

How does Atherosclerosis emerge?

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Goal

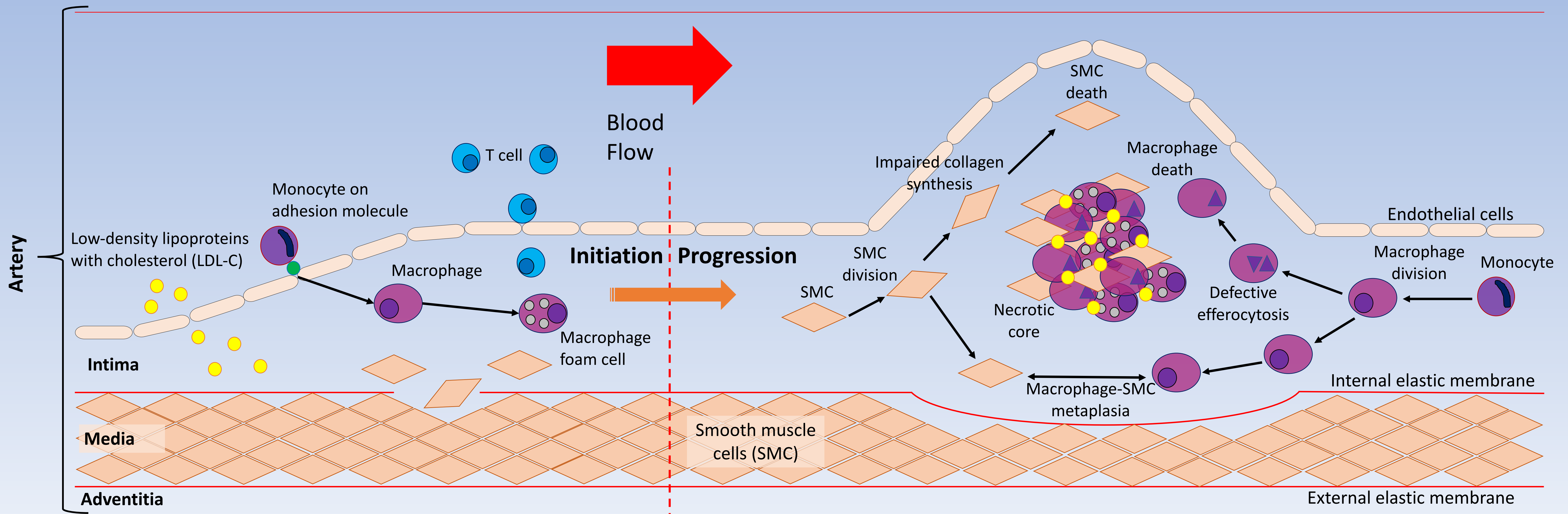
The Goal of this study is to show which mechanisms cause atheroma in the arteries of people who are suffering from atherosclerosis under consideration of the different risk factors.

Relevance of the paper

Today the most frequent cause of death worldwide is Atherosclerosis. Therefore it is very important to understand how these lesions occur in the arteries, to find new therapy methods and to modify the risk factors which this disease brings along.

The process of Atherosclerosis

In combination from LDL-Proteins, which carry cholesterol, macrophage foam cells and T cells, the initiation process of atherosclerosis starts in the intima by breaking out smooth muscle cells out of the media. Then the progression takes place with a cascade of numerous reactions, as SMC and macrophage divisions, which lead to SMC and macrophage cell death. Then in combination of these dead cells, LDL-C and macrophage foam cells, a necrotic core is “born”. In a later stage the necrotic core leads to the encroachment of the arteria, which is responsible for several diseases as heart attacks.



Paper:

P. Libby, J. E. Buring, L. Badimon, G. K. Hansson, J. Deanfield, M. S. Bittencourt, L. Tokgözoğlu, E. F. Lewis/Nature Reviews Disease Primer, Atherosclerosis (16.08.2020)

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