TOSHIBA

MR Body Expert

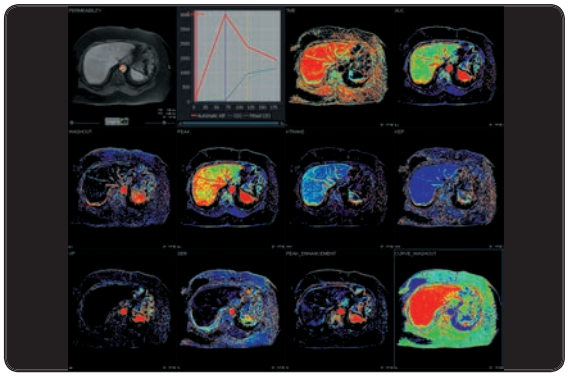
Vitrea™ software is a multi-modality advanced visualization system providing comprehensive applications in a variety of IT environments.

The MR Body Expert package, powered by Olea Medical, provides expert users with access to the latest tools and applications for Breast, Prostate and Body Imaging.

Applications

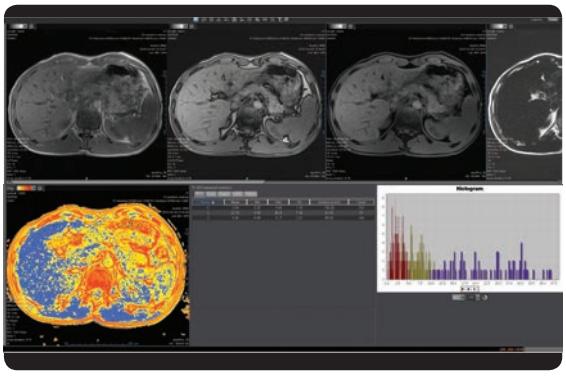
DCE Permeability*

The DCE Permeability application computes the main permeability maps from raw perfusion series, supports irregular time sampling and different mathematical models with computation on each time point and provides optimized qualitative maps (TME, AUC, WASHIN, WASHOUT, PEAK) and semi-quantitative maps (Ve, Vp, Kep and Ktrans). It is embedded with the following: automatic or manual arterial input function, automatic or manual background segmentation and instantaneous motion correction algorithm.



Metabolic*

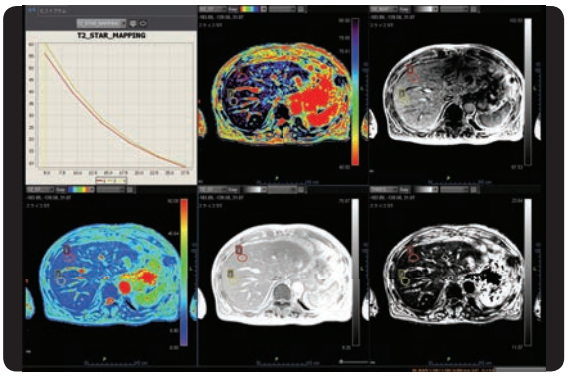
The Metabolic application investigates tissue characteristics in hepatitus, cirrhosis, cancer and other disorders, by measuring the hepatic fat fraction (HFF), through a non-invasive method. This is highly useful to better evaluate severe diseases such as non-alcoholic fatty liver diseases



for which liver biopsy cannot be routinely performed. With MRI dedicated sequences (2p and multi-points Dixon acquisitions), the Olea application computes fat fraction map (FF), for the quantitative measurement of the hepatic fat percentage. (Without T2* correction, fat fraction using 2 point Dixon method could result in inaccurate results.)

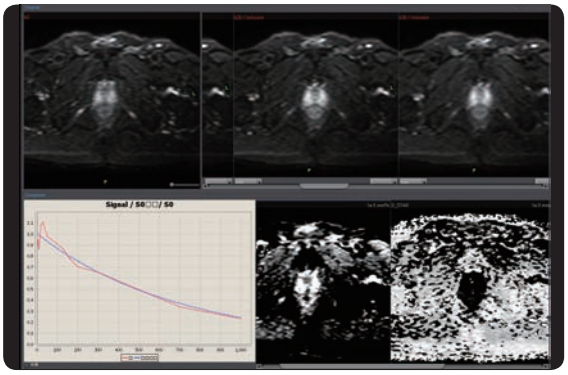
Relaxometry*

The Relaxometry application measures relaxation times from MRI images, improves sensitivity and reduces subjectivity of visual evaluation, therefore enhancing investigation of tissue abnormalities. With MRI dedicated sequences, this application generates the T2 map and T2* map, computed from and T2* map sequences (spin echo and field echo sequences with multiple echo times), such as offering T2* value for the evaluation of iron level in fibrotic liver.



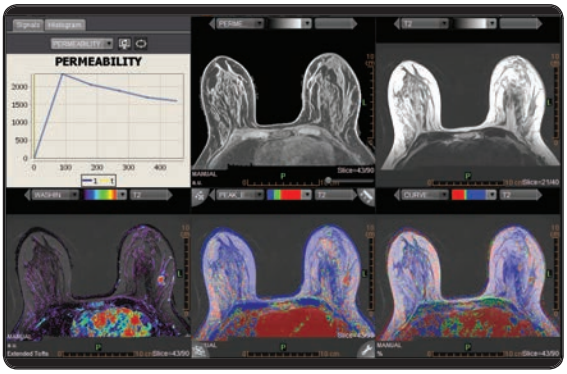
IVIM*

IVIM imaging is a concept and a method to quantitatively assess all the microscopic translational motions that could contribute to the signal acquired with diffusion MRI. These motions are both molecular water diffusion (due to thermal Brownian motion) and microcirculation of blood (also called pseudo-diffusion). IVIM computes the main IVIM maps (D, D*, f). It is the only one featuring the Bayesian post-processing method, a rigorous probabilistic estimation of diffusion parameters. IVIM, offering optimized computational time, is embedded with motion correction algorithms and includes NEX variable or accumulation variables.



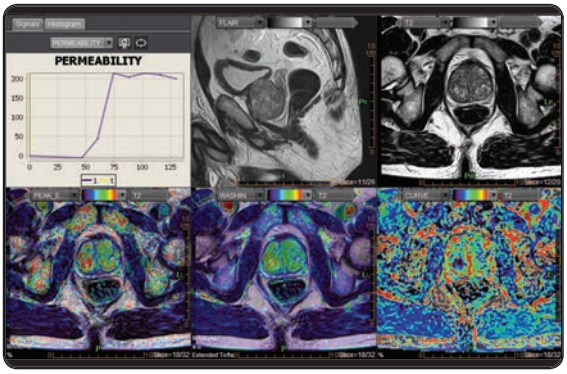
Application Workflows

Breast Expanded*



The Breast Expanded application is an efficient tool for breast cancer detection, characterization and staging. This workflow computes and displays conventional, diffusion and permeability maps and offers complete multiparametric analysis, including MPR and 3D visualization, volume segmentation, multiple series fusion, permeability with qualitative and quantitative analysis. The Breast applications also include the latest Breast detected report based on BI-RADS** ATLAS; useful to improve communication between radiologists, patients and referring physicians. The standard reporting tool ensures acceptable risk assessment and enhanced follow-up of suspicious findings.

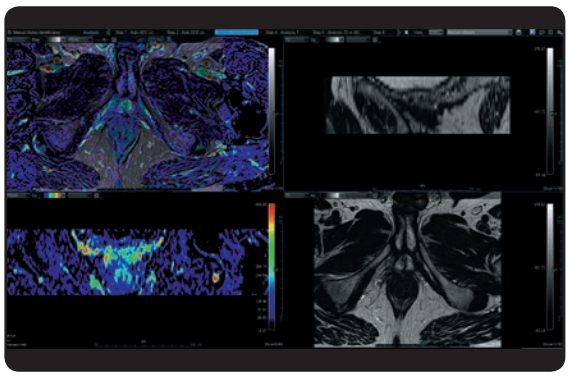
Prostate Expanded*



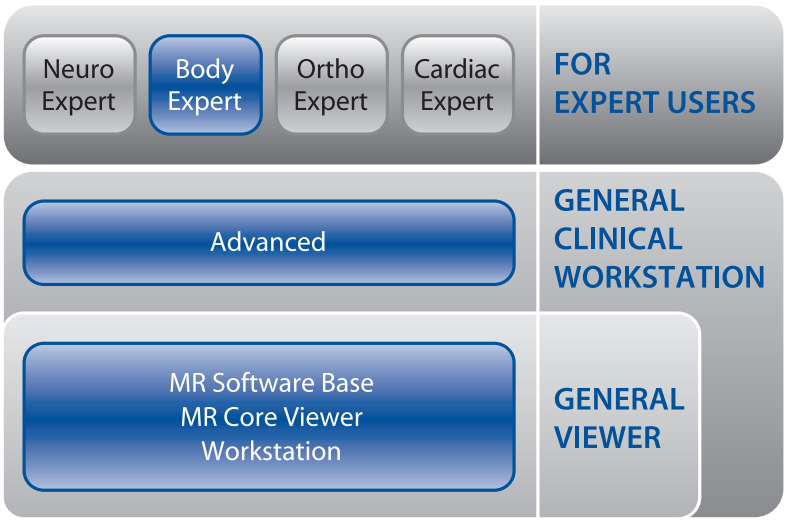
The Prostate Expanded application offers multiparametric analysis of all available sequences on the same screen and includes access to advanced diffusion and permeability parameters (computed semi-quantitative and quantitative maps, based on tested and documented mathematic models). To improve the quality of reading and reporting, the PI-RADS prostate report is included in the advanced prostate application for the detection, characterization and staging of prostate cancer.

Rectum Streamlined*

The Rectum Streamlined application workflow offers efficient multi-step assisted post-processing and 3D visualization for rectal pathologies, allowing specialists to delineate tumoral margins, assess mesorectal involvement, nodes and distant metastases. This workflow provides automatic diffusion computation, permeability calculation including both qualitative parameters for quick visual inspection and quantitative data for accurate assessment, analysis of rectal morphology based on T2w and comparison between T2w, ADC and Ktrans maps along with series fusion options.



Clinical Application Packages



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