The aim of this study was to evaluate whether digitized images obtained from occlusal radiographs taken with low or over dose of radiation could be improved with the aid of computer software for digital treatment. Thirteen occlusal radiographs of a dry skull were taken employing 13 different exposure times. The radiographs were digitized and then manipulated with the program for image editing. 143 evaluations were performed by specialists in dental radiology who classified radiographs as appropriate or not appropriate for interpretation. Test Z was used for statistical analysis of the data and the results showed that it is possible to manipulate digitized radiographic images taken with 75% of the ideal exposure time and to make them suitable for interpretation and diagnosis. Conversely, it was concluded that the over exposed images, 57.50% above the standard exposure time, were inadequate.

Key words: radiographic image enhancement, image processing, computer-assisted radiography, dental radiography.