# Frequently Asked Questions About Asymptomatic Bacteriuria (ASB)

## Q: How can I tell if my patient has a UTI vs. ASB?

***A:*** *IDSA defines asymptomatic bacteriuria as the presence of 1 or more species of bacteria growing in the urine at specified quantitative counts (≥$10^5$ [CFU]/mL) irrespective of the presence of pyuria, without symptoms of a UTI. A urinary tract infection is a clinical diagnosis.* ***It requires a positive urinalysis plus symptoms.*** *Symptoms include costovertebral tenderness, suprapubic tenderness, urgency, frequency, fever ≥ 100.4°F, dysuria, gross hematuria.*

## Q: Is delirium/altered mental status a symptom of UTI?

***A:*** *Per IDSA: Patients who are delirious are less likely to be mobile and may have incontinence issues, which can lead to that positive UA. Data shows that antibiotics do not improve behavior compared to no antibiotics. There is also no mortality benefit when asymptomatic bacteriuria is treated with antibiotics. Additionally, focusing on the asymptomatic urine culture may actually lead to missing the true reason that the patient is here! Investigate first for other causes for delirium, which can include medications, food, and dehydration.*

## Q: Does smell or appearance of urine correlate to a UTI?

***A:*** *Per data from Midthun et. al, the positive predictive value of smell or appearance is approximately 54%. Diagnosing a UTI by smell, therefore, carries the same odds as flipping a coin! Smell can be caused by diabetes, starvation, dehydration, food, or medications.*

## Q: If I don't treat an asymptomatic UA, will my patient get sicker?

***A:*** *There are data from Sabe et. al showing that treating ASB in kidney transplant patients on active immunosuppressive treatment does not prevent pyelonephritis. These data from a very vulnerable population provide reassurance that clinically stable patients with ASB will be okay without antibiotics.*

*Another interesting point from Cai et al to consider: Treating ASB may lead to more UTIs, which suggests that the bacteria in that positive urinalysis may actually have a protective effect*

## Q: My clinically stable patient can't give me a history. Should I assume that the UA indicates UTI?

***A:*** *IDSA also included this patient population in their guidelines. Their recommendations are the same for these patients as they are for those that cannot give a history or report pain.*

## Q: Are pyuria/leukocyte esterase/nitrites in a UA indicative of a UTI?

***A:*** *As per Kayalp et. al, the absence of all of these have a strong negative predictive value of 97% – 99% for bacteria in the urine. The presence of them, however, carries a positive predictive value for UTI of a mere 9 – 11%.*

## Q: Is a fall a symptom of a UTI in the elderly?

***A:*** *Juthani-Mehta et al & Rowe et al showed that falls carry a 20% positive predictive value for UTI. Falls are, therefore, not associated with UTI in the elderly. Investigate first for other causes for falls, such as starvation, age, medications, and dehydration.*

## Q: Isn't prescribing an antibiotic "just in case" a lot less harmful then accidentally missing a UTI?

***A**: The IDSA guidelines make a strong recommendation against treating ASB because there is **high** certainty for harm and **low** certainty of any benefit from treatment of ASB in older adults. Per Curran et. al, **approximately 20% of all patients prescribed an antibiotic will suffer an adverse drug reaction.** Some possible side effects of antibiotics commonly used for UTI may include:*

***Fluoroquinolones:** acute renal failure, hyperglycemia, delirium in the elderly, tendon rupture, aortic aneurism*

***Sulfamethoxazole/trimethoprim:** acute renal failure, hyperkalemia when used with certain other medications (which has led to sudden death), hypoglycemia*

***Beta-lactams:** allergic reactions, nausea/vomiting, abdominal pain, drug-induced liver injury, seizures*

***Each additional day of antibiotic therapy is associated with significant antibiotic harm!***

**Sources:**


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