



**Topic: Uniform Labeling of Blocks and Slides in Surgical Pathology:
Evidence-Based Guideline from the CAP and NSH**

Date: April 21, 2015

Why is this guideline needed? Is there any evidence that patients have been harmed due to labeling errors?

The goal of this guideline is to encourage standardization. This project was inspired by a member of the CAP and NSH expert panel who observed in his busy consultation practice that interpretation is frequently hindered by the lack of consistent labeling practices, resulting in an inability to determine the site of origin of slides and blocks received in consultation from other institutions. Furthermore, although published evidence of patient harm resulting from inadequate labeling of slides and blocks is generally lacking, there is considerable anecdotal evidence and media exposure relating to misdiagnosis due to the mix-up of tissue specimens or slides between patients.

Isn't a barcode a sufficient patient identifier? Do we really need more identifiers?

Barcode technology has been shown to be an effective means of decreasing specimen labeling errors in multiple studies and the expert panel agrees that it should be used in all histology laboratories with access to this technology. A barcode, when available, serves as a useful second identifier. However, it is always necessary to maintain a human readable identifier as 1) barcode technology is not available to all laboratories 2) barcodes and the instruments that read them may not always function as anticipated, and 3) there must be a labeling convention that can be interpreted outside the institution when consultations or second opinions are requested. This guideline is intended to address the use of human readable identifiers; barcodes are beyond the scope of the guideline.

How will the guideline be enforced? What happens if a laboratory doesn't follow the guideline?

As with any clinical evidence-based guideline, following the recommendations is not mandatory. These recommendations *may* be incorporated into future versions of the CAP Laboratory Accreditation Program (LAP) checklist; however, they are not currently required by LAP or any regulatory or accrediting agency. It is encouraged that laboratories adopt these recommendations.

Can two identifiers really fit onto a cassette, especially if they are handwritten?

Yes. Automated cassette labeling equipment can easily accommodate two identifiers, one of which is the accession designation. This is more challenging with hand written cassettes; however, it is important to remember that the guideline does not specify the second identifier and therefore, it is possible to select a relatively brief format, such as a portion of the patient name, that can be written easily but which can still serve as a clear visual distinction of a block or slide from those of another patient with a similar accession number.

We use an automated cassette labeler. Will we be able to change the specifications easily?

Yes. As part of the background for this guideline the expert panel distributed a questionnaire to all of the major vendors for block and slide labeling equipment. All vendors queried confirmed that it is possible to achieve two patient identifiers on blocks and slides; therefore, it will be possible to change the specifications successfully.

A patient's name is not unique. Why should it be used as one of the identifiers?

The purpose of a second identifier is to provide a second check that the slide or block is assigned to the correct patient and specimen. While a name, or a portion thereof used for labeling

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purposes, is not “unique,” by virtue of the contrast between a string of letters and the primarily numerical data in the accession number, it serves as a very useful second check, particularly when comparing blocks and slides at the time of cutting or slides and protocols at the time of sign out.

What are some examples of second identifiers?

Possible second identifiers include patient name, or a portion thereof, medical record number, date of birth, or a computer-generated barcode. The guideline does not make a specific recommendation in this regard.

We don't always have an accession number available when we collect surgical specimens. What should we do?

When an accession number has not yet been assigned, laboratories should label the blocks and slides with at least two patient identifiers, one of which is the patient name. This is a requirement specifically stated in the CAP LAP Anatomic Pathology checklist (checklist question ANP.11800); this reflects the general requirement of both the LAP and the Joint Commission that all specimens submitted to the laboratory should be labeled with two patient identifiers.

Why is the stain/procedure name important for labeling slides?

Clear identification of the stain or procedure name on the slide label is essential to ensure that there is no confusion as to what stain procedure has been used. This is particularly important with immunohistochemical stains, for which knowledge of the antibody applied is often essential to the correct interpretation of the stain.

How should one label a specimen that is “deeper” or a re-cut?

The guideline does not specifically address this point. Each laboratory should establish an internal naming convention that is clearly articulated in a policy or procedure and uniformly applied by all personnel. Guideline statement seven recommends that when multiple slides are cut from a single block, laboratories should label each slide in order of cutting. This recommendation includes ALL slides including levels/deeper sections and those prepared for histochemical or immunohistochemical stains. The labeling of slides as Level1, Level2, etc. would be separate and, in addition to, the sequential labeling recommended.

Does this guideline address control slides?

The guideline does not directly address control slides as this was beyond the scope of the guideline. However, it was the consensus of the expert panel, supported by respondents during the open comment period, that laboratories should establish a clear and standardized method for distinguishing control tissue from patient tissue that can be understood internally and externally.

Does this guideline mean that our laboratory can't create our own way of labeling?

No. These are guidelines intended to promote standardization, with practical suggestions on labeling strategies that have proven to be successful among the members of the expert panel. There was insufficient evidence in the published literature to support a specific convention for labeling. Throughout the guidelines, multiple options are provided for implementing the guideline statements, none of which is specifically stated as a requirement.

Why wasn't a recommendation made about standardizing some common abbreviations and conventions?

The expert panel and the majority of respondents in the open comment period agreed that standardized conventions for naming and abbreviations would be desirable in surgical pathology, particularly with regard to histochemical and immunohistochemical stains. With few exceptions (eg, cluster designations), however, there are no agreed upon naming conventions. In view of this and the lack of a specific agency charged with maintaining and updating a universal list of abbreviations, this is not a practical recommendation. However, the expert panel strongly endorses the use of standardized naming conventions and abbreviations within each institution, clearly articulated in a policy or procedure and uniformly applied in that institution.

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Won't it be confusing if every laboratory's slides and blocks are labeled in the same manner?

The goal of this guideline is to reduce the confusion and diagnostic error that may occur when the blocks and slides are labeled in a non-intuitive and non-standardized manner. There is the potential for confusing blocks and slides from two institutions that have the same accession designation. Ways to mitigate this risk (eg, inclusion of the institution name on slide labels, re-labeling of consultation materials with an internal accession designation, and inclusion of an additional clinic or hospital as part of the "S" portion of the accession designation) are addressed in several of the guideline statements.

I receive slides for consultations, should I re-label the slides?

Yes. Laboratories should label blocks and slides received in consultation with their own institution's accession designation. This practice facilitates the ability of the laboratory to track, cross-reference, and return the consultation material to the appropriate outside institution.

REFERENCES

1. Brown RW, Della Speranza V, Alvarez JO, et al. Uniform labeling of blocks and slides in surgical pathology: guideline from the College of American Pathologists Pathology and Laboratory Quality Center and the National Society for Histotechnology. *Arch Pathol Lab Med.* 2015;139(12):1515-24.

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