National Cancer Database
American College of Surgeons

Commission on Cancer, National Cancer Database: Opportunities and Challenges to Improve Cancer Surveillance

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Commission on Cancer

Mission and Aims

1. **Promote high quality data as critical to measuring patient care**
   - Standards for registry quality control and timeliness
   - Interactive reports designed to measure data completeness

2. **Develop evidence-based quality of care measures from the National Cancer Database**
   - Establish standards of best-practice to ensure optimal patient care
   - Demonstrate survival benefits

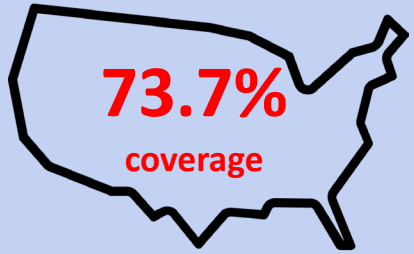
National Cancer Database

Key components needed to develop and report quality of care metrics

COMPREHENSIVE

>1.5 million records annually

~1,400 hospitals, diverse audience



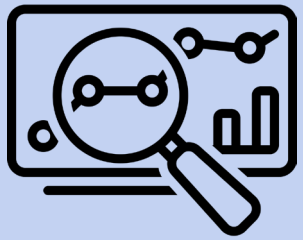
DETAILED

>450 fields submitted

~70 disease sites

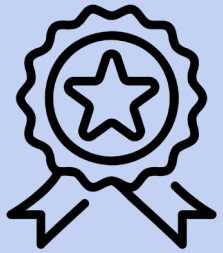
AJCC TNM Staging

Outcomes



HIGH QUALITY

CoC Standards drive accuracy of data



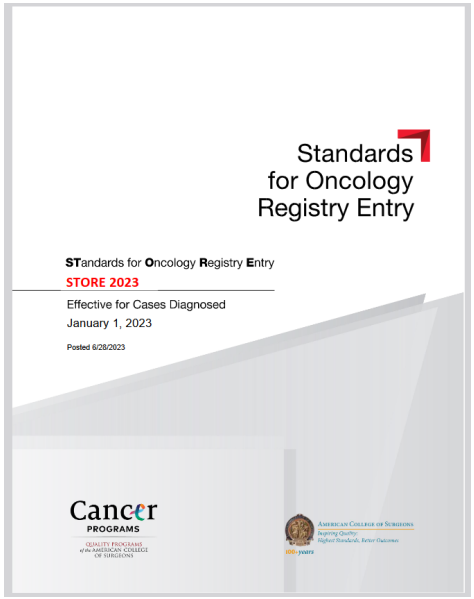
CONTEMPORARY

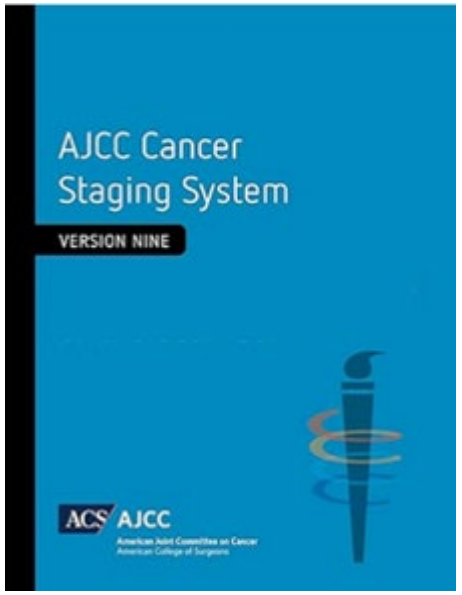
Rapid Cancer Reporting System

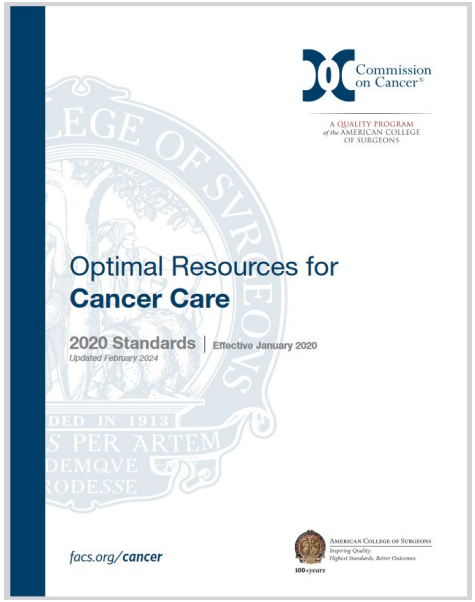
Real-time case feedback

Perspectives on High Quality Data

Standardized Abstraction Processes + Unified Code Definitions = High Quality Reports







Perspectives on High Quality Data

CoC Standards and their role in data quality

Cancer Registry Quality Control

The cancer committee implements a quality control policy and procedure

> 90% CoC Hospital Compliance

Data Submission

Case submission to the Rapid Cancer Reporting System at least once each calendar month

> 90% CoC Hospital Compliance

Perspectives on High Quality Data

2024 National Cancer Database data quality evaluation

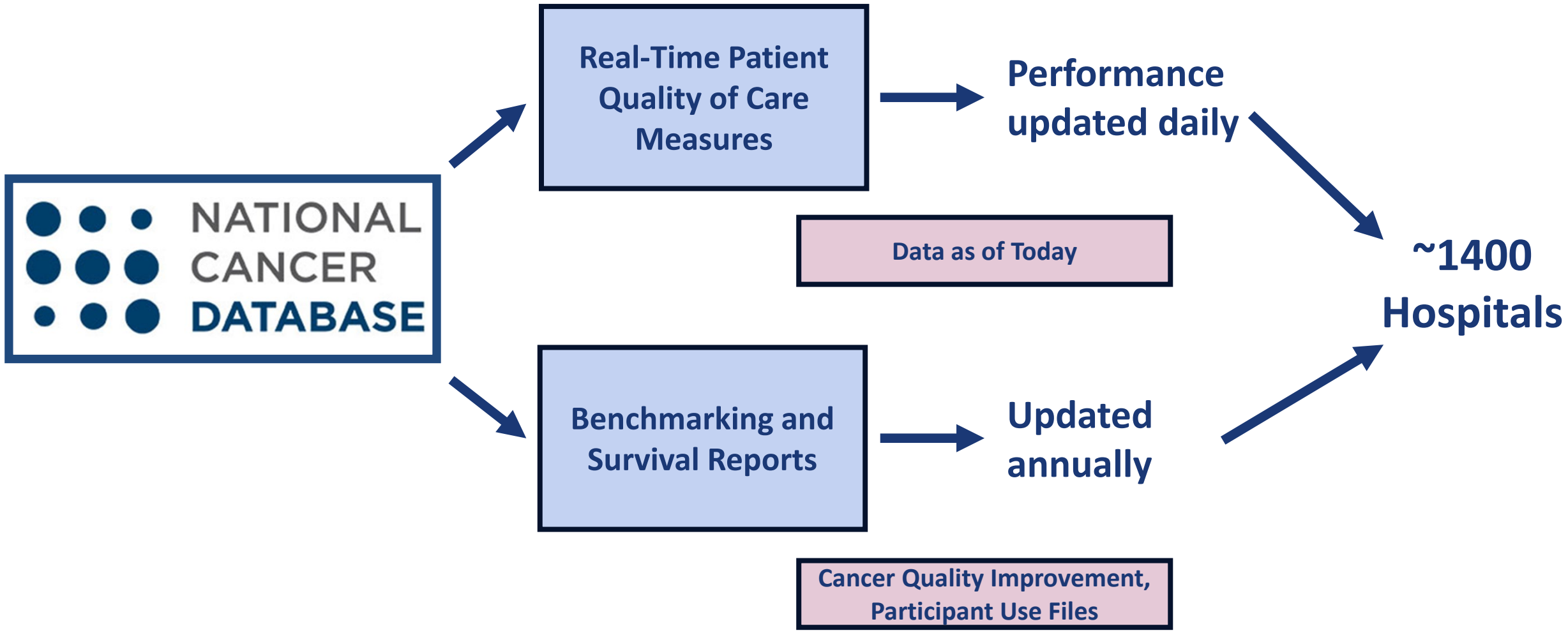
- characterized by a high level of case completeness
- comparability with uniform standards for data collection
- timely data submission
- high rates of compliance with validity standards for registry and data quality evaluation.

The National Cancer Database Conforms to the Standardized Framework for Registry and Data Quality

Bryan E Palis [1], Lauren M Janczewski [2], Amanda E Browner [2], Joseph Cotler [2], Leticia Nogueira [3], Lisa C Richardson [4], Vicki Benard [4], Reda J Wilson [4], Nadine Walker [5], Ryan M McCabe [2], Daniel J Boffa [6], Heidi Nelson [7]

Palis, Ann Surg Oncol 2024; https://doi.org/10.1245/s10434-024-15393-8

Perspectives on Timelines and Scope of Reporting



NCDB Challenges and Opportunities

Continued strive for excellence

Challenges

- Systemic Therapy
- Recurrence and Progression
- Patient Identification

Opportunities

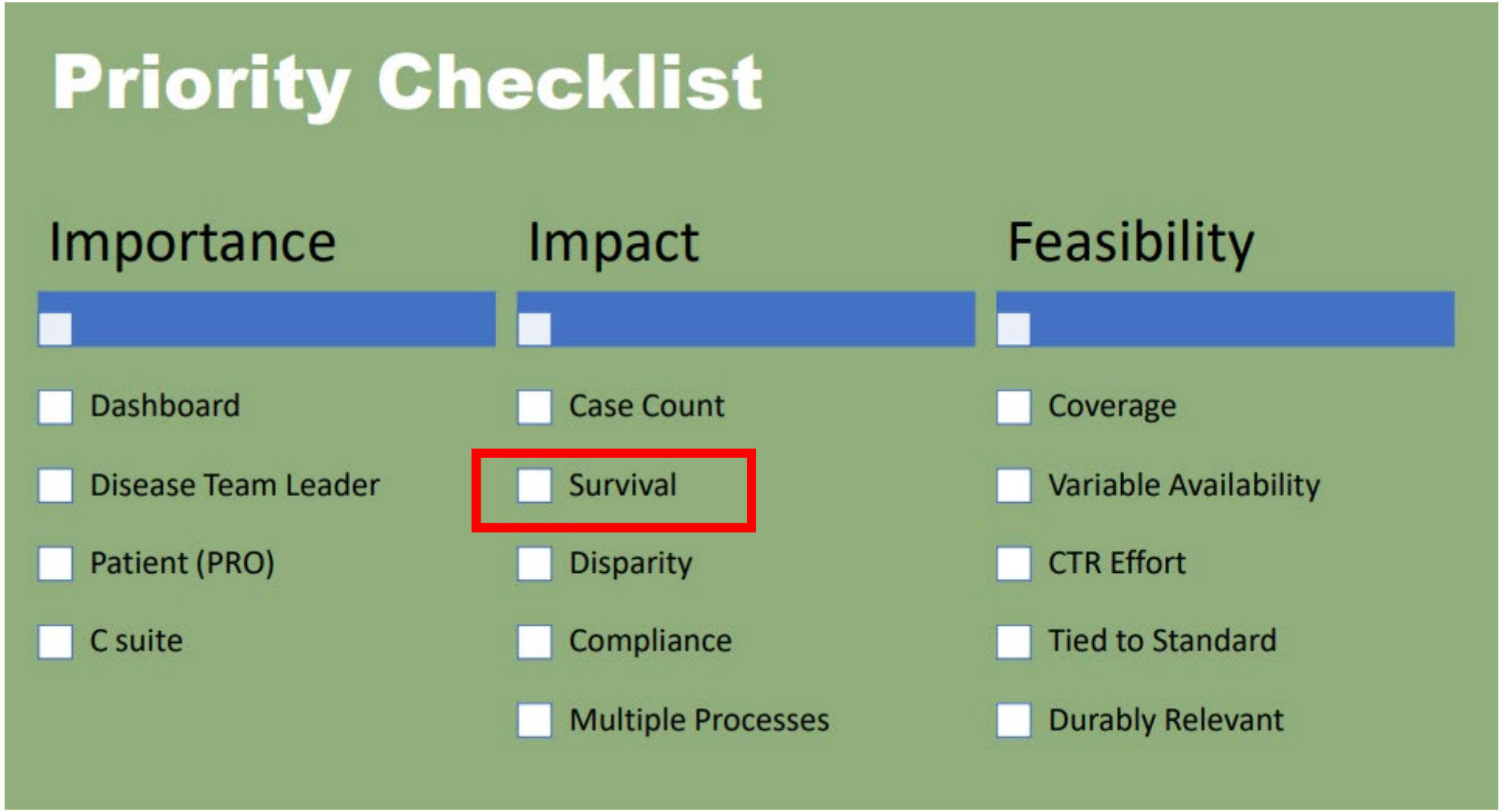
- Improved data collection through synoptic reporting
- Linkage
- Measures of best-practice

CoC Measures of Best Practice

Quality Measures Reported in NDCB

- The multidisciplinary Commission on Cancer through the Quality Assurance and Data Committee convenes clinical experts from around the country
- These evidence-based measures are based on best practices and are designed to be assessed at the hospital or systems level
- Each measure was developed using standardized cancer registry data fields (structured data)
- Report up to 3 measures per top 10 disease sites by prevalence

CoC Quality Measure Development

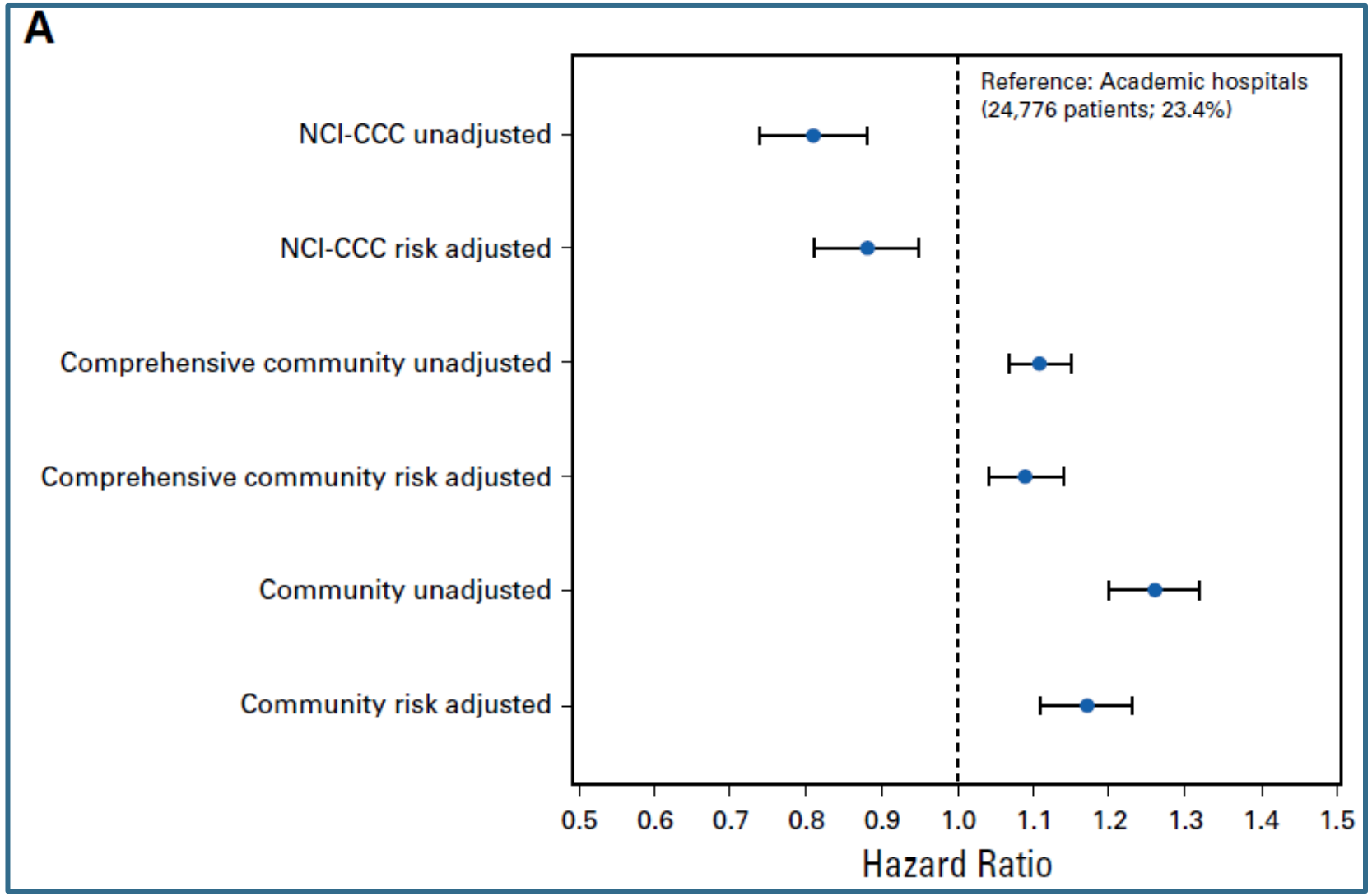


What can we learn from a National Database? National trends in care care…..

- Can we measure survival by hospital type?
- Can we use survival to “rate” hospital cancer programs?

- Stage III breast cancer – usually involves surgery, systemic therapy and radiation – all of which are widely available

Survival As a Quality Metric of Cancer Care: Use of the NCDB to Assess Hospital Performance



Breast ca Stage III

Shulman, Palis, JOP 2017; https://doi.org/10.1200/JOP.2016.020446

NCDB Individual Program Quality Metrics

- Auto-generated from program registry data transmitted to NCDB
- Data fed back to programs on a regular basis
- Benchmarked against other programs
- Can be tracked over time

CQIP

Cancer Quality Improvement Program

Hospital of the University of PA - Abramson Cancer Center

6231900

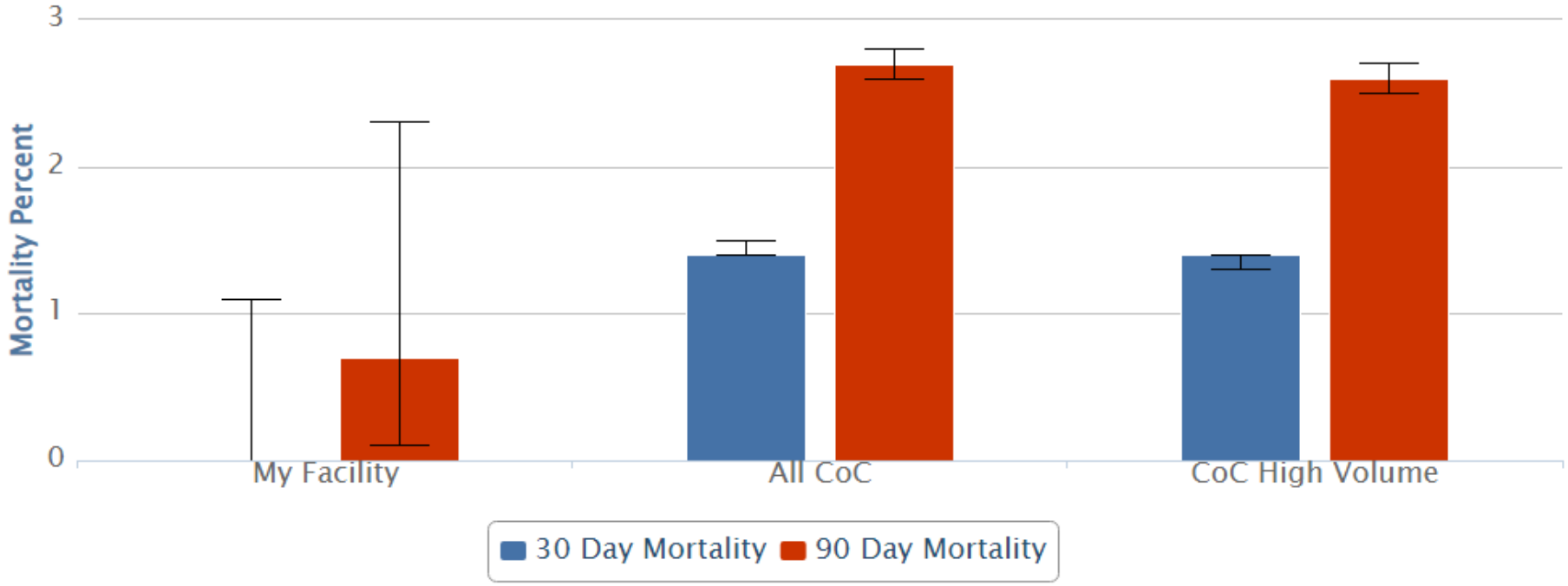
Philadelphia, PA

NATIONAL CANCER DATABASE

Annual Report 2023

Updated October 2023

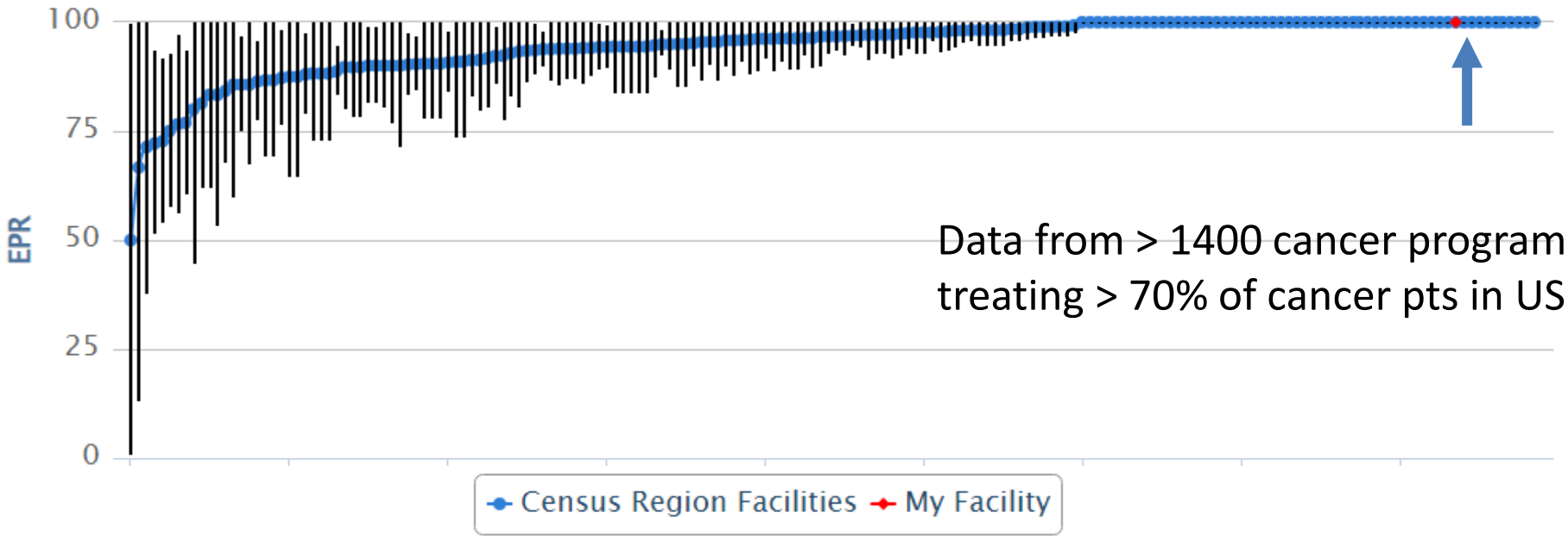
NSCLC Resections, Unadjusted 30, 90 Day Mortality, 95% CI, 2019 - 2021 My Facility vs. All CoC and CoC High Volume



	My Facility		All CoC		CoC High Volume	
	30 Day	90 Day	30 Day	90 Day	30 Day	90 Day
Mortality Percent	0.0%	0.7%	1.4%	2.7%	1.4%	2.6%
95 % CI	(0.0,1.1)	(0.1,2.3)	(1.4,1.5)	(2.6,2.8)	(1.3,1.4)	(2.5,2.7)
Deaths	0	2	1,097	2,047	984	1,859
Resections	279	279	76,921	75,011	72,595	70,819

*NA No resections, or < 30 or < 90 days of follow up for alive patients

COLON, 2021, C12RLN: At least 12 regional lymph nodes removed and pathologically examined for resected colon cancer

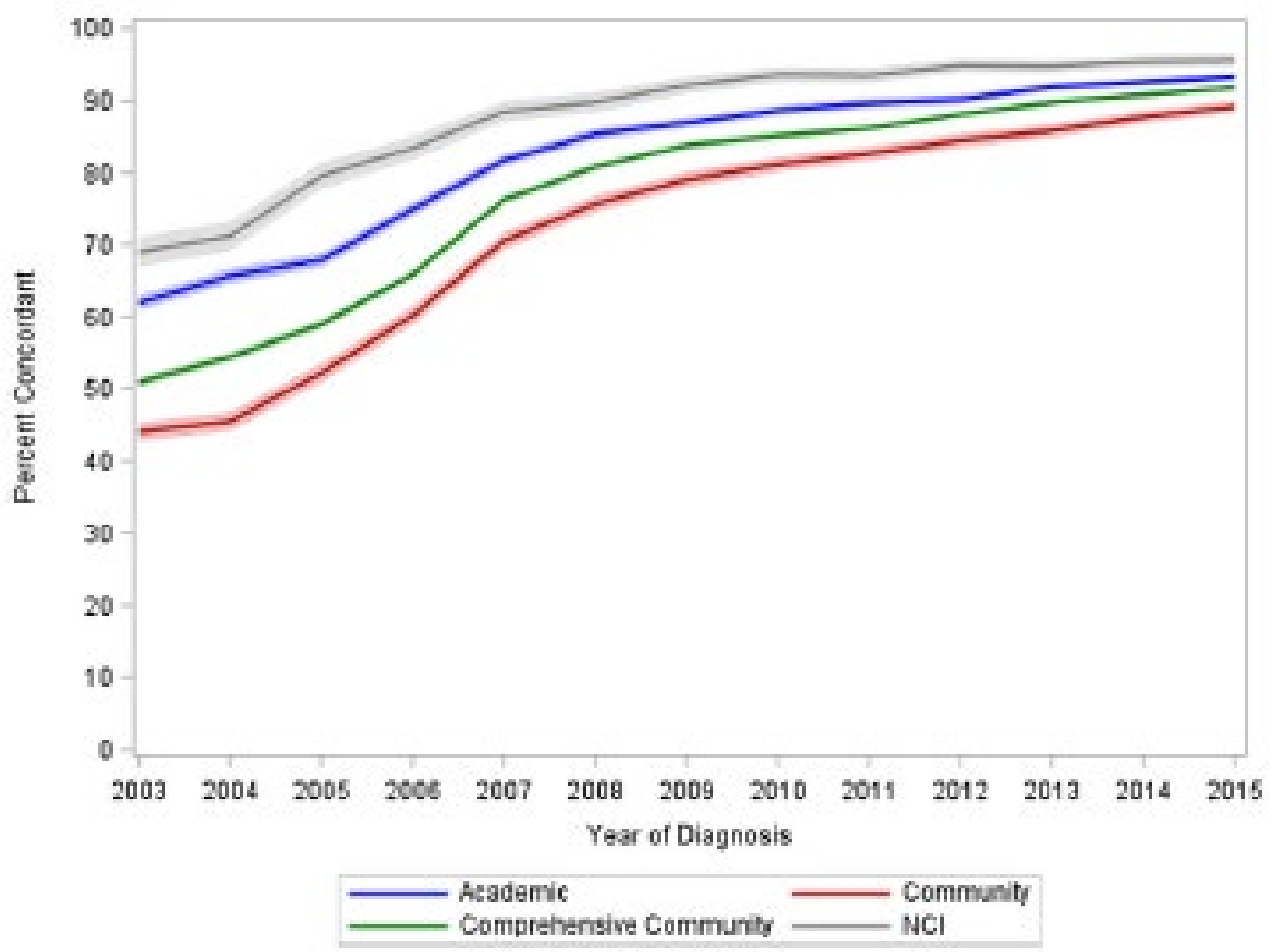


Data from > 1400 cancer programs treating > 70% of cancer pts in US

	My Program	My State (PA)	My Census Region (Middle Atlantic)	My ACS Region (Northeast)	My CoC Program Type (ACAD)	All CoC Programs
Performance Rate	100 %	95.1 %	95.6 %	95.6 %	96.4 %	94.9 %
Denominator	14	1946	6071	9074	10650	40994
95 % CI	(100.0,100.0)	(94.1,96.0)	(95.1,96.1)	(95.2,96.1)	(96.1,96.8)	(94.7,95.1)

At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer. (RCRS data as of 10/9/2023)

Compliance with Cancer Quality Measure Over Time and Their Association with Survival Outcomes: The Commission on Cancer's Experience with the Quality Measure Requiring at least 12 Regional Lymph Nodes to be Removed and Analyzed with Colon Cancer Resections



Adjusted Survival Hazard Rations Compliant vs non-compliant by year

2003 HR 0.86 (0.84-0.86)

2009 HR 0.78 (0.74-0.81)

A collaboration between surgeons and pathologists – multi-disciplinary coordinated care

Shulman, Ann Surg Oncol 2019; https://doi.org/10.1245/s10434-019-07323-w

Participant User Files

- NCDB data available to researchers from CoC accredited programs
- Data used to study cancer trends and outcomes
  - > 1,300 applications for data per year
  - > 4,500 articles published with PUF NCDB data

Racial Disparities in Receipt of Guideline-Concordant Care for Early-Onset Colorectal Cancer in the United States

Leticia M. Nogueira, PhD, MPH[1]; Folasade P. May, MD[2]; K. Robin Yabroff, PhD[1]; and Rebecca L. Siegel, MS[1]

DOI https://doi.org/10.1200/JCO.23.00539

CONCLUSION Patients with early-onset CRC racialized as Black receive worse and less timely care than individuals racialized as White. Health insurance, a modifiable factor, was the largest contributor to racial disparities in receipt of guideline-concordant care in this study.