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## Sommario/riassunto

This publication starts of with a review of plaque imaging techniques, with an introduction of the segmentation techniques for plaque classification and quantification. Many aspects of plaque imaging techniques are presented in this publication, such as; medical image retrieval and database management, MRI techniques to differentiate stable versus high risk atherosclerosis, composition and morphology of atherosclerotic plaque, analysis of the soft tissue based on computer vision techniques, modelling of coronary artery biomechanics, Cardiac CT for the assessment of cardiovascular pathology wit