Dear Sir,

We appreciate the interest shown by Sivrioglu et al. in our article. Some of the concerns raised by the authors have already been discussed in our article. [1] Nevertheless, we take this opportunity to further clarify the contentious issues.

We have been doing diffusion-weighted MRI (DW-MRI) as part of the protocol for renal lesion evaluation since 2008, employing b-values of 0 and 500 s/mm$^2$, and have published data from the same. [2,3] The present article was based on a retrospective review of patients who underwent DW-MRI for characterization of focal renal lesions and not primarily for evaluation of renal function. Through this study, we wanted to highlight an additional benefit of renal DW-MRI which we encountered, that apparent diffusion coefficients (ADCs) can be used to assess renal perfusion and fibrosis.

In this study, ADC measurements were calculated irrespective of renal medulla and cortex. Due to the histopathologic differences of renal medulla and cortex, the ADC measurements may vary between normal and patient groups.[2,3] If this distinction had been made, we think that the cut-off ADC values described in this study may change.

The reasons for differences in parenchymal diffusion are renal perfusion differences, glomerulosclerosis, tubular atrophy, and interstitial fibrosis, which were found on comparing healthy people and patients with renal failure.[1] With comparative studies, renal perfusion with low b values (like 50 s/mm$^2$) and the other reasons with high b values (>500 s/mm$^2$) can be assessed more accurately. Thus, the state of the kidney perfusion and fibrosis can be considered separately. We think that this determination may show the way to stage renal failure and treatment, and also may be an issue for further studies.

In this study, ADC measurements were calculated with two b-values (0 and 500 s/mm$^2$). But it is recommended that ADC values should be measured with at least with three b-values (such as 0, 50, and 500 s/mm$^2$), so that the ADC values and cut-off values can be determined more accurately.

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References