

# H&E stain

2021-12-17

Zhixin Li

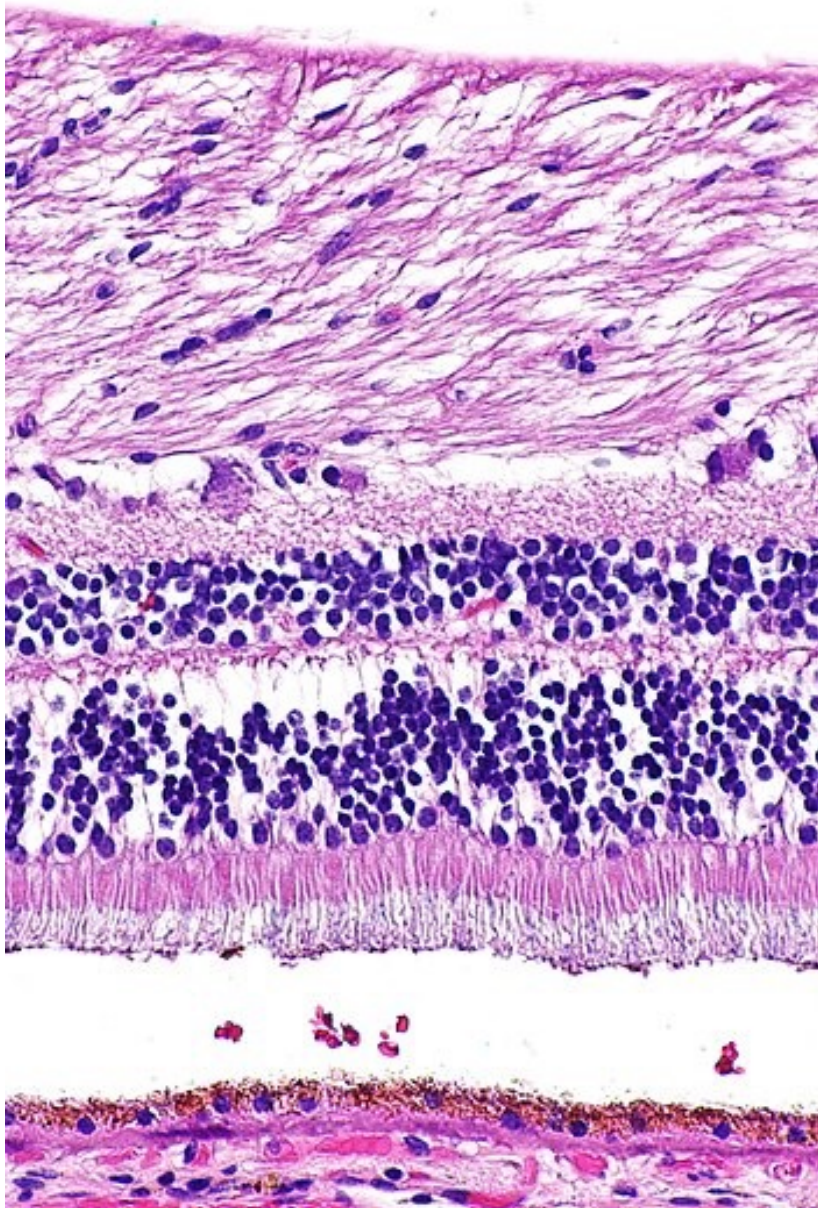
# About H&E stain

From wiki

- Hematoxylin and eosin stain 苏木精伊红染色 (or haematoxylin and eosin stain or hematoxylin-eosin stain; often abbreviated as H&E stain or HE stain) is one of the principal tissue stains used in histology 组织学.[1][2][3] It is the most widely used stain in medical diagnosis[1] and is often the gold standard. [4]
- For example, when a pathologist 病理学家 looks at a biopsy 活组织切片检查 of a suspected cancer, the histological section 组织切片
- is likely to be stained with H&E.

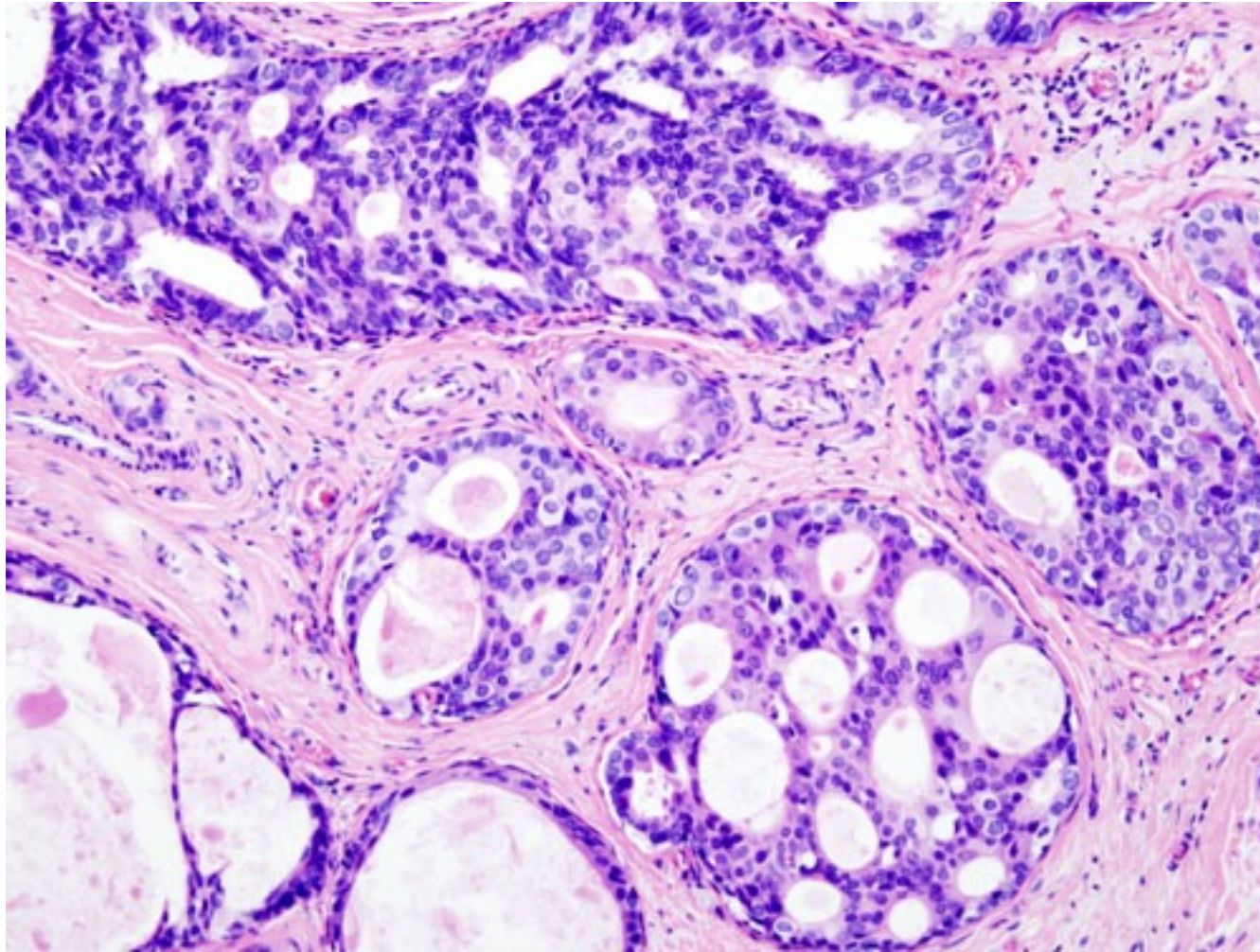
# Principle

- H&E is the combination of two histological stains: hematoxylin and eosin.
- The hematoxylin stains cell nuclei a purplish blue, and eosin stains the extracellular matrix and cytoplasm pink, with other structures taking on different shades, hues, and combinations of these colors.
- the overall patterns of coloration from the stain show the general layout and distribution of cells and provides a general overview of a tissue sample's structure.

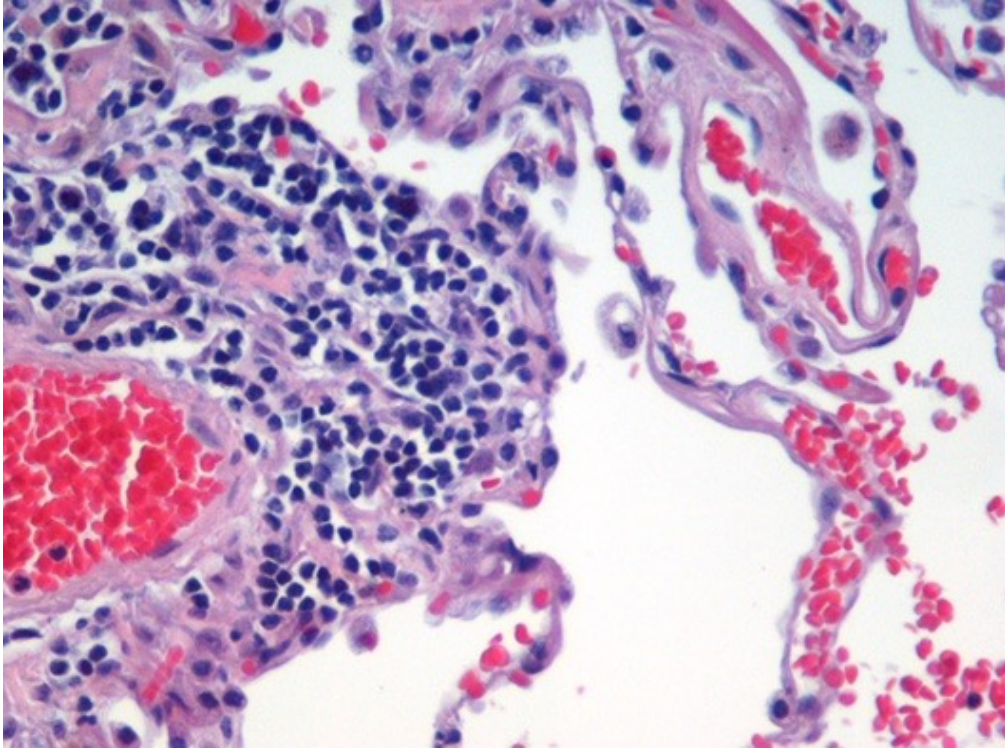


- Example
- Retina 视网膜 (part of the eye) stained with hematoxylin and eosin, cell nuclei stained blue-purple and extracellular material 细胞外物质 stained pink.



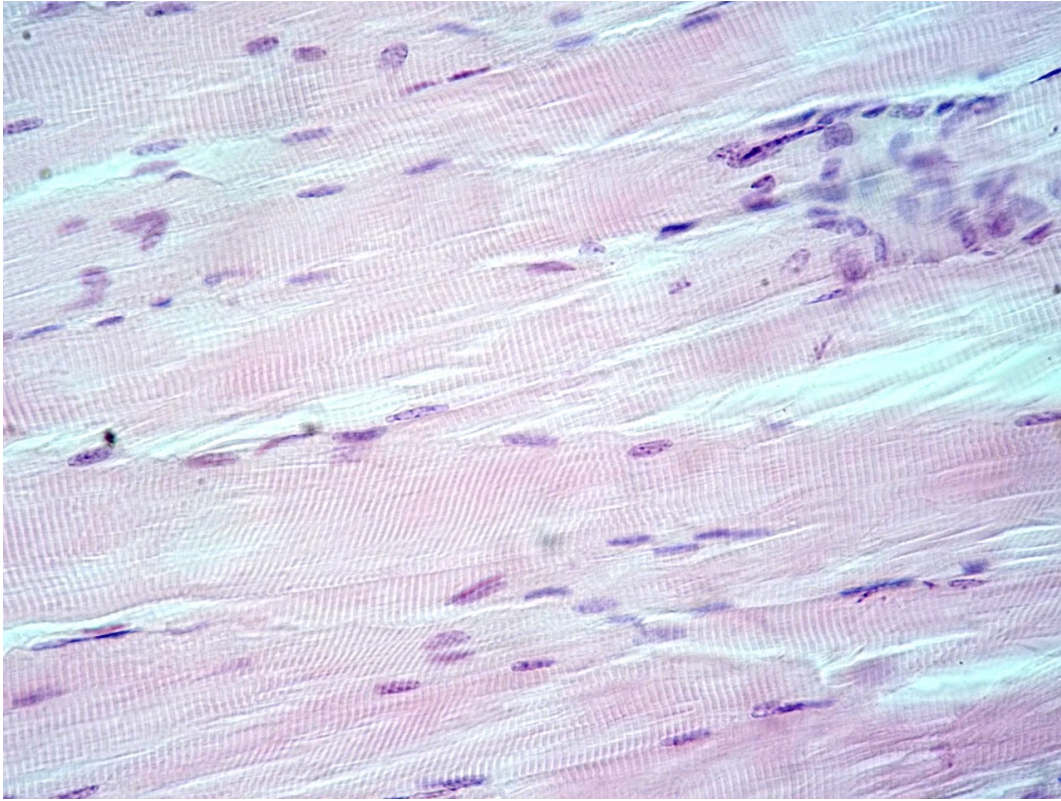


- Ductal carcinoma in situ (DCIS) in breast tissue, cell nuclei (blue-purple), extracellular material (pink).

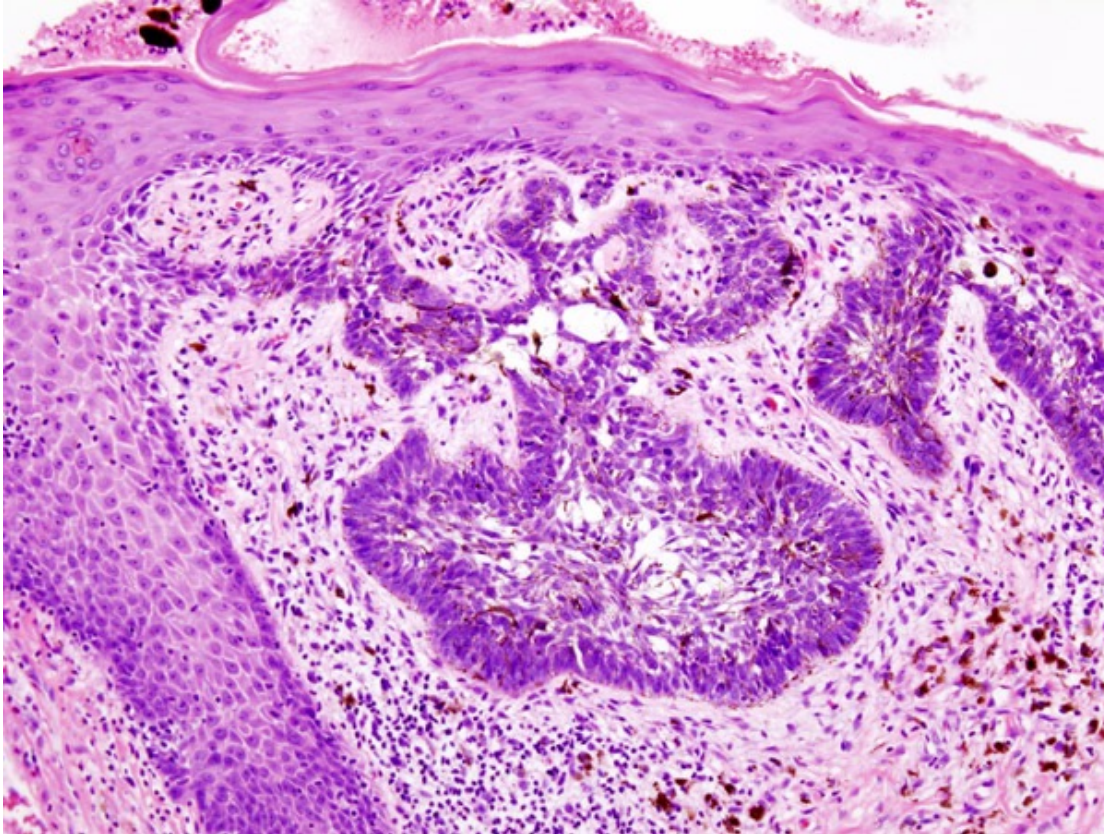


- Lung tissue taken from an emphysema patient. Cell nuclei (blue-purple), red blood cells (bright red), other cell bodies and extracellular material (pink), and air spaces (white).





- Muscle tissue, cell nuclei (blue-purple), extracellular material (pink).



- Basal cell carcinoma of the skin, cell nuclei (blue-purple), extracellular material (pink).



# Our lab

- H&E stain of control and mutant (Kif7 cKO) of small intestine at P10  
哺乳期 and P20断奶
- check control and mutant tissue structure at very beginning research stage