Canarie RS3-111.
Blood flow modelling.

Digital hemodynamic twins of arterial vasculature to improve clinical outcomes.

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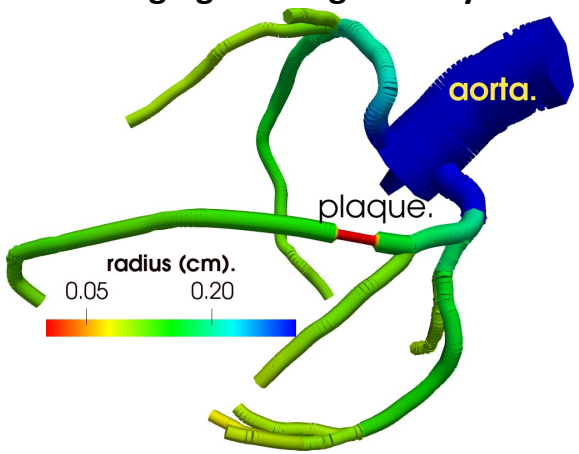
Clinical testing. → Subjective decisions. → **Low treatment success.**

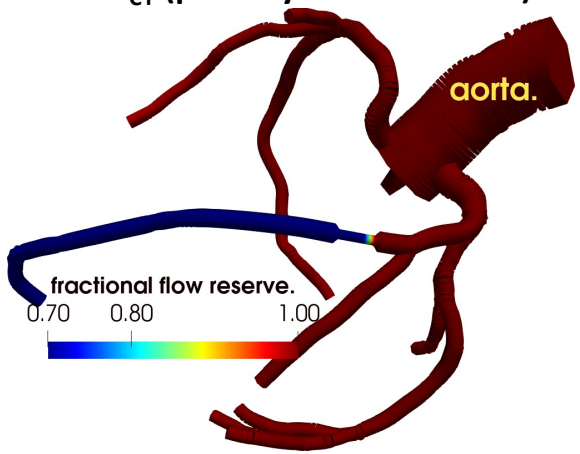
Extensible CFD models. → Subject's geometry, physiology, VVUQ. → Alliance de recherche numérique du Canada + Platforms: CFD, EP, image processing, VVUQ, Viz. → Objective actionable recommendation. → Improved quality of life, higher treatment success.

Representative study: Some of the metrics that are part of the recommendation.

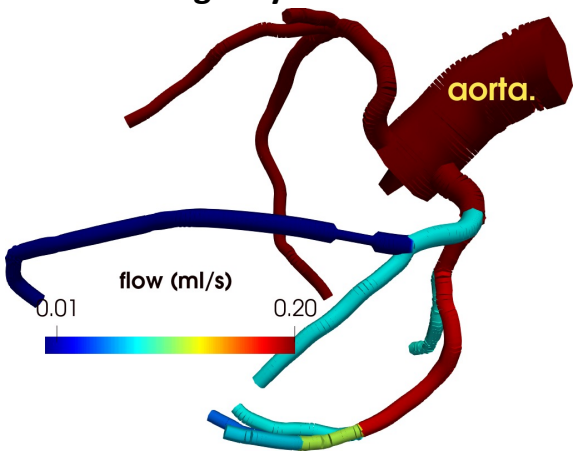
A. Imaging driven geometry.



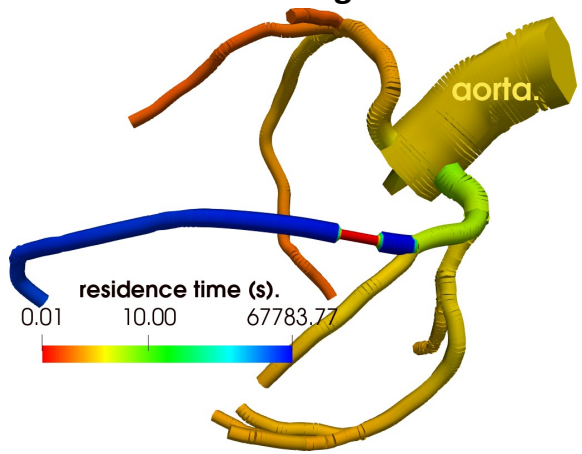
B. FFR_{CT} (primary clinical metric).



C. %age myocardium at risk.



D. Clotting risk.



What we need: I. HQPs (see Tim Hunter's poster). II. Health authority approvals. III. Deeper collaboration among CFD/data scientists and end users (clinicians, experimentalists), provider uptake. IV. Consortia of RSEs to accelerate the R&D.

Obesity, aging, micro-vascular dysfunction, device design.