2. Materials and Methods

Skeletal remains from the Oberbipp dolmen (3300-3000 BCE) and from 13 other Neolithic sites (fig. 1) were investigated by means of:

- Morphological analysis [1,2] to establish biological profiles and the minimal number of individuals (MNI)
- Stable isotope ratios of \( \delta^{13}C, \delta^{15}N, \delta^{34}S, \delta^{18}H, \delta^{18}O \) to reconstruct dietary and migration patterns [3,4]
- Ancient DNA analysis for population genomics and kinship analysis
- Radiocarbon dating to establish the relations within one burial site and between the different sites
- For all biochemical analyses unilateral pars petrosa are sampled to ensure that each dataset belongs to one and the same individual (fig. 2)

3. Results

- Based on right femora the MNI is 40 for the Oberbipp dolmen
- The age estimation shows the presence of all age classes (fig. 3)
- Pathological changes such as trauma or degenerative alterations can be found on approx. 40 bones
- Ancient DNA shows, that 63% of the individuals have haplogroup K, more specific 45% have haplogroup K1a+195

4. Conclusion

- The morphological analyses indicate a "normal" demographic distribution in the dolmen, including infants, which are widely missing in other sites (fig. 1) [5,6]
- Lesions typical for lethal interpersonal conflicts were not observed, but signs for healing, inflammations and unspecific deficiency symptoms were present
- First stable isotope ratios show relative negative \( \delta^{13}C \) values. Hence, a regular consumption of C4-plants, such as millet, is not assumed for the Oberbipp population
- The aDNA data can be traced back to a migration wave around 5500 BCE via principal component analysis [7]
- By the end of the project a comprehensive dataset of morphological and biochemical information will be available for the Neolithic population from Switzerland