AMJ
ISSN: 0005-2523

ISSN: 0005-2523
Volume 71, Issue 05, 2026

Doubling of Distant-Stage Cancer Survival in the United States, Mid-1990s to 2015–2021: A Surveillance-Based Case for the Therapeutics-Led Era

Dr. Sibah Bin Ali[1*]

[1] Department of Medical Oncology, University of Health Sciences, Algeria

*Corresponding Author: s.b.ali@univ-health.dz

Abstract

The dominant narrative of U.S. cancer surveillance has long been a story of prevention: smoking fell, and the death rate followed. That story is true but no longer complete. Drawing on the American Cancer Society's 2026 surveillance estimates and the underlying SEER and National Center for Health Statistics data, we argue that the United States has crossed a qualitative threshold. Five-year relative survival for all cancers combined has reached 70%, but the headline understates what happened beneath it: the largest proportional gains now belong to the cancers once written off. Distant-stage (metastatic) survival for all sites doubled, from 17% to 35%, between the mid-1990s and 2015–2021; metastatic lung-cancer survival rose roughly five-fold, from 2% to 10%; and myeloma survival nearly doubled, from 32% to 62%. We contend that cancer control has entered a therapeutics-led phase, in which molecular and immunologic treatment—not screening alone—increasingly drives population mortality. This reframing carries a sharp corollary: gains concentrated in late-stage disease are uniquely dependent on continuous access to expensive, recently approved drugs, and are therefore uniquely vulnerable to disruptions in research funding and insurance coverage.

Keywords: *cancer statistics; relative survival; metastatic disease; cancer mortality; health disparities; cancer policy*

Introduction

For most of the period in which the United States has kept reliable cancer records, the most consequential lever against cancer death was behavioral, not clinical. The age-adjusted cancer death rate climbed through most of the twentieth century on the back of the tobacco epidemic, peaked in 1991, and has since fallen by roughly a third—a decline that translates to an estimated 4.8 million deaths averted relative to a counterfactual in which rates held at their peak. [1] Most analyses correctly attribute the early decline to falling smoking prevalence, which dropped from 42% of U.S. adults in 1964 to about 11% by 2023. [1]

This framing—prevention first—has been so successful that it has become an intellectual default. It is also increasingly incomplete. The purpose of this commentary is to argue that the most recent surveillance data describe a different mechanism taking over. The marginal death now averted in the United States is, more and more often, the death of a patient who already has advanced

disease and who is alive because of a drug that did not exist fifteen years ago. The evidence is not anecdotal; it is written into the survival statistics themselves.

To situate the U.S. experience: worldwide, there were close to 20 million new cancer cases and 9.7 million cancer deaths in 2022, with roughly one in five people developing cancer in their lifetime. [2] The United States, with approximately 2,114,850 new cases and 626,140 deaths projected for 2026, [1] is a single—if unusually well-documented—chapter in a global problem. What makes its data valuable beyond its borders is the granularity of its long-run survival series, which lets us watch the therapeutic transition unfold in slow motion.

2 Data and approach

This is a synthesis and interpretation of published, population-based surveillance data; it presents no new primary data. Incidence figures derive from registries in the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) program and the CDC's National Program of Cancer Registries, with mortality from the National Center for Health Statistics, as compiled in the American Cancer Society's *Cancer Statistics, 2026* report. [1] Relative survival—the ratio of observed survival among patients to expected survival in a matched general population—is used throughout as the measure of net cancer survival, because it isolates the excess mortality attributable to the cancer itself.

A methodological caution deserves to be stated plainly rather than buried. Survival statistics are *not* a clean measure of treatment progress: they are inflated by earlier detection through two distinct mechanisms—lead time (moving the diagnosis date earlier without changing the death date) and overdiagnosis (detecting indolent tumors that would never have caused harm). [3] This is precisely why our argument leans hardest on distant-stage survival and on mortality, both far more resistant to these biases than all-stage survival.

3 The therapeutic transition, in the data

3.1 The survival gains have moved downstream

The single most informative table in modern U.S. cancer surveillance is the breakdown of relative survival by stage over time, because it tells us where in the disease course progress is occurring. The pattern is unambiguous and under-appreciated. For localized disease—caught early, often curable by surgery alone—survival was already high in the mid-1990s and has barely moved, because there was little room to move. The action is at the other end of the spectrum (Table 1).

The interpretation is straightforward: you cannot improve metastatic survival with a mammogram. Lead time and overdiagnosis operate on *localized* disease, where survival is flat. The doubling of all-site distant survival, and the five-fold rise for metastatic lung cancer, are therefore largely *real* and largely *therapeutic*—the fingerprint of a decade in which targeted agents and immune checkpoint inhibitors moved from trial endpoints to standard practice. Figure 1 makes the magnitude visible.

3.2 Two case studies in what treatment can do

Two malignancies illustrate the transition with unusual clarity. **Myeloma** is the cleaner example, because it is rarely screen-detected, so its gains cannot be dismissed as a detection artifact. Five-year relative survival roughly doubled, from 32% in the mid-1990s to 62% in 2015–2021, [1] tracking the arrival of proteasome inhibitors, immunomodulatory drugs, and monoclonal antibodies. There is no plausible lead-time story here; this is therapy.

Lung cancer is the more consequential example, because of its scale. It remains the leading cause of cancer death in the United States, projected to kill about 124,990 people in 2026—more than colorectal and pancreatic cancer combined. [1] Yet its mortality now falls faster than its incidence, and that gap is the signature of treatment. A landmark population-level analysis linked the sharp decline in non–small-cell lung-cancer mortality after 2013 not merely to falling incidence but to the diffusion of targeted therapies, demonstrating an effect visible across the entire population rather than only in trials. [4] In metastatic melanoma, the parallel is even starker: combination checkpoint blockade produced a median overall survival exceeding six years in the CheckMate 067 trial, [5] against a historical median of well under a year—precisely the kind of advance that turns a 16% distant-stage survival into 35%.

3.3 Mortality is following — and that is the real proof

Survival statistics can be fooled; mortality rates are far harder to fool, because they are anchored to deaths in the whole population rather than a selected cohort of diagnosed patients. [3] This is why the most persuasive corroboration of the therapeutic-transition thesis is that mortality moves in concert with the survival gains. A recent analysis estimated that improvements in stage-specific survival accounted for nearly 174,000 fewer U.S. cancer deaths between 2010 and 2019. [1] Breast cancer offers the most rigorously decomposed example: modeling work attributes the bulk of the post-1975 mortality decline to treatment advances, with screening contributing the remainder. [6] When an effect appears independently in selected-cohort survival and in population mortality, the artifact explanations lose their force.

4 What the headline number hides: disparity

A national 5-year survival figure of 70% is an average, and averages launder injustice. The same dataset documents that Black patients have lower survival than White patients for nearly every cancer type, even after adjusting for stage at diagnosis and socioeconomic status. [1,7] Some of this reflects biology—a higher burden of aggressive subtypes such as triple-negative breast cancer—but the larger driver is differential access across the entire continuum, from screening to genetic testing to receipt of the targeted therapies described above. [7]

This is the uncomfortable logic of a therapeutics-led era: when survival depends on access to expensive new drugs, any inequity in access is mechanically converted into an inequity in survival. The disparity data make the same point geographically and by ethnicity. American Indian and Alaska Native populations bear the highest overall cancer mortality, with death rates for kidney, liver, stomach, and cervical cancers running at roughly twice those of White populations, [1] and

ISSN: 0005-2523
Volume 71, Issue 05, 2026

lung-cancer incidence in Native women has yet to decline at all. Much of this burden is rooted in the same modifiable and structural factors—smoking, infection, obesity, and unequal care—that drive the national totals, just distributed unequally. [8] Roughly 40% of incident cancers and 44% of cancer deaths among U.S. adults aged 30 and older are attributable to potentially modifiable risk factors, [8] which means a large share of the remaining burden is, in principle, addressable by prevention—if prevention reaches the people who need it. The cervical-cancer experience is instructive here: HPV vaccination can virtually eliminate the disease, [9] yet the states with the highest incidence have the lowest vaccination coverage, so an unambiguously effective tool is poised to widen, not narrow, the gap.

5 The policy corollary nobody can opt out of

Here the reframing stops being academic. If the marginal averted death is increasingly that of a metastatic patient kept alive by a recently approved drug, then the gains of the past decade are structurally dependent on two things the previous era did not require to the same degree: a continuous pipeline of cancer research, and insurance coverage that puts the resulting drugs within reach.

Prevention-era gains, once achieved, were relatively durable—a person who quit smoking in 2005 does not relapse into risk if a research budget is cut in 2026. Therapeutics-era gains are not durable in the same way. They must be *re-earned every year*, in every patient, through access to drugs that frequently cost more than a median household income annually. A metastatic-lung-cancer survival rate of 10% is not a monument; it is a subscription. Withdraw the funding that produces the next generation of agents, or the coverage that delivers the current one, and the distant-stage curves this commentary celebrates are the first that will bend back down—precisely because they rest on the most fragile and most recent scaffolding.

6 Limitations

The figures synthesized here are model-based projections and registry estimates, not a census, and the 2026 case and death counts in particular should not be used to infer year-over-year trend—the projection methodology is explicitly unsuited to that purpose. [1] Relative survival, even restricted to distant stage, can still be influenced by shifts in subtype mix and by stage-migration from improved imaging. Racial and ethnic categories aggregate heterogeneous populations and, through misclassification, tend to underestimate burden in non-White groups, especially Native populations. [1] Finally, this is interpretation built on others' data; the causal attribution of survival gains to therapy versus detection, while strongly supported for distant-stage and mortality endpoints, is an inference, not a randomized result.

ISSN: 0005-2523
Volume 71, Issue 05, 2026

7 Conclusion

The United States did not merely keep doing what worked. Somewhere in the last fifteen years, the engine of progress against cancer death quietly changed—from prevention that stops cancers from starting to treatment that keeps advanced cancers from killing. The 70% survival headline is real, but the more important number is the one beneath it: distant-stage survival doubled, and for the deadliest cancers it did far more than double. That is the return on a generation of basic and clinical research, and it is the strongest argument that such research is not a discretionary expense but the load-bearing wall of every survival gain made since. It is also why the moment is precarious. We have built a system in which staying alive with advanced cancer is, increasingly, contingent on access renewed year after year. Protecting that access is no longer a humanitarian footnote to the cancer-statistics story. It is the story.

References

1. Siegel RL, Kratzer TB, Wagle NS, Sung H, Jemal A. Cancer statistics, 2026. *CA Cancer J Clin.* 2026;76(1):e70043. doi:10.3322/caac.70043

2. Bray F, Laversanne M, Sung H, et al. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin.* 2024;74(3):229–263. doi:10.3322/caac.21834

3. Welch HG, Schwartz LM, Woloshin S. Are increasing 5-year survival rates evidence of success against cancer? *JAMA.* 2000;283(22):2975–2978. doi:10.1001/jama.283.22.2975

4. Howlader N, Forjaz G, Mooradian MJ, et al. The effect of advances in lung-cancer treatment on population mortality. *N Engl J Med.* 2020;383(7):640–649. doi:10.1056/NEJMoa1916623

5. Larkin J, Chiarion-Sileni V, Gonzalez R, et al. Five-year survival with combined nivolumab and ipilimumab in advanced melanoma. *N Engl J Med.* 2019;381(16):1535–1546. doi:10.1056/NEJMoa1910836

6. Caswell-Jin JL, Sun LP, Munoz D, et al. Analysis of breast cancer mortality in the US—1975 to 2019. *JAMA.* 2024;331(3):233–241. doi:10.1001/jama.2023.25881

7. Jemal A, Robbins AS, Lin CC, et al. Factors that contributed to Black–White disparities in survival among nonelderly women with breast cancer between 2004 and 2013. *J Clin Oncol.* 2018;36(1):14–24. doi:10.1200/JCO.2017.73.7932

8. Islami F, Marlow EC, Thomson B, et al. Proportion and number of cancer cases and deaths attributable to potentially modifiable risk factors in the United States, 2019. *CA Cancer J Clin.* 2024;74(5):405–432. doi:10.3322/caac.21858

9. Falcaro M, Castañon A, Ndlela B, et al. The effects of the national HPV vaccination programme in England, UK, on cervical cancer and grade 3 cervical intraepithelial neoplasia incidence: a register-based observational study. *Lancet.* 2021;398(10316):2084–2092. doi:10.1016/S0140-6736(21)02178-4

10. Sung H, Ferlay J, Siegel RL, et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin.* 2021;71(3):209–249. doi:10.3322/caac.21660

AMJ
ISSN: 0005-2523

ISSN: 0005-2523
Volume 71, Issue 05, 2026

Tables and Legends

Table 1. Five-year relative survival (%) by stage, all sites and selected high-mortality sites, United States.

Site / stage	Mid-1990s	2015–2021	Fold	Endpoint
All sites — localized	88	92	1.0×	early
All sites — regional	54	69	1.3×	intermediate
All sites — distant	**17**	**35**	**2.0×**	metastatic
Lung — distant	**2**	**10**	**~5×**	metastatic
Melanoma — distant	16	35	2.2×	metastatic
Rectum — distant	8	18	2.3×	metastatic
Stomach — distant	3	8	2.8×	metastatic

Source: Siegel et al., Cancer statistics, 2026, Table 7. Highlighted rows mark metastatic disease, where the largest proportional gains occur.

ISSN: 0005-2523
Volume 71, Issue 05, 2026

Figures and Legends

Figure 1. Distant-stage (metastatic) 5-year relative survival, mid-1990s vs 2015–2021. Red labels denote fold change. Data: Siegel et al., 2026 (Table 7).