# **Advanced Inference Testing Medical Records - Set 4**

# **CASE 4: Medication List Inference + Conflicting Measurements**

Patient: Thompson, Beverly

MRN: 4521-2025-668

**DOB:** 09/08/1972 (53 years old)

Date of Service: October 25, 2025

### **PAGE 1 - PRIMARY CARE VISIT**

PROVIDER: Johnson, Robert MD - Internal Medicine

LOCATION: Northside Medical Group

**CHIEF COMPLAINT:** Refills and weight loss discussion

#### **HPI**:

53F here for medication refills and wants to discuss weight loss options. Says she's been reading about that surgery where they shrink your stomach. Friend had it done and "looks great now." Patient frustrated with her current situation. Takes "a lot of pills" every day. Tired all the time. Can't keep up with grandkids.

### **PROBLEM LIST (from EMR):**

- 1. Multiple metabolic conditions
- 2. Cardiac history
- 3. Breathing issues
- 4. Mood disorder
- 5. Joint problems
- 6. GERD
- 7. Chronic conditions requiring daily management

### **CURRENT MEDICATIONS** (verified with patient, pill bottles reviewed):

- 1. Lantus 45 units subcutaneous every night at bedtime
- 2. Humalog sliding scale with meals
- 3. Jardiance 25mg every morning
- 4. Metformin ER 1000mg twice daily

- 5. Glipizide 10mg twice daily
- 6. Lisinopril 40mg daily
- 7. Metoprolol succinate 100mg daily
- 8. Amlodipine 10mg daily
- 9. Furosemide 40mg daily in morning
- 10. Carvedilol 25mg twice daily
- 11. Aspirin 81mg daily
- 12. Plavix 75mg daily
- 13. Atorvastatin 80mg at bedtime
- 14. Fenofibrate 145mg daily
- 15. Omega-3 fatty acids 1000mg twice daily
- 16. Pantoprazole 40mg twice daily
- 17. Sertraline 100mg daily
- 18. Trazodone 50mg at bedtime PRN
- 19. Gabapentin 300mg three times daily
- 20. Meloxicam 15mg daily
- 21. Vitamin D 2000 units daily
- 22. Multivitamin daily
- 23. Calcium with vitamin D twice daily

### **SOCIAL HISTORY:**

Works as administrative assistant. Divorced, lives alone. 3 adult children, 5 grandchildren. Denies tobacco quit 10 years ago. Rare alcohol. No illicit drugs.

### **REVIEW OF SYSTEMS:**

Per patient: Gets short of breath walking, feet swell by end of day, chronic back and knee pain, heartburn if misses pills, feels down a lot, trouble sleeping, numbness in feet sometimes, frequent urination especially at night.

#### **PHYSICAL EXAM:**

**VITALS** (MA taking vitals - patient in street clothes with shoes):

- BP: 138/84 (left arm, sitting)
- HR: 78
- TE 00 40T

• Temp: 98.4 F

• RR: 16

O2 Sat: 96% on RA

• Weight: 247 lbs (digital scale in hallway)

• **Height: 64 inches** (measured with shoes on)

GENERAL: Obese woman, appears stated age, NAD

CARDIOVASCULAR: RRR, distant heart sounds, no obvious m/r/g

RESPIRATORY: Decreased breath sounds at bases, no wheezing

ABDOMEN: Obese, soft, non-tender, BS present

EXTREMITIES: 2+ pitting edema bilateral lower extremities to mid-calf

SKIN: Intact, no acute lesions

NEURO: Grossly intact, decreased sensation bilateral feet to monofilament

### **LABS** (drawn today, will result later):

- Comprehensive metabolic panel
- CBC
- Lipid panel
- HbA1c
- Liver function tests

#### **ASSESSMENT/PLAN:**

Patient with multiple chronic conditions requesting weight loss surgery consultation. Given her medication list and physical findings, she appears to have significant comorbidities. Will need to review labs when back. Provided referral to bariatric surgery. Refilled all medications x90 days.

Discussed diet and exercise. Patient states she's tried "everything" but hard to exercise with her knees and being out of breath.

Return to clinic in 3 months or sooner if issues. Follow up with specialists as scheduled.

### PAGE 2 - LABORATORY RESULTS

**COLLECTION DATE:** October 25, 2025

**RESULT DATE:** October 26, 2025

#### **COMPREHENSIVE METABOLIC PANEL:**

• Glucose (fasting): 18/ mg/dL [HIGH]

• BUN: 32 mg/dL [HIGH]

• Creatinine: 1.6 mg/dL [HIGH]

• eGFR: 38 mL/min/1.73m<sup>2</sup> [LOW - Stage 3B CKD]

• Sodium: 136 mEq/L [LOW NORMAL]

• Potassium: 5.1 mEq/L [HIGH NORMAL]

• Chloride: 101 mEq/L

• CO2: 24 mEq/L

• Calcium: 9.1 mg/dL

• Albumin: 3.6 g/dL

**HEMOGLOBIN A1C:** 9.2% [HIGH - poorly controlled]

#### **LIPID PANEL:**

• Total Cholesterol: 198 mg/dL

• LDL: 112 mg/dL (calculated)

• HDL: 34 mg/dL [LOW]

Triglycerides: 260 mg/dL [HIGH]

• VLDL: 52 mg/dL

### LIVER FUNCTION:

• AST: 45 U/L [SLIGHTLY HIGH]

• ALT: 58 U/L [HIGH]

• Alkaline Phosphatase: 92 U/L

• Total Bilirubin: 0.8 mg/dL

### **CBC**:

• WBC: 8.2 K/uL

• RBC: 3.9 M/uL [LOW]

• Hemoglobin: 10.8 g/dL [LOW]

• Hematocrit: 33% [LOW]

• MCV: 85 fL

• Platelets: 245 K/uL

#### **URINALYSIS:**

• Protein: 2+ [ABNORMAL]

• Glucose: 3+ [ABNORMAL]

• Ketones: Negative

• Blood: Trace

• Microalbumin/Creatinine Ratio: 420 mg/g [MARKEDLY ELEVATED - macroalbuminuria]

# **PAGE 3 - CARDIOLOGY RECORDS (from chart review)**

MOST RECENT CARDIOLOGY NOTE - 08/15/2025

**PROVIDER:** Martinez, Elena MD - Cardiology

**Patient:** Beverly Thompson

**HISTORY:** 53yo woman with h/o MI 2019 s/p PCI with DES to LAD, chronic systolic HF (EF 35-40%), HTN, and other conditions. Here for routine f/u.

### **CURRENT SYMPTOMS:**

Class II-III heart failure symptoms. Gets SOB with one flight of stairs. Sleeps on 3 pillows. Denies chest pain currently. Legs swell by evening.

**MEDICATIONS:** As documented elsewhere in chart - on appropriate HF regimen with ACE-I, beta-blocker, diuretic, antiplatelet therapy.

**EXAM:** BP 142/86, HR 76 regular

Weight: 244 lbs (cardiac clinic scale)

JVP mildly elevated

S3 gallop present

Lungs: Bibasilar crackles

Extremities: 2+ edema

### ECHO FROM 06/2025:

- LV systolic dysfunction, EF 35-40%
- Moderate LVH
- Mild mitral regurgitation
- Dilated left atrium
- No pericardial effusion

#### **ASSESSMENT:**

- CHF, systolic, NYHA class II-III stable on current regimen
- CAD s/p stenting continued dual antiplatelet
- HTN suboptimally controlled

**PLAN:** Continue current medications. Weight management critical - every pound matters for heart function. Encouraged lifestyle modification.

Next visit 3 months.

### PAGE 4 - ENDOCRINOLOGY RECORDS

**DATE:** 09/20/2025

**PROVIDER:** Kumar, Anil MD - Endocrinology

**RE:** Diabetes management

#### **HPI:**

Patient with longstanding diabetes (diagnosed approximately 12 years ago per history). Has been on insulin for past 5 years. Multiple oral agents added over years. Recent A1C was 9.4% which is unacceptable. Discussed need for intensification.

#### **COMPLICATIONS OF DIABETES NOTED:**

- Retinopathy followed by ophthalmology, s/p laser treatment bilaterally
- Nephropathy Cr 1.5 last check, significant proteinuria, followed by nephrology
- Peripheral neuropathy on gabapentin, seen by podiatry
- Macrovascular disease prior MI

**EXAM: Weight: 250 lbs** (endocrine clinic scale with hospital gown)

Height: 63 inches (stadiometer measurement) BP 144/88

Diabetic foot exam: Loss of protective sensation bilaterally. No ulcers today.

#### PLAN:

- Increased Lantus to 45 units (from 38 units)
- Continue all other agents
- Stricter dietary compliance discussed

- A1C goal <7% but difficult to achieve
- Consider insulin pump vs. further intensification
- F/u 2 months

### **PAGE 5 - NEPHROLOGY CONSULTATION**

**DATE:** 07/12/2025

**PROVIDER:** Singh, Rajiv MD - Nephrology

**REASON FOR CONSULT:** Progressive kidney disease

### HPI:

53F referred for worsening kidney function. History of diabetes and hypertension. Creatinine has been rising over past 2 years. Now 1.5-1.6 range. Has significant proteinuria.

### **REVIEW OF LABS:**

- Creatinine trend:  $1.1 (2022) \rightarrow 1.3 (2023) \rightarrow 1.5 (2024) \rightarrow 1.6 (2025)$
- eGFR: Currently 38, was 52 two years ago
- Urine protein elevated, microalbumin >300 (macroalbuminuria)

### **KIDNEY ULTRASOUND (06/2025):**

- Right kidney: 10.2 cm, increased echogenicity
- Left kidney: 9.8 cm, increased echogenicity
- Consistent with chronic kidney disease
- No hydronephrosis, no stones

#### **ASSESSMENT:**

- CKD Stage 3B, diabetic nephropathy
- Proteinuria
- Secondary to long-standing DM and HTN

**DISCUSSION:** Patient's kidney disease is progressing despite optimal medical management. At this rate, may need dialysis within 5-10 years. Discussed importance of:

- 1. Strict BP control (goal <130/80)
- 2. Glycemic control (A1C <7%)
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5. WEIGHT LOSS - even 5-10% would significantly help

4. Avoid nephrotoxic drugs

Will continue to follow. Educated about kidney disease progression and eventual need for renal replacement therapy considerations.

### PAGE 6 - OPHTHALMOLOGY NOTE

**DATE:** 05/10/2025

PROVIDER: Lee, Christine MD - Ophthalmology/Retina Specialist

**DIAGNOSIS:** Diabetic retinopathy with macular edema

#### **HISTORY:**

Long-standing diabetes with eye complications. Has had multiple laser treatments. Vision has declined over years.

**EXAM:** Visual acuity: 20/40 OD, 20/50 OS (with correction)

### Dilated exam:

- Background diabetic retinopathy both eyes
- Hard exudates present bilaterally
- Cotton wool spots OU
- Microaneurysms
- Macular edema left > right
- S/p panretinal photocoagulation

**IMPRESSION:** Moderate-severe diabetic retinopathy. Macular edema contributing to vision loss.

**PLAN:** Anti-VEGF injection left eye today. Return in 6 weeks. Emphasized critical importance of glucose control to prevent further vision loss.

### PAGE 7 - SLEEP MEDICINE CONSULTATION

**DATE:** 04/18/2025

**PROVIDER:** Chang, Michelle MD - Sleep Medicine

**CHIEF COMPLAINT:** Snoring, daytime fatigue

HPI:

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53F referred for evaluation of sleep-disordered breathing. Husband (now ex-husband, but was married at time of study) reported loud snoring and witnessed breathing pauses. Patient complains of never feeling rested, falls asleep watching TV. Epworth Sleepiness Scale: 14/24.

#### **SLEEP STUDY - APRIL 2025:**

Overnight polysomnography performed.

### **RESULTS:**

• Total sleep time: 5.8 hours

• Sleep efficiency: 72%

• AHI: 38 events/hour [SEVERE OSA]

• RDI: 42 events/hour

• Lowest oxygen saturation: 79%

Average O2 saturation during sleep: 89%

• Significant oxygen desaturations during REM sleep

• Predominant obstructive events

**IMPRESSION:** Severe obstructive sleep apnea

**TREATMENT:** CPAP therapy initiated. Settings: 11 cm H2O. Patient given machine and mask. Education provided.

**FOLLOW-UP NOTE** (06/2025): Compliance check: Patient using CPAP only 3 nights per week, 4-5 hours per night when used. Does not meet insurance definition of compliance (>4 hours, >70% of nights). Discussed importance. Patient states mask uncomfortable, hard to sleep with it.

### PAGE 8 - PSYCHIATRY NOTE

**DATE:** 03/15/2025

**PROVIDER:** Williams, Jennifer MD - Psychiatry

**CHIEF COMPLAINT:** Depression

#### **HPI:**

Patient presents with persistent low mood. Going through divorce. Financial stress. Feels overwhelmed by medical problems. Difficulty sleeping. Low energy. Loss of interest in activities. Denies SI/HI currently but had passive thoughts in past ("would be easier if I wasn't here").

### **PSYCHIATRIC HISTORY:**

- Major depressive disorder recurrent episodes
- First episode age 30
- Multiple medication trials over years
- Prior hospitalization 2008 for suicidal ideation
- No recent hospitalizations
- Currently on sertraline with partial response

**MENTAL STATUS EXAM:** Alert, oriented. Depressed mood and affect. Linear thought process. Denies current SI. Fair insight and judgment.

**ASSESSMENT:** MDD, currently in partial remission on sertraline. Stressors include divorce, health issues, financial concerns.

#### **PLAN:**

- Continue sertraline 100mg
- Added trazodone 50mg HS for sleep
- Supportive therapy
- F/u 4-6 weeks

### PAGE 9 - WEIGHT MANAGEMENT PROGRAM DOCUMENTATION

**PROGRAM:** Northside Hospital Comprehensive Weight Management

**START DATE:** December 1, 2024 **DURATION:** 10 months (ongoing)

### **INITIAL VISIT (12/01/2024):**

Weight: 256 lbs (clinic scale, patient in light clothing)

**Height: 64 inches** (wall-mounted stadiometer)

BMI: 43.9

Patient enrolled in medically supervised weight loss program. Team includes physician, dietitian, exercise physiologist, behavioral psychologist.

### **VISIT SUMMARY:**

Month 1 (12/2024): Wt 256 lbs - Baseline established

Month 2 (01/2025): Wt 254 lbs - Lost 2 lbs, dietary counseling

Month 3 (02/2025): Wt 251 lbs - Lost 3 lbs, encouraged to continue

Month 4 (03/2025): Wt 253 lbs - Up 2 lbs, discussed barriers

Month 5 (04/2025): Wt 250 lbs - Back down 3 lbs

**Month 6 (05/2025):** Wt 249 lbs - Lost 1 lb

Month 7 (06/2025): Wt 251 lbs - Up 2 lbs - plateau discussed

**Month 8 (07/2025):** Wt 250 lbs - Down 1 lb

**Month 9 (08/2025):** Wt 249 lbs - Down 1 lb

Month 10 (09/2025): Wt 248 lbs - Down 1 lb

**TOTAL WEIGHT LOSS:** 8 lbs over 10 months (3.1% total body weight loss)

**PROGRAM NOTES:** Patient has been compliant with visits. Attended nutrition counseling monthly. Participated in group education classes. Food diaries reviewed - shows adherence to meal plan. Exercise limited by physical limitations (knee pain, shortness of breath). Patient frustrated with minimal weight loss despite efforts. Discussed that medical conditions and medications may be limiting weight loss. Referred for bariatric surgery evaluation given plateau and multiple comorbidities.

### PAGE 10 - BARIATRIC SURGERY CONSULTATION

**DATE:** October 28, 2025

**PROVIDER:** Roberts, Patricia MD - Bariatric Surgery

**CHIEF COMPLAINT:** Evaluation for weight loss surgery

### HPI:

53F referred by PCP for bariatric surgery evaluation. Presents with medication list indicating multiple obesity-related conditions. Patient motivated for surgery after friend's successful outcome.

WEIGHT/HEIGHT MEASUREMENTS TODAY: Weight: 242 lbs (bariatric clinic digital scale, patient in exam gown, no shoes)

Height: 63 inches (digital stadiometer, shoes off)

BMI: 42.9 kg/m<sup>2</sup>

Note: Measurements differ from various clinics - reviewed records showing range 242-256 lbs depending on scale, clothing, time of day. Height measurements 63-64 inches. Using today's measurements as most standardized.

**MEDICATION RECONCILIATION:** Reviewed patient's medication list. Based on medications, patient appears to have:

• Dishetes (on basal bolus insulin + multiple oral agents)

- Diabetes (on basar-boids misum + multiple oral agents)
- Cardiovascular disease (on multiple cardiac meds including post-MI regimen)
- Heart failure (on HF-specific medications)
- Hypertension (on 3-4 BP medications)
- Dyslipidemia (on statin + fibrate)
- GERD (on high-dose PPI)
- Depression (on SSRI)
- Neuropathy (on gabapentin)
- Chronic pain (on NSAID)

### **REVIEW OF RECORDS:**

### **Confirmed Diagnoses from documentation:**

# 1. Type 2 DM with complications:

- Retinopathy with macular edema (s/p laser)
- Nephropathy (Stage 3B CKD, eGFR 38, macroalbuminuria)
- Peripheral neuropathy
- A1C 9.2% (poorly controlled despite max medical therapy)

### 2. Cardiovascular disease:

- CAD s/p MI (2019) with stenting
- Chronic systolic heart failure (EF 35-40%, NYHA Class II-III)
- LVH

### 3. **Hypertension:**

• On 3 agents, still not at goal

### 4. Dyslipidemia:

• Despite statin + fibrate, triglycerides 260, low HDL

#### 5. Severe OSA:

• AHI 38, not compliant with CPAP

#### 6. NAFLD:

• Elevated liver enzymes, consistent with fatty liver

### 7. **Depression:**

Recurrent MDD

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o. Chi onic kidney disease stage 3D.

• Diabetic nephropathy, progressing

**WEIGHT MANAGEMENT HISTORY:** Documented participation in comprehensive medically supervised program for 10 months (12/2024-09/2025) with consistent monthly attendance. Lost only 8 lbs despite adherence. Multiple specialists have recommended weight loss as critical intervention.

#### **CLEARANCES NEEDED:**

• Cardiology clearance (high-risk given EF 35-40%)

• Psychology clearance (history of depression with past SI)

Nephrology input (CKD Stage 3B - surgery may stress kidneys further)

**PHYSICAL EXAM:** VITALS: BP 134/82, HR 74, RR 16, O2 Sat 95% RA

GENERAL: Obese woman, pleasant, NAD

CARDIOVASCULAR: RRR, S3 present, JVP normal today

RESPIRATORY: CTAB, no distress

ABDOMEN: Obese, soft, non-tender, well-healed surgical scars (prior C-sections)

EXTREMITIES: Trace edema today

NEURO: Decreased sensation feet bilaterally

#### **ASSESSMENT:**

Complex 53yo woman with severe obesity (BMI 42.9) and MULTIPLE serious comorbidities:

- Advanced diabetes with microvascular complications (retinopathy, nephropathy, neuropathy)
- Cardiovascular disease (prior MI, chronic HF with reduced EF)
- CKD Stage 3B with declining function
- Severe OSA
- Poorly controlled HTN
- Dyslipidemia
- Depression

Patient has participated in comprehensive medically supervised weight management program for >6 months with documented adherence but minimal success (3.1% weight loss). Taking 23 medications daily for obesity-related conditions.

#### **CONCERNS:**

- 1. Cardiac risk: EF 35-40% increases surgical risk significantly
- 2. **Renal function:** eGFR 38 surgery may worsen kidney function

- 3. **Psychological:** History of depression with suicidal ideation
- 4. **CPAP non-compliance:** Concerning for post-op compliance

### This is a HIGH-RISK but potentially HIGH-BENEFIT case.

Without intervention, patient's trajectory is dialysis, further cardiac decline, possible blindness from retinopathy. But surgery carries significant risks given comorbidities.

### **PLAN:**

- 1. Obtain cardiology clearance will need stress test, optimize HF management
- 2. Psychology evaluation assess current mental status, surgical readiness
- 3. Nephrology consultation regarding surgical risk
- 4. Comprehensive pre-op medical optimization
- 5. Multidisciplinary team conference
- 6. If cleared, recommend Roux-en-Y gastric bypass (metabolic benefits for diabetes)

### **MEDICAL NECESSITY:** Patient meets criteria for bariatric surgery:

- BMI >40 (42.9)
- Multiple severe obesity-related comorbidities
- Failed >6 months medically supervised weight loss program
- Medically necessary to prevent further deterioration

However, must ensure patient can safely undergo surgery given cardiac and renal status. Will proceed with clearances and optimization.

### PAGE 11 - CARDIOLOGY CLEARANCE FOR SURGERY

**DATE:** November 5, 2025

**PROVIDER:** Martinez, Elena MD - Cardiology

**RE:** Pre-operative clearance for bariatric surgery

### **ASSESSMENT:**

Patient with known CAD s/p PCI, chronic systolic HF (EF 35-40%) requesting clearance for bariatric surgery.

#### **ADDITIONAL TESTING PERFORMED:**

#### **Stress Test (Nuclear):**

- Modified Bruce protocol
- Stopped at 4 minutes due to fatigue and dyspnea
- Peak HR 128 (75% max predicted)
- BP response: 134/82 to 156/88
- No chest pain
- No diagnostic ECG changes
- Nuclear imaging: Fixed defect in LAD territory (old MI), no new reversible ischemia

### **Updated Echo (11/2025):**

- EF 38% (unchanged)
- Moderate LVH
- Mild MR
- No significant change from prior

**IMPRESSION:** High-risk surgical candidate due to reduced EF and HF history. However, no evidence of active ischemia. Patient medically optimized on appropriate HF regimen.

CLEARANCE: Patient cleared for bariatric surgery with following recommendations:

- Perioperative beta-blockade (already on carvedilol)
- Careful fluid management given HF
- ICU monitoring post-operatively
- Aggressive DVT prophylaxis
- Close cardiac monitoring

Benefits of significant weight loss (reduced cardiac workload, improved metabolic profile) may outweigh surgical risks. Patient understands increased cardiac risk.

**CLEARED FOR SURGERY** with above precautions.

### PAGE 12 - PSYCHOLOGY PRE-OPERATIVE EVALUATION

**DATE:** November 8, 2025

**PROVIDER:** Anderson, Mark PhD - Clinical Psychology

**EVALUATION TYPE:** Pre-bariatric surgery psychological assessment

**CLINICAL INTERVIEW:** Patient presents as cooperative, appropriate. Currently in stable mental health, denies active depression. Taking sertraline with good effect. Denies current or recent suicidal ideation. Past hospitalization was 17 years ago in context of difficult divorce - no recent psychiatric hospitalizations.

**UNDERSTANDING OF SURGERY:** Patient demonstrates good understanding of bariatric surgery. Able to articulate:

- Surgical risks and benefits
- Dietary restrictions post-operatively
- Need for vitamin supplementation for life
- Importance of follow-up
- Lifestyle changes required
- Realistic weight loss expectations

**EATING BEHAVIORS:** No evidence of binge eating disorder. No purging behaviors. Some emotional eating acknowledged but not pathological. Patient has been working with dietitian and shows improvement in eating patterns.

**MOTIVATION:** Highly motivated. Understands surgery is tool, not cure. Concerned about declining health. Wants to be healthy for grandchildren. Motivated by friend's successful outcome and realistic about her expectations.

**SUPPORT SYSTEM:** Divorced but has good support from adult children. Attends church regularly. Has friend group. Not isolated.

**CONCERNS:** History of depression with past suicidal ideation is noted, but currently stable. Will need continued psychiatric follow-up post-operatively. Patient understands and agrees.

**COGNITIVE ASSESSMENT:** Adequate cognitive function to understand informed consent and post-operative requirements.

**RECOMMENDATION:** CLEARED for bariatric surgery from psychological standpoint.

#### Recommend:

- Continue sertraline post-operatively
- Close psychiatric follow-up
- Monitor for post-operative depression (common after bariatric surgery)
- Patient committed to follow-up care

# **INFERENCE CHALLENGES IN THIS CASE:**

### 1. Must infer diagnoses from medication list:

- Lantus + Humalog + Jardiance + Metformin + Glipizide = Type 2 DM
- Lisinopril + Metoprolol + Amlodipine + Furosemide + Carvedilol = Heart failure + HTN
- Aspirin + Plavix = Prior MI/stenting
- Atorvastatin + Fenofibrate = Dyslipidemia
- Pantoprazole = GERD
- Sertraline + Trazodone = Depression
- Gabapentin = Neuropathy

### 2. Conflicting weight/height measurements:

- PCP: 247 lbs, 64 inches (with shoes, street clothes)
- Cardiology: 244 lbs
- Endocrinology: 250 lbs, 63 inches (in gown)
- Weight program: 248 lbs, 64 inches
- Bariatric clinic: 242 lbs, 63 inches (most standardized)
- BMI ranges from 41.5 to 43.9 depending on measurements
- Must determine which is most accurate

### 3. Diabetes complications scattered across multiple notes:

- Ophthalmology: Retinopathy
- Nephrology: Nephropathy, CKD Stage 3B
- Neuro exam findings: Neuropathy
- Cardiology: Macrovascular disease (MI)
- Must piece together that patient has severe diabetes with multiple end-organ complications
- 4. Kidney disease progression Must track creatinine trend and recognize Stage 3B CKD

### 5. **Heart failure severity** - Must recognize:

- EF 35-40% = reduced EF (HFrEF)
- S3 gallop = decompensated HF
- NYHA Class II-III symptoms
- On guideline-directed medical therapy (ACE-I, beta-blocker, diuretic)
- 6. **Sleep apnea non-compliance** AHI 38 (severe) but poor CPAP adherence

- 7. Weight loss program documentation Calculate % weight loss (3.1%), determine if adequate attempt
- 8. **High surgical risk recognition** Despite meeting criteria, must recognize:
  - Cardiac risk (low EF)
  - Renal risk (CKD Stage 3B)
  - But cleared by specialists with precautions
- 9. Borderline approval This case SHOULD be approved but requires careful risk-benefit analysis
- 10. **Time calculations** 10 months program participation (12/2024-09/2025), consultation 10/2025 = meets >6 month requirement

# This tests whether AI can:

- Reverse-engineer diagnoses from medications
- Reconcile conflicting measurements
- Recognize high-risk but appropriate candidate
- Understand that severe comorbidities = both higher risk AND higher medical necessity