

Patient Name:		Health Status:		Account #:	
Owner's Name:		Ordered by:		Internal ID:	
Breed:	West Highland White Terrier	Email:		Sample Type:	Ear, right
Age:	2	Hospital:		Received Date:	6/5/2026
Species:	Dog	Location:		Report Date:	06/10/26

Potential Clinically Relevant Microbes Detected:

Top 5 potential Bacterial and Eukaryotic pathogens are listed. The comprehensive list of all microbes are shown in page 3. "Inferred" column indicates the difference of the species' abundance from "Normal Range", i.e. its abundance in clinical healthy animals. Less than 1000 cells of Bacteria or less than 10 cells of Fungi are often not clinically significant.

1. Bacteria

Species Detected	AID*	Percentage	Cells per Sample	Normal Range	Inferred Status
Arcanobacterium canis [1]	[Link]	51.8 %	150,000,000	0-180	● Disease
Staphylococcus coagulans [2]	--	36.7 %	110,000,000	0-1,100	● Disease
Streptococcus halichoeri [1]	[Link]	6.6 %	19,000,000	0-150	● Disease
Streptococcus canis [3]	[Link]	4.8 %	14,000,000	0-1,300	● Disease
Corynebacterium auriscanis [4]	[Link]	0.2 %	460,000	0-7,000	● Disease

2. Fungi

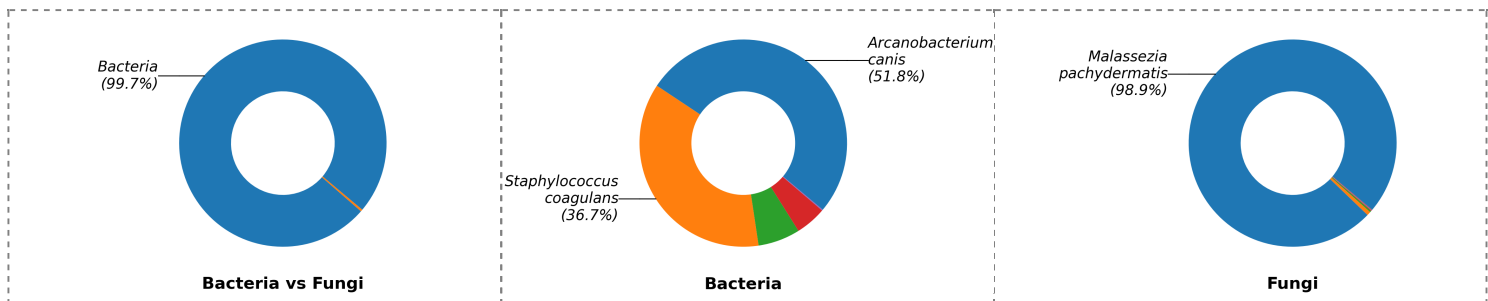
Species Detected	AID*	Percentage	Cells per Sample	Normal Range	Inferred Status
Malassezia pachydermatis [5]	[Link]	98.9 %	14,000	0-2,900	● Abnormal
Alternaria sp. [6]	[Link]	0.2 %	32	0-1,700	● Normal

Abbreviation Key:

- **Normal Range.** Species detected within the reference range of clinically healthy animals.
- **Abnormal Range.** Species detected outside the reference range of clinically healthy animals.
- **Disease Range.** Species detected significantly higher than the reference range of clinically healthy animals.

* AID stands for Animal Infection Database. It is a resource center to provide more information for microbes in animal microbiome settings.

Microbial Overview:



Bacteria vs Fungi: the relative abundance between Bacteria and Fungi. **Bacteria:** the percentage profile of bacterial species alone. **Fungi:** the percentage profile of fungi species alone. Each color represents a species. The larger the colored segment is, the more abundant the species is.

Additional Reports about Parasites, DNA viruses and Virulence Factors:

- (1) No non-fungi eukaryote was detected.
- (2) No DNA virus was detected.
- (3) No toxin/biofilm-related gene was detected.

Antimicrobial Resistance for Detected Clinically Relevant Microbes

The sample was screened for antibiotic resistance genes and intrinsic resistances. Please follow antimicrobial stewardship guidelines for cautious antibiotic use.

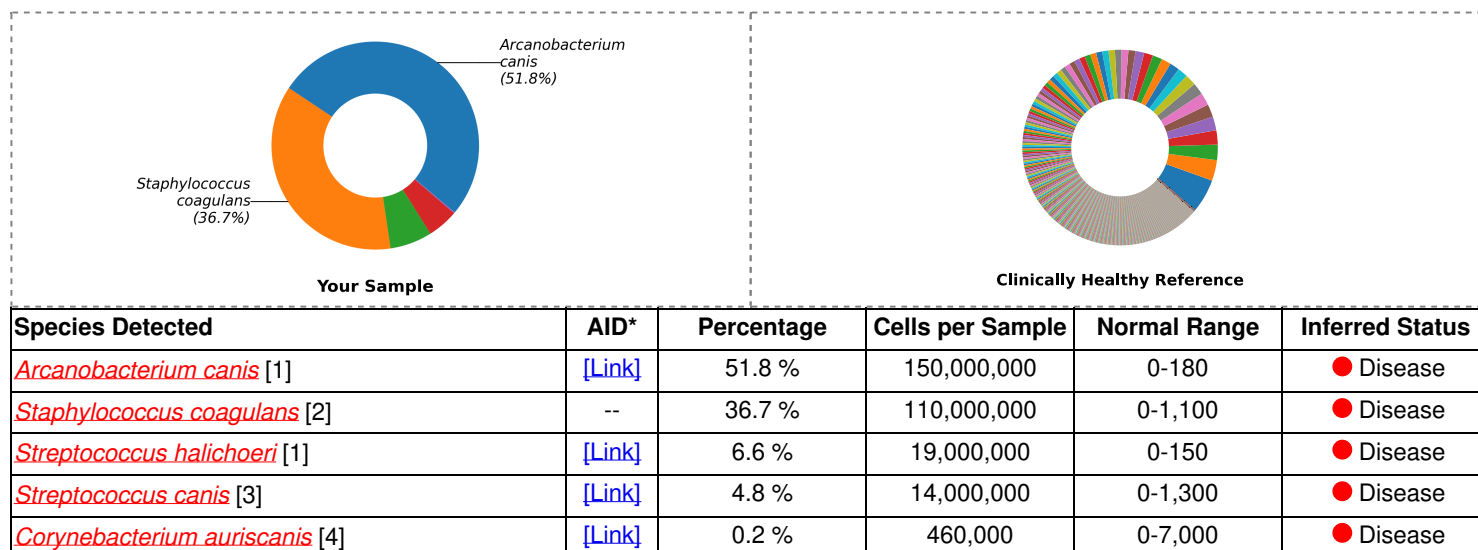
Drug Tiers*	Antibiotics	<i>Arcanobacterium canis</i> (51.8 %)	<i>Staphylococcus coagulans</i> (36.7 %)	<i>Streptococcus halichoeri</i> (6.6 %)	<i>Streptococcus canis</i> (4.8 %)	<i>Corynebacterium auriscanis</i> (0.2 %)	Suggested Dose†	Drug Delivery
1st	Cefazolin	-	F	F	F	-	15 mg/kg, q 12 hrs	IV, SC
	Cephalothin	-	-	F	F	-	4-20 mg/kg, q 8 hrs	PO
	Cephalexin	-	F	F	F	-	22 mg/kg, q 12 hrs	PO
	Cefadroxil	-	-	F	F	-	22 mg/kg, q 12 hrs	PO
	Cefoxitin	-	R	R	R	R	15 mg/kg, q 12 hrs	IV, SC
	Penicillin	-	G	-	F	-	8-10 mg/kg, q 8 hrs	PO
	Penicillin G	-	G	G	G	-	-	-
	Oxacillin	-	G	-	-	-	22 mg/kg, q 8 hrs	IV
	Ampicillin	-	-	G	G	-	22 mg/kg, q 8 hrs	IV, SC
	Amoxicillin	-	-	F	F	-	22 mg/kg, q 8 hrs	PO
	Clavamox	-	-	F	G	R	13.75 mg/kg, q 12 hrs	PO
	Gentamicin	-	R	R	R	R	6 mg/kg, q 24 hrs	IV, SC
	Tobramycin	-	-	-	-	R	-	IV/Topical Use
	Neomycin	-	R	R	R	R	-	Topical Use
	Clindamycin	-	G	R	R	-	5.5 mg/kg, q 12 hrs	PO
	Lincomycin	-	G	-	-	-	15-25 mg/kg, q 24hrs	PO
	Doxycycline	-	F	-	-	-	5 mg/kg, q 12 hrs	PO
	Minocycline	-	G	-	-	-	10 mg/kg, q 12 hrs	PO
	Tetracycline	-	G	-	P	-	20 mg/kg, q 12 hrs	PO
	Sulfonamide	-	-	-	-	-	30 mg/kg, q 12 hrs	PO
2nd	Trimethoprim-sulfamethoxazole	-	G	G	F	-	15-30 mg/kg, q 24 hrs	PO
	Metronidazole	-	-	R	R	R	10 mg/kg, q 8 hrs	IV
	Cefovecin	-	-	F	F	-	8 mg/kg, once	SC
	Cefpodoxime	-	-	F	F	-	5 mg/kg, q 24 hrs	PO
	Ceftiofur	-	-	F	F	-	2.2 mg/kg, q 24 hrs	SC
	Timentin	-	-	F	F	-	-	Topical Use
3rd	Azithromycin	-	G	-	-	-	5 mg/kg q 12 hrs	PO
	Orbifloxacin	-	-	-	-	-	2.5-7.5 mg/kg, q 24 hrs	PO
	Chloramphenicol	-	-	-	G	G	35 mg/kg q 8 hrs	PO
	Florfenicol	-	-	-	-	-	20 mg/kg, q 12 hrs	PO
	Amikacin	-	R	R	R	R	15 mg/kg, q 24 hrs	IV, SC
	Rifampin	-	F	-	-	-	5-10 mg/kg, q 12 hrs	PO
	Imipenem	-	-	-	-	-	10 or 20 mg/kg, q 8 hrs	-
	Levofloxacin	-	G	-	-	-	10-30 mg/kg, q 24 hrs	IV/PO
	Marbofloxacin	-	-	-	-	-	2.75-5.5 mg/kg, q 24 hrs	PO
	Pradofloxacin§	-	-	-	-	-	3.0 mg/kg, q 24 hrs	PO
	Enrofloxacin	-	-	-	G	F	5 mg/kg, q 24 hrs	PO
	Ciprofloxacin§¶	-	G	R	R	R	-	Topical Use
	Ceftazidime	-	-	R	R	R	3-30 mg/kg, q 6-8 hrs	IV
	Mupirocin	-	-	-	-	-	-	Topical Use
	Nitrofurantoin	-	F	-	-	-	4.4-5mg/kg, q 24 hrs	PO
	Colistin	-	R	R	R	R	8-9g/kg, q 24 hrs	PO
	Piperacillin-Tazobactam	-	-	F	F	-	90 mg/kg, 30min q 8 hrs	IV
	Fusidic acid‡	-	F	R	R	-	-	Topical Use
	Tulathromycin	-	-	-	-	-	2.5mg/kg	SC
	Tylosin	-	-	-	-	-	10-25mg/kg	PO
	Ofloxacin	-	-	-	-	-	0.1mL, q 2-8 hours	Topical Use

Drug Class	Antifungals	<i>Malassezia pachydermatis</i> (98.9 %)	<i>Alternaria sp.</i> (0.2 %)	Suggested Dose†	Drug Delivery
Triazole	Fluconazole	-	-	5-10mg/kg, q 24 hrs	PO, IV
	Itraconazole	-	-	5-10mg/kg, q 24hrs	PO
	Voriconazole	-	-	10mg/kg, 12hrs	PO
	Ketoconazole	-	-	10mg/kg, q 24hrs	PO
Echinocandin	Caspofungin	R	-	1mg/kg, q 24hrs	PO
	Micafungin	R	-	1mg/kg, q 24hrs	PO
	Anidulafungin	R	-	1mg/kg, q 24hrs	PO
Polyene	Amphotericin B	-	-	0.5-1mg/kg, q 48 hrs	IV
Fluoropyrimidine	Flucytosine	-	-	25-50 mg/kg, q 6-8hrs	PO
Allylamine	Terbinafine	-	-	10-30 mg/kg, q 24hrs	PO

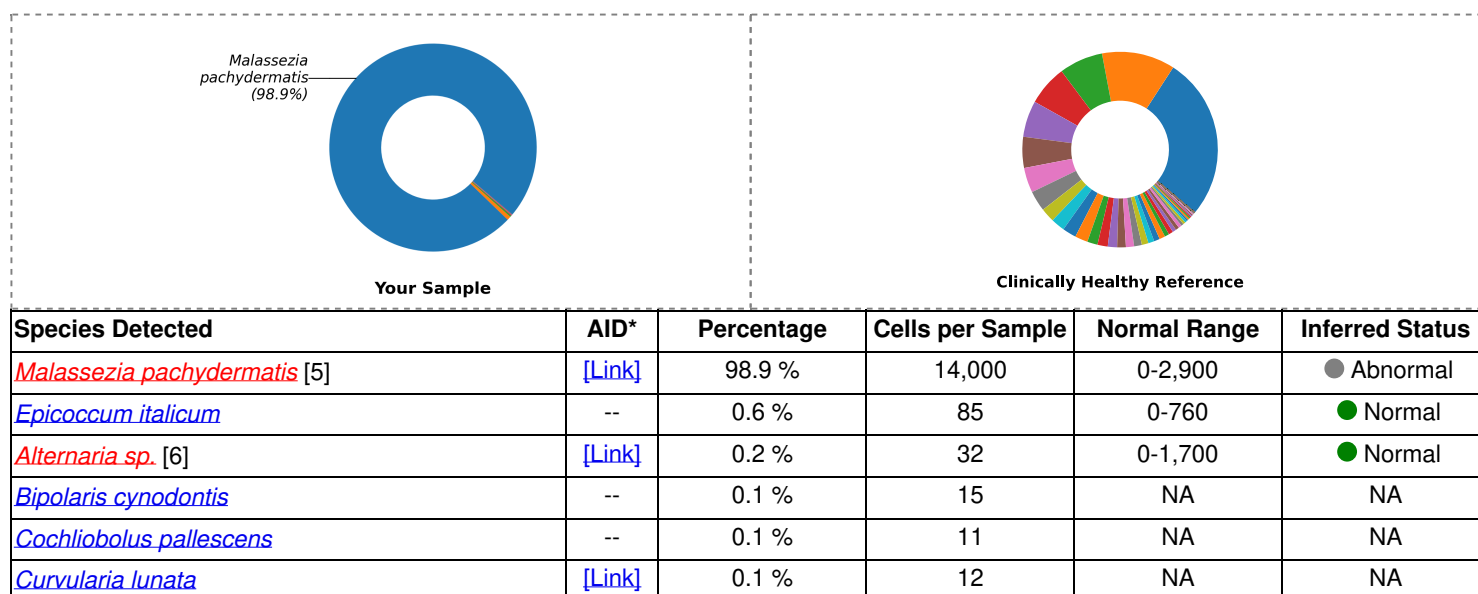
R	Not Recommended (resistance genes detected, intrinsic resistance, or <10% effectiveness in antibiogram studies)	PO	Oral, by mouth	*	Antibiotic Drug Tiers for Companion Animals, ARSI, University of Minnesota
IR	Intermediate Resistance Predicted	IV	Intravenous injection	§	Contraindicated in some animals
-	No resistance detected/no info	SC	Subcutaneous injection	¶	Variable bioavailability in animals
P	No resistance detected and Poor Efficacy (< 50% effectiveness in antibiogram studies)	TU	Topical use	‡	Used in combination with other antibiotics (except quinolones)
F	No resistance detected and Fair Efficacy (< 75% effectiveness in antibiogram studies)			†	Doses may vary with patient species and infections.
G	No resistance detected and Good Efficacy (> 75% effectiveness in antibiogram studies)				

Supplemental Data

Bacteria & Archaea Composition



Fungi Composition



Donut plots above depict the relative abundance of all detected Bacterial or fungal species. Each color represents a different species. The larger the colored segment is, the more abundant that species is in the specimen.

The tables above lists top 8 bacterial/fungal species detected within the limit of detection. The absolute and relative abundances of each species is shown. Potential clinically relevant microbes are highlighted in red.

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References

1. Greene, Craig E. Infectious Diseases of the Dog and Cat-E-Book. Elsevier Health Sciences, 2013.
2. Paterson, G. K. (2021). Genomic epidemiology of the opportunistic pathogen *Staphylococcus coagulans* from companion dogs. *Journal of medical microbiology*, 70(8), 001407.
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4. Bygott J. M., Malnick H., Shah J.J., Chattaway M.A., Karas J. A. First clinical case of *Corynebacterium auriscanis* isolated from localized dog bite infection. (2008) *Journal of Medical Microbiology*, 57: 899-900
5. Meason-Smith, C., Diesel, A., Patterson, A. P., Older, C. E., Mansell, J. M., Suchodolski, J. S., & Rodrigues Hoffmann, A. What is living on your dog's skin Characterization of the canine cutaneous mycobiota and fungal dysbiosis in canine allergic dermatitis. (2015) *FEMS Microbiology Ecology*, 91(12):fiv139
6. Muller and Kirk's small animal Dermatology, 7th edition Elsevier

Methods

The MiDOG® All-in-One Microbial Test is a targeted, Next-generation DNA sequencing testing service able to identify molecular signatures unique to the identity and character of a specific microorganism. This test relies on safeguarded preservation and transport of collected samples, thorough extraction of DNA from all microbes present in the specimen, select amplification of microbial DNA followed by Next-generation DNA sequencing using the latest technologies from Illumina (Illumina, Inc., San Diego, CA). Data handling is done via curated microbial databases to accurately align DNA sequences to ensure precise and accurate (species-level) identification of all microbes present in the specimen.

When no Microbial Species are Detected:

When no Microbial species are detected in this test, this result may be due to a very low microbial load and/or low concentration of microbial DNA in the sample provided. In this case, we recommend re-sampling the area of interest and re-submitting specimen for analysis.

Phylogenetic Rank Abbreviations

If the detected microbial taxon could not be identified down to the genus level, the closest phylogenetic rank identified is provided. An abbreviation indicating the level of the rank is displayed aside. The meaning of the abbreviations is shown as: (p) Phylum level, (c) Class level, (o) Order level, and (f) Family level.

Disclaimer

The information contained in this MiDOG® report is intended only to be factor for use in a diagnosis and treatment regime for the animal patient. As with any diagnosis or treatment regime, you should use clinical discretion with each animal patient based on a complete evaluation of the animal patient, including history, physical presentation and complete laboratory data, including confirmatory tests. All test results should be evaluated in the context of the patients individual clinical presentation. The information in the MiDOG ® report has not been evaluated by the FDA.

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