

Biocare Basics: Tissue Placement for IHC

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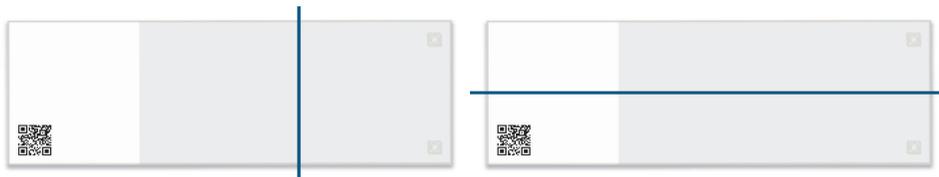
As anyone who has worked in histology will tell you, a successful staining process begins long before the staining protocol itself. In fact, factors that will determine a stain's success or failure start to come into play soon as the tissue is removed from the patient's body. As such, proper education and training for all steps is important.

Incomplete or overdone fixation can affect the presence of features for staining. Inappropriate processing can result in the production of tissue specimens that cannot be sectioned and therefore will not provide any useful microscopic information.

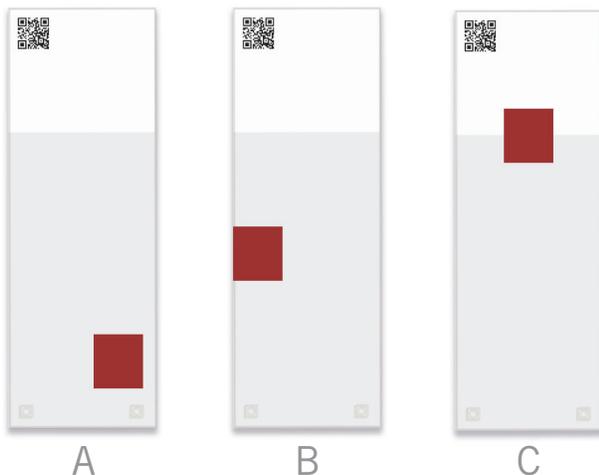
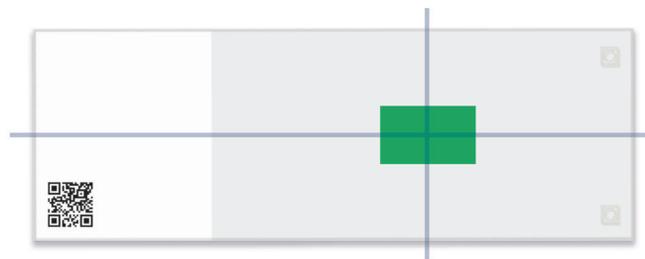
High quality microtomy takes care, skill, patience, and attention to detail. One such detail is the often-overlooked art of "Where do I put the tissue on the slide?"

As automated technology in laboratories continues to rise, having the tissue appropriately centered on the slide has only become more important. Regardless of the skill level of the technician, there are certain elements inherent to the process that can reduce the quality of the staining results. However, if the tissue is optimally placed, it can offset potentially confounding variables like evaporation, incomplete spreading of fluids, non-leveled instruments, or incorrect dispensation of volume.

Tissue sections should be placed on the slide midline, away from the slide edges so that staining reagents and the slide coverslip will be more likely to cover the entirety of the section.



There currently exists a wide range of adopted staining technology. Certain techniques may allow for great tissue placement flexibility, such as the simple dip and dunk, but others now involve more parameters that affect the results. For all these reasons, consistency in tissue placement can have a significant positive affect on staining results, regardless of the level of the level of staining technology present in a lab. A representation of a properly placed sectioned slides:



- A. Too low and off to the right for many automated slide stainers.
- B. Centered in the slide field, but too far off the midline for effective spread and coverslipping.
- C. On the midline, but too high. The tissue will interfere with the label and is more likely to wash off.