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Automatic detection of the carotid artery boundary on cross-sectional MR image sequences using a circle model guided dynamic programming

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Systematic aerobic training has positive effects on the compliance of dedicated arterial walls. The adaptations of the arterial structure and function are associated with the blood flow-induced changes of the wall shear stress which induced vascular remodelling via nitric oxide delivered from the endothelial cell. In order to assess functional changes of the common carotid artery over time in these processes, a precise measurement technique is necessary. Before this study, a reliable, precise, and quick method to perform this work is not present.

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