

Table E1. IDT results by FQ and concentration used for criteria #1, criteria #2, criteria #3, and criteria #4 and if underwent oral challenge to IDT positive FQ in 163 patients^a

FQ	Concentration	Criteria #1 ^b	Criteria #2 ^c	Criteria #3 ^d	Criteria #4 ^e
		<ul style="list-style-type: none"> FQ wheal \geq saline wheal + 3 mm 	<ul style="list-style-type: none"> FQ wheal \geq saline wheal + 3mm Flare present 	<ul style="list-style-type: none"> FQ wheal \geq 5 mm Flare > wheal 	<ul style="list-style-type: none"> Specific FQ flare at 0.025 mg/mL \geq histamine flare Specific FQ flare \geq 5 mm at 0.005 mg/mL No flare \geq 5 mm for either of the other 2 FQ at 0.005 mg/mL
Ciprofloxacin IDT Positive		Number oral challenged to ciprofloxacin with positive ciprofloxacin IDT / total ciprofloxacin IDT positive (%)			
	0.005 mg/mL	14/49 (29%)	1/7 (14%)	1/4 (25%)	0/1 (0%)
	0.025 mg/mL	21/68 (31%)	11/37 (30%)	6/20 (30%)	
	0.005 mg/mL or 0.025 mg/mL	22/75 (29%)	11/38 (29%)	6/20 (30%)	
Levofloxacin IDT Positive		Number oral challenged to levofloxacin with positive levofloxacin IDT / total levofloxacin IDT positive (%)			
	0.005 mg/mL	5/56 (9%)	1/10 (10%)	2/7 (29%)	0/1 (0%)
	0.025 mg/mL	7/58 (12%)	1/10 (10%)	1/8 (13%)	
	0.005 mg/mL or 0.025 mg/mL	8/66 (12%)	2/13 (15%)	2/11 (18%)	
Moxifloxacin IDT Positive		Number oral challenged to moxifloxacin with positive moxifloxacin IDT / total moxifloxacin IDT positive (%)			
	0.005 mg/mL	1/48 (2%)	0/9 (0%)	0/8 (0%)	0/2 (0%)
	0.025 mg/mL	1/66 (2%)	1/32 (3%)	0/22 (0%)	
	0.005 mg/mL or 0.025 mg/mL	1/72 (2%)	1/35 (3%)	0/26 (0%)	
At least 1 FQ IDT Positive		Number oral challenged to at least 1 FQ with at least 1 FQ IDT positive / total positive to at least 1 FQ (%)			
	0.005 mg/mL	34/73 (47%)	9/19 (47%)	11/13 (85%)	2/4 (50%)
	0.0025 mg/mL	43/83 (52%)	25/48 (52%)	28/33 (85%)	
	0.005 mg/mL or 0.025 mg/mL	48/96 (50%)	28/53 (53%)	33/36 (92%)	

Abbreviations: FQ = fluoroquinolone; IDT = intradermal test

^a82 of 159 patients with negative IDT by criteria #4 underwent oral challenge to a total 85 FQ doses (15 patients labeled to \geq 2 FQ). 2 of 4 patients with positive IDT by criteria #4 for a specific FQ underwent oral challenge to an IDT negative FQ. No immediate or delayed reactions were observed in patients that underwent IDT and FQ oral challenge.

^bBased on the "Drug allergy: an updated practice parameter" (*Ann Allergy Asthma Immunol.* 2010)

^cBased on the the European Network on Drug Allergy (ENDA) criteria (Brockow K et al. *Allergy.* 2013)

^dBased on currently used interpretation for a positive skin test in penicillin allergy (Shenoy ES et al. *JAMA.* 2019)

^eStudy proposed criteria developed during routine clinical care and applied retrospectively based on observation that non-specific wheal without flare frequently occurs in patients with suspected non-IgE mediated mast cell activation

Table E2. Index FQ and reaction, oral challenge FQ, and subsequent treatment FQ for the 82 patients with negative intradermal testing by proposed criteria #4 who underwent oral challenge

Index Fluoroquinolone (FQ)	Index Reaction	Oral Challenge FQ			Subsequent Treatment			Oral Challenge FQ			Subsequent Treatment		
		Ciprofloxacin	C	L	M	Levofloxacin	C	L	M	Moxifloxacin	C	L	M
Ciprofloxacin (C) 91 Labels • 50 OC • 14 Treatments	Immediate ^d	6 •0	0	0	0	4 •1	0	0	0	0	0	0	0
	Immediate-type ^e	30 •6	5 •2	5 •0	0	4 •1	0	2 •0	0	0	0	0	0
	Delayed	2	0	1	0	3	0	1	0	0	0	0	0
	Unknown	1	0	0	0	0	0	0	0	0	0	0	0
Levofloxacin (L) 89 Labels • 40 OC • 13 Treatments	Immediate	6 •2	0	0	0	7 •1	2 •0	2 •0	0	0	0	0	0
	Immediate-type	8 •3	3 •2	1 •0	0	12 •2	1 •0	3 •0	0	0	0	0	0
	Delayed	2	0	0	0	5	1	1	0	0	0	0	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Moxifloxacin (M) 19 Labels • 10 OC • 1 Treatment	Immediate	3 •2	1 •0	0	0	1 •1	0	0	0	0	0	0	0
	Immediate-type	2 •1	0	0	0	0	0	0	0	2 •0	0	0	0
	Delayed	0	0	0	0	2	0	0	0	0	0	0	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Abbreviations: C = ciprofloxacin FQ = fluoroquinolone; L = levofloxacin; M = moxifloxacin; OC = oral challenge

^aOf the 163 patients, 39 patients carried labels for ≥ 2 FQ, bringing total labels to 199.

^bOf the 82 patients who underwent oral challenge, 15 patients carried labels for ≥ 2 FQ. In total, there were 85 oral challenge doses administered and, in this table, patients with multiple FQ labels are counted for each of their index fluoroquinolone labels, bringing the total OC represented in this table to 100.

^cOf the 23 patients that underwent subsequent treatment, 6 patients carried labels for ≥ 2 FQ, and in this table, patients with multiple FQ labels are counted for each of their index FQ labels, bringing the total subsequent treatments represented in this table to 28.

^dSymptoms occurring within 1 hour of first dose

^eSymptoms occurring within 1 to 36 hours of first dose