

(#716) Differences in the Evaluation of Skin Prick Testing Results For Food Allergy Diagnosis Between US and UK Physicians.

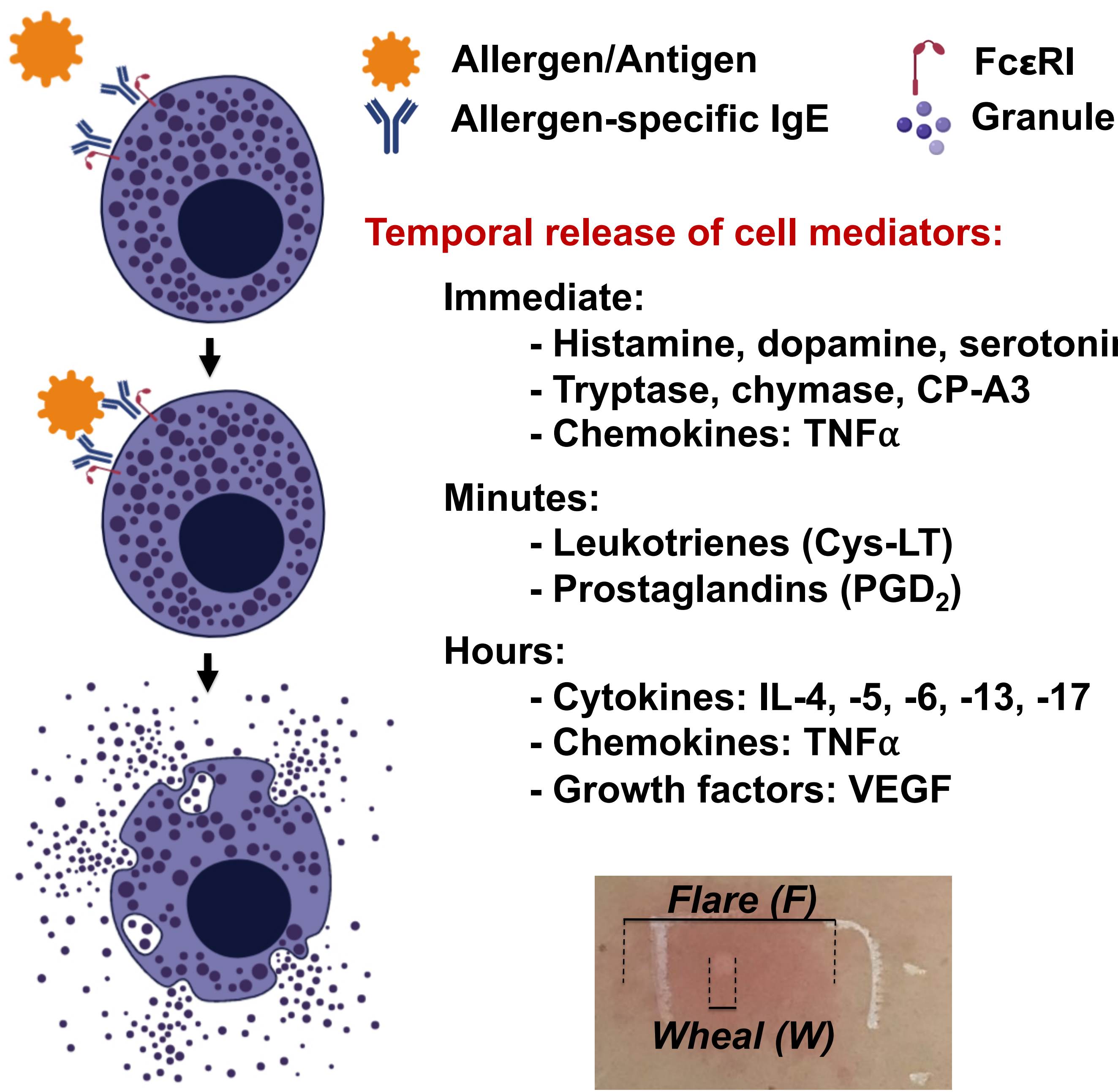
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Introduction

Food Allergies and Testing

1. Associated with considerable medical, emotional, and socioeconomic burden
2. Standardized diagnostic tools:
Quantitative: ImmunoCAP Testing
Qualitative/Functional: Skin Prick Testing (SPT)
Gold Standard: Oral food challenge
3. “Sacrificiation” tools and interpretation:
Mueller device, Hagerdorn cutting needle, Multitest
Read-out: wheal (hive) and flare (erythema)
4. SPT confounders: age, medication, technique



Skin Prick Test Interpretation

US: AAAAI and ACAAI

- Objective wheal-and-flare responses be recorded in millimeters (diameter or area) because cutoff levels (in millimeters) may obviate the necessity for confirmatory respiratory and food allergen challenge test
- All negative controls should be < 3-mm wheals and <10-mm flares

UK: EAACI and BSACI

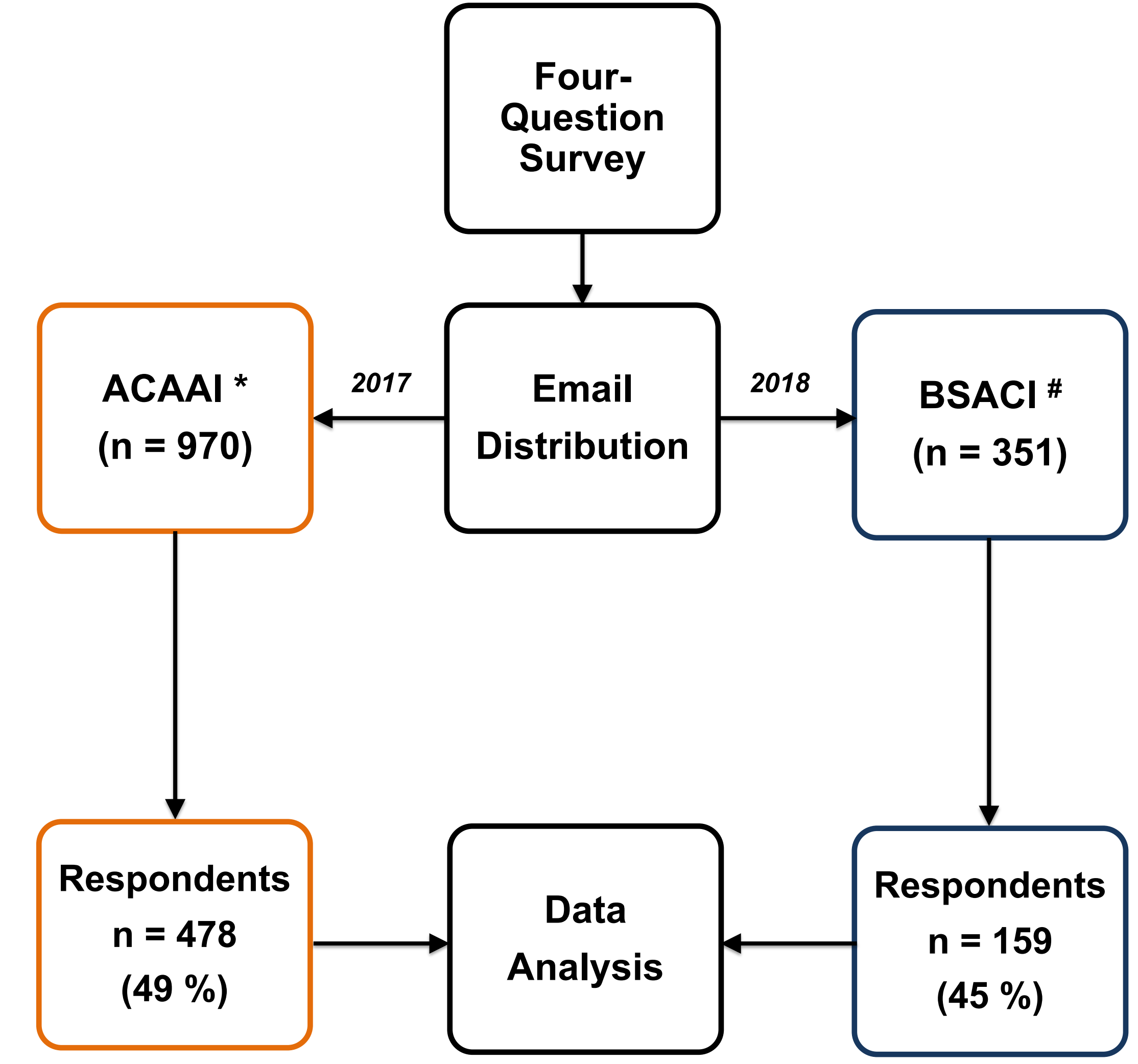
- The largest diameter of the wheal of each particular test is measured, a positive being a wheal of ≥ 3 mm.
- Measure the longest extent of the wheal (not including the flare) and the extent 90° to the first measurement.

Question: Are there universal guidelines for SPT interpretation?

Goal: Use a brief, four-question survey to evaluate differences in how allergists in the United States (US) and the United Kingdom (UK) evaluate the SPT result for food allergy diagnosis.

Results

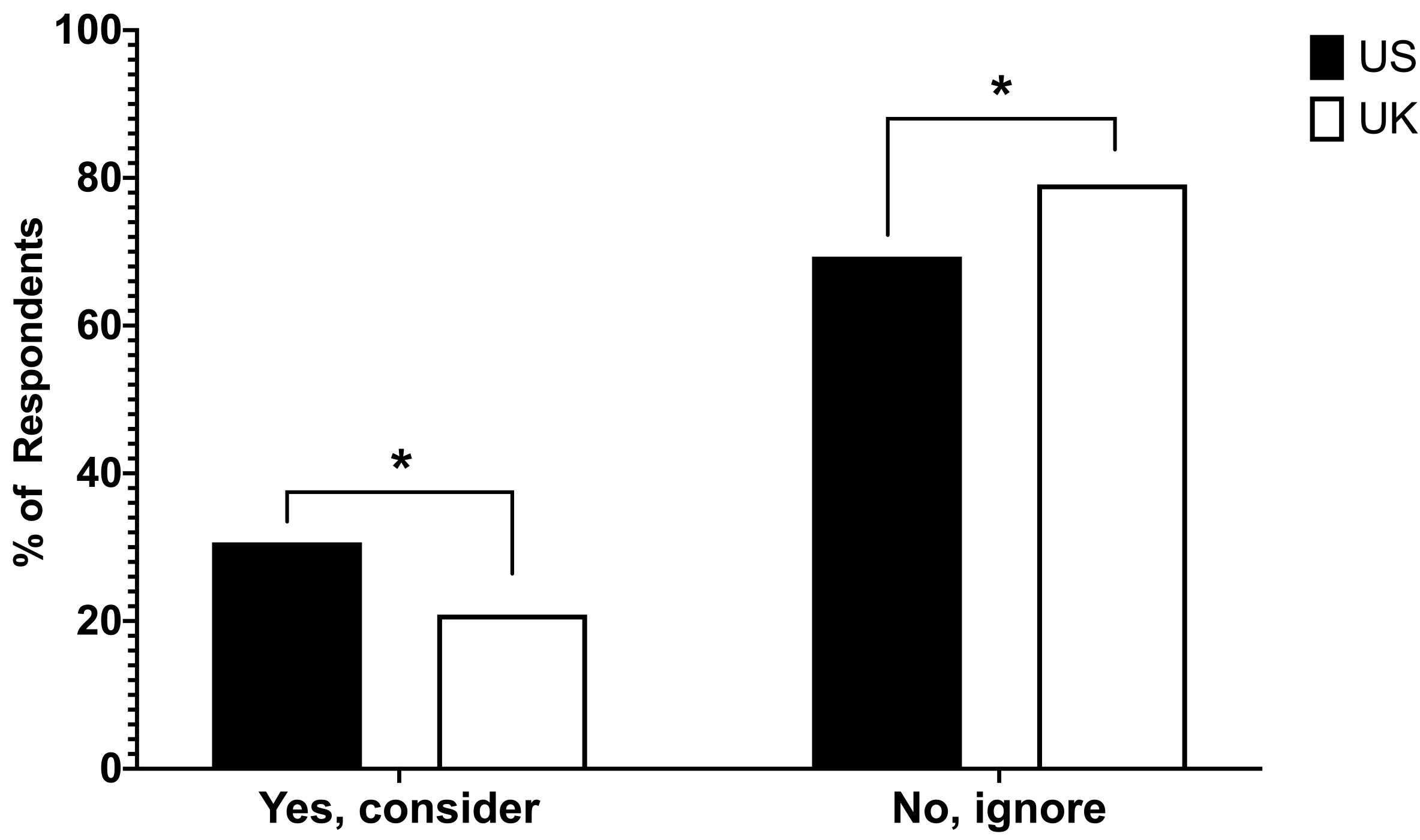
Methodology



* ACAAI: American College of Allergy, Asthma, and Immunology
BSACI: The British Society for Allergy and Clinical Immunology

Figure 2

Q2: If the wheal diameter is 0 mm, do you consider a large flare response as a positive result for skin prick testing?



Statistical significance was determined at the * $p < 0.025$, ** $p < 0.01$, *** $p < 0.001$, and **** $p < 0.0001$ levels.

Figure 1

Q1: Do you measure both wheal and flare when skin prick testing for food allergy?

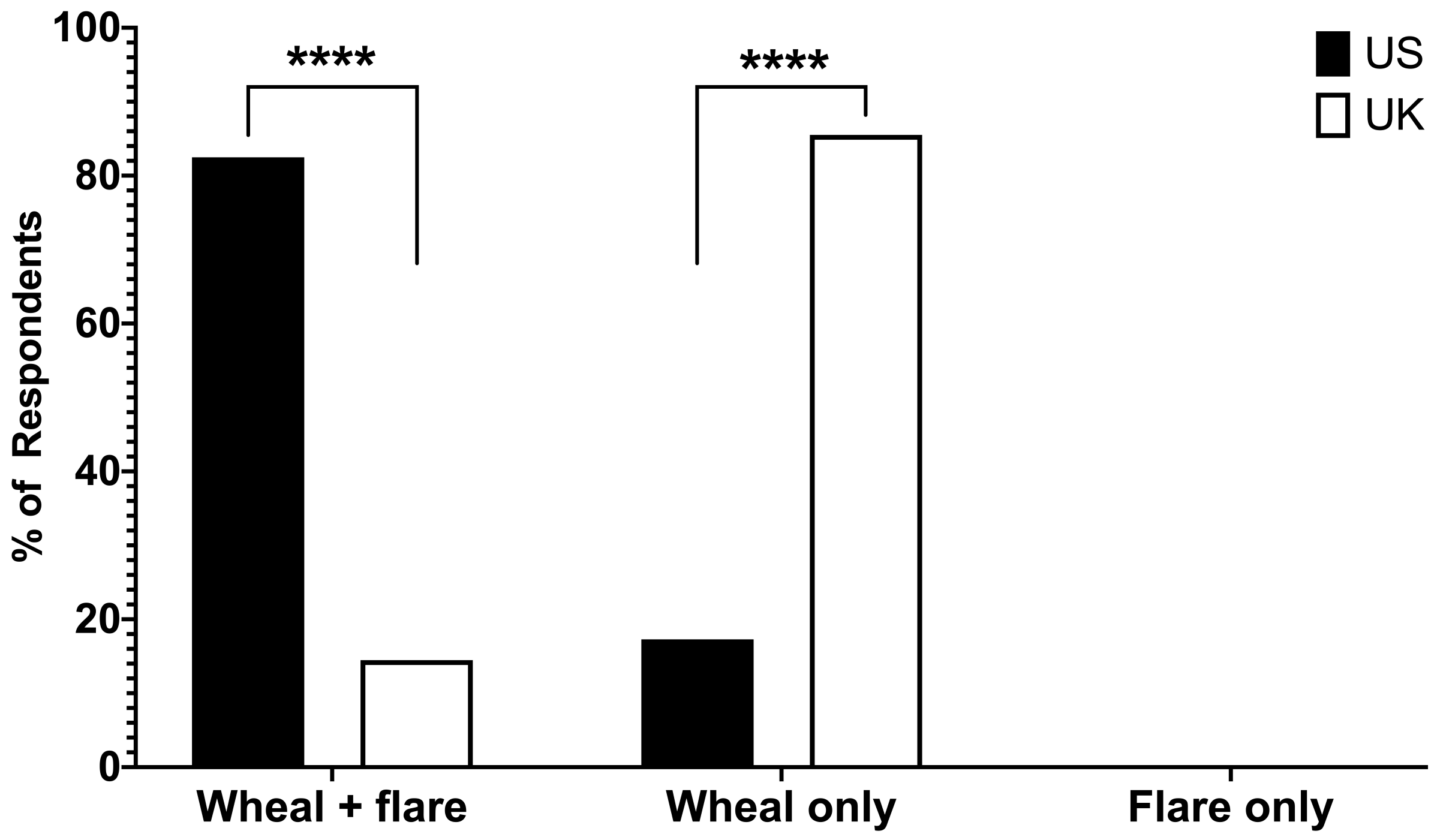
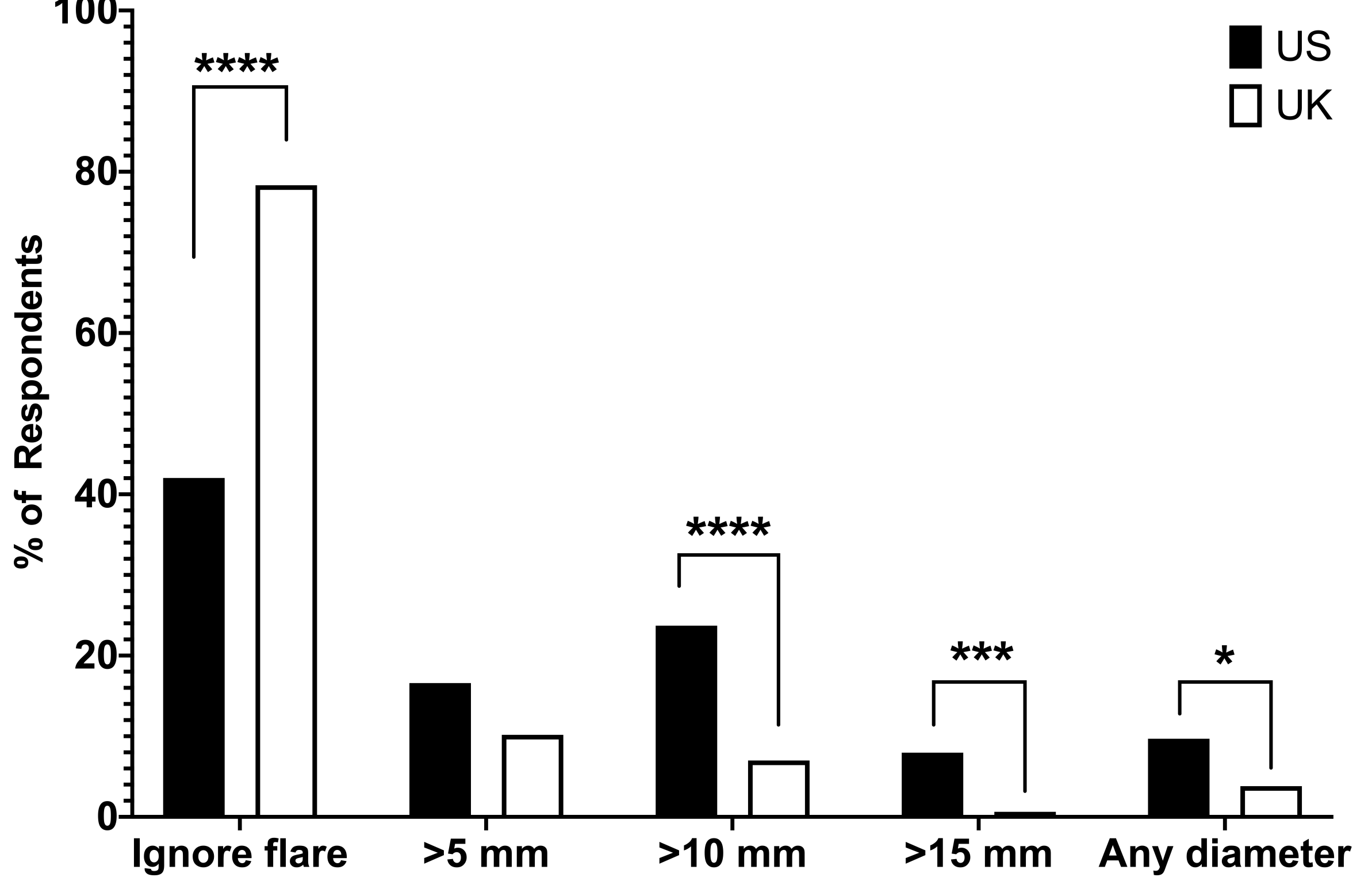


Figure 3

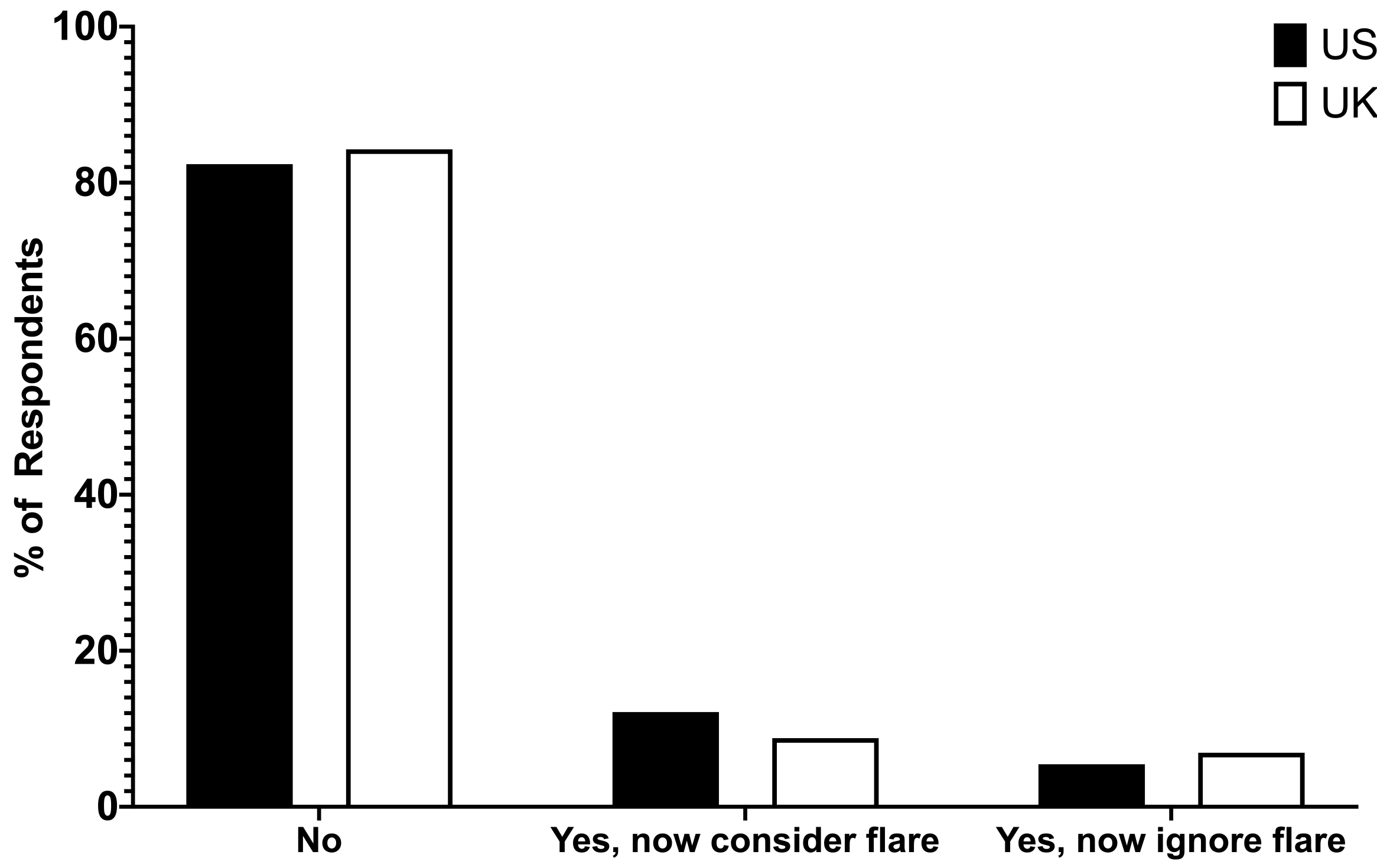
Q3: What cut-off do you use for a positive flare response?



Results (continued)

Figure 4

Q4: Has your practice with regards to measuring/considering the flare response changed over the years?



- 1) Eighty-two percent of US allergists surveyed measure both the wheal and the flare compared to 14% of UK physicians.
- 2) Many more UK allergists ignore the flare in the absence of the wheal.
- 3) Fifty-eight percent of US physicians will consider a positive flare response and only 24% will consider a >10 mm flare response as positive in the absence of a wheal.
- 4) The providers' practice with regards to measuring and considering the flare did not change over time in either region based on self-report.

Conclusions

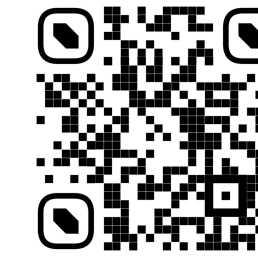
- 1) Identified significant discordances in SPT interpretation practices between allergists in the US and the UK.
- 2) These differences may potentially contribute to conflicting diagnoses for patients, alter management plans, and ultimately affect the clinical outcomes of IgE-mediated food allergy patients.

Future Considerations

- 1) Follow-up survey to evaluate whether SPT interpretation affected a practitioner's decision to proceed with oral food provocation challenges.
- 2) Inquire whether the practice of using wheal +/- flare was applied across all age groups tested for food allergies.
- 3) Potential for academic versus private practice bias.

References

Abstract/References available at the following link:



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