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mDIXON Quant delivers robust, high quality fat quantification

White Paper

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Multi-echo, multi-peak mDIXON Quant method delivers robust, high quality fat quantification

mDIXON Quant balances accuracy and efficiency in acquiring the data needed for fat quantification in the liver non-invasively, in a single breathhold.

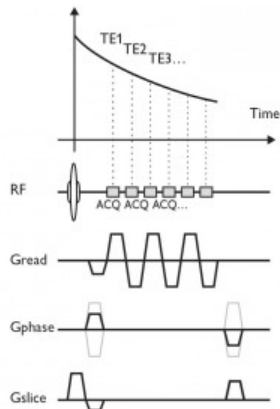
A simple in-phase and out-of-phase acquisition may be used for a qualitative assessment of fat. However, mDIXON Quant uses a 6-echo acquisition for robust and high quality fat quantification. Using a higher number of echoes has the advantage of allowing quantitative assessment, accommodating fat molecules' multiple spectral peaks and enabling T2* correction. T2* correction is necessary because T2* signal decay between echoes influences the relative signal intensity of the fat peaks.

White Paper

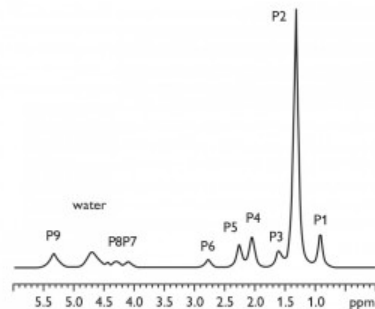
Ingenia 1.5T, Ingenia 3.0T
Body, fat fraction, Liver,
mDIXON Quant

Freely selectable echo time

mDIXON Quant differs from other MR fat quantification methods because its algorithm maintains freedom for the user in selecting echo times. This also provides flexibility in choosing other parameters, such as resolution and field of view. The 7-peak reconstruction enables robust water/fat separation, which delivers better modeling of heterogeneous fat distribution in the liver.



6-echo acquisition



7-peak fat modeling

Convenient color maps

mDIXON Quant results can be displayed in a color fat fraction map that visually conveys the amount of fat in the liver, and enables convenient comparison of images acquired at different times.

Another benefit of the mDIXON Quant technique is the possibility to create a T2* map. When paired with fat quantification, this provides a more complete picture of liver health.

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