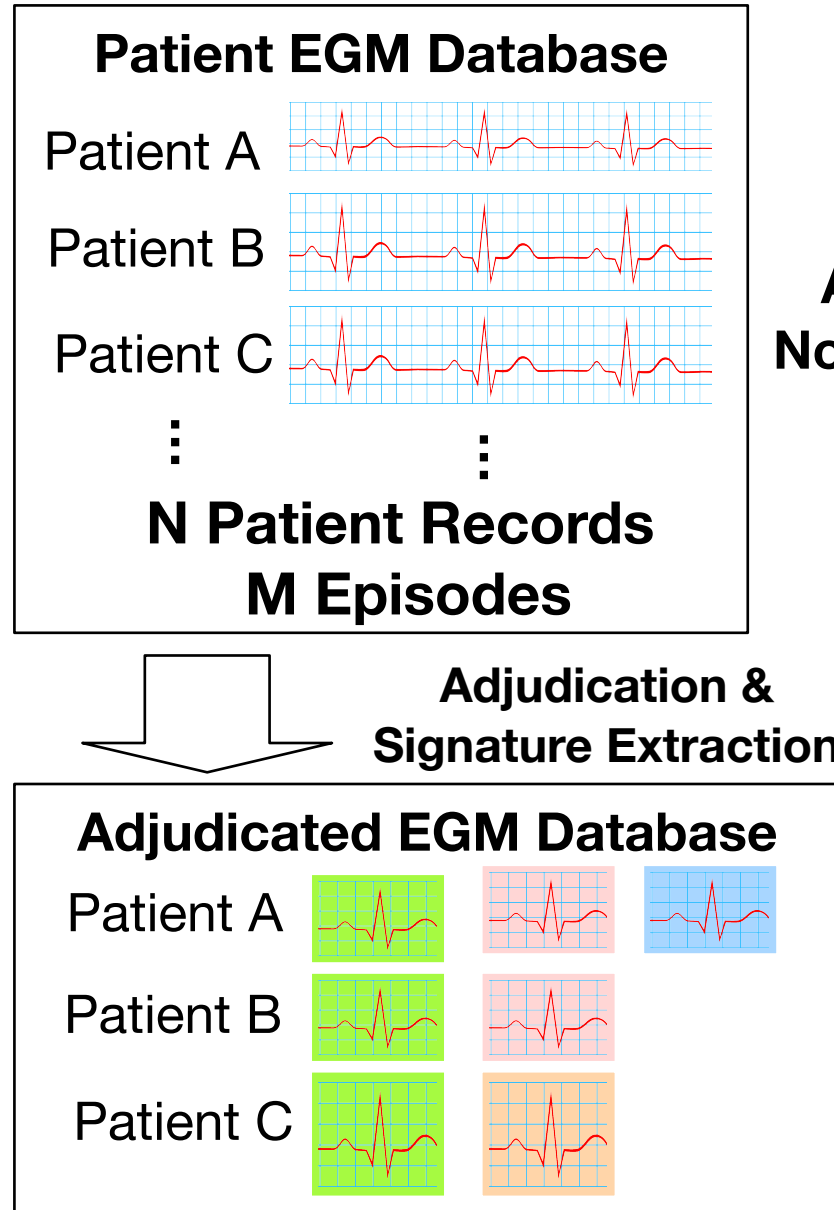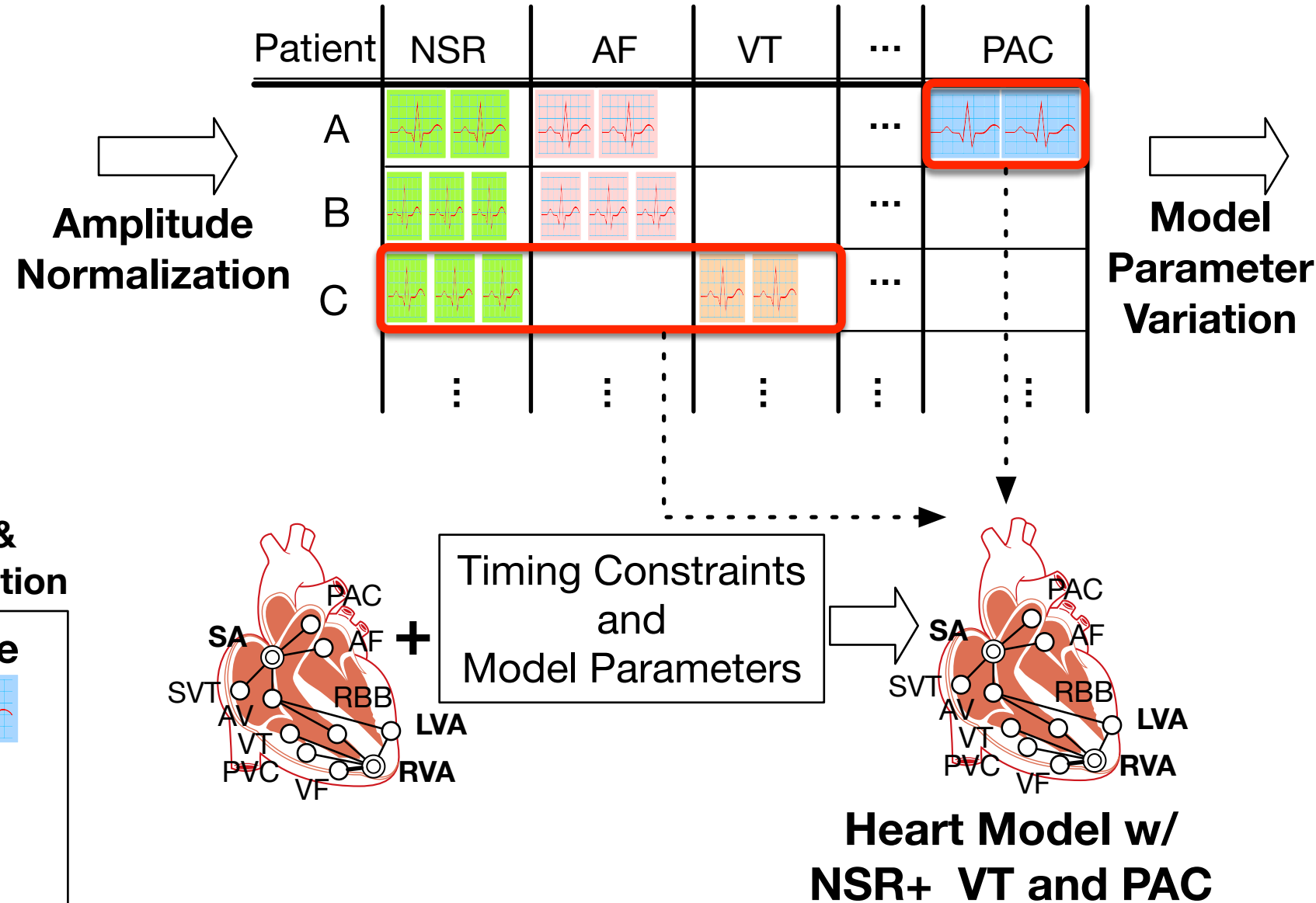**①** **Real Patient Data for Adjudication & Extraction**

② **Synthetic Heart Model Generation using Condition Look-up Table**

③ **Cohort Generation**

Patient EGM Database

Patient A
Patient B
Patient C

N Patient Records M Episodes

Adjudication & Signature Extraction

Adjudicated EGM Database

Patient A
Patient B
Patient C

Amplitude Normalization

Patient	NSR	AF	VT	...	PAC
A				...	
B				...	
C				...	
⋮	⋮	⋮	⋮	⋮	⋮

Timing Constraints and Model Parameters

Heart Model w/ NSR+ VT and PAC

Model Parameter Variation

Model A$_1$
Model A$_N$
Model B$_1$
Model B$_N$
Model J$_1$
Model J$_N$

N Heart Conditions M Instances/Condition

EGM Generation

Device Evaluation