

STANDARD OPERATING PROCEDURE

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| Title: | Image Management | | |
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| Originator and Date: | Lise Matzke 21OCT2008 | Effective Date: | 21OCT2008 |
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| Date | Reviewer | Summary of revision |
| 20Apr2009 | Crystal Leung | Reformatted to iCAPTURE format |
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Purpose

Digital based images are of utmost value to the iCAPTURE Biobank. It is imperative that all images be stored in a safe, confidential and consistent manner.

Responsibilities

This procedure is applicable to:

- Biobank personnel
- Other Biobank personnel who may be responsible for imaging

Safety

While there are no inherent safety issues in using photographic equipment and storage of data, it is imperative to use personal protective equipment (PPE) when handling biospecimens for image production purposes. See "Handling Biohazardous Materials" SOP - BB.001.01 for further information.

Definitions

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|---------------------|---|
| Accessioning number | Unique identifier that links a specific piece of clinical data or sample to a patient |
| JPEG | Joint Photographic Experts Group. JPEG is an image file format that uses a compression technique for color images |
| PPE | Personal Protective Equipment. The equipment and clothing required to mitigate the risk of injury from or exposure to hazardous conditions encountered during the performance of duty. PPE includes, but is not limited to: face shields, lab coat, goggles and gloves. |
| RAW | RAW images are large, usually uncompressed files that are not processed by the camera and retain all their original data. RAW format images are digital negatives |
| SOP | Standard Operating Procedure. Document used to control the methods and requirements by which personnel will perform their activities. |

Materials and Equipment

Camera (digital or film)

Personal computer (PC)

Digital image card reader

Lighting source

Procedures

1. All images should be uploaded/transferred into (insert proper location on computer; drive). Once there, choose the category of image:
 - Autopsy
 - Surgical
 - Consult autopsy
 - Miscellaneous
2. In each category, create a new folder with the accessioning number or where possible the Biobank identification number.

3. After acquiring a digital image(s) (by used of digital camera, flat bed scanner, microscope system etc. or received from an outside party) rename each image. For images that have more than one type of file, e.g. JPEG and RAW, each type should have same name.
4. Naming convention will most likely be indicative of tissue type. However, it is recommended that images be named as:
 - a. Image 1, image 2, image 3 etc. or
 - b. RVFW, LVFW, apex, base etc. or
 - c. View of apex 1, view of apex 2, view of base 1 - etc.
 - For photomicroscopy, where possible: naming convention should follow:
 - Case number; stain; objective; image number

Example: S07-12345_SAB_10X_image 1

Additional Comments

It is important to note the extreme importance of saving images in a highly secured and confidential manner. The **P:\Cardio Vascular Patient Images** part of the network has been especially developed for the confidential storage of patient images. This drive is backed up daily and has very limited membership (n=5). While many images are numbered with SPH accessioning numbers, the use of iCAPTURE ID and or CR(S) numbers are recommended.

This SOP has not addressed image enhancement via software such as Adobe Photoshop or GIMP. As is the general rule with many institutions, enhancement should not interfere with the true image, i.e. creating cells, adding cells, deleting tissue, but should rather enhance the image's aesthetics. It should be kept in mind that the image set up, positioning, lighting, background and camera set up should be organized with the highest of image reproduction quality in mind: image enhancement software should not replace these invaluable reproduction elements. When using image enhancement software, a copy of the image should be made, and enhancements should be made to the copy: do not throw out the original. This is ESPECIALLY important in dealing with images from Forensic cases. For Forensic case work, **do not** discard images of poor, limited quality. For completeness, all images should be kept and inventoried in the appropriate folder.