





TAXINOMISIS

Multidisciplinary approach → stratification of patients with carotid artery disease

The clinical problem

- Carotid artery disease primary cause of ischaemic cerebrovascular events
- Est. 150,000 deaths per year in Europe and 130,000 in the USA
- Atherosclerotic plaques in the carotid artery bifurcations **cause progressive narrowing of the vessel lumen**

 erode or rupture causing thromboembolism in the cerebropetal circulation

 lead to cerebral infarction

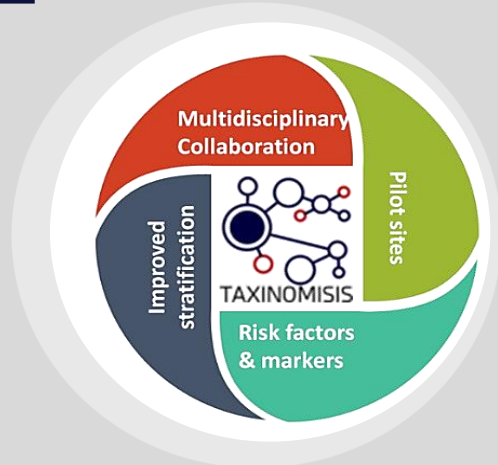
TAXINOMISIS approach

TAXINOMISIS new approach for the stratification of carotid artery disease patients by:

- unwinding the **pathobiology** that underlies symptomatic plaques
- discriminating distinct disease **mechanism-driven states (endotypes) and biomarkers**
- developing a multiscale **risk stratification model**

The stratification tool will be validated though the TAXINOMISIS clinical study

TAXINOMISIS innovation capacity



Project objectives



- Investigate the causal relationship of the major pathways and factors identified in symptomatic carotid artery disease
- Study disease phenotypes and disintegrate them into endotypes according to specific pathobiological mechanisms
- Integrate a computational model and an agent based model of plaque progression in the risk stratification tool
- Perform a test for determining the presence of single Nucleotide Polymorphisms and predicting drug response
- Evaluate the risk model of carotid artery disease stratification in an observational multicentre clinical study
- Present a cost-effectiveness analysis

Consortium



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