



ACP Academy



Urinalysis Matters

ACP Academy Format (Refreshed Edition)

INTRODUCTION

Urinalysis is a rapid, point-of-care diagnostic tool essential for assessing urinary tract infection (UTI), kidney pathology, and other systemic conditions. As an ACP, your role includes appropriate indications, accurate dipstick interpretation, specimen handling, and clinical decision-making in line with NICE CKS.

INDICATIONS FOR TESTING

Test via dipstick or microscopy when patients present with new-onset:

- Dysuria, frequency, urgency, or incontinence
- Visible blood in urine
- Suprapubic pain or tenderness
- Fever ≥ 1.5 °C above baseline

Dipstick testing is useful in men or when clinical symptoms are unclear. Avoid routine dipsticks in asymptomatic patients, especially older adults.

SPECIMEN COLLECTION ESSENTIALS

- Use mid-stream clean-catch technique
- For catheterised patients, collect aseptically from sampling port (never from the bag)
- Send samples to the lab within 4 hours or use boric acid preservative

DIPSTICK INTERPRETATION

Interpreting the dipstick results:

- Nitrites: Suggest Gram-negative bacterial infection
- Leukocyte esterase: Indicates presence of white cells

- Blood: May indicate UTI or other pathology (e.g. stone, malignancy) – Always follow your local pathway for following up patients with Non-Visible Haematuria (NVH).

Interpretation combinations:

- Nitrite OR nitrite + leukocytes/blood → UTI likely
- Leukocytes only → UTI equally likely; send culture
- All negative → UTI unlikely unless pregnant

WHEN TO SEND FOR CULTURE

Always send a culture when:

- Patient is male or pregnant
- Suspected pyelonephritis or sepsis
- Catheter-associated UTI
- Treatment failure or recurrent infection
- Atypical presentations in elderly

INTERPRETATION AND MANAGEMENT

- Positive dipstick + typical symptoms → Treat and send culture
- Ambiguous symptoms + leukocytes only → Send culture; consider delayed Rx
- Negative dipstick + mild symptoms → Conservative management, safety net

RED FLAGS – ESCALATE PROMPTLY

- Signs of pyelonephritis or systemic infection
- Persistent haematuria (consider cancer referral)
- High-risk catheter-associated infections

OSCE STATION FRAMEWORK

1. Introduce yourself and explain the purpose of the test
2. Simulate or explain clean-catch technique
3. Demonstrate dipstick use correctly (dip, wait, interpret)
4. Interpret key markers and match with clinical symptoms
5. Explain next steps (e.g., culture, antibiotics, self-care)
6. Dispose of equipment and wash hands

SUMMARY

- Combine symptoms and dipstick findings
- Send cultures when appropriate
- Avoid treating asymptomatic bacteriuria
- Prioritise safety, hygiene, and confident communication in OSCEs

Urinalysis is more than a colourful dipstick! It's a diagnostic snapshot that, when interpreted wisely, can change a patient's trajectory. Stay curious, correlate with symptoms, and don't be afraid to say, *"Let's send a culture just to be sure."*

Precision beats assumption. Confidence grows with practice. And sometimes, what starts with a humble urine pot leads to life-saving care. Remember, urinalysis matters!

Keep learning, keep leading. You've got this!