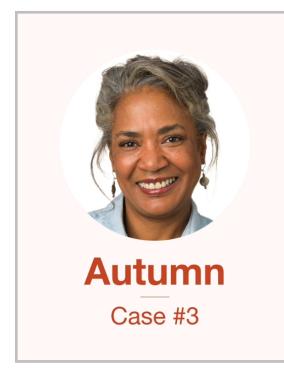


# Full Case Assignments I - Part Three

Okay, the last patient for this week. We'll call her "Autumn," a 58-year-old female with chief complaint of fatigue, poor sleep, anxiety, poor exercise tolerance, GI issues, brain fog memory, and recent ovarian cancer.



**58 y.o. Female** CC: Fatigue, poor sleep, anxiety, poor exercise tolerance, GI issues, brain fog, memory, recent ovarian cancer.

Went to law school at age 49; diagnosed with **ovarian cancer** shortly after.

Just passed Bar exam (huge stressor)

On **Mylan estradiol patch**; severe cognitive issues without supplemental estrogen.

"Crashed" after birth of daughter at age 40.

She went to law school at age 49. Diagnosed with ovarian cancer shortly after. Just passed the bar exam and was under a huge amount of stress. Was on the Mylan estradiol patch and has severe cognitive issues without supplemental estrogen. She described really crashing after the birth of her daughter at age 40.



### Please list the 5 major health concerns in your order of importance

Energy: Tired, lack of energy, depressed a/o anxious a lot; no motivation / Don't sleep well: wake up often (sometimes awake 1-2 hours), anxious, sleep lightly, Apnea?

Physical: Lack of stamina, physically weak, legs ache w/ exercise, foot and calf cramps, shoulder pain, can't get stronger, exercise makes it worse; stiff after sitting long periods

Digestion: crave sugar, tired after meals, gas, occasional cramps, hungry often -snack for energy - but don't really enjoy eating, put on weight,

Mental: lack of concentration or mental energy; forgetting names and terms; (situational: not working now...)? Read then can't remember details; ...

Fear of cancer recurring...

Please check the appropriate number on all questions below. 0 as least/never to 3 as most/always.

ategory I	0	1	2	3
eeling that bowels do not empty completely	0	0	0	0
ower abdominal pain relieved by passing stool or gas	0	0	0	0
Alternating constipation and diarrhea	0	0	0	0
Diarrhea	0	0	0	0
Constipation	0	0	0	0
lard, dry, or small stool	0	0	0	0
Coated tongue or "fuzzy" debris on tongue	0	0	0	0
Pass large amount of foul-smelling gas	0	0	0	0
fore than 3 bowel movements daily	0	0	0	0
Jse laxatives frequently	0	0	0	0
ategory II	0	1	2	3
Excessive beliching, burping, or bloating	0	0	0	0
Sas immediately following a meal	0	0	0	0
Offensive breath	0	0	0	0
Difficult bowel movement	0	0	0	0
Sense of fullness during and after meals	0	0	0	0
Difficulty digesting fruits and vegetables; undigested food found in stools	0	0	0	0
ategory III	0	1	2	3
Stomach pain, burning, or aching 1-4 hours after eating	0	0	0	0
Jse antacids	0	0	0	0
eel hungry an hour or two after eating	0	0	0	0
leartburn when lying down or bending forward	0	0	0	0



Temporary relief by using antacids, food, milk, or carbonated beverages	0	0	0	0
Digestive problems subside with rest and relaxation	0	0	0	0
Heartburn due to spicy foods, chocolate, citrus, peppers, alcohol, and caffeine	0	0	0	0
Category IV	0	1	2	3
Roughage and fiber cause constipation	0	0	0	0
Indigestion and fullness last 2-4 hours after eating	0	0	0	0
Pain, tenderness, soreness on left side under rib cage	0	0	0	0
Excessive passage of gas	0	0	0	0
Nausea and/or vomiting	0	0	0	0
Stool undigested, foul smelling, mucous like, greasy, or poorly formed	0	0	0	0
Frequent urination	0	0	0	0
Increased thirst and appetite	0	0	0	0
Category V	0	1	2	3
Greasy or high-fat foods cause distress	0	0	0	0
Lower bowel gas and/or bloating several hours after eating	0	0	0	0
Bitter metallic taste in mouth, especially in the morning	0	0	0	0
Burpy, fishy taste after consuming fish oils	0	0	0	0
Difficulty losing weight	0	0	0	0
Unexplained itchy skin	0	0	0	0
Yellowish cast to eyes	0	0	0	0
Stool color alternates from clay colored to normal brown	0	0	0	0
Reddened skin, especially palms	0	0	0	0
Dry or flaky skin and/or hair	0	0	0	0
History of gallbladder attacks or stones	0	0	0	0
Have you had your gallbladder removed?	0	Yes	0	No
Category VI	0	1	2	3
Acne and unhealthy skin	0	0	0	0
Excessive hair loss	0	•	0	0
Overall sense of bloating	0	•	0	0
Bodily swelling for no reason	0	0	0	0
Hormone imbalances	0	0	0	0
Weight gain	0	0	0	0
Poor bowel function	0	0	0	0
Excessively foul-smelling sweat	0	0	0	0
	0	1	2	3
Category VII				

A lot of symptoms listed in the gut, gallbladder, and liver section.



Depend on coffee to keep going/get started	0			
	0	0	0	0
Get light-headed if meals are missed	0	0	0	0
Eating relieves fatigue	0	0	0	0
Feel shaky, jittery, or have tremors	0	0	0	0
Agitated, easily upset, nervous	0	0	•	0
Poor memory/forgetful	0	0	0	0
Blurred vision	0	0	0	0
Category VIII	0	1	2	3
Fatigue after meals	0	0	0	0
Crave sweets during the day	0	0	0	0
Eating sweets does not relieve cravings for sugar	0	0	0	0
Must have sweets after meals	•	0	0	0
Waist girth is equal or larger than hip girth	0	0	0	0
Frequent urination	0	0	0	0
Increased thirst and appetite	0	0	0	0
Difficulty losing weight	0	0	0	0
Category IX	0	1	2	3
Cannot stay asleep	0	0	0	0
Crave salt	0	0	0	0
Slow starter in the morning	0	0	0	0
Afternoon fatigue	0	0	0	0
Dizziness when standing up quickly	0	0	0	0
Afternoon headaches	0	0	0	0
Headaches with exertion or stress	0	0	0	0
Weak nails	0	0	0	0
Category X	0	1	2	3
Cannot fall asleep	0	0	0	0
Perspire easily	0	0	0	0
Under high amount of stress	0	0	0	0
Weight gain when under stress	•	0	0	0
Wake up tired even after 6 or more hours of sleep	0	0	0	•
Excessive perspiration or perspiration with little or no activity	0	0	0	0
Category XI	0	1	2	3
Edema and swelling in ankles and wrists	0			



Poor muscle endurance	0	0	0	0
Frequent urination	0	0	0	0
Frequent thirst	0	0	0	0
Crave salt	0	0	0	0
Abnormal sweating from minimal activity	0	0	0	0
Alteration in bowel regularity	0	0	•	0
Inability to hold breath for long periods	0	0	0	0
Shallow, rapid breathing	0	0	0	0
Category XII	0	1	2	3
Tired/sluggish	0	0	0	0
Feel cold?hands, feet, all over	0	0	0	0
Require excessive amounts of sleep to function properly	0	0	0	0
Increase in weight even with low calorie diet	0	0	0	0
Gain weight easily	0	0	0	0
Difficult, infrequent bowel movements	0	0	0	0
Depression/lack of motivation	0	0	0	0
Morning headaches that wear off as the day progresses	0	0	0	0
Outer third of eyebrow thins	0	0	0	0
Thinning of hair on scalp, face, or genitals, or excessive hair loss	0	0	0	0
Dryness of skin and/or scalp	0	0	0	0
Mental sluggishness	0	0	0	0
Category XIII	0	1	2	3
Heart palpitations	•	0	0	0
Inward trembling	0	0	0	0
Increased pulse even at rest	•	0	0	0
Nervous and emotional	0	0	0	0
Insomnia	0	0	0	0
Night sweats	0	0	0	0
Difficulty gaining weight	•	0	0	0
Category XIV	0	1	2	3
Diminished sex drive	0	0	0	0
Menstrual disorders or lack of menstruation	0	0	0	0
increased ability to eat sugars without symptoms	0	0	0	0
Category XV	0	1	2	3
Increased sex drive	0	0	0	0
Tolerance to sugars reduced	0	0	0	0

Also several in blood sugar, HPA axis, heart and CVD category, thyroid, and pituitary.



"Splitting" - type headaches	0	0	0	0
Category XVI (Males Only)	0	1	2	3
Urination difficulty or dribbling	0	0	0	0
Frequent urination	0	0	0	0
Pain inside of legs or heels	0	0	0	0
Feeling of incomplete bowel emptying	0	0	0	0
Leg twitching at night	0	0	0	0
Category XVII (Males Only)	0	1	2	3
Decreased libido	0	0	0	0
Decreased number of spontaneous morning erections	0	0	0	0
Decreased fullness of erections	0	0	0	0
Difficulty maintaining morning erections	0	0	0	0
Spells of mental fatigue	0	0	0	0
Inability to concentrate	0	0	0	0
Episodes of depression	0	0	0	0
Muscle soreness	0	0	0	0
Decreased physical stamina	0	0	0	0
Unexplained weight gain	0	0	0	0
Increase in fat distribution around chest and hips	0	0	0	0
Sweating attacks	0	0	0	0
More emotional than in the past	0	0	0	0
Category XVIII (Menstruating Females Only)	0	1	2	3
Perimenopausal	0	Yes	0	No
Alternating menstrual cycle lengths	0	Yes	0	No
Extended menstrual cycle (greater than 32 days)	0	Yes	0	No
Shortened menstrual cycle (less than 24 days)		Yes	0	No
Pain and cramping during periods	0	0	0	0
Scanty blood flow	0	0	0	0
Heavy blood flow	0	0	0	0
Breast pain and swelling during menses	0	0	0	0
Pelvic pain during menses	0	0	0	0
Irritable and depressed during menses	0	0	0	0
Acne	0	0	0	0
Facial hair growth		0	0	0
- and the grant	0	0	0	0
Hair loss/thinning				



		7 - surgio	al menopa	use in oct 2	009 year
Since menopause, do you ever have uterine bleeding		0	Yes	0	No
Hot flashes		0	0	0	0
Mental fogginess		0	0	0	0
Disinterest in sex		0	0	0	0
Mood swings		0	0	0	0
Depression		0	0	0	0
Painful intercourse		0	0	0	0
Shrinking breasts		0	0	0	0
Facial hair growth		0	0	0	0
Acne		0	0	0	0
Increased vaginal pain, dryness, or itching		0	0	0	0
0-1 How many alcoholic beverages do you consume per	1	How many caffei	nated beverag	es do you cons	ume
veek?	per day?				
5-7 How many times do you eat out per week?	7 seeds?	How many times	a week do you	eat raw nuts	10
3-4 How many times a week do you eat fish?	1-2	How many times	a week do vo	ı workout?	
ist the three worst foods you eat during the average week: bread pi	udding/cren				rimminas
french bread w/ buttert	o o o o o o		morroan	000 111 011 0	go
ist the three healthiest foods you eat during the average week: COOk	ed greens/	veggies orga	nic lamb o	r chicken ,	
salmon cakes  Do you smoke? Yes   No  Do you currently have mercury amalgams (fillings) Yes   No  tave you had mercury amalgam fillings removed in the past? Yes    Rate your levels of stress on a scale of 1-10 during the average week:					
Oo you smoke? Yes   No Oo you currently have mercury amalgams (fillings) Yes   No Have you had mercury amalgam fillings removed in the past? Yes   Rate your levels of stress on a scale of 1-10 during the average week:		B			
to you smoke? Yes   No	[Select]	s post hystere	ctomy		
No you smoke? Yes   No No No you currently have mercury amalgams (fillings) Yes   No No stave you had mercury amalgam fillings removed in the past? Yes   No No No No Yes   No	[Select] noto's tal foggines	s post hystere	ctomy		

She mistakenly filled out the male symptoms in Category XVI but also has lots of symptoms in the menopausal female hormone area.

She eats out almost every day. Eats fish regularly. Exercises only once or twice a week. Still eating bread, so you'd probably want to do gluten intolerance testing. Does have mercury amalgams and has had some removed, so you'd want to consider mercury testing. She is on Synthroid for hypothyroidism and Hashimoto's and estrogen patch. Then taking vitamins D and C, selenium, and fish oil.



Indicate the frequency with which you eat the following foods by marking in the appropriate box. FREQUENT= at least once a day, OFTEN= several times per week, OCCASIONAL= once a week or less, SELDOM= once or twice a month or less, NEVER= total avoidance. Often Seldom Frequent Occas. Never Alcoholic Beverages 0 Eat Out at Restaurants 0 0 Pastries, Cookies, Candy, Ice Cream and Other Sweets White Flour: Bread, Pasta, Pancakes, Crackers, Muffins, etc. Add Sugar to Coffee, Tea, Cereals, or Other Foods 0 0 Sodas or Soft Drinks Diet Soft Drinks Fruit Juices Artificial Sweeteners (NutraSweet, Saccharin, etc) 0 Natural Sweeteners (Honey, Maple Syrup, Agave, etc) Breakfast Cereals (Hot or Cold) 0 ٥ Packaged Foods: Chips, Crackers, Puffs, Pretzels 0 0 Vegetable Oils (Sunflower, Safflower, Canola, Corn, Soy) 0 0 Margarine or Tub Vegetable Oil Spreads 0 0 Deep-Fried Foods Olive Oil Saturated Fats (Butter, Ghee, Lard, Coconut, Palm, Tallow) Fatty Fish (Salmon, Mackerel, Sardines, Herring) Nuts and Seeds, Nut/Seed Butters Pasteurized Dairy (Check: Nonfat, Low-Fat, 🗸 0 0 0 0 Whole) Raw Dairy Products (Check: Nonfat, Low-Fat, 🗸 0 0 0 Whole) Fermented Dairy Products (Yogurt, Kefir, Cheese) Eggs (Check: V Free-Range, Pastured, V Organic, or 0 0 Conventional) Poultry or Fowl (Chicken, Turkey, Duck, etc) Pork 0 Red Meat (Beef, Lamb) Processed Meats (Bacon, Sausage, Salami, Ham, etc) 0 Organ Meats (Liver, Kidney, Sweetbreads, etc) Soy Products (Tofu, Tempeh, Soy Milk, Edamame)



		_	_		_	_
Salads, Uncooked Vegetables		0	•	0	0	
Fermented Vegetables (Sauerkraut, Kim Chi, etc.	c)	0	0	0	•	0
Non-Starchy Vegetables (Greens, Squash, Carro	ots)	0	0	0	0	0
Starchy Vegetables (Potatoes, Yams, Sweet Pot	tatoes)	0	0	0	0	0
Fresh Fruits		0	0	0	0	0
Beans and Legumes		0	0	0	0	0
Whole Grains and Whole Grain Breads (Wheat,	Gluten)	0	0	0	0	0
Alternative Grains (Quinoa, Buckwheat, Teff, etc.	:)	0	0	0	0	0
Herbs and Spices (Fresh or Dried)		0	0	0	0	0
Chocolate (Check: Milk or Dark)		0	0	0	0	0
Herbal Teas		0	0	0	0	0
Coffee (Check: Z Regular or Z Decaffeinated	d)	0	0	0	0	0
Caffeinated Teas (Check: Z Black or Gree	n)	0	0	0	0	0
Salt (Check: 🔽 lodized or 💟 Sea Salt)		0	0	0	0	0
Please indicate if you are on any special diet:						
Cup lasta vagastarian	□ Magatarian			□ Other		
Ovo-lacto-vegetarian	□ Vegetarian			□ Other		
☐ Diabetic ADA	☐ Vegan			Other		
☐ Diabetic ADA ☐ Dairy-free	□ Vegan □ Paleo			Other		
□ Diabetic ADA □ Dairy-free ☑ Gluten-free	Vegan Paleo GAPS	off for 5 y	ears.	□ Other		
☐ Diabetic ADA ☐ Dairy-free	Vegan Paleo GAPS this diet? on and for example: 80/20, or s at restaurants 2	all the time	e, except cert , no pasta	ain holidays		
Diabetic ADA Dairy-free Gluten-free Gluten	Vegan Paleo GAPS this diet? On and For example: 80/20, or s at restaurants 2 cribe your current eat	r all the time!-3x/week ing styles:	e, except cert , no pasta	ain holidays		
Diabetic ADA Dairy-free Gluten-free Gluten	Vegan Paleo GAPS this diet? On and For example: 80/20, or s at restaurants 2 cribe your current eat	r all the time-3x/week	e, except cert , no pasta	ain holidays		
Diabetic ADA Dairy-free Gluten-free Gluten	Vegan Paleo GAPS this diet? On and For example: 80/20, or s at restaurants 2 cribe your current eat	r all the time-3x/week	e, except cert , no pasta	ain holidays n years,		
Diabetic ADA Dairy-free Gluten-free Gluten	Vegan Paleo GAPS this diet? on and for example: 80/20, or s at restaurants 2 cribe your current eat computer, or	r all the time -3x/week ing styles:  Fast  Eat t	e, except cert , no pasta	ain holidays n years,	learned	
Diabetic ADA Dairy-free Gluten-free Gluten	Vegan Paleo GAPS this diet? on and for example: 80/20, or s at restaurants 2 cribe your current eat computer, or	r all the time-3x/week ling styles:  Fast Eat t Eat t Trav Don	e, except cert , no pasta i eater loo much in the middle el Frequenti	ain holidays n years,		or calories
Diabetic ADA Dairy-free Gluten-free Gluten	Vegan Paleo GAPS this diet? on and For example: 80/20, or s at restaurants 2 cribe your current eat computer, or s, portion sizes,	r all the time -3x/week ing styles:  Fast  Eat t  Trav  Donn	e, except cert , no pasta  eater  too much in the middle el Frequenti 't care to ce t really enjo	ein holidays n years, of the night y	nostly for fuel	
Diabetic ADA Dairy-free Gluten-free Gluten	Vegan Paleo APS this diet? On and for example: 80/20, or s at restaurants 2 cribe your current eat computer, or s, portion sizes, in home	r all the time-3x/week ling styles:  Fast  Eat ti  Trav  Don  Lack  Don'	e, except cert no pasta i	ain holidays n years,	nostly for fuel in neighborh if seated tog	nood

I mentioned before she is eating out a lot. Also occasional pastries, cookies, and candy, but otherwise, her diet is pretty good. Describes it as 80/20 gluten-free and occasionally eats bread and tortillas at restaurants.



	Diet often for weight control	<ul> <li>Struggle with eating issues or history of eating disorders</li> </ul>
V	Eat too much or too little under stress	
Addi	itional Comments	
da Ca ou	aughter left for college, husband started tra a Bar exam (took many tries, each time stu at a lot, or get take out. I usually eat leftove	ay for my daughter and husband and I for 17 years, 3 years ago veling a lot for work, and I was under a lot of stress trying to pass dying hard for 3-4 months) So, I stopped cooking at home: we eat rs the next day, or go to local restaurants for either breakfast or lot, and I have gained 15-20 pounds. I crave sugar and chocolate



The food we eat is probably the single-most important factor determining whether we are healthy or ill. The goal of this survey is not to pass judgment, but instead to get an accurate idea of what you're eating and how it may (or may not) be contributing to your health problems. The accurate and honest you can be in your responses, the more I will be able to help you make choices that support health and well-being.

### 1) Describe a typical breakfast (including what time you eat it).

Usually eat between 8 and 9 am (I am at home now, not working out of the house) eggs (scrambled or fried in olive oil, butter or ghee); sometimes add cheese (raw cheddar or gouda mostly)

Chicken apple sausage or turkey bacon, or leftover meat from dinner: beef, lamb, chicken

Vegetables -usually left from night before, or cook fresh: broccolini, zucchini, onion, greens (arugula, kale), cauliflower

sometimes: baked sweet potato, or white rice, or white potatoes

water

black tea w/ cream, or sometimes coffee (capuchino with whole milk if available)

Occasionaly oatmeal w/ nuts, cranberries, and maple syrup and coconut or cream.

2) Do vo	u have a	morning	snack?	



Yes No Sometimes

Handful of roast nuts; almonds, cashews, pecans, walnuts, brazil nuts - whatever I have at home. (I soak and roast my own nuts regularly)

Banana or apple w/ almond butter

### 3) Describe a typical lunch (including what time you eat it).

Usually eat between 12 - 2.

Often eat out: salad with chicken or salmon on it, OR soup and scoop of chicken or egg salad VERY Rarely: a pre-made sandwich, if nothing else availlable. Generally have not been eating bread for several years.

If at home: leftovers from dinner: meat, veggies, rice or potato

### 4) Do you have an afternoon snack? Yes No Sometimes

Handful of nuts -almonds, cashews, pecans, walnuts, brazil nuts - whatever I have at home.

Banana or apple w/ almond butter

Avocado on rice-crackers, sometimes with cheese or cream-cheese

Yogurt with nuts; sometimes add molasses or maple syrup

Berries w/ coconut milk

### 5) Describe a typical dinner (including what time you eat it).

Usually eat between 6:30 - 7:30, sometimes 8.

IF at home:

beef, lamb, chicken or fish - baked or cooked on stove with olive oil or butter and salt. Lemon, mustard, butter, soy-sauce, mint jelly, sweet chutney, (rarely mayonnaise) are common condiments we eat.

Veggies: saut?ed in butter or olive oil: all varieties: carrots, broccoli cauliflower, green beans, zucchini, tomatoes, onions, leeks, .

Yams or rice or yukon-gold potatoes

Occasionally: a cookie or small bowl of chocolate ice-cream

BUT: for past 2 years we have been eating out A LOT - 4-6 times/ week. Then I usually order salad w/ balsamic dressing, meat (beef, lamb, chicken or fish), veggies and potatoes with various sauces/marinades. Will often eat a slice or two of bread w/ butter or oil.

Also, eat at favorite regional Mexican: tacos w/ pork (carnitas) or chicken w/ sour cream, guacamole, tortilla chips w/ salsa, chicken w/ mole (sweet sauce) cheese, and salad.



At 10 or 11 pm	
cheese (usually ray	w )cheddar and GF crackers, or with walnuts or pecans
avocado with chee	
almond butter on G	F crackers
Do you eat dessert afte lease describe what you	er: Iunch? odinner? both? "I don't eat dessert" eat for dessert
Not every night; me	ostly on weekends as we always go out Fri and Sat night. Dessert: creme br?l?e, bread
	s are favorites. At home: packaged cookies or chocolate ice-cream, or berries w/ coconut
milk or real cream	
Sometimes i make	fried bananas (in butter)
	y in the middle of the night? Yes Sometimes you eat?
so, do you eat? What do	
dditional Comments AS said above: we	have been eating out a lot -( 3-5x/week) So, have been eating more quantity and more et c than if I cooked at home more.
dditional Comments  AS said above: we sauces, flavorings,	have been eating out a lot -( 3-5x/week) So, have been eating more quantity and more et c than if I cooked at home more.  bring from a home-delivery service (2-3x week) . They cook good, "healthy", organic foods,

Stress of passing the bar exam led to eating out and not cooking much at home, and this led to a weight gain of 15 to 20 pounds, sugar craving, and caffeine dependence. Breakfast is good, and then it kind of goes downhill from there because she is eating lunch and dinner out very often.



ENVIRONMENTAL EXPOSURE			
Please answer the following questions:			
	Yes	No	Unknown
1) Do you have exposure to the interior building of a water damaged building and/or microbial growth? If yes, please answer the next three (3) questions:	0	0	0
a. Do you have samples/evidence of spore or genus and species of fungus (air test, ERMI test, etc.)	0	0	0
b. Is there visible microbial growth (mold)?	0	0	0
c. Is there a presence of musty smells?	0	0	0
2) Do you remember a tick bite occurring before your illness beginning? If yes, please answer the next two (2) questions:	0	0	0
a. Did you have an unexplained rash after the bite?	0	0	0
b. Did you experience flu-like illness after the bite?	0	0	0
3) Have you had a brown recluse or other poisonous spider bite? If yes:	0	0	0
a. Did you experience flu-like illness after the bite?	0	0	0
4) Did you become ill after eating fish?	0	0	0
5) Did you become ill after exposure to a body of fresh water?	0	0	0
6) Did you become ill after exposure to the ocean during a 'Red Tide' or other bloom?	0	0	0
7) Did you become ill after exposure to an estuary fish kill?	0	0	0
Did you become ill after exposure to a closed shell fish bed area?	0	0	$\circ$
ASSOCIATED ILLNESSES			
Please mark yes or no:			
Illness	Yes		No
Tick borne Illness	0		0
Lyme Disease	0		0
Fibromyalgia	0		0
Chronic Fatigue Syndrome	0		0
Gulf War Syndrome	0		0
Chemical Sensitivity	0		0
Sick Building Syndrome	0		0
Fungus or Mycotoxicosis	0		0
Depression	0		0
Chronic Soft Tissue Injury	0		0
Irritable Bowel Syndrome	0		0
Bacteria	0		0
Beil's Palsy	0		0
Pfiesteria	0		0



Sensory Neural Hearing Loss	0 •
Ciguatera Seafood Poisoning	0 •
Any Learning Disability	0
Autism	0 0
Attention Deficit Disorder	0
Charcot Marie Tooth Syndrome	0 0
Alzheimer's Disease	0 •
Parkinson's Disease	0 •
Amyotrophic Lateral Sclerosis	0 •
Multiple Sclerosis	0 0
Diabetes	0 •
Ocular Disease (e.g., cataract)	0 •
Retinal Disease (e.g., glaucoma)	0 •
Low Vision or Blindness	0 •
Another Condition Involving Neurological Function	0 •

Nothing significant on the environmental exposure survey.



The single most important criteria for effective case management is a comprehensive and detailed health history. Please answer the following questions with as much detail as possible. It is important for me to know everything about you and your case. Even when you feel the questions may not be directly relevant to your situation, please do your best to answer them.

It takes tremendous time and energy for any healthcare provider to manage a complicated case. My practice is limited to a small number of patients and therefore the case review process is very important.

Instructions: Please type answers to the following questions with as much detail as possible. Please answer each question independently.

### **HEALTH HISTORY QUESTIONS**

1) Please list the following

Education: BA in Religious Thought; J.D. in Law

Profession: unemployed, recently licensed lawyer

Interests (sports, hobbies, etc.):

Walking, hiking, yoga, eating out, movies

2) List your chief complaints in order of your importance:

- Anxiety, depression, anger moody and feel tired, lethargic, weak a lot.
- Sleep trouble: wake often in middle of the night (3-5 a.m.); often awake for 1-2 hours, anxious and worried thinking,
- -Physical discomfort: achy legs (especially after exercise )/ mild lymphedema; weak muscles, shoulder pain, de-conditioned overall and not sure how to get strong w/ out pain
- Digestive trouble: tired after a meal, uncomfortable if eat too much (pain), gas, sensitive to spicy, acidic foods; trouble digesting legumes/beans, lentils, etc
- Concern about cancer recurrence: always present.

3) List all diagnoses given to you in a timeline sequence and your personal opinions about them.

Lymphedema in legs: post surgery in 2010: painful (achey and weak), real, debilitating; prevents me from doing what I like: hiking, long walks, biking> Makes me mad and depressed..

Depression: on and off since I was 20; seems situational but prevents me from doing things I need to do to get my life on track. Many docs want me to try anti-D or anti-anxiety medications, but I don't want to; don't trust them; currently feel stuck

Ovarian Cancer: Oct 2009 discovered on surgical removal of huge ovarian cyst in full hysterectomy. Leaves me nervous about it's recurrence. Grateful they found it early!

Chronic Fatigue Syndrome, CFS: diagnosed after a year of being sick and weak and depressed all the time. - 1988 - 1994 Continued for 6 years. Acupuncture helped; May have been missed hypothyroidism? or may have led to that? disrupted my life for a long time. left me more cautious, reluctant to take on new challenges, depressed.

4) What's your opinion on what has happened to your health?

I am frustrated that at my age - 58 - I feel like an old woman sometimes: achy body, mental fog, no energy or interest in doing much of anything, trouble concentrating. More recently I have become more depressed since I am not working, have no role at home anymore, and don't feel great: stay home by myself a lot: way too much: but can't muster the motivation or energy to get out and do something about it.

Both the years of having CFS and the pressure to have a second surgery , post hysterectomy, to remove

On her questionnaire, she mentions lymphedema in her legs, history of depression, ovarian cancer in 2009, surgically removed ovarian cysts, and hysterectomy. Chronic fatigue syndrome diagnosis between 1988 and 1994 and suspects she may have had hypothyroidism, and it was misdiagnosed.



dozens of lymph glands and my omentum, allegedly necessary to look for cancer cells, messed up my insides, my hormones, my immune system, my digestive track... and has left me feeling unhappy, lacking energy, and with occasional pain. Not sure it was necessary. The whole process of the cancer discovery and the recommendation for Chemo-therapy, despite no signs of any spread (which I refused against doctor's angry warnings) left me with no trust in the medical establishment - either in their ability to figure out what is really going on or how to treat it.

5) List any treatments, medications, or supplements that have improved your health.

Herb ,Mineral and Nutrition supplements: I was under the care of a herbalist/botanist for 2 years post surgery/cancer and took dozens of supplements. I believe they helped me recover faster than without them. Too many to list. Included:

Synthroid/levothyroxin was a life saver, bringing me steady energy after years of feeling completely drained.

Estradiol brought my body back into control, and my mental function as well, after instant "surgical menopause" caused major disruptions. Not sure about staying on it so long, though.

The fist surgery may have saved my life: catching and removing clear-cell carcinoma ovarian cancer tumor before it had spread outside of the ovary.

Back when I had CFS, acupuncture was the one thing that seemed to help get my energy back in balance.

6) List any treatments, medications, or supplements that have caused reactions or decreased your health.

I believe the second surgery - "staging surgery" - after my full hysterectomy, was unnecessary, invasive, and traumatic to my body and has left me more debilitated then if I had not had it. They removed many more lymph glands than they told me they would, and removing the oomentum has changed the way my organs in my belly sit, and perhaps how they function?

I tried Anti-depressants (welbutrin, prozac) in very low dose several years ago that left me feeling very out of sorts, emotional, and uneasy. Not good.

I have tried numerous supplements to help with sleep, all of which don't really help w/ sleep and I wake up feeling slightly drowsy and mildly depressed: melatonin, I-tryptophan, glycine, serenagen, seranosol, ... Perhaps I needed to stay on them longer to adjust? (i never tried more then 3-4 night in a row.)

Increasing the Levothyrozine or switching to "bio-identical" Armour when I was feeling sluggish several years ago just made me more "hyper" and anxious, so did not stay on it.

7) List in a timeline sequence any medical procedures or surgeries you have had:

1974 - head injury: concussion and hairline fracture, temporary amnesia: hospitalized for 10 days

1975 - 4 impacted wisdom teeth removed - surgery

1983 and 1986 - abortions -(D

### PERSONAL OPINION QUESTIONS

\*Please do not answer "I don't know" to any of these questions.\*

1) Why do you think healthcare practitioners have failed with your case?

They treat all symptoms with prescription medication or nothing.

OR, if giving me supplements, they do not follow up, or they charge me for every follow up visit, and do not check in after a few days or a week or two to see how I am reacting to it. I often feel I am being experimented with, not given solid information.

2) What are you looking for in a healthcare practitioner?



Someone who can see the overall big-picture and is open to alternative "medicine" approaches (non-western - acupuncture, herbs - and/or nutrition/diet changes, and/or life-style support/coaching.)

Also, someone who will give me clear suggestions about what I can or need to do, and will follow up or be easily available for questions, especially in the first weeks of a new plan.

Really, I think I am looking for a "coach", who will become someone I can connect with as I go along trying to get healthier, better, stronger, .... who sees my health as a complex process that takes more than just me to "fix" it, but also more than just them making suggestions and then hoping I follow thru and see changes.

3) What do you consider a realistic window of time to see changes in your health under our care?

I would like to see change within a few weeks, but know that with diet changes, results often take 1-2 months (0r more) to manifest....

4) Are you prepared to pay for the laboratory testing, consulting fees and nutritional supplements that may be required to successfully manage your condition?

Yes

5) On a scale of 1 to 10, how committed are you to recovering your health? 7-8

B Why?

I say 7-8 because I know myself: with out a " coach" or partner who is supporting me in making significant changes, I tend to give up after a while and resort to old habits. (lazy? easily discouraged? busy?) So, although I know I need to do things for myself, I also know I'm more likely to succeed if I have someone to talk to about the program as I go through it.

6) What obstacles or beliefs, if any, stand in the way of you recovering your health?

I am under a lot of internal stress these days and tend to give up or give in to desires (to eat out, eat sugar, drink coffee, alcohol,) or just be lazy about preparing good food.

I currently believe that exercise is "bad" for me now - i.e. it will cause more leg aches and overall pain and fatigue and I don't think my muscles will get stronger. So, I have become very sedentary.

7) Are there emotional or psychological issues that may be contributing to your health problems? If so, please explain them briefly.

YEs: I am depressed and do not want to do anything good for myself that takes any effort. So, little exercise, not eating great, and not doing anything productive.

I am in a strange position in life: 58, having just obtained my CA law license, but not having a job or any good connections in the field, and scared to go out there and "put myself" out looking for volunteer or other opportunities to practice.

I feel very sad and alone: Child gone (to college), companion dog dies last year, husbands' new job has him away 2 weeks/month - so I am literally alone at home and struggling to get out and find things to do that make sense.

8) Do you enjoy your work? Do you believe your work contributes to your health problems?

I am not working. Major part of the problem!

9) Do you have a purpose in life?

Synthroid and estradiol patch significantly improved her health, as have herbs, minerals, and supplements. Antidepressants and serotonergic supplements have not worked or caused harm. She had a significant head injury in 1974.



Her commitment is 7 to 8, and she says she needs a coach or a partner to stick with changes, so pay attention to that. It is really important. She is telling you here that she is going to need support in order to be successful. She says she struggles with depression, and she is lacking social connection, and that is probably part of why she needs that kind of support.

Want to get out and help underprivileged/underserved peoples in legal arena, but am stuck right now.

10) Where else do you find support? Friends? Church or religious group? Nature?

Spiritual meditation community - go 2x/week. Husband - when he's home A couple friends, if I call them.

11) How did you feel about answering all of these questions and the case review process?

Interesting: I like that the questions go into who I am and what my life is like now, not just symptoms and lab results. It helped me realize that a lot of my "health concerns" are probably related to how I am living these days, not purely "medical".

(I have filled out many long forms over the years for doctors, naturopaths, chiropractors, "alternative" care folks, who then don't read them and end up asking me for information during our rushed appointment that seems it would have been good for them to have in their mind before we started. Leaves me feeling like they have a pre-determined plan or approach before they even meet me the first time!)

The whole process of preparing for my first visit has been very time intensive, and expensive, so I am keeping an open but somewhat skeptical mind as to whether it is worth it or not.

Pay attention again to the question for answer #11. We talked about this in the last case assignment. She is feeling discouraged and has tried a lot that has not worked in the past. Finds it hard to trust practitioners given her experience with previous clinicians, so you just want to be aware of that.



Marker	Value	Functional Range	Lab Range
Glucose	94	75 - 90	65 - 99
Hemoglobin A1c	5.8	4.4 – 5.4	4.8 - 5.6
Uric Acid	6.3	3.2 - 5.5	2.5 - 7.1
BUN	17	13 – 18	6 - 24
Creatinine	0.71	0.7 – 1.0	0.57 - 1
BUN/Creatinine Ratio	24	9 – 23	9 - 23
eGFR if Non-African American	94		> 59
eGFR if African American	109		> 59
Sodium	141	135 – 140	134 - 144
Potassium	4.1	4.0 - 4.5	3.5 - 5.2
Chloride	103	100 – 106	97 - 108
C02	23	25 – 30	18 - 29
Calcium	9.3	9.2 – 10.1	8.7 - 10.2
Parathyroid Hormone, Intact	52	15 - 60	15 - 65
Phosphorus	2.8	3.0 - 4.0	2.5 - 4.5
Magnesium	2.1	2.0 - 2.6	1.6 - 2.3
Protein, total	6.7	6.9 – 7.4	6.0 - 8.5
Albumin	4.2	4.0 - 5.0	3.5 - 5.5
Globulin	2.5	2.4 - 2.8	1.5 - 4.5
A/G ratio	1.7	1.5 - 2.0	1.1 - 2.5
Bilirubin, total	0.4	0.1 – 1.2	0.0 - 1.2
Alkaline Phosphatase	41	42 – 107	39 - 117
LDH	148	140 - 180	119 - 226
AST	11	0 - 23	0 - 40
ALT	14	0 - 20	0 - 32
GGT	10	0 - 21	0 - 60
TIBC	293	275 – 425	250 - 450
UIBC	161	175 - 350	131 - 425
Iron	132	40 – 135	27 - 159
Iron saturation	45	17 – 45	15 - 55
Ferritin	94	30 - 100	15 - 150
Vitamin B-12	566	450 – 2000	211 - 946
Folate, Serum	13.1	> 5.0	> 3.0
Calcitriol (1,25 di-OH Vitamin D)	54.8	19.9 - 79.3	19.9 - 79.3
Vitamin D, 25-hydroxy	31.1	35 - 60	30.0 - 100.0
Cholesterol, total	233	150 - 230	100 - 199
Triglycerides	95	50 – 100	0 - 149
HDL	54	55 – 85	> 39
LDL	160	0 - 140	0 - 99
T. Chol / HDL Ratio	4.3	< 3	0 - 4.4
Triglycerides / HDL Ratio	1.76	< 2	< 3.8



Marker	Value	Functional Range	Lab Range
CRP-hs	0.64	< 1.0	0.00 - 3.00
Homocysteine	8.9	< 7.0	0.0 - 15.0
TSH	0.728	0.5 - 2.0	0.45 - 4.50
T4, total	10.3	6.0 - 12	4.5 - 12
T3 Uptake	31	28 - 35	24 - 39
T3, Total	74	100 – 180	71 - 180
T3, Free	2.3	2.5 - 4.0	2 - 4.4
T4, Free	1.68	1 - 1.5	0.82 - 1.77
Reverse T3	18.5	9 - 21	9.2 - 24.1
Thyroid – TPO Ab	98		0 - 34
Thyroid – TGA	<1.0		0 - 0.9
Copper	88	81 - 157	72 - 166
Zinc	80	64 - 126	56 - 134
Zinc / Copper Ratio	0.91	> 0.85	
Serum Methylmalonic Acid (MMA)	133	< 300	0 - 378
WBC	3.4	5.0 - 8.0	3.4 - 10.8
RBC	4.37	4.4 – 4.9	3.77 - 5.28
Hemoglobin	13.2	13.5 - 14.5	11.1 - 15.9
Hematocrit	40.2	37 - 44	34 - 46.6
MCV	92	85 – 92	79 - 97
MCH	30.2	27.7 – 32.0	26.6 - 33.0
MCHC	32.8	32 – 35	31.5 - 35.7
RDW	13.7	11.5 – 15.0	12.3 - 15.4
Platelets	231	150 – 379	150 - 379
Neutrophils	62	40 – 60	
Lymphocytes	27	25 – 40	
Monocytes	7	4.0 – 7.0	
Eosinophils	3	0.0 - 3.0	
Basophils	1	0.0 - 3.0	

Fasting glucose is 94, and A1c is 5.8. It's a probable blood sugar issue. Triglycerides are creeping up at 95, and HDL is low-normal at 54. Total cholesterol is 233, and total cholesterol-to-HDL ratio is 4.3, so that is not optimal. Uric acid is functionally high at 6.3. I would do advanced metabolic and lipid panel follow-up with THD (True Health Diagnostics\*).

<\* Note: True Health Diagnostics is no longer in business. See this post for the latest updates.>

BUN-to-creatinine ratio is 24. It is one point out of the range, and BUN and creatinine are normal, so it is probably not a concern.

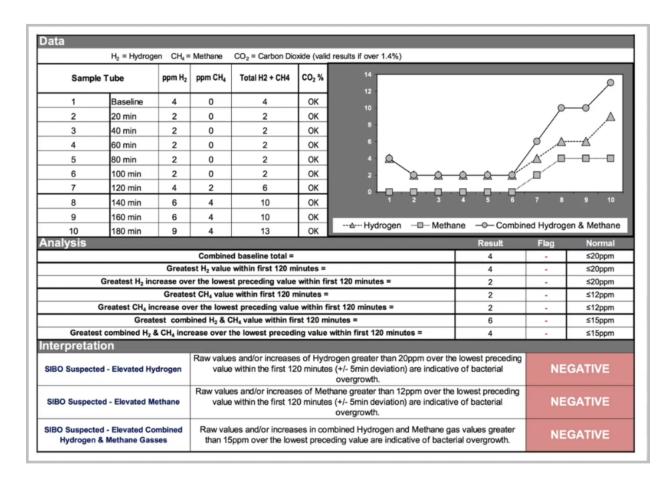
Her 25(OH)D is 31, and this is another situation where parathyroid hormone can be useful because it is 52, so that means it is definitely not maximally suppressed, and vitamin D deficiency is likely. Note that calcitriol and serum calcium are normal, but calcium is a little on the low end of normal here.

Homocysteine is slightly high at 8.9. Serum B12 and folate are normal. Serum MMA is normal, so you would want to consider urine MMA and FIGLU.



TSH is optimal at 0.73. Total T3 is low-normal at 74, and free T3 is low-normal at 2.3. Free T4 is high-normal at 1.68. This is a classic example of why T4 monotherapy is often ineffective in patients with Hashimoto's, which she has. You can see her thyroid antibodies are elevated at 98.

White blood cell count is almost out of the lab range, low at 3.4, suggestive of chronic infection or perhaps Hashimoto's autoimmunity. Red blood cell and hemoglobin are functionally low and may be related to low active B12 or folate, so that is another reason to do urine MMA or FIGLU.



SIBO breath test was firmly negative. This is a completely normal result, not equivocal in the slightest.



### Comprehensive Stool Analysis | Parasitology x3

### **BACTERIOLOGY CULTURE**

### Expected/Beneficial flora

- 4+ Bacteroides fragilis group
- 1+ Bifidobacterium spp.
- 4+ Escherichia coli
- 2+ Lactobacillus spp.
- 2+ Enterococcus spp.
- 4+ Clostridium spp.
- NG = No Growth

1+ Alpha hemolytic strep

Commensal (Imbalanced) flora

- 2+ Beta strep, group B
- 2+ Hemolytic Escherichia coli
- 1+ Providencia rettgeri
- 1+ Staphylococcus aureus

### BACTERIA INFORMATION

Expected /Beneficial bacteria make up a significant portion of the total microflora in a healthy & balanced GI tract. These beneficial bacteria have many health-protecting effects in the GI tract including manufacturing vitamins, fermenting fibers, digesting proteins and carbohydrates, and propagating antitumor and anti-inflammatory factors.

Clostridia are prevalent flora in a healthy intestine. Clostridium spp. should be considered in the context of balance with other expected/beneficial flora. Absence of clostridia or over abundance relative to other expected/beneficial flora indicates bacterial imbalance. If C. difficile associated disease is suspected, a Comprehensive Clostridium culture or toxigenic C. difficile DNA test is recommended.

Commensal (Imbalanced) bacteria are usually neither pathogenic nor beneficial to the host GI tract. Imbalances can occur when there are insufficient levels of beneficial bacteria and increased levels of commensal bacteria. Certain commensal bacteria are reported as dysbiotic at higher levels.

Dysbiotic bacteria consist of known pathogenic bacteria and those that have the potential to cause disease in the GI tract. They can be present due to a number of factors including: consumption of contaminated water or food, exposure to chemicals that are toxic to beneficial bacteria; the use of antibiotics, oral contraceptives or other medications; poor fiber intake and high stress levels

### YEAST CULTURE

### Normal flora

1+ Geotrichum spp

Dysbiotic flora

### MICROSCOPIC YEAST

### Result:

Expected:

Few

None - Rare

The microscopic finding of yeast in the stool is helpful in identifying whether there is proliferation of yeast. Rare yeast may be normal; however, yeast observed in higher amounts (few, moderate, or many) is abnormal.

### YEAST INFORMATION

Dysbiotic flora

Yeast normally can be found in small quantities in the skin, mouth, intestine and mucocutaneous junctions. Overgrowth of yeast can infect virtually every organ system, leading to an extensive array of clinical manifestations. Fungal diarrhea is associated with broad-spectrum antibiotics or alterations of the patient's immune status. Symptoms may include abdominal pain, cramping and irritation. When investigating the presence of yeast, disparity may exist between culturing and microscopic examination. Yeast are not uniformly dispersed throughout the stool, this may lead to undetectable or low levels of yeast identified by microscopy, despite a cultured amount of yeast. Conversely, microscopic examination may reveal a significant amount of yeast present, but no yeast cultured. Yeast does not always survive transit through the intestines rendering it unvialble.



### Comprehensive Stool Analysis / Parasitology x3

# PARASITOLOGY/MICROSCOPY Sample 1 None Ova or Parasites Few Yeast Sample 2 None Ova or Parasites Rare RBC Rare Yeast Sample 3 None Ova or Parasites Rare RBC Few Yeast

### PARASITOLOGY INFORMATION

Intestinal parasites are abnormal inhabitants of the gastrointestinal tract that have the potential to cause damage to their host. The presence of any parasite within the intestine generally confirms that the patient has acquired the organism through fecal-oral contamination. Damage to the host includes parasitic burden, migration, blockage and pressure. Immunologic inflammation, hypersensitivity reactions and cytotoxicity also play a large role in the morbidity of these diseases. The infective dose often relates to severity of the disease and repeat encounters can be additive.

There are two main classes of intestinal parasites, they include protozoa and helminths. The protozoa typically have two stages; the trophozoite stage that is the metabolically active, invasive stage and the cyst stage, which is the vegetative inactive form resistant to unfavorable environmental conditions outside the human host. Helminths are large, multicellular organisms. Like protozoa, helminths can be either free-living or parasitic in nature. In their adult form, helminths cannot multiply in humans.

In general, acute manifestations of parasitic infection may involve diarrhea with or without mucus and or blood, fever, nausea, or abdominal pain. However these symptoms do not always occur. Consequently, parasitic infections may not be diagnosed or eradicated. If left untreated, chronic parasitic infections can cause damage to the intestinal lining and can be an unsuspected cause of illness and fatigue. Chronic parasitic infections can also be associated with increased intestinal permeability, irritable bowel syndrome, irregular bowel movements, malabsorption, gastritis or indigestion, skin disorders, joint pain, allergic reactions, and decreased immune function.

In some instances, parasites may enter the circulation and travel to various organs causing severe organ diseases such as liver abscesses and cysticercosis. In addition, some larval migration can cause pneumonia and in rare cases hyper infection syndrome with large numbers of larvae being produced and found in every tissue of the body.

One negative parasitology x1 specimen does not rule out the possibility of parasitic disease, parasitology x3 is recommended. This test is not designed to detect Cyclospora cayetanensis or Microsproridia spp.

		GIARDI	A/CRYPTOSPORIDIUM IMM	UNOASSAY
	Within	Outside	Reference Range	Giardia duodenalis (AKA intestinalis and lamblia) is a protozoan that infects the small intestine and
Giardia duodenalis	Neg		Neg	is passed in stool and spread by the fecal-oral route. Waterborne transmission is the major source of giardiasis.
Cryptosporidium	Neg		Neg	Cryptosporidium is a coccidian protozoa that can be spread from direct person-to-person contact or waterborne transmission.

Doctor's Data results indicate low levels of Bifidobacteria and Lactobacillus, some commensal imbalance flora, and mild fungal overgrowth.



# Comprehensive Stool Analysis / Parasitology x3

		DIGESTION /A	BSORPTION
	Within	Outside Reference R	tange Elastase findings can be used for the diagnosis or the exclusion of exocrine pancreatic
Elastase	> 500	> 200 µg/n	insufficiency. Correlations between low levels
Fat Stain	Few	None - Mod	of fecal fat using Sudan IV staining is a qualitative procedure utilized to assess fat absorption and to detect steatorrhea. <b>Muscle</b>
Muscle fibers	None	None - Rare	fibers in the stool are an indicator of incomplete digestion. Bloating, flatulence, feelings of "fullness" may be associated with increase in
Vegetable fibers	Rare	None - Few	muscle fibers. Vegetable fibers in the stool may be indicative of inadequate chewing, or eating
Carbohydrates	Neg	Neg	"on the run". <b>Carbohydrates</b> : The presence of reducing substances in stool specimens can indicate carbohydrate malabsorption.
		INFLAMN	MATION

			INFLAMMATION	
	Within	Outside	Reference Range	Lactoferrin and Calprotectin are reliable markers for differentiating organic inflammation
Lactoferrin	5.5		< 7.3 μg/mL	(IBD) from function symptoms (IBS) and for management of IBD. Monitoring levels of fecal lactoferrin and calprotectin can play an essential
Calprotectin*	30		<= 50 μg/g	role in determining the effectiveness of therapy, are good predictors of IBD remission, and can indicate a low risk of relapse. Lysozyme* is an
Lysozyme*	519		<= 600 ng/mL	enzyme secreted at the site of inflammation in the GI tract and elevated levels have been identified in IBD patients. White Blood Cells
White Blood Cells	None		None - Rare	(WBC) and <b>Mucus</b> in the stool can occur with bacterial and parasitic infections, with mucosal irritation, and inflammatory bowel diseases such
Mucus	Neg		Neg	as Crohn's disease or ulcerative colitis.

			IMMUNOLOGY	
	Within	Outside	Reference Range	Secretory IgA* (sIgA) is secreted by mucosal tissue and represents the first line of defense of
Secretory IgA*		219	51 - 204 mg/dL	the GI mucosa and is central to the normal function of the GI tract as an immune barrier. Elevated levels of slgA have been associated with an upregulated immune response.



### Comprehensive Stool Analysis / Parasitology x3 SHORT CHAIN FATTY ACIDS Within Outside Reference Range Short chain fatty acids (SCFAs): SCFAs are the end product of the bacterial fermentation process of dietary fiber by beneficial flora in the % Acetate 64 40 - 75 % gut and play an important role in the health of the GI as well as protecting against intestinal dysbiosis. Lactobacilli and bifidobacteria produce % Propionate 13 - 29 large amounts of short chain fatty acids, which decrease the pH of the intestines and therefore make the environment unsuitable for pathogens, % Butyrate 20 - 37 % including bacteria and yeast. Studies have shown that SCFAs have numerous implications in maintaining gut physiology. SCFAs decrease % Valerate 2.0 0.5 - 7 % inflammation, stimulate healing, and contribute to normal cell metabolism and differentiation. Levels of Butyrate and Total SCFA in mg/mL are Butyrate 2.6 0.8 - 4.8 mg/mL important for assessing overall SCFA production, and are reflective of beneficial flora levels and/or Total SCFA's 13 4 - 18 mg/mL adequate fiber intake. INTESTINAL HEALTH MARKERS Red Blood Cells (RBC) in the stool may be Within Outside Reference Range associated with a parasitic or bacterial infection, or an inflammatory bowel condition such as Red Blood Cells Rare None - Rare ulcerative colitis. Colorectal cancer, anal fistulas, and hemorrhoids should also be ruled out. pH: Fecal pH is largely dependent on the pН 6.1 6 - 7.8 fermentation of fiber by the beneficial flora of the Occult blood: A positive occult blood indicates Occult Blood Neg the presence of free hemoglobin found in the stool, which is released when red blood cells are lysed. MACROSCOPIC APPEARANCE Color: Stool is normally brown because of Appearance Expected pigments formed by bacteria acting on bile introduced into the digestive system from the liver. While certain conditions can cause Color Brown Brown changes in stool color, many changes are harmless and are caused by pigments in foods or dietary supplements. Consistency: Stool Formed/Soft Consistency Soft normally contains about 75% water and ideally should be formed and soft. Stool consistency can vary based upon transit time and water absorption.

SIgA is only very slightly elevated at 219.



## Helicobacter pylori Stool Antigen - 418

	Antigen	
Hellcobacter pylori	DETECTED	

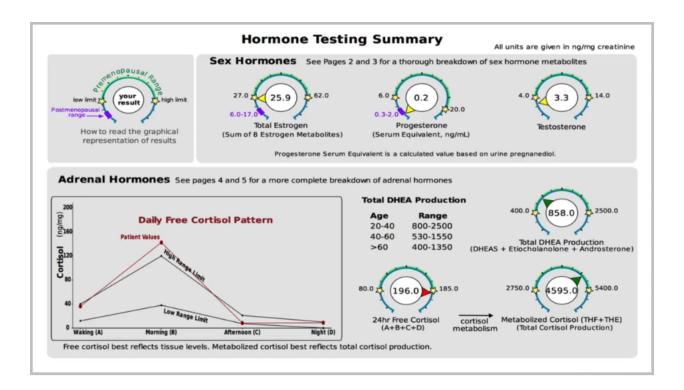
Stool antigen tests are widely used for their non-invasive nature, high sensitivity, and high specificity. Detection of antigens on the surface of organisms in stool specimens is the current test of choice for pathogen diagnosis and provides increased sensitivity over more common microscopy techniques.

H. pylori was detected. This is somewhat common in her age group, and I think we should treat it given her symptoms and age.

TEST		RESULT				
Array 3 – Wheat/Gluten Proteome Reactivity & Autoimmunity	IN RANGE (Normal)	EQUIVOCAL*	OUT OF RANGE	REFERENCE (ELISA Index)		
Wheat IgG	0.75			0.3-1.5		
Wheat IgA	0.48			0.1-1.2		
Wheat Germ Agglutinin IgG	0.42			0.4-1.3		
Wheat Germ Agglutinin IgA	0.79			0.2-1.1		
Native & Deamidated Gliadin 33 IgG	0.50			0.2-1.2		
Native & Deamidated Gliadin 33 IgA	0.56			0.1-1.1		
Alpha Gliadin 17-mer IgG	0.56			0.1-1.5		
Alpha Gliadin 17-mer IgA			1.82	0.1-1.1		
Gamma Gliadin 15-mer IgG	0.74			0.5-1.5		
Gamma Gliadin 15-mer IgA		1.00		0.1-1.0		
Omega Gliadin 17-mer IgG	0.67			0.3-1.2		
Omega Gliadin 17-mer IgA		1.06		0.1-1.2		
Glutenin 21-mer IgG	0.57			0.1-1.5		
Glutenin 21-mer IgA	0.36			0.1-1.3		
Gluteomorphin + Prodynorphin IgG	0.33			0.3-1.2		
Gluteomorphin + Prodynorphin IgA	0.57			0.1-1.2		
Gliadin-Transglutaminase Complex IgG		1.20		0.3-1.4		
Gliadin-Transglutaminase Complex IgA	1.02			0.2-1.5		
Transglutaminase-2 lgG	1.00			0.3-1.6		
Transglutaminase-2 IgA			1.98	0.1-1.6		
Transglutaminase-3 IgG	1.10			0.2-1.6		
Transglutaminase-3 IgA		1.32		0.1-1.5		
Transglutaminase-6 IgG	0.75			0.2-1.5		
Transglutaminase-6 lgA		1.23		0.1-1.5		

Cyrex Array 3 was positive and likely celiac. She has positive alpha gliadin antibodies, equivocal gamma and omega gliadin, equivocal gliadin transglutaminase, which is quite specific for celiac, and also positive tTG2 and equivocal tTG3 and tTG6. You may want to run Cyrex Array 4 to check for cross-reactive proteins and other food intolerances given that she is producing antibodies to tTG3 and tTG6, affecting skin and brain. You might want to consider Cyrex Array 5 for autoimmune reactivity.





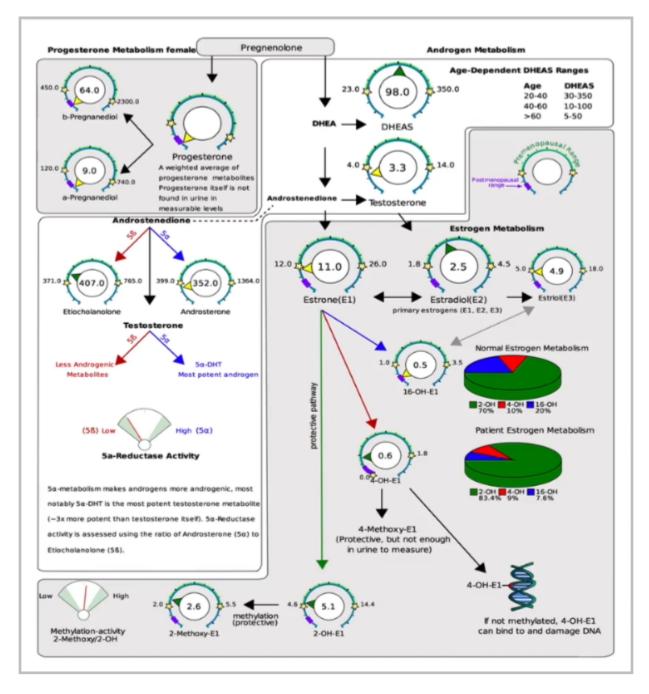
DUTCH test showed estrogen levels above the postmenopausal range, which is not surprising given that she is supplementing with estrogen, but progesterone is below the menopausal range, and this is also not surprising. It's one of the downsides of estrogen monotherapy in postmenopausal women.

Her 24-hour free cortisol is high. Metabolized cortisol is high-normal. Total DHEA is low-normal. Clearance may be slightly impaired due to hypothyroidism, and that may be what we are seeing here.



Category	Test			Result	Units	<b>Normal Rang</b>	je
Progesteror	ne Metab	olism				Premenopausal, luteal rang See below for other ranges.	
	b-Pregn		Below premenopausal range	64.0	ng/mg		( - Green's Laking Graing
	a-Pregn	anediol	Below premenopausal range	9.0	ng/mg	120 - 740	
Androgen M	letabolisr	m					
	DHEAS		Within range	98.0	ng/mg	23 - 350	
	Androst	erone	Below range	352.0	ng/mg	399 - 1364	
	Etiochol	anolone	Low end of range	407.0	ng/mg	371 - 765	
	Testoste	rone	Below range	3.3	ng/mg	4 - 14	
	5a-DHT		Low end of range	0.4	ng/mg	0 - 8.8	
	5a-Andr	rostanediol	Below range	3.9	ng/mg	12 - 30	
	5b-Andr	ostanediol	Below range	13.4	ng/mg	20 - 75	
	Epi-Testo	osterone	Below range	0.3	ng/mg	4.5 - 22.3	
Estrogen M	etabolites	5					
	Estrone	(E1)	Below premenopausal range	11.0	ng/mg	12 - 26	
	Estradio	I(E2)	Within range	2.5	ng/mg	1.8 - 4.5	
	Estriol(E	3)	Below premenopausal range	4.9	ng/mg	5 - 18	
	2-OH-E1	l	Low end of range	5.1	ng/mg	4.6 - 14.4	
	4-OH-E1	l	Within range	0.6	ng/mg	0 - 1.8	
	16-OH-E	1	Below premenopausal range	0.5	ng/mg	1 - 3.5	
	2-Metho	xy-E1	Low end of range	2.6		2 - 5.5	
	2-OH-E2	2	Within range	0.32	ng/mg	0 - 1.2	
Normal Ra	naec	Luteal	Postmenopausal			Follicular	Ovulatory
Estrone (E1		12-26	3.0-7.0			4.0-12.0	22-68
Estradiol (E		1.8-4.5	0.3-0.9			1.0-2.0	4.0-12.0
Estriol (E3)	-/	5-18	1.5-4.0			N/A	N/A
2-OH-E1		4.6-14.4	0.4-2.0			N/A	N/A
4-OH-E1		0-1.8	0-0.3			N/A	N/A
16-OH-E1		1-3.5	0.2-0.6			N/A	N/A
2-Methoxy-	E1	2-5.5	0.5-1.4			N/A	N/A
		2 0.0		al Pg (10	Oma)	747.	- 47
a-Pregnane	diol	120-740		0-3000		25-100	25-100
b-Pregnane		450-2300		00-9000		100-300	100-300



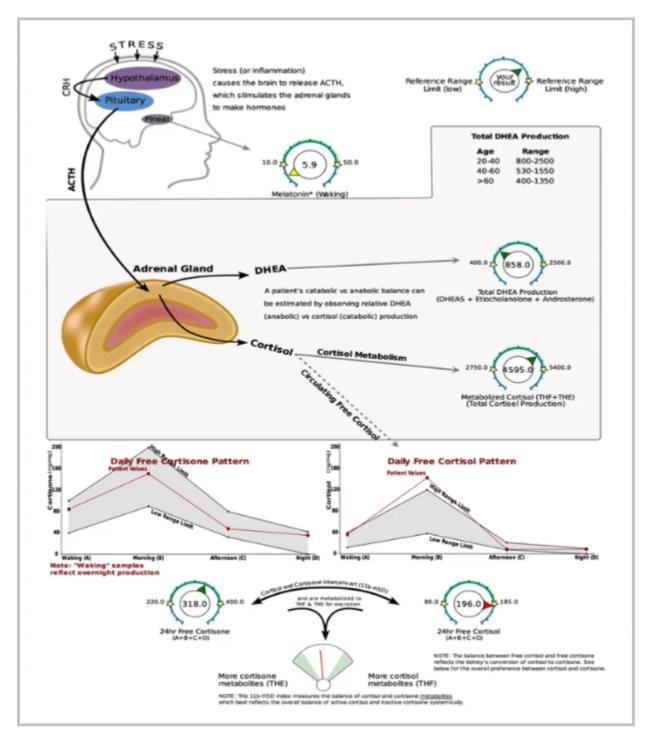


Her testosterone is a little low, but it's not clear whether that is pathological or physiological. I'm not going to go into a lot of detail on this, since we're not covering it in the course, so I'm not expecting you to come up with this in your case assignment.



Category	Test		Result	Units	Normal Range
Creatinine					
	Creatinine A (Waking)	Within range	0.49	mg/ml	0.2 - 2
	Creatinine B (Morning)	Within range	0.49	mg/ml	0.2 - 2
	Creatinine C (Afternoon)	Within range	0.49	mg/ml	0.2 - 2
	Creatinine D (Night)	Within range	0.74	mg/ml	0.2 - 2
Daily Free C	ortisol and Cortisone				
	Cortisol A (Waking)	High end of range	36.1	ng/mg	12 - 40
	Cortisol B (Morning)	Above range	142.5	ng/mg	38 - 120
	Cortisol C (Afternoon)	Low end of range	8.3	ng/mg	7.3 - 21
	Cortisol D (Night)	High end of range	8.8	ng/mg	0 - 10
	Cortisone A (Waking)	Within range	84.4	ng/mg	40 - 100
	Cortisone B (Morning)	Within range	150.9	ng/mg	90 - 200
	Cortisone C (Afternoon)	Within range	47.7	ng/mg	32 - 80
	Cortisone D (Night)	High end of range	35.3	ng/mg	0 - 42
	24hr Free Cortisol	Above range	196.0	ug	80 - 185
	24hr Free Cortisone	Within range	318.0	ug	220 - 400
Cortisol Met	abolites and DHEAS				
	b-Tetrahydrocortisol (b-THF)	Within range	1729.0	ng/mg	1050 - 2070
	a-Tetrahydrocortisol (a-THF)	Low end of range	107.0	ng/mg	75 - 265
	b-Tetrahydrocortisone (b-THE)	Within range	2759.0	ng/mg	1550 - 3150
	Metabolized Cortisol (THF+THE)	Within range	4595.0	ng/mg	2750 - 5400
	DHEAS	Within range	98.0	ng/mg	23 - 350
Melatonin (*	measured as 6-OH-Melatonin-Sulfate)				
	Melatonin* (Waking)	Below range	5.9	ng/mg	10 - 50





Her 24-hour free cortisone is normal, but free cortisol is high. You would want to see if she is taking licorice, which could have that effect. Melatonin is below the range, which is likely contributing to sleep issues, as cortisol suppresses melatonin.





# CASE REVIEW REPORT OF FINDINGS

Patient Name: "Autumn" Date: 10-18-16

### **Underlying Patterns**

PATTERN	SUPPORTING MARKERS	COMMENTS
Dysglyemia	Glucose, A1c, uric acid, TG	
Vitamin D deficiency	25(OH)D, PTH	
Impaired methylation?	Homocysteine	
Thyroid underconversion	T4/T3	
Immune dysregulation	WBC	
Insufficiency dysbiosis	DD CSAP	
Fungal overgrowth	DD CSAP	
H. pylori infection	BioHealth	
Probable celiac disease	Cyrex 3	
Hormone imbalance	DUTCH	Estrogen high relative to progesterone
HPA-D	DUTCH	High free cortisol
Low melatonin	DUTCH	

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### **Recommendations for further testing**

TEST	PURPOSE	COMMENTS
THD panel	Follow up on lipids/metabolic	
Cyrex Array 4	Cross-reactive proteins	

### **Recommendations for Treatment**

TREATMENT	PURPOSE	COMMENTS
Antimicrobial protocol	Fungal overgrowth, H. pylori, dysbiosis	See handout
EVCLO + fish + sun	Vitamin D	Re-test in 45 days
Strict gluten-free diet	Celiac	100%, no exceptions
HPA Balance	HPA-D/lower cortisol	
Phosphatidylserine	HPA-D/lower cortisol	
Stress management	HPA-D	See handout

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Here is the report of findings for Autumn. Dysglycemia evidenced by glucose, A1c, uric acid, and triglycerides. Vitamin D deficiency by 25(OH)D and PTH. Impaired methylation with homocysteine. Thyroid under-conversion: T4-to-T3 conversion issue with T4 and T3. Immune dysregulation with low white blood cell count, likely. Insufficiency dysbiosis and fungal overgrowth from Doctor's Data stool test. H. pylori infection from BioHealth. Probable celiac disease with Cyrex Array 3. HPA axis dysfunction and low melatonin from DUTCH and hormone imbalance as well.



For follow-up testing, True Health Diagnostics\* panel for lipids and metabolic markers. Cyrex Array 4 for cross-reactive proteins. Possibly Cyrex Array 5 you could add for autoimmune reactivity.

<\* Note: True Health Diagnostics is no longer in business. See this post for the latest updates.>

For treatment, you would want to do an antimicrobial protocol for fungal overgrowth, H. pylori, and dysbiosis. Extra-virgin cod liver oil plus increasing fish intake and sun exposure for vitamin D. Strict wheat- and gluten-free diet because of celiac. She needs to be 100 percent there, not 80/20, 90/10, or even 95/5. HPA Balance and phosphatidylserine for high free cortisol and stress management for HPA axis dysregulation.

# **Antimicrobial protocol**

Nutreceutical	Dosage
GI Synergy	1 packet BID (with breakfast and dinner)
Lauricidin	1 scoop TID (with each meal)
Interfase Plus	3-4 capsules BID (on empty stomach)
PHGG	5 grams/d taken (with dinner)
Prescript Assist	1 BID (upon rising and before bed)
MegaSporeBiotic	1 capsule (with lunch)
Sulfurophane	150 mg BID with breakfast and dinner
Saccharomyces boulardii	3-4 billion CFU BID at lunch and before bed
A-FNG	Slowly build to 20-30 drops BID w/meals, as tolerated

Here is the antimicrobial protocol. It is the core protocol plus sulforaphane and Saccharomyces boulardii for H. pylori. Saccharomyces boulardii is doing double duty for H. pylori and fungal overgrowth. Then A-FNG for fungal overgrowth. If you're not successful for H. pylori, you may need to add mastic gum, DGL, cranberry juice, and then proceed to pharmaceuticals if that doesn't work.

Okay, that's it for part one. We'll be back with some more case assignments for part two next week.