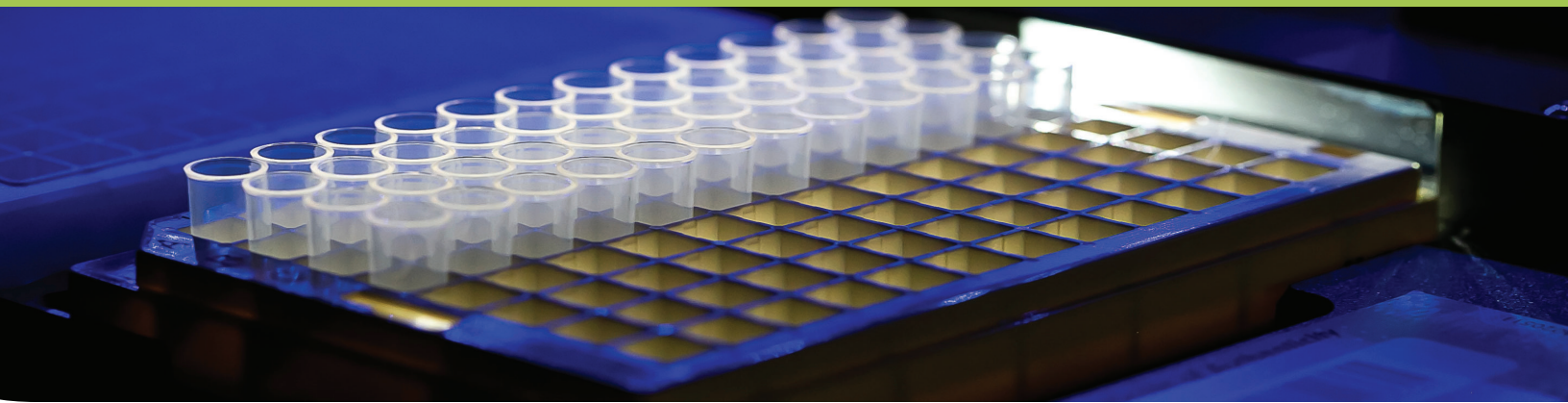


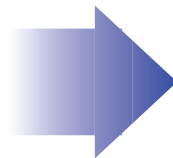
Molecular UTI Testing

A better option to urine culture



Disadvantages of Traditional Culture

- Culture over 24-48 hours
- Slow growth organisms may not be detected
- High false-negatives
- May miss even common uropathogens
- Antibiotic sensitivity/resistance testing requires more time and can be complicated by presence of more than one organism
- Typical results take 2-4 days



Advantages of Molecular Testing

- ✓ PCR technology is rapid, highly sensitive and specific
- ✓ Simultaneous detection of 20 common uropathogens and 15 antibiotic resistance markers
- ✓ Overcomes difficult-to-grow and slow-growing organisms
- ✓ Can detect organism even after recent antibiotic use
- ✓ Targeted detection and treatment options within 24 hours

Studies have shown 25%-30% of women who present with an uncomplicated UTI have a negative urine culture.

And >90% of those with negative urine cultures were found to have an *E. coli* infection detected by PCR.



UTIs in males are, by definition, considered "complicated" since the normal male urinary tract has many natural defenses to infection.

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Advancing laboratory diagnostics and the science of patient care

Molecular UTI Testing through BIOTAP Medical

BIOTAP Medical offers molecular urinary tract infection testing which provides faster and more accurate identification of the top uropathogens known to cause UTIs. With its accompanying antibiotic resistance report, a narrow-spectrum antibiotic regimen can be employed to treat the specific pathogen(s) identified reducing the possibility of treatment failure.

Organisms identified by BIOTAP Medical's UTI testing:

- Acinetobacter baumannii
- Candida albicans
- Candida glabrata
- Citrobacter freundii
- Enterobacter cloacae
- Enterococcus faecalis
- Enterococcus faecium
- Escherichia coli
- Klebsiella aerogenes
- Klebsiella oxytoca
- Klebsiella pneumoniae
- Megasphaera 1
- Morganella morganii
- Proteus mirabilis
- Proteus vulgaris
- Pseudomonas aeruginosa
- Staphylococcus aureus
- Staphylococcus saprophyticus
- Streptococcus agalactiae
- Ureaplasma urealyticum

Antibiotic resistance markers to:

- Aminoglycosides
- Beta-lactams
- Extended spectrum beta-lactams
- Carbapenems
- Cephalosporins
- Glycopeptides
- Phenicol, lincosamide, oxazolidinone, pleuromutilin, & streptogramin A
- Macrolides
- Nitrofurans
- Quinolones & Fluroquinolones
- Sulfonamides
- Trimethoprim

UTIs results in an estimated **7 million** office visits, **1 million** emergency department visits, and over **100,000** hospitalizations with an associated annual cost of **\$1.6 billion**.

After the first episode of a UTI, 27% of women have a confirmed recurrence within 6 months.

- UTIs**
- #1 most frequently diagnosed infection in long-term care facilities
 - #2 most common infection among hospitalized patients & community-dwelling adults ≥ 65yo

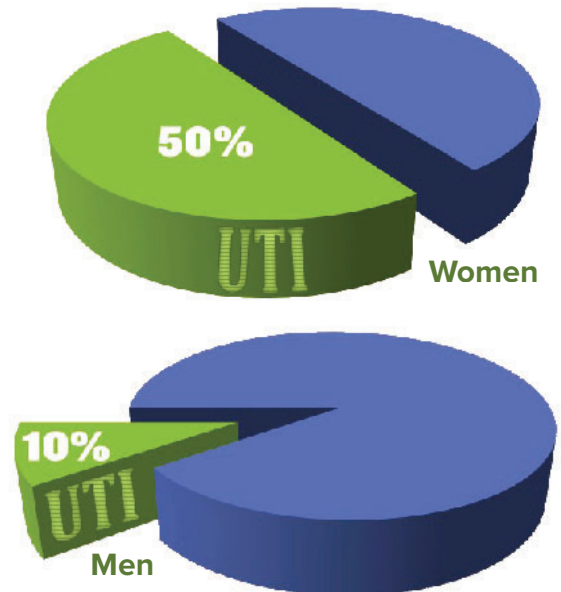


1 in 3 uncomplicated UTIs in young healthy women are Bactrim-resistant.

1 in 5 are resistant to five other common antibiotics.

Targeted therapy for UTIs is critical.

Percentage of women and men who will have a UTI in their lifetime



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