

Key Points: Urine Test Results Acute Care | Adults

1. Urinalysis (UA)–macroscopy or dipstick

Positive UA or dipstick

- leukocytes $\geq 1+$, OR
- >5 WBC/hpf on microscopy

*nitrates and bacteria are not reliable for diagnosing infection

UA positive

Negative UA

- leukocytes < 1 , OR
- < 1 on dipstick or macroscopy, AND if done
- >5 WBC/hpf on microscopy

This reasonably rules out urinary tract infections (UTIs) in most patients.

UA negative

In elderly patients, negative microscopy is more reassuring than negative dipstick for ruling out UTIs

2. Urine Culture

Positive urine culture is:

- 10^6 CFU/L: May be a significant colony count if patient has UTI symptoms.
- $\geq 10^7$ CFU/L: A significant colony count if patient has UTI symptoms.

Urine culture positive

Negative urine culture:

Urine culture negative + UA negative

Urine culture negative + UA positive

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Interpreting Urine Test Results Acute Care | Adults

<p>Color and turbidity are not indicative of a urinary tract infection (UTI). Cloudy or odorous urine is typically a sign of dehydration</p>	→	Urine microscopy (aka dipstick)
		Color
		Turbidity
		pH, urine 4.5–8.0
		Specific gravity 1.005–1.030
		Protein Neg
		Glucose Neg
		Ketones Neg
		Hemoglobin, urine Neg
		Leukocytes
<p>Leukocytes are often present with asymptomatic bacteriuria (ASB) and do not diagnosis a UTI</p>	→	
<p>WBC <5/HPF excludes UTI in most cases</p>	→	Urine microscopy
		WBC OCC (/HPF)
		RBC OCC (/HPF)
<p>Presence of bacteria without UTI symptoms is ASB</p>	→	Bacteria
		White cell clumps Neg (/LPF)
		Epithelial cells OCC (/HPF)
		Mucous
		Hyaline casts OCC (/HPF)
<p>Midstream or in/out catheter specimen is best</p>	→	Urine culture
		Source
		Organism
		Colony count
<p>S: Susceptible. I: Intermediate. Use with caution R: Resistant</p>	→	Drug / Interpretation
		Select the agent most appropriate for the patient and with the narrowest spectrum of activity.
<p>MIC: Minimum inhibitory concentration, if reported, is specific to the organism-drug combination. The drug with the lowest MIC may not be the best choice.</p>	→	MIC

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