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8	Correction Number CP-1692	
9	Log Summary: Add more statistical multidimensional image component semantics	
10	Name of Standard	
11	PS3.16	
12	Rationale for Correction:	
13	Additional statistical measures, especially of goodness of fit, are needed as parametric map quantities.	
14	E.g., see Li X, Welch EB, Chakravarthy AB, Xu L, Arlinghaus LR, Farley J, et al. Statistical comparison of dynamic contrast-enhanced	
15	MRI pharmacokinetic models in human breast cancer. Magnetic Resonance in Medicine. 2012 Jul 1;68(1):261–71. Available from:	
16	<a href="http://dx.doi.org/10.1002/mrm.23205">http://dx.doi.org/10.1002/mrm.23205</a> .	
17	<i>[Ed.Note. Ideally a standard source of statistical codes would be available rather than creating new DCM codes.]</i>	
18	Correction Wording:	

Amend DICOM PS3.16 as follows (changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):

## CID 7180 Abstract Multi-dimensional Image Model Component Semantics

Type: Extensible  
Version: 20161106yyyyymmdd

Table CID 7180. Abstract Multi-dimensional Image Model Component Semantics

Coding Scheme Designator	Code Value	Code Meaning	SNOMED-CT Concept ID	UMLS Concept Unique ID
...	...	...	...	...
DCM	110833	Ultrasound Attenuation		
DCM	113068	Student's T-test		
DCM	113071	Z-score		
DCM	113057	R-Coefficient		
DCM	126220	R2-Coefficient		
<b><u>DCM</u></b>	<b><u>ddd001</u></b>	<b><u>Chi-square</u></b>		
<b><u>DCM</u></b>	<b><u>ddd002</u></b>	<b><u>D-W</u></b>		
<b><u>DCM</u></b>	<b><u>ddd003</u></b>	<b><u>AIC</u></b>		
<b><u>DCM</u></b>	<b><u>ddd004</u></b>	<b><u>BIC</u></b>		
DCM	110834	RGB R Component		
...	...	...	...	....

## D DICOM Controlled Terminology Definitions (Normative)

Table D-1. DICOM Controlled Terminology Definitions

Code Value	Code Meaning	Definition	Notes
126220	R2-Coefficient	Coefficient of determination, $R^2$ . An indication of goodness of fit.	
<b><u>ddd001</u></b>	<b><u>Chi-square</u></b>	<b><u>Pearson's <math>X^2</math> test.</u></b>	
<b><u>ddd002</u></b>	<b><u>D-W</u></b>	<b><u>Durbin-Watson statistic for detecting serial correlation in residuals.</u></b> <b><u>See <a href="http://en.wikipedia.org/wiki/Durbin%E2%80%93Watson_statistic">http://en.wikipedia.org/wiki/Durbin%E2%80%93Watson_statistic</a>.</u></b>	
<b><u>ddd003</u></b>	<b><u>AIC</u></b>	<b><u>Akaike information criterion. A measure of the balance between goodness of fit and number of free parameters.</u></b> <b><u>See Akaike H. A new look at the statistical model identification. IEEE Transactions on Automatic Control. 1974 Dec;19(6):716–23. <a href="http://dx.doi.org/10.1109/TAC.1974.1100705">http://dx.doi.org/10.1109/TAC.1974.1100705</a>.</u></b>	
<b><u>ddd004</u></b>	<b><u>BIC</u></b>	<b><u>Bayesian information criterion. A measure of the balance between goodness of fit and model complexity.</u></b> <b><u>See <a href="http://en.wikipedia.org/wiki/Bayesian_information_criterion">http://en.wikipedia.org/wiki/Bayesian_information_criterion</a>.</u></b>	