Determining features for discriminating PTB and normal lungs using phase congruency model

Abstract

The appearance of the infected zone on the digital chest X-ray image for pulmonary tuberculosis (PTB) does not conform to standard shape, size or configuration. This study uses phase congruency (PC(x)) values to gather information from transition of adjacent pixel values that may be used as features to represent known disease type. The feature vector consisting of the average, variance, coefficient of variation and maximum PC(x)-values was found to be able to detect PTB with high accuracy.