

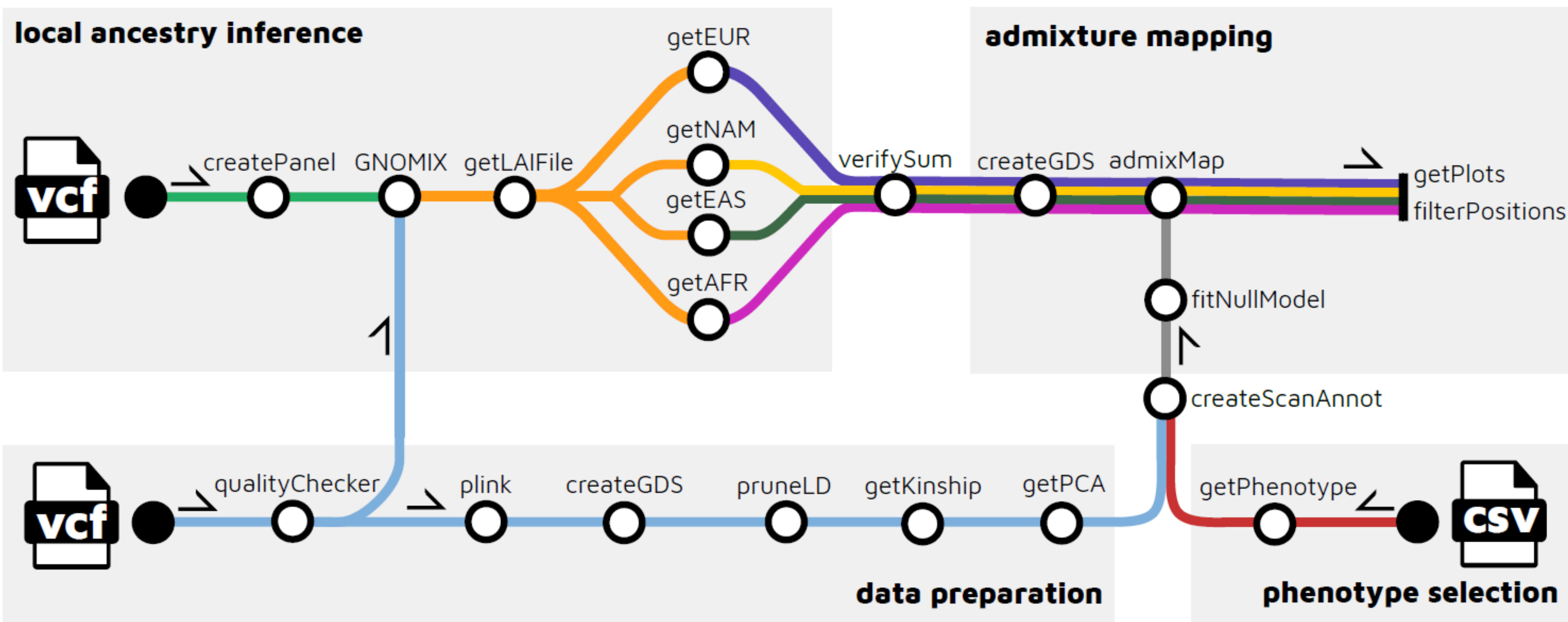
Enhancing genomic research in Brazil with Nextflow-based admixture mapping pipelines

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Context

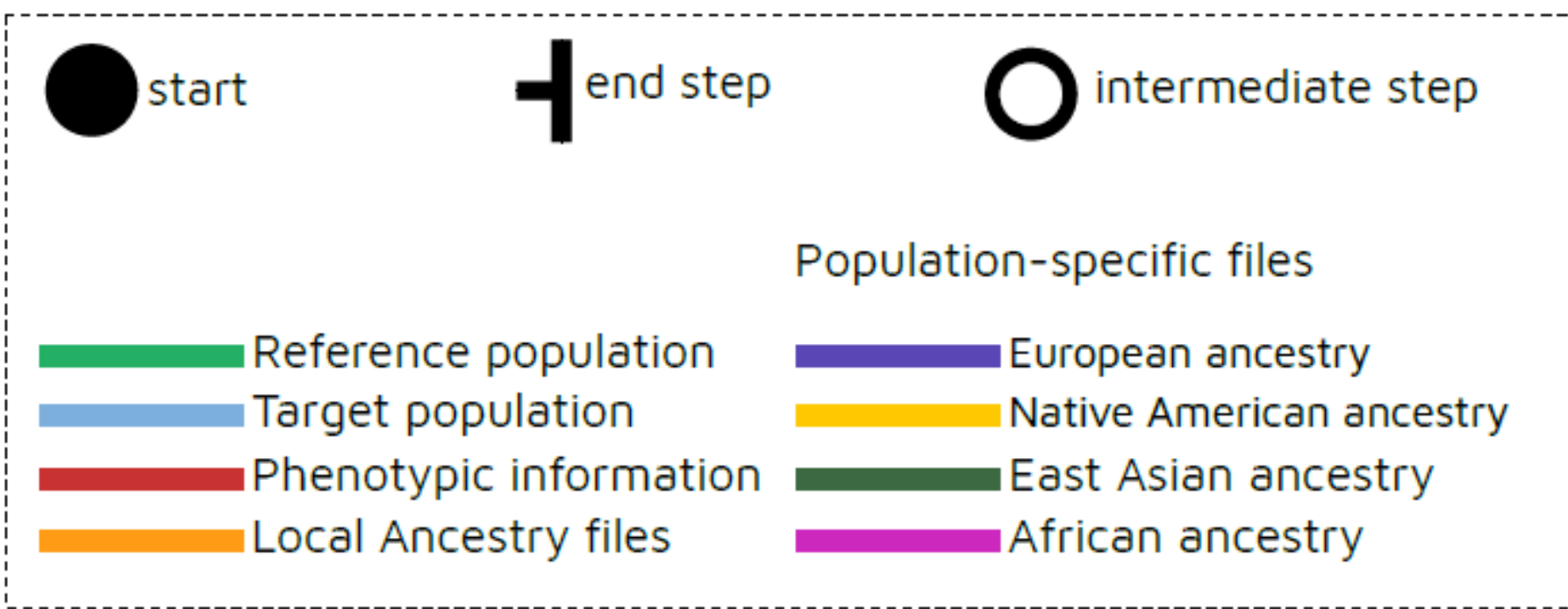
The Brazilian population exhibits significant genetic diversity due to its admixed American Indigenous, African, and European ancestries. This diversity makes it an ideal setting for comprehensive genetic studies. However, about 80% of existing genetic knowledge is derived from studies of European populations, resulting in missed opportunities for pioneering discoveries in non-European genomes that could drive healthcare innovations. Addressing this, the 'Gen-t do Brasil' project aims to map the DNA of more than 200,000 Brazilians by 2027 to understand the impact of genetic factors on health, and to develop innovative methods for disease detection and treatment.



Admixture mapping pipeline. We utilize the genetic diversity of the Brazilian population to enhance and scale this technique.

A Genetic Relationship Matrix (GRM) adjust for Brazil's complex population structure.

nf-core/
admixmaping v1.0.0



Nextflow ensures the code-safe scalability needed to establish a **Brazilian biobank.**

Scheme of an admixture mapping study

