

# **Podiatric Pathology**

Histology | Cytology | Mycology

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ACCOUNT INFORMATION PATIENT INFORMATION					
	Last Name			First M.I. Name	
	Street	Street			Apt.#
	Address			State Zip	
	Phone		Sex Pa	atient Date of	
	Social			ge Birth	/ /
	Security #				
	BILLING IN	IFORMATION			
	BILL:  ☐ Insurance	Name of Insured			ship to insured:  ☐ Spouse ☐ Dependent
	☐ Medicare ☐ Patient ☐ Client	Company Name			
Requesting Physician:	Secondary	Street Address			
Referring Physician:	Information Attached	City		State Zip Cod	le
Referring Physician Fax #:	INCLUDED:  □ Copy of the	Employer Name			
Patient Chart #:	front and back of the patient's	Member ID #		Group Contract #	
ICD-9 Code:	insurance card	Medicare #		Referral #	
CLINICAL DATA (include Rule Out information)			Collection D	Date / _ /	# of Containers
			Conection	Date	# Of Containers
☐ Check if digital image was sent					
RULE OUT - Check All That Apply			SPECIMEN		
□ NAIL / SKIN DISEASE       □ BONE HISTOLOGY         □ Bacterial vs. Candidal Paronychia       □ Bursitis         □ Cyst of Nail       □ Degenerative Join         □ Granulation Tissue       (hallux abducto-va hammer toe)         □ Paronychia       □ Gouty Arthritis         □ Pigmented Lesion       □ Inflammatory Join         (nevus / melanoma / lentigo)       □ Joint Synovitis         □ Pyogenic Granuloma       □ Osteoarthritis         □ Tumor (verruca / IPK / carcinoma)       □ Tumor (cyst / neo	Disease	s Plantaris Discretum Inctuate Keratosis re ofibrosum ulare cate the disease	RIGHT LEFT LEFT Medial Lateral Medial Plantar		
☐ Determine if Matrix and/or Nail Bed was Removed				□ Dorsal	□ Dorsal
HISTOLOGY			MYCOLOGY		
Biopsy Data (Please identify anatomic site below and apply appr    Epidermal Nerve Fiber Density Test	Collection Date	/ /		zolo zolo	Charles been to the state of th
Specimen # Type / Site	Signs and Symptoms		Specimen # Type / Site His ps Red (HTCH) (H) LONG		
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				<u></u>	W W
CYTOLOGY					<u>.</u> ≘
☐ FNA Location	Siz	ze:cm		<u> </u>	Dry
Duration Consistency	1. / 2%		100 K	Δ (100) (40)	× i i i i i i i i i i i i i i i i i
Circle: Solid / Cystic Solitary / Multiple Circumscrib	ı / Diffuse		InterScience	SinterScience Capazie Loranse Simen' Simen' SinterScience Capazie Loranse	simen"————————————————————————————————————
WOUND CULTURE  ☐ Wound Culture and Sensitivity (Swab)	Specimen*	Specimen*	Specimen".		
Specimen # Type / Site					
CONSULTATION			0000000 Patient Test / Site		
Source:	000000  Test / Site	Test / Site	Patient ————————————————————————————————————		
Please send pathology report with specimen Slides	☐ Paraffin Block	☐ Other	Pat Tes	Tes   Les	Pat Tes



# Fungal Testing - Procedures, Testing Methods and Terminology

Formalin jars and small plastic mycology bags have been provided for the collection and transport of skin and nail specimens. Obtain as much material as possible. A small sample size may hinder the ability to grow and identify an organism.

#### Drooduros

**SKIN** – Cleanse the area with an alcohol swab. Scrape scale from the advancing edge of the lasion

**FUNGAL BLISTER** – Remove the entire root of the blister and place it in formalin for Histology with PAS staining.

**SUPERFICIAL NAIL** (WHITE SUPERFICIAL ONYCHOMYCOSIS) – Cleanse the surface of the nail with an alcohol swab. Scrape white superficial material from the nail surface with a blade or nipper.

**DEEP NAIL** (DISTAL SUBUNGUAL ONYCHOMYCOSIS) – Send material from the most proximal, deepest area of involvement. Avoid sending distal subungual debris. This matter contains heavy contamination with saprophytes that are probably not causing infection. Furthermore, true pathogen viability may be diminished in the more distal areas. If a skin lesion is also present, please provide skin scrapings along with nail samples in the same plastic bag or sterile cup. A scraping from the involved skin may reveal the causative organism associated with the nail infection.

## **Fungal Testing Methods**

**HISTOLOGY WITH PAS** – With the highest published sensitivity, histology with PAS is the gold standard for diagnosing onychomycosis. This allows the podiatric pathologist to histologically view the entire nail plate for fungal disease, alive or dead.

**FUNGAL CULTURE** – In the laboratory, the specimen is grown in two media. The first, Sabourauds + chloramphenicol allows a wide range of fungi to grow. Since molds frequently overgrow a dermatophyte, a second, more reflective media containing the first two ingredients + cycloheximide is used. The cycloheximide inhibits the growth of the molds to allow dermatophytes to flourish. Even in the best of conditions, dermatophytes may be difficult to retrieve.

MICROSCOPIC EXAMINATION OF CULTURE – Some fungi have a distinct enough colony morphology to allow presumptive identification based solely on culture appearance; however, in order to make a definitive identification of fungal species, the resultant culture is examined microscopically as a "wet mount."

**FLUORESCENT KOH** – This special KOH test is useful in identifying the presence of fungal elements in the actual skin or nail specimen. It is more rapid and specific than traditional KOH. In skin specimens, the microscopic morphology may lead to a presumptive identification. This is much more difficult in nail specimens.

## Test Interpretation

The significance of saprophytes in clinical skin and nail disease is controversial. Although the presence of any organism other than a dermatophyte (Trichophyton, Microsporum, Epidemophyton) may be indicative of a secondary invasion or contamination, rather than a primary infection, there have been reports of saprophytes as the causative agents of skin and nail disease.

## Significance of Test Results

**POSITIVE PAS** – The PAS stained positive, indicating the presence of fungus when viewed under the microscope during histological exam.

**NEGATIVE PAS** – Indicates staining was negative, but does not rule out the presence of fungi. If evidence of disease is seen in the architecture of the nail, it will be indicated on the pathology report.

**POSITIVE CULTURE AND IDENTIFICATION** – Identifies the specific genus and species and allows differentiation of a saprophyte from a dermatophyte.

**NEGATIVE CULTURE** – Can indicate the absence of fungal disease, especially if repeated cultures and KOH are found to be negative. May also result from dead fungi due to previous antifungal treatment or inadequate tissue sampling. If cultures are negative, consider sending the nail in formalin for histopathologic evaluation for fungus.

**POSITIVE KOH** – Indicates the visible presence of fungi in the specimen. Does not allow fungal identification or differentiation of a dermatophyte from a saprophyte.

**NEGATIVE KOH** – Does not rule out the presence of fungal infection. Indicates only that, in the sampled tissue, fungal hyphae were not seen. Fungi may still be grown and identified on culture.

**FUNGAL SENSITIVITY TESTING** — Unlike bacterial specimens, routine testing of fungal isolates for antifungal susceptibility is not performed. The technique is not standardized and there is little correlation between laboratory results and clinical efficacy. Fungal sensitivity testing is generally used as a research tool only.

# **Podiatry Specimen Collection Guidelines**

TEST	SPECIMEN TYPE	CONTAINER	USE	
Nail Histology with PAS	Nail Clippings	Formalin	Rule Out Fungal Infection <b>Recommended for</b> <b>Highest Sensitivity</b>	
Nail for KOH or Fungal Culture			KOH Shows Positive or Negative for Fungal Infection; Culture Grows Specific Organisms	
Skin / Tissue Histology (Hematoxolin & Eosin)	Skin or Tissue Biopsy	Formalin	Identify or Rule Out Disease	
Bone Histology	Bone Formalin		Identify or Rule Out Disease	
Bone Culture	Bone	Sterile Cup	Rule Out Osteomyelitis  Bone Histology Recommended in Conjunction with Culture	
Cytology	Joint or Cyst Aspiration	Alcohol-Based Preservative	Identify or Rule Out Disease	
Gouty Crystals	Gouty Crystals  Joint or Cyst Aspiration  Make One Set of Slides Using Standard Smear Procedure, Air Dry, Send in Cardboard Slide Holder		Rule Out Gout in the Joint	
Wound Culture and Sensitivity (C & S)	Wound Fluid or Cyst Aspiration	BBL Wound Culture Swab	Identify Bacterial Infection	
Cell Counts, WBC or Miscellaneous Clinical Tests	Joint or Cyst Aspiration	Sterile Jar	Look for Abnormal Counts or Infection	
AFB	Nail Clippings or Bone	Sterile Cup	ТВ	
Epidermal Nerve Fiber Density Punch Biopsy		Formalin	Rule Out Small Fiber Neuropathy Important for Lab to Receive Within 24 Hours	