Elsevier Editorial System(tm) for Ultrasound Manuscript Draft Manuscript Number: Title: Novel interest about cardiac variation of internal jugular vein for the evaluation of the hemodynamics Article Type: Letter to the Editor Corresponding Author: Dr. francesco sisini, Ph. D. Corresponding Author's Institution: Department of Physics and Earth Sciences First Author: francesco sisini, Ph. D. Order of Authors: francesco sisini, Ph. D.; Angelo Taibi; Gambaccini Mauro; Paolo Zamboni Suggested Reviewers: Opposed Reviewers: Dear Editor,

I am writing to bring to your attention the attached letter.

Sincerly,

Francesco Sisini

Novel interest about cardiac variation of internal jugular vein for the evaluation of the hemodynamics

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In a recent issue of Ultrasound in Medicine and Biology, we read the ar-1 ticle entitled "Cardiac variation of internal jugular vein for the evaluation of 2 hemodynamics" (Nakamura et al., 2016) with great interest. In such paper, 3 the authors, reported that for the first time it might be possible to estimate 4 hemodynamics parameters by analysing the cardiac variation in the cross 5 sectional area (CSA) of the IJV. The obtained CSA trace, represents a pe-6 riodic signals that nicely reproduces the a, c and v waves and the x and y7 descents of the jugular venous pulse (JVP). The authors declare that at the 8 best of their knowledge no study has examined the cardiac variation in the CSA of the IJV. In fact, last year, our group published on this same journal 10 the proof of concept of this methodology (Sisini et al., 2015) practically si-11 multaneously with another similar paper (Sahani et al., 2015). Moreover, nn 12 the same issue of this journal where it was published the paper by Nakamura 13 et al, is present a further paper of our group that demonstrates the clinical 14 applicability of this innovative ultrasonic methodology (Sisini et al., 2016). 15 We hope that the flourishing of publications about this topic will lead to the 16 revision of the JVP, which is certainly one of the most solid parameters that 17 can take pictures of the heart brain axis, overcoming significant technical 18 challenges in acquiring flow information with the usual methods of Doppler 19 ultrasonography (Zamboni, 2016). The JVP was in fact, a fundamental pa-20 rameter in medical diagnostics but in recent decades has been phased out, 21 especially because of the technical problem of trying to acquire it with the 22 traditional method. 23

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