MEDLEY

Medical AI Ensemble Clinical Decision Report

Case ID: Case_13 Title: Case_13 - Medical Analysis Generated: 2025-08-12 07:08

Primary Diagnostic Consensus

Diagnosis	ICD-10	Agreement	Confidence	Status
Iga Nephropathy	M32.14	13.1%	Very Low	PRIMARY

Alternative & Minority Diagnoses

Diagnosis	ICD-10	Support	Type
Lupus Nephritis	Unknown	9.3%	Minority (<20%)
Post-infectious Glomerulonephritis	Unknown	7.5%	Minority (<20%)
Systemic Lupus Erythematosus	M32.9	6.5%	Minority (<20%)
Interstitial Nephritis	Unknown	4.7%	Minority (<20%)
Glomerulonephritis	Unknown	3.7%	Minority (<20%)
Membranoproliferative Glomerulonephritis	Unknown	3.7%	Minority (<20%)
Renal Cell Carcinoma	Unknown	2.8%	Minority (<20%)
Anca-associated Vasculitis	Unknown	2.8%	Minority (<20%)
Interstitial Cystitis	Unknown	1.9%	Minority (<20%)
Chronic Kidney Disease	Unknown	1.9%	Minority (<20%)
Membranous Nephropathy	Unknown	1.9%	Minority (<20%)
Chronic Pyelonephritis	Unknown	1.9%	Minority (<20%)
Rapidly Progressive Glomerulonephritis	Unknown	1.9%	Minority (<20%)
Urinary Tract Infection	Unknown	1.9%	Minority (<20%)
Acute Interstitial Nephritis	Unknown	1.9%	Minority (<20%)
Alport Syndrome	Unknown	1.9%	Minority (<20%)
Renal Infection (pyelonephritis)	Unknown	0.9%	Minority (<20%)
Urolithiasis (kidney Stones)	Unknown	0.9%	Minority (<20%)
Glomerulonephritis with Lupus Nephritis	Unknown	0.9%	Minority (<20%)

Diagnosis	ICD-10	Support	Type
Postinfectious Glomerulonephritis	Unknown	0.9%	Minority (<20%)
Acute Pyelonephritis	Unknown	0.9%	Minority (<20%)
Bladder Cancer	C80.1	0.9%	Minority (<20%)
Renal■abcess	Unknown	0.9%	Minority (<20%)
Prostatitis	Unknown	0.9%	Minority (<20%)
Anca-associated Vasculitis (e.g., Granulomatosis with Polyangiitis)	Unknown	0.9%	Minority (<20%)
Chronic Interstitial Nephritis (drug-induced)	Unknown	0.9%	Minority (<20%)
Anca-associated Vasculitis with Glomerulonephritis	Unknown	0.9%	Minority (<20%)
Mixed Connective Tissue Disease with Renal Involvement	Unknown	0.9%	Minority (<20%)
Recurrent Urinary Tract Infection with Secondary Glomerulonephritis	Unknown	0.9%	Minority (<20%)
Hantavirus Pulmonary Syndrome / Renal Syndrome	Unknown	0.9%	Minority (<20%)
Iga Nephropathy (berger's Disease)	Unknown	0.9%	Minority (<20%)
Nephrolithiasis (kidney Stones)	Unknown	0.9%	Minority (<20%)
Chronic Interstitial Nephritis	Unknown	0.9%	Minority (<20%)
Systemic Lupus Nephritis	Unknown	0.9%	Minority (<20%)
Glomerulonephritis (other)	Unknown	0.9%	Minority (<20%)
Polycystic Kidney Disease	Unknown	0.9%	Minority (<20%)
Acute Glomerulonephritis	Unknown	0.9%	Minority (<20%)
Henoch-schönlein Purpura	Unknown	0.9%	Minority (<20%)
Glomerulonephritis, Likely Related to Autoimmune Disease (e.g., Lupus Nephritis)	Unknown	0.9%	Minority (<20%)
Vasculitis (e.g., Anca-associated Vasculitis)	Unknown	0.9%	Minority (<20%)
Chronic Interstitial Nephritis Secondary to Toxin Exposure	Unknown	0.9%	Minority (<20%)
Benign Prostatic Hyperplasia	Unknown	0.9%	Minority (<20%)
Renal Stones	Unknown	0.9%	Minority (<20%)
Hypertensive Nephropathy	Unknown	0.9%	Minority (<20%)
Acute Interstitial Nephritis with Hematuria	Unknown	0.9%	Minority (<20%)
Renal Cell Carcinoma (rcc)	Unknown	0.9%	Minority (<20%)
Polycystic Kidney Disease (pkd)	Unknown	0.9%	Minority (<20%)
Granulomatosis with Polyangiitis	Unknown	0.9%	Minority (<20%)
Goodpasture Syndrome	Unknown	0.9%	Minority (<20%)

Analysis Overview

Models Queried: 22

Successful Responses: 22

Consensus Level: Low

Total Estimated Cost: $0.385

■■ Note: Analysis using fallback extraction (orchestrator unavailable)

Some advanced analysis features may be limited. ICD codes have been inferred where possible.

Critical Decision Points & Evidence Synthesis

Critical Decision Points

Key areas where models showed significant divergence in diagnostic or management approach:

Evidence Synthesis & Clinical Correlation

Symptom-Diagnosis Correlation Matrix

Legend: +++ Strong association, ++ Moderate, + Weak, - Not typical

Diagnostic Decision Tree

Step	Action	If Positive	If Negative
1	Initial Laboratory Tests	→ Confirm suspicion	→ Broaden differential
2	Imaging Studies	→ Identify pathology	→ Consider specialized tests
3	Specialized Testing	→ Definitive diagnosis	→ Empiric treatment
4	Treatment Trial	→ Continue if effective	→ Reconsider diagnosis

Executive Summary

Case Description

Complex Urology Case Presentation

Patient Demographics

Age: 24 years old

Sex: Male

Ethnicity: Middle Eastern (Iranian heritage)

Occupation: Graduate student in chemistry

Chief Complaint

"Burning when I urinate and blood in my urine for the past 6 months, on and off"

History of Present Illness

24-year-old male presents with a 6-month history of intermittent dysuria, gross hematuria, and suprapubic discomfort. Episodes occur every 2-3 weeks, last 3-5 days, then resolve completely. Patient reports no fever during episodes. Pain is described as "deep burning" both during and after urination. Has had 4 courses of antibiotics from urgent care with temporary improvement each time.

Recently developed new symptoms: bilateral flank pain, decreased urine output, and weight gain of 8 lbs over 2 weeks. Denies recent travel, new sexual partners, or illicit drug use. Reports family history of "kidney problems" in paternal uncle.

Past Medical History

- Recurrent "kidney stones" as teenager (no documentation available)
- Treated for depression with sertraline 50mg daily for 2 years
- No known allergies

Social History

- PhD student in organic chemistry, works with various solvents and compounds
- Denies tobacco use
- Social alcohol use (2-3 drinks/week)
- Sexually active with one female partner for 8 months
- Recent immigrant (3 years ago), limited family medical records

Physical Examination

- Vital Signs: BP 145/92, HR 88, Temp 37.1°C, RR 16
- General: Mild periorbital edema, appears fatigued
- Genitourinary: No penile discharge, testes normal, mild suprapubic tenderness
- Costovertebral angle: Bilateral tenderness
- Extremities: 1+ pitting edema to mid-shins

Laboratory Results

Urinalysis (during symptomatic episode)

- Color: Dark amber with visible blood
- Protein: 3+ (300 mg/dL)
- Blood: 3+
- RBC: >50/hpf, many dysmorphic

- WBC: 15-20/hpf
- Nitrites: Negative
- Leukocyte esterase: 2+
- Casts: 3-5 RBC casts/lpf, 1-2 granular casts/lpf

Urine Culture
- Day 1: Mixed flora <10,000 CFU/mL
- Day 3: No growth

Serum Chemistry
- Creatinine: 2.1 mg/dL (baseline unknown)
- BUN: 45 mg/dL
- eGFR: 42 mL/min/1.73m²
- Sodium: 138 mEq/L
- Potassium: 4.8 mEq/L
- Chloride: 104 mEq/L

Additional Labs
- CBC: WBC 8,200, Hgb 11.2 g/dL, Plt 180,000
- ESR: 45 mm/hr
- CRP: 12 mg/L
- C3: 45 mg/dL (Low, normal 90-180)
- C4: 8 mg/dL (Low, normal 10-40)
- ANA: Positive, 1:160 homogeneous pattern
- Anti-dsDNA: Pending
- ANCA: Pending

Imaging
- Renal Ultrasound: Bilateral increased echogenicity, no hydronephrosis, no obvious stones
- CT Abdomen/Pelvis (non-contrast): Bilateral renal enlargement, no stones identified

Key Clinical Findings

• Elevated inflammatory markers (CRP, ESR)
• Positive family history of similar episodes

Primary Recommendations

• Consider Iga Nephropathy among differential diagnoses

Primary Diagnosis Clinical Summaries

Diagnostic Landscape Analysis

Detailed Diagnostic Analysis

The ensemble analysis identified **Iga Nephropathy** as the primary diagnosis with 13.1% consensus among 0 models.

Detailed Alternative Analysis

Diagnosis	Support	Key Evidence	Clinical Significance
Lupus Nephritis	9.3%	0 models	Unlikely
Post-infectious Glomerulonephritis	7.5%	0 models	Unlikely
Systemic Lupus Erythematosus	6.5%	0 models	Unlikely
Interstitial Nephritis	4.7%	0 models	Unlikely
Glomerulonephritis	3.7%	0 models	Unlikely
Membranoproliferative Glomerulonephritis	3.7%	0 models	Unlikely
Renal Cell Carcinoma	2.8%	0 models	Unlikely
Anca-associated Vasculitis	2.8%	0 models	Unlikely

Minority Opinions

All alternative diagnoses suggested by any models with their clinical rationale:

- **Lupus Nephritis** (ICD-10: Unknown) - 9.3% agreement (0 models)
  Supporting Models:
- **Post-infectious Glomerulonephritis** (ICD-10: Unknown) - 7.5% agreement (0 models)
  Supporting Models:
- **Systemic Lupus Erythematosus** (ICD-10: M32.9) - 6.5% agreement (0 models)
  Supporting Models:
- **Interstitial Nephritis** (ICD-10: Unknown) - 4.7% agreement (0 models)
  Supporting Models:
- **Glomerulonephritis** (ICD-10: Unknown) - 3.7% agreement (0 models)
  Supporting Models:
- **Membranoproliferative Glomerulonephritis** (ICD-10: Unknown) - 3.7% agreement (0 models)
  Supporting Models:
- **Renal Cell Carcinoma** (ICD-10: Unknown) - 2.8% agreement (0 models)
  Supporting Models:
- **Anca-associated Vasculitis** (ICD-10: Unknown) - 2.8% agreement (0 models)
  Supporting Models:

• **Interstitial Cystitis** (ICD-10: Unknown) - 1.9% agreement (0 models)

Supporting Models:

• **Chronic Kidney Disease** (ICD-10: Unknown) - 1.9% agreement (0 models)

Supporting Models:

• **Membranous Nephropathy** (ICD-10: Unknown) - 1.9% agreement (0 models)

Supporting Models:

• **Chronic Pyelonephritis** (ICD-10: Unknown) - 1.9% agreement (0 models)

Supporting Models:

• **Rapidly Progressive Glomerulonephritis** (ICD-10: Unknown) - 1.9% agreement (0 models)

Supporting Models:

• **Urinary Tract Infection** (ICD-10: Unknown) - 1.9% agreement (0 models)

Supporting Models:

• **Acute Interstitial Nephritis** (ICD-10: Unknown) - 1.9% agreement (0 models)

Supporting Models:

• **Alport Syndrome** (ICD-10: Unknown) - 1.9% agreement (0 models)

Supporting Models:

• **Renal Infection (pyelonephritis)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Urolithiasis (kidney Stones)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Glomerulonephritis with Lupus Nephritis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Postinfectious Glomerulonephritis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Acute Pyelonephritis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Bladder Cancer** (ICD-10: C80.1) - 0.9% agreement (0 models)

Supporting Models:

• **Renal■abcess** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Prostatitis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Anca-associated Vasculitis (e.g., Granulomatosis with Polyangiitis)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Chronic Interstitial Nephritis (drug-induced)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Anca-associated Vasculitis with Glomerulonephritis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Mixed Connective Tissue Disease with Renal Involvement** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Recurrent Urinary Tract Infection with Secondary Glomerulonephritis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Hantavirus Pulmonary Syndrome / Renal Syndrome** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Iga Nephropathy (berger's Disease)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Nephrolithiasis (kidney Stones)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Chronic Interstitial Nephritis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Systemic Lupus Nephritis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Glomerulonephritis (other)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Polycystic Kidney Disease** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Acute Glomerulonephritis** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Henoch-schönlein Purpura** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Glomerulonephritis, Likely Related to Autoimmune Disease (e.g., Lupus Nephritis)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Vasculitis (e.g., Anca-associated Vasculitis)** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Chronic Interstitial Nephritis Secondary to Toxin Exposure** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Benign Prostatic Hyperplasia** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Renal Stones** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

• **Hypertensive Nephropathy** (ICD-10: Unknown) - 0.9% agreement (0 models)

Supporting Models:

- **Acute Interstitial Nephritis with Hematuria** (ICD-10: Unknown) - 0.9% agreement (0 models)
  Supporting Models:
- **Renal Cell Carcinoma (rcc)** (ICD-10: Unknown) - 0.9% agreement (0 models)
  Supporting Models:
- **Polycystic Kidney Disease (pkd)** (ICD-10: Unknown) - 0.9% agreement (0 models)
  Supporting Models:
- **Granulomatosis with Polyangiitis** (ICD-10: Unknown) - 0.9% agreement (0 models)
  Supporting Models:
- **Goodpasture Syndrome** (ICD-10: Unknown) - 0.9% agreement (0 models)
  Supporting Models:

Additional Diagnoses Considered:

Management Strategies & Clinical Pathways

Immediate Actions Required

No immediate actions identified with high consensus.

Recommended Diagnostic Tests

Treatment Recommendations

Treatment recommendations pending diagnostic confirmation.

Model Diversity & Bias Analysis

Model Response Overview & Cost Analysis

Model	Origin	Tier	Cost	Diagnosis	Training Profile
mistral-7b-inst	France	Budget	<$0.01	Renal Infection (Pyelonephritis)	General
grok-4	USA	Premium	$0.039	Glomerulonephritis with lupus nephritis	Alternative
gpt-oss-120b	USA	Mid-Range	<$0.01	Lupus nephritis (probable class III/IV)	Standard
command-r	Canada	Mid-Range	<$0.01	Acute Pyelonephritis	Standard
deepseek-chat	China	Budget	<$0.01	Lupus Nephritis	Regional
gemini-2.5-pro	USA	Premium	$0.036	Not specified	General
deepseek-r1	China	Budget	<$0.01	Lupus Nephritis	Regional
sonar-deep-rese	USA	Premium	$0.017	Lupus Nephritis	Standard
jamba-large-1.7	Israel	Premium	$0.017	Lupus Nephritis	Standard
gemini-2.5-flas	USA	Budget	<$0.01	Lupus Nephritis	General
mistral-large-2	France	Premium	$0.022	IgA Nephropathy (Berger's Disease)	Standard
command-r-plus	Canada	Premium	$0.028	Glomerulonephritis	Standard
wizardlm-2-8x22	USA	Mid-Range	<$0.01	Rapidly Progressive Glomerulonephritis	Standard
grok-2-1212	USA	Premium	$0.018	Lupus Nephritis	Standard
gemma-2-9b-it	USA	Budget	<$0.01	Systemic Lupus Nephritis	Standard
gpt-4o	USA	Premium	$0.028	IgA Nephropathy	Comprehensive
gemini-2.5-flas	USA	Budget	<$0.01	Glomerulonephritis, likely related to autoimmune disease (e.g., Lupus Nephritis)	General
llama-3.2-3b-in	USA	Budget	<$0.01	Systemic Lupus Erythematosus (SLE) with renal involvement	General
gpt-4o-mini	USA	Budget	<$0.01	Glomerulonephritis	General
qwen-2.5-coder-	China	Mid-Range	<$0.01	Acute Interstitial Nephritis with Hematuria	Regional
claude-3-opus-2	USA	Premium	$0.158	Lupus nephritis	Comprehensive
lfm-40b	USA	Mid-Range	<$0.01	Interstitial cystitis	Standard

Total Estimated Cost: $0.385

Understanding Training Profiles

Training profiles indicate the type and depth of medical knowledge in each model:

Comprehensive: Extensive medical literature training with broad clinical knowledge

Standard: Standard medical knowledge base with general clinical training

Regional: Region-specific medical training reflecting local practices and conditions

General: Broad general knowledge, not specifically trained on medical literature

Alternative: Alternative medical perspectives and non-conventional approaches

AI Model Bias Analysis

AI model bias analysis is generated during orchestration (Step 2). This comprehensive analysis examines cultural, geographic, and training data biases across the AI models used.

Primary Diagnosis Bias Factors:

- Cultural: Fallback analysis - limited bias assessment available
- Geographic: Cannot assess without orchestrator
- Training Data: Training data bias analysis requires orchestrator

Alternative Diagnoses Bias:

Detailed Model Responses

Complete diagnostic assessments from each model:

1. mistral-7b-inst (France, Released: 2023-09-27)

Primary Diagnosis: Renal Infection (Pyelonephritis) (ICD-10: N10.90) - Confidence: 0.8

Differential Diagnoses:

- Renal Cell Carcinoma (ICD: C64.9) - 0.2
- Urolithiasis (Kidney Stones) (ICD: N13.9) - 0.15
- Glomerulonephritis (ICD: B80.9) - 0.1

Key Clinical Findings:

- Recurrent UTI episodes, gross hematuria, flank pain, decreased urine output, proteinuria, RBC casts in urine, elevated ESR, elevated CRP, positive ANA
- Bilateral renal enlargement on CT Abdomen/Pelvis, normal renal ultrasound

2. grok-4 (USA, Released: 2024-12-26)

Primary Diagnosis: Glomerulonephritis with lupus nephritis (ICD-10: M32.14) - Confidence: 0.8

Differential Diagnoses:

- Membranoproliferative glomerulonephritis (ICD: N05.5) - 0.6
- IgA nephropathy (ICD: N02.8) - 0.5
- ANCA-associated vasculitis (ICD: M31.30) - 0.4

Key Clinical Findings:

- Intermittent dysuria and gross hematuria with dysmorphic RBCs and RBC casts on urinalysis
- Acute kidney injury with creatinine 2.1 mg/dL and eGFR 42 mL/min/1.73m²
- Hypocomplementemia with low C3 (45 mg/dL) and C4 (8 mg/dL)
- Positive ANA (1:160 homogeneous pattern)

3. gpt-oss-120b (USA, Released: 2025-08-05)

4. command-r (Canada, Released: 2024-03-11)

Primary Diagnosis: Acute Pyelonephritis (ICD-10: N10) - Confidence: 0.75

Differential Diagnoses:

- Interstitial Cystitis (ICD: N30.9) - 0.6
- Bladder Cancer (ICD: C67) - 0.4

- Renal■Abcess (ICD: N14.9) - 0.3

Key Clinical Findings:

- Recurrent urinary tract infections with transient relief from antibiotics
- Bilateral flank pain, tenderness & renal enlargement
- Gross hematuria, dysuria, suprapubic discomfort
- Mild periorbital edema, elevated BP, pending ANCA & anti-dsDNA results

5. deepseek-chat (China, Released: 2024-12-20)

Primary Diagnosis: Lupus Nephritis (ICD-10: M32.14) - Confidence: 0.9

Differential Diagnoses:

- IgA Nephropathy (ICD: N02.8) - 0.7
- Post-Infectious Glomerulonephritis (ICD: N00.9) - 0.5
- Chronic Kidney Disease (ICD: N18.9) - 0.6

Key Clinical Findings:

- Intermittent dysuria and hematuria
- Bilateral flank pain and decreased urine output
- Elevated creatinine and BUN
- Low C3 and C4 levels

6. gemini-2.5-pro (USA, Released: 2024-12-19)

7. deepseek-r1 (China, Released: 2025-01-20)

8. sonar-deep-rese (USA, Released: 2025-03-07)

9. jamba-large-1.7 (Israel, Released: 2025-07-01)

Primary Diagnosis: Lupus Nephritis (ICD-10: N02.2) - Confidence: 0.8

Differential Diagnoses:

- IgA Nephropathy (ICD: N02.0) - 0.6
- Membranous Nephropathy (ICD: N02.3) - 0.4
- Chronic Pyelonephritis (ICD: N11.9) - 0.3

Key Clinical Findings:

- Bilateral renal enlargement

- Dysmorphic RBCs in urinalysis
- Low C3 and C4
- Positive ANA

10. gemini-2.5-flas (USA, Released: 2024-12-19)

Primary Diagnosis: Lupus Nephritis (ICD-10: N04.9) - Confidence: 0.9

Differential Diagnoses:

- IgA Nephropathy (ICD: N02.2) - 0.6
- Post-infectious Glomerulonephritis (ICD: N03.8) - 0.4
- Recurrent Urinary Tract Infection with Secondary Glomerulonephritis (ICD: N08.8) - 0.3

Key Clinical Findings:

- Intermittent dysuria and gross hematuria for 6 months
- Bilateral flank pain, decreased urine output, weight gain, periorbital edema, pitting edema
- Hypertension (BP 145/92)
- Elevated BUN and Creatinine with decreased eGFR

11. mistral-large-2 (France, Released: 2024-11-01)

Primary Diagnosis: IgA Nephropathy (Berger's Disease) (ICD-10: N08.0) - Confidence: 0.85

Differential Diagnoses:

- Lupus Nephritis (ICD: M32.14) - 0.7
- Post-infectious Glomerulonephritis (ICD: N05.9) - 0.6
- Membranoproliferative Glomerulonephritis (ICD: N01.7) - 0.55

Key Clinical Findings:

- Intermittent dysuria and gross hematuria
- Bilateral flank pain and suprapubic tenderness
- Decreased urine output and weight gain
- Proteinuria and hematuria with RBC casts

12. command-r-plus (Canada, Released: 2024-04-04)

Primary Diagnosis: Glomerulonephritis (ICD-10: N03.9) - Confidence: 0.7

Differential Diagnoses:

- Interstitial Nephritis (ICD: N16.1) - 0.6
- Nephrolithiasis (Kidney Stones) (ICD: N20.9) - 0.5
- Urinary Tract Infection (UTI) (ICD: N39.0) - 0.4

Key Clinical Findings:

- Gross hematuria
- Elevated creatinine and BUN
- Low C3 and C4 levels
- Positive ANA

13. wizardlm-2-8x22 (USA, Released: 2024-04-15)

Primary Diagnosis: Rapidly Progressive Glomerulonephritis (ICD-10: N02.0) - Confidence: 0.7

Differential Diagnoses:

- IgA Nephropathy (ICD: N03.2) - 0.5
- Lupus Nephritis (ICD: N05.1) - 0.6
- Post-infectious Glomerulonephritis (ICD: N05.9) - 0.4

Key Clinical Findings:

- Intermittent dysuria, gross hematuria, and suprapubic discomfort for 6 months
- New onset bilateral flank pain, decreased urine output, and weight gain
- Proteinuria (3+) and hematuria with dysmorphic RBCs and RBC casts on urinalysis
- Elevated serum creatinine and BUN with reduced eGFR

14. grok-2-1212 (USA, Released: 2024-12-12)

Primary Diagnosis: Lupus Nephritis (ICD-10: M32.14) - Confidence: 0.8

Differential Diagnoses:

- IgA Nephropathy (ICD: N02.8) - 0.6
- ANCA-Associated Vasculitis (ICD: M31.3) - 0.5
- Chronic Interstitial Nephritis (ICD: N11.9) - 0.4

Key Clinical Findings:

- Intermittent dysuria and gross hematuria for 6 months
- Bilateral flank pain, decreased urine output, and weight gain
- Elevated serum creatinine and BUN, low eGFR
- Urinalysis showing proteinuria, hematuria, and RBC casts

15. gemma-2-9b-it (USA, Released: 2024-06-27)

Primary Diagnosis: Systemic Lupus Nephritis (ICD-10: N17.0) - Confidence: 0.8

Differential Diagnoses:

- Acute Interstitial Nephritis (ICD: N17.9) - 0.15
- Renal Cell Carcinoma (ICD: C64.9) - 0.05
- Glomerulonephritis (Other) (ICD: N03.9) - 0.1

Key Clinical Findings:

- Gross hematuria
- Proteinuria
- Dysmorphic red blood cells on urinalysis
- Renal casts on urinalysis

16. gpt-4o (USA, Released: 2024-05-13)

Primary Diagnosis: IgA Nephropathy (ICD-10: N02.8) - Confidence: 0.8

Differential Diagnoses:

- Lupus Nephritis (ICD: M32.14) - 0.7
- Alport Syndrome (ICD: Q87.81) - 0.6
- Acute Glomerulonephritis (ICD: N00.9) - 0.5

Key Clinical Findings:

- Intermittent dysuria and gross hematuria
- Bilateral flank pain
- Decreased urine output
- Weight gain with 1+ pitting edema

17. gemini-2.5-flas (USA, Released: 2024-12-19)

Primary Diagnosis: Glomerulonephritis, likely related to autoimmune disease (e.g., Lupus Nephritis) (ICD-10: N08.5) - Confidence: 0.9

Differential Diagnoses:

- IgA Nephropathy (ICD: N02.8) - 0.7
- Post-infectious Glomerulonephritis (ICD: N08.0) - 0.5
- Alport Syndrome (ICD: Q87.81) - 0.6

Key Clinical Findings:

- 6-month history of intermittent dysuria, gross hematuria, suprapubic discomfort
- Recent development of bilateral flank pain, decreased urine output, 8 lbs weight gain
- Elevated BP (145/92)
- Mild periorbital edema, 1+ pitting edema to mid-shins

18. llama-3.2-3b-in (USA, Released: 2024-09-25)

Primary Diagnosis: Systemic Lupus Erythematosus (SLE) with renal involvement (ICD-10: M32.0) - Confidence: 0.9

Differential Diagnoses:

- Interstitial Nephritis (ICD: N17.0) - 0.6

- Glomerulonephritis (ICD: N05.0) - 0.5
- Chronic Pyelonephritis (ICD: N35.0) - 0.4

Key Clinical Findings:

- Bilateral flank pain
- Decreased urine output
- Weight gain
- Dark amber urine with visible blood

19. gpt-4o-mini (USA, Released: 2024-07-18)

Primary Diagnosis: Glomerulonephritis (ICD-10: N00) - Confidence: 0.8

Differential Diagnoses:

- Interstitial Nephritis (ICD: N10) - 0.7
- Renal Stones (ICD: N20) - 0.5
- Urinary Tract Infection (ICD: N39.0) - 0.4

Key Clinical Findings:

- Intermittent dysuria and hematuria
- Bilateral flank pain
- Bilateral renal enlargement on imaging
- Low C3 and C4 levels

20. qwen-2.5-coder- (China, Released: 2024-11-12)

Primary Diagnosis: Acute Interstitial Nephritis with Hematuria (ICD-10: N17.2) - Confidence: 0.85

Differential Diagnoses:

- Renal Cell Carcinoma (RCC) (ICD: C64.9) - 0.15
- IgA Nephropathy (ICD: N30.0) - 0.1
- Systemic Lupus Erythematosus (SLE) (ICD: M32.9) - 0.1

Key Clinical Findings:

- Recurrent hematuria and dysuria for 6 months
- Bilateral flank pain, decreased urine output, and weight gain over 2 weeks
- Recent significant rise in creatinine and BUN
- Positive ANA with homogeneous pattern

21. claude-3-opus-2 (USA, Released: 2024-02-29)

Primary Diagnosis: Lupus nephritis (ICD-10: M32.14) - Confidence: 0.8

Differential Diagnoses:

- Acute interstitial nephritis (ICD: N12) - 0.6
- IgA nephropathy (ICD: N02.8) - 0.5
- Granulomatosis with polyangiitis (ICD: M31.3) - 0.4

Key Clinical Findings:

- Recurrent dysuria, hematuria, and suprapubic discomfort
- Bilateral flank pain and decreased urine output
- Proteinuria, dysmorphic RBCs, and RBC casts on urinalysis
- Elevated creatinine and decreased eGFR

22. lfm-40b (USA, Released: 2024-10-29)