



# LUX-Dx II+™ ICM System

## PVC Burden Algorithm: Programming Guide

The LUX-Dx II+™ insertable cardiac monitor (ICM) provides a daily premature ventricular contraction (PVC) burden percentage with advanced programming and is the only ICM with an actionable PVC burden alert.\*



### Dual-stage Algorithm Overview

Capable of detecting PVC sequences such as couplets and triplets, the LUX-Dx II+ ICM uses a dual-stage algorithm to calculate a patient's daily PVC burden.



#### Stage 1: Detect.

Monitors R-R intervals and changes in R-wave amplitude to detect potential PVCs.



#### Stage 2: Verify.

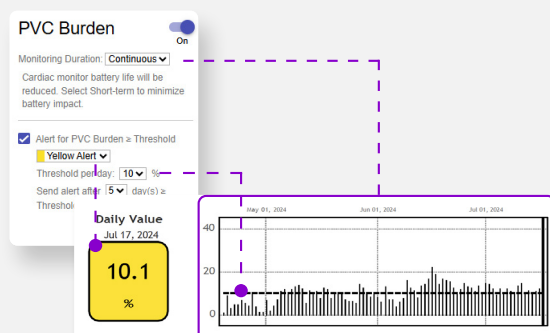
A morphology assessment uses patient-adaptive waveform comparison techniques to verify potential PVCs.

### Duration Programming

PVC burden is calculated as the number of detected PVCs out of the total number of detected ventricular beats for each 24-hour period (midnight to midnight). Daily PVC burden trends are available for review within the LATITUDE Clarity™ Data Management System.

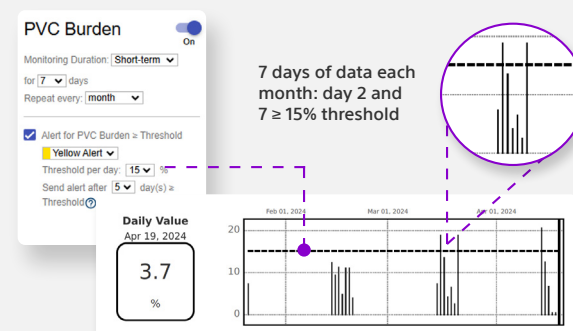
#### Continuous Monitoring

Device continuously monitors a patient's daily PVC burden.



#### Short-term Monitoring

Device monitors for PVCs at a repeated programmed frequency. In the example below, the device will monitor for PVCs for 7 consecutive days, repeated each month.



## Advanced Programming

With advanced PVC burden programming, clinicians can customise monitoring parameters to each patient. Programming changes can be made remotely using the LATITUDE™ Clarity Data Management System, without the need to bring the patient into the clinic.

Detection Parameter	Configurable Options	Nominal Value (If PVC burden is turned to ON)
PVC Burden Detection	On, Off	Off
PVC Monitoring Type	Short-term, Continuous	Continuous
PVC Burden Monitoring Days	2, 3, 7, 14, 30 days	N/A (Continuous)
PVC Burden Monitoring Frequency	Every week, month, 3 months, or 6 months	N/A (Continuous)

Alert Parameter	Configurable Options	Nominal Value (If PVC burden is turned to ON)
PVC Alert	Off, red alert, yellow alert	(Yellow)
PVC Alert Threshold	5%, 10%, 15%, 20%, 30%, 40%	(15%)
Days to PVC Alert	1, 3, 5, 7 days	(5)

## Alert Programming

Programming options include:

- **LATITUDE Clarity alert type:** Yellow or Red
  - Red alerts are treated as higher priority than yellow alerts in LATITUDE Clarity.
- **Threshold per day:** A burden at or above this threshold will act as a counter toward the alert status.
- **Days ≥ threshold:** An alert will be sent once the programmed number of days ≥ threshold has been met. This is a non-continuous counter, meaning non-consecutive days above threshold will tally toward the alert criteria.

The LUX-Dx II+ ICM PVC Burden algorithm demonstrated strong performance when identifying patients with a PVC burden ≥ 10%.<sup>1\*\*</sup>



**100%**  
PPV



**84%**  
sensitivity

\*As of 4.1.2025: Reveal LINQ™ Clinician Manual, LINQ II™ Clinician Manual, BIOMONITOR III™ Technical Manual, BIOMONITOR III™ Technical Manual, BIOMONITOR IV™ Technical Manual, Merlin Patient Care System for SJM Confirm™ ICM, Confirm Rx™ ICM and Jot Dx™ ICM Help Manual, and Merlin Patient Care System Assert-IQ™ ICM Help Manual.

\*\*In silico testing of algorithm performance on 12-lead Holter data.

1. Siejko KZ, Kupfer M, Rajan A, Herrmann K, Nair D. Premature ventricular contraction detection and estimation of daily burden by an insertable cardiac monitor. Heart Rhythm O2. 2025;6:528–536.  
[doi: https://doi.org/10.1016/j.hroo.2025.01.004](https://doi.org/10.1016/j.hroo.2025.01.004).



**LUX-Dx II™ and LUX-Dx II+™**  
**Insertable Cardiac Monitor Systems**  
**Indications, Safety and Warnings**

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