Periop Tibial Nerve Stimulation to Reduce Postoperative Ileus (Pilot RCT)

34 patients in RCT

Tibial Nerve Stimulation

- Stratified by: type of surgery (right/left) open vs. lap
- Return of Bowel Function: 3.11 days
- Ileus: 17.6%

Placebo

- Return of Bowel Function: 3.6 days
- Ileus: 35.3% (p=0.42)

Venara A et al. Dis Colon Rectum 2018;61(9):1080-88
Risk Factors for Colon Cancer

14,325 patients with Stage I-III Colon Cancer
*No adjuvant chemo
who underwent surgery (alone) in Swedish CRC registry 2007-12

Risk Factors for Earlier Recurrence:
- Male
- Low vascular pedicle ligation
- >pT or pN stage
- Short distal margin
- Vascular/perineural invasion
- Postop complications
- Emergency Surgery


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ERAS (vs. control) Systematic Review & Meta-analysis (of 25 colorectal trials)

**LOS:**
- Favors ERAS: -4
- Favors control: -2

**Mortality:**
- P = 0.15

**SSI:**
- P = 0.11

**Morbidity:**
- *P < 0.00001

**Readmissions:**
- P = 0.53

Greer NL et al. Dis Colon Rectum 2018;61(9):1108-18
Propensity Score Analysis for Low Rectal CA: LAR+Intersphincteric Resection vs. APR

LAR+ Intersphincteric Resect (ISR)

n=112

Vs.

APR

n=173

(for stage I-III low Rectal CA) without preop chemoXRT

ISR

69.9%

5 yr Relapse Free Survival

APR

67.9%

p=0.64

3 yr Cumulative Local Recurrence Rate

7.3%

3.9%

(Hazard Ratio 0.75-1.68)

Tsukamoto S et al. Dis Colon Rectum 2018;61(9):1035-42
Resident’s Corner: Acute Ulcerative Colitis

Key Concepts:
- R/O infection
- Early surgery if toxic
- Immunosuppression
- Frequent reassessment
- Surgery if no response
- Taper / maintain Tx if improved

Ellis CT, Fichera A. Dis Colon Rectum 2018;61(9):1010-13
Impact of Tumor Deposits on Outcomes for Stage III Colon Cancer

NCD: 74,577 patients

- Lymph Node+ (alone)
  - 74% received chemo

- Tumor Deposit + (alone)*
  - Less likely to receive chemo
  - Longer delay (>8 wks) to chemo
  - 52%, p<0.001

Lymph node +

- 75% received chemo

Worst prognosis with both LN+ and +tumor deposits

5 year survival: 63.4%

5 year survival: 46%

5 year survival: 61.9%

(N1c similar to N1a)

Wong-Chong N et al. *Dis Colon Rectum* 2018;61(9):1043-52
Risk Factors for Pouch Adenomas in patients with FAP

192 patients with FAP
46.9% with pouch adenomas after Proctocolectomy + IPAA

Risk for Pouch Adenomas w/:

1. Severe Upper GI phenotype
2. Male Sex
3. Age < 18 (at time of IPAA)

Also noted:
- Gastric adenomas in 37.2%
- Duodenal adenomas in 80.3%
- Desmoid tumors in 24.5%

After 20 years, only ~22% of patients free of pouch adenomas

Management of Large Cecal Polyps: Avoiding Colectomy

52 patients with cecal polyps referred for surgery

<table>
<thead>
<tr>
<th>Partial Cecectomy:</th>
<th>Right Hemi:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Complication Rate:</strong></td>
<td><strong>37.1% p=0.02</strong></td>
</tr>
<tr>
<td>EBL: 10mL</td>
<td>50 mL p=0.02</td>
</tr>
<tr>
<td>OR time: 76 min</td>
<td>98 min p=0.009</td>
</tr>
<tr>
<td>Length of Stay: 2 days</td>
<td>4 days p&lt;0.001</td>
</tr>
</tbody>
</table>

19 partial cecectomy

2 converted to right colectomy

33 right colectomy

Kulaylat AS et al. *Dis Colon Rectum* 2018;61(9):1089-95
**Cold vs. Hot Snare Polypectomy Depth**

Delayed bleeding occurs more commonly after hot snare

15 patients underwent histology evaluation of cold vs. hot snare specimens

**Cold** = all limited to shallow submucosa

**Hot** = 60% to deep submucosa
20% to muscularis propria (p<0.001)

Hot resection caused damage to deeper layers, and may explain incidence of bleeding

Acute Kidney Injury in the ERAS Era

Compared AKI rates before and after implementing ERAS protocol

**AKI Pre-ERAS:**

11.9%

**AKI Post – ERAS:**

13.4% (p=0.50)

**Risk factors for AKI:**
- HTN
- Ureteral stents
- NSAIDS
- OR time > 200 min
- ↑ IVF on POD#1

**Protective factors:** laparoscopic approach

*ERAS itself not associated with risk AKI

Hassinger TE et al. *Dis Colon Rectum* 2018;61(8):946-54
SSI & Complications in Obese
Colorectal Surgery Patients

NSQIP Database 2011-13
74,891 patients

Obese pts compared with normal weight

Obese and 30 day complications

Odds Ratio SSI:
BMI 30-35: 1.5
BMI 35-40: 1.9
BMI >40: 2.1

BMI >40 = Higher rates of:
- Wound disruption
- Sepsis
- Respiratory/Renal problem
- UTI

BMI <18.5:
Increased risk mortality
O.R. 1.3

Resident’s Corner: Neoadjuvant Tx Rectal CA

Neoadjuvant Tx must balance a number of influential factors

Multidisciplinary Tumor Board decision can help delineate best patient-specific treatment course

Left-Sided Predominance of Early-Onset Colorectal CA: Rational for Flex Sig in Young

Patients < 50 years who presented to single institution 2000-16 (excluding IBD, FAP, HNPCC)

739 patients identified
Age 18-49 (mean: 44 years)
32% w/ family history CRC

83% within range of flex sig:
3% descending
15% sigmoid
65% rectal

Outside range of flex sig:
17% right and transverse colon

Segev L, Kalady MF, Church JM. Dis Colon Rectum 2018;61(8)
Risk Factors for Peritoneal Recurrence in Stage II-III Colon Cancer

Japanese Multidisciplinary Cancer Trials Database of patients who underwent curative colon resection (3,814 patients)

Peritoneal Recurrence in 2.3%

Mean Duration from OR → Recurrence: 17 ± 10.3 months

34% had recurrence in >1 organ

Predictors of peritoneal recurrence:
- Age > 60
- pT4
- pN1-2

Mayanagi S et al. Dis Colon Rectum 2018;61(7):803-8
TaTME vs. lap TME: Propensity Score Matched Analysis

46 pts w/ low-mid Rectal CA for each group compared:

Conversion Rate
- TaTME: 0% (p=0.002)
- Lap: 19.6%

Distal Resection Margin
- TaTME: 25mm (p<0.001)
- Lap: 15 mm

TME grade / CRM
- (no difference)

Postop Complications
- (no difference)

Conclusion: TaTME is safe & feasible, good 30d results

Persiani R et al. Dis Colon Rectum 2018;61(7):809-16
Predicting Survival after HIPEC (for Appendiceal AdenoCA)

65 patients with appendix adenoCA (2005-2015)

Retrospective review (single center)

Cytoreductive Surgery + HIPEC

Predictors of Success:
- PCI < 7
- Complete Cytoreduction Score of 0
- Preop CEA < 6

Overall Survival: 55.5%
Disease Free Survival: 36.1%

Median F/U 44 months

Resident’s Corner: Pilonidal Disease

Pilonidal disease: Diagnosis made clinically

ACUTE
- Incision and drainage of abscess cavity
- Minimal or no tissue excision
- Wound care
- Education on hygiene
- Antibiotics for immunosuppressed, Crohn’s, leukopenic

MILD
- Conservative treatment
- Hygiene, clipping weight loss, etc.
- Pit picking

CHRONIC

SEVERE
- Cyst excision

Kuckelman J; Johnson E. Dis Colon Rectum 2018;61(7):775-79

Basicom Cleft Lift (including preop marking)
Limberg flap

Without primary closure
- Minimize excision
- Secondary intention
- Negative pressure therapy
- Wet to dry
- Requires meticulous wound care
- Delayed primary closure

With primary closure
- Bascom cleft lift
- Karydakis flap
- Rhomberg (Limberg) flap
- Primary closure (off midline)
Clinical Practice Guidelines: Anal Squamous Cell CA (2/2)

Endoscopic and Radiologic evaluation should be done for staging (1C)

Primary treatment should be Chemo-Radio Therapy (e.g. Nigro) (1A)

5-FU and Mitomycin-C 1st line (1A)

Surveillance should start 8-12 weeks after completion CXRT (1B)

Biopsy considered for persistent lesion if >6 months post- CXRT

APR Salvage for persistent or recurrent disease (1B)

Multimodal (chemo + XRT) Tx gives superior locoregional control vs. XRT alone (1A)

PET can be considered an adjunct (though should not replace regular CT) 1C

Clinical Practice Guidelines: 
**Pre-malignant** Lesions of Anal Area (1/2)

Patients with **dysplasia** should be followed at regular intervals (variety of methods) 2B

Screening with **Anal Pap** can be considered in high risk pts (but not for universal screening) 2B

**HRA** can be considered for screening when performed by someone with appropriate training (2B)

**Ablative treatment** (with conventional anoscopy or HRA) is appropriate for **HSIL** (2B)

**Topical agents** are options for treatment of **LSIL or HSIL** (2B)

**Vaccination against HPV** (age <26) for primary prevention is recommended (2A)

---

PPH Hemorrhoidopexy – 10 yr F/U Results

86 patients w/ Grade III hemorrhoids underwent PPH in 2006

77 (90%) completed F/U evaluation at 10 years postop

Short term:
8 patients (9%) w/ urinary retention postop
2 patients () w/ postop bleed

@ 10 years:
39% w/ repeat prolapse (8 re-operations)

= 68% satisfied
= 15% poorly satisfied
= 17% dissatisfied

LOS 12 hrs

Resident’s Corner: Diagnosis and Treatment of Complications of the IPAA for UC


Copyright © Wolters Kluwer Health, Inc. All rights reserved.
Revisional & Reconstructive Surgery for Failing IPAA is Associated with Good Function and Pouch Salvage (in Highly Selected Pts)

N = 81
Revision or reconstruction of an IPAA
Single institution

Pouch Survival After Revision

<table>
<thead>
<tr>
<th>% Survival</th>
<th>5-Year</th>
<th>10-Year</th>
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<tbody>
<tr>
<td>100</td>
<td></td>
<td></td>
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<tr>
<td>75</td>
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<tr>
<td>50</td>
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<td>25</td>
<td></td>
<td></td>
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<tr>
<td>0</td>
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</tbody>
</table>

Pouch Survival

Predictors of Failure:
- Crohn’s disease
- Recurrent fistula
- Pelvic abscess

Functional Outcomes w/ revision:
Good overall, though:

Increased:
- Daytime incontinence
- Liquid stool
- Medications to thicken stool

Lightner et al. Dis Colon Rectum 2018;61
Oral Hydration Solution Prevents Electrolyte Disturbances and Reduces Readmissions after Diverting ileostomy: a RCT

Patients with diverting ileostomy after rectosigmoid resection randomized

- Oral Hydration Group
  - Sodium level: $139 \pm 2$
  - Urea/Cr: $35/0.9$
  - Readmission (for FEN): 0%

- Control Group (No Hydration)
  - Sodium level: $136 \pm 6$ ($p=0.007$)
  - Urea/Cr: $66/1.5$ ($p=0.01-0.02$)
  - Readmission: 24% ($p=0.001$)

Appendectomy and Risk of Subsequent Diverticular Disease Requiring Hospitalization

41,988 patients with diverticular disease (vs. 413,115 matched controls)

Objective: investigate how appy affects future diverticulitis risk

Odds Ratio of Diverticulitis w/in 1 year after appy:

2.26
(95% CI: 2.71-5.83)

Odds Ratio of Diverticulitis w/in 20 yrs of appy:

1.22
(95% CI: 1.12-1.32)

Conclusion: Appendectomy is associated with increased risk of diverticular disease (compared with control group with no surgery)

Resident’s Corner: Locally Recurrent Rectal CA

Workup:
1) CT chest/abd/pelvis
2) Pelvic MRI (use rectal gel, 3 orthogonial plane, trained radiologist)
3) CEA
4) Colonoscopy

Eligibility:
1) No unresectable distant mets
2) R0 (or R1 + IORT) resection is possible

Tx Options:
Neoadjuvant CXRT
Redo LAR/APR
Multivisceral Resection

Contraindications:
1) S1/lumbar invasion
2) Pelvic sidewall / multifocal disease
3) Sciatic notch invasion
4) Encasement of iliac vessels

Grading of TME: Interrater Agreement

37 specimens assessed pre and post fixation
Graded on:
Bulk, Surface Regularity, Defects*, Coning

Inter-rater Agreement (fresh tissue):
α=0.83 average

Surgeon

Pathologist

α=0.96 good

Pathology Resident

Post-Fixation assessment was less reliable
*Defect grading had best inter-rater agreement (α=0.92)
Other characteristics not as good

Risk Factors for +CRM in Rectal Cancer

Independent Predictors of +CRM:

- **Urgent Operation**: (17.3%, O.R. 1.88)
- **Open Approach**: (10%, O.R. 1.61) vs. 3.9% with MIS
- **Pathologic Stage: T3/T4**: (12.6%, O.R. 7.62)
- **APR**: (O.R. 1.14)
- **Tumor @<8cm**: (O.R. 1.81)
- **Node+**: (13.4%, O.R. 2.02)

Risk of +CRM ranges from:

- <1% (no risk factors)
- 43% (all 6 risk factors)

Warrier SK et al. *Dis Colon Rectum* 2018;61(4)
CMS Survey on Global Periop Services

2015:
CMS proposed elimination of global period, instead coding every 15-min postop encounter separately.

Now:
CMS suspects work included overestimates the number & complexity of visits that actually occur during global.

What to do:
Use code #99204 for any service in periop global period.

7,000 surgeon responses that this would increase charting costs

CMS Abandoned plan

They will survey/reevaluate the global period work for 293 discrete surgical codes in 9 states:

OR  NV  N.D.  OH  KY  R.I.  N.J.  LA  FL

RCT of Extended Periop ERAS Counseling

165 patients assigned

Extended vs. Standard ERAS Counseling before colectomy
(n=80)

Extended:

LOS median 5 days

p<0.001

Standard:

LOS median 7 days

No difference in:
Morbidity, reop rate, readmissions, mortality

Counseling enables
Patient compliance

Characteristics of 104 patients with Bone Metastasis from Colorectal Cancer

Long Bone Mets (41% overall)

Most Common Patterns:

Location:
Liver mets
P=0.036

Location:
Left Colon
P=0.034

Spine Mets (Most common overall, 67%)

Median interval to Dx in bone: 20 mo.
Median survival after diagnosis: 5 mo.
1 year OS: 30%
Poor prognosis w/ ≥2 organs, ↑ Calcium

Kawamura H et al. Dis Colon Rectum 2018;60(6):673-78
Node Metastasis in T.I. Mesentery by Location with Right-Sided Colon Tumors

Historically recommended: 5-10 cm T.I. resect margin.

752 cases w/ Rt sided tumors evaluated:

- Cecum: 7.3%
- Ascending Colon*: 2.2%
- Hepatic Flexure*: 1.7%

*All with Stage IV disease

Rectal Cancer Female Sexuality Score

Female Rectal Cancer Patients 2001-2014

Development and validation phases of scoring questionnaire
(interest, pain, bleeding, size, completion, orgasm, relaxation ?s)

466 sexually active women polled

7 item score (0-29 points)
*Score >9 is sexual dysfunction

76%/75% sensitivity/specificity for detecting sexual dysfunction (w/ QoL impact)

Score vs. QoL Impact:
P<0.001

Insurance Disparities in Colon Cancer Survival

SEER database query:
Colon cancer cases age 15-64, 2007-2012
55,432 cases
Stratified by insurance type

Significant disparities

Medicaid
Insured
78.8% of pts
13.7% of pts
0
Un-Insured
7.5% of pts

3 year overall survival*
57%
75.6%
61.2%

* Rates of surgery
* Inadequate LN yield
* More advanced dz may explain some of disparity:

Resident Involvement Does NOT Increase Morbidity in Laparoscopic Colorectal Surgery

NSQIP Cases 2005-2012:
Lap Colon w/ PGY<5 resident compared to cases w/out resident

Complications:
No difference in complication rates w/ or w/out residents

LOS: No difference w/ or w/out residents (regardless of op time)

*Short cases w/ Residents: 24% ↓ odds of reoperation

Adrenal Masses in FAP

Canadian Familial GI Cancer Registry Imaging / Autopsy Reports

311 patients

Adrenal Masses in 16%

Adrenal Masses: 2x as prevalent in FAP (compared to general population)

FAP 16%

Characteristics:
97% benign

Surgery in 11% for: size, hormonal secretion, malignancy concern

Elevated Venous Thromboembolism Risk Following Colectomy for IBD = Colorectal Cancer for 90 d After Surgery

Explorys Database
- 26 Major Healthcare Systems
- 75,620 Patients
- Retrospective Review

- 26 Hospitals
- Patients with colorectal resection

Endpoint: 30-Day DVT or PE Incidence

- Diverticulitis: 2.4%
- Cancer: 2.9%
- IBD: 3.1%

Increased risk with:
Cancer, IBD, Smoking, Obesity, Age > 60

IBD (particularly UC) pts may benefit from extended VTE prophylaxis (similar risk to colon cancer)

29% occurred within 7 days of surgery
47% with 14 days
70% within 30-days

Effective Bundle Reduces Colorectal SSI Rates in High Outlier Unit

**Preop:**
- Mechanical + Oral bowel prep
- CHG wipes + shower

**Periop:**
- Skin prep
- IV antibiotics
- Wound protectors
- Glove, sleeve, suction tip change

**Postop:**
- Dressing removal after 48h
- Observe for SSI

**Methodology:**
- 2,250 abdominal CRS procedures at same unit

**High outlier (Pre-bundle):**
- 11.8% SSI Rate (5.5% deep)
- Prebundle SIR = 1.16

**Compared: SSI w/in 30d**
- 43.8% pts Pre-bundle
- 56.2% pts Post-bundle

**Compliance w/ measures:**
- 75-99%

**High outlier (Post-bundle):**
- 6.6% SSI Rate (1.7% deep)
- Post-bundle SIR = 0.66

(Post-bundle) Low outlier with exemplary performance (p=0.08)

Gorgun E et al. *Dis Colon Rectum* 2018;61(1)
Clinical Practice Guidelines: Hemorrhoids

**Initial Evaluation** should include complete endoscopic evaluation in select pts w/ bleeding (1B).

**Office-based procedures** can be used for grade I/II if medical Treatments fail (1A).

**Surgical Hemorrhoidectomy** should be offered if symptomatic external or grade III/IV internal (1A).

**1st Line Treatment:** dietary modification, fiber, toileting habits (1B).

**Early excision of Thrombosed External hemorrhoids within 3 days** (2C).

**Multimodal pain regimen** should be used to reduce narcotics after surgery (1B).

---

Long-Term Outcome of Small, Incidental Neuroendocrine Tumors Removed by Biopsy

99 patients neuroendocrine tumors incidentally found & removed

F/U: 6.5 years (range: 1-12.8)
No deaths

Local Recurrence Rate (Time to recur):
6.5% (8 yrs / 11 yrs)
1.5% (7 yrs)

All recurrences occurred at >5 years (& underwent complete endoscopic salvage)

No difference in biopsy vs. advanced endoscopic type of initial removal p=0.37

Kwak et al. Dis Colon Rectum 2018;61(3)
Small vs. Large Volume Bowel Prep in Physically Disabled Persons: PICO-MOVI Study

Sodium picosulfate + magnesium citrate

150mL + 2L clear liquid x2 (split dose)

Ottawa Score ≥7: 75.8%

Ascorbic acid-enriched polyethylene glycol + bisacodyl

1.5L + 1L clear liquid (PM)
0.5L + 1L clear liquid (AM)

Ottawa Score ≥7: 81.4%

Randomized, endosopist blinded, Non-inferiority design (<15% difference in prep scores)

95% CI: [-3.5 to 14.6], p=0.023

Small volume prep is Non-Inferior

Mathus-Vliegen et al. Dis Colon Rectum 2018;61
### Comparing Rigid Procto, Flex Sig, and DRE to Determine Rectal Cancer Location

<table>
<thead>
<tr>
<th></th>
<th>Rigid Proctoscope</th>
<th>Flexible Endoscopy</th>
<th>Digital Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper (cm)</strong></td>
<td>11.9 + 0.8</td>
<td>12.5 + 2.1</td>
<td>8.7 + 0.6</td>
</tr>
<tr>
<td><strong>Middle (cm)</strong></td>
<td>7.4 + 1.3</td>
<td>7.7 + 1.8</td>
<td>6.8 + 1.4</td>
</tr>
<tr>
<td><strong>Lower (cm)</strong></td>
<td>2.8 + 0.8</td>
<td>2.8 + 1.6</td>
<td>2.8 + 1.6</td>
</tr>
</tbody>
</table>

- **Rigid Proctoscope vs. Flex**:
  - Difference: ±0.2 cm
    - [-2 to 1.6 cm]

- **Flexible Endoscopy vs. DRE**:
  - Difference: 0.3 cm
    - [1.9 to 2.4 cm]

- **Digital Exam**:
  - [Though difference may be >2cm if tumor >5cm from anal verge]

*Based on 173 patients undergoing all 3 modes of measurement*

---

Tanaka A et al. *Dis Colon Rectum* 2018
Colorectal Cancer Safety Net Outcomes

Private Tertiary Care
- Uninsured/Medicare: 13%
- Median Income: $49,741
- Stage IV Disease: 20%

Safety Net
- 46% (p<0.001)
- $39,299 (p<0.001)
- 26% (NS)

*Safety Net Hospitals provide good-quality cancer care despite differences in socioeconomic equality.

Emphasis should focus on ensuring ongoing funding for safety-net hospitals

Althans AR et al. *Dis Colon Rectum* 2018;61
Prophylactic Ureteral Catheters: NSQIP Analysis

Colectomy Targeted ACS NSQIP Database (2010-2014):
2,486 colectomies with prophylactic ureteral catheter (PUC) (4.9% of total cases)

333 ureteral injuries

0.65% WITHOUT PUC
0.60% WITH PUC (NS)

Multivariate Analysis: Odds Ratio Ureteral Injury by using PUC:
0.45 [0.25 to 0.81]

Highest Risk of Injury with:
- Diverticular Disease
- T4 Malignancy
- Open Approach

Coakley KM et al. Dis Colon Rectum 2018;61
To Close or Not to Close (the defect): Outcomes of After Local Excision of Rectal CA

Propensity Score-Matched Analysis:
220 full-thickness & 210 partial-thickness defects

Complications:
- Full-thick: 15% vs. 12% (NS)
- Partial-thick: 7% vs. 5% (NS)

Bleeding:
- *9% vs. 3% *(p=0.045)

Selective approach to defect closure is appropriate

Lee L et al. Dis Colon Rectum 2018;61
Reflections: Not Taking No for an Answer
#ILookLikeASurgeon


Copyright © Wolters Kluwer Health, Inc. All rights reserved.
Resident’s Corner: Rectovaginal Fistula

Clinical Practice Guidelines: VTE Prevention

Use VTE Risk assessment tool (2A)

Use mechanical prophylaxis (SCDs, early mobilization) (1B)

Use pharmacologic prophylaxis for moderate or high-risk pts (1A)

Consider IVC filter for high-risk patients if pharmacologic prophylaxis contraindicated (2C)

Use extended duration (4 weeks) pharmacologic prophylaxis (not treatment) for cancer patients (1B) & consider for high-risk IBD (2C)

Fleming et al. *Dis Colon Rectum* 2018;61(1);14-20
Clinical Practice Guidelines: Rectal Prolapse

Initial Evaluation should include focus on prolapse, sphincter structure/function, and comorbid conditions (1C)

Anal physiology testing can be considered to assess coexisting functional disorders (2C)

For acceptable risk patients, the procedure of choice is: Trans-abdominal rectal fixation (2B) +/- mesh (1C)

Perineal rectosigmoidectomy +/- levatorplasty may be used with slightly higher recurrence rates (1C)

Not enough evidence to determine posterior > anterior (1C)

Going the Distance: Should Patients with Rectal Cancer Travel to High Volume Centers?

- **7.3%** short distance to low volume hospital \(< 8\) proctectomy/year
- **2.3 miles**

**More likely to have:**
- \(<12\) lymph nodes
- No neoadjuvant therapy
- Higher 30 & 90-day mortality

- **NCDB Query:**
  - Stage II/III rectal cancer
  - **(2006-2012)**
  - **N=18,605**

- **11.1%** long distance, high volume hospital\(*>26\) rectal ca surgeries/year
- **62.6 miles**

**More likely to be:**
- Younger, White, Private insurance

**34% increase in 5-year mortality** \(HR 1.34\)

*(controlled for pt, stage, and hospital factors)*

*(Improved 5-year overall survival)*

---

Xu et al. *Dis Colon Rectum* 2017;60
Robot-Assisted Ventral Mesh Rectopexy for Rectal Prolapse: 5-year Experience at a Tertiary Referral Center

258 patients with rectal prolapse syndromes:
- 31 Full thickness rectal prolapse
- 48 Internal prolapse or rectocele
- 71 Internal prolapse with enterocele
  * No control group
  * No validated scores were used

Robotic Ventral Mesh Rectopexy
Median F/U 23.5 Months

Recurrence:
12.9% if full thickness
10.4% if internal prolapse

Mortality 0.4%
Morbidity 7%

Mesh Erosion: 1.3%

*Robotic ventral mesh rectopexy is safe in treating rectal prolapse syndromes

Van Iersel et al. Dis Colon Rectum 2017;60(11)
Crohn’s Disease of the Pouch: A True Diagnosis or an Oversubscribed Diagnosis of Exclusion?

- Total pouch excisions performed at Mayo Clinic 1982-2016: 147
- Preoperative dx of Crohn’s of the pouch: 35
- Pathological confirmation of Crohn’s of the pouch: 7

Conclusion: Only 20% of pouches excised for "Crohn's" have pathological confirming evidence of this

Lightner et al. *Dis Colon Rectum* 2017;60(11)
Patient Satisfaction with Propofol for Colonoscopy: a RCT

RCT: NCT 02937506

Anesthesia provider administered:
1) fentanyl/midazolam (n = 300) or
2) propofol (n = 300)
during outpatient colonoscopy

Single endoscopist performed all colonoscopies.

Propofol (vs. fentanyl/versed):
Fewer patients recall being awake (2% vs 17%) \( p < 0.0001 \)

Rated anesthesia:
“just right” (98.7% vs 91.3%) \( p = 0.0002 \)

“very satisfied” (86.3% vs 74%) \( p = 0.0005 \)

“Difficult” procedure in:
4.3% for propofol vs. 25% fentanyl \( p < 0.0001 \)

Complications: 2.7% propofol vs 11.7% fentanyl \( p < 0.0001 \)

Padmanabhan A et al. *Dis Colon Rectum* 2017;60:1102-8
Clinical Practice Guidelines: Colon Cancer

Preop:
+ Include CEA (1C)
  - Evaluate proximal colon (when possible) (1C)
  - 30-50% with synchronous adenomas
+ Get CT chest/abd/pelvis (1B)
  - Not PET (2B)

Intraop:
+ Document: metastases, lymphovascular drainage basins resected (1C)
+ Resect involved adjacent organs (1B)
+ MIS approach preferred (1A)

Obstructed?
+ Stent first or surgery ok (1B)
+ Synchronous lesions: Two resections or subtotal are OK (1B)

Postop:
Adjuvant chemo for Stage III (1A), hi risk Stage II (2A)

Vogel JD et al. Dis Colon Rectum 2017;60:999-1017
Resident’s Corner: CRS Neuroendocrine Tumors

Primary tumor site & lymph node status are largest prognostic factors

Ford MM. Dis Colon Rectum 2017;60:1018-21
Resident’s Corner: CRS Neuroendocrine Tumors

- Colonic neuroendocrine tumors
- CT or MRI abdomen/pelvis to rule out metastasis
- Segmental resection with regional lymphadenectomy
- Surveillance every 6-12 months for up to 10 years
- Consider: Multiphase CT or MRI abdomen/pelvis
- Chromogranin A
- Urine 5-HIAA

Ford MM. *Dis Colon Rectum* 2017;60:1018-21

*CME Available!*
Racial and Socioeconomic Differences & Process Measure Adherence for ERAS Pathways

Retrospective review of 440 ERAS patients:

**Process Measure Adherence by Income:**

- Low (n=41): 17% ($\ P=0.05$)
- High (n=399): 32%

**ERAS Process Measure Adherence by Race:**

- 27% ($P=0.32$)
- 32%

**Conclusions:**

Despite process measure discrepancy, **No Difference in 30-day Outcomes** (LOS/Complications) based on:

- Race ($p>0.7$)
- Socioeconomics ($p>0.3$)

Measurement Bias of Polyp Size at Colonoscopy

8,591 polyps measured during 12,597 colonoscopies

Density Distributions of polyp measurements are reported

Abrupt spikes seen at 5, 10, 15, 20 mm sizes (compared to non-interval size, e.g. 6mm)

Endoscopists may be biased toward certain size numbers (and against others)

Fish-eye view & lack of (fixed) path tissue size correlation are limitations

Sakata S et al. Dis Colon Rectum 2017;60(9):987-91
Healthcare Economics Update: MACRA/MIPS (The New Way of Medicare Reimbursement)

2017 data used to adjust reimbursement schedule in 2019. Quality inputs based on:

- **Cost (old value based purchasing)**: 0%
- **Improve Activity**: 15%
- **Advancing Care (old meaningful use)**: 25%
- **Quality (old PQRS)**: 60%

***Automatic -4% if opt NOT to participate***

***To avoid penalty, only need quality data on 1 patient or 1 improvement activity!***

IT’s NOT TOO LATE to sign up!

(Contact Healthcare Economics Committee for more info)

Peters WR et al. Dis Colon Rectum 2017
Risk Factors for Fecal Incontinence (F.I.) in Crohn’s Disease

F.I. QoL Questionnaire to 528 patients with Crohn’s treated at single center 2003-2013

- 325 respondents (62%)
  - Disease duration: 12 yrs, 66% Female
  - Median age: 42 years

Fecal Incontinence Rate: 20%

F.I. Associated with:
- Liquid Stool (p<0.01)
- Previous surgery (p<0.01)
- Strictureing disease (p=0.02)
- Perianal disease (p=0.03)

Vollebregt PF et al. Dis Colon Rectum 2017;60(8)
Risk of Ovarian Involvement in Colorectal Tumors of the Peritoneum

258 females with >1 remaining ovary completed cytoreduction / HPIEC (2010-15)

- Peritoneal malignancy
  - Both ovaries macroscopically normal
    - Yes: 17% with occult metastases
  - No: 1 ovary involved, but 1 normal ovary
    - Yes: 45% occult metastases (in normal ovary)

*High rates of occult ovarian mets with peritoneal malignancy can help consent & decision making

Mehta AM et al. Dis Colon Rectum 2017;60(7)
ASCRS Assessment Tool for Lap Colectomy

Intraoperative Video (Unedited) of Right Colectomy

Different experience level assessed by expert reviewers

ASCRS Assessment Tool Applied:

- 8 categories plus an overall assessment

Assessment Tool Validation

Reliably Stratified Surgeons by Skill Level (p<0.007)

Champagne et al. *Dis Colon Rectum* 2017;60(7)
VTE AFTER ULCERATIVE COLITIS (UC) RESECTION: Is it the disease or the operation?

NSQIP 2005-2013: 18,833 patients
VTE @ 30 days:

Independent predictors of VTE:
- Emergency surgery (OR 7.85)
- High-risk elective surgery (OR 5.07)
- Steroids (OR 1.54)
- Albumin < 3.5 (OR 1.45)

Chronic UC vs. non-IBD:
- 3.8% VTE vs. 3.8% VTE

A diagnosis of Chronic UC was not an independent predictor of VTE.

McKenna et al. Dis Colon Rectum 2017;60(7)
Bowel Sounds are NOT Associated with GI Function After Major Abdominal Surgery

- Blinded daily auscultation by medical students
- Positive Predictive Value of + bowel sounds: <25%
- No association of bowel sounds with:
  - PO tolerance
  - Flatus
  - Bowel movement

Measured:
+ Bowel Sounds
Time to GI function

Should not be used to guide feeding decisions or as markers of ileus

Read TE et al. Dis Colon Rectum 2017;60(6)
Physician Burnout: Systematic Review & Framework For Action

**Burnout Rate:** 54.4%

**Causes:**
- Loss of autonomy
- Subspecialty choice
- More call / work hours
- Asymmetric rewards / punitive culture
- Productivity-based compensation

**Solutions:**
- Devote 20% of time to what you find meaningful
- Align personal / organizational values
- Engage w/ colleagues

**Suicide Rates:** 1.5-4.5x general population

Rothenberger DA et al. *Dis Colon Rectum* 2017;60(6)
Baseline T Stage Predicts Early Tumor Regrowth After Nonoperative Management in Distal Rectal Cancer With Initial Complete Clinical Response

91 patients with TNM stage I-III distal rectal cancer treated with Chemo-XRT

Followed by MRI or EUS

No difference in:
- late LR
- systemic recurrence

Early Local Recurrence defined as: < 12 months

cT2 = 3% early LR

*ct3-4 = 30% early LR
P=0.007

*ct3/4 patients need more intensive surveillance after an apparent clinical complete response to neoadjuvant CXRT

Habr-Gama et al. Dis Colon Rectum 2017;60(6)
Function and QoL Outcomes After ChemoXRT & Local Excision of Rectal Cancer

ACOSOG Z6041
Prospective phase II trial: T2N0 tumors
ChemoXRT followed by local excision

QoL questionnaires*
1) at diagnosis
2) a year after treatment

*FISI: Unchanged
*FACT-C: Unchanged
*FIQL: ↓ scores in lifestyle, coping, & embarrassment

66/71 eligible pts with 1 year follow up (92%)

ChemoXRT+local excision had minimal impact on anorectal function 1 year after surgery.

Lynn et al. *Dis Colon Rectum* May 2017;60(5)
Long-Term Outcomes After Continent Ileostomy in patients with Crohn’s

Up-front / intentional continent ileostomy (known Crohn’s)
- 15 patients
  - 80% major revisions
  - 20% minor revisions

Large Bowel Crohn’s: Colectomy & Koch pouch
- Crohn’s diagnosed later
  - retrospective review 1978-2013
  - 33 patients
    - 85% major revisions
    - 30% minor revisions

*Outcomes are poor with continent ileostomy, though no difference in early vs. late diagnosis of Crohn’s

Aytac E et al. Dis Colon Rectum 2017;60(5)
Systemic Metronidazole May Not Reduce Posthemorrhoidectomy Pain – A Meta-Analysis

<table>
<thead>
<tr>
<th>Main outcomes:</th>
<th>All RCTs (n=5):</th>
<th>RCTs (n=4) with low risk of bias:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain scores</td>
<td>0.87 points ↓/10 (P=0.046)</td>
<td>ns</td>
</tr>
<tr>
<td>Return to normal activities</td>
<td>0.76 days faster (P=0.027)</td>
<td>ns</td>
</tr>
</tbody>
</table>

*No conclusive evidence for metronidazole use after hemorrhoidectomy*

Wanis et al. *Dis Colon Rectum* 2017;60(4)
Perspective on Management of Fecal Incontinence (FI): A Needs Assessment

Interview Assessment:
(surgeons, patients, RN, PT)

Barriers to effective FI Management:
*QoL more important than # episodes FI

Helewa RM et al. *Dis Colon Rectum* 2017;60(4)
20 years of a VA Spinal Cord Injury Clinic: Flex Sig Screening and Hemorrhoid Ligation

<table>
<thead>
<tr>
<th>548 patients</th>
<th>Only 9 required hemorrhoid surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>↓</td>
<td>4.7% adenoma detection rate</td>
</tr>
<tr>
<td>781 flexible sigmoidoscopies</td>
<td>7.7% inadequate prep</td>
</tr>
<tr>
<td>↓</td>
<td></td>
</tr>
<tr>
<td>4.9 +2 bands/patient</td>
<td></td>
</tr>
</tbody>
</table>

Conclusions:
Banding (incl. external hemorrhoids / tags) is safe in spinal cord injury patients

Cosman BC et al. *Dis Colon Rectum* 2017;60(4)
Quality of Life after TATA Surgery for Ultralow Rectal Cancer

**Methods:**
173 pts alive to query (1985-2008)
Surveys mailed:
- FIQLS (Wexner scale)
- EORTC QLQ-30+CR38 questionnaire

- 90 responses:
  - Age at surgery 59.2 years
  - Mean: 1.6cm above anorectal ring
  - All had neoadjuvant chemo-XRT
  - Median F/U 104 mo. (95%>2yrs)

**Diarrhea QoL score**

= 29/100*

*Higher scores = worse QoL

**Conclusions:** Quality of life is good in highly select (motivated) patient group

97% would still choose coloanal over stoma

Marks JH et al. *Dis Colon Rectum* 2017;60(3)
Peripheral Nerve Injury Rates After Colorectal Surgery: NSQIP Analysis

186,936 operations (27% laparoscopic) → Motor Nerve Injury in 122 (0.065%)

Factors associated with injury:

- Younger Age (54 vs. 61 years)  
  p<0.001

- Obesity (BMI>30)  
  p=0.003

- Longer OR Times*  
  277 vs. 176 min  
  p<0.001

- Radiotherapy  
  P<0.001

*Strongest predictor

Al-Temimi et al. *Dis Colon Rectum* 2017;60(3)
Readmission Causes by Day of Rehospitalization

69,222 elective colorectal procedures → 30 Day Readmission rate = 10.8% (NSQIP)

Factors associated with readmission:

**Early (0-5 days, median 3d, 44%)**
- sepsis
- leak / wound infection
- surgical complications
- ileus / cardiopulmonary events

**Late (>6 days, median 11d, 56%)**
- stoma dysfunction*
- renal failure*
- urinary infection
- disseminated malignancy

*Potentially preventable

Al-Mazrou et al. *Dis Colon Rectum* 2017;60(2)
Quality Improvement: Value of Physician Feedback

7,975 Operations 2008-2012 → Bi-annual Surgeon Feedback: Process Measure Adherence → Outcome Measurement

Urinary Catheter Removal: Urinary Tract Infection:
- Urinary Catheter Removal: 73%
- Urinary Tract Infection: 100% (p<0.0001)
- ↓ by 52% (p<0.01)

Preop Antibiotics: (SSI):
- Preop Antibiotics: 72%
- (SSI): 7.6%
- 100% (p<0.0001)
- 6.6% (p=0.3)

Leak Testing: Anastomotic Leak
- Leak Testing: 88%
- Anastomotic Leak: 95% (p<0.01)
- 5.2% (p<0.05)
- 2.9%

*Feedback allows ↑adherence to process measures and improvement in some (not all) quality measures

JA Waters et al. Dis Colon Rectum 2017

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Pre-Operative Immunonutrition & Colorectal Resection Outcomes

960 propensity matched patients

Pre-op Immunonutrition
Fish oil + L-Arginine x 5 days
vs.
No immunonutrition

Immunonutrition*
Prolonged Length of Stay (LOS) = 16%

*23% lower Risk of Prolonged LOS
p=0.05

No supplements
Prolonged LOS = 20%

Thornblade et al. Dis Colon Rectum 2017;60(1)
Clinical Practice Guidelines: Anal Fistula

Simple:
- Fistulotomy (1A)
  - 90% effective
- Endoanal advancement flap (1B)
  - 66-87% heal
- LIFT (1B)
  - 61-94% heal

Complex:
- Endoanal advancement flap (1B)
- LIFT (1B)
- Cutting Seton (2B)
  - 61-94% heal, 12% incontinent

Ineffective:
- Plug (2B)
- Fibrin Glue (2B)

Vogel et al. Dis Colon Rectum 2016;59(12)
Sphincter Saving Outcomes for Large Bowel Crohn’s Disease

Large Bowel Crohn’s
(No: perianal, severe rectal, small bowel disease)

Ileorectal Anastomosis

\( n=75 \)
- Higher use biologics & immunomodulators
- Older age
- More penetrating disease

Intentional IPAA (J-pouch)*
\( n=32 \)
- ↑QoL scores (3 year)
- ↓Recurrence / repeat surgery \( (p=0.017) \)
- ↓Permanent stoma \( (p=0.04) \)

Similar:
Functional / Defecatory Outcomes

*May be appropriate in highly select patients

Li et al. *Dis Colon Rectum* 2016;59(12)