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(54) Title: METHOD AND SYSTEM OF MRI IMAGING TO ESTIMATE LIVER WATER R₁ AND R₂* VARIABILITY

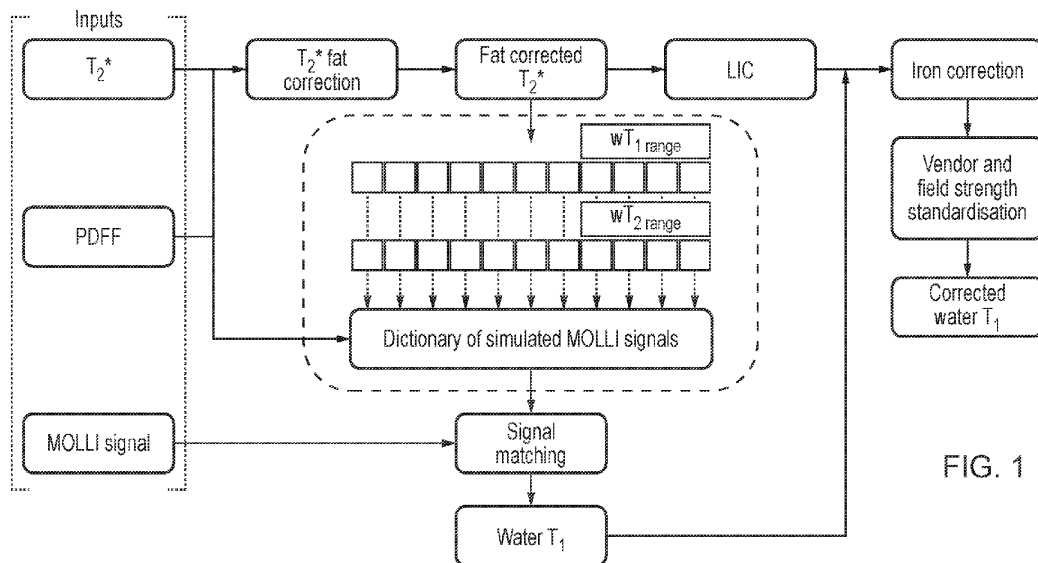


FIG. 1

(57) Abstract: The present invention relates to the field of liver imaging using MRI. In particular, the present invention provides means to estimate the variability in liver water R₁ and R₂* with reference to liver water, iron and fat content. Disclosed is a method of liver imaging comprising the following stages: 1. input stage; 2. T₂* fat-correction stage; 3. generation of simulated MOLL signals stage including: (a) LIC-LWC relaxation rate i) estimating the influence of LWC on R₁ and R₂* ii) estimating the influence of LIC on R₁ and R₂* iii) healthy-liver reference water R₁, LIC, and R₂* values; and (b) estimation of water T₂ and (c) generating a dictionary of simulated MOLL signals; 4. signal matching stage; 5. water T₁ iron correction stage; and 6. water T₁ standardisation stage including: (a) water T₁ field strength correction; b) water T₁ vendor correction.

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