



INITIAL INTERROGATION BY:
Lynn Settergren

DOCKET DATE
Jul 30, 2024

CPT: 93280 ICD-10: Z95.0, I49.5

John Tomkinson

MURJ ID MRN # DOB Clinic Site Following Physician
1591407 60007566543 01/26/1957 Cherry Hill Adam Zivin

Boston Scientific

IMPLANT DATE: 11/15/2021

IPG: L331 S/N: 959438

SUMMARY STATEMENT

This report includes 1 total transmission that was received on 07/30/24. Battery, lead impedance, sensing amplitude and pacing threshold data was reviewed and tested.

PROGRAMMING EVALUATION PERFORMED

IMPRESSIONS

Normal In-Office: No Events

- Normal Device Function
- Alerts or events: None
- Battery: OK, 11.5 years
- Sensing, impedance and thresholds reviewed and tested
- Presenting Rhythm: was AP VS 60s
- Underlying Rhythm: historically no P waves at 40 ppm, intact AV conduction
- Heart Rate Histograms reviewed
- Pacing and Detection Parameters were evaluated

Additional Notes:

BSX rep present to offer programming options from tech support engineers

Created By: Lynn Settergren 07/30/2024 03:24 PM Edited By: Lynn Settergren 07/30/2024 03:40 PM

Rate Response Suboptimal

- Rate histograms consistent with or suggestive of suboptimal rate response programming
- Patient Symptomatic? reports inadequate HR response for cycling with accelerometer only. Accelerometer only provided adequate HR for walking.
- Device Reprogrammed? Y
- 24 hr sensor trend playback with MV ON would increase sensor rates approximately 20ppm with VT threshold ON and response factor of 8

Created By: Lynn Settergren 07/30/2024 03:31 PM

Device Reprogrammed

Device reprogrammed, changes are listed below:

- MV ON without Ventilatory Threshold response factor.
- MV response factor of 7 by pt's preference instead of proposed response factor of 5, so not to accelerate rate too quickly
- min paced AV delay shortened from 200-140ms
- min sensed AV delay shortened from 190-130ms

Created By: Lynn Settergren 07/30/2024 03:36 PM Edited By: Lynn Settergren 07/30/2024 03:38 PM

PLAN

Routine remote and in-office follow up as needed

Additional Notes:

quarterly transmissions, annual office visit

LEAD	MFR	MODEL	IMPLANT DATE
Right Atrium	Boston Scientific	7841	2021-11-15
Right Ventricle	Boston Scientific	7842	2021-11-15

BATTERY: Battery has 11.5 years left. Battery Status: OK.

On Anticoagulant Pacer Dependent

MR Conditional

MOST RECENT IMPRESSIONS

Normal In-Office: No Events (2)	07/30/2024
Device Reprogrammed (7)	07/30/2024
Rate Response Suboptimal (4)	07/30/2024
Pacemaker Mediated Tachycardia (PMT) (2)	07/16/2024

PACING INDICATION

Sick Sinus Syndrome (SSS) / Sinus Node Dysfunction

LEAD	SENSING	IMPEDANCE	THRESHOLD
RA	8.5mV Fixed 0.5mV	608 Ω	-- 2V @ 0.4ms
RV	20.8mV Fixed 2.5mV	903 Ω	-- 2V @ 0.4ms

PARAMETER SUMMARY

MODE: DDDR	PACED CHAMBER:	LOWER RATE: 65
MODE SWITCH: 160	TRACKING RATE: 125	SENSOR RATE: 155
PACED AV: 320	SENSED AV: 300	LVRV Delay:

TYPE	STATUS	RATES	THERAPIES
VT	On	160 bpm	

RECENT THERAPY COUNTS

Shocks Delivered:	Shocks Aborted:	ATP Delivered:
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I REVIEWED THE DATA AND AGREE WITH THE FINDINGS IN THIS REPORT. ELECTRONICALLY COSIGNED BY:

Adam Zivin MD

ELECTRONICALLY
SIGNED ON:

Jul 31, 2024 @ 01:59 pm



LATITUDE™ Programming System

Combined Follow-up Report

Tomkinson, John

Date of Birth 26 Jan 1957

Device ACCOLADE MRI EL L331/ 959438

Report Created 30 Jul 2024

Last Office Interrogation

16 Jul 2024

Implant Date

15 Nov 2021

My Alerts

There are no alerts to display.

Events Since Last Reset (16 Jul 2024)

27 Jul 2024 03:02 APM RT at 76 bpm

Battery OK

Approximate time to explant:

11.5 years

Magnet Rate

100 ppm

One Year Remaining

Explant



Leads Data

Implant

15 Nov 2021

Previous Session

Most Recent

Atrial

Intrinsic Amplitude

4.0 mV

Paced mV

8.5 mV

Pace Impedance

700 Ω 630 Ω 608 Ω

Pace Threshold

0.7 V @ 0.5 ms

0.7 V @ 0.4 ms

No data collected

Ventricular

Intrinsic Amplitude

14.0 mV

22.4 mV

20.8 mV

Pace Impedance

1100 Ω 942 Ω 903 Ω

Pace Threshold

0.7 V @ 0.5 ms

0.9 V @ 0.4 ms

No data collected

Settings

Ventricular Tachy Settings

Ventricular Tachy EGM Storage

On

Detection Rate

160 bpm

Atrial Tachy Settings

ATR Mode Switch 160 bpm DDIR

Brady Settings

Mode

DDDR

Pacing Output

RYTHMIQ™

Off

Atrial

2.0 V @ 0.4ms

Lower Rate Limit

65 ppm

Ventricular

2.0 V @ 0.4ms

Maximum Tracking Rate

125 ppm

Sensitivity

Maximum Sensor Rate

155 ppm

Atrial

Fixed 0.5 mV

Paced AV Delay

140 - 320 ms

Ventricular

Fixed 2.5 mV

Sensed AV Delay

130 - 300 ms

Leads Configuration (Pace/Sense)

A-Refractory (PVARP)

240 - 340 ms

Atrial

Bipolar

V-Refractory (VRP)

190 - 250 ms

Ventricular

Bipolar

Rate Adaptive Pacing

Minute Ventilation

On

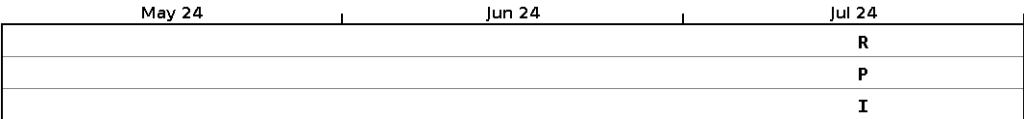
Accelerometer

On

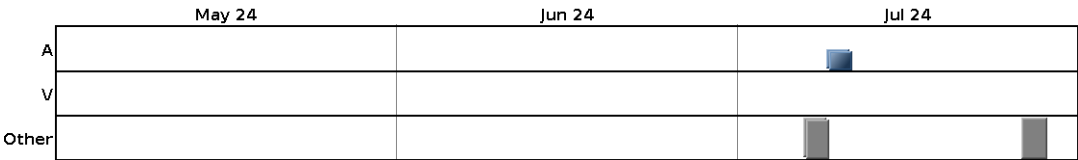
Trends

Today's Activity: Program and Interrogate

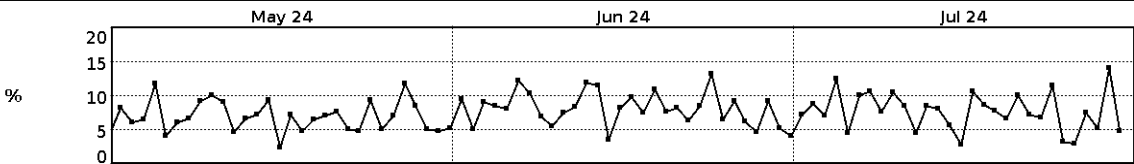
R = Counter Reset
P = Program
I = Interrogate



Events



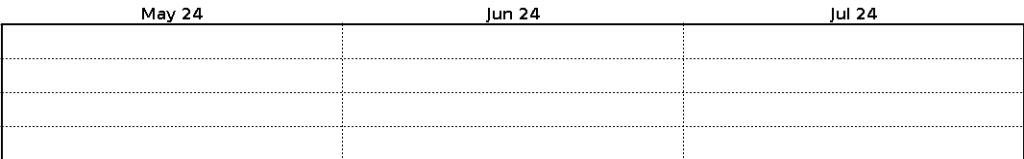
Activity Level



Heart Rate

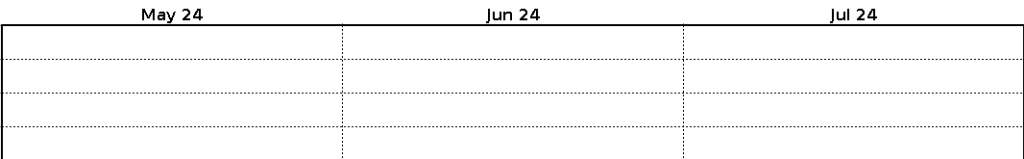
Max
Mean
Min

bpm



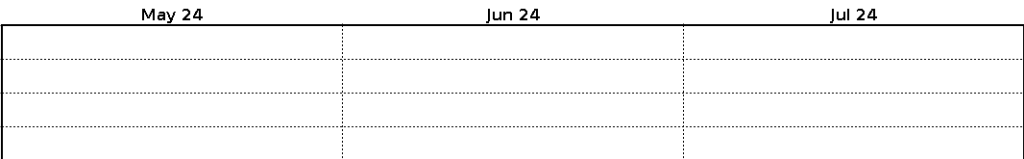
SDANN

ms

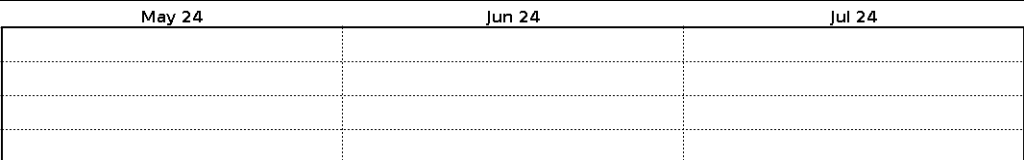


HRV Footprint

%

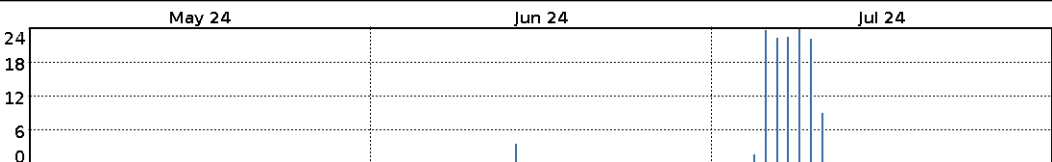


Autonomic Balance Monitor



AT/AF Burden

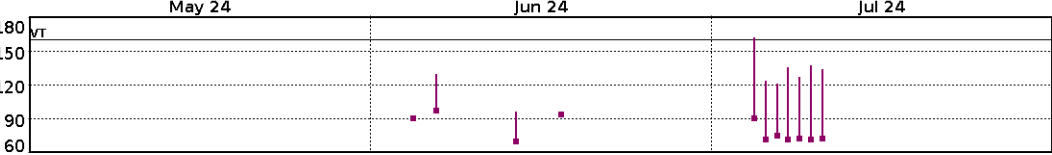
h



V Rate during AT/AF

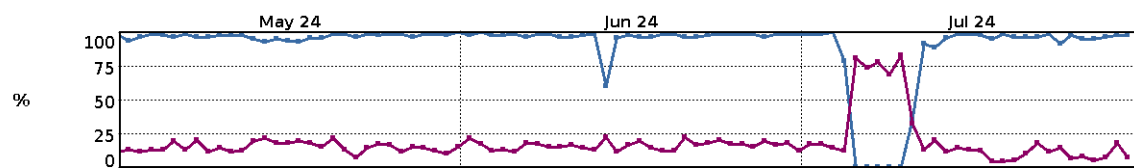
Max
Mean

bpm



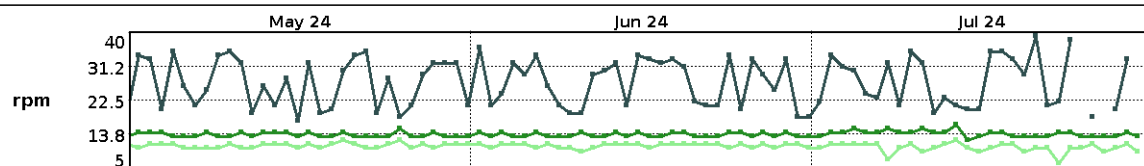
Pacing Percent

■ Atrial
■ V

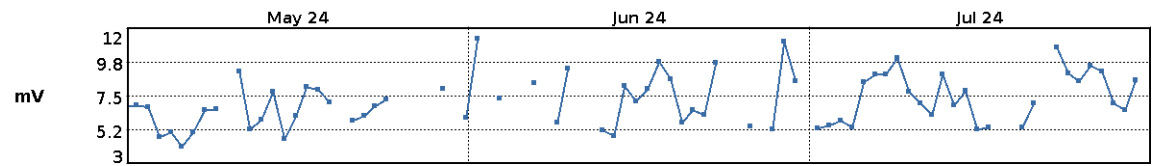


Respiratory Rate

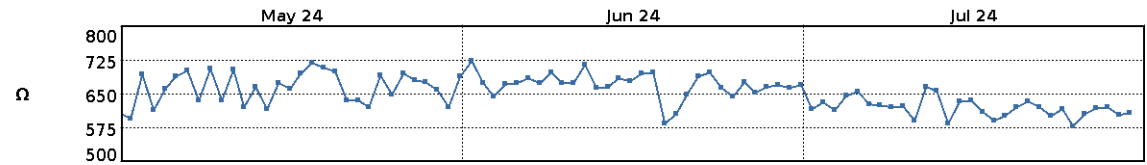
■ Max
■ Median
■ Min



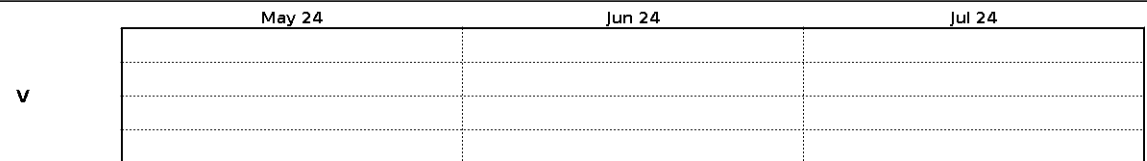
P-Wave Amplitude



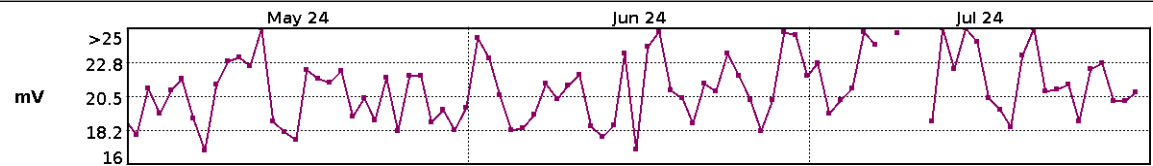
A Pace Impedance



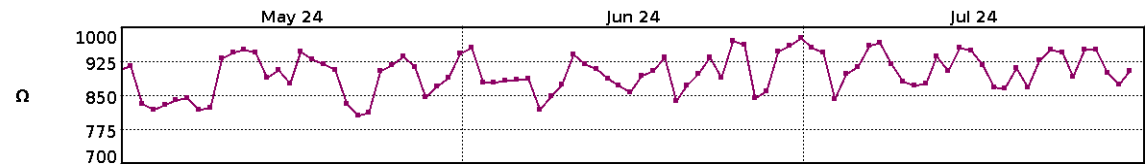
A Pace Threshold



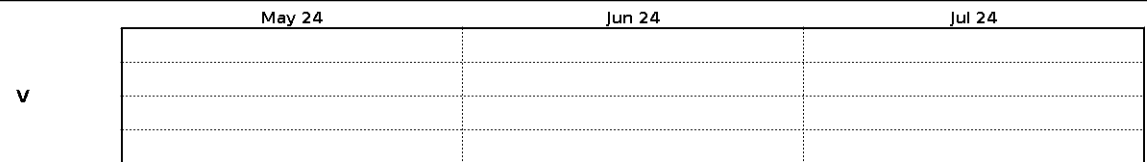
R-Wave (V) Amplitude



V Pace Impedance

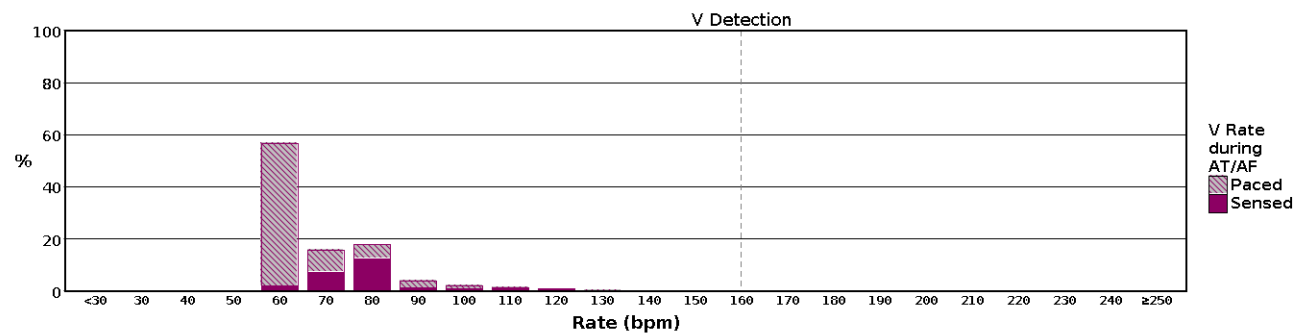
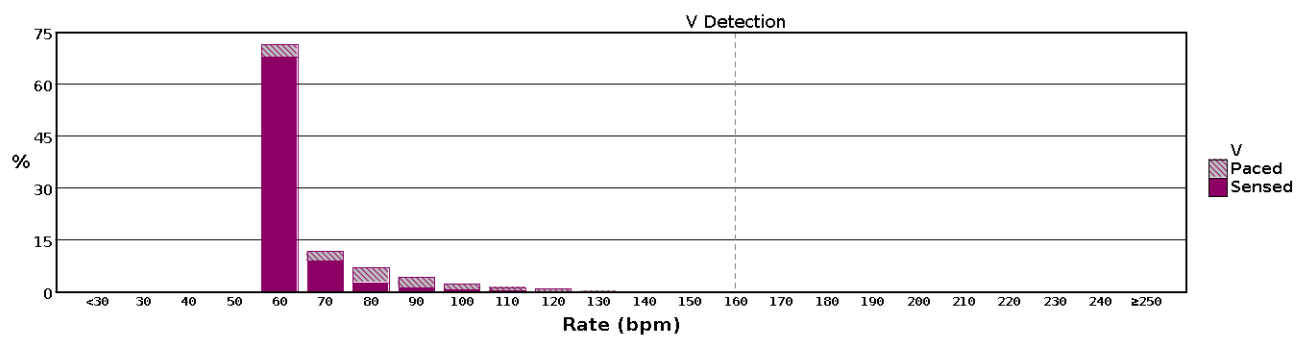
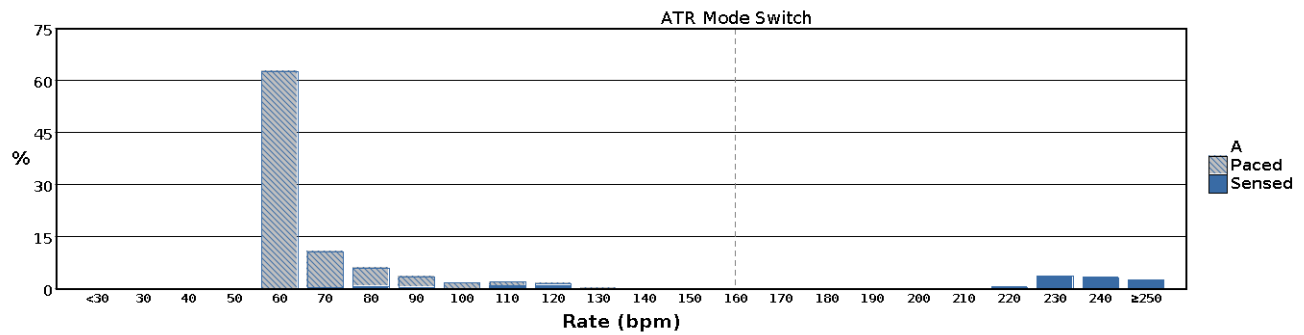


V Pace Threshold

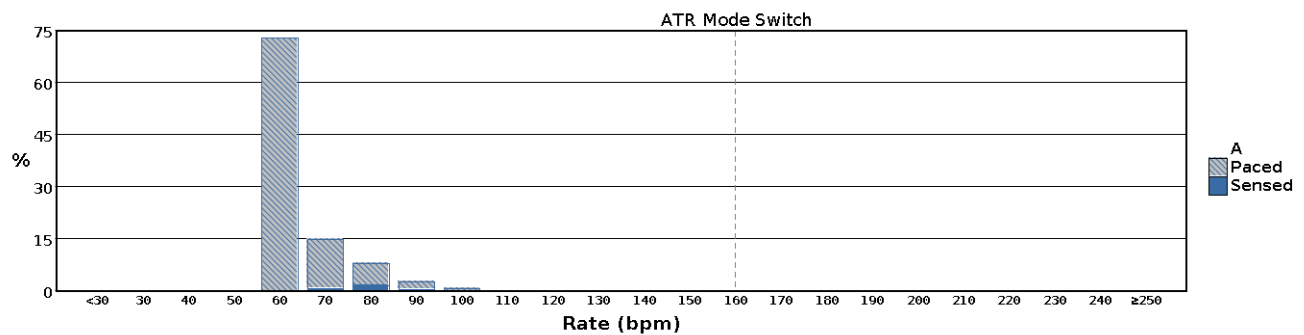


Ventricular Tachy Counters		Since Last Reset	Device Totals
		16 Jul 2024	
Ventricular Episode Counters			
Total Episodes		0	4
VT Episodes (V>A)		0	1
SVT Episodes (V<=A)		0	0
Nonsustained Episodes		0	3
Brady Counters	Reset Before Last	Since Last Reset	
	150 day(s)	13 day(s)	
	16 Feb 2024	16 Jul 2024 to Today	
	to 16 Jul 2024		
Counters			
% A Paced		86	97
% V Paced		18	9
Intrinsic Promotion			
AV Search +			
% Successful		100	0
Rate Hysteresis			
% Successful		0	0
Atrial Arrhythmia			
% AT/AF		4	0
Total Time in AT/AF (days)		6.5	0.0
Episodes by Duration			
< 1 minute		93	0
1 min - < 1 hr		89	0
1 hr - < 24 hr		28	0
24 hr - < 48 hr		0	0
> 48 hr		0	0
Total PACs		31.3K	1.9K
Ventricular Counters			
Total PVCs		477	42
Three or More PVCs		0	0
AT/AF Overview: Since Last Reset (16 Jul 2024 to Today)			
AT/AF: 0%		AT/AF Events: 0	
Total Time in AT/AF (days): 0.0			
There are no ATR events to display.			
AT/AF Overview: Reset Before Last (16 Feb 2024 to 16 Jul 2024)			
Longest:	07 Jul 2024 00:24	Avg V Rate: 69 bpm	Duration: 17:10:25 hh:mm:ss
Fastest VS Rate:	04 Jul 2024 23:44	Max V Rate: 161 bpm	Duration: 00:17:32 hh:mm:ss

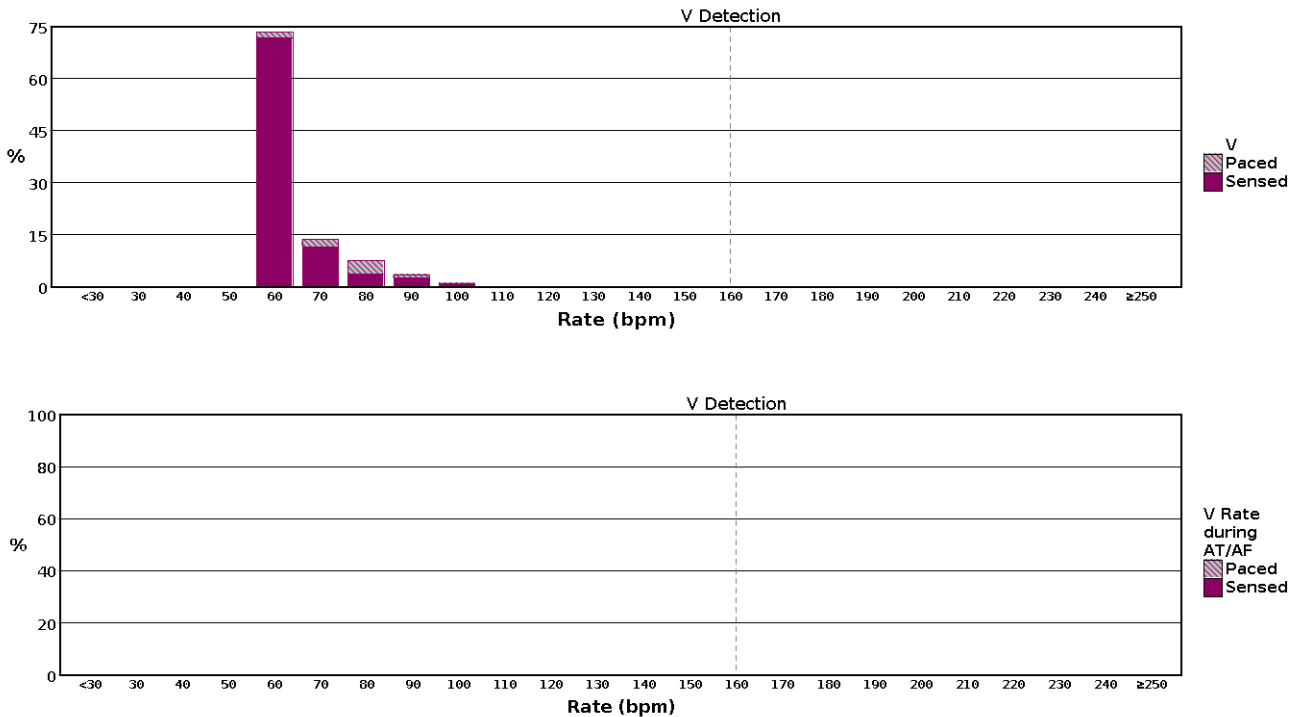
Histograms Reset Before Last (16 Feb 2024)



Histograms Since Last Reset (16 Jul 2024)



Histograms Since Last Reset (16 Jul 2024)



Heart Rate Variability

Last Measured:
HRV data unavailable because device was reprogrammed in the last 24 hours.

Reference:
HRV data unavailable because device was reprogrammed in the last 24 hours.



Real-time Log Report

Tomkinson, John

Date of Birth 26 Jan 1957

Device ACCOLADE MRI EL L331/ 959438

Last Office Interrogation

16 Jul 2024

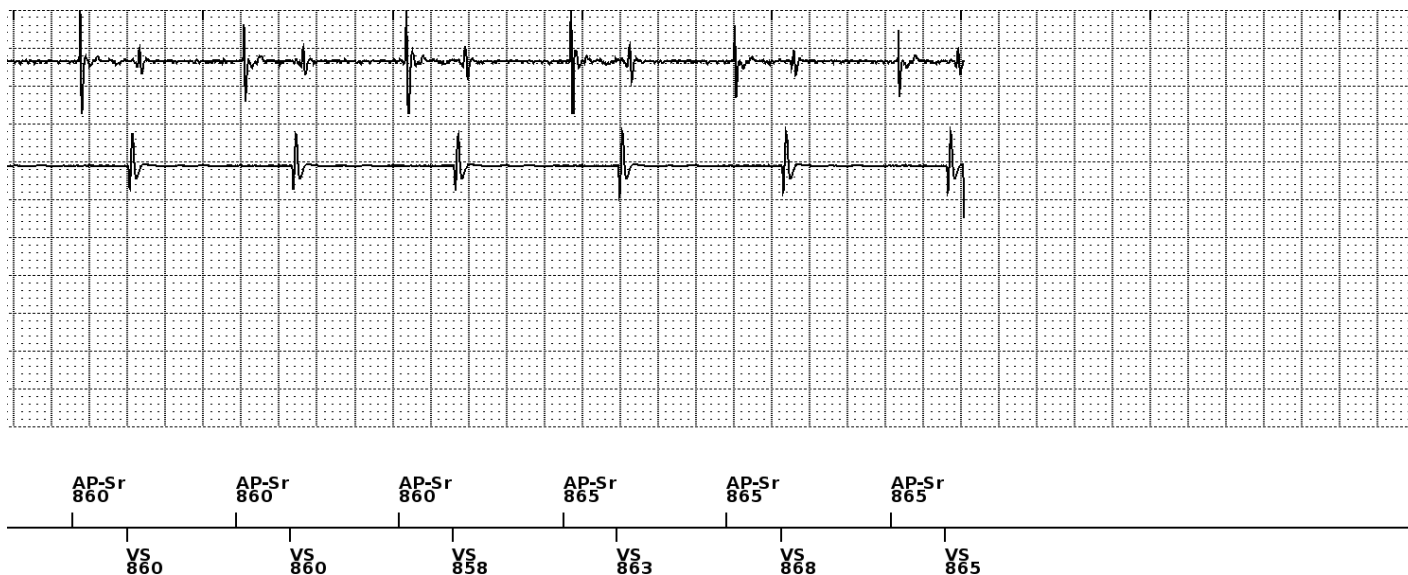
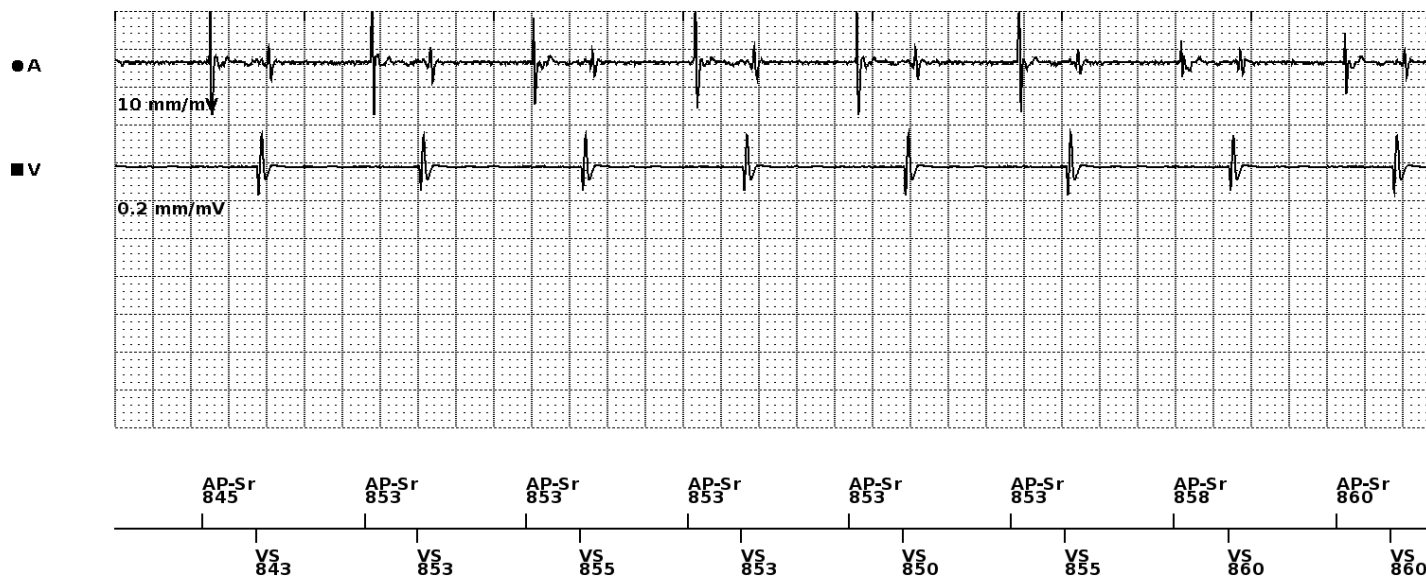
Implant Date

15 Nov 2021

Snapshot-2

30 Jul 2024 14:28:13

25mm/s



**LATITUDE™ Programming System****Report Created 30 Jul 2024****Sensor Trending and Replay Report****Tomkinson, John**

Date of Birth 26 Jan 1957

Device ACCOLADE MRI EL L331/ 959438

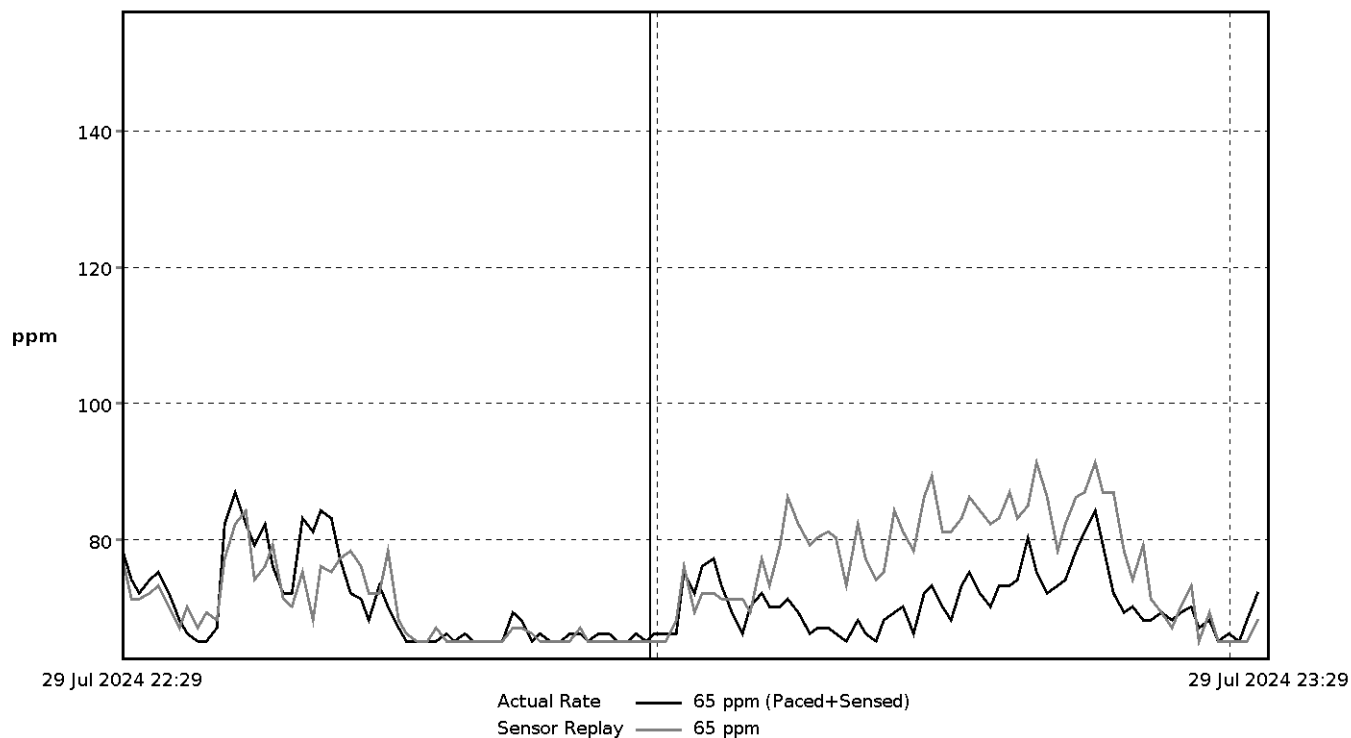
Last Office Interrogation

16 Jul 2024

Implant Date

15 Nov 2021**Sensor Trending and Replay Settings**

	Present	Replay
Lower Rate Limit	65	65 ppm
Max Sensor Rate	155	155 ppm
Minute Ventilation	Passive	On
Response Factor	---	8
Fitness Level	---	Endurance Sports
Ventilatory Threshold	---	115 ppm
Ventilatory Threshold Response	---	70 %
Accelerometer	On	On
Response Factor	9	9
Activity Threshold	Medium Low	Medium Low
Reaction Time	30	30 s
Recovery Time	4	4 min

Sensor Trending - 30 Second Average

**LATITUDE™ Programming System****Report Created 30 Jul 2024****Device Settings Report****Tomkinson, John**

Date of Birth 26 Jan 1957

Device ACCOLADE MRI EL L331/ 959438

Last Office Interrogation

16 Jul 2024

Implant Date

15 Nov 2021**Programming**

Last Programmed 30 Jul 2024

Ventricular Tachy

Ventricular Tachy EGM Storage On

Detection Rate 160 bpm (375 ms)

Atrial Tachy**Therapy****ATR Mode Switch Details**

ATR Mode Switch On
Trigger Rate 160 bpm
Duration 0 cycles
Entry Count 8 cycles
Exit Count 8 cycles
Fallback
Mode DDIR
Time 00:30 mm:ss
ATR Fallback LRL 65 ppm
Ventricular Rate Regulation Off

Atrial Tachy Response

Atrial Flutter Response On
Trigger Rate 160 bpm
PMT Termination On

Brady

Settings			
Mode	DDDR	Output	
RYTHMIQ™	Off	●A	2.0 V @ 0.4ms
Lower Rate Limit	65 ppm	■V	2.0 V @ 0.4ms
Maximum Tracking Rate	125 ppm	Sensitivity	
Maximum Sensor Rate	155 ppm	●A	Fixed 0.5 mV
Paced AV Delay	140 - 320 ms	■V	Fixed 2.5 mV
Sensed AV Delay	130 - 300 ms	Leads	
A-Refractory (PVARP)	240 - 340 ms	●A	
V-Refractory (VRP)	190 - 250 ms	Pace	Bipolar
PVARP after PVC	400 ms	Sense	Bipolar
AV Search +	Off	Safety Switch	On
Blanking		■V	
A-Blank after V-Pace	125 ms	Pace	Bipolar
A-Blank after V-Sense	45 ms	Sense	Bipolar
V-Blank after A-Pace	65 ms	Safety Switch	On
Magnet Response	Pace Async	Rate Adaptive Pacing	
Noise Response	DOO	Minute Ventilation	On
Rate Enhancements		Response Factor	7
Rate Smoothing		Fitness Level	Endurance Sports
Up	Off %	Ventilatory Threshold	125 ppm
Down	Off %	Ventilatory Thresh. Response	Off %
Sudden Brady Response	Off	Accelerometer	On
		Response Factor	9
		Activity Threshold	Medium Low
		Reaction Time	30 s
		Recovery Time	4 min
		Minute Ventilation Sensor Settings	
		Minute Ventilation Sensor	On
		Excitation Current	320 µA
		Vector Selection	V Only
		Signal Artifact Monitor	On
		Minute Ventilation Sensor Status	
		Status	Calibrated
		Current Vector	V

Setup

Telemetry						
Enable use of ZIP™ telemetry					On	
Trending Setup						
Recording Method					30 Second Average	
Duration					25 hours	
Data Storage					Continuous	
Leads Status Setup						
		Daily Intrinsic Amplitude	Daily Impedance	Impedance Limits		Pace Threshold
				Low	High	
●A	Pace/Sense	On	On	200	2000 Ω	Off
■V	Pace/Sense	On	On	200	2000 Ω	Off

**LATITUDE™ Programming System****Report Created 30 Jul 2024****Settings Changes Report****Tomkinson, John**

Date of Birth 26 Jan 1957

Device ACCOLADE MRI EL L331/ 959438

Last Office Interrogation

16 Jul 2024

Implant Date

15 Nov 2021

Status	Parameter	Old Value	New Value
Programmed	Derive from Patient Attributes	---	Off
Programmed	Minute Ventilation Response Factor	---	7
Programmed	Minute Ventilation Sensor	Passive	On
Programmed	Normal Brady Minimum Paced AV Delay	200 ms	140 ms
Programmed	Normal Brady Minimum Sensed AV Delay	190 ms	130 ms
Programmed	Patient's Fitness Level	---	Endurance Sports
Programmed	Patient's Fitness Level	Active	Endurance Sports
Programmed	Ventilatory Threshold	---	125 ppm
Programmed	Ventilatory Threshold Response	---	Off