

# Dental age estimation in Bosnian adults. Bias, Precision and Accuracy of five methods

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## ABSTRACT

The aim of the present study was to compare the accuracy, precision, and bias of five dental age estimation methods. The sample was comprised of 60 permanent teeth, obtained from 60 individuals aged 18–85 years.

Age was estimated according to the methods proposed by Ubelaker (UB), Lamendin (LA), Bang and Ramm (BR)-for intact and sectioned teeth, and Kvaal and Solheim (KS) for extracted teeth. Estimated dental age was compared to real chronological age of persons from whom teeth were extracted.

BR for intact teeth was found to be the most accurate (Mean absolute error was 2,66), with the highest precision (standard deviation 3,88) and the least bias (mean error 0,11) when estimation was performed on premolars. Except for BR method for intact teeth and BR method for sectioned teeth when estimation was performed on premolars all other methods had tendency to underestimate age in our sample. LA method displayed the lowest accuracy and precision with tendency to underestimate real age in every tooth type.

Final recommendations on which dental age estimation method should be used in Bosnian adults are based on achieved results of accuracy and precision as well as on the availability of necessary equipment and tooth type that is used for age estimation.