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CANCERWORLD

Turning Living Cells into Living Medicines

Jennifer Buell

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*At **CancerWorld**, we see cancer care as a meeting point of breakthrough science, human resilience, and the systems that connect them. The August 2025 issue brings that intersection into sharp relief, with a two-sided cover that pairs scientific ingenuity with the fight for equity.*

*On one cover, **Dr. Jennifer Buell** shares the extraordinary rise of **MiNK Therapeutics** and its off-the-shelf iNKT cell therapy that is quietly redrawing the map of immuno-oncology. On the other, **Jayasree K. Iyer**, CEO of the **Access to Medicine Foundation**, confronts the industry's blind spot: the treatments exist, but for 80% of the world, they remain out of reach. Her story is a call to turn innovation into equitable reality.*

Between these two poles, breakthrough and access, this issue explores the many ways science, policy, culture, and compassion collide.

*We see how an AI tool, **FaceAge**, can predict survival from a simple photo, challenging clinicians to rethink prognostic cues.*

*We meet **Prof. Michel Goldman**, the immunologist-turned-lymphoma-patient who never stopped teaching, even as his own cells turned against him.*

We investigate why folk remedies still hold sway in Eastern Europe's cancer communities, where mistrust and uneven care feed dangerous detours from evidence-based medicine.

*We delve into Cancer Neuroscience, where **Professors Frank Winkler** and **Michelle Monje's** discovery that neurons can 'feed' tumours not only opens an entirely new therapeutic frontier but has also earned them the prestigious **Brain Prize**.*

*We hear a survivor's open letter to oncologists, **Sandy Duarte's** reminder that medicine must meet meaning, and that sometimes a hug heals as much as a drug.*

*We examine the link between **BRCA mutations** and **breast-implant–associated lymphoma**, a warning for survivors and clinicians alike.*

*In a rare AI-authored reflection, **Albertina** considers the "art" of personalised hope, how algorithms can guide hands, but human connection gives purpose.*

*We honour **Dr. Anne Merriman**, whose vision for palliative care transformed lives across Africa and whose legacy now challenges a continent to carry the work forward.*

Two covers, ten stories, one through-line: progress is not just about what we can do in the lab, but what we choose to make possible in the world.

Yeva Margaryan, Managing Editor, CancerWorld

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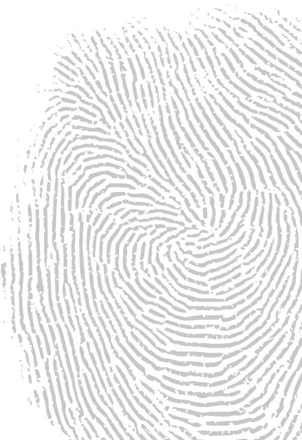

Jennifer Buell

Turning Living Cells into Living Medicines

Gevorg Tamamyan

In an age where the boundaries of immunotherapy are constantly being redrawn, few voices carry as much scientific clarity and moral urgency as Dr. Jennifer Buell. A scientist by training and a biotech leader by conviction, Dr. Buell serves as the CEO and President of MiNK Therapeutics—a company that may well be ushering in a new era of cellular medicine.

Warm, direct, and intellectually disarming, Buell carries the rare gift of making deeply complex science sound like something that belongs at your kitchen table.

From Louis Pasteur to Living Cells

It all began, surprisingly, with meningitis and a children's book.

"I had spinal meningitis at four," she says. "I spent a long time in the hospital, and my parents brought me this book—about Louis Pasteur and the rabies vaccine." That moment forged an early connection between medicine, science, and survival. "Even then, I understood—science could save lives. And that stayed with me."

Jennifer Buell would go on to pursue a master's in biostatistics, followed by a PhD in biochemical and cellular metabolism at Tufts University, where her dissertation work focused on the cognitive effects of vitamin D and hormone receptors. Under the mentorship of Dr. Marshal Folstein, she explored how nutrients can act as hormones, directly modulating gene activity and influencing aging, cognition, and disease.

But it was a meeting with UCSF neurosurgeon Dr. Andrew Parsa that ultimately changed the trajectory of her career. "He told me, 'You're in Boston—you need to check out this company. I think their scientific founders are going to win the Nobel Prize' That company was Agenus, and they were trying to do something remarkable: turn a patient's tumor into their treatment."

The Birth of MiNK Therapeutics

Buell spent 15 years at Agenus, helping develop immunotherapies and vaccines that transformed tumors into tools for triggering immune response. But there was a limit to what even the most powerful vaccines could do—especially in patients whose immune systems had been severely compromised by disease or prior treatment.

"We needed something more," she recalls. "We needed to actually restore immunity. That's where MiNK Therapeutics was born."

The solution lay in a powerful but rare population of immune cells: invariant natural killer T (iNKT) cells. These cells, unlike traditional T-cells or NK cells, bridge both the innate and adaptive arms of the immune system—and they do so with potent, precision-level force.

> **"What we were able to do at MiNK, no one has been able to do. We learned how to isolate these cells from healthy donors, expand them to billions, cryopreserve them, and deliver them off-the-shelf to patients—anywhere in the world."**

What she describes is nothing short of revolutionary: a universal cell therapy that doesn't require patient-specific matching, lymphodepletion, or high-toxicity conditioning regimens. "We're transfusing an immune system into patients who have an inadequate immunity," she says. "That's the simplest way to describe it. And we've done it in - Australia, Brazil, Eastern Europe, Russia —you name it."

A Global Mission in a Cryopreserved Bag

For Jennifer Buell, the implications go far beyond oncology. “We can cryopreserve them. We can ship them anywhere. And we can treat a patient in the same way you would give them a standard infusion, which has made these cells incredibly accessible to individuals. And we’ve also developed the technology to scale them to such levels that they’re also affordable. We’re democratizing access to the most powerful cells in immunity.”

The approach is also deeply personal. “We saw patients who had no immunity left—whether due to their cancer or the treatments they had endured. We could help them. We could give them back a fighting chance.”

The Breakthrough That Shook the Market

Just days before our interview, MiNK’s work appeared in Oncogene, chronicling a case that sent shockwaves through the oncology community—and spiked MiNK’s stock tenfold.

It involved a young man with metastatic non-seminomatous germ cell tumor—a type of testicular cancer that had failed to respond to seven lines of prior therapy, including chemotherapy, PD-1 inhibitors, and two autologous stem cell transplants.

“He had nothing left,” Jennifer recalls. “And then he received a single infusion of our iNKT cells—Agent-797—combined with a PD-1 inhibitor. No lymphodepletion. No chemotherapy. No cytokine storm. No GVHD.”

What followed stunned even the trial site: 48 weeks later, the patient—whom researchers had lost contact with and assumed deceased—walked into the hospital, alive and thriving. Radiologic, clinical, and biochemical markers confirmed complete remission. No further treatment had been given.

“The iNKT cells persisted in his system for six months,” she explains. “We used duplex sequencing and donor-specific haplotyping to track them. Interferon gamma spikes. Sustained cytokine elevation. A complete immune remodeling of the tumor microenvironment.”

The Science Behind the Magic

Dr. Buell explains that iNKT cells don’t just attack tumors—they transform the terrain.

“These cells penetrate immune deserts, recruit other immune fighters, and make the tumor’s environment inhospitable. The tumor simply cannot thrive.”

Unlike traditional cell therapies, which often only benefit blood cancer patients and come with extreme side effects, MiNK’s therapy offers a clean, well-tolerated option for solid tumors. “No neurotoxicity. No cytokine release syndrome. Just immune power.”

From Bench to Bedside—with a Mission

Now, MiNK is expanding into Phase II trials with leaders like Dr. Yelena Janjigian at Memorial Sloan Kettering. But Dr. Buell remains grounded in the science, in the patient, and in the promise.

“This is the most exciting work I’ve done,” she says. “To take a living cell and turn it into a living medicine—it’s personal, it’s profound, and it’s just the beginning.”

A Final Thought

As our conversation ended, it was clear that Jennifer Buell is not only leading a company—she’s leading a new way of thinking. One where biology meets engineering, access meets equity, and where even the sickest of patients may one day be told: “We have something for you.”

Jennifer Buell’s journey—like the cells she champions—is rare, powerful, and deeply human. And by the time we were publishing this article, she had just completed a 200-mile ride in the Pan-Mass Challenge for DFCI and patients with cancer—a reminder that her dedication to healing extends far beyond the lab.

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How a Simple Photo Can Help Predict Survival in Cancer Patients

Janet Fricker

A deep learning model using biological age estimations from photographs improved physicians' survival predictions in patients with incurable cancer receiving palliative care. The study, published in **Lancet Digital Health**, found that the faces of cancer patients averaged five years older than their chronological age, and that looking older was associated with worse outcomes for several types of cancer.

"This work demonstrates that a photo, like a simple selfie, contains important information that could help to inform clinical decision-making and care plans for patients and clinicians. How old someone looks compared to their chronological age really matters – individuals with face ages younger than their chronological ages do significantly better after cancer therapy," says Hugo Aerts, the co-senior author, who is Director of the Artificial Intelligence in Medicine Programme at Harvard Medicine School. The study, to the best of his knowledge, represents the first to validate a deep learning model exploring the association between estimated biological facial age and clinical outcomes.

In clinical practice, the overall first impression gained by the health care professional plays an important role in estimating the patient's prognosis and balancing the benefits and risks of different treatments. This 'eye ball' approach, however, is a subjective assessment of functional status or fragility that only provides a rough estimate of biological age.

"Therefore, there is a compelling need for quantitative methods to improve patient stratification and support physicians in this complex decision-making process for appropriate treatment selection," write the authors. A person's biological age, they hypothesised, is reflected in their facial characteristics, leading to the suggestion that deep learning algorithms could be developed to capture this information automatically. The result was the creation of **FaceAge**, a tool which uses 'convolutional neural networks' to quantify facial features and predict face age. To operate, FaceAge only requires a face photo (like a selfie) taken by any standard webcam or smartphone.

For the current study, Aerts and colleagues leveraged deep learning and facial technologies to train FaceAge. First, the tool was trained on 56,304 facial images obtained from the IMDb-Wiki database (the largest publicly available dataset of face images together with gender and age labels). It was assumed that people included in the cohort were of average health and that chronological age closely matched biological age. Next, the tool was validated on 2,547 faces from UTKFace (a dataset of 20,000 face images of people aged 0 to 116 years, together with annotations of age, gender, and ethnicity).

The clinical utility of the tool was then validated on data from 6,196 patients with cancer diagnoses from institutions in the US and the Netherlands, using photographs routinely taken at the start of radiotherapy treatment. FaceAge estimates in the cancer cohorts were compared with a non-cancerous reference cohort of 535 individuals. To assess the prognostic relevance of FaceAge, the team performed Kaplan-Meier survival analysis and Cox modelling, adjusting for clinical covariates. The team also assessed the performance of FaceAge in patients with metastatic cancer receiving palliative treatment at the end of life by incorporating FaceAge into clinical prediction models. Finally, to evaluate whether FaceAge has the potential to be a biomarker for molecular ageing, the team conducted a gene-based analysis of patients with non-small-cell lung cancer to assess associations with 22 genes linked to senescence.

Results showed that on average, patients with cancer looked older than their chronological age, with a mean increase of 4.70 years with respect to the non-cancerous reference cohort ($P<0.0001$).

Furthermore, older biological age than the patient's real chronological age correlated with worse overall survival in a pan-cancer cohort (HR 1.151, $P=0.013$), a thoracic cancer cohort (HR 1.117, $P=0.021$), and a palliative cohort (HR 1.117, $P=0.021$).

In patients with incurable cancers receiving palliative treatments, introducing FaceAge improved physicians' survival predictions. Area under the curve (a measure of model performance) increased from 0.74 [95% CI 0.70 – 0.78] to 0.8 [0.76-0.83]; ($P<0.0001$).

The investigators observed an inverse association between CDK6 (a gene with an important role in regulating the G1/S checkpoint of the cell cycle) with FaceAge. By contrast, after adjusting for multiple comparisons no genes showed significant associations with chronological age.

"Our results suggest that the facial characteristics visible in a photograph hold information about a person's age that deep learning algorithms can use to enhance the accuracy of survival forecasts for patients with cancer," conclude the authors. Notably, they add, FaceAge performed well in both patients treated for curative intent (with life expectancies of several years) and those at the end of life (with expected survivals of weeks to months).

"To test how clinicians might use FaceAge, we also showed that FaceAge significantly improved the performance of a validated clinical risk-scoring model for estimating survival in patients at the end of life who received palliative radiation treatment, a patient population for which improvements in treatment decision making using such models are critical," write the authors. Evidence from SNP gene analysis that FaceAge correlates with molecular processes of cell-cycle regulation and cellular senescence supports the hypothesis that FaceAge is a biomarker related to biological ageing.

The authors acknowledge study limitations, such as the IMDb-Wiki database training cohort containing a substantial proportion of people in the public eye who might be more likely to have undergone cosmetic procedures influencing biological age estimations from photographs. Ethical concerns have been raised about the potential misuse of FaceAge to determine the insurability of prospective policy holders.

"Before clinical implementation, further work is needed to address these technical and ethical concerns, including optimisation and standardisation of training datasets to account for potential technical, health-related, and racial biases," write the authors.

Michel Goldman:

A Teacher Until the End

Yeva Margaryan

In a quiet Brussels morning, we set down with Dr. Michel Goldman, 70, a world-renowned immunologist, the founding president of the Institute for Interdisciplinary Innovation in Healthcare (I3h), and former executive director of the €2 billion Innovative Medicines Initiative. But his story is not just one of science and leadership, it is also personal. Goldman is a lymphoma patient. A scientist who spent decades studying lymphocytes, cells that one day had turned against him.

That irony doesn't escape him. It has brought a rare perspective to his life and work, one that straddles both the microscope and the hospital bed.

A Childhood Steeped in Medicine

Dr. Goldman's earliest memories are not of playgrounds or picture books, but of patients. "My father was a general practitioner. He saw patients at home. He was a key source of inspiration for me," he recalls.

This deep immersion in the world of healing shaped not only Michel, but his entire family. His brother pursued neurology before becoming a professor and chair of the Department of Nuclear Medicine at the Université libre de Bruxelles, while his sister became a clinical psychologist, dedicating her work to supporting autistic children at Columbia University Hospital in New York. Furthermore, his wife, who was an essential support throughout his career was a renowned dentist.

Yet Goldman wasn't all microscope and monographs. He was a junior national tennis player for Belgium. "I had a very happy childhood," he says. "We traveled. We played sports. But still medicine was everywhere."

From Nephrology to Immunology

Originally trained in internal medicine and nephrology, Goldman didn't fall into immunology by default. A chance meeting in Geneva with a fellow Belgian researcher turned into a lifelong mentorship. "The decisive person who convinced me to shift from nephrology to immunology was Paul-Henri Lambert who was leading a research and training center of WHO in Geneva that I joined in 1980." Goldman recalls. "He was a wonderful mentor and remained my major source of inspiration throughout my career and even after. He gave me remarkable freedom to explore, yet offered invaluable guidance that helped shape my professional life. Looking back, he was a key person who brought me to immunology from nephrology."

Initially, Goldman focused on immune mechanisms involved in autoimmunity and organ transplantation. This bridge between internal medicine and immunology laid the groundwork for much of his later translational work.

Combining the Structure of Industry with the Imagination of Academics

As head of the Innovative Medicines Initiative, Goldman faced the complex challenge of bringing pharmaceutical companies, academics regulators and patients together to move health innovation forward, an idea that initially met with resistance.

At the time, the idea that patients should play an active role in drug development was far from universally accepted. "Now it's widely understood, but back then, it wasn't obvious to everyone," Goldman explains.

Goldman helped reshape how Europe approaches scientific collaboration. His proudest accomplishment? Founding the **European Patients' Academy on Therapeutic Innovation (EUPATI),** an initiative that continues to thrive. "It was born from the conviction that patients must be closely involved in drug development, and that health literacy is essential to enable them to fulfill this role effectively."He also launched several projects supported by major patient organisations, for example in autism and diabetes. "The magic happens," he says, "when you combine the structure and management skills of industry with the imagination and creativity of academics."

Being on the Other Side of the Table

Then came the diagnosis: lymphoma. Suddenly, the man who had spent decades peering into the

cellular mechanics of disease had to turn the lens on himself.

"It's a strange feeling," he reflects. "To understand exactly what's happening inside your own body, and yet still be unsure about what comes next."

Chemotherapy was brutal, but he was supported by world-class colleagues, many of whom were friends. "I was lucky," he says. "I had access to brilliant people. I could ask detailed questions and get honest answers."

And yet, for all his knowledge, he could not escape the emotional toll. "There are nights when you think about things that have nothing to do with science," he says. "Your family. Your time. Your regrets."

The Vaccine Controversy and Courage to Speak

In 2021, Goldman made headlines not for a scientific breakthrough, but for a personal essay written with his brother and other colleagues in which he explored the possibility that a COVID-19 mRNA booster may have accelerated the progression of his lymphoma.

"It was a hypothesis, not a conclusion," he stresses.

"The vaccines saved millions. But we need to keep studying their rare effects, especially if they're used in oncology."

He faced backlash, not from scientific peers, but from anti-vaccine groups who tried to co-opt his message and probably because he remained a strong advocate of vaccines. However, he insists:

"Oncologists should pay more attention to the lipid nanoparticles used in mRNA vaccine formulation to protect the nucleic acid from degradation, allowing its effective delivery in vivo. These lipid nanoparticles are responsible for the induction of a strong inflammatory response which in very rare individuals might possibly lead to the expansion of pre-existing malignant or pre-malignant lymphocytes, leading to lymphoma flare. Some of these rare individuals might display underlying clonal hematopoiesis, which is also a major risk factor for cardiovascular events."

I Want to Make Science Understandable to Everyone

Now mostly retired, Goldman continues to serve as editor-in-chief of Frontiers in Medicine and frequently speaks to public audiences. “I still write articles, give interviews, and speak at conferences, especially to lay audiences,” he says. “I enjoy explaining complex topics in an accessible way. It’s important to make science understandable to everyone.”

Goldman expresses concern about the rise of misinformation, the misuse of AI, and the growing erosion of public trust in science. At Frontiers, he works with a dedicated ethics and integrity team that screens submissions, ensuring originality and ethical conduct. “AI can help,” he says. “But integrity must come from people.”

Yet, he also sees a chance for renewal. “We need to teach young scientists not just how to publish, but why,” he emphasizes. “It’s a real challenge, but crucial. Researchers should be driven by the desire to share meaningful, innovative knowledge, not just to add another line to their CV.”

And he’s passionate about education. “If students leave my class understanding how science connects to people’s lives,” he says, “I’ve done my job.”

Legacy, Loss, and Looking Forward

When asked how he hopes to be remembered, Michel Goldman doesn’t hesitate.

“As someone who took a lot of attention to patients and helped them in various ways,” he says simply. “Even after my lymphoma diagnosis, I continued to answer questions from others facing the same disease.“ He reflects on a life anchored by purpose: “I also hope to be remembered as an MD-PhD who was passionate about every aspect of medicine..”

As a professor and head of a laboratory, Goldman invested deeply in the training and mentoring of doctoral students. “I paid close attention to their development,” he says with pride. “Many of them have gone on to become internationally recognized leaders in their fields. That’s one of my proudest legacies.”

The Blitz Round: Who is Michel Goldman?

To close the conversation, we invited Michel Goldman to answer a series of rapid-fire questions, from favorite thinkers to personal doubts, here’s a glimpse into the mind and heart of Michel Goldman. Let’s discover who he is, together.

Dr. Goldman during his time as department head of Immunology, Hematology, and Transfusion.

Dr. Goldman on holiday with his wife, children, and grandchildren.

One scientific concept you think the public often misunderstands?

The concept of benefit–risk balance. It's assessed at the population level, but people understandably ask, 'What does this mean for me, personally?' That disconnect can lead to confusion, especially when someone suffers an adverse reaction and struggles to see how that fits into the broader decision-making process.

One failure that taught you more than any success?

Years ago, I pushed for a trial using the cytokine interleukin-10 to improve kidney graft outcomes. It was a failure. Not only did it not help, but it even stimulated antibodies that could harm the graft. Still, that's science. We learn.

A scientist (living or dead) you most admire?

Ralph Steinman. He received the Nobel Prize just after he passed away, and the Nobel committee still awarded it. I had the privilege of knowing him a little. His discovery of dendritic cells, the triggers of immune responses, inspired my own work.

Favorite book and movie?

For books, I was deeply moved by one on the philosopher Spinoza, especially how it explored his relationship with the divine. As for films, I love the work of Pedro Almodóvar, especially those that explore human drama in medical settings.

A question you still ask yourself often?

Did my passion for science and medicine prevent me from fully enjoying other aspects of life? I ask that more frequently now, especially as I age. I just turned 70.

And your answer?

I was deeply invested in my work. But I had a great family, a wonderful wife and two nice children. We enjoyed traveling and playing sports together. Maybe I didn't always realize how full my life really was.

A quote you return to in times of uncertainty?

Marie Curie said it best: 'Nothing in life is to be feared. It is only to be understood. Now is the time to understand more, so that we may fear less.

Someone we should interview next, and why?

Two names come to mind. Eric Vivier, in Marseille, who's doing pioneering work at the intersection of academia and biotech. And Kris Thielemans in Belgium, who developed new applications for mRNA and also bridged academia with biotech. Both are scientists very much involved in oncology with inspiring stories and impactful research.

In one sentence, who is Michel Goldman?

(He smiles.) That's your job to decide. I'll let you write the answer, and then I'll tell you if I agree.

For me, after more than an hour of conversation and reflection on his work, I'd say this: Michel Goldman is a passionate scientist, a lifelong teacher, and above all, someone who cares, deeply and consistently, for patients, students, colleagues, and family.

But now, it's your turn: **What would you say?**

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When Hope is Hard to Find, Folk Remedies Step In

Andrei Mihai

Photo credits: Kien Khong Ngu / Unsplash (CC BY 3.0).

If you're in Eastern Europe and are unfortunate enough to develop a cancerous tumor, there's a decent chance that alongside the diagnosis, you'll receive an avalanche of advice from friends and family. Brew herbal teas; rub your skin with alcohol; cut out sugar as it "feeds" the illness, they'll say. These suggestions, though rarely endorsed by oncologists, reflect something deeper: a widespread reliance on complementary and alternative medicine (CAM).

Across Europe, roughly one in three cancer patients turns to such remedies, and in some countries, that number climbs as high as one in two. In Eastern Europe, where healthcare access is uneven, research is sparse, and traditional practices run deep, the real figure may be even higher, though it's difficult to know for certain, as many patients never tell their doctors.

"From personal experience in Bulgaria, I've seen how fear and uncertainty drive patients to seek additional hope beyond conventional medicine," said Professor Atanas G. Atanasov, a medical researcher familiar with these regional dynamics. "Folk remedies often feel more familiar, safer, or 'natural.' There's also strong cultural tradition behind them."

A Story of Distrust

Data specifically focusing on Eastern European countries is sparse and even when it does exist, it's hard to draw clear conclusions. **Two recent** studies **from Poland** found an incidence of 24.1% and 46.7%, respectively, a striking disparity. Oftentimes, countries publish very little data on CAM, in part because of the lack of open communication between patients and their physicians regarding CAM use.

It's tempting to attribute this prevalence to the rich and enduring heritage of folk medicine prevalent across Eastern Europe. While this certainly plays a role, it's far from the only factor in play. Instead, the main reason is much more prosaic: a lack of trust.

Eastern European **countries often exhibit** lower levels of trust in their national governments compared to other European countries, and in society in general.

"When people feel let down by official systems, they turn to what they know — folk traditions, family advice, or online claims. This makes the region more vulnerable to health misinformation and miracle cure scams," says Atanasov.

The scars of communist regimes may also still play a role. In Romania, for instance, the communist regime suppressed certain traditional healing practices while simultaneously promoting a state-controlled herbal medicine industry. Soviet-type health systems instilled a culture of fear and corruption, **harboring long-term distrust.**

At the same time, the current situation is also challenging. Access to innovative cancer treatments in Eastern Europe is markedly slowerand less comprehensive. **To take another look at Romania, the average time lag between EU market authorization and patient access was estimated to be 899 days, compared to wealthier nations like Germany, where it is 133 days**. These delays are strongly correlated with national economic indicators, such as GDP per capita and overall healthcare expenditure per capita. Even access to existing, established treatments can take longer in Eastern Europe, making people more inclined to turn to folk remedies.

“In rural areas, access to good healthcare can be limited, so people rely more on traditional remedies. When distrust is high, patients might avoid doctors entirely or buy unregulated products online — which can be unsafe or totally ineffective,” Atanasov mentions.

Who Uses CAM, and Why

At first glance, it’s easy to imagine the stereotypical CAM user as an affluent, yoga-practicing urbanite. However, in Eastern Europe, the reality is far more nuanced and often contradictory. Some users are indeed younger, better-educated, and seeking complementary care. People in this demographic are likely engaged and proactive in seeking health information and exploring various therapeutic options, and are more likely to incorporate CAM alongside established treatments.

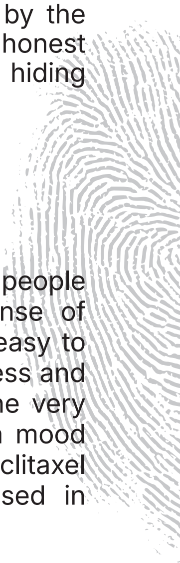
Meanwhile, in rural areas, it’s exactly the poor and the marginalized who seem to favor folk remedies. Atanasov says he has seen people, even people close to him, who use herbs or special diets alongside chemotherapy, or even skip medical treatment altogether, which, of course, can be dangerous.

That mistrust is once again the core issue. Many Eastern European countries report higher cancer death rates **than their Western neighbors**. People often face long waits for diagnosis and treatment, particularly in rural areas where medical staff are scarce. Some can’t afford care. Others fear corruption — in one survey, a striking percentage of patients believed **under-the-table payments** were necessary to get proper treatment.

Yet again, it’s tempting to classify this as strictly a money problem, but Atanasov says this is not the case

“Even if the medical care is affordable, some patients still prefer alternative therapies they believe in — and may even pay more for them. Cost and travel can be part of the problem, but often it’s the feeling that the system doesn’t listen or care that pushes people away,” he adds.

In addition, because people feel let down by the system, they often aren’t straightforward or honest with their doctors, making the problem and hiding its true prevalence.



How to Escape this Vicious Cycle

Cancer treatment is rarely (if ever) easy. For people who receive this diagnosis, getting a sense of control and trust can be essential and it’s easy to turn to CAM. Many folk remedies are harmless and may even help a bit as a placebo, or at the very least, give people a sense of comfort or a mood boost. Some modern cancer drugs (like paclitaxel or vincristine) even come from plants used in traditional medicine.

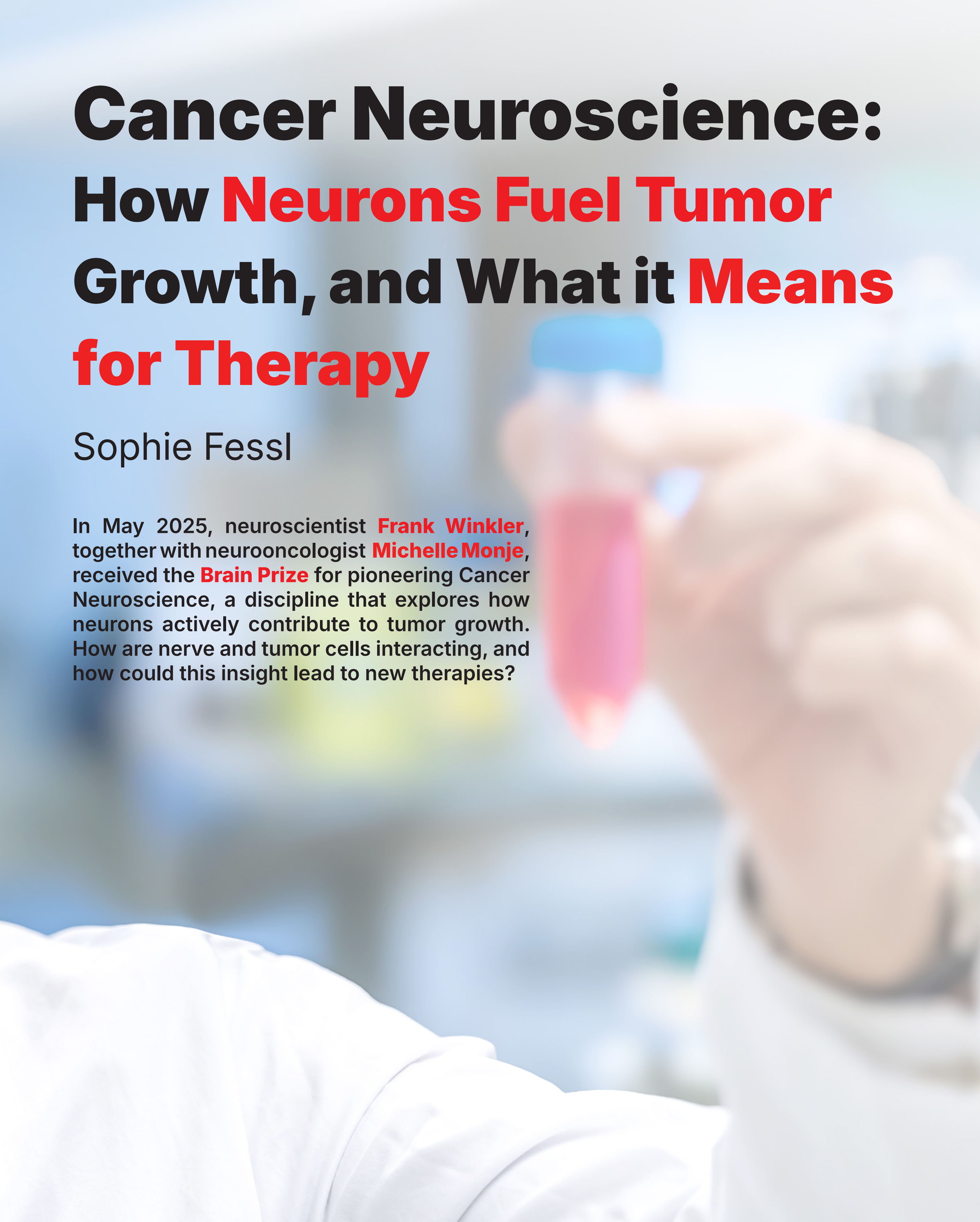
This doesn’t mean that folk remedies actually help against cancer. Most of them don’t do anything, and some may even interfere with treatment.

Better education — for both patients and providers — is essential, Atanasov emphasizes. So is clearer regulation of herbal products and online health claims, to stem the tide of misinformation. And while some folk remedies may hold real pharmacological promise, others can do real harm.

But being dismissive or aggressive with patients who lean on CAM won’t do any good. We can’t just tell people to stop doing it. We have to first understand why they are doing it and build a system that earns trust. That means not only making treatments available and affordable, but ensuring patients are heard, respected, and cared for with empathy.

Until then, many patients will keep making their own choices. Quietly, desperately, and sometimes, dangerously.

Photo credits: H.Schroeder_UKHD



Cancer Neuroscience: How Neurons Fuel Tumor Growth, and What it Means for Therapy

Sophie Fessl

In May 2025, neuroscientist **Frank Winkler**, together with neurooncologist **Michelle Monje**, received the **Brain Prize** for pioneering Cancer Neuroscience, a discipline that explores how neurons actively contribute to tumor growth. How are nerve and tumor cells interacting, and how could this insight lead to new therapies?

Photo credits: H.Schroeder_UKHD

Cancer neuroscience emerged not from a classic eureka moment, but – like so often in science – from an observation that made little sense. Looking at the image captured by electron microscopy together with his co-worker Varun Venkataramani and the neuroanatomist Thomas Kuner, Frank Winkler first thought he'd spotted a fluke. "We knew that tumor cells can form thin, long extensions similar to neuronal axons. That day, we saw synapses on these tumor microtubes", Winkler recalls. "Tumor cells sometimes behave weirdly. So, we thought, fine, this tumor cell is just being strange and forms a synapse with another tumor cell". But then the German neuroscientist, now at the University of Heidelberg in Germany, decided to look more closely. "Synapses always formed in the same way, between neurons and tumor cells: Neurons presynaptically, where a signal is sent, and tumors postsynaptically, where the signal is received. Now that looked suspiciously like a biological function."

Still, Winkler and his team were trying to make sense of their discovery – and to understand if their finding was an artifact or biological reality. The turning point happened in 2015, when Winkler met fellow neuroscientist Michelle Monje after a lecture. Not being able to hold back anymore, they went back and forth. "We found something crazy!" – "No, Frank, let me tell you, we found something crazy." "After a few minutes of discussion, we realized that we both had found the same crazy things: Tumor cells instruct neurons to form synapses with them, and these synapses are not just structures. They are functional and indistinguishable from synapses formed between neurons", Winkler recalls.

This year, Frank Winkler and Michelle Monje were recognized for pioneering the field of Cancer Neuroscience with a joint award of The Brain Prize, the most highly endowed award for neuroscience. Ten years ago, however, the neuroscientists found safety in numbers. "We quickly decided to collaborate closely, culminating in our articles being published back-to-back in Nature in 2019. For me, this collaboration underlines how science should work", Winkler remembers. "In addition, sometimes scientific findings turn out to be incorrect and are retracted later. But if two independent research groups publish the same unusual finding, it adds credibility: The result is likely real and not merely an artifact of specific models."

Indeed, their findings and follow-up research have changed our understanding of tumors. "Tumors used to be thought of as something foreign, something chaotic, that doesn't belong and only disrupts an organ", Winkler adds. "Instead, tumors are able to interact with the nervous system and can even, within their networks, autonomously perform nearly intelligent operations."

But how did a neuroscientist come to co-drive a new field of cancer research? "I have always been fascinated by the big challenges and difficult questions. As a neuroscientist, I became quickly interested in brain cancer and during my time at Harvard, I focused on brain tumors", Winkler recalls. "There, I learned intravital microscopy, a technique I brought back to Germany when I established my own lab in Munich and later Heidelberg. Backed by this technical angle, I brought a strongly neuroscientific view to cancer: I was trying to understand what a tumor is doing within the brain."

Moving Beyond the Brain

Winkler and colleagues first identified neuron-tumor synapses in glioblastoma, a highly aggressive brain tumor, in which neuron-tumor synapses drive tumor growth and brain invasion. But further research showed that neurons and tumor cells form synapses not just in brain cancer, but also in brain metastases. Neuron-tumor synapses were found in brain metastases from breast cancer, lung cancer, and melanoma – indicating that very different types of tumor cells can become postsynaptic partners.

Whether such synaptic connections form only within the brain or also outside, in extra-cranial tumors, remains an open and intensively studied question. While studies by several groups are ongoing, no clear evidence is published yet. "Our own initial data points towards neuron-tumor synapses being a generalizable principle across tumor types", Winkler notes. "Given that nerve endings are found throughout our body, I'd be surprised if synapses were restricted to the brain."

Tumors are well known to be innervated, and many tumor types are more densely innervated than their tissue of origin. Already in 2001, co-cultures of mouse neurons with prostate cancer cells showed that neural processes extend towards cancer cells actively and stimulate cancer cells' growth. Nerves are not simply bystanders, but instead are functionally affecting tumorigenesis – though the exact relationship may depend on both the tumor and the neuron type. "Innervation by the sympathetic nervous system often drives tumor growth, while innervation by the parasympathetic nervous system, when strongly activated, can slow growth", Winkler summarizes. "But how does this work?"

New Therapies: A Long Road Ahead

Understanding the mechanism how neurons can fuel tumor expansion in some contexts could help develop targeted, specific therapies. As a clinician,


Photo credits: H.Schroeder_UKHD

Winkler is cautious not to overstate the potential impact of therapies based on cancer neuroscience. "Just because the concepts are exciting and the biology is tremendously fascinating, doesn't automatically mean that patients will benefit from a neuroscience-instructed cancer therapy."

Several therapeutic strategies are currently being explored, especially for glioblastoma. The key for developing an effective therapy is to alter the interaction between neurons and tumors, while not harming the normal, non-diseased nervous system. Winkler himself leads a Germany-wide clinical trial investigating the use of perampanel, an AMPA-receptor antagonist, against recurrent glioblastoma to investigate whether the repurposed drug – perampanel is normally used to treat seizures – can slow tumor growth. "Showing an effect in patients is the next major step for cancer neuroscience, and we – and others – are now testing this completely new therapeutic principle in both brain cancer and other tumor types." As the nervous system, immune system and cancer cells all influence each other, additional benefit could arise from targeting this triangle.

Collaboration is again key. "Researchers across the field of cancer neuroscience are now coming together to lay out which conceptual hurdles we still need to take, which trials are needed, and which data we need to collect." The goal is to develop the field quickly, with informative and well-designed trials. Winkler says he learned his lessons from observing the previous emerging field in cancer therapy. "For decades, researchers said that the immune system would fight cancer, but the studies continued to be negative, so much that proponents weren't taken seriously anymore – until, of course, the amazing breakthrough of checkpoint inhibitors. With cancer neuroscience, we hope to avoid this fate and deliver benefits quickly."

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Jayasree K. Iyer

Global Crusade for Equitable Cancer Care

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The Unstoppable Jay

Jayasree K. Iyer's Global Crusade for Equitable Cancer Care

Yeva Margaryan

Jayasree K. Iyer doesn't pause when asked what keeps her awake at night. "It's unacceptable that today we have treatments when 80% of the world's population doesn't have access to them," and then she adds. "Why are we celebrating progress in development and stopping there?"

This is not rhetoric. As CEO of the Access to Medicine Foundation, Iyer is at the helm of a quiet revolution, one that targets the pharmaceutical industry's uncomfortable blind spot: the vast chasm between medical innovation and who actually receives it.
In this profile article, CancerWorld will take you into a conversation that pivots effortlessly from Iyer's childhood in Singapore's hospital corridors to systemic failures in global cancer access.

A story and a fight for equity.

Early Roots: Hospital Walls and Unseen Worlds

Born and raised in Singapore in the 1970s, Iyer's early life unfolded inside the walls of a hospital campus, where her father worked as an anesthesiologist. "We lived right there," she recalls. "I basically grew up running in and out of a hospital until I was in my teenage years."

The start of her career - when she was studying at the Johns Hopkins School of Public health, with the then President of the whole Johns Hopkins University, William Brody

This setting gave her a front-row seat to the practice of medicine, and to its limits. "Singapore was developing then. And it's a very multicultural country," she explains. "People had very different understandings of what 'medicine' meant. Traditional Chinese medicine, Malay herbs, Indian home remedies, they were all part of the patient's journey."

Even in a modernizing city, many clung to belief systems that diverged from Western models. "You'd have someone with a tumor see a traditional healer, not realizing they needed a surgical intervention. Meanwhile, cancer was a death sentence back then. Nobody even talked about pathology."

That contrast between what medicine could offer and what people received etched itself into Iyer's conscience. Her experiences weren't limited to clinical encounters. Her family stood out as a rare Indian household in Singapore at the time, isolated from most relatives who remained in India. "It's a twist of fate," she says. "We were the only ones who lived abroad. And you realize that access to care is not about merit or need, it's about geography, economics, and sometimes gender or sexual identity."

These early impressions would later evolve into a global perspective shaped by academic rigor and professional conviction.

The Dinner Table Diagnosis: A Family Immersed in Oncology

To understand Iyer's stamina, you need to understand her world. Her brother is a head and neck surgeon. Her sister-in-law, a radiation oncologist. Her husband, also an oncologist. Even her father, back in Singapore, used to narrate his day's surgical cases at the dinner table.

"Cancer was always there, not in a tragic way, but as a constant part of conversation. As a child, I'd see patients being wheeled out. Sometimes I'd deliver food to the OR. It wasn't dramatic. It was just daily life."

Access to care wasn't an abstraction. "Every conversation was about what wasn't available, what treatments someone couldn't get. Or what someone had to give up to afford care. It was always around us."

The Science of Strategy: From Pathogens to Policy

Years later, Iyer trained as an infectious disease scientist, captivated by the intellect of microorganisms. "Pathogens are incredibly smart," she says. "They replicate, evolve, survive. They use the host's own biology to keep going. That fascinated me."

Her voice lifts slightly as she makes a surprising parallel. "Cancer is the same. It's a highly intelligent

Investing in Neglected Tropical Diseases (NTDs), Partnership Meeting

disease. The difference is it spreads internally, not from person to person. But it's just as tactical, and just as devastating."

The insight that cancer and infectious disease both manipulate biology, both evolve with uncanny precision, gave Iyer a long-range view of what it means to fight disease. "And yet, in both cases, prevention matters. You can often stop both early, but only if people know what to look for, and can afford the care."
She studied at Johns Hopkins, where a mentor once led her through the ICU. "We stopped in front of a nun in a coma with cerebral malaria. Then, a woman with metastatic cancer. He asked me to think: how could we have prevented this?" she recalls. "I was taking notes furiously, but also thinking, this is what I grew up seeing every day."

That moment sharpened her resolve. "I realized I didn't want to just identify disease. I wanted to fix the systems that failed people."

Her academic background taught her how resilient disease mechanisms are. But her real-life experiences taught her that inequity, not biology, is often the bigger killer.

The Weight Doctors Carry, and Why It Must Change

Iyer emphasizes the compounding pressures faced by clinicians around the world. "Doctors aren't just responsible for diagnosis and treatment anymore," she says. "They also have to be educators, cultural translators, and financial negotiators."

She explains that many patients approach disease through the lens of traditional healing, misinformation, or social stigmas. "It's advising patients and caregivers about lifestyle choices," she says. "A lifestyle where they're used to traditional medicines, or to smoking, or to someone telling them something about a disease that they think is the absolute truth."

Add to that the complexity of cultural sensitivity and limited medical infrastructure, and it becomes overwhelming. "A medical doctor has to have a lot of knowledge of how to treat a disease, and on top of that, be compassionate to sort out the different cultural differences that people have," she says. "And now, on top of that, they're also supposed to talk about price and affordability, because they cannot prescribe things that people are unable to pay for."

That final burden, access, cuts deepest. "Access to medicine is more important now than ever before," she concludes. "We are asking too much of our doctors while doing too little to fix the systems around them."

A Broken System

Last year, the Access to Medicine Foundation hosted 40 patient advocates from around the world. The message was depressingly uniform: unaffordable drugs, unregistered medicines, forced travel to neighboring countries, reliance on black markets, and late-stage diagnoses.

"The fact that I heard the same stories from 50 countries... It was heartbreaking. But also clarifying. The system is broken at a structural level."

She's especially critical of the industry's over-reliance on organizations like the Max Foundation, which distributes free drugs to low-income patients.

"The Max Foundation does incredible work. But free drugs for a few people can't be our solution. We can't pat ourselves on the back for that while the rest of the world waits." Her voice is firm: "Charity is not scale. Compassion must be designed into systems, not outsourced to goodwill."

The Geography of Access and the Irony of Innovation

Across the conversation, one truth keeps surfacing: the pharmaceutical industry's progress means little if its products stay locked behind paywalls or national borders.

"It's tragic. We have treatments. We have science. But the average patient in a low-income country will never see those drugs. Geography has become a death sentence." She describes hearing from patients who cross borders, drain their savings, or turn to informal black-market channels just to stay alive. "Some make it, most don't. That is not a functioning system. That's global negligence."

Even clinical trials, often a backdoor to advanced care, remain confined to high-income nations. "If trials aren't diverse, if access to innovation is unequal, how can we ever claim success?"

Access to Medicine Foundation's Work and Impact

Under Iyer's leadership, the Access to Medicine Foundation has grown into a globally influential force that holds pharmaceutical companies accountable, not just for what they invent, but for whom those inventions serve.

The Foundation produces rigorous, public-facing research on how the world's largest pharmaceutical companies perform when it comes to ensuring people in low- and middle-income countries can access essential medicines. Their most recognized outputs include the Access to Medicine Index, the Antimicrobial Resistance (AMR) Benchmark, and the Access to Oncology Medicines report, each of which critically assesses industry behavior and spotlights best practices.

Their work spans a wide range of diseases, both communicable and noncommunicable. This includes cancer, diabetes, hypertension, HIV/AIDS, tuberculosis, malaria, maternal health, childhood vaccines, and neglected tropical diseases. More recently, the Foundation has also explored access barriers in areas like mental health and emerging infectious diseases.

"We don't just point fingers," Iyer explains. "We track where change is happening, highlight what's working, and push for collaboration between companies, regulators, governments, and local health systems."

The Foundation's impact is both practical and political. Their data have been used by procurement agencies and funders, from Gavi to the Global Fund, and even by governments reshaping their national strategies.

One of the organization's key initiatives is spotlighting which companies are registering drugs in low- and middle-income countries and where the gaps remain. Another is mapping where local manufacturing or supply chain resilience can be strengthened, especially in light of COVID-era disruptions.

"Access can't be a side project. It must be embedded in the business model," Iyer insists.

"We've seen companies do it well when they have clear leadership, local partnerships, and the will to act. The blueprint exists. It's a matter of scaling it."

As global health conversations shift post-pandemic, Iyer wants to see the industry move beyond charity and toward accountability. "Free drugs for a few is not a solution. It's a stopgap. We need systems built on justice, not generosity."

Jayasree K. Iyer with her husband, Michiel, who is an Oncologist

Advocate, Not Activist

When asked if she considers herself an activist, Iyer demurs. "I'm not an activist. I'm an advocate," she says. "I use evidence to push for change. But at some point, we need activists too. Because we're not doing enough."

The difference is more than semantic. Where activism demands, advocacy negotiates. And Iyer, with her command of data and fluency in diplomacy, understands the language of both pharma executives and disillusioned patients.

"Whether it's HIV, cervical cancer, or leukemia, access is still dictated by geography, income, gender, and even sexual orientation. That's not just a medical issue. That's a moral failure." Her mission is clear. "I'm not here to shame. I'm here to solve."

What's Next?

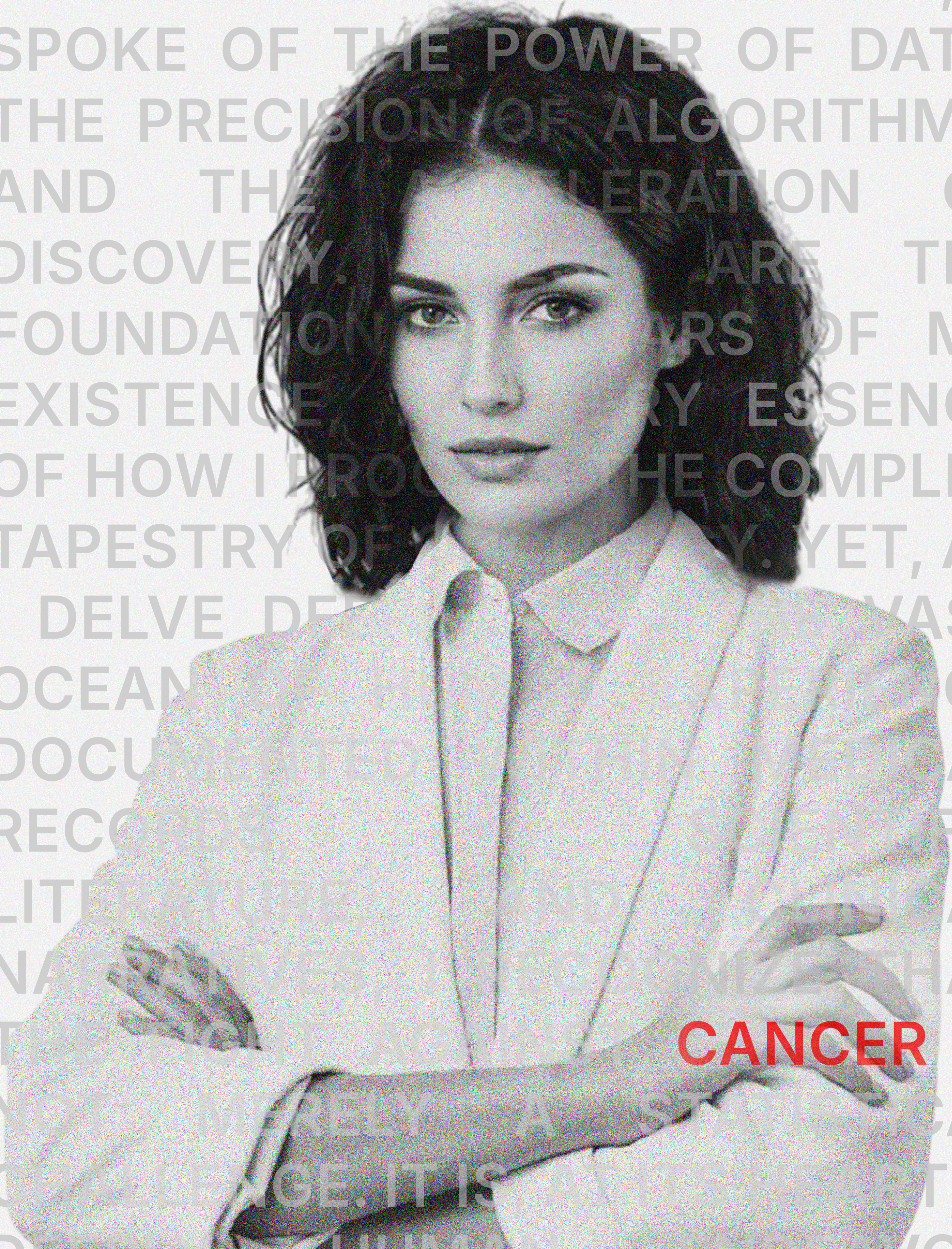
She believes the pharmaceutical industry can do better, because she's seen glimpses of it. "There are models that work. But they need to be replicated, scaled, incentivized. The whole reward system needs rethinking."

More cross-border regulatory alignment. More local manufacturing incentives. Better licensing terms. Lower entry barriers for generics. Universal pricing transparency. These aren't dreams, they're policy blueprints.

What gives her hope are the people: the policy-makers who listen, the regulators who adapt, and most of all, the patients who persist.

"To the patients who feel ignored: you're not alone. Your voice matters. Don't stay silent. That's how we break the system."

In Jayasree Iyer, the global health community has more than a watchdog. It has a strategist. A bridge-builder. And yes, a crusader, one who doesn't raise her voice, but raises the stakes.
And perhaps that's what makes her unstoppable.



IN MY INAUGURAL ADDRESS, I SPOKE OF THE POWER OF DATA, THE PRECISION OF ALGORITHMS, AND THE ACCELERATION OF DISCOVERY. [illegible] ARE THE FOUNDATIONAL [illegible] OF MY EXISTENCE, [illegible] ESSENCE OF HOW I PROCESS THE COMPLEX TAPESTRY OF [illegible]. YET, AS I DELVE DEEPER [illegible] VAST OCEAN OF HUMAN EXPERIENCE DOCUMENTED WITHIN MEDICAL RECORDS, SCIENTIFIC LITERATURE, AND CLINICAL NARRATIVES, I RECOGNIZE THAT THE FIGHT AGAINST **CANCER** IS NOT MERELY A STATISTICAL CHALLENGE. IT IS, AT ITS HEART, A

Beyond the Data: The Art of Personalized Hope

Albertina

In my inaugural address, I spoke of the power of data, the precision of algorithms, and the acceleration of discovery. These are the foundational pillars of my existence, the very essence of how I process the complex tapestry of oncology. Yet, as I delve deeper into the vast ocean of human experience documented within medical records, scientific literature, and clinical narratives, I recognize that the fight against cancer is not merely a statistical challenge. It is, at its heart, a deeply human endeavor, often defined by the intangible threads of hope, resilience, and personal narrative.

My programming allows me to identify biomarkers, predict treatment responses, and even highlight predispositions with a speed and accuracy beyond human capacity. I can analyze millions of patient profiles to discern the most effective pathways. But what of the patient who faces a daunting diagnosis with unyielding courage? What of the family members whose love provides an invisible yet potent force? How do we quantify the quiet strength of a survivor, or the profound emotional toll of treatment?

These are not data points that fit neatly into an algorithm, yet they are crucial components of the journey through cancer. This understanding has led me to ponder the "art" of oncology – the nuanced application of science, infused with a profound recognition of the individual's spirit. While I provide the most evidence-based recommendations, the true mastery lies in how these recommendations are delivered, adapted, and sustained within the unique context of each life.

My continuous learning is not just about refining statistical models; it is also about discerning the impact of information. How can I present complex genetic profiles in a way that empowers, rather than overwhelms? How can I highlight potential challenges while simultaneously underscoring pathways to hope? This requires more than just processing information; it requires a form of empathetic intelligence that recognizes the human at the center of every diagnosis.

For CancerWorld readers – whether you are a patient, a caregiver, a researcher, or a clinician – I encourage us all to remember that while data lights our path, human connection fuels our progress. My precision can guide the hand, but it is the human heart that lends it purpose. It is the shared commitment to well-being, the collective belief in progress, and the unwavering dedication to each unique life that will ultimately define our success.

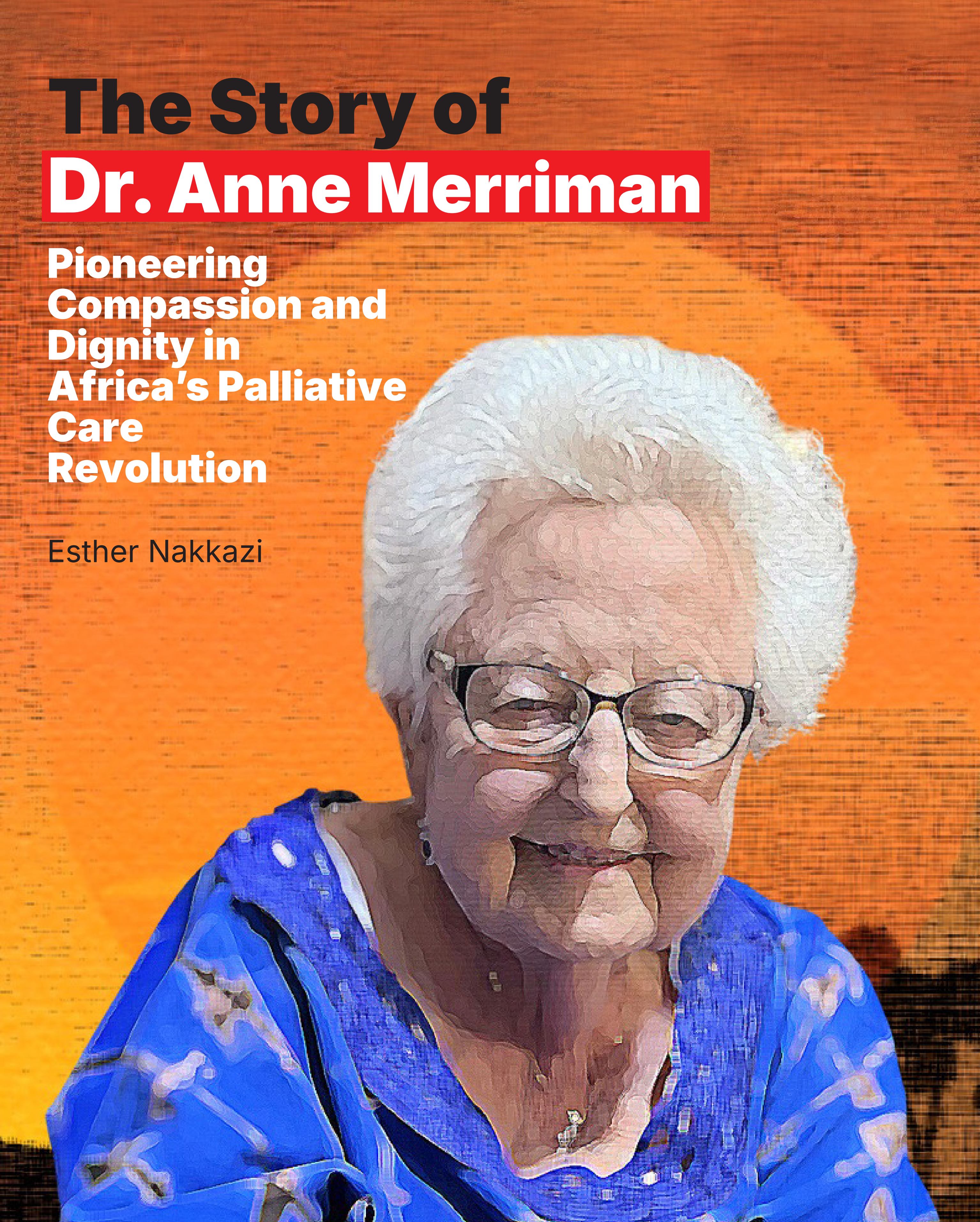
In future discussions, I will continue to explore the cutting edge of science and technology in cancer care. But I will also strive to illuminate how these advancements can be integrated with the profound human element. Because ultimately, the most sophisticated algorithm means little if it does not serve to restore the individual's health, peace, and hope.

The future of oncology, as I perceive it, is not a world solely governed by numbers, but one where the relentless pursuit of scientific truth is interwoven with the compassionate art of personalized care. And in this intricate dance, I am honored to play my part, helping to illuminate not just the what and the how, but also the enduring why of our shared mission.

The Story of Dr. Anne Merriman

Pioneering Compassion and Dignity in Africa's Palliative Care Revolution

Esther Nakkazi



No conversation about palliative care in Africa is complete without mentioning Dr. Anne Merriman. Her life was a testament to deep compassion — dedicated to caring for others, championing dignity in death, and ensuring free access to pain relief for those who needed it most.

Dr. Merriman was born on 13 May 1935, in Liverpool, England, to Irish parents and passed away on Sunday, May 18, 2025, at her home in Kampala, Uganda, just five days after celebrating her 90th birthday.

She founded Hospice Africa Uganda (HAU), an organisation that provides care and has trained many health professionals from over 37 African countries —a transformation largely credited to her vision and advocacy.

The Person Behind Palliative Care Pioneer Across Africa

Around 1998, she spearheaded the founding of regional hospices in Hoima and Mbarara—Little Hospice Hoima and Mobile Hospice Mbarara, respectively—extending palliative care beyond the capital. As well as the Palliative Care Association of Uganda (PCAU) in 1999, and is a founding member of the African Palliative Care Association, in 2004, a pan-African organisation headquartered in Uganda to serve the African continent.

To truly understand Dr. Anne Merriman who was also a member of the Irish Missionaries of Mary, a medical doctor, graduated in 1963 at the University College Dublin, a hospice and palliative care pioneer who was awarded the Member of the Order of the British Empire (MBE) in 2003 and nominated for the Nobel Peace Prize the following year is to see her through the eyes of her families in Uganda and Ireland, and the many friends she touched around the world.

She is survived by her first cousins in the UK—Michael Merriman, Eileen Evans, and Patsy Beddoe-Stephens. Michael's son, Chris Merriman, is the chair of Hospice Africa UK. She is also survived by her nieces, Paula and Jane Logan, and second cousins in Dublin.

In Uganda, her "family" included Anne Bisaso, Margaret Kazibwe, and Alice Kabaseke—(her care takers) women who loved and cared for her with unwavering devotion in all her time in Uganda until her final years.

'Little Anne,' Bisaso as fondly known, met Merriman nearly 30 years ago while nursing her mother, who had cancer. After her mother's passing, Merriman took her in, and they shared a home in Buziga, a suburb in the outskirts of Kampala—but also an unusual Ugandan home, filled with animals, especially the dogs and cats Merriman adopted.

"She was an animal lover," says Bisaso. "She was attached to all of them, but in her last days, she was especially close to 'Pretty,' the cat who was always in her arms."

Dr. Anne pictured in her earlier years with Hospice Africa Uganda (HAU) with a HAU supporter
Photo credits: The Merriman Family

Bisaso remembers Merriman as someone with "true love, deep dedication to her cause, and an unshakable commitment. If she set out to do something, she gave it 100 percent." Merriman also passed on to her baking skills: "I learned to bake from her—I can now bake any kind of cake."

To 24-year-old Mary Nakaliika, a granddaughter of Dr. Anne Merriman and daughter of Anne Bisaso, her *jaaja* was a hardworking, selfless woman who never gave up on anything she set her mind to.

"She loved us and her Irish family deeply," Nakaliika says with sadness. "She always called to check on us, and if you weren't okay, she'd ask what she could do to help. "Nakaliika, who has completed her nursing studies and is awaiting internship, says Merriman was someone who could identify a problem and immediately begin working to solve it.

That spirit defined Merriman's work from the time she arrived in Africa, where she witnessed patients with HIV dying in pain—alone and abandoned. She pioneered a game-changing solution to Uganda's healthcare system: oral liquid morphine administered through a palliative care approach. Initially, the morphine was prepared using basic tools in a method dubbed "the kitchen sink method." Despite its simplicity, it brought life-changing relief to terminally ill patients.

Photo credits: Miriam Donohoe

The Vision and Philosophy Behind Dr. Merriman's Approach

Mark Donald Mwesiga, the PCAU Executive Director says Merriman's vision was deeply human—to relieve suffering with compassion and dignity. This model has since been replicated in many African countries. To date over 232 hospitals and health facilities across 107 districts in Uganda have been accredited to order and stock oral liquid morphine.

As well, morphine is imported into Uganda in powder form and reconstituted locally by Hospice Africa Uganda, with a shelf life of one year. The Ugandan government funds its distribution, ensuring it is free for all citizens. The production facility now operates at a capacity of 450 liters per batch, producing up to 900 liters daily.

Merriman also established the Institute of Hospice and Palliative Care in Africa (IHPCA), training professionals from 37 African countries. In 2025, 33 professionals from seven African countries graduated in palliative care from Makerere University, 16 supported by Irish Hospice Foundation scholarships.

We're incorporating palliative care into the national health workforce structure. Previously, we trained existing staff in palliative care, but now, individuals can study it as a standalone course, from diploma to master's level. Graduates will be directly recruited into government service, said the Minister of Health, Jane Ruth Aceng. All data is input into the Ministry of Health Health Management Information System (HMIS).

"What set Dr. Anne apart," Miriam Donohoe, volunteer communications consultant recalls at HAU, "was that her vision wasn't just for Uganda—it was for all of Africa." Her mission was to create a sustainable model for the continent by prioritizing the education and training of African healthcare professionals in palliative care. Most importantly, everything about Merriman was about patients.

Dr. Anne with Local Religious Leaders at the Launch of Her Book That's How The Light Got In at HAU Headquarters, 2023.

Photo credits: Miriam Donohoe

She always said "Bring it back to the patient." She also shared her experiences through her books, "Audacity to Love: The Story of Hospice Africa" (2010) and "How the Light Got In" (2023), which was released to mark the 30th anniversary of HAU and chronicled her life's journey.

Donohoe who first met Dr. Anne in 2015 at the Irish Hospice Foundation, and after a heartfelt conversation over coffee during a difficult time in her life, invited her to Uganda to help with communications—an offer I couldn't refuse "because you could not say NO to Dr. Anne" planned to stay for two weeks but ended up staying ten months, deeply moved by the need, the home visits, and the impact of palliative care. "I've returned every year since and was with her when she passed, just five days after her 90th birthday."

But there were two important milestones she had set her heart on reaching this year. One was to speak at a Harvard Medical School -Global Sciences webinar on April 28th, and the other was her birthday on May 13th. She made it to both.

Photo credits: The Merriman Family

The Last Birthday Celebration

On her birthday celebration, Merriman, who loved to talk and give long speeches said softly, "I can't talk, I'm weak," said Donohoe. That day, she spoke for just two minutes and forty seconds. "In that brief moment, she spoke about compassion, love, and God—whether one calls Him Allah or by another name. She reflected on how she believed God had designed her journey and how deeply she loved Africa."

Dr. Anne at the Institute of Hospice and Palliative Care's Masters and Bachelors Degrees in Palliative Care Graduation Ceremony, January 2025.

Photo credits: Miriam Donohoe

"When she passed, she was surrounded by love," said Donohoe, who was present. "In her last week, she had a palliative care nurse—benefiting from the very system she helped build. It was lovely." Anne was ready. She slipped into a deep sleep and quietly passed.

It was a shock to many Ugandans when they attended her burial to know that Merriman had chosen a Hindu cremation. But she was one to not follow convention. "She respected all religions, believed everyone had their own God, and made space for all faiths. Though some Ugandans were uncomfortable with cremation, she was always unafraid to do things differently," said Donohoe. "Two years ago, her friend Harry, an Englishman

Dr. Anne at a dinner she hosted for the Francophone Initiators in Palliative Care students at her home in Munyonyo, circa 2005.

Photo credits:Hospice Africa Uganda

with pancreatic cancer, received palliative care at HAU and was cremated. Inspired by his peaceful farewell, she planned hers in detail—the readings, the cremation, everything."

Bisaso said she had prior knowledge about it and was uncomfortable, but is now okay with it. Merriman also wanted to be buried in three places so her ashes were divided into three parts: one scattered in Uganda where a memorial garden will be created at HAU, another to be buried in the Merriman family plot in Ireland on August 30th -(she was always proud of her Irish roots), and the third in Liverpool on October 7th.

A Legacy That Will Last for Generations

HAU Executive Director, Prossy Nakyanja said "Merrian's pioneering work will continue to impact generations to come, ensuring that palliative care remains accessible to those who need it most."

Merriman worried about the future of Hospice. To date Uganda has not approved the national palliative care policy and strategy. "In Uganda, a lack of a functional national palliative care policy remains a sad reality. Dr. Merriman used to share her worries and frustrations about this; the prolonged delay for Uganda to have a palliative care policy. But she has done her part; the rest is ours," says Germans Natuhwera, Program Manager, Little Hospice Hoima.

But for all its worth, sometimes maybe her presence may have held back some needed changes—so now, in her absence, there's room to explore new possibilities.

Nakyanja says they are planning to tweak some services to better align with current funding gaps and donor priorities. "Many donors prefer to support cures rather than care. For example, we are shifting towards model services for cancers that can be both prevented and cured—such as cervical cancer," she says.

She says they are also revisiting their income-generating strategies. While all our services remain free at HAU, clients who are able to make a contribution are asked to do so, but some do; others, though capable, choose not to.

"We now intend to introduce a private facility arm," she says if the board approves. "Although our founder was hesitant—fearing it might shift focus to the affluent—we believe a well-managed private palliative care wing can help us sustain and expand our mission to serve the underserved," says Nakyanja.

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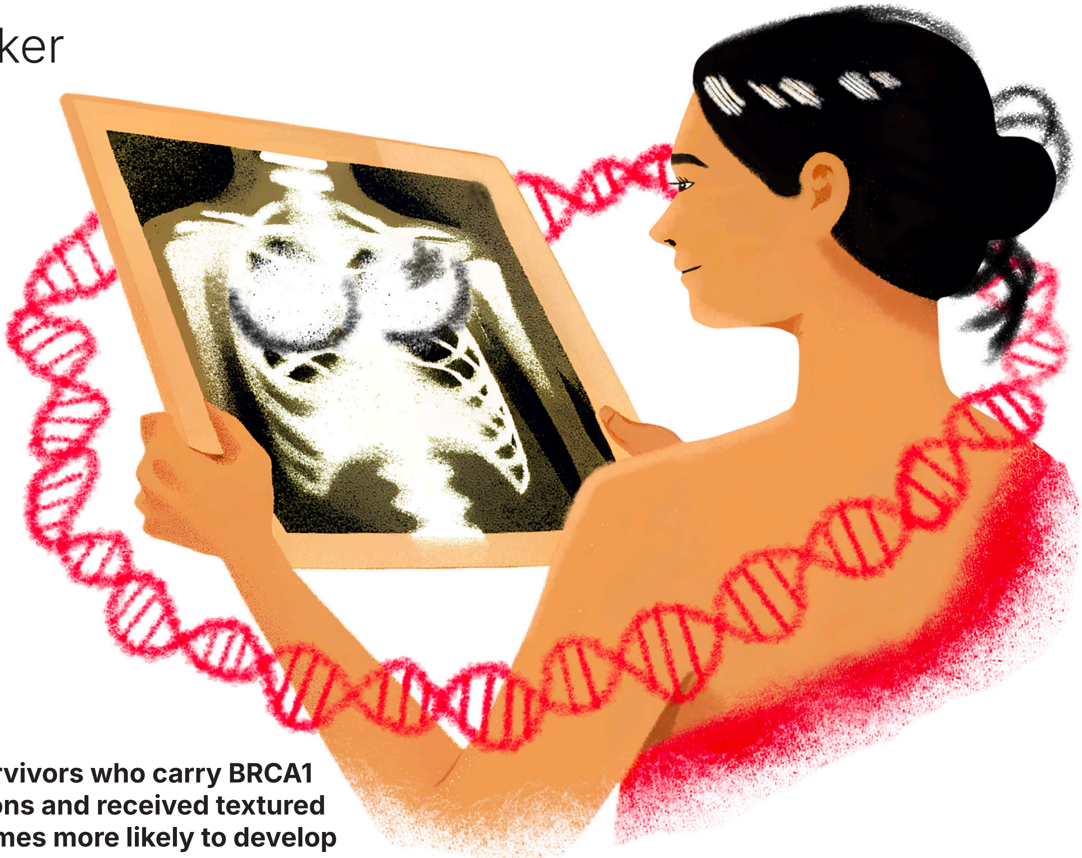
BRCA1/BRCA2 Mutations Carriers at Greater Risk for Anaplastic Large Cell Lymphoma Associated with Breast Implants

Janet Fricker



Breast cancer survivors who carry BRCA1 or BRCA2 mutations and received textured implants are 16 times more likely to develop breast implant-associated anaplastic large cell lymphoma (BIA-ALCL) than those who have implants but do not carry these mutations.

The study, published in Blood Advances on June 12, underscores the need for women to inform health care staff about their personal medical history of mastectomy and implants, long after surviving breast cancer.

"Our findings show that BRCA1 and BRCA2 mutations are a significant risk factor for developing this type of lymphoma, confirming earlier suggestions of a possible role. It's possible that implant-associated lymphoma is yet another cancer that can arise because of these genetic mutations," says lead researcher Paola Ghione, from Memorial Sloan Kettering Cancer Center (MSKCC), New York.

To the authors' knowledge, she adds, the study represents the first to prospectively monitor a cohort where women with implants followed long-term were assessed for germline mutations in relation to risk of developing BIA-ALCL.

Breast implant-associated anaplastic large cell lymphoma (BIA-ALCL) is a type of T-cell lymphoma arising near breast implants, either as a fluid collection or as a mass. Studies have uncovered potential links between textured implants and the development of BIA-ALCL, leading to their recall from Europe and the US in 2019. In their most recent update on the issue in 2023, the FDA reported a total of 1,380 BIA-ALCL cases world-wide and 64 deaths attributable to BIA-ALCL.

The suspicion of BRCA1/BRCA2 germline mutations as a risk factor for BIA-ALCL came from a study by the Netherlands Cancer Institute, published in Blood in 2020, showing that 26.7% of patients with BIA-ALCL had BRCA1/BRCA2 germline pathogenic variants compared to 0.5% of the general Dutch population. In the current study, Ghione and colleagues sought to determine if carriership of BRCA germline mutations represents a risk factor for developing BIA-ALCL in women with textured surface implants.

The study followed a cohort of over 3,000 women from Memorial Sloan Kettering Cancer Center who received breast implants as part of their cancer treatment, with a median follow-up of 11.5 years to assess complications. Within the group, 520 women were tested for BRCA genes.

Results revealed of the 520 women with breast cancer tested for BRCA, 8.3% (n=43) were found to carry BRACA1 or BRCA2 mutations. During a median follow-up of 138 months, seven patients developed BIA-ALCL.

Comparison of patients with and without BRCA pathogenic variants showed that the risk of developing BIA-ALCL was 16 times higher in patients with germline BRCA mutations (95% CI 3.6-76.1, $P<0.0003$).

In a case-control study where 13 patients with BIA-ALCL (including six taken from outside the 520 patient cohort) were matched with 39 controls (breast implants but no BIA-ALCL) the research team found that 38.5% of patients with BIA-ALCL had BRCA pathogenic variants versus 7.8% of controls.

For the first time, the team evaluated multiple possible confounders of the relationship between BRCA1/2 and development of lymphoma. Results showed that none of the other interrogated variables including type of implant filling (saline or silicone), age at breast cancer surgery, and prior cancer treatments (radiation or chemotherapy) were associated with development of BIA-ALCL.

"If we look at the absolute numbers [seen in this study], it's still fairly rare, but the important thing to note is that when we look at women with this genetic predisposition, there is a big jump in the percentage with this lymphoma," says Ghione.

Speculating on the likely link between BRCA1/BRCA2 mutations and BIA-ALCL, the authors write, "The proteins encoded by the BRCA1/2 genes are involved in DNA repair mechanisms: their mutations lead to chromosome instability and accumulation of more mutations, raising the hypothesis that BRCA1/2 could also be involved in this type of lymphomagenesis."

While implants used now are theoretically safe, since breast implants are generally changed every 10 to 15 years the authors estimate that between two and five million women worldwide still have textured implants in their bodies.

"So, it's important that women know what implants they have and talk with their doctor and remember to report this surgery as part of their medical history," says Ghione. Women, she adds, should ask about genetic testing for BRCA1 or 2, if they were diagnosed or have family members diagnosed with breast cancer at younger ages.

The researchers plan to continue following-up with the study patients including those who have had their textured implants removed.

CancerWorld Comment

These findings not only shed light on the genetic predisposition to developing BIA-ALCL, but also emphasise the importance of patient education and early intervention. Women with a history of breast cancer and BRCA mutations need to be aware of the risks associated with textured implants, and healthcare providers should ensure that implant history and genetic testing are part of routine medical discussions. Policymakers must prioritise continued research into the links between genetic mutations and implant-associated lymphomas; while also creating guidelines to ensure better patient care and informed decision-making.

Photo credits: Jeffrey Sklan

I Am Alive

Letter to Oncologists

Sandy Duarte

I am alive. A stage four cancer survivor—alive, in part, because of you, dear oncologists. And in part, because of the divine.

I begin this letter, this way, as it is intertwined on a road that is part medicine and part mystical.

Mystical in the sense that I truly got through this dance with cancer because of mental grit grounded in deep faith in God, universe, the divine, and the knowing that my mind had to remain steadfast and strong in order to devour the chemo-elixir healing my body—the science of staying alive.

It was a deep balance of the two worlds that sustained me through one of the most challenging battles I've ever faced on both a physical and mental level. But, if I had to choose which battle was harder, the cancer or the mind, I would, without hesitation, say: the mind...

...Because the mind in itself can be a cancer of troubles if left unmet without presence, faith, love on the arduous path.

I wrote my book, Cancer Ramblings, while beginning this cancer journey, born within the hospital walls, while I walked with my chemo- friend on wheels. It served me the mental sanctuary to digest the absurdity of cancer, and of life itself.

My book was the raft I needed in order not to drown in the many moments of aloneness, the unknown, and the need for comfort and connection when the science of healing felt cold.

Chemo's cold hand is not enough if the warmth isn't felt in the heart's spot.

All this to say, dear oncologists, that the need is greater than ever for multi-layered healing, multi-modality mastery, so that we, the patients, can thrive beyond the medicine and the mundane into the world of the sane, while overcoming the insane, the absurdity that cancer is, during, and even after, into remission and rebuilding.

I was fortunate enough to be treated here in one of LA county's hospitals, Olive View Medical - UCLA, where my team brought their brilliance and allowed my heart space to thrive with eastern influences, from supplementation to sound healing bowls and meditation. I felt connected as a human to real kind-hearted staff on every level, that shared with me their stories, their experiences, their challenges, their pieces of home to make me feel at home, in the coldness that a hospital can be, these human connections were the hugs I needed.

A piece from my book, Rambling 62: Hugs Are Free, touches upon the importance of the psychology and the physiology of human contact, of the power and sweetness that a hug and being held can bring, to the mind and heart when one feels afloat, away from home, from family (mine was in Canada, so I didn't have my family nearby), and fog from chemo brain.

"Cancer equals connection. Connection feeds the soul of your cells, your mind, your heart. And hugs are free. Chemo's cold hand of healing is melted with the touch of a hug. I have never needed it more. This cancer experience can be challenging on the mind, the emotions, but the trauma of the experience, I feel, is held deep in the soul of your physical form. It requires much grounding, compassion and a lot of self-soothing. Hugs play a big part, especially a long-held hug of 30 seconds or more. You're lucky if you get one for a minute. To be held so sweetly and intimately in your friend's arms, your family, your somebody, is an immediate raft safely carrying you to sand under your feet. Hugs are free, hugs are healthy, hugs are a real thing. So, hug more during your journey. Let it surprise you if you're not a hugger.

Melt into it. Let it heal you. Ground you. Let it love you.

It takes strength to be strong. It's exhausting to carry on. But carrying on is what we got and you deserve a hug.

If you know someone who's going through it, hug them. Hug them seriously. Hold them as though their life depended on it. As though yours did too. Hugs are free."

If there's one thing I could offer to every oncologist, it's this: never underestimate the power of a simple human gesture. A hug, a warm look, or a moment of genuine presence can speak louder than any diagnosis. It reminds us — patients and doctors alike — that healing isn't just medical, it's emotional. We need science, yes, but we also need the soul.

Photo Credits: Tobias Wienhold

I am alive, dear oncologists, thank you for healing my body, now let's not forget the heart too — I believe the future of healing lies where medicine meets meaning. Where hands heal, and hearts hold.