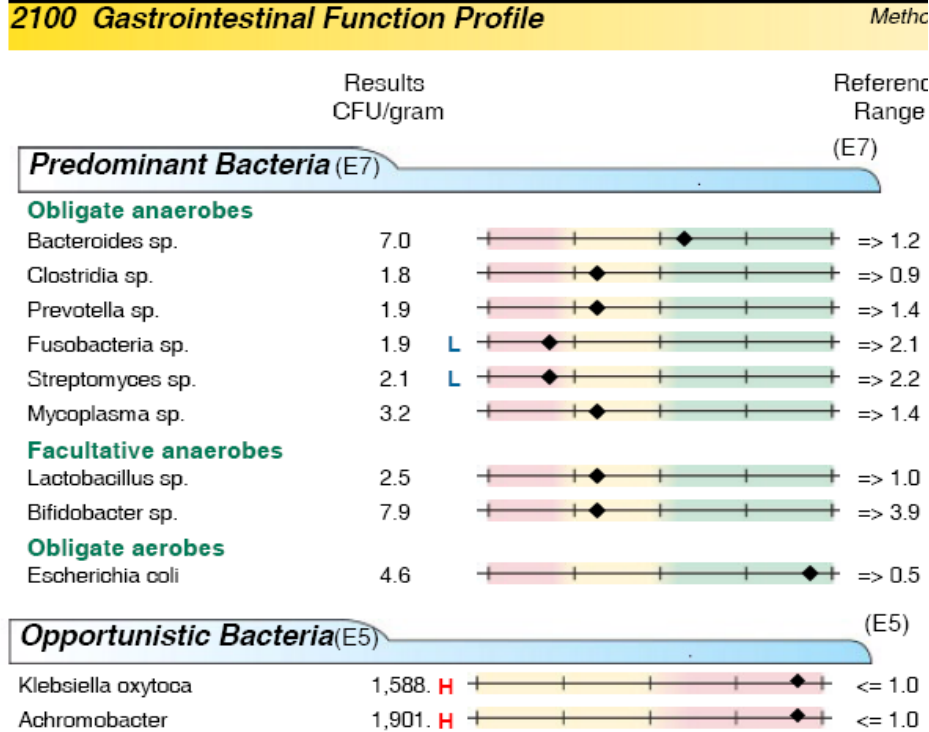


## CASE 1 – 84/F with Chronic Diarrhea

An 84 y/o female presented with chronic, explosive diarrhea, onset 09/06, then again 01/07 until present, occurring primarily between midnight and 2AM.

### Findings:



#### NOTE:

Bacteroides =  $7.0 \times 10^7$   
 Bifidobacter =  $7.9 \times 10^7$   
 E. coli =  $4.6 \times 10^7$  (Rel. High)

K. oxytoca =  $1.59 \times 10^8$   
 Achromobacter =  $1.90 \times 10^8$

#### Predominant Bacteria

Low abundance of Fusobacteria and Streptomyces (plus below normal Bifidobacter and Lactobacillus) with relative overgrowth of E. coli.

#### Opportunistic Bacteria (see NOTE showing genome abundances)

K. oxytoca

- known association with acute colitis caused by use of quinolone antibiotics.

Achromobacter

- A. xylosoxidans is commonly found as a nosocomial infection in immunocompromised patients, so hospital exposure might be investigated, although numerous other species may account for the elevation.

No pathogens, yeast, parasites or drug resistance genes are found.

**CASE 1 – 84/F with Chronic Diarrhea (continued)**

**2100 Gastrointestinal Function Profile** Methc

		Results		Reference Range	
<b>Beneficial SCFA</b>					
Total SCFA	93.1			=> 35.0	mM/g
n-Butyrate	12.3			=> 4.6	mM/g
Acetate %	69.7			50.0 - 72.0	%
Butyrate %	13.2			8.0 - 28.0	%
Propionate %	12.8	L		15.0 - 22.0	%
Valerate %	4.3	H		1.2 - 4.0	%
<b>Inflammation</b>					
Lactoferrin	11.0	H		<= 7.3	ug/mL
WBCs	Neg			Neg	
Mucus	Neg			Neg-Rare	
<b>Immunology</b>					
Fecal sIgA	81			40 - 204	mg/dL
Anti-gliadin sIgA	< 1			<= 20	mg/dL

Here we see the metabolic fingerprint of the bacterial dysbiosis in the imbalanced propionate (L) and valerate (H) reflecting shifted total bacterial metabolic output. We also note the high Lactoferrin produced by intra-epithelial leukocytes to sequester iron as means of lowering the inflammation due to bacterial growth. The Metamatrix Celiac Profile might be ordered to further diagnose this patient.

## 2100 Gastrointestinal Function Profile

Methc

Results		Reference Range
<b>Additional Tests</b>		
pH	6.9	6.1 - 7.2
Occult blood	Neg	Neg
RBCs	Neg	Neg
Color	Brown	
<b>Digestion</b>		
Elastase 1	183 <b>L</b>	=> 200 ug/mL
Triglycerides	67	<= 400 mg/dL
Putrefactive SCFA	2.9	0.7 - 4.8 mM/g
Vegetable Fibers	None	None-Few
<b>Absorption</b>		
LCFAs	2.3	0.3 - 12.0 mmol/L
Total Fat	3.4	0.7 - 24.0 mmol/L
Cholesterol	14	<= 70 mg/dL

Low Elastase 1 indicates that pancreatic insufficiency is suggested as one etiological origin of the disturbance. With this information we might construct the medical hypothesis that, as cortisol falls in the evening, the GI immune system activity increases with inflammatory responses. Concurrently, dietary proteins are passing undigested into the lower regions of the gut where they may be presenting as antigenic stimulants. Toxic bacterial metabolic products can increase sharply, along with direct bacterial enterotoxic effects, producing gasses and stimulating peristalsis that manifests as explosive diarrhea.

Rec:

- Submit Celiac Disease Profile specimen
- Address diet – investigate food sensitivities with IgG profile
- Add digestive enzymes and pre & pro biotics
- Alternate high dose allicyn, berberine and oil of oregano (thymol)