

In vitro activity of tigecycline and comparators among pathogens isolated in Europe from patients with complicated intra-abdominal and skin- and soft tissue-infections –TEST Data 2004-2011

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Background: Intra-abdominal and skin and soft tissue infections are a major problem in hospitals due to their frequency, high morbidity rate, prolongation of hospital stay and escalating antimicrobial resistance with attendant additional costs. Monitoring of antimicrobial resistance is necessary for effective therapy. The Tigecycline European Surveillance Trial (TEST) program has monitored the activity of tigecycline and comparative antimicrobial agents in pathogens isolated from complicated intra-abdominal and skin/soft tissue infections in patients in Europe since 2004. **Methods:** 964 cumulative hospital sites in 26 European countries collected over 15,000 gram-negative and gram-positive isolates from patients with intra-abdominal and skin/soft tissue infections from 2004-2011. MICs were determined by broth microdilution, and interpreted using current EUCAST guidelines. **Results:** The in vitro activity of tigecycline and comparators against IAI/SSTI isolates is shown below. na = breakpoints not defined or non-applicable AK=Amikacin, AMP=Ampicillin, CFT=Ceftriaxone, MERO=Meropenem, LEVO=Levofloxacin, PT=Piperacillin-Tazobactam, TIG=Tigecycline, VAN=Vancomycin **Conclusions:** Percent susceptible varied amongst the genera for both IAI and SSTI pathogens for each comparator antimicrobial studied. *E. coli* and *K. pneumoniae* isolates from SSTI were significantly more likely to be ESBL-producers than isolates from IAI (P<0.005, Fisher's exact test). Against most gram-negative Enterobacteriaceae tigecycline demonstrated excellent in vitro activity with % susceptible >87% overall. Tigecycline was slightly less active against *S. marcescens* and ESBL+ *K. pneumoniae*. >=99% of gram-positive isolates were susceptible to tigecycline, including MRSA and vancomycin-resistant enterococci. Continued monitoring of antimicrobial resistance in both IAI and SSTI pathogens in Europe is warranted.

Organism (n): IAI/SSTI	Antimicrobial: Percent Susceptible: IAI/SSTI							
	AK	AMP	CFT	LEVO	MERO	PT	TIG	VAN
<i>Acinetobacter spp</i> 146/1361	64/68	na/na	na/na	47/56	49/68	na/na	na/na	na/na
<i>Enterobacter spp</i> 486/2023	97/97	1/3	50/64	80/86	96/99	60/73	87/89	na/na
<i>E. faecalis</i> 281/897	na/	98/99	na/na	na/na	na/na	na/na	100/100	98/99
<i>E. faecium</i> 291/279	na/na	17/16	na/na	na/na	na/na	na/na	99/99	91/89
<i>E. coli</i> 894/1426	96/95	39/33	83/77	73/64	99/99	87/86	99/99	na/na
ESBL+ 102/251	83/85	0/0	0/0	25/19	98/99	62/60	98/97	na/na
<i>K. pneumoniae</i> 372/925	94/92	1/3	75/68	78/70	96/96	75/71	89/88	na/na
ESBL+ 60/217	75/77	0/0	5/1	28/28	89/91	17/29	70/84	na/na
<i>P. aeruginosa</i> 312/2015	88/87	0/0	0/0	61/57	64/76	73/74	na/na	na/na
<i>S. marcescens</i> 82/721	96/97	4/4	77/85	92/88	97/99	81/91	72/75	na/na
<i>S. aureus</i> , MSSA 78/2631	na/na	na/na	na/na	94/93	na/na	na/na	100/100	100/100
<i>S. aureus</i> , MRSA 33/882	na/na	na/na	na/na	16/12	na/na	na/na	100/100	100/100
<i>S. agalactiae</i> 21/803	na/na	na/na	na/na	100/96	na/na	na/na	100/100	100/100