

COMBAT-VT

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COMBAT-VT:

NURBS-based isogeometric analysis of a bi-ventricular heart model

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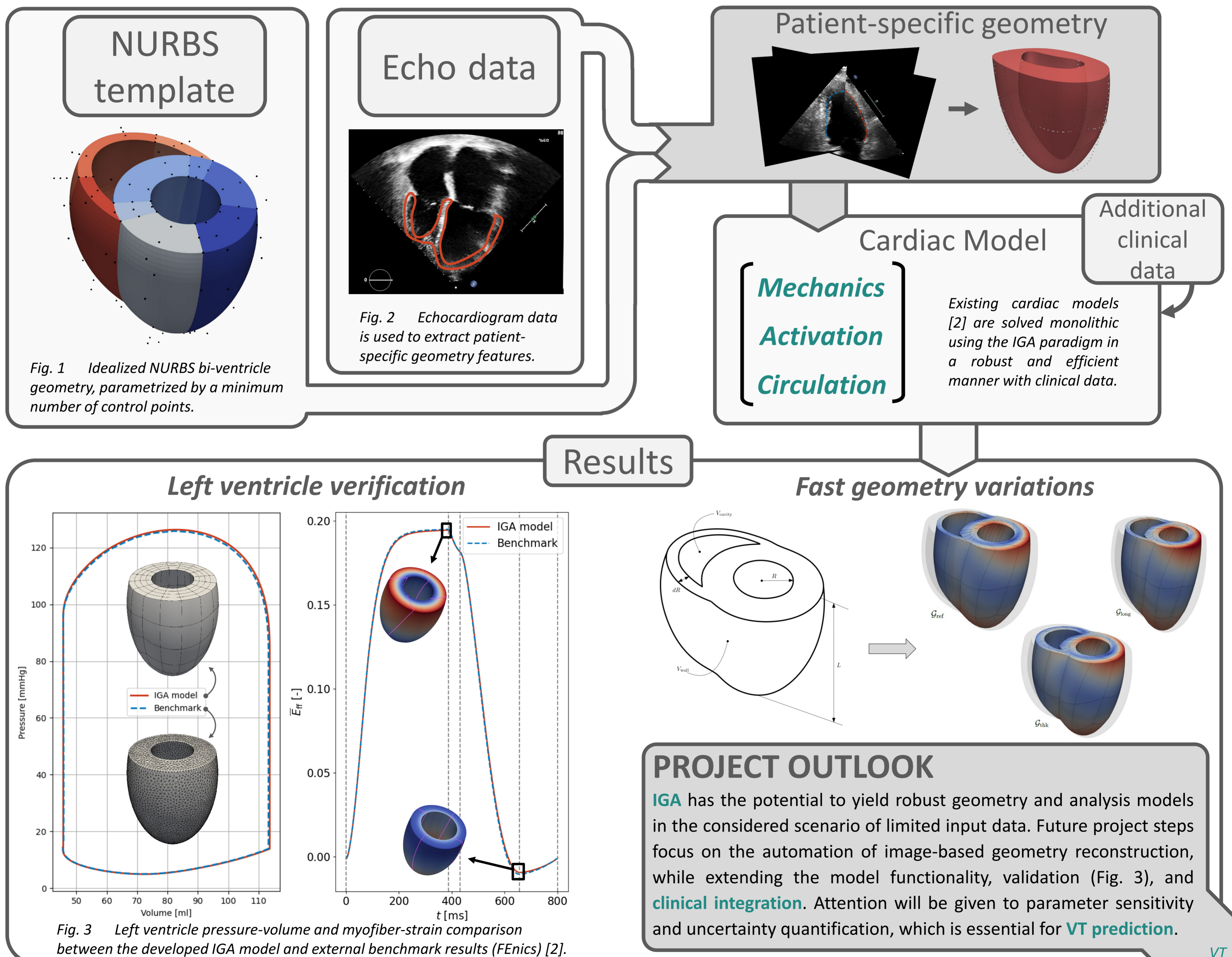
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MOTIVATION AND OBJECTIVE

Computer simulations provide information that can be used by clinicians to support decision-making (Computational-model-based decision support = COMBAT) regarding the treatment of **Ventricular Tachycardias** (VTs). It is the goal of this **COMBAT-VT** subproject to develop efficient and robust models that can be integrated into the clinical workflow.

SIMULATION WORKFLOW

Our simulation framework combines the **Isogeometric Analysis** (IGA) simulation paradigm [1] with image recognition techniques to obtain **patient-specific** computer models (Fig. 1 & 2). Simulations will be performed directly on a Non-Uniform Rational B-Spline (NURBS) bi-ventricular geometry. Computational costs are improved because of the limited number of control points that quantify the geometry.



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