

The objective of this paper is to identify osteoporotic cases from healthy controls on 2D bone radiograph images, using texture analysis. Taking into account the piecewise fractal nature of bone radiograph images, an appropriate fractal model is used to characterize the trabecular bone network. A piecewise Whittle estimator for calculating the Hurst exponent H is used to better consider the piecewise fractal nature of the data. The Support vector Machine (SVM) are used as classifier to discriminate the two populations. A total of 116 training and test images are used. The k-fold Cross-validation method is used to validate the results of the classification