

## DICOM Correction Proposal

|                     |   |
|---------------------|---|
| STATUS              | Assigned                                      |
| Date of Last Update | 2025/08/27                                    |
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| Submission Date     | 2019/10/01                                    |

|  |         |
|--|---------|
| Correction Number  | CP-1982 |
| Log Summary: Add mechanism for handling sensitive images   |         |
| Name of Standard<br>PS3.3 2025a  |         |
| <p>Rationale for Correction:</p> <p>Many sites have policies that medical images such as plastic surgery photos, abuse photos, and photos of certain anatomy are considered sensitive due to their content, and access to those images is restricted and/or audited differently than access to other medical images.</p> <p>"Sensitive images" are "any image obtained or used for the purpose of providing care with the potential to reveal personal information (beyond protected health information) that may cause the patient, patient proxy, or health care provider embarrassment, shock, grief, or emotional distress." (See Whitepaper <a href="https://link.springer.com/article/10.1007/s10278-024-00980-8">https://link.springer.com/article/10.1007/s10278-024-00980-8</a>)</p> <p>The Attributes in this CP do not encode site policy but rather encode values that describe the nature of the image content which then can facilitate the implementation and invocation of such site policies.</p> <p>Multiple categories of sensitivity may be encoded since more than one may apply and the policies and procedures may also differ.</p> <p>Implementation of some policies may depend on Storage SCPs providing these attributes as query or return keys. That is permitted but this CP does not make it mandatory as it would break existing implementations.</p> <p>A summary tag at the study level to indicate if one or more sensitive images are present somewhere in the study was considered to be a PACS/VNA indexing optimization that DICOM doesn't usually do. If deployment experience indicates a need, that can be added later (likely in Part 4). Forensic studies would be sensitive at the study or patient level which is being addressed in a separate CP.</p> <p>Q. Should the "Personal Content" category be retained or removed?</p> <p>Some argue that all images are PHI and the PHI protections should be adequate; Personal content would not warrant different protections. Others point out that Personal is a way for a patient to have certain images protected differently (e.g. most images available to all physicians, while Personal restricted to a specific care team and those outside would need to acknowledge a logging notice to bypass) and that ultimately tag usage will be driven by site policy choices and DICOM should enable but not presume those choices.</p> <p>&lt;TODO SIIM participants (Towbin, Rotemberg, Bishop) will loop in additional SMEs from dermatology, pediatrics, cosmetic surgery, etc during ballot&gt;</p> |         |

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|---------------------|
| Correction Wording: |
|---------------------|

Modify PS3.3 C.12.1 as shown

## C.12.1 SOP Common Module

...

Table C.12-1. SOP Common Module Attributes

| Attribute Name  | Tag                | Type     | Attribute Description   |
|---|--------------------|----------|---|
| ...   |                    |          |   |
| Original Specialized SOP Class UID                              | (0008,001B)        | 3        | The SOP Class in which the Instance was originally encoded that has been replaced during a fall-back conversion to the current Related General SOP Class. See PS3.4   |
| <b>Image Sensitivity Code Sequence</b>                          | <b>(xxxx,yyyy)</b> | <b>3</b> | <b>Indicates the potential presence of sensitive content in the image. See Section C.7.6.1.X.</b><br><b>One or more Items are permitted in this Sequence.</b><br><b>If this Attribute is absent, then the image may or may not contain sensitive content.</b> |
| <b>&gt;Include Table 8.8-1 "Code Sequence Macro Attributes"</b> |                    |          | <b>DCID Newcid1 "Image Sensitivity Categories"</b><br><b>DCID Newcid2 "Image Sensitivity Details"</b>   |
| Synthetic Data  | (0008,001C)        | 3        | Whether or not some or all of the content of this instance was made artificially rather than being a faithful representation of acquired data.<br>...   |
| ...   |                    |          |   |

Add Section PS3.3 C.7.6.1.X as shown

### C.7.6.1.X Sensitive Images

Image Sensitivity Code Sequence (xxxx,yyyy) records sensitivity categories that apply to this image. The decision of whether or not to record such sensitivity codes, the sensitivity codes to use, and the organizational and system behaviors that are triggered by such sensitivity codes, are all driven by local customs, policies, and conventions.

Multiple categories may apply to the same image. In addition to the category codes, the sequence may also contain one or more detailed codes indicating the basis for the assigned category. E.g., the nudity category code might be accompanied by a more detailed code indicating the type of body part that triggered the nudity label. The entirety of the body part may or may not be present, and the body part might not be the intended target of the image.

The order of items in the sequence is not significant. The meaning of multiple items being present is not defined beyond each being individually applicable to the image.

These categories would apply primarily to visible light images (like photographs); however, there may be cases where sites might choose to apply them to radiological images (e.g. surface renderings of volumetric scans like CT, genitals discernable in pelvic x-rays, tattoos being detectable, gender reassignment imaging, mammography, etc.).

If both Image Sensitivity Code Sequence (xxxx,yyyy) and Recognizable Visual Features (0028,0302) are present, then the values shall be consistent. I.e., an item with a value of (Newcode3, DCM, "Identifying Content") shall be present in the Image Sensitivity Code Sequence (xxxx,yyyy) if Recognizable Visual Features (0028,0302) has a value of YES, and absent if Recognizable Visual Features (0028,0302) has a value of NO.

This code sequence is intended to facilitate the implementation of site policies to protect the privacy of the subject and/or protect the sensibilities of the viewer by triggering behaviors such as:

- An Image Display presenting a warning message, perhaps using the text in the code meaning of the sensitivity codes, before asking the user if they want to proceed with displaying the image.
- A PACS restricting the retrieval of images based on the role or identity of the user.

Such behaviors are not mandated by the Standard.

The behaviors applied to different types of sensitive images may differ between institutions and regions based on local regulations, policies, implementation capabilities, and configurations. Thus, the same code may trigger different behaviors in different organizations/contexts.

It is also possible that the choice of codes to apply to a given image might differ between institutions, regions, practitioners, and patients based on local [customs](#), policies and conventions. As such, when images from another institution are imported locally, the coercion process might involve adding, modifying, or removing codes in the Image Sensitivity Code Sequence (xxxx.yyyy) to better support local policies and procedures for sensitive images. Since (Newcode2, DCM, "Personal Content") may be based on a determination by the patient, it would likely remain unmodified during coercion. If codes are modified or removed, it is recommended that implementations consider recording the original values in the Original Attributes Sequence (0400,0561) to provide an audit trail.

Ultimately, the logic of deciding which policies and mechanisms to invoke based on the items in the sequence (e.g., applying the most restrictive of the triggered policies, or having newer items supersede older items, or during coercion during import retaining older items here or moving them to the Original Attributes Sequence (0400,0561)) is left to the implementation.

Add tag to PS3.6 Table 6-1

| Tag         | Name                            | Keyword                      | VR | VM |  |
|-------------|---------------------------------|------------------------------|----|----|--|
| (xxxx,yyyy) | Image Sensitivity Code Sequence | ImageSensitivityCodeSequence | SQ | 1  |  |

Add Context Group to PS3.16 as shown for Image Sensitivity Categories

CID newcid1 Image Sensitivity Categories

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML  
Type: Extensible  
Version: [yyymmdd](#)  
UID: 1.2.840.10008.6.1.newciduid1

Table CID newcid1. Image Sensitivity Categories

| Coding Scheme Designator | Code Value | Code Meaning          |
|--------------------------|------------|-----------------------|
| DCM                      | Newcode0   | Non-sensitive Content |
| DCM                      | Newcode1   | Nudity Content        |
| DCM                      | Newcode2   | Personal Content      |
| DCM                      | Newcode3   | Identifying Content   |
| DCM                      | Newcode4   | Gruesome Content      |
| DCM                      | Newcode5   | Sensitive Content     |

Add Context Group to PS3.16 as shown for Image Sensitivity Details

CID newcid2 Image Sensitivity Details

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML  
Type: Extensible  
Version: [yyymmdd](#)  
UID: 1.2.840.10008.6.1.newciduid2

Table CID newcid2. Image Sensitivity Details

| Coding Scheme Designator | Code Value          | Code Meaning            | SNOMED-RT ID   | UMLS Concept Unique ID |
|--------------------------|---------------------|-------------------------|----------------|------------------------|
| SCT                      | 87612001            | Blood                   | T-C2000        | C0005767               |
| <u>SCT</u>               | 386702006           | Abuse                   |                |                        |
| SCT                      | 417746004           | Traumatic Injury        | DF-00777       | C3263723               |
| <u>SCT</u>               | 125667009           | Bruising                |                |                        |
| <u>SCT</u>               | 312608009           | Lacerations             |                |                        |
| <u>SCT</u>               | 125666000           | Burn                    |                |                        |
| <u>SCT</u>               | 426284001           | Chemical Burn           |                |                        |
| <u>SCT</u>               | 314534006           | Thermal Burn            |                |                        |
| <u>SCT</u>               | 125643001           | Open Wound              |                |                        |
| <u>SCT</u>               | 112633009           | Surgical Wound          |                |                        |
| <u>SCT</u>               | 29240004            | Autopsy                 |                |                        |
| <u>SCT</u>               | 430339001           | Pediatric Autopsy       |                |                        |
| SCT                      | 430861001           | Gross Specimen          | G-843A         | C2316367               |
| DCM                      | Newcode18           | Excised Tissue          |                |                        |
| <u>SCT</u>               | <u>364320009</u>    | <u>Pregnancy status</u> |                |                        |
| <u>SCT</u>               | <u>56306000</u>     | <u>Cosmetic Surgery</u> |                |                        |
| <u>SCT</u>               | <u>341000119102</u> | <u>Tattoo</u>           |                |                        |
| <u>SCT</u>               | <u>51089004</u>     | <u>Birthmark</u>        |                |                        |
| <u>SCT</u>               | 73632009            | Laparoscopy             |                |                        |
| <u>SCT</u>               | 392003006           | Colposcopy              |                |                        |
| <u>SCT</u>               | 73761001            | Colonoscopy             |                |                        |
| <u>SCT</u>               | 423827005           | Endoscopy               |                |                        |
| <u>SCT</u>               | 71934003            | Genitals                |                |                        |
| SCT                      | 46862004            | Buttock                 | T-D2600        | C0006497               |
| SCT                      | 53505006            | Anus                    | T-59900        |                        |
| SCT                      | 76752008            | Breast                  | T-04000        | C0006141               |
| SCT                      | 24142002            | Nipple                  | T-04100        | C0028109               |
| <u>SCT</u>               | <u>18911002</u>     | <u>Penis</u>            | <u>T-91000</u> | <u>C0030851</u>        |
| <u>SCT</u>               | <u>20233005</u>     | <u>Scrotum</u>          | <u>T-98000</u> | <u>C0036471</u>        |
| <u>SCT</u>               | <u>40689003</u>     | <u>Testis</u>           | <u>T-94000</u> | <u>C0039597</u>        |
| <u>SCT</u>               | <u>39117004</u>     | <u>Labia</u>            |                |                        |
| <u>SCT</u>               | <u>65439009</u>     | <u>Clitoris</u>         |                |                        |
| <u>SCT</u>               | <u>76784001</u>     | <u>Vagina</u>           | <u>T-82000</u> | <u>C0042232</u>        |

Add definitions to PS 3.16 Annex D

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**Table D-1. DICOM Controlled Terminology Definitions**

| Code Value       | Code Meaning                        | Definition   | Notes |
|------------------|-------------------------------------|--|-------|
| ...              |                                     |  |       |
| <b>Newcode0</b>  | <b><u>Non-sensitive Content</u></b> | <b><u>The image does not include content considered to be sensitive.</u></b>   |       |
| <b>Newcode1</b>  | <b><u>Nudity Content</u></b>        | <b><u>The image includes content which may be considered to constitute nudity, such as photos of genitals, breasts, buttocks, etc.</u></b>   |       |
| <b>Newcode2</b>  | <b><u>Personal Content</u></b>      | <b><u>The image includes content deemed personal by the image subject. This might include photos of abuse injuries, plastic surgeries, or photos indicating the religion, culture, or politics of the image subject.</u></b> |       |
| <b>Newcode3</b>  | <b><u>Identifying Content</u></b>   | <b><u>The image includes content commonly used to identify the image subjects, such as photos of the face, tattoos, birthmarks, fingerprints, dental structures, retina, etc.</u></b>  |       |
| <b>Newcode4</b>  | <b><u>Gruesome Content</u></b>      | <b><u>The image includes content considered gruesome, gory, or violent by some viewers, such as photos of abuse injuries, trauma, surgery, autopsy, or blood.</u></b>  |       |
| <b>Newcode5</b>  | <b><u>Sensitive Content</u></b>     | <b><u>The image may include content considered sensitive for some reason.</u></b>  |       |
| ...              |                                     |  |       |
| <b>Newcode18</b> | <b><u>Excised Tissue</u></b>        | <b><u>The image may include tissue removed from the patient.</u></b>   |       |
| ...              |                                     |  |       |

Modify PS3.15 as shown

**Table A.5.2-1. General Message Format**

|                                   | Field Name            | Opt. | Description  | Additional Conditions on Field Format/Value   |
|-----------------------------------|-----------------------|------|--|---|
| Event                             | EventID               | M    | Identifier for a specific audited event.   | The identifier for the family of event. E.g., "User Authentication". DCID 400 "Audit Event ID"              |
|                                   | ...                   |      |  |   |
| Active Participant (multi-valued) | UserID                | M    | Unique identifier for the user actively participating in the event.  | See Section A.5.2.1.  |
|                                   | ...                   |      |  |   |
| Audit Source                      | AuditEnterpriseSiteID | U    | Logical source location within the healthcare enterprise network, e.g., a hospital or other provider location within | Serves to further qualify the Audit Source ID, since Audit Source ID is not required to be globally unique. |

|                                   | Field Name                   | Opt. | Description   | Additional Conditions on Field Format/Value      |
|-----------------------------------|------------------------------|------|---|--|
|                                   |                              |      | a multi-entity provider group.  |  |
|                                   | ...                          |      |   |  |
| Participant Object (multi-valued) | ParticipantObjectTypeCode    | U    | Code for the participant object type being audited. This value is distinct from the user's role or any user relationship to the participant object.   | Person<br>System Object<br>Organization<br>Other |
|                                   | ...                          |      |   |  |
|                                   | ParticipantObjectSensitivity | U    | Denotes policy-defined sensitivity for the Participant Object ID such as VIP, HIV status, mental health status, or similar topics.<br><br><b><u>This may be influenced by values in the Image Sensitivity Code Sequence (xxxx.yyyy) if present in the participant object.</u></b> | Locally defined terms.                           |
|                                   | ParticipantObjectID          | M    | Identifies a specific instance of the participant object.   | Usage refined by individual message descriptions |
|                                   | ...                          |      |   |  |