INFECTIOUS DISEASE: DERMATOLOGIC LAB TESTING

Reference Number: LA.CP.CG.29
Date of Last Revision 3/24

Coding implications
Revision Log

OVERVIEW

Fungal infection of the nails (onychomycosis) is common. Toenails are more likely than fingernails to be affected. Onychomycosis is characterized by discoloration, splitting, deformation, and brittleness of the nails and can also affect the surrounding skin. Non-fungal infections and non-infectious nail conditions, such as nail dystrophy, can mimic onychomycosis. Confirmatory testing should be performed to confirm fungal infection before initiating treatment to prevent inappropriate use of antifungal medications. Available testing methods include microscopy, culture, and molecular (PCR-based) techniques.

This policy is intended for use in the outpatient setting.

POLICY REFERENCE TABLE

Criteria Sections	Example Tests (Labs)	References
Microscopy/Peroxidase Tests for Onychomycosis	Fungus Stain (LabCorp)	1, 2
	KOH Prep (Pacific Medical)	
Fungal Culture for Onychomycosis	Culture, Fungus, Miscellaneous (Quest Diagnostics)	

	Fungus (Mycology) Culture/Dermatophyte Culture (LabCorp)	
	Fungal Isolate Identification (Quest Diagnostics)	
Culture-Independent Molecular Tests (NAAT/PCR) for Onychomycosis	Nail-ID (Vikor Scientific)	

CRITERIA

It is the policy of Louisiana Healthcare Connections that the specific tests noted below are **medically necessary** when meeting the related criteria:

Onychomycosis (Nail Fungus) Testing

Microscopy/Peroxidase Tests for Onychomycosis

I. Microscopy/peroxidase tests for onychomycosis may be considered **medically necessary** when:

   A. The member/enrollee shows signs or symptoms of onychomycosis (e.g., nails that are discolored, deformed, brittle, and/or foul-smelling; subungual debris; separation of the nail from the nail bed), **AND**

   B. Results of testing would influence the member's/enrollee's clinical management.

II. It is the policy of health plans affiliated with Centene Corporation that current evidence does not support the use of Microscopy/Peroxidase tests for any additional indications except onychomycosis.

Fungal Culture for Onychomycosis

I. Fungal culture for onychomycosis (presumptive and/or definitive) may be considered **medically necessary** when:

A. The member/enrollee shows signs or symptoms of onychomycosis (e.g., nails that are discolored, deformed, brittle, and/or foul-smelling; subungual debris; separation of the nail from the nail bed), **AND**

B. Results of testing would influence the member's/enrollee's clinical management.

II. It is the policy of health plans affiliated with Centene Corporation that current evidence does not support the use of fungal culture for any additional indications except onychomycosis (presumptive and/or definitive).

Culture-Independent Molecular Tests (NAAT/PCR) for Onychomycosis

I. It is the policy of health plans affiliated with Centene Corporation that current evidence does not support the use of culture-independent molecular tests (NAAT/PCR) for onychomycosis.

BACKGROUND AND RATIONALE

Microscopy/Peroxidase Tests for Onychomycosis

British Association of Dermatologists

In their 2014 onychomycosis guidelines, the British Association of Dermatologists state the following:

"Laboratory confirmation of a clinical diagnosis of tinea unguium should be obtained before starting treatment. This is important for several reasons: to eliminate nonfungal dermatological conditions from the diagnosis; to detect mixed infections; and to diagnose patients with less responsive forms of onychomycosis, such as toenail infections due to *T. rubrum*." (p. 942)

"Traditionally, laboratory detection and identification of dermatophytes consists of culture and microscopy." (p. 942)

American Academy of Family Physicians

In their 2021 rapid evidence review of onychomycosis, the AAFP listed the common signs and symptoms of onychomycosis, including: nails that are discolored, deformed, hypertrophic, or hyperkeratotic; subungual debris; separation from the nail bed; brittle nails that break easily or crumble; and nails that are foul smelling. (p. 360)

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Culture-Independent Molecular Tests (NAAT/PCR) for Onychomycosis

British Association of Dermatologists

In their 2014 onychomycosis guidelines, the British Association of Dermatologists state the following:

"It appears that real-time PCR significantly increased the detection rate of dermatophytes compared with culture. However, PCR may detect nonpathogenic or dead fungus, which could limit its use in identifying the true pathogen. Restriction fragment length polymorphism analysis, which identifies fungal ribosomal DNA, is very helpful for defining whether the disease is caused by repeat infection or another fungal strain when there is a lack of response to treatment. However, this technique has not been implemented into routine clinical practice." (p. 942)

American Academy of Family Physicians

In their 2021 rapid evidence review of onychomycosis, the AAFP states the following:

"A potassium hydroxide (KOH) preparation with direct microscopy is the preferred diagnostic method [for onychomycosis] because it is highly specific, has rapid results, and is cost-effective. Diagnosis by KOH preparation alone is sufficient for treatment initiation. However, if KOH results are negative and there is high clinical suspicion for onychomycosis, other testing may be performed to confirm the diagnosis." (p. 361)

Revision log

Coding Implications

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NOTE: Coverage is subject to each requested code's inclusion on the corresponding LDH fee schedule. Non-covered codes are denoted (*) and are reviewed for Medical Necessity for members under 21 years of age on a per case basis.

CPT® Code	Description
87101	Culture, fungi (mold or yeast) isolation, with presumptive identification of isolates; skin, hair, or nail
87102	Culture, fungi (mold or yeast) isolation, with presumptive identification of isolates; other source (except blood)
87106	Culture, fungi, definitive identification, each organism; yeast
87107	Culture, fungi, definitive identification, each organism; mold
87143	Culture, typing; gas liquid chromatography (GLC) or high pressure liquid chromatography (HPLC) method
87147	Culture, typing; immunologic method, other than immunofluorescence (eg, agglutination grouping), per antiserum
87149	Culture, typing; identification by nucleic acid (DNA or RNA) probe, direct probe technique, per culture or isolate, each organism probed
87150	Culture, typing; identification by nucleic acid (DNA or RNA) probe, amplified probe technique, per culture or isolate, each organism probed
87206	Smear, primary source with interpretation; fluorescent and/or acid fast stain for bacteria, fungi, parasites, viruses or cell types
87220	Tissue examination by KOH slide of samples from skin, hair, or nails for fungi or ectoparasite ova or mites (eg, scabies)
87480	Infectious agent detection by nucleic acid (DNA or RNA); Candida species, direct probe technique

CPT® Code	Description
87481	Infectious agent detection by nucleic acid (DNA or RNA); Candida species, amplified probe technique
87482	Infectious agent detection by nucleic acid (DNA or RNA); Candida species, quantification
87500	Infectious agent detection by nucleic acid (DNA or RNA); vancomycin resistance (eg, enterococcus species van A, van B), amplified probe technique
87640	Infectious agent detection by nucleic acid (DNA or RNA); Staphylococcus aureus, amplified probe technique
87641	Infectious agent detection by nucleic acid (DNA or RNA); Staphylococcus aureus, methicillin resistant, amplified probe technique
87650	Infectious agent detection by nucleic acid (DNA or RNA); Streptococcus, group A, direct probe technique
87651	Infectious agent detection by nucleic acid (DNA or RNA); Streptococcus, group A, amplified probe technique
87652	Infectious agent detection by nucleic acid (DNA or RNA); Streptococcus, group A, quantification
87653	Infectious agent detection by nucleic acid (DNA or RNA); Streptococcus, group B, amplified probe technique
87798	Infectious agent detection by nucleic acid (DNA or RNA), not otherwise specified; amplified probe technique, each organism
87799	Infectious agent detection by nucleic acid (DNA or RNA), not otherwise specified; quantification, each organism
87800	Infectious agent detection by nucleic acid (DNA or RNA), multiple organisms; direct probe(s) technique
87801	Infectious agent detection by nucleic acid (DNA or RNA), multiple organisms; amplified probe(s) technique

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Converted corporate to local policy.	03/24	5/1/24

REFERENCES

1. Ameen M, Lear JT, Madan V, Mohd Mustapa MF, Richardson M. British Association of Dermatologists' guidelines for the management of onychomycosis 2014. Br J Dermatol. 2014;171(5):937-958.
2. Frazier WT, Santiago-Delgado ZM, Stupka KC. Onychomycosis: rapid evidence review. Am Fam Physician. 2021;104(4):359-367.

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. LHCC makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved.

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