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Staining

P 22-24

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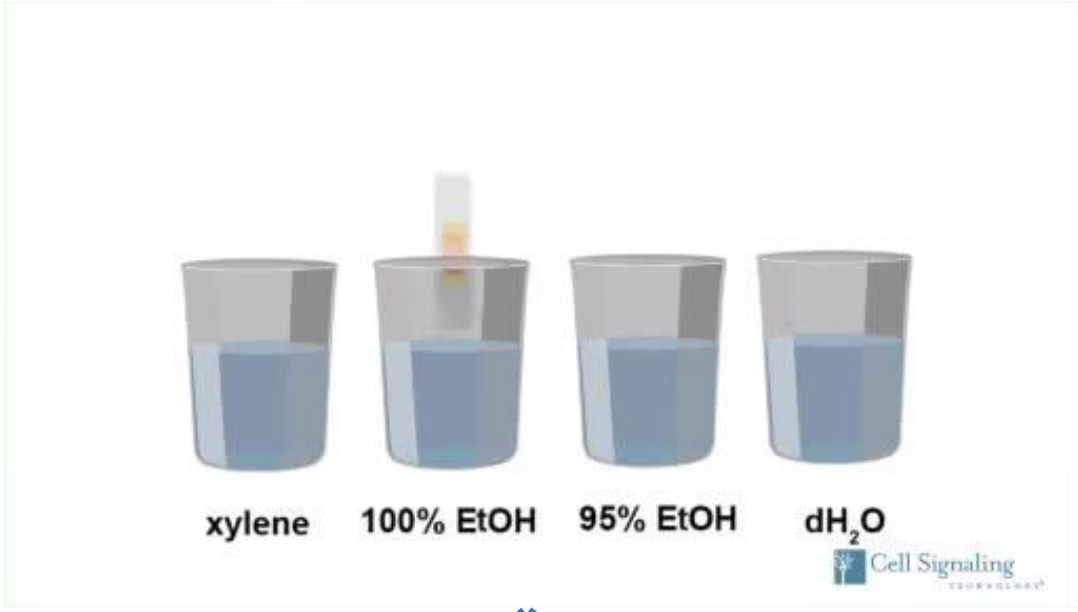
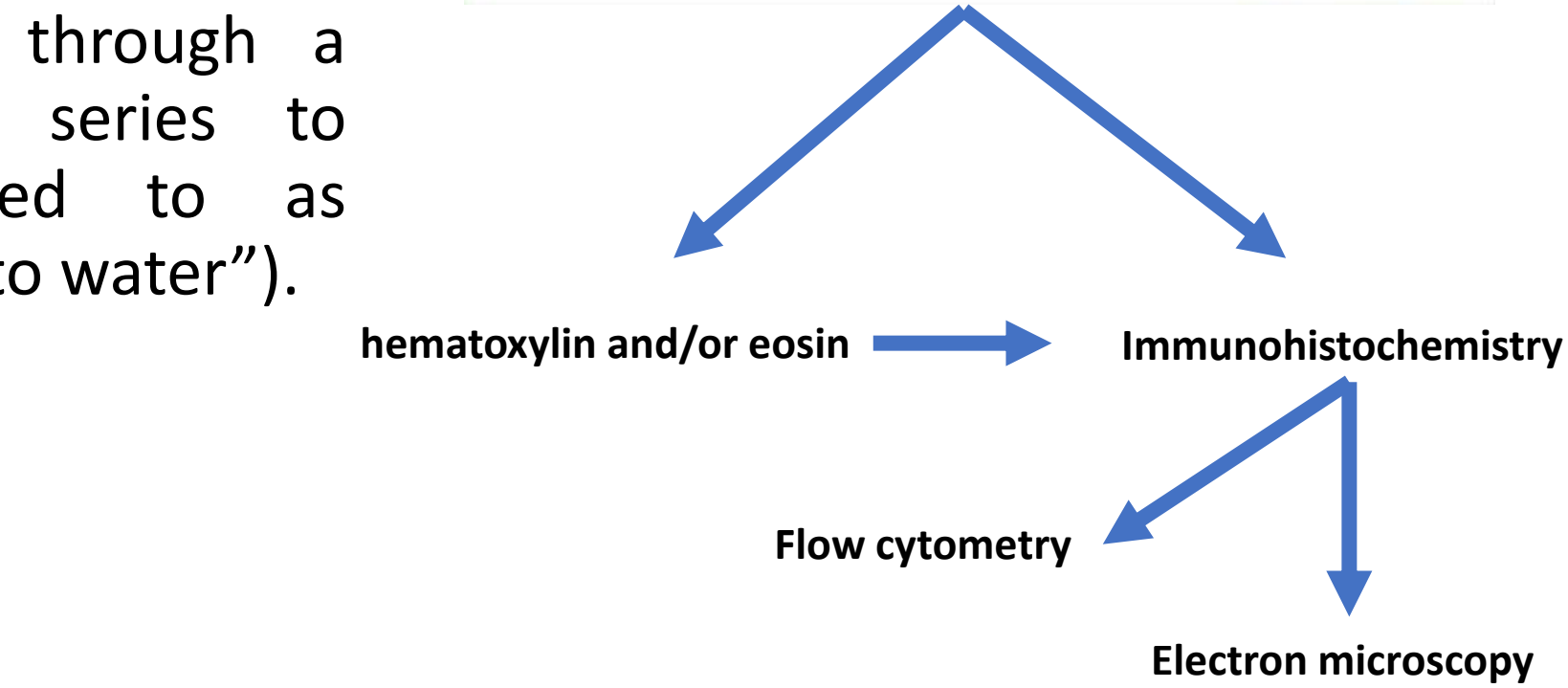
Staining

- Staining of tissue slides is carried out by reversing the embedding process in order to remove the paraffin wax from the tissue to allow water-soluble dyes to penetrate the sections.
- “Deparaffinization”

Deparaffinization

- The tissue slides must be exposed to a clearing agent and subsequently taken through a descending alcohol series to water (also referred to as “bringing your slides to water”).

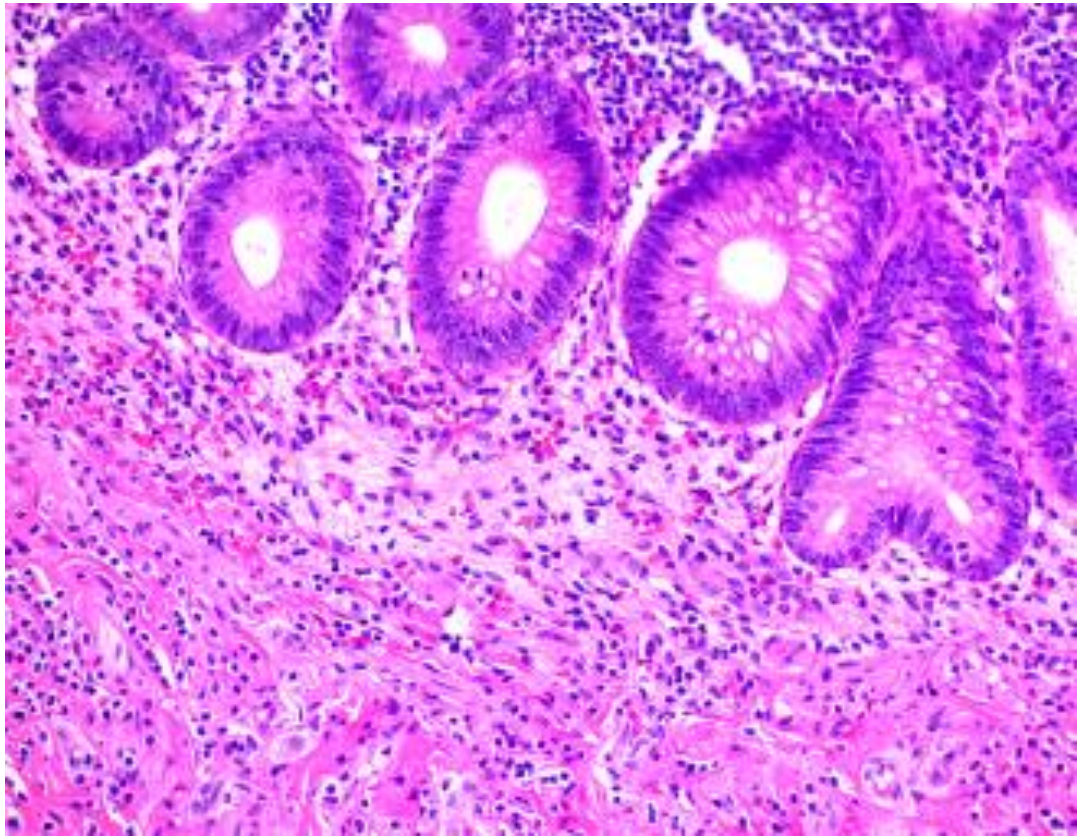




Routine staining

- Choosing the appropriate dye for a particular tissue slide is related to its ability to color otherwise transparent tissue sections and various cellular components of the tissue.

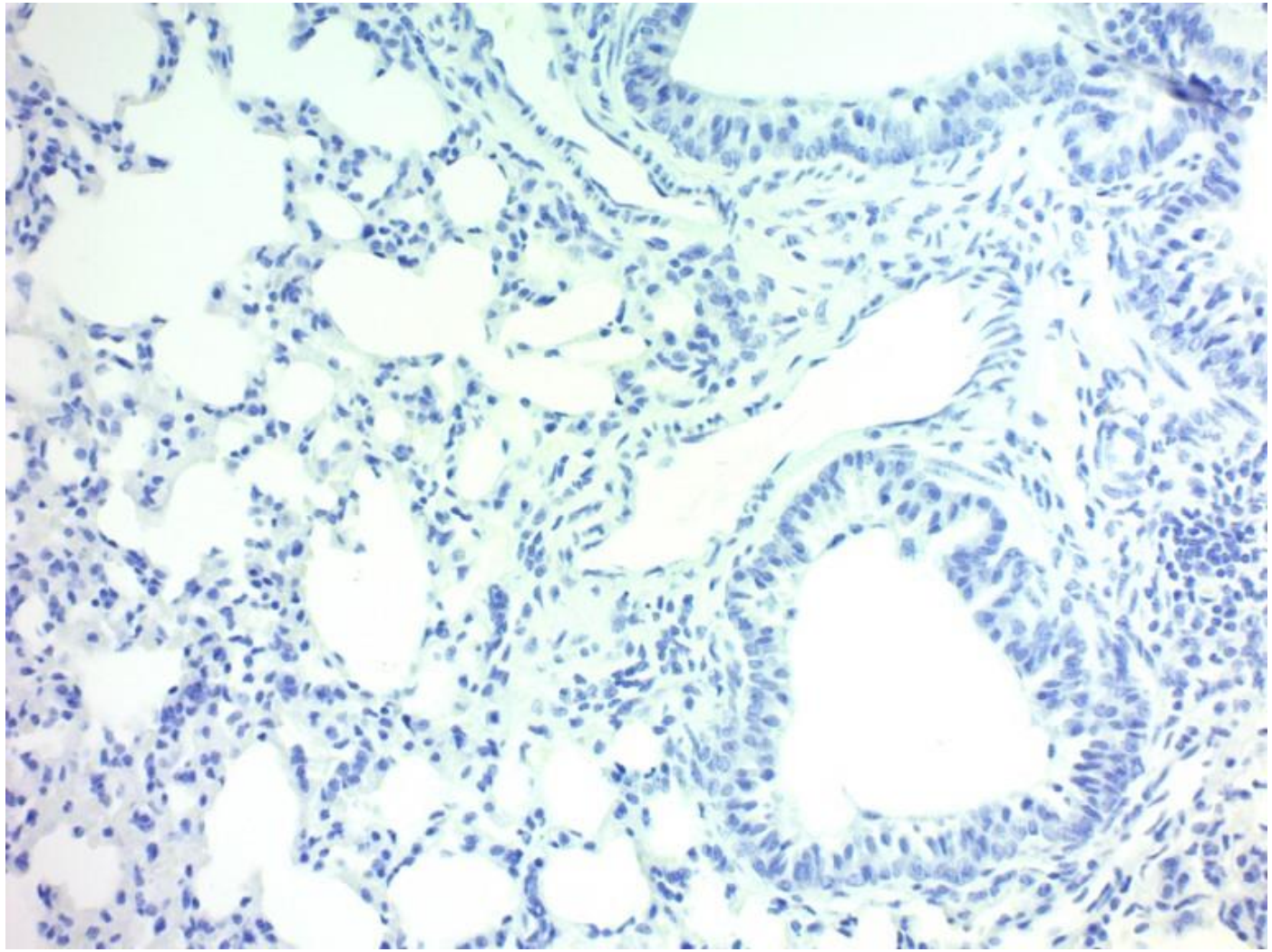
- The term "routine staining" includes the hematoxylin and eosin (i.e., H and E) stain. This stain is used routinely as it provides the pathologist or researcher with a detailed view of the tissue, clearly staining, for example, the cytoplasm, nucleus, and organelles.



ab245880 H&E Staining Kit used to perform Hematoxylin and Eosin staining of formalin-fixed paraffin embedded tissue sections.

Hematoxylin and Eosin (H and E)

- Hematoxyline stains the cell nuclei dark or black blue >> shows good intranuclear details.

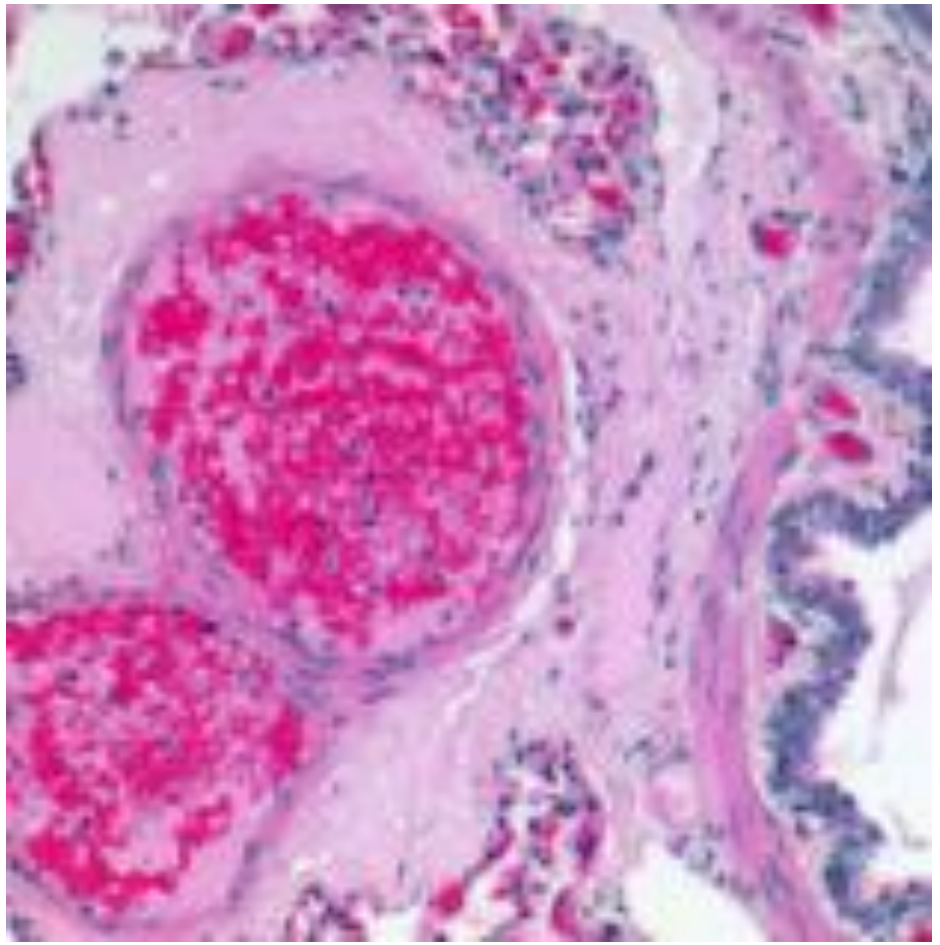


Pig Lung stained with Hematoxylin Solution (Mayer's,Modified) (ab220365) followed by bluing with Bluing Reagent.

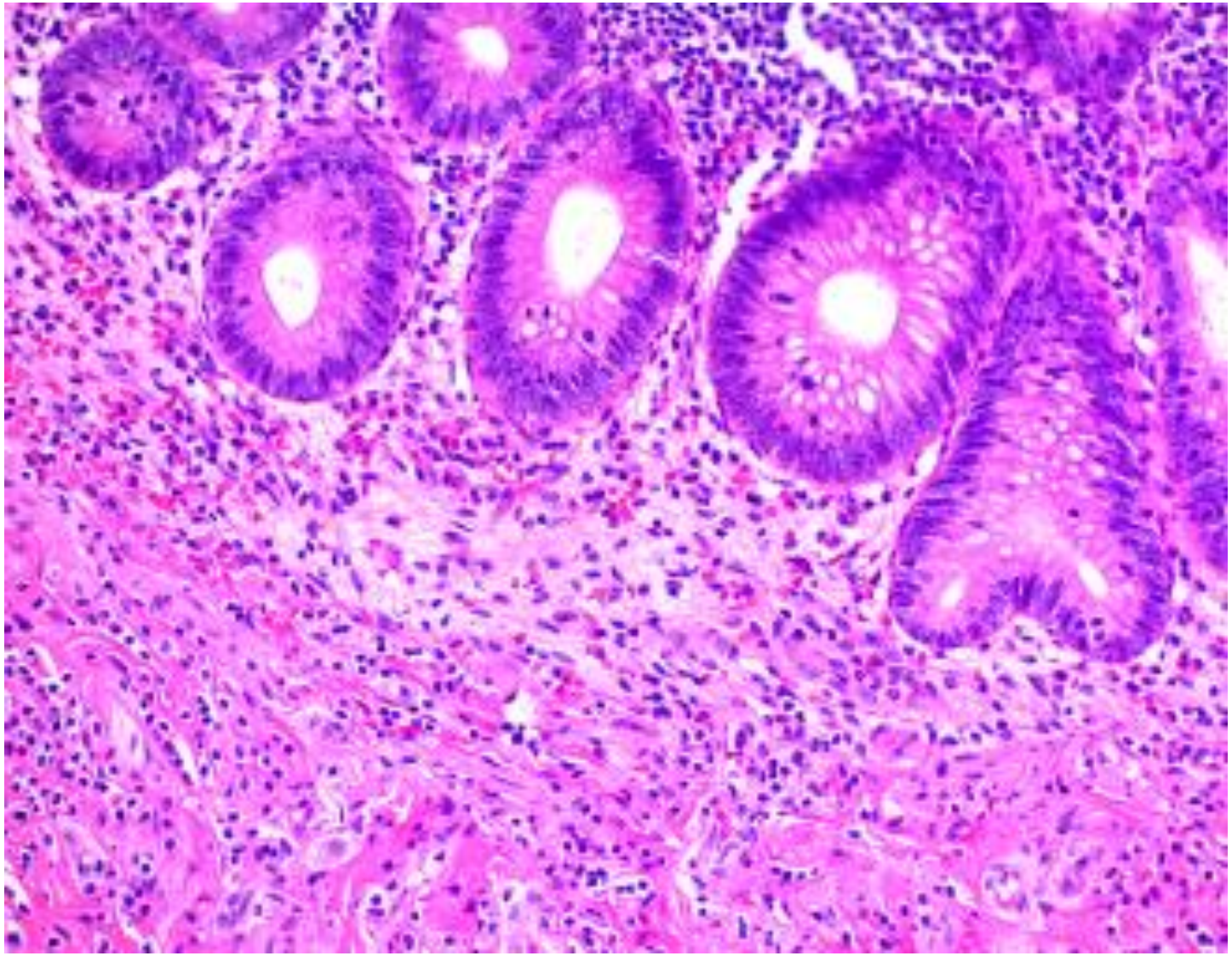
Hematoxylin and Eosin (H and E)

- Eosine stains the cell cytoplasm >>> with a shades and varying colors of pink, orange and red.

- However, the staining results will based on the sample or tissue preparation (involves tissue fixation, dehydration, clearing, and paraffin infiltration).



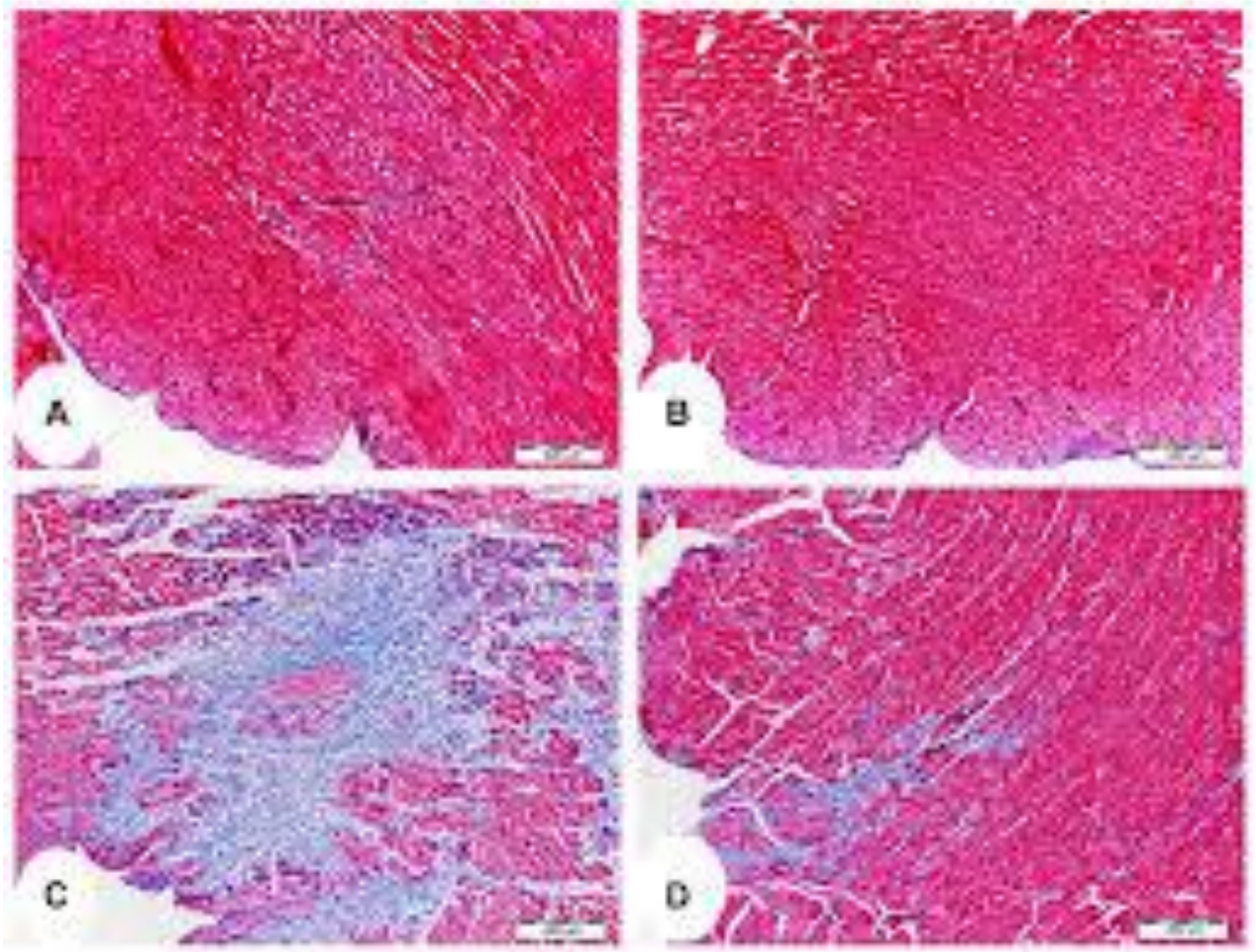
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Eosin Y Solution (Modified Alcoholic) (ab246824)



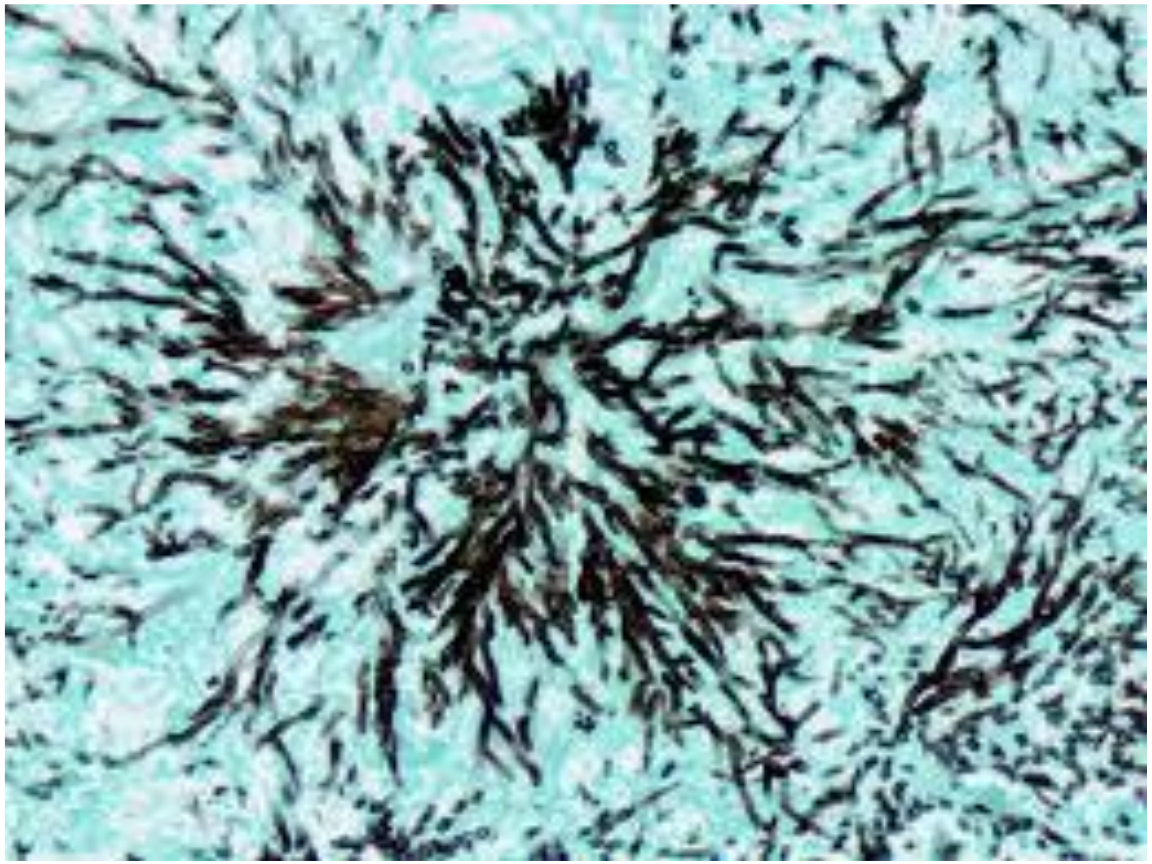
ab245880 H&E Staining Kit used to perform Hematoxylin and Eosin staining of formalin-fixed-paraffin embedded tissue sections.

Special Stains

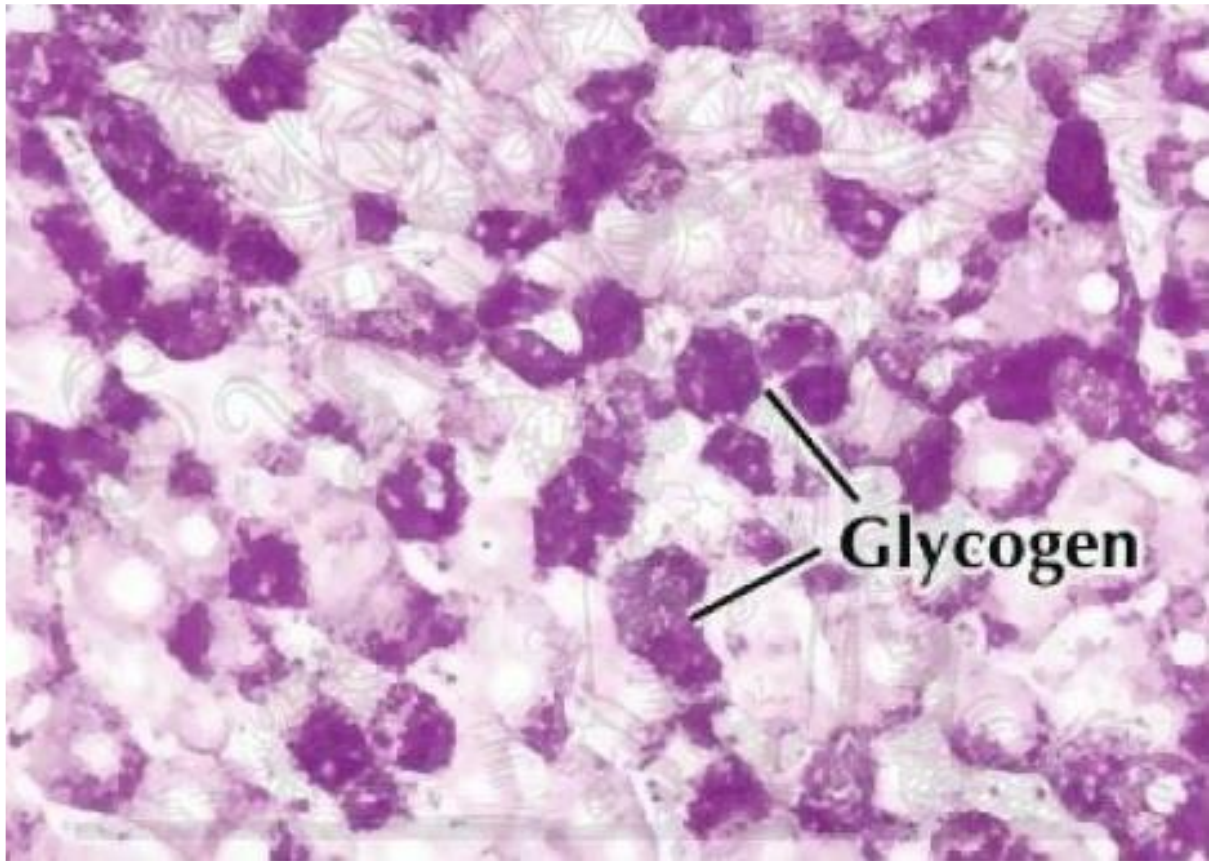
- The term “special stains” refers to a large number of staining techniques, other than H and E, that allow the visualization of particular tissue structures, elements, or microorganisms that cannot be identified with H and E staining Examples include:



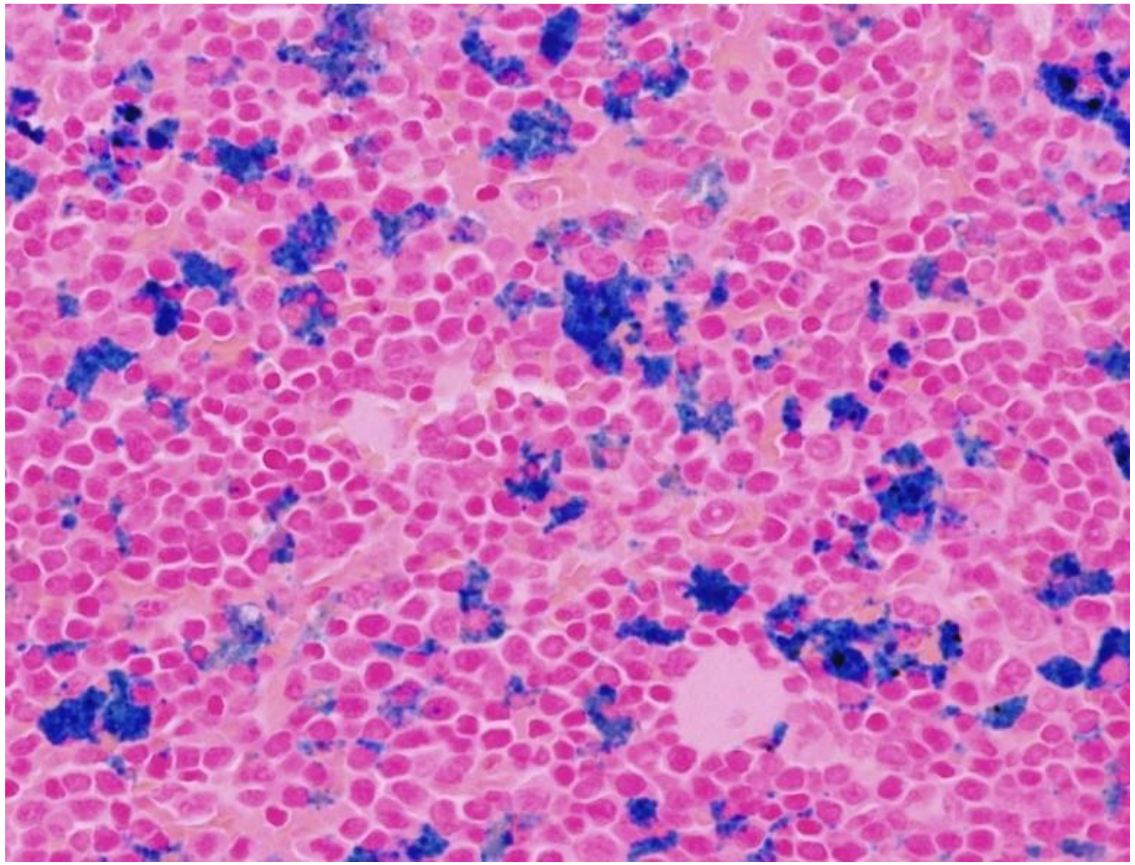
Masson’s trichrome (e.g., skin; identification of collagenous connective tissue)



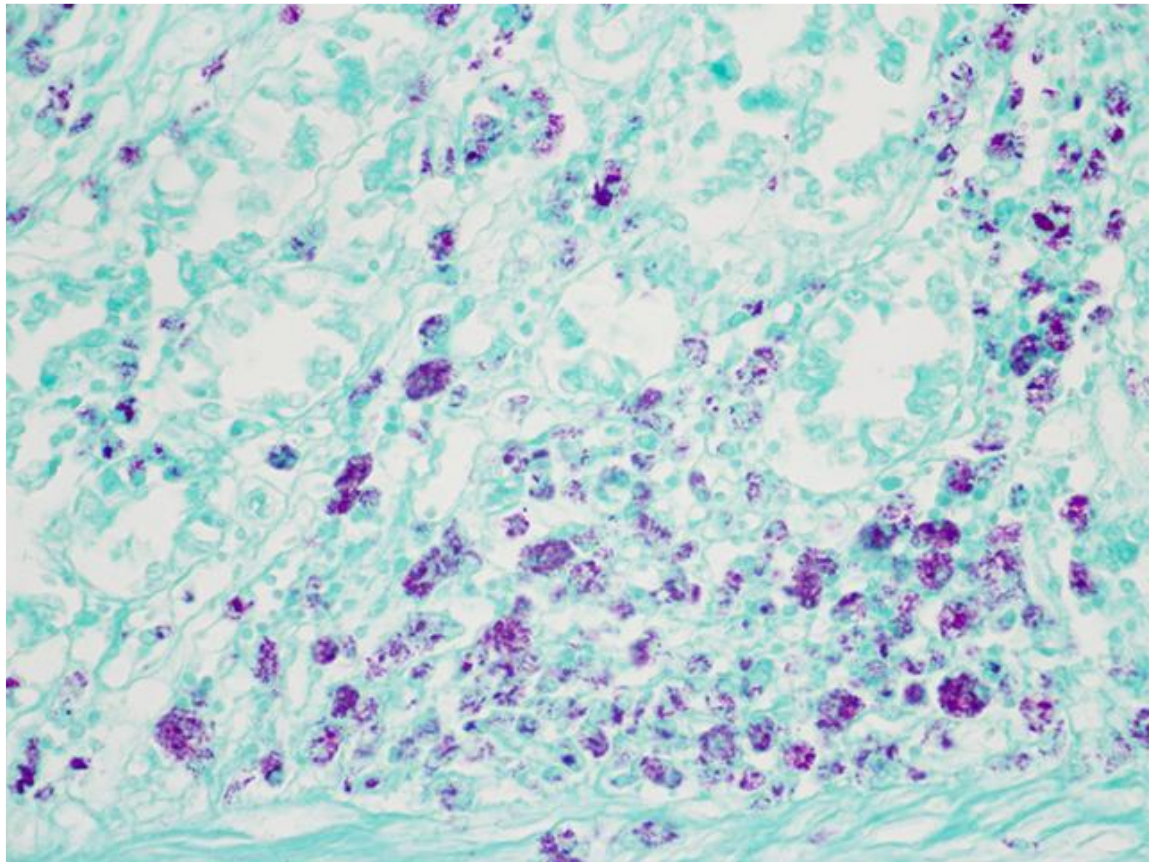
Gomori silver stain (e.g., reticulum fibers .)



Periodic acid-Schiff (e.g., kidney; identification of high proportion of carbohydrates, such as glycogen, glycoproteins, and proteoglycans)



Perl’s Prussian blue iron (e.g., liver; identification of ferric (Fe3+) iron in tissue preparations or blood and bone marrow smears)



Ziehl-Neelsen (acid-fast bacillus) (e.g., lung; identification of acid fast bacilli)