NexGen Testing

Genitourinary symptoms aren't always what they seem

Genitourinary symptoms are generally assumed to be caused by urinary tract infections (UTI). Abnormal point-of-care urinalysis often seems to support this diagnosis. Studies show, however, that sexually transmitted infection (STI), which also can result in abnormal urinalysis, should also be considered a potential cause.

Over-diagnosis of UTI occurs in 31 to 57% of cases[1,2]

→ Likely over-prescribing of antibiotics
Potential antibiotic therapy complications
Increased antibiotic resistance

Under-diagnosis of STI occurs in up to 37% of cases[1,2]

→ Worsening of the patient's condition
Complications from untreated infection
Potential spread of infection

Infectious Disease testing helps improve speed and accuracy of treatment.

GenitoSTD testing includes a robust set of pertinent antimicrobial resistance genes to maximize accurate initial antibiotic selection and to promote antimicrobial stewardship.

Up to 99% detection of causative bacterial, viral, fungal pathogens

- Panel designed and validated for medically indicated detection of infectious disease causing agents involving the female and male genitourinary systems
- One of the most complete selections of High Risk HPV (human papilloma virus) types
- Robust coverage for causative agents for Pelvic Inflammatory Disease (PID), endometritis, cervicitis, vaginitis (bacterial vaginosis), vulvitis, urethritis, prostatitis, cystitis and genito-urinary ulcers
- Complete target set for non-bloodborne sexually-associated infections

1. Weigler G, Perry C, Weigler A, Kim B, Yangouyian M, et al. (2013). The Prevalence of Unexpected Sexually Transmitted Diseases in Women with Lower Urinary Tract Complaints Suggestive of UTI is High. J Community Med Health Educ 3:240. https://www.omicsonline.org/the-prevalence-of-unexpected-sexually-transmitted-diseases-in-women-with-lower-urinary-tract-complaints-suggestive-of-uti-is-high-2161-0711.1000240.php?aid=19332
2. Tomas, M.E., Getman, D., Donskey, C.J., et al. (2015.) Overdiagnosis of Urinary Tract Infection and Underdiagnosis of Sexually Transmitted Infection in Adult Women Presenting to an Emergency Department. Journal of Clinical Microbiology 53: 8. https://jcm.asm.org/content/jcm/53/8/2686.full.pdf

Support for infection diagnosis and treatment

Having the right information at the right time means clinicians can quickly provide patients individualized care and potentially avoid unnecessary complications and costs.

Pathogen and antibiotic resistance in 24 hours*

- Real Time Polymerase Chain Reaction (PCR) infectious disease testing offers higher accuracy and broader detection than culture.[3]
- Increased sensitivity and specificity+
- Unaffected by concurrent use of antibiotics
- Identifies polymicrobial infections
- Antimicrobial resistance information to help guide accurate antibiotic use
- CAP and CLIA accredited lab

Sample collection designed to be simple, safe and efficient

- Universal swab and transport tube provide convenient and efficient sample collection
- Safely inactivates and stabilizes sample in transit for subsequent analysis
- Test orders and reports easily accessed from the cloud

Genito-STD Infectious Disease Pathogens

- Acinetobacter baumanii
- Actinomyces israelii
- Atopobium vaginae
- BVAB 2,3 (bacterial vaginosis associated bacteria 1-3); Mobiluncus spp
- Candida albicans, glabrata, parapsilosis, tropicalis
- Chlamydia trachomatis
- Citrobacter freundii
- Cytomegalovirus (CMV, Human Herpesvirus-5)
- E. coli
- Eggerthella lenta
- Enterobacter aerogenes, cloacae
- Enterococcus faecalis, faecium
- Fusobacterium nucleatum, necrophorum
- Gardnerella vaginalis
- Haemophilus ducreyi
- Haemophilus influenzae
- Herpes simplex virus 1 & 2 (HSV-1, HSV-2)
- High Risk HPV Types 16, 18, 26, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 67, 68, 69, 70, 73, 82
- Klebsiella (Calymmatobacterium) granulomatis
- Klebsiella pneumoniae, oxytoca
- Leptotrichia spp, Sneathia spp
- Megasphaera (Types 1, 2)
- Mycoplasma genitalium, hominis
- Neisseria gonorrhoeae
- Peptostreptococcus anaerobius, asaccharolyticus, magnus, prevotii
- Prevotella bivia, loescheii
- Proteus mirabilis, vulgaris
- Pseudomonas aeruginosa
- Serratia marcescens
- Staphylococcus (coagulase negatve: epidermidis, haemolytcus, lugdunensis, saprophytcus)
- Staphylococcus aureus
- Streptococcus agalactiae (Group B strep (GBS))
- Streptococcus pyogenes (Group A strep)
- Treponema pallidum
- Trichomonas vaginalis
- Ureaplasma urealyticum, parvum

Antibiotic Resistance

- **VanA, VanB** (Vancomycin Resistance genes)
- **mecA** (Methicillin resistance gene)
- **ermB, C; mefA** (Macrolide Lincosamide Streptogramin Resistance)
- **qnrA1, qnrA2, qnrB2** (Fluoroquinolone resistance genes)
- **tet B, tet M** (Tetracycline resistance genes)
- **SHV, KPC Groups** (Class A beta lactamase)
- **CTX-M1 (15), M2 (2), M9 (9), M8/25 Groups** (Class A beta lactamase)
- **IMP, NDM, VIM Groups** (Class B metallo beta lactamase)
- **ACT, MIR, FOX, ACC Groups** (AmpC beta lactamase)
- **OXA-48,-51** (Class D oxacillinase)
- **PER-1/VEB-1/GES-1 Groups** (Minor Extended Spectrum beta lactamases)
- **dfr (A1, A5), sul (1, 2) probes** (Trimethoprim/ Sulfamethoxazole resistance)

*Majority of results provided within 24 hours from receipt of specimen.

+ Compared to traditional culture and sensitivity[1]

3. Pritt, MD, B. (2017 Nov 6). Syndromic testing for infectious diseases, part 2: gastrointestinal infections. Mayo Clinic. https://news.mayomedicallaboratories.com/2017/11/06/syndromic-testing-infectious-diseases-part-2-gastrointestinal-infections/