

Letter to the Editor

Reply: 'Hand pattern indicates risk of prostate cancer'

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Sir,

We thank Cheema and Sharif (2011) for their interest in our paper. We agree that the strength of our study lies in its size, and therefore, we have been able to make reliable estimates of the association between digit ratio and prostate cancer risk. Epidemiological studies are able to estimate such relationships, but they are more limited in their ability to explain why such relationships occur, particularly in terms of the underlying biology as other possible explanations of any risks observed may exist. As such, the main purpose of our paper was to estimate the association between digit ratio and prostate cancer risk *per se* given the previously reported associations seen in a number of other cancers and indeed other conditions/traits. The explanation is that such risk may be driven by an underlying relationship with pre-natal hormone levels remains speculative, but would be in keeping with

current thinking on the aetiology of prostate cancer. The evidence for a link between pre-natal hormones and digit ratio is suggested by McIntyre (2006) and Breedlove (2010).

In terms of any changes in the ratio of digit lengths with age or other factors, we are unaware of any data other than that of McIntyre *et al* (2005) and Trivers *et al* (2006) that suggest that it is generally longitudinally stable, and given that further collection of longer-term information on this would require much time and effort, we remain happy to present our main finding on the association to encourage other groups to study whether such a relationship is seen in other studies, given the interest in this externally available trait.

If our observations are replicated, the finding may further stimulate useful insights into the biology of prostate cancer risk and/or have clinical utility.

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