Celiac Disease	
PowerPlans	Celiac Disease Orderset, Celiac Gene Assessment, GI AMB Celiac Disease (Future) Plan
Presentation	• **Classical**: Malabsorption (FTT, steatorrhea), abd pain, gas, **distension, constipation or diarrhea**, anemia, non-erosive arthritis, dental enamel defects, aphthous ulcers, dermatitis herpetiformis (pruritis papules/vesicles), neuropsych (ADHD, depression, HA). ↑ risk in T1DM, autoimmune thyroid dz, Turner and Down syndrome. • **Infants**: **present irritable, wasted extremities, buttocks, and distended abdomen**
Pathophys	**HLA-DQ2 or -DQ8** (predisposition, **necessary for dz)** + environmental trigger → **Antibodies to gliadin** (gluten byproduct), tissue transglutamidase (tTG; cross-links and deamidizes gliadin peptides) → **enterocyte destruction**
Workup	• **Serologies**: anti-tTG IgA, anti-endomysial IgA, anti-gliadin. Always check IgA levels (IgA deficiency can yield false-negatives);DGP IgA if < 2 yrs old • **Biopsy**: intraepithelial lymphocytes, villous atrophy, crypt hyperplasia
Treatment	• Gluten-free diet ($$, needs very strict adherence, hard to maintain). Wheat, rye, barley all contain gluten. Oats are controversial. Improvement in 2-4w. • **Follow with TTG until normalized (usually by 12 months). Follow Vitamin D and B 12 levels as well as Thyroid.** Check if immune against Hep B

Malabsorption		
	Presentation/Pathophys	**Workup**
Carbs	• **Frequent, watery stools** • Pathyphys: carbs digested by amylase (saliva and pancreas), so **pancreatic disease** can lead to poor carb digestion • **Lactase deficiency** (lactose intolerance): usually adult-onset • **Bacterial overgrowth**/alteration of bowel flora → increased lactate production and temporary lactase deficiency leading to lactose intolerance	• Fecal pH < 5.5 (can also be seen transiently in viral enteritis) • Stool reducing substances >0.5%. *need fresh stool • Breath hydrogen test used to detect lactase and sucralase deficiency (rare)
Fat	• **Greasy, foul-smelling stools** (steatorrhea) • Cause by diseases affecting bile production/secretion or **poor enterohepatic circulation of bile salts** (e.g., ileal resection) or **pancreatic insufficiency** (eg. cystic fibrosis, Schwachman-Diamond) 2/2 inadequate lipase • Critically affects absorption of the fat-soluble vitamins **A, D, E, and K**. • **Giardia** infection often associated with fat malabsorption	• Spot fecal fat: non-specific • Split fats (fatty acids) more suggestive of malabsorptive process • Neutral fats more suggestive of pancreatic dysfunction • 72 hr fecal fat: > 5 g per 24 hours suggests malabsorption (diet during these 24 hrs should be >35% fat)
Protein	• **Edema, hypoalbuminemia** • Usually related to **deficiency of pancreatic proteases (e.g. cystic fibrosis)** • Different from protein-losing gastroenteropathy (PLE) (2/2 mucosal disruption or increased lymphatic pressure)	• Serum total protein, albumin • Stool alpha-1 antitrypsin (for PLE)

Autoimmune Hepatitis	
Presentation	Acute vs. subacute. Transaminitis > bilirubin elevation. Hypergammaglobulinemia. Fatigue, amenorrhea.
Pathophys	• **Type 1 (classic):** any age/gender. +ANA, anti-SM. • **Type 2**: girls. anti-LKM. Recurrence more common in Type 2.
Workup	LFTs, Ig levels, auto-antibodies, maybe liver biopsy
Treatment	Prednisone (18-24m) + azathioprine/6-MP (steroid-sparing; check TPMT enzyme activity first. Low TMPT levels = risk of myelosuppression). Relapse more common if trx weaned in 1st 3 years of therapy or during puberty.