



City of Hope

VALUE-BASED ONCOLOGY CARE: UNDERSTANDING VALUE, COST, AND OUTCOMES

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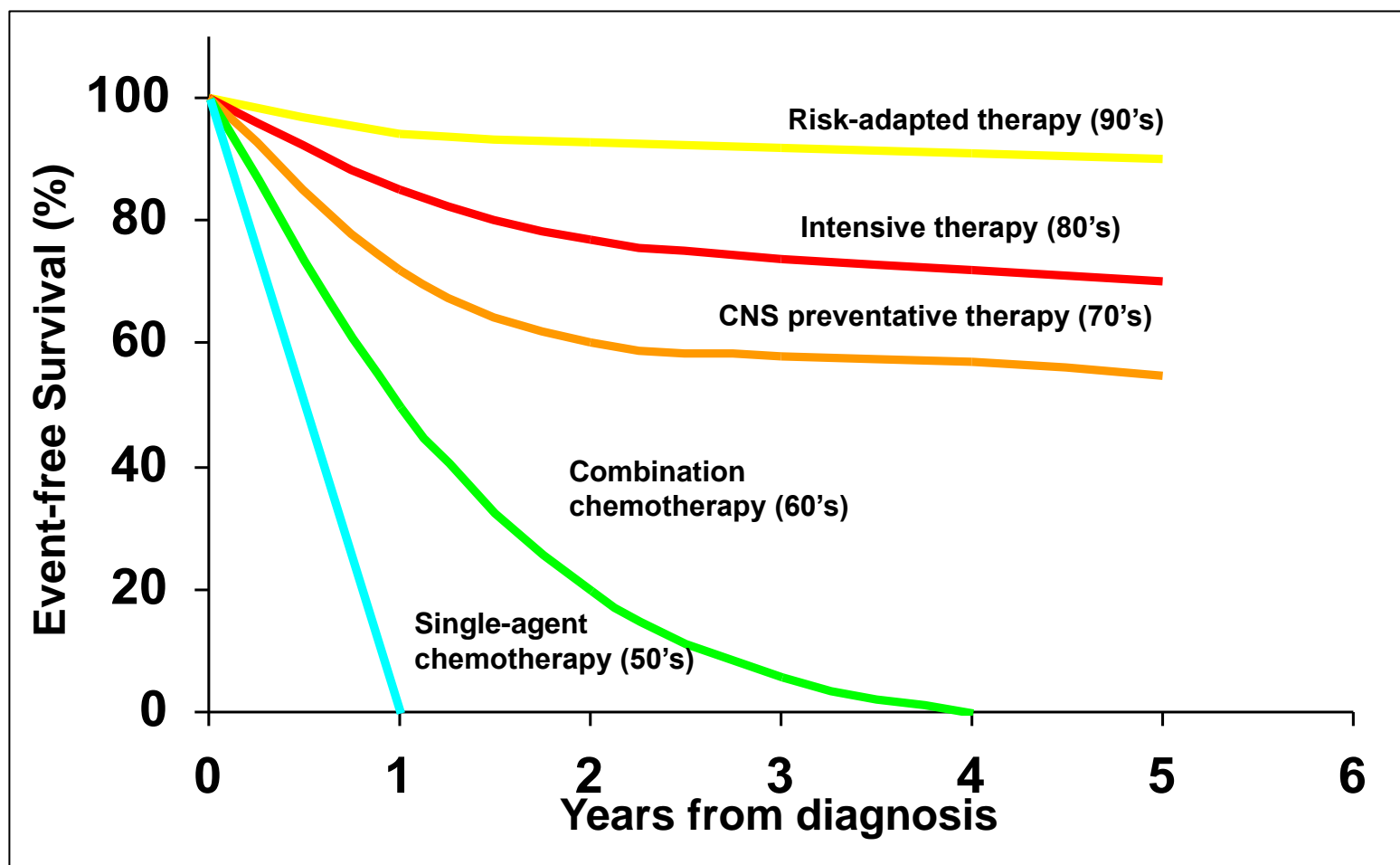
Disclosures

- Nothing to disclose.

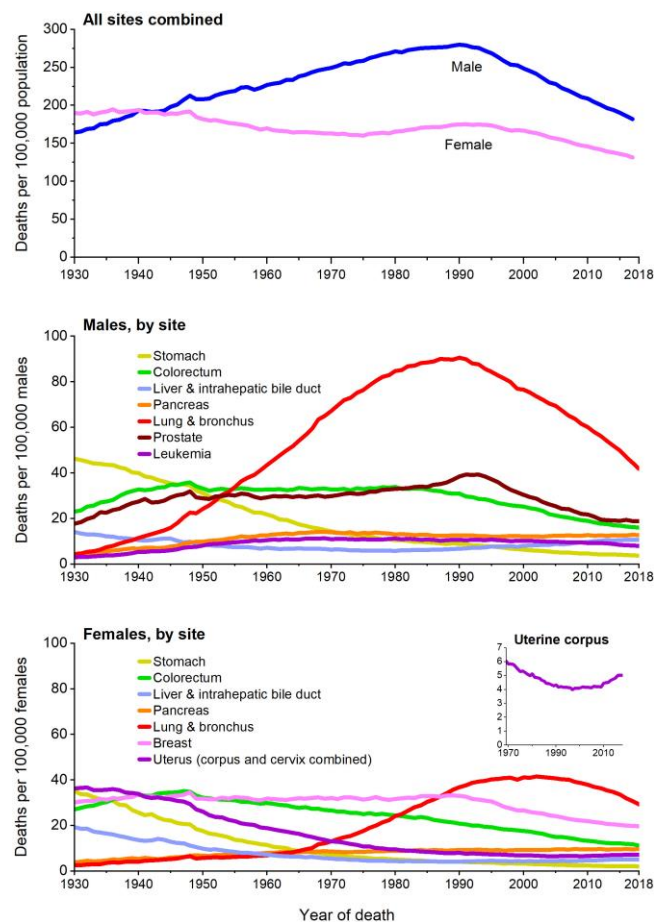
Evolving Cancer Care Technology is Improving Patient Outcomes and Saving Lives



What can we Learn from the Paradigm of Pediatric Hematology?

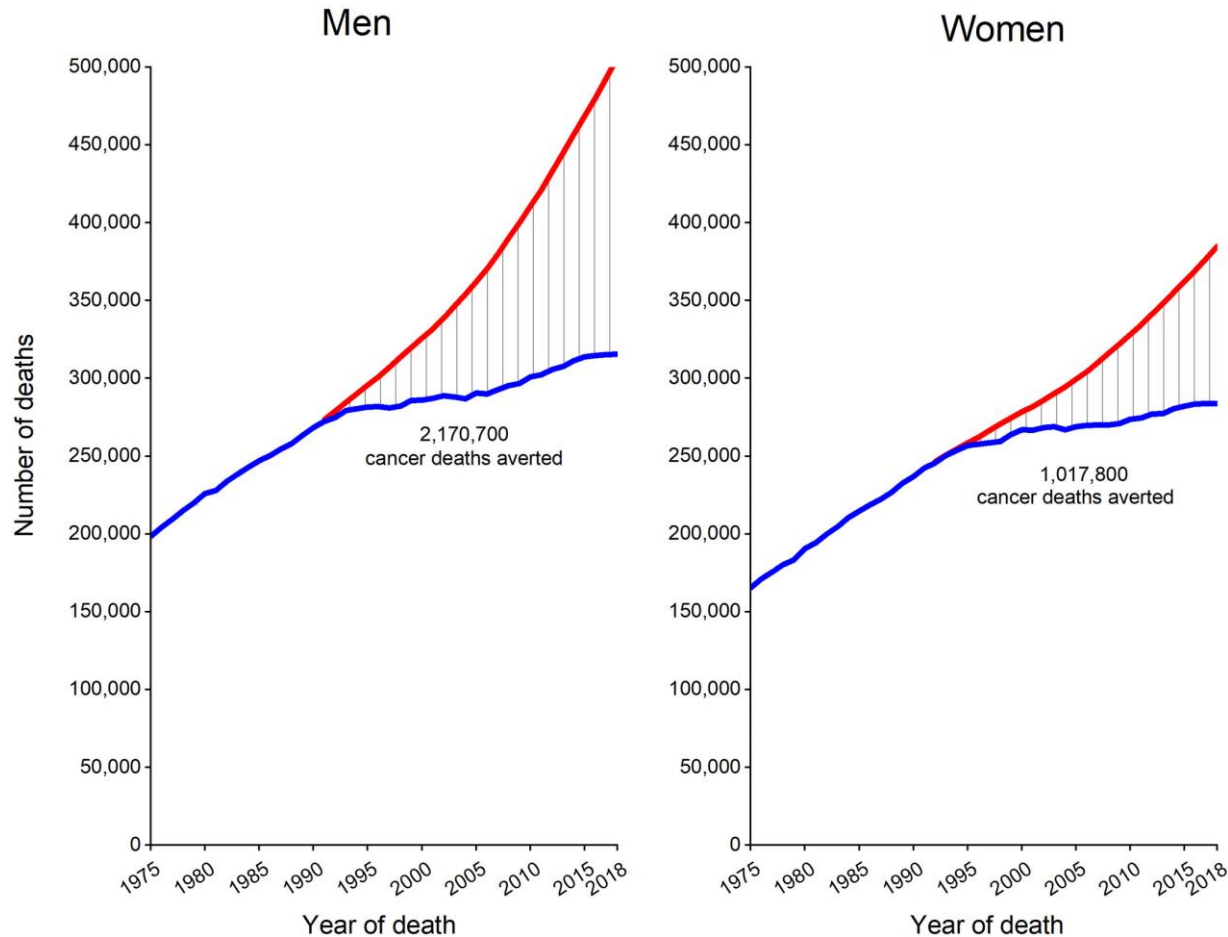


Cancer Mortality Rates are Improving by the Greatest Percentages Ever Recorded



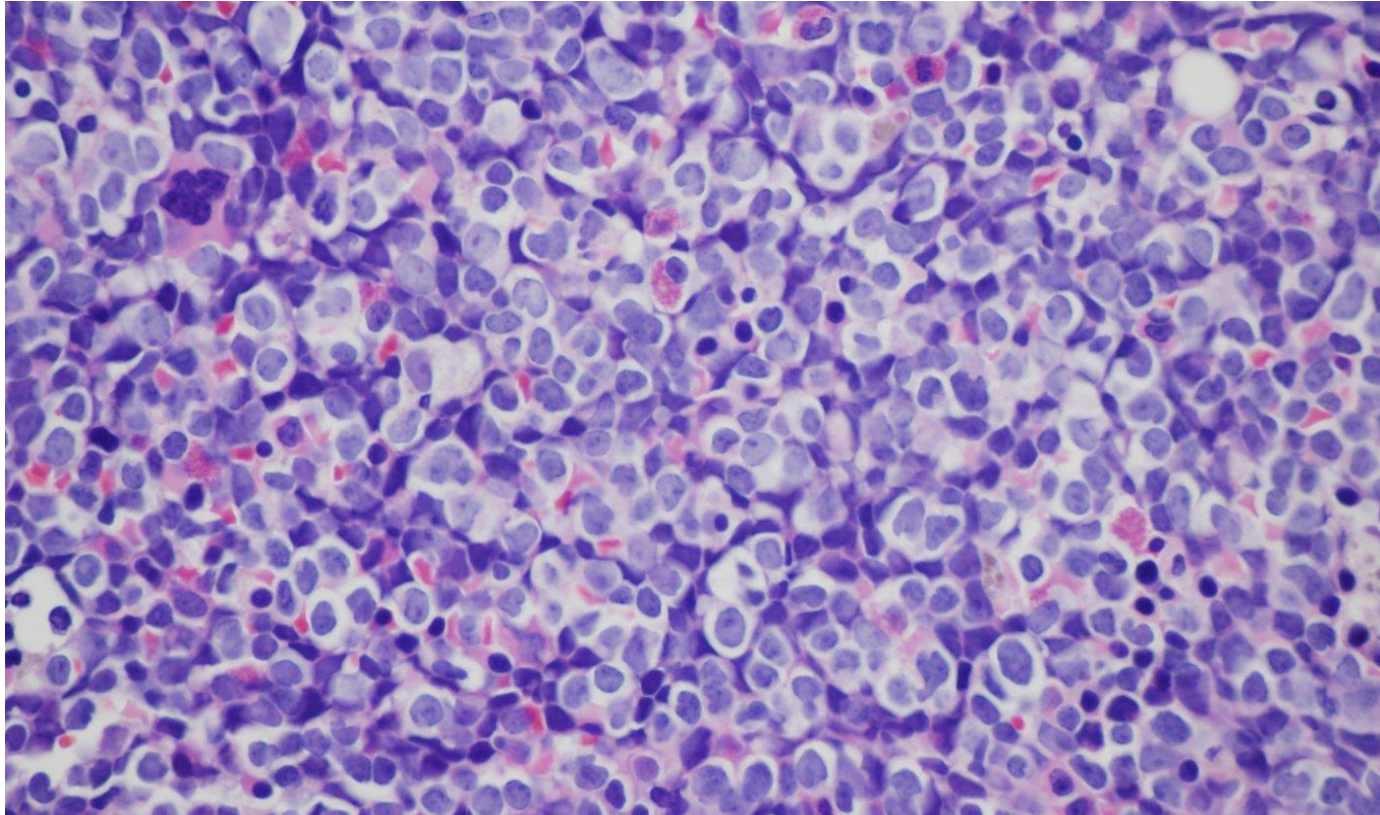
CA: A Cancer Journal for Clinicians, Volume: 71, Issue: 1, Pages: 7-33, First published: 12 January 2021, DOI: (10.3322/caac.21654)

The Life Dividend for Improving Cancer Survival Rates

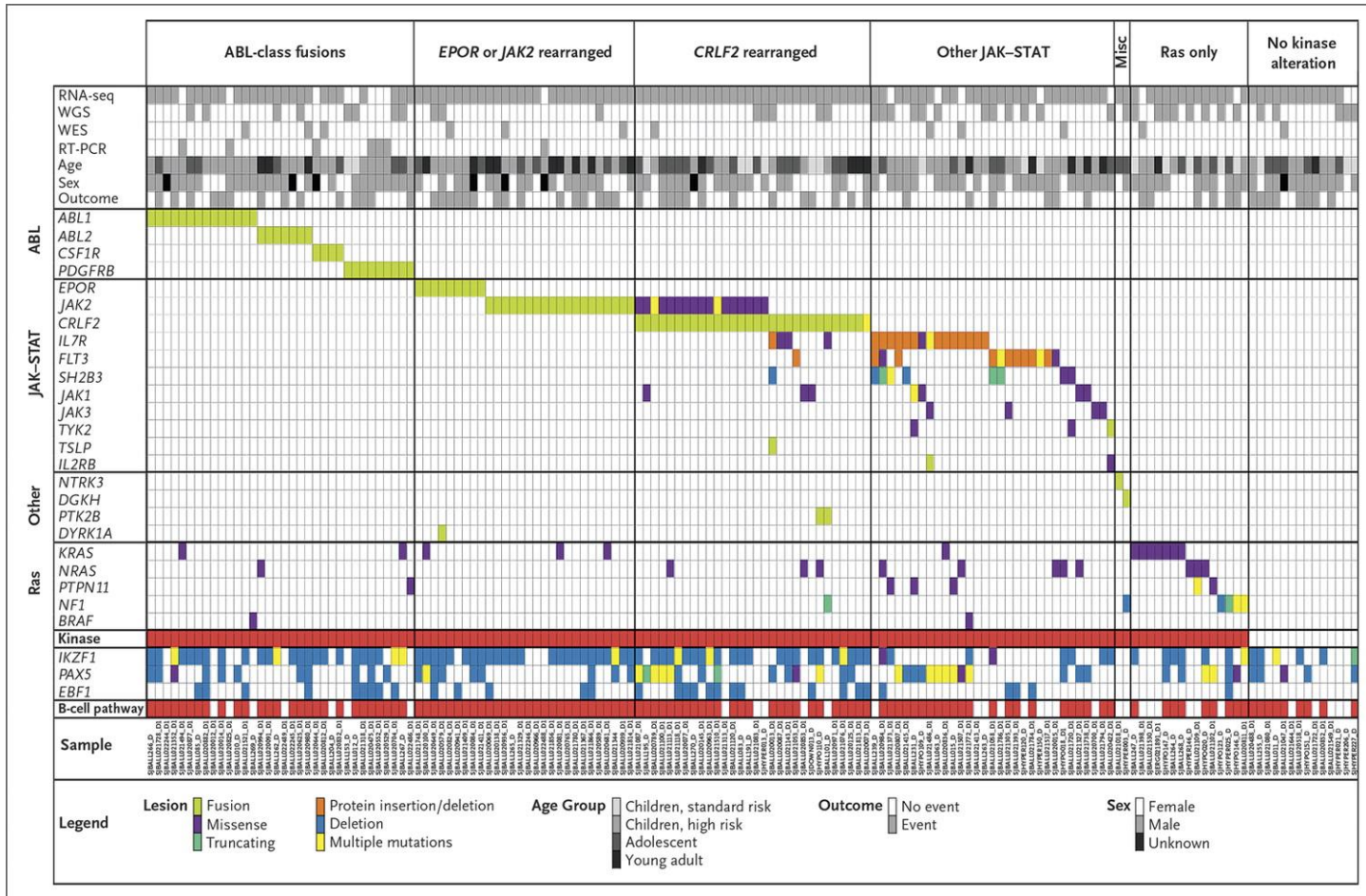


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What Leukemia Looks Like Tells Us Little Of What We Need To Know To Treat It Effectively

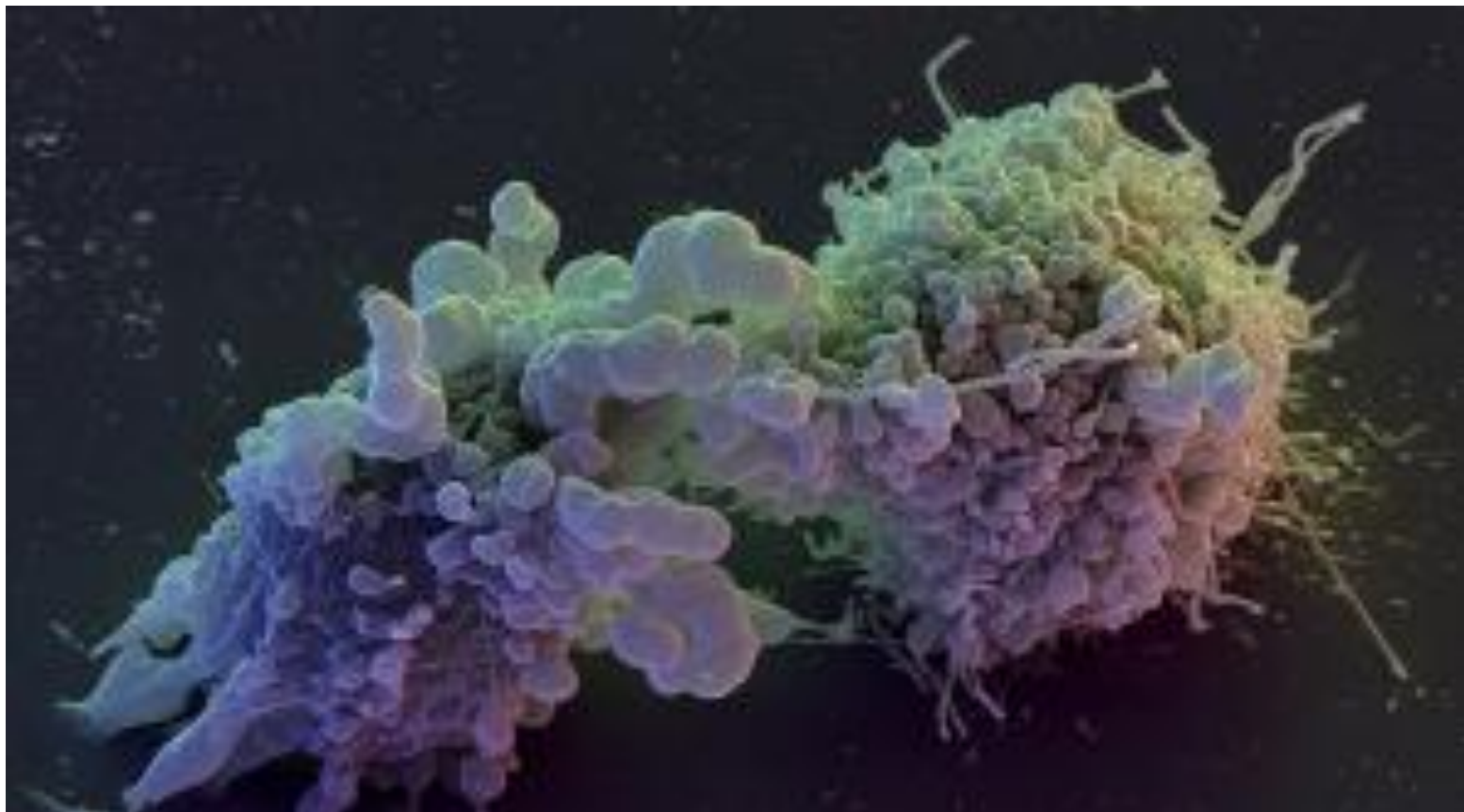


Diversity of Molecular Abnormalities Inform the Rational Use of Targeted Therapeutic Agents



Roberts KG et al. N Engl J Med 2014;371:1005-1015

Novel Technologies Provide New Therapeutic Opportunities for Patients with Unmet Cancer Care Needs





America's Healthcare Economics Present a Profound National Challenge

- US healthcare expenditures are growing unsustainably
- 2014 (a representative sample year) healthcare inflation rate 5.3% vs. 0.8% overall rate§
- In 2019 total US healthcare expenditures were \$3.8 trillion/\$11,582 per person (17% of GDP)¹
- Medi-Cal/California state Medicaid expenditures are in line with this level of spending
- 2020 healthcare expenditures dropped by 2% due to the COVID-19 pandemic; expenditures are expected to rise rapidly following an end to the public health emergency⁺
- 2010 cancer care costs > \$124.6 billion²
- Cancer care-related costs are projected to grow by 39% (\$172.8 billion) by 2020³
- Cancer affects 3% of the population, but consumes >5% of all healthcare expenditures
- The federal government is the largest healthcare payer; rising healthcare expenditures are a significant driver of the budget deficit

1. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical>

2. <http://www.usinflationcalculator.com/inflation/current-inflation-rates/>

3. <https://www.aha.org/news/headline/2021-02-17-study-us-health-spending-falls-first-time-60-years-2020-7-decline-hospital>

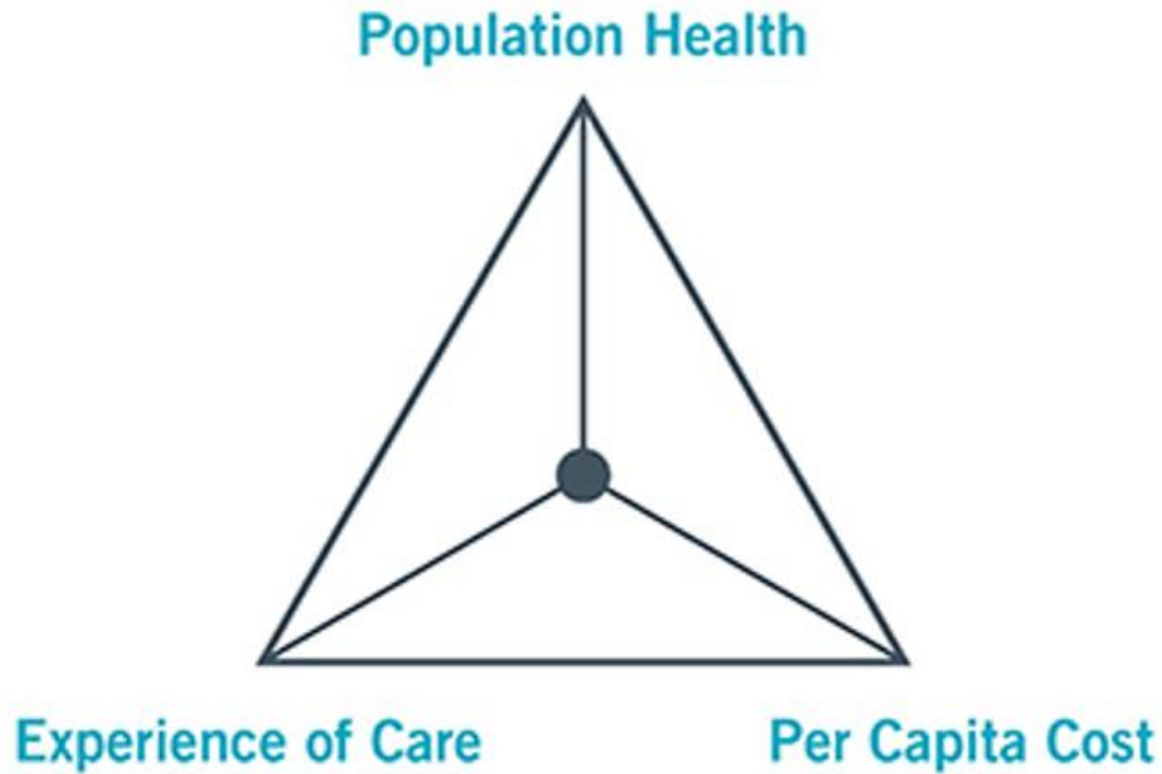
<https://costprojections.cancer.gov/expenditures.html>



Some of the Drivers of Increased Cancer Care Costs

- Increasing cancer incidence/prevalence
- Aging cancer patient population with numerous comorbidities
- Increasing ability to rescue patients
- Increasing use of high-cost surgical, radiotherapeutic, chemotherapeutic technologies
 - Cellular-based therapeutics
 - CAR T-cells
- Increasing pharmaceutical costs of targeted therapies
 - Tyrosine kinase inhibitors (> \$90,000/year)
 - Blinatumomab (\$190,000/2 month course)
 - Ibrutinimb (\$120,000/year)

The IHI Triple Aim





Strategies for Managing Rising Healthcare Costs

- Narrow provider networks
- Prior authorization/Utilization Management oversight
- Technologic-specific coverage limitations or coverage definitions
- Per-Capita payment for care services
- Provider/Healthcare system risk sharing



WHAT IS VALUE?

$$\text{VALUE} = (\text{QUALITY} + \text{OUTCOMES}) / \text{COST}$$

Wehrwein, et al

Managed Care, August 16, 2015

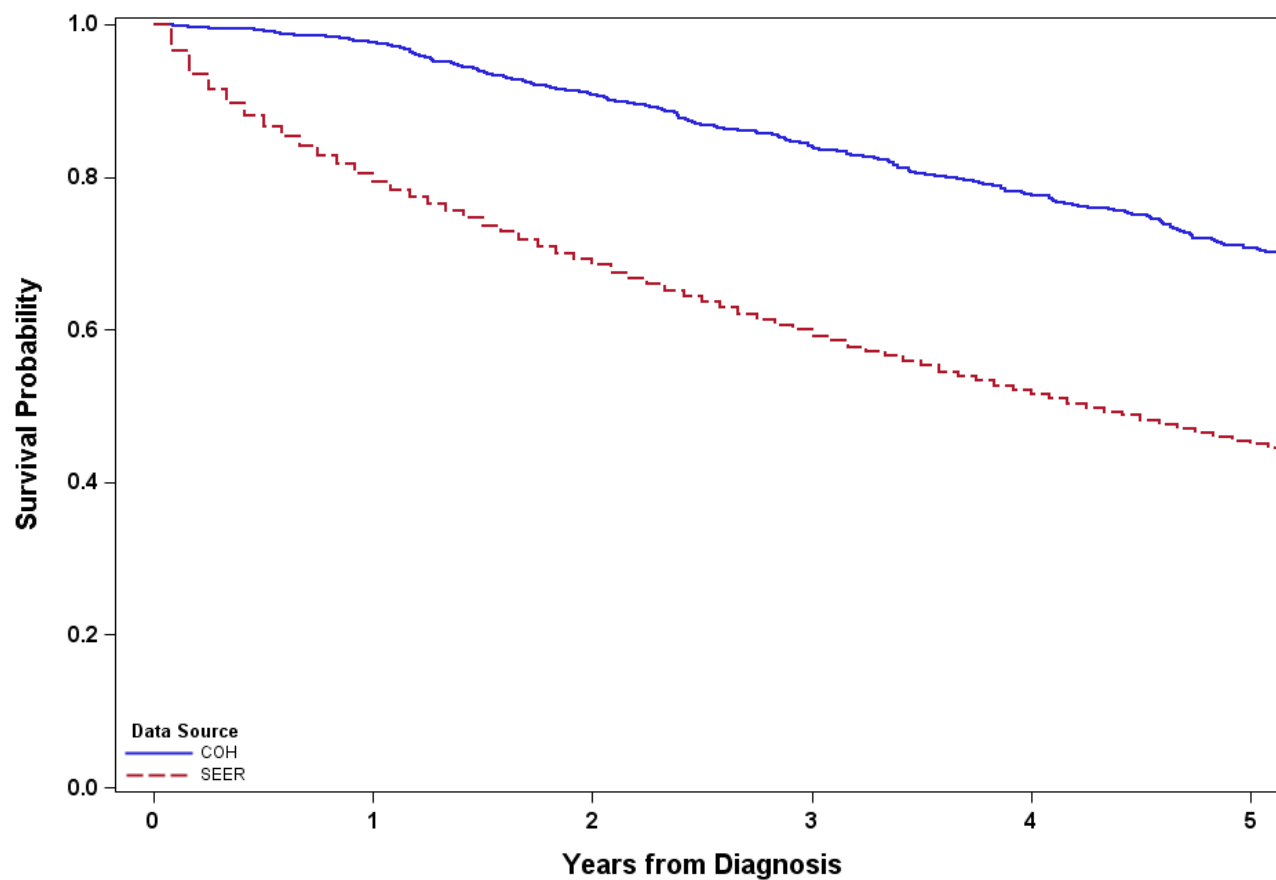
Scope of Disparities



- Black patients and those on Medicaid were less likely to receive guideline-concordant medications compared with white patients and those who had managed care insurance plans
- Patients of lower socioeconomic status were also less likely to receive NCCN-adherent care across all cancer types except cervical cancer ($P < .0001$)
- Specifically, non-Hispanic black patients were less likely to receive drugs suggested by the NCCN in breast cancer (odds ratio [OR], 0.88; 95% CI, 0.84-0.92), prostate cancer (OR, 0.90; 95% CI, 0.86-0.93), colon cancer (OR, 0.85; 95% CI, 0.79-0.92), and ovarian cancer (OR, 0.71; 95% CI, 0.62-0.82)
- Hispanic patients were less likely to receive NCCN-concordant care in breast, prostate, and liver cancers
- Asian patients were less likely to receive guideline-adherent treatment in breast and liver cancers.
- Having Medicaid also decreased a patient's likelihood of receiving a therapy endorsed by the NCCN; this effect was seen in breast, prostate, colon, rectal, gastric, and liver cancers ($P < .0001$)
- In all, less than half of patients (47.5%) with cancer that were included in the analysis received anticancer therapies that were consistent with those highlighted in NCCN guidelines

***Less Than 50% of
Patients With Cancer
Received NCCN-
Concordant Care in
California From 2004
to 2016***

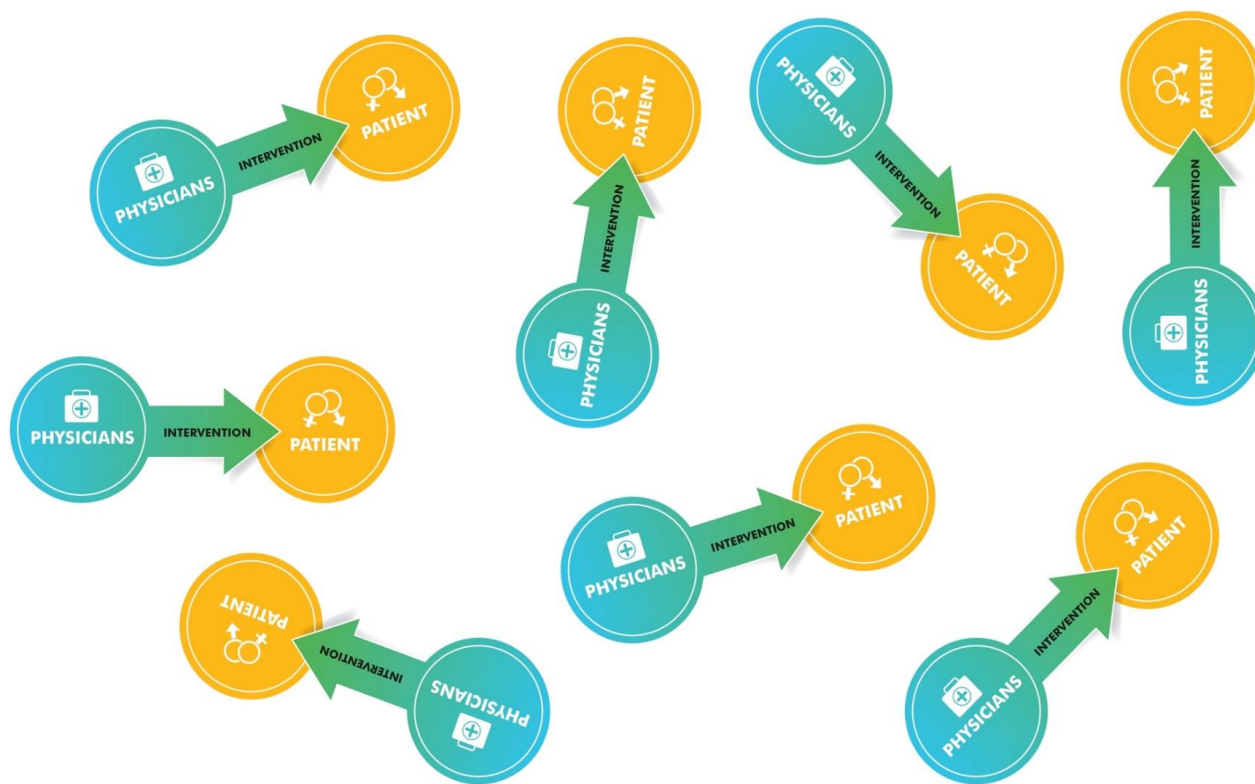
MM COH vs SEER National, 2007-2016 Unadjusted Overall Survival



Patients At Risk

COH	1285	1252	979	758	584	452
SEER	53301	42464	31993	23951	17638	12718

A Challenge to Sustainability: Cancer Care is Often Delivered as a Disconnected Series of Transactions





What are the Causes for Failure of This Cancer Care Model

- Failure to perform risk assessment
- Inaccurate risk assessment
- Failure to establish patient-centered goals of care
- Failures in intra-team communication
- Failures in communication between team and patient
- Technology/Goals of Care mismatches
- Scope of Care/Goals of Care mismatches
- Technology/Risk mismatches
- Failure to reevaluate patient/goals of care on an iterative basis
- Inadequate organization commitment of resources to enterprise



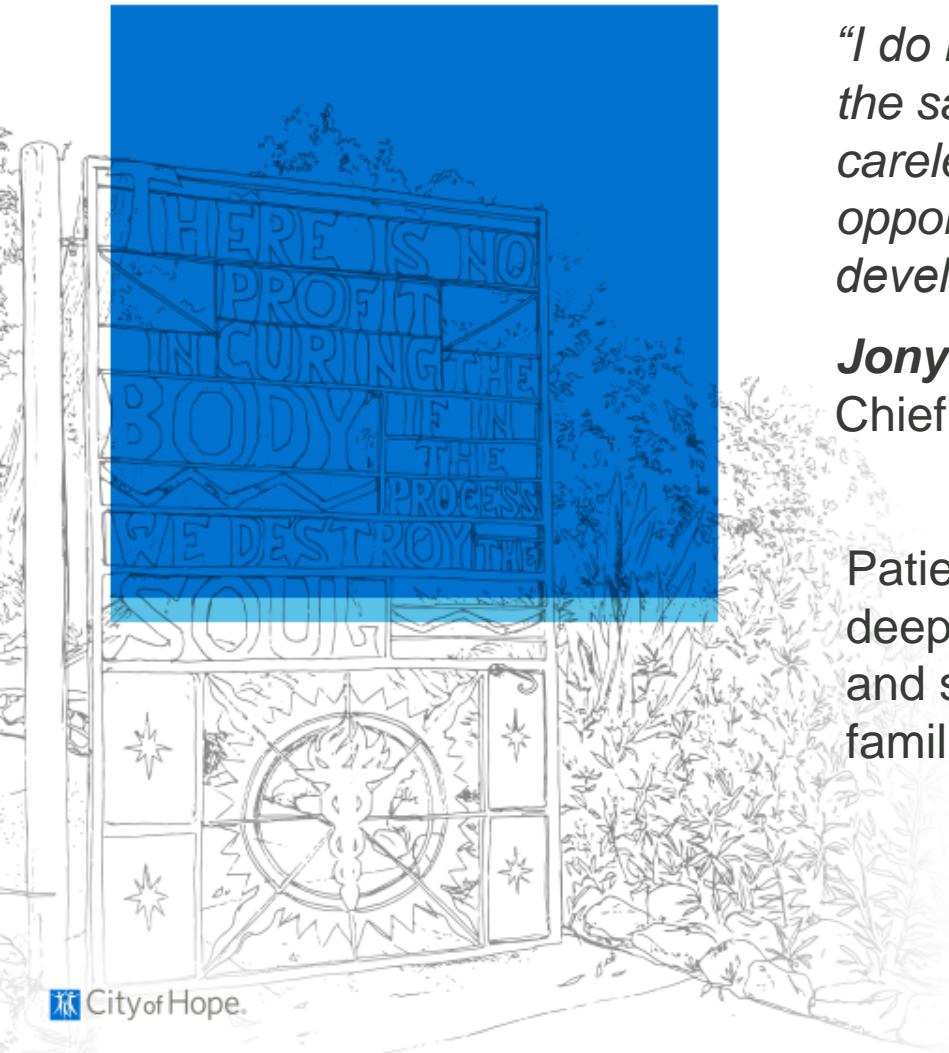
A Word of Caution About Performance Metrics

- Getting this right is about designing more patient-centric **systems** rather than simply creating more metrics
- Metrics need to drive better systems rather than provide an incentive to perform to the metric

“We tend to be much more comfortable talking product attributes that you can measure with a number. . .The problem is, you and I both know, that we make probably the most important decisions of our lives in the absence of numerical data.”

Jony Ive
Chief of Design, Apple

Creating a Model for More Patient-Centered Care



"I do believe that people sense care in the same way, I think, that we sense carelessness. I think that we sense opportunistic products that were just developed quickly and to a price."

Jony Ive

Chief Design Officer, Apple

Patient-centeredness begins with a deep respect for the human, emotional, and spiritual needs of patients and their families.

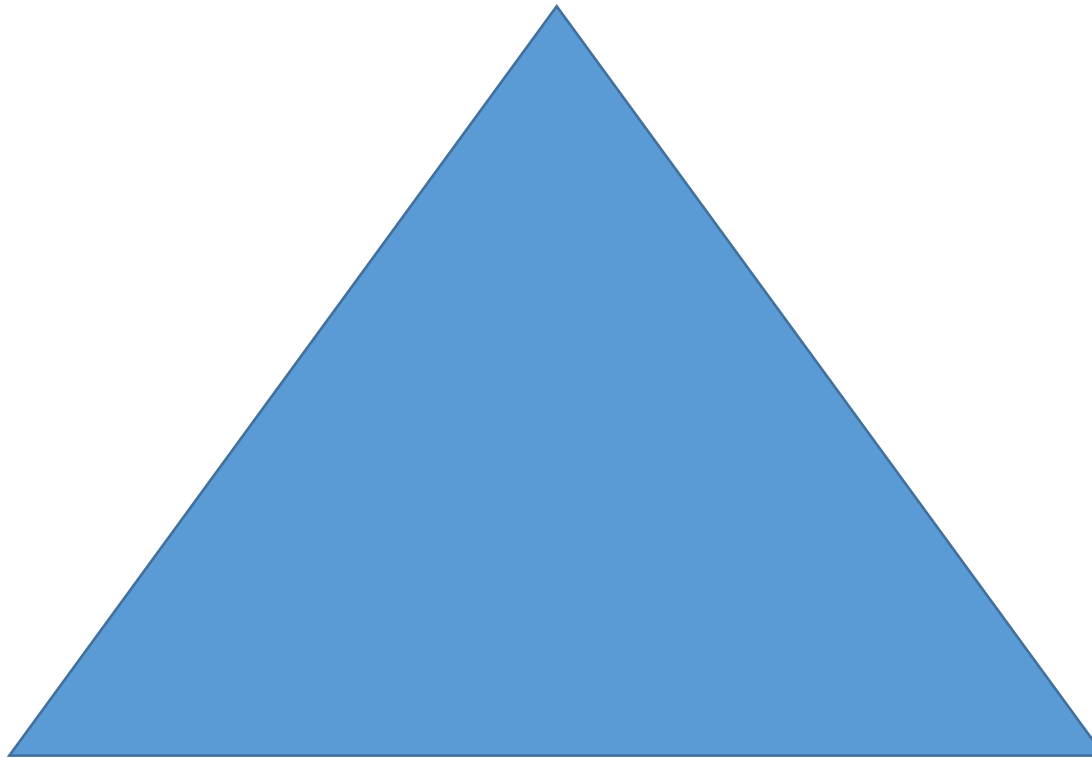


Personalized/Precision Medicine Triple Aim of Care

(Alvarnas, 2016)

Clinical Risk
(Diagnostic, Molecular,
Genomic, Proteomic)

**Risk/Goal-
Adapted
Cost per
Case**

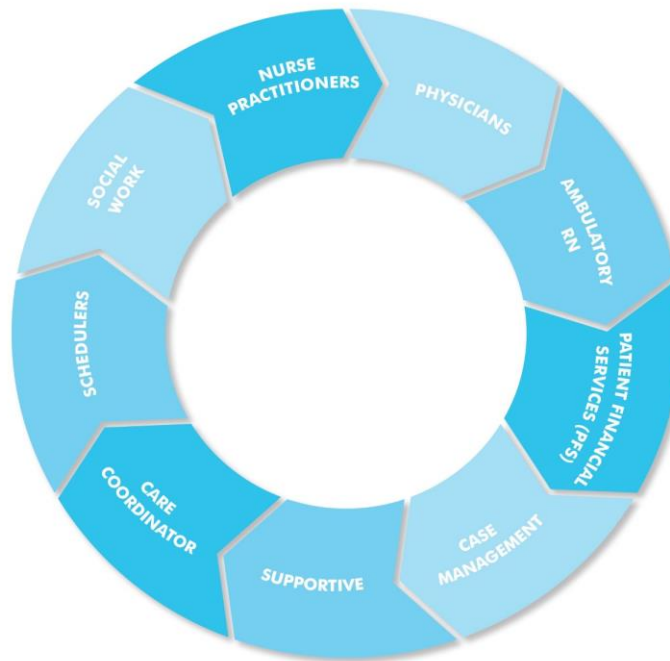


**Patient/Family-
Centered
Experience of
Care**



Patient-Centered, integrated team-based care

A High-Functioning/Seamlessly Integrated Care Team Forms the Core of Patient-Centered Cancer Care



Ecosystems for Effective Care – How This Patient-Center Cancer Care Model Helps to Move us Closer to Value-Based Care



Value Mapping and Value Chain Analysis of Cancer Care Delivery Can:

- Instead of structuring healthcare based upon the next intervention, realign infrastructure and payment to support a continuum of care
 - Cancer care is episodic, but successful treatment is based upon an effective continuum of care
 - Requires multiple services providing opportunity for savings
 - Coordination of care can avoid delays in care and costly services
 - By developing a highly skilled workforce, we can reduce disconnects in care delivery
- Look for opportunities for increasing efficiency in care delivery
 - Reduce duplicative testing, imaging, and non-value-added care



How This Patient-Center Cancer Care Model Helps to Move us Closer to Value-Based Care

- Practice effective stewardship of healthcare resources
 - Molecular diagnostic studies
 - Pharmaceuticals
 - Imaging studies
 - Inpatient length of stay
 - Avoid inpatient days which are not medically indicated
- Move toward integrated care models that deliver care most efficiently at the lowest-priced care setting
 - Rationale care escalation schemes
 - Planned clinical-goal based transitions in care
- Links most effective cancer care delivery with economic sustainability
- Consistently produce and report transparent care outcomes data!!!!



Distress Management

- What is distress?
- Distress includes patient experience of physical, psychological, emotional, spiritual issues related to the cancer journey
 - Fatigue
 - Pain
 - Insomnia
 - Depression
 - Anxiety
 - Anger
- The focus is not just of complications of treatment; it requires a full assessment of the human experience of care
 - It includes a deep examination upon patient and family coping, resilience, quality of life, and the human sustainability of navigating the care journey



Goals of Care

- Where are we going on this journey?
- Is care directed at:
 - A cure?
 - Disease control?
 - Mitigation and control of symptoms?
 - Enhancing quality of life?
 - Ensuring a compassionate end of life experience?
- Clinicians admit in surveys that GOC discussions happen too infrequently, too late, or in too piecemeal a fashion for a majority of a patients with blood cancers



Restoration to Wholeness





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