

Supplementary Table 1. Clinical characteristics of patients with anaphylaxis who underwent allergy tests (n=74) and a comparison of the severity of anaphylaxis (mild to moderate vs. severe)

	Total, (%) (N=74)	Mild to moderate, (%)			Total, (%) (n=56)	Severe, (%)			Total (%) (n=18)
		<2yr=, (%) (n=15)	≥2, <6yr, (%) (n=19)	≥6yr, (%) (n=22)		<2yr, (%) (n=6)	≥2, <6yr, (%) (n=8)	≥6yr, (%) (n=4)	
Sex (male) (%)	47 (63.5)	12 (80.0)	10 (52.6)	15 (68.2)	37 (66.1)	4 (66.7)	6 (75.0)	0 (0.0)	10 (55.6)
Age (median, years)	4.0 (1.0-7.0)	1.0 (0.0-1.0)	4.0 (2.0-4.0)	10.0 (6.0-13.0)	4.0 (1.0-8.0)	1.0 (0.0-1.0)	3.0 (2.0-4.0)	9.0 (7.0-9.0)	3.0 (1.0-5.0)
History of allergic disease (%)	58 (78.4)	8 (53.3)	16 (84.2)	19 (86.4)	43 (76.8)	3 (50.0)	8 (100.0)	4 (100.0)	15 (83.3)
Food allergy	33 (44.6)	7 (46.7)	11 (57.9)	6 (27.3)	24 (42.9)	2 (33.3)	5 (62.5)	2 (50.0)	9 (50.0)
Atopic dermatitis	24 (32.4)	5 (33.3)	7 (36.8)	6 (27.3)	18 (32.1)	1 (16.7)	4 (50.5)	1 (25.0)	6 (33.3)
Allergic rhinitis	23 (31.1)	0 (0.0)	8 (42.1)	9 (40.9)	17 (30.4)	0 (0.0)	3 (37.5)	3 (75.0)	6 (33.3)
Asthma	16 (21.6)	0 (0.0)	6 (31.6)	9 (40.9)	15 (26.8)	0 (0.0)	1 (12.5)	0 (0.0)	1 (5.6)
Anaphylaxis	8 (10.8)	0 (0.0)	1 (5.3)	5 (22.7)	6 (10.7)	0 (0.0)	1 (12.5)	1 (25.0)	2 (11.1)
Drug allergy	3 (4.1)	0 (0.0)	0 (0.0)	1 (4.5)	1 (1.8)	0 (0.0)	1 (12.5)	1 (25.0)	2 (11.1)
Urticaria	1 (1.4)	0 (0.0)	0 (0.0)	1 (4.5)	1 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Family history of allergy (%) [†]	32 (43.2)	7 (46.7)	5 (31.6)	11 (50.0)	23 (41.1)	3 (50.5)	4 (50.0)	2 (50.0)	9 (50.0)
Anaphylaxis symptoms & signs									
Urticarial rash	64 (86.5)	14 (93.3)	17 (89.5)	18 (81.8)	49 (87.5)	6 (100.0)	6 (75.0)	3 (75.0)	15 (83.3)
Dyspnea	55 (74.3)	9 (60.0)	12 (63.2)	21 (95.5)	42 (75.0)	4 (66.7)	6 (75.0)	3 (75.0)	13 (72.2)
Facial edema	50 (67.6)	11 (73.3)	13 (68.4)	13 (59.1)	37 (66.1)	5 (83.3)	5 (62.5)	3 (75.0)	13 (72.2)
Wheezing	23 (31.1)	4 (26.7)	7 (36.8)	5 (22.7)	16 (28.6)	2 (33.3)	5 (62.5)	0 (0.0)	7 (38.9)
Vomiting	17 (23.0)	7 (46.7)	6 (31.6)	0 (0.0)	13 (23.2)	2 (33.3)	2 (25.0)	0 (0.0)	4 (22.2)
Throat tightness	10 (13.5)	1 (6.7)	2 (10.5)	4 (18.2)	7 (12.5)	0 (0.0)	1 (12.5)	2 (50.0)	3 (16.7)
Abdominal pain	6 (8.1)	0 (0.0)	2 (10.5)	2 (9.1)	4 (7.1)	0 (0.0)	1 (12.5)	1 (25.0)	2 (11.0)
Nausea	3 (4.1)	0 (0.0)	1 (5.3)	1 (4.5)	2 (3.6)	0 (0.0)	0 (0.0)	1 (25.0)	1 (5.6)

* A comparison of the severity of anaphylaxis (mild to moderate vs. severe).

[†] these include the anaphylaxis, asthma, allergic rhinitis, atopic dermatitis, food allergy, drug allergy, and urticarial history of the family.

Supplementary Table 2. Allergen sensitization rate of allergy tests and the severity of anaphylaxis (mild to moderate vs. severe) (n=74)

	Total (n=74),	Mild to moderate (n=56), (%)				Severe (=18), (%)			
	(%)	<2yr, (%)	≥2, <6yr, (%)	≥6yr, (%)	Total, (%)	<2yr, (%)	≥2, <6yr, (%)	≥6yr, (%)	Total, (%)
All allergens	64/74 (86.5%)	15/15 (100.0)	16/19 (84.2)	19/22 (86.4)	50/56 (89.2%)	4/6 (66.7)	6/8 (75.0)	4/4 (100.0)	14/18 (77.8%)
All food	48/71 (67.6%)	15/15 (100.0)	14/19 (73.7)	6/20 (30.0)	35/54 (64.8%)	4/6 (66.7)	6/8 (75.0)	3/3 (100.0)	13/17 (76.5%)
Egg	32/63 (50.8%)	14/15 (93.3)	7/17 (41.1)	1/15 (6.7)	22/47 (46.8%)	4/6 (66.7)	5/7 (71.4)	1/3 (33.3)	10/16 (62.5%)
Milk	21/57 (36.8%)	7/15 (46.7)	6/14 (42.9)	0/15 (0.0)	13/44 (29.5%)	3/6 (50.0)	4/8 (50.0)	1/4 (25.0)	8/13 (61.5%)
Nuts	29/60 (48.3%)	9/13 (69.2)	8/16 (50.0)	3/15 (20.0)	20/44 (45.5%)	2/5 (40.0)	6/8 (75.0)	1/3 (33.3)	9/16 (56.3%)
Wheat	14/49 (28.6%)	2/11 (22.2)	4/12 (33.3)	5/13 (38.5)	11/36 (30.6%)	0/4 (0.0)	1/4 (25.0)	2/5 (40.0)	3/13 (23.1%)
Crustacean	6/43 (10.3%)	3/10 (30.0)	0/11 (0.0)	0/13 (0.0)	3/34 (8.8%)	0/2 (0.0)	2/3 (66.7)	1/4 (25.0)	3/9 (33.3%)
All inhalants	36/62 (58.1%)	3/8 (37.5)	10/18 (55.6)	18/22 (81.8)	31/48 (64.6%)	0/4 (0.0)	1/6 (16.7)	4/4 (100.0)	5/14 (35.7%)
Mite	30/59 (50.8%)	1/10 (10.0)	10/17 (58.8)	15/19 (78.9)	26/46 (56.5%)	0/3 (0.0)	1/6 (16.7)	3/4 (75.0)	4/13 (30.8%)
Animal	12/47 (25.5%)	1/5 (20.0)	3/13 (23.1)	7/19 (36.8)	11/37 (29.7%)	0/3 (0.0)	0/3 (0.0)	1/4 (25.0)	1/10 (10.0%)
Tree	19/53 (35.8%)	1/5 (20.0)	4/15 (26.7)	10/20 (50.0)	15/40 (37.5%)	0/4 (0.0)	1/5 (20.0)	3/4 (75.0)	4/13 (30.8%)

*A comparison of the severity of anaphylaxis (mild to moderate vs. severe).

† $P < 0.05$

Supplementary Table 3. Comparison of anaphylactic triggers with the allergic sensitizations of patients

	All allergen sensitization	All food sensitization	Egg sensitization	Milk sensitization	Nuts sensitization	Wheat sensitization	Crustacean sensitization	All inhalant sensitization	Mite sensitization	Animal sensitization	Tree sensitization
Triggers											
Food (n=41)	39 (95.1%)	35 (85.4%)	24 (58.5%)	16 (39.0%)	21 (51.2%)	9 (22.0%)	3 (7.3%)	16 (39.0%)	13 (31.7%)	35 (85.4%)	24 (58.5%)
Immune therapy (n=8)	8 (100.0%)	3 (37.5%)	2 (25.0%)	0 (0.0%)	1 (12.5%)	0 (0.0%)	1 (12.5%)	8 (100.0%)	8 (100.0%)	5 (62.5%)	5 (62.5%)
Exercise (n=3)	3 (100.0%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	3 (100.0%)	1 (33.3%)	1 (33.3%)	3 (100.0%)
Drug (n=4)	2 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)	1 (25.0%)	1 (25.0%)	1 (25.0%)
Food triggers											
Egg (n=6)	6 (100.0%)	6 (100.0%)	6 (100.0%)	1 (16.7%)	0 (0.0%)	2 (33.3%)	0 (0.0%)	1 (16.7%)	0 (0.0%)	1 (16.7%)	0 (0.0%)
Milk (n=8)	7 (87.5%)	7 (87.5%)	7 (87.5%)	6 (75.0%)	5 (62.5%)	1 (12.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Nuts (n=11)	10 (90.9%)	9 (81.8%)	3 (27.3%)	2 (18.2%)	8 (72.7%)	0 (0.0%)	1 (9.1%)	6 (54.5%)	6 (54.5%)	1 (9.1%)	1 (9.1%)
Wheat (n=3)	3 (100.0%)	3 (100.0%)	1 (33.3%)	1 (33.3%)	2 (66.7%)	2 (66.7%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Crustacean (n=2)	2 (100.0%)	2 (100.0%)	1 (50.0%)	1 (50.0%)	1 (50.0%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Buckwheat (n=1)	1 (100.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)
Fish (n=1)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Unspecified foods (n=9)	6 (100.0%)	6 (100.0%)	6 (100.0%)	1 (16.7%)	5 (55.6%)	4 (44.4%)	0 (0.0%)	1 (16.7%)	0 (0.0%)	1 (16.7%)	0 (0.0%)

Supplementary Table 4. Comparison of anaphylactic triggers with the symptoms and sign of anaphylaxis

	Urticarial rash	Facial edema	Throat tightness	Dyspnea	Wheezing	Hypotension	Abdominal pain	Vomiting
Triggers								
Food (n=41)	35 (85.4%)	29 (70.7%)	7 (17.1%)	28 (68.3%)	17 (41.5%)	4 (9.8%)	4 (9.8%)	17 (41.5%)
Immune therapy (n=8)	6 (75.0%)	3 (37.5%)	0 (0.0%)	8 (100.0%)	3 (37.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Exercise (n=3)	3 (100.0%)	2 (66.7%)	1 (33.3%)	3 (100.0%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Drug (n=4)	1 (25.0%)	3 (75.0%)	1 (25.0%)	2 (50.0%)	0 (0.0%)	1 (25.0%)	0 (0.0%)	0 (0.0%)
Food triggers								
Egg (n=6)	5 (83.5%)	4 (66.7%)	0 (0.0%)	3 (50.0%)	1 (16.7%)	0 (0.0%)	0 (0.0%)	2 (33.3%)
Milk (n=8)	6 (75.0%)	4 (50.0%)	1 (12.5%)	4 (50.0%)	3 (37.5%)	1 (12.5%)	0 (0.0%)	6 (75.0%)
Nuts (n=11)	11 (100.0%)	9 (81.8%)	3 (27.3%)	5 (45.5%)	4 (36.4%)	3 (27.3%)	1 (9.1%)	5 (45.5%)
Wheat (n=3)	3 (100.0%)	3 (100.0%)	0 (0.0%)	3 (100.0%)	3 (100.0%)	0 (0.0%)	0 (0.0%)	1 (33.3%)
Crustacean (n=2)	2 (100.0%)	2 (100.0%)	0 (0.0%)	2 (100.0%)	2 (100.0%)	0 (0.0%)	1 (50.0%)	0 (0.0%)
Buckwheat (n=1)	1 (100.0%)	1 (100.0%)	1 (100.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Fish (n=1)	1 (100.0%)	1 (100.0%)	1 (100.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Unspecified foods (n=9)	6 (66.7%)	5 (55.6%)	1 (11.1%)	9 (100.0%)	4 (44.4%)	0 (0.0%)	2 (22.2%)	3 (33.3%)