ACS Cancer Conference 2025

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Value of NAPBC/NAPRC

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American College of Surgeons

Outline

- NAPBC Accreditation
  - Breast Cancer Quality Measures
  - Value of NAPBC Literature Review
- NAPRC Accreditation
  - Rectal Cancer Quality Measures
  - Value of NAPRC Literature Review
- Conclusion
- Q&A

NAPBC Accreditation

- The National Accreditation Program for Breast Centers (NAPBC) originated in **2008** through the cancer programs at the American College of Surgeons
- Mission to improve the quality of care and monitoring of outcomes of patients with disease of the breast.
- NAPBC accreditation granted to centers meeting 29 standards
- 600 NAPBC-accredited centers in the US
- More than 90% of the NAPBC centers are also CoC-accredited hospitals

Standard 7.1

Breast Cancer Quality Measures

Year	Measure	Explanation
2006	Adjuvant radiation therapy	Patients undergoing BCT w/out adjuvant chemo or immunotherapy for stage I-III breast cancer, radiation should be initiated within 60 days
2008	Hormone therapy for ER/PR positive Breast Cancer	Endocrine therapy recommended within 60 days of diagnosis for patients with ER/PR positive breast cancer
2014	PMRT for ≥ 4 positive lymph nodes	Radiation for women with ≥ 4 positive lymph nodes after mastectomy (NCCN/ASCO measure)

Breast Cancer Quality Measures

Year	Measure	Explanation
2017	Needle Biopsy as Initial Diagnosis Method	At least one image-guided needle biopsy is performed to establish diagnosis of breast cancer before surgical excision
2022	Breast cancer surgery timing	For patients with AJCC Clinical Stage I-III breast cancer, surgery should be performed within 60 days of diagnosis
2024	Neoadjuvant Chemotherapy and/or Immunotherapy	For patients <75 yo with HER2-positive or triple-negative breast cancer, w/ any clinical N > 0 or clinical T > 1, neoadjuvant chemotherapy and/or immunotherapy should be initiated within 60 days of diagnosis

National Accreditation Program for Breast Centers Demonstrates Improved Compliance with Post-Mastectomy Radiation Therapy Quality Measure

Elizabeth R Berger, MD, MS, Chihsiung E Wang, PhD, Cary S Kaufman, MD, FACS, Ted J Williamson, MD, PhD, CTR, Julio A Ibarra, MD, Karen Pollitt, BS, Richard J Bleicher, MD, FACS, James L Connolly, MD, David P Winchester, MD, FACS, Katharine A Yao, MD, FACS

Berger, E.R., et al. "National Accreditation Program for Breast Centers Demonstrates Improved Compliance with Post-Mastectomy Radiation Therapy Quality Measure." *J Am Coll Surg* 2017;224:236e244.

Study Design

- **Data Source**: NCDB (capturing ~70% of newly diagnosed breast malignancies in the US)
- **Patient population**: 34,752 women who underwent mastectomy with ≥4 positive lymph nodes between 2006 and 2013 at NAPBC-accredited centers (477) and CoC-only accredited hospitals (958).
- **Analysis**: Compared PMRT rates at NAPBC centers before and after accreditation and compared rates between NAPBC centers and CoC-only hospitals. Used mixed effects models and multivariable nested logistic regression to adjust for patient and tumor characteristics.

Berger, E.R., et al. "National Accreditation Program for Breast Centers Demonstrates Improved Compliance with Post-Mastectomy Radiation Therapy Quality Measure." *J Am Coll Surg* 2017;224:236e244.

Key Findings

- NAPBC Accreditation improves post-mastectomy radiation (PMRT) therapy compliance for women who underwent mastectomy with 4 or more positive lymph nodes
- NAPBC centers yielded higher PMRT rate compared to CoC hospitals (66.0% vs 59.2%; **p < 0.001**)
- Patients at NAPBC centers had **26% greater odds** of receiving PMRT than those at CoC hospitals
- For each year of accreditation (2009 to 2011), centers had significantly higher rates of radiation in the accreditation year compared with the year before accreditation **(p < 0.001)**

Berger, E.R., et al. "National Accreditation Program for Breast Centers Demonstrates Improved Compliance with Post-Mastectomy Radiation Therapy Quality Measure." *J Am Coll Surg* 2017;224:236e244.

Key Findings

- NAPBC status provides added benefits to CoC accreditation by ensuring high compliance with breast cancer quality measures
- Formalized accreditation program mandates reporting and accountability, improving PMRT
- Additional factors influencing PMRT rate: age, race/ethnicity, income, insurance status, treatment region, histology, hormone receptor status, Charlson/Deyo score
  - Less likely to received PMRT if they were older, had a lower income, had Medicare/Medicaid or were uninsured, or had higher Charlson scores

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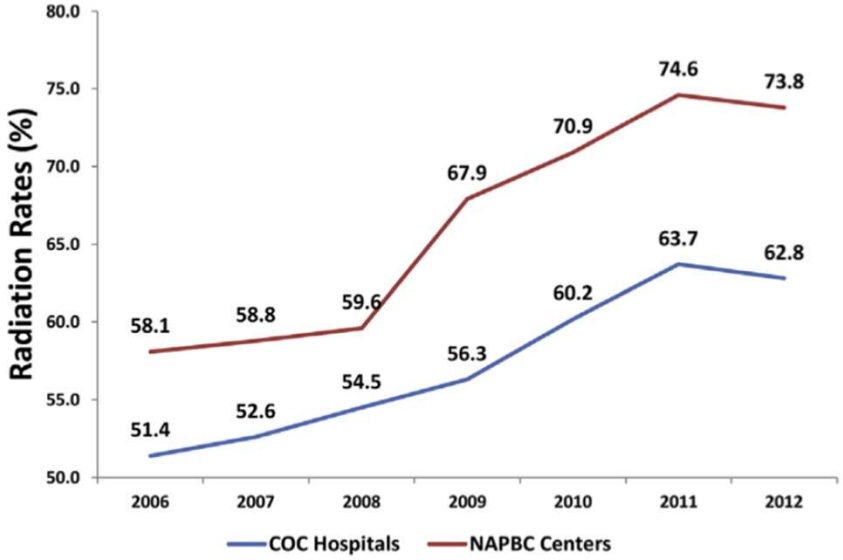

Figure 1. Trends in radiation rates in National Accreditation Program for Breast Centers (NAPBC) accreditation centers vs Commission on Cancer (CoC) hospitals as composite rates across all years (2006 to 2012).

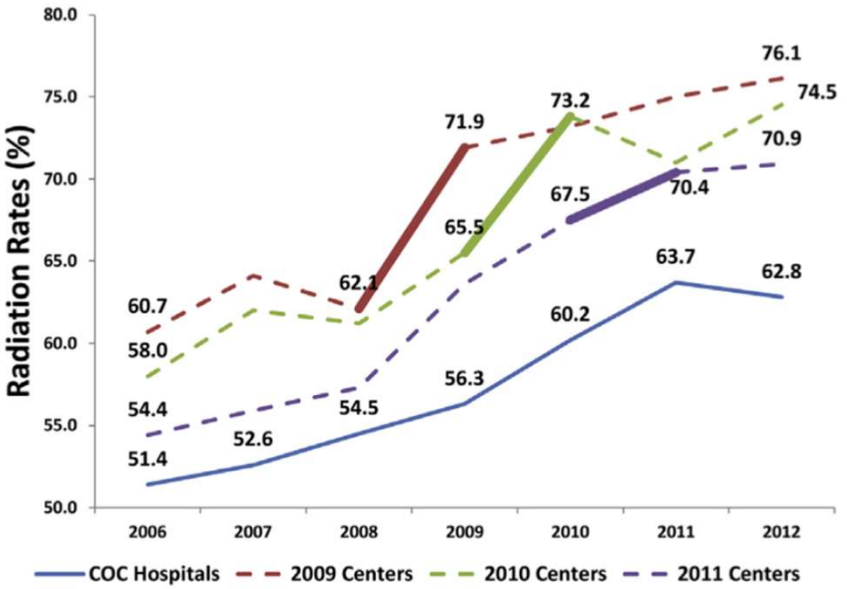

Figure 2. Trends in radiation rates in National Accreditation Program for Breast Centers (NAPBC) accreditation centers vs Commission on Cancer (CoC) hospitals by year of NAPBC accreditation (2009, 2010, 2011).

Berger, E.R., et al. "National Accreditation Program for Breast Centers Demonstrates Improved Compliance with Post-Mastectomy Radiation Therapy Quality Measure." *J Am Coll Surg* 2017;224:236e244.

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Impact of Breast Center Accreditation on Compliance with Breast Quality Performance Measures at Commission on Cancer-Accredited Centers

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Impact of Breast Center Accreditation on Compliance with Breast Quality Performance Measures at Commission on Cancer-Accredited Centers" by Miller et al., *Annals of Surgical Oncology* (2019).

Purpose

- To determine if accreditation by the National Accreditation Program for Breast Centers (NAPBC) is associated with improved performance on six breast cancer quality measures at Commission on Cancer (CoC) accredited centers.

Impact of Breast Center Accreditation on Compliance with Breast Quality Performance Measures at Commission on Cancer-Accredited Centers" by Miller et al., *Annals of Surgical Oncology* (2019).

Study Design

- Retrospective review of 2015 NCDB data
- Comparison of patients treated at CoC centers *with* and *without* NAPBC accreditation. (53,355 patients; 1296 facilities)
- Analysis of six breast cancer quality measures
  - These measures cover areas such as adjuvant treatment, needle/core biopsy, and breast conservation therapy rates
- Mixed effects modeling to adjust for patient, tumor, and facility factors.

Impact of Breast Center Accreditation on Compliance with Breast Quality Performance Measures at Commission on Cancer-Accredited Centers" by Miller et al., *Annals of Surgical Oncology* (2019).

TABLE 1 Breast-specific quality measures monitored by non-NAPBC and NAPBC centers

Measure number	Description	Abbreviation	Year of release by the CoC	Compliance level required by the CoC
1	Radiation therapy is administered within 1 year (365 days) of diagnosis for women younger than age 70 years receiving BCS for breast cancer (53,355 patients; 1296 facilities)	BCS RT	2006	90%
2	Combination chemotherapy is considered or administered within 4 months (120 days) of diagnosis for women younger than age 70 years with AJCC T1c, Stage II, or Stage III hormone-receptor-negative breast cancer (5573 patients; 1117 facilities)	CHEMO HR−	2006	NA[a]
3	Tamoxifen or third-generation aromatase inhibitor is considered or administered within 1 year (365 days) of diagnosis for women with AJCC T1c, Stage II, or Stage III hormone-receptor-positive breast cancer (38,801 patients; 1297 facilities)	TAM/AI HR+	2006	90%
4	Radiation therapy is considered or administered within 1 year (365 days) of diagnosis for women undergoing mastectomy for breast cancer with four or more positive lymph nodes (6701 patients; 1174 facilities)	PMRT ≥ 4 NODES	2014	90%
5	Needle/core biopsy is performed before the surgical treatment of cancer (91,500 patients; 1302 facilities)	NEEDLE BX	2014	80%
6	A target rate of 50% of all eligible patients diagnosed with early stage breast cancer (Stage 0, I, II) are treated with BCS (1306 facilities)	BCS 50%	2014	NA[a]

NAPBC National Accreditation Program for Breast Centers; *CoC* commission on cancer; *HR* hormone receptor; *BCS* breast-conserving surgery

[a]The CoC has not implemented an expected performance rate for these two measures[12]

Impact of Breast Center Accreditation on Compliance with Breast Quality Performance Measures at Commission on Cancer-Accredited Centers" by Miller et al., *Annals of Surgical Oncology* (2019).

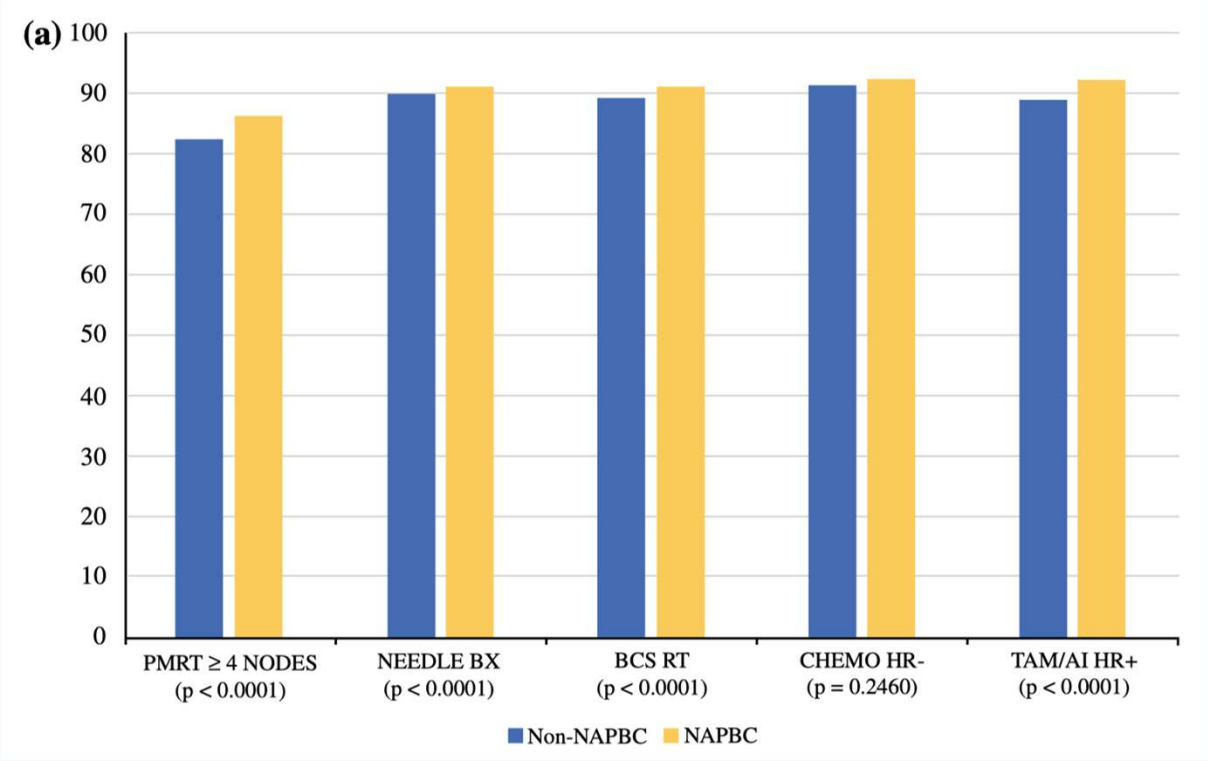
Key Findings

- Out of 1308 CoC facilities, 484 (37%) were NAPBC-accredited.
- 111,547 patients (48%) were treated at NAPBC centers.
- **NAPBC centers achieved significantly higher performance on four of the five quality measures than non-NAPBC centers at the patient level and on five of six measures at the facility level.**
- More than 80% of patients treated at both NAPBC and non-NAPBC centers received care in compliance with breast quality measures

Key Findings

- NAPBC centers were approximately twice as likely as non-NAPBC centers to:
  - Perform needle/core biopsy before surgical treatment (OR 1.96, $p < 0.0001$).
  - Achieve a breast conservation therapy rate of 50% (OR 2.05, $p < 0.0001$).
- A significantly higher proportion of patients were treated at academic facilities in the NAPBC (36.1%) versus non-NAPBC cohorts (29.2%).
- NAPBC academic centers were six times (OR 6.06, $p < 0.001$) more likely to perform BCS at the target rate of 50% than non-NAPBC academic centers.

Patient Level



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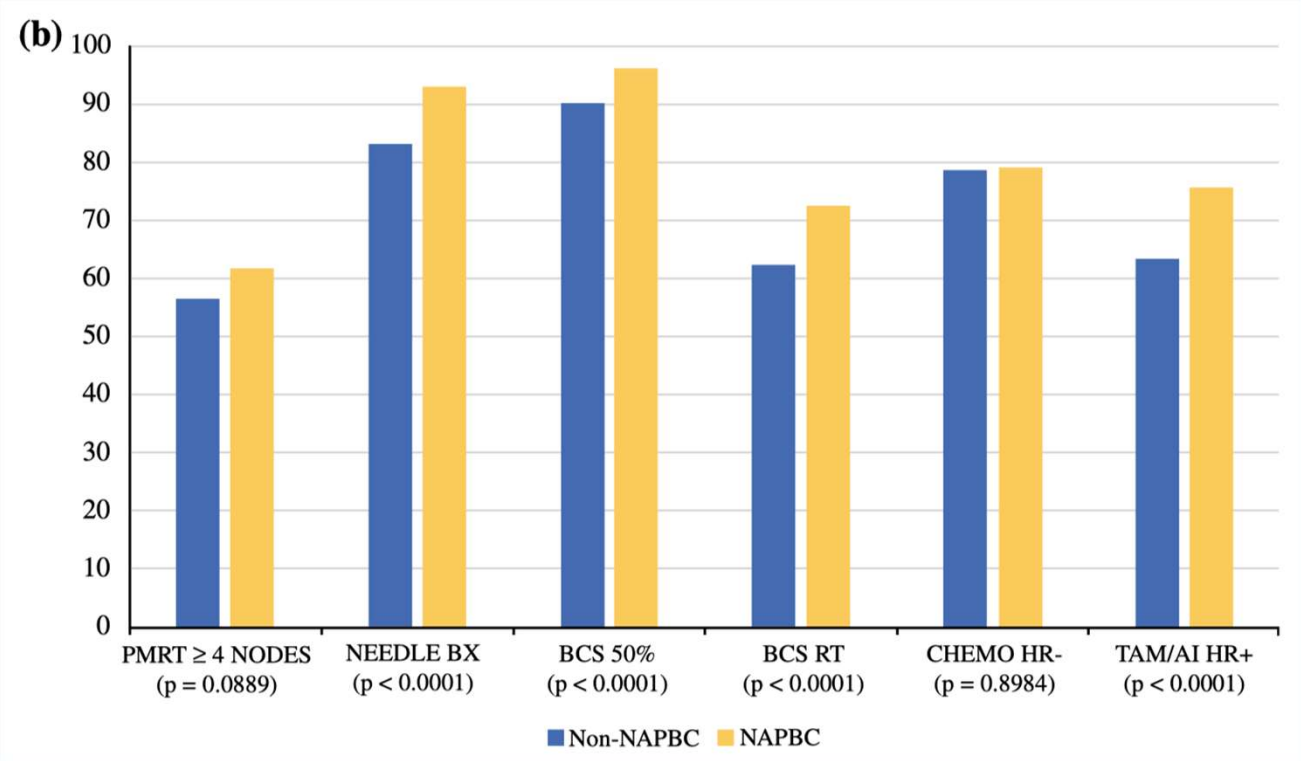
Facility Level



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NAPRC Accreditation

- Significant variation exists in rectal cancer care quality across the US
- The Optimizing the Surgical Treatment of Rectal Cancer Consortium
  - Established NAPRC in 2017 as part of the ACS COC
  - Goals: standardize care, improve outcomes, and support research
- Multidisciplinary program management ensures that patients receive coordinated, evidence-based care using the well-established model of program compliance with an accepted set of standards
- Quality improvement through data audits
- Key differences from NAPBC:
  - Programs apart of NAPRC must be CoC-accredited and submit data to the NCDB
  - NAPRC requires a program director as well as lead physicians in radiation oncology, medical oncology, pathology and radiology

NAPRC Standards

The value of national accreditation program for rectal cancer: A survey of accredited programs and programs seeking accreditation

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Kapadia MR, Senatore PJ, Messick C, Hull TL, Shaffer VO, Morris AM, Dietz DW, Wexner SD, Wick EC. The value of national accreditation program for rectal cancer: A survey of accredited programs and programs seeking accreditation. Surgery. 2024 Apr;175(4):1007-1012. doi: 10.1016/j.surg.2023.12.005. Epub 2024 Jan 23. PMID: 38267342.

Study Design

- Survey-based observational study
- Surveyed accredited programs and those seeking accreditation
- Study Objective: To identify the value of NAPRC accreditation from the hospital and physician perspectives, and to determine the practical obstacles faced by programs seeking accreditation
- An electronic survey (40 questions, mixed-methods design) was distributed to 85 rectal cancer programs (22 accredited, 63 interested) in January and February 2021.
- Survey questions addressed program demographics, reasons for pursuing accreditation, resource needs, barriers, and perceived programmatic value.
- Data analysis included descriptive statistics for quantitative data and thematic analysis for qualitative (open-ended) responses.

Kapadia MR, Senatore PJ, Messick C, Hull TL, Shaffer VO, Morris AM, Dietz DW, Wexner SD, Wick EC. The value of national accreditation program for rectal cancer: A survey of accredited programs and programs seeking accreditation. Surgery. 2024 Apr;175(4):1007-1012. doi: 10.1016/j.surg.2023.12.005. Epub 2024 Jan 23. PMID: 38267342.

Key Findings

- Strong perceived value in NAPRC accreditation,
  - Driven by improved quality of care, enhanced program organization, and standardization.
  - ”Improved quality and culture of rectal cancer care," "enhanced program organization and coordination," and "challenges our program to provide optimal, high-quality care”
  - "For many, the pride associated with being an accredited program was highly ranked, as was the leadership development experience associated with obtaining accreditation."
- Drivers for Accreditation: Hospital administrators supported accreditation primarily to improve care (96%), standardize care (80%), and gain a marketing advantage (78%)

Kapadia MR, Senatore PJ, Messick C, Hull TL, Shaffer VO, Morris AM, Dietz DW, Wexner SD, Wick EC. The value of national accreditation program for rectal cancer: A survey of accredited programs and programs seeking accreditation. Surgery. 2024 Apr;175(4):1007-1012. doi: 10.1016/j.surg.2023.12.005. Epub 2024 Jan 23. PMID: 38267342.

Key Findings

- Barriers to Accreditation: Cost and lack of personnel were the most frequently cited barriers.
  - Cumbersome requirements and inconsistent attendance at multidisciplinary tumor (MDT) board meetings were also concerns, particularly regarding radiologists (15%) and pathologists (7%).
    - The shift to virtual meetings during the COVID-19 pandemic enhanced MDT board attendance for many (56%).
- Staffing: 71% of accredited programs and 34% of in-process programs hired additional staff to meet NAPRC standards. Funding primarily came from the cancer center or hospital/departmental funds.

Kapadia MR, Senatore PJ, Messick C, Hull TL, Shaffer VO, Morris AM, Dietz DW, Wexner SD, Wick EC. The value of national accreditation program for rectal cancer: A survey of accredited programs and programs seeking accreditation. Surgery. 2024 Apr;175(4):1007-1012. doi: 10.1016/j.surg.2023.12.005. Epub 2024 Jan 23. PMID: 38267342.

Key Findings

- **Qualitative Themes:** Thematic analysis revealed three key themes regarding the perceived value of NAPRC:
  - **Team Collaboration:** "True multi-disciplinary care for rectal cancer patients," "More people connecting to care for the patient."
  - **Care Quality/Standardization:** "I have been so proud of our team building and improved quality of care we have been able to achieve and provide for our patients," "Improved and streamlined care of rectal cancer patients."
  - **Patient Confidence/Referrals:** "Inspires confidence in the care here," "Prestige and competitive advantage."
- The NAPRC is perceived as a valuable program for improving the quality and standardization of rectal cancer care. Addressing the barriers to accreditation, particularly cost and staffing, is essential for wider adoption and ultimately, improved patient outcomes.

Kapadia MR, Senatore PJ, Messick C, Hull TL, Shaffer VO, Morris AM, Dietz DW, Wexner SD, Wick EC. The value of national accreditation program for rectal cancer: A survey of accredited programs and programs seeking accreditation. Surgery. 2024 Apr;175(4):1007-1012. doi: 10.1016/j.surg.2023.12.005. Epub 2024 Jan 23. PMID: 38267342.

Association of National Accreditation Program for Rectal Cancer Accreditation with Outcomes after Rectal Cancer Surgery

Calista M Harbaugh, MD, MSc, Nicholas J Kunnath, MS, Pasithorn A Suwanabol, MD, MS, FACS, Justin B Dimick, MD, MPH, FACS, Samantha K Hendren, MD, MPH, FACS, Andrew M Ibrahim, MD, MSc, FACS

Harbaugh, Calista M MD, MSca,b; Kunnath, Nicholas J MSb; Suwanabol, Pasithorn A MD, MS FACSa,b; Dimick, Justin B MD, MPH, FACSa,b; Hendren, Samantha K MD, MPH, FACSa,b; Ibrahim, Andrew M MD, MSc, FACSa,b. Association of National Accreditation Program for Rectal Cancer Accreditation with Outcomes after Rectal Cancer Surgery. Journal of the American College of Surgeons ():10.1097/XCS.0000000000001064, March 28, 2024.

Study Purpose

- To investigate the association between NAPRC accreditation and surgical outcomes for rectal cancer patients
- This is the first large-scale study evaluating the outcomes associated with NAPRC accreditation.

Harbaugh, Calista M MD, MSca,b; Kunnath, Nicholas J MSb; Suwanabol, Pasithorn A MD, MS FACSa,b; Dimick, Justin B MD, MPH, FACSa,b; Hendren, Samantha K MD, MPH, FACSa,b; Ibrahim, Andrew M MD, MSc, FACSa,b. Association of National Accreditation Program for Rectal Cancer Accreditation with Outcomes after Rectal Cancer Surgery. Journal of the American College of Surgeons ():10.1097/XCS.0000000000001064, March 28, 2024.

Study Design

- Retrospective, observational study of Medicare beneficiaries aged 65-99 years who underwent proctectomy for rectal cancer between 2017 and 2020.
- Data source: Medicare Provider Analysis and Review (MedPAR) file.
- Primary exposure: NAPRC accreditation.
- Primary outcomes: In-hospital mortality, 30-day mortality, 1-year mortality, 30-day complications, readmissions, and reoperations.
- Statistical analysis: Multivariable logistic regression with risk adjustment for patient and hospital characteristics.

Key Findings

- **Prevalence of Accreditation:** Only 3.3% of hospitals (65 out of 1,985) were NAPRC-accredited by 2022.
- **Hospital Characteristics:** "Accredited hospitals were more likely to be nonprofit and teaching with 250 or more beds." They also had a significantly higher annual proctectomy volume.
- **Patient Characteristics:** Patients at accredited hospitals were more likely to undergo elective procedures with a minimally invasive approach and sphincter preservation. They also traveled further for surgery.
- **Mortality and Morbidity:** "Risk-adjusted in-hospital mortality (1.1% vs 1.3%; $p = 0.002$), 30-day mortality (2.1% vs 2.9%; $p < 0.001$), 30-day complication (18.3% vs 19.4%; $p = 0.01$), and 1-year mortality rates (11% vs 12.1%; $p < 0.001$) were significantly lower at accredited compared with nonaccredited hospitals."
- **Sensitivity Analysis:** The trend in mortality reduction remained significant even when limiting the analysis to only large teaching hospitals. However, the improvements in complications, reoperations and readmissions were not significant in this subgroup

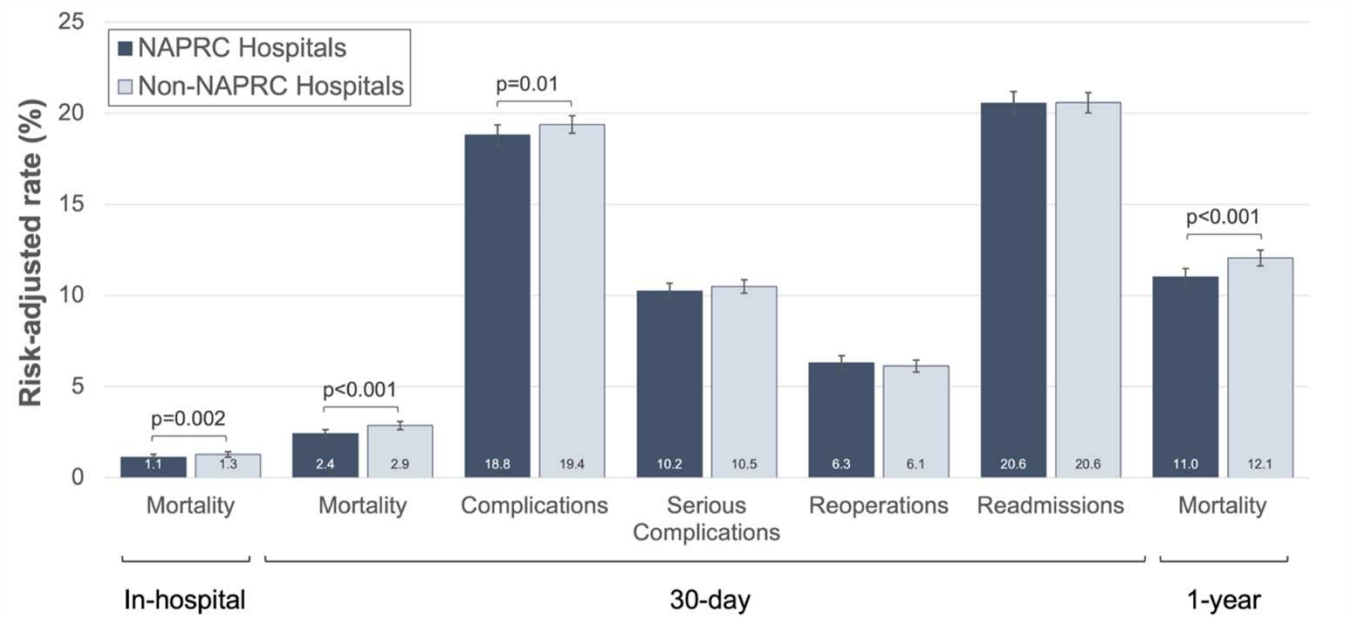

Figure 2. Risk-adjusted outcomes after proctectomy among Medicare beneficiaries with rectal cancer treated at National Accreditation Program for Rectal Cancer (NAPRC)-accredited and nonaccredited hospitals. Risk-adjusted rates (%) are shown on the y-axis, adjusting for age, sex, year of surgery, Elixhauser comorbidities, surgical priority, surgical approach, sphincter-preserving surgery, nurse ratio, and number of beds per hospital. The dark bars indicate risk-adjusted rates at NAPRC-accredited hospitals and the light bars at nonaccredited hospitals. Significant associations are indicated by the listed p value.

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Key Findings

- "NAPRC-accredited hospitals have lower risk-adjusted morbidity and mortality for major rectal cancer surgery...yet, only 1 in 10 Medicare beneficiaries undergo proctectomy at an NAPRC hospital."
- Further research is needed to understand the specific practices that lead to improved outcomes in NAPRC centers and to explore strategies to expand access to accreditation.

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Main Takeaway

- NAPBC/NAPRC Accreditation leads to:
  - Higher performance on quality measures
  - Formalized programs mandating reporting and accountability
  - Centralized database to provide real-time feedback
  - Lower risk-adjusted morbidity and mortality
  - Evidence-based care processes, and internal audit
  - Coordinated, multidisciplinary care
  - Robust support structure to help hospitals achieve accreditation


Questions