



## Letter to the Editor

## Response to the letter to the editor by Fakoya et al.



Dear Editor,

We accept the invitation to reply to the Letter to the Editor submitted by Dr. Fakoya et al. [1]. We read their publication regarding “The Palm-Heart Diameter: A Prospective Simple Screening Tool for Identifying Heart Enlargement”, published in Open Access Macedonian Journal of Medical Sciences (2017 Dec 15; 5 (7):818–824) [2].

We understand that the authors pointed out that we did not reference their publication, which was available online on November 28, 2017, something less than 2 months before the date we submitted ours (January 24, 2018). In their article, Fakoya et al. [2] are using statistical tests to explore *correlation*. We however, were interested in *comparing* the measurements [3], making their publication less relevant in the context of our hypothesis [3].

We reply to the criticism of our article as follows:

1. The assumption that hand and heart size is the same in a healthy human heart appears in medical textbooks [4], making it one of the myths of medicine. We still see it on contemporary autopsy reports on occasion, which is why we wanted to test it.
2. The reason why we performed the volume measurements by using CT is exactly that volume measurements of the fist and heart reliably allowed to test our hypothesis. They are not performed routinely during autopsy.
3. Following the recommendation of Fakoya et al. for critical review of our references, we found that the study of Vanhaebost et al. [5] was cited as referring to fist/heart comparison, although it does not. It refers to predictors of heart size and as such it was selected and also referenced in the manuscript.
4. In contrast to the assumption of Fakoya et al., in our article, sex was obviously taken into consideration, as we tested for males and females distinctively. We did not perform the comparisons for distinct age groups, nor height classes, as this was irrelevant to answer our scientific question asked. Instead, we subclassified our study population based on the presence of cardiomegaly, because one of our hypotheses was that in case of cardiomegaly, heart volume would exceed that of the hand.

We critically review some aspects of the letter of Fakoya et al. [1]:

1. In their letter, Fakoya et al. [1] assume that their study “links the increase in heart diameter up to the age of 55 years” to myocyte regeneration [1]. Neither the term *myocyte* nor the term *regeneration* occurs in their article [2]. We suggest to verify the text.

2. In their letter Fakoya et al. [1] write: This factor of “2%” for cardiomyocyte multipotency appears relatable to the factor of “2%” increase in heart diameter up to 50 years of age. These numbers are equal by coincidence. Drawing any other conclusions from this appears to be scientifically unjustified.
3. The study of Fakoya et al. [2] references relations of hand width to genes. A more detailed read of the paper that they cite with that purpose (Zhao et al., 2011 [6]) reveals, however, that the abnormality related to the gene that Fakoya et al. [2] mention, *Tfap2b*, does not increase hand width per se. Instead and more precisely, that gene may bring about abnormalities of the fifth digit if not even postaxial accessory digits. Surely, the person measuring hands in the study of Fakoya et al. [2] would have noted variations of the anatomy of the hands as well as specific signs of the syndrome caused by Char syndrome in their study population.
4. Fakoya et al. [1] suggest palm measurements as a possible indicator for heart transplants. Such a measurement would add nothing to a complex decision, which can and should only be based on state of the art clinical testing.
5. Fakoya et al. [1] propose that their study was the first ever to explore a relationship between the hand and the heart. This seems questionable, as there appears to be a rather interesting and very well made study by Sterrett et al. [7] (1935, over 80 years ago) that they might have considered for citation, which dropped hand measurements from correlation with heart diameter approximation due to a very low correlation.

To summarize:

- Dr. Fakoya's work [2] is not comparable to our work since they explore *correlations* between hand width and heart diameter and we *compared* fist volume to that of the hand [3]. Moreover, it is definitely not the first one to explore such correlations.
- Several statements of their letter to the editor [1] lack scientific basis.

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## References

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Conflict of interest: None declared.  
All authors contributed equally to this reply.

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