

# Information Extraction from Clinical Narratives for Temporal Reasoning

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NATALIA VIANI

DEPARTMENT OF ELECTRICAL, COMPUTER AND BIOMEDICAL ENGINEERING

UNIVERSITY OF PAVIA

# Information Extraction from Clinical Text

**Information Extraction:** identification of predefined types of information inside a text (e.g. medical report)

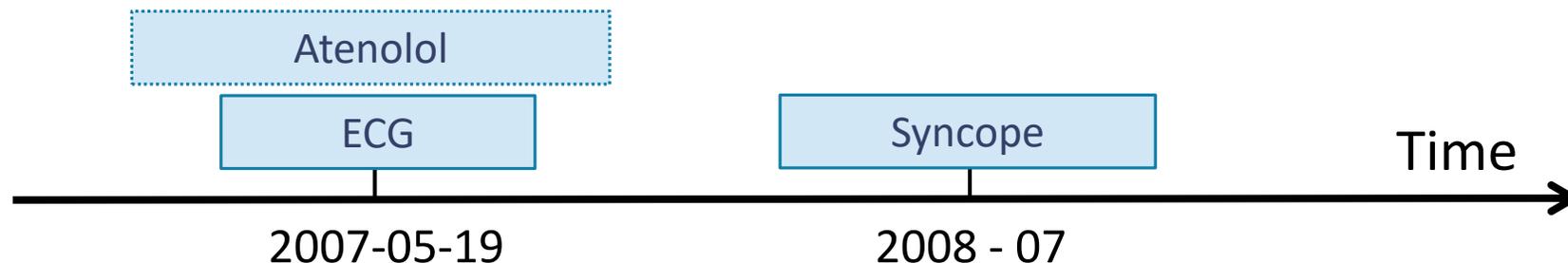
On 19.05.2007 ECG and Atenolol dosage increased to 50 mg twice a day.  
In July 2008 syncope during physical exercise.

Automatic extraction

□ Clinically relevant events

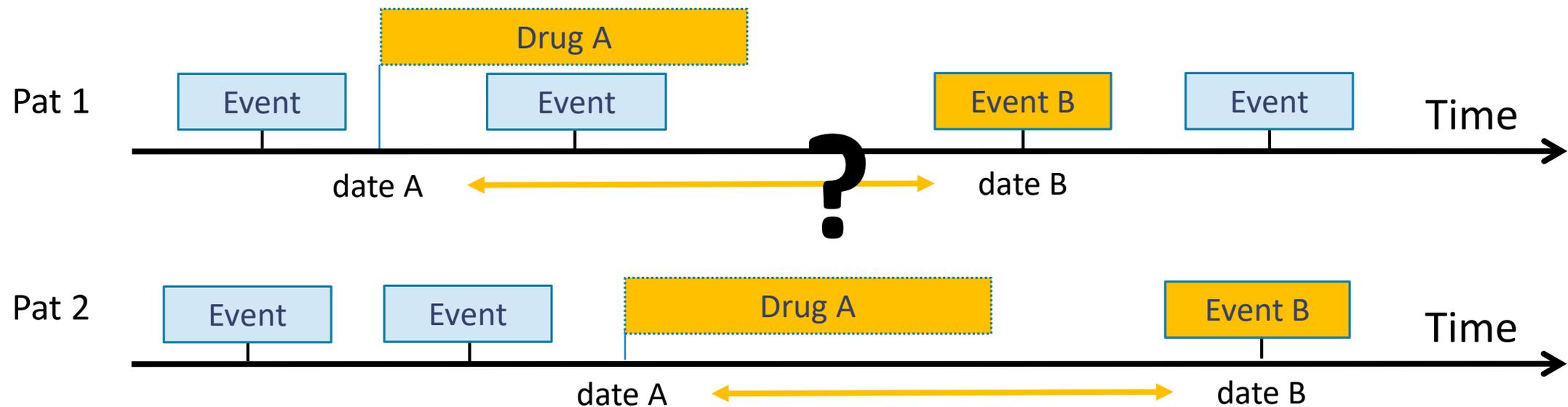
□ Temporal expressions

**Summarization of extracted information:** clinical timelines reconstruction



# Temporal Reasoning

**Main idea:** look for interesting relations using the information extracted from reports belonging to different patients



Cause-effect relation between A and B?

# Clinical Relevance and Possible Applications

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## **Clinical relevance**

- Exploitation of the information locked in free text
- Summarization of the unstructured portions of clinical records
- Effective comparison between different patient records

## **Possible applications**

- Identification of adverse drug reactions
- Evaluation of treatment efficacy
- Identification of symptom-disease relations