

# Cancer systems biology

Driving Cancer Breakthroughs with Data, Computation, and Collaboration

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## Cancer Precision Medicine

1 in 6 death due to cancer.

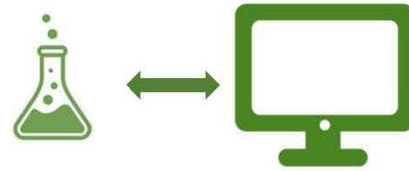
Early diagnosis is important.

Molecular profiling can help identify personalized treatment.

Monitoring treatment response improves prognosis.

Liquid biopsy allows low-cost, non-invasive, accurate, and fast monitoring of treatment response.

## Approach



Data: 200+ patient samples  
100TB+ genomic data  
Multi-omics data

Methods: AI/ML  
Linear model,  
Random Forest, Deep learning,  
Large language models (and  
experiments).

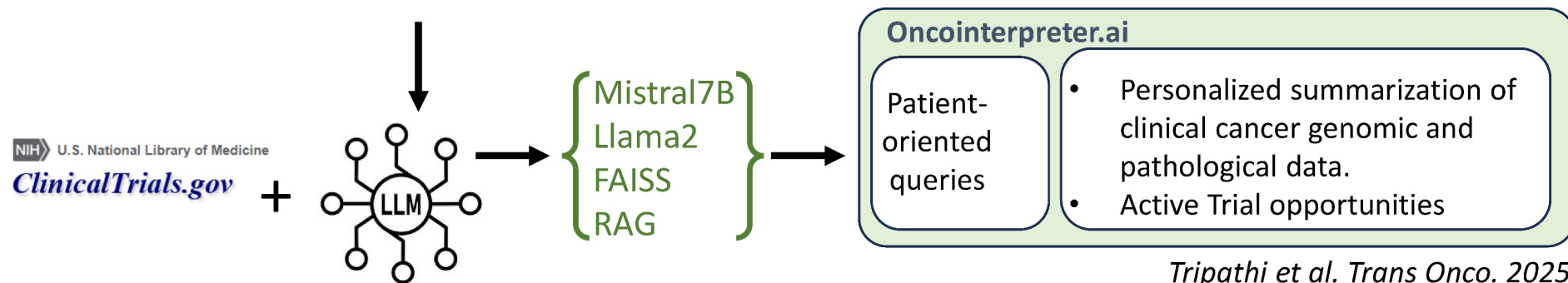
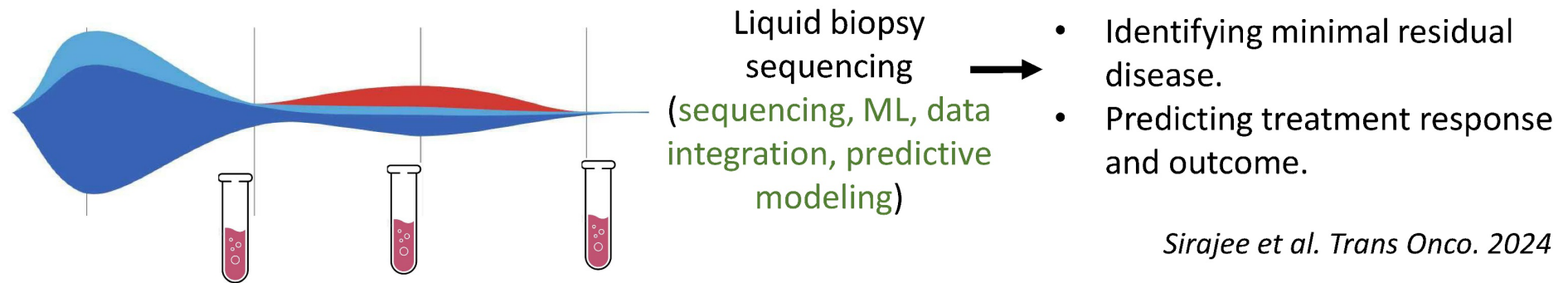
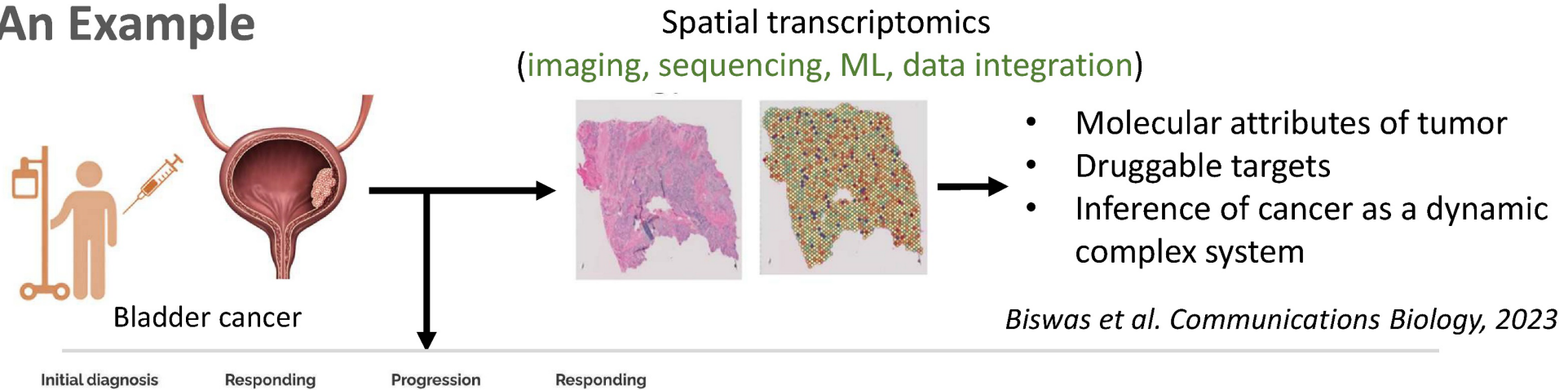
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## Research objectives

Develop technologies to advance multi-omics cancer diagnosis.

Guide precision medicine strategies by multi-modal data integration.

## An Example



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