

# Review of: "Image Quality and Radiation Dose Assessment for the Clinical Applied 16 Slice CT Scanner using PMMA phantom and Quality Assurance phantom"

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Potential competing interests: No potential competing interests to declare.

General comment:

In my view this is a rather simple quality assurance test that any CT-unit has to undergo without any clear scientific value.

It may help as a quality control in your setup, but what can the community learn from it? What is the novelty here? There is no hypothesis and no statistical analysis that looks at or test presumptions.

You only present descriptive data - you should work with them and test them.

Also phantom measurements are only the first step - how does this translate into daily clinical workflow? What is your experience in clinical routine? Any qualitative or quantitative analysis that helps to support your approach?

Abstract:

You should structure the abstract in Aim, Materials and Methods, Results, Discussion and Conclusion

Please omit first sentence, it does not really help.

Why is a quality control worth publishing? It is actually a prerequisite to do so.

Introduction:

Again, a bit chaotic. Try to introduce the problem and the possible solution you are pursuing by applying your method. What is your study purpose? Again, quality check itself is not really newsworthy.

Materials and Methods:

Did you use any statistical analysis and which programme?

If there is only a listing of measurements it is descriptive and of minor value as a scientific manuscript. You need to test a

hypothesis with simple statistics, e.g. t-test to test a null-hypothesis against your findings. This is what makes an analysis scientific.

Dose measurements:

What technical imaging presets were used for scanning, i.e. tube voltage, -current, collimation, pitch.....You have to specify or better list them in a table exactly for your measurements.

Nose has to be noise (!)

Results and Discussion

You should separate Results and Discussion in separate paragraphs.

Also Conclusion should be last paragraphs.

Figures:

Please better illustrate how the phantom look like and what inserts are used for which measurements, e.g. Figure 4 looks like a magnification of the lower insert in figure 3? You could certainly better illustrate that with higher quality.

Also better describe in figure legends what you want to illustrate.

Table 2:

Why did air and polyethylene differ so much between actual HU and measured HU?