

# DICOM Correction Proposal

STATUS	Letter Ballot
Date of Last Update	2025/09/07
Person Assigned	David Clunie <dclunie@dclunie.com>
Submitter Name	Mathieu Malaterre <Mathieu.malaterre@gmail.com>
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Correction Number	CP-2514
Log Summary:	Photometric Interpretation Compatibility
Name of Standard	PS3.5
Rationale for Correction:	<p>Since CP-1653 Valid values for Pixel Data related attributes have been added to the DICOM standard part 05. However, two gaps have been found for RLE and JPEG-LS with regards to YBR_FULL Photometric Interpretation. This CP makes it explicit that conversion for JPEG Lossless / YBR_FULL to RLE / YBR_FULL or JPEG-LS / YBR_FULL is possible even in the case where Bits Allocated is 16.</p> <p>During typical DICOM network query operations (eg. C-MOVE) the transfer syntax is defined during the negotiation (eg. Patient or study level). As such we should not reject an instance level transfer when the codec (RLE or JPEG-LS) allow for a particular lossless transformation.</p>
Correction Wording:	

*Change section PS 3.5 –8.2.2 as follow*

**Table 8.2.2-1. Valid Values of Pixel Data Related Attributes for RLE Compression using Standard Photometric Interpretations**

Photometric Interpretation	Samples per Pixel	Planar Configuration	Pixel Representation	Bits Allocated	Bits Stored	High Bit
MONOCHROME1 MONOCHROME2	1	absent	0 or 1	1, 8 or 16	1-16	0-15
PALETTE COLOR	1	absent	0	8 or 16	1-16	0-15
YBR_FULL	3	0 or 1	0	<b>88 Or 16</b>	<b>1-816</b>	<b>0-715</b>
RGB	3	0 or 1	0	8 or 16	1-16	0-15

*Change section PS 3.5 –8.2.3 as follow*

**Table 8.2.3-1. Valid Values of Pixel Data Related Attributes for JPEG-LS Compression using Standard Photometric Interpretations**

Photometric Interpretation	Transfer Syntax	Transfer Syntax UID	Samples per Pixel	Planar Configuration	Pixel Representation	Bits Allocated	Bits Stored	High Bit
MONOCHROME 1	JPEG-LS Lossless	1.2.840.10008.1.2.4.80	1	absent	0 or 1	8 or 16	2-16	1-15
MONOCHROME 2	JPEG-LS Lossy (Near-Lossless)	1.2.840.10008.1.2.4.81						
PALETTE COLOR	JPEG-LS Lossless	1.2.840.10008.1.2.4.80	1	absent	0	8 or 16	2-16	1-15
YBR_FULL	JPEG-LS Lossless	1.2.840.10008.1.2.4.80	3	0	0	8 or 16	2-16	1-15
	JPEG-LS Lossy (Near-Lossless)	1.2.840.10008.1.2.4.81						
RGB	JPEG-LS Lossless	1.2.840.10008.1.2.4.80	3	0	0	8 or 16	2-16	1-15
	JPEG-LS Lossy (Near-Lossless)	1.2.840.10008.1.2.4.81						