Digital Forensic Photography Documentation Guideline 2025

*Consent obtained from all subjects used in photos

Introduction

Photodocumentation of physical areas on the human body is part of a comprehensive medical forensic documentation process. These photos should be a clear and accurate representation of what the examiner saw in person. The forensic examiner should perform a thorough head-to-toe physical assessment, documenting all findings. Upon signed consent, the examiner should collect a series of digital images based on the patient's medical history and the examiner's findings throughout the assessment. This photodocumentation will supplement the examiner's written documentation.

This document introduces forensic examiners to the process of digital forensic imaging, including best-practice methods for collecting, handling, managing and delivering these images to professionals working at outside agencies (e.g. law enforcement officers, attorneys, experts, consultants). Examiners should have a signed skills validation tool on file with their local organization, based on this guideline, to ensure all staff are properly trained and deemed competent.

Recommended Equipment:

https://www.sdfi.com/Downloads/SDFI_Technical_Requirements.pdf

- Protective portable camera case (meets or exceeds IP67 • MIL C-4150J • Def Stan 81- 41/STANAG 4280)
- High resolution mirrorless digital camera system capable of capturing RAW and JPG files (with appropriate accessories, depending on the camera system used)
- Hand-held camera remote with separate extension cord
- Foot-pedal-controlled camera remote
- Low-profile, quick-release camera stand with ball-head function
- Photomacrographic scales
- A computer (64-bit with 16 GB RAM) with 2TB or greater of accessible local/network storage space. The best place to store forensic data is on a secure and local computer network
- Computer software and storage capable of reading/managing vast amounts of image files.
- Computer software capable of securing and encrypting large amounts of digital images and video at AES 256-bit encryption standards
- Nested, end-to-end encrypted asynchronous file transfer technologies
- Optional: 42-inch or larger HDTV or screen with an HDMI connector

Photography Basics:

Photographers use several means to tell the camera how to capture the image including aperture, shutter speed, depth of field and white balance.

- Aperture refers to the size of the opening, or shutter, that lets light into the camera
- Shutter speed is how long the opening, or shutter, remains open.
- Depth of field is the amount of area in front of (foreground) and behind (background) an object that remains in focus.
- White balance allows the camera to record the proper temperature of light, resulting in an accurate representation of the color tones of objects in the photograph.
- **Series of 4**, as defined within this guideline, is used to compose a series of four or more photographs for each finding. This systematic approach generally refers to distance, mid-distance, close-up, and close-up with photomacrographic scale. In some cases, extreme close-up may also be necessary.

Photography Steps:

1. The forensic examiner should acquire consent from the patient, or if applicable, the patient's parent or guardian prior to taking any photographs.
   - Follow organizational and jurisdictional policy as well as local, state and federal rules and regulations before obtaining any photographs. Some hospital or organizational policies may allow photography of patients unable to provide consent as part of medical care.

2. The forensic examiner should check and test the camera system and settings prior to use (e.g. flash and camera batteries, flash mounted correctly, memory card loaded, camera stand setup, remote foot pedal in place, etc.).

3. The very first picture will be a bookend or picture of the patient's ID wristband. A bookend identifies each exam/case as unique and initiates that patient's series of photos.

Note: A copy of the SDFI bookend card can be downloaded at:
https://www.sdfi.com/Downloads/bookends.pdf

Date:	
Name:	
Case #:	
Photographer:	
ID Record #:	
D.O.B: (mm/dd/yy)	or Age:

4. Next, perform a full body overlapping photographic storyboard, if you are in a smaller space that doesn't allow you to step back far enough to take a full body photo. This series of storyboard photos will identify the patient and will be useful in demonstrating the general condition of the patient and their clothing at the time of examination.

    *   Take a full-frame head shot, from above the head to the neckline or thereabout, clearly showing the person's facial features.
    *   Take an upper body picture, from neckline to waistline or thereabout, clearly showing overlap from the last picture taken. Take this picture from a lower stance.
    *   Take an upper body picture, from waistline to just above the knees or thereabout, clearly showing overlap from the last picture taken. Kneel down to maintain a 90-degree angle for all images.
    *   Take a lower body picture, from just above the knees to mid-shin or thereabout, clearly showing overlap from the last picture taken. Bend down to take this picture, again maintaining a 90-degree angle.
    *   Take a lower leg picture showing both feet, from mid-shin to below both feet or thereabout, clearly showing overlap from the last picture taken. Will need to kneel and bend to take this picture.

5. Each photo should have an overlapping landmark to ensure continuity. The landmark should be a body part or area on the clothing. Landmarks are anchors; when you have one in each photo/frame, they connect the full storyboard of that patient.

6. Repeat this overlapping photographic storyboard for the left, right and back sides, as needed.

Overlapping Photographic Storyboard

Note: Ensure there are overlapping landmarks in each picture to form one cohesive storyboard
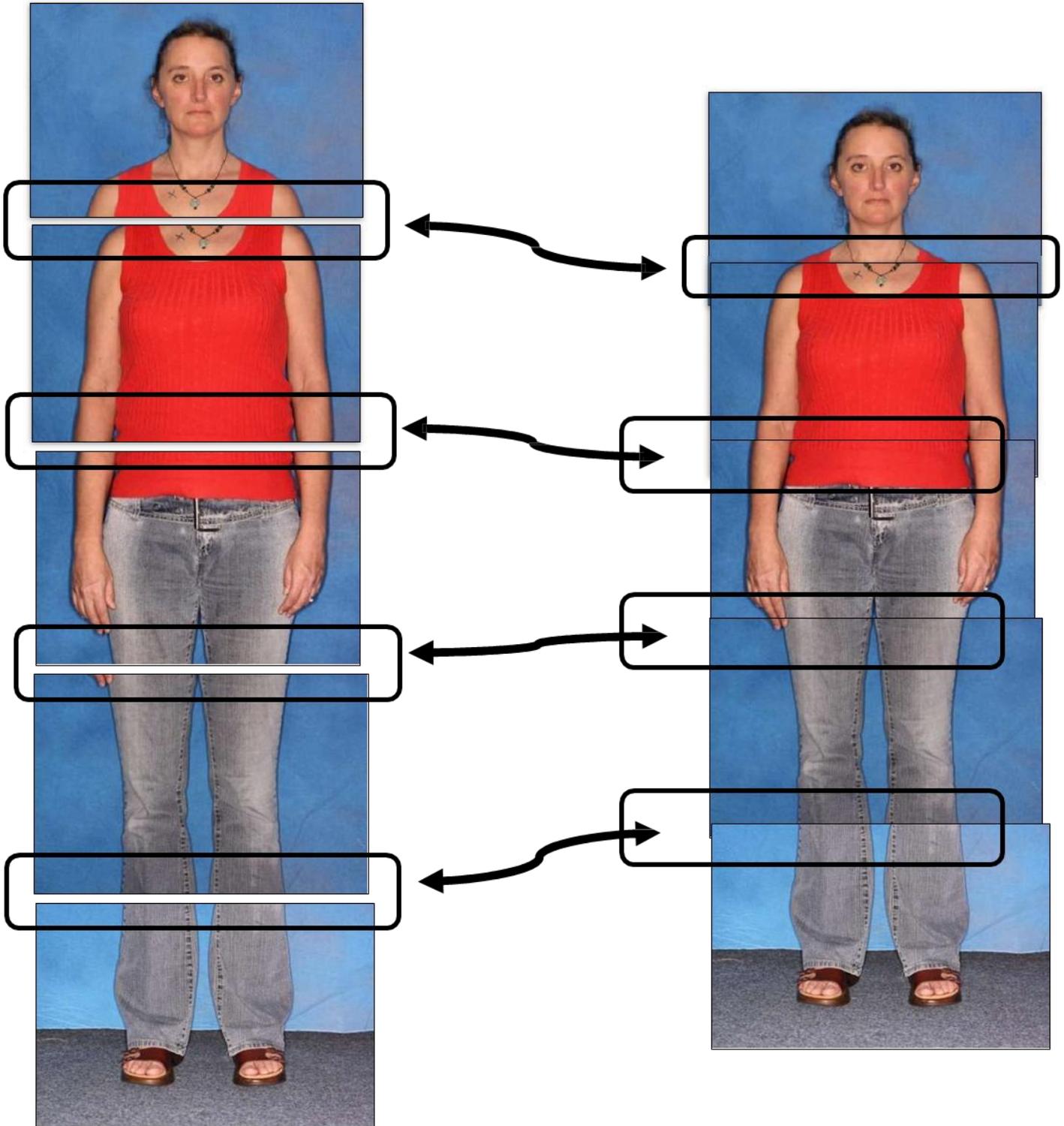
7. After the storyboard is complete, capture a **Series of 4** and if necessary, extreme close-up, for each injury or area of interest from the head-to-toe assessment. Stand directly in front of the area and take the pictures at a 90-degree angle to the area of interest.
   a. Distance and mid-distance pictures will demonstrate anatomical location, and the close-up and extreme close-up photos will demonstrate details of the findings.
   b. Mid-distance pictures are generally 50% closer than distance pictures.
   c. After completing a mid-distance area picture, immediately take close-up pictures related to that specific area, followed by extreme close-up photo.
      i. For close-up photos, switch camera aperture setting from 5.6 to 22
      ii. For extreme close-up photos, stay at 22 but physically move closer to the subject
      iii. For areas that are too large for a single extreme close-up, create an overlapping photo storyboard of the one area on that person's body.
   d. All close-up pictures should be taken both with and without a photomacrographic scale to identify size of injury or area of interest.
   e. Always stand directly in front of the area and take the pictures at a 90-degree angle. This ensures that there is no distortion of the finding.
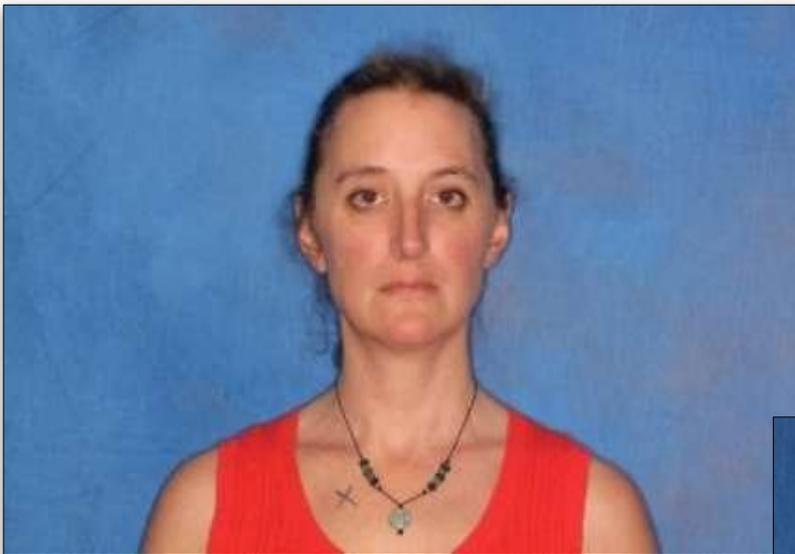
Left: Picture showing upper chest with upper arms and shoulders. This photo includes the face

Right: Mid-distance picture of upper chest showing right arm, right shoulder, neck and general chest are.

Right: Close-up without photomacrographic scale- note sweater and jewelry landmarks.

Left: Close-up with photomacrographic scale.

Extreme close-up

8. Once photographs of all findings and areas of interest are complete **(Series of 4)** including an extreme close-up photograph, if necessary, then finish with a bookend or photograph of patient's ID wristband. This indicates the end to this patient's photographs.


Note: Refer to the SDFI Anogenital Photography Documentation Guideline for more information about anogenital photographs.

Framing:

- Framing refers to drawing focus to the injury or area of interest within the photo
- Start by centering the white square on the viewfinder
- Ensure the white square is on the object you want to focus on; if not, reset the white square as outlined below.
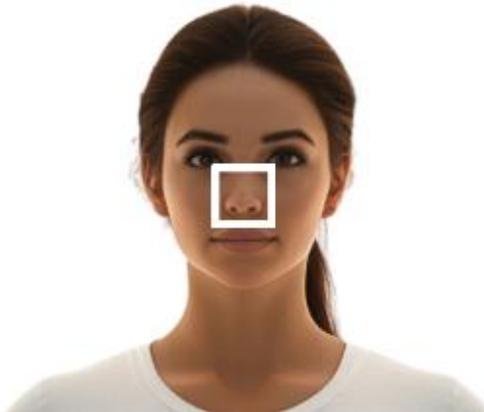
☐ **Check** that the White AF Frame (Square) is centered on the screen. If it is not centered, **press** the "SET" button located to the right of the screen inside the Quick Control Dial.

Focus on Subject

☐ **Press** the shutter button **halfway** to activate White AF Frame (Square); the White AF Frame (Square) will turn green when ready. If the square turns red, step back slightly and try again.

Key Photography Reminders:

- Photos should never be deleted, even if a photo is blurry or was taken by accident.
- When taking photos, position yourself with a stable stance for balance. Keep your left foot forward and right foot back. Keep your left elbow close to your body and distribute the camera's weight comfortably.
- Check photos in real-time and retake if needed.
- Elements of a good photo:
  - Focus: Is it clear and in focus?
  - Lighting: Is it in adequate lighting?
  - Alignment: Is it at 90-degrees?
  - Represent: Does it show a clear and accurate representation of the subject matter?

SDFI- Telemedicine Store, Study, and Share Process:

After all required pictures have been taken, the SDFI Software will be used to securely **Store** AES 256-bit encrypted copies of all files using a specified Case ID within the Secure Network Storage Area, **Study** all forensic data, and **Share** case information with Authorized Receivers as necessary.

Accessing the SDFI Software

The user launches the application and enters the Master Access Passphrase into the SDFI Software.
Note: This passphrase can contain up to 256 upper case, lower case, space, or special characters. An example of a passphrase would be: "the black cat crossed the road on tuesday".

Store Forensic Data Securely

The user selects the "Store New Case" button and follows the prompts to establish a Case ID, process the data on their SD Card, and Store the data within the Secure Network Storage Area.

- Example Case IDs with image numbers are shown below:

  - Date Last, First Case# OtherID# Image#.File Extension
  - 160928 Smith, Jane 23452345 SA76867 0002.File Extension

In the background the following steps take place:

- A unique Case Folder is created in the Secure, Network Storage Area using the Case ID ("160928 Smith, Jane 23452345 SA76867" above).
- The files on the SD Card are copied, renamed with the Case ID as above, and individually secured using AES 256-bit encryption.
- The encrypted forensic data copies are transferred to the Case Folder within the secure network storage area.
- The SDFI Software verifies that all files have been successfully transferred to the Case Folder and clears the SD Card of the original image files.

Study the Forensic Data

The user chooses a Case Folder from the Case Selection Area and loads references of all contents into the Viewing Pane of the SDFI Software.

Images can then be selected and viewed with the ability to apply a digital contrast filter, zoom in on areas of interest, view RAW versions of the files, if necessary, add non-destructive draw and text annotations, and create comparison reports to aid in detailing any findings.

Share Forensic Data with Authorized Receivers

Upon receiving a request and/or proper documentation, the SDFI Software may be used to prepare a share file containing all case data of interest within the Case Folder.

Preparing and sending a Share File can be done by:

- Selecting all files to be shared within the Share File Selection Pane and clicking on the "Share Case" button of the SDFI Software.
- Creating a Unique, One-Time Only Passphrase that will be used to re-encrypt the forensic data with AES 256-bit encryption.
  Note: This passphrase should be different than the Master Access Passphrase and will be used by the Authorized Receiver to decrypt the shared forensic data.
- The Share File is uploaded to the SDFI File Portal using a high-speed internet connection and the web browser of the user's choice.
- The SDFI File Portal is then used to send a Download Notification Email to the Authorized Receiver. Individual files are never attached to or sent via this email.

The Authorized Receiver can now download the Share File on a Windows-based PC through the SDFI File Portal. No additional software is required by the Authorized Receiver as all applications are packaged within the Share File.

To fully access the forensic data within the Share File, the Authorized Receiver must:

- Download the Share File using the Download Notification Email.
- Call the user who prepared the Share File and verbally request the Unique, One-Time Only Passphrase.
- Launch the Share Decrypt application within the Share File and enter the One-Time Only Passphrase.

The SDFI Software will then decrypt all packaged files, and the Authorized Receiver will have full access to the forensic data at this time.

References

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