*Abstract*— Osteoporosis screening using dental X-Ray images has been growing an interesting research. Existing methods for osteoporosis screening have been peformed using the dental peripiacal or panoramic in X-Ray images. There were limited research using both the periapical and panoramic due to the expensive cost of obtaining data. This paper presents a combination of the periapical and panoramic images for osteoporosis detection. The images processing methods were performed to obtain the shape-based features of the porous trabecular bone on both the dental radiograph images. The important features were selected from the extracted features. These selected features were choosen for osteoporosis detection using decision tree. The quantitative evaluation used confusion matrix. It were found accuracy rate to be 73.33%, sensitivity rate to be 72.23, and spesificity rate to be 72.23% for data testing.

Keywords: dental X-Ray, feature selection, osteoporosis

detection, porous trabecular bone