STUDY IN DIAGNOSTIC IMAGING USING LINEAR AND CURVED TRANSDUCER OF ULTRASONOGRAPHY IN VITRO SAMPLE

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.



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ABSTRACT

STUDY ON DIAGNOSTIC IMAGING USING DIFFERENT TYPES OF ELECTRICAL TRANSDUCER ON ULTRASONOGRAPHY

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Ultrasonography or USG is diagnostic imaging technique in that applied to examine part of the human bodies such as soft tissues, muscles, tendons, vessels, joints and internal organs for possible pathology or lesions. USG has been proved as a nonionizing radiation, non invasive and capturing in real time. The objective of this study is to measure various depth penetration from 30 samples using linear and curved trasducer. By comparing two different types of transducer to determine which transducer is more accurate for lesion examination. Agar was used to be a media in this research. The sample (fish oil) was put in the media with different depth penetration then the sample measured using linear transducer (high frequency) and curveded transducer (low frequency). This research was also done by comparing the result of depth penetration using transducers and the real value of the penetration using a measuring instrument (caliper). The result of this study is linear and curved transducer are acurate for lesions examination. But linear transducer is stronger recommended transducer type to be used in lesions examination because it produce higher resolution of an image than curved transducer.

Keywords: Ultrasonography, USG, Transducer, Linear Transducer, Curved Transducer.

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DEDICATION

I dedicate this works for my family and friends

Also, for the future research



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First of all, I am grateful to the presence of God for establishing me to finish this research.

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