

DICOM Correction Item

Correction Number CP-457	
Log Summary: Add YBR_420 for Ultrasound MPEG	
Type of Modification Modification	Name of Standard PS 3.3
Rationale for Correction: The addition of MPEG to the standard with Supplement 42 should allow its use for Ultrasound, especially for clinical applications such as pediatric echocardiography. The YBR_PARTIAL_420 Photometric Interpretation is added to the Ultrasound IOD.	
Sections of documents affected PS 3.3 Annex C	
Correction Wording:	

C.8.5.6.1.2 Photometric Interpretation

For US Images, Photometric Interpretation (0028,0004) is specified to use the following Defined Terms:

MONOCHROME2	PALETTE COLOR	RGB
<i>ARGB (retired)</i>	YBR_FULL	YBR_FULL_422
YBR_PARTIAL_422	YBR_RCT	YBR_ICT

YBR_PARTIAL_420

Note: It is recommended that future implementations should not use ARGB photometric interpretation.

See PS 3.5 for restrictions imposed by compressed Transfer Syntaxes.

C.8.5.6.1.12 Samples Per Pixel

For US Images, Samples Per Pixel (0028,0002) is specified to use the following values for specific Photometric Interpretations:

**Table C.8-19
 US SAMPLES PER PIXEL**

Photometric Interpretation	Samples Per Pixel Value
MONOCHROME2	1
RGB	3
YBR_FULL	3
YBR_FULL_422	3
YBR_PARTIAL_422	3
YBR_RCT	3
YBR_ICT	3
<u>YBR_PARTIAL_420</u>	<u>3</u>
PALETTE COLOR	1

C.8.5.6.1.13 Bits Allocated

For US Images, Bits Allocated (0028,0100) is specified to use the following values for specific Photometric Interpretations:

**Table C.8-20
US BITS ALLOCATED**

Photometric Interpretation	Bits Allocated Value
MONOCHROME2	8
RGB	8
YBR_FULL	8
YBR_FULL_422	8
YBR_PARTIAL_422	8
YBR_RCT	8
YBR_ICT	8
<u>YBR PARTIAL 420</u>	<u>8</u>
PALETTE COLOR	8 - 8 bit palette, or 16 - 16 bit palette

C.8.5.6.1.14 Bits Stored

For US Images, Bits Stored (0028,0101) is specified to use the following values for specific Photometric Interpretations:

**Table C.8-21
US BITS STORED**

Photometric Interpretation	Bits Stored Value
MONOCHROME2	8
RGB	8
YBR_FULL	8
YBR_FULL_422	8
YBR_PARTIAL_422	8
YBR_RCT	8
YBR_ICT	8
<u>YBR PARTIAL 420</u>	<u>8</u>
PALETTE COLOR	8 - 8 bit palette, or 16 - 16 bit palette

C.8.5.6.1.15 High Bit

For US Images, High Bit (0028,0102) is specified to use the following values for specific Photometric Interpretations:

**Table C.8-22
US HIGH BIT**

Photometric Interpretation	High Bit Value
MONOCHROME2	7
RGB	7
YBR_FULL	7
YBR_FULL_422	7
YBR_PARTIAL_422	7
YBR_RCT	7
YBR_ICT	7
<u>YBR PARTIAL 420</u>	<u>7</u>
PALETTE COLOR	7 - 8 bit palette, or 15 - 16 bit palette

C.8.5.6.1.16 Planar Configuration

For US Images, Planar Configuration (0028,0006) is specified to use the following values for specific Photometric Interpretations:

**Table C.8-23
US PLANAR CONFIGURATION**

Photometric Interpretation	Planar Configuration Value
RGB	0 - color-by-pixel, or 1 - color-by-plane
YBR_FULL	1
YBR_FULL_422	0
YBR_PARTIAL_422	0
YBR_RCT	0
YBR_ICT	0
<u>YBR PARTIAL 420</u>	<u>0</u>