

Estimation of the tissue perfusion parameters using ultrasound contrast agent can help to improve diagnosis occlusion of coronary arteries thus it can helps to prevent myocardial infarction. Precise registration of ultrasound time sequence is precondition for automatic and reliable perfusion analysis. Many image registration methods were developed, but ultrasound image registration is a still a challenging area. In this paper, a registration based on mutual information metric is presented using multiple regions of interest and parallel approach. Another focus is put on the registration evaluation using specific properties of acquired ultrasound sequences.