accessDx
redefining personalized therapy

Nail Pathogen Panel

Accurate Diagnostics Using PT-PCR

The Nail Pathogen Panel

Onychomycosis is a fungal infection of the toenails or fingernails. Onychomycosis accounts for 50% of all nail disease cases[1] and can cause pain and disfigurement and may produce serious physical and occupational limitations contributing to reduced quality of life.[2] Diabetes, human immunodeficiency virus, immunosuppression, obesity, smoking, and advancing age are predisposing factors of this fungal infection.[1] Of special concern is the diabetic foot which may lead to serious complications with onychomycosis as bacterial colonization and vascular insufficiency may lead to serious sequelae.[3] Moreover, paronychia which can be caused by polymicrobial infections can in some cases require oral antibiotherapy which is based on the identified pathogens and local resistance patterns.[4]

Effective medications for onychomycosis rely on the identification of the causative pathogen which can be done by microscopy, histochemical staining and cultures which can delay treatment.

Rapid Pathogen Identification

PCR is a molecular technique that can be used to precisely analyze the genetic material of pathogens. This rapid and accurate solution eliminates guesswork in diagnosing and treating wound infections. RT-PCR technology precisely detects the correct pathogen(s). This allows providers the ability to prescribe timely and effective treatment.

With the AccessDx Nail Pathogen Panel, physicians can identify a fungal toenail infection quickly with the added benefit of species identification. This approach provides a high degree of diagnostic accuracy.[5] Moreover, the panel can detect both fungi and bacteria from the microbial nail flora.

Improves clinical confidence and decreases patient risks

- Detects polymicrobial infections
- Faster and more sensitive detection of fungi compared to cultures
- Aids in quick clinical decision-making
- Unaffected by concurrent antibiotic use
- Identifies potential antibiotic resistance
- Reduces false negatives results
- Detects polymicrobial infections
- Reduces unnecessary drug exposure and adverse events

The AccessDx NPP Difference

AccessDx is CAP and CLIA certified, showcasing our commitment to accuracy, speed, and excellence. With over 1,000 clients across the healthcare landscape, our partners recognize our commitment to excellence. AccessDx's dedicated lab operations and client success teams are ready to help serve the needs of your group.

Wound Test Panel

Bacterium

Klebsiella pneumoniae, oxytoca
Pseudomonas aeruginosa
Staphylococcus (epidermidis, haemolyticus, lugdunensis, saprophyticus)
Staphylococcus aureus
Staphylococcal enterotoxins A, B
Stenotrophomonas maltophilia
Streptococcus agalactiae (Group B strep)
Streptococcus pneumoniae
Streptococcus pyogenes (Group A strep)
Vibrio cholerae, parahaemolyticus, vulnificus
Yersinia enterocolitica

Fungal

Aspergillus flavus, fumigatus, niger, terreus
Blastomyces dermatitdis
Candida albicans, glabrata, parapsilosis, tropicalis
Curvularia lunata
Cladosporium herbarum
Epidermophyton floccosum
Fusarium oxysporum, solani
Malassezia furfur, restricta, sympodialis, globosa
Microsporum audouinii, canis, gypseum
Trichosporon mucoides, asahii
Trichophyton mentagraphophytes/interdigitale, rubrum, soudanense,terrestre, tonsurans, verrucosum, violaceum

Antibiotic Resistance Test Menu

VanA, VanB (Vancomycin Resistance genes)
mecA (Methicillin resistance gene)
ermB, C; mefA (Macrolide Lincosamide Streptogramin Resistance)
qnrA2 (Fluoroquinolone resistance genes)
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)

[1] Gupta AK, Versteeg SG, Shear NH. Onychomycosis in the 21st Century: An Update on Diagnosis, Epidemiology, and Treatment. J Cutan Med Surg. 2017 Nov/Dec;21(6):525-539
[2] Stewart CR, Algu L, Kamran R, Leveille CF, Abid K, Rae C, Lipner SR. Effect of onychomycosis and treatment on patient-reported quality-of-life outcomes: A systematic review. J Am Acad Dermatol. 2020 Jun 2:S0190-9622(20)31020-3
[3] Oates A, Bowling FL, Boulton AJ, McBain AJ. Molecular and culture-based assessment of the microbial diversity of diabetic chronic foot wounds and contralateral skin sites. J Clin Microbiol. 2012;50(7):2263-71.
[4] Leggit JC. Acute and Chronic Paronychia. Am Fam Physician. 2017 Jul 1;96(1):44-51
[5] Gustafson E, Bakotic W, Bennett L, Page L, McCarthy L. DNA-based detection for onychomycosis correlates better to histopathology than does fungal culture. Dermatol Online J. 2019 Jul 15;25(7):13030/qt5bc2z46g