Reviewer's report

Title: Echocardiographic integrated backscatter for detecting progression and regression of aortic valve calcifications in rats.

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Reviewer: pompilio faggiano

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The issue of valve calcification as a marker of subclinical atherosclerosis, or predictor of valve stenosis progression or target for therapy is relevant for clinical practice.

This experimental study on noninvasive evaluation of valve calcification using ultrasound integrated backscatter add useful information on a potential new approach of valve calcification. Furthermore, the ability to evaluate changes in integrated backscatter parameters as a consequence of changes in clinical status or therapy, may have clinical relevance.

I have no major concerns on this paper: the study is well conducted, using a validated approach, the manuscript is well written.

It is unclear to me if the values of integrated backscatter found at baseline in both groups indicated the complete absence of valve calcification, which is well demonstrated by histology in control group (zero). In other words, a cut-off value for valve calcification presence/absence can be derived from this study?. This issue should be commented.

The applicability of this approach to human study should be commented in the Discussion section.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.

pompilio faggiano