Simulation and Analisys of periapical abscess with Periapical Radiograph image Using DCT (Discrete Cosine Transform) Transformation And K-NN(k-Nearest Neighbor) Method in Android Aplication– Nopriza Umami - 111090088

ABSTRACT

Periapical abscess is an advanced dental disease than tooth pulpitis. The diagnose of periapical abscess is difficult upheld exactly because it can't be seen with the naked eye.

The types of research is descriptiv with the purpose for detection part of the teeth with periapical abscess periapical suspect.method to research is using periapical radiograph image with DCT (Discrete Cosine Transform) transformation and K-NN (K-Nearest Neighbor) method.aplicated in android because android is very usefull for many people now and don't need special skills to operated so can be used easily by dentists later.

This system had an accuracy of 100% for training image and 83.1% for 28 testing image. when there is consists of 11 abscess periapical image and 11 normal image. For testing image consist of 14 abscess periapical image and 14 normal image.

The conclusions of this study is periapical abscess can be detected using DCT (Discerete Cosine Transform) transformation and K-NN (K-Nearest Neighbor) method with accuracy 83.1% and and the computation time is 2234,9 miliseconds.

Keywords: *DCT (Discrete Cosine Transform), periapical abscess, periapical radiograph image.*