In our team Oncothai at the OncoLille Institute, we can propose these subjects :

Intracranial aneurysms are malformations that develop at the expense of the vascular wall, preferentially at proximal bifurcations of the polygon of Willis. The morbidity and mortality associated with their rupture is high. Current understanding of the pathophysiology of bifurcations tends to point to an endothelial lesion linked to turbulent shear flow exerted on the bifurcation wall, leading to a neuro-inflammatory reaction responsible for a modification and embrittlement of this wall, which in turn leads to a modification of the flow. This self-sustaining phenomenon can lead to stabilization of the aneurysm, its progression or even rupture. A Finnish hypothesis adds bacterial involvement to this neuro-inflammatory cascade, which our team has so far been unable to confirm in a cohort of patients operated at Lille University Hospital.

In this context, the 2 studies we propose to carry out are as follows:

M2 Subject 1: genomic study of the bacterial & neuroinflammatory microenvironment in intracranial aneurysms

- RT-qPCR

- Immunohistochemistry

M1 Subject 2: hemodynamic & neuroinflammatory study

- Analysis of RT-qPCR results

- Blood flow modeling

- Measurement of hemodynamic parameters on 3D models

Contact:

Antoine Devalckeneer : Antoine.DEVALCKENEER@chu-lille.fr