it as the first item on the org chart.

"You hire to your weakness," he says. *"And then the team moves forward."*

There is no attempt to do everything.

Only to hire talent, build successful programs, and create organizational structure that is sustainable.

The institutions, the standards, the people he trained — none of them require his presence to keep moving forward. He planned it that way.

From Radical Surgery to No Surgery

Prof. Balch describes oncology not as a field, but as a succession of disruptions — each one displacing the habits of generations, each one demanding rigorous evidence before it could become a standard of care.

He spent decades building that evidentiary foundation. Now he is watching it bear fruit in ways that would have seemed implausible when he began.

"When I started," he says, *"surgery was the primary treatment."*

Then came targeted therapy. Immunotherapy.

Precision oncology. Each one a revolution. Each one, eventually, a new baseline.

Now, another shift is happening.

"In melanoma," he says, *"we went from radical surgery to no surgery in selected patients after only 6 weeks of combination immunotherapy."*

He lets that sit for a moment.

The man who spent decades perfecting surgical technique has lived long enough to watch surgery itself being outpaced — not by a bigger operation, but by a treatment that makes the radical operation unnecessary.

"That's revolutionary."

The Problem that Worries Him Most

For all the progress, Charles Balch sees something coming that science alone cannot stop.

Not a failure at the frontiers of science. About something happening right now, in every country, to people in the middle of their lives.

"Cancer is increasing in young and middle-aged individuals," he says.

Not at the edges of life. In the middle of it.

"These are our workforce," he says. *"Our teachers. Our parents. Our workforce... the vanguard of the economy."*

The causes converge from every direction, such as — what we eat, what we breathe, how our bodies carry decades of chronic inflammation, and what we inherited without ever knowing it. They interact in ways medicine is only beginning to understand, and they are accelerating.

But the impact is clear.

"The productivity loss is going to affect every economy," he says. *"But before it's an economic problem — it's a human one affecting families and financial stability."*

If He Could Redesign the Fight Against Cancer

When asked what he would prioritize, his answer is immediate.

"I think everyone needs to know their inherited risk for cancer, heart disease and diabetes," he says.

"And genetics," he quickly adds. *"The knowledge of*

Celebrating 25 years of CEO leadership at ASCO, June, 2025
| Photo source: LinkedIn

what your own biology is quietly planning, decades before it announces itself."

"We have discovered large and small mutations that allow us to identify the young people at high risk who are more likely to develop cancer BEFORE they qualify for the current screening protocols."

It's about targeted early detection...because the window for saving a life is almost always earlier than anyone acts on it.

"Cancer is a silent killer," he says. *"If you wait for symptoms, it's too late."*

"Of course, we need to focus on lifestyle," he says. *"The type of food we eat. The air we breathe with tobacco products."*

Then vaccines — a tool already in existence, still vastly under deployed.

"Cancer prevention vaccines could save a million lives," he says. *"We already have the tools. We are not using them at scale."*

He imagines a future where this is not science fiction. Every element of it already exists. What is missing is the will to make it universal.

"Every person will know their genetic risk," he says. "It will be protected information, used by healthcare providers just like we know and use their blood type."

Not as a burden. As a head start.

Information that arrives in advance, not at diagnosis. That, he believes, is where the fight against cancer first begins.

From ASCO to the World

As CEO of American Society of Clinical Oncology, already one of the most influential organizations in America, Charles Balch helped expand its identity.

"At the time, we were the American society," he says. *"But there was a global need."*

Then, with the quiet conviction that would define his tenure: *"Cancer doesn't recognize borders. And neither should we."*

Together with the elected volunteer leaders, he pushed outward—Africa, Asia, Europe, Latin America.

Into places where oncology infrastructure was thin and the need was greatest.

"We put a globe inside the 'O' of ASCO," he says. *"As a statement of our global strategy."*

It was a small design change with an explicit declaration embedded in it.

He traveled extensively, championing collaborations across specialties, helping organize and grow oncology societies in Latin America, Africa and Asia.

He urged surgeons to think beyond the operating room — to embrace oncology principles, join forces with medical and radiation oncologists, and commit to the clinical trials that would generate the evidence the field needed.

Today, that shift defines a vital mission of the organization impacting almost every country.

The experience changed not just the organization. It changed how he understood himself.

What he gave ASCO, ASCO gave back — in a different form.

"Over my career," he says, *"I transformed from a general surgeon to a surgical oncologist. After my experience with ASCO, I consider myself an oncologist who is also a surgeon."*

It is a distinction that sounds subtle. It is not.

It represents a fundamental reordering of identity — from the instrument first, to the patient first...from the operation to the outcome.

ISOPT: A Different Kind of Mission

After half a century of building institutions, Charles Balch is building something that looks nothing like an institution.

Everything he has built until now required walls, hierarchies, budgets, gatekeepers. What he is building now requires none of those things.

Education. Prevention. Early Detection. Intervention.

Not treatment first. Everything that comes before it.

Through the International Society of Oncology Prevention and Treatment, he is building something deliberately open... designed from the beginning to reach the people before they ever enter the realm of oncology institutions.

Not for those already inside the system. For everyone outside it.

"I wanted free access to information — virtually," he says. *"And in multiple languages, ensuring that all the innovation and science of early detection, genetic testing, risk-based screening, and multidisciplinary cancer treatments are available on every continent and in every major language."*

For most of medical history, knowledge traveled slowly — and unevenly — across language barriers. That constraint, he believes, has just been removed.

Technology has handed him something previous generations of global health advocates never had: the ability to collapse language as a barrier entirely.

"I embrace these advances in artificial intelligence. I use it every day."

"Now you can hear me with AI talk about cancer prevention in Chinese, Spanish, Portuguese," he says. *"That's the future."*

And beneath the technology, the architecture, and the multilingual reach, the mandate reduces to a single uncomfortable truth.

"Fifty percent of cancers could be prevented or cured

with what we already know," he says.

"Research and technology advances over the past three decades have provided the tools and information needed to prevent half the world's cancers."

"That knowledge already exists — in journals, in guidelines, in genetics, in the hands of trained oncologists. It simply isn't reaching all the people who need it most."

The challenge is not discovery.

It is distribution.

What Matters in the End

When Charles Balch takes stock of fifty years in medicine, the ledger defies summary.

"I've treated thousands of patients," he says. *"Published many highly cited papers."*

He says it not with pride, but with the quiet accuracy of someone taking inventory before moving to what actually matters.

Then he pauses.

"But the biggest impact is mentoring."

He thinks about the surgeons, oncologists, and researchers he trained — now leading cancer centers, building their own programs, training their own next generations across six continents.

"The next generation is my real legacy," he says.

"My publications will be superseded. The patients I've cared for are the reason I came to work every day. But the people I trained and mentored are building the future and that future belongs to them."

It is the most accurate accounting of what a life in medicine can mean, when it is spent not just treating disease, but multiplying the number of people capable of doing so.

A Life of Continuous Reinvention

He has been asked for career advice many times. The answer has not changed. It has only deepened.

"Work hard," he says. *"Have strategic goals. Be adaptable to change."*

He pauses. *"And reinvent yourself — not once, but continuously. Because the field you enter will not be the field you retire from."*

"Above all else," he says, *"remain a student. Of medicine. Of the world. Of your own assumptions. The moment you believe you have fully arrived is the moment you begin to fall behind."*

"You need to see the world from different perspectives and look for a better future," he says. *"Without that, you're just executing. With it, you're contributing something that wasn't there before."*

And then, as he always does, he returns to the seven words that changed the direction of his life before it had fully begun. Spoken by a surgeon in Toledo, Ohio, decades ago, to a young man who had already decided what was possible for him.

"You won't know unless you try."

He has spent fifty years trying it. The young man from Toledo, Ohio, who almost didn't apply is still reinventing himself, medicine, and focused on saving lives globally. He would not recognize the distance traveled.

***

Charles Balch did not simply build a career in oncology. He helped build its structures—its systems, its collaborations, its future direction.

And if there is one idea that runs through everything he says, it is this:

"Progress in oncology will not be defined by what we can do at the edges of science, but by how early we act, how widely we share what we already know, how well we build across borders and specialties, and how honestly we reckon with the risks that real change has always required of those who lead it."

He has spent fifty years proving that conviction right.

He is not finished.

FROM SILENCE TO PRESENCE

Dr Christian Ntizimira on Reimagining End-of-Life Care

By Knarik Arakelyan

Dr Christian Ntizimira, MD, MMsGHE, Founder and Executive Director of the African Center for Research on End-of-Life Care (ACREOL), and author of "The Safari Concept: An African Framework on End-of-Life Care," speaks about dignity, suffering, and reimagining care at the end of life.

In the aftermath of the 1994 genocide against the Tutsi in Rwanda, a young boy dreamed not of healing, but of escape. He wanted to become a pilot—*"to leave the realities behind,"* as he now reflects. Today, Dr. Christian Ntizimira is one of Africa's leading voices in palliative care, a physician who has spent his life not escaping suffering, but confronting it—sitting with it, learning from it, and ultimately redefining what it means to care.

His journey into medicine, he admits, was almost accidental. Persuaded by his father to try medical school *"for just one year,"* he never left. Wh at began as a reluctant compromise became a calling that would take him from rural Rwandan hospitals to Harvard and back again, with a mission to transform how the world understands care at the end of life.

That mission was born, in part, from failure.

The Patient Who Changed Everything

The turning point came early in his clinical training, in a district hospital in Rwanda.

A 24-year-old man lay dying of liver cancer.

"I was familiar with physical pain," Ntizimira recalls. *"But this was different: suffering beyond pain."*

At the time, fear and stigma surrounded the use of morphine. He hesitated. The patient remained in severe distress.

Then came an image he has never forgotten: the patient's mother kneeling before him, pleading not for cure, but for relief. Actually, she was asking for death.

"I failed twice," he says. *"As a doctor, because I could not relieve his pain. And as a Rwandan, because an elder should never kneel before a younger person."*

The young man died in agony. That moment reshaped everything.

"Why did I study medicine if my role is only to witness suffering? Why does medicine feel like it has no soul or perhaps never had one?"

Years later, during a fellowship in Boston, Ntizimira encountered a different model of dying—technologically advanced, medically controlled, and profoundly isolated. In one hospital room, a patient lay surrounded by photographs.

"I thought these were people who had died," he recalls. *"I thought the patient was preparing to join them."*

They were not dead. They were simply far away.

"In Rwanda," he says, *"we don't bring photographs. We bring people."*

The contrast was stark: advanced care, but human absence.

For Ntizimira, this became a defining insight: medicine can succeed clinically, yet fail profoundly in humanity.

Redefining a "good death"

Out of these experiences emerged a central question: what does a "good death" mean?

For Ntizimira, it is not defined solely by symptom control or medical outcomes.

It is defined by presence. *"A good death is when you are surrounded. When you are not alone."*

His work argues that dying is not only a biological process, but also a biosocial, spiritual, and relational one. To separate these dimensions, he believes, is to misunderstand care itself.

From Autonomy to Community

Much of modern medicine is built on the principle of individual autonomy. But Ntizimira's experience challenged this assumption.

"In Rwanda, we say: when you are well, you belong to yourself. When you are sick, you belong to your family."

This philosophy reshaped how he approached care, not as a transaction between doctor and patient but as a relationship embedded in the community. It also led to the development of what he calls the Safari Concept, an African framework for end-of-life care that emphasises shared decision-making, cultural context, and open dialogue around suffering.

In practice, this means creating spaces where families can speak, grieve, question, and participate. It means recognising that illness does not affect individuals in isolation and that care should not be delivered that way either.

One moment, in particular, remains unforgettable.

During what he expected to be a routine family meeting, Ntizimira called the relatives of a patient. What followed defied every clinical expectation.

"Sixty people showed up in the room," he recalls.

At first, he was overwhelmed. In many clinical systems, such a gathering would be considered unmanageable—even inappropriate.

But for the family, it was entirely natural.

"They were all connected to the patient," he says. *"I had never seen anything like it."*

The experience forced a quiet but profound realization: definitions of *"family,"* and therefore of *"care,"* are not universal. They are deeply cultural, relational, and contextual.

Rethinking Global Models of Care

Ntizimira's work also exposes a deeper tension in global health: the assumption that models developed in high-income countries can be seamlessly applied elsewhere.

"The palliative care I learned came from Europe and America," he says. *"But it was difficult to duplicate that in an African context."*

Even language, he found, could become a barrier. The term *"end-of-life care"* has no meaningful equivalent in Kinyarwanda. Instead, the concept is expressed as *"life until the end"*—a subtle, but profound shift in perspective.

This realisation led him to found the African Center for Research on End-of-Life Care (ACREOL), an organisation dedicated to developing culturally grounded approaches to care through research, education, and advocacy.

At its core is a simple, but radical idea: that care must first be understood locally before it can be improved globally.

Ubuntu: *"I am because you are."*

Central to Ntizimira's philosophy is Ubuntu, an African ethical framework often translated as *"I am because you are."*

It stands in contrast to the individualism that dominates much of Western medical thinking. *"When you move from 'I think, therefore I am' to 'I am because you are,' everything changes,"* he says.

Care, in this view, is no longer about treating disease in isolation. It becomes an act of connection of recognising the patient as part of a wider human network.

"Ubuntu is not only African," he adds. *"It is a universal invitation to build communities where people are seen, valued, and respected."*

Between Worlds and Ways of Seeing Care

Training in Rwanda and later at Harvard exposed Dr Christian Ntizimira to profoundly different medical cultures. At times, the distance between them felt unbridgeable.

His response was not to choose one over the other, but to hold both in tension and to reconcile them.

"We must deconstruct, then reconstruct," he explains. *"And through that process, we can reconcile."*

For him, this is not an abstract academic exercise, but a necessary rethinking of how medicine itself is taught and practised. It means questioning inherited models of care—particularly those shaped by colonial histories, while also refusing to discard the scientific advances they have produced.

What emerges is a delicate balance: resisting polarisation while insisting on relevance, and building approaches that are both scientifically grounded and culturally meaningful.

Through this lens, Ntizimira's work becomes less about choosing between worlds, and more about learning how to inhabit them responsibly.

Teaching, Presence, and What Truly Matters

Through the ACREOL, Ntizimira has trained thousands of healthcare providers across Africa. His message to them is simple, but deliberately disruptive:

"There is a difference between treating the disease and treating the person."

The distinction, he argues, is not philosophical but practical. Disease can be treated without ever fully acknowledging the person who carries it, but care is diminished when that happens.

"If you treat the person," he says, *"you have a greater chance of treating the disease as well."*

In resource-limited settings, where specialists are few and the burden of illness is high, this shift in perspective becomes not only ethical, but necessary for sustainable care.

For Ntizimira, however, impact is not measured only in systems changed or programmes delivered.

What sustains him is something far more immediate.

"The satisfaction of my presence—through the eyes of my patients and their families."

In a field often defined by outcomes and metrics, he offers a quieter measure of success: simply being there.

"I am because you are. I am because we are."

Legacy, Misconceptions, and What Endures

Asked about legacy, Ntizimira does not refer to institutions or professional achievements. He returns instead to something more fundamental: the kind of medicine that is practised when no one is watching.

"That kindness is not a weakness," he says. *"We must continue to show humanity in our practice."*

His reflections extend beyond palliative care to the wider field of oncology. One persistent misconception, he notes, is the equation of palliative care with end-of-life care alone—a framing that narrows its role and delays its integration into standard treatment pathways.

His message to younger clinicians is direct:

"The way a patient dies can reflect how a society lives."

It is both observation and warning and perhaps also an invitation to rethink what care truly means.

Ubuntu, the African philosophy of interconnectedness, remains the anchor of his practice—reminding him that care is never solitary, and that meaning is always relational.

Life Until the End

If he had not become a doctor, Ntizimira might have been a pilot. In another life, he could have spent his days navigating the skies.

Instead, he has chosen to navigate something more complex and less predictable: the fragile space between life and death, where medicine meets humanity, and where care is ultimately defined not by cure, but by presence.

In one word, he says he would like to be remembered as someone *"who lived until the end."*

It is a phrase that reflects his philosophy, but also quietly challenges its reader.

Not simply to extend life, but to honour it, all the way through.

About the Author

Knarik Arakelyan (PhD) is a psychologist and communications professional with over 14 years of experience in public relations, health communication, and public awareness campaigns. She is currently the Managing Editor of "CancerWorld" magazine, Head of the "OncoDaily TV," and serves as PR and Communications Officer at "EMERTÉ" Clinic.

IMMUNOTHERAPY'S HIDDEN BURDEN

Rethinking Toxicity in the Era of Breakthroughs

By Knarik Arakelyan

Immunotherapy has redefined cancer care—offering survival where little once existed, and in some cases, the possibility of long-term remission. But as its use expands across tumor types and earlier lines of treatment, a more complex reality is coming into focus: the same immune activation that drives tumor control can also trigger serious, sometimes life-threatening toxicities.

"These toxicities are fundamentally different," says **Dr Yinghong Wang, MD, PhD, MS,** Professor in the Department of Gastroenterology and Hepatology and Deputy Division Head (Research) in the Division of Internal Medicine at MD Anderson Cancer Center.

"They are immune-mediated, often unpredictable, and can affect virtually any organ system."

Immune-related adverse events are no longer rare complications. They are an inherent consequence of treatment—one that is testing how well modern oncology can balance innovation with responsibility.

A New Toxicity Landscape

Checkpoint inhibitors and other immunotherapies have shifted the therapeutic paradigm. But unlike chemotherapy, their side effects do not follow predictable timelines or organ-specific patterns.

Instead, clinicians are confronted with an activated immune system that may turn against healthy tissue with little warning.

"While the benefits are transformative, the responsibility to manage these side effects effectively has never been greater," Wang explains.

This shift demands more than clinical vigilance. It requires new models of care—ones that integrate early detection, rapid response, and cross-specialty coordination as standard practice.

Gastrointestinal Toxicities: A Growing Clinical Pressure Point

Among immune-related toxicities, gastrointestinal complications have emerged as one of the most frequent and clinically significant—reported in a substantial proportion of patients receiving checkpoint inhibitors in routine practice.

"Gastrointestinal toxicities, especially colitis, are among the most frequent and clinically significant immune-related adverse events," says Wang.

What may begin as mild diarrhea can escalate quickly into severe colitis, leading to dehydration, hospitalization, and, in some cases, life-threatening complications.

Management is rarely straightforward.

"They often require immunosuppressive therapy," Wang notes, *"which can complicate the overall cancer treatment strategy."*

The diagnostic challenge is equally pressing. Symptoms can mimic infection or disease progression, narrowing the window for timely and accurate intervention.

A System Still Catching Up

Despite growing awareness, the infrastructure needed to manage these toxicities remains uneven.

"One of the biggest gaps is awareness and early recognition," Wang says. *"Patients may not immediately report symptoms, and healthcare providers outside oncology may not always be familiar with immune-related toxicities."*

Variation in care pathways persists across institutions, often reflecting differences in access to multidisciplinary expertise.

"We still lack fully standardized pathways in many settings," she adds, *"particularly when it comes to integrating gastroenterologists and other specialists into the care team."*

For patients, this fragmentation can translate into delayed diagnosis and suboptimal management—at a point when timing is critical.

Supportive Care, Reimagined

As immunotherapy reshapes treatment, it is also redefining the role of supportive care—from a complementary service to a central pillar of oncology.

"Supportive care is absolutely central," Wang

emphasizes. *"It's no longer just about managing side effects—it's about enabling patients to stay on potentially life-saving treatments safely."*

In this context, reactive approaches are no longer sufficient.

"In the context of immunotherapy, supportive care must be proactive, not reactive," she says, highlighting the need for patient education, structured monitoring, and rapid access to specialist care.

The objective is not only to mitigate toxicity, but to preserve both treatment continuity and quality of life.

Building a Collaborative Response: The ASPIRE-IOTOX Initiative

Efforts to close these gaps are gaining momentum.

The ASPIRE-IOTOX meeting has emerged as a key forum for addressing the real-world complexities of immune-related toxicities—bringing together oncologists, gastroenterologists, and other specialists to align on practical strategies.

"The ASPIRE-IOTOX meeting is a critical step," Wang says. *"It creates a platform for specialists to come together and share knowledge, with a strong focus on real-world practice."*

Beyond knowledge exchange, the initiative reflects a broader shift toward coordinated care.

"It helps build a community of experts who can drive forward research, education, and standardized approaches," she adds.

In an increasingly complex treatment landscape, such collaboration is becoming essential, not optional.

The Next Phase of Immunotherapy

As the field evolves, so too must its priorities.

"We need better predictive tools to identify which patients are at risk of developing severe toxicities," Wang notes. Equally important are refined management strategies that can control toxicity without compromising anti-tumor efficacy.

Education remains a critical gap.

"We also need broader education for healthcare professionals and patients," she says.

But perhaps the most urgent need is structural change.

"We must continue strengthening multidisciplinary collaboration. Immunotherapy has changed oncology, and our care models must evolve accordingly."

Beyond the Breakthrough

The success of immunotherapy has transformed expectations in cancer care. But its long-term impact will depend not only on expanding indications or improving response rates, it will depend on how well the field manages its unintended consequences.

Gastrointestinal toxicities are not simply side effects. They are a measure of whether oncology can adapt to its own progress.

Because the next frontier in cancer care is no longer just extending life, but learning how to manage, with precision and responsibility, the cost of doing so.

About the Author

Knarik Arakelyan (PhD) is a psychologist and communications professional with over 14 years of experience in public relations, health communication, and public awareness campaigns. She is currently the Managing Editor of "CancerWorld" magazine, Head of the "OncoDaily TV," and serves as PR and Communications Officer at "EMERTÉ" Clinic.

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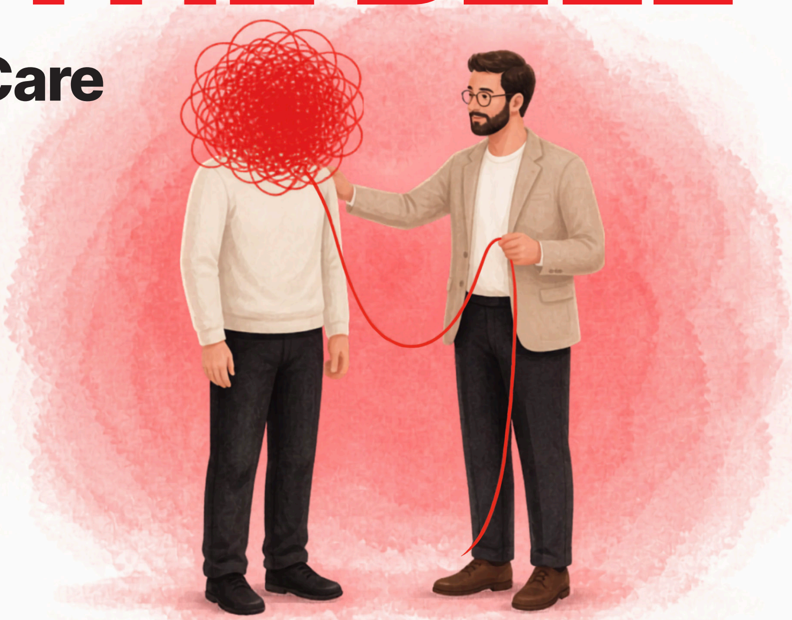
AFTER THE BELL

Rethinking Cancer Care Beyond Treatment

by Adrian Pogacian



As cancer survival improves, a critical gap persists: the period after treatment, where psychological distress, identity disruption, and unmet needs remain insufficiently addressed in routine oncology care.

A System Designed for Treatment, Not Transition

"We have to be next to cancer patients when they need it the most, not when we think they need it."

This observation reflects a persistent misalignment in oncology care. While treatment pathways are highly protocolised and time-sensitive, the transition out of treatment remains comparatively unstructured, despite being a period of significant vulnerability for patients.

The symbolic act of ringing the bell at the end of treatment encapsulates this tension. It marks clinical completion and is often framed as a return to normality.

Yet for many patients, it signals the beginning of a new phase characterised less by certainty than by ambiguity.

Survivorship as a Complex Clinical Phase

Advances in oncology have transformed outcomes across many tumour types, shifting cancer from an acute, often fatal condition to a chronic or manageable disease for a growing number of patients. However, this epidemiological success has not been matched by a proportional evolution in survivorship care.

The post-treatment period is frequently associated with a convergence of relief and distress. Patients may experience persistent physical symptoms, reduced functional capacity, and heightened anxiety regarding recurrence. At the same time, the structured support systems present during active treatment diminish.

Rather than a return to a previous baseline, patients are often required to establish a *"new normal"* under altered physical and psychological conditions.

Distress Across the Cancer Trajectory

The concept of distress as the *"sixth vital sign,"* endorsed by the International Psycho-Oncology Society, reflects growing recognition of the psychological burden associated with cancer. Distress encompasses emotional, social, and existential dimensions and is present across the disease trajectory from diagnosis through long-term survivorship.

Despite this recognition, routine assessment and management of distress remain inconsistent in clinical practice.

Importantly, distress does not necessarily decline following treatment completion. In some cases, it becomes more pronounced, as patients transition from intensive medical supervision to less frequent follow-up, while continuing to process the implications of their diagnosis and treatment.

Identity, Stigma, and Self-Perception

Cancer affects not only physical health but also personal identity. Changes in appearance, functional status, and social roles can destabilise established sources of self-esteem. In addition, stigma, whether perceived or internalised, may contribute to a narrowing of identity around the disease.

Evidence suggests that patients who maintain engagement in meaningful activities and roles, even in adapted forms, demonstrate better psychological adjustment. Conversely, early withdrawal from such roles may reinforce vulnerability and reduce resilience.

This highlights the importance of supporting patients not only in managing symptoms, but also in preserving continuity of identity.

Cancer as a Potentially Traumatic Experience

An increasing proportion of patients describe the cancer experience as traumatic. Clinical observations and emerging research point to symptoms consistent with post-traumatic stress in a subset of survivors, including intrusive thoughts, heightened vigilance, and emotional dysregulation.

At the same time, the concept of post-traumatic growth has gained traction within psycho-oncology. Some patients report positive psychological changes, including redefined priorities and increased appreciation of life. However, such outcomes are not universal and should not be assumed.

Facilitating adaptive processing requires structured psychological support and recognition of the full spectrum of patient experiences.

The Persistence of Isolation

A recurrent theme in patient narratives is the experience of increasing isolation following treatment completion. While active treatment involves continuous interaction with healthcare providers, survivorship often entails reduced contact and fewer structured points of support. *"I am more and more alone as time goes by,"* as one patient described it.

This perception underscores the need to reconceptualise cancer care as a continuum rather than a series of discrete interventions.

Implications for Oncology Care

The growing population of cancer survivors presents both an opportunity and a challenge for health systems. Addressing survivorship effectively requires integrating psychological and social dimensions into standard oncology care.

Key considerations include:

- systematic screening for distress across all phases of care
- development of structured survivorship programmes
- integration of psycho-oncology into multidisciplinary teams
- support for identity reconstruction and role continuity.

Such approaches are not supplementary but central to comprehensive cancer care.

Beyond Survival

The progress achieved in oncology over recent decades is substantial. However, as survival improves, the limitations of a model focused predominantly on disease control become more apparent.

The post-treatment phase represents an unmet need within current care frameworks—one that carries significant implications for long-term outcomes, quality of life, and health system sustainability.

The question facing oncology is no longer only how to treat cancer, but how to support patients in living beyond it.

About the Author

Adrian Pogacian, PhD, is a licensed clinical psychologist with advanced training in psycho-oncology. His expertise is in Coping with Cancer, Complicated Grief, Posttraumatic Growth and Meaning-Centered therapy approach.

REWRITING RAS

A New Targeted Option on the Horizon for Pancreatic Cancer

By Mariam Khachatryan

Metastatic pancreatic cancer remains one of the most treatment-refractory solid tumours in oncology. Despite multiple incremental refinements over the past decade, first-line therapy continues to rely on cytotoxic chemotherapy, most commonly FOLFIRINOX or gemcitabine plus nab-paclitaxel, with limited change in overall disease trajectory.

Against this backdrop, RAS-targeted therapy has long represented a theoretical but largely unrealised goal. With activating RAS mutations present in approximately 92% of pancreatic cancers, the pathway has been an obvious target—yet historically considered difficult to drug.

The emergence of **daraxonrasib,** a multi-selective RAS(ON) inhibitor, has therefore drawn attention as it moves through early clinical development and into a pivotal randomised programme, **RASolute 303,** which is comparing monotherapy and combination strategies against standard chemotherapy in the first-line metastatic setting.

Shiraj Sen, MD, Clinical Director of NEXT Oncology–Dallas and a principal investigator in early-phase studies, described the emerging dataset as potentially practice-shifting **in an interview with OncoDaily GI.**

Early Signals of Activity in a Refractory Disease

Early-phase data suggest that direct RAS inhibition may produce clinically meaningful responses in metastatic pancreatic cancer, including in patients with diverse RAS mutations.

"Emerging data from the early phase studies of multi-selective RAS(ON) inhibitors, both as monotherapy and in combination with conventional chemotherapy, are demonstrating that durable responses are possible in individuals with metastatic, unresectable pancreatic cancer with a variety of RAS mutations. This is very encouraging as it is the first time that a targeted therapy has shown such promise in metastatic pancreatic cancer."

While mechanistic understanding is still evolving, ongoing biomarker analyses aim to clarify how sustained RAS suppression alters downstream signalling and resistance dynamics over time.

"Ongoing biomarker analyses will help elucidate how continuous RAS suppression is impacting RAS signaling at the tumor level, both when individuals are responding to treatment and at time of disease progression."

The data remain early, based on limited patient numbers and without mature survival endpoints.

Rationale for a Three-Arm Pivotal Design

The RASolute 303 trial is enrolling newly diagnosed metastatic PDAC patients with ECOG performance status 0–1, randomised 1:1:1 across the three arms. Co-primary endpoints are progression-free survival and overall survival, assessed independently per RECIST v1.1. Secondary endpoints include objective response rate, duration of response, disease control rate, safety, and patient-reported quality-of-life outcomes.

The RASolute 303 trial reflects two consistent signals from early development: activity with RAS(ON) inhibition alone, and potentially enhanced activity in combination with chemotherapy.

In early-phase cohorts:

Among 38 patients with newly metastatic RAS-mutant pancreatic cancer treated with **daraxonrasib monotherapy (300 mg):**

- ORR: 47%
- DCR: 89%

Among 31 patients treated with **daraxonrasib (200 mg) plus gemcitabine and nab-paclitaxel:**

- ORR: 55%
- DCR: 90%

These results have informed the decision to evaluate both approaches in a randomised first-line setting, alongside standard chemotherapy.

The intention is not only to confirm activity but to define positioning: whether RAS inhibition can function as a chemotherapy-free strategy or whether combination therapy provides incremental benefit.

Tolerability and Second-Line Activity

Long-term follow-up data presented by Revolution Medicines in September 2025 reinforced the durability of daraxonrasib's activity in pretreated patients. In second-line RAS-mutant metastatic PDAC, confirmed objective response rates were 35% in the KRAS G12X subgroup (n=26) and 29% across all RAS mutations (n=38), with disease control rates of 92% and 95%, respectively. Median progression-free survival reached 8.5 and 8.1 months, and median overall survival 13.1 and 15.6 months, after a median follow-up of approximately 17 months. In a disease where second-line options have historically offered minimal benefit, these figures are striking.

The safety profile remained consistent and manageable. Rash and mucositis were the most common treatment-related events, and although dose interruptions and reductions were frequent, no patients discontinued therapy because of toxicity. Mean dose intensity was 86%.

Positioning within Current Treatment Standards

Despite extensive clinical investigation, the therapeutic backbone of metastatic pancreatic cancer has remained largely unchanged for more than a decade.

The ongoing **RASolute 302 trial,** comparing daraxonrasib with chemotherapy in the second-line setting, may further inform where this class of agents fits within established treatment sequences.

A positive outcome would carry substantial implications, given the near-universal prevalence of RAS mutations in this disease.

"If this trial identifies that daraxonrasib is more effective than chemotherapy in the second line metastatic setting, this would introduce the first effective, non-cytotoxic treatment option for individuals with metastatic pancreatic cancer ever."

Such a shift, however, remains contingent on randomised comparative evidence.

Beyond Efficacy: The Relevance of Treatment Burden

As an oral, once-daily agent, daraxonrasib differs fundamentally from standard intravenous chemotherapy, raising important questions about treatment experience and feasibility in routine practice.

"Individuals may be able to spend more time with loved ones or doing what they love and less time in the infusion room or in their oncologist's office."

This consideration is particularly relevant in a patient population that increasingly includes younger individuals who remain active at diagnosis.

"It will be important to see how patient experience and quality of life differs in individuals getting daraxonrasib compared to chemotherapy."

Formal quality-of-life data from randomised studies remain pending.

Broader Implications for RAS-Driven Malignancies

RAS mutations represent one of the most common oncogenic drivers across solid tumours, and early signals of activity have also been observed in colorectal cancer and non-small cell lung cancer.

"Publicly available data already suggests efficacy of RAS(ON) inhibitors, both allele-specific as well as in a multi-selective fashion, in colorectal cancer and NSCLC, as well. "

Ongoing registrational studies, including **RASolve 301 in NSCLC,** will be important in determining whether activity is consistent across tumour types and molecular contexts.

"This may help inform the development of the many multi/pan-(K)RAS inhibitors now being offered in the early phase clinical trials at centers like ours at NEXT Oncology."

Conclusion

The development of RAS(ON) inhibitors marks a renewed attempt to therapeutically exploit one of the most ubiquitous oncogenic drivers in cancer biology. Early-phase data for daraxonrasib suggest measurable activity in metastatic pancreatic cancer, including objective responses in RAS-mutant disease.

However, these findings remain preliminary. Their clinical significance will depend on confirmation in ongoing randomised studies, particularly **RASolute 303 and RASolute 302,** which will define whether RAS inhibition can meaningfully alter the current chemotherapy-dominated treatment paradigm.

For now, the evidence supports continued investigation rather than a redefinition of standard practice.

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About the Author

Mariam Khachatryan, MD, is Editor-in-Chief of OncoDaily GI, the gastrointestinal oncology platform launched on 7 September 2025. She leads the editorial direction of OncoDaily GI, and on 9 March 2026, launched JocOnDa, its official journal club, bringing structured discussion of new evidence to oncologists working across the GI field.

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