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8	Correction Number CP-2520
9	Log Summary: Clarify single frame WSI
10	Name of Standard
11	PS3.3
12	Rationale for Correction:
13	CP 2025 clarified that WSI objects with an image type of THUMBNAIL, LABEL and OVERVIEW are always single frame images,
14	but it is not clear what "not applicable means" in "Dimension Organization Type (0020,9311) is not applicable".
15	Correction Wording:

Amend DICOM PS3.3 as follows (changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):

C.7.6.17.3 Spatial Location and Optical Path of Tiled Images

If Dimension Organization Type (0020,9311) is present with a value of TILED_FULL, then the Per-Frame Functional Group Macros that would otherwise describe the spatial location of each tile explicitly (e.g., the X, Y and Z offsets from the origin in the Slide Coordinate System Plane Position (Slide)), and the optical path or segment, may be omitted.

A value of TILED_FULL indicates that the frames across all Instances of a Concatenation, or a single Instance in the absence of a Concatenation, comprise a non-sparse non-overlapping representation of an entire rectangular region, and are sequentially encoded as successive frames in Pixel Data (7FE0,0010) in an implicit order varying:

- first along the row direction from left to right, where the row direction is defined in the Slide Coordinate System by the first three values of Image Orientation (Slide) (0048,0102),
- then along the column direction from top to bottom, where the column direction is defined in the Slide Coordinate System by the second three values of Image Orientation (Slide) (0048,0102),
- then along the depth direction from the glass slide towards the coverslip, where the depth direction is defined in the Slide Coordinate System from zero to positive,
- then along optical paths, if applicable, where the direction is defined by successive Items of the Optical Path Sequence (0048,0105) in the order in which they are listed in that Sequence,
- then along the segments, if applicable, where the direction is defined by ascending numeric values of Segment Number (0062,0004) as defined in the Segment Sequence (0062,0002).

If Dimension Organization Type (0020,9311) is absent or has a value of TILED_SPARSE, then the location of each tile is explicitly encoded using information in the Per-Frame Functional Groups Sequence (5200,9230), and the recipient shall not make any assumption about the spatial position or optical path or segment or order of the encoded frames, and whether or not any tiles overlap, but shall rely on the values of the relevant Per-Frame Functional Group Macro.

Note

Images with an Image Type (0008,0008) Value 3 of THUMBNAIL, LABEL or OVERVIEW are single frame. ~~They and~~ may have a spatial extent that is not the same as the Total Pixel Matrix; ~~so, A~~ Dimension Organization Type (0020,9311) ~~is not applicable of TILED_FULL, if used, serves only to define the location, optical path or segment of the single tile, and to allow the information in the Per-Frame Functional Group Sequence (5200,9230) to be elided.~~

The same previously applied to images with an Image Type (0008,0008) Value 3 of LOCALIZER, which has been retired. See PS3.3-2021c.