

*Riunione Annuale*

**GIM** GRUPPO  
ITALIANO  
MAMMELLA



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**HOTEL EXCELSIOR SAN MARCO**

PIAZZA DELLA REPUBBLICA, 6

# Development of an Oxford Nanopore–Based Multi-Omic ctDNA Profiling for Minimal Residual Disease Detection.

## A GIM<sub>37</sub>-INSPIRE.1 Ancillary Study

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DEGLI STUDI  
DI UDINE**

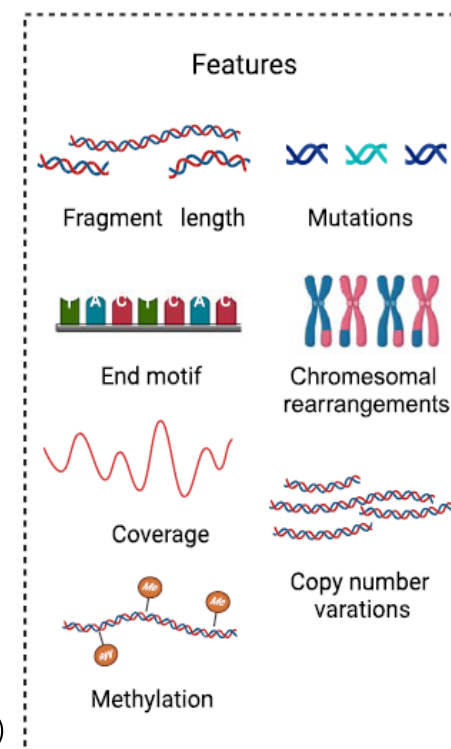


# Background

- Advances in systemic therapy have enabled 10–15% of patients with stage IV disease to achieve a radiologic CR;
- MRD and ctDNA;
- Oxford Nanopore Technology (ONT) provides an integrated analytical framework that encompasses a spectrum of molecular insights.



Current signal



Modified from Si HQ (2024)



# The Project

## STUDY DESIGN

Liquid biopsy translational ancillary study

## STUDY POPULATION

Patients enrolled in the GIM<sub>37</sub>-INSPIRE.1 study

## METHODS

- Collection of personal data, clinical and pathological characteristics;
- Blood sampling according to the INSPIRE protocol (at baseline and progression) and processing to ONT sequencing;
- Bioinformatic analysis of omic data and correlation with time to treatment failure and overall survival.

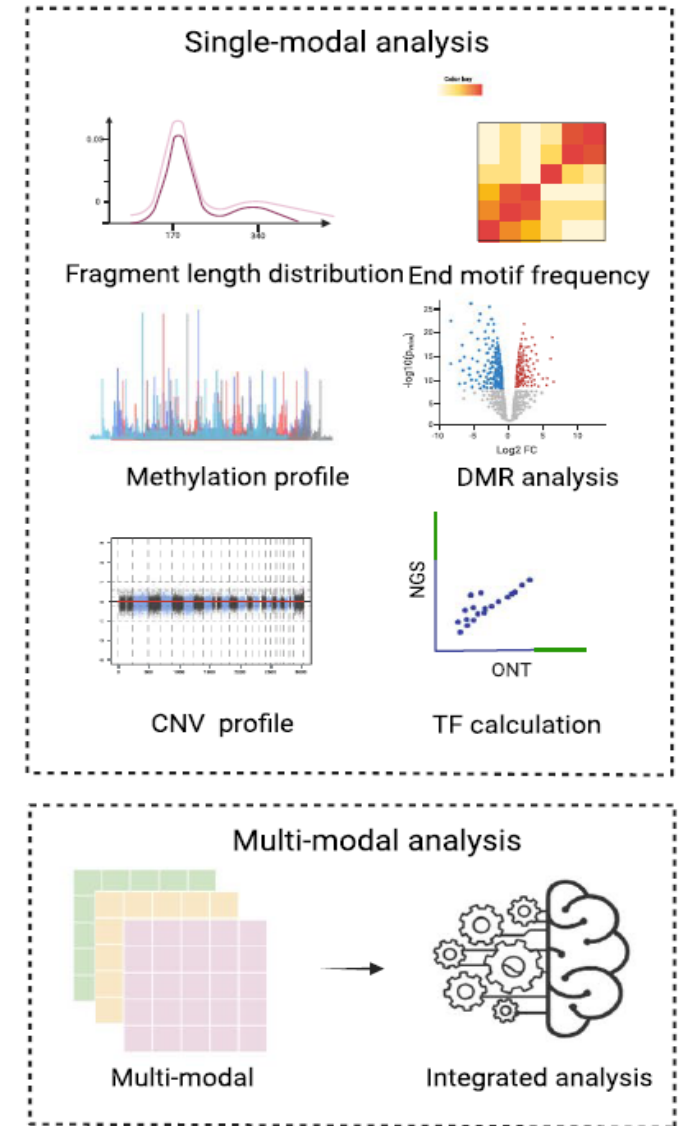
# Study Objectives

## PRIMARY OBJECTIVE

- To develop and implement a third-generation sequencing pipeline for ctDNA analysis (Oxford Nanopore), aimed at minimal residual disease detection.

## SECONDARY OBJECTIVES

- To develop and validate multi-omic classifiers predictive of treatment response duration in terms of time to treatment failure and overall survival;
- To identify and characterize novel, non-mutation-driven, resistance mechanisms;
- Evaluation of MRD+ in case of CR;
- Analysis of NPV and PPV.



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