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FUNCTIONAL  
MEDICINE®

# Case Management: Gastrointestinal Dysfunction

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**Advanced Practice Module: Restoring Gastrointestinal Equilibrium**

London, UK

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# Disclosure

Consultant for Genova Diagnostics

# Learning Objectives

- Evaluate case studies and use information gleaned from history, physical exam, and laboratory analysis to develop effective, individualised treatment plans for patients with GI dysfunction.

# TL, 40-year-old athlete



# TL, 40-year-old male athlete

- Lifetime GI issues, but significant worsening 2 years ago:
  - Gas, bloating, & abdominal pain; diarrhea, constipation
  - Also complains of canker sores, tongue soreness
  - Symptoms are worse with dietary fats
  - Has seen many health providers, no benefit
  - All standard labs and imaging are within normal limits

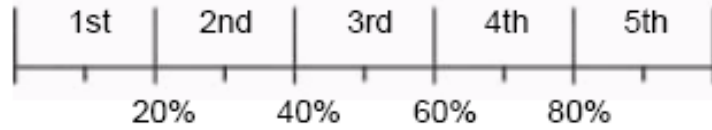
# TL, 40-year-old male athlete

- Lifetime GI issues, but significant worsening 2 years ago:
  - Takes a number of supplements, no medications
  - History of multiple antibiotics (>15)
  - Impeccable organic diet
    - Minimal simple carbohydrate, he eats some whole, sprouted grains; sensitive to milk and eggs
  - Family history of colon cancer

Lack of Diversity suggests dysbiosis

### Percentile Ranking by Quintile

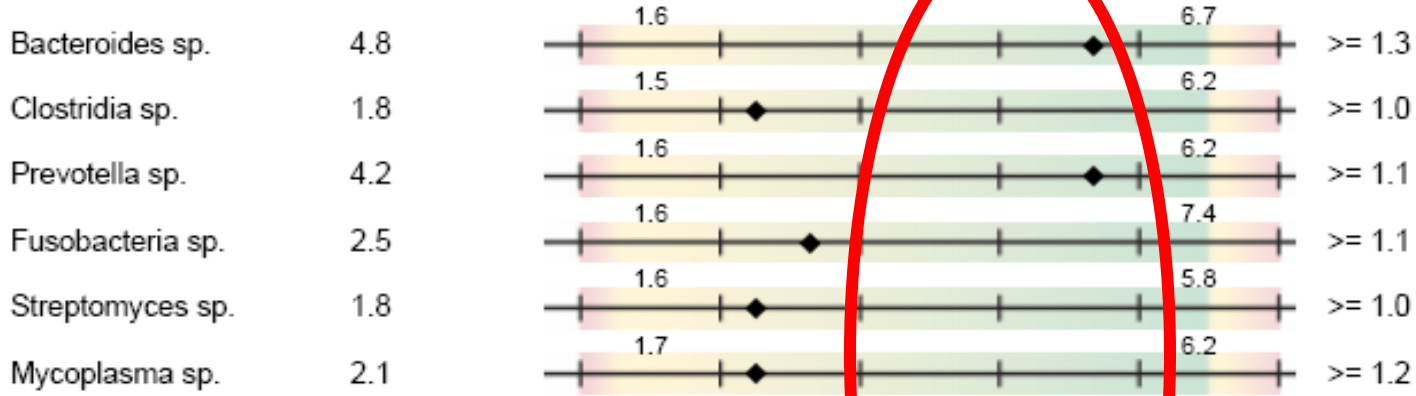
Results  
CFU/gram



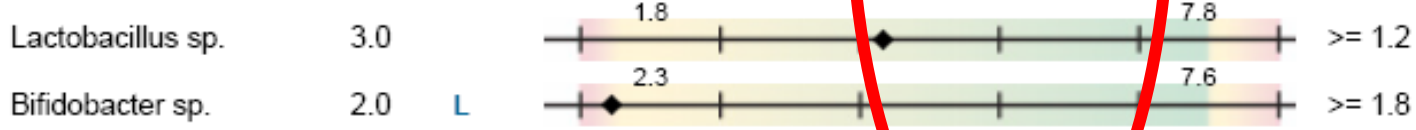
95%  
Reference  
Range

**Predominant Bacteria** (E+007) E+007

#### Obligate anaerobes



#### Facultative anaerobes



#### Obligate aerobes



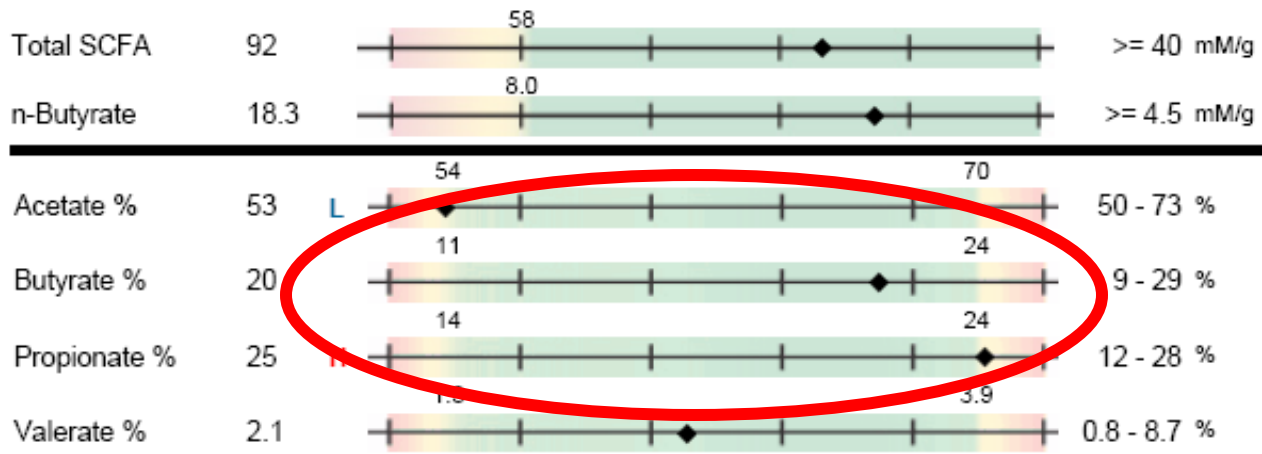
**Opportunistic Bacteria**

No clinically significant amounts.

Imbalances suggest dysbiosis



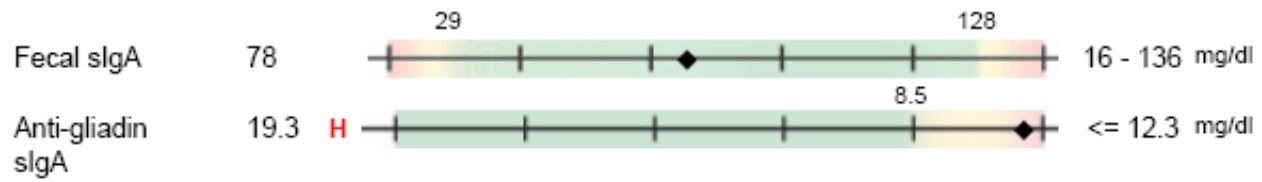
### Beneficial SCFA



### Inflammation



### Immunology





Poor digestion and absorption correlate with symptoms



**Additional Tests**

pH	6.1	5.9	6.9	5.7 - 7.1
Occult blood	Neg			Neg
RBCs	Neg			Neg
Color	Lt. Brown			

**Digestion**

Elastase 1	336	L	376	>= 211 ug/mL
Triglycerides	287	H	247	<= 365 mg/dl
Putrefactive SCFA	2.2		4.2	<= 6.0 mM/g
Vegetable Fibers	Rare			None-Few

**Absorption**

LCFAs	20.7	H	4.8	<= 13.2 mmol/L
Total Fat	24.6	H	10.1	<= 21.2 mmol/L
Cholesterol	25		98	<= 154 mg/dl

UC\*\* = Unable to Calculate

# Treatment plan

- Anti-inflammatory GI medical food
- Lipase-containing digestive enzymes with meals
- Bifidobacteria sp. 20bill CFU
- Combination probiotic 100bill CFU
- Diet:
  - Eliminate all gluten-containing grains

# 3-Month follow-up:

“When I presented in the spring, I was suffering significantly from bloating, incomplete evacuation, and episodic abdominal pain. Following stool analysis and food sensitivity testing, low beneficial bacteria, gluten sensitivity, and fat malabsorption were discovered. A diet which eliminated offending foods, coupled with a detailed supplement protocol, was followed. ***After only a short time all original symptoms vanished, and the results of the lab testing have helped me to remain vigilant about the importance of safeguarding gut health.***”

# JC, a 38-year-old male with gastrointestinal pain

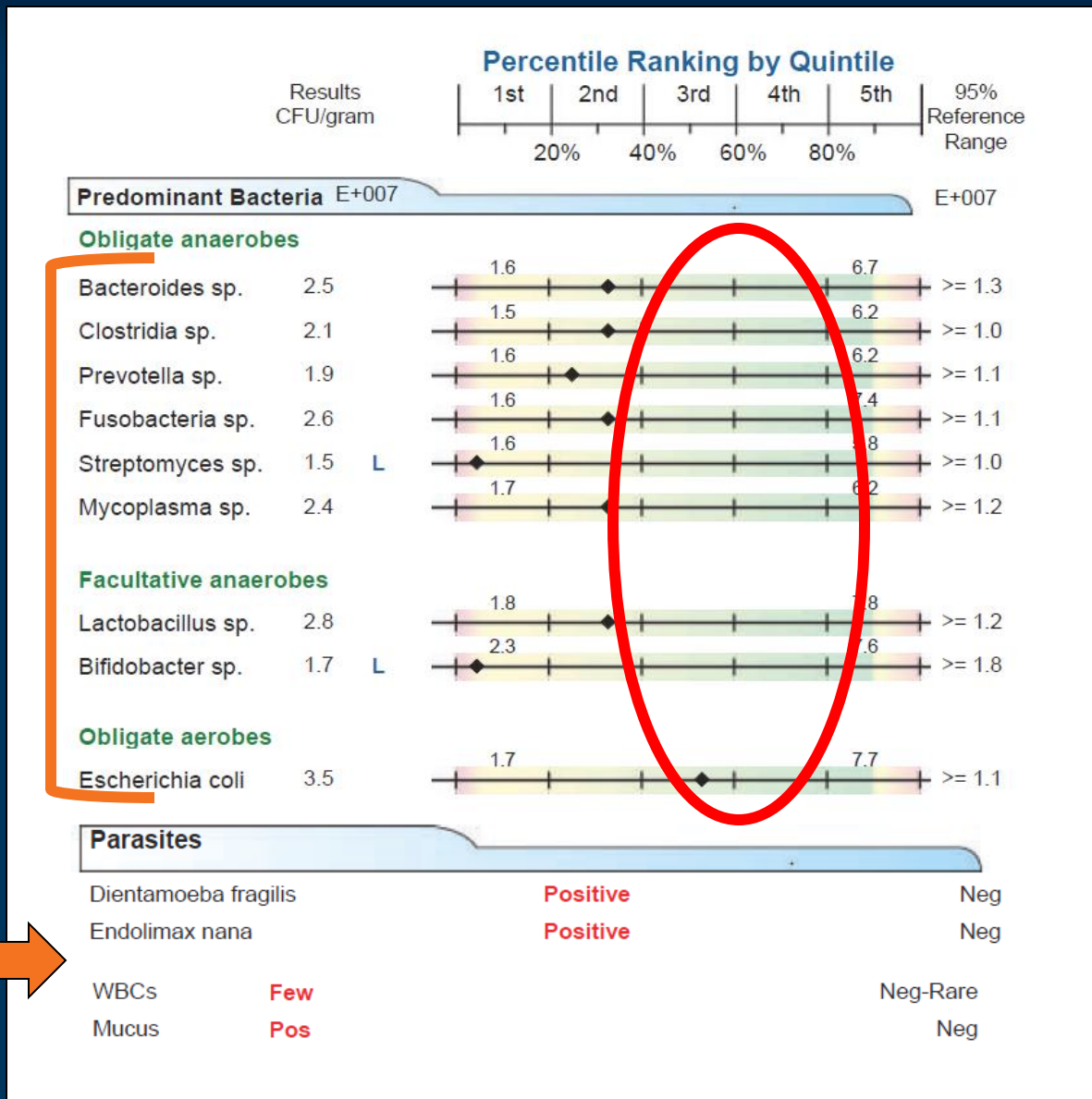


- GI pain:
  - 9-10/10 x 1 year (severe, constant)
- Other symptoms:
  - Diarrhea alternating with constipation, abdominal bloating, reflux, and flatulence after eating
- 20# weight loss
- Medication generally not helpful

# JC, a 38-year-old male with gastrointestinal pain



- No history of travel, family asymptomatic
- Vegetarian diet x years
- Endoscopy & colonoscopy: Normal
- Standard labs (including O&P): Normal



# Treatment plan

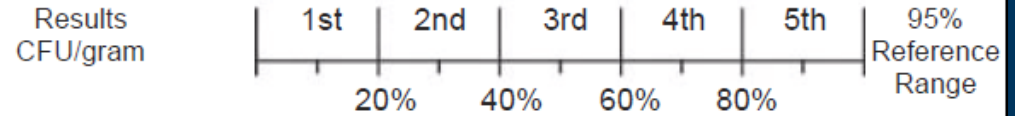
- Metronidazole 500 mg PO TID for 10 days
- Gastrointestinal medical food: 2 scoops with juice daily
- Probiotic powder: ¼ tsp PO BID  
(providing 200 billion mixed genus CFU per day)
- Deglycyrrhizinated Licorice (DGL) – Chew 2 tablets with meals
- Cabbage juice: Consume 1-2 liters/day
- Elimination Diet

# 3-Month follow-up visit

- All GI symptoms significantly improved/resolved
- Pain:
  - 3/10 (previously 9/10)
- Elimination diet is difficult
  - Looking forward to reintroducing foods!



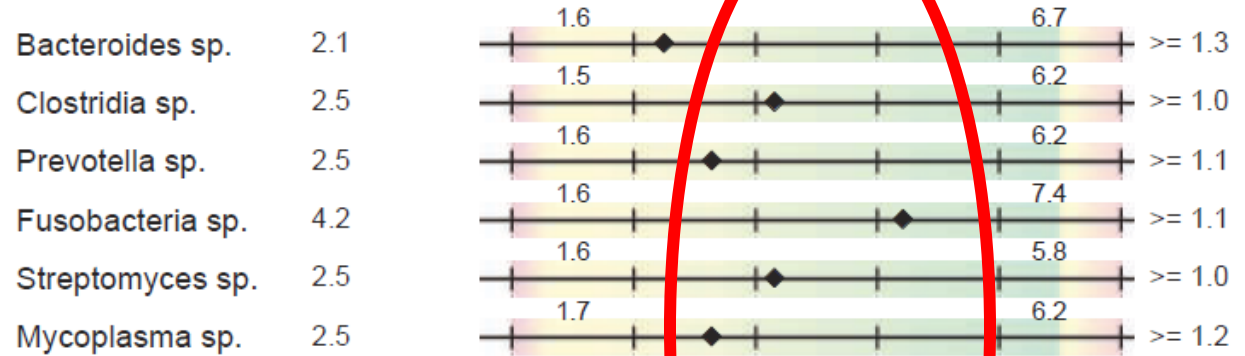
### Percentile Ranking by Quintile



#### Predominant Bacteria E+007

E+007

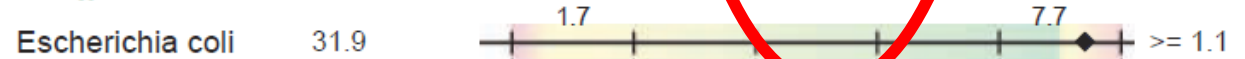
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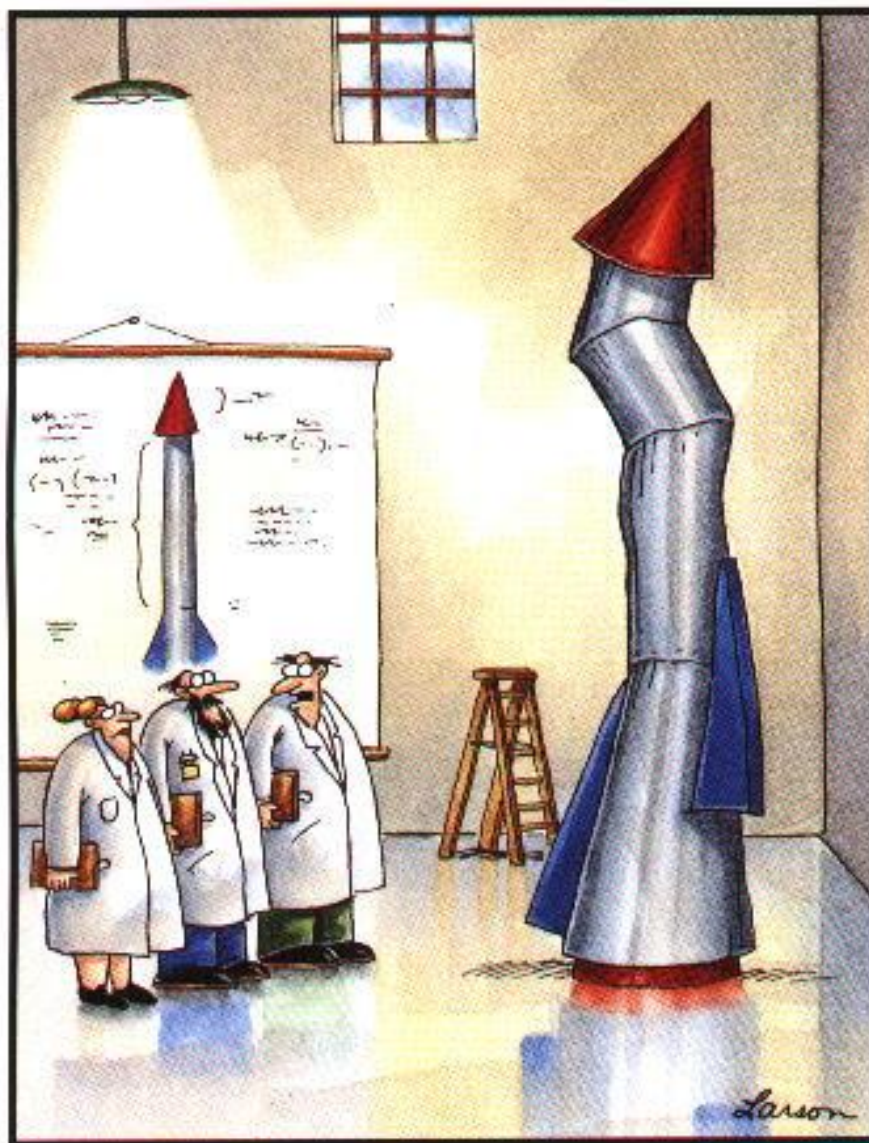
#### Parasites

Neg



# 3-Month treatment plan

- Continue medical food, probiotics, DGL, and cabbage juice
- Add botanical antimicrobial formula that includes:
  - Berberine, oregano, wormwood, barberry, black walnut, and olive leaf; 4 caps PO BID x 2 months
- Re-evaluate at six months



"It's time we face reality, my friends. ...  
We're not exactly rocket scientists."