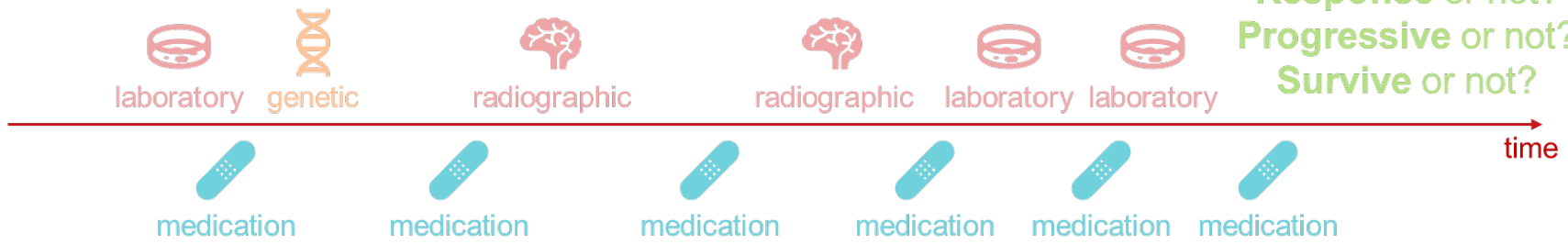
Introduction

Categorizing clinical information for **multi-modal asynchronous** time series analysis

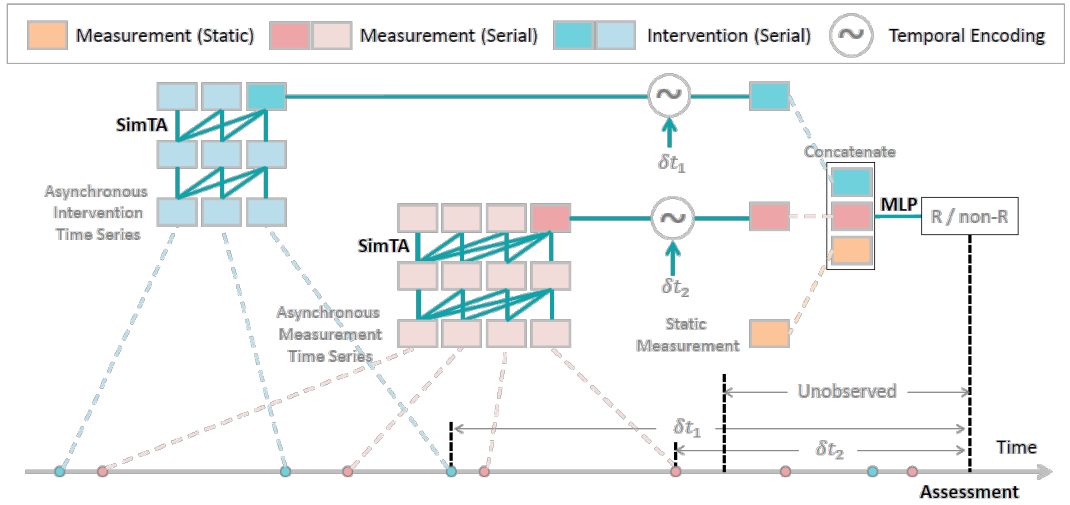
- Measurement (Serial)
- Measurement (Static)
- Intervention (Serial)
- Assessment



Question:
Response or not?
Progressive or not?
Survive or not?

Methodology

MIA-Prognosis Framework



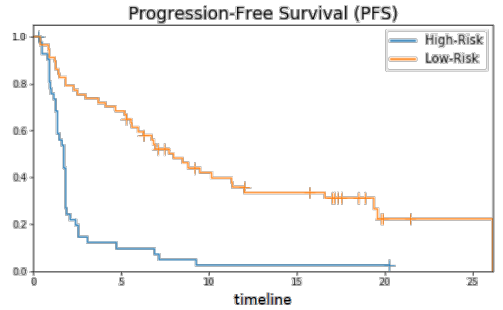
SimTA: **Sim**ple **T**emporal **A**ttention for Asynchronous Time Series

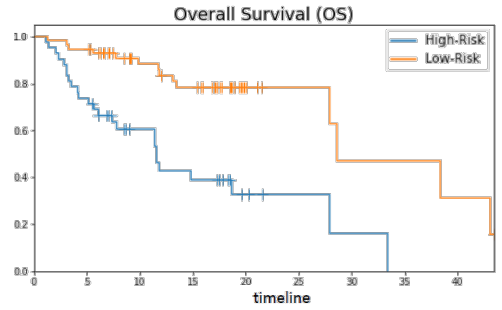
*Learning to attend to the asynchronous time **intervals***

Results

99 patients with advanced-stage NSCLC under second-line anti-PD-1 **immunotherapy**

Methods	LSTM	LSTM(i)	LSTM(s)	Ours	Ours w/o radiomics	Ours w/o lab
AUC	0.71	0.71	0.70	0.80	0.47	0.58





MIA-Prognosis: A Deep Learning Framework to Predict Therapy Response
Jiancheng Yang *et al.* MICCAI 2020. *Student Travel Award*