

Surgical Treatment of Colon and Rectal Cancer in the 2020s

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Presentation Goals

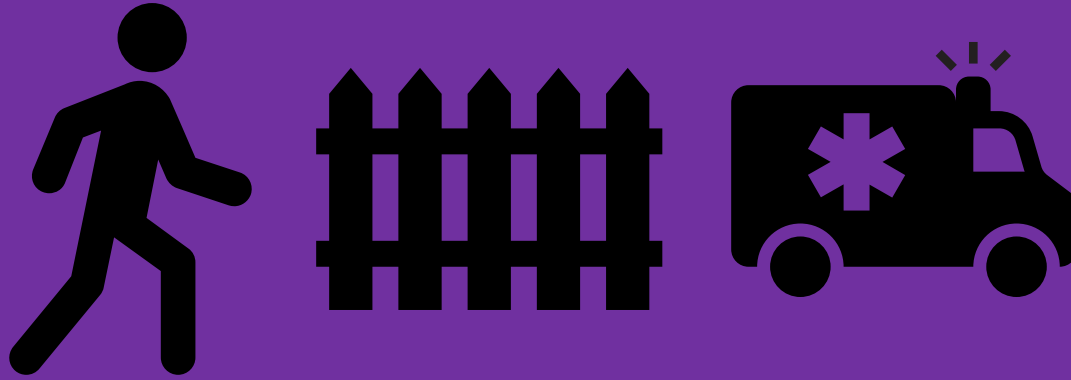
- Outline the major treatment approaches for Colon and Rectal Cancer
- Identify key quality and outcome measures in Colon and Rectal Cancer treatment
- Discuss future changes and evolutions in the surgical treatment of cancer over the next decade

Colon and Rectal Cancer- a common problem

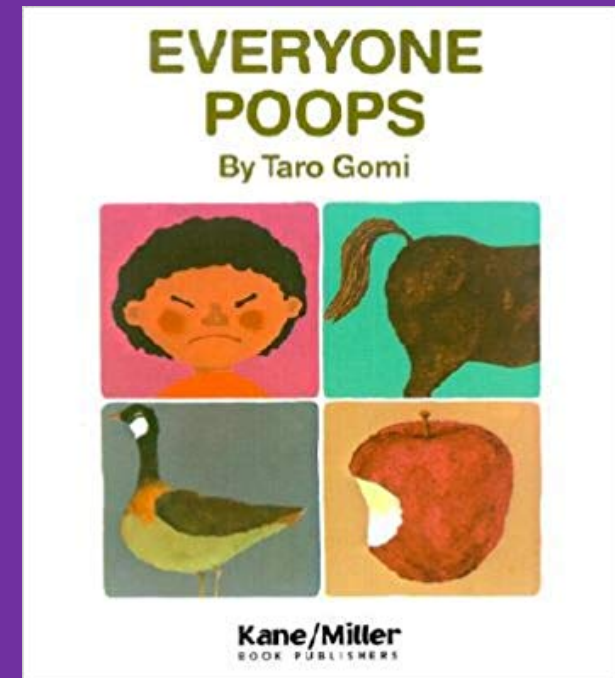
- Colorectal Cancer remains the 3rd most common malignancy in men and women; and the 3rd most common cause of cancer death in men and women
- Estimated ~100,00 colon cancer cases and ~40,000 rectal cancer cases per year.
- Lifetime risk is 4.6% in men, 4.2% in women (about 1/23)

- 2016: ~1.5 million survivors of CRC alive in the US
 - Some cancer free, some with ongoing treatment/surveillance
- While aggressive screening is effective and preferred, this disease is still a frequently encountered problem.
 - Colonoscopy
 - CT Colonography
 - Flex-Sig
 - Barium enema
 - Fecal immunochemical test (FIT), Stool DNA, Fecal Occult Blood Test

Barriers to Treatment/Potential Solutions



- Ewww.... Gross
 - Take away the Stigma with straightforward talk
- Screening Hassle
 - Early stage cancer is curable
- Week in the Hospital
 - Not anymore
- Colostomy Bag
 - Uncommon, and manageable, outcome



Colon and Rectal Cancer Staging

TUMOR

T1- Submucosa

T2- Invades Into Muscularis Propria

T3- Invades Through Muscularis Propria

T4- Penetrates to the visceral peritoneum

T4a- Surface of visceral peritoneum

T4b- Invades other organs

- Stage I: T1 or T2

- Stage II: T3 or T4

NODES

N1- 1-3 regional nodes or deposits

N1a- 1 node

N2a- 2-3 nodes

N1 c- Tumor deposits

N2- 4+ regional nodes

Ns2a- 4-6 nodes

N2b- 7+ nodes

- Stage III: Any N

METASTASIS

M1- any Metastasis

M1a- one organ metastasis

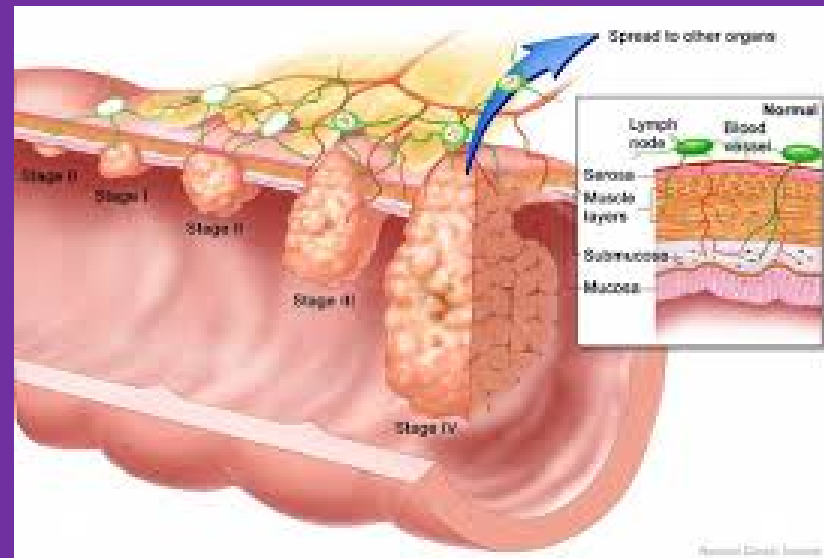
M1b- more than one organ metastasis

- Stage IV: Any M

Treatment of Colon and Rectal Cancer: Overview Colon

- Colon Cancer

- Accurate Staging with complete Endoscopy; CT Chest/Abdomen/Pelvis; CEA Level
- Surgery Remains the Mainstay of Treatment
- Chemotherapy for advanced Disease



Stage I

- T1 or T2 (confined to the submucosa or muscularis propria)
- Surgical Resection of Disease
- Follow up Surveillance
- **5 year Survival 90%**

Stage II/III

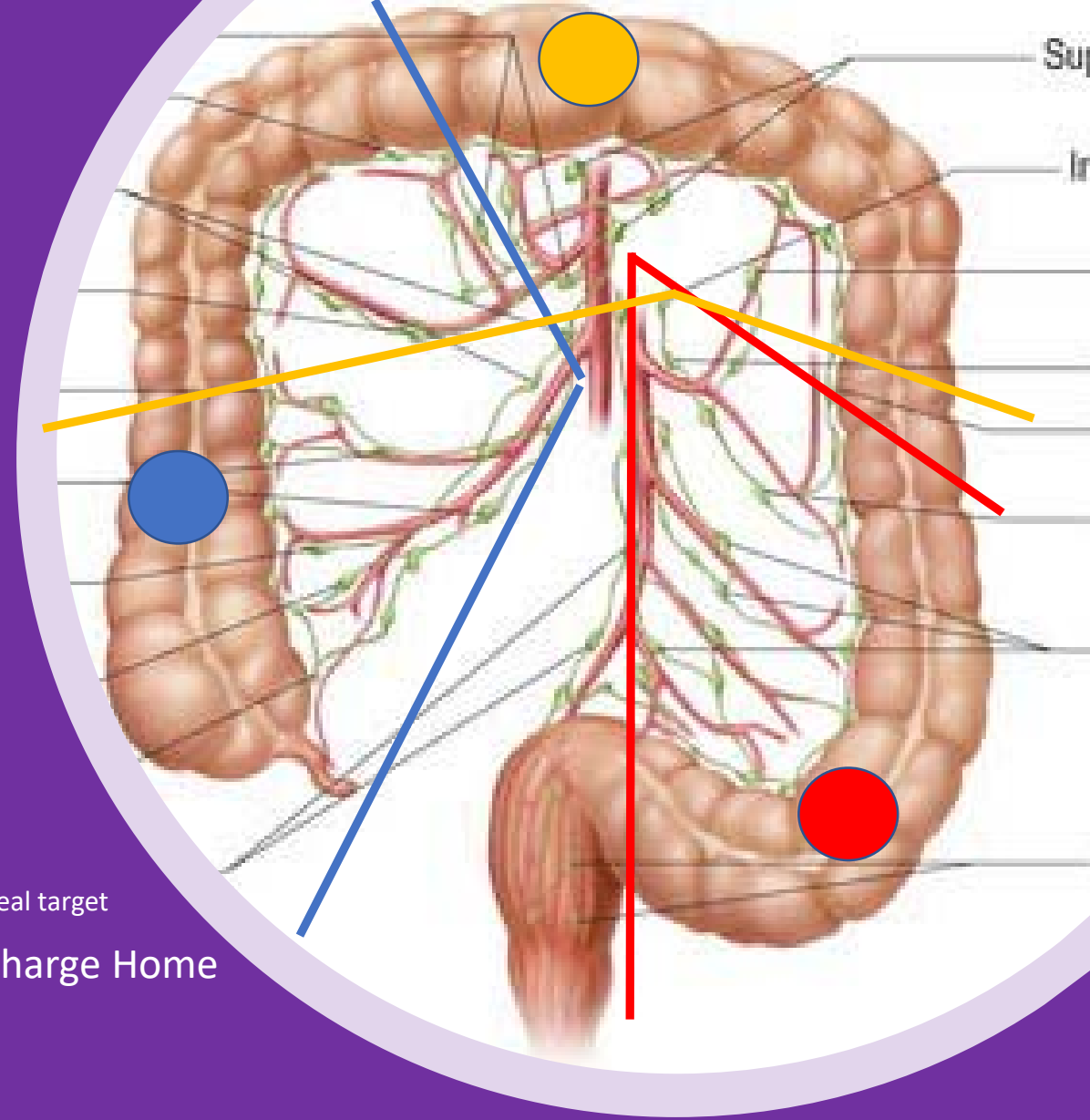
- T3 or T4 or N1/N2 (through the muscularis propria or involving lymph nodes)
- Surgical Resection of Primary Disease
- Chemotherapy depending on results, indicated for stage III, debatable for stage II
- Follow up Surveillance
- **5 year Survival 71%*, but..**
- **52-89% based on specific staging**

Stage IV

- Any Metastatic Disease
- Chemotherapy
- Surgical Resection of Primary site +/- metastatic disease pending completion of above
- Ongoing treatment per oncology, discussion of alternative regimens
- **5 year Survival 14%**

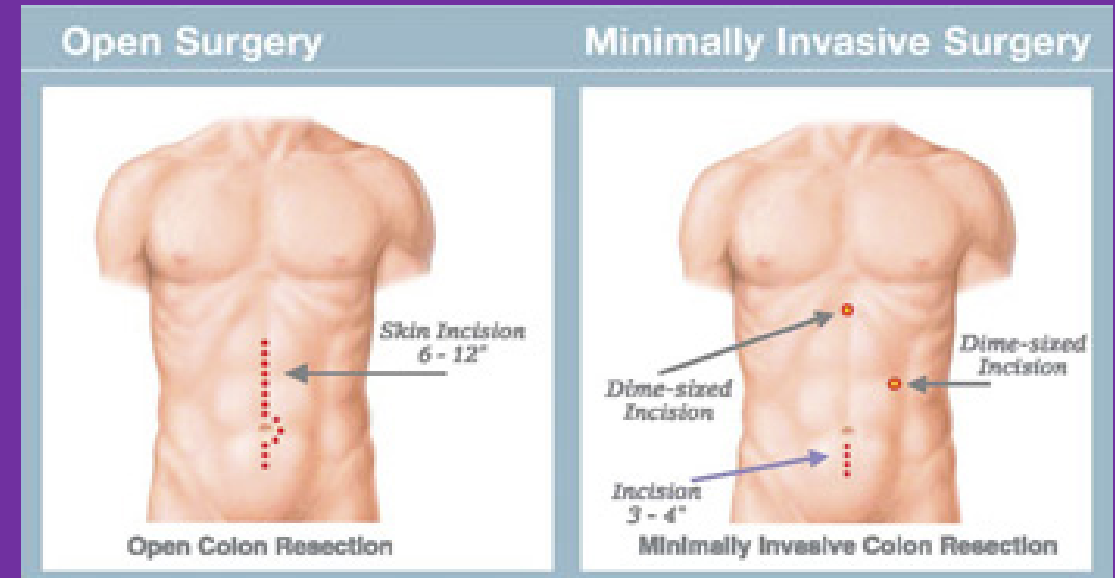
High Quality Surgery for Colon Cancer

- Essential to good outcomes
 - Survival Benefit has been linked to correct surgery
- Clear Margins
 - 5cm proximal and distal
 - Total Mesocolic Excision
- Adequate Lymph Node Removal
 - At least 12 nodes should be removed.
 - Fewer than 12 nodes is a high risk feature for recurrence or understaging
 - Only 80% success in achieving this goal as of 2011
 - Evidence increasing that the more nodes retrieved, the better the outcome
 - Recent studies suggest that for right-sided lesions, 22 nodes may be the more ideal target
- Colon Reconstruction with Bowel Anastomosis and Prompt Discharge Home
 - Complication rates 20-25%
 - Wound Infections, Pneumonia, MI, DVT, Bleeding, UTI, Ileus, ect.
 - Anastomotic leaks ~2-3%; Mortality ~1-2%



Minimally Invasive Surgery- from novelty to standard of care

- 2004-2014- COST/CLASICC/COLOR/JCOG 0404/ALCCS trials have demonstrated non-inferiority for cancer resection. i.e. minimally invasive and open approaches have the same long-term and disease-free survival and recurrence rates
- Trials have shown clear advantage to laparoscopic when it comes to short-term benefits though
 - Shorter length of stay -Faster Return of Bowel Function
 - Less narcotic use -Fewer Surgical Complications
- Grade 1 A recommendation to MIS from ASCRS (American College of Colon and Rectal Surgeons)
 - When feasible, minimally invasive approach is preferred
- Not a Universal Solution
 - Prior surgical history -Large Bulky Tumors
 - Obstruction -Body Habitus
- Technology has kept pace
 - Energy Devices -Staplers -Wound Protectors
 - Robotic Abilities and instrumentation
- Surgical Experience has Increased
 - Late 90s- "I saw a couple laparoscopic cases in training"
 - Today- "I did more laparoscopy than open surgery in training"
- 2019- New Studies Suggesting Laparoscopy may be Superior
 - Denmark- Laparoscopic Approach associated with higher probability of good resection quality compared to open resection
 - China- Laparoscopic Approach superior to Open for nodal counts and other quality measures



In the coming decade, the question is no longer:

“CAN YOU DO MINIMALLY INVASIVE SURGERY?” but rather “WHY DIDN'T YOU DO MINIMALLY INVASIVE SURGERY?”

Treatment of Colon and Rectal Cancer: Overview Rectum

- Rectal Cancer
 - Much more complex
 - Accurate Staging with complete Endoscopy; CT Chest/Abdomen/Pelvis; CEA Level
 - Additional Local Staging needed with MRI and/or Endoscopic Ultrasound to determine the T-stage and N-stage preoperatively
 - Role of Neoadjuvant AND Adjuvant Chemotherapy and Radiation Therapy
 - Surgical Complexity Increases- Multiple Surgical Options

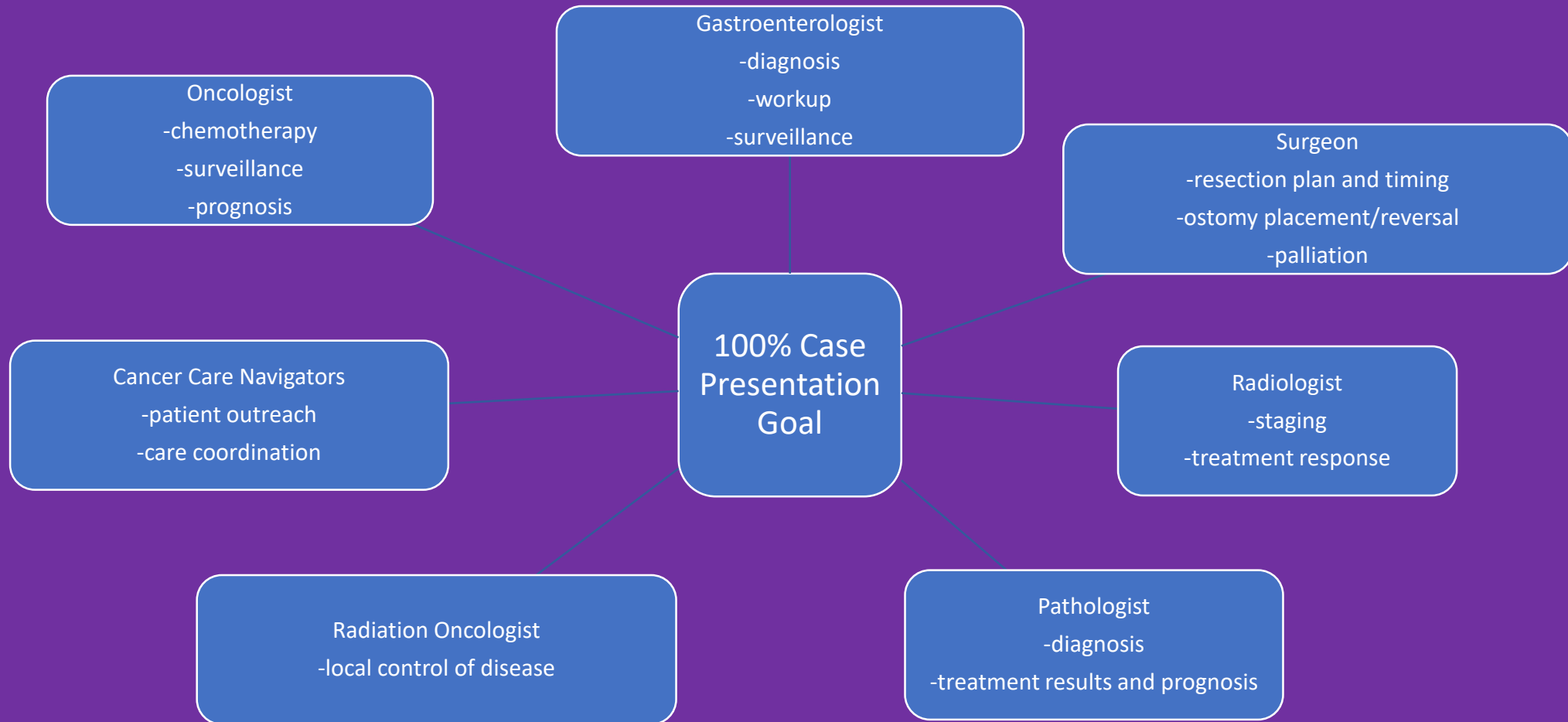
Stage I
<ul style="list-style-type: none">• T1 or T2 (confined to the submucosa or muscularis propria)• Surgical Resection of Disease<ul style="list-style-type: none">• Complete TME with Nodes• vs TransAnal Excision• Follow up Surveillance <p>• 5 year Survival 89%</p>

Stage II/III
<ul style="list-style-type: none">• T3 or T4 or N1/N2 (through the muscularis propria or involving lymph nodes)• Neoadjuvant Chemotherapy and Radiation• Surgical Resection of Primary Disease• Additional Chemotherapy depending on results• Ostomy Reversal Surgery• Follow up Surveillance <p>• 5 year Survival 70%*</p>

Stage IV
<ul style="list-style-type: none">• Any Metastatic Disease• Chemotherapy• Radiation pending above• Surgical Resection of Primary site +/- metastatic disease pending completion of above• Ongoing treatment per oncology, discussion of alternative regimens <p>• 5 year Survival 15%</p>

- Increased Surgical Risk
 - Length of operation, bleeding, injuries
- Bladder and Sexual Function
- Pre-existing vs Resulting Incontinence
- Chemo/Radiation Alone
- Locally Advanced Lesion
 - Urology and/or GYN-Onc input
- Permanent vs Temporary Ostomy
 - Tumor factors, patient function, choice
- Patient Desire for Trans-Anal Procedure
 - Compromise of oncologic outcome

Rectal Cancer: Multidisciplinary Conference



High Volume Centers, Multidisciplinary Conferences, Credentialing

- Multidisciplinary conference has been shown to enhance care and improve outcomes
- 2015 Study showed a change in management plan in 29% of presented cases
- 2017 Study using Data from the National Cancer Database
 - 2006 to 2012- high volume centers (>26 cases per year) associated with higher nodal counts, high compliance with chemo/radiation, lower 30 and 90 day mortality and improved 5 year survival.
 - Patients who traveled long distances for treatment
- **“Nowhere in colorectal surgery are therapeutic decisions more complex or more important to long-term patient outcomes than in the treatment of rectal cancer”- ASCRS Textbook**
- National Accreditation Program for Rectal Cancer
 - OSTRiCh Consortium (Optimizing the Surgical Treatment of Rectal Cancer)
 - CoC (Commission on Cancer)
 - Only 13 listed so far, but predict many more on the way in the coming decade

Ostomies- a matter of perspective?

- Data confirm a negative impact on quality of life
- Patient education has a positive effect though
- Preoperative stoma site marking decreases postop complications
- Most Ostomies are temporary and reversable, especially if they are planned in advance
- Future research into improving ostomy quality of life
- Vegan Ostomy



“Let’s Get Real!”
with Gaylyn Henderson of Gutless and Glamorous
and the Aerie REAL campaign



World Ostomy Day October 6, 2018
SPEAKING OUT CHANGES LIVES



**A Facebook LIVE event
on World Ostomy Day!**

Saturday, Oct. 6, 2018
2:00 pm (edt)
UOAA Facebook Page
@UOAAinc

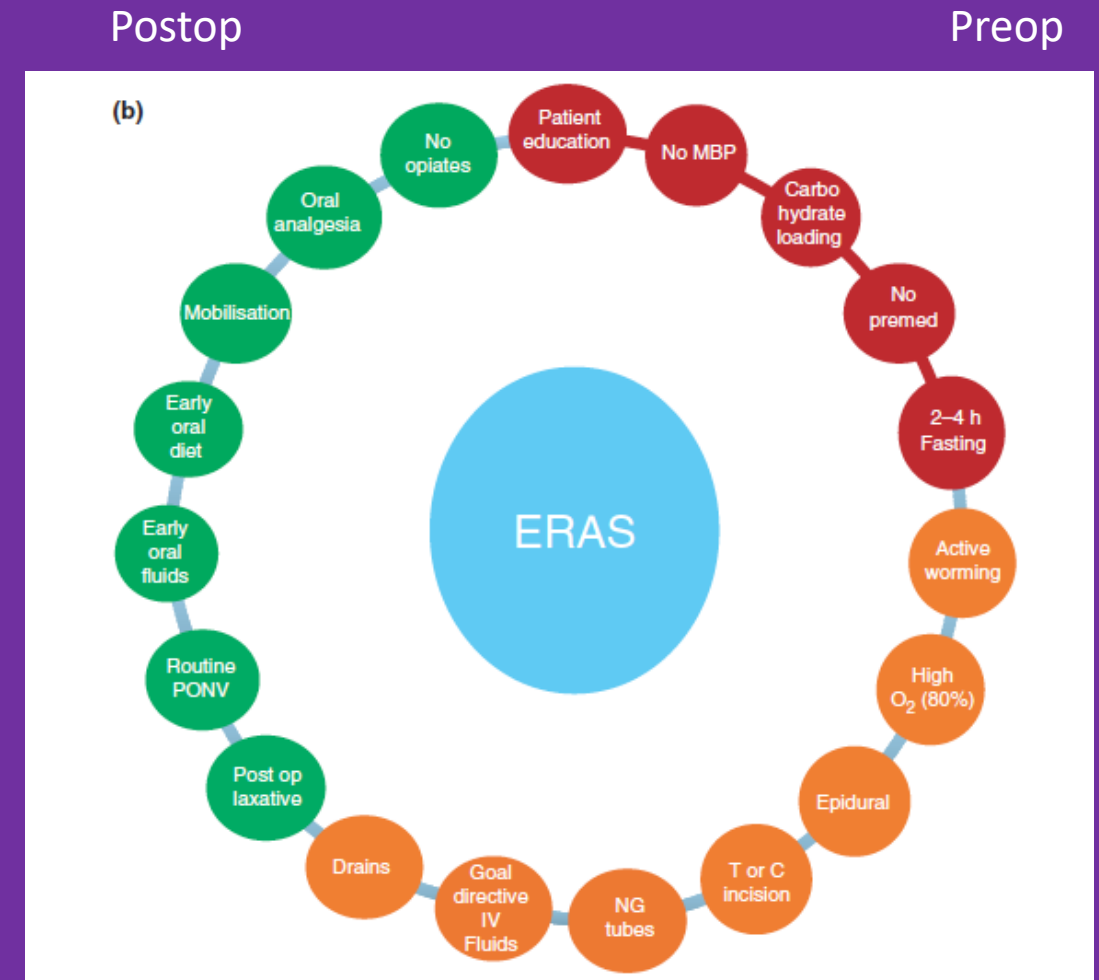
ERAS: Early Recovery After Surgery

-Not just the latest buzzword, but an effective way to improve patient outcomes

- Reduced Infections
- Shorter Length of Stay
- Fewer adverse events

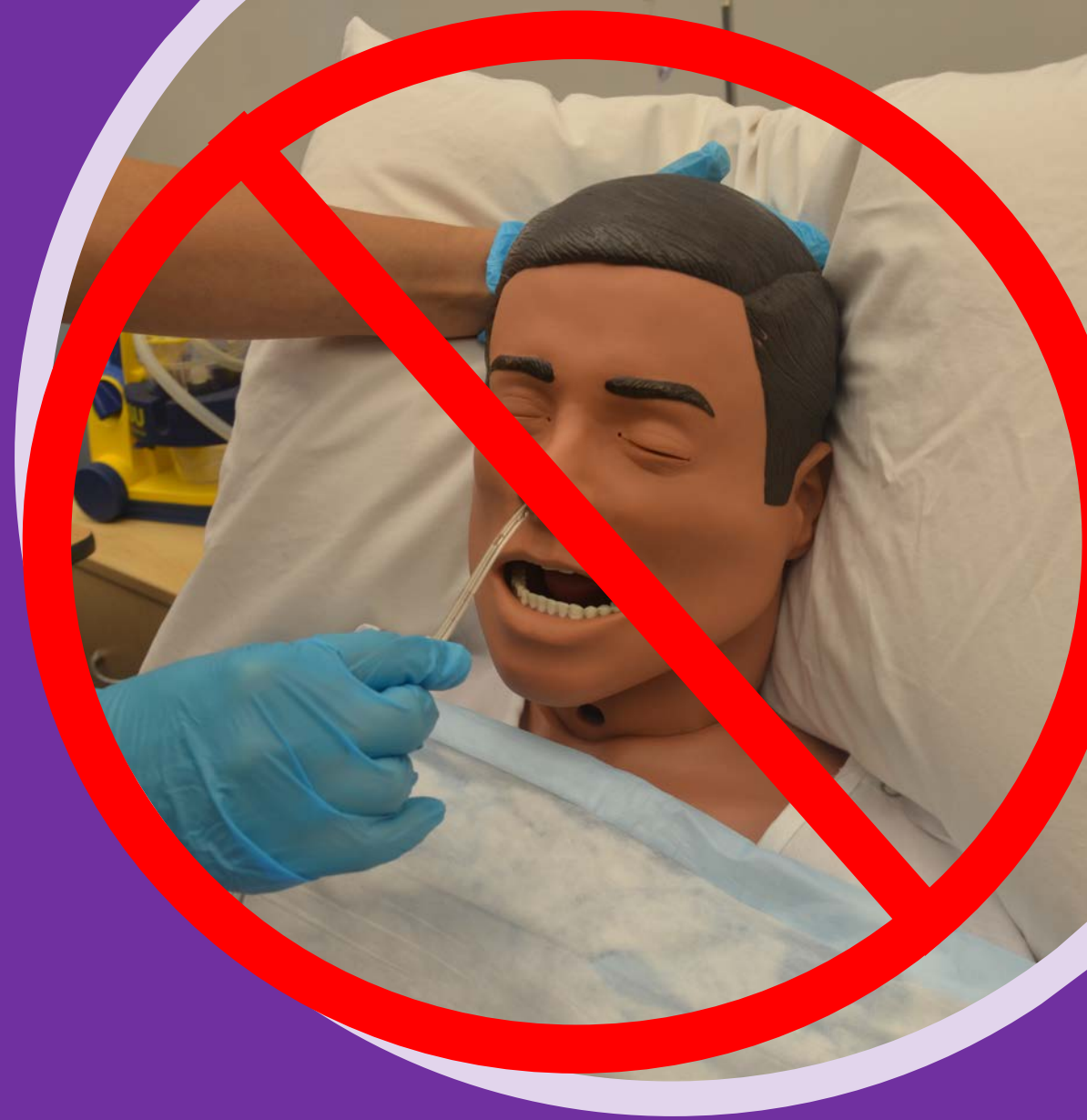
- Mobilization after surgery
- Reduced Narcotic Usage
- Faster Advancement of Diet
- Earlier Discharge Home

- Good for Patients, Good for Providers, Good for Hospitals
- Started in Colon and Rectal surgery, but starting to be more widely adopted in other surgical specialties as well



ERAS Outcomes

- Reducing hospital average stay from 9 days to 2.5 days
 - Many Patients now leaving on Post-op Day 1
- Liquids PO up to 3 hours before surgery
- Fluids Stopped within 24hrs of surgery
- Walking the day of surgery
- Solid Food PO the day of surgery
- Nasogastric Tubes only used in the event of post-op ileus
- Less Narcotic Usage
 - Many Patients don't even take narcotics post-op

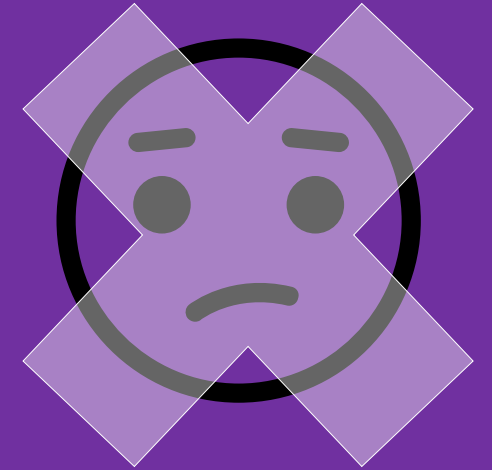


Stage IV Cancer- not the end of options

- Historically Dismal survival rates of <10%
- Many of these cases are not curable
- Liver Metastasis
 - Untreated disease has a median survival of 8 months, and <5% 5-year survival
 - Selected cases with potentially resect-able disease 30% survival
 - Even with chemotherapy alone, median survival is greater than 2 years, sometimes closer to 3
- Pulmonary Metastasis
 - Minimally invasive options are more prevalent for lung surgery as well
 - 5-year survival rates of 30-40% in series of lung resection for metastatic colorectal cancer
- Increased Understanding of Palliative Care and Hospice

Take Home Points

- Colorectal Cancer is a common, but treatable problem, often with great outcomes
- Early Detection is key
- High-Quality Surgery remains the mainstay of curative treatment for Colon Cancer. Margins and Nodal Counts
- Complex Decision Making with Rectal Cancer means multidisciplinary conferences, credentialing, and treatment at high volume centers
- ERAS is leading the way to better patient outcomes
- Treatment options may be better than patients think





That's All Folks!

Questions? Comments? Coffee Time?

