

Systems, Incentives and Collaborations to Address Variations in Cancer Care Outcomes Across the Spectrum of Diseases and Sites of Care

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What we know.....

- ◆ Cancer outcomes and survival is variable across the US and across hospital types
 - Socio-economic factors
 - Insurance status
 - Site of care
- ◆ In some cases cancer survival in the US is worse than in European countries
- ◆ Standards of quality are adopted variably

IOM.....20 years ago

- ♦ The Institute of Medicine report, *Ensuring Quality Cancer Care*, found that optimal cancer care is delivered when patients undergoing procedures that are technically difficult to perform and have been associated with higher mortality in lower-volume settings receive care at facilities with extensive experience (i.e., high-volume facilities) (IOM and NRC, 1999).
- ♦ A follow on consensus study, *Interpreting the Volume-Outcome Relationship in the Context of Cancer Care*, included recommendations to incorporate evidence-based volume–outcome relationships in the assessment of high-quality care (IOM and NRC, 2001):

IOM.....20 years ago

- ♦ **Recommendation 1:** When a large and significant volume–outcome relationship is establishedvolume should be incorporated as a quality indicator into ongoing quality-of-care programs and initiatives.
- ♦ **Recommendation 2:** Federal and private research sponsors such as the National Cancer Institute, the Agency for Healthcare Research and Quality, health care purchasers, health plans, and provider groups, through *public–private partnerships*, should support program evaluation and research projects to:
 - (1) elucidate the nature of the volume–outcome relationship and its application to quality improvement, and
 - (2) monitor the implementation (and effects) of volume-based policies.

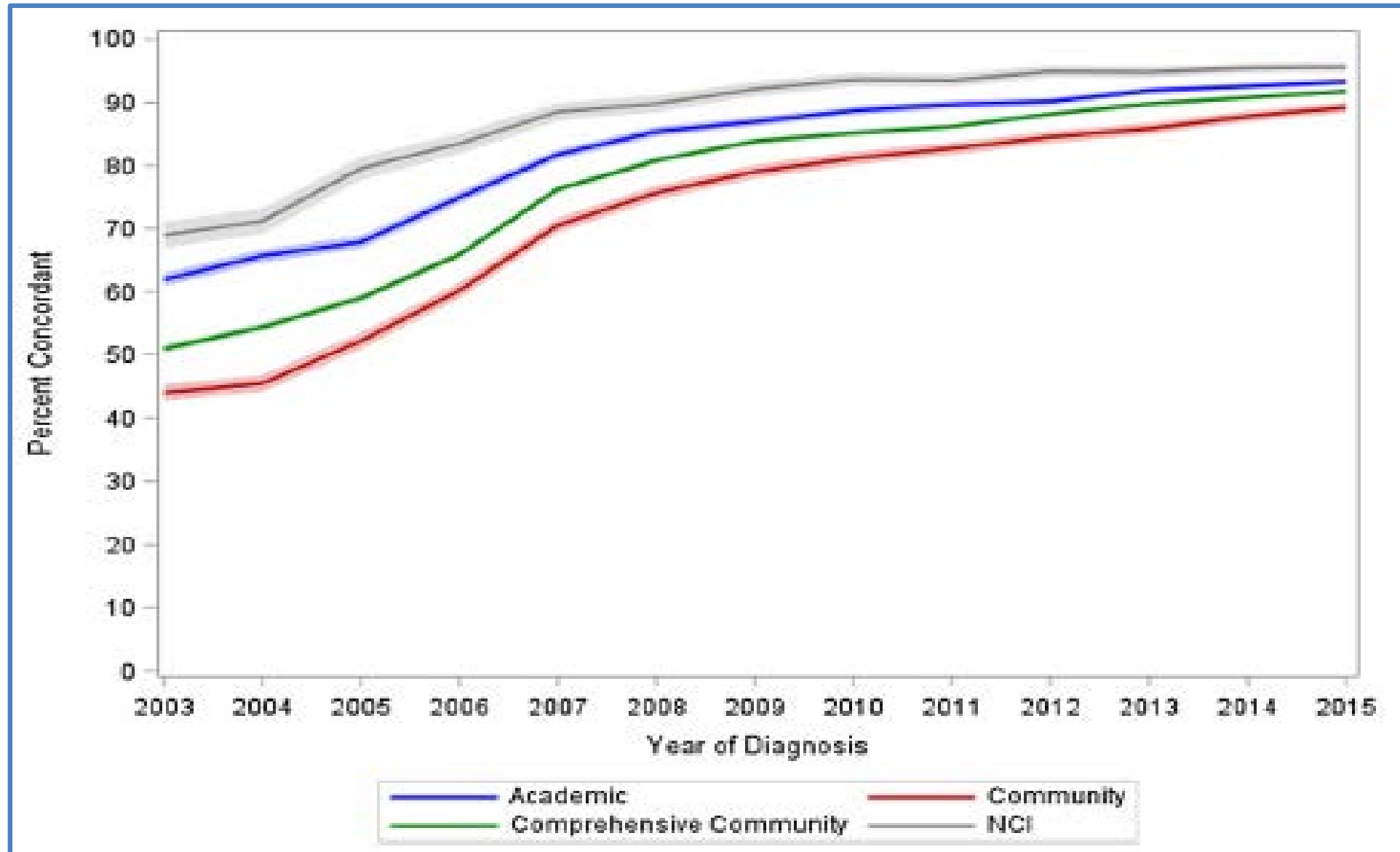
Using the National Cancer Database to Assess Quality Trends and Areas to Focus On

- ◆ NCDB includes cancer registry data from the 1500 hospital cancer programs accredited by the Commission on Cancer
 - 37 million patients
 - Covers 72% of all cancer patients in the US
 - Data used for quality work, at the national level and individual hospital level
- ◆ Does compliance with a quality metric track with survival outcomes?
- ◆ How does Commission on Cancer data feedback and accreditation factor in?

Resection of ≥ 12 lymph nodes with colon ca resections (NQF 0225)

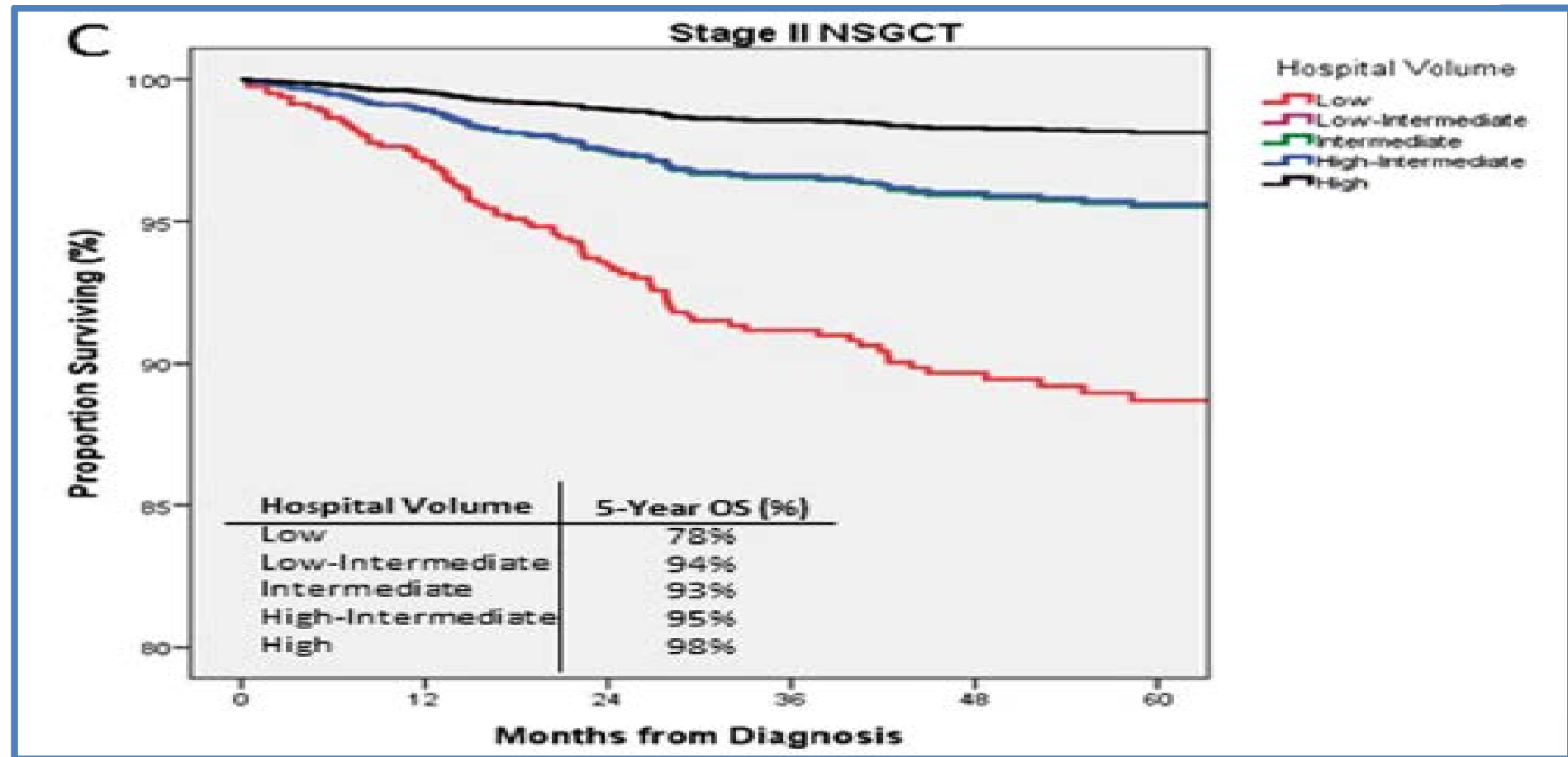
- ◆ Based on strong evidence of a link with patient survival
- ◆ Supported by the National Quality Forum (1st cancer quality metric group)
- ◆ Supported by NCI, CDC, CMS, and AHRQ , and eventually by CoC, ACS, ASCO, and NCCN
- ◆ Adopted by CoC as one of the first quality measures of the Rapid Quality Reporting System (RQRS) giving real time patient-level feedback to cancer programs

Colon Ca Resection - Compliance with 12+ nodes quality metric



Impact of hospital case volume on testicular cancer outcomes and practice patterns

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NCDB data

Survival As a Quality Metric of Cancer Care: Use of the National Cancer Data Base to Assess Hospital Performance

Lawrence N. Shulman, Bryan E. Palis, Ryan McCabe, Kathy Mallin, Ashley Loomis, David Winchester, and Daniel McKellar

Stage III Breast Cancer Survival

Breast Patient Volumes

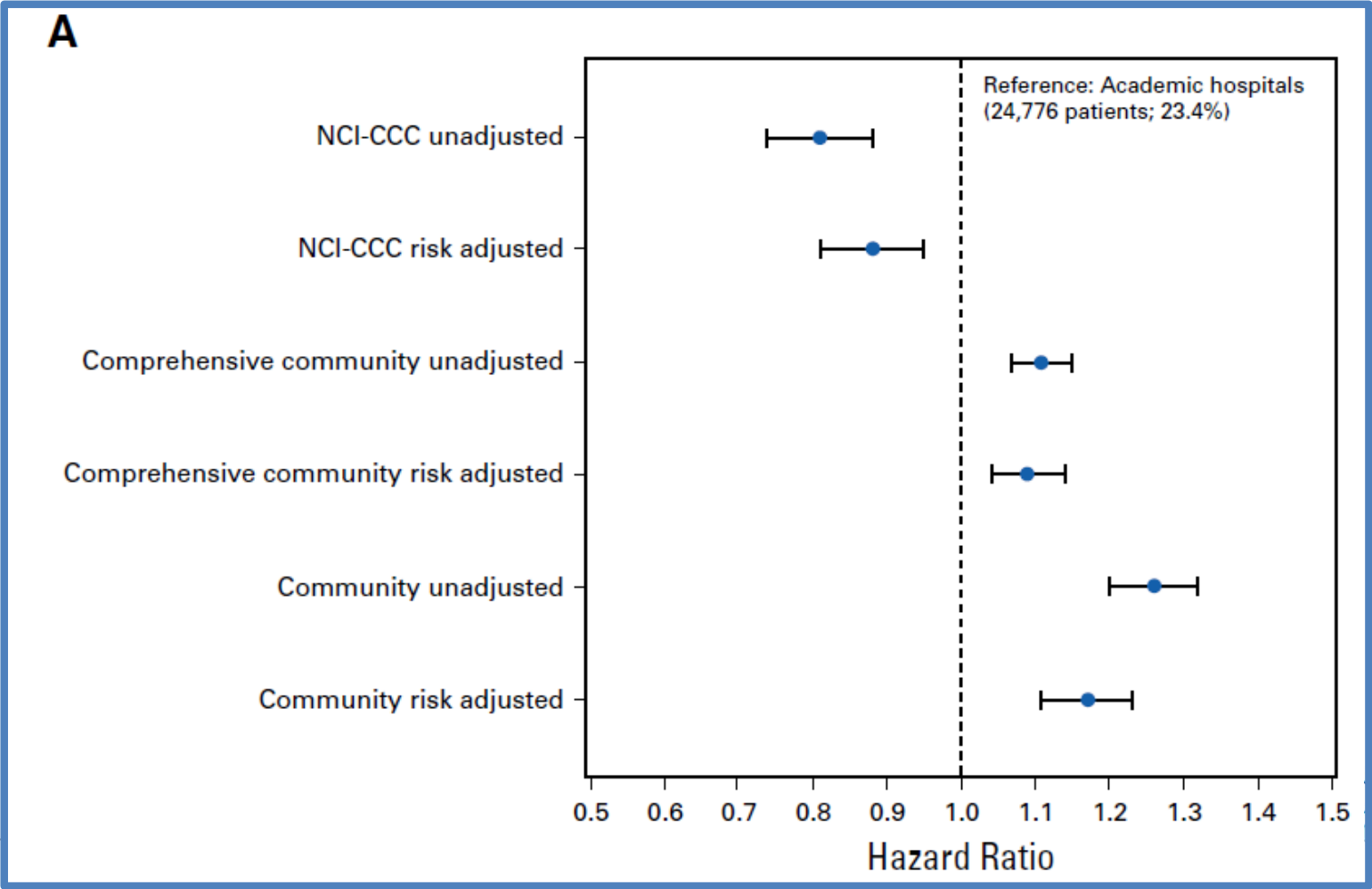
105,877 patients

PPS + NCI = 8.6%

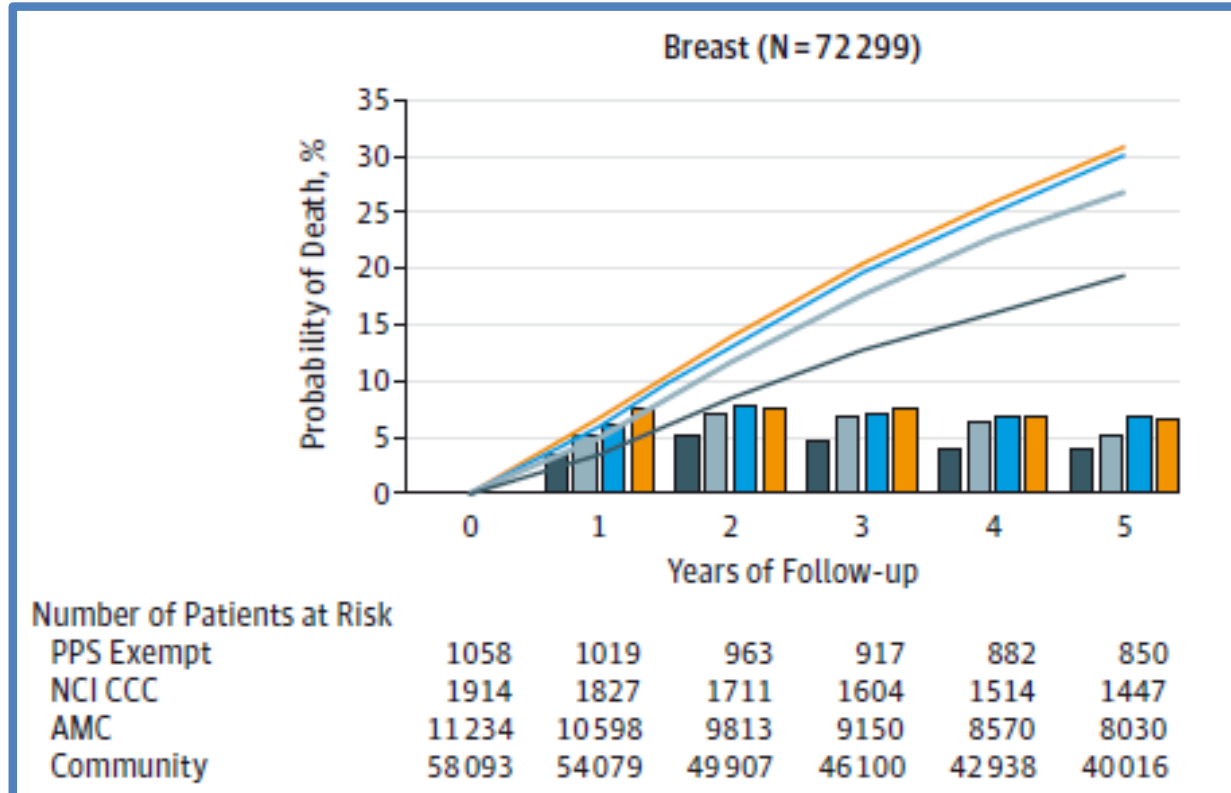
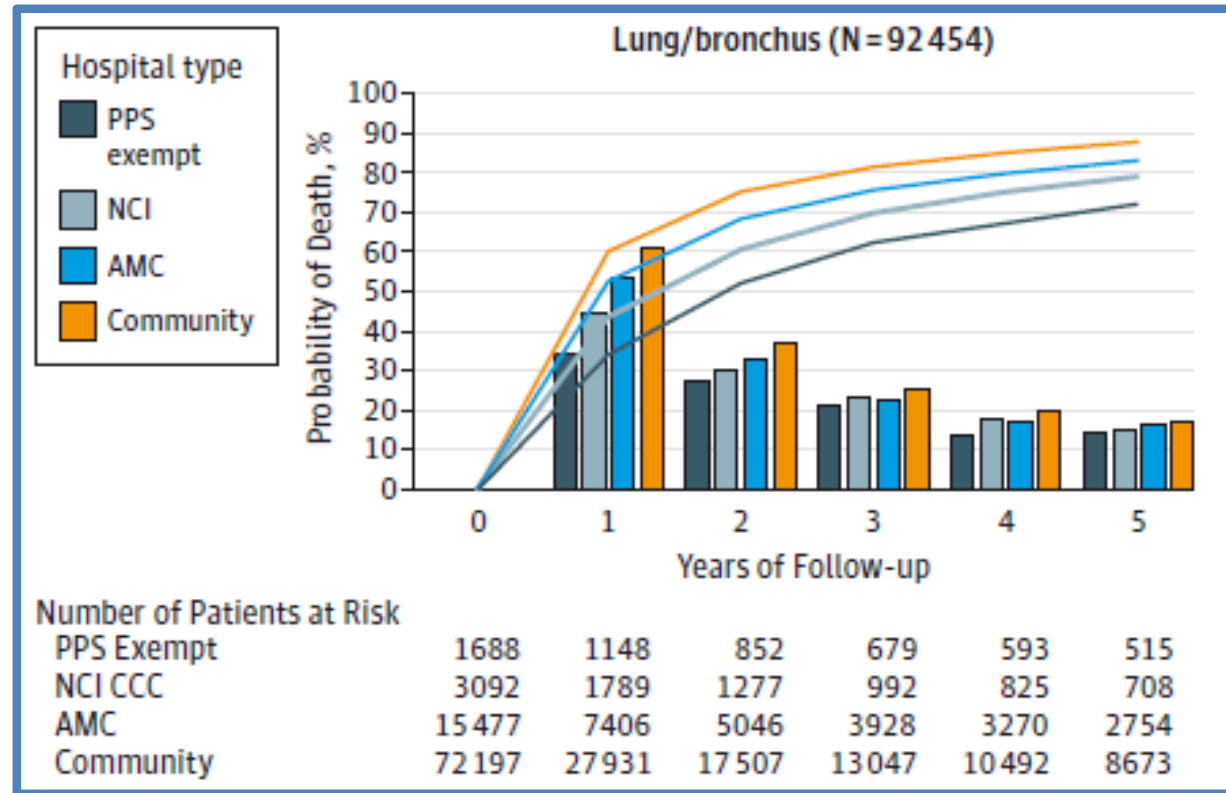
AMC = 23.4%

Community = 68.0%

Shulman, JOP 2017



Survival by Hospital Type – SEER Medicare



Breast patient volumes
 PPS + NCI = 4.1%
 AMC = 15.5%
 Community = 80.4%

Pfister, Bach, JAMA Oncology 2015

What are the confounders.....

- Rural cancer care is particularly challenging
 - Low volumes
 - Sometimes great distances to regional centers
 - Generalists
 - In some circumstances socio-economic challenges
- Care is delivered by super-specialists in academic centers and generalists in community programs
- Complexity of care varies by cancer and specialty
 - Pancreatic surgery
 - Sarcoma pathology
 - Testicular cancer systemic therapy
 - CAR T systemic therapy
 - Head and Neck RT

ANNALS OF MEDICINE

THE BELL CURVE

What happens when patients find out how good their doctors really are?

BY ATUL GAWANDE

Every illness is a story, and Annie Page's began with the kinds of small, unexceptional details that mean nothing until seen in hindsight. Like the fact

lection pad of dry filter paper is taped over it to absorb the sweat for half an hour. A technician then measures the concentration of chloride in the pad.

cystic fibrosis in the "Nelson Textbook of Pediatrics"—the bible of the specialty—was written by one of the hospital's pediatricians. The Pages called and

The New Yorker, 2004

The Bell Curve – Shulman's Interpretation

- ♦ Medical outcomes are the sum of many parts, many little details
- ♦ *Systems are critical*
- ♦ *People are critical*

What the data shows.....

- ♦ How can we continue to generate data of variability of outcomes based on volume and expertise.....?
- ♦ And not do much to call this issue out.....?
- ♦ Or to address potential solutions.....?
- ♦ *Other countries have addressed these issues – though they are smaller countries.....and in some cases single payor, and national unified medical record and without financial incentive misalignment*

What influences behavior.....

- ◆ *Requirements for guideline adherence*
- ◆ *Payment*
- ◆ *Accreditation*

Solutions.....???

- ♦ Treatment of all cancer patients at academic cancer centers is NOT the solution
- ♦ Certain aspects of care would be best performed at high-volume academic centers
- ♦ Systems put into place to support cancer care at community hospitals for much of cancer care

*We can't move this needle alone....
but this needs to be a collaborative effort....
with aligned incentives*

Some thoughts.....

- ♦ **Guideline concordant care – collaborations between CMS, private payors, NCCN, practices**
 - NCCN guidelines evidence based
 - Quality payment ties
 - Auto pre-authorizations if NCCN guideline concordant
- ♦ **Hospitals to work as systems – collaborations between hospital programs**
 - High complexity care delivered at high-volume academic centers
 - Academic centers support quality care at community affiliates
 - Systems to support shared expertise, bilateral patient flow and shared incentives
- ♦ **Accreditation organizations – collaborations between accreditation organization, cancer programs and payors**
 - Include distribution of care, and quality outcomes
 - Include framework of hospital systems

Quality of Cancer Care in the US

- ♦ *We try hard, and individuals want to provide high-quality care, but therapies are complex and our systems are complex, and make this challenging*
- ♦ *Measurement and analysis, and reduction in variation are important steps to improving care*
- ♦ *In the end, hospital systems, public and private payors, accreditation organizations.... Must work together to support, not thwart, high-quality care, and clinicians must focus and pay attention to their patients and details*