

Review of: "Dose Reduction in Medical Radiography: Advancing Veterinary Diagnostic Solutions"

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Potential competing interests: No potential competing interests to declare.

I'd like to thank the authors for their valuable effort; just a few clarifications are needed, in my opinion.

- Abstract

What do you mean at the beginning with wanting to “mitigate photon attenuation”? Did you mean reduce scatter?

You talk about entrance skin dose, and you report results of dose at the depth of x cm. Entrance skin dose is measured at the skin surface. I suggest clarifying what dose you are actually measuring and also improving the description of the setup in this regard in the manuscript.

- INTRODUCTION

- In the Beer Lambert Law, x does not represent the distance that the photon travels... Some photons will be absorbed, others scattered, and others will pass through the material. x (in your formula) represents the thickness of that material.
- Not sure I understand this sentence: “In radiology, attenuation can be explained as intensity and dose where the medium is the tissue.” I don't think it's correct; please rephrase.
- Referring to “while dose attenuation refers to the reduction in the amount of radiation absorbed by tissue as it passes through it.” → the dose is defined as the deposited energy per unit mass, so we can maybe say that dose attenuation refers to the reduction of the radiation energy absorbed by the tissue.
- I suggest to rephrase the last part of the intro to make the objective of this study clear.

- METHODS

- Regarding the method used to measure image quality, what does measuring the greyscale exactly mean? Why simply that would give you a measure of image quality/noise? I.e., I'm more familiar with methods such as measuring the standard deviation of the HU in a small area of the image where the tissue is supposed to be homogeneous.
- I don't understand very well the setup to measure what you call entrance dose. Did you position the dosimeter behind a water block of different thickness each time? How can the dose at increasing depth be higher, if I understood the setup correctly?

At the very end, what does this mean? “Low dose means low energy consumption which may create the chance of producing mobile diagnostic equipment instead of stationary.”?

