

# Ontology of **fever generation**

As related to Cytokine Release Syndrome (CRS)

Fever, typically presenting at onset, is a hallmark feature of CRS.

#### DE-RISKING CYTOKINE RELEASE SYNDROME



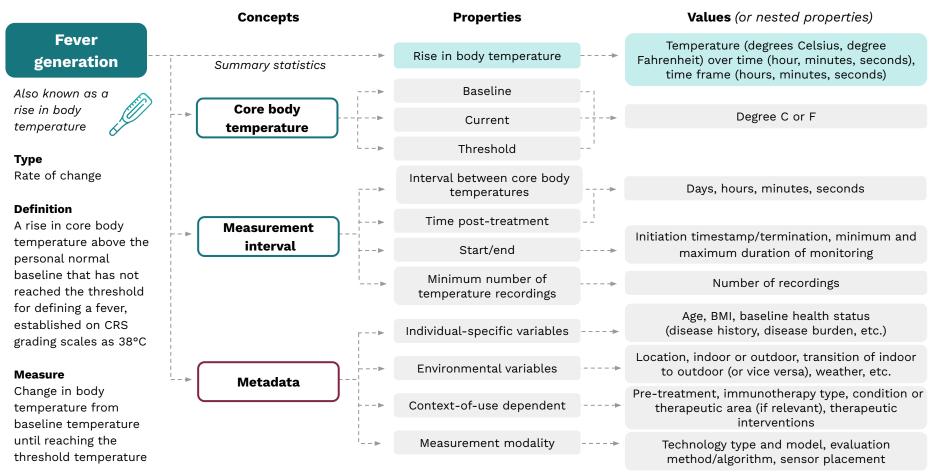
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### Ontology of **fever generation**



#### **Examples**

#### Core body temperature

Baseline

**Baseline**: Temperature at pre-infusion time, temperature over last two days.

**Definition**: Body temperature over a specified time frame for use as a comparator to future body temperature recordings. Defining the parameters of baseline temperature will lead to more precise determination of fever generation.

#### Core body temperature

Threshold

**Threshold**: Definition of CRS grade fever (38 degrees C); 2 standard deviations from baseline.

**Definition:** The point at which the measurement signals reach a critical transition. Defining the parameters of threshold temperature will lead to earlier detection and an increased response window.

#### **Measurement interval**

**Interval between measures:** Every four hours (standard of care) with continuous monitoring.

Duration: 14 days (recommended observation period for CRS).

#### Measure considerations and assumptions:

- Body temperature should be reflective of a core body temperature. Oral, axillary, and rectal body temperatures are considered to <u>reflect core temperature</u>.
- Context is key; while core body temperature is maintained within a narrow window, it fluctuates daily based on several factors, including circadian rhythm, exercises, environmental factors.
- Sensor placement (e.g., wear location) can influence the measurement, conversion, and prediction algorithms for core body temperature and fever generation, respectively.
- A rise in body temperature may be influenced by other factors including prophylactic treatment (e.g., antipyretics) and the cause of the fever (alternative adverse events).
- The interval between measures should balance ethical safety monitoring (not exceeding four hours), the duration of measurement collection, and the time required for physiological and technical capture capacity of change.
- The administration of temperature-suppressing medications should be labeled.

# More more CRS resources are available to support you.

#### Full ontology of early warning signs of CRS



**Ontology of fever generation** 



Ontology of tachycardia



Ontology of hypotension



<u>Ontology of hypoxia</u>

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