

# Three Palm Software



## WorkstationOne™

# HL7 Conformance Statement

Three Palm Software  
367 Penn Way  
Los Gatos, CA 95032  
(408) 356-3240  
[support@threepalmsoft.com](mailto:support@threepalmsoft.com)



## Contents

1. Introduction .....	3
1.1. Purpose and Intended Audience .....	3
1.2. Definitions, Terms and Abbreviations .....	3
2. Referenced Documents.....	4
3. Inbound Messages .....	4
3.1. Supported Message Types.....	4
3.1.1. ADT Segments Processed.....	4
3.1.2. ORM Segments Processed.....	4
3.1.3. ORU Segments Processed .....	5
3.2. Supported HL7 Fields.....	5
3.2.1. MSH – Message Header Segment.....	5
3.2.2. PID – Patient Identifier Segment.....	6
3.2.3. ORC – Common Order Segment .....	7
3.2.4. OBR – Observation Request Segment .....	8
3.2.5. OBX – Observation Result Segment.....	9
3.2.6. MSA – Message Acknowledgement Segment.....	10
3.4. Acknowledgements .....	10
4. Outbound Messages .....	10
4.1. Supported Message Types.....	10
4.2. Segments Processed .....	11
4.3. Supported HL7 Fields.....	11
4.3.1. MSH – Message Header Segment.....	11
4.3.2. PID – Patient Identifier Segment.....	12
4.3.3. ORC – Common Order Segment .....	13
4.3.4. OBR – Observation Request Segment .....	14
4.3.5. OBX – Observation Result Segment.....	15
4.3.6. NTE – Notes and Comments Segment .....	17

# 1. Introduction

## 1.1. Purpose and Intended Audience

This document is the HL7 Conformance Statement for the HL7 Services of WorkstationOne. It details WorkstationOne’s default usage of data elements found in the HL7 Standard. It covers only those elements of the HL7 Standard that are applicable to WorkstationOne.

The user of this document is involved with system integration and/or software design. We assume that the reader is familiar with the terminology and concepts that are used in HL7 2.x standard and the IHE Radiology Technical Framework. Full versions of the HL7 Standard (not specific to vendor implementation) can be found at <http://www.HL7.org>.

WorkstationOne can receive inbound HL7 messaging from various information systems in an imaging environment, such as, but not limited to, a RIS (Radiology Information System), or a PACS (Picture Archiving and Communication System). WorkstationOne will only use those inbound HL7 message data elements which are clinically appropriate in Breast Imaging WorkStation system, and more specifically, in the WorkstationOne product. WorkstationOne primarily depends on inbound HL7 messaging for notification of patient demographic creation/changes, and Radiology procedure orders/update/results. WorkstationOne can send outbound order/observation messages when result status changed for an exam. The WorkstationOne HL7 interface supports HL7 version 2.x (2.1 – 2.5) messages.

## 1.2. Definitions, Terms and Abbreviations

The following are terms and abbreviations used in this document, many of which are defined within the HL7standard.

Abbreviation	Description
ADT	Admission, Discharge, and Transfer message
HL7	Health Level 7
IHE	Integrating the Healthcare Enterprise
MSH	Message Header segment
NTE	Notes and comments segment
OBR	Observation Request segment
OBX	Observation/Result segment
ORC	Common Order segment
ORM	Order Request message
ORU	Observation Results - Unsolicited message
PID	Patient ID segment
RIS	Radiology Information System

## 2. Referenced Documents

The following documents are referenced by this document:

Number	Identifier	Title
1	190	WorkstationOne Enterprise Integration Manual
2		HL7 Standard v2.5
3		IHE Radiology Technical Framework Revision 10.0, Final Text February 18, 2011

## 3. Inbound Messages

### 3.1. Supported Message Types

By default, WorkstationOne supports the following inbound messages:

Message Type	Event Code	Trigger Event
ADT	A01	Admit a patient
	A04	Register a patient
ORM	O01	General order message
ORU	R01	Unsolicited transmission of an observation message

#### 3.1.1. ADT Segments Processed

The following segments are processed when WorkstationOne receives an ADT message:

MSH  
PID

#### 3.1.2. ORM Segments Processed

The following segments are processed when WorkstationOne receives an ORM message:

MSH  
PID  
ORC  
OBR

##### 3.1.2.1. ORM Messages: Supported Control Codes and Order Status

All ORM^O01 messages are treated equally, and by default the WorkstationOne reading status is determined considering both ORC-1 and ORC-5. The result status is taken from OBR-25.

The following is the default Order Control Codes supported from ORC-1:

Control Code (ORC-1) Value
NW
OK
CA
OC
DC
OD

And the default Order Status Codes supported from ORC-5:

Control Code (ORC-1) Value
CM
IP

### 3.1.3. ORU Segments Processed

The following segments are processed when WorkstationOne receives an ORU message:

MSH  
PID  
ORC  
OBR

## 3.2. Supported HL7 Fields

By default, WorkstationOne (WS1) uses values from the following HL7 fields in inbound messages.

### 3.2.1. MSH – Message Header Segment

HL7 Field	Name	Required	Used by WS1	Comments
MSH-1	Field Separator	Yes	Yes	Default " "
MSH-2	Encoding Characters	Yes	Yes	Default "^~\&"
MSH-3	Sending Application	No	No	
MSH-4	Sending Facility	No	No	
MSH-5	Receiving Application	No	No	
MSH-6	Receiving Facility	No	No	
MSH-7	Date/time of Message	No	No	
MSH-8	Security	No	No	
MSH-9	Message Type	Yes	Yes	
MSH-10	Message Control ID	Yes	Yes	
MSH-11	Processing ID	Yes	Yes	
MSH-12	Version ID	Yes	Yes	"2.1", "2.2", "2.3", "2.3.1", "2.4", "2.5"

MSH-13	Sequence Number	No	No	
MSH-14	Continuation Pointer	No	No	
MSH-15	Accept Acknowledgement Type	No	No	
MSH-16	Application Acknowledgement Type	No	No	
MSH-17	Country Code	No	No	
MSH-18	Character Set	No	No	
MSH-19	Principal Language of Message	No	No	
MSH-20	Alternate Character Set Handling Scheme	No	No	
MSH-21	Message Profile Identifier	No	No	

### 3.2.2. PID – Patient Identifier Segment

HL7 Field	Name	Required	Used by WS1	Comments
PID-1	Set ID . Patient ID	No	No	
PID-2	Patient ID	No	No	
PID-3	Patient Identifier List	Yes	Yes	Only PID-3.1 used
PID-4	Alternate Patient ID	No	No	
PID-5	Patient Name	Yes	Yes	5.1 –Last Name; 5.2- First name; 5.3-Middle Name;
PID-6	Mother’s Maiden Name	No	No	
PID-7	Date of Birth	No	No	
PID-8	Sex	No	No	F (Female), M (Male), U(Unknown), O(Other)
PID-9	Patient Alias	No	No	
PID-10	Race	No	No	
PID-11	Patient Address	No	No	
PID-12	Country Code	No	No	
PID-13	Phone Number . Home	No	No	
PID-14	Phone Number . Business	No	No	
PID-15	Primary Language	No	No	
PID-16	Marital Status	No	No	
PID-17	Religion	No	No	
PID-18	Patient Account Number	No	No	
PID-19	SSN Number . Patient	No	No	
PID-20	Driver's License Number - Patient	No	No	
PID-21	Mother's Identifier	No	No	

PID-22	Ethnic Group	No	No	
PID-23	Birth Place	No	No	
PID-24	Multiple Birth Indicator	No	No	
PID-25	Birth Order	No	No	
PID-26	Citizenship	No	No	
PID-27	Veterans Military Status	No	No	
PID-28	Nationality	No	No	
PID-29	Patient Death Date and Time	No	No	
PID-30	Patient Death Indicator	No	No	
PID-31	Identity Unknown Indicator	No	No	
PID-32	Identity Reliability Code	No	No	
PID-33	Last Update Date/Time	No	No	
PID-34	Last Update Facility	No	No	
PID-35	Species Code	No	No	
PID-36	Breed Code	No	No	
PID-37	Strain	No	No	
PID-38	Production Class Code	No	No	
PID-39	Tribal Citizenship	No	No	

### 3.2.3. ORC – Common Order Segment

HL7 Field	Name	Required	Used by WS1	Comments
ORC-1	Order Control	Yes	Yes	
ORC-2	Placer Order Number	Yes	Yes	Accession number
ORC-3	Filler Order Number	Yes	No	
ORC-4	Placer Group Number	No	No	
ORC-5	Order Status	Yes	Yes	
ORC-6	Response Flag	No	No	
ORC-7	Quantity/Timing	No	No	
ORC-8	Parent	No	No	
ORC-9	Date/Time of Transaction	No	No	
ORC-10	Entered By	No	No	
ORC-11	Verified By	No	No	
ORC-12	Ordering Provider	No	No	
ORC-13	Enterer's Location	No	No	
ORC-14	Call Back Phone Number	No	No	
ORC-15	Order Effective Date/Time	No	No	
ORC-16	Order Control Code Reason	No	No	

ORC-17	Entering Organization	No	No	
ORC-18	Entering Device	No	No	
ORC-19	Action By	No	No	
ORC-20	Advanced Beneficiary Notice Code	No	No	
ORC-21	Ordering Facility Name	No	No	
ORC-22	Ordering Facility Address	No	No	
ORC-23	Ordering Facility Phone Number	No	No	
ORC-24	Ordering Provider Address	No	No	
ORC-25	Order Status Modifier	No	No	
ORC-26	Advanced Beneficiary Notice Override Reason	No	No	
ORC-27	Filler's Expected Availability Date/Time	No	No	
ORC-28	Confidentiality Code	No	No	
ORC-29	Order Type	No	No	
ORC-30	Enterer Authorization Mode	No	No	

### 3.2.4. OBR – Observation Request Segment

HL7 Field	Name	Required	Used by WS1	Comments
OBR-1	Set ID – Observation	Yes	No	
OBR-2	Placer Order Number	Yes	No	Accession number
OBR-3	Filler Order Number	Yes	No	
OBR-4	Universal Service Identifier	No	No	
OBR-5	Priority – Observation	Yes	No	
OBR-6	Requested Date/Time	No	No	
OBR-7	Observation Date/Time #	No	No	
OBR-8	Observation End Date/Time #	No	No	
OBR-9	Collection Volume	No	No	
OBR-10	Collector Identifier	No	No	
OBR-11	Specimen Action Code	No	No	
OBR-12	Danger Code	No	No	
OBR-13	Relevant Clinical Information	No	No	
OBR-14	Specimen Received Date/Time	No	No	
OBR-15	Specimen Source	No	No	



OBR-16	Ordering Provider	No	No	
OBR-17	Order Callback Phone Number	No	No	
OBR-18	Placer Field 1	No	No	
OBR-19	Placer Field 2	No	No	
OBR-20	Filler Field 1	No	No	
OBR-21	Filler Field 2	No	No	
OBR-22	Results Report/Status Change - Date/Time	No	No	
OBR-23	Charge to Practice	No	No	
OBR-24	Diagnostic Serv Sect ID	No	No	
OBR-25	Result Status	No	Yes	Report status
OBR-26	Parent Result	No	No	
OBR-27	Quantity/Timing	No	No	
OBR-28	Result Copies To	No	No	
OBR-29	Parent	No	No	
OBR-30	Transportation Mode	No	No	
OBR-31	Reason for Study	No	No	
OBR-32	Principal Result Interpreter	No	Yes	32.1 – Reviewer ( 32.1.1 – ID <sup>[1]</sup> , 32.1.2 – Last Name)

[1] ID is used for reviewer, if ID doesn't have value, last name is used.

### 3.2.5. OBX – Observation Result Segment

HL7 Field	Name	Required	Used by WS1	Comments
OBX-1	Set ID – Observation Result	No	No	
OBX-2	Value Type	No	No	
OBX-3	Observation Identifier	No	No	
OBX-4	Observation Sub-ID	No	No	
OBX-5	Observation Value	No	No	
OBX-6	Units	No	No	
OBX-7	References Range	No	No	
OBX-8	Abnormal Flags	No	No	
OBX-9	Probability	No	No	
OBX-10	Nature of Abnormal Test	No	No	
OBX-11	Observation Result Status	No	No	
OBX-12	Effective Date of Reference Range	No	No	
OBX-13	User Defined Access Checks	No	No	
OBX-14	Date/Time of the	No	No	

	Observation			
OBX-15	Producer's ID	No	No	
OBX-16	Responsible Observer	No	No	
OBX-17	Observation Method	No	No	
OBX-18	Equipment Instance Identifier	No	No	
OBX-19	Date/Time of the Analysis	No	No	

### 3.2.6. MSA – Message Acknowledgement Segment

HL7 Field	Name	Required	Set by WS1	Comments
MSA-1	Acknowledgment Code	Yes	Yes	AA, AE, AR
MSA-2	Message Control ID	Yes	Yes	Message control ID from the corresponding inbound message
MSA-3	Text Message	No	No	
MSA-4	Expected Sequence Number	No	No	
MSA-5	Delayed Acknowledgment Type	No	No	
MSA-6	Error Condition	No	No	

## 3.4. Acknowledgements

The WorkstationOne HL7 services returns an **AA** if the incoming message is received and processed successfully. If the message cannot be parsed, the Acknowledgment Code is set to **AR**. Any other parsing error returns an Acknowledgment Code of **AE**.

## 4. Outbound Messages

The outbound messages are used to notify other information systems, e.g. RIS or PACS the Exam status changed or Recall Report Generated in WorkstationOne. In both scenarios, it is configurable to send either outbound ORM messages or outbound ORU messages.

### 4.1. Supported Message Types

By default, WorkstationOne sends the following outbound messages:

Message Type	Event Code	Trigger Event
ORM	O01	General order message
ORU	R01	Unsolicited transmission of an observation message

## 4.2. Segments Processed

The following table lists the segments that are processed for each HL7 message type by the default HL7 outbound mappings.

Message Type	Segments Processed
ORM	MSH PID ORC OBR {NTE}
ORU	MSH PID ORC OBR {OBX} {NTE}

## 4.3. Supported HL7 Fields

This section describes the fields that WorkstationOne supports as a part of the outbound messages.

- Fields specified in outbound segment specification are optional and may not be sent in outbound messages if they are not available from previous HL7 or updates.

### 4.3.1. MSH – Message Header Segment

HL7 Field	Name	Required	Set by WS1	Comments
MSH-1	Field Separator	Yes	Yes	By default always " " <sup>[1]</sup>
MSH-2	Encoding Characters	Yes	Yes	By default always "^~\&" <sup>[1]</sup>
MSH-3	Sending Application	No	Yes	Device configuration <sup>[2]</sup>
MSH-4	Sending Facility	No	Yes	Device configuration <sup>[2]</sup>
MSH-5	Receiving Application	No	Yes	Device configuration <sup>[2]</sup>
MSH-6	Receiving Facility	No	Yes	Device configuration <sup>[2]</sup>
MSH-7	Date/time of Message	No	Yes	Date/Time message sent
MSH-8	Security	No	No	
MSH-9	Message Type	Yes	Yes	
MSH-10	Message Control ID	Yes	Yes	Generated sequential number <sup>[3]</sup>
MSH-11	Processing ID	Yes	Yes	"P"
MSH-12	Version ID	Yes	Yes	Device configuration, can be "2.1", "2.2", "2.3", "2.3.1", "2.4", "2.5" <sup>[2]</sup>
MSH-13	Sequence Number	No	No	
MSH-14	Continuation Pointer	No	No	
MSH-15	Accept Acknowledgement	No	No	

	Type			
MSH-16	Application Acknowledgement Type	No	No	
MSH-17	Country Code	No	No	
MSH-18	Character Set	No	Yes	Device Configuration <sup>[2]</sup>
MSH-19	Principal Language of Message	No	No	
MSH-20	Alternate Character Set Handling Scheme	No	No	
MSH-21	Message Profile Identifier	No	No	

[1] The field separator and encoding characters cannot be changed through grammar changes.

[2] These attributes come from the *configuration* object and can be set when the device is configured using the WorkstationOne BE Config tool. Specifically, for MSH-18 Character Set, it can be set, for messages encoded in version 2.3 or higher, to one of the following encoding: UTF7, UTF 8, UTF16, ASCII, iso\_8859\_1, iso\_8859\_15, and ISO\_IR87

[3] The message control ID is a sequential number with a string prefix. When the device starts, the initial value of the control ID is set to 1.

### 4.3.2. PID – Patient Identifier Segment

HL7 Field	Name	Required	Set by WS1	Comments
PID-1	Set ID . Patient ID	No	No	
PID-2	Patient ID	No	Yes	Device Configuration <sup>[1]</sup>
PID-3	Patient Identifier List	Yes	Yes	Device Configuration <sup>[1]</sup>
PID-4	Alternate Patient ID	No	No	
PID-5	Patient Name	Yes	Yes	5.1 –Last Name; 5.2- First name;
PID-6	Mother's Maiden Name	No	No	
PID-7	Date of Birth	No	No	
PID-8	Sex	No	No	
PID-9	Patient Alias	No	No	
PID-10	Race	No	No	
PID-11	Patient Address	No	No	
PID-12	Country Code	No	No	
PID-13	Phone Number . Home	No	No	
PID-14	Phone Number . Business	No	No	
PID-15	Primary Language	No	No	
PID-16	Marital Status	No	No	
PID-17	Religion	No	No	
PID-18	Patient Account Number	No	No	
PID-19	SSN Number . Patient	No	No	

PID-20	Driver's License Number - Patient	No	No	
PID-21	Mother's Identifier	No	No	
PID-22	Ethnic Group	No	No	
PID-23	Birth Place	No	No	
PID-24	Multiple Birth Indicator	No	No	
PID-25	Birth Order	No	No	
PID-26	Citizenship	No	No	
PID-27	Veterans Military Status	No	No	
PID-28	Nationality	No	No	
PID-29	Patient Death Date and Time	No	No	
PID-30	Patient Death Indicator	No	No	
PID-31	Identity Unknown Indicator	No	No	
PID-32	Identity Reliability Code	No	No	
PID-33	Last Update Date/Time	No	No	
PID-34	Last Update Facility	No	No	
PID-35	Species Code	No	No	
PID-36	Breed Code	No	No	
PID-37	Strain	No	No	
PID-38	Production Class Code	No	No	
PID-39	Tribal Citizenship	No	No	

[1] Set PID in PID-2 and/or PID-3 are configurable using the WorkstationOne BE Config tool.

### 4.3.3. ORC – Common Order Segment

HL7 Field	Name	Required	Set by WS1	Comments
ORC-1	Order Control	Yes	Yes	Set to either "RE" (observations to follow) or "SC" (status changed)
ORC-2	Placer Order Number	Yes	Yes	Device Configuration <sup>[1]</sup>
ORC-3	Filler Order Number	Yes	Yes	Device Configuration <sup>[1]</sup>
ORC-4	Placer Group Number	No	No	
ORC-5	Order Status	Yes	Yes	"IP" (in progress) or "CM" (order is completed)
ORC-6	Response Flag	No	No	
ORC-7	Quantity/Timing	No	No	
ORC-8	Parent	No	No	
ORC-9	Date/Time of Transaction	No	Yes	Date/time message is constructed.
ORC-10	Entered By	No	No	
ORC-11	Verified By	No	No	
ORC-12	Ordering Provider	No	No	

ORC-13	Enterer's Location	No	No	
ORC-14	Call Back Phone Number	No	No	
ORC-15	Order Effective Date/Time	No	No	
ORC-16	Order Control Code Reason	No	No	
ORC-17	Entering Organization	No	No	
ORC-18	Entering Device	No	No	
ORC-19	Action By	No	No	
ORC-20	Advanced Beneficiary Notice Code	No	No	
ORC-21	Ordering Facility Name	No	No	
ORC-22	Ordering Facility Address	No	No	
ORC-23	Ordering Facility Phone Number	No	No	
ORC-24	Ordering Provider Address	No	No	
ORC-25	Order Status Modifier	No	No	
ORC-26	Advanced Beneficiary Notice Override Reason	No	No	
ORC-27	Filler's Expected Availability Date/Time	No	No	
ORC-28	Confidentiality Code	No	No	
ORC-29	Order Type	No	No	
ORC-30	Enterer Authorization Mode	No	No	

[1] These attributes come from the *configuration* object and can be set when the device is configured using the WorkstationOne BE Config tool.

#### 4.3.4. OBR – Observation Request Segment

HL7 Field	Name	Required	Set by WS1	Comments
OBR-1	Set ID – Observation	Yes	Yes	
OBR-2	Placer Order Number	Yes	Yes	Device Configuration <sup>[1]</sup>
OBR-3	Filler Order Number	Yes	Yes	Device Configuration <sup>[1]</sup>
OBR-4	Universal Service Identifier	No	Yes	
OBR-5	Priority – Observation	Yes	No	
OBR-6	Requested Date/Time	No	No	
OBR-7	Observation Date/Time #	No	Yes	Date/Time message constructed
OBR-8	Observation End Date/Time #	No	Yes	Date/Time message constructed
OBR-9	Collection Volume	No	No	

Three Palm Software – Document # 213 (version 2.0)

OBR-10	Collector Identifier	No	No	
OBR-11	Specimen Action Code	No	No	
OBR-12	Danger Code	No	No	
OBR-13	Relevant Clinical Information	No	No	
OBR-14	Specimen Received Date/Time	No	No	
OBR-15	Specimen Source	No	No	
OBR-16	Ordering Provider	No	No	
OBR-17	Order Callback Phone Number	No	No	
OBR-18	Placer Field 1	No	No	
OBR-19	Placer Field 2	No	No	
OBR-20	Filler Field 1	No	Yes	Device Configuration <sup>[2]</sup>
OBR-21	Filler Field 2	No	Yes	Device Configuration <sup>[2]</sup>
OBR-22	Results Report/Status Change - Date/Time	No	No	
OBR-23	Charge to Practice	No	No	
OBR-24	Diagnostic Serv Sect ID	No	No	"RAD"
OBR-25	Result Status	No	Yes	Mapped Result status <sup>[3]</sup>
OBR-26	Parent Result	No	No	
OBR-27	Quantity/Timing	No	Yes	The start Date/Time and end Date/Time are set as current Date/Time.
OBR-28	Result Copies To	No	No	
OBR-29	Parent	No	No	
OBR-30	Transportation Mode	No	No	
OBR-31	Reason for Study	No	No	
OBR-32	Principal Result Interpreter	No	Yes	32.1 – Reviewer (32.1.1 – ID, 32.1.2 – Last Name, 32.1.3 – First Name)

[1] These attributes come from the *configuration* object and can be set when the device is configured using the WorkstationOne BE Config tool.

[2] OBR-20 and OBR-21 are configurable. When a recall report is sent, each of these two fields can be set to one of: BIRADS code, Breast Density, Negative, Abnormality, Side, Procedures, Procedure Reason, or Procedure Minutes.

[3] The Result Status is mapped from WorkstationOne internal result status to OBR-25 results code ("R" or "I") or customized codes based on specific integration.

### 4.3.5. OBX – Observation Result Segment

HL7 Field	Name	Required	Set by WS1	Comments
OBX-1	Set ID – Observation Result	No	Yes	
OBX-2	Value Type	No	Yes	"TX" (Text Data (Display))
OBX-3	Observation Identifier	No	Yes	3.1 – ID, 3.2 – text, 3.3 – name of

Three Palm Software – Document # 213 (version 2.0)

				the coding system <sup>[1]</sup>
OBX-4	Observation Sub-ID	No	No	
OBX-5	Observation Value	No	Yes	The value is formatted according to the type and coding system specified in OBX-2 and OBX-3.
OBX-6	Units	No	No	
OBX-7	References Range	No	No	
OBX-8	Abnormal Flags	No	No	
OBX-9	Probability	No	No	
OBX-10	Nature of Abnormal Test	No	No	
OBX-11	Observation Result Status	No	Yes	"F" (Finalized)
OBX-12	Effective Date of Reference Range	No	No	
OBX-13	User Defined Access Checks	No	No	
OBX-14	Date/Time of the Observation	No	No	
OBX-15	Producer's ID	No	No	
OBX-16	Responsible Observer	No	No	
OBX-17	Observation Method	No	No	
OBX-18	Equipment Instance Identifier	No	No	
OBX-19	Date/Time of the Analysis	No	No	

[1] WorkStationOne uses the SNOMED Reference Terminology (SRT) as the coding scheme designator recommended for HL7 reporting of clinical conditions. The following table lists the code currently used by WorkStationOne in outbound report messages:

Category	Code Value	Code Meaning
Negative	R-40759	negative
Comments	R-41F7C	result comments
Abnormality	F-03158	screened - abnormality
	F-01796	Mammographic breast density
	F-8A057	calcifications
	F-01795	architectural distortion
	F-01792	focal asymmetry
	F-01793	global asymmetry
	T-C4752	structure of paramammary lymph node
BIRADS	F-01797	tubular structure
	F-037BA	mammography assessment finding
	F-037BB	category 0
	F-037BC	category 1
	F-037BD	category 2
	F-037BF	category 3
	F-037C0	category 4
Breast Density	F-037C1	category 5
	F-01710	breast composition
	F-01711	almost entirely fat
	F-01712	scattered fibroglandular
	F-01713	heterogeneously dense



	F-01714	extremely dense
Laterality	G-C171	Laterality
	T-04020	right breast
	T-04030	left breast
	T-04080	bilateral breasts
Recall Procedure	P0-0051E	Recall procedure
	P1-4830E	Biopsy - stero
	P1-0322D	Biopsy - MRI
	P1-03226	Biopsy - US
	P1-48304	Biopsy - core needle
	P1-48145	Biopsy - needle
	P5-0900D	MRI of breast
	P5-B0004	Ultrasonography of breast
	P1-4830F	surgical evaluation

### 4.3.6. NTE – Notes and Comments Segment

HL7 Field	Name	Required	Set by WS1	Comments
NTE-1	Set ID – Notes and Comments	No	Yes	
NTE-2	Source of Comment	No	No	
NTE-3	Comment	No	Yes	The comment has the formatted text version of the internal report information. <sup>[1]</sup>
NTE-4	Comment Type	No	No	

[1] All report information can be mapped to text string and add as comment. The user can use WorkstationOne BE Config tool to specify a XML stylesheet (XSL) to map a report to desired output text.

Example of outbound ORU^R01 message with NTE segment:

```
MSH|^~\&|WorkstationOne|TPS|||201110240332||ORU^R01|MyHL7Sender_7|P|2.3.1|||||UNICODE UTF-8
PID||001001|001001||IHEMammoTest
ORC|RE|||CM||^20111024033233^20111024033233||20111024033233
OBR|1||168749009^mammography normal^SNM|||20111024033233|20111024033233|||||||Category 4A
- low suspicion for malignancy|There are scattered fibroglandular densities (25% -
50%)||RAD|R||^20111024033233^20111024033233|||guest@TestServer&Guest&Joe
NTE|1||\X000d\Institution: TPS WS1 Name of Institution\X000d\Radiologist: TestServer/user\X000d\Report date and
time: 2011-10-24T03:32:31.93015-07:00\X000d\X000d\Patient\X000d\Patient ID: 001001\X000d\Patient Name:
IHEMammoTest, Current and prior 4 view different size pixels\X000d\Sex: F\X000d\Date of birth:
01/01/1901\X000d\Age: 106\X000d\X000d\Study\X000d\Study date: 20050101\X000d\Study time:
100100\X000d\Study ID: 001001CUR\X000d\Study reason: Screening exam with no presenting
symptoms\X000d\Accession number: \X000d\Body part: \X000d\Modality: MG\X000d\Referring physician:
\X000d\Priors\X000d\Study date: 20050101 time: \X000d\Study ID: 001001CUR\X000d\Accession number:
\X000d\Study date: 20040101 time: \X000d\Study ID: 001001PRIOR\X000d\Accession number:
\X000d\X000d\Markup\X000d\X000d\X000d\Summary\X000d\Radiologist Notes: follow up Ultrasound exam
every 3 months.
OBX|1|TX|R-40759^negative^SRT||True|||||F
OBX|2|TX|R-41F7C^result comments^SRT||Radiologist Notes: follow up Ultrasound exam every 3 months.|||||F
OBX|3|CE|F-03158^screened - abnormality^SRT||F-01796^Mass^SRT|||||F
OBX|4|TX|F-037BA^mammography assessment finding^SRT||Category 4A - low suspicion for malignancy|||||F
OBX|5|CE|F-01710^breast composition^SRT||F-01712^There are scattered fibroglandular densities (25% -
50%)^SRT|||||F
OBX|6|CE|G-C171^Laterality^SRT||T-04080^bilateral breasts^SRT|||||F
OBX|7|TX|P0-0051E^SRT||US|||||F
```