Characterizing C-Reactive Protein in the Daasanach, a semi-nomadic pastoralist community in Northern Kenya

Anna Tavormina | *MSGH Candidate*

OBJECTIVES

Members of the study team at El Bokoch School.

C-Reactive Protein (CRP) is a commonly used biomarker of inflammation associated both with acute and chronic immune response. Elevated CRP is associated with negative health outcomes. In high income countries, elevated CRP

- Characterize CRP levels in the Daasanach population.

- Explore the association between adiposity and CRP in the Daasanach.

- Compare inflammatory levels and risk factors between the Daasanach and United States population (using data from the National Health and Nutrition Examination Survey).

METHODOLOGY

This year, the study team conducted interviews and collected anthropometric from 227 households and 599 individuals as part of a semi-longitudinal cohort study.

Height, weight, body fat (measured via both bioimpedance and skinfold calipers), and immune biomarkers (from dried blood spots) were collected among other anthropometrics for this analysis.

Data collected in 2022 (Daasanach) and 2017 - 2020 (NHANES) were used for preliminary analyses.

The researcher collecting dried blood spots from a participant.

PRELIMINARY FINDINGS
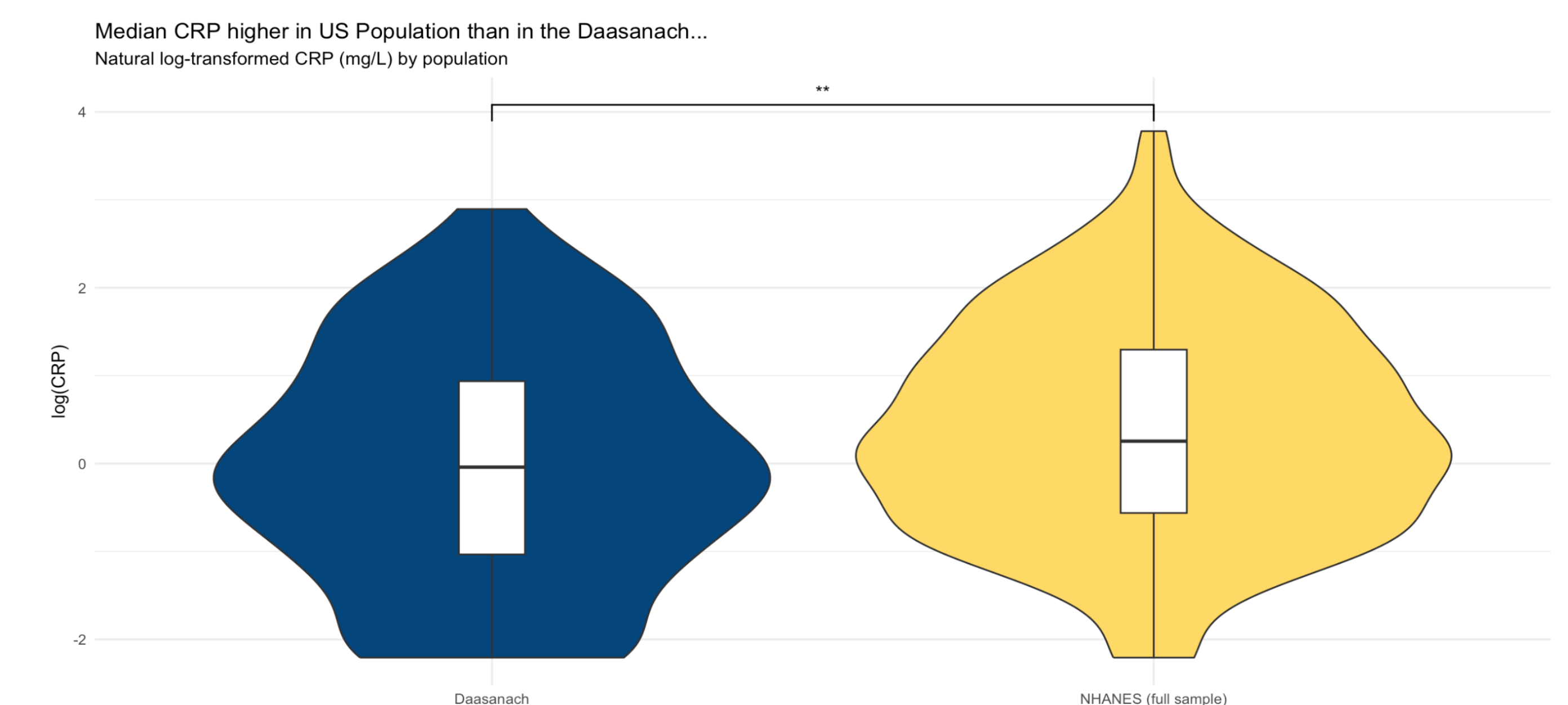
Median CRP in the US (1.325 mg/L) was higher than median CRP in the Daasanach (0.960 mg/L). However, CRP is positively associated with BMI. Median CRP among those in the US with BMI < 22 (0.460 mg/L) was less than that in the Daasanach.
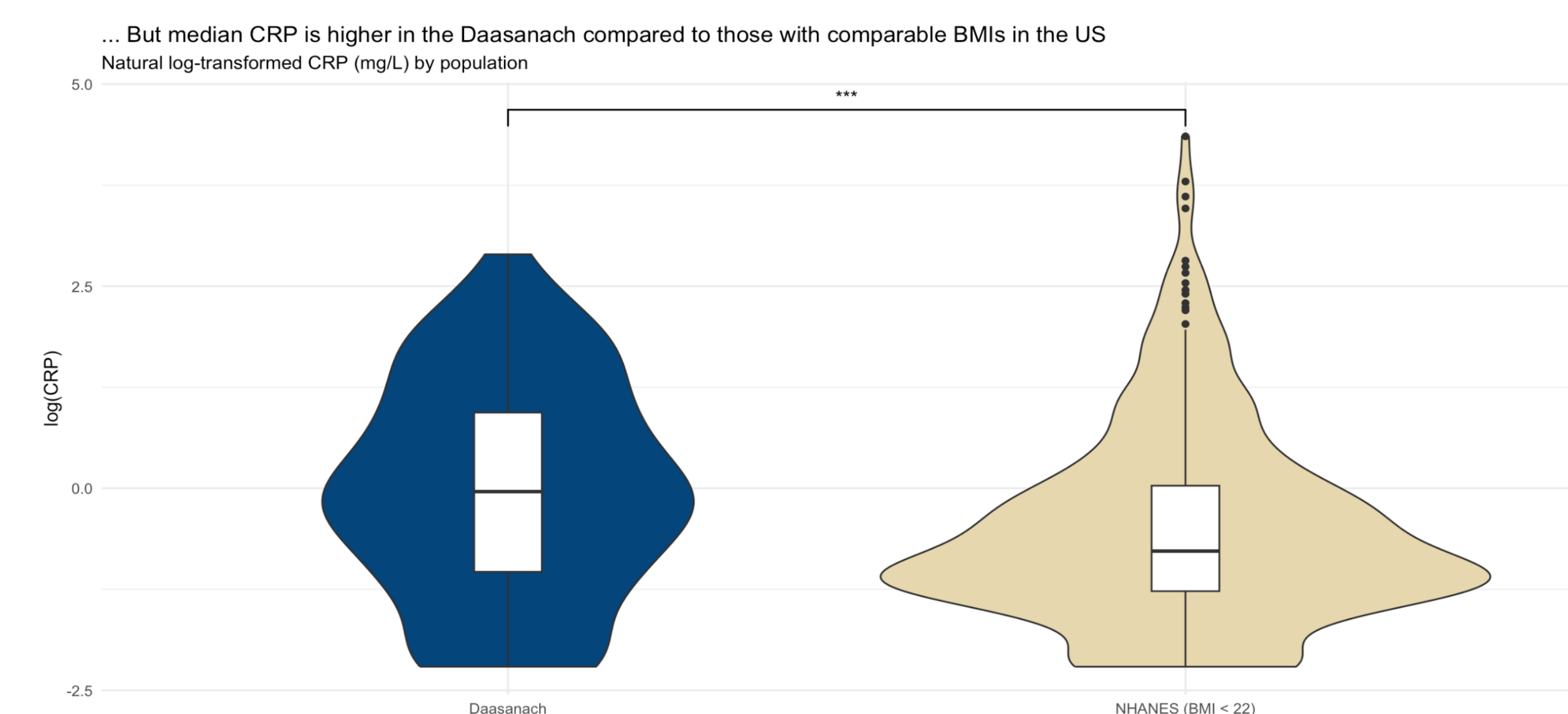
In the context of this study, these preliminary results suggest that inflammation in the Daasanach is influenced by both higher pathogen burden and lower energetic availability.

Note that CRP was natural-log transformed for these visualizations – significance asterisks indicate differences in mean log(CRP) from a two-way t-test, but median CRP values were reported here for interpretability.