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5TH ANNUAL

ADVANCED PRACTICE PROVIDER IBD IMMERSION

AN IBD U™ VIRTUAL MEETING SERIES

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Inflammatory Bowel Disease Center

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IBD Management 2.0: What You Can Apply to Practice

Moderated by:
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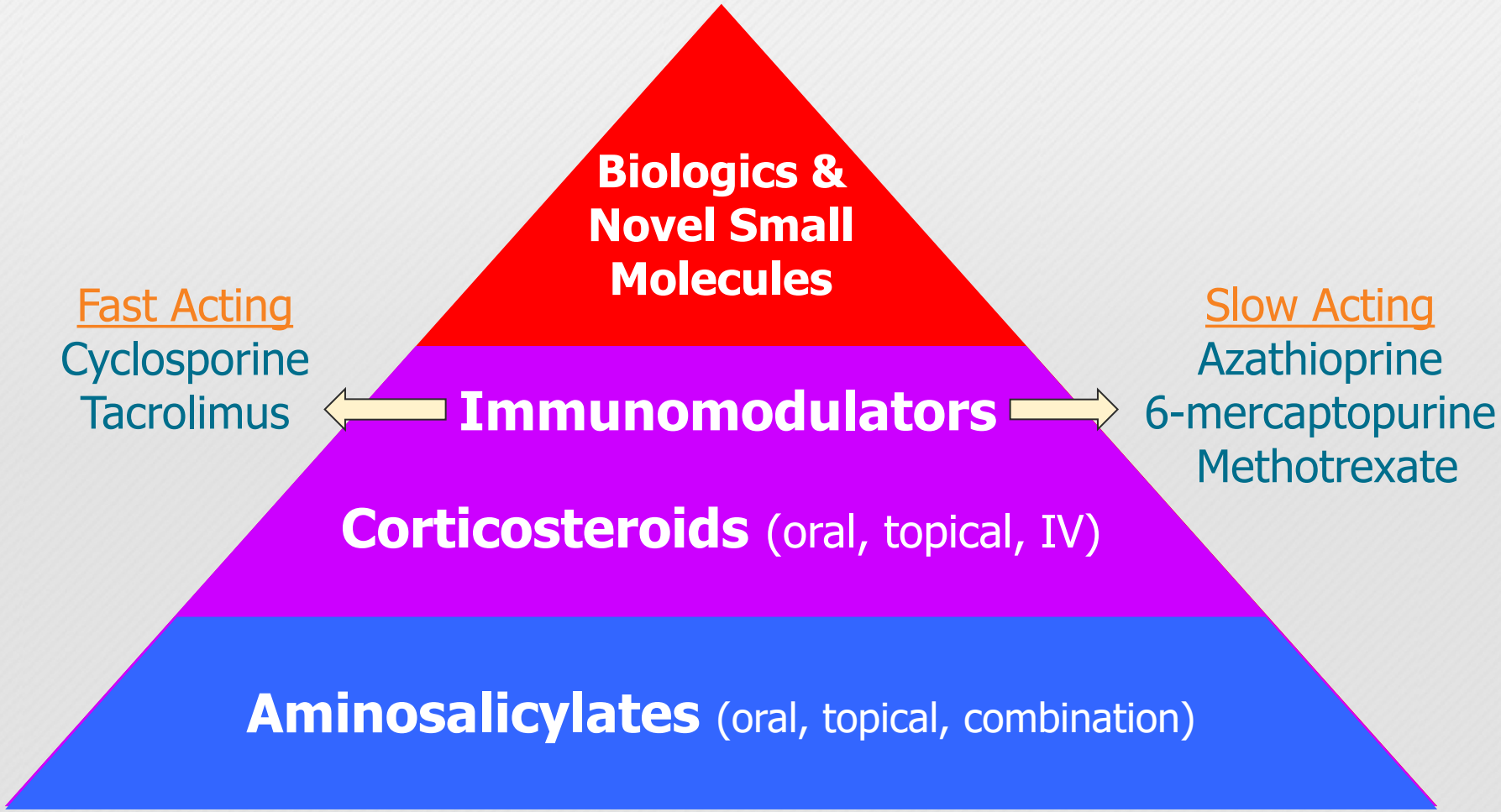
Nurse Practitioner
University of Chicago Medicine
Digestive Diseases Center
Chicago, IL

Topics

1. Overview of treatment options
2. When to start biologics?
3. When to add immunosuppressants?
4. Preferred therapies in cases of severe disease flare
5. Use of sequencing, transitioning, and why?
6. Monitoring response to treatment
7. Pipeline agents of interest

IBD Medical Therapies



IBD = inflammatory bowel disease; IV = intravenous.

Hanauer SB. *Curr Opin Gastroenterol*. 1999;15(4):308-314.

IBD: Aminosalicylates "5-ASA"; "Mesalamine" etc.

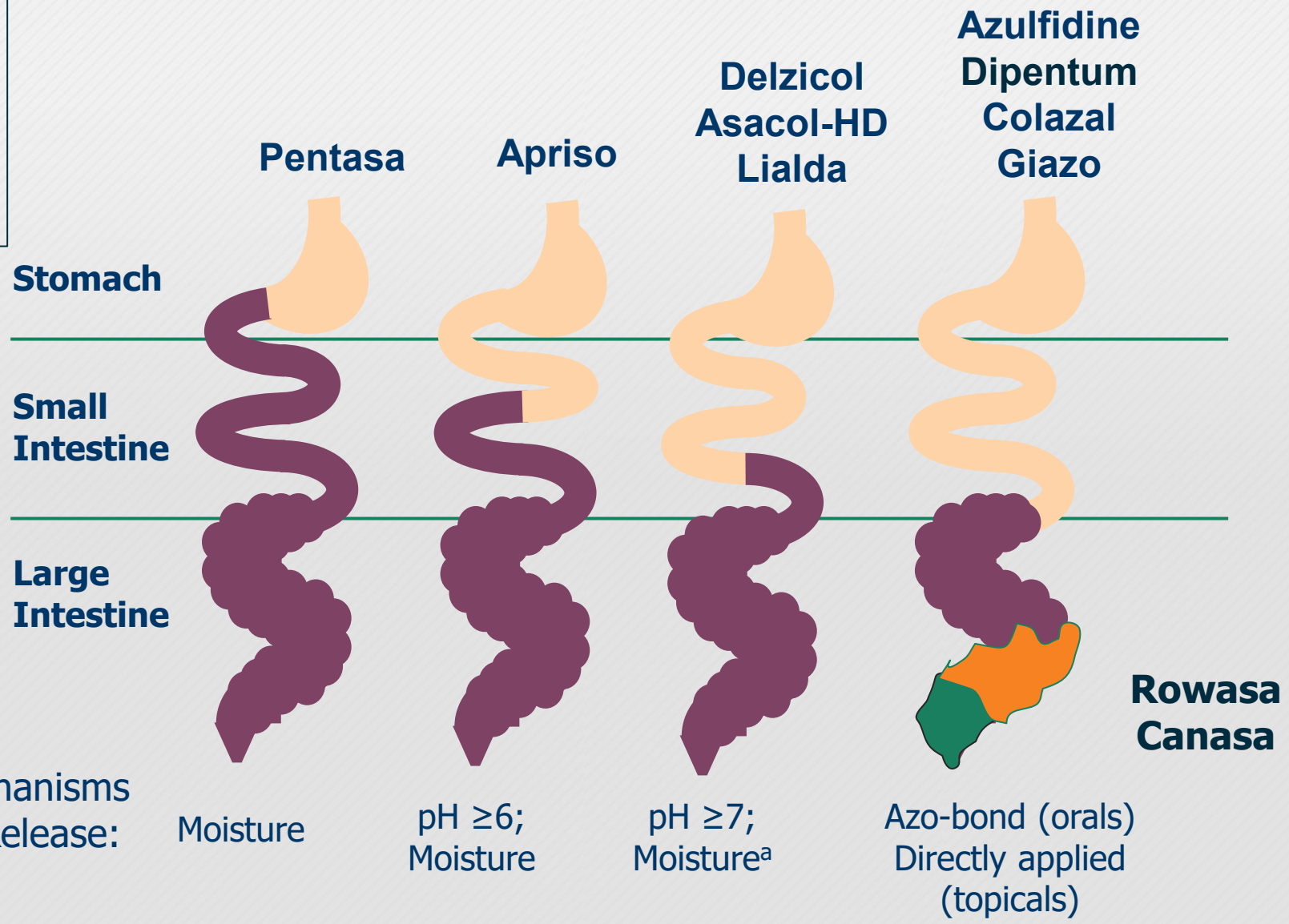
- Benefits
  - Onset of action within a few days with enemas/suppository formulations; longer for oral
  - Very safe; no systemic immunosuppression
  - Some formulations generic and inexpensive
  - Once-a-day dosing now used
- Drawbacks
  - Useful only in mild-moderate disease
  - Questionable benefits in Crohn's disease (CD)
  - Historically, many pills multiple times a day

5-ASA = 5-aminosalicylic acid.

Ford AC, et al. *Clin Gastroenterol Hepatol*. 2012;10(5):513-519.
Hanauer SB. *Aliment Pharmacol Ther*. 2008;27(Suppl 1):15-21.
Lichtenstein GR, et al. *Gastroenterol Hepatol*. 2015;11(3 Suppl 1):1-16.
Lim WC, et al. *Cochrane Database Syst Rev*. 2010;(12):CD008870.

5-ASA Release Sites

"Branded names" required as generic names don't differentiate mechanisms of release



[a]Lialda utilizes both.

Apriso. Package insert. Salix Pharmaceuticals, Inc; 2008; Asacol-HD. Package insert. Procter & Gamble Pharmaceuticals, Inc.; 2009; Azulfidine. Package insert. Pfizer; 2012; Canasa. Package insert. Allergan; 2017; Colazal. Package insert. Salix Pharmaceuticals, Inc; 2008; Giazo. Package insert. Valeant Pharmaceuticals North America LLC; 2000; Lialda. Package insert. Shire; 2017; Pentasa. Package insert. Shire; 2013; Rowasa. Package insert. Meda Pharmaceuticals Inc; 2013.

IBD: Corticosteroids

- Oral, parenteral, topical (rectal)
- Effective in INDUCING REMISSION
- Ineffective in MAINTAINING REMISSION
- Prohibitive side-effect profile

Katz JA. *Gastroenterol Clin North Am*. 2004;33(2):171-189.

IBD: Corticosteroids

- Benefits
  - Work very fast
  - Work in patients who are very sick, usually quickly
  - Usually work well if you've never had them, or only rarely
- Drawbacks
  - Many short-term side effects
  - Laundry list of long-term side effects; some are irreversible
  - Need to wean off slowly to allow adrenal glands to start working

Waljee AK, et al. *PLoS One*. 2016;11(6):e0158017.

Budesonide

- High potency "local" corticosteroid
- Targeted delivery to bowel
  - Budesonide CIR
    - Small bowel, right colon
    - FDA approved in Crohn's disease
  - Budesonide MMX
    - Colon only
    - FDA approved in ulcerative colitis (UC)
- Extensive hepatic first-pass metabolism
  - Minimal systemic side effects

CIR = controlled ileal release; FDA = US Food and Drug Administration; MMX = multimatrix.

Iborra M, et al. *Clin Exp Gastroenterol*. 2014;7:39-46.
Sherlock ME, et al. *Cochrane Database Syst Rev*. 2015;(10):CD007698.

Pearls for Optimization of Steroids

- Use non-systemic steroids if possible
- Starting dose:
  - Budesonide 9 mg
  - Prednisone 40 mg to 60 mg
  - Prednisolone 32 mg to 40 mg
- Taper steroids quickly if symptoms allow
- Supplement with calcium + vitamin D
- Check bone density; consider therapy

- Rectal steroids
  - Hydrocortisone suppository and enema
- Budesonide
  - Rectal foam

Schoon EJ, et al. *Clin Gastroenterol Hepatol*. 2005;3(2):113-121.

Immunomodulators

- Thiopurines:
  - Azathioprine
  - 6-mercaptopurine (6-MP)
- Methotrexate
- Calcineurin inhibitors:
  - Cyclosporine
  - Tacrolimus

IBD: Purine Analogues

- Azathioprine
- 6-MP

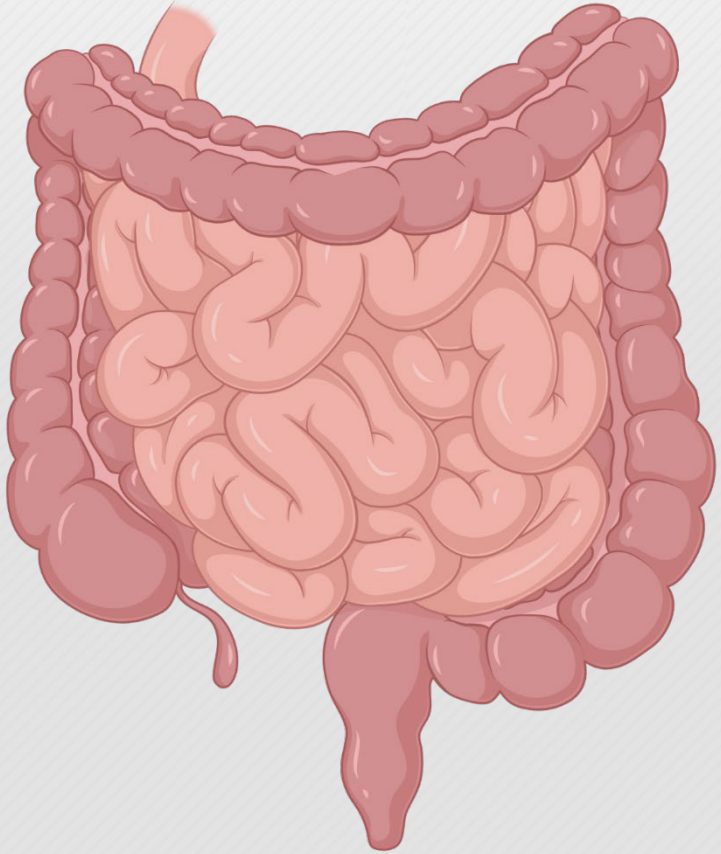


Image created with BioRender.com

IBD: Purine Analogues

- Benefits:
  - Provide very good long-term results in many patients
    - Even in patients who previously relied on steroids
  - Contains no steroids; so has no steroid side effects
  - Long-term safety profile very good
- Drawbacks:
  - Begin to work slowly...often need a number of weeks to months to see the full effect
  - Some patients have side effects that require stopping the drugs
  - Concern over very rare potential risk of lymphoma and skin cancers

The benefits far outweigh the rare risks in the vast majority of patients

Clinical Interpretation of AZA/6-MP Metabolite Levels

6-TG (pmol/8 x 10^8 RBC)	6-MMP (pmol/8 x 10^8 RBC)	Interpretation
Undetectable	Undetectable	Noncompliance/ Not absorbed
<235	<5700	Under-dosed
<235	>5700	Preferential metabolism by TPMT
235-450	<5700	Therapeutic goal
235-450	>5700	Potential hepatotoxicity
>450	<5700	Potential TPMT deficiency (potential bone marrow toxicity)
>1000	Undetectable	Potential TPMT absence (potential bone marrow toxicity)
>450	>5700	Over-dosed

6-MMP = 6-methylmercaptopurine; 6-TG = 6-thioguanine; AZA = azathioprine; RBC = red blood cells; TPMT = thiopurine methyltransferase.
Adapted from: Bloomfeld RS, et al. *Aliment Pharmacol Ther*. 2003;17(1):69-73.

Pearls for Dosing of Thiopurines

- First check TPMT enzyme, CBC with differential, LFTs
- Dose 50 mg daily to start
- See patient and recheck CBC with differential, LFTs every 3 to 4 weeks while increasing dose towards "goal" dose
- Goal dose is often roughly 1.5 mg/kg (6-MP) to 2.5 mg/kg (azathioprine) if normal TPMT; verify when close by checking 6-TG/6-MMP metabolites

CBC = complete blood count; LFTs = liver function tests.

IBD: Methotrexate

How it works:

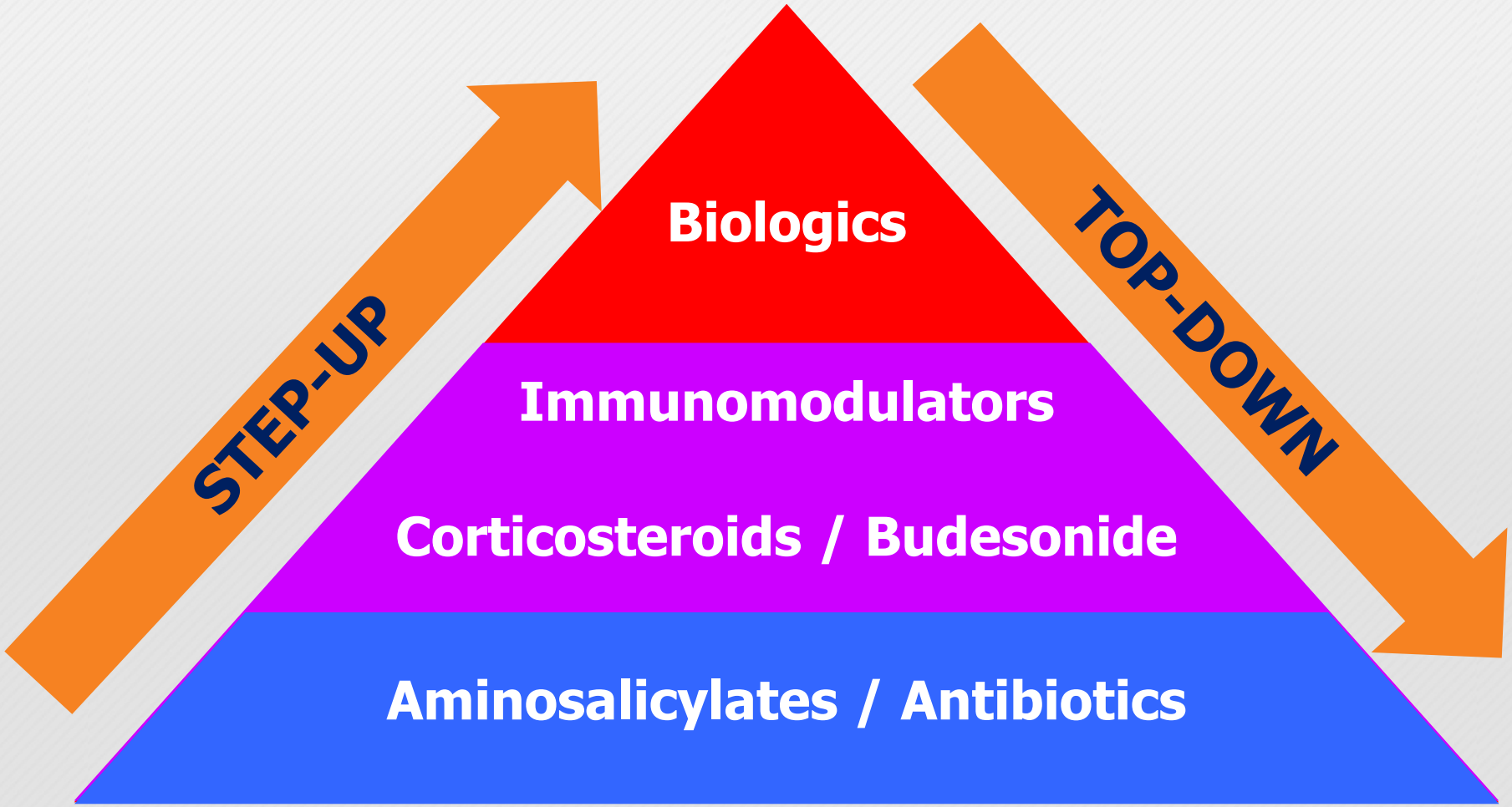
- Also a slow-acting, effective therapy
- Interferes with the folate pathway, essential for actively dividing cells (ie, inflammatory cells)
- Typically given subcutaneously, but may be given intramuscularly or orally; once-weekly dosing
- Very good long-term results
- Used in Crohn’s disease; now being used in ulcerative colitis

Pearls for Dosing of Methotrexate

- Once-a-week dosing
- Oral up to doses of 15 mg; subcutaneous up to 25 mg
- Maximum dose 25 mg SC – USE A TUBERCULIN SYRINGE!
- Start lower dose and titrate up every 1 to 2 weeks if worried about side effects
- Can give ondansetron for nausea
- See patient and recheck CBC with differential, LFTs every 3 to 4 weeks while increasing dose towards "goal" dose
- Folic acid 1 mg PO daily

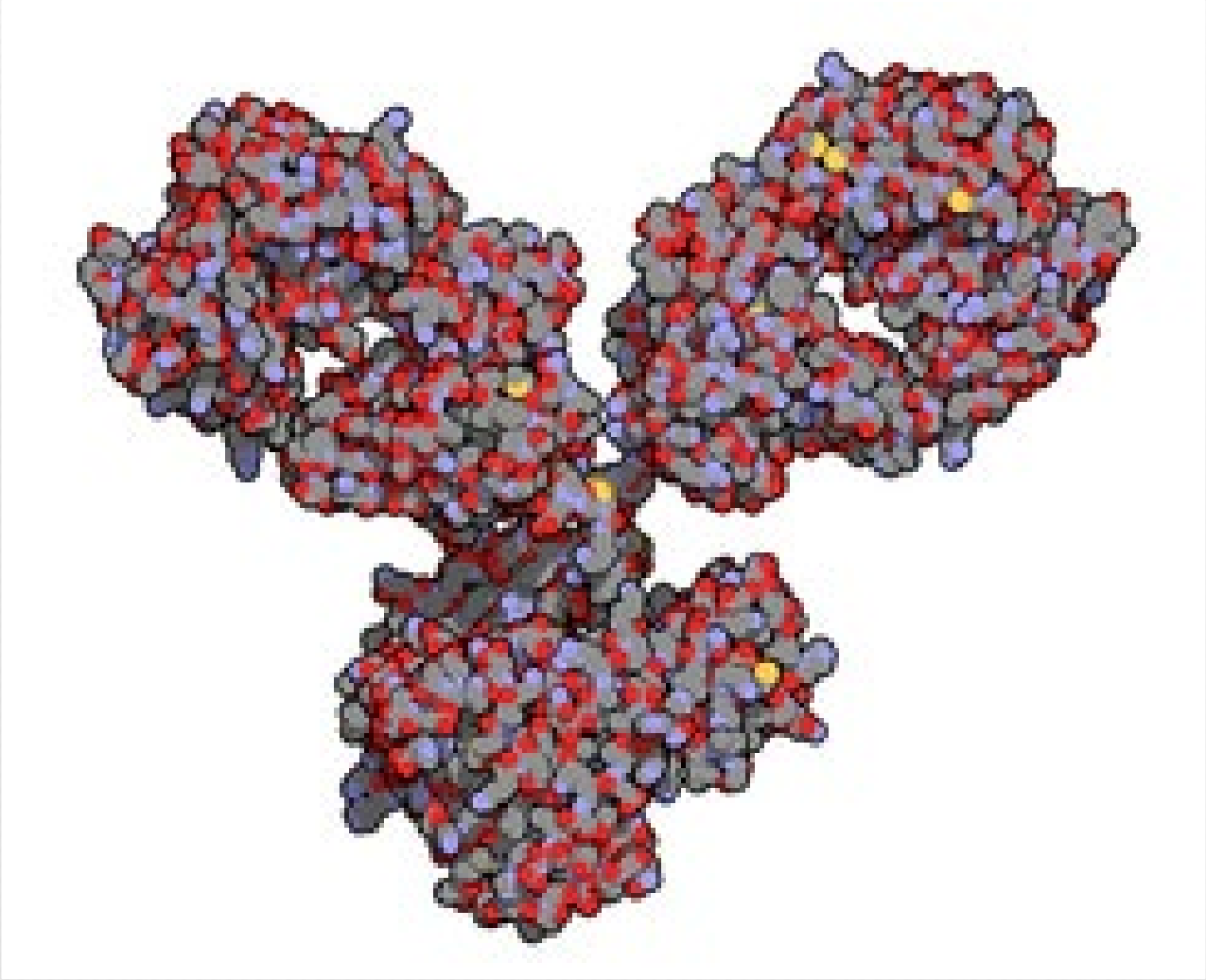
PO = oral; SC = subcutaneous.

"Top Down?"

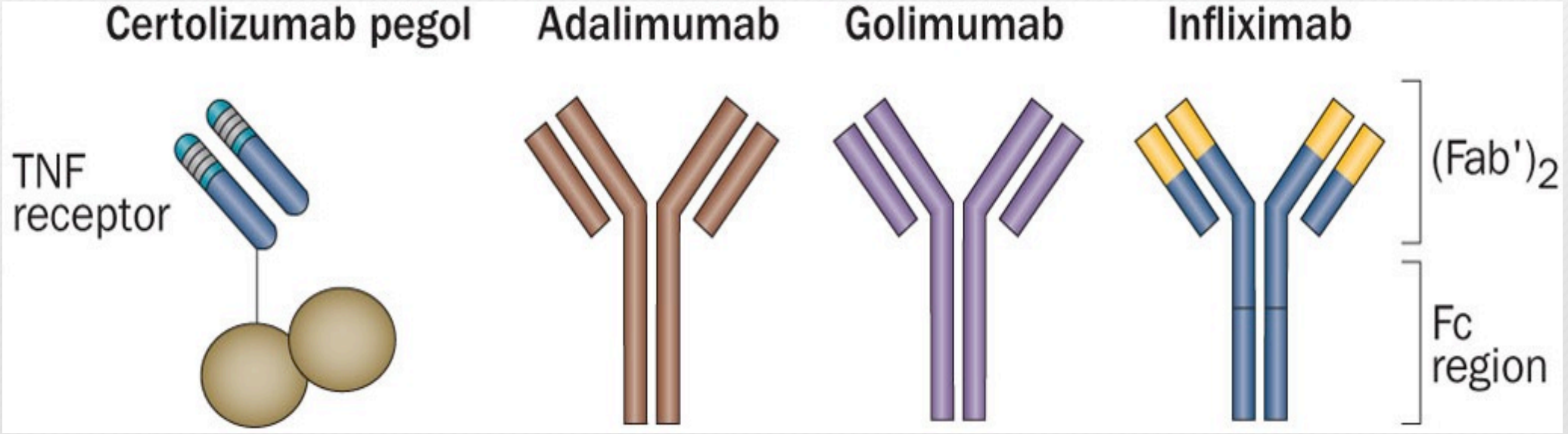


Adapted from Hanauer SB. *Curr Opin Gastroenterol*. 1999;15(4):308-314.

Biologics



Family #1: Anti-TNF Therapies



FDA approval for:	**CD**	**CD; UC**	**UC**	**CD; UC**

$(Fab')_2$ = antigen-binding fragment secondary antibody; Fc = fragment crystallizable; TNF = tumor necrosis factor.
Modified from van Schouwenburg PA, et al. *Nat Rev Rheumatol*. 2013;9(3):164-172.

Pearls for Optimization of Anti-TNFs

- Higher trough drug levels = better outcomes
  - Consider checking levels in patients who do not respond, lose response, or develop symptoms of possible antibodies (joint pains, swelling, rash)
- Dose increases often needed:
  - Adalimumab: 40 mg every 7 days
  - Certolizumab: 200 mg every 14 days
  - Golimumab: 100 mg every 14 days
  - Infliximab 10 mg/kg every 8 weeks

IBD Combination Therapy

- Combination therapy (anti-TNF biologic + immunosuppressant) yields the best outcomes:
  - Highest response rates[1] (especially in UC[2])
  - Lowest rates of neutralizing antibodies
  - Lowest rates of loss of response

1. Colombel JF, et al. *N Engl J Med*. 2010;362(15):1383-1395.
2. Panaccione R, et al. *Gastroenterology*. 2014;146(2):392-400.

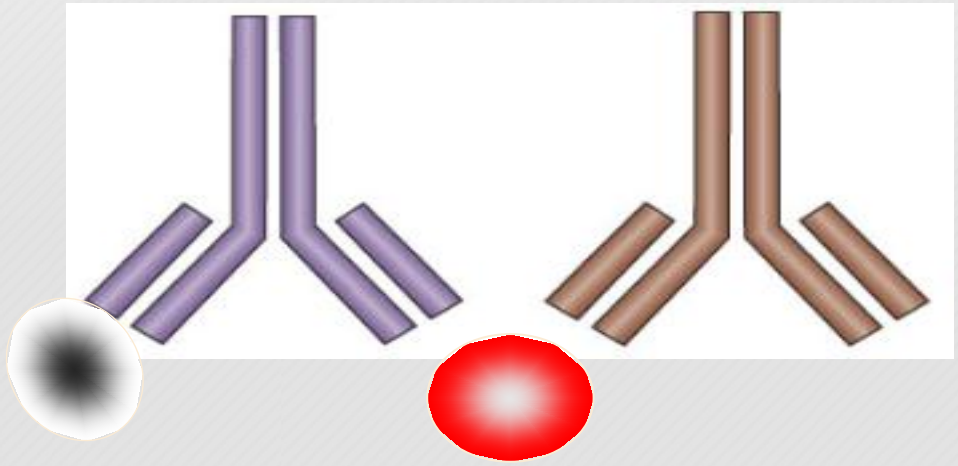
IBD Combination Therapy

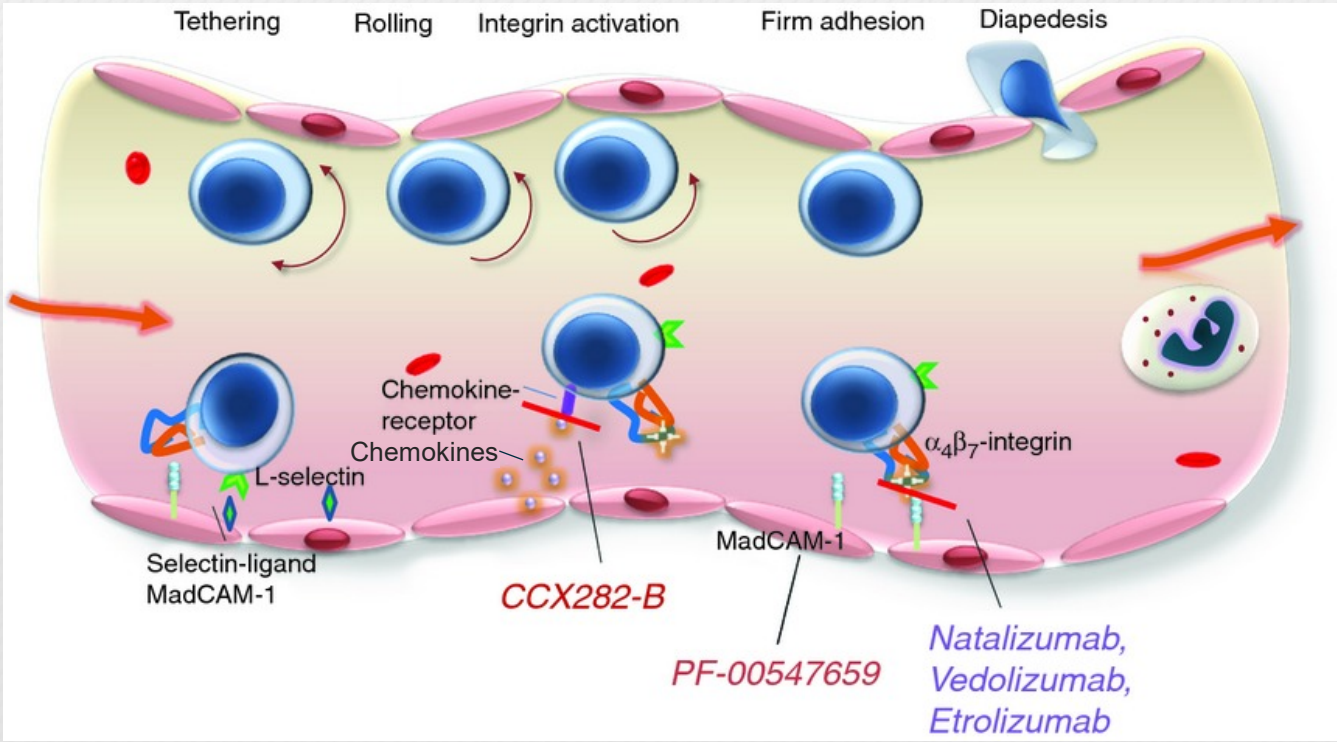
- Combination therapy (anti-TNF biologic + immunosuppressant) yields the best outcomes:
  - Highest response rates[1] (especially in UC[2])
  - Lowest rates of neutralizing antibodies
  - Lowest rates of loss of response

But…
- Slightly higher rates of infection
- Higher rates of lymphoma (especially with thiopurines)

1. Colombel JF, et al. *N Engl J Med*. 2010;362(15):1383-1395.
2. Panaccione R, et al. *Gastroenterology*. 2014;146(2):392-400.

Family #2: Anti-Integrins

	Natalizumab	Vedolizumab
		
FDA approved for:	**CD**	**CD; UC**



MadCAM-1 = mucosal addressin cellular adhesion molecule-1.

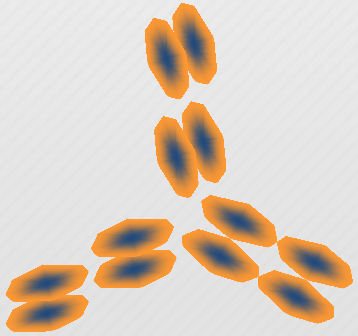
Modified from van Schouwenburg PA, et al. *Nat Rev Rheumatol*. 2013;9(3):164-172; Lobatón T, et al. *Aliment Pharmacol Ther.* 2014;39(6):579-594. Reprinted with permission from John Wiley and Sons.

Pearls for Anti-Integrins

- Full onset of action may take 2 to 3 months
- May need to "bridge" sicker patients with a short-acting agent (steroids; calcineurin inhibitor) for the first few weeks or months
- Joint pains – some patients:
  - ? An adverse effect of medication
  - ? "Uncovering" parallel joint problems in patients with IBD that were otherwise treated with systemic therapy
  - ? Withdrawal from steroids
  - Can be treated with steroids and usually not limiting to therapy
- Increase to monthly infusions if patient loses response or has suboptimal response

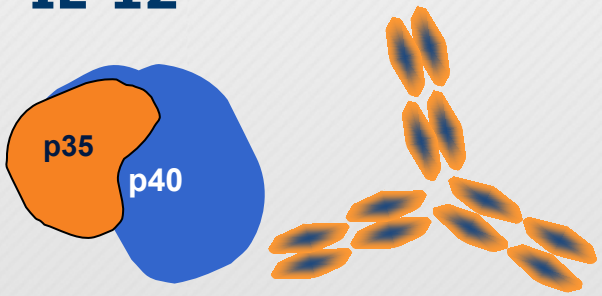
Family #3: Anti-Interleukin 12/23

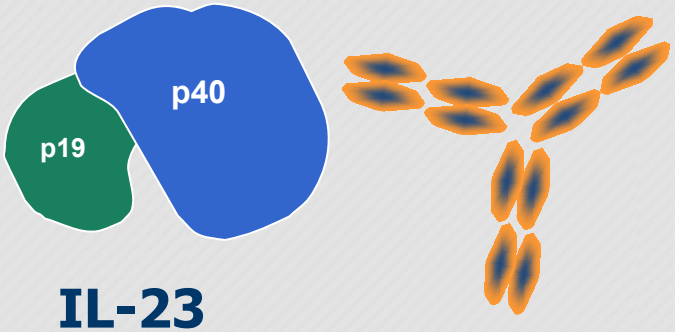
Ustekinumab



FDA approved:
Crohn's Disease
(UC anticipated)

IL-12





IL-23

IL = interleukin.

Feagan BG, et al. *N Engl J Med*. 2016;375:1946-1960.
Sand BE. *Gastroenterol Hepatol (NY).* 2016;12(12):784-786.

Pearls for Anti-IL–12/23

- 2 separate insurance approvals required:
  - 1 for IV and 1 for injections
- Not clear whether immunosuppressants add any benefit
- Also works in psoriasis
- Increase to monthly injections if patient loses response or has suboptimal response
- No known cancer risks
- Infectious risks less than with anti-TNFs

Biologics: Anti-Drug Antibodies

- **Anti-TNF drugs:**
  - Approximately **10% to 14%** of patients will develop anti-drug antibodies that are neutralizing
  - Rates are only **1% to 3%** if the patients are co-administered azathioprine, 6-MP, or methotrexate
  - Adding the immunomodulators may also decrease antibody rates
- **Anti-adhesion molecule drugs:**
  - Much lower rates of neutralizing antibodies (vedolizumab 1.0%-3.7%)
- **Anti-IL12/23 (ustekinumab)"**
  - Much lower rates of neutralizing antibodies (0.7%)

Feagan BG, et al. *N Engl J Med*. 2013;369(8):699-710; Hanauer SB, et al. *Lancet*. 2002;359(9317):1541-1549; Sandborn WJ, et al. *Gut*. 2007;56(9):1232-1239; Sandborn WJ, et al. *N Engl J Med*. 2012;367(16):1519-1528; Schreiber S, et al. *Gastroenterology*. 2005;129(3):807-818.

Management of Anti-Drug Antibodies

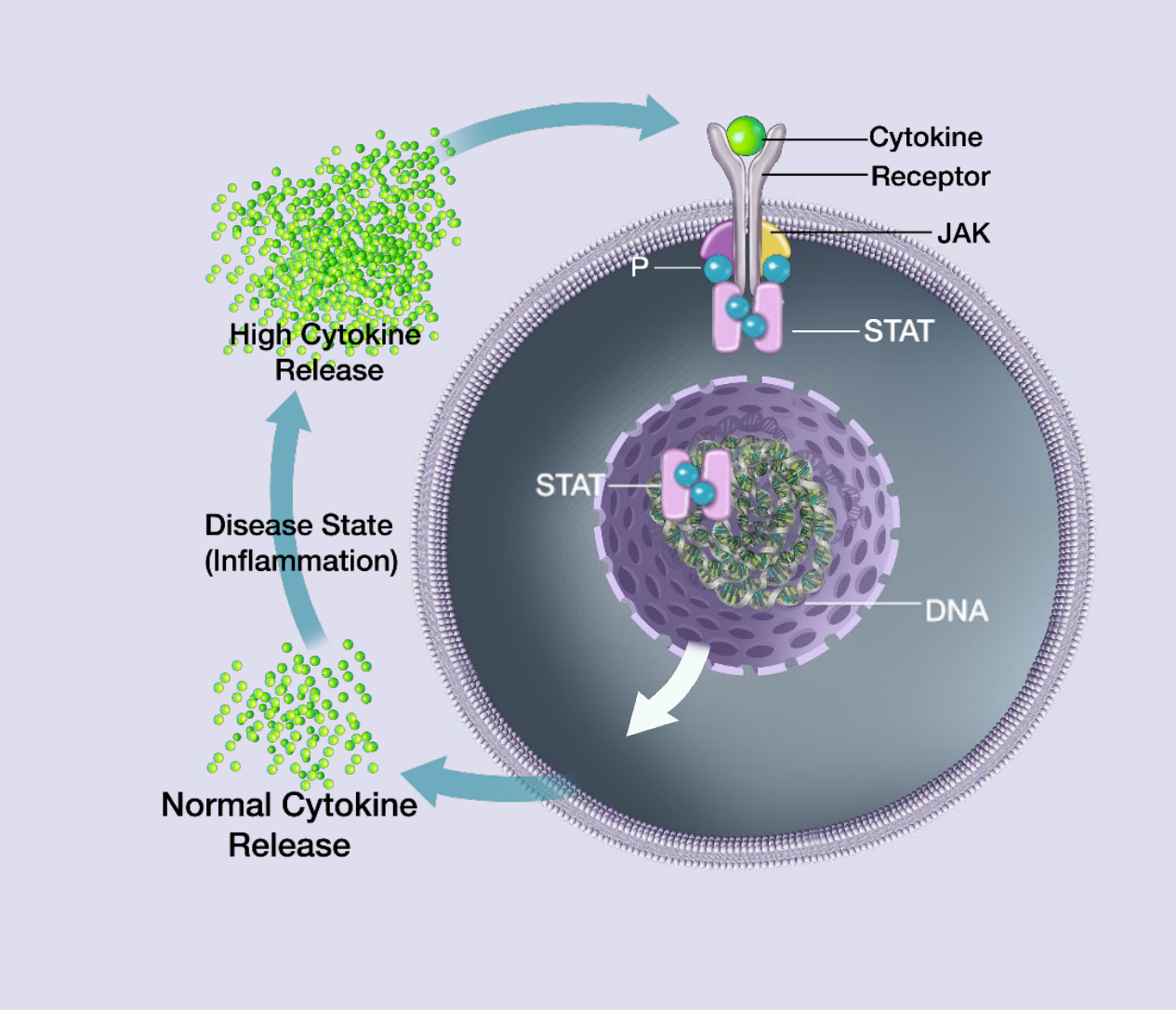
- **If low levels of antibodies and + biologic drug levels are present:**
  - Increase the dose of the biologic
  - Add an immunosuppressant
  - Do both
  - Retest after a few months; if antibody titer is higher, change therapies
- **If high levels of antibodies and little/no biologic drug levels are present:**
  - Switch to a different biologic
  - Do not switch to a biosimilar of the same biologic
  - Add an immunosuppressant to the new biologic to help decrease the risk of making anti-drug antibodies to the newly started biologic

Family #4: JAK Inhibitors

Tofacitinib

FDA approved: UC

JAK-STAT Signaling Cascade



JAK = Janus kinase; STAT = signal transducer and activator of transcription.

Coskun M, et al. *Pharmacol Res*. 2013;76:1-8; O'Sullivan LA, et al. *Mol Immunol*. 2007;44(10):2497-2506.

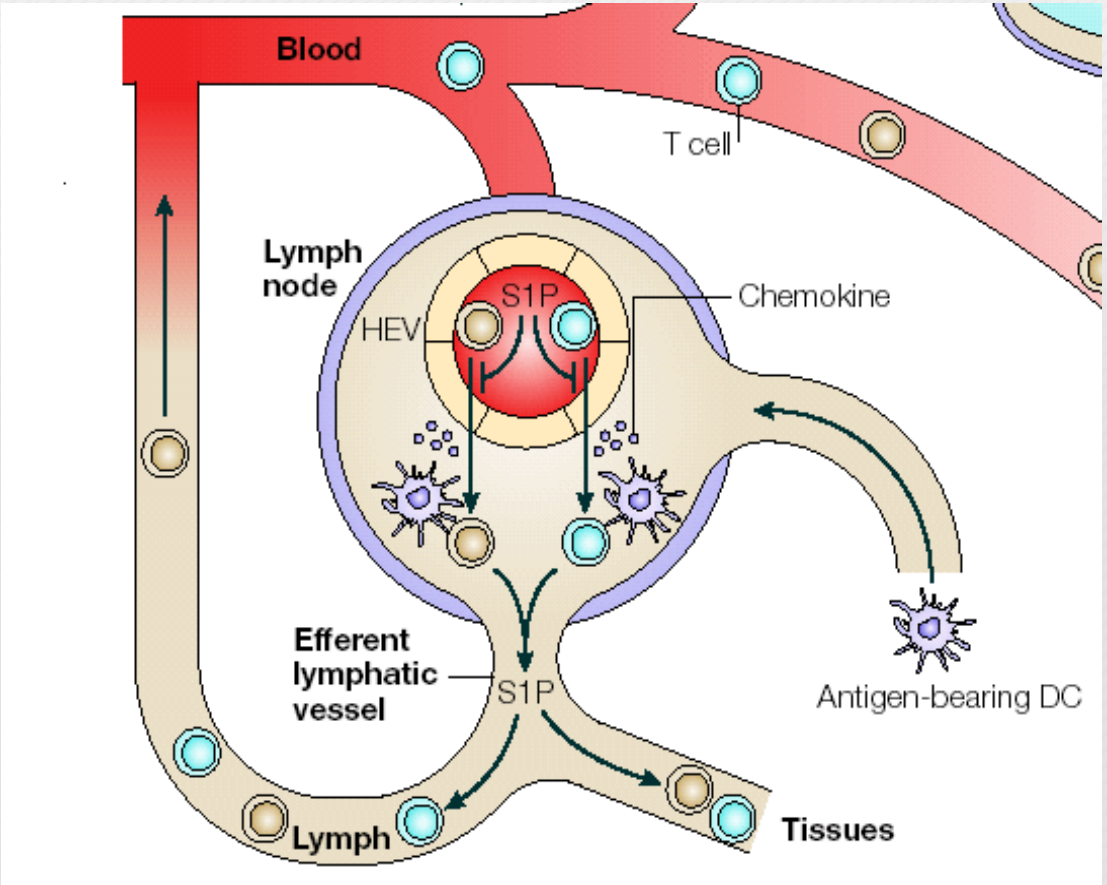
Pearls for JAK Inhibitors (Tofacitinib)

- Vaccinate with recombinant shingles
- Start at 10 mg every 12 hours for 8 weeks; use 5 mg every 12 hours once better
- Reassess with objective measures (CRP, fecal calprotectin, flexible sigmoidoscopy) prior to decreasing to 5 mg every 12 hours dose
- Discontinue if no response within 16 weeks
- Concomitant immunosuppressants are not recommended
- Dosage increases above 10 mg twice daily not recommended
- Warning for use if >50 years old with 1+ cardiovascular risk factor or with history of or at risk for blood clots
- Pregnancy safety concerns limit use in certain patient groups
- Can be stopped immediately with quick wash-out if patient has an infection or going for a surgery or major dental procedure

Family #5: S1P Modulators

Ozanimod

- S1P: facilitates the ability of CCR7+ lymphocytes to exit from lymph nodes
- S1P internalization prevents these lymphocytes from responding to S1P
  - They are retained in the lymph node
- Should not impact protective immunity since these cells do not otherwise circulate through the lymph nodes



FDA approved: UC

DC = dendritic cell; HEV = high endothelial venule; S1P = sphingosine 1-phosphate.

Song J, et al. *J Pharmacol Exp Ther.* 2008;324:276-283.
Subei A, et al. *CNS Drugs.* 2015;29(7):565-575.

Pearls for S1P Modulators

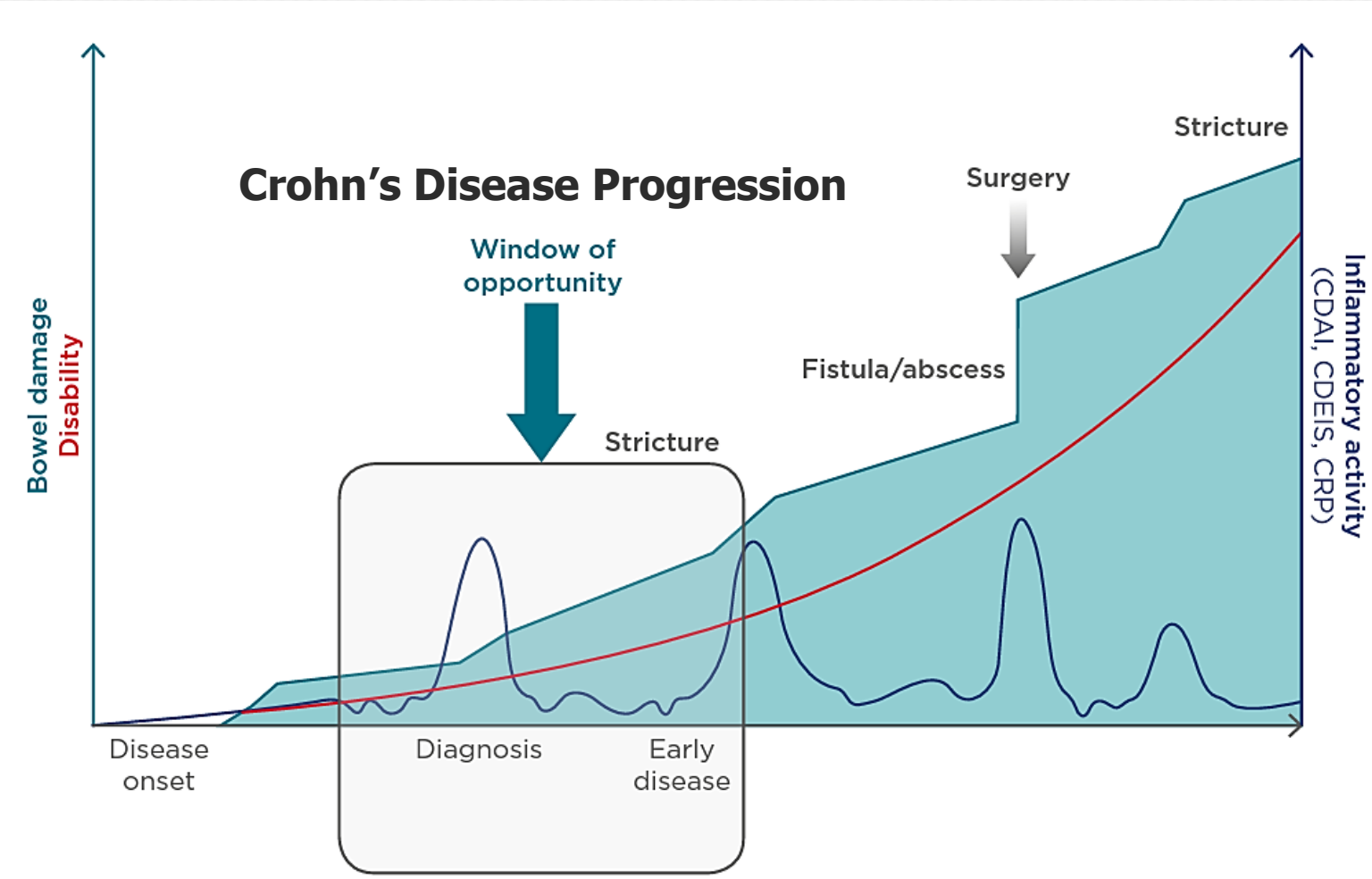
- Avoid if known heart block, macular edema/uveitis
- Initial "starter pack" followed by 1 mg daily dosing
- Missed dose?
  - If a dose is missed during first 2 weeks of treatment, reinitiate treatment using the titration regimen
  - If a dose is missed after first 2 weeks of treatment, continue with the treatment as planned

Starter Pack

- 7-day starter pack:
  - Days 1-4: 0.23 mg
  - Days 5-7: 0.46 mg
  - Days 8 and onward: 0.92 mg

Ozanimod. Package insert. Celgene Corporation; 2021.

Effective IBD Treatment: Seizing the Window of Opportunity



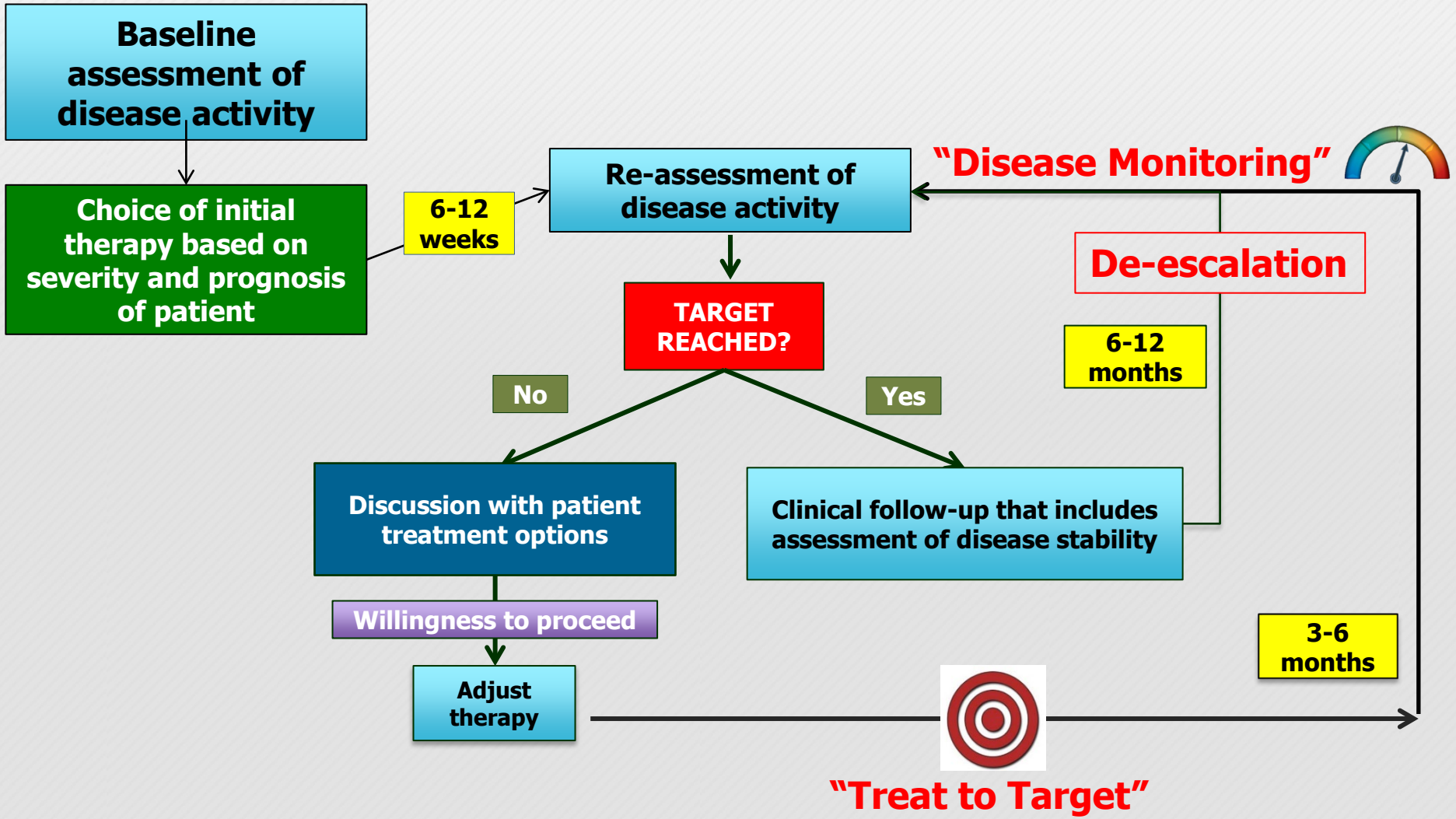
CDAI = Crohn's Disease Activity Index; CDEIS = Crohn's Disease Endoscopy Index of Severity.

Colombel JF, et al. Presented at: Congress of the European Crohn's and Colitis Organisation; February 16, 2018; Vienna, Austria; Colombel JF, et al. *EMJ Gastroenterol.* 2018;7[Suppl 2]:12-20. Open Access; Figure adapted from: Pariente B, et al. *Inflamm Bowel Dis.* 2011;17(6):1415-1422. Open Access; Colombel JF, et al. *Gastroenterology.* 2017;152(2):351-361.

Effective IBD Treatment: Seizing the Window of Opportunity

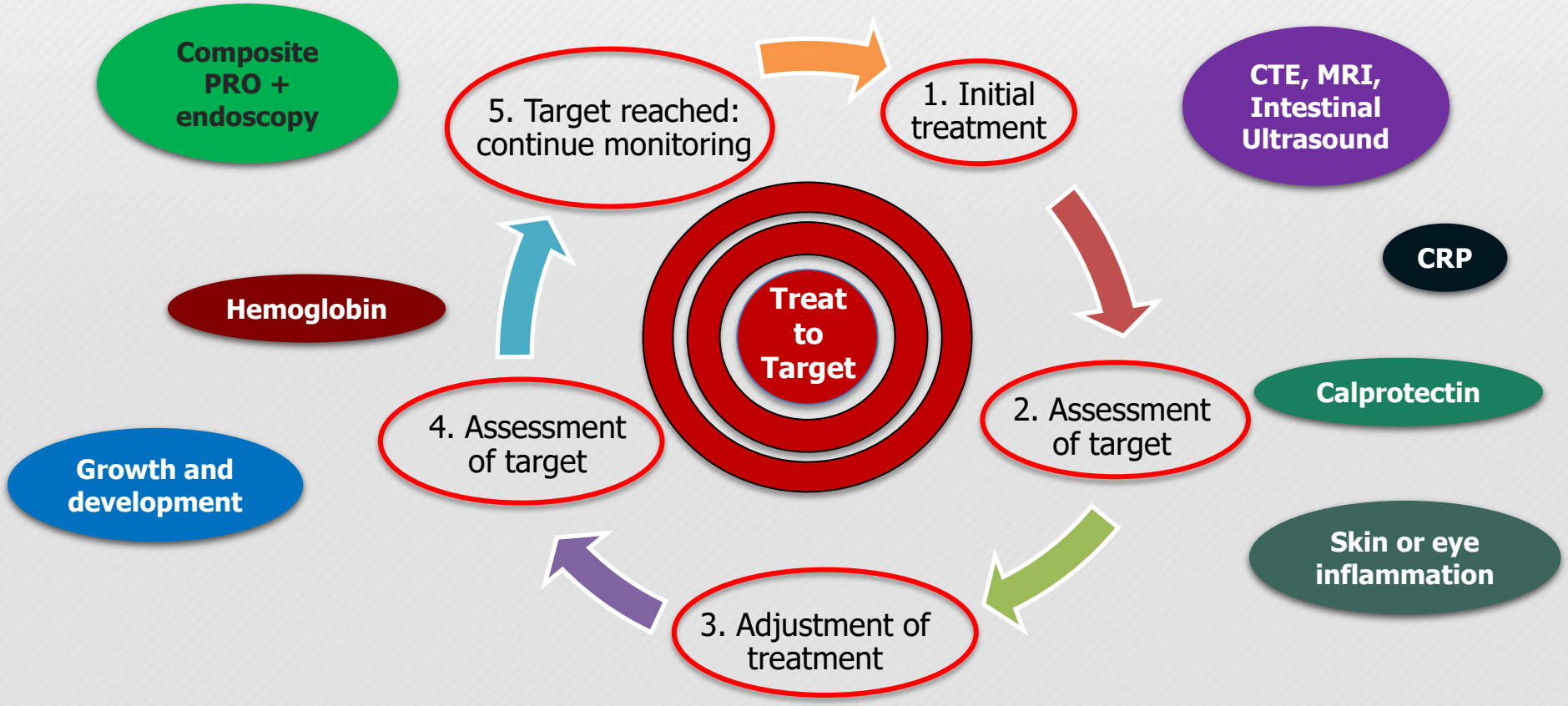
1. Identify location and severity of disease
2. Select appropriate therapy(-ies) that will induce response/remission quickly and safely
3. Continue appropriate therapy(-ies) that will maintain response/remission safely
4. Take into consideration if the patient also has other inflammatory conditions (ie, rheumatoid arthritis, psoriasis, multiple sclerosis)
5. Contraindications to any therapies?
6. **PROVE THEY ARE WORKING = TREAT TO TARGET**

Treat to Target in IBD



Christensen B, Rubin DT. In: Baumgart DC, ed. *Crohn's Disease and Ulcerative Colitis*. 2nd ed. Cham, Switzerland: Springer Nature; 2017:267-278.

Choose a Target That Is Individualized (and Reliable) for Your Patient



Peyrin-Biroulet L, et al. *Am J Gastroenterol*. 2015;110:1324-1338.
Turner D, et al. *Gastroenterology*. 2021;160:1570-1583.

FDA-Approved Therapies: CD

Mild to moderate disease:

- Induction: budesonide (oral)
- Maintenance: none (!)

Moderate to severe disease:

- Induction & maintenance:
  - Anti-TNF (adalimumab, certolizumab, infliximab)
  - Anti-integrin (natalizumab, vedolizumab)
  - Anti-IL–12/23 (ustekinumab)

FDA-Approved Therapies: UC

Mild to moderate disease:

- Induction: budesonide (oral & rectal); various 5-ASA/sulfasalazine (oral & rectal); hydrocortisone (rectal)
- Maintenance: various 5-ASA/sulfasalazine

Moderate to severe disease:

- Induction & maintenance:
  - Anti-TNF (adalimumab, golimumab, infliximab)
  - Anti-integrin (vedolizumab)
  - Anti-IL–12/23 (ustekinumab)
  - JAK inhibitor (tofacitinib)
  - S1P modulator (ozanimod)

NOT Approved Therapies

The old immunosuppressive agents were never FDA-approved; their use has fallen out of favor due to better and safer options.

Examples:

- Azathioprine
- 6-mercaptopurine
- Methotrexate
- Cyclosporine
- Tacrolimus
- EVEN prednisone and other corticosteroids do not have FDA approval for long-term use…so don't use them!

Role for These Therapies

These agents are used in special circumstances:

Examples:

- Azathioprine
- 6-mercaptopurine
- Methotrexate

As "add on therapies" to biologics (especially anti-TNFs) to:

- Decrease the chance of/overcome anti-drug antibodies
- Increase drug levels
- Increased efficacy in perianal CD
- Increased efficacy in UC (azathioprine/6-MP)

- Cyclosporine
- Tacrolimus
- EVEN prednisone and other corticosteroids do not have FDA approval for long-term use…so don't use them!

Role for These Therapies

These agents are used in special circumstances:

Examples:

- Azathioprine
- 6-mercaptopurine
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- Tacrolimus
- EVEN prednisone and other corticosteroids do not have FDA approval for long-term use…so don't use them!

As fast-acting induction agents in:

- Severe steroid-refractory ulcerative colitis
- Severe steroid-refractory Crohn's colitis
- Pyoderma gangrenosum

Management of SEVERE Colitis

These agents are used in severe, IV steroid-refractory UC (and perhaps similarly in Crohn's colitis):

Examples:

- Infliximab (but NOT injectable anti-TNF)
- ? tofacitinib
- Methotrexate
- Cyclosporine
- Tacrolimus

As fast-acting induction agents in:

- Severe steroid-refractory ulcerative colitis
- Severe steroid-refractory Crohn's colitis
- Pyoderma gangrenosum

- EVEN prednisone and other corticosteroids do not have FDA approval for long-term use…so don't use them!

Crohn's Perianal Fistulas

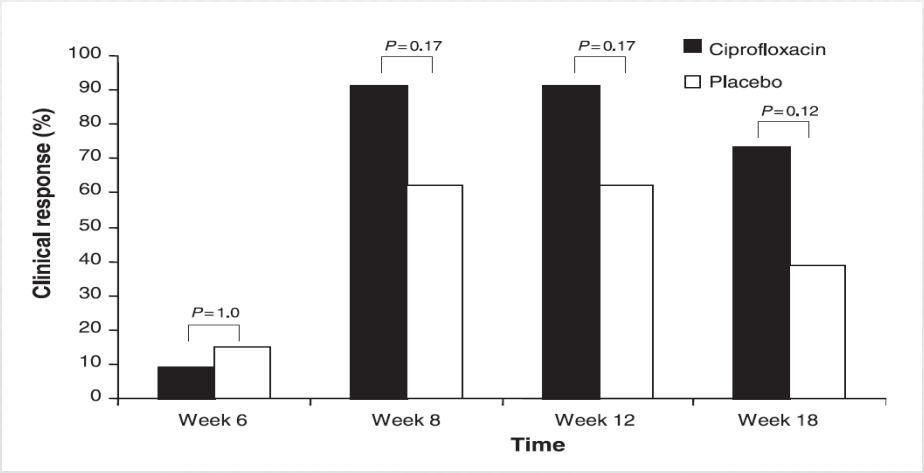
- Antibiotics are key (ciprofloxacin, metronidazole)
  - May need long-term antibiotics
- Drainage is key – sitz baths, surgical
  - An experienced Crohn's surgeon is important part of the team
- Best data with anti-TNF, especially infliximab
  - ALWAYS cover first with antibiotics (otherwise the patient may get abscess)
- Higher doses of anti-TNF may be needed
- Combination therapy with anti-TNF and immunosuppressant superior to monotherapy

Rackovsky O, et al. *Expert Rev Gastroenterol Hepatol*. 2018;12(6):597-605.
Kotze PG, et al. *Gut*. 2018;67(6):1181-1194.

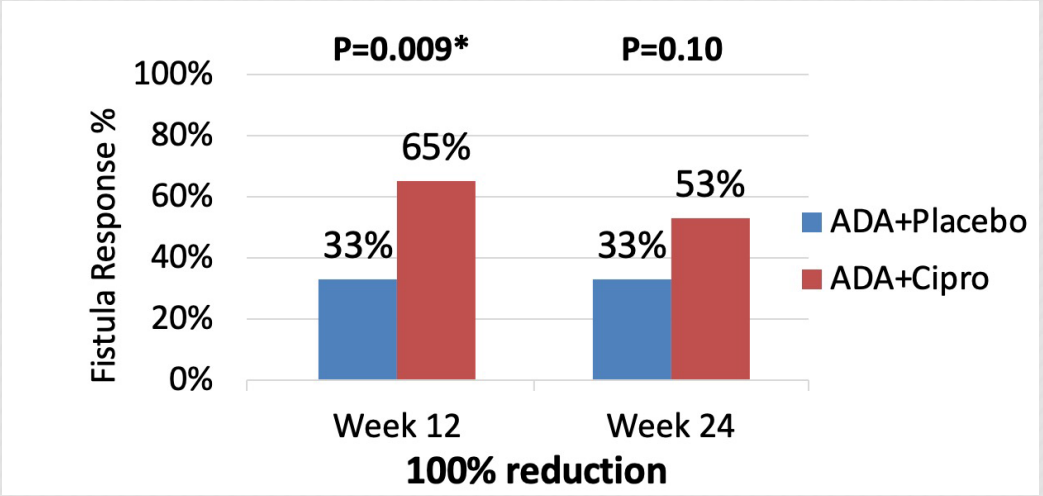
Perianal Crohn's Disease: Combine Therapies

- Multiple studies of anti-TNF demonstrate benefit of combination with ciprofloxacin for fistula response and closure
- Higher serum trough concentrations of infliximab are associated with greater fistula healing
  - 15.8 µg/mL in healed fistulas vs 4.4 µg/mL in non-healed (*P*<.0001)

Infliximab + Ciprofloxacin Compared With Infliximab + Placebo[1]



Adalimumab + Ciprofloxacin Compared With Adalimumab + Placebo[2]



ADA = adalimumab; Cipro = ciprofloxacin; PBO = placebo.

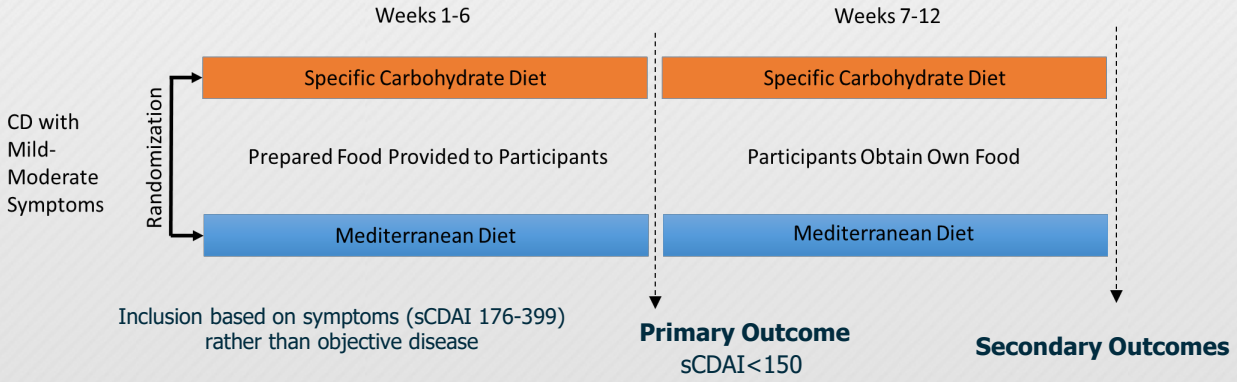
1. West RL, et al. *Aliment Pharmacol Ther.* 2004;20:1329-3136. Reprinted with permission From John Wiley and Sons.
2. Adapted from: Dewint P, et al. *Gut*. 2014;63(2):292-299.

What About Diet?

- Distinguish *diet* from *nutrition*
- Monitor key nutrients and risk of malnutrition:
  - Vitamin D
  - Vitamin B_{12}
  - Zinc
  - Folate
  - Iron
- Can diet treat IBD?

Specific Carbohydrate and Mediterranean Diet Achieve Similar Clinical Remission Rates in a Randomized Trial in CD

Methods:



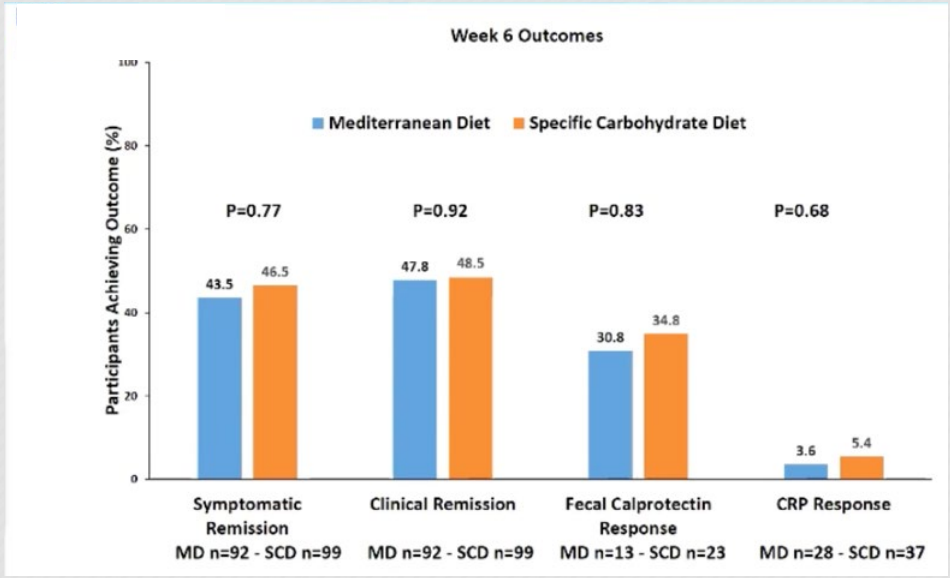
	SCD	Mediterranean diet
High intake	Unprocessed meats, poultry, fish, eggs Most vegetables, fruits and nuts	Olive oil Fruits and vegetables Nuts and cereals
Avoid or limit	Grains and dairy Sweeteners other than honey	Red/processed meat Sweets

Results:

- N=191 (92 in MD and 99 in SCD)
- No significant difference in symptomatic or clinical remission
- Neither diet associated with normalization of CRP

Baseline	SCD	MD	*P*-value
Objective inflammation*	**50 (52.1)**	**38 (41.8)**	**.21**
CDAI (Median)	210.0	206.8	.02

*FC > 250 µg/g or hsCRP > 5 mg/L at baseline or definite inflammation on colonoscopy



FC = fecal calprotectin; hsCRP = high-sensitivity C-reactive protein; MD = Mediterranean diet; SCD = specific carbohydrate diet; sCDAI = simple Crohn's Disease Activity Index.

Lewis JD, et al. Presented at: Digestive Disease Week (DDW) 2021 Virtual meeting; May 21-23, 2021. Abstract 781.
Lewis JD, et al. *Gastroenterology.* 2021;161(3):837-852.e9.

Monitoring Response to Therapy

- "Invasive" (or rather unpleasant)
  - Colonoscopy / other scopes
  - CT/CT enterography
  - MR/MR enterography
  - Barium studies (upper GI, SBFT, barium enema)
- Noninvasive markers of inflammation:
  - Blood: CRP (? ESR in children)
  - Fecal: calprotectin; lactoferrin)
- Nonspecific
  - Elevation in platelet count
  - Elevation in blood eosinophils, neutrophils
  - ? WBC elevation (not very helpful)
  - Growth restitution (in children)

CRP = c-reactive protein; CT = computed tomography; ESR = erythrocyte sedimentation rate; GI = gastrointestinal; MR = magnetic resonance; SBFT = small bowel follow-through; WBC = white blood cell.

IBD Pipeline Drugs

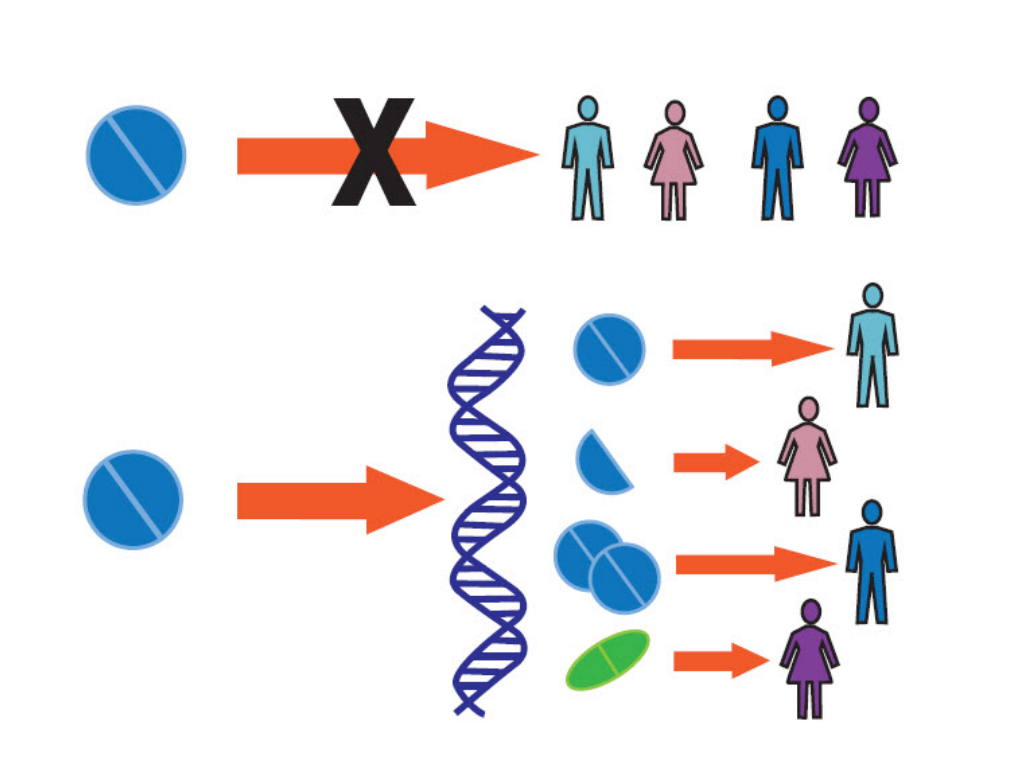
	Anti-integrins	S1P receptor modulators	Anti-IL molecules	JAK and tyrosine kinase inhibitors	Microbial therapies	Toll-like receptor agonists	Fusion biologics
Phase 1		Amiselimod	GSK1070806		ABI-M201		AMT-101
Phase 2	Abrilumab	Etrasimod	Brazikumab Guselkumab Spesolimab PF-04236921	TD-1473‡ BMS-986165	SER-287	Cobitolimod	AMT-101
Phase 3	Etrolizumab Ontamalimab AMJ300	Ozanimod* Etrasimod	Mirikizumab Risankizumab† Brazikumab Guselkumab Spesolimab	Filgotinib Upadacititinib TD-1473			

*Approved in UC. †Filed in CD. ‡Filed in UC.

Cohen NA, et al. *Curr Opin Gastroenterol.* 2021;37:357-363.

Future: Personalized Medicine

1. Identify the predominant inflammatory pathway in each patient
2. Choose the best agent customized for that patient
3. Verify that the pathway is working



RNSights. Accessed December 10, 2021; https://rnsights.rnsights.net/the-push-for-personalized-medicine/
Siegel CA. *Am J Gastroenterol.* 2018;113(10):1440-1443.
Flamant M, et al. *Therap Adv Gastroenterol*. 2018;11:1756283X17745029.

Key Takeaways in Team Management Approach for Patients With IBD

- **RNs:**
  - First-line patient triage: phone calls, pages, faxes, and online portal messaging
    - Patients flaring, navigating billing/insurance questions, medication refills
  - Baseline labs and coordinating new biologic starts and renewals
  - Point person for infusion centers, radiology, outside GI referral teams, and pharmacies
  - Working with and delegating to medical assistants when needed
    - Patient records, appointment follow-ups every 6 months

RN = registered nurse.

Key Takeaways in Team Management Approach for Patients With IBD (cont'd)

- **APNs:**
  - Return clinic visit follow-ups:
    - Most recently: hybrid of virtual video visits and face-to-face visits
    - Acute issues, post-operative, and routine maintenance visits (encouraging compliance)
    - Assess for "breakthrough" symptoms in between interval therapies & optimize therapy as needed
    - Keeping up-to-date on routine lab results, colonoscopies, and other objective data
    - Determine if referrals are necessary (eg, dermatology, rheumatology, mental health)
  - Injection training, education, time allotted for longer visits
- **What has worked for us:**
  - Weekly team meetings, open lines of communication, "closing the loop" with patients, and delegating as appropriate outside of our immediate team

APN = advanced practice nurse.

Surgical Pearls for APP Practice: What You Need to Know!

Michele Rubin, MSN, APN, CNS, CGRN

IBD Clinical Nurse Specialist
Director, Advanced Practice Nursing
Associate Director
Inflammatory Bowel Disease Center
University of Chicago Medicine
Chicago, IL

Key Points in IBD Surgery

1. **Surgery is "not considered a failure" or "a last resort"**
   - Recognize failure of medications and treatment – **do not delay surgery**
   - Early surgical consultation – **"discuss early"**

IBD = inflammatory bowel disease.

Key Points in IBD Surgery

1. **Surgery is "not considered a failure" or "a last resort"**
   - Recognize failure of medications and treatment – **do not delay surgery**
   - Early surgical consultation – **"discuss early"**
2. **Recognize complications:**
   - Strictures/abscess in CD
   - Toxic colitis/cancer

CD =Crohn's disease.

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   - Toxic colitis/cancer
3. **Manage preoperative abscesses** (CD)
   - Drain if abscess is >3 cm
   - If <3 cm, manage with IV antibiotics

IV = intravenous.

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   - Drain if abscess is >3 cm
   - If <3 cm, manage with IV antibiotics
4. **Minimize corticosteroids**

Key Points in IBD Surgery

5. **Optimize nutrition** if >10% weight loss, BMI <18.5 kg/m^2, albumin <3 g/dL

BMI = body mass index.

Key Points in IBD Surgery

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6. **Help patients quit smoking**

Key Points in IBD Surgery

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6. **Help patients quit smoking**
7. **Improve patients' quality of life!**

Key Points in IBD Surgery

5. **Optimize nutrition** if >10% weight loss, BMI <18.5 kg/m^2, albumin <3 g/dL
6. **Help patients quit smoking**
7. **Improve patients' quality of life!**
8. **Shared decision-making:**
   - Discuss risks and benefits
   - Consequences of no surgery
   - Ask about patient preferences

Key Points in IBD Surgery

9. **Set postoperative expectations:**
   - **Surgery is not a cure in CD** (exception Crohn's colitis/end stoma)
   - **Bowel function/sensation may be altered** – ostomy, number of stools
   - **Time to recover** and restrictions
   - **Postoperative monitoring for recurrence in CD is necessary**

Ulcerative Colitis (UC)

When Is Surgery Needed in UC?

One-third of patients will require surgery!

Elective

- **Failure of medical therapy/ steroid dependency**
- **Complications/side effects** of medications
- **Dysplasia or cancer**
- **Refractory extraintestinal manifestations**
- **Growth failure** (in pediatric patients)
- **"Decreased quality of life"**

Urgent

- **Sepsis/fulminant colitis**
- **Uncontrolled hemorrhage**
- **Colonic perforation**
- **Toxic megacolon**

Rubin M. In: *Wound, Ostomy, and Continence Nurses Society Core Curriculum: Ostomy Management*. 2nd ed. Wolters Kluwer; 2021:44-64; Fichera A, et al. *J Gastrointest Surg.* 2007;11(6):791-803; Grucela A, et al. *Mt Sinai J Med.* 2009;76(6):606-612; Kornbluth A, et al. *Am J Gastroenterol.* 2010;105(3):501-523; Surgery in Inflammatory Bowel Diseases (IBDs). Accessed November 5, 2021. https://www.crohnscolitisfoundation.org/sites/default/files/2020-07/Surgical%20Pearls_final-1.pdf

Toxic Megacolon

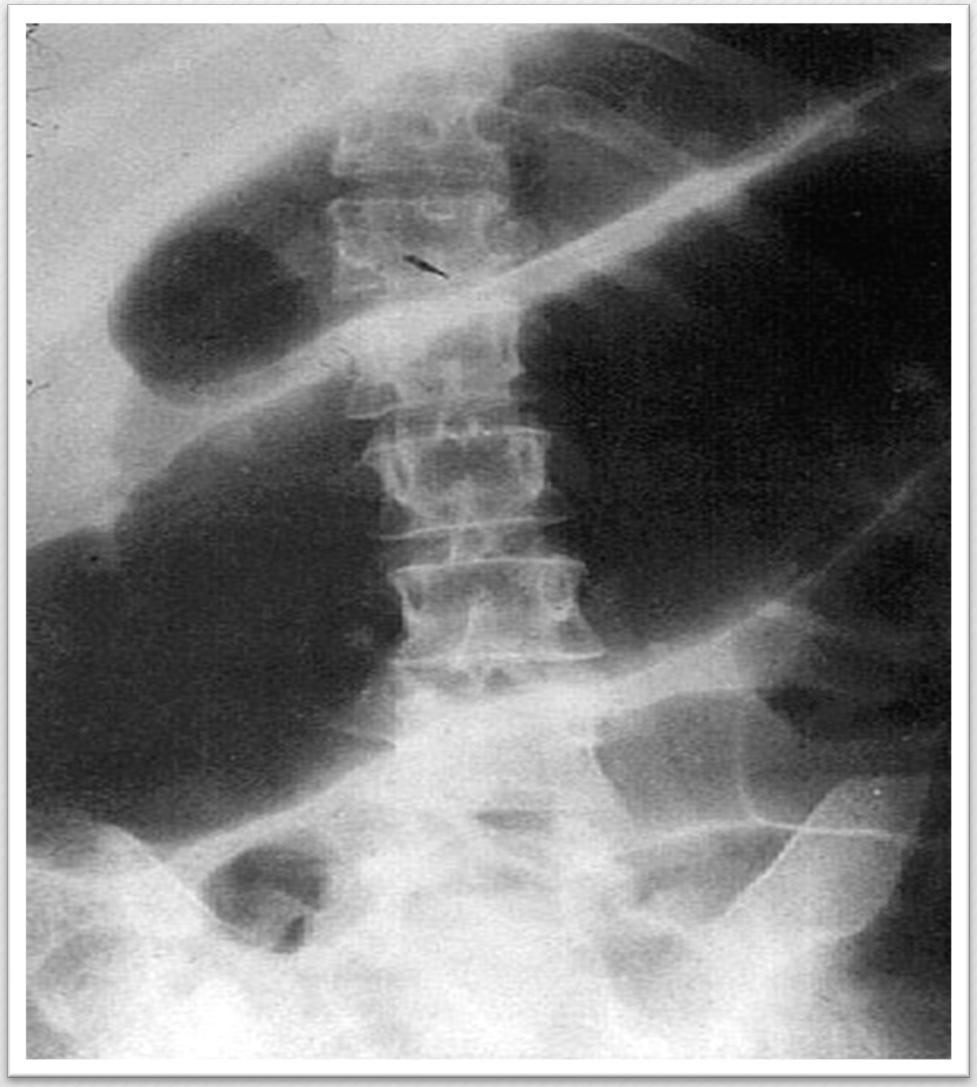
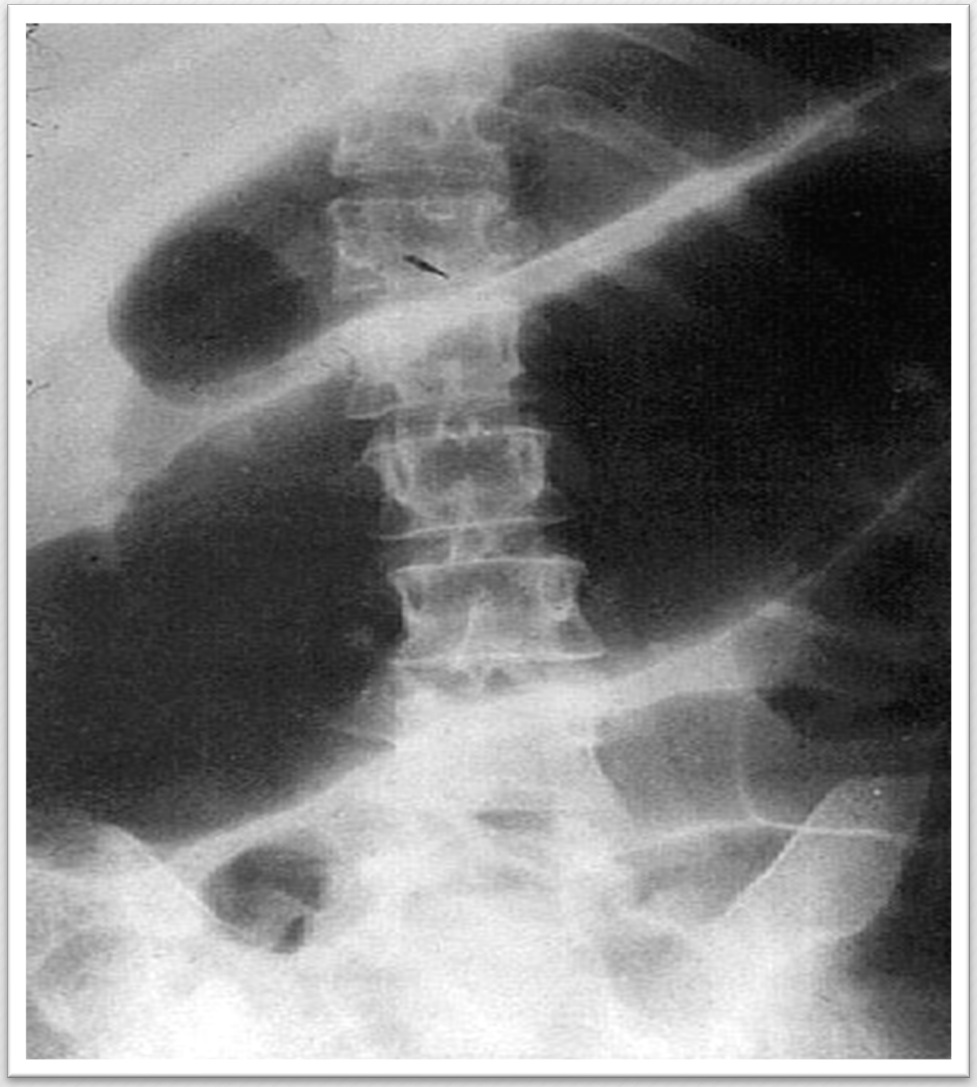
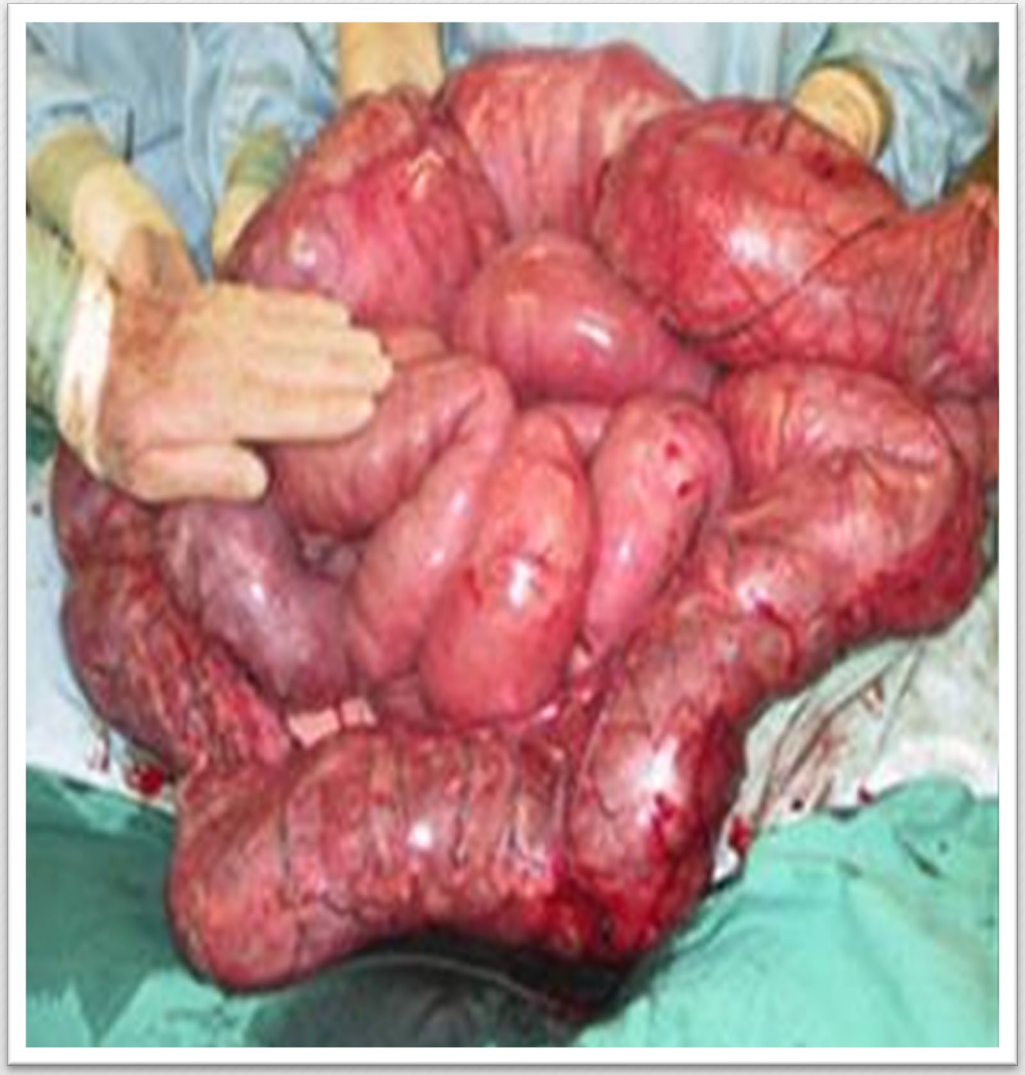


Image courtesy of Fabrizio Michelassi, MD, and Michele Rubin APN, CNS, CGRN.

Toxic Megacolon





Images courtesy of Fabrizio Michelassi, MD, and Michele Rubin, APN, CNS, CGRN.

Key Points in UC

- **Entire colon and rectum are removed** in almost all cases

Rubin M. In: *Wound, Ostomy, and Continence Nurses Society Core Curriculum: Ostomy Management*. 2nd ed. Wolters Kluwer; 2021:71-99; Fichera A, et al. *J Gastrointest Surg*. 2007;11(6):791-803; Grucela A, et al. *Mt Sinai J Med.* 2009;76(6):606-612; Kornbluth A, et al. *Am J Gastroenterol.* 2010;105(3):501-523; Surgery in Inflammatory Bowel Diseases (IBDs). Accessed Nov 5, 2021. https://www.crohnscolitisfoundation.org/sites/default/files/2020-07/Surgical%20Pearls_final-1.pdf

Key Points in UC

- **Entire colon and rectum are removed** in almost all cases
- Typically, **2 or 3 surgeries** involved
  - Minimum of at least 3 months apart

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Key Points in UC

- **Entire colon and rectum are removed** in almost all cases
- Typically, **2 or 3 surgeries** involved
  - Minimum of at least 3 months
- **Total abdominal colectomy** (TAC): staging procedure
  - **Ileostomy, rectum remains** as a "Hartmann's pouch" (HP)
  - **Normal** to have a **mucus discharge** from HP
  - **Rectum removed later** (proctectomy or a J-pouch)

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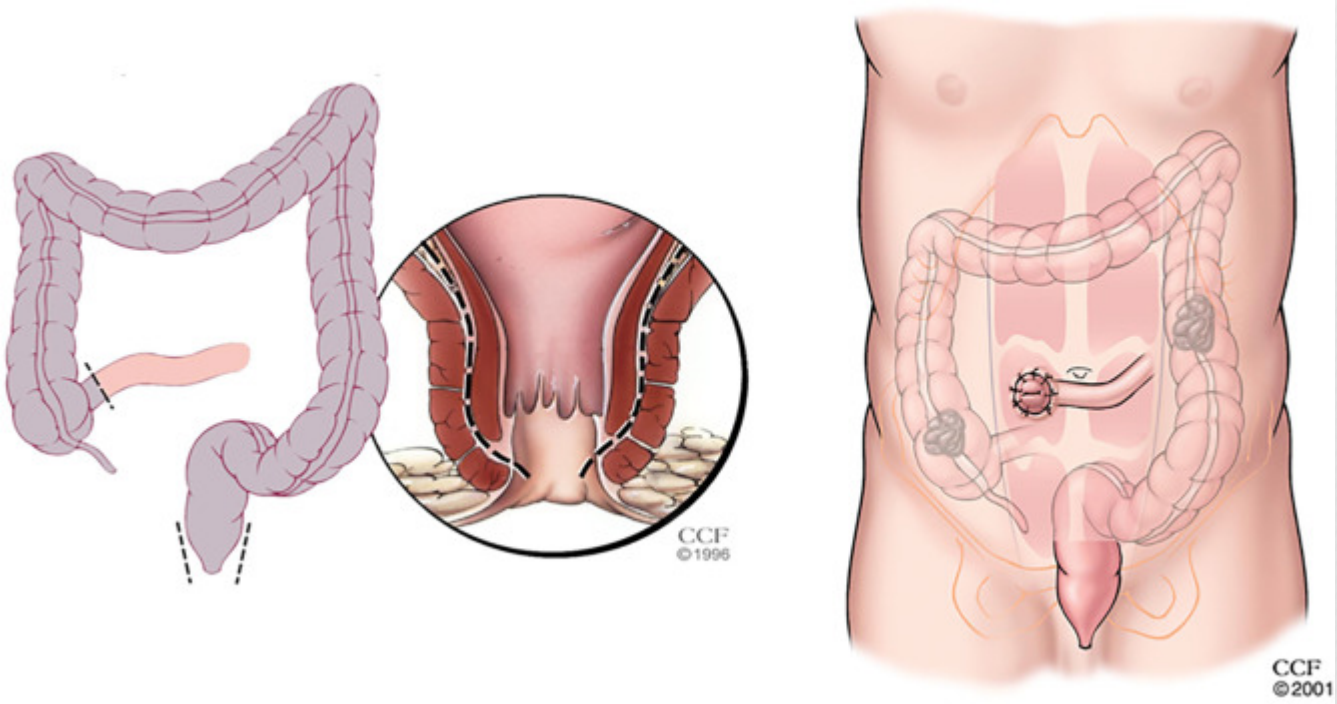
Proctocolectomy With Ileostomy

Resection of entire colon, rectum, anus with end permanent ileostomy

Curative



Stoma

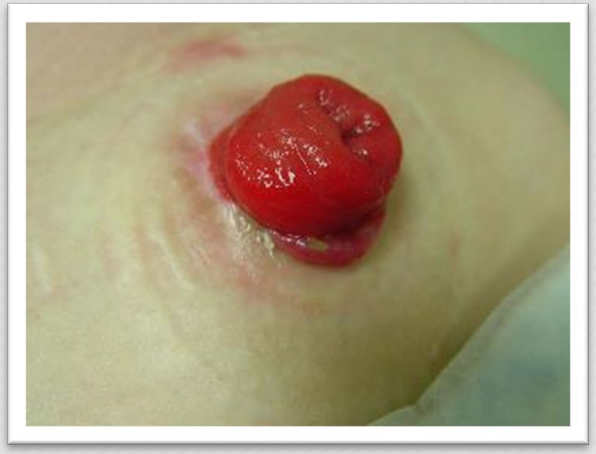


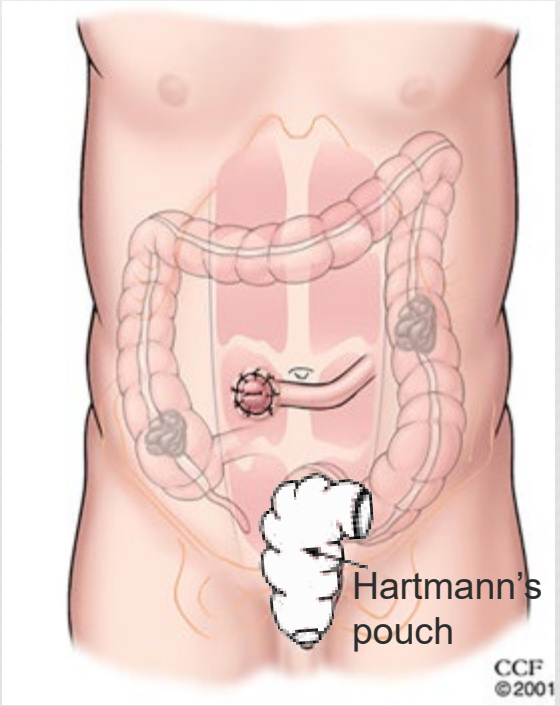
Image courtesy of J. Colwell.

Reprinted from Ashburn JH. In: *Pouchitis and Ileal Pouch Disorders.* Academic Press; 2019:29-40. Copyright 2019, with permission from Elsevier.
https://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/crohns_disease.pdf

Total Abdominal Colectomy, Ileostomy, Hartmann's Pouch (Staging Procedure)

Colon removed, rectum/anus remains with end ileostomy

Rectum preserved

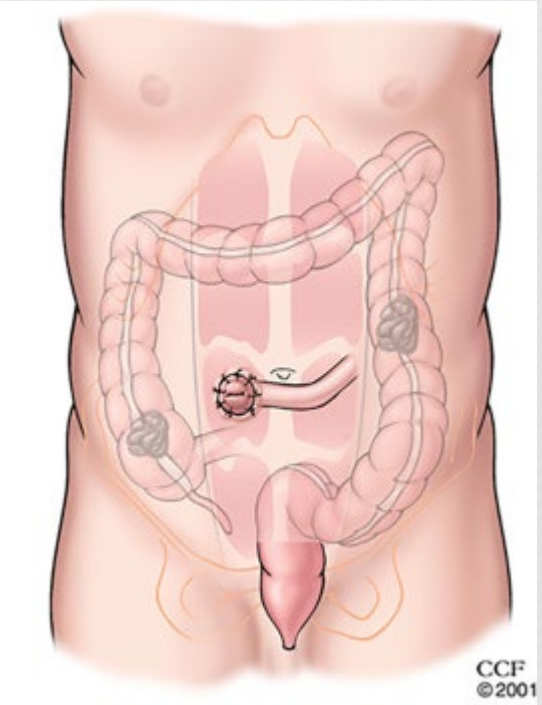


Reprinted from Ashburn JH. In: *Pouchitis and Ileal Pouch Disorders.* Academic Press; 2019:29-40. Copyright 2019, with permission from Elsevier.
https://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/crohns_disease.pdf

Proctocolectomy, Ileal Pouch Anal Anastomosis (IPAA; J-Pouch) for UC

Stage 1

Colon removed, rectum remains with end ileostomy



IPAA = ileal pouch-anal anastomosis.

Reprinted from Ashburn JH. In: *Pouchitis and Ileal Pouch Disorders.* Academic Press; 2019:29-40. Copyright 2019, with permission from Elsevier.

https://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/crohns_disease.pdf

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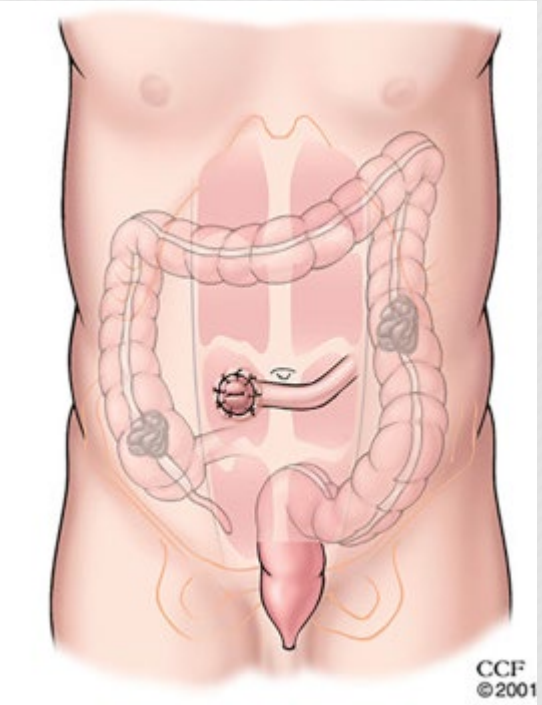
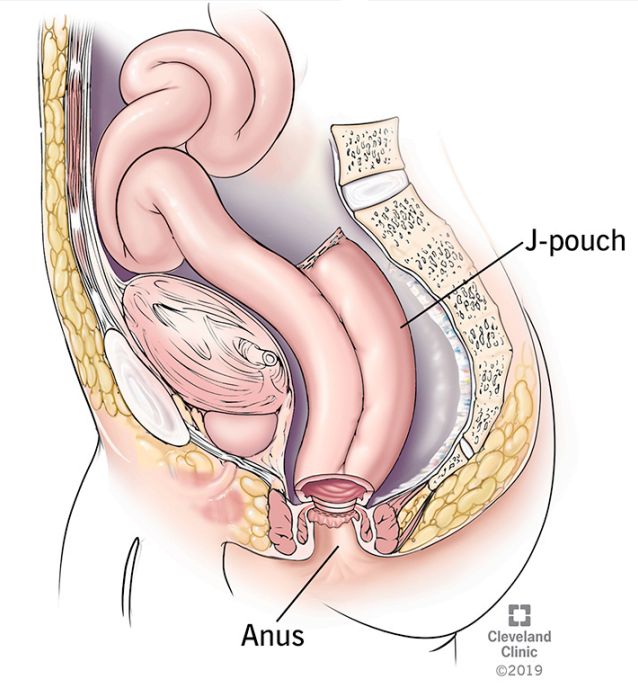


Stage 2

Rectum removed, J-pouch created, diverting ileostomy

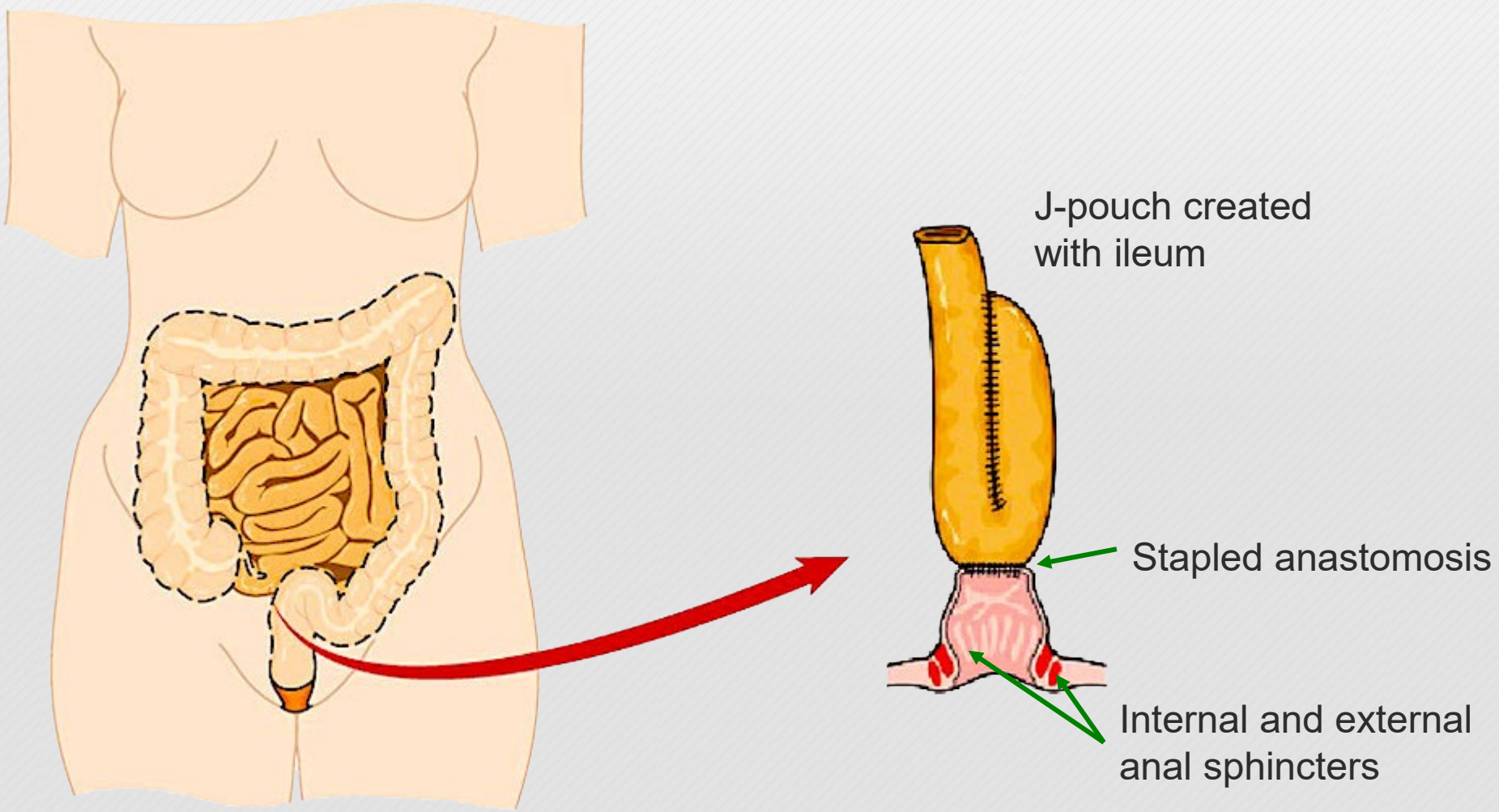
Stage 3

Ileostomy closed



Reprinted from Ashburn JH. In: *Pouchitis and Ileal Pouch Disorders.* Academic Press; 2019:29-40. Copyright 2019, with permission from Elsevier.
M'Koma AE, et al. *Int J Colorectal Dis.* 2007;22(10):1143-1163 ; Cleveland Clinic. Accessed December 10, 2021. https://my.clevelandclinic.org/health/treatments/21062-j-pouch-surgery
https://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/crohns_disease.pdf

Ileal Pouch Anal Anastomosis (IPAA; J-Pouch)



Ileoanal reservoir (J-pouch). July 8, 2021. Accessed December 10, 2021. https://commons.wikimedia.org/wiki/File:Ileoanal_Reservoir.jpg

Benefits of UC Surgery

- Technically **it's a cure and eliminates colon cancer** risk

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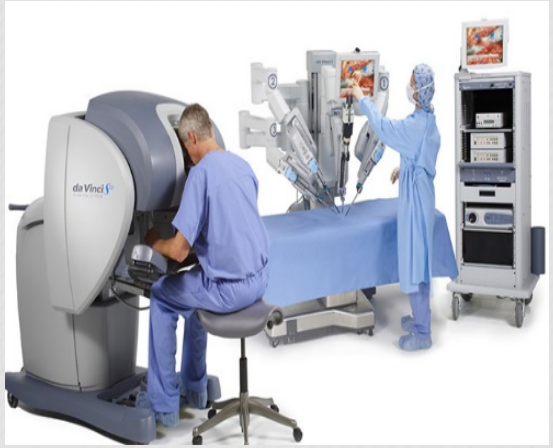
- **Ileal pouch anal anastomosis:**
  - **Restores bowel continuity** through the anus, **no permanent stoma**

Benefits of UC Surgery

- Technically **it's a cure and eliminates colon cancer** risk
- Patients can **get off IBD medications**
- **Restores health quickly** (anemia, nutrition, **quality of life**)
- **Ileal pouch anal anastomosis:**
  - **Restores bowel continuity** through the anus, **no permanent stoma**
- May be done using **minimally invasive techniques** (eg, laparoscopic, laparoscopic-assisted, robotic) in most cases



Risks of UC Surgery

- **Early:**
  - **All abdominal surgery:**
    - **Infection – bladder - UTI, pneumonia, wound, rectal stump leak in Hartmann's procedure**
      - **Good bowel prep, antibiotics preop and postop, coughing and deep breathing**
    - **Bleeding**
    - **Blood clots (deep vein thrombosis, pulmonary embolism)**
    - **Postop ileus**
  - **Rectum/anus removal (proctocolectomy or J-pouch)**
    - **Injury to ureters and nerves, affecting urinary flow and sexual function**
    - Ileoanal pouch **anastomotic leak** – sinus tract, abscess

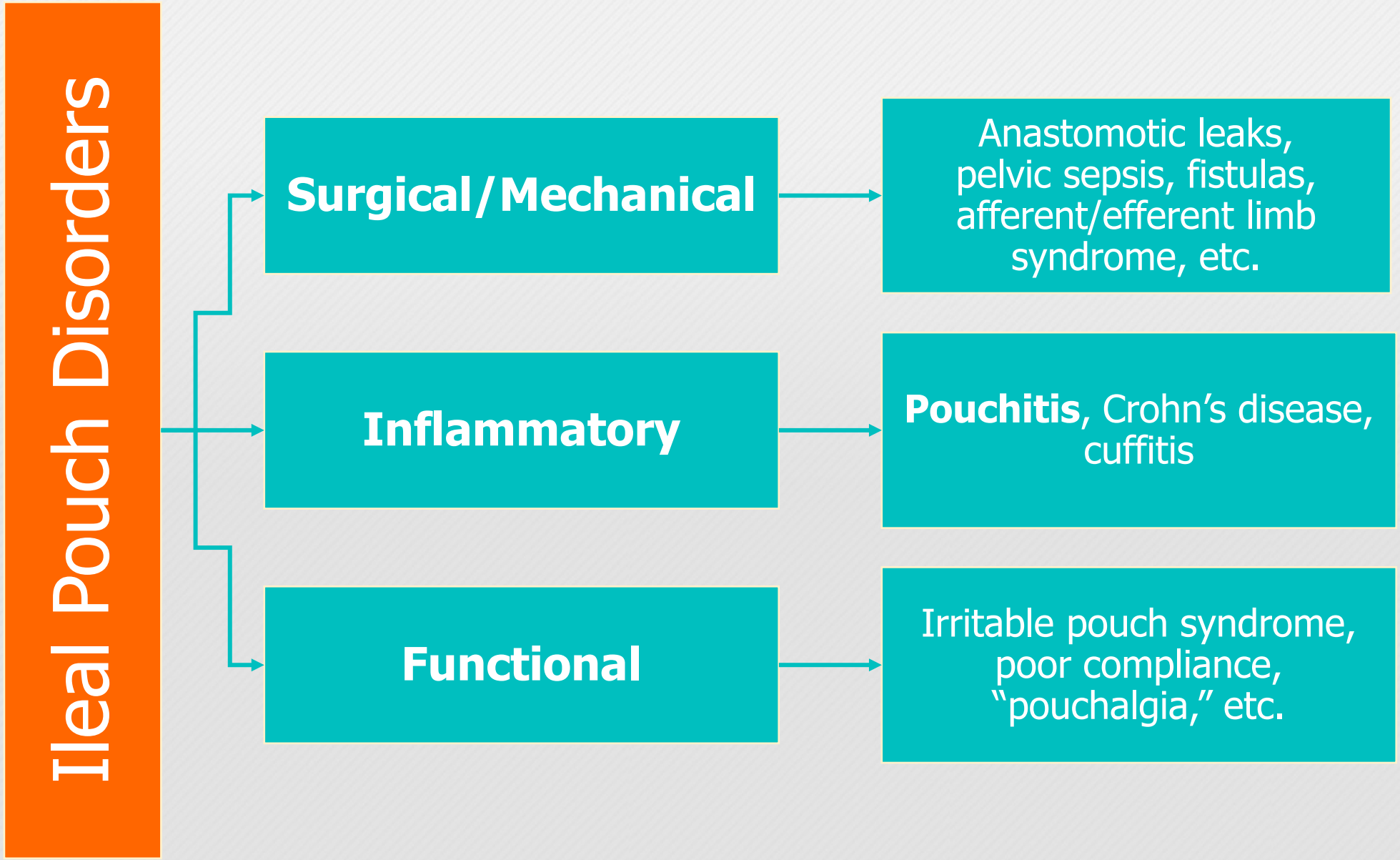
UTI = urinary tract infection.

Rubin M. In: *Wound, Ostomy, and Continence Nurses Society Core Curriculum: Ostomy Management*. 2nd ed. Wolters Kluwer; 2021:71-99; Fichera A, et al. *J Gastrointest Surg*. 2007;11(6):791-803; Grucela A, et al. *Mt Sinai J Med*. 2009;76(6):606-612; Kornbluth A, et al. *Am J Gastroenterol.* 2010;105(3):501-523; Surgery in Inflammatory Bowel Diseases (IBDs). Accessed Nov 5, 2021. https://www.crohnscolitisfoundation.org/sites/default/files/2020-07/Surgical%20Pearls_final-1.pdf

Risks of UC Surgery

- **Late:**
  - **Delayed perineal wound healing,** anus closed – use air seat cushion
  - **Stoma complications,** such as hernia, prolapse, retraction
  - **Small bowel obstruction** (adhesions), at stoma site with swelling
  - **Peri-J-pouch abscess,** due to a leak
  - **Fertility issues,** dyspareunia, infertility, decreased erections

Rubin M. In: *Wound, Ostomy, and Continence Nurses Society Core Curriculum: Ostomy Management*. 2nd ed. Wolters Kluwer; 2021:71-99; Fichera A, et al. *J Gastrointest Surg*. 2007;11(6):791-803; Grucela A, et al. *Mt Sinai J Med*. 2009;76(6):606-612; Kornbluth A, et al. *Am J Gastroenterol.* 2010;105(3):501-523; Surgery in Inflammatory Bowel Diseases (IBDs). Accessed Nov 5, 2021. https://www.crohnscolitisfoundation.org/sites/default/files/2020-07/Surgical%20Pearls_final-1.pdf



Shen B, et al. *Am J Gastroenterol.* 2005;100(12):2796-2807.

Pouch Complications

- **Pouchitis: 50% overall**
- **Cuffitis:** 10%-15%
- **Anastomotic Complications**
  - **Leaks:** 6%-10%
  - **Pelvic sepsis:** 4%-6%
    - Can result in pouch failure
  - **Pouch fistulae/sinus tract:** 22%-33%
    - Can result in pouch failure
- **Anastomotic strictures:** 16%
- **Dysplasia/neoplastic:** 3%-2.7%
  - Mostly in cuffitis, especially if preop diagnosis of dysplasia, cancer

- **Sexual dysfunction:** 15% to 40%?

  (Laparoscopic approach has reduced?)
  - **Men**
    - Impotence, **decreased erections**
  - **Women**
    - **Dyspareunia**
    - **Female infertility** reduced by approximately 35%
- **CD:** 10%-13%
  - Develops later
  - Can result in pouch failure
- **Pelvic vein thrombosis:** 7%-10%
  - Can result in pouch failure

Quinn KP, et al. *Inflamm Bowel Dis.* 2019;25(3):460-471; Shen B, et al. *Am J Gastroenterol.* 2005;100:93-101; Fichera A, et al. *J Gastrointest Surg.* 2009;13(3):526-532; Shen B. UpToDate. Updated September 25, 2020. Accessed December 10, 2021. https://www.uptodate.com/contents/management-of-acute-and-chronic-pouchitis

Pouchitis

Up to 50% of J-pouch patients have ≥1 episode of "pouchitis"

"Feels like UC all over again"

- **Symptoms:** Loose watery frequent stools, urgency, leakage, crampy pain, ± blood, fatigue
- **Etiology:** Reaction of the pouch lining to the microbiome flora
- **Treatment:** strong evidence for 2-week course of ciprofloxacin or metronidazole
- **Chronic, relapsing pouchitis:** 10% to 15% of patients
  - Treat with ciprofloxacin + metronidazole 28 days
  - May need long-term antibiotic suppression
  - Probiotics (VSL#3 DS) in preventing acute recurrence
  - Use of other "IBD therapy studies" ie, biologics—anti-TNF, vedolizumab, ustekinumab

TNF = tumor necrosis factor.

Shen B, et al. *Dig Dis Sci*. 2006;51(12):2361-2364; Mimura T, et al. *Gut.* 2005;53:108-14; Yu ED, et al. *World J Gastroenterol*. 2007;13:5598-5604; Fichera A, et al. *J Gastrointest Surg*. 2009;13(3):526-532; Fleshner PR. UpToDate. Accessed November 5, 2021. https://www.uptodate.com/contents/surgical-management-of-ulcerative-colitis; Zulkowski K. *Adv Skin Wound Care*. 2012;25(5):231-236; Bär F, et al. *Aliment Pharmacol Ther.* 2018;47(5):581-587; Gregory M, et al. *Inflamm Bowel Dis.* 2019;25(9):1569-1576.

J-Pouch: What to Expect

- Average **4 to 8 stools** per day, **best 4 to 6**
- Liquid-to-**mostly pasty** consistency—80% of time over 24 hours
- Can usually delay bowel movement for couple hours
- **Little or no urgency** to pass stool
- Usually, **no leakage:**
  - If present, at night, only a wetness
  - Older patients more at risk for leaks / nighttime initially
- Wet Ones, moisture barrier **ointments, anal leakage pads** to prevent rash as needed
- **Can eventually eat most foods** without difficulty—spicy or high sugar, fatty or roughage foods may increase stools
- Most patients are **happy with results**

Function improves over time!

Fichera A, et al. *J Gastrointest Surg*. 2009;13(3):526-532; Holder-Murray J, et al. *World J Gastroenterol*. 2009;15(7):769-773; Michelassi F, et al. *Ann Surg*. 2003;238(3):433-441; Perry-Woodford Z, et al. *Br J Nurs*. 2008;17(4):220-224; Rubin M. In: *Wound, Ostomy, and Continence Nurses Society Core Curriculum: Ostomy Management*. 2nd ed. Wolters Kluwer; 2021:71-99.

Crohn’s Disease

When Is Surgery Needed in Crohn's Disease?

- **Failure or complications of medical therapy** – Steroid dependency
- **Perforation**
- **Extraintestinal manifestations**
- **Growth failure** (in pediatric patients)
- **Hemorrhage**
- **Decreased quality of life**

- **Fistulas and abscesses**
- **Perianal complications**
- **Malnutrition**

Horton KM, et al. In: *Advanced Therapy of Inflammatory Bowel Disease*. 3rd ed. Vol 1. People's Medical Publishing House; 2011:175-184;
Kornbluth A, et al. *Am J Gastroenterol*. 2010;105(3):501-523.

Key Points in Crohn's Disease Surgery

- Typically, **only the segments of bowel affected are removed**
  - Healthy bowel is left intact or mild disease may remain

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  - Fecal diversion with stoma
  - Proctectomy

Key Points in Crohn's Disease Surgery

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  - **Healthy bowel** is left intact or mild disease may remain
- **Perianal Disease: Combination of medical and surgical treatment**
  - Sphincter preserving surgery – ie, fistula/seton placement
  - Fecal diversion with stoma
  - Proctectomy – removal of rectum and anus
- **Crohn's disease often reoccurs at the same location over time***
  - **Restart effective Crohn's therapy** once no infections noted at post-op visit
  - **Rescope after 3 to 6 months** to assess for recurrence; adjust therapy if recurrent Crohn's is observed!

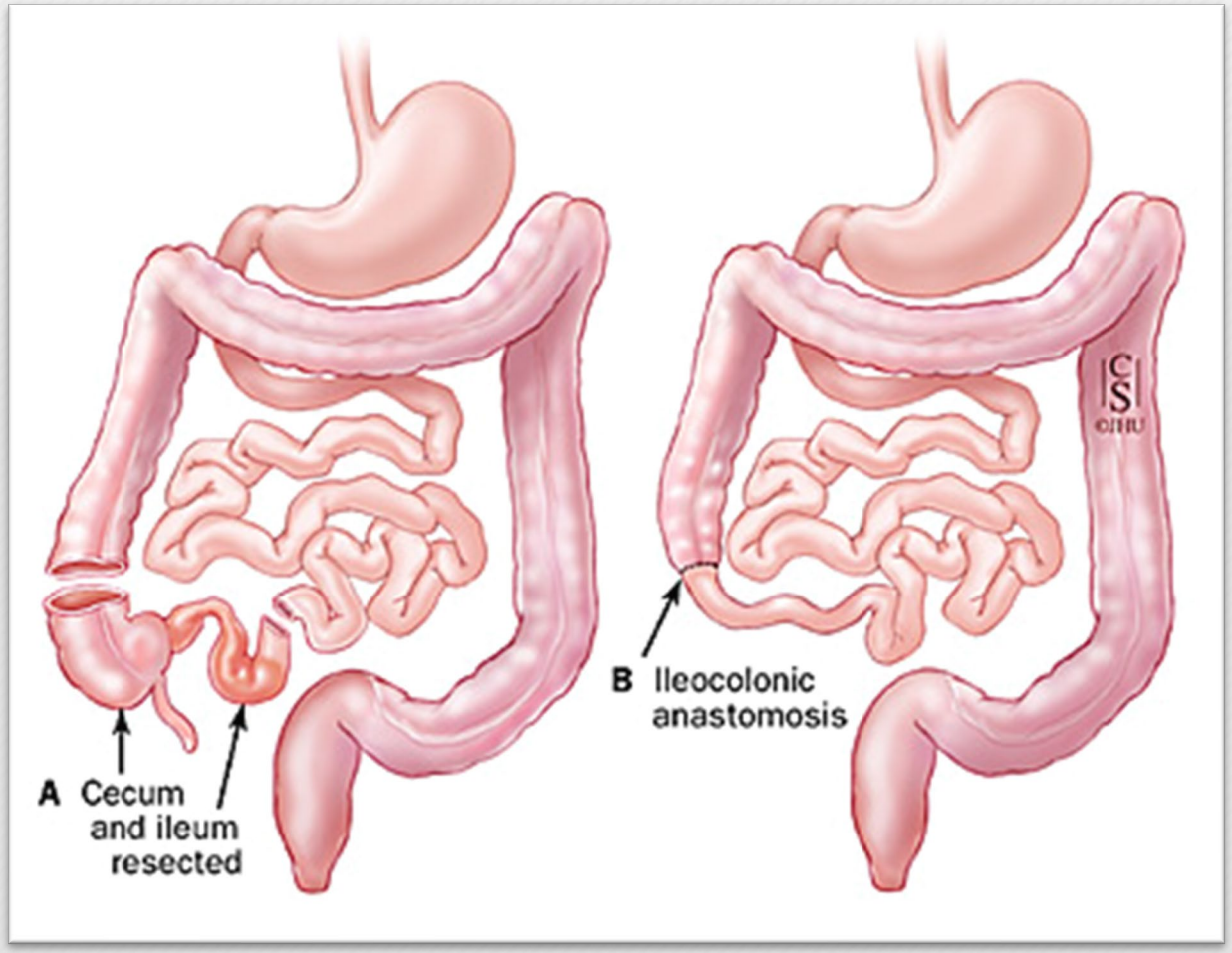
*Exception to the rule: CD involving **only the colon** is often cured by removing the entire colon and rectum/anus with stoma

KEY-reassess for recurrence with ileoscopy

Resection of Crohn's Disease Segment

The most common bowel surgery for CD

Anastomosis of Healthy Bowel



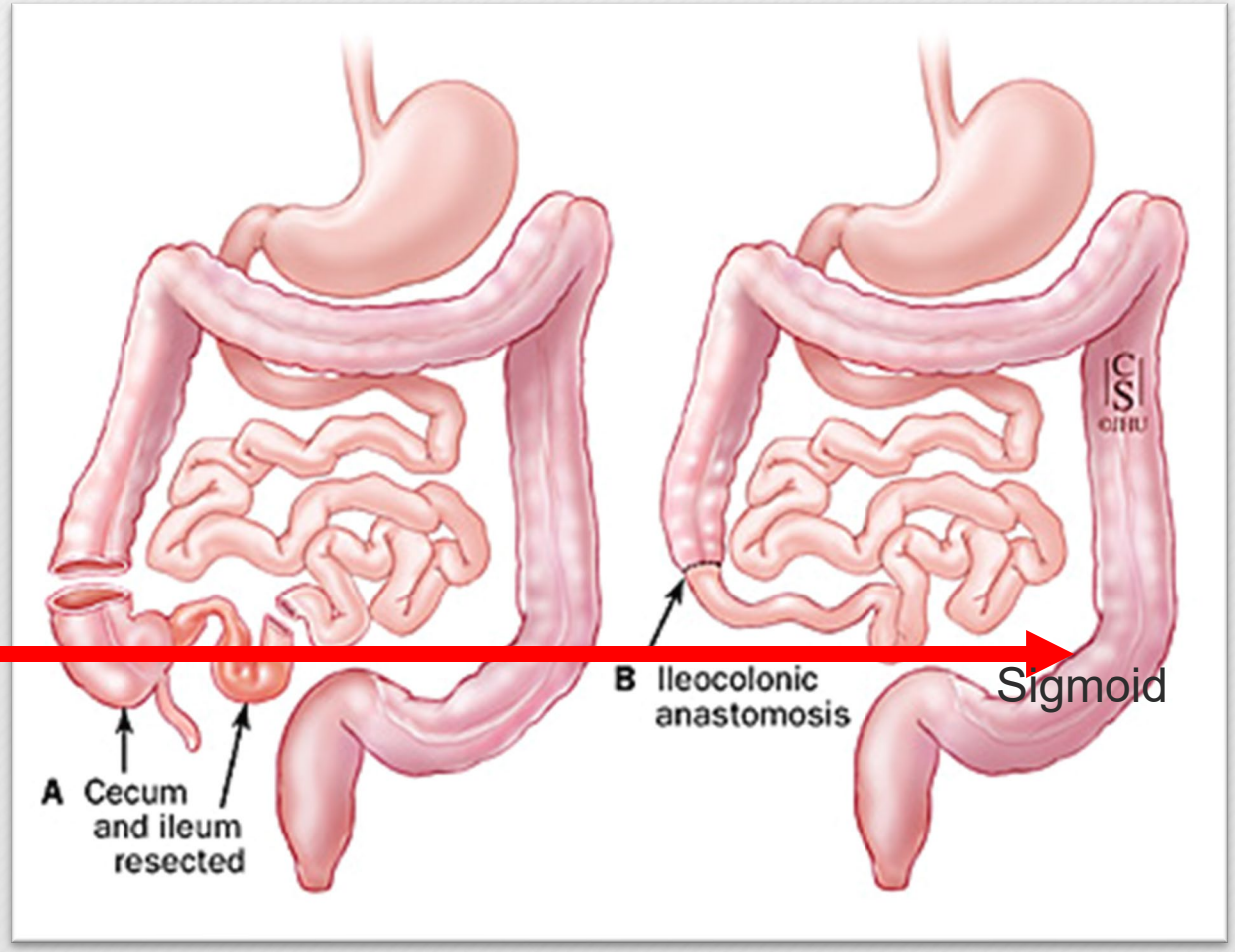
Johns Hopkins. Crohn's Disease. Accessed December 10, 2021. https://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/crohns_disease.pdf

Resection of Crohn's Disease Segment

The most common bowel surgery for CD

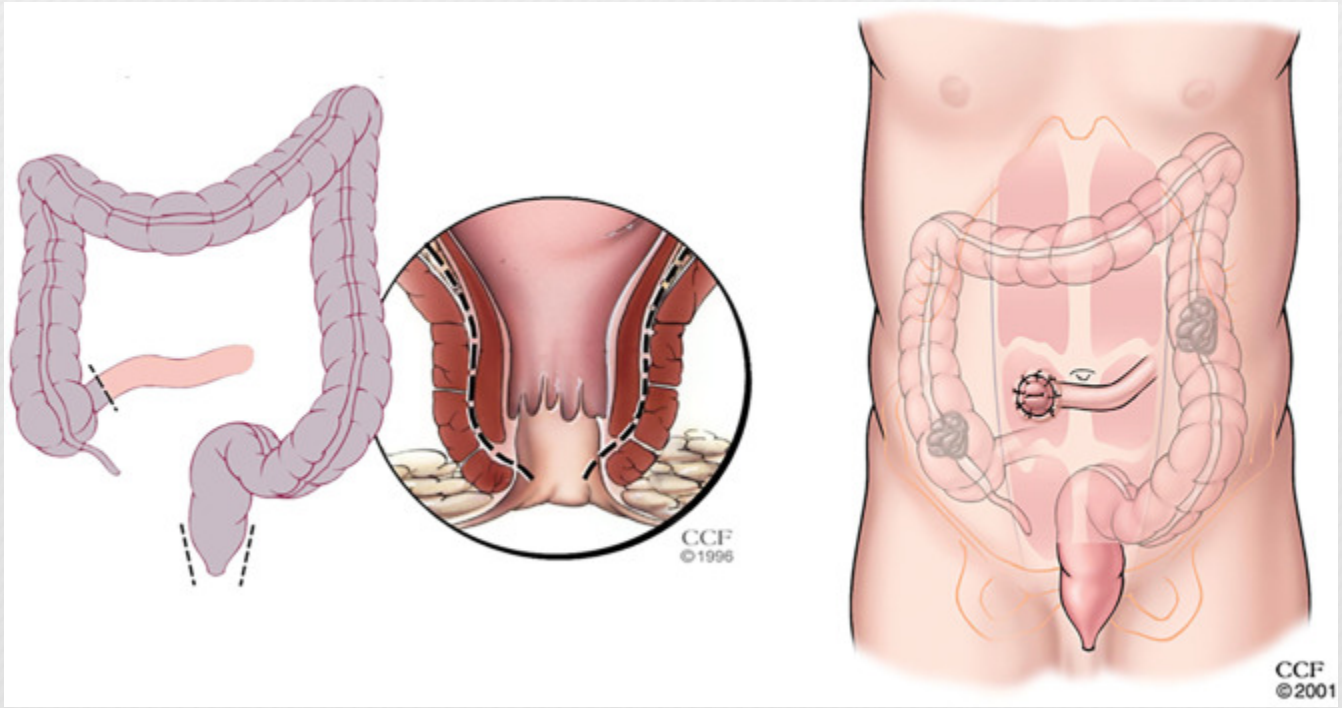
Sometimes, a temporary ileostomy is necessary if diseased or fistula closure is needed in the sigmoid area to allow the distal anastomosis to heal if there is risk of decreased healing

Anastomosis of Healthy Bowel



Johns Hopkins. Crohn's Disease. Accessed December 10, 2021. https://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/crohns_disease.pdf

Proctocolectomy With Permanent Ileostomy



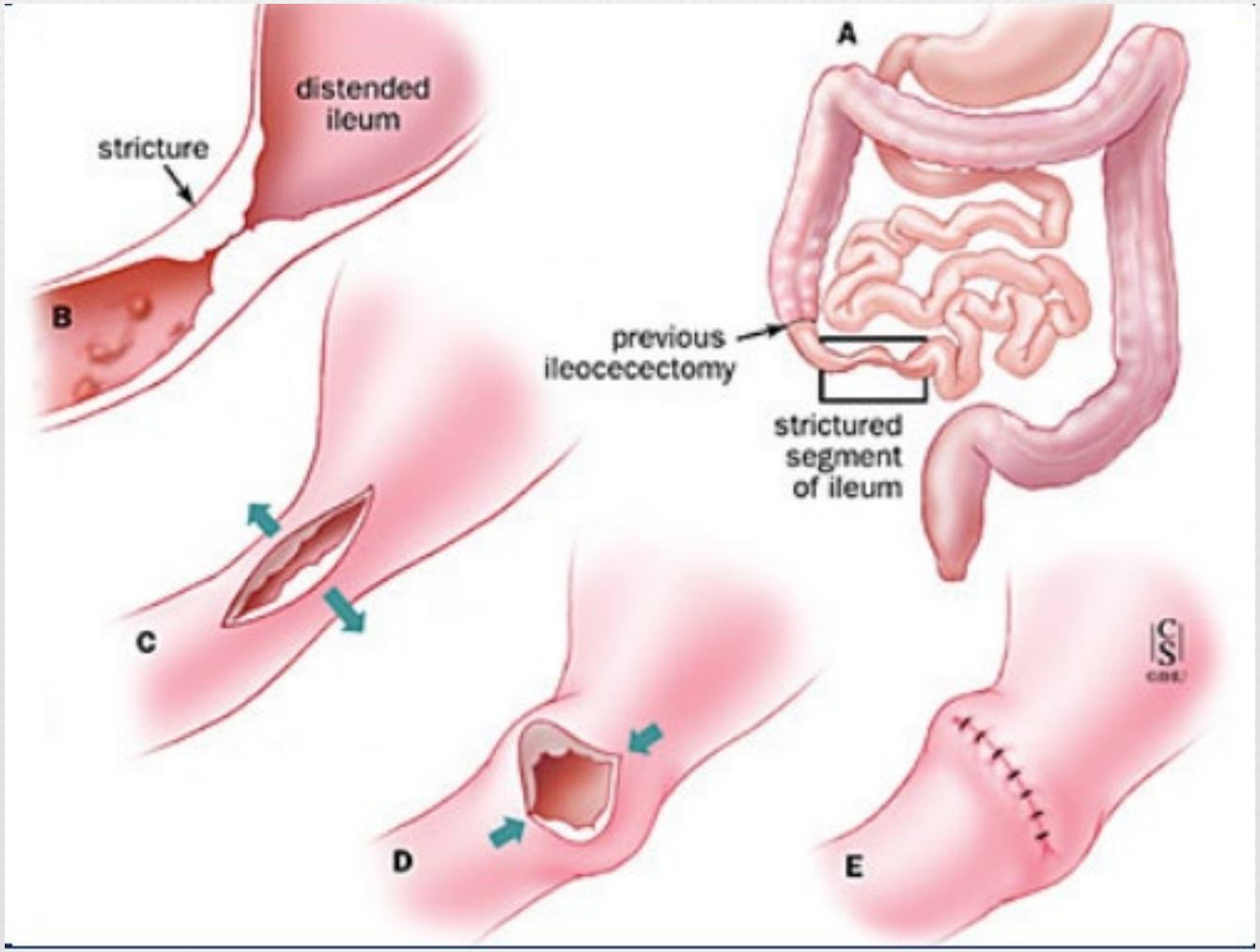
Resection may be curative for Crohn's Disease

Reprinted from Ashburn JH. In: *Pouchitis and Ileal Pouch Disorders.* Academic Press; 2019:29-40. Copyright 2019, with permission from Elsevier.

Bowel-sparing Intestinal Strictureplasty

No bowel resected

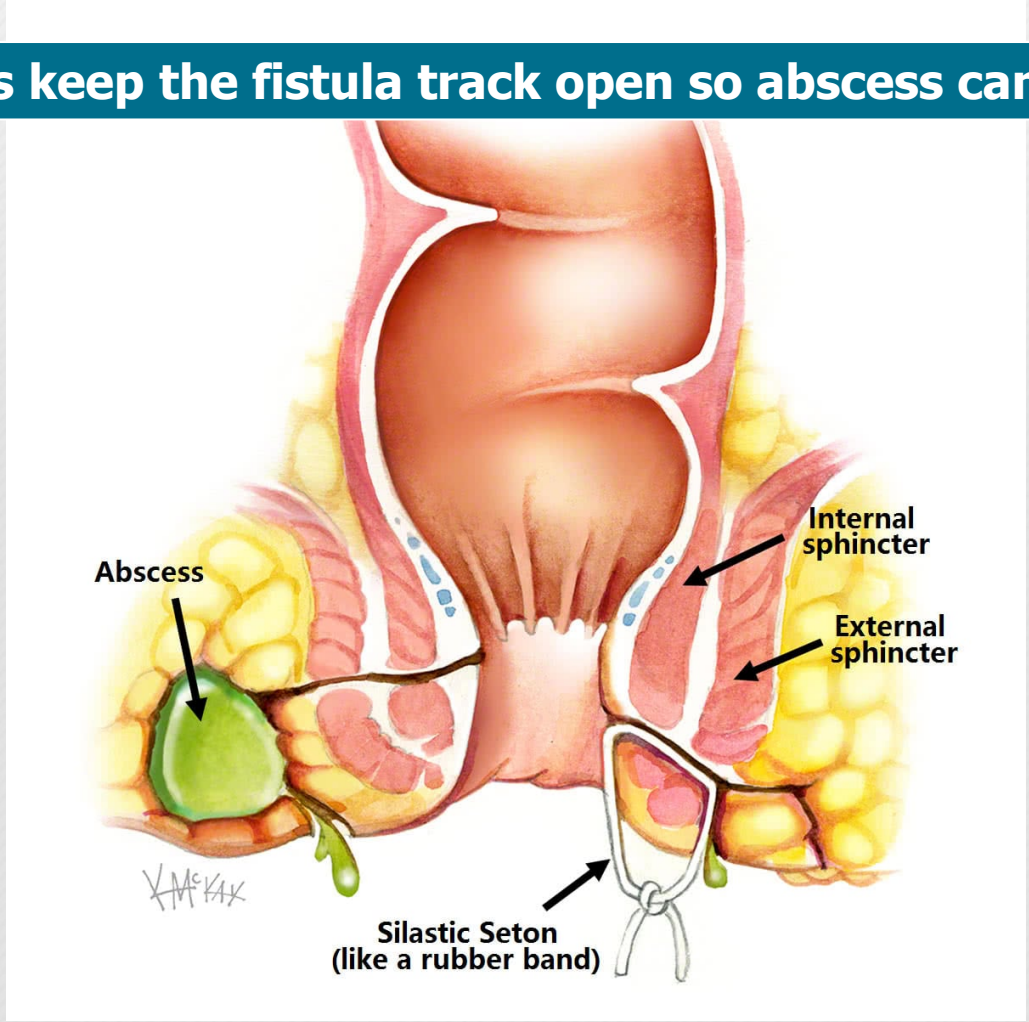
Recurrence rates low

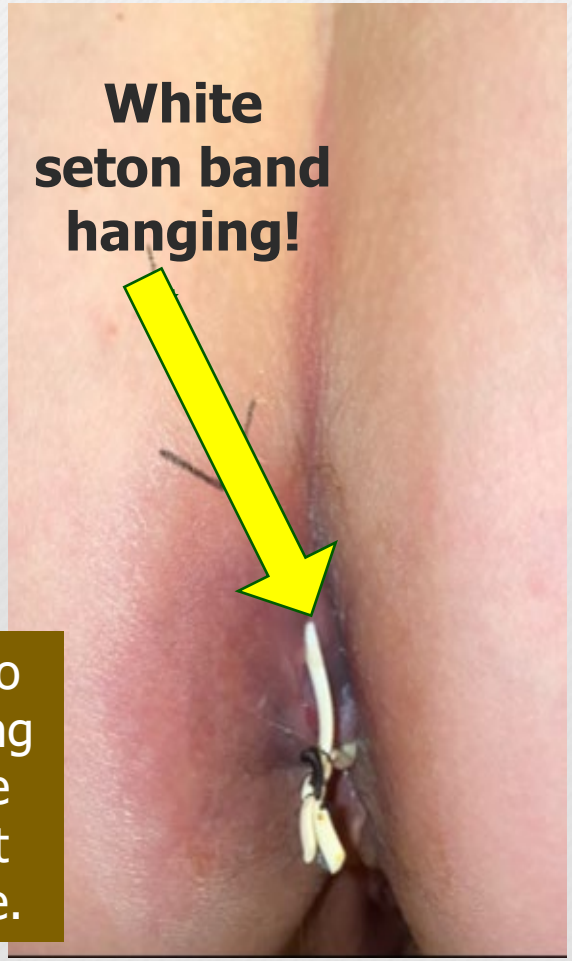


Ambe PB, et al. *J Gastrointestinal Surg.* 2012;16(10:209-217.
Johns Hopkins. Crohn's Disease. Accessed December 10, 2021.
https://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/crohns_disease.pdf

Setons Prevent Sphincter Damage

Setons keep the fistula track open so abscess can drain



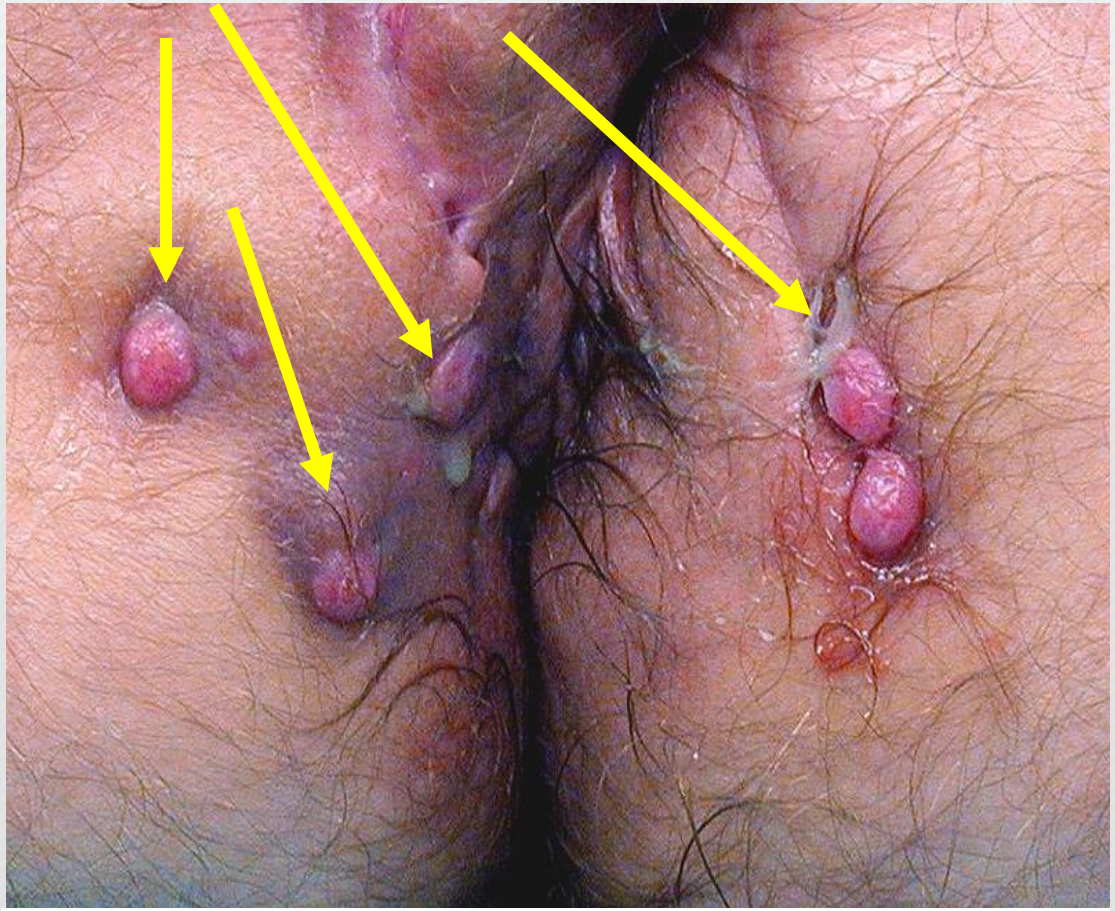


Setons best to be tied hanging down outside the body, not tied in a circle.

Combination medical and surgical Treatment

Colorectal Surgeons Sydney. Accessed December 10, 2021. https://colorectalsurgeonssydney.com.au/procedures/fistula-repair
Image courtesy of Michele Rubin, MSN, APN, CNS, CGRN.

Complex Perianal Fistula/Abscess Network



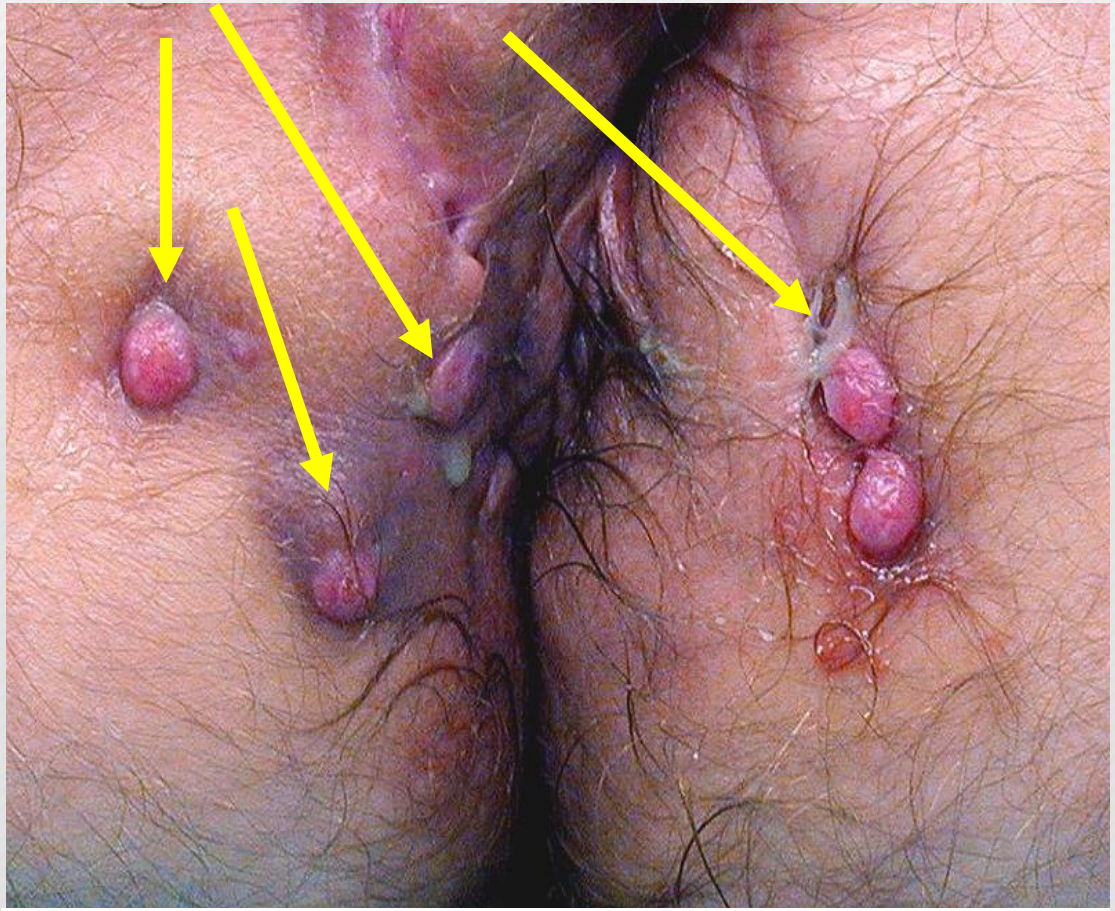
Sepsis, draining fistulae with heaped up granulation tissue

Schwartz DA, et al. *Ann Intern Med.* 2001;135(10):906-918.

Image courtesy of Michele Rubin, MSN, APN, CNS, CGRN.

Complex Perianal Fistula/Abscess Network

Staging procedure – diverting stoma



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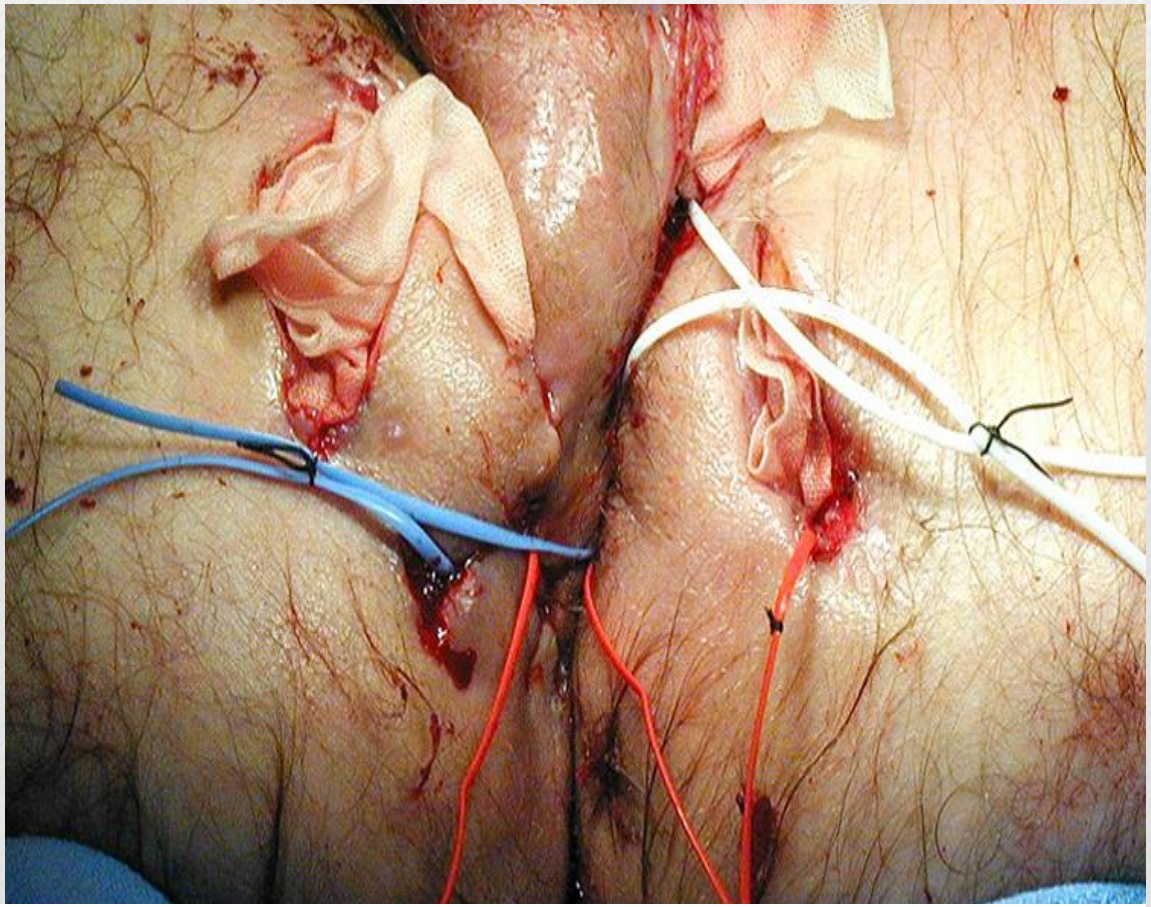


Diverting stoma and multiple I & Ds of abscesses - eventual proctectomy

I & Ds = incisions and drainages

Schwartz DA, et al. *Ann Intern Med.* 2001;135(10):906-918.

Images courtesy of Michele Rubin, MSN, APN, CNS, CGRN.

Benefits and Risks of Crohn's Disease Surgery

- **Benefits:**
  - **Removes the diseased segment only**
  - **Significant improvement** for most (symptoms, nutrition, **quality of life**)
  - **Laparoscopic technique** (preferred when possible)

Rubin M. In: *Wound, Ostomy, and Continence Nurses Society Core Curriculum: Ostomy Management*. 2nd ed. Wolters Kluwer; 2021:71-99; Fichera A, et al. *J Gastrointest Surg*. 2007;11(6):791-803; Grucela A, et al. *Mt Sinai J Med*. 2009;76(6):606-612; Kornbluth A, et al. *Am J Gastroenterol.* 2010;105(3):501-523; Surgery in Inflammatory Bowel Diseases (IBDs). Accessed Nov 5, 2021. https://www.crohnscolitisfoundation.org/sites/default/files/2020-07/Surgical%20Pearls_final-1.pdf

Benefits and Risks of Crohn's Disease Surgery

- **Benefits:**
  - **Removes the diseased segment only**
  - Significant improvement for most (symptoms, nutrition, and **quality of life**)
  - **Laparoscopic technique** (preferred when possible)
- **Risks:**
  - Major surgery incurs increased risk, such as infection, blood clots (deep vein thrombosis, pulmonary embolism), dehydration, ileus postoperatively, obstructions, and **multiple surgeries**
  - **Anastomotic leak**
  - **Short gut with multiple surgeries, diarrhea stools**
  - **Possible ostomy**
  - **Incontinence of stool** with seton's **if damage to sphincters**
  - **Not a cure; postoperative recurrence is common**

Rubin M. In: *Wound, Ostomy, and Continence Nurses Society Core Curriculum: Ostomy Management*. 2nd ed. Wolters Kluwer; 2021:71-99; Fichera A, et al. *J Gastrointest Surg*. 2007;11(6):791-803; Grucela A, et al. *Mt Sinai J Med*. 2009;76(6):606-612; Kornbluth A, et al. *Am J Gastroenterol.* 2010;105(3):501-523; Surgery in Inflammatory Bowel Diseases (IBDs). Accessed Nov 5, 2021. https://www.crohnscolitisfoundation.org/sites/default/files/2020-07/Surgical%20Pearls_final-1.pdf

Clinical Pearls in IBD Surgery

- **Surgery is necessary at times:**
  - Recognize treatment failure
  - **Discuss early,** not as last resort!
- **Match appropriate surgery to patient:**
  - **UC/CD**, type of procedure, need optimized **nutrition**, **staged procedure, drain abscess,** ileostomy, etc.
- **Shared decision-making:**
  - Discuss risks/benefits
  - **Promotes adherence, empowers patients!**
- **Perianal disease:**
  - **Combination of medical and surgical treatment**

- **Ongoing management if NO surgery:**
  - **Consider consequences of NO surgery—d**isease progression, decreased quality of life, hospitalizations, higher risk of complications
- **Ongoing management AFTER surgery:**
  - Pay special attention to issues, such as **stoma care** and **J-pouch adjustment,** pouchitis, & surveillance
  - **Postop visit in CD: refer back to GI** to restart CD treatment, as needed

- **A multidisciplinary team approach is key:**
  GIs — surgeons — a**dvanced practice providers (APPs)** — **nurses** — **ostomy/wound** — nutritionist — radiologist — pathologist — psychologist – pain specialist

Resources for Patients

- **Crohn's & Colitis Foundation – most trusted website!**
  https://www.crohnscolitisfoundation.org
  - Online education and support and recommended books
  - **Information Resource Center – surgery in IBD brochure**
  - Local chapters; support groups
  - Peer-to-peer support
  - Free 1-year membership with your referral
  - J-pouch support
  - **Nurses and APPs site:**
    - **APP resources, case studies, surgical pearls in IBD**
  - **IBD Clinical Hub**
  - **IBD Circle – discussion of patient cases**
- **Other resources:**
  - National Digestive Diseases Information Clearinghouse https://www.niddk.nih.gov
  - J-pouch.org
  - Ostomy support groups

Final Thought

- An experienced surgeon is critical for surgeries of the perianal area, sphincter, and J-pouch

Thank You!

Practical Tips for Managing IBD Patients With Ostomies

Janice C. Colwell, APRN, CWOCN, FAAN

Advanced Practice Nurse, Ostomy and Wound Care
Department of General Surgery
Inflammatory Bowel Disease Center
University of Chicago Medicine
Chicago, IL

Surgery Is the Treatment

- Preop education:
  - Living with a stoma
    - Skills
    - Practicalities
  - Stoma site marking
  - Peer-to-peer interaction

Ostomy.org

UOAA United Ostomy Associations of America, Inc.

HOME | OSTOMY INFORMATION | SUPPORT | ADVOCACY | WHO WE ARE | LATEST | EVENTS | DONATE | SEARCH

Ostomy Nutrition Guide

See our new "Eating with an Ostomy" Guide.

Read More

Crohn's Disease & Ulcerative Colitis Information

- Defining, Caring and Treating
- Preparing for Ostomy Surgery
- Common Issues, Managing Diet, Mental Health

Ostomy Information

- What Is An Ostomy?
- Living with an Ostomy: FAQs
- Diet + Nutrition
- Ostomy Skin Care
- Sexuality
- New Ostomy Patient Guide
- The Phoenix Magazine

My Ostomy

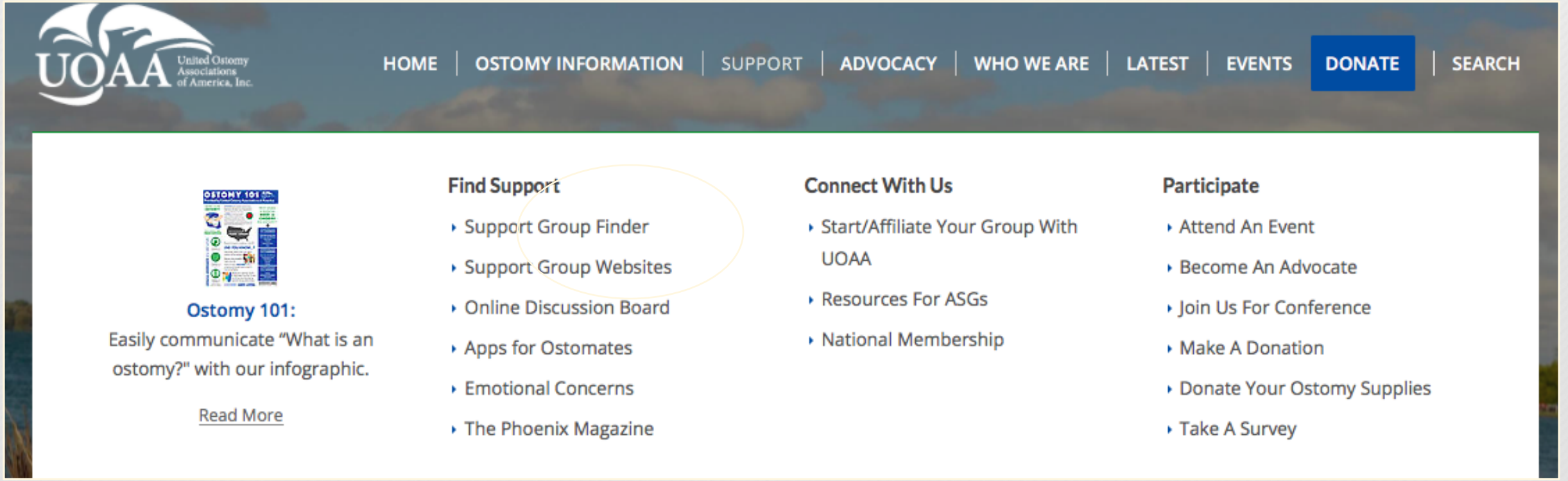
- Ileostomy
- Colostomy
- Urostomy
- J-Pouch
- Continent Diversions + Other Ostomy Types
- Español

General Information

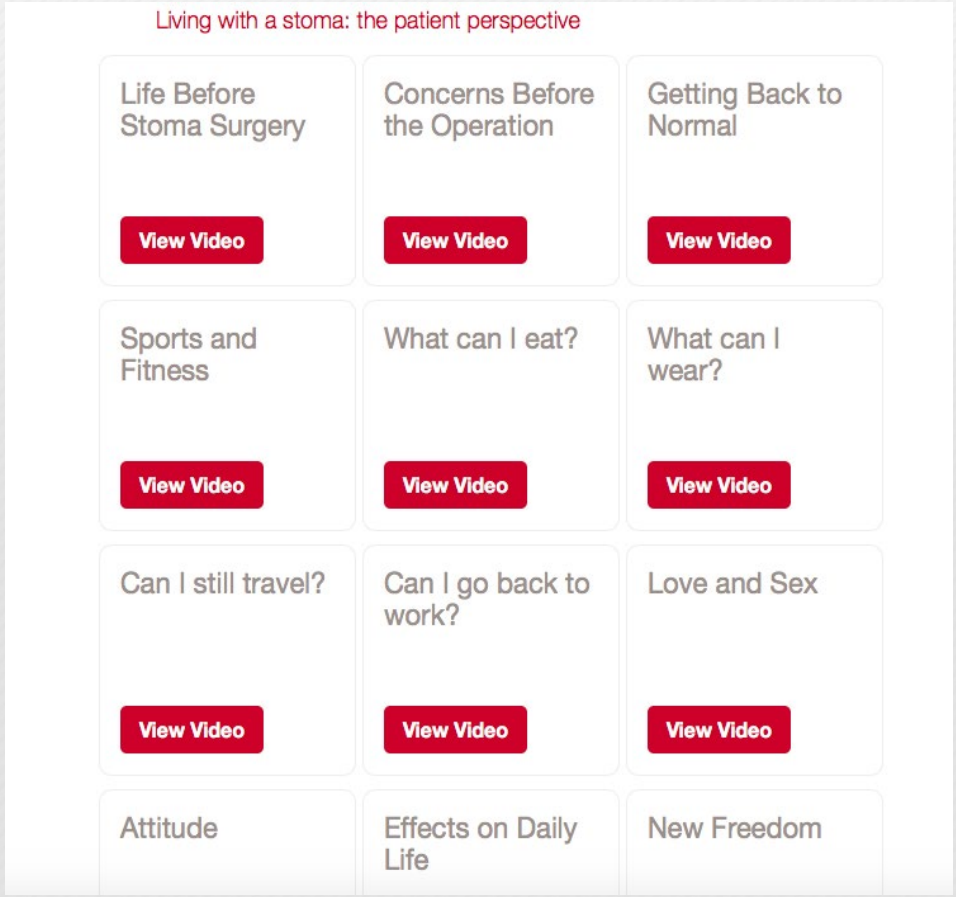
- Product + Supply Information
- Resources for Nurses/Home Health
- Travel Tips + TSA
- Bill Of Rights
- Donate Your Ostomy Supplies
- Emergency Supplies
- Related Links
- Find an Ostomy Nurse

Ostomy.org

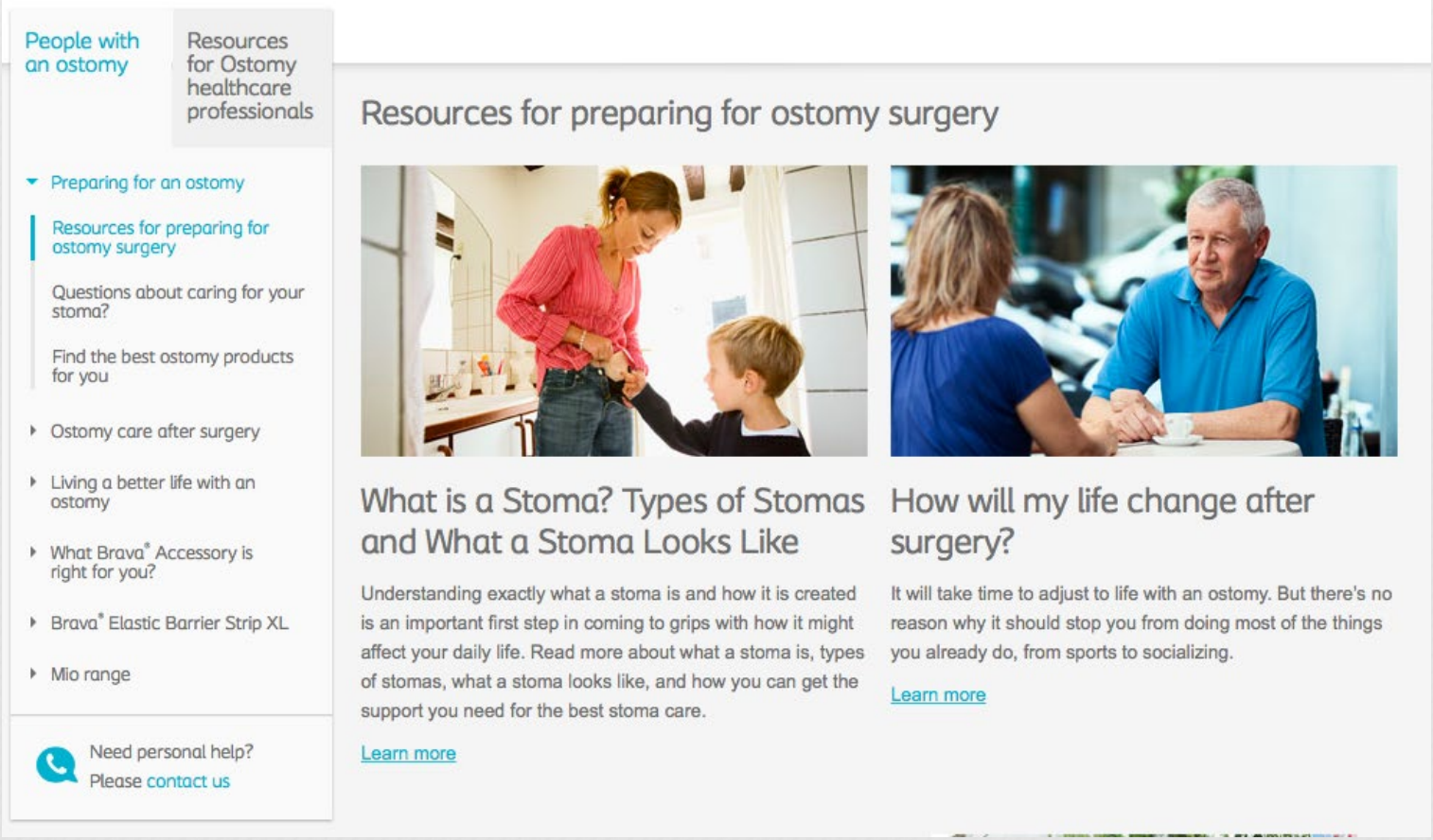
Support: peer to peer



Product Manufacturers' Websites

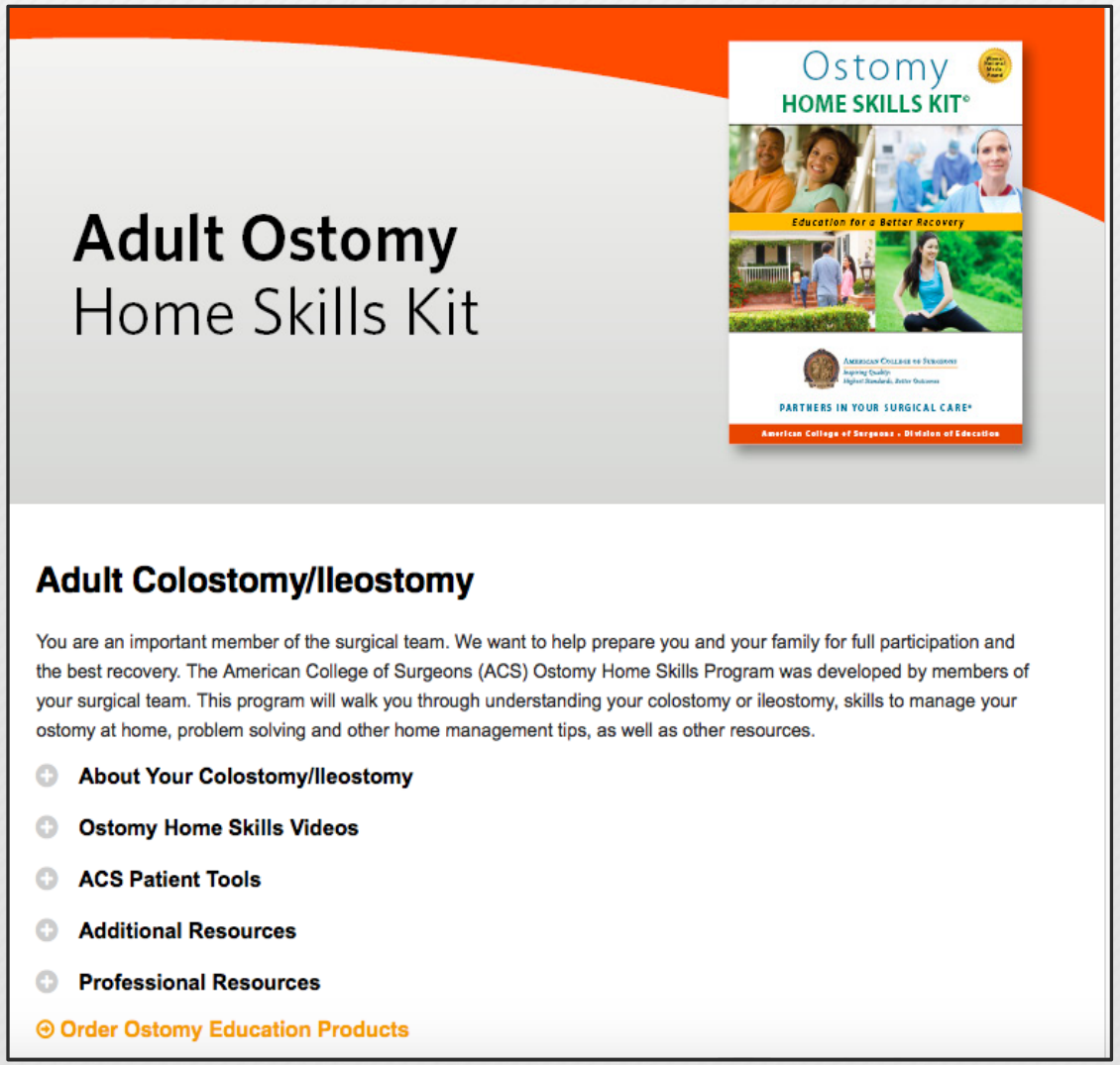


Hollister
Coloplast
ConvaTec

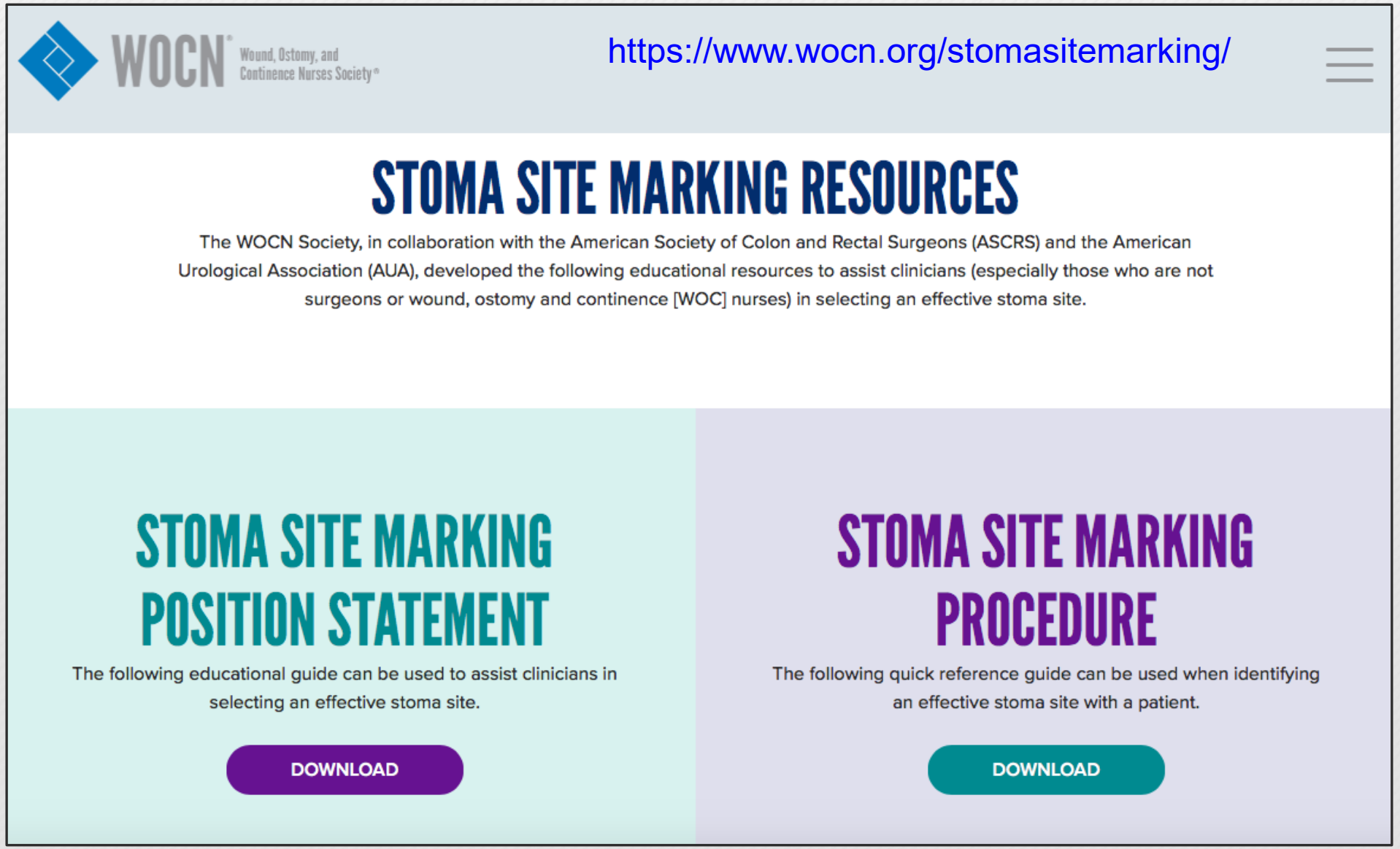


American College of Surgeons

- Preop education ostomy kit: https://www.facs.org/
- Contains:
  - Booklet with information on the operation
  - Home skills such as emptying and changing a pouch
  - DVD with demonstration of each skill
  - Stoma Practice Model
  - Stoma supplies (measurement guide, marking pen, scissors, sample pouch)
  - Ostomy self-care checklist



Stoma Site Marking

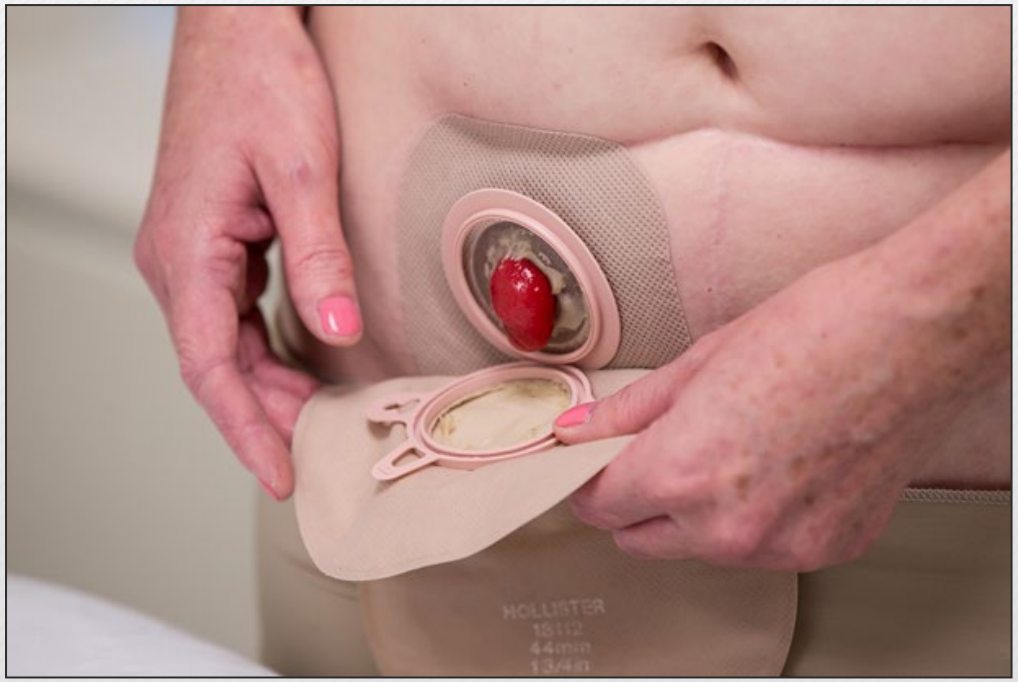


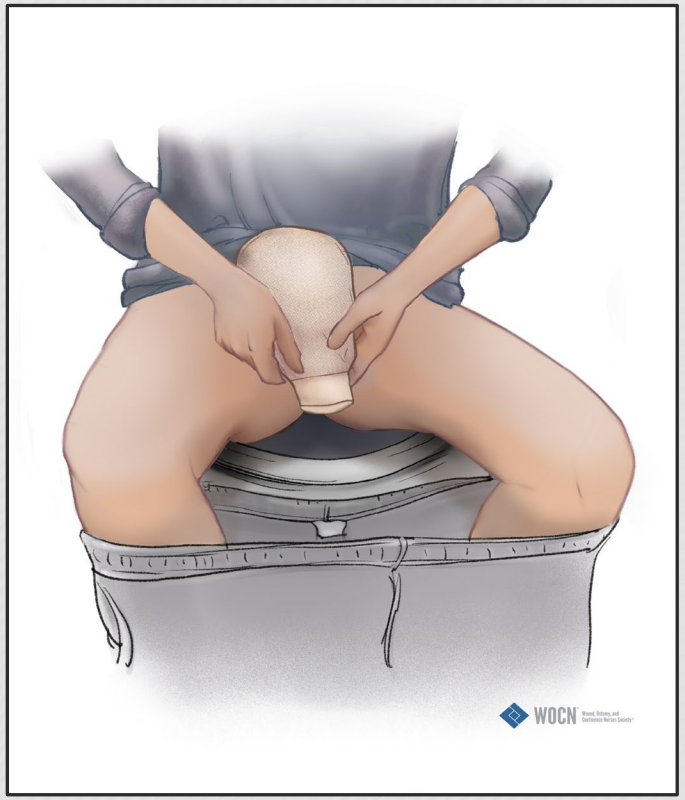
Stoma Site Marking

Wound, Ostomy, and Continence Nurses Society. Accessed December 10, 2021. https://youtu.be/tdzrhPBNJXE

Postop Care

- Skills Acquisition
  - How to empty the pouch
  - How to change the pouch



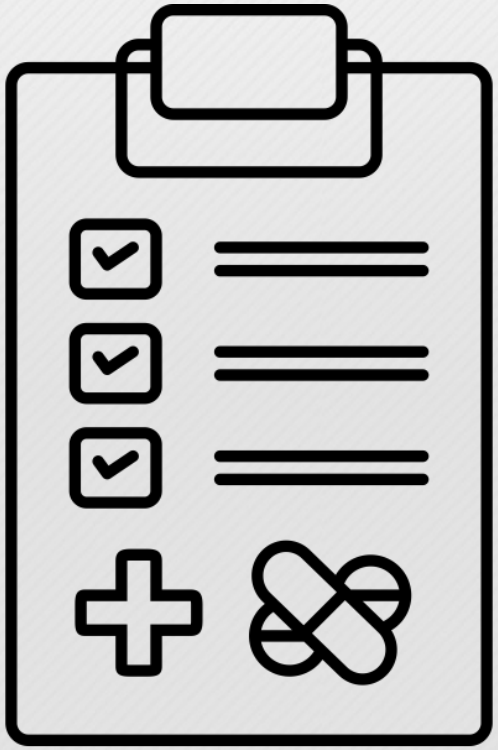


- Supplies for at least 2 weeks
- Referral:
  - Home care nursing
  - Ostomy nurse follow-up

Image courtesy of JC Colwell, APRN.
Drawing courtesy of Wound, Ostomy, and Continence Nurses Society.

Postop Care: Teaching Tips

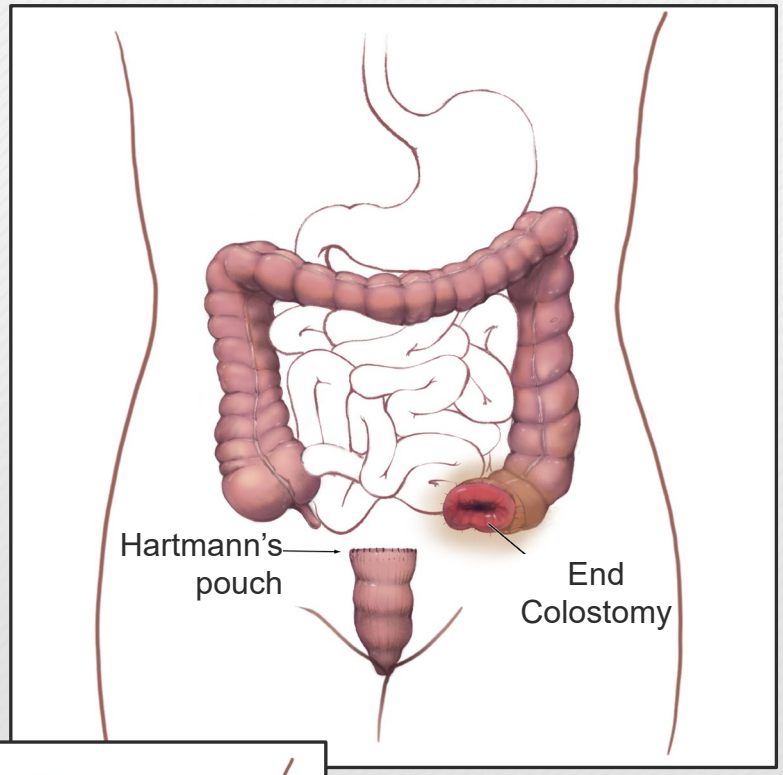
- Ileostomy patients
  - Teach:
    - Monitor output (volume and consistency)
    - Dietary considerations (fiber restrictions)
  - Medications:
    - ? Extended-release medications?
    - Antidiarrheals
  - When to seek assistance:
    - Reduced wear time
    - Injured peristomal skin

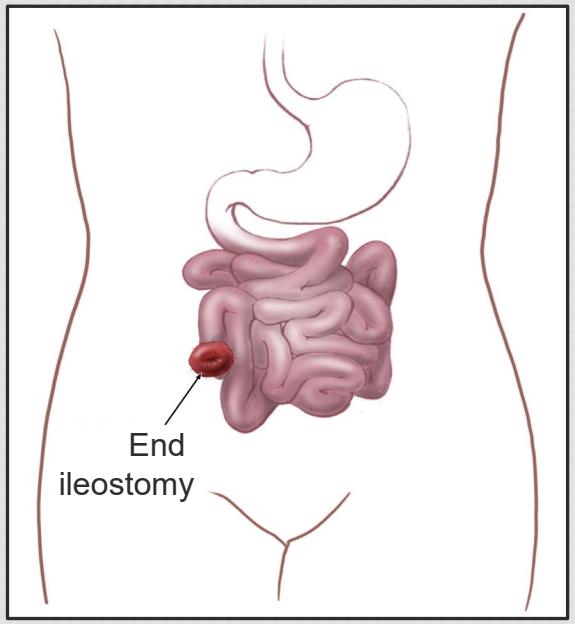


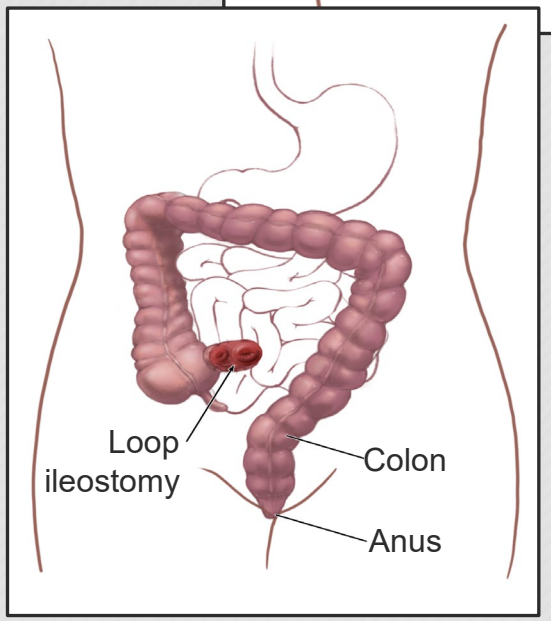
Graphic created by Priyanka from the Noun Project.

Post-Discharge Visit

- Review the operative report:
  - Where is the stoma (location in GI tract)
    - Small intestine (section)
    - Large intestine (section)
  - How much intestine is above the stoma
  - How much bowel is below the stoma
  - What type of stoma (loop or end)







GI = gastrointestinal.
Images courtesy of Wound, Ostomy, and Continence Nurses Society.

Post-Discharge Care

- Review the pathology report
  - Crohn's disease
    - Where was the disease
  - Ulcerative colitis
  - Any signs of dysplasia

Surgical Pathology Report

FINAL PATHOLOGIC DIAGNOSIS
Total abdominal colectomy, colon:
- Quiescent and mildly active ulcerative colitis involving the distal 50 cm of the colon.
- Portion of distal ileum without diagnostic abnormality.
- Appendix involved by endosalpingosis.
- Multiple reactive pericolic lymph nodes.

Comment
There is no evidence of dysplasia.

Post Discharge Visit Assessment

Question	Answer
• How many times in 24 hours do you empty your pouch?	• End ileostomy: ~1000 cc • Colostomy: depends on location
• What is the consistency of the stool?	• Ileostomy: pasty stool 80% • Colostomy: depends on location
• How often do you change your pouching system?	• Average wear time 4 days
• How does the skin around the stoma appear to you?	• Intact no openings, no itching

Richbourg L, et al. *J Wound Ostomy Continence Nurs*. 2008;35(5):504-508.

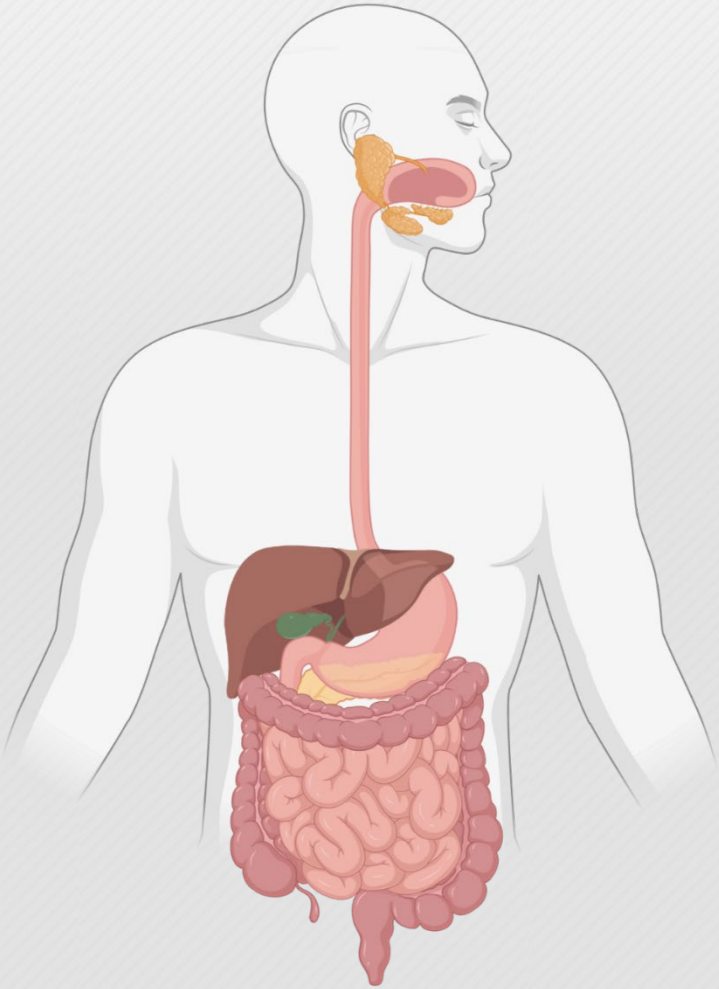
Postoperative Issues to Address

Issues	Outcomes
• Stoma will shrink over time	• Must reduce size in pouch opening
• Stoma makes noise	• Usually from postop edema
• Slow to heal perineal wounds	• Topical wound care
• Rectal discharge	• Reassurance/topical treatment
• Report of peristomal “ulcer”	• Consider pyoderma occurrence

Long-term Considerations

- **Patient to have a scope per stoma**
  - Instruct them to bring a complete pouch change with them
  - If a 2-piece system, they can remove the pouch and keep the flange in place

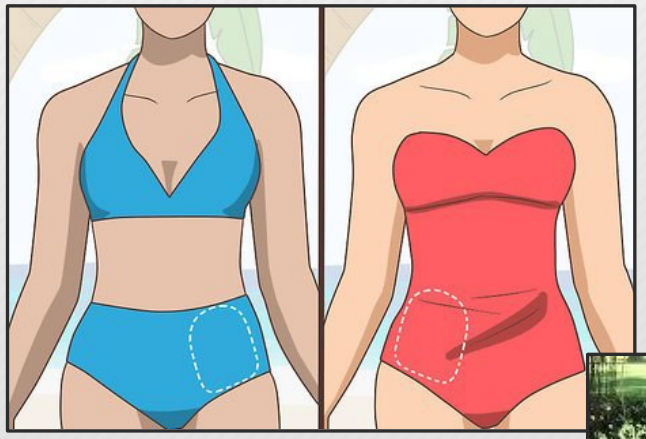
- **Patient to have a CT scan done**
  - Instruct to bring a complete pouch change with them
  - Instruct to expect high watery output (if oral contrast is used)



CT = computed tomography.
Image created with BioRender.com.

Questions About Living With a Stoma

- Can I get the pouch wet (showering, swimming etc.)?

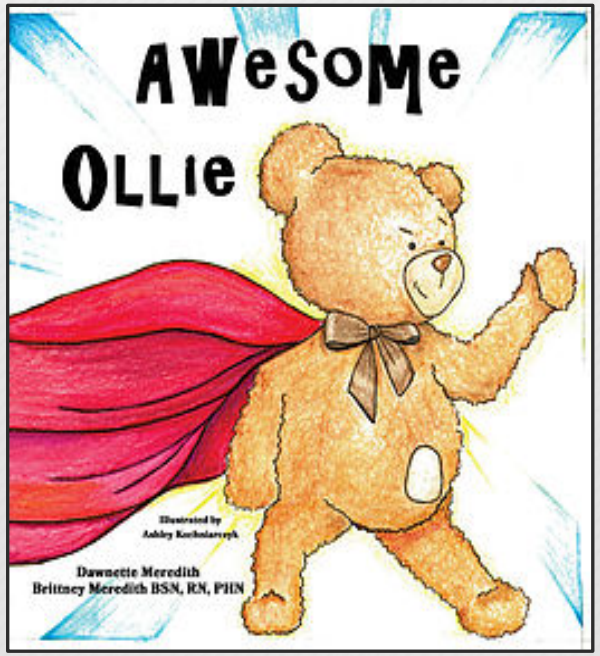


Images courtesy of JC Colwell, APRN.

Questions About Living With a Stoma

- How do I share this with my children?

Hollister.com



www.awesomeostomy.com

Questions About Living With a Stoma

- How do I conceal my pouching system?

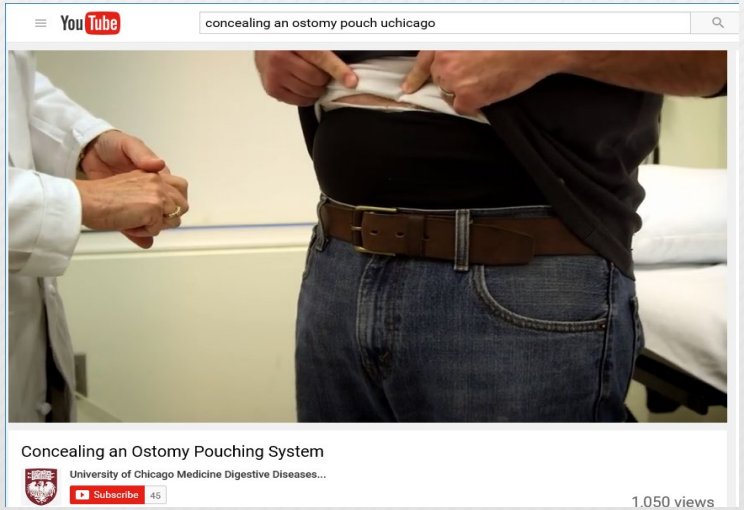
Images courtesy of JC Colwell, APRN.

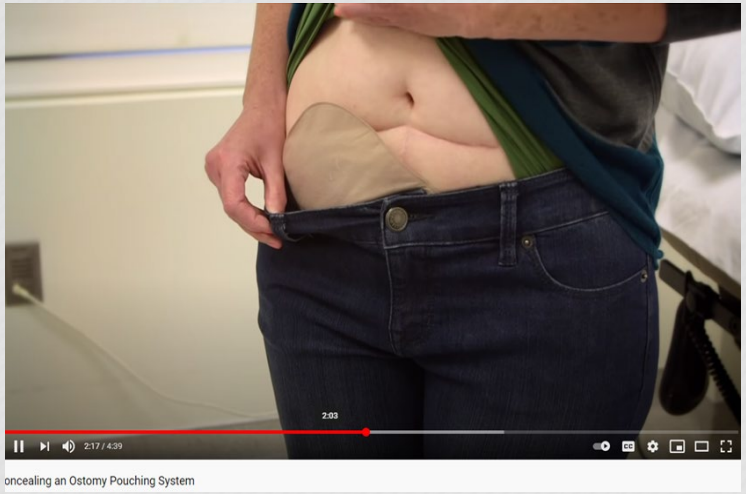
Questions About Living With a Stoma

- How do I conceal my pouching system?

Images courtesy of JC Colwell, APRN.

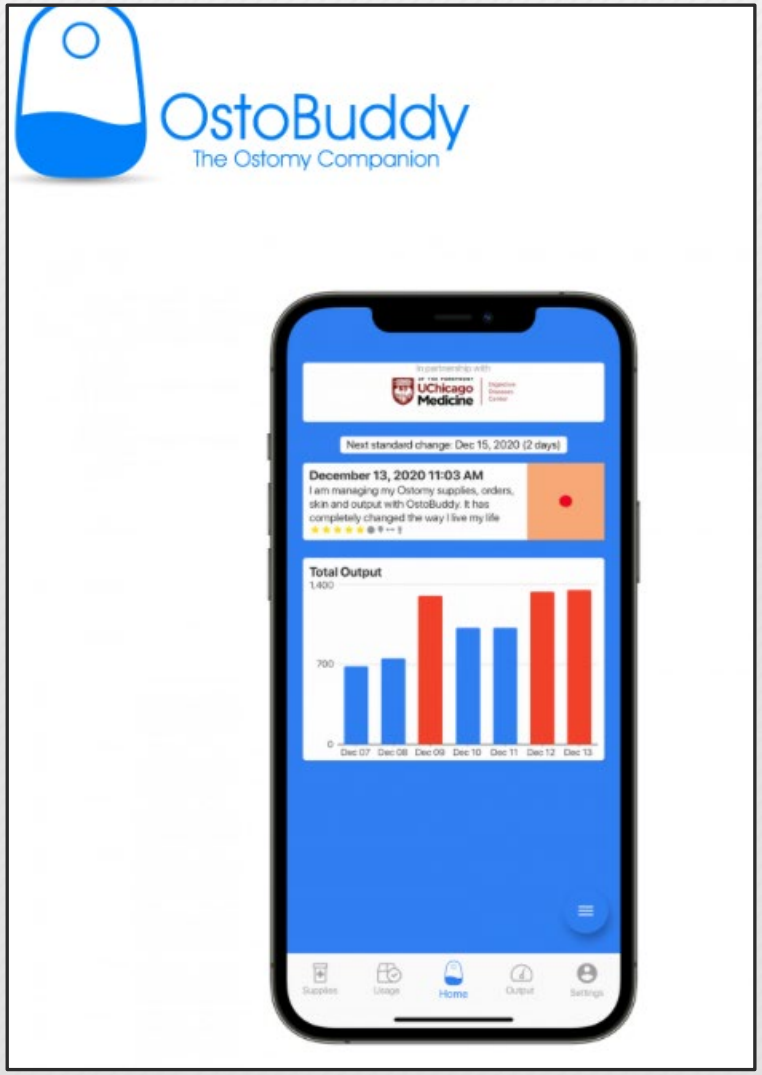
YouTube Videos





Images courtesy of JC Colwell, APRN.
YouTube. Accessed December 10, 2021. https://www.youtube.com/watch?v=mi3H8nd7BuU; https://www.youtube.com/watch?v=aKPL2Rmj0hI

Online Resources and Apps



Online Resources

Ostomy Podcasts

The Beautiful Bag

The Beautiful Bag is an ostomy podcast for anyone that might be having an ostomy in the future, those that have one, or anyone looking to learn more about what life with an ostomy is like. Each week, new guests on this podcast educate the listeners and share their stories about living life with an ostomy.

Listen to The Beautiful Bag Podcast

The Real Life Ostomy Podcast

This ostomy podcast is all about living life with an ostomy or those with bowel disease that may be having an ostomy in the future. A wealth of information is shared in each episode that includes tips and personal stories from real ostomates and their lives with an ostomy.

Listen to The Real Life Ostomy Podcast

The Beautiful Bag. Accessed December 10, 2021. https://thebeautifulbag.libsyn.com/website
The Real Life Ostomy Podcast. Accessed December 10, 2021. https://reallifeostomy.buzzsprout.com/

Online Resources

Ostomy Podcasts

Butts & Guts

This Cleveland Clinic ostomy podcast explores digestive and surgical health issues. It is hosted by Colorectal Surgery Chairman Scott Steele, MD. He discusses how to have to best digestive health possible from your gall bladder to your liver and beyond. Listen to hundreds of podcasts from medical doctors on topics that range from bariatric surgery, pelvic floor disorders, pediatric colorectal surgery, celiac disease, and more.

Listen to Butts & Guts Podcast

me+ Talk

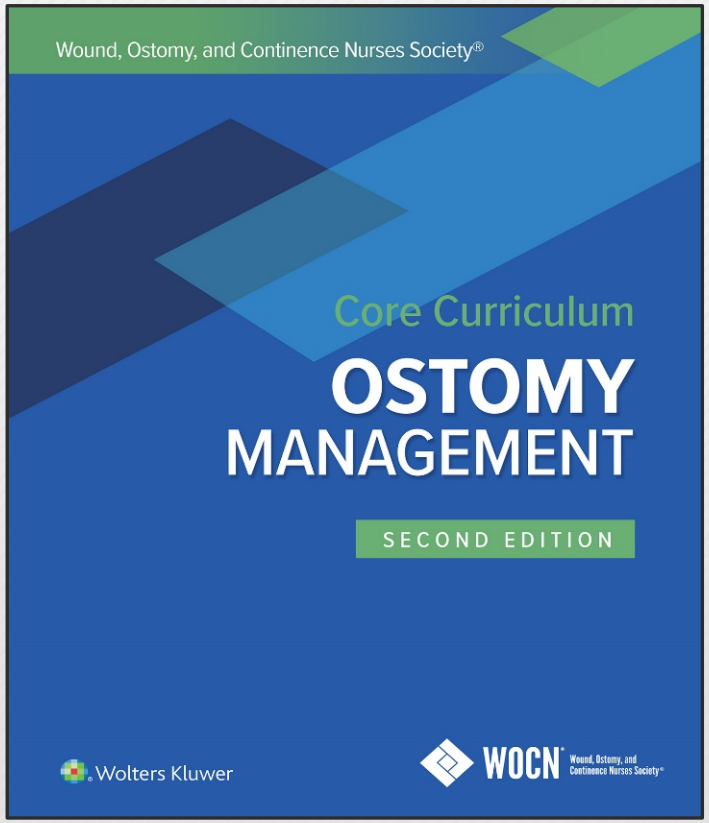
ConvaTec launched an ostomy podcast called me+™ for people living with an ostomy. This podcast features "real talk" from nurses, product specialists, and community members covering all-things ostomy. There's advice on post-surgery changes, tips for day-to-day living, mental wellness, intimacy, and more.

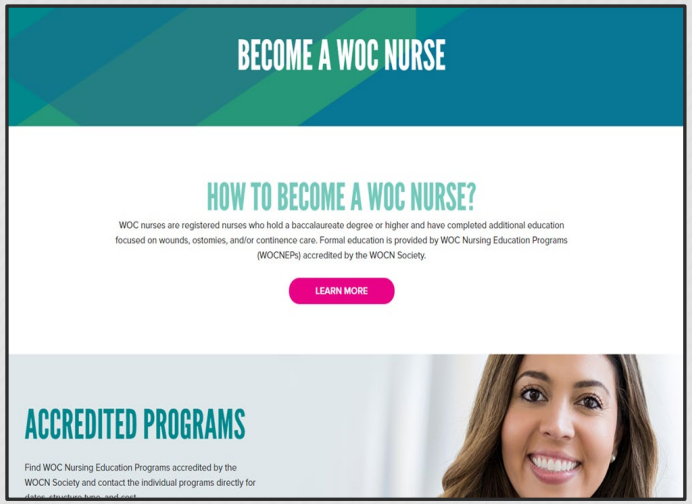
Listen to me+ Talk Podcast

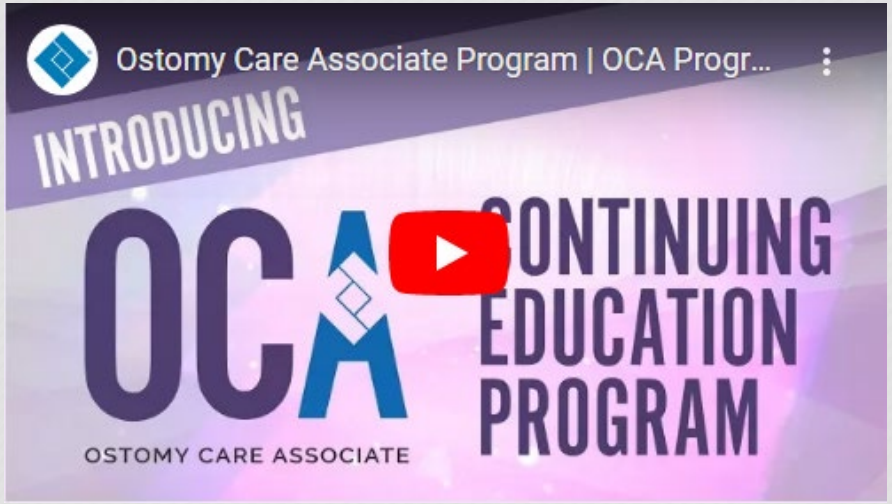
Butts & Guts. Accessed December 10, 2021. https://my.clevelandclinic.org/podcasts/butts-and-guts/introduction-to-butts-and-guts
me+ Talk. Accessed December 10, 2021. https://meplus.convatec.com/about/

Ostomy Resources

- Textbook: *Core Curriculum: Ostomy Management*
- Ostomy certification:
  - Online course with a 1-week preceptorship
  - Certification: CWOCN
- Ostomy Care Associate (OCA):
  - Online modules
  - Skills demonstration







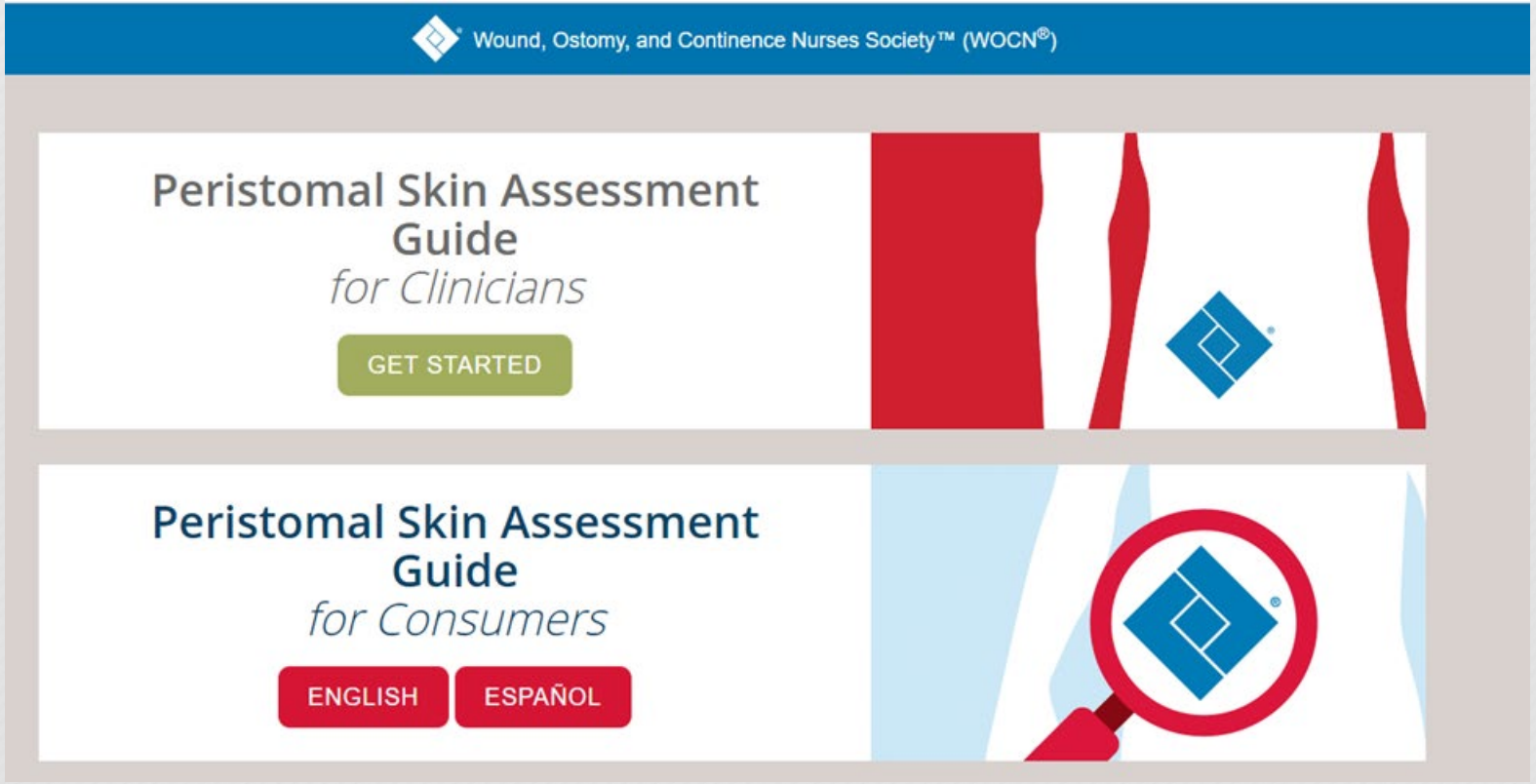
Carmel J, Colwell J, Goldberg MT, eds. *Core Curriculum: Ostomy Management.* 2nd ed. Wound, Ostomy, and Continence Nurses Society; 2022.

Wound, Ostomy, and Continence Nurses Society. Accessed December 10, 2021. https://www.wocn.org/become-a-woc-nurse/

Wound, Ostomy, and Continence Nurses Society. Accessed December 10, 2021. https://www.wocn.org/ostomy-care-associate-program/about/

Ostomy Resources

- *Peristomal Skin Assessment Guide:*
  - Clinicians
  - Patients



Wound, Ostomy, and Continence Nurses Society. Accessed December 10, 2021. https://psag.wocn.org/

Assess your patient

What is the location/distribution of the skin damage?

- **Free of any damage, no rash**
- **Immediately bordering the stoma**
- **Not bordering the stoma**
- **Solid rash with distinct satellite lesions**
- **Papules or pustules at hair follicles**
- **Patchy, scattered distribution**

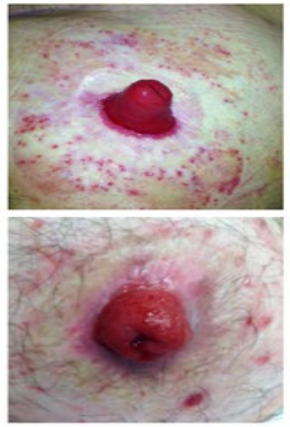
Peristomal Medical Adhesive Related Skin Injury (PMARSI – Folliculitis)

Manage Probable Contributing Factors: Damage to Hair Follicles

Adhesive Removal technique

- Loosen edges of adhesive product
- With fingers of opposite hand, push skin down and away from adhesive
- Gently remove adhesive product back over itself in the direction of hair growth, keeping it close to the skin surface
- As product is removed, continue moving fingers of opposite hand as necessary to support newly exposed skin

Hair Removal
Frequency and technique: Clipping or use of electric razor recommended; frequency dependent on rate of hair growth.



Topical Treatment

Adhesive Remover or Releaser
Consider use to prevent skin damage. If patchy skin loss is present, consider additional topical treatment options.

Skin Cleansing
Recommend use of mild antibacterial soap with thorough rinsing until inflammation resolves.

Treatment of open areas (if any)
Dust with Skin Barrier Powder; brush off excess.

Wound, Ostomy, and Continence Nurses Society. Accessed December 10, 2021. https://psag.wocn.org/

Conclusion

Ostomy Care Services

Colon & Rectal Surgery

- Anorectal Conditions
- Colorectal Cancer
- Diverticulitis
- Inflammatory Bowel Disease
- Pelvic Floor Conditions
- Robotic Colon & Rectal Surgery

Providing care and support for patients living with stomas as well as those considering ostomy surgery

At the University of Chicago Medicine, our specialty nurses, certified in ostomy wound and continence care, work with adults anticipating the creation of an ileostomy or colostomy. Our team provides post-operative education and care to patients who have recently undergone surgery. We also see patients living with stomas that need additional assistance and/or are interested in updates to their ostomy management systems.

- Meet Our Team
- Colectomy
- Ostomy Care
  - Ostomy Surgery
  - Guide to Pouching Systems
  - Living with an Ostomy
  - Ostomy Nurse Specialists
- Preparing for Your Surgery
- Refer a Patient

Our specialty nurses provide ostomy care at the bedside and in our outpatient stoma clinic.

We believe that all people who undergo ostomy surgery should have access to a specialized ostomy nurse to help with the adaptation and adjustments that are necessary following surgery and on an ongoing basis. We suggest that all patients with an ostomy be examined by an ostomy nurse annually to identify any issues before problems arise.

UChicagoMedicine. Accessed December 10, 2021. https://www.uchicagomedicine.org/conditions-services/colon-rectal-surgery/ostomy

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