

## T1 mapping and magnetic resonance elastography: potential new techniques for quantification of parenchymal changes in hepatic amyloidosis

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We read with interest the pictorial essay by Özcan et al. (1) entitled “Imaging for abdominal involvement in amyloidosis” in the recent issue of *Diagnostic and Interventional Radiology*. In this article, the authors provide both textual and visual portrayals of abdominal amyloidosis, which is difficult to diagnose because of nonspecific imaging findings and frequent subclinical presentation.

Both computed tomography and magnetic resonance imaging (MRI) findings, in combination with clinical history, anatomic location and patient’s primary disease can help to limit the differential diagnosis. In this context, we would like to share our experience with two newly emerging imaging techniques that could be of interest to radiologists. A 46-year-old woman with biopsy-proven liver amyloidosis underwent liver and heart MRI examination with T1 mapping. Using modified look-locker inversion recovery (MOLLI) sequence, liver T1 values were higher (855 ms at MOLLI 5(3)3(3) and 880 ms at MOLLI 3(3)3(3)5) compared with the mean values (550±70 ms at MOLLI 5(3)3(3) and 615±35 ms at MOLLI 3(3)3(3)5) obtained in healthy volunteers (Fig. a). Many studies proved that T1-mapping values are informative for the presence of myocardial amyloidosis and normal T1 values can exclude cardiac amyloidosis (2, 3). Although we have found hepatic T1 values more than 4 times the standard deviation in our case, further investigations are need-

ed to confirm our observations regarding the utility of mapping techniques in liver amyloidosis.

The patient was also evaluated with magnetic resonance elastography (MRE) during liver MRI and very high liver shear stiffness values (mean, 8.5 kPa) were detected (Fig. b, c). A recent report has documented increased liver stiffness measured by MRE in liver amyloidosis (4). T1 mapping and MRE may be new tools to visualize and quantify liver changes in amyloidosis.

### Conflict of interest disclosure

The authors declared no conflicts of interest.

### References

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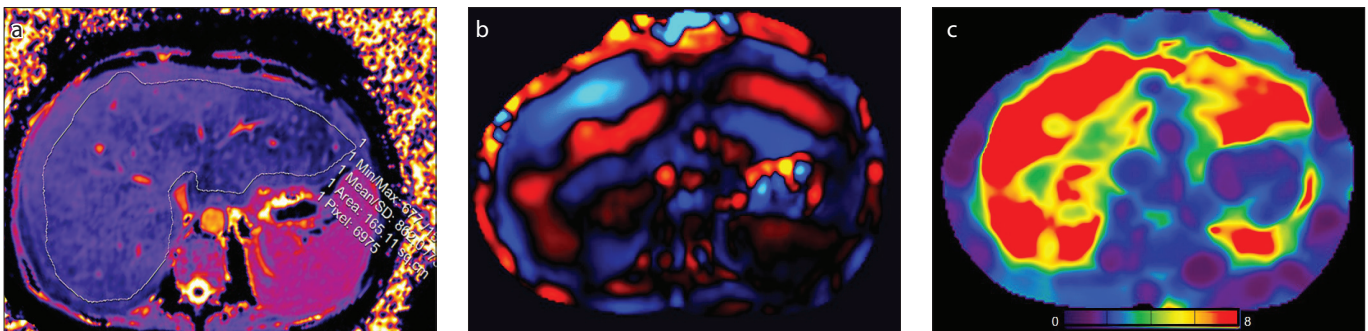


Figure. a–c. A 46-year-old woman with biopsy-proven liver amyloidosis. Unenhanced modified look-locker inversion recovery (MOLLI) T1 map at 1.5 T (a) reveal diffuse abnormal high T1 values. Wave image (b) and elastogram (c) reveal high liver shear stiffness values (mean 8.5 kPa).