

DICOM Correction Item

Correction Number	CP 761
Log Summary: Clarify Pixel Spacing attribute condition within Basic Pixel Spacing Calibration Macro	
Type of Modification	Name of Standard
Correction	PS 3.3 2007
Rationale for Correction Pixel Spacing (0028,0030) attribute is defined as a Type 1C attribute in Basic Pixel Spacing Calibration Macro, but the requirement for the condition is not specified. The unmodified explanations provided in paragraph 10.7.1.1 may produce the mistaken impression that this attribute is then mandatory for IODs that contain modules that include this macro, which is not the case.	
Sections of documents affected PS 3.3 10.7	
Correction Wording:	

10.7 BASIC PIXEL SPACING CALIBRATION MACRO

Table 10-10 defines the Attributes for the Basic Pixel Spacing Calibration Macro.

**Table 10-10
 BASIC PIXEL SPACING CALIBRATION MACRO ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
Pixel Spacing	(0028,0030)	1C	Physical distance in the patient between the center of each pixel, specified by a numeric pair - adjacent row spacing (delimiter) adjacent column spacing in mm. See 10.7.1.1 and 10.7.1.3. Required if the image has been calibrated. May be present otherwise.
Pixel Spacing Calibration Type	(0028,0402)	3	The type of correction for the effect of geometric magnification or calibration against an object of known size, if any. See 10.7.1.2.
Pixel Spacing Calibration Description	(0028,0404)	1C	A free text description of the type of correction or calibration performed. Notes: 1. In the case of correction, the text might include description of the assumptions made about the body part and geometry and depth within the patient. 2. in the case of calibration, the text might include a description of the fiducial and where it is located (e.g., "XYZ device applied to the skin over the greater trochanter"). 3. Though it is not required, the Device Module may be used to describe the specific characteristics and size of the calibration device. Required if Pixel Spacing Calibration Type (0028,0402) is present.

10.7.1 Basic Pixel Spacing Calibration Macro Attribute Descriptions

10.7.1.1 Pixel Spacing

The Pixel Spacing (0028,0030) attribute specifies the physical distance in the patient between the center of each pixel.

If **Pixel Spacing (0018,2010) is present and** the image has not been calibrated to correct for the effect of geometric magnification, the values of this attribute shall be the same as in Imager Pixel Spacing (0018,1164) or Nominal Scanned Pixel Spacing (0018,2010), if either of those attributes are present.

If **Pixel Spacing (0018,2010) is present** and the values are different from those in Imager Pixel Spacing (0018,1164) or Nominal Scanned Pixel Spacing (0018,2010), then the image has been corrected for known or assumed geometric magnification or calibrated with respect to some object of known size at known depth within the patient.

If Pixel Spacing Calibration Type (0028,0402) and Imager Pixel Spacing (0018,1164) and Nominal Scanned Pixel Spacing (0018,2010) are absent, then it cannot be determined whether or not correction or calibration have been performed.

- Notes:
1. Imager Pixel Spacing (0018,1164) is a required attribute in DX family IODs.
 2. Nominal Scanned Pixel Spacing (0018,2010) is a required attribute in Multi-frame SC family IODs