LATITUDE INTEGRATION HL7 SPECIFICATION

LATITUDE™ NXT

LATITUDE NXT Patient Management System

ABOUT THIS MANUAL

The Boston Scientific LATITUDE remote patient monitoring system creates HL7 Observation Result Unsolicited (ORU) messages according to the specifications and definitions published in this document. These messages are used to deliver patient data to electronic medical record (EMR) systems.

This document is intended for Boston Scientific LATITUDE customers who (1) integrate HL7 messages into an EMR and (2) use EMR systems to track and manage patient data.

The first section of this document ("Latitude HL7 Message Specification" on page 1-2) is intended primarily for technical personnel involved in message integration. The second section ("Latitude HL7 Term Definitions" on page 2-2) is primarily intended for the clinician as further clarification of the Boston Scientific version of the data included in the message.

NOTE: *It is assumed that readers of this document are familiar with HL7 2.x terminology, specification syntax, data types, message structures, and semantics for ORU messages. For more information concerning HL7 messaging, visit www.hl7.org.*

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LATITUDE HL7 MESSAGE SPECIFICATION

CHAPTER 1

This chapter contains the following topics:

LATITUDE HL7 MESSAGE SPECIFICATION

The LATITUDE HL7 file is based upon the HL7 2.3.1 Observation Result Unsolicited message standard. This international standard describes a universal model for medical electronic data interoperability.

LATITUDE HL7 message basic concepts: (ASCII characters shown as delimiters in this publication are examples and are subject to change.)

1.   A LATITUDE message is made up of segments

2.   The first three letters of a segment are the segment type identifier

3.   A LATITUDE message will always contain these segment types: MSH; PID; NTE1; PV1; OBR1; OBX (many); ZU1; ZU2

4.   Segments are ASCII text strings made up of several delimited sequences

5.   A sequence is delimited by the pipe character (|, i.e., ASCII 0x7C) at its end

6.   Sequences are located and referred to by their numeric position within the segment

7.   The segment type identifier is not counted in sequence numbering

8.   With the exception of segment type MSH, the first sequence is always a number. This and the three character segment ID immediately before it are used to identify the segment, e.g. NTE.1, OBR.3, and OBX.75

9.   Some sequences may contain sub-sequences:

   •   Items within sub-sequences are separated by the caret character (^, i.e., ASCII 0x5E)

   •   The quantity and maximum length of sub-sequences are defined in the sequence definition

   •   Empty sub-sequences use the caret character as a placeholder

   •   The sub-sequence ends with a sequence delimiter (|)

10.   Message segments end with either a LF or CR character.

Patient data within a LATITUDE message is organized into four observation reports: Last Interrogation, Implant, Last In-Office Lead Test, and Lead Information. Observation reports consist of a single OBR segment followed by multiple OBX segments.

The message also contains useful follow-up summary data, including additional information from LATITUDE's Quick Notes report.

Refer to the illustration at left for further information.

MSH SEGMENT STRUCTURE

The MSH segment contains information about the sender and receiver of the message, the type of the message, a time stamp, etc. It is the first segment of the ORU message.

ELE-MENT NAME	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAM-PLE VALUE
Field separator	1		ST	1	R	[1..1]		00001	Y	|

Element name	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAMPLE VALUE
Encoding characters	2		ST	4	R	[1..1]		00002	Y	^~\&
Sending application	3		HD	180	R	[1..1]		00003	Y	LATI-TUDE
Sending facility	4		HD	180	R	[1..1]		00004	Y	BOSTON SCIENTIF-IC
Receiving facility	6		HD	180	RE	[0..1]		00006		Clinic Name
Date/Time of message	7		TS	26	R	[1..1]		00007		2006051-015 0057 +0000
Message type	9		MSG	15	R	[1..1]		00009		
Message code		1	ID	3	R	[1..1]	0076		Y	ORU
Trigger event		2	ID	3	R	[1..1]	0003		Y	R01
Message control ID	10		ST	20	R	[1..1]		00010		2500144
Process-ing ID	11		ID	1	R	[1..1]	0103	00011		P
Version ID	12		ID	5	R	[1..1]	0104	00012	Y	2.3.1
Accept acknowl-edge-ment type	15		ID	2	R	[1..1]	0155	00015	Y	NE
Character set	18		ID	6	R	[1..1]	0211	00692		8859/1 UNICODE See note a.
Principal language	19		CE	60	R	[0..1]		00693		See note b.
Language ID		1	ID	2	R	[0..1]				EN
Language name		2	ST	50	R	[0..1]				English
Coding system		3	ST	6	R	[0..1]				ISO639

a. The Character Set identifier will be either 8859/1 or UNICODE, but not both. Boston Scientific reserves the right to change the character set used in the HL7 message. The system receiving this HL7 message should check MSH.18 in order to identify the character set used in this HL7 message.

b. When Principal Language is blank, assume EN^English^ISO639. Otherwise the message language will be identified.

PID SEGMENT STRUCTURE

The PID segment contains patient identifier information such as name, id codes, zip code, and so on. This information is used for patient matching.

ELE-MENT NAME	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAM-PLE VALUE
Set ID — PID	1		SI	1	R	[1..1]		00104	Y	1

Patient ID	2		CX	20	R	[1..1]		00105		
ID		1	ST	20	R	[1..1]				4234793-618 See note a.
Patient identifier list	3		CX	20	R	[1..1]		00106		
List of IDs		1	ST	20	R	[1..2]				4234793-618~ab-c123456 See notes a, b and c.
Patient name	5		XPN	140	R	[0..1]		00108		See note d.
Family +last name prefix		1	CM	40	RE	[0..1]				Doe
Given name		2	ST	40	RE	[0..1]				John
Middle initial or name		3	ST	40	RE	[0..1]				Jimmy
Suffix		4	ST	20	RE	[0..1]				Jr.
Name representation code		8	ID	1	O	[0..1]	0465			|
Auxiliary patient name	5		XPN	140	R	[0..1]		00108		See note d.
Auxiliary family +last name prefix		1	CM	40	RE	[0..1]				Smith
Auxiliary given name		2	ST	40	RE	[0..1]				Jack
Auxiliary middle initial or name		3	ST	40	RE	[0..1]				Jackie
Auxiliary suffix		4	ST	20	RE	[0..1]				Sr.
Name representation code		8	ID	1	O	[0..1]	0465			P
Date of birth	7		TS	26	RE	[0..1]		00110		19271209

Sex	8		IS	1	RE	[0..1]	0001	00111		M See note e.
Zip or postal code	11	5	ST	10	RE	[0..1]				55408

a. Both Patient ID (sequence 2) and Patient Identifier List (sequence 3) contain a unique patient number that is generated and maintained by LATITUDE.

b. LATITUDE allows clinics to (optionally) add their own patient IDs to the LATITUDE system. Optional patient IDs become part of the exported HL7 message. If used, these clinic-defined patient IDs appear in the patient identifier list (sequence 3) as text after a tilde (~) character.

c. This table defines all patient ID elements used in the PID segment. Because every patient record is unique, messages might not contain each of the patient ID elements defined above.

d. Where available, the message will additionally contain patient name information as listed in the table. The ideographic and phonetic names will be included as an HL7 list within the PID.5 sequence. The items listed in the table represent the maximum set of information that could be sent.

e. The value U will appear if the patient's sex is unknown.

NTE SEGMENT STRUCTURE

THE NTE segment contains alerts and events that have occurred for a particular patient. There may be as many as four NTE segments in a single LATITUDE HL7 message.

ELE- MENT NAME	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAM- PLE VALUE
Set ID — NTE	1		SI	1	R	[1..1]		00096		1
Source of comment	2		ID	8	R	[1..1]		00097	Y	LATI- TUDE
Com- ment	3		FT	65536	R	[1..*]		00098		See content descrip- tion in Note a.

a. There is the potential for 4 NTE segments within each device follow-up message. The Set ID and description for these segments is as follows:

- Set ID 1 - This NTE segment contains a report consisting of an array of alerts that have occurred for a particular patient. There may be more than one alert associated with the given patient/ physician pair. The alerts are sorted such that all red alerts appear first followed by yellow alerts. Secondary sorting within each alert type is newest to oldest. A maximum of 255 alerts may be displayed.

- Set ID 2 - This NTE segment contains information concerning the LATITUDE patient record dismissal. It will contain information about who performed the dismissal and when it was performed.

- Set ID 3 - This NTE segment contains a report consisting of an array of events (stored episodes) that are included in the upload for a particular patient. There may be more than one event associated with the given patient/physician pair. Events are sorted newest to oldest with a maximum of 255 events listed. The last line of this segment will contain totals of each type of episode.

- Set ID 4 - This NTE segment contains information about the device if it is in a noteworthy condition. It will contain a warning statement and information concerning the condition. If this NTE segment exists it should be treated as a high priority message to display to the end user.

b. Not every LATITUDE HL7 message will contain all four NTE segments.

PV1 SEGMENT STRUCTURE

The PV1 (Patient Visit) segment contains information regarding the patient's attending physician.

ELE- MENT NAME	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAM- PLE VALUE
Set ID — PV1	1		SI	4	R	[1..1]		00131	Y	1
Patient class	2		IS	1	R	[0..1]		00132	Y	R
Attend- ing doctor	7		XCN	60	RE	[1..1]		00137		

	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAMPLE VALUE
ID Number (ST)		1	ST	10	RE	[1..1]				JHopkins See note a.
Family + last name prefix		2	CM	40	RE	[1..1]				Hopkins
Given name		3	ST	40	RE	[0..1]				John
Middle initial or name		4	ST	1	RE	[0..1]				L
suffix		5	ST	20	RE	[0..1]				Sr.

a. Attending Doctor ID Number is the physician's LATITUDE login name.
b. Messages might not contain all of the physician name elements defined above.

PV2 SEGMENT STRUCTURE

The PV2 (Patient Visit 2) segment contains information regarding the patient's LATITUDE group.

ELEMENT NAME	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAMPLE VALUE
Clinic organization name	23		XON	90	O	[0..1]		00724	N	
Organization name (group)		1	ST	87	RE	[0..1]			N	Cardiology
ID number (primary or secondary patient group)		3	NM	1	RE	[0..1]			N	1 See note b.

a. The PV2 segment is optional and may not be present in the HL7 file.
b. This value will be 1 if the HL7 file is associated with the primary LATITUDE group and it will be 2 if it is associated with the secondary LATITUDE group.

OBR SEGMENT STRUCTURE

OBR segments are the section headers for individual OBX interrogation information segments. They contain data such as timestamps, report identifier, and a unique system-generated identifier.

ELEMENT NAME	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAMPLE VALUE
Set ID — OBR	1		SI	4	R	[1:1]		00237	Y	1 through 4 See note a
Filler order number	3		EI	22	R	[1:1]		00217		
Entity identifier		1	ST	15	R	[1:1]				Unique identifier See note b

Name	SEQ	Comp	Data Type	Length	Opt	Rep	Table	Item #	Rpt	Value
Universal Service ID	4		CE	200	R	[1:1]		00238		
Identifier		1	ST	50	R	[1:1]				Boston-Scientif-ic-LastInter-rogation See note a
Text		2	ST	50	R	[1:1]				Last Interrog-ation See note a
Observa-tion date/time #	7		TS	26	R	[1:1]		00241		200604-2908000 5+0000
Observa-tion end date/time #	8		TS	26	RE	[0:1]		00242		200604-2908000 5+0000
Ordering provider	16		XCN	120	RE	[0:1]		00226		
ID number		1	ST	50	RE	[0:1]				e.g. JHopkins, Cariolo-gy, etc. See note c
Placer field 1	18		ST	2	R	[1:1]		00253	Y	DR See note d
Results rpt/status Chng – date/time +	22		TS	26	RE	[0:1]		00255		200604-2908000 5+0000
Results Status +	25		ID	1	R	[1:1]	0123	00258	Y	F

a. The LATITUDE ORU message contains four OBR (Observation Report) segments, each having a different Set ID and Universal Service ID (see table above). Each OBR contains multiple OBX records with context-specific observations. Details concerning the specific OBX observations are listed in the OBX Segment Structure section of this document.
b. LATITUDE generates one unique identifier and records it as Filler Order Number (OBR.3) in all four OBRs. The identifier does not change if observations are re-sent.
c. Ordering Provider (OBR.16) is the LATITUDE login name of either the responsible physician or the patient group name.
d. Placer Field 1 (OBR.18) is a value that is used to identify the type of observation being sent. It is always set to DR which stands for Diagnostic Report.

Observation Report Group IDs

Set ID	Name	Description	Universal Service ID Identifier	Universal Service ID text
1	Last interrogation	This OBR contains observations from the last remote monitoring session.	BostonScientific–LastInterrogation	Last Interrogation
2	Implant	This OBR contains observations generated at the time the PG was implanted.	BostonScientific–Implant	Implant
3	Last in-office lead test	This OBR contains observations from the latest in-office Lead Test.	BostonScientific–LastInOffice	Lead Test: In-Office
4	Lead information	This OBR contains information about implanted leads.	BostonScientific–Leads	Lead Information

OBX SEGMENT STRUCTURE

OBX segments contain data gathered during the most recent device interrogation.

ELE-MENT NAME	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAMPLE VALUE
Set ID – OBX	1		SI	4	R	[1..1]		00569		Sequential integer starting with 1
Value type	2		ID	2	R	[1..1]	0125	00570		ST or NM or DT or ED See note a
Observation identifier	3		CE	590	R	[1..1]		00571		
Identifier		1	ST	80	R	[1..1]				See note b
Text		2	ST	256	R	[1..1]				See note b
Name of coding system		3	ST	20	R	[1..1]			Y	GDT-LATI-TUDE
Observation value	5		- -	4000	RE	[0..1]				See note c
Units	6		CE	60	RE	[0..1]				
Identifier		1	ST	20	RE	[0..1]				See note d
Observation result status	11		ID	1	R	[1..1]	0085	00579	Y	F
Date/Time of the Observation	14		TS	26	C	[0..1]		00582		2006031-717000 0 +0000 See note e

a. Value Type (OBX.2) is the format of the reported data: ST - String; NM - Number; DT - Date; ED - Encapsulated data.
b. All observations are coded using LATITUDE specific terms. These terms are defined in the LATITUDE HL7 Term Definitions section of this document.
c. Observation Value (OBX.5) is the actual reported data expressed in the format specified in OBX.2. The maximum length of this string is 4000, although a PDF-formatted Presenting EGM Report may make the string longer.
d. OBX.6 contains the unit of measurement for data reported in OBX.5, if applicable. Units of measurement and decimal notation are localized.
e. Date/Time of the Observation (OBX.14) is non-blank only if the timestamp of the given observation is different than the timestamp reported in OBR.7. This value is conditional because it is a required value in observation groups OBR-1 and OBR-3 and it is not present in groups OBR-2 and OBR-4.

ZUX SEGMENT STRUCTURE

The Z Segments are customized segments used to transfer LATITUDE specific information.

ELE-MENT NAME	SEQ	SUB SEQ	DT	LEN	USAGE	CARD	TBL #	ITEM #	FIXED	EXAM-PLE VALUE
Segment Type	1		ST	3	R	[1..1]			Y	ZU1 or ZU2 See note a
Value	2		ST	200	R	[1..1]				URL or Report Type See note a

a. The two Z segments used are:

- ZU1 - Value contains the URL string that allows a system user to link to the patient in LATITUDE. Ex. https://www.test.bostonscientific.com/access/physician/patientDetails?id=987654321

- ZU2 - Value contains LATITUDE message description and version. Ex. Device Summary Report Version 6

LATITUDE HL7 TERM DEFINITIONS

CHAPTER 2

This chapter contains the following topics:

LATITUDE HL7 TERM DEFINITIONS

All observations contained in the OBX segments are coded using LATITUDE specific terms. The tables below are complete listings of OBX terms as used in the four OBR groups. Not all terms are relevant to all devices; therefore, not all terms will be present in all messages.

OBX TERMS USED IN OBR–1 GROUP (LAST INTERROGATION DATA)

Not every term appears in every message

GDT Code	Term Name	Description	Data Type	Unit
GDT-00001	Result Source	The Result Source identifies the source of the data (i.e., Remote Interrogation)	ST	
GDT-00002	Device Manufacturer	Device manufacturer company name	ST	
GDT-00003	Device Type	The type of device	ST	
GDT-00004	Device Name	The name given to a device by the manufacturer	ST	
GDT-00005	Device Model Name	The device model name	ST	
GDT-00006	Device Model Number	The device model number	ST	
GDT-00007	Device Serial Number	The device serial number	ST	
GDT-00008	Battery Gauge	The percentage that represents the battery life	NM	%
GDT-00009	Battery Status	Represents an alert or notification about the current status of the battery	ST	
GDT-00010	Monitoring Voltage	The battery voltage measurement taken by the implanted device.	ST	V
GDT-00011	Charge Time	The charge time of the last capacitor reform.	NM	s
GDT-00012	Last Reform	The date of the last capacitor reformation in the implanted device.	DT	
GDT-00013	VF Episodes	Total Ventricular Fibrillation Episodes: The number of episodes in the highest tachy zone detected since the Counters Since date.	ST	
GDT-00014	• VT Episodes • Tachy Episodes • VT Episodes (V>A)	VT Episodes: VT Zone arrhythmias detected since the Counters Since date	ST	
GDT-00015	VT-1 Episodes	VT-1 Episodes: VT-1 Zone arrhythmias detected since the Counters Since date. The term name will be shown as either VT Episodes or Tachy Episodes, depending upon the implanted device.	ST	
GDT-00016	• Non-Sustained Ventricular Episodes • Non-Sustained Episodes	Total Ventricular Tachycardia Non- Sustained Episodes: The number of Non- Sustained VT episodes detected since the Counters Since date	ST	
GDT-00017	• ATR Mode Switches • ATR Episodes	ATR Mode Switches: The number of mode switches detected since the Counters Since date.	NM	
GDT-00018	Afib Episodes	Atrial Fibrillation Episodes: Atrial Fibrillation episodes detected since the Counters Since date.	NM	
GDT-00019	• SVT Episodes • SVT Episodes (V≤A)	Supraventricular (Atrial) Tachycardia Episodes: SVT (AT) episodes detected since the Counters Since date.	NM	
GDT-00020	Atrial Percent Paced	Right Atrial Pacing Percent: The percent of all Right atrial events detected since the Counters Since date that were paced.	NM	%

GDT-00021	RV Percent Paced	Right Ventricular Pacing Percent: The percent of all Right ventricular events detected since the Counters Since date that were paced.	NM	%
GDT-00022	LV Percent Paced	Left Ventricular Pacing Percent: The percent of all left ventricular events detected since the Counters Since date that were paced.	NM	%
GDT-00023	Right Atrial Lead Status	The current status of the Right Atrial Lead determined by the device based on analysis of the lead amplitude and impedance.	ST	
GDT-00024	RA Intrinsic Amplitude	Right Atrial Intrinsic Amplitude (P-Wave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00025	RA Pace Impedance	Right Atrial Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00026	Right Ventricular Lead Status	The current status of the Right Ventricular Lead determined by the device based on analysis of the lead amplitude and impedance.	ST	
GDT-00027	RV Intrinsic Amplitude	Right Ventricular Intrinsic Amplitude (RWave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00028	RV Pace Impedance	Right Ventricular Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00029	• LV Lead Status • Left Ventricular Lead Status	The current status of the Left Ventricular Lead determined by the device based on analysis of the lead amplitude and impedance.	ST	
GDT-00030	LV Intrinsic Amplitude	Left Ventricular Intrinsic Amplitude (RWave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00031	LV Pace Impedance	Left Ventricular Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00032	• Shock Vector Status • Electrode Impedance Status	The current status of the Shock Vector determined by the device based on analysis of the impedance.	ST	
GDT-00033	Shock Impedance	The daily measured value for shock impedance	ST	Ohms
GDT-00034	• V-Tachy Mode • Therapy	Ventricular therapy mode	ST	
GDT-00035	A-Tachy Mode	Atrial Tachy therapy mode.	ST	
GDT-00036	Brady Mode	Brady Mode (i.e., pacing mode): The manner in which a device provides rate and rhythm support.	ST	
GDT-00037	Lower Rate Limit	Lower Rate Limit (LRL) is the rate at which the implanted device paces the atrium and/ or ventricle in the absence of sensed intrinsic activity.	NM	min^{-1}
GDT-00038	Maximum Tracking Rate	Maximum Tracking Rate: In the DDI and I(R) modes, the Maximum Tracking Rate (MTR) is the maximum rate at which the ventricular pacing will track 1:1 with nonrefractory sensed atrial events.	NM	min^{-1}
GDT-00039	Maximum Sensor Rate	The fastest sensor-driven pacing rate that can be achieved in a rate-adaptive pacing system.	NM	min^{-1}
GDT-00040	Sensitivity RA	Right Atrial Sensitivity: The Atrial Sensitivity parameter indicates the smallest signal that will be sensed in the right atrium. Value can be numeric value expressed in mV, a text string of (Nominal, Less, Least), or a combination of both.	ST	mV
GDT-00041	Sensitivity RV	Right Ventricular Sensitivity: The Right Ventricular Sensitivity parameter indicates the smallest signal that will be sensed in the right ventricle. Value can be numeric value expressed in mV, a text string of (Nominal, Less, Least), or a combination of both.	ST	mV

GDT-00042	Sensitivity LV	Left Ventricular Sensitivity: The Left Ventricular Sensitivity parameter indicates the smallest signal that will be sensed in the left ventricle. Value can be numeric value expressed in mV, a text string of (Nominal, Less, Least), or a combination of both.	ST	mV
GDT-00043	Paced AV Delay	The value of the AV Delay setting.	ST	ms
GDT-00044	Sensed AV Offset	Sensed AV Offset: The AV Delay is shortened by the programmed Sensed AV Offset after a sensed atrial event. For COGNIS, TELIGEN, and newer devices a value may be displayed even if it is not applicable for the current programmed mode.	ST	ms
GDT-00045	AV Search Hysteresis Search Interval	Number of paced AV cycles between A-V rate searches	ST	cycles
GDT-00046	AV Search Hysteresis AV Increase	The percentage increase in AV delay to be applied to the next cardiac cycle when AV Search is active. Note that this value will be output as appropriate for older devices. GDT-00218 will be output as appropriate for COGNIS, TELIGEN, PROGENY, and INGENIO devices.	NM	%
GDT-00047	• A-Refractory (PVARP) • A-Refractory	Post-Ventricular Atrial Refractory Period (PVARP) is the time period after a ventricular event, either paced or sensed, when activity in the atrium does not reset the cardiac cycle nor trigger a ventricular stimulus.	ST	ms
GDT-00048	RV-Refractory (RVRP)	Right Ventricular Refractory Period is the time period following a right ventricular event, either paced or sensed, when sensed electric activity in the right ventricle does not reset the timing cycles.	ST	ms
GDT-00049	LV-Refractory (LVRP)	Left Ventricular Refractory Period (LVRP) is defined as the time period following a left ventricular event, either paced or sensed, when intrinsic LV events will not be used to reset the timing cycles.	NM	ms
GDT-00050	LV Protection Period	Left Ventricular Protection Period (LVPP): LVPP is the period after a left ventricular event, either paced or sensed, when the device will not pace the left ventricle.	NM	ms
GDT-00051	Ventricular Pacing Chamber	Pacing Chamber: This parameter determines the ventricular pacing configuration - left, -right or bi-ventricular pacing.	ST	
GDT-00052	Ventricular Pacing Chamber LV Offset	Offset between delivery of RV and LV pacing pulses. The offset is applied to the LV pacing pulse, based on the timing of the RV pacing pulse. The offset may have a negative or positive value.	NM	ms
GDT-00053	Pacing Output – RA	The combination of the Right Atrial Amplitude and the Right Atrial Pulse Width.	ST	
GDT-00054	Pacing Output – RV	The combination of the Right Ventricular Amplitude and the Right Ventricular Pulse Width.	ST	
GDT-00055	Pacing Output – LV	The combination of the Left Ventricular Amplitude and the Left Ventricular Pulse Width.	ST	
GDT-00056	ATR Mode Switch Mode	ATR Mode Switch Mode: Non-tracking pacing mode change when patient experiences atrial tachyarrhythmia.	ST	
GDT-00057	ATR Mode Switch Rate	Atrial Tachy Response Rate is the pacing rate to which the mode switches in a new therapy setting.	ST	min⁻¹
GDT-00058	AFib Zone	AFib Rate Threshold: The rate above which an A-A interval is classified in the AFib zone.	ST	min⁻¹
GDT-00059	AFib Zone ATP1 Type	ATP Therapy for the first therapy set	ST	
GDT-00060	AFib Zone ATP1 Number of Bursts	The programmed number of atrial Antitachy Pacing bursts delivered in the AFib Zone by an implanted device for the first programmed atrial therapy set.	ST	
GDT-00061	AFib Zone ATP2 Type	ATP Therapy for the second programmed therapy set.	ST	

GDT-00062	AFib Zone ATP2 Number of Bursts	The programmed number of atrial Antitachy Pacing bursts delivered in the AFib Zone by an implanted device for the second programmed atrial therapy set.	ST	
GDT-00063	AFib Zone Shock 1 Energy	AFib Shock 1 Energy: The amount of energy delivered in the first shock of the AFib zone.	ST	J
GDT-00064	AFib Zone Shock 2 Energy	AFib Shock 2 Energy: The amount of energy delivered in the second shock of the AFib zone.	ST	J
GDT-00065	AFib Zone Shock 3 Energy	AFib Shock 3 Energy: The amount of energy delivered in the third shock of the AFib zone.	ST	J
GDT-00066	SVT Zone	SVT (AT) Rate Threshold: The rate above which an A-A interval is classified in the SVT Zone (i.e., AT Zone).	NM	min^{-1}
GDT-00067	SVT Zone ATP1 Type	The type of atrial Antitachy Pacing bursts delivered in the SVT Zone (i.e., AT Zone) by an implanted device for the first programmed atrial therapy set.	ST	
GDT-00068	SVT Zone ATP1 Number of Bursts	The number of atrial Antitachy Pacing bursts delivered in the SVT Zone (i.e., AT Zone) by an implanted device for the first programmed atrial therapy set.	ST	
GDT-00069	SVT Zone ATP2 Type	The type of atrial Antitachy Pacing bursts delivered in the SVT Zone (i.e., AT Zone) by an implanted device for the second programmed atrial therapy set.	ST	
GDT-00070	SVT Zone ATP2 Number of Bursts	The number of atrial Antitachy Pacing bursts delivered in the SVT Zone (i.e., AT Zone) by an implanted device for the second programmed atrial therapy set.	ST	
GDT-00071	SVT Zone Shock 1 Energy	SVT (AT) Shock 1 Energy: The amount of energy delivered in the first shock of the SVT Zone (i.e., AT Zone).	ST	J
GDT-00072	SVT Zone Shock 2 Energy	SVT (AT) Shock 2 Energy: The amount of energy delivered in the second shock of the SVT Zone (i.e., AT Zone).	ST	J
GDT-00073	SVT Zone Shock 3 Energy	SVT (AT) Shock 3 Energy: The amount of energy delivered in the third shock of the SVT Zone (i.e., AT Zone).	ST	J
GDT-00074	• VF Zone • Shock Zone	VF Rate Threshold: The rate above which an R-R interval is classified in the VF zone.	NM	min^{-1}
GDT-00075	• VF Shock 1 Energy • Shock Zone Shock Energy	VF Shock 1 Energy: The amount of energy delivered in the first shock of the VF zone.	NM	J
GDT-00076	VF Shock 2 Energy	VF Shock 2 Energy: The amount of energy delivered in the second shock of the VF zone.	NM	J
GDT-00077	VF Max Shock Energy	VF Maximum Shock Energy: The amount of energy delivered in each remaining shock after the second shock of the VF zone.	NM	J
GDT-00078	VF Number Of Additional Shocks	VF Number Of Additional Shocks: The number of additional max energy shocks in the VF zone programmed for delivery.	NM	
GDT-00079	• VT Zone • Tachy Detection Rate • Conditional Shock Zone	VT Rate Threshold: The rate above which an R-R interval is classified in the VT zone.	NM	min^{-1}
GDT-00080	VT Zone ATP1 Type	The type of ventricular Antitachy Pacing bursts delivered in the VT Zone by an implanted device for the first programmed ventricular therapy set.	ST	
GDT-00081	VT Zone ATP1 Number of Bursts	The number of ventricular Antitachy Pacing bursts delivered in the VT Zone by an implanted device for the first programmed ventricular therapy set.	ST	

GDT-00082	VT Zone ATP2 Type	The type of ventricular Antitachy Pacing bursts delivered in the VT Zone by an implanted device for the second programmed ventricular therapy set.	ST	
GDT-00083	VT Zone ATP2 Number of Bursts	The number of ventricular Antitachy Pacing bursts delivered in the VT Zone by an implanted device for the second programmed ventricular therapy set.	ST	
GDT-00084	• VT Shock 1 Energy • Conditional Shock Zone Shock Energy	VT Shock 1 Energy: The amount of energy delivered in the first shock of the VT zone.	ST	J
GDT-00085	VT Shock 2 Energy	VT Shock 2 Energy: The amount of energy delivered in the second shock of the VT zone.	ST	J
GDT-00086	VJ Max Shock Energy	VT Maximum Shock Energy: The amount of energy delivered in each remaining shock after the second shock of the VT zone.	ST	J
GDT-00087	VT Number Of Additional Max Energy Shocks	VT Number Of Additional Shocks: The number of additional max energy shocks in the VT zone programmed for delivery.	NM	
GDT-00088	VT-1 Zone	VT-1 Rate Threshold: The rate above which an R-R interval is classified in the VT-1 zone.	NM	min^{-1}
GDT-00089	VT-1 ATP1 Type	The type of ventricular Antitachy Pacing bursts delivered in the VT-1 Zone by an implanted device for the first ventricular therapy set.	ST	
GDT-00090	VT-1 ATP1 Number of Bursts	The number of ventricular Antitachy Pacing bursts delivered in the VT-1 Zone by an implanted device for the first ventricular therapy set.	ST	
GDT-00091	VT-1 ATP2 Type	The type of ventricular Antitachy Pacing bursts delivered in the VT-1 Zone by an implanted device for the second ventricular ATP therapy set.	ST	
GDT-00092	VT-1 ATP2 Number of Bursts	The number of ventricular Antitachy Pacing bursts delivered in the VT-1 Zone by an implanted device for the second ventricular ATP therapy set.	ST	
GDT-00093	VT-1 Shock 1 Energy	VT-1 Shock 1 Energy: The amount of energy delivered in the first shock of the VT-1 zone.	ST	J
GDT-00094	VT-1 Shock 2 Energy	VT-1 Shock 2 Energy: The amount of energy delivered in the second shock of the VT-1 zone.	ST	J
GDT-00095	VT-1 Max Shock Energy	VT-1 Maximum Shock Energy: The amount of energy delivered in each remaining shock after the second shock of the VT-1 zone.	ST	J
GDT-00096	VT-1 Number Of Additional Max Energy Shocks	VT-1 Number Of Additional Shocks: The number of shocks in the VT-1 zone programmed for delivery.	NM	
GDT-00097	Counters Since	The starting date that the counter values are calculated from.	ST	
GDT-00108	Device Implant Date	Implant date of the device *NOTE: The observation value will either conform to the DT format or show "N/R"*	DT	
GDT-00119	RV Pace Threshold	The minimum electrical stimulation (pacemaker output pulse) required to consistently initiate right ventricular (RV) depolarization.	ST	
GDT-00190	• Reverse Mode Switch • RYTHMIQ™	The alternative manner in which the device provides rate and rhythm support.	ST	
GDT-00191	• RA Lead Configuration • Lead Configuration (Pace/Sense) - RA	The configuration of the RA Lead for pacing and sensing.	ST	
GDT-00192	• RV Lead Configuration	The configuration of the RV Lead for pacing and sensing.	ST	

	• Lead Configuration (Pace/Sense) - RV			
GDT-00193	• LV Lead Configuration • Lead Configuration (Pace/Sense) - LV	The configuration of the LV Lead for pacing and sensing.	ST	
GDT-00196	ATR Minimum Duration	Atrial Tachycardia Response Minimum Duration: The shortest duration of Atrial Tachycardia Response episodes since the Counters Since date.	ST	
GDT-00197	ATR Maximum Duration	Atrial Tachycardia Response Maximum Duration: The longest duration of Atrial Tachycardia Response episodes since the Counters Since date.	ST	
GDT-00200	Magnet Rate	The expected rate when a magnet is placed over the device, an indicator of remaining battery life.	NM	min⁻¹
GDT-00201	Minute Ventilation	This parameter specifies the MV sensor mode for the rate adaptive pacing. Values can be On, Off, Passive, or ATROnly.	ST	
GDT-00207	Accelerometer	This parameter specifies the XL sensor mode for the rate adaptive pacing. Values can be On, Off, Passive, or ATROnly.	ST	
GDT-00212	MRI Protection Mode	This counts the number of times MRI Protection was started since the last implanted device reset.	NM	
GDT-00213	RA Pace Threshold	The minimum electrical stimulation (pacemaker output pulse) required to consistently initiate right atrial (RA) depolarization.	ST	
GDT-00216	• Ventricular Tachy EGM Storage • Tachy EGM Storage	Parameter to determine if Tachy EGM storage is on or off. Brady devices only.	ST	
GDT-00217	VF Zone ATP	Indicates whether or not ATP therapy is enabled in the VF zone.	ST	
GDT-00218	AV Search Hysteresis AV Delay	The AV delay to be applied when the device is in an AV search. Note that this value will be output as appropriate for COGNIS, TELIGEN, PROGENY, and INGENIO devices forward. GDT-00046 will be output as appropriate for older devices.	NM	ms
GDT-00219	LV Pace Threshold	The minimum electrical stimulation (pacemaker output pulse) required to consistently initiate left ventricular (LV) depolarization.	ST	
GDT-00220	Treated Episodes Counter Since Implant	S-ICD total number of treated episodes since the current device was implanted.	NM	
GDT-00221	Treated Episodes Counter Since Last Reset	S-ICD total number of treated episodes since the Counters Since date.	NM	
GDT-00222	Untreated Episodes Counter Since Implant	S-ICD total number of untreated episodes since the current device was implanted.	NM	
GDT-00223	Untreated Episodes Counter Since Last Reset	S-ICD total number of untreated episodes since the Counters Since date.	NM	
GDT-00224	Number of Shocks Delivered Since Implant	S-ICD total number of shocks delivered since the current device was implanted.	NM	
GDT-00225	Number of Shocks Delivered Since Last Reset	S-ICD total number of shocks delivered since the Counters Since date.	NM	
GDT-00226	Gain Setting	S-ICD S-ECG gain setting.	ST	
GDT-00227	Sensing Configuration	S-ICD sensing configuration setting.	ST	

GDT-00228	Post Shock Pacing	S-ICD setting for whether or not pacing is on or off after a shock is delivered.	ST	
GDT-00229	Shock Polarity	S-ICD shock polarity value.	ST	
GDT-00230	SMART Charge Duration	S-ICD SMART Charge duration value.	NM	s
GDT-00231	SMART Charge Intervals	S-ICD SMART Charge interval value.	NM	
GDT-01000	Presenting EGM Report	The Presenting EGM Report for the current interrogation in PDF format.	ED	

OBX TERMS USED IN OBR-2 GROUP (IMPLANT DATA)

Not every term appears in every message

GDT Code	Term Name	Description	Data Type	Unit
GDT-00001	Result Source	The Result Source identifies the source of the date (i.e., Implant).	ST	
GDT-00002	Device Manufacturer	Device manufacturer company name.	ST	
GDT-00003	Device Type	The type of device.	ST	
GDT-00004	Device Name	The name given to a device by the manufacturer.	ST	
GDT-00005	Device Model Name	The device model name.	ST	
GDT-00006	Device Model Number	The device model number.	ST	
GDT-00007	Device Serial Number	The device serial number	ST	
GDT-00098	RA Intrinsic Amplitude	Right Atrial Intrinsic Amplitude (P-Wave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00099	RA Pace Impedance	Right Atrial Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00100	RA Pace Threshold	The minimum electrical stimulation (pacemaker output pulse) required to consistently initiate Right Atrial depolarization.	ST	
GDT-00101	RV Intrinsic Amplitude	Right Ventricular Intrinsic Amplitude (RWave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00102	RV Pace Impedance	Right Ventricular Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00103	RV Pace Threshold	The minimum electrical stimulation (pacing output pulse) required to consistently initiate Right Ventricular depolarization.	ST	
GDT-00104	LV Intrinsic Amplitude	Left Ventricular Intrinsic Amplitude (RWave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00105	LV Pace Impedance	Left Ventricular Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00106	LV Pace Threshold	The minimum electrical stimulation (pacing output pulse) required to consistently initiate Left Ventricular depolarization.	ST	
GDT-00107	Shock Impedence	Last Delivered Ventricular Shock Lead Impedance: The shocking impedance from the last ventricular shock delivered.	ST	Ohms
GDT-00108	Device Implant Date	Implant date of the device *NOTE: The observation value will either conform to the DT format or show "N/R."*	DT	

OBX TERMS USED IN OBR-3 GROUP
(LAST IN-OFFICE LEAD TEST DATA)

Not every term appears in every message

GDT Code	Term Name	Description	Data Type	Unit
GDT-00001	Result Source	The Result Source identifies the source of the data (i.e., Lead Test: In-Office).	ST	
GDT-00002	Device Manufacturer	Device manufacturer company name.	ST	
GDT-00003	Device Type	The type of device.	ST	
GDT-00004	Device Name	The name given to a device by the manufacturer.	ST	
GDT-00005	Device Model Name	The device model name.	ST	
GDT-00006	Device Model Number	The device model number.	ST	
GDT-00007	Device Serial Number	The device serial number.	ST	
GDT-00108	Device Implant Date	Implant date of the device NOTE: The observation value will either conform to the DT format or show "N/R."	DT	
GDT-00109	RA Intrinsic Amplitude	Right Atrial Intrinsic Amplitude (P-Wave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00110	RA Pace Impedance	Right Atrial Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00111	RA Pace Threshold	The minimum electrical stimulation (pacemaker output pulse) required to consistently initiate Right Atrial depolarization.	ST	
GDT-00112	RV Intrinsic Amplitude	Right Ventricular Intrinsic Amplitude (RWave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00113	RV Pace Impedance	Right Ventricular Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00114	RV Pace Threshold	The minimum electrical stimulation (pacing output pulse) required to consistently initiate Right Ventricular depolarization.	ST	
GDT-00115	LV Intrinsic Amplitude	Left Ventricular Intrinsic Amplitude (RWave) measured during an Intrinsic Amplitude Test.	ST	mV
GDT-00116	LV Pace Impedance	Left Ventricular Lead Impedance measured during a Lead Impedance Test.	ST	Ohms
GDT-00117	LV Pace Threshold	The minimum electrical stimulation (pacing output pulse) required to consistently initiate Left Ventricular depolarization.	ST	
GDT-00118	Shock Impedance	Last Delivered Ventricular Shock Lead Impedance: The shocking impedance from the last ventricular shock delivered.	ST	Ohms

OBX TERMS USED IN OBR-4 GROUP
(LEAD INFORMATION DATA)

Not every term appears in every message

GDT Code	Term Name *(See note a.)*	Description	Data Type	Unit
GDT-00120	Lead 1: Implant Date	The Implant Date of the lead.	DT	
GDT-00121	Lead 1: Manufacturer	The Manufacturer of the lead.	ST	
GDT-00122	Lead 1: Model Number	The Model of the lead.	ST	

GDT-00123	Lead 1: Serial Number	The Serial number of the lead.	ST	
GDT-00124	Lead 1: Polarity	The Polarity of the lead.	ST	
GDT-00125	Lead 1: Position	The Position of the lead.	ST	
GDT-00126	Lead 1: Status	The status of the lead.	ST	
GDT-00130	Lead 2: Implant Date	The Implant Date of the lead.	DT	
GDT-00131	Lead 2: Manufacturer	The Manufacturer of the lead.	ST	
GDT-00132	Lead 2: Model Number	The Model of the lead.	ST	
GDT-00133	Lead 2: Serial Number	The Serial number of the lead.	ST	
GDT-00134	Lead 2: Polarity	The Polarity of the lead.	ST	
GDT-00135	Lead 2: Position	The Position of the lead.	ST	
GDT-00136	Lead 2: Status	The status of the lead.	ST	
GDT-00140	Lead 3: Implant Date	The Implant Date of the lead.	DT	
GDT-00141	Lead 3: Manufacturer	The Manufacturer of the lead.	ST	
GDT-00142	Lead 3: Model Number	The Model of the lead.	ST	
GDT-00143	Lead 3: Serial Number	The Serial number of the lead.	ST	
GDT-00144	Lead 3: Polarity	The Polarity of the lead.	ST	
GDT-00145	Lead 3: Position	The Position of the lead.	ST	
GDT-00146	Lead 3: Status	The status of the lead.	ST	
GDT-00150	Lead 4: Implant Date	The Implant Date of the lead.	DT	
GDT-00151	Lead 4: Manufacturer	The Manufacturer of the lead.	ST	
GDT-00152	Lead 4: Model Number	The Model of the lead.	ST	
GDT-00153	Lead 4: Serial Number	The Serial number of the lead.	ST	
GDT-00154	Lead 4: Polarity	The Polarity of the lead.	ST	
GDT-00155	Lead 4: Position	The Position of the lead.	ST	
GDT-00156	Lead 4: Status	The status of the lead.	ST	
GDT-00160	Lead 5: Implant Date	The Implant Date of the lead.	DT	
GDT-00161	Lead 5: Manufacturer	The Manufacturer of the lead.	ST	
GDT-00162	Lead 5: Model Number	The Model of the lead.	ST	
GDT-00163	Lead 5: Serial Number	The Serial number of the lead.	ST	
GDT-00164	Lead 5: Polarity	The Polarity of the lead.	ST	
GDT-00165	Lead 5: Position	The Position of the lead.	ST	
GDT-00166	Lead 5: Status	The status of the lead.	ST	
GDT-00170	Lead 6: Implant Date	The Implant Date of the lead.	DT	
GDT-00171	Lead 6: Manufacturer	The Manufacturer of the lead.	ST	
GDT-00172	Lead 6: Model Number	The Model of the lead.	ST	
GDT-00173	Lead 6: Serial Number	Number The Serial number of the lead.	ST	
GDT-00174	Lead 6: Polarity	The Polarity of the lead.	ST	
GDT-00175	Lead 6: Position	The Position of the lead.	ST	
GDT-00176	Lead 6: Status	The status of the lead.	ST	
GDT-00180	Lead 7: Implant Date	The Implant Date of the lead.	DT	
GDT-00181	Lead 7: Manufacturer	The Manufacturer of the lead.	ST	
GDT-00182	Lead 7: Model Number	The Model of the lead.	ST	
GDT-00183	Lead 7: Serial Number	The Serial number of the lead.	ST	

GDT-00184	Lead 7: Polarity	The Polarity of the lead.	ST	
GDT-00185	Lead 7: Position	The Position of the lead.	ST	
GDT-00186	Lead 7: Status	The status of the lead.	ST	

a.   Lead.x may or may not be viewable, depending on the version of the system.

EXAMPLE HL7 FILE

CHAPTER 3

This chapter contains the following topics:

EXAMPLE HL7 FILE

The following HL7 file examples show what a LATITUDE HL7 message might look like. These are only two examples of many possible outcomes. Data within the example messages is hypothetical, and not all LATITUDE HL7 terms are represented.

EXAMPLE MESSAGE 1 — S-ICD DEVICE

```
MSH|^~\&|LATITUDE|BOSTON SCIENTIFIC||Test Clinic|20150209214153+0000||
ORU^R01|1000000138|P|2.3.1|||NE|||UNICODE/1|en^English^ISO639
PID|1|1000000009|1000000009~PID_001||Smith^Joe||20150101|U
NTE|1|LATITUDE|\.br\My Alerts\.br\----------------------------\.br\Jan 26, 2015
10:07 CST - Yellow Alert - Untreated episode.\.br\Jan 26, 2015 10:04 CST -
Yellow Alert - Shock therapy delivered to convert arrhythmia (treated episode).
NTE|3|LATITUDE|\.br\Jan 26, 2015 10:07 CST Untreated\.br\Jan 26, 2015 10:04 CST
Treated, Shock Impedance: 77 Ohms\.br\
PV1|1|R
PV2|||||||||||||||||||||Test Clinic group^^1
OBR|1||1000000013|BostonScientific-LastInterrogation^Last Interrogation|||
201501261012-0600|201501261012-0600|||||||||||DR||||201501261012-0600|||F
OBX|1|ST|GDT-00001^Result Source^GDT-LATITUDE||Remote Interrogation||||||F
OBX|2|ST|GDT-00002^Device Manufacturer^GDT-LATITUDE||BOSTON SCIENTIFIC||||||F
OBX|3|ST|GDT-00003^Device Type^GDT-LATITUDE||S-ICD||||||F
OBX|4|ST|GDT-00004^Device Name^GDT-LATITUDE||||||||F
OBX|5|ST|GDT-00005^Device Model Name^GDT-LATITUDE||EMBLEM S-ICD||||||F
OBX|6|ST|GDT-00006^Device Model Number^GDT-LATITUDE||A209||||||F
OBX|7|ST|GDT-00007^Device Serial Number^GDT-LATITUDE||100564||||||F
OBX|8|DT|GDT-00108^Device Implant Date^GDT-LATITUDE||20150126||||||F
OBX|9|ED|GDT-01000^Presenting S-ECG Report^GDT-LATITUDE||Application^PDF^^Base64^
{encoded PDF here}||||||F|||201501261012-0600
OBX|10|ST|GDT-00009^Battery Status^GDT-LATITUDE||OK||||||F
OBX|11|NM|GDT-00008^Battery Gauge^GDT-LATITUDE||98|%||||F
OBX|12|ST|GDT-00034^Therapy^GDT-LATITUDE||ON||||||F
OBX|13|NM|GDT-00074^Shock Zone^GDT-LATITUDE||220|bpm||||F
OBX|14|NM|GDT-00075^Shock Zone Shock Energy^GDT-LATITUDE||80|J||||F
OBX|15|NM|GDT-00079^Conditional Shock Zone^GDT-LATITUDE||200|bpm|||||F
OBX|16|NM|GDT-00084^Conditional Shock Zone Shock Energy^GDT-LATITUDE||80|J|||||F
OBX|17|ST|GDT-00229^Shock Polarity^GDT-LATITUDE||REV||||||F
OBX|18|NM|GDT-00230^SMART Charge Duration^GDT-LATITUDE||204.69|s||||F
OBX|19|NM|GDT-00231^SMART Charge Intervals^GDT-LATITUDE||133||||F
OBX|20|ST|GDT-00226^Gain Setting^GDT-LATITUDE||1X||||||F
OBX|21|ST|GDT-00227^Sensing Configuration^GDT-LATITUDE||Alternate|||||F
OBX|22|ST|GDT-00228^Post Shock Pacing^GDT-LATITUDE||ON||||||F
OBX|23|ST|GDT-00097^Counters Since^GDT-LATITUDE||20150126||||F
OBX|24|NM|GDT-00220^Treated Episodes Counter Since Implant^GDT-LATITUDE||1||||||F
OBX|25|NM|GDT-00221^Treated Episodes Counter Since Last Reset^GDT-LATITUDE||1||||||F
OBX|26|NM|GDT-00222^Untreated Episodes Counter Since Implant^GDT-LATITUDE||1||||||F
OBX|27|NM|GDT-00223^Untreated Episodes Counter Since Last Reset^GDT-LATITUDE||1||||||F
OBX|28|NM|GDT-00224^Number of Shocks Delivered Since Implant^GDT-LATITUDE||1||||||F
OBX|29|NM|GDT-00225^Number of Shocks Delivered Since Last Reset^GDT-LATITUDE||1||||||F
OBX|30|ST|GDT-00032^Electrode Impedance Status^GDT-LATITUDE||OK||||||F
OBR|4||1000000013|BostonScientific-Leads^Lead Information|||201501261012-0600|
201501261012-0600|||||||||||DR||||201501261012-0600|||F
OBX|1|ST|GDT-00121^Manufacturer^GDT-LATITUDE||BOSTON SCIENTIFIC||||||F
OBX|2|ST|GDT-00122^Model Number^GDT-LATITUDE||1030||||||F
OBX|3|ST|GDT-00123^Serial Number^GDT-LATITUDE||A123456||||||F
ZU1|https://www.was1.bostonscientific.com/clinic/emr/patient?id=123456789
ZU2|Device Summary Report Version 6
```

EXAMPLE MESSAGE 2 — OTHER DEVICES (NOT S-ICD)

```
MSH|^~\&|LATITUDE|BOSTON SCIENTIFIC||Lakeview Drive No 2
Clinic|20100507203115+0000||ORU^R01|2500021|P|2.3.1|||NE|||UNICODE|EN^English^ISO639|
PID|1|7066374|7066374~CCa9972||Carroll^Carter_1^^||19490329|M|||^^^^0BT19|||||||||
NTE|1|LATITUDE|\.br\My Alerts\.br\-----------------------------\.br\05 May 2010-Device
parameter error.  Print Device Settings report and review parameters.  Contact LATITUDE
Customer Support.\.br\05 May 2010-High atrial pacing lead impedance detected.  Schedule
in-office follow-up to evaluate atrial pacing lead.\.br\|
NTE|2|LATITUDE|Dismissed from Review List in LATITUDE by Terrill, Clementina_uk (CTe4276)
on 07 May 2010 at 22:31 CEST|
NTE|3|LATITUDE|\.br\Events Since Last Follow-up(06 Jan 2010)\.br\------------------------
-----\.br\|
PV1|1|R||||CTe4276^Terrill^Clementina_uk^^|
OBR|1||2500092|BostonScientific-LastInterrogation^Last
Interrogation|||20100505084709+0000|20100505084709+0000|||||||||CTe4276||DR||||20100505
084709+0000|||F|
OBX|1|ST|GDT-00001^Result Source^GDT-LATITUDE||Remote Interrogation||||||F||
OBX|2|ST|GDT-00002^Device Manufacturer^GDT-LATITUDE||BOSTON SCIENTIFIC||||||F||
OBX|3|ST|GDT-00003^Device Type^GDT-LATITUDE||CRT-D||||||F||
OBX|4|ST|GDT-00004^Device Name^GDT-LATITUDE|||||||F||
OBX|5|ST|GDT-00005^Device Model Name^GDT-LATITUDE||COGNIS 100-D||||||F||
OBX|6|ST|GDT-00006^Device Model Number^GDT-LATITUDE||P106||||||F||
OBX|7|ST|GDT-00007^Device Serial Number^GDT-LATITUDE||715154||||||F||
OBX|8|DT|GDT-00108^Device Implant Date^GDT-LATITUDE||20090505||||||F||
OBX|9|NM|GDT-00008^Battery Gauge^GDT-LATITUDE||0|%|||||F||
OBX|10|ST|GDT-00009^Battery Status^GDT-LATITUDE||OK Approximate time to explant: N/
R||||||F||
OBX|11|NM|GDT-00011^Charge Time^GDT-LATITUDE||N/R|s|||||F||
OBX|12|DT|GDT-00012^Last Capacitor Re-form^GDT-LATITUDE||N/R||||||F||
OBX|13|ST|GDT-00097^Counters Since^GDT-LATITUDE||20100106||||||F||
OBX|14|ST|GDT-00013^VF Episodes^GDT-LATITUDE||0||||||F||
OBX|15|ST|GDT-00014^VT Episodes^GDT-LATITUDE||0||||||F||
OBX|16|ST|GDT-00015^VT-1 Episodes^GDT-LATITUDE||0||||||F||
OBX|17|ST|GDT-00016^Non-Sustained Ventricular Episodes^GDT-LATITUDE||0||||||F||
OBX|18|NM|GDT-00020^Atrial Percent Paced^GDT-LATITUDE||0|%|||||F||
OBX|19|NM|GDT-00021^RV Percent Paced^GDT-LATITUDE||0|%|||||F||
OBX|20|NM|GDT-00022^LV Percent Paced^GDT-LATITUDE||0|%|||||F||
OBX|21|ST|GDT-00023^Right Atrial Lead Status^GDT-LATITUDE||OK||||||F||
OBX|22|ST|GDT-00024^RA Intrinsic Amplitude^GDT-LATITUDE|||mV|||||F||
OBX|23|ST|GDT-00025^RA Pace Impedance^GDT-LATITUDE|||Ohms|||||F||
OBX|24|ST|GDT-00026^Right Ventricular Lead Status^GDT-LATITUDE||OK||||||F||
OBX|25|ST|GDT-00027^RV Intrinsic Amplitude^GDT-LATITUDE|||mV|||||F||
OBX|26|ST|GDT-00028^RV Pace Impedance^GDT-LATITUDE|||Ohms|||||F||
OBX|27|ST|GDT-00029^LV Lead Status^GDT-LATITUDE||OK||||||F||
OBX|28|ST|GDT-00030^LV Intrinsic Amplitude^GDT-LATITUDE|||mV|||||F||
OBX|29|ST|GDT-00031^LV Pace Impedance^GDT-LATITUDE|||Ohms|||||F||
OBX|30|ST|GDT-00032^Shock Vector Status^GDT-LATITUDE||OK||||||F||
OBX|31|ST|GDT-00033^Shock Impedance^GDT-LATITUDE|||Ohms|||||F||
OBX|32|ST|GDT-00034^V-Tachy Mode^GDT-LATITUDE||Monitor + Therapy||||||F||
OBX|33|ST|GDT-00036^Brady Mode^GDT-LATITUDE||DDDR||||||F||
OBX|34|NM|GDT-00037^Lower Rate Limit^GDT-LATITUDE||100|min‾¹|||||F||
OBX|35|NM|GDT-00038^Maximum Tracking Rate^GDT-LATITUDE||110|min‾¹|||||F||
OBX|36|NM|GDT-00039^Maximum Sensor Rate^GDT-LATITUDE||110|min‾¹|||||F||
OBX|37|ST|GDT-00040^Sensitivity RA^GDT-LATITUDE||AGC 0.25|mV|||||F||
OBX|38|ST|GDT-00041^Sensitivity RV^GDT-LATITUDE||AGC 0.6|mV|||||F||
OBX|39|ST|GDT-00042^Sensitivity LV^GDT-LATITUDE||AGC 1.0|mV|||||F||
OBX|40|ST|GDT-00043^Paced AV Delay^GDT-LATITUDE||30 - 300|ms|||||F||
OBX|41|ST|GDT-00044^Sensed AV Offset^GDT-LATITUDE||-60|ms|||||F||
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OBX|42|ST|GDT-00047^A-Refractory (PVARP)^GDT-LATITUDE||150 - 450|ms|||||F||
OBX|43|ST|GDT-00048^RV-Refractory (RVRP)^GDT-LATITUDE||150 - 450|ms|||||F||
OBX|44|NM|GDT-00049^LV-Refractory (LVRP)^GDT-LATITUDE||250|ms|||||F||
OBX|45|NM|GDT-00050^LV Protection Period^GDT-LATITUDE||400|ms|||||F||
OBX|46|ST|GDT-00051^Ventricular Pacing Chamber^GDT-LATITUDE||BiV|||||||F||
OBX|47|NM|GDT-00052^Ventricular Pacing Chamber LV Offset^GDT-LATITUDE||0|ms|||||F||
OBX|48|ST|GDT-00053^Pacing Output - RA^GDT-LATITUDE||3.5 V @ 0.4 ms|||||||F||
OBX|49|ST|GDT-00054^Pacing Output - RV^GDT-LATITUDE||3.5 V @ 0.4 ms|||||||F||
OBX|50|ST|GDT-00055^Pacing Output - LV^GDT-LATITUDE||3.5 V @ 0.4 ms|||||||F||
OBX|51|ST|GDT-00191^Lead Configuration (Pace/Sense) - RA^GDT-LATITUDE||Bipolar|||||||F||
OBX|52|ST|GDT-00192^Lead Configuration (Pace/Sense) - RV^GDT-LATITUDE||Bipolar|||||||F||
OBX|53|ST|GDT-00193^Lead Configuration (Pace/Sense) - LV^GDT-LATITUDE||||||||F||
OBX|54|ST|GDT-00056^ATR Mode Switch Mode^GDT-LATITUDE||DDI|||||||F||
OBX|55|ST|GDT-00057^ATR Mode Switch Rate^GDT-LATITUDE||170|min⁻¹|||||F||
OBX|56|NM|GDT-00074^VF Zone^GDT-LATITUDE||180|min⁻¹|||||F||
OBX|57|NM|GDT-00075^VF Shock 1 Energy^GDT-LATITUDE||41|J|||||F||
OBX|58|NM|GDT-00076^VF Shock 2 Energy^GDT-LATITUDE||41|J|||||F||
OBX|59|NM|GDT-00077^VF Max Shock Energy^GDT-LATITUDE||41|J|||||F||
OBX|60|NM|GDT-00078^VF Number Of Additional Shocks^GDT-LATITUDE||6|||||F||
OBX|61|NM|GDT-00079^VT Zone^GDT-LATITUDE||160|min⁻¹|||||F||
OBX|62|ST|GDT-00080^VT Zone ATP1 Type^GDT-LATITUDE||Off|||||F||
OBX|63|ST|GDT-00081^VT Zone ATP1 Number of Bursts^GDT-LATITUDE||Off|||||||F||
OBX|64|ST|GDT-00082^VT Zone ATP2 Type^GDT-LATITUDE||Off|||||||F||
OBX|65|ST|GDT-00083^VT Zone ATP2 Number of Bursts^GDT-LATITUDE||Off|||||||F||
OBX|66|ST|GDT-00084^VT Shock 1 Energy^GDT-LATITUDE||0.1|J|||||F||
OBX|67|ST|GDT-00085^VT Shock 2 Energy^GDT-LATITUDE||0.1|J|||||F||
OBX|68|ST|GDT-00086^VT Max Shock Energy^GDT-LATITUDE|||J|||||F||
OBX|69|NM|GDT-00088^VT-1 Zone^GDT-LATITUDE||140|min⁻¹|||||F||
OBX|70|ST|GDT-00089^VT-1 ATP1 Type^GDT-LATITUDE||Off|||||F||
OBX|71|ST|GDT-00090^VT-1 ATP1 Number of Bursts^GDT-LATITUDE||Off|||||F||
OBX|72|ST|GDT-00091^VT-1 ATP2 Type^GDT-LATITUDE||Off|||||F||
OBX|73|ST|GDT-00092^VT-1 ATP2 Number of Bursts^GDT-LATITUDE||Off|||||||F||
OBX|74|ST|GDT-00093^VT-1 Shock 1 Energy^GDT-LATITUDE||0.1|J|||F||
OBX|75|ST|GDT-00094^VT-1 Shock 2 Energy^GDT-LATITUDE||0.1|J|||F||
OBX|76|ST|GDT-00095^VT-1 Max Shock Energy^GDT-LATITUDE||Off|J|||F||
OBX|77|NM|GDT-00096^VT-1 Number Of Additional Max Energy Shocks^GDT-LATITUDE||3|||||F||
OBR|2||2500092|BostonScientific-
Implant^Implant||20090505|20090505|||||||CTe4276||DR|||20090505|||F|
OBX|1|ST|GDT-00001^Result Source^GDT-LATITUDE||Implant|||||F||
OBX|2|ST|GDT-00002^Device Manufacturer^GDT-LATITUDE||BOSTON SCIENTIFIC|||||F||
OBX|3|ST|GDT-00003^Device Type^GDT-LATITUDE||CRT-D|||||F||
OBX|4|ST|GDT-00004^Device Name^GDT-LATITUDE||||||F||
OBX|5|ST|GDT-00005^Device Model Name^GDT-LATITUDE||COGNIS 100-D|||||F||
OBX|6|ST|GDT-00006^Device Model Number^GDT-LATITUDE||P106|||||F||
OBX|7|ST|GDT-00007^Device Serial Number^GDT-LATITUDE||715154|||||F||
OBX|8|DT|GDT-00108^Device Implant Date^GDT-LATITUDE||20090505|||||F||
OBX|9|ST|GDT-00098^RA Intrinsic Amplitude^GDT-LATITUDE|||mV|||F||
OBX|10|ST|GDT-00099^RA Pace Impedance^GDT-LATITUDE|||Ohms|||F||
OBX|11|ST|GDT-00100^RA Pace Threshold^GDT-LATITUDE||V @  ms|||F||
OBX|12|ST|GDT-00101^RV Intrinsic Amplitude^GDT-LATITUDE|||mV||||F||
OBX|13|ST|GDT-00102^RV Pace Impedance^GDT-LATITUDE|||Ohms||||F||
OBX|14|ST|GDT-00103^RV Pace Threshold^GDT-LATITUDE||V @  ms|||F||
OBX|15|ST|GDT-00104^LV Intrinsic Amplitude^GDT-LATITUDE|||mV|||||F||
OBX|16|ST|GDT-00105^LV Pace Impedance^GDT-LATITUDE|||Ohms|||||F||
OBX|17|ST|GDT-00106^LV Pace Threshold^GDT-LATITUDE||V @  ms||||||F||
OBX|18|ST|GDT-00107^Shock Impedance^GDT-LATITUDE|||Ohms|||||F||
OBR|3||2500092|BostonScientific-LastInOffice^Lead Test: In-
Office|||||||||||CTe4276||DR|||||||F|
OBX|1|ST|GDT-00001^Result Source^GDT-LATITUDE||Lead Test: In-Office|||||F||
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OBX|2|ST|GDT-00002^Device Manufacturer^GDT-LATITUDE||BOSTON SCIENTIFIC||||||F||
OBX|3|ST|GDT-00003^Device Type^GDT-LATITUDE||CRT-D||||||F||
OBX|4|ST|GDT-00004^Device Name^GDT-LATITUDE||||||||F||
OBX|5|ST|GDT-00005^Device Model Name^GDT-LATITUDE||COGNIS 100-D||||||F||
OBX|6|ST|GDT-00006^Device Model Number^GDT-LATITUDE||P106||||||F||
OBX|7|ST|GDT-00007^Device Serial Number^GDT-LATITUDE||715154||||||F||
OBX|8|DT|GDT-00108^Device Implant Date^GDT-LATITUDE||20090505||||||F||
OBX|9|ST|GDT-00109^RA Intrinsic Amplitude^GDT-LATITUDE||<0.1|mV|||||F|||||
OBX|10|ST|GDT-00110^RA Pace Impedance^GDT-LATITUDE||<200|Ohms|||||F|||||
OBX|11|ST|GDT-00111^RA Pace Threshold^GDT-LATITUDE||N/R||||||F|||||
OBX|12|ST|GDT-00112^RV Intrinsic Amplitude^GDT-LATITUDE||<0.1|mV|||||F|||||
OBX|13|ST|GDT-00113^RV Pace Impedance^GDT-LATITUDE||<200|Ohms|||||F|||||
OBX|14|ST|GDT-00114^RV Pace Threshold^GDT-LATITUDE||N/R||||||F|||||
OBX|15|ST|GDT-00115^LV Intrinsic Amplitude^GDT-LATITUDE||<0.1|mV|||||F|||||
OBX|16|ST|GDT-00116^LV Pace Impedance^GDT-LATITUDE||<200|Ohms|||||F|||||
OBX|17|ST|GDT-00117^LV Pace Threshold^GDT-LATITUDE||N/R||||||F|||||
OBX|18|ST|GDT-00118^Shock Impedance^GDT-LATITUDE||<20|Ohms|||||F|||||
OBR|4||2500092|BostonScientific-Leads^Lead
Information|||20100507203115+0000|20100507203115+0000||||||||CTe4276||DR||||2010050720
3115+0000||F|
ZU1|https://www.was1.bostonscientific.com:558/access/physician/patientDetails?id=7066374|
ZU2|Device Summary Report Version 3|
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SYMBOLS USED ON LABELING

APPENDIX A

Symbol	Meaning
	Manufacturer
EC REP	Authorized Representative in the European Community
AUS	Australian Sponsor Address

Остаряла версия. Да не се използва.

Zastaralá verze. Nepoužívat.

Forældet version. Må ikke anvendes.

Version überholt. Nicht verwenden.

Aegunud versioon. Ärge kasutage.

Παλιά έκδοση. Μην την χρησιμοποιείτε.

Outdated version. Do not use.

Versión obsoleta. No utilizar.

Version périmée. Ne pas utiliser.

Zastarjela verzija. Nemojte upotrebljavati.

Úrelt útgáfa. Notið ekki.

Versione obsoleta. Non utilizzare.

Novecojusi versija. Neizmantot.

Pasenusi versija. Nenaudokite.

Elavult verzió. Ne használja!

Dit is een verouderde versie. Niet gebruiken.

Utdatert versjon. Skal ikke brukes.

Wersja przeterminowana. Nie używać.

Versão obsoleta. Não utilize.

Versiune expirată. A nu se utiliza.

Zastaraná verzia. Nepoužívať.

Zastarela različica. Ne uporabite.

Vanhentunut versio. Älä käytä.

Föråldrad version. Använd ej.

Güncel olmayan sürüm. Kullanmayın.

Manufacturer

Boston Scientific Corporation
4100 Hamline Avenue North
St. Paul, MN 55112-5798 USA

EC | REP

Authorized Representative in the European Community

Guidant Europe NV/SA; Boston Scientific
Green Square, Lambroekstraat 5D
1831 Diegem, Belgium

AUS

Australian Sponsor Address

Boston Scientific (Australia) Pty Ltd
PO Box 332
BOTANY NSW 1455 Australia
Free Phone 1 800 676 133
Free Fax 1 800 836 666

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