

Interpretation results

Date: **01.06.2026**

User: **Female, 41 y.o.**



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Test type

Routine urinalysis

Summary table of results

Marker	Result	Reference (from the form)	Status
Color	Yellow	Straw to yellow	NORMAL
Clarity	Cloudy	Clear	ABNORMAL
Specific gravity	1.015	1.005–1.030	NORMAL
pH	7.5	5.0–7.0	HIGH
Protein	33 mg/dL	Negative / <15 mg/dL	HIGH
Glucose	Negative	Negative	NORMAL
Ketones	Negative	Negative	NORMAL
Leukocyte esterase	Positive	Negative	ABNORMAL
Nitrite	Positive	Negative	ABNORMAL
WBC	50–70 /HPF	0–5 /HPF	HIGH
RBC	2–3 /HPF	0–2 /HPF	SLIGHTLY HIGH
WBC / leukocyte casts	Present	None	ABNORMAL
Bacteria	Many (+++)	None	ABNORMAL
Mucus	Moderate (++)	None / few	HIGH

Interpretation of deviations

Clarity — cloudy

- Clinical meaning: Cloudy urine commonly reflects increased cells, bacteria, mucus, crystals, or protein.
- Possible causes: In this context, the cloudiness is most consistent with marked inflammation/infection in the urinary tract.

pH — 7.5

- Clinical meaning: Urine is more alkaline than the reference range.
- Possible causes: Can occur with urinary tract infection, especially with some bacteria that alkalinize urine. Diet and delayed sample processing can also affect pH.

Protein — 33 mg/dL

- Clinical meaning: Mild proteinuria is present.
- Possible causes: In acute urinary inflammation/infection, protein can appear due to leukocytes, bacteria, fever, and irritation of the urinary tract. Persistent protein after recovery would need follow-up.

Leukocyte esterase — positive

- Clinical meaning: Indicates white blood cells in the urine.
- Possible causes: Strongly supports urinary tract inflammation/infection, matching burning with urination and flank/lower-back pain.

Nitrite — positive

- Clinical meaning: Suggests the presence of nitrite-producing bacteria in the urine.
- Possible causes: Often associated with bacterial urinary tract infection, commonly gram-negative organisms such as E. coli, though culture is needed to identify the organism.

WBC — 50-70 /HPF

- Clinical meaning: Marked pyuria, meaning many white blood cells in urine.
- Possible causes: Strongly supports active urinary tract inflammation/infection.

RBC — 2-3 /HPF

- Clinical meaning: Slight microscopic hematuria.
- Possible causes: Can occur with urinary tract infection, irritation, stones, or contamination. Given the symptoms and other urine findings, infection-related irritation is a likely explanation, but persistence after treatment should be rechecked.

WBC / leukocyte casts — present

- Clinical meaning: This is an important finding. Leukocyte casts suggest inflammation involving the kidney tubules/upper urinary tract rather than only the bladder.
- Possible causes: Together with fever, chills, right flank/lower-back pain, burning urination,

pyuria, nitrite positivity, and bacteria, this may indicate an upper urinary-tract infection such as acute pyelonephritis. This requires prompt medical assessment.

Bacteria — many (+++)

- Clinical meaning: Significant bacteriuria.
- Possible causes: Strongly supports bacterial urinary tract infection, especially with positive nitrite and leukocyte esterase.

Mucus — moderate (++)

- Clinical meaning: Increased mucus can be nonspecific.
- Possible causes: May accompany inflammation/infection or sample contamination.

Combined assessment

The urinalysis shows a pattern highly concerning for bacterial urinary tract infection:

- Positive leukocyte esterase
- Positive nitrite
- Markedly **elevated** WBCs: 50–70 /HPF
- Many bacteria
- Cloudy urine
- Mild proteinuria
- Slight RBC increase

The key additional finding is **WBC/leukocyte casts present**, which, together with **fever, chills, and right flank/lower-back pain**, raises concern for **upper urinary-tract involvement**, such as acute pyelonephritis. This is more serious than uncomplicated cystitis and usually needs prompt medical evaluation and prescription treatment.

Recommended additional tests

- **Urine culture with antibiotic susceptibility** — to identify the bacteria and choose the most effective antibiotic. Ideally collected before antibiotics if this does not delay care.
- **Complete blood count with differential** — to assess systemic inflammation and leukocytosis.
- **CRP and/or procalcitonin** — to help evaluate severity of infection/inflammation.
- **Serum creatinine, urea/BUN, electrolytes, eGFR** — to assess kidney function, especially important with suspected upper urinary-tract infection.
- **Blood cultures** — if fever is **high**, chills/rigors are present, **low** blood pressure, rapid heart rate, or concern for sepsis.

- **Pregnancy test**, if pregnancy is possible — pregnancy changes management and increases urgency.
- **Renal/urinary tract ultrasound or CT if indicated** — if severe flank pain, suspected stone/obstruction, recurrent infection, poor response to treatment within 48–72 hours, or worsening symptoms.

Which doctor to consult

- **Urgent care physician / primary care physician today** — because fever, chills, flank pain, and leukocyte casts suggest possible upper urinary-tract infection requiring timely treatment.
- **Emergency department immediately** if any of the following occur: worsening fever/chills, vomiting or inability to keep fluids/medications down, severe flank pain, confusion, dizziness/fainting, **low** blood pressure, rapid heartbeat, pregnancy, known kidney disease, diabetes/immunosuppression, or symptoms worsening despite treatment.
- **Urologist** — if there are recurrent infections, suspected obstruction/stone, abnormal imaging, or persistent blood/protein in urine after infection resolves.

General recommendations

- Seek medical care **the same day**; this pattern should not be managed with observation alone.
- Do not delay care while waiting for culture results; a clinician may start empiric antibiotics based on severity and local resistance patterns.
- Drink fluids if you can tolerate them, but avoid excessive fluid intake if you have kidney/heart disease or vomiting.
- For fever/pain, use only medications that are safe for you and follow dosing instructions; avoid NSAIDs if you have kidney disease, dehydration, stomach ulcer/bleeding risk, or were advised not to take them.
- After treatment, a repeat urinalysis may be useful to confirm resolution, especially if protein, RBCs, or symptoms persist.

Important: This decoding is preliminary. Reference values are taken from your form. Consult a physician for diagnosis.

Important notice

This interpretation is for informational purposes only and is not medical advice, a diagnosis, or a treatment recommendation. Test results must be reviewed by a qualified physician taking into account your medical history and clinical picture.

