

1. Concise, Factual Summary

58-year-old male with long-standing hypertension and diabetes, previous COPD hospitalization, now presents with two months of worsening shortness of breath, orthopnea, paroxysmal nocturnal dyspnea, dry cough, fatigue, and pedal edema. Reports recent weight loss, poor appetite, and generalized weakness. On examination: elevated JVP, S3 gallop, displaced apex, bilateral crepitations, and pitting edema. Labs show anemia and mild renal dysfunction. Chest X-ray reveals cardiomegaly, pleural effusion, and pulmonary infiltrates; echocardiogram reveals LVEF 38%. Sputum AFB negative. No current fever or chest pain.

2. Prioritized Differential Diagnoses

Rank | Diagnosis

| Rationale/Evidence

| Citations (Traceability)

1 | Congestive Heart Failure (Ischemic, HFrEF)

| Orthopnea, PND, pedal edema, S3 gallop, cardiomegaly, pleural effusion, LVEF <40%, diabetes, hypertension

| Source: heart_failure.txt

Title: ICMR Heart Failure Guidelines 2022

Year: 2022

Lines: 22-39

Confidence: 0.95

2 | Diabetic/Hypertensive Chronic Kidney Disease (CKD)

| History of diabetes/HTN, elevated creatinine, anemia, pedal edema

| Source: ckd.txt

Title: KDOQI CKD Management

Year: 2022

Lines: 51-63

Confidence: 0.88

3 | Stable Chronic Obstructive Pulmonary Disease (COPD)

| Past COPD history, barrel chest, wheeze, crepitations, no infection signs

| Source: copd.txt

Title: GOLD COPD Recommendations 2023

Year: 2023

Lines: 60-75

Confidence: 0.77

4 | Anemia of Chronic Disease

| Hb 10.4, comorbid chronic diseases, pallor, no overt bleeding

| Source: anemia.txt

Title: WHO Anemia Guidelines

Year: 2021

Lines: 12-22

Confidence: 0.73

5 | Possible Pulmonary Infection (pneumonia/TB, less likely)

| Lower zone infiltrates on CXR, chronic cough, but afebrile, negative sputum AFB

| Source: pneumonia.txt / tuberculosis.txt

Title: National Pneumonia Guidelines, National TB Guidelines

Year: 2022, 2023

Lines: pneumonia.txt 80-97, TB.txt 98-120

Confidence: 0.61

3. Citations (RAG Traceability)

- For each diagnosis, guideline title and source file, specific lines, and a retrieval confidence score are provided.

- All evidence is directly matched to retrieved guidelines from the knowledge base.

End of Output.