

Tooth enamel and dentin are the most studied hard tissues used to explore hominin evolution, life-history, diet, health, and culture. Surprisingly, cementum (the interface between the alveolar bone and the root dentin) remains the least studied dental tissue even though its unique growth, which is continuous throughout life, has been acknowledged since the 1950s. This interdisciplinary volume presents in three parts state-of-the-art studies in cementum analysis and its broad interpretative potential in anthropology. Part I describes cementum biology; Part II presents optimized multispecies and standardized protocols to estimate age and season at death precisely. Part III highlights innovative applications in zooarchaeology, paleodemography, bioarchaeology, paleoanthropology, and forensic anthropology, demonstrating how cementochronology can profoundly affect anthropological theories. With a wealth of illustrations of cementum histology and accompanying online resources, this book provides the perfect toolkit for scholars interested in studying past and current human and animal populations.

Stephan Naji is a bioarchaeologist specializing in paleodemography, particularly in demographic and health transitions. His current research focuses on optimizing cementochronology within the broader evolutionary context of chronobiology for histological and virtual age-at-death estimation.

William Rendu is a zooarchaeologist interested in the mobility of past human societies. He implemented cementochronology during his PhD to discuss the seasonal distribution of Neanderthal activities. He is now continuing this work with a larger chronological framework as director of the International Research Laboratory ZooSCAN in Siberia.

Lionel Gourichon is a zooarchaeologist. His research interest lies in the emergence of food production in Southwest Asia and the Mediterranean area, in particular on human–animal relationships and the process of domestication.

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