

## « Imaging of moving organs »

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Despite important developments in MRI during the last years, technological and methodological improvements are still necessary for imaging of moving organs. Acquisition time is still too long relative to physiological motions (principally cardiac and respiratory motions). A breath-hold is generally required to obtain artefact free images or to analyse the first pass in perfusion imaging. Moreover, a breath-hold is not always possible (children, non cooperative patients, due to severe pathologies), and in most cases not reproducible. Clinical experiences, previous and published works have shown that MRI of moving organs is still a challenge. Our methodology to perform imaging of moving organs is based on adaptive imaging. The concept is to take into account and integrate organ motion and physiological movements of the patient during the image acquisition, image reconstruction and image processing.