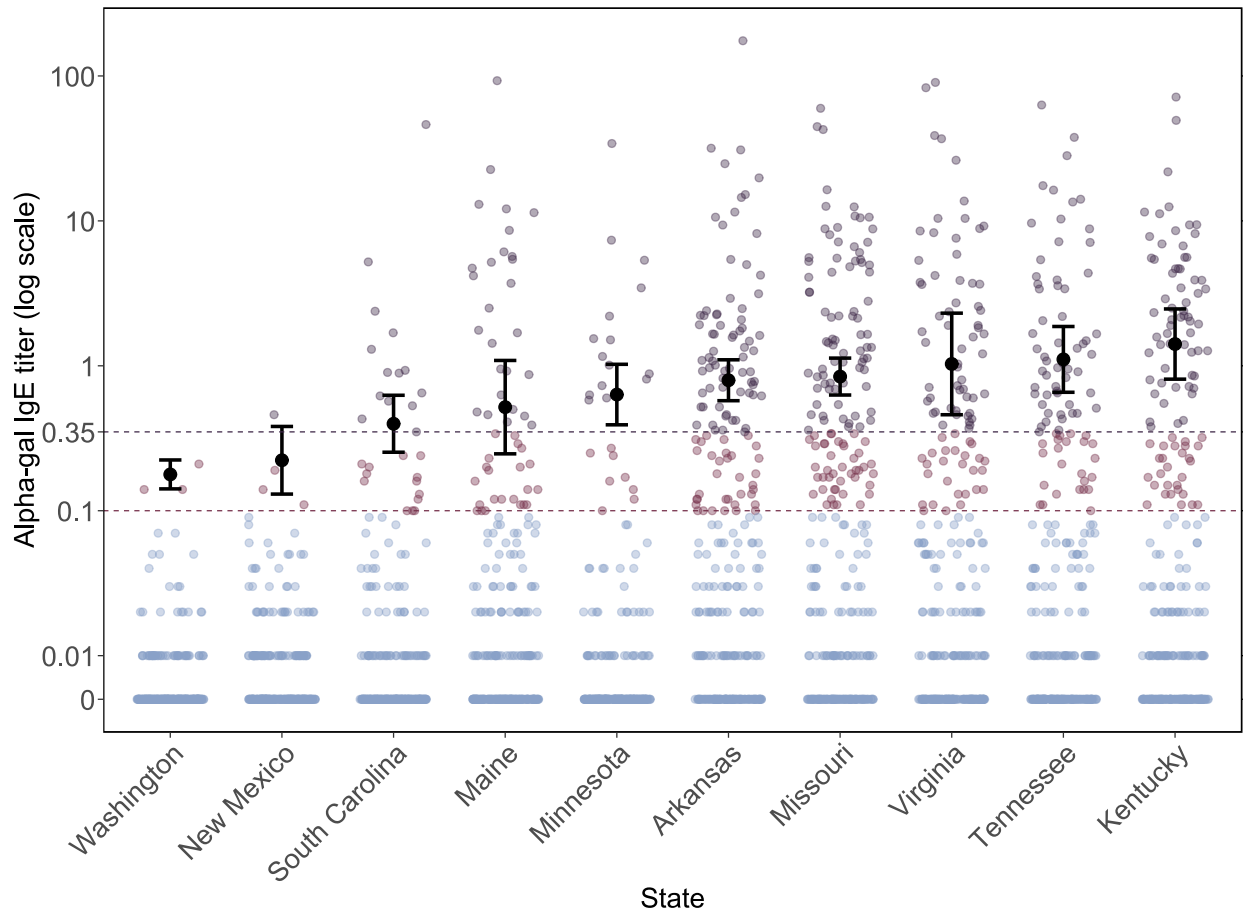


SUPPLEMENTARY FIGURE 1. Alpha-gal immunoglobulin E titers* of 3,000 blood donor samples[†] and geometric mean titer[§] of positive alpha-gal IgE tests,[†] by state — 10 states, November 2024–April 2025**



Abbreviation: IgE = immunoglobulin E; kU/L = kilounits per liter; CI = confidence interval

* The limit of quantitation (the lowest level at which the assay can reliably and reproducibly quantify specific IgE) of ImmunoCAP allergens, including o215 alpha-Gal, is 0.1 kU/L. Although the limit of quantitation is 0.1, there is still some quantitation within the negative range, in addition to titers = 0; this might represent low-level signal (noise) or values that are not analytically reliable. Blue points represent negative alpha-gal IgE titers and should be considered equivalently negative.

[†] There are 300 points per state representing 300 blood donor samples per state. In each state, points are numerous and therefore confluent at an alpha-gal IgE titer of 0.

[§] Black points with error bars represent the estimated geometric mean alpha-gal IgE titer of all positive tests in each state based on poststratification of data by age and sex, and error bars represent the 95% CIs.

[†] The quantitative value 0.35 kU/L was previously used as the IgE antibody analytical and clinical threshold, before the U.S. Food and Drug Administration approval of a 0.1 kU/L analytical threshold. An optimal clinical threshold value of 0.59 kU/L, not shown on this plot, has been previously proposed to better distinguish true clinical allergy from allergic sensitization (i.e., asymptomatic seropositivity) (<https://pubmed.ncbi.nlm.nih.gov/36574585/>).

** During 2017–2022, Arkansas, Kentucky, Missouri, Tennessee, and Virginia had the highest numbers of suspected AGS cases per population. New Mexico and Washington were selected as states without lone star ticks and with low numbers of suspected AGS cases. Maine, Minnesota, and South Carolina were considered to have moderate numbers of suspected AGS cases. Maine was selected because 1) the state is at the leading edge of the northward expansion of lone star ticks and 2) Maine CDC has performed and published AGS surveillance as a reference point. Minnesota was selected as a state with a relatively high number of suspected AGS cases relative to its minimal lone star tick populations. South Carolina was selected as a state with established lone star tick populations but with fewer suspected AGS cases than its neighboring states.