

## 1 PATIENT INFORMATION

## 1 PATIENT DETAILS

NAME

Siobhan K. Adeyemi-Nolan

DOB

07/05/1988

AGE / SEX

38 yrs / Female

MRN / PATIENT ID

FXM-6641209

DATE OF SERVICE

08/13/2026

PROVIDER

Tobias R. Lindqvist, MD

CREDENTIALS

MD, IFMCP, ABIM

PRIMARY CARE PROVIDER

D. Kaur, MD — Lakeshore Internal Medicine

VISIT TYPE

Initial Functional Medicine Consultation — comprehensive root-cause evaluation, 75 minutes

CARE SETTING

Outpatient integrative medicine clinic, in person

REFERRAL SOURCE

Self-referred; primary care aware and records requested with consent

INTERPRETER USED

No

## CC CHIEF COMPLAINT

## 2 PRIMARY REASON FOR VISIT

"I have been told three times that my labs are normal and that I am just stressed. I am 38 and I cannot get through a workday without lying down. My stomach is unpredictable, I have lost hair at the temples, and I would like someone to look at the whole picture rather than one system at a time."

## S SUBJECTIVE

## 3 SYMPTOMS, GOALS, TIMELINE &amp; EXPOSURES

## 3a GOALS &amp; SYMPTOM TIMELINE

## Reason for evaluation

Initial comprehensive functional medicine consultation for an 18-month history of fatigue, cognitive fogging, alternating bowel habit and hair loss, with prior conventional evaluation reported as unremarkable. She seeks a systems-level

assessment and an explicit plan, and is clear that she is not seeking to leave conventional care — she wants the two coordinated.

### Patient health goals

In her stated order: (1) energy sufficient to work a full day and attend her daughter's evening swimming; (2) predictable digestion so she can eat outside the house without planning around a bathroom; (3) to stop the hair loss; (4) to understand what is actually happening rather than to be reassured. She explicitly does not want an open-ended supplement regimen and asks that anything started have a stated purpose and a stopping point — a reasonable and welcome constraint.

### Symptom timeline

**Constructed together on a timeline in the room.** Childhood: recurrent tonsillitis with an estimated 8–10 antibiotic courses before age 12; tonsillectomy at 9. 2010–2016: high-stress consultancy role, chronic short sleep. 2017: first pregnancy, uncomplicated. **2019: severe *Campylobacter gastroenteritis* contracted abroad, treated with ciprofloxacin, with bowel habit never returning to baseline afterward.** 2020–2021: pandemic-period isolation, weight gain, alcohol increase. 2022: second pregnancy, gestational thyroid monitoring for a borderline TSH, no treatment. 2023: postpartum. **2024 (February): mother's death after a 9-month illness during which she was the primary carer — she identifies this as the point everything worsened together.** 2025 (March): started a proton pump inhibitor for reflux, still taking it. 2025 (May): began a self-directed gluten-free diet with partial symptom benefit, then reintroduced gluten before her celiac test, which was negative. 2026: symptoms plateaued at their current level.

### Current symptom burden

Fatigue is the dominant symptom — unrefreshing sleep, an energy trough between 2 and 4 PM most days, and post-exertional heaviness lasting into the following day after moderate exercise. Brain fog with word-finding difficulty and reduced reading stamina. Bloating that is minimal on waking and marked by evening, with visible abdominal distension. Alternating loose stools and constipation. Hair thinning at both temples and increased shedding on washing. Cold intolerance. Low mood without anhedonia. Reduced libido. Cycles have shortened from 28 to 24 days over the past year with worsening premenstrual irritability.

## 3b SYSTEM & LIFESTYLE DOMAINS

### Digestive / gut health

Bloating daily, worst 2–3 hours after meals and progressive through the day. Bristol type 6 stools three or four mornings weekly, alternating with type 2 and two-day gaps. Two to three bowel movements on loose days, often urgent, which is what constrains her eating out. Reflux since 2025, currently suppressed on omeprazole. No blood, no mucus, no nocturnal symptoms, no weight loss. Identifiable triggers: onion, garlic, apples, wheat-heavy meals and large evening meals — a FODMAP-consistent pattern. Prior GI evaluation: celiac serology negative in 2025 while gluten-containing, fecal calprotectin 28 µg/g in 2025 (normal), no endoscopy, no colonoscopy, no breath testing. The gluten-free trial helped partially, which she interpreted as celiac disease and which is more plausibly a fermentable-carbohydrate effect.

### Nutrition and dietary pattern

Breakfast skipped four or five days weekly. Coffee on an empty stomach, three cups before noon. Lunch typically a shop-bought sandwich or salad eaten at her desk. Largest meal at 8:30–9 PM after her children are settled. Protein intake estimated at 45–55 g daily, well below requirement. Fiber low, roughly 12 g daily. Two to three vegetable servings. Sugary beverages none; two glasses of wine on four evenings weekly. Water 1–1.5 L. Self-imposed avoidance of dairy and gluten in rotation without a structured protocol or any reintroduction. No food insecurity. Cooks competently but cites time, not skill, as the barrier.

### Metabolic / weight

Weight up 18 lb since 2020, stable over the past 8 months. BMI 27.4, waist 34 inches. Craves carbohydrate mid-afternoon and again late evening. Post-meal drowsiness after high-carbohydrate lunches. No diagnosed diabetes or prediabetes; the last fasting glucose was 94 mg/dL in 2025 with no insulin ever measured. Blood pressure normal. Lipids 2025 borderline with triglycerides 148 and HDL 46.

### Hormonal / endocrine

Cold intolerance, dry skin, temporal hair thinning and constipation-predominant phases all raise a thyroid question; TSH was 3.9 mIU/L in 2025, reported to her as normal, with no free T4 and no antibodies ever measured. Menstrual cycle

shortened from 28 to 24 days over 12 months, moderate flow, worsening premenstrual irritability and breast tenderness in the 7 days before menses — a pattern consistent with early luteal insufficiency in the late-thirties transition. No hirsutism, no acne. Libido reduced. Two children, no fertility concerns, no hormonal contraception since 2021 (copper IUD in situ). No hormone therapy.

### Sleep and circadian rhythm

In bed at 11:30 PM, asleep by midnight, waking at 6:15 AM — approximately 6 hours. Wakes between 3 and 4 AM two or three nights weekly and takes 30–60 minutes to resettle. Sleep described as unrefreshing regardless of duration. Snoring denied by her partner; Epworth 8, so obstructive sleep apnea is unlikely. Screen use in bed nightly. Last coffee at 2 PM. No shift work. Morning light exposure minimal — she leaves for work in the dark for much of the year and works in a windowless office.

### Stress / mental-emotional health

Perceived Stress Scale 24 — high. Carer for her mother through 2023 to early 2024, then bereaved; she describes having “never stopped to deal with it.” Current stressors: full-time work, two children aged 9 and 4, and a partner who travels. Coping through work rather than through rest. No formal trauma history. Anxiety present as background tension rather than as discrete episodes. No prior therapy. No mind-body practice. Denies suicidal ideation. Social connection reduced — she has stopped seeing friends because of both fatigue and unpredictable bowel symptoms, which is a genuine and under-recognised consequence of the GI symptoms.

### Physical activity

Formerly ran three times weekly until 2023. Now walks 20 minutes most days. Attempted a return to running twice in the past year and abandoned it both times because of two-day post-exertional fatigue — a pattern that requires careful framing, since conventional exercise advice may make her worse if applied without pacing. No resistance training. Sedentary 8 hours per workday. No pain with activity.

### Immune / inflammatory history

Childhood recurrent tonsillitis. Seasonal allergic rhinitis, mild. Mild eczema on both hands, worse in winter. No asthma. No diagnosed autoimmune disease. **Maternal aunt with Hashimoto thyroiditis and mother with rheumatoid arthritis** — a meaningful family autoimmune signal. No recurrent infections as an adult. CRP 2.8 mg/L in 2025 — reported as normal but at the upper end.

### Pain / musculoskeletal

Diffuse morning stiffness lasting 15–20 minutes, non-migratory, without joint swelling or erythema. Intermittent tension-type headaches two or three times weekly. Beighton 3/9. No injury history. No inflammatory back pain, no synovitis.

## 3c EXPOSURES, TREATMENT & BACKGROUND

### Environmental / exposure history

Works in a 1970s office building with reported intermittent musty odour after heavy rain and a known roof leak in 2024; she is not the only affected employee, though this remains an association rather than a demonstrated exposure. Home is a 1990s build with no damp, no known mold. Municipal water. No occupational chemical exposure. Two cats, no new allergy symptoms. Non-smoker, no household smoker. No known heavy metal exposure; she asks about it specifically, prompted by online reading.

### Medication and supplement history

Omeprazole 20 mg daily since 03/2025, never reviewed for continuation. Loratadine 10 mg seasonally. Copper IUD since 2021. Self-purchased and currently taking: a multivitamin, magnesium citrate 200 mg nightly, ashwagandha 600 mg, a probiotic of unspecified strain and count, and collagen peptides — five products, all started without a stated indication, none with a review date, and two with no plausible mechanism for her presentation. No prescription medications otherwise. No affordability barrier, but she estimates \$95 monthly on supplements and would prefer to spend less on more targeted items.

### Prior testing and treatment

2025 primary care panel: CBC normal, CMP normal, TSH 3.9, fasting glucose 94, lipids as above, CRP 2.8, celiac serology negative on a gluten-containing diet, fecal calprotectin 28. No ferritin, no B12, no vitamin D, no free T4, no thyroid antibodies, no insulin ever measured. No imaging. No GI endoscopy. Treatments tried: gluten-free diet 2025 (partial

benefit, unstructured), dairy avoidance (unclear benefit), probiotic (no discernible change), omeprazole (effective for reflux specifically).

**Family history**

Mother — rheumatoid arthritis, deceased 2024 aged 68 from metastatic ovarian cancer. Father — type 2 diabetes and hypertension, alive at 71. Maternal aunt — Hashimoto thyroiditis. Sister — irritable bowel syndrome. Maternal grandmother — ovarian cancer at 74. **The maternal ovarian cancer pattern across two generations warrants a genetics referral independent of everything else discussed today.**

**Social history / social determinants**

Married, partner travels two weeks monthly. Two children, 9 and 4. Full-time marketing director. Owns her home, no financial strain, reliable transport. High health literacy. No cultural dietary restrictions. Cooking time is the principal implementation barrier; she has both the skill and the resources otherwise.

**Pertinent negatives**

Denies unintentional weight loss, rectal bleeding, melena, nocturnal diarrhea waking her from sleep, persistent fever, drenching night sweats, severe or localised abdominal pain, progressive neurologic deficit, joint swelling, rash of concern, chest pain, dyspnea, and suicidal ideation. **No GI or systemic red flags — this is important, as their absence is what makes a structured non-urgent workup appropriate.**

ROS

FUNCTIONAL MEDICINE REVIEW OF SYSTEMS

4

PERTINENT POSITIVES & NEGATIVES

|                                                                                  |                                                                                                                               |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Fatigue, low energy, fever, night sweats, appetite or weight change              | Positive — profound unrefreshing fatigue, post-exertional malaise, 18 lb gain since 2020. No fever, no night sweats, no loss. |
| Brain fog, headache, dizziness, memory, numbness, tingling                       | Positive — fog, word-finding difficulty, tension headaches 2–3× weekly. No focal symptoms.                                    |
| Bloating, reflux, nausea, pain, diarrhea, constipation, food reactions           | Positive on all — evening-predominant distension, alternating Bristol 2 and 6, FODMAP-pattern triggers.                       |
| Joint pain, muscle pain, stiffness, swelling, chronic pain, exercise intolerance | Positive — 15–20 min morning stiffness, post-exertional fatigue. No joint swelling.                                           |
| Rash, itching, acne, hair changes, nail changes, flushing, skin sensitivity      | Positive — temporal hair thinning, increased shedding, hand eczema, dry skin. Nails brittle.                                  |
| Heat/cold intolerance, menstrual change, libido, thyroid symptoms                | Positive — cold intolerance, cycle 28→24 days, worsening PMS, reduced libido.                                                 |
| Sleep disturbance, snoring, daytime sleepiness, insomnia, circadian              | Positive — 6 hrs, 3–4 AM waking, unrefreshing. Epworth 8, snoring denied — OSA unlikely.                                      |
| Anxiety, depression, stress, irritability, burnout, mood                         | Positive — PSS 24, unprocessed bereavement, background anxiety, irritability. PHQ-9 9, no SI.                                 |
| Allergies, recurrent infections, autoimmune symptoms, asthma, flares             | Positive — seasonal rhinitis, eczema, strong family autoimmune history. No adult recurrent infection.                         |
| Medication or supplement side effects, intolerance, adherence                    | Positive — 5 self-selected supplements without indication; long-term PPI never reviewed.                                      |

## 5 OBSERVED FINDINGS

## V VITALS

## TEMPERATURE

97.4 °F

## BLOOD PRESSURE

108/68 mmHg

## HEART RATE

64 bpm

## RESPIRATORY RATE

14 /min

## OXYGEN SATURATION

99% RA

## HEIGHT

5 ft 5 in

## WEIGHT

165 lb (147 lb in 2020)

## BMI

27.4

## WAIST CIRCUMFERENCE

34 in

## PAIN SCORE

2/10 — tension headache today

## General appearance

Well-groomed woman appearing her stated age, alert and articulate. Tired-appearing with periorbital shadowing. No acute distress. Engaged and organised — brought a written symptom chronology, which materially assisted the timeline construction.

## HEENT

Conjunctiva mildly pale. Sclera anicteric. **Angular cheilosis at both oral commissures.** Tongue with mild atrophy of the filiform papillae anteriorly and no coating. Dentition good, no erosions to suggest reflux. Pharynx clear, tonsils absent. Nasal mucosa mildly boggy consistent with allergic rhinitis. Mucous membranes moist.

## Neck

**Thyroid mildly and symmetrically enlarged, firm, non-tender, no discrete nodule, no bruit.** No cervical lymphadenopathy. Full range of motion.

## Cardiovascular

Regular rate and rhythm at 64. Normal heart sounds, no murmur. Peripheral pulses 2+ symmetric. Capillary refill under 2 seconds. No edema. Extremities cool with mild acrocyanosis of the fingertips.

## Pulmonary

Normal effort. Clear to auscultation bilaterally. No wheeze, no crackles.

## Abdomen

**Visibly distended at 4 PM examination, notably more than she reports on waking.** Soft, non-tender throughout with no guarding or rebound. Tympanitic to percussion across the mid-abdomen consistent with gas. Bowel sounds active. No mass, no organomegaly, no hernia. No succussion splash. No rebound or peritonism.

## Musculoskeletal

No synovitis, no joint swelling, no warmth or erythema in any joint. Full range of motion throughout. Beighton 3/9. No tender points beyond the upper trapezius bilaterally. Strength 5/5. Normal gait.

## Skin

**Diffuse thinning at both temples with reduced density and preserved hairline; positive hair pull test at 8 hairs of 60 — consistent with telogen effluvium.** Mild fissured eczema on the dorsum of both hands. Generalised xerosis. Nails with

longitudinal ridging and mild brittleness, no koilonychia, no clubbing. No rash, no purpura, no acanthosis nigricans.

### Neurologic

Alert and fully oriented. Cranial nerves intact. Strength 5/5. Sensation intact to light touch, pinprick and vibration including the feet. **Reflexes 1+ with a mildly delayed relaxation phase at both ankles.** Coordination and gait normal. No tremor. Cognitive screening not formally administered; conversation fluent with two observed word-finding pauses.

### Psychiatric

Mood described as "flat and frayed." Affect reactive, tearful briefly when her mother was discussed. Speech normal. Thought process linear and well organised. Insight excellent. Judgment intact. No suicidal ideation on direct questioning.

TM

## FUNCTIONAL MEDICINE TIMELINE / MATRIX ASSESSMENT

### 6 ROOT-CAUSE DOMAINS

#### Antecedents

Female sex with a strong maternal-line autoimmune history — mother with rheumatoid arthritis, aunt with Hashimoto thyroiditis. Heavy childhood antibiotic exposure with 8–10 courses before age 12. Two pregnancies with borderline thyroid function noted in the second and never followed up. Chronic short sleep and high occupational stress from her twenties onward. A maternal-line ovarian cancer pattern across two generations.

#### Triggers

**Two discrete and datable triggers.** (1) *Campylobacter* gastroenteritis in 2019 with fluoroquinolone treatment — bowel habit never returned to baseline, the classic antecedent of post-infectious IBS and a recognised precipitant of small intestinal bacterial overgrowth. (2) Her mother's illness and death across 2023–2024, a prolonged caregiving stress followed by unprocessed bereavement, which she independently identifies as the point of systemic deterioration. Secondary: the 2025 initiation of a proton pump inhibitor, which reduces gastric acid barrier function and is itself associated with small bowel bacterial overgrowth.

#### Mediators

Ongoing and mutually reinforcing: chronic sleep restriction at 6 hours with 3–4 AM waking; unmanaged psychological stress at PSS 24; probable nutrient insufficiency — the angular cheilosis, pale conjunctiva, brittle nails, telogen effluvium and pallor point to iron and possibly B-vitamin depletion, plausibly compounded by two years of acid suppression; a low-fiber, low-protein, late-loaded dietary pattern; near-total physical inactivity with deconditioning; minimal morning light exposure with a windowless workplace; and social withdrawal driven by the GI symptoms, which removes her main source of restoration.

#### Lifestyle domains

**Nutrition:** inadequate protein and fiber, skipped breakfast, late large meals, unstructured self-elimination. **Movement:** collapsed from three runs weekly to walking only, with two failed returns due to post-exertional fatigue. **Sleep:** restricted, fragmented, unrefreshing, with poor light and screen hygiene. **Stress:** high and unaddressed, with bereavement never processed. **Relationships:** withdrawn from friendships; partner supportive but frequently absent. **Meaning and purpose:** she describes work as consuming and no longer meaningful — a domain she raised herself and asked to include. **Environment:** a possible but unproven workplace damp exposure.

#### Strengths, readiness and barriers

**Strengths:** excellent health literacy, organised, self-monitoring, competent cook, financially resourced, supportive partner, and a clear articulate account of her own history. **Readiness:** high, and importantly she has asked for a bounded rather than an open-ended plan. **Barriers:** time, evening childcare demands, partner absence two weeks monthly, and an understandable wariness after three encounters in which she felt dismissed. **Support:** partner, sister, and an existing primary care relationship she values and wishes to keep central.

## 7 MODIFIABLE BEHAVIORS &amp; IMPLEMENTATION BARRIERS

## DIETARY PATTERN AND MEAL TIMING

Breakfast skipped 4–5×/week; largest meal 8:30–9 PM — inverted from optimal

## FIBER INTAKE

≈ 12 g/day against a target of 25–30 g

## PROCESSED FOOD, SUGAR, SATURATED FAT, SODIUM

Moderate — shop-bought lunches are the main source

## FOOD ACCESS, COOKING ABILITY, BUDGET

All adequate — time is the sole barrier, not skill or resources

## RESISTANCE TRAINING AND MOBILITY

None currently

## SLEEP AND CIRCADIAN

6 hrs, 3–4 AM waking, nightly screens in bed, minimal morning light

## SUBSTANCE USE

Non-smoker; alcohol as above; no other substances

## PATIENT-SELECTED GOALS

She chose three herself: eat breakfast with protein, walk outdoors in the morning light, and be in bed by 10:45 PM. These are hers, not prescribed, and are more likely to hold for that reason.

## PROTEIN INTAKE

45–55 g/day against a target of ~100 g — a major and correctable deficit

## FRUIT AND VEGETABLE / HYDRATION

2–3 servings daily; fluid 1–1.5 L

## ALCOHOL AND CAFFEINE

Wine 2 glasses × 4 evenings; 3 coffees before noon, first on an empty stomach

## PHYSICAL ACTIVITY

20 min walking most days; two failed running restarts due to post-exertional fatigue

## SEDENTARY TIME

≈ 8 hours per workday, windowless office

## STRESS MANAGEMENT AND SOCIAL SUPPORT

No practice in place; socially withdrawn; bereavement unprocessed

## READINESS AND CONFIDENCE

Readiness 9/10; confidence 6/10, limited by time rather than motivation

## 8 SCORES, INTERPRETATION &amp; COMPARISON

## PHQ-9

9 — mild depressive symptoms; item 9 scored 0

## PERCEIVED STRESS SCALE-10

24 — high perceived stress

## EPWORTH SLEEPINESS SCALE

8 — normal; argues against obstructive sleep apnea

## BRISTOL STOOL SCALE

Alternating type 2 and type 6 — mixed-pattern bowel habit

## GAD-7

11 — moderate anxiety

## FATIGUE SEVERITY SCALE

5.8 / 7 — clinically significant fatigue

## INSOMNIA SEVERITY INDEX

13 — subthreshold to mild insomnia

## IBS-SSS

290 — moderate severity

#### MENSTRUAL SYMPTOM INVENTORY

**Cycle 28→24 days over 12 months; 7-day premenstrual symptom window**

#### ASCVD 10-YEAR RISK

**<2% — not a current concern**

#### SOCIAL DETERMINANTS SCREENING

**Negative in all domains**

#### INTERPRETATION AND LIMITATIONS

**Scores are consistent with a genuine multi-system symptom burden rather than with a primary mood disorder — the FSS and IBS-SSS are the outliers, and the PHQ-9 of 9 is proportionate to living with 18 months of unexplained illness and an unprocessed bereavement. No functional laboratory test has been used to generate any conclusion in this note.**

#### HAIR PULL TEST

**8 of 60 — positive, consistent with telogen effluvium**

#### READINESS-TO-CHANGE

**Action stage across nutrition, sleep and movement**

L

## LABORATORY AND DIAGNOSTIC RESULTS

### 9 REVIEWED OR ORDERED

#### Routine / conventional labs — ordered today

CBC with differential; comprehensive metabolic panel; **full thyroid panel — TSH, free T4, free T3, TPO and thyroglobulin antibodies** (the antibodies and free T4 have never been measured despite a TSH of 3.9, a goitre and a family history of Hashimoto); fasting glucose and fasting insulin with HOMA-IR; HbA1c; lipid panel; CRP and ESR.

#### Nutrient status

**Ferritin with full iron studies** (never measured, and the pale conjunctiva, angular cheilosis, brittle nails and telogen effluvium all point here); vitamin B12 with methylmalonic acid and folate (two years of acid suppression makes B12 depletion plausible); vitamin D; magnesium; zinc; homocysteine.

#### GI / nutrition testing

Celiac serology to be repeated with total IgA — the 2025 test is only partially reliable given her intermittent gluten avoidance, and total IgA was never checked to exclude a false negative. Fecal calprotectin repeated. **Glucose hydrogen-methane breath test ordered for small intestinal bacterial overgrowth** — specifically indicated by post-infectious onset, evening-predominant distension and two years of PPI use. *Stool microbiome profiling was requested by the patient and declined, with the reasoning explained: it would not change management here and does not have the analytic validity to justify the cost.*

#### Hormonal testing

Thyroid panel as above. Day-3 FSH, LH, estradiol and prolactin, with a day-21 progesterone to assess the shortened cycle. *Salivary or urinary “adrenal fatigue” panels were requested and declined — adrenal insufficiency is not clinically suggested, and the construct these panels test is not a recognised diagnosis. A morning cortisol has been included instead, which is the appropriate test if hypocortisolism is genuinely to be excluded.*

#### Inflammatory / autoimmune testing

ANA with reflex, rheumatoid factor and anti-CCP — justified by the maternal rheumatoid history and 15–20 minutes of morning stiffness, though the absence of synovitis makes inflammatory arthritis unlikely and this is being done to close the question rather than because it is expected to be positive. *IgG food sensitivity panels were requested and declined — IgG to food indicates exposure, not intolerance, and acting on such a panel would drive unnecessary dietary restriction in a woman already restricting without structure.*

#### Sleep / diagnostic testing and imaging

**Thyroid ultrasound ordered** given the palpable symmetric goitre. No abdominal imaging indicated in the absence of red flags. No sleep study — Epworth 8 with snoring denied. *Heavy metal testing requested and declined absent any exposure*

history; the rationale was discussed and accepted.

#### Prior records reviewed

Primary care panel of 04/2025 in full, the 2025 celiac serology and fecal calprotectin reports, obstetric records from 2022 including the borderline antenatal TSH, and the 2019 travel-clinic record documenting *Campylobacter* with ciprofloxacin treatment. **Results release to Dr. Kaur arranged with written consent.**

## A

## ASSESSMENT

### 10 FUNCTIONAL MEDICINE CLINICAL INTERPRETATION

- **Chronic multi-system symptom burden with two datable triggers and several sustaining mediators — not a single disease, and not “just stress.”** The pattern is coherent once the timeline is drawn: a post-infectious gut insult in 2019, a prolonged caregiving stress and bereavement in 2023–2024, and a set of ongoing mediators — sleep restriction, likely nutrient depletion, protein and fiber inadequacy, deconditioning, and unmanaged stress — that have kept her from recovering.
- **Probable post-infectious irritable bowel syndrome, mixed type, with small intestinal bacterial overgrowth to be excluded (K58.2, K59.9).** Onset directly after *Campylobacter* with fluoroquinolone treatment, evening-predominant distension, FODMAP-pattern triggers, and two years of acid suppression. IBS-SSS 290. Breath testing ordered. Calprotectin normal and no red flags — inflammatory bowel disease is unlikely but celiac disease has not been reliably excluded and is being retested properly.
- **Probable subclinical or early autoimmune hypothyroidism — not yet established (E03.9 provisional).** A TSH of 3.9 was called normal, but with a palpable symmetric goitre, delayed ankle reflex relaxation, cold intolerance, temporal hair loss, constipation-predominant phases, a borderline antenatal TSH in 2022, and a first- and second-degree family history of autoimmune thyroid and rheumatoid disease, free T4 and thyroid antibodies should have been measured and were not. **This is the most likely single organic contributor and it has been missed three times.**
- **Probable iron deficiency without established anemia (E61.1 provisional).** Pale conjunctiva, angular cheilosis, brittle ridged nails, a positive hair pull test, fatigue and cold intolerance in a menstruating woman whose ferritin has never been measured. Telogen effluvium in this context is far more often iron- and thyroid-related than idiopathic.
- **Telogen effluvium (L65.0)** — positive pull test, with a plausible trigger 3–4 months after the peak of her stress and probable nutrient depletion. Reversible once the drivers are corrected, which is worth telling her explicitly, as hair loss is causing disproportionate distress.
- **Chronic insufficient sleep with maintenance insomnia (G47.00, Z72.820).** Six hours with 3–4 AM waking, unrefreshing, with poor light and screen hygiene. Both a mediator of and a consequence of the rest.
- **Unprocessed bereavement with moderate anxiety and mild depressive symptoms (F43.21).** PSS 24, GAD-7 11, PHQ-9 9. Proportionate to her circumstances, and requiring treatment in its own right rather than as a diagnosis of exclusion for everything else.
- **Inadequate protein and fiber intake with a circadian-inverted eating pattern.** Roughly half the protein and half the fiber she needs, breakfast skipped, largest meal at 9 PM. This alone would account for a meaningful share of the fatigue, the satiety-related weight gain and the bowel irregularity.
- **Deconditioning with post-exertional symptom exacerbation.** Two failed running restarts. This pattern requires paced, graded reintroduction; standard “exercise more” advice has already failed her twice and would likely fail again.
- **Long-term proton pump inhibitor use without review (Z79.899).** Seventeen months, no reassessment, and a plausible contributor to both micronutrient depletion and bacterial overgrowth. A deprescribing candidate, not an emergency.

- **Unstructured supplement use.** Five products at \$95 monthly, none with a stated indication or endpoint. At least three have no plausible role in her presentation.
- **Incidental but important: a maternal-line ovarian cancer pattern across two generations (Z80.41, Z15.01)** — mother at 68 and maternal grandmother at 74. This warrants a genetics referral entirely independent of her presenting complaints, and would have been missed had the family history not been taken in full.
- **Red flags absent.** No weight loss, no bleeding, no nocturnal diarrhea, no fever, no synovitis, no neurologic deficit. This is what makes a structured, unhurried workup appropriate rather than an urgent one.
- **On the limits of this assessment:** several patient-requested tests were declined with reasons given — stool microbiome profiling, IgG food sensitivity panels, salivary adrenal panels and heavy metal screening. None would change management, and two would actively mislead. Nothing in this assessment rests on a non-validated test.

P

## PLAN

### 11 FUNCTIONAL MEDICINE MANAGEMENT BY DOMAIN

- **Sequencing, stated plainly to the patient:** nothing is started blind. Labs and breath testing come first, then a small number of targeted interventions with defined endpoints. Lifestyle foundations begin today because they do not depend on results.
- **Nutrition — foundations from today:** protein target 25–30 g at breakfast and roughly 100 g daily, which is the single highest-yield dietary change. Fiber increased gradually from 12 g toward 25–30 g, deliberately slowly given the bloating. Largest meal moved to midday where her schedule permits. First coffee taken with food rather than on an empty stomach. Alcohol reduced to no more than 4 units weekly. Batch-cooking on Sundays as the practical answer to her actual barrier, which is time.
- **Gastrointestinal:** hold all further self-directed elimination until the celiac retest is complete — further avoidance now would compromise the test. Pending breath testing, begin a structured low-FODMAP trial of 4 weeks with a *mandatory* systematic reintroduction phase, delivered with dietitian support. Referral to a GI dietitian placed. If the breath test is positive, treat the overgrowth specifically; if negative, continue the FODMAP protocol and address motility.
- **Proton pump inhibitor deprescribing:** after the celiac serology is drawn, taper omeprazole to 20 mg on alternate days for 2 weeks, then stop, with an as-needed alginate for rebound. Coordinated with Dr. Kaur. If reflux recurs meaningfully, reassess rather than simply resume.
- **Thyroid:** no treatment started until the free T4, antibodies and ultrasound return. If TPO antibodies are positive with a rising TSH, discuss levothyroxine with Dr. Kaur, since ongoing thyroid management belongs in primary care rather than here. This is stated to the patient explicitly so that expectations are set.
- **Iron:** no supplementation before ferritin is known. If ferritin is below 30 µg/L, start iron bisglycinate 25 mg on alternate days with vitamin C — alternate-day dosing is better absorbed and better tolerated than daily. Recheck at 12 weeks. Hair regrowth explained as taking 3–6 months after correction, which manages a realistic expectation.
- **Supplements — simplification agreed:** stop the collagen peptides, the ashwagandha and the unspecified probiotic — no indication, no endpoint, no plausible mechanism here. Continue magnesium citrate 200 mg nightly for the constipation-predominant phases and sleep. Hold the multivitamin pending nutrient results, then replace with targeted repletion. Estimated saving of roughly \$60 monthly, redirected to the dietitian sessions. Every future supplement to carry a written indication, dose, duration and stopping criterion.
- **Sleep and circadian:** her own three goals adopted — bed by 10:45 PM, 10–15 minutes of outdoor morning light within an hour of waking, no screens in bed. Consistent wake time including weekends. Last coffee by noon. If the 3–4 AM waking persists at 6 weeks, refer for CBT-I rather than prescribe a hypnotic.

- **Movement — paced, not pushed:** begin with 20 minutes of daily outdoor walking (already established) plus two short resistance sessions weekly of 15 minutes. **No running for 8 weeks.** Progression by no more than 10% weekly and only if there is no next-day payback. This pacing framing is deliberate; unpaced return has already failed twice.
- **Stress and bereavement:** referral to a bereavement counsellor and to a therapist for the anxiety, both accepted. Framed as central to the plan rather than as an afterthought, and specifically not as an alternative explanation for her physical symptoms. Ten minutes of daily breathing practice or a walk without a phone. Reconnection with two friendships nominated as an explicit goal, since the social withdrawal is itself a mediator.
- **Environment:** she will raise the office damp with facilities and occupational health. No mycotoxin testing — not validated for this purpose. If a documented remediation issue emerges, revisit.
- **Genetics referral placed** for the maternal ovarian cancer pattern — independent of everything else and arguably the most consequential single action of this visit.
- **Coordination:** a full consultation letter to Dr. Kaur today with the lab plan, the reasoning, the tests declined and the reasons for declining them. Her primary care relationship remains central; this service is adjunctive and is described that way to both parties.
- **Education and expectations:** she was told plainly that meaningful improvement is realistically a 3–6 month horizon, not weeks; that not every symptom will have a single explanation; and that some of what she has read online is being deliberately not pursued, with the reasons given rather than dismissed. Red flags reviewed — rectal bleeding, unintentional weight loss, nocturnal diarrhea, fever, or new neurologic symptoms warrant prompt conventional assessment.

## F

## FOLLOW-UP

### 12 REASSESSMENT PLAN

#### Follow-up

Laboratory results reviewed within 5 working days with a telephone summary and a copy to Dr. Kaur. Breath test within 2 weeks. **Lab review consultation at 3 weeks (09/03/2026)** to interpret all results together, decide on thyroid and iron treatment, and act on the breath test. GI dietitian within 3 weeks to start the low-FODMAP protocol with a scheduled reintroduction. Bereavement counselling and therapy within 4 weeks. Thyroid ultrasound within 2 weeks. Genetics referral appointment to be tracked by the clinic rather than by the patient. Follow-up consultation at 8 weeks for symptom, sleep, energy and pacing review, and at 12 weeks with repeat ferritin, thyroid function and IBS-SSS. Urgent conventional assessment for rectal bleeding, unintentional weight loss, nocturnal diarrhea, persistent fever, joint swelling or new neurologic symptoms.

TB

## TIME DOCUMENTATION &amp; BILLING

## TOTAL TIME SPENT

92 minutes — 75 minutes face to face, 17 minutes documentation and coordination

## NUTRITION AND LIFESTYLE COUNSELING TIME

24 minutes

## LAB REVIEW TIME

14 minutes — prior panel review and rationale for tests ordered and declined

## CARE COORDINATION TIME

12 minutes — primary care letter, dietitian, genetics, therapy referrals

## RECORDS REVIEW TIME

11 minutes — 2019 travel clinic, 2022 obstetric, 2025 primary care

## SUPPLEMENT / MEDICATION REVIEW

9 minutes — five products reviewed, three discontinued, PPI taper planned

## E/M LEVEL

99205 — new patient, high complexity MDM; total time 92 minutes documented

## PROLONGED SERVICES

99417 × 1 — 15 minutes beyond the 60-minute threshold for 99205

## PREVENTIVE / COUNSELING CODE(S)

96160 health risk assessment · 96127 × 2 (PHQ-9, GAD-7)

## NUTRITION / LIFESTYLE COUNSELING CODE(S)

Referred out — 97802 to be billed by the dietitian

## CHRONIC CARE MANAGEMENT

Not applicable — initial consultation

## BASIS FOR BILLING

High-complexity medical decision making — multiple new problems with an extensive diagnostic workup, prescription and supplement management, and independent interpretation of outside records; total time also documented

## PRIMARY ICD-10

R53.83 — Other fatigue

## SECONDARY ICD-10

K58.2 mixed irritable bowel syndrome · R14.0 abdominal distension · R41.840 attention and concentration deficit · L65.0 telogen effluvium · E03.9 hypothyroidism, unspecified (provisional, under investigation) · E04.0 nontoxic diffuse goiter · F43.21 adjustment disorder with depressed mood · F41.1 generalized anxiety disorder · G47.00 insomnia · N92.0 excessive and frequent menstruation with regular cycle · Z79.899 other long term drug therapy · Z80.41 family history of ovarian malignancy · Z15.01 genetic susceptibility to breast and ovarian malignancy

SO

## PROVIDER SIGN-OFF

## PROVIDER NAME

Tobias R. Lindqvist

## CREDENTIALS

MD, IFMCP, ABIM

## SPECIALTY

Functional / Integrative  
Medicine

## DATE

08/13/2026

## TIME

5:35 PM