Osteoporosis is a condition of decreased bone mass. This leads to fragile bones which are at an increased risk for fractures, more often, it affects postmenopausal women. In this paper we propose a study of osteoporosis with the fractal dimension. After an introduction to the theory and fractal dimension, we use the box counting method for the segmentation of radiographic images, the study of the influence of range size boxes on the fractal dimension will be investigated, and the correlation between a reference dimension and bone mineral density. Other imaging techniques will be given in order to see the results of the application of the method on these types of images

Osteoporosis is a condition of decreased bone mass. This leads to fragile bones which are at an increased risk for fractures, more often, it affects postmenopausal women. In this paper we propose a study of osteoporosis with the fractal dimension. After an introduction to the theory and fractal dimension, we use the box counting method for the segmentation of radiographic images, the study of the influence of range size boxes on the fractal dimension will be investigated, and the correlation between a reference dimension and bone mineral density. Other imaging techniques will be given in order to see the results of the application of the method on these types of images