Supplemental Figure Legends

Figure E1. Distributions of ages of participants at time of survey by +EoE and -EoE subsets. The median age of participants in the +EoE subset was 15 years and 182 (58.9%) were 18 years or younger at the time of the survey. The median age for participants in the -EoE subset was 13 years with 3600 (62.4%) being 18 years or younger at the time of the survey.

Figure E2. Analysis of participant sex based on "Who is completing this survey?" response by +EoE or -EoE subset. (a) Participants whose data was reported by non-self respondents. **(b)** Participants whose data was self-reported. N=6,064; 10 participants in the -EoE subset were removed due to lack of response. There was no significant difference in the percentage of participants with EoE between the self-reporting (5.86% +EoE) and non-self-reporting (5.04% +EoE) subsets (P-value: 0.2093). P-values obtained by Fisher's exact test.

1   *Supplemental Tables*

2   **Table E1. Adjusted[1] odds of co-existing eosinophilic esophagitis for food allergic registry**
3   **participants with specific food allergies**

Food Allergens[2]	*-EoE* n=5765	*+EoE* n=309	*Adjusted OR (95% CI)*	*FDR-adjusted P value*
Beans/Legumes/Peas	**688 (12%)**	**71 (23%)**	**2.2 (1.67, 2.91)**	**2.0e-07**
Black beans	174 (3%)	29 (9%)	3.3 (2.18, 4.99)	1.4e-07
Chickpea	403 (7%)	33 (11%)	1.6 (1.09, 2.31)	0.027
Green beans	189 (3%)	22 (7%)	2.2 (1.41, 3.53)	0.0015
Lentils	356 (6%)	38 (12%)	2.1 (1.49, 3.04)	1.3e-04
Lima beans	195 (3%)	25 (8%)	2.5 (1.61, 3.86)	1.4e-04
Navy beans	189 (3%)	22 (7%)	2.3 (1.42, 3.56)	0.0014
Red kidney beans	176 (3%)	27 (9%)	3.0 (1.95, 4.56)	2.8e-06
Peas	439 (8%)	55 (18%)	2.6 (1.93, 3.57)	1.1e-08
Pinto beans	179 (3%)	30 (10%)	3.3 (2.19, 4.95)	1.1e-07
Other bean/pea	88 (2%)	7 (2%)	1.6 (0.71, 3.39)	0.31
Cereals/Grains	**416 (7%)**	**56 (18%)**	**3.0 (2.17, 4.07)**	**2.0e-10**
Barley	195 (3%)	28 (9%)	3.0 (1.94, 4.51)	2.8e-06
Buckwheat	86 (1%)	17 (6%)	3.9 (2.29, 6.78)	4.1e-06
Corn	169 (3%)	22 (7%)	2.6 (1.62, 4.14)	2.3e-04
Gluten	156 (3%)	22 (7%)	2.9 (1.80, 4.63)	4.3e-05
Hops	71 (1%)	8 (3%)	2.2 (1.03, 4.65)	0.060
Malt	97 (2%)	13 (4%)	2.7 (1.46, 4.88)	0.0031
Millet	54 (1%)	10 (3%)	3.9 (1.93, 7.79)	4.3e-04
Oat	185 (3%)	25 (8%)	2.7 (1.77, 4.25)	2.9e-05
Rapeseed	19 (<1%)	5 (2%)	5.2 (1.90, 14.08)	0.0029
Rice	73 (1%)	16 (5%)	4.2 (2.42, 7.39)	2.5e-06
Rye	154 (3%)	17 (6%)	2.1 (1.27, 3.62)	0.0082
Spelt	65 (1%)	16 (5%)	5.1 (2.88, 9.06)	2.0e-07
Wheat	279 (5%)	44 (14%)	3.4 (2.40, 4.81)	9.5e-11
Other cereal/grain	38 (1%)	4 (1%)	2.1 (0.73, 5.89)	0.21
Egg	**2405 (42%)**	**189 (61%)**	**2.5 (1.91, 3.15)**	**3.7e-11**
Finned Fish	**530 (9%)**	**70 (23%)**	**3.0 (2.23, 3.95)**	**2.2e-12**
Anchovies	188 (3%)	17 (6%)	1.8 (1.04, 2.93)	0.051
Bass	177 (3%)	15 (5%)	1.6 (0.94, 2.80)	0.11
Catfish	193 (3%)	16 (5%)	1.6 (0.93, 2.69)	0.12
Cod	284 (5%)	33 (11%)	2.3 (1.58, 3.40)	7.6e-05
Eel	139 (2%)	12 (4%)	1.7 (0.90, 3.02)	0.14
Flounder	196 (3%)	15 (5%)	1.5 (0.84, 2.49)	0.21
Haddock	177 (3%)	19 (6%)	2.1 (1.26, 3.38)	0.0076
Hake	145 (3%)	11 (4%)	1.4 (0.76, 2.69)	0.30
Halibut	198 (3%)	20 (6%)	2.0 (1.21, 3.17)	0.011
Herring	159 (3%)	13 (4%)	1.6 (0.86, 2.77)	0.18
Mackerel	169 (3%)	12 (4%)	1.4 (0.75, 2.49)	0.35
Megrim	136 (2%)	11 (4%)	1.5 (0.82, 2.90)	0.21
Perch	165 (3%)	13 (4%)	1.5 (0.82, 2.64)	0.22
Plaice	136 (2%)	11 (4%)	1.5 (0.82, 2.89)	0.21
Pollock	165 (3%)	14 (5%)	1.6 (0.91, 2.82)	0.13
Salmon	304 (5%)	36 (12%)	2.5 (1.70, 3.57)	8.8e-06
Sardine	169 (3%)	11 (4%)	1.3 (0.67, 2.33)	0.52
Snapper	157 (3%)	13 (4%)	1.6 (0.89, 2.84)	0.16
Swordfish	157 (3%)	11 (4%)	1.3 (0.70, 2.47)	0.43
Tilapia	202 (4%)	21 (7%)	2.1 (1.30, 3.33)	0.0046
Trout	193 (3%)	15 (5%)	1.5 (0.88, 2.60)	0.18
Tuna	273 (5%)	33 (11%)	2.5 (1.68, 3.64)	2.0e-05
Whitefish	196 (3%)	22 (7%)	2.2 (1.39, 3.50)	0.0019
Other finned fish	77 (1%)	9 (3%)	2.2 (1.06, 4.34)	0.050
Fruit	**970 (17%)**	**80 (26%)**	**1.8 (1.36, 2.34)**	**1.2e-04**
Apple	246 (4%)	32 (10%)	2.7 (1.79, 3.98)	7.2e-06
Apricot	116 (2%)	13 (4%)	2.1 (1.18, 3.87)	0.020
Avocado	222 (4%)	25 (8%)	2.2 (1.45, 3.48)	8.8e-04
Banana	296 (5%)	28 (9%)	1.8 (1.22, 2.78)	0.0075
Blackberry	66 (1%)	8 (3%)	2.3 (1.11, 4.96)	0.041
Blueberry	80 (1%)	11 (4%)	2.7 (1.41, 5.17)	0.0057
Carambola	14 (<1%)	4 (1%)	5.4 (1.74, 16.48)	0.0070

Cherry	145 (3%)	14 (5%)	1.9 (1.06, 3.30)	0.049
Coconut	152 (3%)	18 (6%)	2.4 (1.42, 3.94)	0.0021
Cranberry	40 (1%)	6 (2%)	2.9 (1.20, 6.94)	0.028
Currant	19 (<1%)	5 (2%)	4.8 (1.78, 13.10)	0.0042
Date	47 (1%)	5 (2%)	2.0 (0.79, 5.12)	0.18
Grape	68 (1%)	19 (6%)	5.5 (3.21, 9.26)	4.4e-09
Grapefruit	89 (2%)	8 (3%)	1.7 (0.80, 3.53)	0.21
Guava	43 (1%)	6 (2%)	2.6 (1.10, 6.30)	0.046
Kiwifruit	226 (4%)	27 (9%)	2.4 (1.57, 3.66)	1.8e-04
Lemon	78 (1%)	5 (2%)	1.2 (0.46, 2.91)	0.76
Lime	60 (1%)	5 (2%)	1.5 (0.59, 3.77)	0.43
Mandarin	63 (1%)	6 (2%)	1.8 (0.77, 4.23)	0.21
Mango	186 (3%)	22 (7%)	2.3 (1.46, 3.71)	0.0010
Melon	214 (4%)	25 (8%)	2.4 (1.51, 3.66)	4.5e-04
Orange	167 (3%)	12 (4%)	1.4 (0.74, 2.50)	0.35
Papaya	75 (1%)	8 (3%)	2.0 (0.95, 4.27)	0.094
Passion fruit	54 (1%)	7 (2%)	2.5 (1.10, 5.54)	0.044
Peach	211 (4%)	24 (8%)	2.3 (1.45, 3.54)	9.2e-04
Pear	127 (2%)	16 (5%)	2.5 (1.43, 4.22)	0.0028
Persimmon	30 (1%)	4 (1%)	2.6 (0.88, 7.35)	0.12
Pineapple	181 (3%)	15 (5%)	1.6 (0.90, 2.69)	0.14
Plum	112 (2%)	13 (4%)	2.3 (1.27, 4.17)	0.011
Raspberry	83 (1%)	9 (3%)	2.1 (1.03, 4.24)	0.059
Strawberry	235 (4%)	24 (8%)	2.0 (1.29, 3.14)	0.0042
Watermelon	196 (3%)	24 (8%)	2.4 (1.56, 3.81)	3.0e-04
Other fruit	118 (2%)	9 (3%)	1.4 (0.72, 2.87)	0.35
Meat	**412 (7%)**	**60 (19%)**	**3.1 (2.30, 4.26)**	**8.2e-12**
Beef	293 (5%)	41 (13%)	2.8 (1.95, 3.98)	1.6e-07
Chicken	106 (2%)	33 (11%)	6.3 (4.13, 9.46)	3.1e-16
Duck	27 (<1%)	5 (2%)	3.6 (1.37, 9.53)	0.016
Elk/Moose	72 (1%)	5 (2%)	1.2 (0.47, 3.06)	0.71
Gelatin	88 (2%)	7 (2%)	1.4 (0.64, 3.13)	0.43
Horse	65 (1%)	6 (2%)	1.6 (0.68, 3.84)	0.31
Lamb	144 (2%)	13 (4%)	1.7 (0.91, 2.98)	0.13
Pork	179 (3%)	31 (10%)	3.5 (2.32, 5.32)	2.9e-08
Rabbit	61 (1%)	5 (2%)	1.4 (0.57, 3.67)	0.47
Turkey	60 (1%)	23 (7%)	7.5 (4.53, 12.33)	1.8e-13
Venison	84 (1%)	5 (2%)	1.0 (0.41, 2.61)	0.94
Milk	**2027 (35%)**	**189 (61%)**	**3.0 (2.36 3.80)**	**2.0e-17**
Peanut	**3736 (65%)**	**207 (67%)**	**1.1 (0.87, 1.47)**	**0.38**
Seeds	**1106 (19%)**	**89 (29%)**	**1.7 (1.32, 2.20)**	**1.6e-04**
Fennel seed	54 (1%)	6 (2%)	2.2 (0.91, 5.06)	0.11
Flaxseed	119 (2%)	20 (6%)	3.3 (2.03, 5.42)	8.8e-06
Mustard seed	182 (3%)	20 (6%)	2.1 (1.33, 3.46)	0.0039
Poppy seed	103 (2%)	14 (5%)	2.6 (1.45, 4.56)	0.0029
Pumpkin seed	91 (2%)	14 (5%)	3.0 (1.70, 5.41)	5.3e-04
Sesame seed	911 (16%)	77 (25%)	1.8 (1.35, 2.31)	1.3e-04
Sunflower seed	298 (5%)	36 (12%)	2.4 (1.67, 3.50)	1.2e-05
Other seed	63 (1%)	4 (1%)	1.2 (0.43, 3.31)	0.75
Shellfish	**1128 (20%)**	**105 (34%)**	**2.2 (1.74, 2.89)**	**4.4e-09**
Clam	493 (9%)	38 (12%)	1.6 (1.08, 2.21)	0.028
Crab	696 (12%)	60 (19%)	1.8 (1.36, 2.48)	2.3e-04
Crayfish	397 (7%)	28 (9%)	1.4 (0.92, 2.09)	0.14
Lobster	663 (12%)	63 (20%)	2.1 (1.53, 2.76)	9.1e-06
Octopus	282 (5%)	17 (6%)	1.2 (0.70, 1.93)	0.59
Oyster	455 (8%)	31 (10%)	1.3 (0.90, 1.97)	0.19
Scallop	478 (8%)	39 (13%)	1.6 (1.15, 2.34)	0.012
Squid	307 (5%)	17 (6%)	1.1 (0.64, 1.77)	0.81
Shrimp	866 (15%)	73 (24%)	1.8 (1.39, 2.44)	8.2e-05
Other shellfish	133 (2%)	15 (5%)	2.1 (1.24, 3.72)	0.012
Soy	**1095 (19%)**	**115 (37%)**	**2.6 (2.03, 3.28)**	**5.8e-13**
Tree Nuts	**3414 (59%)**	**206 (67%)**	**1.4 (1.09, 1.79)**	**0.016**
Almond	2175 (38%)	147 (48%)	1.5 (1.20, 1.90)	0.0013
Brazil nut	1795 (31%)	113 (37%)	1.3 (1.01, 1.62)	0.066
Cashew	2585 (45%)	148 (48%)	1.1 (0.90, 1.45)	0.30
Chestnut	1225 (21%)	96 (31%)	1.7 (1.30, 2.14)	1.9e-04
Coconut	546 (9%)	42 (14%)	1.5 (1.09, 2.15)	0.023
Hazelnut	2193 (38%)	140 (45%)	1.4 (1.07, 1.70)	0.019

Macadamia nut	1648 (29%)	117 (38%)	1.5 (1.20, 1.94)	0.0013
Pecan	2091 (36%)	132 (43%)	1.3 (1.04, 1.66)	0.035
Pine nut	1332 (23%)	108 (35%)	1.8 (1.41, 2.29)	1.1e-05
Pistachio	2285 (40%)	141 (46%)	1.3 (1.03, 1.64)	0.045
Walnut	2381 (41%)	152 (49%)	1.4 (1.10, 1.74)	0.011
Other tree nut	157 (3%)	9 (3%)	1.1 (0.53, 2.08)	0.90
Vegetables	**586 (10%)**	**66 (21%)**	**2.5 (1.87, 3.40)**	**1.6e-08**
Asparagus	37 (1%)	6 (2%)	3.1 (1.29, 7.48)	0.020
Broccoli	62 (1%)	6 (2%)	1.8 (0.78, 4.28)	0.21
Brussel sprouts	38 (1%)	3 (1%)	1.5 (0.45, 4.84)	0.55
Cabbage	50 (1%)	5 (2%)	1.9 (0.75, 4.90)	0.21
Carrot	148 (3%)	19 (6%)	2.5 (1.50, 4.08)	0.0010
Cauliflower	46 (1%)	6 (2%)	2.4 (1.01, 5.74)	0.066
Celery	110 (2%)	16 (5%)	2.8 (1.64, 4.92)	5.5e-04
Cucumber	87 (2%)	13 (4%)	2.9 (1.61, 5.37)	0.0012
Eggplant	78 (1%)	6 (2%)	1.4 (0.60, 3.30)	0.46
Lettuce	45 (1%)	13 (4%)	5.9 (3.10, 11.16)	4.5e-07
Onion	95 (2%)	12 (4%)	2.6 (1.37, 4.80)	0.0069
Parsley	24 (<1%)	6 (2%)	4.9 (1.96, 12.09)	0.0016
Pepper	90 (2%)	6 (2%)	1.2 (0.53, 2.88)	0.64
Sweet potato	42 (1%)	12 (4%)	5.7 (2.95, 11.00)	1.5e-06
Spinach	41 (1%)	7 (2%)	3.3 (1.47, 7.53)	0.0077
Pumpkin, squash	73 (2%)	8 (3%)	2.1 (0.97, 4.33)	0.084
Tomato	194 (3%)	25 (8%)	2.6 (1.68, 4.10)	9.6e-05
White potato	91 (2%)	13 (4%)	2.8 (1.54, 5.17)	0.0018
Other vegetable	187 (3%)	24 (8%)	2.6 (1.63, 3.99)	1.6e-04
Wheat	**962 (17%)**	**102 (33%)**	**2.6 (2.01, 3.33)**	**3.4e-12**
Other Food Allergy	**1418 (25%)**	**117 (38%)**	**1.9 (1.51, 2.47)**	**1.1e-06**

CI: confidence interval; EoE: eosinophilic esophagitis; FDR: false discovery rate; OR: odds ratio

1. Adjusted for sex, age, race, ethnicity, and geographic location in multivariable logistic regression models.

2. Excluded carob, jackfruit, olive, other meat, bamboo, Brussels sprouts, and beets due to <1% of participants reporting these comorbidities in both subsets.

Table E2. Adjusted[1] odds of co-existing eosinophilic esophagitis based on reported outgrown food allergies

Outgrown Food Allergies	-EoE n=5765	+EoE n=309	Adjusted OR (95% CI)	FDR-adjusted P Value
Any Food Allergies Outgrown				
Yes	1682 (29%)	104 (34%)	1.3 (0.99, 1.65)	0.056[2]
No	3448 (60%)	167 (54%)		
Unsure	635 (11%)	38 (12%)		
Outgrown Food Allergens				
Beans/legumes/peas	113 (2%)	14 (5%)	2.5 (1.39, 4.35)	0.026
Cereals/grains	81 (1%)	6 (2%)	1.4 (0.61, 3.26)	0.86
Egg	669 (12%)	36 (12%)	0.99 (0.69, 1.41)	0.98
Finned fish	72 (1%)	9 (3%)	2.4 (1.17, 4.81)	0.12
Fruit	188 (3%)	13 (4%)	1.3 (0.72, 2.28)	0.86
Meat	85 (1%)	15 (5%)	3.4 (1.92, 5.95)	6.0e-04
Milk	478 (8%)	28 (9%)	1.1 (0.73, 1.62)	0.98
Peanut	205 (4%)	19 (6%)	1.8 (1.08, 2.87)	0.12
Seeds	110 (2%)	12 (4%)	2.0 (1.10, 3.72)	0.12
Shellfish	109 (2%)	9 (3%)	1.5 (0.77, 3.08)	0.57
Soy	310 (5%)	22 (7%)	1.4 (0.87, 2.15)	0.49
Tree nuts				
Almond	622 (11%)	33 (11%)	0.98 (0.68, 1.43)	0.98
Brazil nut	298 (5%)	15 (5%)	0.93 (0.55, 1.59)	0.98
Cashew	343 (6%)	18 (6%)	0.98 (0.60, 1.60)	0.98
Chestnut	270 (5%)	13 (4%)	0.89 (0.50, 1.57)	0.98
Coconut	481 (8%)	26 (8%)	1.0 (0.66, 1.51)	1.00
Hazelnut	395 (7%)	18 (6%)	0.85 (0.52, 1.39)	0.95
Macadamia nut	302 (5%)	15 (5%)	0.92 (0.54, 1.56)	0.98
Pecan	367 (6%)	19 (6%)	0.96 (0.60, 1.55)	0.98
Pine nut	340 (6%)	15 (5%)	0.80 (0.47, 1.37)	0.86
Pistachio	337 (6%)	19 (6%)	1.1 (0.66, 1.71)	0.98
Walnut	381 (7%)	18 (6%)	0.88 (0.54, 1.43)	0.98
Vegetables	89 (2%)	9 (3%)	2.0 (1.00, 4.03)	0.19
Wheat	219 (4%)	18 (6%)	1.6 (0.96, 2.60)	0.23
Other	346 (6%)	10 (3%)	0.51 (0.27, 0.96)	0.16

CI: confidence interval; EoE: eosinophilic esophagitis; FDR: false discovery rate; OR: odds ratio

1. Adjusted for sex, age, race, ethnicity, and geographic location in multivariable logistic regression models.

2. "Yes" compared to "No" as reference. P value is not FDR-adjusted

1   **ONLINE REPOSITORY**

2   ***Supplemental Methods***

3   *Food Allergy Research & Education (FARE) Patient Registry*

4   The FARE Patient Registry was developed for the purposes of conducting research on food

5   allergy from self-reported data through an Institutional Review Board-approved study protocol

6   (Advarra, Protocol Pro00022715). Registry participants voluntarily elect to enroll in the FARE

7   Patient Registry via a link on the FARE website (https://www.foodallergy.org). Enrollees were

8   required to be ≥18 years of age, though adult caregivers can enroll on behalf of children with

9   food allergy and provide information pertaining to their child. Prior to enrollment completion,

10   enrollees review information on the FARE Patient Registry and its objectives as a research study

11   and voluntarily provide informed assent and/or consent for enrollment.

12

13   *Exclusions*

14   Participants with demographic information, but no additional survey questions completed (n=19)

15   or no current age (n=11), were excluded. Additionally, participants were excluded if they had no

16   apparent food allergy (n=35) – signified by selecting "None of the above" for the question, "*Has*

17   *the participant ever been diagnosed by a doctor as allergic to any of the following foods or food*

18   *groups?"* and/or not selecting any of the food allergen categories listed and also selecting "No"

19   for *"Does the participant have any food allergies not listed above?"*.

20

21   *Statistical Analyses*

22   For the purposes of analysis, nominal age range values for ages <1 year and >80 years were

23   converted to a representative numeric value. The option of "0 to 30 days old" was converted to

24 0.01, "1 to 3 months old" to 0.25, "4 to 7 months old" to 0.5, "8 to 11 months old" to 0.75, and

25 "80 or more years old" to 80.

26   In the questionnaire section about symptoms that developed within 2 hours of eating the

27 food or foods that produce an allergic reaction, the questions are grouped by main symptom

28 categories (e.g. skin, respiratory), however, the respondents were not directly asked about any of

29 the main category symptoms. To be able to study the association of symptoms of the main

30 categories with co-existing EoE, we counted everyone who selected at least one of the specific

31 symptoms or "Other" within one main symptom category as having a symptom of that main

32 category.