1	Status	Letter Ballot
2	Date of Last Update	2024/11/11
3	Person Assigned	David Clunie
4		mailto:dclunie@dclunie.com
5	Submitter Name	David Clunie
6		mailto:dclunie@dclunie.com
7	Submission Date	2024/03/16

8	Correction Number CP-2406
9	Log Summary: Clarify Series and Frame of Reference relationship for Whole Slide Microscopy Images
10	Name of Standard
11	PS3.3
12	Rationale for Correction:
13 14	The real-world model specifies that a Series is spatially defined by a single Frame of Reference and there is a specific statement in the Frame of Reference Module that each Series shall have a single Frame of Reference UID.
15 16 17	However, whole slide microscopy image series typically contain a mixture of images that may not be spatially related, such as label and overview (macro) images distinct from the pyramid layers, and it may be difficult if not impossible to establish their spatial relationship to the pyramid (and without purpose in the case of the label image).
18 19	Since the single Frame of Reference in a Series constraint has been long standing and may be required for some implementations, relax the requirement to include the Frame of Reference for WSI image types that are not spatially related.
20	Correction Wording:

1   *Amend DICOM PS3.3 as follows (changes to existing text are bold and **<u>underlined</u>** for additions and ~~**struckthrough**~~ for removals):*

2   7 DICOM Model of the Real World

3   Figure 7-1a, ??? and ??? depict the DICOM view of the Real-World that identifies the relevant Real-World Objects and their relationships
4   within the scope of the DICOM Standard. It provides a common framework to ensure consistency between the various Information
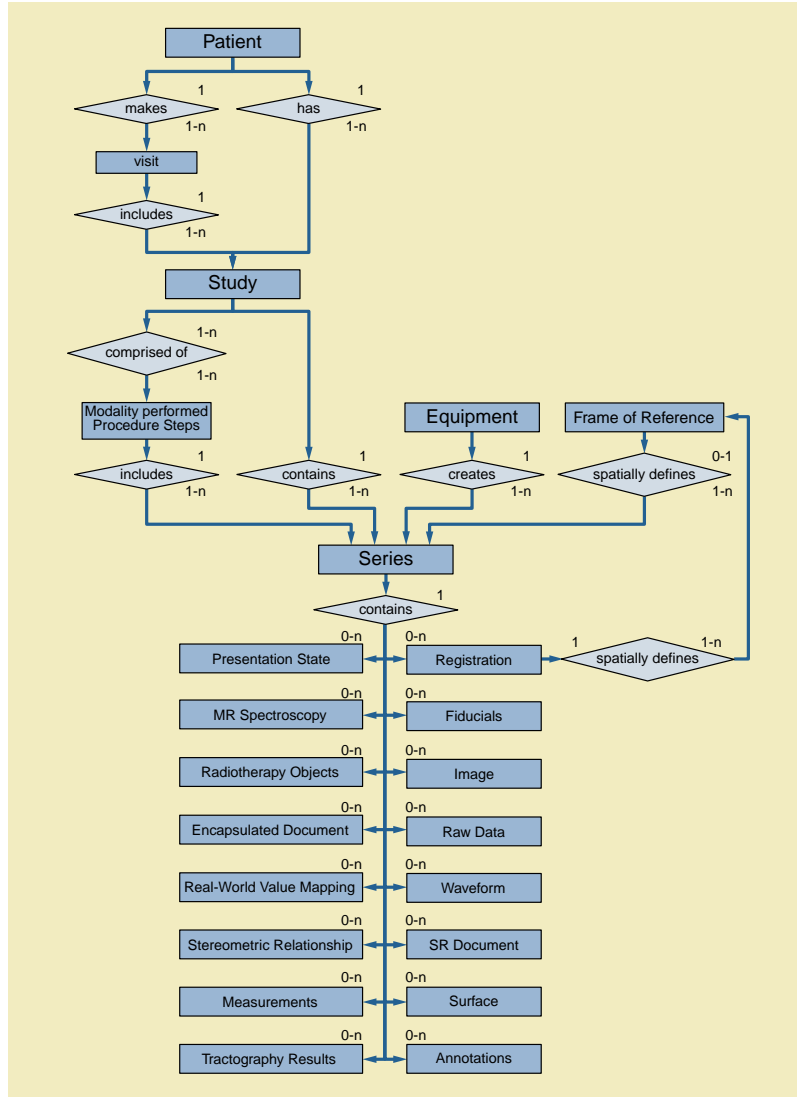5   Objects defined by the DICOM Standard.

6   **Figure 7-1a. DICOM Model of the Real World**

7   **Note**

8   **<u>Though typically a single Series is spatially defined by a single Frame of Reference, there may be situations in</u>**
9   **<u>which a Series contains some Instances without a defined Frame of Reference.</u>**

A.32.8 VL Whole Slide Microscopy Image IOD

A.32.8.3 VL Whole Slide Microscopy Image IOD Module Table

Table A.32.8-1. VL Whole Slide Microscopy Image IOD Modules

IE	Module	Reference	Usage
Patient	Patient	???	M
	Clinical Trial Subject	???	U
Study	General Study	???	M
	Patient Study	???	U
	Clinical Trial Study	???	U
Series	General Series	???	M
	Whole Slide Microscopy Series	???	M
	Clinical Trial Series	???	U
Frame of Reference	Frame of Reference	???	~~M~~**C - Required if Image Type Value 3 is VOLUMEor THUMBNAIL. May be present otherwise.**
Equipment	General Equipment	???	M
	Enhanced General Equipment	???	M
Acquisition	General Acquisition	???	M
Multi-Resolution Pyramid	Multi-Resolution Pyramid	???	U - Shall be present only if Image Type Value 3 is VOLUME or THUMBNAIL.
Image	General Image	???	M
	General Reference	???	U
	Microscope Slide Layer Tile Organization	???	M
	Image Pixel	???	M
	Acquisition Context	???	M
	Multi-frame Functional Groups	???	M
	Multi-frame Dimension	???	M
	Specimen	???	M
	Whole Slide Microscopy Image	???	M
	Optical Path	???	M
	Slide Label	???	C - Required if Image Type (0008,0008) Value 3 is LABEL; may be present otherwise
	SOP Common	???	M
	Common Instance Reference	???	M
	Frame Extraction	???	C - Required if the SOP Instance was created in response to a Frame-Level retrieve request

Note

1. The ??? was previously included in the Image IE for this IOD but has been retired. See PS3.3-2021c.

2. **In prior releases, the Frame of Reference Module had a Usage of M; see PS3.3-2024d. However, since a single Series is spatially defined by a single Frame of Reference, to allow for Images within the same Series that may**

1   **not spatially related to the Images of the Multi-Resolution Pyramid, such as some LABEL and OVERVIEW images,**
2   **the inclusion now has Conditional Usage.**