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1	Status	Final Text
2	Date of Last Update	2016/11/06
3	Person Assigned	David Clunie
4		mailto:dclunie@dclunie.com
5	Submitter Name	QIICR
6	Submission Date	2016/03/04

7	Correction Number CP-1591	
8	Log Summary: Allow multiple finding sites for single regions of interest in measurement templates and segmentations	
9	Name of Standard	
10	PS3.3, PS3.16 2016d	
11	Rationale for Correction:	
12	Regions of interest used for measurements of malignant, inflammatory or traumatic lesions sometimes span multiple discretely identifiable anatomic locations for which codes are available for each component, but not the combination of locations, and for accurate recording it is necessary to list the locations, rather than lump them together into some large whole that may described uninvolved regions.	
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16	For example, a prostate lesion might involve the posteromedial and posterolateral parts of the right side of the middle part of the peripheral zone, without involving the anterior segment, and hence it would be imprecise to describe it as the entire right side of the middle part of the peripheral zone, and yet no precoordinated single code for such a region may exist.	
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19	It is proposed to modify the cardinality of Finding Site in all relevant (general purpose) templates from 1 to 1-n, and make a similar change to segmentations. No impact on the installed base is expected since the templates and objects affected are relatively new, the known implementations are not affected, and worst case it is expected that receiving applications that expect only a single site will ignore any additional sites.	
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23	There is no requirement that the multiple locations be contiguous.	
24	Correction Wording:	

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Amend DICOM PS 3.3 follows to add new Table 10-7b Multiple Site General Anatomy Optional Macro Attributes and use it in the Segment Description Macro:

## 10.5 General Anatomy Macros

Table 10-5, Table 10-6 ~~and~~, Table 10-7 ~~and~~ **Table 10-7b** describe the attributes for identifying the general region of the patient anatomy examined using coded terminology, as well as the principal structure(s) within that region that is the target of the current SOP Instance. The only differences between the ~~three~~ macros ~~is~~ **are** the Type ~~and~~ **Number of Items** of the Anatomic Region Sequence (0008,2218) attribute. Table 10-8 describes the attributes for the coding of the principal structure only.

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The specific anatomic structures of interest within the image (e.g., a particular artery within the anatomic region) is identified by the Primary Anatomic Structure Sequence (0008,2228). Characteristics of the anatomic structure, such as its location (e.g., subcapsular, peripheral, central), configuration (e.g., distended, contracted), and laterality (e.g., right, left, both), and so on, may be refined by the Primary Anatomic Structure Modifier Sequence (0008,2230).

**Table 10-5. General Anatomy Mandatory Macro Attributes**

**Table 10-6. General Anatomy Required Macro Attributes**

**Table 10-7. General Anatomy Optional Macro Attributes**

Attribute Name	Tag	Type	Attribute Description
Anatomic Region Sequence	(0008,2218)	3	Sequence that identifies the anatomic region of interest in this Instance (i.e., external anatomy, surface anatomy, or general region of the body).  Only a single Item is permitted in this Sequence.
<i>&gt;Include Table 8.8-1 "Code Sequence Macro Attributes"</i>			Context ID may be defined in the macro invocation.
>Anatomic Region Modifier Sequence	(0008,2220)	3	Sequence of Items that modifies the anatomic region of interest <del>of in</del> this Instance  One or more Items are permitted in this Sequence.
<i>&gt;&gt;Include Table 8.8-1 "Code Sequence Macro Attributes"</i>			Defined CID 2 "Anatomic Modifier", unless otherwise defined in the macro invocation.
<i>Include Table 10-8 "Primary Anatomic Structure Macro Attributes"</i>			Context ID may be defined in the macro invocation.

**Table 10-7b. Multiple Site General Anatomy Optional Macro Attributes**

Attribute Name	Tag	Type	Attribute Description
<b><u>Anatomic Region Sequence</u></b>	<b><u>(0008,2218)</u></b>	<b><u>3</u></b>	<b><u>Sequence that identifies the anatomic region of interest in this Instance (i.e., external anatomy, surface anatomy, or general region of the body).</u></b>  <b><u>One or more Items are permitted in this Sequence.</u></b>
<i><u>&gt;Include Table 8.8-1 "Code Sequence Macro Attributes"</u></i>			<b><u>Context ID may be defined in the macro invocation.</u></b>
<b><u>&gt;Anatomic Region Modifier Sequence</u></b>	<b><u>(0008,2220)</u></b>	<b><u>3</u></b>	<b><u>Sequence of Items that modifies the anatomic region of interest in this Instance</u></b>  <b><u>One or more Items are permitted in this Sequence.</u></b>
<i><u>&gt;&gt;Include Table 8.8-1 "Code Sequence Macro Attributes"</u></i>			<b><u>Defined CID 2 "Anatomic Modifier", unless otherwise defined in the macro invocation.</u></b>
<i><u>Include Table 10-8 "Primary Anatomic Structure Macro Attributes"</u></i>			<b><u>Context ID may be defined in the macro invocation.</u></b>

**Table 10-8. Primary Anatomic Structure Macro Attributes**

Attribute Name	Tag	Type	Attribute Description
Primary Anatomic Structure Sequence	(0008,2228)	3	Sequence of Items that identifies the primary anatomic structure(s) of interest in this Instance.  One or more Items are permitted in this Sequence.
>Include Table 8.8-1 "Code Sequence Macro Attributes"			Context ID may be defined in the macro invocation.
>Primary Anatomic Structure Modifier Sequence	(0008,2230)	3	Sequence of Items that modifies the primary anatomic structure of interest in this Instance.  One or more Items are permitted in this Sequence.
>>Include Table 8.8-1 "Code Sequence Macro Attributes"			Defined CID 2 "Anatomic Modifier".

**C.8.20.4.1 Segment Description Macro**

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**Table C.8.20-4. Segment Description Macro Attributes**

Attribute Name	Tag	Type	Attribute Description
...	...	...	...
<del>Include Table 10-7 "General Anatomy Optional Macro Attributes"</del> <del>Table 10-7b "Multiple Site General Anatomy Optional Macro Attributes"</del>			May not be necessary if the anatomy is implicit in the Segmented Property Type Code Sequence.  <b><u>More than one item in Anatomic Region Sequence (0008,2218) may be used when a region of interest spans multiple anatomical locations and there is not a single pre-coordinated code describing the combination of locations. There is no requirement that the multiple locations be contiguous.</u></b>
Segmented Property Category Code Sequence	(0062,0003)	1	Sequence defining the general category of this segment.  Only a single Item shall be included in this Sequence.
>Include Table 8.8-1 "Code Sequence Macro Attributes"			Baseline CID 7150 "Segmentation Property Categories".
Segmented Property Type Code Sequence	(0062,000F)	1	Sequence defining the specific property type of this segment.  Only a single Item shall be included in this Sequence.
>Include Table 8.8-1 "Code Sequence Macro Attributes"			Baseline CID 7151 "Segmentation Property Types".
>Segmented Property Type Modifier Code Sequence	(0062,0011)	3	Sequence defining the modifier of the property type of this segment.  One or more Items are permitted in this Sequence.
>>Include Table 8.8-1 "Code Sequence Macro Attributes"			Baseline CID 244 "Laterality".

Amend DICOM PS 3.16 follows:

**TID 300 Measurement**

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**Table TID 300. Parameters**

Parameter Name	Parameter Usage
\$TargetSite	Value(s) for Anatomic Location of measurement
\$TargetSiteMod	Modifier Value for Anatomic Location of measurement

**Table TID 300. Measurement**

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
5	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, "Finding Site")	1-n	U		\$TargetSite
6	>>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT, "Laterality")	1	U		DCID 244 "Laterality"
7	>>	HAS CONCEPT MOD	CODE	DT (G-A1F8, SRT, "Topographical modifier")	1	U		\$TargetSiteMod

**Content Item Descriptions**

Rows 2, 3, 4, 5	The HAS CONCEPT MOD items allow the explicit definition of terms for post-coordination of the measurement concept name. Additional post-coordinated modifier terms may be included in a SOP Instance based on this Template, in accordance with section 6.2.4, or as defined by Templates that invoke this Template and explicitly define additional post-coordinated modifiers (e.g., TID 5203).
<b>Row 5</b>	<b><u>Finding site may be multiple when a region of interest spans multiple anatomical locations and there is not a single pre-coordinated code describing the combination of locations. E.g., when a malignant, inflammatory or traumatic process spans actual or defined anatomical boundaries. There is no requirement that the multiple locations be contiguous.</u></b>

**TID 1419 ROI Measurements**

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**Table TID 1419. Parameters**

\$TargetSite	Value(s) for Anatomic Location of measurement
\$TargetSiteMod	Modifier Value for Anatomic Location of measurement

**Table TID 1419. ROI Measurements**

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
2		HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, "Finding Site")	1-n	U		\$TargetSite
3	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT, "Laterality")	1	U		DCID 244 "Laterality"
4	>	HAS CONCEPT MOD	CODE	DT (G-A1F8, SRT, "Topographical modifier")	1	U		\$TargetSiteMod
...	...	...	CODE	...	...	...	...	...
9	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, "Finding Site")	1-n	U		\$TargetSite
10	>>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT, "Laterality")	1	U		DCID 244 "Laterality"

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
11	>>	HAS CONCEPT MOD	CODE	DT (G-A1F8, SRT, "Topographical modifier")	1	U		\$TargetSiteMod

#### Content Item Descriptions

<b>Rows 2, 9</b>	<b><u>Finding site may be multiple when a region of interest spans multiple anatomical locations and there is not a single pre-coordinated code describing the combination of locations. E.g., when a malignant, inflammatory or traumatic process spans actual or defined anatomical boundaries. There is no requirement that the multiple locations be contiguous.</u></b>
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## TID 1501 Measurement Group

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**Table TID 1501. Parameters**

Parameter Name	Parameter Usage
\$TargetSite	Values for Anatomic Location of measurement
\$TargetSiteMod	Modifier Value for Anatomic Location of measurement

**Table TID 1501. Measurement Group**

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
6	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, "Finding Site")	1- <u>n</u>	U		\$TargetSite
7	>>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT, "Laterality")	1	U		DCID 244 "Laterality"
8	>>	HAS CONCEPT MOD	CODE	DT (G-A1F8, SRT, "Topographical modifier")	1	U		\$TargetSiteMod

#### Content Item Descriptions

<b>Row 6</b>	<b><u>Finding site may be multiple when a region of interest spans multiple anatomical locations and there is not a single pre-coordinated code describing the combination of locations. E.g., when a malignant, inflammatory or traumatic process spans actual or defined anatomical boundaries. There is no requirement that the multiple locations be contiguous.</u></b>
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