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Biological distance between flexed and supine burials at the ancient Greek city of Himera using dental nonmetric data

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We investigate potential differences in genetic relatedness of flexed and supine burials from Himera, a Greek colony on Sicily (648-409 BCE), using biodistance analysis of nonmetric dental traits to explore whether locals adopted Greek burial styles, Greek and local customs hybridized, and/or each group maintained distinct burial styles. In other contexts, supine burials have been associated with Greeks, and flexed burials have been interpreted as representing indigenous individuals. Thus, we hypothesize that supine burials will be more closely related to Greeks from Euboea (indirect founders of Himera) and flexed burials will be genetically distinct, possibly representing locals. To test our hypothesis, we recorded presence and absence of 34 dental nonmetric traits using the ASU Dental Anthropology System in 57 individuals from Himera (23 flexed, 34 supine) and 45 from Karystos, Greece. Pseudo-Mahalanobis D2 matrices using different trait combinations were used to estimate biological distance among groups. These analyses showed that the individuals buried in flexed and supine positions are genetically similar to one another and distinct from Karystos, suggesting that there were no major genetic differences between the burial types at Himera. The only trait that was significantly different between the two burial styles was the interruption groove (i.e., the “Etruscan” lateral incisor), which was significantly more common in the flexed burials (present in 88% of flexed and 59% of supine graves; Fisher’s Exact test p=0.0496). Genetic similarity of the flexed and supine individuals suggests that despite cultural differences in burial practice, the groups likely interbred.