

Common Antimicrobial Coverage of DxWound Organisms

DxWound Test Results*		Resistance Genes Detected				Potential Organism	Common Antibiotic Coverage	
		mecA	ermA	ermB	vanA or vanB		Oral	IV
AEROBIC GRAM POSITIVE BACTERIA	<i>Corynebacterium amycolatum</i> or <i>striatum</i>						Linezolid [†]	Daptomycin [†] , Linezolid [†] , Telavancin [†] , Vancomycin
	<i>Enterococcus faecalis</i>			+	-		Amoxicillin, Amox-Clav, Levofloxacin [§]	Ampicillin, Amp-Sulb, Penicillin G, Vancomycin [§]
				+/-	+	VRE	Amoxicillin, Amox-Clav, Linezolid	Ampicillin, Amp-Sulb, Daptomycin, Linezolid, Telavancin
	<i>Enterococcus faecium</i>			+	-		Amoxicillin, Amox-Clav	Ampicillin, Amp-Sulb, Daptomycin, Linezolid
				+/-	+	VRE	Linezolid	Daptomycin, Linezolid
	<i>Staphylococcus aureus</i>	-	-			MSSA	Cephalexin, Dicloxacillin, MRSA active agent [§]	Cefazolin, Nafcillin, Oxacillin, MRSA active agent [§]
		-	+			MSSA	Cephalexin, Dicloxacillin, TMP-SMX [§]	Cefazolin, Nafcillin, Oxacillin, Vancomycin [§]
		+	-			MRSA	Clindamycin, Doxycycline, Linezolid, Minocycline, TMP-SMX	Daptomycin, Linezolid, Vancomycin
		+	+			MRSA	Doxycycline, Linezolid, Minocycline, TMP-SMX	Daptomycin, Linezolid, Vancomycin
	Coagulase negative Staphylococci (CoNS): <i>S. epidermidis</i> or <i>S. lugdunensis</i>	-	-				Cephalexin, Dicloxacillin, MRSA active agent [§]	Cefazolin, Nafcillin, Oxacillin, MRSA active agent [§]
		-	+				Cephalexin, Dicloxacillin, TMP-SMX [§]	Cefazolin, Nafcillin, Oxacillin, Vancomycin [§]
		+	-			MRCoNS	Clindamycin, Doxycycline, Linezolid, Minocycline, TMP-SMX	Daptomycin, Linezolid, Vancomycin
		+	+			MRCoNS	Doxycycline, Linezolid, Minocycline, TMP-SMX	Daptomycin, Linezolid, Vancomycin
	<i>Streptococcus anginosus</i> group (viridans)		+/-	+/-			Amoxicillin, Amox-Clav, Cephalexin, Levofloxacin [§]	Cefazolin, Ceftriaxone, Levofloxacin [§] , Vancomycin [§]
<i>Streptococcus mitis</i> group (viridans) [‡]		+/-	+/-			Amoxicillin, Amox-Clav, Cephalexin, Levofloxacin [§]	Cefazolin, Ceftriaxone, Levofloxacin, Vancomycin	
<i>Streptococcus pyogenes</i> (group A) or <i>agalactiae</i> (group B)	-	-				Amoxicillin, Amox-Clav, Cephalexin, Clindamycin [§]	Cefazolin, Ceftriaxone, Clindamycin [§] , Penicillin G	
	+	+/-				Amoxicillin, Amox-Clav, Cephalexin, Linezolid [§]	Cefazolin, Ceftriaxone, Penicillin G, Vancomycin [§]	
	+/-	+				Amoxicillin, Amox-Clav, Cephalexin, Linezolid [§]	Cefazolin, Ceftriaxone, Penicillin G, Vancomycin [§]	
<i>Mycobacterium abscessus</i> [†]						Clarithromycin	Amikacin +/- Cefoxitin	
<i>Mycobacterium chelonae</i> [†]						Azithromycin, Clarithromycin, Linezolid	Azithromycin, Imipenem, Linezolid	

DxWound Test Results*		Common Antibiotic Coverage	
		Oral	IV
ANAEROBIC BACTERIA	<i>Clostridium perfringens</i> or <i>septicum</i>	Clindamycin + Penicillin, Metronidazole	Clindamycin + Penicillin G, Imipenem, Meropenem, Metronidazole
	<i>Finegoldia magna</i> (<i>Peptostreptococcus magnus</i>)	Amoxicillin, Amox-Clav, Clindamycin, Metronidazole	Amp-Sulb, Clindamycin, Ertapenem, Imipenem, Meropenem, Metronidazole, Pip-Tazo, Vancomycin
	<i>Peptoniphilus assaccharolyticus/harei</i> (<i>Peptostreptococcus</i>)	Amoxicillin, Amox-Clav, Clindamycin, Metronidazole	Clindamycin, Ertapenem, Metronidazole, Penicillin G, Vancomycin
	<i>Bacteroides fragilis</i> group (+/-ermB)	Amox-Clav, Metronidazole	Amp-Sulb, Ertapenem, Imipenem, Meropenem, Metronidazole, Pip-Tazo
	<i>Porphyromonas asaccharolytica</i> or <i>somerae</i>	Clindamycin, Metronidazole	Clindamycin, Ertapenem, Metronidazole
	<i>Prevotella</i> spp.	Amox-Clav, Clindamycin, Metronidazole	Amp-Sulb, Clindamycin, Ertapenem, Imipenem, Meropenem, Metronidazole, Pip-Tazo

DxWound Test Results*		Common Antibiotic Coverage	
		Oral	IV
FUNGI	<i>Aspergillus flavus</i> or <i>fumigatus</i> or <i>niger</i>	Isavuconazole, Voriconazole	Amphotericin B, Isavuconazole, Voriconazole
	<i>Candida albicans</i>	Fluconazole	Anidulafungin, Caspofungin, Fluconazole, Micafungin
	<i>Candida glabrata</i>	Fluconazole**, Voriconazole**	Amphotericin B, Anidulafungin, Caspofungin, Micafungin
	<i>Candida parapsilosis</i>	Fluconazole	Fluconazole
	<i>Candida tropicalis</i>	Fluconazole	Anidulafungin, Caspofungin, Fluconazole, Micafungin
	<i>Candida krusei</i>	Isavuconazole, Posaconazole	Amphotericin B, Anidulafungin, Caspofungin, Isavuconazole, Micafungin, Posaconazole

DxWound Test Results*	Resistance Genes Detected			Potential Organism	Common Antibiotic Coverage ^{††}	
	CTX-M or SHV (ESBL)	IMP, KPC, NDM, OXA-48, SME or VIM (CRE)			Oral	IV
<i>Acinetobacter baumannii</i>	-	-		Minocycline	Amp-Sulb (sulbactam has potential activity), Imipenem, Meropenem, Minocycline	
	+	-	ESBL^{††}	Minocycline	Amp-Sulb (sulbactam has potential activity), Imipenem, Meropenem, Minocycline	
	+/-	+ [†]		no common options	Combination therapy common and typically includes two or more of Carbapenem, Colistin/Polymyxin B, Minocycline/Tetracycline	
<i>Citrobacter freundii</i>	-	-		Ciprofloxacin, Levofloxacin, TMP-SMX	Cefepime, Ciprofloxacin, Levofloxacin, Pip-Tazo	
	+	-	ESBL^{††}	no common options	Ertapenem, Imipenem, Meropenem	
	+/-	+	CRE^{††}	no common options	Colistin, Polymyxin B, Tigecycline (+/- meropenem in combination)	
<i>Enterobacter aerogenes and cloacae</i>	-	-		Ciprofloxacin, Levofloxacin, TMP-SMX	Cefepime, Ciprofloxacin, Levofloxacin, Pip-Tazo	
	+	-	ESBL^{††}	no common options	Ertapenem, Imipenem, Meropenem	
	+/-	+	CRE^{††}	no common options	Colistin, Polymyxin B, Tigecycline (+/- meropenem in combination)	
<i>Escherichia coli</i>	-	-		Cephalexin, Ciprofloxacin, Levofloxacin, TMP-SMX	Cefazolin, Ceftriaxone, Fluoroquinolones	
	+	-	ESBL^{††}	no common options	Ertapenem, Imipenem, Meropenem	
	+/-	+	CRE^{††}	no common options	Colistin, Polymyxin B, Tigecycline (+/- meropenem in combination)	
<i>Klebsiella oxytoca and pneumoniae</i>	-	-		Cephalexin, Ciprofloxacin, Levofloxacin, TMP-SMX	Cefazolin, Ceftriaxone, Fluoroquinolones	
	+	-	ESBL^{††}	no common options	Ertapenem, Imipenem, Meropenem	
	+/-	+	CRE^{††}	no common options	Colistin, Polymyxin B, Tigecycline (+/- meropenem in combination)	
<i>Morganella morganii</i>	-	-		Ciprofloxacin, Levofloxacin, TMP-SMX	Cefepime, Ciprofloxacin, Ertapenem, Levofloxacin, Meropenem, Pip-Tazo	
	+	-	ESBL^{††}	no common options	Ertapenem, Meropenem	
	+/-	+	CRE^{††}	no common options	no common options [†]	
<i>Proteus mirabilis/vulgaris</i>	-	-		Amox-Clav, Cefuroxime, Ciprofloxacin, Levofloxacin	Ceftriaxone, Ciprofloxacin, Levofloxacin, Pip-Tazo	
	+	-	ESBL^{††}	no common options	Ertapenem, Imipenem, Meropenem	
	+/-	+	CRE^{††}	no common options	no common options [†]	
<i>Pseudomonas aeruginosa</i>	-	-		Ciprofloxacin, Levofloxacin	Cefepime, Ceftazidime, Imipenem, Levofloxacin, Meropenem, Pip-Tazo	
	+	-	ESBL^{††}	no common options	Ceft-Tazo (Zerbaxa [®]), Colistin, Imipenem, Meropenem, Polymyxin B	
	+/-	+ [†]		no common options	Ceft-Avi (Avycaz [®]), Colistin, Polymyxin B	
<i>Serratia marcescens</i>	-	-		Ciprofloxacin, Levofloxacin, TMP-SMX	Cefepime, Ciprofloxacin, Ertapenem, Imipenem, Levofloxacin, Meropenem, Pip-Tazo	
	+	-	ESBL^{††}	no common options	Ertapenem, Imipenem, Meropenem	
	+/-	+	CRE^{††}	no common options	Tigecycline (+/- meropenem in combination)	

AEROBIC GRAM NEGATIVE BACTERIA

Unless otherwise specified as detected (+) or non detected (-), the resistance gene is not expected to be found associated with this organism

+/- The resistance gene can be associated with the organism but it does not influence the common treatment options listed here

* When multiple organisms are present, interpret antibiotic resistant gene results in light of all identified organisms. Gene may also be found in organisms that aren't part of DxWound results.

§ Possible alternative if patient has a true penicillin allergy

† Consider consultation with ID specialist

‡ Consider checking sensitivity with beta-lactam antibiotics

** If susceptibility confirmed

†† Consider consultation with ID specialist if Extended-Spectrum b-lactamase (ESBL) or Carbapenem-Resistant Enterobacteriaceae (CRE) genes present

CRE Carbapenemase-Resistant Enterobacteriaceae

ESBL Extended-Spectrum beta-lactamase

MRCoNS Methicillin-Resistant Coagulase Negative Staphylococcus

MRSA Methicillin-Resistant Staphylococcus aureus

MSSA Methicillin-Sensitive Staphylococcus aureus

VRE Vancomycin-Resistant Enterococcus

Disclaimer: This is not an all-inclusive antimicrobial treatment table and does not take into account local resistance patterns or all mechanisms of antimicrobial resistance. Uncommonly used antimicrobial coverage for specific organisms were omitted from this table, but may be appropriate in some patients. The DxWound Genetic Analysis Report does not make recommendations for treatment. All tests should be evaluated utilizing professional judgment in the clinical context of the patient. The test results should be used with other clinical and diagnostic findings for patient case management. Resistance genes may be associated with organisms detected by DxWound and listed here because extremely rare or not reported in the literature.

References: Please visit cogendx.com/resources for a complete bibliography.

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