Lancet Oncology Commission: The Human Crisis in Cancer

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Executive Summary

Amid unprecedented scientific progress in oncology, a growing body of evidence reveals a parallel and profound crisis in the human experience of cancer care. While survival outcomes have improved, the systems designed to deliver care increasingly fall short in addressing the emotional, relational, and existential dimensions of cancer. Although examples of compassionate and attentive care can be found in every setting, patients and families across global contexts continue to report being unheard, unsupported, and, at times, actively harmed by care structures that prioritise technical precision over human presence.

This Commission proposes that the human crisis of cancer is not defined by pathology, mortality, or aetiology, but by the erosion of meaning, connection, and compassion in the experience of cancer. This crisis is shaped by what is present and what is absent: the presence of fragmented, costly, and impersonal systems; the absence of human connection, psychological safety, and relational care. It is a crisis that spans delivery, mental health, palliative care, research, and education – one that is not peripheral to oncology's progress but central to its failures. Its impacts are felt most acutely by those already made vulnerable by inequity, discrimination, and economic precarity, but it is a system-level failure that ripples across every context, from the most resource-rich to the most resource-constrained. Addressing it will require more than good intentions. It will demand confronting the structural incentives and ideologies that have devalued the relational foundations of cancer care.

The Commission identifies a growing imbalance between technological innovation and the human dimensions of cancer care. As the field has increasingly prioritized biopharmaceutical development, genomic precision, and market-driven efficiencies, it has often neglected core practices that uphold dignity, alleviate suffering, and build trust. People living with cancer – especially those navigating complex treatment pathways, financial distress, or advanced disease – are frequently caught in systems designed around disease management rather than human-centred support.[1–3] In low-resource settings, these shortcomings are intensified by underinvestment in health systems, weak access to palliative services, and lack of psychosocial infrastructure.[4,5] But the challenge is global. In high-resource settings, people living with cancer also report profound experiences of disconnection, abandonment, and moral distress.[6,7]

Rehumanising cancer care is necessary and possible. There is strong and growing evidence for a set of approaches that improve patient experience, reduce suffering, and support health system resilience. These include patient navigation, early integration of palliative care, financial protection mechanisms, and culturally relevant mental health support. Many of these interventions are cost-effective and scalable across settings.[8,9] Yet despite their promise, they remain chronically underutilized. Structural disincentives – such as reimbursement models that undervalue time spent in communication or emotional support – continue to obstruct their adoption.[10,11] Meanwhile, global research agendas remain dominated by commercial priorities, reinforcing the invisibility of human-centred approaches in the production of evidence and innovation.[12,13]

This Commission brings together over forty contributors across eleven countries and multiple disciplines and professions, including oncology, palliative care, mental health, health economics, education, public health, and social science. We also emphasise the perspectives of healthcare professionals themselves, whose wellbeing, training, and capacity to provide relational care are essential to the integrity of cancer systems. Our research has drawn on global literature reviews, empirical data collection, policy analysis, patient and caregiver narratives, and extensive stakeholder consultation. What emerges is a call to action grounded in three principles: (1) human suffering in cancer care is often structurally produced and therefore preventable; (2) proven solutions already exist but are under-implemented; and (3) dignity, connection, and presence are not sentimental ideals but measurable and essential outcomes of good cancer care.

If cancer care is to meet the needs of those it serves while sustaining the humanity of the workforce delivery cancer care, systems must be redesigned to prioritise the whole person – not only the tumour. This requires embedding relational and ethical practices within the very structure of oncology: in how we train health workers, fund research, measure quality, and organise services. The human crisis of cancer care is not a failure of compassion of individual health professionals; it is a failure of design, investment, and accountability. To correct it, we must confront how we care and what we value.

Introduction

The growing imbalance between the biological and human dimensions of medicine is one of the defining challenges of modern health care. Over the past century, scientific advances in diagnosis, treatment, and disease surveillance have transformed the prospects of survival for millions. In cancer care, precision medicine, molecular imaging, and biotechnological therapies have delivered substantial progress. Yet, as these developments accelerated, the design and delivery of care shifted, often unintentionally, towards a model that prioritises disease control over human welfare, technical precision over interpersonal connection, and economic value over lived experience.

Nowhere is this imbalance between biological progress and human consequences more visible than in cancer care, where advances in genomics and high-cost therapies have often redirected attention and investment away from the relational foundations of care. The separation of oncology from primary and community-based care, the proliferation of narrow quality metrics, and the persistent underfunding of psychosocial and palliative services are symptoms of a

broader drift: the uncoupling of cancer care from the everyday realities and needs of those affected.

We refer to this drift as the human crisis of cancer care. This crisis has been slow in its onset and often invisible in its emergence. The global under-resourcing of psychosocial care in cancer, reflects a system-level erosion of attention to the psychological, relational, existential, and social dimensions of illness. This erosion is not simply a side effect of resource constraints; it is shaped by structural incentives, institutional priorities, and global research agendas that assign value to what is biological, technological, marketable, and monetisable. The result is a profound misalignment between the full range of what matters to people living with cancer and their caregivers and what is valued, measured, and rewarded by the systems that serve them.

Throughout this Commission, we use the term "human-centred care" to describe the broad set of practices, relationships, and systems that recognise the person living with cancer. This term draws on traditions of patient-centred, person-centred, and humanistic care, each of which sought to reorient medicine toward the needs, values, and preferences of the individual. However, these terms have often been reduced to managerial metrics or biologised, such that "personalized medicine" has come to refer to treatment based on the genetic profile of the person affected rather than to their personhood.[14–17] We adopt for this Commission the term human-centred care to reclaim its broader moral and systemic scope. It reflects the clinical relationship and the organisational and political conditions that shape how cancer care is delivered, experienced, and valued. Once core to medicine, qualities such as dignity, respect, and self-determination have been increasingly displaced by economic and bureaucratic logics, with dehumanisation often arising less from intention than from routinised processes.

In this Commission we also examine how the language of cancer care reflects and shapes value systems. Terms such as "financial toxicity" and "time toxicity" have gained traction in recent years and were introduced in oncology literature to draw explicit parallels with treatment toxicities, underscoring that cost and burden-related harms are clinically meaningful adverse effects of cancer (INSERT NBP REFS). The term financial toxicity is now widely used by patients, clinicians, and researchers, and measured through validated instruments such as the COST/FACIT scale, which capture both objective financial burden and subjective financial distress. However, to avoid any unintended connotations, we note that this Commission uses the term "financial toxicity" interchangeably with "financial hardship" and "financial distress," recognising all as descriptors of the economic and psychosocial impact of cancer. Our framing emphasises that these costs and burdens stem primarily from the way care is priced and financed, which compounds patient and household vulnerabilities. We revisit this terminology in the Economics section, where we discuss how financial and time burdens reflect broader system-level value failures.

As this Commission seeks to re-centre the human experience in cancer care, we have also been deliberate in our use of terms such as "person living with cancer," "people with lived experience," and "patient." We recognise that language carries meaning beyond clinical precision, and that the choice of terms reflects broader ethical and cultural values. When referring to individuals in their full social and existential contexts, including their roles, identities, and lived experiences of illness, we use "person" or "people living with cancer." This

framing affirms the agency, complexity, and humanity of those affected. The term "patient" is retained in contexts related to clinical encounters, health systems, or institutional settings, where it remains a widely understood and pragmatic term. Where appropriate, we also include "people with lived experience" to acknowledge those who have directly navigated cancer care systems, including survivors and caregivers. These choices aim to reflect the diversity and dignity of individuals affected by cancer while maintaining clarity.

Avoidable suffering in cancer care is widespread and multifactorial. Across diverse contexts, people with cancer face barriers to timely access, inadequate pain and symptom control, care fragmentation, and insufficient psychological support. In many settings, health professionals receive little formal training in communication or emotional care, and system-level indicators rarely incentivize relational skills. In resource-constrained contexts, these challenges are compounded by underinvestment in cancer care, equipment shortages, workforce constraints, and late-stage presentation of disease, all of which contribute to unnecessary death and prolonged suffering. Palliative and psychological care are among the most scalable and cost-effective interventions in these settings yet remain unavailable to most of those who need them. In this Commission, we also distinguish between supportive care and palliative care. Supportive care is a more overarching term that encompasses services that help people manage treatment side effects and sustain quality of life throughout the cancer journey, while palliative care is a specialised approach that addresses multidimensional suffering, especially in advanced disease.

The effects of conflict, displacement, and system fragility further amplify these gaps. Over two billion people now live in fragile or conflict-affected settings, where the challenges of delivering timely, coordinated, and humane cancer care are particularly acute.[18] In these environments, the human quality of care – attentiveness, dignity, relational respect – is often the most feasible and most valued by patients. While most dramatically evident in these settings, these dynamics are not confined to conflict zones. In high-resource, conflict-free settings, many patients also report feeling emotionally abandoned by systems designed to optimise throughput rather than presence. The providers of human-centred health care have often become demoralized and accepting of the inadequacy of resources in this area, despite their low cost and substantial benefit - as if this were an inevitable unchangeable reality, rather than a consequence of the value systems of decision-makers. This acceptance risks normalising systemic neglect rather than recognising it as a product of institutional value systems.

This Commission also explores how economic structures and ideologies shape the perceived value of care. The commercialisation of cancer has generated significant revenue for innovation, particularly in diagnostics, pharmaceuticals, surgery, and radiotherapy. The consequent financial logics of modern health systems can distort research priorities, clinical attention, and the system of values that shape decision making and resource allocation. Indeed, in some institutions, commercialisation itself has become a metric of scientific accomplishment. Interventions that do not generate revenue – such as communication, psychological support, or early palliative care integration – are consistently under-resourced and under-recognised. This pattern demonstrates what has been described as the broader corporatisation of health systems, in which ownership and control are increasingly consolidated under profit-driven entities, often at the expense of patient and community wellbeing.[19] This reflects a deeper commodification of care, where market utility increasingly outweighs human or ethical significance. As the *Lancet Commission*

on Culture and Health (2014) noted, health systems are not value-free, but are shaped by cultural norms, political priorities, and economic incentives that determine what kinds of care are recognised, funded, and delivered.[2]

This Commission begins by examining three interrelated areas where the human crisis is most acutely felt: the delivery of cancer care, the inclusion of mental health in cancer control, and the integration of palliative care. We then turn to the economic, educational, and research structures that underpin these failures, drawing on data and lived experiences from both high- and low-resource settings. While we recognise that the human dimensions of cancer care span the entire continuum – from prevention through end-of-life and survivorship – this Commission gives particular attention to the experience of advanced disease. This focus reflects both the magnitude of suffering in later stages of disease and the disproportionate structural neglect faced by those with complex, life-limiting conditions. Advanced cancer care often lays bare the systemic failures of compassion, coordination, and relief of suffering, making it a critical lens through which to understand broader dysfunctions. Across diverse settings, we analyse how systems of value shape whose suffering is recognised, whose needs are addressed, and what forms of care are counted.

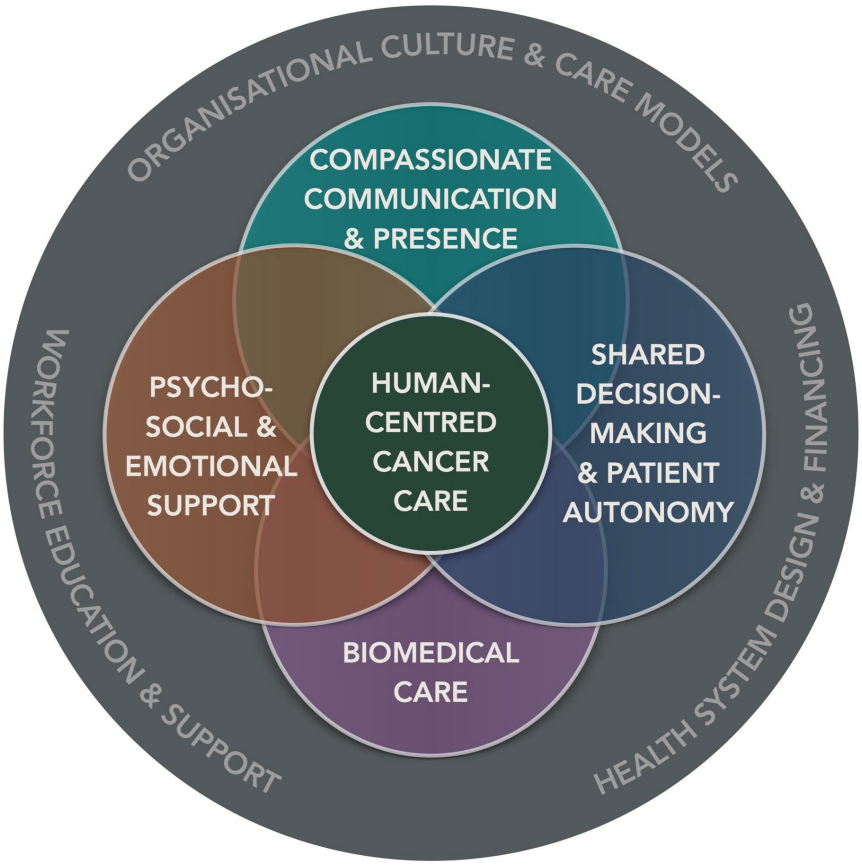

Figure 1: The Core Dimensions of Human-Centred Cancer Care
This image illustrates the central role that human-centred care in oncology should have, influenced by biomedicine, compassionate communication, shared decision-making, and psychosocial and emotional support. These domains

are embedded within broader systems of organisational culture, workforce education, and health system design – each of which must align to enable relational, dignified, and human-centred cancer care.

The Human Crisis in Cancer Care

While the biomedical capabilities of modern oncology have expanded, the systems that deliver cancer care have struggled to preserve the relational, emotional, and ethical dimensions of medicine. Despite widespread examples of compassionate and attentive care, what patients and families across global contexts encounter too often are environments defined by speed, specialisation, and structural detachment. Patients and families continue to report being unheard, unsupported, and, at times, actively harmed by care structures that prioritize technical precision over human presence. These are not the failures of individuals, but rather of care systems designed around efficiency and disease metrics rather than presence and meaning.

In the following three sections, we explore how systemic design choices shape the human experience of cancer care. Focusing on care delivery, mental health, and palliative services, we show how structural decisions across these domains either support or erode human-centred approaches, reflecting a broader undervaluation of relational and existential dimensions of illness.

Although its manifestations vary across contexts, a shared pattern has emerged in modern cancer care: as systems have become more specialised, commercialised, and metric-driven, they have become less focused on the person. This shift is a consequence of deeper structural forces that create economic disincentives, gaps in the human-centred workforce, and persistent biomedical reductionism, mental health stigma, and discomfort with death and dying. As a result, the absence of human-centred care is particularly problematic in the care of people with advanced disease, whose needs span far beyond disease control and who are most vulnerable to the cascading effects of fragmented cancer care.

We examine dehumanisation in cancer care through patient and caregiver experiences, drawing on evidence across diverse geographies. The analysis considers both high- and resource-constrained settings, highlighting unequal distributions of innovation and suffering as well as the shared imperative to rehumanise care.

What follows is not a critique of technology, scientific progress, or biomedical intervention, but an argument for balance. Caring for people with cancer requires more than treating disease, and compassionate care should not depend on the instincts of individual clinicians. Rehumanising cancer care will require structural, cultural, and institutional change grounded in the recognition that compassion, presence, and connection are essential elements of quality, equity, and trust in therapeutic relationships.

Dehumanisation in Cancer Care Delivery

Biomedical Progress, Human Cost

There have been exceptional advances in cancer control in early detection, targeted therapies, and in the creation of individualised treatment protocols. These scientific gains have significantly improved survival in many cancers and have redefined treatment paradigms. However, as modern oncology grows more precise, a deep and disquieting paradox has emerged: the experience of being treated for cancer has, for many, become less personal and more fragmented .[20,21] Patients frequently describe feeling reduced to numbers, their personhood eclipsed by tumour types, genetic markers, and eligibility checklists.[22,23] Families too often report distress from both the disease and the healthcare systems that fail to acknowledge their needs and values.[21,22] Attentive, compassionate care exists in all settings, but remains inconsistently delivered.[24–26] Patients who are health-literate, well-resourced, or persistent may be better positioned to access supportive services, while others fall through systemic gaps. This inequity arises from a failure to embed human presence and emotional support as routine elements of care delivery, held to the same standard of quality and consistency as biomedical intervention.

At the heart of this paradox lies a crisis of human connection. Cancer care today excels at targeting disease but struggles to care for the person with the disease. In high-income contexts, the complexity of highly specialized, multi-site care frequently comes at the expense of communication, continuity, and dignity.[27–29] In lower-resource settings, patients often face systemic neglect: limited or no access to treatment, late-stage diagnosis, and social stigma surrounding palliative care and dying.[30–32] Across all contexts, dehumanising care – whether through indifference, discrimination, or the structures of care – has been shown to worsen emotional, physical, and clinical outcomes.[33–35] Even in systems under strain, patients consistently recall moments of empathic connection: a gesture, a look, or a few words that validate their suffering. While clinicians are pressed for time in many settings, what may not be recognised is that empathy is not determined by the duration of the encounter but by the presence of the clinician.[36]

Personalisation Without the Person

In contemporary oncology, the term ‘personalised medicine’ has come to refer primarily to precision medicine – treatments tailored to the unique genetic and molecular profiles of individual tumours. While this model has led to important advances in targeted therapies, it is a form of personalisation that is grounded in biology rather than biography. What was once linked to holistic care is now defined by cellular traits rather than by lived experience. Patients undergoing advanced genomic profiling may value the potential benefit of such information, but struggle to reconcile their molecular classification with their personal illness narratives.[33,42]

This narrowing of focus is especially evident in high resource contexts, where technological sophistication and clinical subspecialisation have not always translated into improved human experiences of care. Several studies show that increased automation, economic pressures, and bureaucratic demands have eroded clinician-patient time, strained communication, and contributed to the emotional detachment of clinicians.[22,43,44] Patient satisfaction, however, is strongly linked to the perceived presence of compassion, timely information, and empathic listening – particularly from nurses, who often serve as the most consistent point of contact.[29]

Patient-reported experience measures (PREMs) suggest that many patients feel "processed" rather than cared for. Across Organisation for Economic Co-operation and Development (OECD) countries, PREMs often reveal gaps in communication, dignity, and shared decision-making, even where clinical outcomes are strong.[5,45] In one German study using a validated cross-national PREM tool, nearly 20% of cancer patients reported not being involved in care decisions to the degree they wished, and over 25% expressed uncertainty about which clinician was responsible for their care.[46] System-level policies that emphasize throughput, procedural intensity, and survival outcomes have sometimes led to routinized interactions that reduced patients' sense of dignity and agency.[28] While such indicators are vital for monitoring the epidemiological and technical dimensions of cancer control, they offer little insight into whether patients feel seen, heard, safe, or supported. By omitting measures of communication quality, emotional wellbeing, financial wellbeing, relational trust, and caregiver burden as quality indicators, many frameworks obscure the outcomes that matter most to patients.

Dehumanisation as Absence

In lower resource or conflict-affected contexts, dehumanisation arises less from the lack of human connection than from systemic absence: lack of proximate services, medication shortages, long travel times, unaffordable treatment, and stigma about cancer and dying.[47,48] These conditions make it difficult for patients to reach the point where relational care can occur. For example, many patients in low- and middle-income countries experience all three levels of care delay: delayed help-seeking, delayed arrival at a facility, and delayed diagnosis/treatment.[49] Delays are shaped by financial constraints, limited infrastructure, and sociocultural stigma.

The consequences of the structural absence in this context of care are not conceptual; they have measurable clinical consequences and are keenly experienced at the patient level. In lower-resource settings, cancer patients often receive care at advanced stages due to persistent barriers to timely access to medical services and diagnostic investigations and treatment in specialised cancer centres.[49–52] For example, quantitative data from Northern Tanzania show that nearly 80% of breast cancer patients present with Stage III or IV disease, with over half citing cost or distance as reasons for delayed care.[53] These delays increase cancer mortality: as patients wait – whether due to logistical, financial, or systemic barriers – the disease progresses, often moving from potentially curable to incurable stages, amplifying distress and foreclosing treatment options.[53,54] Such delays deepen stigma, uncertainty, and fear.

The concept of "time toxicity" – the cumulative burden of treatment time, travel, coordination, and time spent dealing with treatment side-effects – acts as a measurable indicator of patient suffering, particularly for those without logistical or caregiving support.[55] This construct has emerged as a pragmatic, patient-centred framework to quantify a hidden burden of care, particularly in advanced cancer, where small survival gains may be offset by significant time lost to treatment. Time toxicity could be assessed as a complementary endpoint in clinical trials and

care planning, helping patients to make informed treatment decisions that take into account how they wish to spend their remaining time.[55]

Health Systems Fragmentation and a Workforce Without Support

Across income contexts, fragmented health systems emerge as a primary structural cause of dehumanization. When essential services are absent or disjointed, and when patients navigate systems that neither recognise their suffering nor support their needs, they may feel treated as logistical burdens instead of as whole people.[18,47,48] In conflict zones, dehumanization of this kind reaches its most extreme form. War zones create new "therapeutic geographies," where patients traverse dangerous borders to access fragmented care, facing surveillance, denial of entry, or abandonment along the way.[56,57] A study of Afghan cancer patients treated in Pakistan found that more than half presented at late stages and a similar proportion were lost to follow-up.[58] Such fragmentation of care reduces coordination, undermines trust, and burdens patients with the task of managing their own care pathways.[59,60] There may also be a cost to human life. In one meta-analysis, fragmented care systems were associated with lower survival and increased complication rates, even when adjusted for disease stage and comorbidities.[61]

Disparities in treatment access are structured by race, gender, geography, and income. Studies show that women, racial minorities, and patients with low socioeconomic status report longer diagnostic delays, reduced communication quality, and limited access to high-performing cancer treatment centres.[62–64] In England, for example, significant differences persist in diagnostic timelines between the most and least deprived populations, despite national policy efforts to improve equity.[65]

Efforts to reduce this fragmentation through relational, continuity-based models have often stalled in practice. Despite the well-documented benefits of patient navigation – especially for underserved populations – widespread implementation faces systemic barriers. Our review of national cancer control plans found that while most mention patient navigation, few extend this to palliative or survivorship care, and even fewer integrate financial navigation. Key challenges include the lack of dedicated funding, limited institutional buy-in, undefined professional roles, weak referral mechanisms, and insufficient training. Underpinning many of these issues is the persistent undervaluation of patient navigation itself—a model based on relational, longitudinal support that is often non-billable and therefore deprioritised in systems that reward and remunerate technical interventions over person-centred continuity of care.[66]

Health care workers also report emotional disengagement when the health care system does not consider the emotional toll of caregiving on them. Such detachment – described as "defensive dehumanisation" - was particularly evident during the pandemic when the loss of human connection for physicians, nurses, and other health care providers resulted in high rates of burnout.[67,68] Defined as a work-related syndrome characterized by emotional exhaustion, a loss of empathy and reduction in the personal sense of accomplishment and effectiveness, burnout in health care providers has been associated with worse clinical outcomes.[69] In oncology services, overburdened providers may reduce patient encounters to clinical transactions, limiting opportunities for relational engagement.[70] In such an impersonal system, overstretched staff risk

becoming desensitised, and patients are left to endure humiliation in silence, clinging to treatment as their only resource.

Patient Story: Inhumane Treatment During Radiotherapy

Carlos, an 80-year-old professor, was diagnosed with locally advanced prostate cancer and treated at one of the largest public cancer centres in Mexico. Since beginning radiotherapy, his life and that of his wife have been completely disrupted. Each day, he must arrive at 7:30 AM for an 8:00 AM appointment, prepared with an empty bowel and a full bladder, or risk being rescheduled.

The waiting room is crowded, and his wife, a 70-year-old woman with back problems, is often told by the clerk, "seats are for the patients," and forced to stand. Periodically, a loud speaker orders patients to "start drinking water." Carlos anxiously listens for his name, then gulps. a full litre of water within 10 minutes and waits, holding his bladder until called.

During simulation, the medical team determined that Carlos' bladder took 90 minutes to be ready. By day nine of radiation, he struggled with urgency after only 30 minutes. Encouraged by his daughter, he approached the control room to explain . That day, a technician allowed him to go in early, warning: " if your bladder is not full, you will lose today's session." Carlos received the radiation just in time, although he later admitted that a few drops escaped on the bed.

The next day, he faced the same struggle. When he again asked to go in early, another technician dismissed him: "it's too soon, you have to wait." He tried to hold on, desperate not to miss treatment. When he was finally called in, lying on the radiation bed, he could no longer endure it and urinated on the table. The technician expressed annoyance. Carlos apologized, humiliated and disempowered. He dreaded the thought of seven more days like this – seven more days of urgency, indifference, and the profound loss of dignity.

Carlos' experience is not unique. It reflects the systemic reality for many cancer patients receiving radiotherapy in saturated public institutions, where healthcare workers – overwhelmed by system pressures - can become desensitised and treat patients as tasks rather than people. Disempowered, patients endure this systemic and inhumane treatment because it is the only way to access the biomedical care they need.

Human-Centred Care and Artificial Intelligence

Artificial intelligence (AI) applications are beginning to reshape oncology care delivery. Justified concerns persist that AI may depersonalise medicine or erode trust, and it is premature to assess the overall impact of AI on health outcomes. Yet, early evidence suggest that, when carefully designed and thoughtfully deployed, these tools can complement rather than replace human connection by relieving clinicians of documentation overload and by facilitating access, translation, and triage.

One of the most immediate and impactful uses of AI in oncology practice is in automating clinical documentation and administrative tasks. Contemporary oncology practice is shaped by an overwhelming volume of data entry, record-keeping, and communication management - tasks that often take precedence over direct patient interaction.[71] AI-powered transcription and coding tools may help to restore time for therapeutic encounters. Early reports suggest that such tools may also reduce the perceived emotional distance created by screen-focused care and allow for more sustained presence during clinical encounters.[71]

AI is also being tested to improve patient communication, including conversational interfaces and translation tools for linguistically marginalised populations by answering logistical questions. [72,73,74] Studies in psychotherapy and behavioural health settings suggest that well-designed chatbots can evoke meaningful emotional engagement, with some users reporting a sense of being heard or understood by the system.[75,76] [77] Psychosocial care researchers have also observed that conversational AI systems may help some individuals articulate difficult feelings in advance of clinical visits or in between sessions, but always as a supplement to – not a replacement for – trained professionals.[75,76] However, concerns remain that AI-enabled "artificial empathy" may oversimplify or distort the relational aspects of care or allow providers to delegate human connection to technology. Empathy in cancer care is not simply a verbal exchange but an embodied practice shaped by social relationships, context, and trust. Early evidence suggests that AI tools can mimic empathic responses, they may fall short of the depth and authenticity required in human encounters, underscoring the need for cautious evaluation and regulatory oversight (Koranteng et al., 2024).

The integration of AI into care delivery must be approached with caution and guided by ethical frameworks. Without attention to values, design transparency, and patient input, such tools risk introducing new asymmetries or entrenching existing ones. Systems that incorporate AI may lower barriers to access but raise concerns about safety, bias, and the risk of supplanting genuine human contact. Regulatory scholarship has likewise pointed to the need for AI evaluation to encompass upstream factors such as data governance, consent, and the social assumptions embedded in design.[79]

Within the oncology setting, digital technologies should be viewed not as replacements for the therapeutic alliance but as structural supports that enable it. Their potential lies in removing procedural and linguistic barriers that obstruct human connection - not in simulating human empathy. Ongoing research is needed to evaluate such effects and to ensure that AI is used to enhance rather than to minimise human suffering.

Rebalancing Cancer Care for the Whole Person

A growing body of evidence demonstrates that compassionate, human-centred models of care are both ethically essential and clinically effective. Compassion is consistently linked with lower distress, better adherence, and improved symptom control, and patients who perceive compassionate care are more than twice as likely to rate their care as excellent.[37,3880] These findings are echoed across health systems: in the NHS Cancer Patient Experience Survey, conducted annually with over 70,000 respondents, perceived empathy, involvement in decisions, and relational continuity consistently outperform technical success in driving overall patient satisfaction.[39]

The capacity for compassion is shaped – and often constrained – by system design. Oncologists and other clinicians may want to provide empathic, attentive care but work in environments that do not allow them to do so without personal or professional cost. Time pressures, administrative burden, and emotional fatigue are common features in high-throughput cancer systems.[68,69] To rehumanise care sustainably, empathic care must be understood as a collective and system responsibility rather than one that depends on individual inclination.

The dehumanization of cancer care is neither accidental nor inevitable. It is the consequence of system designs that prioritize throughput, specialization, and biomedical metrics over human connection, equity, and dignity. The challenge ahead is to integrate scientific progress within a framework that recognizes illness as more than molecular malfunction. Treating cancer care must also mean witnessing pain, upholding autonomy, and restoring the centrality of the patient's experience. Rehumanizing care is not a luxury – it is a clinical, moral, and systemic imperative.

Suffering in Silence: The Burden of The Mental Health Crisis in Cancer Care

A Systemic Blind Spot in Cancer Care

Mental health care remains one of the most consistently neglected dimensions of oncology worldwide, fragmented across every phase of the cancer journey. Globally, cancer care systems continue to prioritize molecular precision over relational care. Psychological distress is a treatable and prevalent component of the cancer experience,[81] but it continues to be overlooked – often with devastating consequences. Mental health challenges in cancer span a broad continuum – from existential suffering and grief,[82] to diagnosable psychiatric disorders, such as major depression, anxiety, post-traumatic stress disorders, and, in some cases, psychosis.[83] This distress affects patients, caregivers, and family members. Nevertheless, mental health remains a peripheral concern in cancer policy, research, and clinical practice, representing a critical gap in comprehensive cancer care.[84]For many patients, this gap is not abstract. It is the lived experience of being unseen, of suffering silently in systems focused only on the tumour and not the person.

Patient Story: Distress Screening Alleviated a Spiritual Crisis
Zahra was a 34-year-old woman, undergoing chemotherapy for breast cancer. Mastectomy left her feeling insecure about her appearance, and she had not told her family and friends about her diagnosis, feeling the need to look as if she was doing well. When she completed a newly implemented emotional distress screening tool at her last visit, she checked off that she was having frequent suicidal thoughts, immediately flagging clinical assessment by the nurse. She disclosed that she had a history of 4 suicide attempts in the past and a specific plan to overdose now but was concerned about how her family and friends would perceive her death. Her oncology team was unaware of this as the clinic appointments had focused on cancer treatment only. The nurse connected her to a psychologist, who offered support and encouraged admission to hospital for treatment. Zahra subsequently felt much better and said the distress screening process made her "feel loved for once by a healthcare provider".

Yet, despite international endorsement of emotional distress as the 6th vital sign,[85] global uptake of screening for emotional distress remains inconsistent or absent,[44] particularly in low resource settings.[81] While tools such as the National Comprehensive Cancer Network Distress Thermometer and other screening tools are widely available, they are inconsistently implemented, referrals are infrequently made based on their results, and systems lack sufficient personnel or follow-through to respond adequately.[86–89]

Mental health care in oncology can be delivered by a range of providers, including oncologists, nurses, social workers, psychologists, psychiatrists, and, increasingly, trained lay providers – especially in lower- and middle-income countries.[34] Yet, integration of mental health care in cancer care remains fragmented and inconsistent.[90] Contributing factors include widespread stigma surrounding emotional suffering,[91,92] a workforce unprepared to manage psychosocial needs, low policy prioritisation,[93] and entrenched structural disincentives such as financing models that undervalue emotional care.[94] These issues persist across the spectrum of income contexts, though their manifestations differ by geography and health system structure.
Evidence for the effectiveness of pharmacotherapies for emotional distress in cancer is sparse,[43] but a wide range of psychological therapies have demonstrated efficacy in improving quality of life and reducing distress among patients with cancer, including cognitive behavioural therapy, Meaning-Centred Psychotherapy, Mindfulness-Based Stress Reduction, and supportive-expressive psychotherapy .[81,83,95,96] Cognitive behavioural therapy significantly reduces anxiety and depression among breast and colorectal cancer patients,[97,98] while Meaning-Centred Psychotherapy enhances spiritual wellbeing and reduced hopelessness in patients with advanced cancer.[96] Mindfulness-based interventions strengthen coping skills, particularly in survivors facing recurrence fears.[99] Supportive-expressive group therapy improves social functioning, especially in those with metastatic disease.[100–102]

These psychotherapeutic approaches are effective across the cancer continuum and adaptable to high- and low-resource settings. Notably, low-intensity interventions delivered by non-specialist providers – such as psychoeducation, behavioural activation, and problem-solving therapy – have been shown to reduce anxiety and depression symptoms, particularly when supported by training and supervision frameworks.[103,104] Despite this robust evidence base, however, such interventions are rarely embedded in routine oncology care pathways. Systemic underinvestment and rigid hierarchies continue to devalue relational care, partly because its outcomes are measured less in tumour response than in human dignity and wellbeing.

Access to psychosocial support is often limited in lower-resource settings, where infrastructure is sparse, mental health services underfunded, and the predominant focus of cancer care remains on curative treatment.[81,105] The lack of trained providers, cultural taboos, institutional neglect, and the deprioritisation of supportive care contribute to this gap. The result is profound, unacknowledged suffering – spiritual, social, and existential – that often goes without support or intervention. Addressing this burden requires workforce and infrastructure investment and recognition that psychological suffering in cancer is a health inequity.

When relational aspects of care are excluded from formal monitoring, they become structurally invisible. They are not prioritised, funded, or improved. This creates a vicious cycle in which

emotional distress, spiritual pain, and existential suffering are neither named nor addressed and become invisible in clinical care. This invisibility is especially acute in low-resource and humanitarian settings, where failure to measure human outcomes carries particularly grave consequences. In settings of acute scarcity, basic elements of human-centred care – honest and empathic communication, respectful listening, consistency in providers' relationship to patients – can be delivered effectively and at low cost, particularly when embedded within culturally grounded models of practice.[106,107]

However, these gaps in attention to the mental health of people with cancer are not unique to low-resource settings. In well-resourced settings, patients consistently reported on PREMs that emotional support was among the weakest aspects of their care.[103,104,108] These results are consistent across tumour types, treatment phases, and care settings, and suggest a systemic devaluation of psychological health in cancer care.

A central barrier to progress has been the limited visibility of human outcomes in national cancer control strategies. Across many countries, policy documents focus heavily on infrastructure, screening targets, and pharmaceutical procurement, with little reference to emotional support, caregiver burden, cultural safety, or communication quality. A 2023 review of national cancer control plans found that fewer than half explicitly included psychosocial or palliative services, and even fewer articulated concrete mechanisms for implementation.[109] In many settings, this omission reflects a broader tendency to view relational and emotional aspects of care as beyond the remit of state accountability.

Psychological and Emotional Distress as a Global, Preventable Burden

Emotional and psychological distress are not peripheral concerns in cancer care – together, they represent a global and largely preventable crisis of unmet need. Emotional distress refers to the understandable anguish, fear, or sadness associated with cancer, while psychological distress encompasses broader mental health challenges, including anxiety, depression, or suicidality. Studies report that psychological distress affects between 30% and 50% of cancer patients in high-income countries and between 20% and 70% in lower- and middle-income countries.[81,83]

Converging evidence suggests that this may be linked to elevated suicide rates in this population, particularly with advanced cancers in the early stages when distress is highest. A large population-based study in Sweden found that individuals newly diagnosed with a poor-prognosis cancer had a 12.6-fold increased risk of suicide in the first week post-diagnosis, compared to cancer-free individuals, and a threefold increased risk in the first year.[110]

Overall, suicide risk has been found to be 26% higher in individuals with cancer compared to the general population (standardised mortality ratio of 1.85), and to be particularly associated with poor prognosis cancers and those with long-term quality of life impairments. These rates may also be affected by environmental factors. At the same time, patients and family frequently describe profound emotional suffering that may not meet criteria for psychiatric illness but nonetheless undermines quality of life, treatment adherence, and trust in care. Addressing this

emotional burden requires investment in supportive interventions alongside access to formal psychological care.

Symptoms compatible with clinically relevant anxiety, depression, or post-traumatic stress disorder are prevalent among patients with newly diagnosed and recurrent advanced cancer.[111,112] Moderate to severe symptoms of existential distress and death anxiety have been reported in more than 40% of patients with metastatic cancer,[63] co-occurring with mental disorders in 20%.[114] Yet, these forms of distress remain largely invisible in clinical encounters – unassessed, unaddressed, and untreated – and are compounded by unmanaged pain, debilitating fatigue, social isolation, existential dread, and economic hardship, all of which accelerate psychological decline. Timely identification and response can reverse these trajectories.

Despite the existence of effective interventions,[84] emotional distress is routinely dismissed, deferred, or deprioritised. This is due not to a lack of knowledge, but to a persistent failure to recognise and preserve psychological wellbeing as a core priority of cancer care. In many cancer centres, responsibility for mental health is siloed to specialists, rather than embraced as a shared cultural and institutional duty. Yet, patients often recall that moments when they feltmost human in care were when they felt treated with warmth, recognised as individuals, or simply being met with kindness by their primary oncology team. These gestures are not peripheral; they are central to therapeutic experience and inseparable from cancer care and outcomes. Embedding relational care is a modifiable system feature that improves adherence, satisfaction, and safety.

Structural Inequities and Discrimination

Mental health care in cancer is shaped not only by clinical need, but also by broader sociopolitical conditions.[34] Across and within countries, access to psychosocial support is deeply unequal, disproportionately affecting people who are marginalised on the basis of race, ethnicity, religion, gender identity, disability, homelessness, HIV status, or poverty.[34,115] These intersecting disadvantages reduce the likelihood of timely diagnosis and care and heighten vulnerability to social isolation, and contribute to poorer outcomes. In conflict-affected and post-colonial settings, this structural exclusion is often amplified by limited health literacy, legal precarity, and geographic isolation. The intersection of social identity and illness push people with cancer outside of care systems, producing profound suffering and reinforcing a sense of abandonment.[115]

The COVID-19 pandemic further exposed and intensified longstanding inequities in cancer mental health care. Public health restrictions and prolonged social distancing delayed diagnoses and treatment, intensified fear of infection, disrupted access to services, and compounded stress for patients, caregivers, and healthcare providers alike.[68,116,117] As mental health needs surged, the capacity to respond declined.[116,117] Emerging data show that rates of suicide and suicidal ideation increased during this period – a stark reminder of the cost of neglect, and of the urgent need for early and sustained psychosocial support. This is particularly important for those at

elevated risk, such as individuals with advanced disease, those living alone, or those caring for young children.[77,110,117,118] Screening alone has shown limited effect in reducing adverse psychosocial outcomes, unless paired with proactive outreach and structured pathways of support for high-risk groups.

Stigma: The Invisible Barrier

Stigma remains one of the most pervasive and under-addressed barriers to mental health care in oncology. It manifests at cultural, institutional, and interpersonal levels, shaping both patient behaviour and provider attitudes. Stigma about mental health in cancer was first identified in the professional literature over two decades ago;[92] yet research on this topic remains limited, especially in more resource-constrained settings.[119]

While "stigma" is often used as a catch-all term, this construct can be distinguished from other drivers of neglect. In some cases, psychological suffering is met by providers with fear, contempt, or blame – the classic hallmarks of stigma. In other contexts, however, it is minimised as irrelevant or beyond measurement. Even when recognised, some providers see psychological care as outside their remit, reflecting the broader devaluation of empathy, listening, and relational presence within the culture of medicine.

The stigma of cancer and of mental health has multiple harmful consequences. Studies confirm that perceived stigma among cancer patients reduces help-seeking and increases psychological distress.[119–122] In some regions, many patients believe that emotional distress signifies weakness, spiritual failure, or personal inadequacy.[123] However, while cancer stigma has been widely studied, the stigma of mental health in cancer remains understudied and poorly understood, despite its measurable impact on care-seeking behaviours and provider responsiveness.

Persons with cancer who have psychiatric comorbidities face a compounded risk of marginalisation and reduced access to care. Psychiatric comorbidities are associated with delayed detection, reduced treatment adherence, and poorer survival outcomes.[124] However, these overlapping vulnerabilities are rarely acknowledged in clinical guidelines or standard care pathways.[125,126] Data from the Global Cancer Mental Health Survey illustrate this disconnect: 57% of persons with lived experience reported that mental health stigma is common in cancer care, and 64% believe that cultural values influence the engagement of healthcare providers with these concerns. Among healthcare professionals, 53% perceived mental health stigma as high or very high, and 74% reported it affected their willingness to discuss emotional distress.[127,128]

Unless cancer systems confront both social stigma and systemic disinterest in psychological suffering, it will continue to be overlooked – not because it is rare or intractable but because it provokes discomfort or avoidance in providers and is often dismissed outside the scope of cancer care.

A Workforce Ill-Prepared for Psychosocial Needs

Care narratives demonstrate the value of distress screening in surfacing concealed crises such as existential distress and suicidal ideation. However, while screening tools(e.g. the Distress

Thermometer and other brief assessment measures) are widely available, they are inconsistently implemented and often lack the follow-through or personnel needed to respond to them.[86–89] In many contexts, distress screening has become a procedural task, rather than a gateway to support. Without clear care pathways and adequately trained staff, patients who voice emotional concerns are often left without help – a lack of responsiveness that can worsen distress and undermine trust in care teams. These limitations are magnified in low-resource settings, where both screening tools and specialist services are scarce. Screening is a necessary step, but insufficient to improve outcomes, unless paired with system-level readiness to respond.

Even in resource-constrained settings, attentive listening and structured interventions can alleviate distress and restore a sense of personhood. For example, in Uganda, therapists trained in Managing Cancer and Living Meaningfully (CALM) therapy, and evidence-based supportive expressive therapy tailored for advanced cancer, have helped patients move from fear and mistrust toward renewed coping and connection.[82] When providers are trained to listen with intention, even simple interventions can reduce distress and reaffirm humanity.

Among persons with lived experience of cancer surveyed by the Global Cancer Mental Health Survey, 64% reported receiving no psychosocial support from their primary oncology team, and of those, 61% said they would have wanted it. Among providers, 42% lacked training in psychosocial care, and nearly half said training was inaccessible.[129] Nearly 67% cited an insufficient number of mental health professionals for cancer patients, and 18% were uncomfortable providing emotional support.[129] This stark disconnect between what patients need and what systems deliver sustains a culture of unmet need – where emotional care is seen asancillary rather than an ethical obligation. Addressing this mismatch will require coordinated investment in curriculum reform, clinical mentorship, and institutional expectations. Models of care that embed psychological support into multidisciplinary teams – and train all providers with communication and relational skills – are key to shifting the culture of oncology toward one that values psychological wellbeing as fundamental to cancer care.

Systemic Devaluation of Cancer Mental Health Care

Mental health remains systemically marginalised and underfunded in oncology, despite overwhelming support for patients and providers regarding its value. Psychosocial interventions are low-cost and cost-effective, but because they lack profitability and procedural visibility, they are consistently excluded from funding priorities and institutional benchmarks.

National cancer research budgets in the United Kingdom[130] and Canada,[132] allocate only a fraction of resources to mental health care in cancer, if any at all, despite its measurable impact on outcomes. The 2020-2021 WHO global survey on cancer care found that only 46% of countries included psychological, social, or spiritual care in their health benefit packages, with rates as low as 20% in some regions such as South-East Asia.[133] A systematic review and meta-analysis of global antidepressant prescribing practices identified an overall prescription prevalence rate of 15.6%, but significantly less in Asian countries at 7.4% (Insert Madeline REF). Some centres in Japan, have an antidepressant prescription rate of only 1.1-1.3% largely prescribed by medical practitioners for cancer-related physical symptoms rather than depression (Insert Madeline REF). In Ontario, Canada, psychosocial oncology was identified as a high-

value service in a 2017 Auditor General report.[134] However, a 2019 follow-up report found that fewer than half of the related recommendations had been fully implemented, with no long-term financing strategy in place.[135]

A 2023 review by the International Cancer Control Partnership found that psychosocial care was explicitly included in only 28% of national cancer control plans and was almost absent in low-income countries.[136,137] Provisions for caregiver support, survivor reintegration, and equity-based strategies were similarly inconsistent. Even where strategic plans exist, implementation remains hampered by workforce shortages, weak accountability mechanisms, and competing policy priorities. This omission reflects a biomedical value system that consistently relegates emotional suffering to secondary importance. Reversing this pattern is essential to deliver care that recognises the full spectrum of the cancer experience.

Economic Barriers to Mental Health Care Access

Financial toxicity refers to the adverse financial effects of treatment,[138] which includes out-of-pocket health expenditures, direct treatment costs, and the subjective distresslinked to them.[139,140] The impact of financial toxicity extends beyond the individual patient and affects families, caregivers, and dependants, often undermining household stability and long-term wellbeing. In the United States, for example, cancer-related financial hardship has been linked to personal bankruptcies and housing loss, particularly among those with advanced disease.[141–143] These outcomes represent structural forms of suffering with intergenerational consequences.

Beyond material insecurity, financial toxicity creates additional barriers to psychosocial care. In many countries, insurance or universal health coverage includes psychiatric care for severe mental illness but excludes coverage for low- to moderate-level distress, which is the most common presentation in cancer.[112] This creates a two-tiered system in which those most likely to benefit from timely psychosocial support are least able to access it.

Evidence demonstrates that non-specialist providers can effectively deliver low-intensity psychological interventions,[82] yet these services are rarely reimbursed. In the Global Cancer Mental Health Survey, 44% of persons with lived experience cited financial barriers as a reason for not receiving mental health care.[115] Thus, access is shaped as much by economic position as by clinical need, creating profound inequity. Physician reimbursement models similarly devalue time spent on communication and counselling,[85] reinforcing a procedural bias that sidelines emotional care. In many jurisdictions, time spent listening, validating, or addressing existential suffering is remunerated poorly or not at all – sending a message about which kinds of care are valued and which are ignored.

Until mental health is embedded in reimbursement frameworks, research funding, and cancer quality metrics, its delivery will remain piecemeal and precarious – despite compelling evidence of its cost-effectiveness, acceptability, and impact.

Rehumanising Cancer Systems

Mental health is not peripheral to cancer care; it is a fundamental determinant of clinical outcomes, human dignity, and equity. Across income settings, people with cancer experience psychological suffering that is often preventable or treatable yet routinely overlooked. The result is a care system in which distress istoo often unseen, support is inconsistent, and suffering is compounded by neglect.

Reimagining cancer systems to centre psychological wellbeing requires coordinated action : embedding mental health in national cancer plans, integrating services across care pathways, reforming education and funding structures, and challenging the cultural norms that marginalise emotional suffering. This is not an aspirational vision, but a necessary correction to a system that too often treats the body while neglecting the person with their fears, hopes, grief, and relational needs. Nowhere is this more urgent than at the end of life, where the absence of psychosocial care becomes most visible and where the principles of palliative care provide a path forward..

The Human Crisis in Palliative Care

A Proven, Yet Underutilized Tool Against Suffering

Palliative care is a team-based, interdisciplinary approach that attends to the physical, psychological, social, and spiritual dimensions of suffering.[26,144,145] It includes pain and symptom management, emotional and existential support, advance care planning, and, where appropriate, guidance around end-of-life decisions.(remove 130, 148, ON)[130,146–148] In tertiary settings, palliative care teams often coordinate across specialties, conduct capacity assessments, liaise with psychiatric or legal services, and support patients to die in the setting of their choice.[26,149] Oncology guidelines explicitly recommend early integration of palliative care into cancer care.[150] While not limited to terminal stages, palliative care becomes particularly vital when curative treatments are no longer effective, helping patients and families navigate uncertainty and maintain dignity.

Palliative care is one of the most effective, scalable, and affordable interventions in cancer care. It improves quality of life, mitigates symptom burden, reduces avoidable hospitalizations, and supports complex decision-making for patients and families facing advanced illness.[110,143–145] Yet, despite decades of global advocacy and a robust evidence base,[152–156] palliative care remains inadequately integrated into most cancer systems, particularly in lower-resource settings but also across high-resource settings.[26,157] This failure does not result from financial constraints: indeed, palliative care has been associated with cost savings due to the reduced use of costly tests and treatments at the end of life.[158–161] Rather, it reflects a persistent structural neglect and entrenched biomedical bias. The result is a global epidemic of unnecessary suffering – a failure of vision, not just resources.

From Grassroots Ethic to Medicalisation

Palliative care began as a grassroots movement in the 1960s and 1970s, rooted in a rejection of biomedical reductionism.[162,163] Its pioneers insisted that dignity, emotional support, and spiritual

well-being are as important as disease control, but its acceptance in mainstream medicine was limited by the lack of an evidence base.[26,164] Over time, a rigorous body of evidence for the benefit of early palliative care integration has been developed and outpatient services have become increasingly common in oncology centres, particularly in high-resource settings.(Insert Camilla Refs) Access to palliative care has expanded significantly over the past several decades, supported by advocacy, research, and system-level policy gains. However, it still occupies a paradoxical space today: recognised as essential yet frequently marginalised, deeply needed yet inconsistently delivered.[149,167]

This shift in palliative care from grassroots activism to a formalised, institutionalised practice has brought important benefits – chief among them, greater clinical legitimacy, improved access, and the incorporation of palliative care into major cancer care guidelines (CITE). However, a recent study assessing the state of palliative care development among 201 countries and territories found that only 12% were at an advanced level of development (Insert Trpodoro Ref) At the same time, some stakeholders have raised concerns that its integration within biomedical systems has created new tensions.

In randomised trials and programme evaluations across diverse settings, early palliative care has been shown to significantly reduce depression, traumatic stress, and psychological distress among patients and caregivers.[160,168–173] However, while holistic care remains a central tenet of the palliative care ethos, systemic constraints – such as limited training in psychological care, time pressures, or reimbursement structures – may narrow what is delivered in practice. Further, the emotional, existential, and social dimensions – the very aspects palliative care was created to address – are now perceived by some as underfunded or overlooked compared to the physical and biological dimensions of palliative care.[168,169] The integration of palliative care has also been constrained in many health systems by biomedical logics that prioritise measurable outcomes, procedural interventions, and cost-efficiency.[149] This narrowing of scope reflects broader structural dynamics: the tendency of modern health systems to assimilate person-centred services into procedural workflows, where time, attention, and listening are undervalued currencies.[26]

Unequal Access in High-Resource Settings

There have been substantial advances in palliative care in high-resource settings, where it is becoming increasingly though inconsistently integrated into comprehensive cancer centres (Hui, 2015; Berendt, 2016). This integration is supported by workforce development, formal clinical pathways, and evidence-based guidelines.[26,177] National audits such as the UK's VOICES survey and the US CAHPS Hospice Survey show high overall satisfaction with specialist palliative care services.[178] However, these figures mask persistent inequalities in access, which persist across cancer types and sociodemographic characteristics.

In high-resource settings, patients with cancer are more likely to access palliative care than those with other illnesses.[179,180,181] However, while palliative care has become much more available to patients with solid tumours – especially breast, prostate, and lung cancers – those with haematological malignancies or multimorbidity often experience delayed or no access at all, despite similar symptom burden.[174,179,180,182]

Disparities in access to palliative care are amplified by fragmented health systems, where palliative services operate in siloes, disconnected from oncology, mental health, and primary care.[149] In the United States, for example, access to palliative care is often tied to insurance status or specific institutional pathways, rather than to clinical need,[183] and patients receiving care in NCI-designated cancer centres are more likely to receive palliative care than those in non-NCI-designated centres.[175] Even where palliative services exist, patients must often navigate what has been described as a complex web of eligibility criteria, referral mechanisms, and cultural or linguistic barriers that hinders care.[184–189]

Studies consistently show that patients from racialized communities, low-income households, rural areas, or without private insurance are referred later to palliative care and receive fewer services.[187–189185–187182–184189–191190–192191–193192–194190–192] In the UK, patients from the most deprived quintile were significantly less likely to receive community-based palliative care, even when accounting for disease severity,[191,192] and in Canada, these patients were least likely to receive palliative care in the last month of life or to die at home.[190] Further, palliative care services tend to cluster in urban academic centres, leaving rural, Indigenous, and socioeconomically marginalised populations with limited or delayed access.[193,194] Structural racism, implicit bias, and language barriers further compound these inequities.[185] Cancer patients without strong family support or who face housing insecurity, mental illness, or substance use are often least likely to receive timely referrals, despite being among those who could benefit most.

Early palliative care has been shown to improve quality of life and other outcomes in patients with advanced disease. However, research has shown that the median time from referral to specialist palliative care to death ranges from 20 to 30 days in high-resource settings, with some studies reporting even shorter intervals.[192190187194195196197195] Multicentre studies in high-resource settings have identified median durations of 6 to 19 days in tertiary hospitals, particularly among patients with haematological malignancies.[196–198] While these short timelines partly reflect clinical realities – such as patients being referred with very poor performance status near the end of life – this does not fully explain the pattern of late referral.

Contributors to delayed referrals include fragmented care pathways, oncologists' discomfort discussing prognosis, and institutional cultures that equate palliative care with abandonment.[199–202] Performance status is a well-established predictor of survival, but its frequent use as a referral trigger often means that palliative care is introduced only when functional decline is already irreversible, leaving minimal time for relationship-building, complex symptom management, or advance care planning. These truncated timelines make it difficult to align care with patient goals, reinforcing the perception that palliative care is synonymous with active dying.[203,204]

Beyond structural and institutional barriers, many palliative care systems in high-resource settings also remain poorly integrated with the broader communities patients live in. Religious, spiritual, and cultural communities – often essential sources of identity, meaning-making, and end-of-life support – are rarely engaged in palliative care or cancer care in systematic ways. Despite the strong evidence for the importance of meaning-making, spiritual wellbeing, and culturally embedded care, the integration of these components remains limited in high-resource contexts.[205–207] The disconnect of these components from other aspects of palliative care may

leave patients without key resources for emotional and spiritual care, particularly among immigrant, diasporic, and Indigenous populations whose support networks often lie outside the healthcare system. This gap overlooks the critical role that faith leaders and community networks play in supporting emotional resilience, psychological healing, and dignity in people living with advanced disease and at the end of life. Greater collaboration with community and faith-based organisations could foster more holistic, culturally responsive models of care and reduce unmet needs in such individuals.

Lack of timely referral to palliative care may contribute to a pattern seen across many high-resource settings, where there is high use in the last weeks of life of systemic therapies and health services (including emergency department visits, hospitalizations, ICU admissions) and a high proportion of deaths occurring in hospital rather than home or in community-based settings.[192,208–210]

Limited Access in Lower-Resource Settings

If access to specialised palliative care in high-income countries is unequal, it is nearly non-existent in many low- and middle-income countries. More than 75% of global cancer deaths occur in lower- and middle-income countries,[213,214] yet fewer than 10% of patients in need in these settings receive palliative care,[215–221] and less than 5% receive specialised palliative care. This gap is the result of systemic failures in integration, fragmented policies, lack of training, and enduring social stigma.[222,223] Services such as pain control, psychological support, and home care are often unavailable, even in tertiary cancer centres in those regions.[81,184,224,225]

Despite strong policy advocacy, many lower-resource settings have not integrated palliative care into their essential health benefit packages or national cancer control.[226] Where national policies and services do exist, implementation is often limited to urban pilot sites funded by NGOs, which are vulnerable to shifts in government and donor priorities.[227] In sub-Saharan Africa, studies show that over 60% of patients present with incurable disease, yet basic pain relief is frequently unavailable.[228] Even countries that have made significant strides – such as India, Uganda, and Malawi – still report limited geographical coverage, shortages of essential opioids, and insufficient trained personnel.[220,229,230]

In many contexts, this vacuum has given rise to organic, culturally grounded alternatives that partially fulfil palliative care functions without being formally recognized as such. Community and family caregiving networks, spiritual leaders, religious rituals, and traditional medicine practices often play critical roles in symptom relief, psychological comfort, and end-of-life care. Faith communities often serve as primary caregivers, offering spiritual guidance and practical support to patients and their families.[232] This integration of spiritual care into palliative services is facilitated through collaborations between healthcare providers and local faith leaders, ensuring that care is culturally sensitive and resonates with the patients' beliefs and values.[233] For instance, hospices in South Africa have incorporated spiritual care into the interdisciplinary teams, recognizing its significance in holistic patient care.[234] Studies of ritual chanting ('Itipiso') and religious practices conduced in Thailand have been shown to improve emotional resilience and reduce anticipatory grief in cancer patients,[172,235–237] while in India and Kenya, practices like

pranayama (breathwork) and Dignity Therapy have enhanced patients' sense of meaning and control at the end of life.[99]

Neglect Amid Affordability

Palliative care is one of the few cancer interventions that is both cost-saving and scalable. Unlike radiotherapy or immunotherapy, it does not require expensive infrastructure, products, or high-tech equipment. Yet, despite its relative affordability, palliative care remains underutilised. This paradox highlights a troubling pattern: even when cost is not a barrier, palliative care is deprioritised because it does not align with dominant biomedical goals of cure, control, and technological progress,[238] and does not generate revenue or profit in the market economy.[239,240] In many settings, particularly those with constrained health budgets, this results in systemic misallocation or wasting of resources: money spent on late-stage chemotherapy or intensive hospital care that offers minimal survival benefit, while basic palliative services remain underfunded.[203,241]

The use of aggressive biomedical interventions of limited therapeutic value and high cost, often associated with diminished quality of life in up to one quarter of people living with cancer in the last month of life reflects both structural and ideological forces.[242] Biomedical culture continues to prioritise cure over comfort, end-of-life care is neglected, and palliative care is misperceived as signalling failure (see Appendix, Figure 1). Even when patients are clearly approaching end of life, the reflexive use of technological intervention is often perceived as fulfilling the obligations of care, while attending to the human experience is overlooked or delayed.

Multiple studies have shown that integrating community-based palliative care reduces emergency department use, ICU admissions, and hospital deaths and improves quality of life.[243,244] Community-based models in such countries as Uganda and India show that scalable, low-cost palliative services are feasible when systems invest in training, supervision, and interdisciplinary collaboration.[245–249] However, health systems in lower-resource settings often allocate limited cancer funds to curative treatment, even in late-stage disease (see Appendix, Figure 1).

Low-cost solutions have been shown to be of value in the provision of human-centred cancer care. Lay and volunteer providers, such as peer supporters, spiritual care workers, and community health aides, can provide essential psychosocial and logistical support, particularly for underserved populations. In some countries, volunteers in palliative care services outnumber paid staff. A UK-wide survey found a ratio of 1.5 volunteers to every professional staff member,[393] while in the Netherlands, some hospices operate with a single paid coordinator and up to 100 volunteers.[394] These volunteers offer practical assistance, as well as social presence and relational continuity. In Belgium, over half of surveyed volunteers had served more than six years in the same setting.[395] Their impact on wellbeing is well documented, with studies showing that volunteers contribute to patient satisfaction, emotional comfort, and quality of life.[396–399]

Beyond traditional volunteer roles, newer models of lay support are expanding. Lay navigators, such as those trained through Canada's Nav-CARE programme, support older adults living with

advanced illness by fostering social connections, improving access to services, and enhancing quality of life.[400,401] Peer supporters, often individuals with lived experience of advanced cancer, provide one-to-one or group-based accompaniment, which has been shown to improve emotional resilience without clinical risk.[402] Death doulas, increasingly visible in diverse care systems, offer non-medical end-of-life support focused on presence, advocacy, and spiritual care. While largely unregulated, their contributions are valued by many patients and families, especially when traditional services fall short.[403,404]

Compassionate community models, in which civic organisations and volunteers co-create palliative cancer support structures, have also demonstrated potential benefit in diverse regions. Although formal evaluations are still emerging, studies suggest such initiatives can improve social connectedness and increase community capacity to support dying and grieving individuals.[405–407] These models challenge the clinical monopoly on end-of-life care and argue for a broader understanding of expertise rooted in social solidarity.

Essential palliative medicines such as morphine are included on the WHO Model List of Essential Medicines.[250] Yet in many countries, access remains obstructed by overregulation, logistical barriers and stigma. Only a fraction of patients in need in lower-resource settings receive adequate opioid analgesia (see Appendix, Figure 1).[251] In countries where opioids are tightly controlled, even trained clinicians may be reluctant to prescribe them, fearing legal scrutiny (see Appendix, Figure 1).

In this context, patients receive neither cure nor comfort. They are subjected to fragmented, high-burden interventions with minimal relief, a phenomenon that represents both clinical futility and moral neglect (see Appendix, Figure 1). This pattern demands a critical reconsideration of what cancer care is meant to achieve. Length of life and quality of life are not opposing goals: for most patients, they are inseparable (see Appendix, Figure 1). Reclaiming the purpose of cancer care means attending to tumour response and to dignity, clarity, and the lived experience of illness.

The Metrics of Mismatch

The absence of robust indicators for suffering, psychosocial wellbeing, and quality-of-life outcomes has contributed to the systemic neglect of the human dimensions of cancer care, including palliative care.[256] Most major cancer centres routinely report only biomedical indicators – such as survival rates, tumour response, or hospital throughput – while overlooking other outcomes that matter deeply to patients and families. This omission distorts institutional priorities, undervaluing compassionate, human-centred care in performance assessments and funding models.[257,258]

To help close this gap, a global measure of "serious health-related suffering" was recently developed by the *Lancet Commission on Global Access to Palliative Care and Pain Relief* to quantify the global need for palliative care and improve policy planning at national and international levels.[226] However, while serious health related suffering is a robust metric for global burden, it does not account for inequities in access and its application is limited to the

global policy level, rather than to local practice .[259] In most cancer systems, clinical success is evaluated using biomedical endpoints, while measures of suffering reduction, relational care, caregiver experience, or the quality of dying and death are absent from institutional performance assessments (see Appendix, Figure 1). As a result, palliative care – for which benefits are primarily experiential – is often rendered invisible in policy and funding decisions.

While tools like PROMs and PREMs (Patient-Reported Outcome and Experience Measures) have been piloted in several high-resource settings,[260,261] they are rarely institutionalized in cancer registries, hospital scorecards, or national quality frameworks. The lack of such outcomes limits transparency, accountability, and innovation in human-centred care. Most validated PROMs and PREMs have been developed in high-resource settings and may not reflect cultural norms or care expectations in lower-resource settings.

Programs that deliver excellent patient-centred care often receive less recognition or fewer resources than those associated with high volumes of curative, procedure-driven interventions such as chemotherapy, surgery, or ICU care.[262,263] The privileging of treatment outputs obscures the value of interventions that alleviate suffering without prolonging the disease trajectory.

Integrating metrics that reflect quality of dying and death, family satisfaction and symptom burden would allow systems to track what matters to patients facing incurable illness. Until these dimensions are made visible and measurable, palliative care – and by extension the human dimensions of oncology - will remain structurally marginalized, despite their sound clinical, economic, and moral rationale.

Reclaiming Palliative Care's Purpose

In systems without regulatory frameworks or incentives for team-based models, integration between palliative care and oncology is often limited,[149] leading to mixed messages for patients, delayed decision-making, and unnecessary suffering.[264] Even in high-resource systems with formal palliative services, coordination gaps persist, where palliative care and oncology may function in parallel rather than in partnership. Such fragmentation can confuse patients, duplicate efforts, and diminish trust. [265]
Studies have shown that when palliative care is embedded in cancer services and supported by policy, it improves quality of life, reduces healthcare costs, and enhances care.[243,244] However, without systems-level change, palliative care cannot fully realise its potential to become an essential component of universal health coverage, to cultivate a robust interdisciplinary and community-based workforce, to ensure equitable opioid availability, or to normalise its value through public health messaging.[266,267] Palliative care offers, not a retreat from treatment, but a commitment to care that honours dignity, connection, and meaning (see Appendix, Figure 1). Above all, palliative care must be understood not as a surrender but as an affirmation of life's full dimensions.

Economic Pressures in Cancer Care: Systemic Constraints & Household Consequences

The Multilevel Crisis of Cancer Costs

Cancer is not only a biomedical crisis but also a profound economic one, exerting immense pressure on households and health systems alike. For individuals and families, the economic impact of cancer begins even before diagnosis and often extends across years of treatment, recovery, or bereavement.[77] Economic pressure directly shapes access to and continuity of care, influencing adherence, outcomes, and long-term wellbeing.[77] In many contexts, families absorb costs that extend far beyond treatment itself, including lost income, transport expenses, and the burden of caregiving. These microeconomic shocks remain largely unmeasured in conventional health metrics, despite their cumulative effect on dignity and survival .[77]

At the macroeconomic level, governments face unsustainable increases in overall health expenditures, often without concomitant investment in equitable financing mechanisms.[268] The economic consequences of these growing costs compromise access to care and deepen inequities between and within populations.[269] In both higher- and lower-resource settings, financial toxicity has therefore emerged as a defining feature of the cancer experience - a systemic marker of inequity that requires both financial protection policies and accountability in cancer financing.[77]

Financial Toxicity & Health-Related Social Needs (HRSNs)

Financial toxicity captures the material hardship and economic disruption that cancer imposes on individuals, families, and caregivers. Across many health systems, this burden arises from cumulative out-of-pocket expenses, indirect costs, and loss of income. Patients who are insured may still face high deductibles co-payments, and the cost of excluded services, such as psychosocial support, home care, or transportation.[270] These financial pressures can lead to delayed or missed treatment and reduced adherence.[271] Financial insecurity also spills into family life, affecting caregivers and dependents and is strongly associated with increased anxiety, depression, undermining treatment continuity and recovery.[271] Studies show that even in universal health systems, financial toxicity disproportionately affects those already structurally disadvantaged - deepening inequities linked to racial or ethnic marginalization, disability, or unemployment.[271]

Patient Story: The Hidden Burdens of Cancer—Understanding Non-Medical Costs and Distress
Maria held the hand of her eight-year-old son Alejandro as they waited for his chemotherapy treatment. However, cancer was only part of their struggle. A single mother who worked as a house cleaner, Maria lost missed wages due to hospital visits leaving her unable to afford the nutritious food that Alejandro needed. She relied on food pantries, constantly worrying if what

she obtained would be enough to sustain Alejandros' health. Falling behind on rent, an eviction notice forced Maria and her children into a cramped apartment with relatives. Weak from treatment, Alejandro had no space to rest, and he and Maria spent hours travelling by on bus to and from the hospital, sometimes cancelling appointments because she could not afford the bus fare and had to cancel appointments. The guilt she felt about these lost treatment opportunities was unbearable. Overwhelmed by the situation, Maria reached out one night to a hospital social worker who arranged transportation vouchers, food assistance, and temporary housing support.

"I was… alone. Being at the hospital, I had to deal with a lot with having to be kicked out from where I used to live, from finding a place to live, while having my son all in hospital at once. It was very hard to find someone to want to help or help with finding resources for myself or my son or my daughter."

In contexts where social protection is limited or fragmented, financial toxicity is more severe. Families in these settings often rely on informal or precarious incomes and have limited social safety nets. Cancer care in these settings often depends on out-of-pocket payments, with potentially catastrophic expenditures.[272] Treatment journeys in these contexts are marked by impossible trade-offs between basic needs and medical care.[272] Non-medical costs, such as travel, housing instability, or childcare are rarely covered by health insurance benefits.[273] These health-related social needs are clinically relevant and directly affect outcomes , but they remain poorly captured in most economic models.[274]

These findings highlight that health-related social needs are central to understanding the true cost of cancer and must be integrated into economic models and policy design. Health systems must work across sectors to incorporate responses to these non-medical drivers of cost, moving beyond narrow cost-containment toward coordinated health-social system strategies that protect households from economic shock.

BOX: Health-Related Social Needs: Hidden Drivers of Financial Toxicity, Distress, and Poor Quality of Life—Evidence from Malaysia and India

Health-related social needs (HRSNs) such as transportation, food security, housing and caregiving supports are often overlooked as essential aspects of cancer care, yet they are central drivers of cancer burden. Their impact on out-of-pocket costs, household stability, and quality of life is rarely measured or addressed, particularly in low- and middle-income countries where social safety nets are weak.

Transportation is one of the most common and under-appreciated health-related social needs of patients with cancer,**[275]** according to a scoping review conducted for this Commission (see Appendix, Table 1). In Malaysia, an upper-middle-income country that has made good progress towards universal health coverage, among 1,190 participants recruited from six hospitals (April 2021 to March 2023), patients made a median of 2 trips per month for cancer care, traveling 40 kilometres per trip and spending 60 minutes. The median monthly out-of-pocket cost for travel was MYR 88 (USD 21), which represented 3.2% of the cohort's median household income. Men, older participants, low-income households, and those with advanced

cancers were particularly vulnerable to higher travel burden. Notably, low-income households spent a significantly higher proportion of their monthly income on travel costs compared to their higher-income counterparts (low-income: 5.4% vs high-income: 0.6%). Using a 10% threshold of monthly household income spent solely on transport, we found that one in five participants (20.8%) incurred costs that could be considered potentially catastrophic to the household, a figure substantially higher in some subgroups, highlighting the risk of deeper financial vulnerability .

Subjective distress was also evident: using the Comprehensive Score for Financial Toxicity (COST) tool, [276] low-income households, rural residents, newly diagnosed patients, and those undergoing radiotherapy reported the highest financial toxicity and lowest quality of life. High transport costs were strongly linked to both outcomes.

In India, 400 patients receiving care at the Adyar Cancer Institute in Chennai (February to March 2023) reported high travel burdens, commuting a median of 164 km and 180 minutes per trip, with a median out-of-pocket cost of INR 500 (USD 5.8). These expenditures reach catastrophic levels across income groups, again underscoring how a single unmet need – transport – can destabilise households.
These findings show that health-related social needs are critical determinants of financial toxicity, and patient wellbeing. Addressing them requires recognition that health systems and disease-directed funding are insufficient. Solutions must involve multisectoral, community, and policy-level partnerships that extend beyond traditional healthcare services and financing.

Universal Health Coverage: Uneven Protection Across Settings

While universal health coverage is a global goal,[277] its implementation in cancer care is variable and inadequate. Coverage for medical bills rarely protects patients from income loss and non-medical costs. For example, patients may be shielded from the costs of chemotherapy yet still face lost earnings, travel and childcare expenses, and paid caregiving needs.[276] In insurance-based systems, patients with complex or rare cancers may struggle with denial of coverage, limited formularies, or administrative delays.[278] Moreover, eligibility for subsidised services may be tied to employment status or geography, creating significant gaps in care. Even in publicly funded systems, access to mental health services, palliative care, and rehabilitation is inconsistent and wait times are long. These systemic shortcomings are exacerbated by the rising costs of new cancer therapies, which place increasing strain on public and private payers.[279]

In many countries, especially those with lower levels of health financing and limited infrastructure, the gap between the promise and reality of universal health coverage is pronounced. Cancer services remain frequently concentrated in urban centres, requiring long and costly travel for rural populations. Even in public hospitals, diagnostic tests, medications, and supportive care often require out-of-pocket payments.[280] Where national health insurance exists, benefit packages may cover only a narrow package of services, excluding many essential elements of cancer care, such as radiotherapy, palliative medicine, or opioids for pain control.[280]

Macroeconomic constraints – debt service, inflation, reduced development assistance, and limited fiscal space – further weaken universal health coverage delivery for cancer (see Box). As a result, cancer control efforts tilt toward regressive out-of-pocket models and delayed care and undermine financial protection.
Coverage for supportive services – including transportation, home-based care, psychological counselling, and caregiver support – should be explicitly incorporated into public health benefit packages and national insurance schemes. Reimbursement structures must reflect the full spectrum of patient needs, including time spent on communication, care coordination, and psychosocial support.[281] Without such reforms, financial vulnerability will continue to undermine the reach and impact of psychosocial and palliative services, even in systems with well-developed oncology infrastructure.

National cancer control plans should define clear minimum standards for the integration of palliative and psychosocial care at every stage of the cancer journey and specify implementation mechanisms with financing and accountability. Countries should invest in scalable care models that include home-based palliative visits, community health worker interventions, group counselling, and culturally adapted therapies . In humanitarian and conflict-affected settings, targeted services can provide a rare sense of coherence and emotional safety.

BOX: Debt, Liquidity, and Healthcare Funding Crisis

Cancer control today is deeply entangled with global fiscal instability. The Sustainable Development Goal agenda is off track, with the poorest countries least likely to meet targets. Post-pandemic recovery has been undermined by financial shocks: the COVID-19 crisis , the Ukraine war, soaring fuel and food prices, and inflation . These "poly-shocks" left up to 74 countries in a low growth, low investment trap, many facing mounting debt and shrinking fiscal space for health. External assistance has also fallen as donor priorities shift toward conflict zones and global public goods such as climate and pandemic preparedness.

The servicing of debt – often consuming more than 20% of government revenues – further crowds out investment in cancer services. Even when capital markets reopen, high bond rates threaten to tip "illiquid" states into insolvency.

This macroeconomic pressure directly undermines the foundations of cancer systems infrastructure, equipment, maintenance, and workforce salaries. Public health expenditure has stagnated at 2-3% of GDP in many settings, eroding progress toward universal health coverage. Social protection models remain weak or absent, leaving households to shoulder the rising out-of-pocket costs for cancer.

Health and cancer care are suffering from later-stage presentation, treatment abandonment, and worsening equity gaps. Workforce attrition compounds the crisis, as stagnant public salaries and degraded infrastructure push cancer professionals abroad or into private markets.

Yet constrained systems also foster innovation. In some contexts, necessity has spurred new workforce models that reject narrow Western approaches to specialisation and accreditation in favour of multi-modality teams adapted to geopolitical and resource realities. Such creativity must be harnessed, but it cannot substitute structural reform.

Cancer cannot be addressed in isolation from the wider debt and liquidity crisis. Without tackling the fiscal constraints that squeeze health budgets, national cancer plans risk becoming aspirational documents with little operational impact. Protecting and expanding cancer services will require coordinated debt relief, innovative financing, and international solidarity, alongside domestic reforms that prioritise equitable access and sustainable investment in cancer systems.

Financial Navigation: An Underutilized but Adaptable Strategy

Financial navigation refers to structured support services that help patients and families anticipate, understand, and manage the costs associated with cancer care. It often overlaps with patient navigation, addressing logistical, emotional, and financial barriers simultaneously.[282] While the previous sections outlined the scope of financial hardship and coverage failures, financial navigation represents a pragmatic and underutilised strategy to confront those failures. It links micro-level patient realities with broader economic reforms.[177]

In resource-rich settings, particularly the United States, financial navigation has evolved as a response to the growing complexity and fragmentation of cancer care financing.[283] Trained navigators help estimate costs, negotiate billing, and identify subsidies or entitlements.[283] Financial navigation improves treatment adherence and prevents financial crises that disrupt care.[284] Despite strong evidence of its effectiveness in reducing financial distress, improving quality of life, and promoting timely treatment, financial navigation remains inconsistently implemented and rarely integrated into mainstream oncology workflows.[281]

In many health systems, navigation is treated as optional or charitable , rather than as a core component of care.[284] Most navigation programmes operate on short-term or philanthropic funding and are concentrated in large academic centres, leaving rural, low-income, or marginalised patients without access.[285] Even in hospitals that offer such services, patient awareness is often low and referrals inconsistent.[286]
Financial navigators report limited institutional support, inconsistent training, and inadequate staffing levels.[336] In underfunded or decentralised systems, formal navigation infrastructure is largely absent, but the function is often carried out informally by social workers, nurses, community health workers, or volunteers.[288] NGOs and faith-based groups also fill gaps, connecting patients with subsidised drugs, travel support, or food rations.[289]

Failure to recognise navigation as a distinct professional role entrenches underuse.[287] This deficiency mirrors broader patterns in oncology in which services that are relational, time-intensive, or not linked to billable procedures are undervalued.[281] Unlike physicians or pharmacists, financial navigators are often not salaried through stable funding lines, further entrenching the view that financial concerns are peripheral rather than integral to care.

Innovative models – such as linking patients to navigators via telehealth or integrating navigation with mobile screening units – show promise, particularly in underserved settings.[290]

However, these remain isolated efforts, often reliant on external funding, with little policy support.[291]

Importantly, financial navigation offers a unique bridge between household concerns and system reforms. By tracking patient costs and flagging common barriers, financial navigation can generate real-time data for system improvement.[292] It also supports universal health coverage goals by linking clinical services with social protection policies and financial risk mitigation. Moreover, financial navigation is one of the few interventions that is salient across the full cancer trajectory – from diagnosis, treatment, survivorship, to end-of-life – making it uniquely positioned to capture and respond to the financial dimensions of survivorship care.

To scale financial navigation equitably, three elements are essential: workforce investment, sustainable funding, and integration into routine care. Financial navigation must be recognised as a clinical function, not as a charitable add-on. Its reach must also extend to early-stage patients and survivors – populations often overlooked, but still facing significant financial distress. Implementing financial navigation across global contexts will require a shift in how health systems conceptualise value – expanding attention beyond survival and clinical outcomes to encompass financial stability, dignity, and equity. Sustainable financing, workforce training, and integration into clinical pathways are essential to establish financial navigation as a universal standard of care.

Market Incentives, Commodification, and Systemic Neglect

The current political economy of cancer care rewards high-cost innovation while neglecting interventions that prioritise psychosocial well-being, or caregiver support.[293] In health systems across income settings, the structure of financial incentives privileges therapies with measurable outputs and market potential – such as pharmaceuticals or imaging technologies – over human-centred services such as counselling, peer support, or financial aid.[294] This dynamic reflects the deepening commodification of cancer care. in which services are valued for revenue rather than public good. This is evident in the persistent underfunding of psychosocial oncology and palliative care, despite robust evidence of their impact on quality of life and system efficiency.

The process of commodification – reducing care to economic rather than social or equity-based value –[295] also reshapes how health systems define success. Metrics of efficiency and value are increasingly drawn from market logic – cost-effectiveness ratios, throughput, return on investment – rather than on relational value or experiential quality.[296] This encourages systems to invest in treatments that may offer marginal clinical benefit but command premium prices, while overlooking the economic, social, and emotional needs of patients.[297] As recent reviews have shown, supportive care models in many lower-resource settings narrowly focus on biomedical or psychosocial domains, with few interventions addressing the structural impacts of cancer – such as financial toxicity, employment disruption, and food insecurity.[273] . Even in health systems nominally committed to value-based care, relational labour is undervalued and emotional work rarely reimbursed. In this context, care becomes quantifiable, but not necessarily meaningful.

The dynamics of commodification take on different but equally troubling forms in lower-resource or mixed public-private systems. The growth of private-sector oncology has introduced

advanced technologies and expanded access for some but also fostered dual-track systems in which high-quality care is restricted to those who can pay.[298] Public services, meanwhile, remain under-resourced and overstretched. Here, commodification is manifest in the growth of fee-for-service models, branded cancer hospitals, and selective access to treatment based on ability to pay – often mimicking the most inequitable features of market-based systems in higher-income contexts.[19,299] Donor funding also reinforces silos by privileging vertical disease programmes over system-wide investment.[300,301]

The commodification of care – whether through private insurance in higher-resource settings or fee-for-service models in emerging markets – obscures the needs of the most vulnerable.[302] These forces work to transform illness from a shared human experience into an individual economic risk and care from a collective responsibility into an individual responsibility for a transactional service. Ultimately, the commodification of cancer care has the potential to prioritise profit over personhood. A consequence of this is the devaluation of the non-revenue-generating elements of care that patients and family consistently say matter as much as biomedical treatment: time, attention, trust, and dignity.

Efforts to humanise cancer care must confront these economic logics directly. Without structural reform, even the best-intentioned providers will remain constrained by systems that do not value the kinds of psychosocial and financial care that matter to patients and families as much as biomedical care. As long as return on investment defines value, relief of suffering will remain secondary. Shifting incentives must therefore be seen as a moral and clinical imperative.

Supplementary Financing Mechanisms: Stopgaps not Solutions

In the absence of adequate public provision, patients increasingly turn to supplementary financing mechanisms to bridge economic gaps in care. Among the most visible of these is crowdfunding, which has become a ubiquitous, if controversial, strategy across income contexts.[303] While this approach can raise substantial funds for individuals, it favours patients with digital literacy, wide social networks, and compelling narratives.[303] It also introduces ethical concerns about privacy, equity, and the spectacle of suffering. The most vulnerable patients are often least able to benefit, reinforcing inequities in access. More broadly, crowdfunding shifts responsibility for healthcare financing from the collective to the individual, normalising a system in which only the most visible or marketable can afford to survive. Charitable foundations and hospital-based assistance programmes also provide important support, but their availability is inconsistent , resources are limited, and access remains challenging for many patients.[304] These piecemeal solutions underscore a deeper system failure: when institutions fall short, the burden of care is redistributed to individuals, families, and communities already under strain.

In resource-constrained settings, patients often rely on religious tithes, mutual aid societies, or extended kin networks for financial support.[305] These systems reflect deep traditions of community care but are increasingly strained by the high and rising costs of cancer treatment.[306] While some governments and NGOs offer targeted subsidies – for example, national health funds, Islamic charitable giving (*zakat*), or disease-specific aid – these schemes are often bureaucratically complex, inconsistently applied, or insufficiently resourced.[307] They provide short-term relief but often leave patients vulnerable to cycles of debt and treatment discontinuity.

Supplementary financing can ease immediate distress, but it is not a substitute for structural investment in health systems or comprehensive social protection. Equitable cancer care requires publicly accountable mechanisms that distribute financial risk and guarantee access irrespective of ability to pay. Stopgaps may save lives in the short term, but they cannot replace systemic solutions that embed fairness and justice. The current patchwork of support, while lifesaving in many cases, remains an inadequate response to a systemic failure.

The Crisis in Cancer Research

Research Priorities, Funding, and Innovation

This Commission defines human-centred cancer research as encompassing a variety of research approaches that place the lived experiences and social contexts of people with cancer at the core of inquiry. Such approaches move beyond a narrow focus on biological mechanisms or technological innovation to consider how cultural, psychosocial, familial and structural factors shape the experience of cancer and cancer care. Human-centred research is further characterised by its attention to the diverse range of human experiences across global settings. While the perspectives of cancer patients in high-resource settings remain vital, they can no longer serve as the dominant reference point. The systemic inequities outlined in the previous sections are mirrored in the research agenda itself, where commercial incentives often outweigh patient realities. Biomedical science remains indispensable, but a robust human-centred research agenda must extend across varied geographies, especially low-resource and conflict-affected contexts in which access to cancer care is most precarious. Although human-centred research is foundational, only a small proportion of global cancer research falls into this category.[132–134]

Studies of global cancer research ecosystems have revealed a wide set of interlocking issues. A study of all public and philanthropic research funding from 2016-2020 found that only 4.1% of funded research addressed "psychosocial" issues (inclusive of psychological, cognitive, or behavioural interventions; quality of life studies; and survivorship issues), with the vast majority of funding dedicated to discovery science and biopharmaceutical research.[135] The same study found that only 0.5% of public and philanthropic research funding was directed to cancer research in lower-resource settings,[135] severely undercutting prospects of implementing national cancer control plans in contexts outside the world's richest nations.[159]

Disparities also exist within regions.[136–138] Despite nearly two decades of strategic efforts, the gap between high-income and emerging economies in research capacity remains stark.[139,140] For example, initiatives to expand research capacity in Sub-Saharan Africa confront the persistent realities of underinvestment and limited infrastructure growth.[141 142]

High-income countries continue to dominate the global research landscape, a pattern driven by the prioritisation of discovery science and biopharmaceutical agendas at the expense of human-centred research. [143,144]

The dominant biopharmaceutical paradigm of cancer research has generated a vast array of new cancer technologies, from medicines to imaging and surgical robots. However, these advances have come at high cost to healthcare systems, and their benefit has mostly been accrued by wealthy countries. Access to clinical trials for patients remains the privilege of the few and translational research domains, such as implementation science or health systems, are being displaced by the unrelenting focus on research into cancer biology and technology.[146,147] At the core of this imbalance lies an epistemological schism: one worldview sees cancer research as a technological enterprise, while another argues for the equal and essential inclusion of social sciences, public health, and system-oriented inquiry. Without integrating these approaches, the cancer research enterprise will remain skewed, exclusionary, and ill-equipped to address the human realities of the global cancer burden.

Rebalancing the Cancer Research Agenda: Funding the Human Dimensions of Care

A comprehensive analysis of global cancer research funding from 2016 to 2020 showed that 73.5% of public and philanthropic investment went to preclinical studies, with just 12.1% allocated to clinical research and only 0.5% to global health-focused research.[135] This imbalance is especially stark in areas relevant to the human experience of cancer: less than 2% of global cancer research funding supported psycho-oncology and palliative care research remains consistently underfunded, despite growing recognition of the psychological toll of cancer on patients and families.[150]

The scarcity of investment in human-centred research domains has real world consequences for equity and cancer control. In breast cancer, where overall research volume is high, a UK-based priority-setting partnership found significant divergence between the research interests of scientists and those of patients and caregivers. While scientific stakeholders favoured mechanistic studies and research on treatment optimisation, patients expressed clear preferences for research on emotional wellbeing, communication, family support, and quality of life with advanced disease—areas that have received minimal dedicated funding.[151] Similar disparities are evident in colorectal cancer research, where studies disproportionately focus on biomarker discovery and pharmacological interventions despite significant gaps in prevention, screening, and survivorship care, particularly in low- and middle-income countries.[136]

Although patient representatives are increasingly being included in co-creation and review of research, efforts are needed to ensure that involvement is meaningful .[104,139,152,153] Their voice, and those of investigators conducting human-centred research, typically remains marginalised in funding decisions.

These inequities are further compounded by geographic location. In South Asia, for example, the number of funded cancer studies has increased in recent years, but investment remains heavily concentrated in interventional trials for high-prevalence tumour sites such as breast and lung, with limited support for research into quality of care, patient navigation, or the health system barriers that shape cancer outcomes.[154] Studies focusing on cancers with high mortality in the region, such as gastric and oesophageal cancers, remain disproportionately rare. Although some local funders have emerged - particularly in India, for example - most support comes from international industry actors, further skewing research agendas toward commercial and technical priorities. Between 2014 and 2017, more than 90% of phase III trials evaluating anticancer

therapies were conducted in high-income countries, with only a fraction occurring in low- and middle-income settings.[156] Research from these regions faces substantial barriers, including regulatory complexity, limited local funding, and publication bias against studies led by investigators in the Global South. Even when funding is available, the dominant model of trial design often fails to account for the contextual realities of care delivery in resource-constrained settings, limiting both the relevance and uptake of findings.[157]

The disparities in funding and research interests reinforce care inequities. A recent analysis of U.S. National Cancer Institute spending showed that cancers with the highest incidence among non-Hispanic White populations, such as breast and prostate cancer, receive significantly more funding relative to their lethality than cancers that disproportionately affect minority groups, such as stomach, liver, and uterine cancers.[155] Using a funding-to-lethality ratio, the study revealed more than a hundredfold difference between the most and least funded cancers when adjusted for disease burden.

Attempts to reorient the research agenda toward care delivery and equity have gained some traction. The National Cancer Institute's Cancer Care Delivery Research programme has laid important groundwork in the United States for studies that examine how social determinants, provider behaviour, and health system structures affect outcomes.[158] In Europe, efforts to align research with stakeholder priorities have shown that patients consistently call for greater investment in quality-of-life studies, survivorship, and integrated care, although these areas still remain poorly represented in competitive funding schemes.[159] While these initiatives mark important progress, they remain exceptions within a global research ecosystem that overwhelmingly favours biomedical inquiry.

The persistent underfunding of human-centred cancer research is not simply a gap in evidence. It reflects systemic failures in governance and priority-setting revealing whose knowledge counts, which outcomes are valued, and whose suffering is made visible through scientific attention. If cancer research is to serve the full range of patients' needs, particularly in the context of growing global inequities, then meaningful and sustained investment in the human dimensions of care is not optional - it is an urgent necessity.

At the system level, economic disincentives further entrench these disparities. Mental health research in oncology receives limited funding from industry. In the Global Cancer Mental Health Survey, 64% of providers reported that pharmaceutical or institutional research incentives rarely support mental health topics.[115] Funding for interventional research in cancer is largely driven by commercial profit incentives, but there is little profit to be gained from psychological interventions. This structural reality helps explain why evidence-based psychosocial approaches remain chronically underfunded, despite their demonstrated cost-effectiveness.

This imbalance is illustrated by the recent growth in professional and industry interest in psychedelic psychotherapies in cancer.[160] Enthusiasm for these therapies has surged well beyond the current evidence for their effectiveness,[161,162] driven largely by professional interest and potential market incentives rather than demonstrated clinical value or scalability. Such research may succeed in integrating biomedical and psychosocial models, [163] but risks diverting scarce resources from more scalable humanistic interventions.

Shifting the Cancer Research Agenda Towards Equity and Relevance

Research in biomedical science is indispensable but insufficient to capture the lived realities of people with cancer. This Commission identifies an urgent need for a more expansive and inclusive research agenda, extending inquiry beyond clinical settings. To capture the wider social, economic, and political worlds in which individuals with cancer live their lives, cancer research must bridge the divide between the cancer hospital and the everyday environments where people living with cancer seek meaning, support, and care.

The need for a truly human-centred research agenda investigating the moral, psychosocial and societal dimensions of cancer care has been articulated.[164] In that regard, there is growing interest in integrating cultural context into cancer research, particularly through attention to the religious and spiritual beliefs of people living with cancer.[165,166] This is especially important in resource-constrained settings, where spiritual wellbeing is often positioned as a key component of quality of life for patients with advanced cancer.[167] While the emphasis on spirituality represents a positive step forward, much of this research remains siloed or thematically narrow. Anthropological research focusing on cancer care in India has demonstrated that approaches isolating religious beliefs or cultural practices from the broader material and relational conditions of people living with cancer risk oversimplifying the complexity of what it means to live with cancer.[168,169] Religious beliefs are important to many people living with cancer, but they cannot serve as a short-cut to understanding their broader experiences or preferences. While human-centred care may benefit from cultural and religious awareness of providers, an equally robust research focus is needed on family dynamics, socio-economic conditions, and systemic forces that profoundly influence the experiences and outcomes of people living with cancer.[169]

Biomedical science and the broader clinical cancer research community, constrained by time and resources, cannot alone address the complexities of human experience. Collaborations with social scientists from diverse disciplines can illuminatethe relational and systemic factors that shape the lives of people living with cancer in ways that directly inform clinical care.[170] This is not an optional enhancement but a necessary recalibration. Anthropological and ethnographic methods are uniquely positioned to understand how people live with cancer across varied clinical and non-clinical contexts, capturing the layered and dynamic nature of cancer experiences through long-term fieldwork in families and communities. These participatory approaches do not replace survey-based behavioural and psychosocial research within hospitals but complement and extend it by ensuring that cancer research reflects the full complexity of lived experience. By integrating these perspectives, oncology can provide care that is both technically proficient and deeply attuned to the social and relational realities of patients. This shift will require the cultures of science and society more broadly to meet through a new shared research language – one built on mutual respect, cross-disciplinary fluency, and a rebalanced funding strategy that both supports and demands this kind of integrated research.

Expanding Methods: Towards a Holistic Cancer Research Paradigm

Cancer research primarily focuses on biological sciences to identify targets for disease intervention. Conventional social and behavioural research is similarly grounded in a biomedical epistemology that prioritises measurable data and standardised metrics over the nuanced, subjective experiences of people living with cancer. These approaches favour quantitative

methods or structured interviews over methods that require in-depth engagement with people living with cancer and their social, cultural, and emotional contexts.[171] Quantitative or survey-based methods offer efficiency and large sample sizes and are important for measuring distress and identify predictors; however, theyrisk oversimplifying complex experiences into discrete variables. This can create a narrow and de-contextualized view of cancer, obscuring how race, gender, socioeconomic status, and other social factors intersect with the ambiguities of living with illness.[171]

Psychosocial and cultural research in cancer often reduces lived experience into data points or the manifestation of individual psychology and overlooks the broader familial, social, and political contexts that shape outcomes. In contrast to communicable disease research and policy formulation, where social science insights are frequently integrated, cancer research has been slower to incorporate the contributions of anthropologists, sociologists, and other social scientists. The diversity of cancer experiences cannot be adequately understood through either a reductionist biomedical model or a simplistic cultural or psychiatric lens that reduces experience to single factors such as religion or symptoms of distress.[169,170,172] This gap limits the field's ability to fully grasp the social dimensions of cancer.

Social sciences, such as anthropology and sociology, offer critical perspectives that situate cancer within relationships, institutions, and broader social, political, and economic forces. However, despite a growing body of rigorous qualitative and mixed-methods work in cancer care, human-centred research continues to be systematically underfunded, poorly integrated into large-scale trials, and institutionally marginalised relative to biomedical research agendas.[135] Research agendas must embrace more holistic and dynamic approaches that reflect the complexity of living with cancer.

Methods drawn from social sciences, such as in-depth and open-ended interviews,[173] participant observation in communities and in hospitals,[174] and long-term ethnographic fieldwork,[175] provide valuable tools to explore these complex dimensions of lived experiences. Ethnographic and participatory approaches extend beyond clinical settings, accompanying persons with cancer across diverse locations—including hospitals, neighbourhoods, and homes. By accompanying people through these spaces, social researchers can capture the varied nature of cancer experiences, revealing how care is shaped across local, regional and even transnational networks. Despite this rich potential, these social science methods remain marginalised in most cancer research funding schemes and academic settings. Their limited uptake constrains innovation in prevention, psychosocial support, and culturally appropriate care, ultimately reinforcing a narrow view of what counts as valuable knowledge.[176]

What Social Science Reveals: Lessons from the Field

The following examples demonstrate different social science approaches in cancer research and their ability to illuminate the relational and systemic dimensions of lived. Whether in under-resourced settings, conflict zones, or high-income countries, these approaches reveal how cancer care is shaped by shifting networks, material conditions, and institutional priorities, providing critical insights into how people with cancer navigate diverse and changing contexts.

In many African countries, healthcare systems have historically focused on infectious diseases such as HIV, often sidelining non-communicable diseases such as cancer, despite a growing cancer burden. Social science research shows how cancer care is delivered in resource-constrained settings, revealing the critical role that families and social networks play in compensating for institutional gaps. Ethnographic accounts highlight everyday acts of negotiation and improvisation that sustain care despite shortages of medicines, diagnostics, and specialists .[175,177] Strengthening cancer care models should therefore reinforce social bonds and networks that are essential for providing care in resource-constrained environments.

In post-2003 Iraq and other parts of the Middle East, cancer patients face the enduring effects of wars, displacement, and the collapse of healthcare infrastructures.[178] Social scientists have shown how people living in conflict zones navigate cross-border healthcare landscapes through methods such as multi-sited ethnography,[178–180] capturing their journeys across conflict-affected regions and even international borders in search of cancer care. These approaches highlight the "therapeutic geographies" – mobile networks of care that emerge in conflict zones, where displacement and transnational mobility profoundly shape cancer care and its accessibility.[53] Ethnographic research on the therapeutic geographies of cancer care in conflict zones has led to calls for regional coordination mechanisms between conflict-affected countries to better serve the needs of war-affected populations.[180] Such findings underscore the need for regional coordination to support displaced populations.

Even in relatively ‘stable’ healthcare systems in resource-rich settings, cancer care is embedded in networks of relationships and shifting institutional priorities. Ethnographic studies reveal how these technologies shape not only medical pathways but also emotional and social dynamics, highlighting the so-called "biotechnical embrace" – a reliance on innovation that often overlooks the complexity of patient experiences. Precision medicine promises tailored treatment based on biological profiles, aiming to replace one-size-fits-all approaches with individualised care. However, one UK-based sociological study demonstrates how the promises of such precision treatment often unfold as fragmented and highly impersonal, exposing the urgent need for integrated pathways and navigation support.[174]

These insights point to the urgent need for a rebalancing of global cancer research. Human-centred research must be regarded as essential to delivering equitable and contextually appropriate cancer care. Addressing the current misalignment between research investment and the lived realities of people living with cancer – particularly those in low-resource, marginalised, and conflict-affected settings – requires more than rhetorical commitments to equity. It demands methodological innovation, interdisciplinary collaboration, and long-term funding strategies that value social science contributions. By expanding the research toolkit to include ethnographic and participatory approaches, we can generate the knowledge needed to design cancer care systems that are both technologically advanced and socially responsive. The lived experiences of people with cancer should serve as the foundation for a global oncology research agenda capable of achieving human-centred care. Realising this agenda, however, depends on how future cancer professionals are trained. Research can generate new knowledge, but its impact will remain limited unless oncology education equips clinicians and allied providers with the skills to integrate these human-centred insights into everyday practice.

A Crisis in Cancer Medical Education

Cancer education worldwide has undergone profound expansion over recent decades, driven by rapid advances in tumour biology, diagnostics, and targeted therapies.[81,353,354] [354]Yet, despite this scientific progress, medical education, including oncology education, has tended to deprioritise the human aspects of care – the emotional, social, ethical, and existential dimensions that shape how cancer is experienced. These gaps reflect institutional cultures that prioritise technical mastery and measurable outcomes over communication and compassion.[355–358] Across countries and contexts, oncologists and other cancer professionals are trained to treat disease but not necessarily how to care for the person who bears it.

High-quality, human-centred cancer care depends on the contributions of a wide range of professionals – including oncologists, oncology nurses, social workers, spiritual care providers, and allied health staff – many of whom are at the forefront of relational and psychosocial care. While these groups also require training, this section focuses on medical doctors given their central role in clinical decision-making and influence over care delivery structures. Physician education is also particularly influential in shaping clinical hierarchies and the perceived legitimacy of humanistic care, making it a useful lens for examining systemic challenges and opportunities for reform.

While most medical school curricula formally endorse humanistic values, they are rarely taught in structured ways, reinforced in training environments, or rewarded in certification and clinical practice. The result is generations of technically proficient professionals who are ill equipped to manage psychological suffering, navigate end-of-life conversations, or build trust across social divides. This neglect reflects a deeper failure to embed compassion and relational skills as core competencies.

The consequences of the educational gap in the human dimensions of cancer care are both personal and systemic. Patients report feeling unseen and unsupported. Clinicians report burnout, moral distress, and a loss of meaning in their work. Health systems suffer when care becomes fragmented, depersonalised, and emotionally unsustainable. For these reasons, the future of humane cancer care must begin with workforce training. A human-centred oncology education is a prerequisite for delivering humane, ethical, and equitable care.

A Curriculum of Imbalance: Biomedical Dominance in Cancer Training

Over the past three decades, the rapid expansion of knowledge in cancer biology, the increasing centrality of clinical trials in cancer research , and the rise of novel therapies have significantly shaped oncology education.[359] Specialist curricula have grown in scope and complexity, often extending over four to five years in many countries.[360] This expansion reflects the increasing sophistication of cancer care and the need to train professionals capable of interpreting genomic tests, managing novel therapeutics, and participating in multidisciplinary teams.

However, this scientific progress has not been matched by equivalent attention to the humanistic dimensions of cancer care. Psychosocial, emotional, and cultural competencies remain severely underrepresented in formal training and evaluation, reinforcing an educational paradigm that privileges biomedical expertise over human-centred care.[361,362] Oncology curricula may include isolated modules on communication or ethics, but these are often brief, elective, or inconsistently assessed.[363] The result is professionals adept in clinical reasoning and procedural execution, yet underprepared for the emotional, existential, and relational aspects of cancer care.

This imbalance in training has been increasingly recognised as a barrier to comprehensive oncology practice. Effective care requires clinicians to listen, communicate empathically, and respond appropriately to suffering. Such attention is required from all health providers, not just mental health specialists . As demand grows for compassionate, integrated models of care, the shortcomings of traditional training are increasingly untenable.[3]

The pathway to becoming an oncologist – either medical, clinical, radiation, or surgical oncologist - typically involves two main stages: (1) undergraduate medical education, which is designed to develop ethical, competent, and patient-centred physicians; and (2) postgraduate medical education, which provides specialist training in the clinical and technical competencies of oncology.[106,364] While both stages are essential they frequently perpetuate the same imbalance. Undergraduate medical programmes may introduce humanistic frameworks, but postgraduate medical training tends to revert to disease-centric priorities, with limited formal reinforcement of communication, emotional literacy, or psychosocial care.

While communication skills training has long been recognised as essential, it is still not routinely integrated into medical education. Where such training exists, it is a recent addition. As a result, many practicing physicians around the world have received little or no mandatory training in communication skills. As shown in the survey described below, approximately 25% of oncology physicians reported having no training even in basic communication skills.

Even in countries where psychosocial skills are taught, this training is frequently front-loaded into the early years of medical school and rarely integrated into clinical rotations, specialty curricula, or licensing assessments .[365,366] Without consistent reinforcement, the skills introduced in undergraduate training are often lost by the time trainees enter specialist oncology training – precisely when they are most needed. Oncology-specific training frequently assumes, rather than cultivates, competencies in empathy, listening, or navigating uncertainty.[367] Similarly, while mastery of these skills is essential throughout a clinician's career, they are rarely included in continuing professional development programmes. This erosion of human-centred learning across the educational trajectory represents a critical gap that must be addressed.

A rebalancing of the oncology curriculum is urgently needed. While mastery of scientific and technical knowledge remains essential, it must no longer come at the expense of relational competence. The design, delivery, and assessment of training must reflect the reality that cancer care is not merely a scientific discipline but a profoundly human one. Addressing the human crisis of oncology must begin by changing what – and how – we teach.

Neglecting the Human Dimensions: What Gets Taught, What Gets Lost

Traditional medical education curricula have long been structured around lists of topics defined by clinical specialists. However, in response to global calls for reforms, the past decade has seen many training systems adopt competency-based medical education frameworks designed to articulate what society expects from its health professionals.[368,369] One of the most influential of these is the CanMEDS model, developed in Canada in the 1990s and adopted internationally in the past decade. CanMEDS defines seven key physician roles: Medical Expert, Communicator, Collaborator, Leader, Health Advocate, Scholar, and Professional.[370] In principle, this framework represents a shift toward a more holistic view of physician competence – one that values not only clinical skill but also relational, ethical, and community-oriented capacities.

Yet in practice, the humanistic competencies embedded in frameworks such as CanMEDS remain inconsistently operationalised in oncology training.[371] While the CanMEDS roles of Communicator, Health Advocate, and Professional directly address domains critical to cancer care, they are frequently underemphasised or superficially taught. For example, the Communicator role calls for physicians to listen actively, build therapeutic relationships, and attend to patients' emotional needs. The Health Advocate role, intended to encompass the ability to identify and address psychosocial determinants of health, similarly lacks meaningful integration.[372] In some programmes, it is taught as an abstract ideal rather than a skillset grounded in lived realities – particularly important for patients facing poverty, stigma, or structural inequity. Many oncology curricula devote limited time to cultivating these skills, and even fewer assess them systematically.[373]

This disconnect between framework and implementation reflects a broader misalignment in medical education: a system that formally acknowledges the importance of humanistic care but fails to embed it in the environments where learning occurs. While this is partly explained by the relatively recent adoption of CanMeds and competency-based medical education frameworks in many global curricula, the absence of dedicated curricular time, structured supervision, or formal assessment means that these competencies often remain optional or marginalised rather than foundational. Oncology trainees are expected to engage in emotionally charged conversations – about incurability, recurrence, or end of life – but are rarely provided with the tools or support to do so competently and compassionately. Without structured preparation, supervision, or debriefing, many rely on improvisation or emotional detachment. Over time, this can lead to professional dissatisfaction, disconnection from patients, and a hollowing out of professional purpose.

Global guidelines have begun to address this gap. The European Society for Medical Oncology (ESMO) and the American Society of Clinical Oncology (ASCO) have put forward an updated list of global oncology education recommendations, which contains an expanded section on psychosocial needs.[374] This updated guidance explicitly recommends core training in psycho-oncology, communication skills, and patient education. These additions mark an important step toward standardising human-centred care as a global education priority, although they remain small compared to biomedical topics. Similarly, despite the inclusion of these important topics, significant gaps remain in the widespread implementation of these components within current

training programmes.[375] Further, there is a need for continued professional development for clinicians trained before these competencies were introduced.

This Commission conducted a global survey with 292 oncology clinicians from 71 countries. The questionnaire for this survey was informed by established frameworks, including the CanMEDS roles and the ESMO/ASCO Global Curriculum, as well as by relevant literature and expert consensus within the Commission. Participants represented a wide range of geographic regions, with 41% practising in lower-resource settings. While not fully representative, the survey provides key insights into both shared challenges and context-specific barriers.

Findings of the survey reveal a consistent underrepresentation of person-centred care in formal training. Sixty-three percent of respondents reported that biomedical and technical competencies were prioritised well above psychosocial ones in their training. Only 11% indicated that their education emphasized the emotional or social dimensions of care. While this imbalance might seem justified, 47% said they received no formal training in any of the psychosocial topics covered in the ASCO/ESMO curricula and none reported training across the full set of topics. Only 17% felt that their training had effectively prepared them to meet the emotional and social needs of their patients. Notably, nearly three-quarters of respondents said that less than 10% of their undergraduate and specialist curricula addressed psychosocial aspects. A large majority (88%) expressed a desire for more psychosocial training, believing it should be integrated across all levels of medical education, from undergraduate medical education to continued professional development. Importantly, only 10% felt that most members of their healthcare team were adequately trained in psychosocial support, highlighting the need for comprehensive training for all healthcare professionals involved in cancer care.

A complementary analysis by the Common Sense Oncology (CSO) group – a global initiative focused on improving patient-centred cancer care – of 16 national and regional oncology curricula found that the proportion of curricula dedicated to humanistic components ranged from just 2% to 26%.[376] While 94% included critical appraisal and risk communication, only 56% addressed equity in access to care, and 63% included survivorship or palliative care.[376] Values such as empathy, respect, and compassion were often mentioned, but few curricula provided clear learning objectives, pedagogical strategies, or mechanisms of accountability for teaching these competencies. These dimensions of care should be emphasized in all levels of training and clinical care delivery. The aforementioned survey also found that the most significant barriers to providing effective psychosocial care were lack of time, insufficient psychosocial oncology staff, and low prioritization in healthcare planning. Notably, these gaps persisted regardless of whether clinicians trained recently or decagdes ago, underscoring the need for both initial and ongoing education.

As the cancer burden continues to rise globally, the ability to attend to suffering, communicate with empathy, and support patients through uncertainty must be recognised as a clinical imperative rather than as a soft skill. Educational frameworks provide a promising foundation, but unless these competencies are taught, reinforced, and assessed with the same rigour as medical knowledge, they will remain aspirational rather than transformative.

BOX: The Hong Kong Medical School Reformation

A longitudinal Medical Humanities (MH) programme was introduced in 2012 as part the new six-year undergraduate MBBS in Hong Kong SAR. The mission of the programme is to help nurture the development of medical students into caring doctors, capable of a deeper understanding of the human condition. Input for the curriculum and contents was provided by colleagues for the Faculty of Medicine and Faculty of Arts, as well as community partners and international advisors. The programme was the first of its kind in Asia and has fast been gathering much attention for its innovative learning activities which engage students through experiential learning The HKU Medical Humanities programme was previously featured in the South China Morning Post

Source: see http://www.scmp.com/lifestyle/familyeducation/article/1186397/dose-humanities-medical-students.

Clinicians without Tools: Moral Distress and Burnout in the Workforce

The consequences of inadequate training in the human dimensions of cancer care are not borne by patients alone. Oncology professionals – across disciplines and geographies – report experiencing profound emotional and moral distress when they are unprepared to meet the psychological, spiritual, or existential needs of those in their care. This distress is often exacerbated by health system constraints that prioritise throughput over presence, technical interventions over relational ones, and standardisation over nuance.[378–380]

Studies across diverse income contexts consistently show that oncology clinicians experience high levels of burnout, psychological fatigue, and moral injury.[381] These outcomes reflect structural and educational failures that leave clinicians ill-equipped to respond to suffering in ways that are ethically satisfying and emotionally sustainable.[382,383]

Clinicians describe the pain of witnessing avoidable patient distress – such as unmanaged symptoms, fragmented care, or lack of social support – without having the institutional tools or training to intervene. They report feeling morally compromised when they feel pressured to deliver futile treatment or when systemic barriers, such as cost or access, preclude care aligned with patients' needs and values.[384] This helplessness corrodes purpose and fuels disengagement, exposing how systems have trained clinicians to treat but not to care.

Moral distress in the delivery of cancer care may be particularly acute for trainees and early-career clinicians. A growing body of research has shown that junior doctors, nurses, and allied health professionals frequently feel unsupported when navigating emotionally complex scenarios, especially when they lack senior mentors who model compassionate care.[382] In settings where psychosocial, palliative, or community-based care is poorly developed or excluded from training altogether, these challenges are magnified. Many feel they are expected to show empathy or manage grief without training or supervision. Further, some research suggests that empathy actually declines over the course of undergraduate medical education due to the nature and pressures of the work environment, poor role modelling, a focus on the

biomedical aspects of education, and what has been called "tick-box" empathy training,[385] all systemic features that continue in postgraduate medical training environments.[386]

Educational systems that neglect the emotional realities of oncology both fail to teach critical competencies and normalise the suppression of vulnerability, leaving clinicians isolated, overextended, and unable to process professional grief. The documented spiritual, psychological, and moral toll on clinicians is itself a marker of dehumanised systems of care.[387]

This educational deficit in human-centred care is not only an issue for workforce wellbeing, but also to patient safety and quality of care. Clinician burnout is associated with reduced empathy, poorer communication, increased medical errors, and worse outcomes for patients.[382,384] These effects are especially concerning in cancer care, where trust, continuity, and emotional support are critical to long-term treatment adherence and patient wellbeing.

Addressing the human crisis in oncology must therefore include a rethinking of how education develops technical skills while sustaining compassion and workforce wellbeing. Training must equip future professionals with the skills to face suffering without feeling overwhelmed by it, and to have the language to name and resist the structural injustices that compromise care. Curricula must be redesigned not only to teach empathy but to protect and preserve it – recognising that the wellbeing of patients and professionals are inextricably intertwined.

Global Disparities and Missed Opportunities: Training an Integrated Workforce

While the cancer burden is rising in every region of the world, access to structured oncology education remains uneven. In many health systems, particularly those with fewer institutional or financial resources, formal training in cancer care is limited or unavailable. Health workers other than physicians often learn cancer care through clinical exposure, informal apprenticeship, ad hoc workshops, or externally driven programmes that may not align with local needs .[203]

In addition to gaps in the training of oncologists, training deficits extend across professions. Integrated care models that support collaborative care, shared decision-making, and continuity are required, yet most care remains fragmented across service nodes.[265,388,389] For example, while palliative care is central to humane cancer care, it is still not a recognized medical specialty in many countries and physicians providing palliative care often come from internal medicine/anaesthesiology or other specialties without specific structured training. Therefore, even in systems where palliative services are nominally available, the workforce delivering them is often undertrained, unsupported, and stretched thin by clinical volumes and complexity. Further, palliative care is increasingly delivered by non-specialist providers - including general practitioners, nurses, community health workers, and family caregivers, yet, few of these health professionals receive formal training in communication, symptom management, or psychosocial support.[92,192–194]

Despite the WHO recommendation that palliative care be integrated into all levels of health professional education,[145] uptake remains limited. Training in psychological care and in the exploration of existential issues is particularly lacking, even though these domains are core to effective palliative and end-of-life care.[68,81] Many medical and nursing programmes allocate

fewer than ten total hours to palliative care content,[193] constraining clinicians' ability to respond to suffering—especially in systems where mental health support is fragmented or unavailable. In lower-resource settings, palliative care often relies on a small cohort of individuals who are committed but lack institutional support, defined career paths, or protection from burnout. Without clear protocols or collaborative structures, such care is often inconsistent and unsustainable.

In many countries, nurses provide much of patient-facing care in oncology, yet specialist oncology nursing training is scarce and often based on workplace exposure and ad hoc training sessions that are inconsistently accredited, or accessible only through costly international programmes. Where programmes exist, coverage is limited.

A global survey in 2021 found that the majority of nurses providing end-of-life cancer care had never received formal instruction in pain management, psychological support, or bereavement communication.[390–392] Where such programmes do exist, they are often siloed from broader oncology training and lack interprofessional integration. As a result, opportunities for shared learning and collaborative care planning are missed throughout training. Further, other members of the workforce, such as healthcare assistants, social workers, navigators, and community-based health practitioners often have minimal formal preparation for providing the human dimensions of cancer care. Findings from the Commission survey showed that only 10% of respondents felt that most members of their healthcare team were adequately trained in psychosocial support. This lack of focus on psychosocial care further marginalises professionals whose work is central to human-centred cancer care.

Cancer care now includes a large team including physicians, nurses, psychosocial workers, rehabilitation specialists, community health practitioners, volunteers, and patient advocates, often working far beyond the boundaries of hospitals or specialist centres. Despite this, educational systems rarely train or deploy these contributors in a coordinated way and often do not recognise them as educators, reflecting a persistent undervaluation of relational labour within the cancer workforce.

Amidst these challenges important innovations have emerged. Community-rooted training models – such as palliative care mentorship programmes in East Africa, peer-led psychosocial education in Southeast Asia, and remote case-based learning initiatives, such as Project ECHO – demonstrate the power of context-specific and relationally grounded approaches to oncology education. Project ECHO is a tele-education model launched in the United States and now used in over 40 countries connecting specialist mentors with generalist providers through virtual case discussions.[408] In India and sub-Saharan Africa, Project ECHO has been used to deliver training in palliative care, communication, and cultural safety, with evidence of improved provider confidence and patient satisfaction.[409] In South Africa, an oncology training programme introduced mandatory modules on death and dying, delivered through interdisciplinary workshops co-led by nurses, psychologists, and social workers.[410] These initiatives demonstrate that scalable, culturally sensitive models of interprofessional psychosocial education are possible – if institutions commit to integrating them into core training for all professions and levels. Often developed outside of dominant global institutions, these initiatives offer compelling alternatives to top-down knowledge transfer models; yet they remain under-recognised in formal education policy and international investment frameworks.

Such examples illustrate a broader principle: that education must be co-produced with those who deliver care, and often, with those who receive it. Integrating lived experience, cultural knowledge, and interdisciplinary practice into oncology education is not merely a pedagogical improvement - it is a structural correction. It acknowledges that quality cancer care depends on clinical decisions and the many small, human acts that surround them.

Improvements in global oncology training standards are urgently needed and must include core psychosocial skills. However, local institutions and workforces are best suited to build training that matches the needs of the community. This means relying upon local expertise, focusing on interprofessional learning and teamwork and developing training standards that integrate both clinical and humanistic competencies. A human-centred education system must prepare all members of the cancer workforce - formal and informal - to engage with skill, dignity, and mutual respect. This requires curricula that value relational and emotional labour; accreditation systems that recognise non-physician expertise; and investments in training pathways for roles that have historically been overlooked.

BOX: Common Sense Oncology's core competences for holistic cancer care

Case Study: Assessing Postgraduate Oncology Curricula in Addressing Key Competencies for Patient-Centred Cancer Care.[376]

The crisis in cancer care is not only technological but human. As oncology advances,progress must remain anchored in outcomes that matter to patients. The Common Sense Oncology (CSO) movement champions patient-centred care that prioritizes outcomes that matter to people. A central tenet of the CSO movement's mission is the education and preparation of the next generation of oncologists, with competencies required to deliver fully informed, transparent, and value-oriented care within, equitable, sustainable systems.

A CSO case study assessed 16 postgraduate oncology curricula with national, regional, or global scope. The goal was to evaluate the extent to which these curricula incorporated CSO's core competencies across six domains: critical appraisal, cost and value of cancer care, effective communication about outcomes and treatment risks, equity in accessing cancer care, ethical principles, and the integration of psychosocial oncology, survivorship, and palliative care. Results highlighted both strengths and gaps. Overall, 94% of the analysed curricula included competencies in critical appraisal and communication about outcomes and treatment risks, both essential for delivering high-quality, patient-centred care, and 94% integrated palliative care, while 88% addressed cost and value.
The case study also uncovered significant gaps in curricula related to the humanization of cancer care. Only 56% of the curricula addressed equity in accessing cancer care and ethical principles, while just 63% included competencies in survivorship care. These gaps highlight the risk that graduates remain underprepared for real-world needs. Without a focus on equity, for example, oncologists may fail to recognize and address disparities in access to care, which is a pressing problem in all resource settings. Similarly, a lack of emphasis on ethical principles and survivorship care can result in an incomplete understanding of the long-term impacts of cancer treatment on patients' lives.

These findings underscore the importance of revising oncology curricula to better reflect the core principles of humanization. While there has been progress in integrating competencies related to critical appraisal and palliative care, much work remains to be done. The integration of competencies related to equity, ethics, and survivorship care is essential for preparing oncologists who can deliver truly patient-centred care, especially in light of the growing global disparities in cancer treatment and outcomes. Ultimately, the case study serves as a call to action for the medical education community to ensure that oncology curricula are fully aligned with the Common Sense Oncology principles, preparing future oncologists to meet the diverse needs of cancer patients in an increasingly complex healthcare landscape.

Only through such comprehensive training can we hope to close the gap between clinical excellence and the human experience of cancer care.

Acknowledgment. Haydee Verduzco-Aguirre, Scott Berry and the CSO education working group.

Building a Human-Centred Oncology Curriculum

The preceding sections have identified widespread imbalances in how oncology professionals are trained. Across countries and disciplines, the human aspects of cancer care - compassion, communication, cultural humility, psychological support - are often treated as peripheral, inconsistently taught, or structurally undervalued. This deficit is not simply a curriculum design flaw. It reflects broader professional norms and institutional hierarchies that prioritise biomedical knowledge and technical mastery over emotional presence and ethical discernment.

If oncology is to become more humane, inclusive, and just, educational systems must emphasize relational skills as well as clinical excellence. A human-centred curriculum would place psychosocial care, communication, and ethical reflection at the core of professional education, rather than relegating these topics to elective modules or continuing education. This curriculum would build on key concepts over time, increasing in complexity and depth with each clinical encounter rather than being presented in linear, one-off lessons. Such a curriculum would be grounded in evidence but shaped by lived experience, and it would treat compassion not as an innate quality or optional virtue but as a set of teachable, practicable, and assessable skills.

The findings of our global survey, alongside a review of existing oncology curricula, underscore the urgent need to rebalance oncology education by placing greater emphasis on human-centred competencies. Eighty-eight percent of survey respondents indicated that they wanted more training in psychosocial care across all stages of medical education. Barriers included limited programme availability (76%), weak institutional support (70%), limited awareness (63%), and cultural stigma (60%). Importantly, respondents also emphasised the need for continuous professional development of these skills and attention to the psychosocial wellbeing of oncology providers themselves. Burnout and moral distress were evident, especially among early-career professionals and those in resource-constrained settings, underscoring that relational care strengthens patient outcomes andworkforce resilience.

Several models already point in a new direction. The updated joint ESMO–ASCO global curriculum explicitly calls for training in psycho-oncology, communication skills, and patient

education.[374] Palliative care frameworks increasingly recognise psychological support and family communication as core competencies. Simulation-based education, narrative medicine , and trauma-informed teaching have shown promise in diverse settings. These efforts must now be integrated and expanded - not as supplements, but as foundational and mandatory components of oncology education.

Reform must also extend beyond curriculum content to include attention to who teaches, who is taught, and how learning is assessed. Interprofessional education is essential: nurses, social workers, psychologists, community health workers, and lay carers must be fully included in both learning and teaching roles. This reflects not only the reality of team-based cancer care, but the principle that diverse forms of expertise - including that related to lived experience - are essential to relational care. Institutions should also review how values and skills such as empathy, cultural safety, and therapeutic communication are assessed. When they are absent from examinations and accreditation systems, they are easily sidelined in clinical practice.

Faculty development will also be critical. Most educators were trained in eras and systems that did not prioritise psychosocial or ethical learning. Supporting them to teach these domains confidently - through co-facilitation, mentorship, and protected time - is essential Equally, learners must be prepared to manage complexity, sit with uncertainty, respond to suffering, and navigate grief and loss without detachment or despair.

Finally, investment is required. Human-centred education takes time, resources, and institutional commitment. It demands structural support: time in curricula, funding for faculty, inclusive admissions and mentorship, and accountability mechanisms that reinforce rather than erode compassionate care. These investments are not peripheral to cancer care - they are prerequisites for delivering it well.

As the cancer burden continues to rise and the workforce becomes increasingly stretched, we must ask not only what oncology professionals know, but how they relate, how they cope, and how they sustain themselves and others. The way forward is a continuous, systematic, and interprofessional re-orientation of oncology education, where psychosocial care becomes a thread running through all stages of training and practice, forming the foundation of truly humane, equitable, and effective cancer care worldwide.

Towards an Ideal System of Human-Centred Cancer Care

An ideal system of cancer care would integrate biomedical excellence with sustained attention to the human experience of illness. Such a system would embed palliative and psychosocial support from the point of diagnosis, with routine screening for physical, psychological, and social needs. Health systems would commit the resources necessary to embed psychosocial support as a standard, universally accessible element of cancer treatment. Care pathways would be designed to prioritise shared decision-making, cultural humility, and continuity across hospital, community, and home settings.

In high-income contexts, this would mean proactive and targeted referral to specialised palliative and psychosocial care based on clinical indications, and comprehensive insurance mechanisms that remove financial barriers to care. In low-resource settings, this would involve strengthening community-based services through home visits, tele-palliative care, and peer-support models, backed by national policy commitments and reliable access to essential medicines, including opioids. In all settings, psychosocial and spiritual interventions would be tailored to cultural values, recognising the family and community as central partners in care.

Education and research would align with this vision. Curricula across professions would treat compassion, communication, and ethical discernment as core, competency-based entrustable professional activities. Non-physician providers, lay carers, and volunteers would be trained, recognised, and supported as integral members of the oncology workforce.

Human-centred research would be adequately funded to ensure that diverse experiences and perspectives shape innovation. There would be bidirectional integration of biomedical and human-centred research. Quality of life and psychosocial health outcomes would be embedded in clinical trials, and there would be consideration of the interrelationship of the effects of cancer, cancer treatment, and the human experience. For example, depression and anxiety have been associated with poor treatment response to immune checkpoint inhibitors in cancer (Insert Madeline REF).

Finally, an ideal system would include a central global database for human-centred indicators – tracking training standards, palliative and psychosocial care, financial protection, funding allocation, and patient experience. A publicly accessible dashboard of such key system performance indicators would promote accountability, enable cross-country learning, and help ensure that the dignity and wellbeing of people with cancer are valued as highly as survival itself.

Solutions

A More Human-Centred Model of Cancer Care: Strategic Solutions

The preceding sections of this Commission have traced a profound and multidimensional crisis in global cancer care. While substantial progress has been made in early detection, treatment modalities, and survival outcomes, these biomedical achievements have unfolded alongside widespread inconsistency and failures to protect the emotional, psychological, social, and relational dimensions of patient experience. Across countries and care settings, a frequent picture that emerges is one of fragmentation, relational disconnection, inequity, and moral distress – experienced not only by patients and families but also by clinicians, administrators, and entire communities. These are not isolated gaps in service delivery; they are the consequence of structural design choices and policy and funding priorities that have consistently undervalued the human aspects of oncology.

What is urgently needed now is cancer care that goes beyond alleviating suffering to affirm and strengthen the humanity, integrity, and wellbeing of people living with cancer, through inclusive

systems grounded in trust and relationships. The solutions that follow are not abstract ideals; they are grounded in decades of research, frontline expertise, and the testimony of patients, families, and professionals across income settings. They draw on promising models already in use around the world and are responsive to the realities of clinical complexity, financial constraint, and geopolitical instability.

Cancer care cannot be human-centred unless it is relational at its core. Across cultures, settings, and systems, patients consistently report that the quality of their experience depends not only on the technical precision of care but also on how they are treated as human beings. Emotional attentiveness, clarity in communication, and continuity in relationships are repeatedly cited as equal in importance to the effectiveness of procedures and survival.[38] These dimensions are measurable determinants of the quality of care that should be regarded as both a clinical necessity and an ethical imperative.

In healthcare delivery settings, compassion has been defined as the recognition by physicians of the suffering and vulnerability of patients and "accompanying" them with the intent to relieve their suffering – a concept reflected in foundational professional codes, including the Canadian Medical Association's Code of Ethics.[377] Programmes such as Compassionate Connected Care have demonstrated measurable improvements in both patient outcomes and clinician wellbeing. These frameworks operationalise empathy and presence across care settings and have been linked to reductions in patient anxiety and improvements in staff retention and morale.[40] The cost of such programs is small, and their impact is greatest when delivered through integrated, interdisciplinary teams that include psychologists, social workers, cultural mediators, and community liaisons.

Evidence shows that programmes combining clinical, emotional, and logistical support result in reduced dropout from care, improved adherence, and more efficient use of health resources.[33,41]The consistent delivery of human-centred care requires structural commitment, not personal heroism. Compassion must be embedded into the architecture of cancer care delivery through supportive staffing models, protected time and fair remuneration by institutions and third-party payers for relational work, and explicit expectations about emotional presence, including in clinical interactions that are brief. Systems must invest in the kind of training that cultivates empathy and communication as clinical competencies and recognise and remunerate the contributions of non-professional staff who facilitate human connection. Evaluation systems should incorporate routine patient feedback on relational quality and ensure that these data are used in quality improvement and workforce planning.

Importantly, these solutions are not technical fixes. They require a fundamental shift in values – a recalibration of what counts as success in cancer control, and who gets to define it. These solutions are not exhaustive, nor are they prescriptive in every detail. Rather, they are designed as a strategic framework for local adoption and collective action. We offer them with humility, recognizing that systems change is slow, non-linear, and deeply contextual. Yet we also offer them with urgency, knowing that each day of inaction deepens the emotional and moral toll borne by those affected by cancer. Rehumanising oncology will require political courage, institutional accountability, and sustained investment. It will also require truly listening to those who have long been silenced by the clinical and policy languages that surround them.

Ultimately, the delivery of compassionate care should not depend on the exceptional efforts of individual clinicians, but on institutional cultures and policies that enable and sustain human connection. The consistent thread running through patient narratives – from Iraq, to England, to Brazil – is a longing to be seen and heard along with the desire to survive. Meeting that need is not a sentimental luxury. It is foundational to the legitimacy of cancer care, and essential to the restoration of trust in health systems globally.

Reshape Metrics, Incentives, and Accountability

Efforts to humanise cancer care will have better success if health systems redefine what counts as quality – and ensure that these values are embedded in how human-centred care is routinely measured and evaluated. The metrics that are measured must influence what is funded, prioritised, and improved. Too often, patient-reported outcome measures and patient-reported experience measures are collected as compliance exercises with little consequence for clinical practice, resource allocation, or system accountability. To drive real change, these measures must be embedded into institutional decision-making processes and used to monitor both quality of care and individual clinician performance.

Value-based payment models and health financing strategies must therefore evolve to reward practices that promote dignity, communication, and continuity – not just those that extend life. This means shifting away from reimbursement models that disproportionately incentivise procedure volume or late-stage intervention, and towards models that also recognise and remunerate time spent in conversations, such as those about advance care planning, family engagement, psychosocial support, and coordinated transitions of care. Such care is inexpensive and may be cost saving by minimizing wasted resources spent on aggressive and often futile interventions in the last month of life. It should be regarded as a public good that is essential for the welfare of patients with cancer and their families, although it does not generate revenue comparable to that generated by biomedical and technological interventions or by industry-funded clinical trials.

Redefining quality in this way also calls for critical reflection on existing audit and accreditation systems. Many national and international regulatory bodies still rely on checklists and standards that give disproportionate weight to structural inputs – such as the presence of machines or specialists – while giving little or no attention to relational processes or outcomes. Even in high-resource settings, accreditation systems rarely evaluate whether patients were involved in decision-making, whether families were offered or received psychological support, or whether care teams communicated honestly, empathically, and clearly at key moments of crisis, uncertainty or decision-making. Omissions in these domains are typically not technical oversights; they often reflect a deep-seated epistemic bias in the culture of health systems. Shifting these systems to include culturally sensitive, relationally grounded, and equity-informed indicators will be essential for recognising and improving the true quality of care

Transforming cancer care metrics is a moral and practical imperative. It requires health systems to explicitly value human outcomes and to reflect this in funding, evaluation, and workforce incentives. Recalibrating measurement frameworks to capture what matters to patients and families – across culture and care settings – is a critical level for systems change. Without it, no reform in policy, training, or service delivery can be sustained.

Guarantee Equitable Access to Humane and Supportive Cancer Care

A. Integrate Psychosocial and Palliative Care as Core Services

Psychosocial and palliative services are among the most consistently underfunded and under-integrated aspects of global cancer care, despite robust evidence demonstrating their clinical and economic value. These forms of care are essential to managing the full spectrum of suffering experienced by people living with cancer, including physical symptoms, psychological distress, social dislocation, and existential uncertainty. Yet across health systems, these services are often fragmented, difficult to access, or delivered inconsistently, inequitably, or too late in the disease trajectory to make a meaningful difference. Integrating psychosocial and palliative services into the core design of cancer care pathways must be recognised as a foundational component of high-quality cancer care, not an optional add-on.

When introduced early in the course of illness, it has been associated with improved quality of life, better mood, and, in some cases, longer survival. Psychosocial interventions, too, have demonstrated effectiveness in reducing anxiety, depression, and spiritual distress. Structured therapies such as CALM (Managing Cancer and Living Meaningfully), already in use across more than twenty countries, should be systematically scaled and embedded into national policies and training frameworks.[82,413]

B. Expand and Sustain Patient Navigation

Psychosocial and palliative services remain largely absent from the routine design of cancer care pathways. Financial barriers are a central mechanism of exclusion. When patients are unable to afford transport, counselling, home care, or the cost of caregiving, they are effectively excluded from the supports that enable dignified care. These pressures are especially acute for marginalised communities and health systems where public coverage is limited or fragmented.

Patient navigation is a scalable, human-centred strategy that improves care coordination, reduces care fragmentation, and promotes equity across the cancer continuum. It is especially effective for populations that face systemic barriers to care. The WHO has endorsed patient navigation as an "evidence-based personalised intervention" to ensure timely access to care.[415]

Navigators – who may be nurses, social workers, or trained lay personnel – support patients from diagnosis through treatment and survivorship by offering logistical, emotional, and social support.[416]National cancer control plans should formally incorporate patient navigation across the continuum of care – including palliative, psychosocial, and survivorship services – and allocate resources for workforce development, training, and accountability. Navigation by lay providers is a cost-effective way to deliver or enhance patient navigation.

A recent narrative review of 46 studies on lay navigation programmes shows that these interventions can reduce time to treatment initiation, enhance satisfaction with care, improve self-efficacy, and lower healthcare costs. Although programme goals and structure varied in the published research, the evidence suggests that lay navigation is a cost-effective strategy,

particularly when adapted to the needs of specific populations and settings.[417] Yet, only 7-8% of national cancer plans include navigation for all cancer care services.

Navigation can also facilitate access to financial assistance. Evidence shows that financial navigation programmes can help mitigate these burdens by helping patients access benefits, reduce out-of-pocket costs, and manage debt. These interventions have been associated with improved treatment adherence, lower distress, and more efficient use of health resources.[285,414] However, financial navigation services remain rare, often confined to pilot projects or philanthropic funding.

Addressing these gaps requires institutional investment and policy reform to ensure navigation services are not undervalued or excluded from reimbursement frameworks.

C. Fund Community-Based and Culturally Sensitive Care

In many lower-resource settings, palliative care is delivered through flexible, home- and community-based approaches. In settings such as India, Uganda, Malawi, Nigeria, and Vietnam, such care is often provided by nurses, general practitioners, volunteers, or family members, without rigid adherence to clinical guidelines.[189,222,418–421] These programmes emphasize compassion, trust, and cultural appropriateness, frequently incorporating spiritual or psychosocial support alongside basic symptom management.[266,420,422,423] Rather than being a liability, this flexibility enables care that is compassionate, locally responsive, and resilient.

This kind of relational, community-rooted care is not unique to lower-resource settings – palliative care in the form of hospice and home-based services in many higher-resource settings also embody these values.

Governments should invest in these community-rooted approaches – including home visits, group counselling, spiritual support, and interventions by community health workers – delivered through culturally resonant platforms in both high- and low-resource settings.[106,107]

D. Build Equity into System Design and Measurement

Equity must guide every aspect of this expansion. Services should be made available regardless of geography, income, age, or diagnosis. Patients with non-curative illness, rare cancers, or advanced-stage presentation should receive the same attention to their comfort, dignity, and psychological wellbeing as those undergoing aggressive treatment. Caregivers—often family members—require structured support, including respite care, bereavement counselling, and workplace protections.

Service design must reflect the lived experiences of communities historically marginalised or harmed by health systems. In Indigenous, migrant, and post-conflict populations, the experience of cancer may intersect with histories of neglect, mistrust, or collective trauma.

Psychosocial and palliative care in these settings must be relational, culturally safe, and rooted in practices that affirm continuity, solidarity, and meaning. Investing in these services affirms the legitimacy of public health institutions and restores a sense of agency to those most often

excluded from formal systems of care. Participatory planning processes should be embedded into health policy design to ensure that communities help define the care they receive. Strengthening psychosocial and palliative care and removing financial barriers to accessing these services, are not enhancements to cancer systems. They are essential acts of justice. They affirm that human beings are more than their pathology, and that healing involves much more than disease control. Systems that take this seriously will be better prepared to address suffering in all its forms – including those produced by poverty, exclusion, and abandonment – and more capable of earning the trust of those they seek to serve.

Reform Medical Education for Human-Centred Cancer Care

A. Redesign Oncology Curricula to Include Human-Centred Competencies

The ability to deliver human-centred cancer care depends fundamentally on how the oncology workforce is trained, supported, and valued. Communication, empathy, cultural humility, ethical reflection, and psychological care are not ancillary skills in cancer practice; they must be treated as core competencies and explicitly embedded into oncology curricula at every level - from undergraduate training to specialist certification to continuing professional development.

B. Strengthen Experiential Learning and Assessment

Educational reform must adopt a longitudinal and structured approach that begins early in training and continues across the professional life course. This includes experiential formats, such as patient-led communication training, narrative medicine seminars, interdisciplinary case reflection, and supervised engagement with patient and family narratives. These approaches have been shown to improve knowledge and clinicians' confidence, moral resilience, and capacity to navigate emotionally complex situations.[424] National curricula should mandate these experiential approaches, and assessment systems must be restructured to evaluate relational and reflective competencies with the same rigour applied to technical skills, using entrustable professional activities, peer feedback, and patient-reported data.

In parallel, national and institutional medical education programmes should be evaluated against established international standards – such as the ESMO/ASCO Global Curriculum in Medical Oncology – to ensure compliance with and integration of the human-centred competencies outlined in global guidelines.[374]

C. Build Faculty Capacity for Humanistic Teaching

Faculty development is another critical element. Many educators lack formal preparation or designated time to teach communication, ethics, or the emotional aspects of care, particularly in low-resource settings where faculty shortages are already acute. Health systems and academic institutions must invest in faculty development through train-the-trainer programmes, mentorship networks, and emotional intelligence education. They must also provide protected teaching time and ensure that contributions to humanistic education are recognised in promotion criteria and academic leadership roles. This is especially important in lower-resource contexts, where the burden of cancer is growing rapidly and where the risk of replicating technocentric educational models is high.

Build and Sustain an Integrated Oncology Workforce

Workforce planning must respond to changing epidemiological, demographic, and political realities. The rising global demand for oncology services has placed significant strain on cancer providers, many of whom are experiencing burnout, moral injury, and systemic overload. In response, some systems have begun to explore task-sharing strategies that distribute aspects of psychosocial and palliative care across interdisciplinary teams, including nurses, social workers, psychologists, and lay health workers. These strategies must be scaled and formally integrated into national cancer control planning and workforce policy frameworks. These models show particular promise in rural, remote, and post-conflict settings, where access to oncology specialists may be limited and where care continuity is often best maintained through community-based networks.[425]

Recognition of lay expertise and lived experience can further enhance system responsiveness and cultural safety. In some contexts, peer navigators, community health workers, and cancer survivors have taken on essential roles in patient education, psychosocial support, and financial and system navigation. These individuals often bring a level of cultural and emotional insight that complements clinical knowledge and strengthens trust among historically excluded groups. Health systems should formally recognise and fund these roles as essential components of the cancer workforce, with clear pathways to training, supervision, and integration. Lay providers integration into the oncology workforce should also be adequately resourced within health financing and accreditation structures.

Expanding access to human-centred care also required direct investment in underfunded services such as talk therapy, bereavement support, and spiritual care – particularly in low-resource settings, where these services are often delivered by lay providers.[162,426] These interventions are effective, low-cost, and culturally adaptable, and should be considered essential elements of a comprehensive cancer workforce strategy.

Health systems must confront the ethical responsibilities of workforce governance. Staffing shortages, unrealistic productivity expectations, and institutional cultures that marginalise emotional expression contribute directly to burnout and workforce attrition. Addressing these challenges requires structural changes in scheduling, workload distribution, supervision, and career progression. Systems should institutionalise reflective practice groups, trauma-informed leadership, and protected time for team debriefing as part of a broader commitment to clinician wellbeing. Systems that support staff wellbeing through reflective practice groups, trauma-informed leadership, and attention to moral distress are better positioned to retain skilled professionals and sustain compassionate care over time.

Workforce reform must be treated as a strategic priority in cancer system design, with resource allocation that reflects the full spectrum of skills and services required for human-centred care. Cancer systems cannot be made more human through values alone. They must be redesigned from the ground up to cultivate, recognise, and reward the full spectrum of human competencies required for healing.

Aligning AI and Technology with Human-Centred Cancer Care

The introduction of AI tools in cancer care has raised concerns about their potential to diminish human interactions between patients and providers, but preliminary evidence suggests that they could be designed to complement relational care when guided by humanistic values (Jidong et al., 2023; McCradden et al., 2020; Wong et al., 2023). However, most evidence comes from limited measures in isolated interactions, which may obscure that empathy and humanistic care are embodied practices embedded in social relationships.Used cautiously, AI could relieve administrative burdens, support emotionally attuned communication, and expand access to culturally and linguistically appropriate care. However, risks remain: poorly implemented AI could entrench inequities, diminish trust, or reduce human connection. Ongoing evaluation and regulation are essential to ensure that these tools strengthen rather than erode humane cancer care.

A. Reclaim Clinical Time and Extend Supportive Care

Health systems should implement AI tools – such as speech recognition and natural language processing – to reduce documentation burden and allow clinicians to focus on patient care. Properly deployed, these tools may improve accuracy and flag emotional cues, though clinician oversight is essential to prevent over-reliance on algorithms (Wong et al., 2023).

Conversational AI tools may also support psychological triage, health coaching, and survivorship care, particularly in under-resourced settings. These technologies must be clearly framed as supplemental, not substitutive, to human care. AI must never become a mechanism by which disadvantaged populations receive synthetic compassion while others retain access to human care.[78] Even in high-resource settings, generative AI can be directed to create tools to identify those in greatest need of supportive care services; however, economic benefits must not justify reducing access to human psychosocial services (Jidong et al., 2023).

B. Improve Access to Information Through Multilingual and Culturally Aligned AI

Developers should prioritise AI tools that support multilingual communication and culturally grounded decision-making. Platforms such as Ask Rosa, a digital tool for communicating genetic information, show how AI can simplify complex clinical information for patients.[73] Translation and counselling applications should always involve clinician oversight to ensure accuracy and cultural safety. [74] Such tools may be particularly valuable in diverse or resource-constrained contexts, provided they do not replace human relational care.

C. Regulate for Ethics, Accountability, and Equity

Governments and institutions must regulate AI systems using structured ethical frameworks that emphasise equity, transparency, patient privacy, and participatory design (McCradden et al., 2020). This includes careful attention to data provenance, bias, and the implicit assumptions embedded in system design.[79] Informed consent must be meaningful, not procedural when implementing these tools in clinical settings. Development processes should include patients, caregivers, and historically excluded groups from the outset.[427] Pilot programmes should focus

on applications that complement human empathy, continuity, and resilience – for example, dashboards that flag clinician compassion fatigue or culturally adapted chatbots extending survivorship support (Wong et al., 2023). Such innovations must be equity-driven, context specific, and closely monitored to prevent harm.

Emerging frameworks are being developed to guide both the evaluation of AI interventions and their responsible implementation in cancer care. These frameworks will require continual monitoring and revision to keep pace with the rapid evolution of technology and the evidence of its benefits and harms. As the evidence stands, AI tools should be explicitly framed as supplemental – not substitutive – to human-centred cancer care.

AI is not a substitute for human presence. It can support human dignity by freeing time, improving communication, and expanding access – but only if designed and governed with caution, accountability, and moral clarity.

Align Governance and Policy with Human-Centred Cancer Control

Transforming the human experience of cancer care requires more than changes in clinical practice or education. Without political will and institutional commitment, efforts to centre compassion, equity, and psychosocial integrity will remain fragmented or symbolic. Policy frameworks must move beyond rhetorical endorsement of human-centred care to embed its principles within the operational core of cancer systems.

National cancer policies must include measurable indicators of relational quality, emotional wellbeing, and embed these within funding, accreditation, and evaluation structures. For example, performance evaluation for cancer centres should include metrics on communication, quality, cultural safety, and psychosocial care integration. Health ministries should require inclusion of psychosocial services in universal health coverage packages and incentivise institutions to meet quality thresholds through performance-based funding. Funding agencies must tie investment decisions to compliance with human-centred care standards and reward implementation science, culturally grounded interventions, and participatory research methodologies. Leadership fellowships, grants, and institutional awards should explicitly prioritise initiatives that demonstrate system-level equity and human experience outcomes.[38]

Reforming governance also requires patient and community participation. Policy design processes must create structured opportunities for people living with and affected by cancer to contribute meaningfully to priority setting, budgeting, service design, and monitoring in both clinical and research settings. Participation should be institutionalised through patient councils, participatory budgeting models, and co-design methodologies that recognise the expertise of lived experience. When done well, such engagement leads to policies that are more legitimate, contextually grounded, and responsive to unmet needs.[411]

For many communities - whether Indigenous peoples in settler-colonial states, migrants in precarious legal conditions, or conflict-affected populations - cancer care is not simply a medical challenge but a test of institutional legitimacy. Policies that affirm cultural safety, recognise intergenerational trauma, and support locally governed care models are essential for building

trust and improving outcomes. Equally important are governance mechanisms that hold institutions accountable for addressing discrimination and ensuring equity in service delivery.

Leadership development within the oncology sector must also evolve. Too often, leadership training focuses narrowly on operational efficiency or clinical innovation, neglecting the interpersonal, ethical, and equity dimensions of stewardship. Leadership development programmes should prioritise relational ethics, antiracism, community accountability, and inclusion of historically excluded voices. Future leaders in cancer care should be equipped not only to manage budgets and logistics, but to cultivate inclusive cultures, navigate moral complexity, and advocate for system-level change. This requires investment in leadership pathways that foreground justice, relational ethics, and community accountability.

Finally, research governance must reflect a commitment to human-centred principles. At present, funding for cancer research remains heavily weighted toward basic science and pharmaceutical development. While these areas are essential, they must be balanced with robust investment in implementation science, health systems research, psychosocial oncology and palliative care, and lived experience scholarship. Funding bodies should develop clear criteria for evaluating the equity impact and patient-centred relevance of proposed research. Agencies should require inclusion of community partners, equity frameworks, and qualitative methods that capture the full texture of cancer experience.[38] Research success should be measured not only by publication metrics or translational value, but by demonstrated improvements in patient-defined outcomes and real-world impact.

Real change will require difficult decisions and structural realignment, but the rewards are profound: systems that do not merely treat disease but affirm life in the midst of it.

Empower Stakeholders in Human-Centred Cancer Care as Agents of Change

Patients, caregivers, and professionals in psychosocial oncology and relational care are among the strongest advocates for human-centred cancer care, yet their voices are routinely marginalised in the design, governance, and evaluation of oncology systems. Despite growing recognition of the value of lived experience and emotional labour, those most deeply invested in human-centred cancer care are often excluded from decision-making or relegated to advisory roles without structural influence. In particular, patient perspectives are too often treated as anecdotal or optional, rather than as essential sources of knowledge and leadership.

To build cancer systems that reflect what matters to those they serve, policies must institutionalise the leadership of stakeholders with expertise in the human dimensions of cancer care at every level. This includes embedding structured and meaningful roles for people with lived experience of cancer and psychosocial and palliative specialists in governance bodies, quality assurance committees, curriculum design, programme evaluation teams, and research funding panels. National cancer control plans should mandate stakeholder representation in oversight processes, and clinical institutions should create mechanisms for regular, compensated engagement with patients, caregivers, and professionals who work focuses on emotional, ethical, and culturally sensitive care.

Equally important is the cultivation of leadership pathways for individuals working in domains typically undervalued by biomedical hierarchies. Professionals in human-centred care, such as psychosocial oncology and palliative care, cancer survivorship and rehabilitation, and education frequently face systemic underinvestment in their work – not due to lack of impact, but because their work does not generate revenue or prestige in the same way as that related to biomedicine. Many such leaders are too humble or overstretched to self-advocate and simply accept that their area of work will be under-resourced. This much change. Health systems must actively identify, train, and promote these individuals into decision-making roles, and recognise their contributions as essential to quality, safety, and innovation.

Beyond formal representation, health systems must also support the infrastructure for participatory design and relational accountability; this includes investing in leadership development programmes for patient advocates and equipping them with tools to navigate institutional processes and drive change from within. This also includes co-creation of services, shared priority-setting processes, and community-based consultations that reach beyond traditional patient advisory models. Special attention should be paid to ensuring the inclusion of structurally marginalised groups - such as Indigenous communities, migrants, and people with rare or advanced cancers - whose perspectives are often excluded from institutional decision-making.

Funding bodies also have a key role to play. Research and implementation grants should require active partnership with patients, caregivers, and human-centred care professionals, and define success partly through alignment with patient-defined and relational outcomes. System-level performance metrics should reflect not only survival and throughput but also physical and psychosocial wellbeing, quality of life, and satisfaction with care by those who receive it. Evaluation frameworks should routinely incorporate patient-reported experience measures (PREMs) and create responsive feedback loops that enable real-time improvements.

Finally, health communication strategies should elevate the collective voice of human-centred care stakeholders - not just as storytellers, but as stewards of systemic transformation. Narrative medicine programmes, clinician- and patient-led public campaigns, and transparent reporting on relational outcomes can challenge prevailing definitions of quality and legitimacy. When supported and resourced, these communities become not only recipients or providers of care but co-creators of health systems that affirm humanity across every level.

Conclusion

The human crisis in cancer documented in this Commission is not the result of technical failure. It is the consequence of choices - about what to value, whom to prioritise, and how to measure success The systems of value and incentives that underlie such choices are often implicit, unarticulated, and unchallenged. For decades, cancer systems around the world have been shaped by incentives, epistemologies, and organisational cultures that marginalise the human aspects of care or support them with words alone. The resulting harms have been widely felt but poorly named: unnecessary suffering, disenfranchised grief, clinician burnout, moral distress, and the erosion of trust between patients and institutions.

This Commission calls for a deliberate shift in how cancer care is imagined, delivered, and governed. The five domains outlined - compassionate care models, human-centred metrics, equitable access to psychosocial and palliative services, reformed education and workforce strategies, and values-aligned governance - do not represent isolated reforms. They are interdependent pillars of a new paradigm in oncology, one that places humanity, empathy, equity, and relational accountability at its centre.

Achieving this transformation will require action at every level of the system. Ministries of health must revise national cancer strategies to include clear mandates and financing for psychosocial and palliative care. Health systems must redesign quality frameworks to reflect what patients define as meaningful. Educational institutions must train future clinicians to communicate empathically and honestly, to sit with suffering, and to recognise the structural determinants of health and healing. Funders and research agencies must reorient their priorities to include the lived experience of patients, families, and communities as essential to scientific progress, which would require only a relatively small shift in the total proportion of allocated funds.

Implementation will not be straightforward. Many of the proposed changes challenge existing value systems and ways of thinking, power structures, professional norms, and commercial interests. Yet delay comes at a cost – measured not just in poor outcomes, but in lives diminished by distress, isolation, and exclusion. There is no technological innovation that can substitute for feeling understood. There is no machine that can offer presence, reassurance, or meaning. And there is no sustainable model of cancer care that ignores the basic human need for compassion and connection.

The stories shared throughout this Commission - from Uganda to Iraq to the United Kingdom - offer a roadmap. They show us that human-centred care is both desired and possible, even in settings marked by scarcity, trauma, or institutional strain. Patients are willing to travel long distances to receive human-centred care although technology has the potential to make it more readily accessible. Families rearrange their lives around the human experience of cancer. Clinicians remain in the profession because of it or become burned out and disconnected when it is not part of their work. These accounts are not sentimental - they are instructive. They teach us what is missing, what matters, and what can be built.

Rehumanising cancer care is not a return to an imagined past. It is a step toward a more coherent, just, and sustainable future—one in which the science of oncology is matched by the ethics of care. This Commission invites health systems, professional societies, policymakers, educators, and communities to act with urgency, humility, and resolve. The time for incrementalism has passed. The task now is transformation.

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Declarations

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