Nature Reviews Cardiology published online 10 February 2015; doi:10.1038/nrcardio.2014.188-c2

REPLY

T2 versus T2*: competitive or complementary sequences?

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We would like to thank Dr Kidambi and Dr Plein for their thoughtful comments (Detection of intramyocardial haemorrhage by MRI—no single rule. *Nat. Rev. Cardiol.* doi:10.1038/nrcardio.2014.188-c1)[1] on our Review (Intramyocardial haemorrhage after acute myocardial infarction. *Nat. Rev. Cardiol.* doi:10.1038/nrcardio.2014.188)[2] regarding the use of T2 and T2* imaging for the detection of intramyocardial haemorrhage (IMH). We fully agree with the author's statement that "at the present time, advice to dismiss T2 imaging might be premature and not supported by current evidence." We certainly do not advise that clinicians dismiss T2 imaging. In our Review we advocate the combined use of T2 and T2* with late gadolinium enhancement to enable the specific delineation of oedema, IMH, infarct tissue, and microvascular injury.[2]

The sentence in our Review that the authors are referring to is our own opinion rather than a recommendation and is phrased as such. This opinion is formed by the fact that T2* imaging seems to be less influenced by oedema compared with T2, as shown in the study by Kali and colleagues.[3] Notably, Kidambi *et al.* also found that, when T2* imaging indicated IMH, contrast was higher than when using T2 and susceptibility weighted imaging.[4]

We are also aware of an article by Payne *et al.* (who used a porcine model, and not a canine model as stated in the correspondence by Kidambi and Plein) in which T2 and T2* detected IMH to a similar degree.[5] Consequently, we strongly support ongoing research to further optimize cardiac magnetic resonance sequences to detect IMH. Such optimization will enable improved characterization of the pathophysiology of cardiac reperfusion damage and permit the design of strategies to limit this myocardial damage.

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Competing interests
The authors declare no competing interests

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