The Rationale for and Reality of the ACS CoC National Accreditation Program for Rectal Cancer
Disclosures
Rectal Carcinoma: Surgeon Variability

Edmonton, Canada Registry

- January 1\textsuperscript{st}, 1983 – December 31\textsuperscript{st}, 1990
- 5 hospitals
- 683 patients
- 52 surgeons (5 colorectal surgeons)

## Rectal Carcinoma: Surgeon Variability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Colorectal Trained (+)</th>
<th>Colorectal Trained (-)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low and mid tumors (%)</td>
<td>70.6</td>
<td>62.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Low anterior resection (%)</td>
<td>61</td>
<td>25.8</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Abdominoperineal (%)</td>
<td>27.5</td>
<td>46.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>≥ 21 resections (n=360) (%)</td>
<td>&lt; 21 resections (n=323) (%)</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Local Recurrence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorectal trained (n=109)</td>
<td>10.4</td>
<td>21.1</td>
<td></td>
</tr>
<tr>
<td>Non-colorectal trained (n=574)</td>
<td>27.8</td>
<td>44.6</td>
<td></td>
</tr>
<tr>
<td><strong>Disease-Specific Survival</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorectal trained</td>
<td>67.3</td>
<td>54.5</td>
<td></td>
</tr>
<tr>
<td>Non-colorectal trained</td>
<td>49.0</td>
<td>39.2</td>
<td></td>
</tr>
</tbody>
</table>

# Rectal Carcinoma: Surgeon Variability

<table>
<thead>
<tr>
<th>Disease Specific Survival</th>
<th>Multivariate Analysis</th>
<th>Risk Local Recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HR</td>
<td>p</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>0.005</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>---</td>
<td>&lt;0.001</td>
<td>Vascular/Neural invasion</td>
</tr>
<tr>
<td>---</td>
<td>&lt;0.001</td>
<td>Stage</td>
</tr>
<tr>
<td>---</td>
<td>&lt;0.001</td>
<td>Grade</td>
</tr>
</tbody>
</table>
“Patients operated upon by a general surgeon were 3.42 times more likely to develop a local recurrence than those operated upon by a colorectal surgeon”

Dorrance et al. Dis Colon Rectum 2000
<table>
<thead>
<tr>
<th>Surgeon, Year</th>
<th>Patients (n)</th>
<th>Morbidity</th>
<th>Post-OP Mortality</th>
<th>Recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bokey, 1997</td>
<td>922</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>Porter, 1998</td>
<td>683</td>
<td>↓</td>
<td>-</td>
<td>↓</td>
</tr>
<tr>
<td>Harmon, 1999</td>
<td>5739</td>
<td>-</td>
<td>↓</td>
<td>-</td>
</tr>
<tr>
<td>Hermanek, 1999</td>
<td>1121</td>
<td>-</td>
<td>-</td>
<td>↓</td>
</tr>
<tr>
<td>Callahan, 2003</td>
<td>48528</td>
<td>↓</td>
<td>↓</td>
<td>-</td>
</tr>
<tr>
<td>Smith, 2003</td>
<td>5173</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>Hao Wang, 2009</td>
<td>738</td>
<td>↓</td>
<td>↓</td>
<td>-</td>
</tr>
<tr>
<td>Borowski, 2010</td>
<td>8219</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>Archampong, 2012</td>
<td>65726</td>
<td>n/a</td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>Hohenberger, 2013</td>
<td>1028</td>
<td>↓</td>
<td>↓</td>
<td>-</td>
</tr>
</tbody>
</table>
# Colostomy Rates

<table>
<thead>
<tr>
<th>Source</th>
<th>Year(s)</th>
<th>n</th>
<th>Country</th>
<th>Tumor distance from anal verge</th>
<th>Colostomy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norwegian Rectal Cancer Project</td>
<td>1993-1999</td>
<td>2136</td>
<td>Norway</td>
<td>&lt;12 cm</td>
<td>38%</td>
</tr>
<tr>
<td>Dutch Trial</td>
<td>1996-1999</td>
<td>1805</td>
<td>Netherlands/Sweden</td>
<td>&lt;15 cm</td>
<td>32%</td>
</tr>
<tr>
<td>MRC CRO-7</td>
<td>1998-2005</td>
<td>1350</td>
<td>UK/Canada/NZ/SAF</td>
<td>&lt;15 cm</td>
<td>35%</td>
</tr>
<tr>
<td>German Trial</td>
<td>1994-2002</td>
<td>799</td>
<td>Germany</td>
<td>&lt;16 cm</td>
<td>25%</td>
</tr>
<tr>
<td>Trans-Tasman</td>
<td>2001-2006</td>
<td>323</td>
<td>Australia/New Zealand</td>
<td>&lt;12 cm</td>
<td>33%</td>
</tr>
<tr>
<td>AHRQ and OSHPD (CA)</td>
<td>2002-2004</td>
<td>19,912</td>
<td>USA</td>
<td>rectum</td>
<td>50%</td>
</tr>
</tbody>
</table>
## CRM Rates: U.S. vs. Europe

<table>
<thead>
<tr>
<th></th>
<th>NCDB (U.S.)</th>
<th>Lyon 96-02</th>
<th>German</th>
<th>Dutch</th>
<th>Polish</th>
<th>CRO-7 (U.K.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>17%</td>
<td>3%</td>
<td>3.5%</td>
<td>10%</td>
<td></td>
<td>12.9%/4.4%</td>
</tr>
<tr>
<td>LAR</td>
<td>13%</td>
<td>-</td>
<td>-</td>
<td>8%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>APR</td>
<td>21%</td>
<td>-</td>
<td>-</td>
<td>12%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Rectal Cancer cases between 1974-1995 in Uppsala, Sweden.

In 1980 limited to colorectal unit.

Local Recurrence decreased from 47% to 13%.

Increase seen in cancer-specific survival.
Comparison of long-term outcomes for Rectal Cancer patients before and after implementation of specialized colorectal unit.

Resulted in improved 5- and 10-yr OS from 52% and 40% to 76% and 49% (p=0.003)
Improved survival after rectal cancer in Denmark

S. Bülow*, H. Harling†, L. H. Iversen‡ and S. Ladelund§ on behalf of The Danish Colorectal Cancer Group 1

*Department of Surgery, Hvidovre University Hospital, †Department of Surgery, Bispebjerg University Hospital, ‡Department of Surgery, Århus University Hospital THG, §Research Centre for Prevention and Health, Glostrup Hospital and §Clinical Research Centre, Hvidovre University Hospital and the University of Copenhagen, Copenhagen, Denmark.

Analysis of long-term survival in 10,632 Rectal cancer patients before and after establishing the Danish Colorectal Cancer Group.

Improved 5-yr Relative and Overall survival.

Bulow et al. Colorectal Dis 2010

Figure 2. Survival in patients operated for cure.
# Impact of Centers of Excellence in Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>TME adherence</th>
<th>Permanent stoma rate</th>
<th>Local Recurrence</th>
<th>Overall Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>2002</td>
<td>78% 92%</td>
<td>- + - + - + - + - +</td>
<td>12% 6%</td>
<td>60% 73%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2010</td>
<td>33% 31%</td>
<td>- + - + - + - + - +</td>
<td>16 9</td>
<td>56% 65%</td>
</tr>
<tr>
<td>Sweden</td>
<td>2010</td>
<td>----- 38% 18%</td>
<td>- + - + - + - + - +</td>
<td>8% 3.5%</td>
<td>38% 62%</td>
</tr>
<tr>
<td>Denmark</td>
<td>2010</td>
<td>----- -----</td>
<td>- + - + - + - + - +</td>
<td>----- 37%</td>
<td>51% 51%</td>
</tr>
<tr>
<td>Spain</td>
<td>2013</td>
<td>----- -----</td>
<td>- + - + - + - + - +</td>
<td>----- 5%</td>
<td>----- 88%</td>
</tr>
<tr>
<td>Belgium</td>
<td>2015</td>
<td>----- -----</td>
<td>- + - + - + - + - +</td>
<td>----- 56%</td>
<td>----- 77%</td>
</tr>
</tbody>
</table>
The Status of Radical Proctectomy and Sphincter-Sparing Surgery in the United States

Rocco Ricciardi, M.D., M.P.H., Beth A. Virmig, Ph.D., M.P.H., Robert D. Madoff, M.D., David A. Rothenberger, M.D., Nancy N. Baxter, M.D., Ph.D.

1 Department of Surgery, University of Minnesota Medical School, Minneapolis, Minnesota
2 Department of Colon and Rectal Surgery, Ibadan Clinic, Burlington, Massachusetts
3 Division of Health Services Research and Policy, School of Public Health, University of Minnesota, Minneapolis, Minnesota
4 Department of Surgery, St. Michael’s Hospital, University of Toronto, Toronto, Ontario, Canada

41,631 pts with radical proctectomy

16,510 (39.7%) sphincter-sparing
25,121 (60.3%) colostomy

Ricciardi et al. DCR 2007
Hospital discharge data from 21 states with county-level place of residence information (2002-04)

- 20,000 proctectomies

- 50% of cases non-restorative (APR)

- Only 20% of counties with colostomy rate <40%

Agency for Healthcare Research and Quality
Office of Statewide Health Planning and Development Calif.
11 states’ hospital discharge data 2003-2004 (1)

>7500 proctectomies by 2600 surgeons

40% of surgeons performed **ONLY** non-restorative procedures (APR) for their rectal cancer patients!
  - higher mortality rates (2x) and longer lengths of stay (2 days)

“Restorative” (LAR) surgeons were **specialized** by virtue of more pelvic pouch and anorectal procedures
Same dataset as prior study plus tumor characteristics from SEER, screening rates from Medicare, hospital characteristics from AHA, and surgeon specialty from ASCRS and SSO rosters

“High Stoma Counties” (26% of all counties)
- Defined as >60% colostomy rate (mean 71%)
- Less likely to have MRI or PET scanner
- Less likely to have teaching hospital
- Significantly fewer specialty surgeons

“data support concept that surgeon specialization and familiarity with rectal cancer treatment are important determinants of rectal cancer care”

Ricciardi R et al. DCR 2010
Consortium for Optimizing Surgical Treatment of Rectal Cancer

Established in 2011 Members represent all facets of U.S. healthcare delivery system

- Private clinics, academic centers, community hospitals
- Diverse in size and geography

Improve quality and uniformity of rectal cancer care in the U.S.
Failure of Evidence-Based Cancer Care in the United States

Optimizing Rectal Cancer Management: Another Step Toward Personalization

Clinical Review & Education

High Rate of Positive Circumferential Resection Margins Following Rectal Cancer Surgery

Extended Intervals after Neoadjuvant Therapy in Locally Advanced Rectal Cancer: The Key to Improved Tumor Response and Potential Organ Preservation

Christian P Probst, MD, Adan Z Becerra, BA, Christopher T Aquino, MD, Mohamedatsu A Tejani, MD, Steven D Wesner, MD, FACS, Julio García-Aguilar, MD, P.A.S., Faez H Renzi, MD, FACS, David W Dietz, MD, FACS, John RT Monson, MD, FACS, Fergal J Fleming, MD, on behalf of the Consortium for Optimizing the Surgical Treatment of Rectal Cancer (OSTRiC)

JACS 2015; 221: 430-440
• **1917:** The Joint Commission and Joint Commission on Accreditation of Healthcare Organizations
• **1922:** Commission on Cancer (CoC)
• **1950:** Committee on Trauma (COT)
• **1998:** American College of Surgeons Oncology Group (ACOSOG)
• **2004:** National Surgical Quality Improvement Program (ACS NSQIP®)
• **2005:** National Accreditation Program for Breast Centers (NAPBC)

Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP)
Our Mission...

The Commission on Cancer is a consortium of professional organizations dedicated to improving survival and quality of life for cancer patients through standard-setting, prevention, research, education, and the monitoring of comprehensive quality care.

57 professional member organizations
Over 100 CoC members and staff
8 volunteer leadership committees
Commission on Cancer Member Organizations

**Administrative**
- Association of Cancer Executives (ACE)
- Association of Community Cancer Centers (ACCC)
- American Hospital Association (AHA)
- Community Oncology Alliance (COA)
- National Consortium of Breast Centers (NCBC)

**Advocacy/Patient Based**
- American Cancer Society, Inc. (ACS)
- Cancer Support Community (CSC)
- National Coalition for Cancer Survivorship (NCCS)

**Allied Health**
- American Academy of Hospice and Palliative Medicine (AAHPM)
- American Academy of Physical Medicine & Rehabilitation (AAPM&R)
- Academy of Nutrition and Dietetics, Oncology Nutrition Group (AND)
- Academy of Oncology Nurse and Patient Navigators (AONN+)
- American Physical Therapy Association (APTA)
- American Psychosocial Oncology Society (APOS)
- Association of Oncology Social Work (AOSW)
- National Society of Genetic Counselors (NSGC)

**Clinical**
- American Academy of Pediatrics (AAP)
- American Association of Endocrine Surgeons (AAES)
- American Association of Pathologists' Assistants (AAPA)
- American College of Obstetricians and Gynecologists (ACOG)
- American College of Medical Genetics and Genomics (ACMG)
- American College of Physicians (ACP)
- American College of Radiology (ACR)
- American Head and Neck Society (AHNS)
- American Medical Association (AMA)
- American Pediatric Surgical Association (APSA)
- American Radium Society (ARS)
- American Society of Breast Surgeons (ASBS)
- American Society of Clinical Oncology (ASCO)
- American Society of Colon and Rectal Surgeons (ASCRS)
- American Society of Plastic Surgeons (ASPS)
- American Society for Radiation Oncology (ASTRO)
- American Urological Association (AUA)
- College of American Pathologists (CAP)
- Hematology/Oncology Pharmacy Association (HOPA)
- Oncology Nursing Society (ONS)
- Resident and Associate Society American College of Surgeons (RASACS)
- Society of Gynecologic Oncology (SGO)
- Society for Immunotherapy of Cancer (SITC)
- Society of Nuclear Medicine and Molecular Imaging (SNMMI)
- Society of Surgical Oncology (SSO)
- Society of Thoracic Surgeons (STS)
- Young Fellows Association American College of Surgeons (YFAACS)
Commission on Cancer Member Organizations

**Government**
Centers for Disease Control and Prevention (CDC)
Department of Defense Military Health System (DOD)
Department of Veterans Affairs/Veterans Health (VA)
National Cancer Institute Healthcare Delivery Research Program (NCI HDRP)
National Cancer Institute Surveillance, Epidemiology, and End Results Program (NCI SEER)

**Registry**
National Cancer Registrars Association, Inc. (NCRA)
North American Association of Central Cancer Registries (NAACCR)

**Research/Education**
Alliance Clinical Research Program (ALLIANCE)
American Association for Cancer Education (AACE)
American Joint Committee on Cancer (AJCC)
Association of American Cancer Institutes (AICI)
National Accreditation Program for Breast Centers (NAPBC)
National Comprehensive Cancer Network (NCCN)
National Surgical Adjuvant Breast and Bowel Project (NSABP)
The NCDB is the preeminent, multidisciplinary, national clinical cancer registry system dedicated to continuous quality improvement for the evaluation, management and surveillance of cancer patients.


After the 2018 Call for Data, 1.47 million new cases were added representing 72% of newly diagnosed cancer cases in the U.S. 16.9 million cases overall were submitted.

NCDB captures 250 data points per patient.
NAPBC Accreditation Demonstrates Improved Compliance with Post-Mastectomy Radiation Therapy Quality Measure

**NAPBC quality measure:**
post-mastectomy patients with ≥4 positive lymph nodes should receive radiation therapy (PMRT)

**Objective:**
examine how NAPBC accreditation has affected compliance with this quality measure

**Methods:**
Women who underwent mastectomy at either an NAPBC-accredited center or a CoC only accredited hospital were identified (2006-2013) in the NCDB

Berger et al. JACS 2017
NAPBC centers yielded a significantly higher rate of PMRT than CoC hospitals (66.0% vs 59.2%, p<0.001)
For each year of accreditation (2009-2011), centers had significantly higher rates of radiation in the accreditation year compared to the year prior to accreditation ($p < 0.001$).

Within those centers, the rate of radiation increased post-accreditation in each accreditation year.
National Cancer Data Base 2006-2011
Stage II-III Rectal cancer, 30,994 pts
Significant variations in the use of neoadjuvant treatment by cancer center type, geographical location, hospital volume, Pt age, sex, race, primary payer, urban/rural, comorbidity, stage
Vast majority of pts treated in low (1-10/year) and intermediate (10-30/year) volume centers
23,808 vs 6,466 in high volume centers (>30/year)
Highest adherence observed in high volume centers 78% vs 69% p<0.001

Need for A Rectal Cancer National Accreditation Program

PAPERS OF THE 134TH ASA ANNUAL MEETING

Failure of Evidence-Based Cancer Care in the United States
The Association Between Rectal Cancer Treatment, Cancer Center Volume, and Geography

John R. T. Monson, MD,* Christian P. Probst, MD,* Steven D. Wexner, MD,† Feza H. Remzi, MD,‡ James W. Fleshman, MD,§ Julio Garcia-Aguilar, MD,¶ George J. Chang, MD,∥ and David W. Dietz, MD‡;
On behalf of The Consortium for Optimizing the Treatment of Rectal Cancer (OSTRiCh)
National Cancer Data Base 2010-2011
Stage I-III Rectal cancer
Rate of positive CRM (<1mm) by Pt demographics, tumor characteristics, and treatment
T3/4, high grade, LVI, neural invasion all independently associated
Middle Atlantic (13.5%) vs West-South-Central-Pacific (18.9%) p<0.001
Neoadjuvant chemoradiation not associated with CRM status
16,619 pts → 2,859 had positive CRM (17%)
Optimal Resources for Rectal Cancer Care

2020 Standards | Effective July 2020
• This is a high-level overview

• For full details on standards requirements, review the Definitions and Requirements Documentation, and Measure of Compliance sections for each standard in the Optimal Resources for Rectal Cancer Care (2020 standards)
1.1 Administrative Commitment (new standard)

• Programs provide a letter of authority from facility leadership (CEO or equivalent) demonstrating the commitment to the rectal cancer program, which includes, but is not limited to:
  – A high-level description of the rectal cancer program
  – Any initiatives involving the rectal cancer program during the accreditation cycle that were initiated for the purposes of quality and safety
  – Facility leadership’s involvement in the rectal cancer program
  – Examples of the current and future financial investment in the rectal cancer program
2.1 Rectal Cancer Multidisciplinary Care

• Facility must have a defined Rectal Cancer Multidisciplinary Team

• All surgeons who perform rectal cancer surgery must be members of the RC-MDT

• Minimum of one and maximum of eight appointed physician member from each of the following medical specialties. A lead physician is selected for each specialty.
  • Pathology
  • Radiology
  • Medical oncology
  • Radiation oncology

• Additional required members of the RC-MDT are the Rectal Cancer Program Director (Standard 2.2) and the Rectal Cancer Program Coordinator (Standard 2.3)
2.2 Rectal Cancer Program Director

- The facility appoints a Rectal Cancer Program (RCP) Director who chairs the Rectal Cancer MDT
- Liaison between the RC-MDT and the CoC committee
- Must be an active physician who provides care to rectal cancer patients
- A co-director may be appointed at the discretion of the RCP
- Responsible for evaluating, interpreting, and reporting the MDT performance using NCDB data
2.3 Rectal Cancer MDT Program Coordinator(s)

- Program Coordinator appointed to coordinate activities of the Rectal Cancer MDT
- Responsible for registering and monitoring of patients with suspected and confirmed rectal cancer throughout their diagnostic and treatment pathways
- Ensures patient care pathways are followed according to agreed guidelines, including time targets for relevant interventions: first definitive treatment, subsequent adjuvant therapy, etc.
- Following MDT meeting, fully informs the referring providers of discussion outcomes regarding their patients
2.4 Rectal Cancer Multidisciplinary Team Meetings

- The Rectal Cancer MDT meets at least twice each month during each calendar year.

- At least one RC-MDT member from surgery, pathology, radiology, medical oncology, and radiation oncology must be in attendance for the RC-MDT meeting to qualify under this standard.

- All meeting minutes must contain sufficient detail to accurately reflect the activities of the RC-MDT as well as demonstrate compliance with National Accreditation Program for Rectal Cancer requirements.
### 2.5 Rectal Cancer Multidisciplinary Team Attendance

<table>
<thead>
<tr>
<th>Specialty/Role</th>
<th>Minimum RC-MDT Attendance Requirements*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeons</td>
<td>50%</td>
</tr>
<tr>
<td>Pathologists</td>
<td>20%</td>
</tr>
<tr>
<td>Radiologists</td>
<td>20%</td>
</tr>
<tr>
<td>Radiation Oncologists</td>
<td>20%</td>
</tr>
<tr>
<td>Medical Oncologists</td>
<td>20%</td>
</tr>
<tr>
<td>RCP Director</td>
<td>50%</td>
</tr>
<tr>
<td>RCP Coordinator</td>
<td>50%</td>
</tr>
<tr>
<td>Specialty Lead Physicians</td>
<td>30%</td>
</tr>
</tbody>
</table>

*may include participation through teleconference if the tele-attendee can participate in discussions and has access to necessary meeting materials.
The facility must be accredited by the American College of Surgeons Commission on Cancer before earning accreditation by the National Accreditation Program for Rectal Cancer.

Accreditation only granted to facilities that currently hold CoC accreditation status of:

- 3-Year with Commendation
- 3-Year Accreditation
- 3-Year with Contingency
Before initiation of treatment, must confirm diagnosis for **all patients** who were diagnosed elsewhere

Must obtain and review the outside pathology slides and/or pathology reports and include the pathology reports and/or slides in the patient’s medical record
5.2 Staging before Definitive Treatment

Staging in 95% of patients

Systemic staging
- CT or PET/CT scan of the chest, abdomen, and pelvis
- PET scan without the CT scan does not meet this standard

Local tumor staging:
MRI of the pelvis using a *rectal cancer protocol*:
- Depth of tumor penetration into mesorectum
- Status of circumferential resection margin
- Involvement of adjacent organs
- Lymph node involvement
- Extramural venous invasion
- Relation to anal sphincter complex
• 90% of pretreatment MRI exams are read by a radiologist who is a member of the RC-MDT
• 95% of results must be reported in a standardized synoptic report
• Required report elements are defined on the NAPRC website
5.4 Carcinoembryonic Antigen Level

- Pretreatment CEA level is obtained before definitive treatment in minimum of 75% of previously untreated patients

- CEA level is recorded in the patient's medical record
Individualized treatment planning discussion before beginning definitive treatment in all patients.

Definitive treatment is defined as neoadjuvant therapy, surgical resection, or initiation of palliative care.

Emergency surgery excluded.

The RC-MDT treatment planning discussion must include, but is not limited to:
- Review of diagnostic and staging studies
- Assignment of clinical stage
- Creation of individualized treatment plan

The rectal cancer program (RCP) conforms to local policy and requirements for conducting and documenting multidisciplinary team treatment discussions and communicating with the patient.
• Before initiation of treatment, a standardized treatment evaluation and recommendation summary is provided to the treating physician in at least 50% of patients.

• Summary includes:
  – Tumor location in the rectum (lower, middle, or upper third)
  – Indication of sphincter involvement
  – Pretreatment (clinical) AJCC stage
  – Pretreatment CRM status (involved, threatened, or not threatened)
  – CEA level
  – Neoadjuvant therapy recommendation
  – Type and duration of neoadjuvant therapy recommended
  – Anticipated date and type of surgical procedure
  – Clinical research study eligibility and/or enrollment
5.7 Definitive Treatment Timing

- Minimum of 80% of previously untreated patients begin definitive treatment within 60 days of the patient’s initial clinical evaluation for rectal cancer at the accredited rectal cancer program.

- Delays due to documented patient noncompliance or failure of payers to authorize recommended treatment in a timely fashion shall not be considered a failure to meet this standard.
5.8 Standardized Synoptic Operative Reporting for Surgical Resection

- 80% of surgical resections for rectal cancer are performed by a surgeon who is a member of the RC-MDT
- Operative reports for 95% of all rectal cancer patients who undergo surgical resection are recorded in a standardized synoptic report containing the minimum required elements
- Local excisions are excluded from these requirements
5.9 Pathology Reports after Surgical Resection

- Pathology reports are completed by an RC-MDT pathologist in at least 90% of patients.
- 95% of rectal cancer pathology reports are completed in two weeks, contain all College of American Pathologists (CAP) required data elements, and use a standardized synoptic format.
5.10 Photographs of Surgical Specimens

- A minimum of 65% of specimens are photographed to include anterior, posterior, and left and right lateral views
- Photographs of the fresh unpinned, unfixed ex-vivo specimen obtained using any standard digital camera in either the operating room or in the pathology laboratory
- Images discussed by MDT and electronically stored
Four steps of the treatment outcome conference discussion:

• Pre-surgical evaluation and treatment: clinical stage, neoadjuvant therapy

• Review of the outcome of the surgery: approach, complications, stoma, unexpected findings

• Review the final pathology report and stage:
  – CRM, DRM, tumor regression grade, mesorectal grade, AJCC pathologic stage

• Recommendation for adjuvant treatment
The post-surgical treatment summary is provided to the treating physician for 50 percent of patients within four weeks of the Standard 5.11 Rectal Cancer Multidisciplinary Team Post-Surgical Treatment Outcome Discussion.

Required elements of the Post-Surgical Treatment Summary are enumerated in the full standard.
5.13 Adjuvant Therapy after Surgical Resection

- Recommended adjuvant treatment regimen begins within eight weeks of definitive surgical resection of the primary tumor in at least 50% of eligible patients who elect adjuvant therapy

- Referrals for adjuvant treatment are evaluated and monitored by the RCP Coordinator, reported to the RC-MDT, and documented in the RC-MDT meeting minutes
7.1 Accountability and Quality Improvement Measures

- NAPRC accredited programs treat patients with cancer according to nationally accepted accountability and quality measures indicated by the National Cancer Database quality reporting tools.

- The RC-MDT monitors performance with the estimated performance rates (EPR), develops action plans if performance falls below the required level, and documents performance and actions in the RC-MDT meeting minutes.

- This standard is in development.
Individual components created by relevant society:

- **Surgery**: TME (ASCRS)
- **Pathology**: standard pathology specimen evaluation and reporting (completed by CAP and CoC)
- **Radiology**: rectal cancer protocol MRI, standard reporting (ACR)
The Computer Synoptic Operative Report—A Leap Forward in the Science of Surgery

Ibrahim Edhemovic, MD, MSc, Walley J. Temple, MD, FRCSC, FACS, Christopher J. de Gara, MD, MB, BS, FRCS (Ed., Eng. and C.), MS (London), and Gavin C. E. Stuart, MD, FRCSC

- **Standard Narrative Report (NP) vs. Computerized Synoptic Report (WebSMR).**
- **Cancer Surgery Working Group in Alberta including 7 hospitals.**
- **40 Cases Reviewed, 29 AR and 11 APR.**
- **45.9% of information recorded in NR vs. 99% in WebSMR.**
- **6 minutes** to complete computerized report.
Synoptic Operative Reports Enhance Documentation of Best Practices for Rectal Cancer

REAGAN L. MANIAR, MD, PETER SYTNIK, MD, DEBRAH A. WIRTZFELD, MD, MSC, FRCSC, FACS,
DAVID J. HOCHMAN, MD, FRCSC, FASCRS, ANDREW M. MCKAY, MD, MSC, FRCSC, FACS, BENSON YIP, MD, FRCSC,
PAMELA C. HEBBARD, MD, FRCSC, AND JASON PARK, MD, ME, FRCSC, FACS*

Department of Surgery, University of Manitoba, Winnipeg, Manitoba, Canada

• Independent Review of Operative Reports for Rectal Cancer
• Comparing Quality and ease of reporting for Rectal Cancer Checklist.
• **Synoptic Reports** scored Significantly **Better** than Narrated Reports.
• Reviewers abstracted data Significantly **Faster** with Synoptic Reports.

• Multi-institution study of operative reports for Laparoscopic Cholecystectomy and Whipple.

• Comparison of dictated and historical operative reports to synoptic reports.

• Survey of surgeons using synoptic report.
Synoptic operative reporting for laparoscopic cholecystectomy and pancreaticoduodenectomy: A multi institutional pilot study evaluating completeness and surgeon perceptions

Shanley B. Deal 1,2, Michael I. D’Angelica 2,3, William G. Hawkins 4, Michael Pucci 4, Michael Ujiki 5, L. Michael Brunt 1, Steven Wexner 1, Adnan A. Alseidi 1

1. Virginia Mason Medical Center, General Thoracic and Vascular Surgery, 1100 19th Ave, Seattle, WA, 98101, USA
2. Memorial Sloan Kettering Cancer Center, 1275 York Ave, New York, NY, 10065, USA
3. University of Texas MD Anderson Cancer Center, 1515 Holcombe Blvd, Houston, TX, 77030, USA
4. The University of Texas MD Anderson Cancer Center, 1515 Holcombe Blvd, Houston, TX, 77030, USA
5. Northwestern University Feinberg School of Medicine, 303 East Chicago Ave, Chicago, IL, 60611, USA

The American Journal of Surgery
journal homepage: www.americanjournalofurgery.com

Percentage of frequently missed components in pancreaticoduodenectomy...

- STENT TYPE: 45% DOR, 71% HOR
- RESECTION R0/R1: 91% DOR, 80% HOR
- PD STENT: 73% DOR, 55% HOR

Percentage of frequently missed components for laparoscopic...

- INCOMPLETE CVS: 39% DOR, 41% HOR
- ANTIBIOTICS GIVEN: 29% DOR, 50% HOR
- COUNTS CORRECT: 64% DOR, 79% HOR
- IOC INDICATION: 50% DOR, 60% HOR

Am J Surg, Jun 2018
Percent of participant survey respondents that agree or strongly agree...

<table>
<thead>
<tr>
<th>Operative Report Type</th>
<th>Accuracy</th>
<th>Quality</th>
<th>Cost Savings</th>
<th>Aids in Research/QI project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synoptic</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Dictation</td>
<td>+/-</td>
<td>+/-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Template</td>
<td>-</td>
<td>+/-</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent of respondents agree or strongly agree</th>
<th>SOR EASY TO USE</th>
<th>USE SOR OVER DOR</th>
<th>IMPROVE QI PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC (n=24)</td>
<td>93%</td>
<td>87%</td>
<td>87%</td>
</tr>
<tr>
<td>PD (n=10)</td>
<td>67%</td>
<td>83%</td>
<td>67%</td>
</tr>
</tbody>
</table>

Am j Surg, Jun 2018
## Operative Synoptic Report

### Table 1: Required elements and response options for standardized synoptic operative report (Standard 2.8).

<table>
<thead>
<tr>
<th>Elements</th>
<th>Response options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ASA score</td>
<td>I, II, III, IV, V</td>
</tr>
<tr>
<td>2. Case status</td>
<td>Elective, urgent (obstructed, bleeding, perforated)</td>
</tr>
<tr>
<td>3. Operation</td>
<td>LAR, APR, TPC: local excision</td>
</tr>
<tr>
<td>5. Location of tumor within rectum</td>
<td>High, middle, low</td>
</tr>
<tr>
<td>6. Height of lower edge of tumor from anal verge</td>
<td>0-20 cm</td>
</tr>
<tr>
<td>7. Mobilization of splenic flexure</td>
<td>Yes, no</td>
</tr>
<tr>
<td>8. Level of ligation of inferior mesenteric artery</td>
<td>IMA, SRA: none</td>
</tr>
<tr>
<td>9. Level of ligation of inferior mesenteric vein</td>
<td>High, low, none</td>
</tr>
<tr>
<td>10. Level of rectal transaction distal to distal edge of tumor (distal margin)</td>
<td>0-20 cm</td>
</tr>
<tr>
<td>11. Type of reconstruction</td>
<td>Stapled end-end, stapled end-side, handsewn end-end, handsewn end-side, celina l-pouch, ileal pouch-anal anastomosis, coloplasty: none</td>
</tr>
<tr>
<td>12. Anastomotic testing method(s)</td>
<td>Rectal air inflation under pelvic fluid: rectal instillation of betadine, indigo, or other fluid: polipoint: observation of circular stapler rings only: none</td>
</tr>
<tr>
<td>13. Creation of stoma</td>
<td>Yes (Gastrostomy, colostomy): no</td>
</tr>
<tr>
<td>15. Metastectomy</td>
<td>Yes (Liver, peritoneum: others): no</td>
</tr>
<tr>
<td>16. Completeness of tumor resection</td>
<td>R0, R1, R2</td>
</tr>
<tr>
<td>18. Blood transfusion</td>
<td>Yes: no</td>
</tr>
<tr>
<td>19. TME photographed</td>
<td>Yes—in pathology report: yes—in operative report: no</td>
</tr>
<tr>
<td>20. Short narrative</td>
<td>***</td>
</tr>
</tbody>
</table>
## Comparison of data elements recorded between free text and synoptic reports

<table>
<thead>
<tr>
<th>Data Element Recorded</th>
<th>Free Text (n=50)</th>
<th>Synoptic Report (n=50)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship to the anterior peritoneal reflection</td>
<td>45 (90%)</td>
<td>50 (100%)</td>
<td>0.0218</td>
</tr>
<tr>
<td>Intactness of mesorectum</td>
<td>38 (76%)</td>
<td>50 (100%)</td>
<td>0.0002</td>
</tr>
<tr>
<td>Distance of tumor to the non-peritonealized CRM</td>
<td>38 (76%)</td>
<td>50 (100%)</td>
<td>0.0002</td>
</tr>
</tbody>
</table>

King et al. Pathology 2016
Decision-making in Colorectal Cancer Tumor Board meetings: Results of a prospective observational assessment

S. Shah · S. Arora · G. Atkin · R. Glynne-Jones · P. Mathur · A. Darzi · N. Sevdalis

On average... 76min for 24 pts with 16 attendants.

- **3.16min** per case.

Case history, radiology, and pathology were rated highest quality of information presented.
Evaluation of MDT effect on short-term oncologic outcomes.

Retrospective review data collected before and after implementation of mandatory MDT for Rectal Cancer.
Oncologic Outcomes Pre- and Post MDT

- Persistent Local Tumor
- Persistent Distal Tumor
- Recurrence, Local only
- Recurrence, Distant only
- Recurrence, Local and Distant

Pre-MDT, MDT 2013, MDT 2014

All rectal cancer cases presented at a weekly CRC-MDC between July 2015 and June 2016 were prospectively included.

408 rectal cancer cases were included, and survey responses were obtained for 371 (91%)
Documented change in plan as a result of the CRC-MDC discussion in 97 of 371 (26%)

Changes in management included a change in therapy or change in therapy sequence in 76 cases, and recommendation of additional evaluation in 36 cases.

Changes occurred in 23%, 28%, and 26% of cases presented by surgeons with <10, 10-20, and >20 years of experience.
Conclusions:

• CRC-MDC changes clinical management for a significant portion of rectal cancer patients at a tertiary center, independent of the presenting surgeon’s years of clinical experience.

• Our results support the CRC-MDC standard for the National Accreditation Program for Rectal Cancer.
Accreditation Readiness in US Multidisciplinary Rectal Cancer Care: A Survey of OSTRICH Member Institutions

Lawrence Lee, MD, PhD; David W. Dietz, MD; Fergal J. Fleming, MD; Feza H. Remzi, MD; Steven D. Wexner, MD; David Winchester, MD; John R. T. Monson, MD

Anonymous 39-item Questionnaire on NAPRC standards.

328 OSTRICH institutions.

41.8% response rate
Mean compliance = 10.6

37 (27.0%) respondents were high compliance (13 standards).

100% compliance in 4 centers (2.9%).

High Volume Centers (>30/yr) more likely to be compliant.
The 2011-2014 National Cancer Database was queried for non-metastatic rectal cancer

The NAPRC process measures evaluated included:

- Clinical staging completion
- Treatment starting fewer than 60 days from diagnosis
- CEA level drawn before treatment
- Tumor regression grading
- Margin assessment.
• The NAPRC performance measures included:
  – Negative proximal, distal, and circumferential margins
  – 12 lymph nodes harvested during resection
### Completed, n (%)

<table>
<thead>
<tr>
<th>Process Measure</th>
<th>Completed, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical staging (95%)*</td>
<td>35,738 (91.5)</td>
</tr>
<tr>
<td>Serum CEA obtained prior to treatment (75%)*</td>
<td>25,225 (64.6)</td>
</tr>
<tr>
<td>Treatment started within 60 days of diagnosis (80%)*</td>
<td>33,264 (85.1)</td>
</tr>
<tr>
<td>Tumor regression grading (95%)*</td>
<td>34,382 (88.1)</td>
</tr>
<tr>
<td>CRM assessed (95%)*</td>
<td>33,108 (88.15)</td>
</tr>
<tr>
<td>Proximal and distal margin assessed (95%)*</td>
<td>38,462 (98.45)</td>
</tr>
<tr>
<td>All process measures</td>
<td>9,522 (28.1)</td>
</tr>
</tbody>
</table>

### All process measures achieved by clinical stage

<table>
<thead>
<tr>
<th>Clinical Stage</th>
<th>Completed, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>26 (8.0)</td>
</tr>
<tr>
<td>I</td>
<td>628 (14.2)</td>
</tr>
<tr>
<td>II</td>
<td>3,558 (35)</td>
</tr>
<tr>
<td>III</td>
<td>4,695 (38.3)</td>
</tr>
</tbody>
</table>

### All process measures completed by Path Stage

<table>
<thead>
<tr>
<th>Path Stage</th>
<th>Completed, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1,281 (42.3)</td>
</tr>
<tr>
<td>I</td>
<td>540 (19.1)</td>
</tr>
<tr>
<td>II</td>
<td>2,441 (28.3)</td>
</tr>
<tr>
<td>III</td>
<td>2,476 (27.7)</td>
</tr>
</tbody>
</table>
### Achieved, n (%)

| Negative proximal and distal margin* | 35,828 (93.4) |
| Negative CRM*                      | 27,187 (82.1) |
| All margins negative*              | 26,617 (79.8) |
| 12 or more lymph nodes assessed*   | 28,285 (73.2) |
| All performance measures achieved  | 19,917 (56.3) |

#### All performance measures achieved by clinical stage

<table>
<thead>
<tr>
<th>Clinical Stage</th>
<th>Achieved, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>183 (46.8)</td>
</tr>
<tr>
<td>I</td>
<td>3,310 (60.4)</td>
</tr>
<tr>
<td>II</td>
<td>5,351 (53.0)</td>
</tr>
<tr>
<td>III</td>
<td>6,583 (56.2)</td>
</tr>
</tbody>
</table>

#### All performance measures achieved by pathologic stage

<table>
<thead>
<tr>
<th>Pathologic Stage</th>
<th>Achieved, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1,593 (56.5)</td>
</tr>
<tr>
<td>I</td>
<td>1,797 (56.2)</td>
</tr>
<tr>
<td>II</td>
<td>5,171 (56.3)</td>
</tr>
<tr>
<td>III</td>
<td>5,696 (60.0)</td>
</tr>
</tbody>
</table>
• Retrospective study
• Stage 2-3 rectal adenocarcinoma
• 2010–2016 in one of nine hospitals
• Local staging omitted - 43/240 (17.9%)
• Neoadjuvant Therapy (NT) omitted - 41/240 (17.1%)
The strongest risk factors for staging and NT omission: upper rectal tumors and surgeons ≤ 3 cases/year.

36/41 (87.8%) cases of omitted NT had local staging omitted.

Surgeon local staging and NT rates - strongly correlated (r = 0.92).

NT was associated with lower rates of positive CRM (7.9 vs. 20.0%; P = 0.02), node positivity (33.3 vs. 55.0%; P = 0.01), and local recurrence (7.6 vs. 14.9% at 5 years; P = 0.0176).
NSQIP analysis of clinical stage I-III rectal cancer patients

Underwent LAR

1125 patients who had complete or incomplete preoperative care

Complete preoperative care associated with higher pathologic specimen quality and reduced postoperative morbidity
NAPRC Member Organizations

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100+ years

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