CHARTIS

The next era of cancer care

How science, technology, channels, and economics will reshape the oncology enterprise over the next decade

OCTOBER 2026

Cancer care sits at the intersection of the biggest forces shaping US healthcare delivery. Demand is climbing as the population ages. Cancer science is moving faster than many institutions can adapt. Artificial intelligence (AI) has penetrated the back office and the reading room. The underlying economic model is under pressure from several directions. And behind it all are millions of patients absorbing a diagnosis that reorders their lives.

By most clinical measures, the cancer field is gaining ground. Five-year survival reached 70% for people diagnosed between 2015 and 2021, the highest figure ever recorded, and survival in metastatic disease has doubled since the mid-1990s. Yet these successes have compounded the work for cancer programs. With approximately 2.1 million Americans diagnosed each year, the population of those living with a history of cancer is 18 million and is expected to grow to 26 million by 2040.[1]

When we published The Future of Cancer in 2022, we argued that innovation would outpace the care model, cost pressure would impact the entire value chain, and the lines between academic and community cancer care would blur. Many of our predictions materialized, though not always as linearly as we predicted. The clinical frontier outpaced our forecasts, with antibody-drug conjugates (ADCs) deployed toward curative intent, T-cell engagers crossing into solid tumors, and major breakthroughs in previously "undruggable" targets, such as pancreatic cancer.

The misses were also instructive—blood-based early cancer detection faced hurdles in marquee clinical trials, profound economic reform was delayed, and the biggest prevention breakthrough arrived entirely from outside the field via GLP-1 receptor agonists.

As we look toward the 2030s, the next wave of innovation will fundamentally rewrite the business of oncology. The capabilities that propelled growth over the last decade will be insufficient for the next. In this outlook, we define that emerging landscape and break down why four new strategic mandates will reshape today's foundational assumptions for cancer care providers.

Today's operating premise	Reframe of the 2030s
Premise 1: Patient acquisition begins with diagnosis and physician referral.	Patient acquisition begins at the earliest signal of cancer and across new channels.
Premise 2: Capacity expansion and reputational excellence drive growth.	Speed of innovation and network design anchored on patient experience drive growth.
Premise 3: Margin is concentrated in structurally advantaged drug and site economics.	Margin is contested and re-earned across a broader cancer value chain.
Premise 4: The solution to operating challenges is to layer on more people and space.	AI-enabled operating discipline creates efficiency and protects the human elements of care.

PREMISE 1:

Patient acquisition begins at the first signal of cancer risk

Cancer programs historically have begun competing once a patient received a confirmed diagnosis, working diligently to secure the referral and retain the patient through treatment. By the mid-2030s, a meaningful share of that contest will be decided much earlier. The first relevant cancer interaction may be a suspicious finding on an unrelated scan, an elevated risk score, a blood-based screening result, or a molecular signal of recurrence. At the time of a traditional oncology referral, the patient may already be several steps into a diagnostic pathway and connected to the organization guiding it.

However, the strategic shift goes beyond earlier detection because cancer care will expand in both directions around the treatment episode. Upstream, providers will identify and manage growing populations with elevated risk or indeterminate findings. Downstream, molecular surveillance will keep survivors connected to cancer care long after treatment ends. As a result, patient acquisition will depend less on a single referral event and more on sustained access to risk signals and longitudinal monitoring.

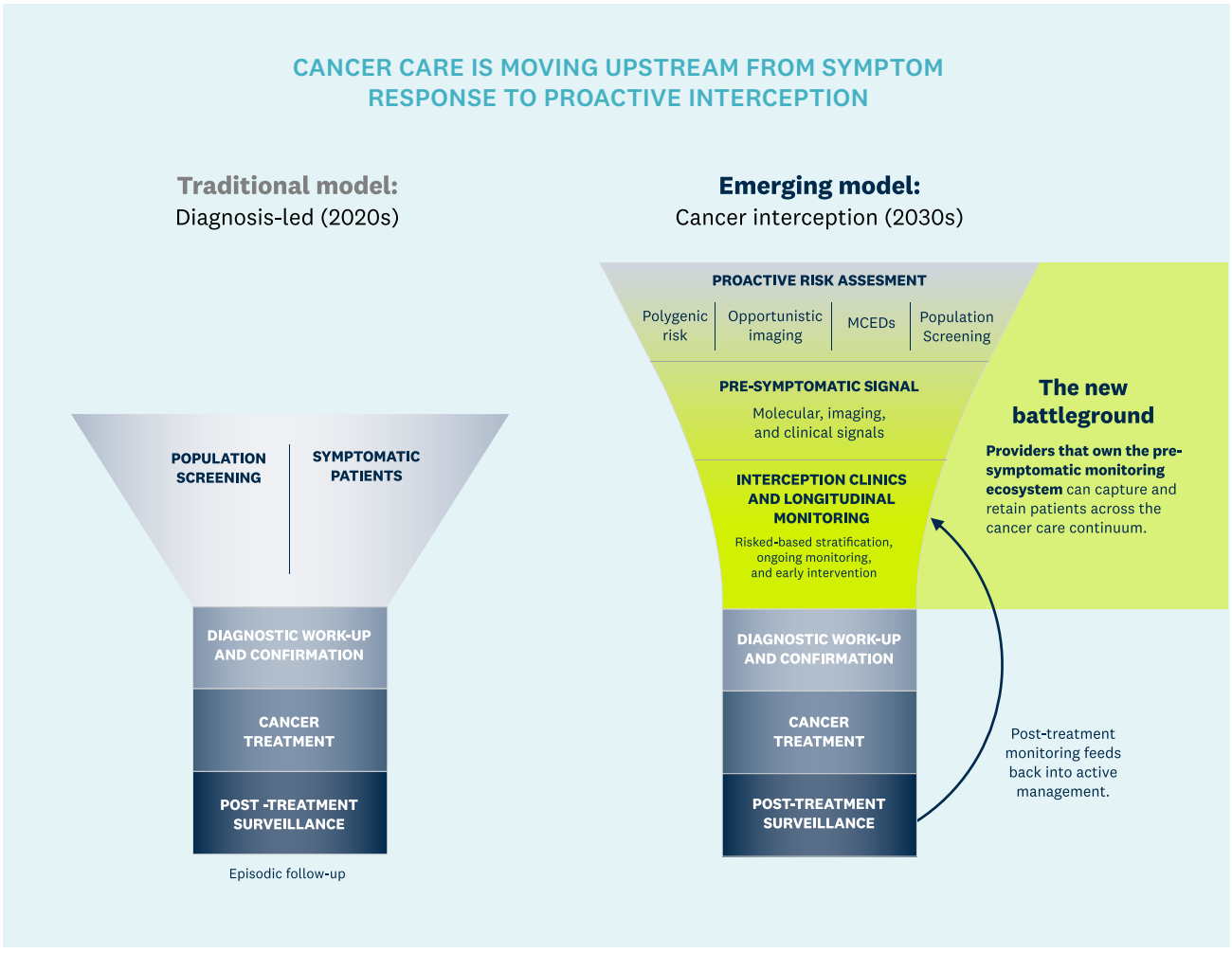
A new set of cancer signals will push critical patient acquisition points further upstream

The coming proliferation of predictive data, algorithmic screening, and molecular diagnostics will create a massive new healthcare segment: The pre-symptomatic patient with an elevated or unresolved cancer risk. Leading organizations will move beyond broad age-based screening guidelines and use clinical history, inherited risk, imaging, laboratory data, and other signals to identify who requires more intensive monitoring or intervention.

Proactive individualized assessment and detection will surface needs earlier. Genetic risk assessment will increasingly extend beyond family history to polygenic scores that combine hundreds of variants to create an individualized view of susceptibility. AI-enabled imaging will review scans obtained for unrelated reasons and surface incidental nodules and other findings that traditional screening programs may miss. Direct-to-consumer channels, including whole-body MRI and broad genetic testing, will continue to generate findings that patients bring back into the traditional healthcare ecosystem.

Blood-based technologies will further accelerate the shift. Multi-cancer early detection (MCED) tests and single-tumor blood assays already reach consumers through self-pay, employer, and concierge channels, often moving ahead of clinical consensus and broad insurance coverage.[2] Although the ultimate role of population-wide MCED screening remains uncertain, these tests will create a growing number of patients with possible cancer signals but no known tumor origin.

The same dynamic will reshape the post-treatment period. Measurable residual disease (MRD) testing will search for microscopic evidence that cancer remains or has returned before it appears on conventional imaging. As MRD becomes clinically actionable in more solid tumors, survivorship care will evolve from periodic follow-up into more continuous molecular surveillance. Each blood draw will become another potential point of re-entry into active cancer care.



Traditional channels will become more organized, and new channels will emerge

These new signals will emerge in an oncology market where traditional referral channels have already consolidated. More than 80% of US physicians are now employed by hospitals or corporate entities, and many large integrated delivery networks (IDNs) have assembled increasingly self-contained ecosystems across primary care, imaging, surgery, medical oncology, and acute care.[3] In many markets, referrals are shaped not only by individual physician preference but also by enterprise scheduling systems, electronic health record (EHR) order pathways, employment relationships, internal access centers, and network integrity expectations.

The pre-diagnostic market also will create channels outside the traditional physician referral system. Employer health plans, concierge medicine groups, radiology aggregators, consumer health companies, genetics platforms, and digital screening programs will need trusted clinical partners to interpret and resolve the signals they generate. Some relationships will resemble conventional referral arrangements. Others will become formal distribution agreements in which cancer providers commit to rapid, protocolized diagnostic workups.

Payers may also become more active channel participants. Historically, health plans have been cautious about steering patients after a cancer diagnosis when clinical complexity, physician trust, and patient sensitivity are highest. Earlier in the journey, before a treatment relationship has been established, they may have greater latitude to influence screening, diagnostics, second opinions, network selection, and site of care. Rising cancer costs will strengthen their incentive to do so.

We believe the next decade will layer a new signal-driven channel system on top of an increasingly consolidated physician landscape. Traditional channels will become more organized, while competing channels emerge around the first indication of a malignancy.

What early detection and longitudinal monitoring mean for cancer providers

By 2035, channel advantage will be defined by proximity to the first credible cancer signal, the ability to convert that signal into a timely and trusted answer, and the capacity to maintain the patient relationship across every stage of their care journey. For cancer providers, succeeding in this environment will demand three critical shifts:

- **The confirmed diagnosis will become a lagging indicator of market share.** By the 2030s, the risk-identification, diagnostic, and surveillance window will influence a growing share of oncology volume. Patients enrolled in multi-year monitoring for a nodule, an elevated

polygenic risk score, or an annual blood-based screen will be more likely to remain within the ecosystem if treatment becomes necessary.

Dedicated MCED clinics at leading institutions such as Dana-Farber and Duke offer an early view of this model, creating a defined destination for patients with a positive test but no known tumor origin.[4] Cancer programs that continue to organize growth solely around the already-diagnosed patient will find more of their traditional referral base committed upstream.

- **Referral strategy will evolve into channel architecture.** Individual physician relationships will remain important, but they will become part of a broader set of designed pathways spanning primary care, imaging, genetics, employers, payers, and consumer platforms. Leading cancer enterprises will define how external signals enter the system, who assumes responsibility for resolving them, how quickly a patient receives an answer, and where the downstream care is directed. The defining competitive advantage will be closed-loop diagnostics, not the strength of referral strategy.

- **Channel strategies will diverge by provider type.** IDNs will begin with a structural advantage through owned primary care, imaging, specialty networks, and longitudinal patient relationships. But they must overcome internal silos to identify, coordinate, and retain this emerging pre-cancer patient cohort.

  Academic medical centers (AMCs) and freestanding cancer hospitals without captive upstream channels will face the greatest risk of disintermediation. They will need to build channel partnerships while leaning into their ability to resolve ambiguous signals and manage complex hereditary risk. To that end, we are already witnessing an unprecedented wave of cross-tier alignment—with AMCs forging regional alliances and joint ventures like UCSF Health and John Muir Health, Moffitt Cancer Center and Memorial Healthcare, and Michigan Medicine and Trinity Health.

  Scaled oncology platforms will be able to leverage their operational agility and standardized pathways across hundreds of community sites, positioning themselves as the turnkey, low-cost delivery partners for payers, national employers, and consumer health companies managing early cancer interception programs.

In the 2030s, competitive advantage will not belong to the institutions that try to own every asset but to the enterprises that orchestrate the most connected ecosystems across payers, employers, community oncologists, and consumer health platforms.

PREMISE 2:

Growth depends on innovation speed and patient experience

For much of the past decade, oncology growth followed a reliable formula: Add ambulatory capacity in attractive markets, recruit subspecialized talent, and amplify the cancer brand. By the 2030s, those advantages will remain important but will be insufficient as therapeutic innovation diffuses faster, care becomes more deliberately divided between advanced hubs and distributed sites, and patients expect complex care to fit more naturally into their lives.

The pace and diffusion of clinical innovation will accelerate

The next decade of oncology will be defined by speed of discovery and clinical translation. AI models are increasingly integrated across the drug-development lifecycle—predicting biomolecular interactions, narrowing drug targets, and supporting molecule design. Simultaneously, digital platforms are accelerating parts of clinical development and regulatory review.[5,6]

AI platforms will not replace the clinical validation required to prove safety and efficacy. But they could meaningfully shorten the path from discovery to approval by accelerating preclinical work, improving patient identification, and enabling more adaptive trial design.

By 2035, the frontier of cancer science is likely to produce a much broader therapeutic arsenal:

- Antibody-drug conjugates (ADCs) and next-generation targeted pills will displace portions of traditional chemotherapy.
- Bispecific and multi-specific antibodies will make immune redirection more scalable and relevant in solid tumors.
- Cell therapies will extend beyond their foothold in liquid tumors.
- Radiopharmaceuticals will become a more established pillar of precision treatment.

Collectively, oncology will be reshaped by a larger, faster-moving, and increasingly combination-driven portfolio of these therapies—reaching broader patient populations and earlier stages of disease.

The historical pattern of innovation beginning in a small number of AMCs and diffusing slowly into community practice will compress as protocols mature, toxicity management improves, and therapies become easier to manufacture and administer. Even so, each modality will bring distinct requirements, from biomarker testing and tissue handling to pharmacy operations, isotope logistics, adverse-event monitoring, and rescue capability.

The ability to translate innovation into routine care will therefore become a defining source of advantage—favoring organizations that can bring new therapies to patients quickly, safely, reliably, and at scale.

ONCOLOGY CONTINUES TO LEAD THE CLINICAL FRONTIER

Antibody drug conjugates

Antibody-drug conjugates (ADCs) combine monoclonal antibody targeting with cytotoxic payloads, akin to biological "guided missiles." Landmark successes across breast, bladder, and lung cancers are moving ADCs from late stage to frontline settings, displacing traditional chemotherapy. Next-gen bispecific ADCs and dual-payloads will expand to more tumor indications and pan-tumor markers. Adoption will be enabled by toxicity protocols across community sites and managing the economic shift from generic chemotherapies to high-cost biologics.

Bispecific antibodies

Bispecific antibodies (BsAbs) bind tumor-specific antigens and immune cells to create an immune response. While initially used in heme malignancies, they are now making breakthroughs in solid tumors. The FDA's recent approval of Tarlatamab for small cell lung cancer was a milestone, proving viability in solid tumors. Into the 2030s, BsAbs may challenge CAR T-cell therapy by providing "off-the-shelf" T-cell redirection without manufacturing. As BsAbs indications expand, the operational challenge will be developing safe outpatient step-up dosing and community-based playbooks to manage cytokine release syndrome.

Personalized mRNA vaccines

Cancer vaccines sequence a patient's tumor to encode mutations into an individualized mRNA injection, training the immune system to hunt remaining cancer cells. In August 2026, Moderna marked a milestone, announcing that its mRNA therapy (paired with Keytruda) showed significant benefit in a Phase 3 melanoma study. Trials are expanding into lung, kidney, bladder, and head and neck cancers. If early successes carry over, treatment could shift from standard therapies to fully individualized vaccines. The primary gating factor will be the logistics of sequencing and per-patient manufacturing at an industrial scale.

Bimodal design will be essential for cancer networks

Innovation adoption will need to occur across a redesigned chassis, designed around a bimodal cancer network. Despite early-2020s predictions that oncology would fully migrate to the outpatient setting, billions of dollars have been committed over the past 5 years to specialized inpatient cancer hospitals. This acute, high-complexity capability remains a durable requirement.[7]

Moving into the 2030s, leading enterprises will run a dual architecture, with distributed sites for protocolized care, tethered to advanced hubs for early-phase trials, intensive cellular therapies, and complex surgical oncology. Because the supply of subspecialized oncologists cannot meet demand, expertise will be embedded in the network through AI-enabled decision support, remote molecular tumor boards, and virtual consults.

Care models will recenter on a simplified patient experience and continuous support

Importantly, as cancer science becomes more complex, the patient experience must become demonstrably simpler. Historic reliance on reputation will fail to overcome fragmented coordination or provider-centric operations. To secure loyalty in the 2030s, the cancer experience must improve how patients access the system and how that system supports them when they leave the building.

First, access must be redefined around the reality of a patient's life, rather than clinic operations. Programs that can quickly schedule patients with the right provider at the right time will build a durable access advantage. Those that extend infusion, imaging, and radiation hours will unlock demand that traditional schedules leave unserved. The metric of success will shift from traditional throughput measures (e.g., "days to first consult") to whether the patient received "the appointment that they wanted" (as Memorial Sloan Kettering now asks).

Second, as next-generation therapies shift care from the clinic to the home, the most critical moments in the cancer journey will occur between clinical visits. A patient receiving a bispecific antibody (BsAb), ADC, or oral targeted therapy may spend only a fraction of their month in the clinic, while managing fatigue, immune toxicity, and anxiety at home.

The most successful programs will deploy remote symptom monitoring, proactive digital triage, and dedicated oncology urgent care. By explicitly formalizing this between-visit programming, providers will reduce avoidable emergency department visits, make complex therapeutic regimens more manageable for patients, and deliver higher-value outcomes.

What shifts in innovation speed and patient experience mean for cancer providers

The practical implication is that growth will require building systems that can rapidly absorb clinical innovation, intelligently route based on complexity, and serve patients on their terms. For cancer providers, this new growth formula will demand four operational mandates:

- **Adoption speed will be a new competitive currency.** The pipeline of complex therapeutics will demand a disciplined process for scanning the horizon, assessing site readiness, and standardizing clinical and financial pathways. The historical model of relying on isolated physician enthusiasm to champion new treatments will be too slow and risky.

  Cancer center leaders must build the infrastructure to safely and rapidly deploy unfamiliar therapies and manage unique toxicities across multiple, diverse sites of care. Some organizations will choose to minimize this complexity risk through strategic partnerships. We are already seeing the emergence of outsourced operational models, ranging from cell therapy "in a box" platforms and multi-institution consortiums to turnkey early-phase research networks, such as START, that provide infrastructure for Phase 1 trials.

- **Cancer networks will need to design around complexity, not just geography.** A successful bimodal network will require clear, enforceable guidelines for what care can safely remain in the community, what requires a virtual subspecialty consult, and what must be escalated to an advanced hub. This balance of keeping tertiary sites reserved for high-acuity interventions while safely maximizing the capabilities of distributed sites will become a competitive advantage.

- **Patient preference will redefine access.** Historically, cancer centers measured oncology access as a throughput puzzle with rigid 8-to-5 weekday schedule constraints. The successful platforms of the 2030s will deconstruct these constraints and compete aggressively on schedules that accommodate caregivers and patients, such as evening imaging and weekend infusion. MD Anderson has already moved in this direction, adding once-a-month Saturday clinics, infusion, imaging, and surgery options for patients.

  Market share will shift to organizations that prioritize getting patients the appointments they need for their circumstances, rather than defaulting to the first available oncologist. Leading programs will also give patients more agency through digital care plans, preference-capture tools, self-scheduling tools, and clear visibility into areas of shared decision-making.

- **"Between-visit" interventions will become standard of care.** As next-generation therapies shift the burden of toxicity management from the infusion chair to the home, the most critical moments of the cancer episode will occur outside the clinic walls.

Market leaders will redesign workflows to manage this experience—drawing from the extensive, established track record of scaled oncology platforms. They will invest in virtual care coordination, electronic patient-reported outcomes, proactive symptom triage, and dedicated oncology urgent care. In the process, programs will protect their economics, secure payer advantages, and reduce avoidable emergency visits.

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PREMISE 3:

Cancer programs must re-earn margin across a changing value chain

The oncology sector has enjoyed an unusually durable economic formula over the past 2 decades, insulated by buy-and-bill models, provider-based reimbursement, commercial rate differentials, and 340B drug discounts. As we move into the 2030s, these advantages will be less dependable.

Consistent with Chartis' broader view of the emerging model of healthcare in the US, legacy oncology economics will buckle under the weight of aging demographics, payer mix shifts, 340B dilution, and site-neutral pressures. Cancer margins will not disappear, but they will become more contested and dictated by those who control referral channels and can diversify across the broader oncology value chain.

Reimbursement pressures will erode the traditional oncology margin

Clinical innovation of the 2030s will be remarkably expensive and will collide with an ecosystem focused on affordability. Policymakers and payers are aggressively targeting US cancer spend, which is forecasted to reach $246 billion annually by 2030. The Inflation Reduction Act's expansion into Part B drug negotiation and Part D redesign will compress pharmaceutical net pricing and shift financial liabilities, incentivizing payers to manage high-cost oral oncolytics more strictly through prior authorization and preferred specialty pharmacies.

Concurrently, Medicare Advantage now covers more than half of eligible Medicare beneficiaries—a dynamic our colleagues at HealthScape Advisors carefully track. As a result, providers will face unprecedented utilization management and site-of-care steering. Combined with the Centers for Medicare & Medicaid Services' (CMS's) push toward site-neutral payments and steep proposed cuts to 340B-acquired drugs, the traditional hospital-based premium margin will face structural erosion.[8]

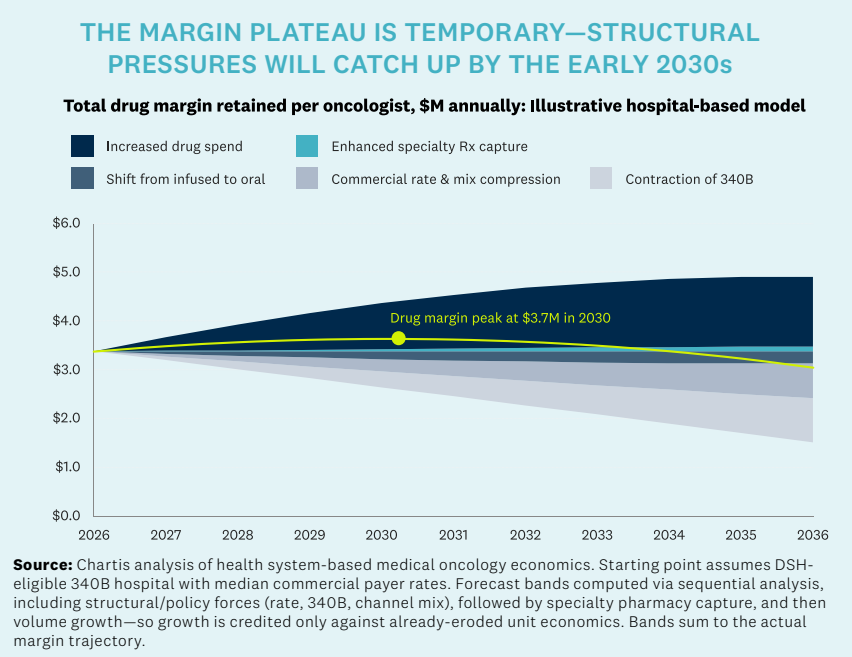
A hybrid model of fee-for-service and value-based cancer care will become the norm

Over the next decade, value-based oncology will likely have moved beyond a limited demonstration model, though it is unlikely to replace fee-for-service payment for cancer care. CMS's Enhancing Oncology Model offers an early blueprint, in which practices receive care management payments, assume downside risk for 6-month episodes, and are accountable for quality and total cost. In its first reconciliation period, 79% of participants generated savings relative to historical spending, and more than half earned the highest quality bonus.[9] The model is scheduled to run through June 2030.

The private market is moving in parallel. Starling Oncology (formerly The Oncology Institute) is expanding delegated capitated arrangements and reported 2.1 million lives under value-based contracts in mid-2026. Meanwhile, Thyme Care offers partnerships in which it assumes downside risk and shares savings with oncology practices.[10] By the mid-2030s, we expect a hybrid model in which fee-for-service remains central to the business, while care-management payments, shared savings, downside risk, and selective delegation expand in select markets and plans.

Oncology margin will become more diversified

As the margins on infused drugs narrow, the oncology profit pool will distribute across more of the care continuum. Sustaining the economic engine will require capturing value beyond the infusion suite through specialty pharmacy, advanced diagnostics, radiopharmaceuticals, MRD-led surveillance, and complex-care premiums.



Source: Chartis analysis of health system-based medical oncology economics. Starting point assumes DSH-eligible 340B hospital with median commercial payer rates. Forecast bands computed via sequential analysis, including structural/policy forces (rate, 340B, channel mix), followed by specialty pharmacy capture, and then volume growth—so growth is credited only against already-eroded unit economics. Bands sum to the actual margin trajectory.

Sophisticated capital has already preempted this shift, with major drug wholesalers like Cardinal, Cencora, and McKesson deploying billions of dollars in recent years to consolidate independent oncology networks and secure outsized control over these revenue streams.

What re-earning margin across a changing value chain means for cancer providers

To defend and rebuild margin in the 2030s, cancer enterprises must execute three strategic mandates:

- **Broaden participation in the oncology margin portfolio.** Infused therapy will remain economically critical but will become less dependable as the sole margin strategy. Providers will need to participate in the growing economics around specialty pharmacy and oral oncolytics, advanced diagnostics, clinical trials, theranostics, and molecular surveillance. This participation could take different forms, including ownership and partnership.

  Not every portfolio category will be highly profitable on its own. Some will drive patient acquisition, therapy selection, and preservation of the longitudinal patient relationship. Some others will enable downstream value.

- **Hospital-based programs must develop a non-premium parallel chassis.** Hospital-based programs should defend premium economics for care that truly requires premium infrastructure, including complex surgery, immune-effector therapy, high-risk infusion, theranostics, early-phase trials, and inpatient rescue. Routine protocolized oncology will face growing site-neutral and payer pressure.

  Rather than defend all services in the hospital outpatient setting, health systems should prepare lower-cost ambulatory options within their networks or through partnerships. The strategic objective is not to abandon 340B or provider-based advantage prematurely but to remain competitive if those advantages narrow and simultaneously preserve premium reimbursement where it is clinically defensible.

- **Build the capabilities to succeed in a more accountable market.** Fee-for-service will remain the economic engine of oncology. But as payers increasingly emphasize total cost, cancer providers will need stronger capabilities in historically underfunded areas, such as navigation, symptom monitoring, treatment adherence, pathway management, early palliative care, and episodic-level analytics.

  Investing in these capabilities can create strategic flexibility by improving quality, experience, and continuity within the existing model—while positioning organizations to participate if more accountable payment models enter the market.

PREMISE 4:

AI-enabled operations enable higher-value human care

For the past decade, cancer programs have used a brute-force approach to solve for growth, layering more providers, exam rooms, and infusion chairs onto the existing chassis. That approach worked because oncology's structural economics could absorb operational inefficiency. But this approach will become unsustainable as margins compress and clinical complexity soars.

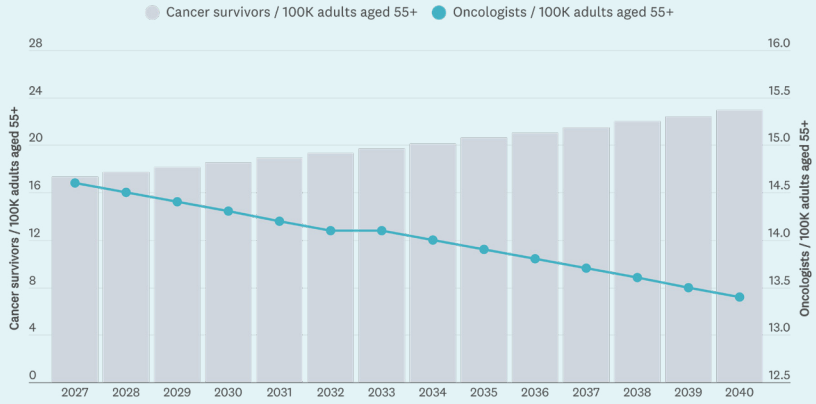
The successful cancer enterprises of the next decade will abandon the practice of simply adding headcount and instead deploy standardization, AI-enabled care redesign, and operating discipline to expand capacity.

The oncology workforce is increasingly insufficient for clinical capacity needs

This operational reckoning is driven, in part, by the cancer care supply-and-demand reality: The oncology workforce math no longer computes. American Society of Clinical Oncology's (ASCO's) recent data reveals an alarming decline in the density of oncologists relative to an aging population, noting that 68% of older Americans live in counties where oncologist coverage is at risk.[11]

SURGING CANCER PREVALENCE IS RAPIDLY OUTPACING CLINICAL WORKFORCE CAPACITY

Total cancer survivors age 55+ and medical/hematology oncologists per 100,000 adults age 55+



Source: Tonorezos E, et al., JNCI, 2024. Chartis analysis: Cancer survivors age 55+ estimated by applying NCI-projected survivor prevalence by age and sex for 2022 and 2040 to corresponding 2017 Census National Population Projections used in the study. Intermediate years extrapolated using the implied 2.18% 2022–2040 CAGR. | American Society of Clinical Oncology, JCO Oncology Practice, 2025. Chartis analysis: Medical/hematology oncologist density projected using the 2014–2024 observed decline from 15.9 to 14.9 oncologists per 100,000 adults age 55+, equivalent to a -0.65% CAGR.

Simply recruiting their way out of a capacity constraint will no longer be a viable strategy for cancer programs. Adding to this challenge, the oncology team's work is compounding, with demands from oral therapy adherence, immune toxicity surveillance, MRD monitoring, symptom triage, and financial navigation.

AI operational enablement will become transformational in clinical support and orchestration

A central response to mounting workforce and economic pressure will be embedding AI into the daily operations of cancer care. Early deployments have largely focused on administrative burden, including tumor registry abstraction, chart summarization, prior authorization, coding, and scheduling. Those areas will remain important, but the next phase will be more consequential as AI augments clinical judgment while coordinating an increasingly complex cancer journey.

On the clinical side, AI is already emerging as a peer reviewer in radiology and pathology. Large-scale studies are demonstrating the potential of AI-supported interpretation in areas such as mammography and lung-nodule detection.[12] By the 2030s, multimodal models will increasingly synthesize imaging, pathology, molecular findings, treatment history, and rapidly changing evidence. They can then identify testing gaps, surface relevant trials, anticipate toxicity, and inform treatment choices.

> **The aim is not to replace oncologist judgment but to help clinicians interpret more information, apply new science more consistently, and spend less time assembling the information required to make a decision.**

AI may be equally transformative as the orchestration layer surrounding the patient. It can help patients and caregivers understand the care plan, sequence appointments, manage oral therapies, report symptoms, and know when and where to seek help. It can also incorporate individual preferences into scheduling and site-of-care decisions, giving patients greater visibility and agency while escalating clinically or emotionally consequential issues to the care team.

As Douglas Flora, MD, emphasized in dedicating his incoming Association of Cancer Care Centers presidency to AI in oncology, this technology will comprehensively reshape the cancer care ecosystem.[13]

None of these capabilities will create capacity automatically. Their value will depend on thoughtful workflow redesign, integration with existing systems, clear escalation rules, governance, and adoption discipline. The defining measure of success will be whether AI removes work, closes coordination gaps, and creates more time for meaningful human care, rather than adding another layer of friction.

What AI-enabled care delivery redesign means for cancer providers

Moving into the 2030s, the defining operational question will be how cancer programs can embrace a new operating discipline while expanding human capacity. Three mandates will be key:

- **Operating discipline will become inseparable from the clinical value proposition.** In the 2030s, a program's clinical reputation will be deeply intertwined with its operational execution. Patients will judge programs by how smoothly they coordinate care and how rapidly they resolve symptoms. Payers will judge value on pathway adherence and avoidable care utilization. Physicians will judge whether the operating model allows them to practice cancer medicine rather than fight administrative friction.

- **Care redesign must target top-of-license preservation.** Programs can no longer afford to have subspecialized providers performing routine tasks. Cancer centers must deploy digital tools to offload documentation, clinical data retrieval, and routine follow-ups, shifting nonclinical work to technology or allied team members so providers can focus on disease management.

  Redesign cannot stop at administrative relief—it will need to integrate AI as a clinical co-pilot, equipping providers with decision support for complex treatment planning, real-time trial matching, and many other domains that elevate the accuracy and confidence of human clinical judgment.

- **Efficiency must protect human moments by design.** The counterintuitive truth of the AI-enabled care model is that the technology is not about removing the human element from oncology but fiercely defending it. By stripping away administrative tasks, cancer programs can protect clinicians' time for the moments of consequence—delivering a diagnosis, navigating complex shared decision-making, managing toxicity de-escalation, and guiding deeply personal goals-of-care discussions.

THE NEXT ERA OF HEALTHCARE DELIVERY IS TAKING SHAPE NOW

We call the emerging model of care for the US HealthCare360 because it will manage health and care continuously, at scale and lower cost, with the human at the center.

- ↗ EXPLORE THE INTERACTIVE MODEL
- ↗ EXPLORE HOW IT WILL CREATE A MORE SEAMLESS PATIENT EXPERIENCE
- ↗ EXPLORE HOW IT WILL ENHANCE THE PHYSICIAN EXPERIENCE AND INCREASE THEIR IMPACT

The 2030s: A more human future for cancer care

The forces reshaping oncology over the next decade—unprecedented scientific progress, shifting profit pools and channels, and the rapid deployment of AI—can read as overwhelming complexity. But for the organizations that adapt, these forces represent the greatest opportunity in a generation to fundamentally rewrite the way cancer care is provided.

By moving the starting line to intercept cancer earlier, deploying bimodal networks that deliver innovation with speed, and rebuilding the economic engine to reward longitudinal management, we will more than just modernize cancer center operations. We will create a new reality in which fewer patients hear a late-stage diagnosis and, when a diagnosis is delivered, ensure the journey is coordinated and profoundly less disruptive to their lives.

For the organizations that meet this moment with operational discipline and bold vision, the future of cancer care is brighter and more hopeful than ever before.

Sources

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2. MCEDs use a single blood draw to search for biological signals, such as methylation and cfDNA fragmentomics. The field has expanded beyond Galleri to include Exact Sciences, Freenome, and DELFI. However, clinical evidence remains unsettled. The NHS-Galleri trial quadrupled the number of cancers detected but missed its goal of significantly reducing Stage III/IV diagnoses. While major medical societies and the U.S. Preventive Services Task Force (USPSTF) have not yet endorsed broad population screening using MCED tests pending definitive mortality or stage-shift data, consumer and commercial demand is accelerating. Tests are currently available outside of standard insurance coverage via direct-to-consumer health platforms, concierge medicine practices, and select self-insured employer wellness programs, which require out-of-pocket payments often ranging from $700 to $1,000.

   "NHS-Galleri Trial Reports Fewer Diagnoses of the Most Advanced Cancers," NHS-Galleri Trial, May 30, 2026, https://www.nhs-galleri.org/trial-updates/nhs-galleri-trial-reports-fewer-diagnoses-of-the-most-advanced-cancers.

3. Avalere analysis of the IQVIA OneKey database estimates that 82% of US physicians were employed by hospitals or corporate entities as of January 2026, up from 52% in January 2018.

   "PAI-Avalere Health Report on Physician Employment Trends and Practice Acquisitions: 2018–2026," Physicians Advocacy Institute and Avalere Health, 2026, https://www.physiciansadvocacyinstitute.org/PAI-Research/PAI-Avalere-Health-Report-on-Physician-Employment-Trends-and-Practice-Acquisitions-2018-2026.

4. "Multi-Cancer Early Detection Clinic," Dana-Farber Cancer Institute, https://www.dana-farber.org/cancer-care/treatment/early-detection-interception/multi-cancer-early-detection-clinic.

   "Multi-Cancer Early Detection (MCED) Tests," Duke Health, medically reviewed May 13, 2026, https://www.dukehealth.org/treatments/cancer/mced-test.

5. AI is being deployed across drug discovery, including biomolecular modeling, target identification, and molecule design. The 2024 Nobel Prize in Chemistry recognized the significance of these advances. It was awarded in part to Google DeepMind's Demis Hassabis and John Jumper for protein structure prediction through AlphaFold. AlphaFold 3 has since extended these capabilities to predict interactions among proteins, nucleic acids, small molecules, and other biomolecules, with applications relevant to therapeutic design.

   Josh Abramson et al., "Accurate Structure Prediction of Biomolecular Interactions with AlphaFold 3," May 8, 2024, Nature, https://www.nature.com/articles/s41586-024-07487-w.

6. The U.S. Food and Drug Administration (FDA) reports growing use of AI across nonclinical, clinical, post-market, and manufacturing phases of drug development. In January 2025, the FDA issued its first guidance addressing AI used to generate data or information supporting regulatory decisions for drugs and biologics. The FDA and the European Medicines Agency subsequently established joint principles for AI use across the drug-development lifecycle. U.S. Food and Drug Administration.

   "Considerations for the Use of Artificial Intelligence to Support Regulatory Decision-Making for Drug and Biological Products," U.S. Food and Drug Administration, January 2025, https://www.fda.gov/regulatory-information/search-fda-guidance-documents/considerations-use-artificial-intelligence-support-regulatory-decision-making-drug-and-biological.

   "Guiding Principles of Good AI Practice in Drug Development," U.S. Food and Drug Administration and European Medicines Agency, January 2026, https://www.fda.gov/about-fda/artificial-intelligence-drug-development/guiding-principles-good-ai-practice-drug-development.

7. Despite earlier industry assumptions of a shift to outpatient oncology, leading academic and freestanding cancer centers are committing unprecedented capital to acute care infrastructure. Recent project announcements and ongoing developments represent well over $12 billion in committed capital. Notable examples include Memorial Sloan Kettering Cancer Center's Griffin Pavilion ($2.3 billion); MD Anderson's second-campus hospital in Austin ($2.5 billion); Dana-Farber's Lavine Bekenstein Cancer Hospital ($1.7 billion, 450,000 square feet); City of Hope Orange County ($1.5 billion); MUSC's downtown Charleston hospital ($1.1 billion); UChicago Medicine's Hyde Park facility ($815 million, 575,000 square feet); Emory's Winship Cancer Institute ($500 million, 450,000 square feet); KU Cancer Center ($450 million), Huntsman Cancer Institute's Utah county campus ($400 million), Moffitt McKinley Hospital ($400 million, 500,000 square feet), Stanford's Redwood City campus (1.7 million square feet), and Northwestern Medicine's new downtown hospital tower ($1.0 billion, 1.2 million square feet).

8. Regulatory pressure on the 340B drug pricing program continues to intensify as policymakers seek to curb rising oncology drug spend. In its proposed rule for the 2027 Hospital Outpatient Prospective Payment System (OPPS), CMS has proposed to reduce the payment rate to average sales price (ASP) minus 33.4% for 340B acquired drugs, creating a significant threat to infusion and specialty pharmacy economics of 340B-eliglbe hospital-based cancer programs. However, because OPPS payment changes are generally implemented in a budget-neutral manner, hospitals may recover a portion of this lost drug margin as Medicare's savings are redistributed to other outpatient services.

   "Calendar Year 2027 Hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Surgical Center (ASC) Proposed Rule (CMS-1850-P)," Centers for Medicare & Medicaid Services, July 2, 2026, https://www.cms.gov/newsroom/fact-sheets/calendar-year-2027-hospital-outpatient-prospective-payment-system-opps-ambulatory-surgical-center.

9. CMS's first reconciliation results for the Enhancing Oncology Model (EOM) found that 79% of the 43 participants evaluated achieved savings relative to historical spending, while more than half earned the highest performance bonus for quality. EOM holds participating oncology practices accountable for quality and total Medicare spending during 6-month episodes of systemic cancer treatment, including downside financial risk.

   "Innovation Insight: Model Participants Drive Value-Based Cancer Care," Centers for Medicare & Medicaid Services, 2026, https://www.cms.gov/priorities/innovation/innovation-insight-model-participants-drive-value-based-cancer-care.

10. Starling Oncology (formerly The Oncology Institute) reported 2.1 million lives under value-based contracts as of June 30, 2026, compared with 1.9 million 1 year earlier. The company is expanding delegated and capitated arrangements across multiple markets and expects approximately $150 million in capitated revenue in 2026.

    "Starling Oncology Reports Second Quarter 2026 Financial Results and Updates Full-Year 2026 Guidance," Starling Oncology, Aug. 6, 2026, https://www.sec.gov/Archives/edgar/data/1799191/000107997326001006/ex99x1.htm.

11. The structural capacity of the cancer delivery system is facing shortages. According to the 2025 ASCO Snapshot: State of the Oncology Workforce, the density of medical and hematology oncologists relative to the highest-utilizing population (age 55 and older) declined from 15.9 per 100,000 in 2014 to 14.9 in 2024. Compounded by an aging physician pool and geographic mismatch, the report estimates that 68% of the older US population currently resides in counties where oncologist coverage is constrained or at high risk of shortage. These shortages will widen the health equity gap, as rural and marginalized communities are disproportionately isolated from subspecialized oncology care.

    M. Kelsey Kirkwood et al., "Where Have We Been and Where Are We Going? The State of the Hematology and Medical Oncologist Workforce in America," Oct. 7, 2025, JCO Oncology Practice, https://ascopubs.org/doi/10.1200/OP-25-00144.

12. Large-scale trials are establishing the clinical validity of AI as a diagnostic co-pilot. In mammography, the landmark Mammography Screening with Artificial Intelligence (MASAI) trial published in The Lancet Oncology demonstrated that AI-supported screening increased early cancer detection by 29% without elevating false positive rates, while simultaneously reducing the workload for radiologists by 44%. In pulmonary screening, a seminal 2019 Nature Medicine study demonstrated that deep-learning models analyzing low-dose chest CT scans matched or outperformed radiologists, increasing cancer detection by 5% and reducing false-positive rates by 11%. This was expanded by the Sybil deep-learning model, published in the Journal of Clinical Oncology in 2023, which predicted personalized lung cancer risk up to 6 years in advance from a CT scan. Beyond radiology, the next frontier of clinical augmentation is computational pathology. Using large foundation models, AI can now analyze standard, digitized slide images to predict genomic biomarkers and identify molecular signatures. This capability has the potential to allow oncologists to bypass weekslong delays and high costs of traditional next-generation sequencing.

    Kristina Lang et al., "Artificial Intelligence-Supported Screen Reading Versus Standard Double Reading in the Mammography Screening with Artificial Intelligence Trial (MASAI): A Clinical Safety Analysis of a Randomised, Controlled, Non-Inferiority, Single-Blinded, Screening Accuracy Study," August 2023, The Lancet Oncology, https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(23)00298-X/abstract.

    Diego Ardila et al., "End-to-End Lung Cancer Screening with Three-Dimensional Deep Learning on Low-Dose Chest Computed Tomography," May 20, 2019, Nature Medicine, https://www.nature.com/articles/s41591-019-0447-x.

    Peter G. Mikhael et al., "Sybil: A Validated Deep Learning Model to Predict Future Lung Cancer Risk From a Single Low-Dose Chest Computed Tomography," Jan. 12, 2023, Journal of Clinical Oncology, https://ascopubs.org/doi/10.1200/JCO.22.01345.

13. Douglas B. Flora, "The Next Frontier: How AI Will Shape Oncology Care," Sept. 19, 2024, Association of Cancer Care Centers, https://www.accc-cancer.org/view/the-next-frontier-how-ai-will-shape-oncology-care.

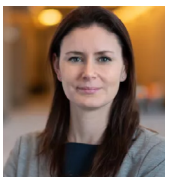
Authors



Ryan Langdale

Senior Partner

rlangdale@chartis.com



Sophie Clamon

Partner

sclamon@chartis.com



Adriana Krasniansky

Associate Partner

akrasniansky@chartis.com

Additional contributor:

Emily Nevarez, Research Manager.

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