Patient-Specific Cardiovascular Computational Fluid Dynamics Modeling

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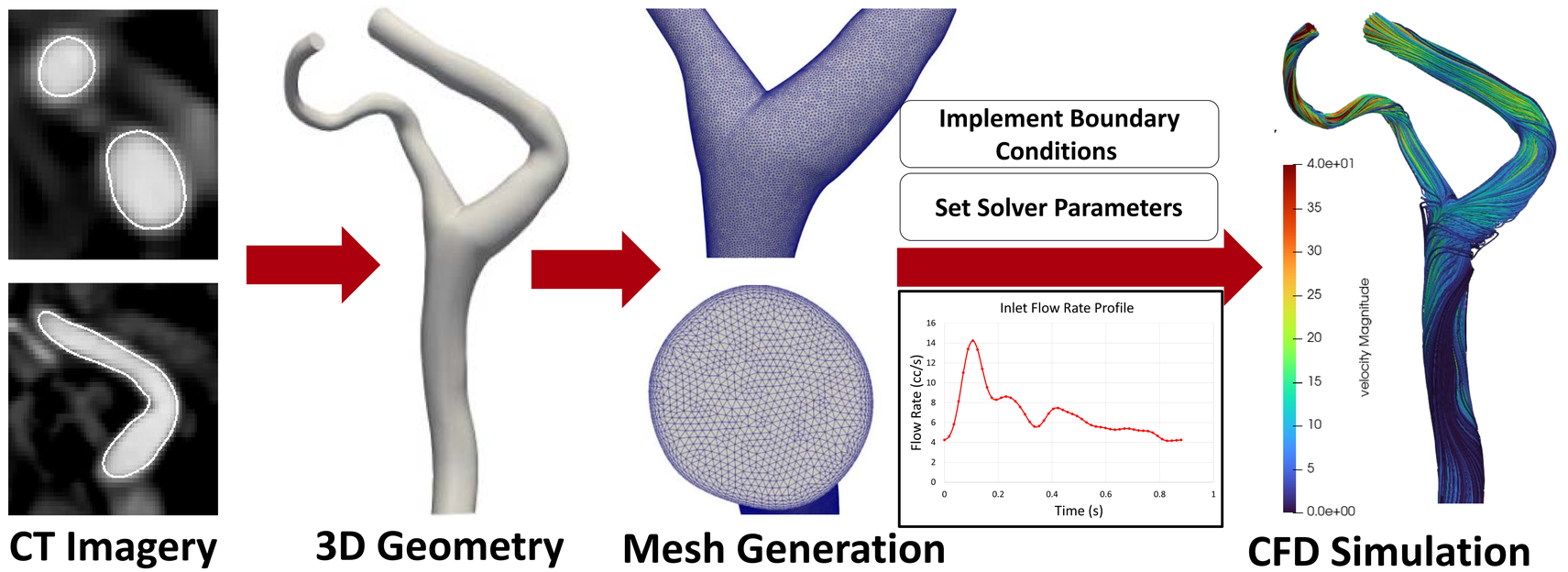
Introduction

- Challenges of *in vivo* studies on human cardiovascular system:

  - Invasive procedures
  - Improper diagnostic and treatment tools

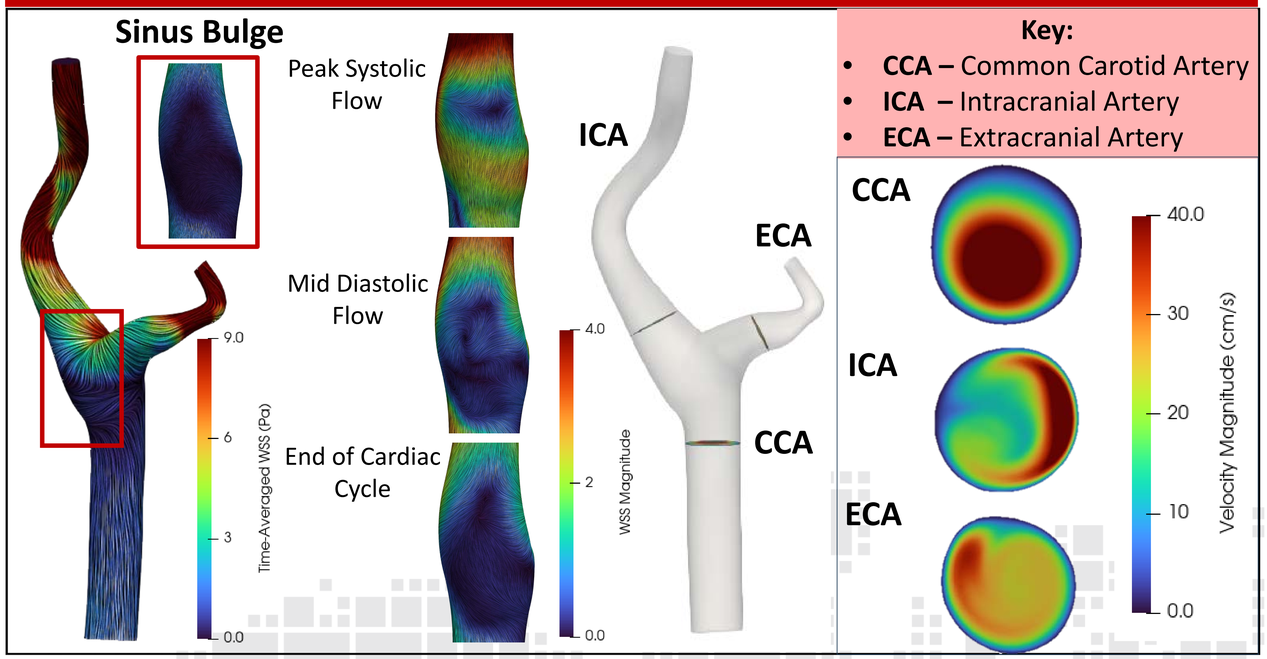
- Developing predictive frameworks using **Computational Fluid Dynamics (CFD)** advances research on complex diseases and conditions

Pipeline for CFD Methods

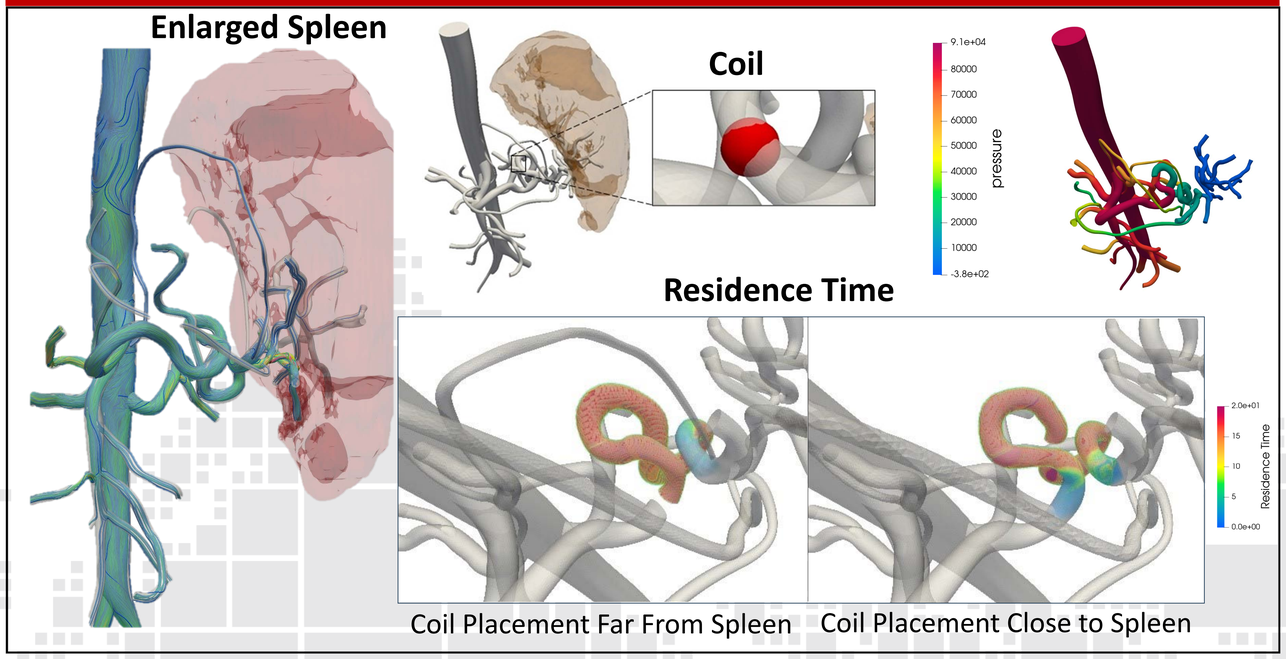


CT Imagery → 3D Geometry → Mesh Generation → CFD Simulation

Application 1: Embolic Stroke of Undetermined Source



Application 2: Splenic Embolization Using Coil



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