AJG Special Issue

AI CLINICAL APPLICATIONS IN GI AND HEPATOLOGY

Submit your clinically relevant manuscript

SUBMISSIONS ARE NOW OPEN!

Submission Window Closes: August 31, 2025

1

ACG 2025

OCTOBER 24 - 29, 2025 | PHOENIX, ARIZONA

REGISTER TODAY: ACGMEETINGS.GI.ORG

2


2025
ACG'S FUNCTIONAL GI & MOTILITY DISORDERS SCHOOL & MIDWEST
REGIONAL POSTGRADUATE COURSE
AUGUST 22-24, 2025 | MARRIOTT INDY PLACE INDIANAPOLIS, IN
click for course information

3


2025
ACG'S ESOPHAGUS SCHOOL
& ACG/VGS/MASGNA REGIONAL POSTGRADUATE COURSE
SEPTEMBER 5-7, 2025 | WILLIAMSBURG LODGE WILLIAMSBURG, VA
click for course information

4

Virtual Grand Rounds

universe.gi.org

Participating in the Webinar

Moderator:
Shirley C. Paski, MD

All attendees will be muted and will remain in "Listen Only Mode"

Type your questions here so that the moderator can see them.
Not all questions will be answered but we will get to as many as possible.

A handout with the slides and room to take notes can be downloaded from your control panel.

Exit

5

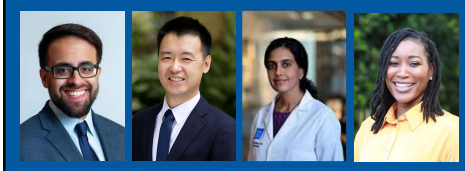
Virtual Grand Rounds

universe.gi.org

ACG Virtual Grand Rounds

Join us for upcoming Virtual Grand Rounds!

Week 31 – Thursday July 31, 2025
Redefining Risk: How Healthcare Transformation is Reshaping Workplace Violence and Patient Behavior
Faculty: Sunanda V. Kane, MD, MSPH, MACG
Moderator: Benjamin J. Houge, MS
At Noon and 8pm Eastern



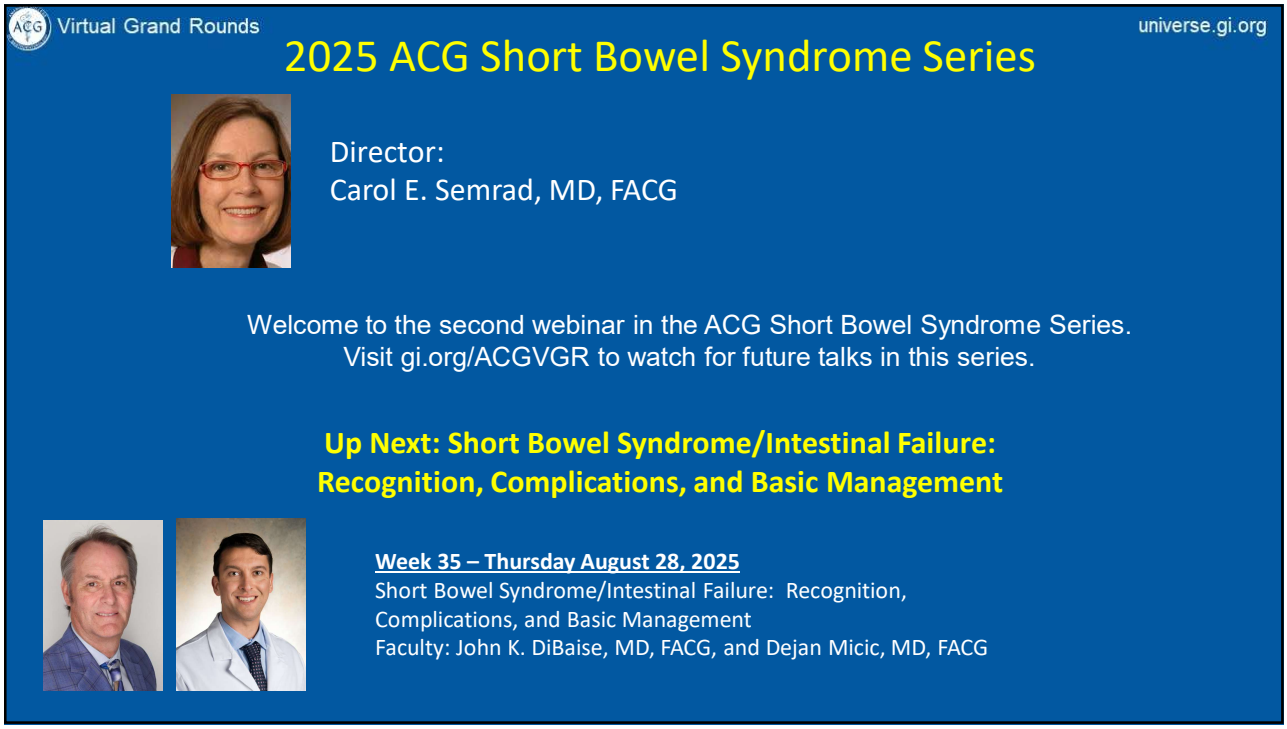
Week 32 – Thursday August 7, 2025
Exploring Health Equity Through Research
Faculty: Christopher D. Vélez, MD, Jin Ge, MD, MBA, Maya Balakrishnan, MD, and Rachel Issaka, MD, MS
At Noon and 8pm Eastern

Visit **gi.org/ACGVGR** to Register

6


Guide
Guide to the Guidelines
Volume 2
A vignette-based journal through the ACG clinical practice guidelines
BRENNAN SPIEGEL
HETAL A. KARSAN
AMERICAN COLLEGE OF GASTROENTEROLOGY
ACG
AMERICAN COLLEGE OF GASTROENTEROLOGY
ACG ANNOUNCES
a New Book Series
Now Available!
Visit https://members.gi.org/store/
to purchase your copies!

7


Virtual Grand Rounds
universe.gi.org
2025 ACG Short Bowel Syndrome Series
Director:
Carol E. Semrad, MD, FACG
Welcome to the second webinar in the ACG Short Bowel Syndrome Series.
Visit gi.org/ACGVGR to watch for future talks in this series.
Up Next: Short Bowel Syndrome/Intestinal Failure:
Recognition, Complications, and Basic Management
Week 35 – Thursday August 28, 2025
Short Bowel Syndrome/Intestinal Failure: Recognition,
Complications, and Basic Management
Faculty: John K. DiBaise, MD, FACG, and Dejan Micic, MD, FACG

8

Virtual Grand Rounds

universe.gi.org

Up Coming 2025-26 ACG SBS Series

- Small Bowel Nutrient and Fluid Absorption: Key Concepts to Manage Short Bowel Syndrome
- Inpatient Management of the Newly Diagnosed Short Bowel Patient: Consult to Discharge
- Short Bowel Syndrome/Intestinal Failure: Recognition, Complications, and Basic Management
- Short Bowel Syndrome: Maximizing Management to Convert Intestinal Failure to Intestinal Insufficiency
- Cases of Non-Short Bowel/Intestinal Failure: Pearls for Recognition and Management

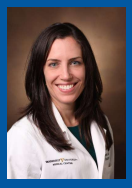
9

9

Virtual Grand Rounds

universe.gi.org

Disclosures



Dawn W. Adams, MD, MS, CNSC:
Ironwood: Consultant; Takeda: Consultant

Shirley C. Paski, MD:
Nutrishare:Advisory Committee/Board Member;
Takeda Pharmaceuticals Inc: Grant/Research Support

**All of the relevant financial relationships listed for these individuals have been mitigated*

10

Virtual Grand Rounds

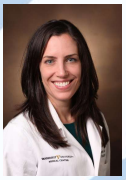
universe.gi.org

CONSULT TO DISCHARGE

INPATIENT MANAGEMENT OF THE NEWLY DIAGNOSED SHORT BOWEL PATIENT

DAWN W. ADAMS

ASSOCIATE PROFESSOR OF MEDICINE, GASTROENTEROLOGY
DIRECTOR CENTER FOR HUMAN NUTRITION
VANDERBILT UNIVERSITY MEDICAL CENTER
NASHVILLE, TN



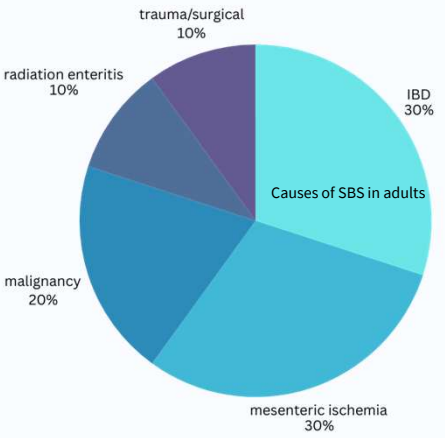
11

Virtual Grand Rounds

universe.gi.org

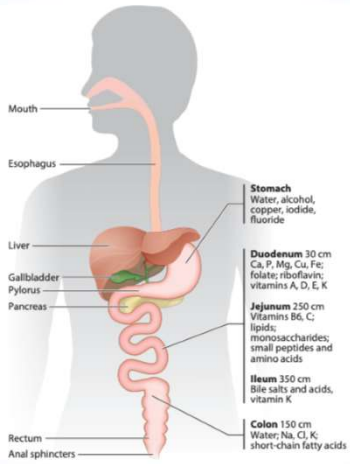
SHORT BOWEL SYNDROME

intestinal failure
insufficient amount of small intestine that leads to malabsorption and its consequences
<200 cm small intestine



Graph created for presentation, percentages based off of a summary of studies including Bering J, DiBaise JK. Short Bowel Syndrome in Adults. Am J Gastroenterol. 2022 Jun 1;117(6):876-883. Bering J, DiBaise JK. Short bowel syndrome: Complications and management. Nutr Clin Pract. 2023 May;38 Suppl 1:S46-S58.

Figure 2: Le Beyec J, Billiauws L, Bado A, Joly F, Le Gall M. Short Bowel Syndrome: A Paradigm for Intestinal Adaptation to Nutrition? Annu Rev Nutr. 2020 Sep 23;40:299-321.

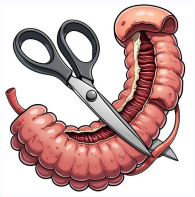


12

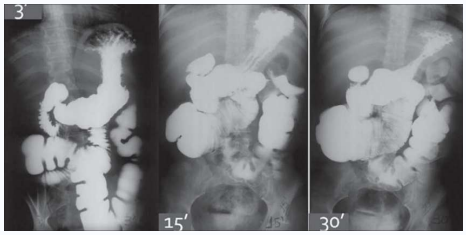
Virtual Grand Rounds

universe.gi.org

HOW DO I KNOW?



- Operative reports (remote surgeries)
- Pathology reports
- Talk to surgeon
- Is radiology helpful?
- What is in continuity?
- What is functioning?



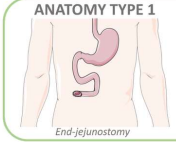
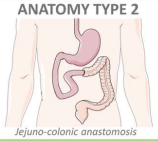
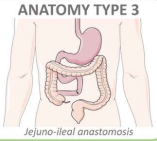
Chacon MA, Wilson NA. The Challenge of Small Intestine Length Measurement: A Systematic Review of Imaging Techniques. J Surg Res. 2023 Oct;290:71-82.
Images from research gate : https://www.researchgate.net/publication/263275454_Barium_follow_through_in_the_assessment_and_follow-up_of_adult_patients_with_short_bowel_syndrome

13

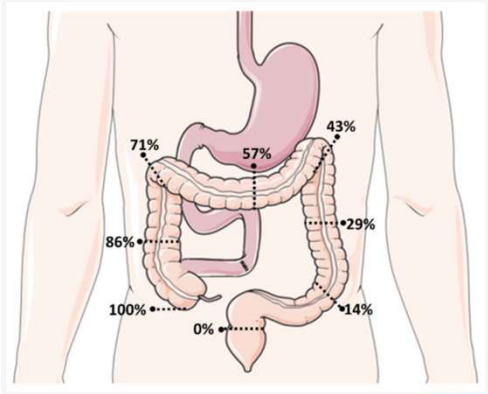
Virtual Grand Rounds

universe.gi.org

ANATOMY MATTERS

	COLON-IN-CONTINUITY		
	ANATOMY TYPE 1	ANATOMY TYPE 2	ANATOMY TYPE 3
	 End-jejunostomy	 Jejuno-colonic anastomosis	 Jejuno-ileal anastomosis
ETIOLOGY	IBD > ISCHEMIA	ISCHEMIA > IBD	ISCHEMIA SURGICAL ADVERSE EVENTS
PREVALENCE	50 – 80 %	20 – 50 %	<10 %
INTESTINAL FAILURE THRESHOLD	100 cm	65 cm	30 cm

Legend: IBD = inflammatory bowel disease



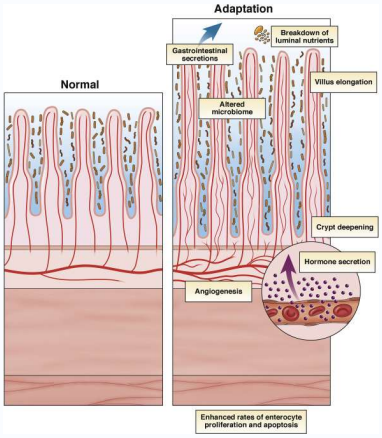
Figures 1 and 2 from Verbiest A, Jeppesen PB, Joly F, Vanuytsel T. The Role of a Colon-in-Continuity in Short Bowel Syndrome. Nutrients. 2023; 15(3):628.

14

Virtual Grand Rounds

universe.gi.org

ADAPTATION



- Begins days to weeks after surgery
- Continues for 1-2 years
- Importance of enteral nutrition
- GI secretions
- Gut hormones
- Angiogenesis

Figure Warner BW. The Pathogenesis of Resection-Associated Intestinal Adaptation. Cell Mol Gastroenterol Hepatol. 2016 May 14;2(4):429-438.

15

Virtual Grand Rounds

universe.gi.org

GET THE COLON BACK

- electrolytes, indigestible carbohydrates
- reduces need for PN and IV support
- during adaptative phase colon increases capacity of colonic bacteria to ferment carbs (1000kcal SCFA)
- breaking effect on rate of early gastric emptying
- hormone production
- colostomy?

EDUCATING SURGEONS ON IMPORTANCE OF COLON FOR SBS

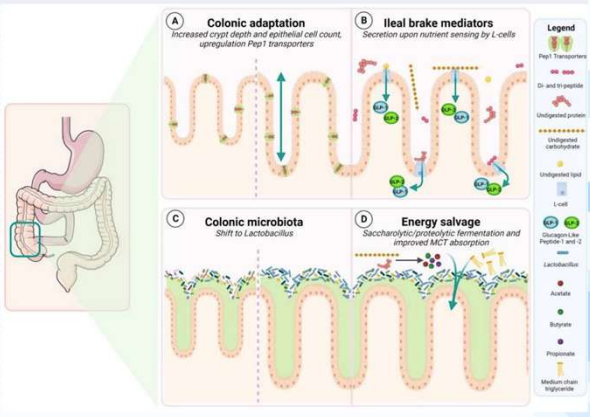


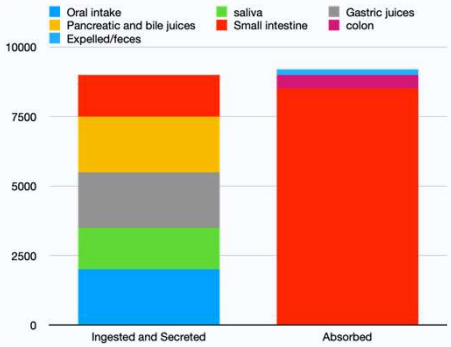
Figure 3: Verbiest A, Jeppesen PB, Joly F, Vanuytsel T. The Role of a Colon-in-Continuity in Short Bowel Syndrome. Nutrients. 2023; 15(3):628.

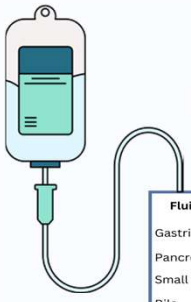
16

Virtual Grand Rounds

universe.gi.org

FLUID LOSSES: GIVE FLUIDS





Fluid Type	Na^+ (mEq/L)	K^+ (mEq/L)	Cl^- (mEq/L)
Gastric Juice	20–80	10–20	100–150
Pancreatic	120–140	5–15	50–75
Small Intestine	130–140	5–10	100–110
Bile	120–145	5–15	100–105
Ileostomy Fluid	120–140	10–20	90–110
Diarrhea	90–140	10–20	90–120
Sweat	20–60	4–8	20–60

- quantify output amount and appearance
- other losses
- high electrolyte losses - Na, Mg
- IV support with fluid replacement (replace Na!)
- restrict hypotonic fluid (water)

Graphics personally created from basic physiology information

17

Virtual Grand Rounds

universe.gi.org

MALNUTRITION: START PARENTERAL NUTRITION EARLY

- central access
- volume status stable (renal failure?), electrolytes, blood glucose
- PN composition should reflect losses (Na, Mg, K)
- extra vitamins or trace elements
- don't wean too soon (CIC)

	Short Bowel Syndrome	
PN/IV volume needs	End jejunostomy	Colon in continuity
<7 L/wk	Fluid	Energy
7–21 L/wk	Fluid + some energy	Energy + some fluid
>21 L/wk	PN/IV dependent	PN/IV dependent

Matarese LE. Nutrition and fluid optimization for patients with short bowel syndrome. JPEN J Parenter Enteral Nutr. 2013 Mar;37(2):161-70.

18

Grand Rounds

universe.gi.org

ANIT-MOTILITY AGENTS

LOPERAMIDE

u-opioid reception in myenteric plexus ⟶ slows down contractions by reducing muscle tone of intestinal walls, decreases gastric secretions

up to 4 pills 4 times per day

DIPHENOXYLATE-ATROPINE

diphenoxylate - similar to loperamide
atropine mostly added to discourage abuse (anticholinergic effects), CNS effects

2 pills 4 times per day

NARCOTICS

often given in hospital post-op, can transition to codeine, CNS effects

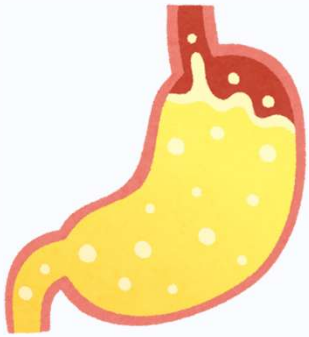
19

Virtual Grand Rounds

universe.gi.org

GASTRIC HYPERSECRETION: ADD ANTI-SECRETORY AGENT

- massive SB resection ⟶ increase in gastric secretions/ hypergastrinemia
- loss of inhibitory feedback
- PPI/H2RA
- ? Octreotide
- 6-12 months - trial cessation (microbiome, mg, bone)



D'sa AA, Buchanan KD. Role of gastrointestinal hormones in the response to massive resection of the small bowel. Gut. 1977 Nov;18(11):877-81.

20

OTHER MEDICATIONS

- GLP2**
- GLP1
- fiber
- bile acid binders
- glutamine
- pancreatic enzymes
- SIBO treatment*

**FDA approved, data supports use
*data supports use
others have little to mixed data or
are still under investigation

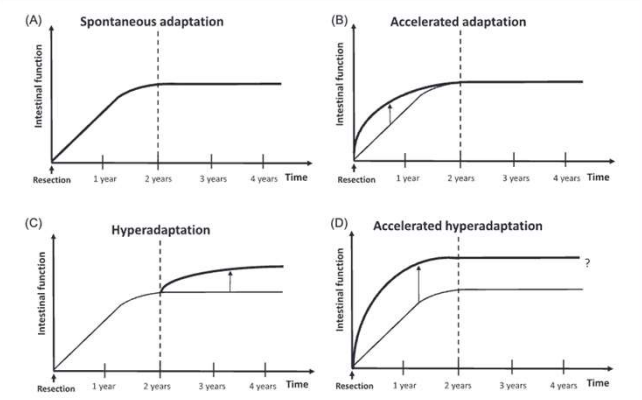


FIGURE 2 Overview of intestinal adaptation and response to therapy in short bowel syndrome. (A) Spontaneous adaptation occurs mainly during the first 2 years postresection. (B) Induced or accelerated adaptation with conventional therapy. (C) Enhanced or hyperadaptation with GLP-2 analogues after a period of (accelerated) adaptation. (D) Accelerated hyperadaptation or early treatment with GLP-2 analogues. Adapted from Jeppesen.[73] GLP-2, glucagon-like peptide-2.

Figure 2 Wauters L, Joly F. Treatment of short bowel syndrome: Breaking the therapeutic ceiling? Nutr Clin Pract. 2023 May;38 Suppl 1:S76-S87.

21

ORAL FLUIDS

- Education on isotonic fluids: avoid HYPOtonic and HYPERtonic fluids
- Limit intake in acute setting for high output
- intake about 1.5-2L per day if no CIC
- Oral rehydration solutions (ORS)
- Goal urine output

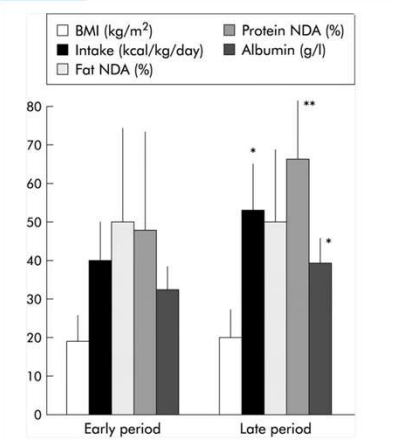
22

Virtual Grand Rounds

LET THEM EAT!

universe.gi.or

- continuous enteral feeding associated with increase in net absorption of lipids, proteins and energy vs oral intake alone
- no difference in absorption for elemental and polymeric
- Hyperphagia is a compensatory mechanism and seen in 70% SBS patients
- timing of meds
- SBS diet education: higher fat without colon
- vitamin supplements if no PN



Joly, F.; Dray, X.; Corcos, O.; Barbot, L.; Kapel, N.; Messing, B. Tube Feeding Improves Intestinal Absorption in Short Bowel Syndrome Patients. Gastroenterology 2009, 136, 824–831.
Fig 6 Crenn, P.; Morin, M.C.; Joly, F.; Penven, S.; Thuillier, F.; Messing, B. Net digestive absorption and adaptive hyperphagia in adult short bowel patients. Gut 2004, 53, 1279–1286.

23

Virtual Grand Rounds

verse.gi.org

PREPARING FOR HOME

IS A PATIENT READY TO GO HOME WITH SBS?

- SURGERY OPTIMIZED
- STABLE PN/FLUIDS
- STOMA DEVICE
- CENTRAL LINE
- HOME SUPPORT
- FOLLOW-UP PLAN
- OTHER SKILLED NEEDS

MUTLIDISCIPLINARY TEAM NEEDED FOR SAFE DC AND TRANSITION

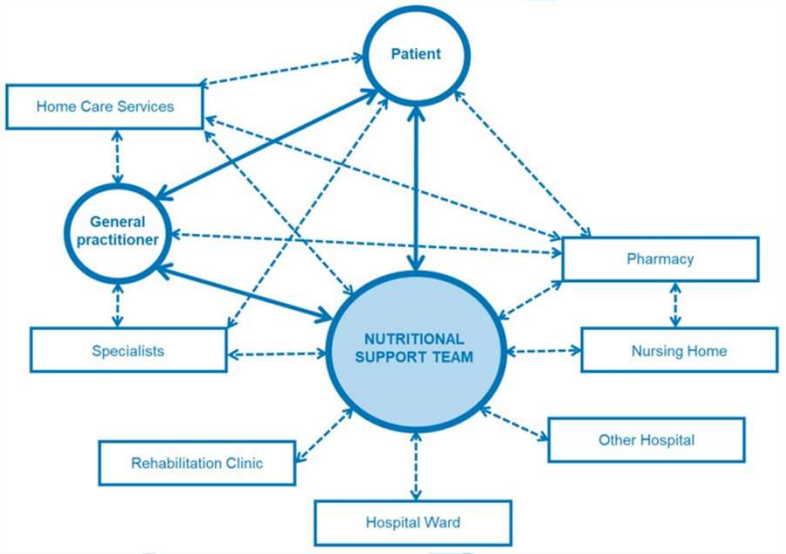
- ORDER MD FOR PN/FLUIDS
- SURGEON/GI DOC
- CASE MANAGER
- NURSE - ACCESS/PN EDU
- DIETITIAN - DIET/PN EDU
- PHARMACIST - MEDS/PN EDU
- HOME INFUSION
- HOME HEALTH

24

Virtual Grand Rounds

universe.gi.org

ITS COMPLICATED



Complex nutrition therapy inpatient and outpatient ; J Clin Med. 2019 Sep; 8(9): 1281.

25

INTESTINAL REHAB PROGRAM

Physician

leader, comprehensive care of patient, communicate

Dietitian

nutritional needs, customized care plan

Pharmacist

verifying, compounding PN, educations, protocols

Nurse

IV access care, education, administer

Social Worker/CM

complex post-hospital care

Other physicians

surgeon, GI, vascular, endocrine, ID

Mental Health

complex mental health issues related to NS

Trainees

Medical, pharmacy, nutrition

Vlug LE, Nutrients. 2020; 12(1):172

26

Virtual Grand Rounds

univers .org

SUMMARY

01 STABILIZE PATIENT

IV fluid and nutrition support

02 UNDERSTAND ANATOMY

get colon back when possible

03 MEDICATIONS

anti-motility, anti-secretor

04 DIET/ORS

education

05 TRANSITION

home needs

multidisciplinary team

06 LONG TERM

maximize adaptation

weaning

education

medications

surgeries

complications

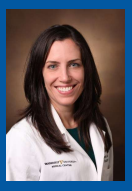
health maintenance

27

Virtual Grand Rounds

universe.gi.org

Questions



Dawn W. Adams, MD, MS, CNSC

Shirley C. Paski, MD

28


GI Innovation Through Collaboration
Let's talk... ACG invites you to join the conversation in the GI Circles.
ACG's Online Professional Networking Communities
Login or sign-up now at: acg-gi-circle.within3.com
GI
ACG GI Circle
Connect and collaborate within GI
IBD Circle
A Partnership of the American College of Gastroenterology and the Crohn's & Colitis Foundation

29