**Isotopic analysis of bone is a rapid and affordable screening method of commingled assemblages of human remains from contexts including post-conflict mass burials.**

**Material and method**

- 5 femora sampled sequentially by drilling cores on four aspects of the diaphysis (anterior, posterior, medial, lateral);
- 56 to 68 samples per bone (308 in total) defatted and analysed for $\delta^{13}$C and $\delta^{15}$N using isotope ratio mass spectrometry (IRMS).

**Application: Intra-person isotopic limit**

The maximum variability in carbon and nitrogen isotope ratios in this study indicates values beyond which it becomes unlikely that two different samples came from the same individual (the ‘three-standard-deviation-from-the-mean’ model).

- $1.76\%$ for $\delta^{13}$C
- $1.71\%$ for $\delta^{15}$N

**Results**

Based on 308 isotopic measurements, the isotopic variation in each bone had the absolute range:

- $1.16\%$ to $1.47\%$ for $\delta^{13}$C,
- $0.77\%$ to $1.39\%$ for $\delta^{15}$N,

and the mean range:

- $1.35\%$ ($\sigma=0.14$) for $\delta^{13}$C,
- $0.92\%$ ($\sigma=0.26$) for $\delta^{15}$N.