

DICOM Correction Proposal

STATUS	Letter Ballot
Date of Last Update	2024/05/29
Person Assigned	Kevin O'Donnell
Submitter Name	Kevin O'Donnell
Submission Date	2023/07/30

Correction Number	CP-2338
Log Summary:	Add Antral Follicle Counts to OB/GYN SR
Name of Standard	PS3.16
Rationale for Correction:	<p>Antral Follicle Count (AFC) involves recording the number of antral follicles in a selected size range that are present in a given ovary. The number of size categories and the size range for each category can be a local practice decision. A new sub-TID is added for this purpose.</p> <p>It is common, but not required, to record the individual follicle size estimates on which the counts are based. Recording such measurements is handled with the existing rows in TID 5013.</p> <p>Some follicles may be measured and counted, others may be counted but not measured, and others may be measured but not counted.</p> <p>See also:</p> <p>https://obgyn.onlinelibrary.wiley.com/doi/full/10.1002/uog.18945 - Counting ovarian antral follicles by ultrasound: a practical guide (Consensus Opinion) – Ultrasound in Obstetrics and Gynecology 2017</p>
Correction Wording:	

Modify TID 5000 as shown:

TID 5000 OB-GYN ULTRASOUND PROCEDURE REPORT

This is the Template for the root of the content tree for the OB-GYN ultrasound procedure report.

Type: Extensible
Order: Significant
Root: Yes

Table TID 5000. OB-GYN Ultrasound Procedure Report

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	BCID 12024 "OB-GYN Ultrasound Report Document Title"	1	M		Root node
2	>	HAS CONCEPT MOD	INCLUDE	DTID 1204 "Language of Content Item and Descendants"	1	U		
2b	>	HAS ACQ CONTEXT	CODE	EV (125203, DCM, "Acquisition Protocol")	1-n	U		DCID 12025 "OB-GYN Ultrasound Beam Path"

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
16	>	CONTAINS	INCLUDE	DTID 5012 "Ovaries Section"	1	U		
17	>	CONTAINS	INCLUDE	DTID 5013 "Follicles Section"	1	U		\$Laterality = EV (7771000, SCT, "Left") \$Number <u>Concept</u> = EV (11879-4, LN, "Number of follicles in left ovary")
18	>	CONTAINS	INCLUDE	DTID 5013 "Follicles Section"	1	U		\$Laterality = EV (24028007, SCT, "Right") \$Number <u>Concept</u> = EV (11880-2, LN, "Number of follicles in right ovary")
18a	>	<u>CONTAINS</u>	<u>NUM</u>	<u>EV (newcode08, DCM, "Total Antral Follicle Count")</u>	1	<u>U</u>		
...								

Content Item Descriptions

Row 6	No purpose of reference is specified.
Row 18a	<u>This reflects the Antral Follicle Count (AFC) totaled across both ovaries.</u>

Modify TID 5013 "Follicles Section" as shown:

TID 5013 FOLLICLES SECTION

This Template contains follicle metrics for left or right ovarian follicles.

Table TID 5013. Parameters

Parameter Name	Parameter Usage
\$Laterality	Ovary laterality
\$Number <u>Concept</u>	The <u>concept name for the</u> number of <u>measured</u> follicles

Type: Extensible
Order: Significant
Root: No

Table TID 5013. Follicles Section

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	DT (59776-5, LN, "Findings")	1	M		
2	>	HAS CONCEPT MOD	CODE	EV (363698007, SCT, "Finding Site")	1	M		DT (24162005, SCT, "Ovarian Follicle")
3	>	HAS CONCEPT MOD	CODE	EV (272741003, SCT, "Laterality")	1	M		\$Laterality
4	>	CONTAINS	NUM	\$Number <u>Concept</u>	1	U		

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
5	>	CONTAINS	INCLUDE	DTID 5014 "Follicle Measurement Group"	1-n	U		
6	>	CONTAINS	INCLUDE	DTID 5016 "LWH Volume Group"	1-n	U		\$GroupName = EV (24162005, SCT, "Ovarian Follicle") \$Width = EV (103355008, SCT, "Width") \$Length = EV (410668003, SCT, "Length") \$Height = EV (121207, DCM, "Height") \$Volume = EV (121221, DCM, "Volume of ellipsoid") \$Method = DCID 7230 "Automation of Measurement" \$Method = DCID 12025 "OB-GYN Ultrasound Beam Path"
7	≥	<u>CONTAINS</u>	<u>INCLUDE</u>	<u>DTID 5XXX "Follicle Count Group"</u>	<u>1-n</u>	<u>U</u>		

Content Item Descriptions

<u>Row 4</u>	<u>The value in Row 4 may or may not equal the sum of Row 7 follicle counts.</u>
<u>Row 7</u>	<u>Describes one or more follicle size range groups, each of which has a specified minimum and maximum size and a count.</u> <u>Some or all follicles counted in Row 7 might not be measured, and follicles measured in Row 5 might have a type or size that does not correspond to any count groups in Row 7.</u>

Add TID 5XXX Follicle Count Group

TID 5XXX FOLLICLE COUNT GROUP

This Template records a count of ovarian follicles of a given type and size range.

Type: Extensible
Order: Significant
Root: No

Table TID 5XXX. Follicle Count Group

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (newcode01, DCM, "Follicle Count Group")	1	M		
2	>	HAS OBS CONTEXT	TEXT	EV (125010, DCM, "Identifier")	1	U		
3	>	CONTAINS	CODE	EV (newcode10, DCM, "Follicle Type")	1	U		CID newcid1 Follicle Type
4	>	CONTAINS	NUM	EV (newcode02, DCM, "Diameter Range Minimum Value")	1	MC	IFF Row 6 is absent	UNITS = DT (mm, UCUM, "mm")

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
5	>	CONTAINS	NUM	EV (newcode03, DCM, "Diameter Range Maximum Value")	1	MC	IFF Row 4 is present	UNITS = DT (mm, UCUM, "mm")
6	>	CONTAINS	NUM	EV (newcode04, DCM, "Volume Range Minimum Value")	1	MC	IFF Row 4 is absent	UNITS = DT (mm3, UCUM, "mm3")
7	>	CONTAINS	NUM	EV (newcode05, DCM, "Volume Range Maximum Value")	1	MC	IFF Row 6 is present	UNITS = DT (mm3, UCUM, "mm3")
8	>	CONTAINS	NUM	EV (newcode07, DCM, "Number of Follicles in Range")	1	M		

Content Item Descriptions

Row 2	Shall be unique among all groups of same laterality.
Rows 4-7	Specifies the size range (in terms of either follicle diameter or follicle volume) that defines this follicle count group.
Row 8	The number of follicles included in a given range count may have actually been measured or only estimated.

Add CID newcid1 for Follicle Types

CID newcid1 Follicle Type

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML
 Keyword: FollicleType
 FHIR Keyword: dicom-cid-newcid1-FollicleType
 Type: Extensible
 Version: yyyymmdd
 UID: newciduid1

Table CID newcid1. Follicle Type

Coding Scheme Designator	Code Value	Code Meaning	SNOMED-RT ID	UMLS Concept Unique ID
DCM	newcode12	Dominant Follicle		
DCM	newcode13	Antral Follicle		
DCM	newcode14	Secondary Follicle		
DCM	newcode15	Primary Follicle		
DCM	newcode16	Primordial Follicle		

Add definitions to PS 3.16 Annex D

Table D-1. DICOM Controlled Terminology Definitions

Code Value	Code Meaning	Definition	Notes
...			
newcode01	Follicle Count Group	The counted group of follicles that fall within a specified type and size range.	

<u>newcode02</u>	<u>Diameter Range Minimum Value</u>	<u>The lowest value that is included in a diameter range.</u>	
<u>newcode03</u>	<u>Diameter Range Maximum Value</u>	<u>The highest value that is included in a diameter range.</u>	
<u>newcode04</u>	<u>Volume Range Minimum Value</u>	<u>The lowest value that is included in a volume range.</u>	
<u>newcode05</u>	<u>Volume Range Maximum Value</u>	<u>The highest value that is included in a volume range.</u>	
<u>newcode07</u>	<u>Number of Follicles in Range</u>	<u>The number of follicles observed in a specified size range.</u>	
<u>newcode08</u>	<u>Total Antral Follicle Count</u>	<u>The total number of antral follicles counted in both ovaries.</u>	
<u>newcode10</u>	<u>Follicle Type</u>	<u>The type of ovarian follicle as determined by its developmental stage.</u>	
<u>newcode12</u>	<u>Dominant Follicle</u>	<u>An antral follicle that has grown to dominate its neighboring follicles which then undergo atresia. Typically, only one or two antral follicles will become dominant in each cycle and mature to ovulation.</u>	
<u>newcode13</u>	<u>Antral Follicle</u>	<u>An ovarian follicle that has progressed from the secondary stage and has developed a small fluid-filled cavity called the antrum. Antral Follicles are also referred to as Tertiary Follicles or Graafian Follicles.</u>	
<u>newcode14</u>	<u>Secondary Follicle</u>	<u>An ovarian follicle that has progressed from the primary stage and has added theca cells.</u>	
<u>newcode15</u>	<u>Primary Follicle</u>	<u>An ovarian follicle that has been activated from the primordial stage.</u>	
<u>newcode16</u>	<u>Primordial Follicle</u>	<u>An ovarian follicle that is quiescent in its original state.</u>	
125005	Biometry Group	<u>Container for a biometric value and its associated growth metrics. Biometric assessment of.</u>	