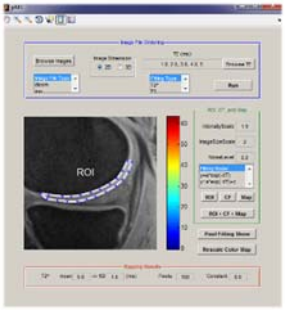
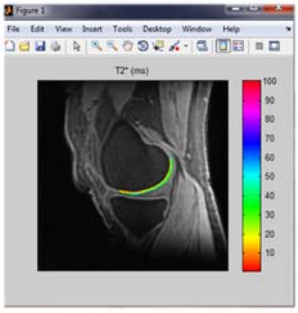
GLC New Product Release: 2015-02-20

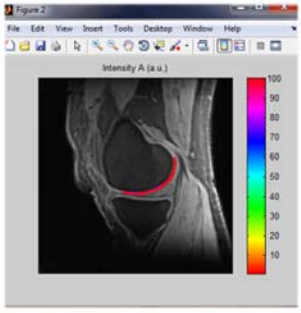
Software for MRI T_2/T_2*/T_1/$T_{1\rho}$ Mapping



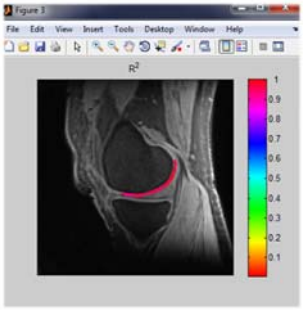
Software pM1



Parameter T_2* map



Intensity A_0 map



Fit-goodness R^2 map

Qian's Lab for MRI at the General Labs Cloud, LLC announces a new software for T_2, T_2*, T_1 and $T_{1\rho}$ mapping. The software, including ***pM1*** for mono- and ***pM2*** for bi-exponential fitting, provides clinical researchers with a critical tool for data processing on standalone computers (laptops or desktops).

The maps of relaxation parameters T_2, T_2*, T_1 and $T_{1\rho}$ provide quantitative characterization of tissues in human body (e.g., cartilage in the knee, parenchyma in the brain, and myocardium in the heart) which may be at risk for failure in function. The software evaluates these relaxation parameters pixel by pixel in a region of interest (ROI) and produces color-encoded maps for the parameters. In addition, it exclusively provides a *fit-goodness R^2 map* for quality control of the mapping, which helps users to gain confidence in interpretation of the parameter maps for tissue degeneration. In the evaluation two models are used: (1) One-term exponential decay plus a constant term for the T_2/T_2*/T_1/$T_{1\rho}$ mapping (implemented by pM1), and (2) Two-term exponential decays plus a constant term for the T_2/T_2* mapping (implemented by pM2). The parameter maps can be used in clinical research for detection of early degeneration in tissues or for assessment of response to interventions.

The software is a MATLAB-based standalone computer program and can be installed into PC/Mac computers without MATLAB installed in them. It runs on MRI images in DICOM format and outputs three types of map (relaxation parameter, component intensity, and fit-goodness).

Main advantages: (**1**) Work on standalone computers for individual's use, (**2**) Provide fit-goodness maps for confident interpretation, and (**3**) Be cost-effective to budget users through a flexible-term lease.

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