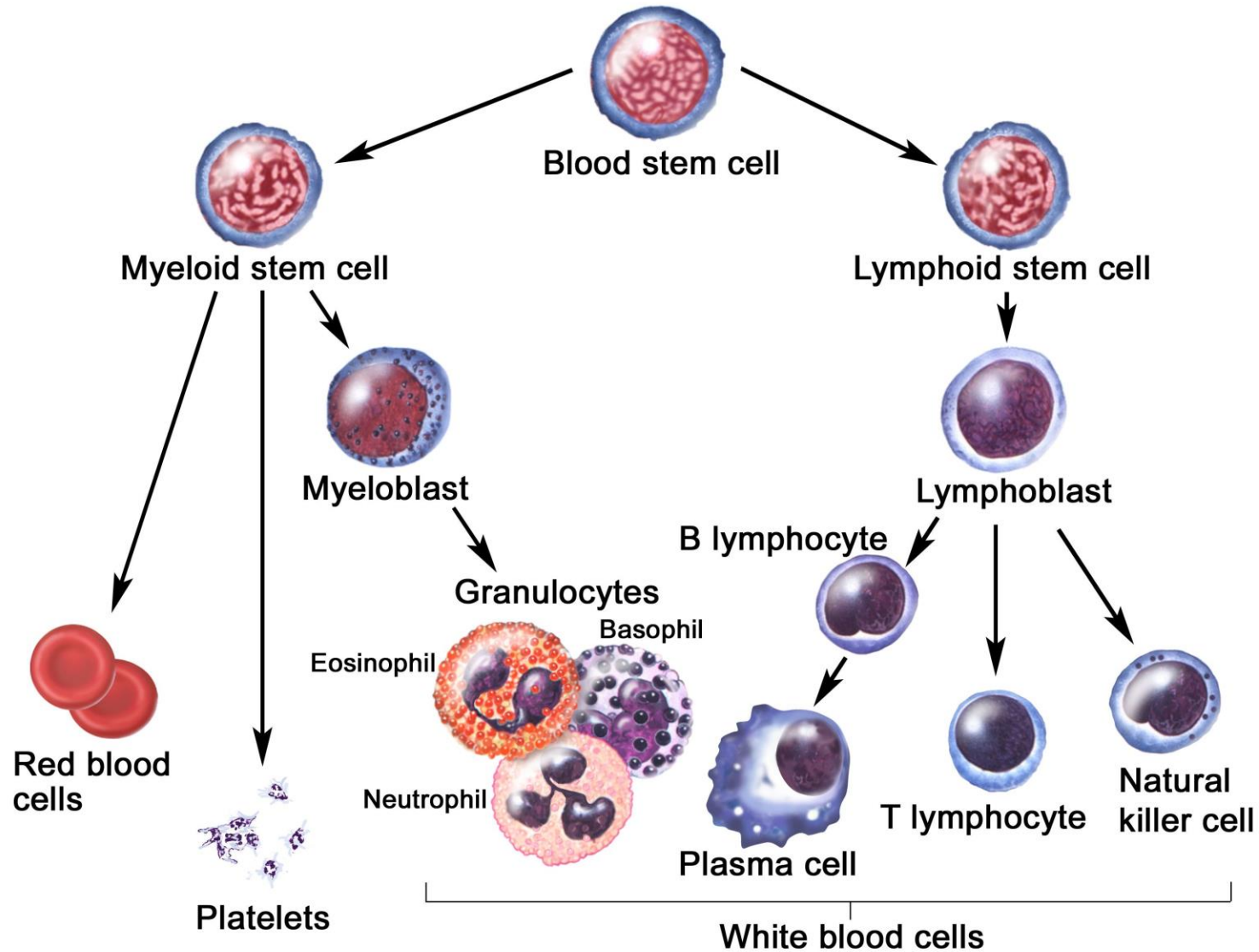


WELCOME!



Lymphoid system



3 classes

Diffused

Nodular

Lymphoid organs

Immune system

2 types

Innate .. 2nd line

Adaptive .. 3rd line

Innate immunity

Proteins

Cytokines

Phagocytic cells

NK cells

Compliment system

Adaptive immunity

2 types

Humoral

Cell mediated
immune response

Humoral immunity

Antibodies B lymphocyte

Cell mediated
immunity

Virus infected cells

Cancer cells

Foreign body

Cytotoxic T cells

Antigen/antibody

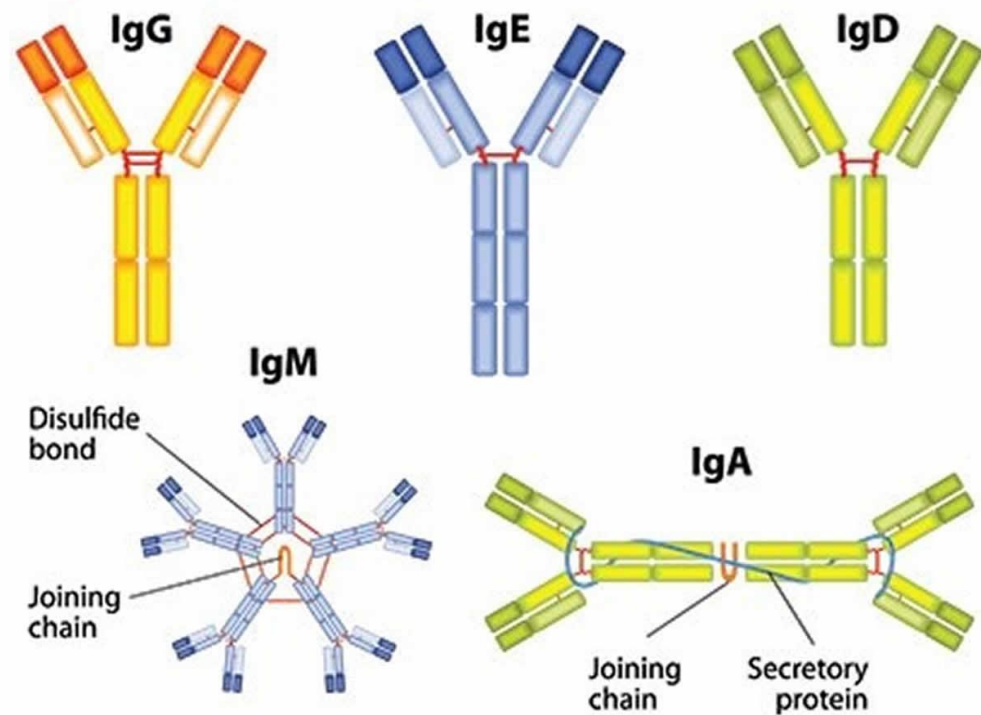
Antigens

Foreign material/
autoimmune disorders

Antibody

IgG, IgM, IgD, IgA, IgE

Immunoglobulins



ANTIBODIES

Immune System

Innate System

Biochemical

Lysozyme

Complement

Physical Barrier

Skin

Mucosa

Phagocytes

Adaptive System

Immunoglobulins

IgG

IgM

IgA

IgD

IgE

Lymphocytes

T cells

Activation

B cells*

Plasma cells

* Activated by T Helper cells

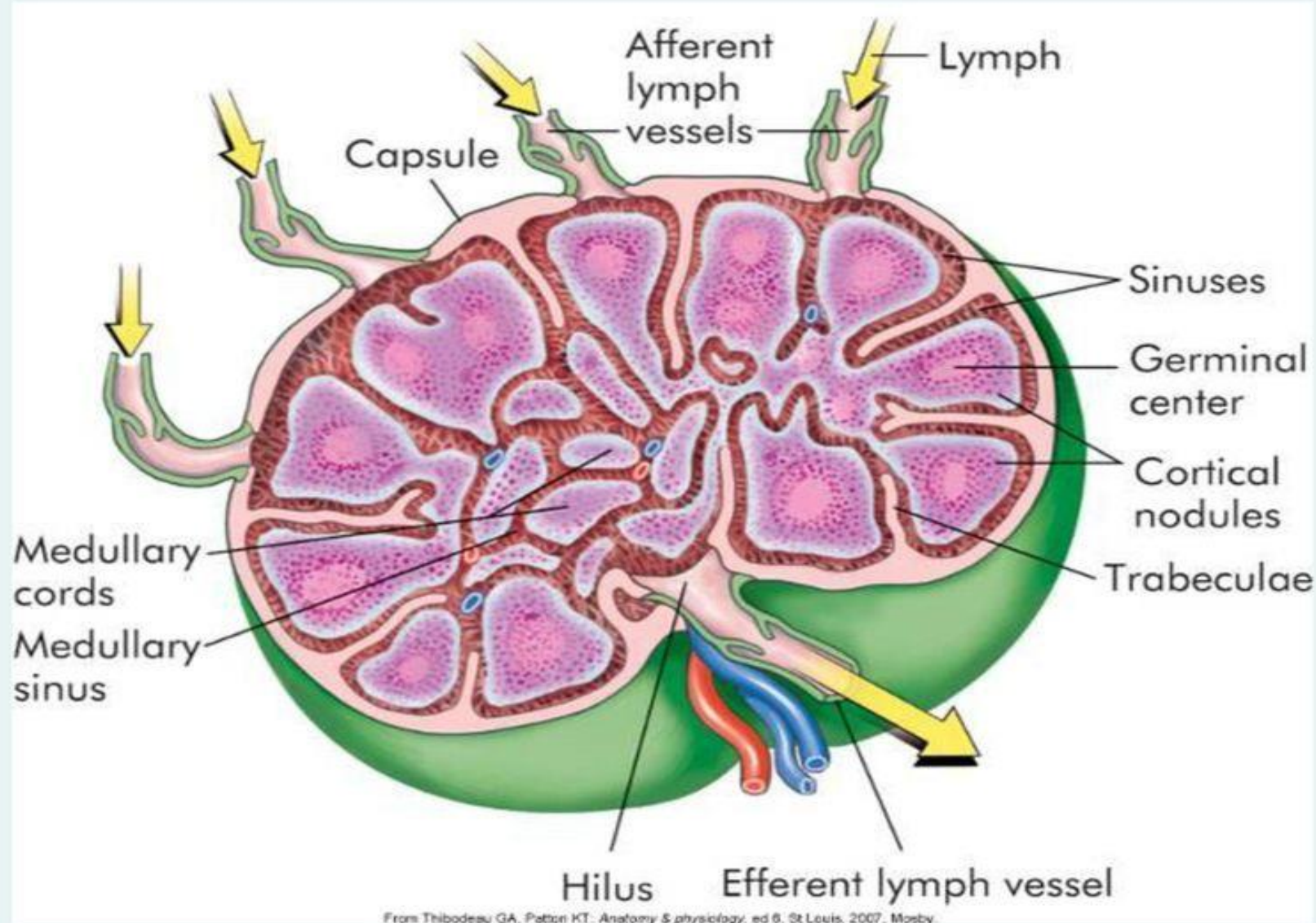
LOCATIONS

MALT

GALT

BALT

Lymphoid Organs



Lymph Nodules / Lymphoid Follicles

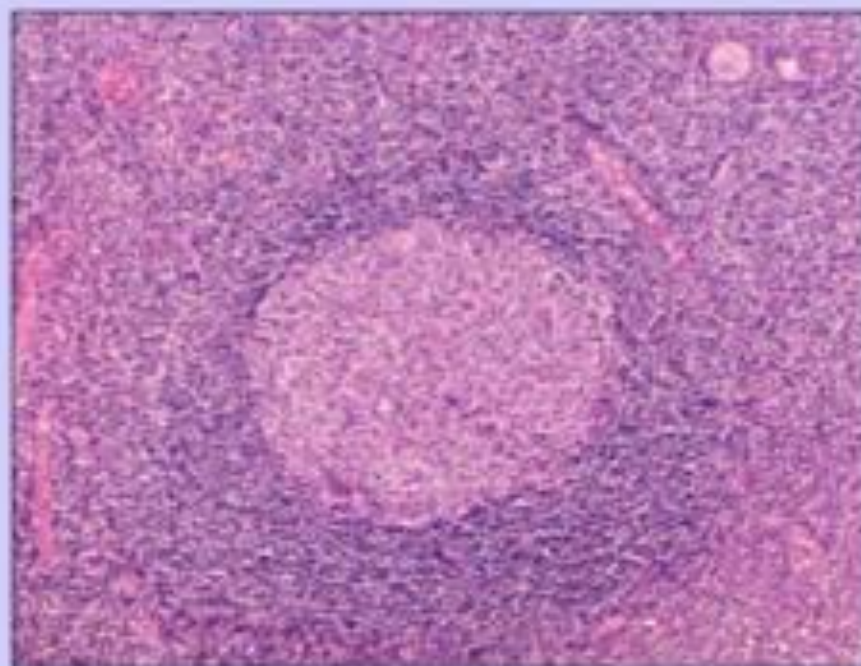
Rounded concentrations of
lymphoid tissue

No capsule

Primary follicles: No germinal centers

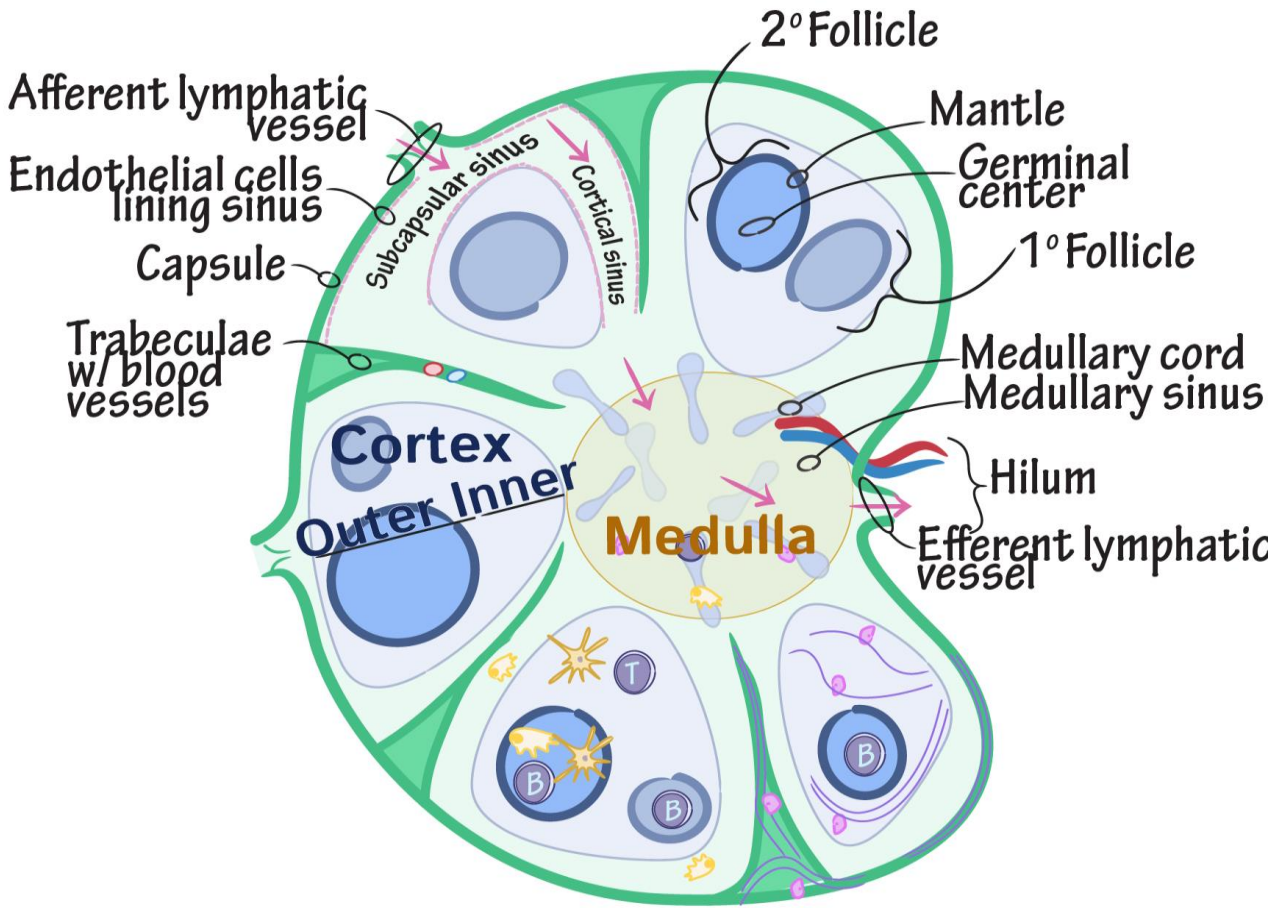
Secondary Follicles: Germinal Centers present





Lymphoid nodules/follicles found *anywhere* there is
antigenic stimulation

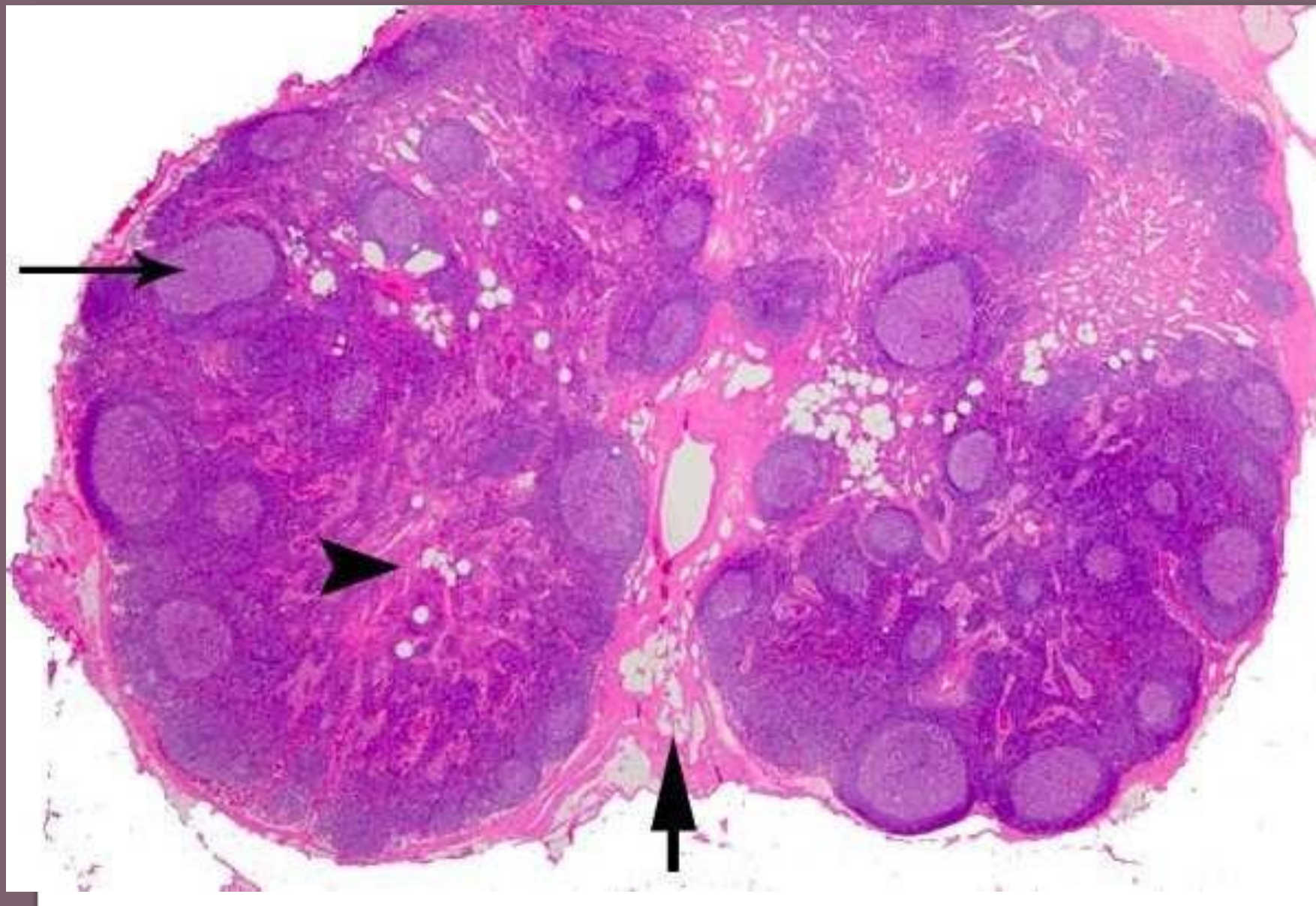


Lymphoid nodules are ***NOT*** the same as Lymph nodes!!

Lymph node

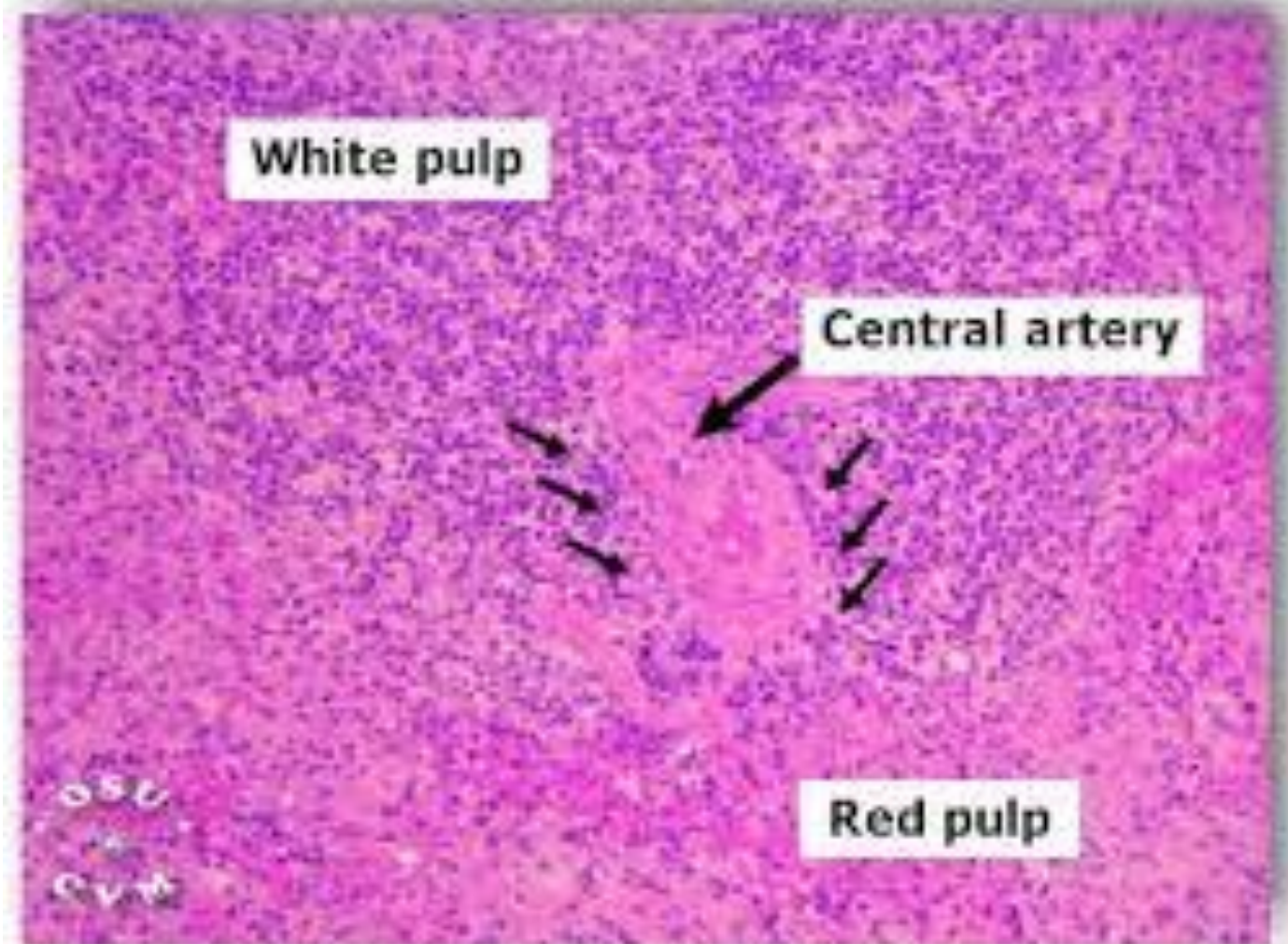


Lymphatic Tissue Components	
Macrophages	
Lymphocytes - T Cells	
B Cells	
Reticular Cells & Fibers	



Lymph node

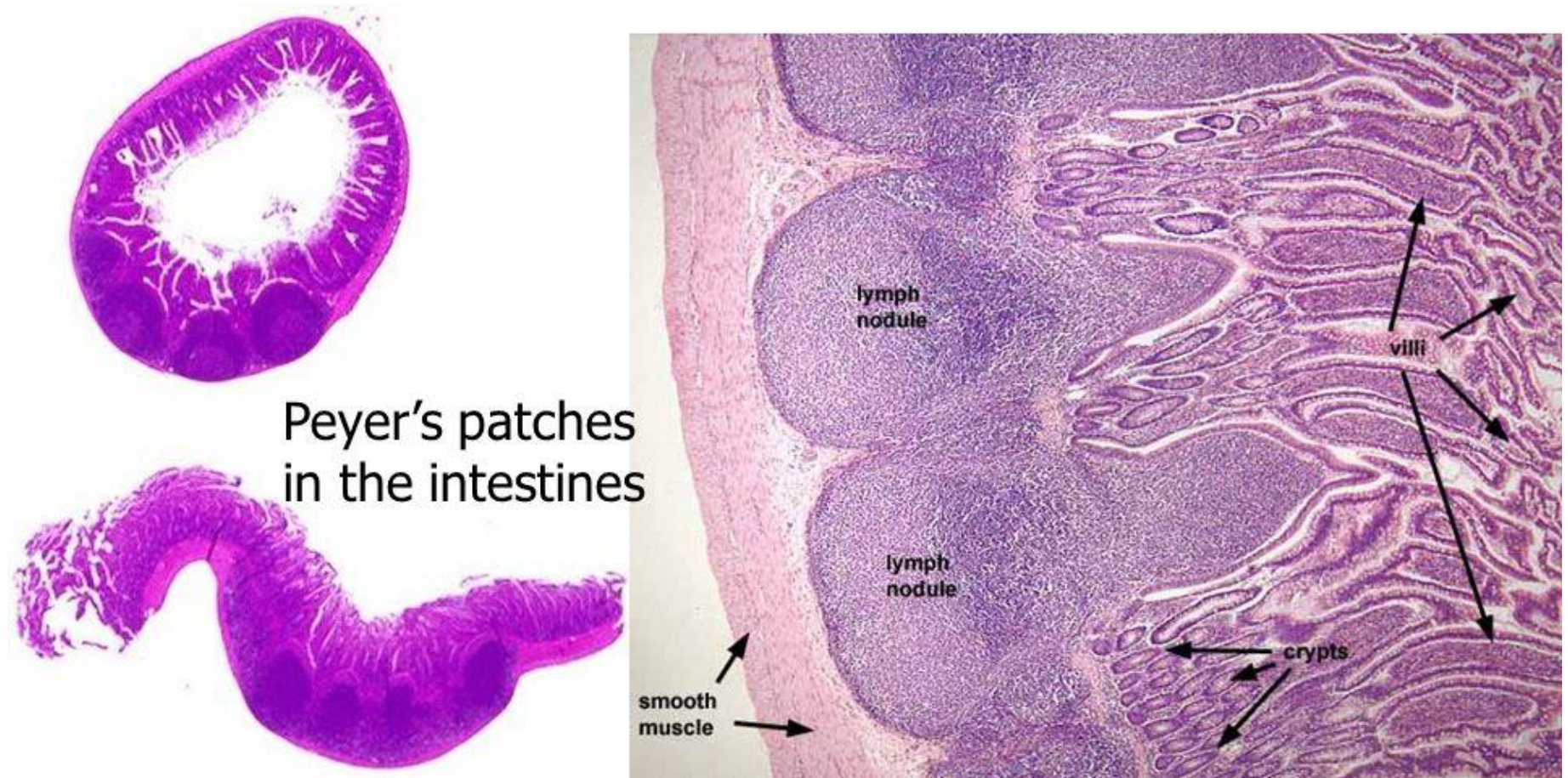
SPLEEN



MALT

Mucosa-Associated Lymphatic Tissue (MALT)

found in the lamina propria of mucous membranes of the GI tract, respiratory tract, urinary tract, and reproductive tract

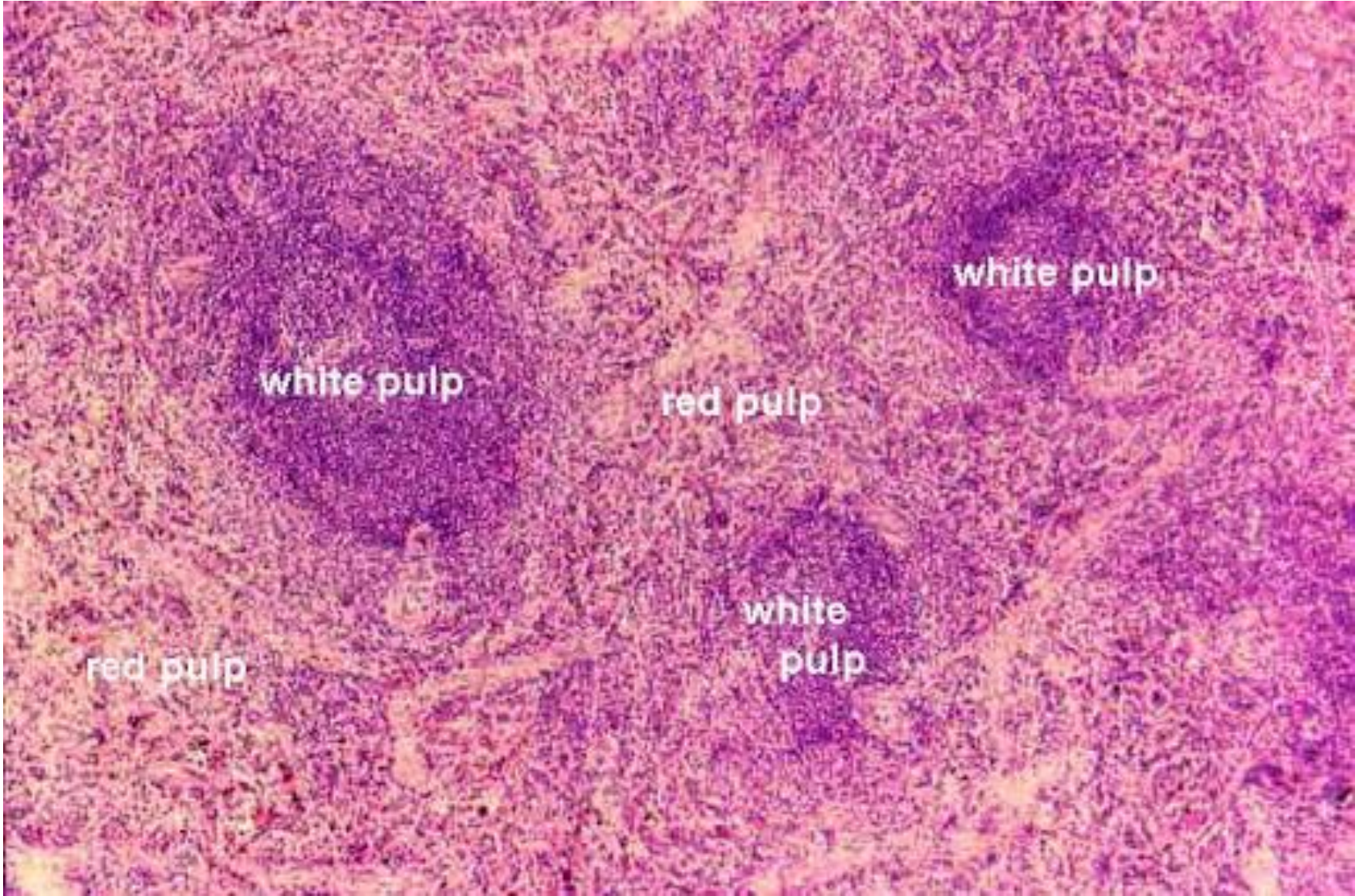


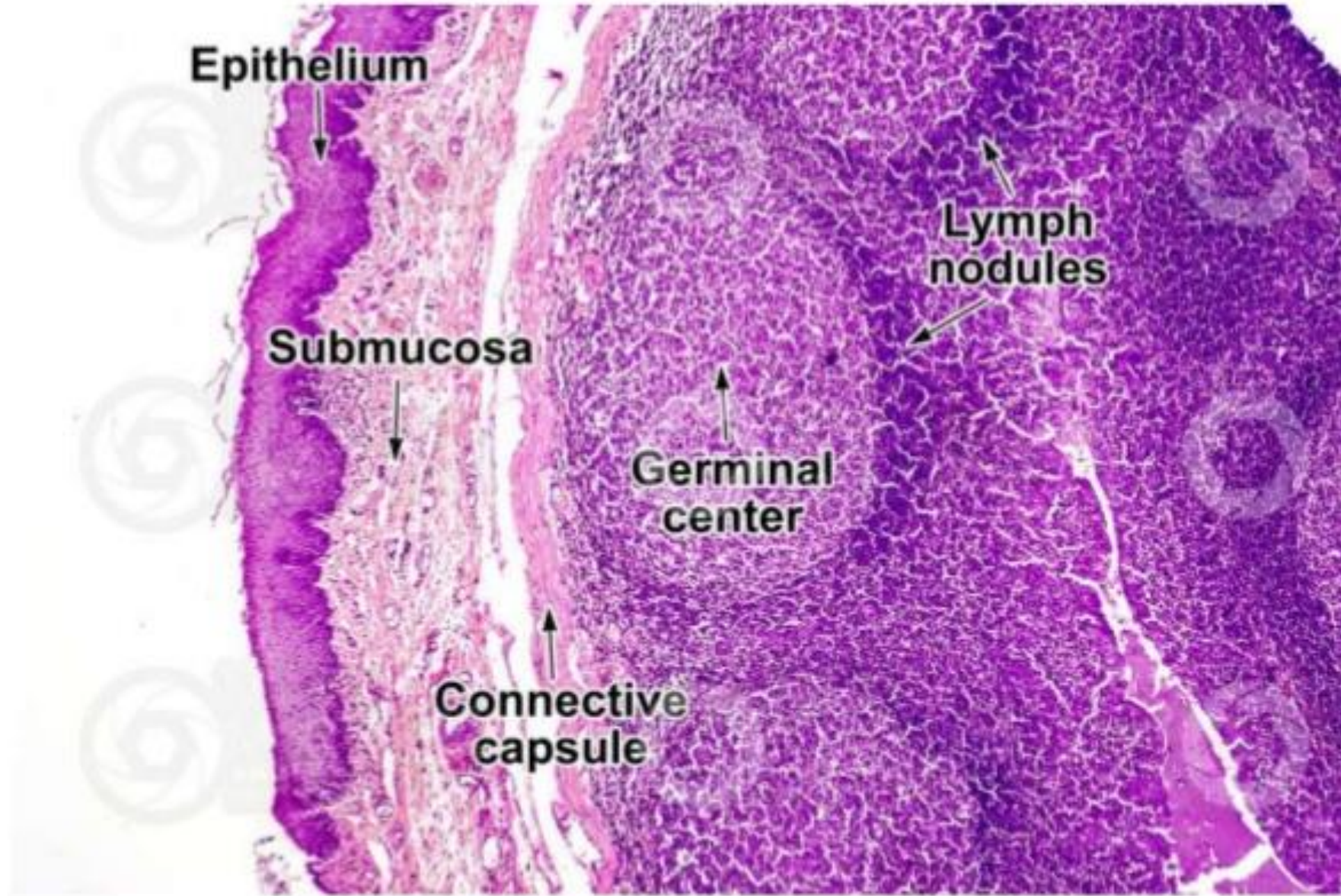
Ileum GALT



Payers patches



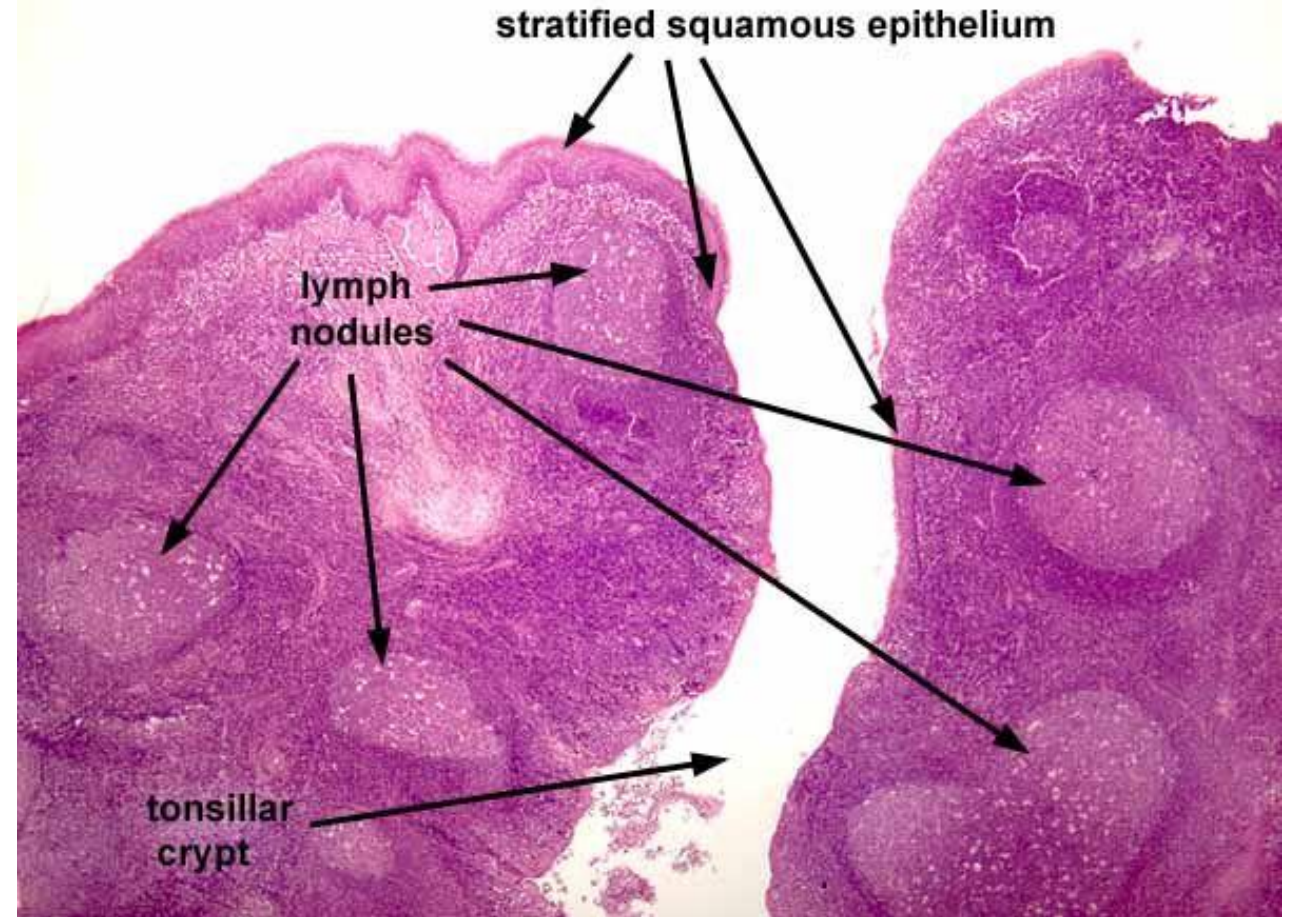




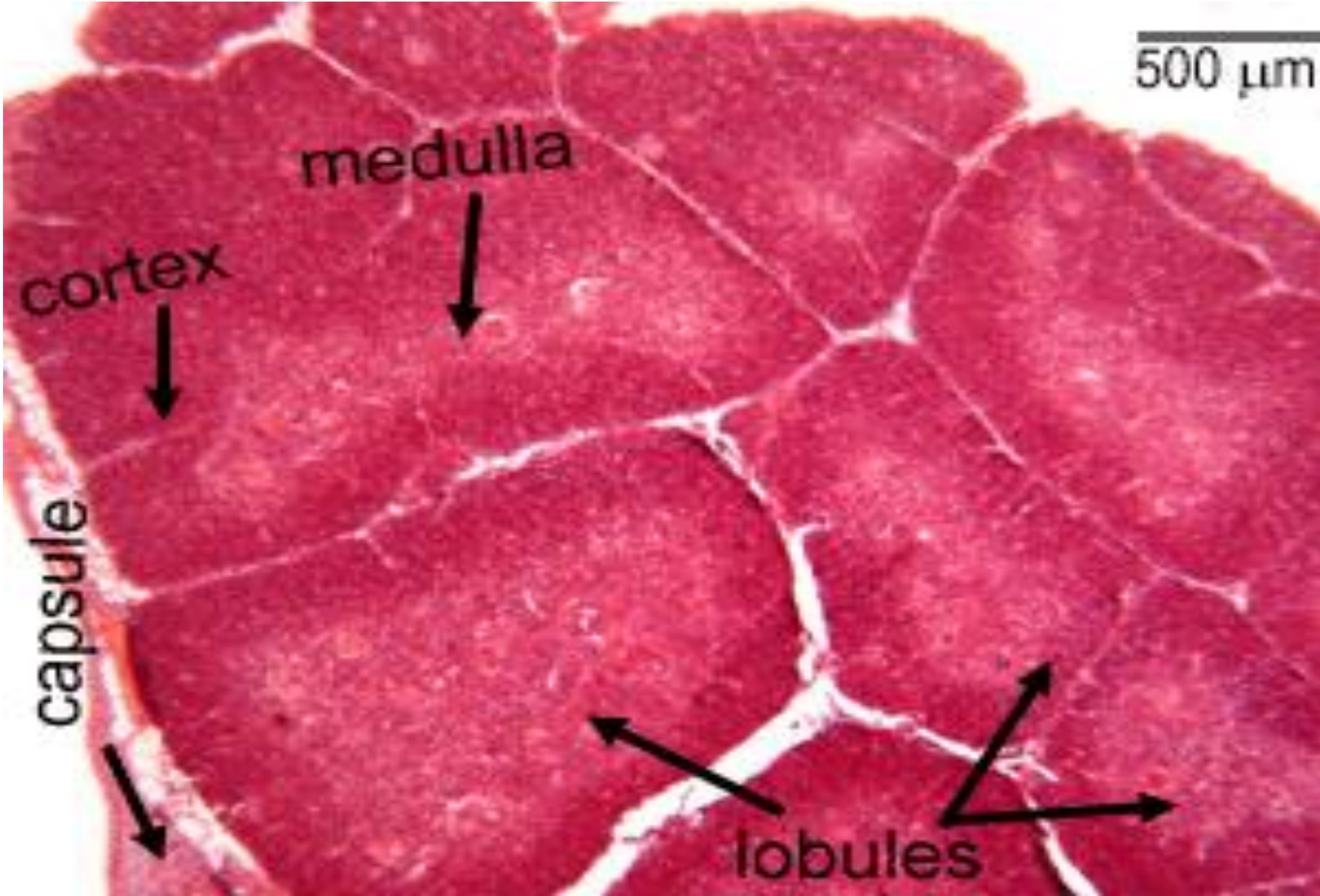
Tonsil



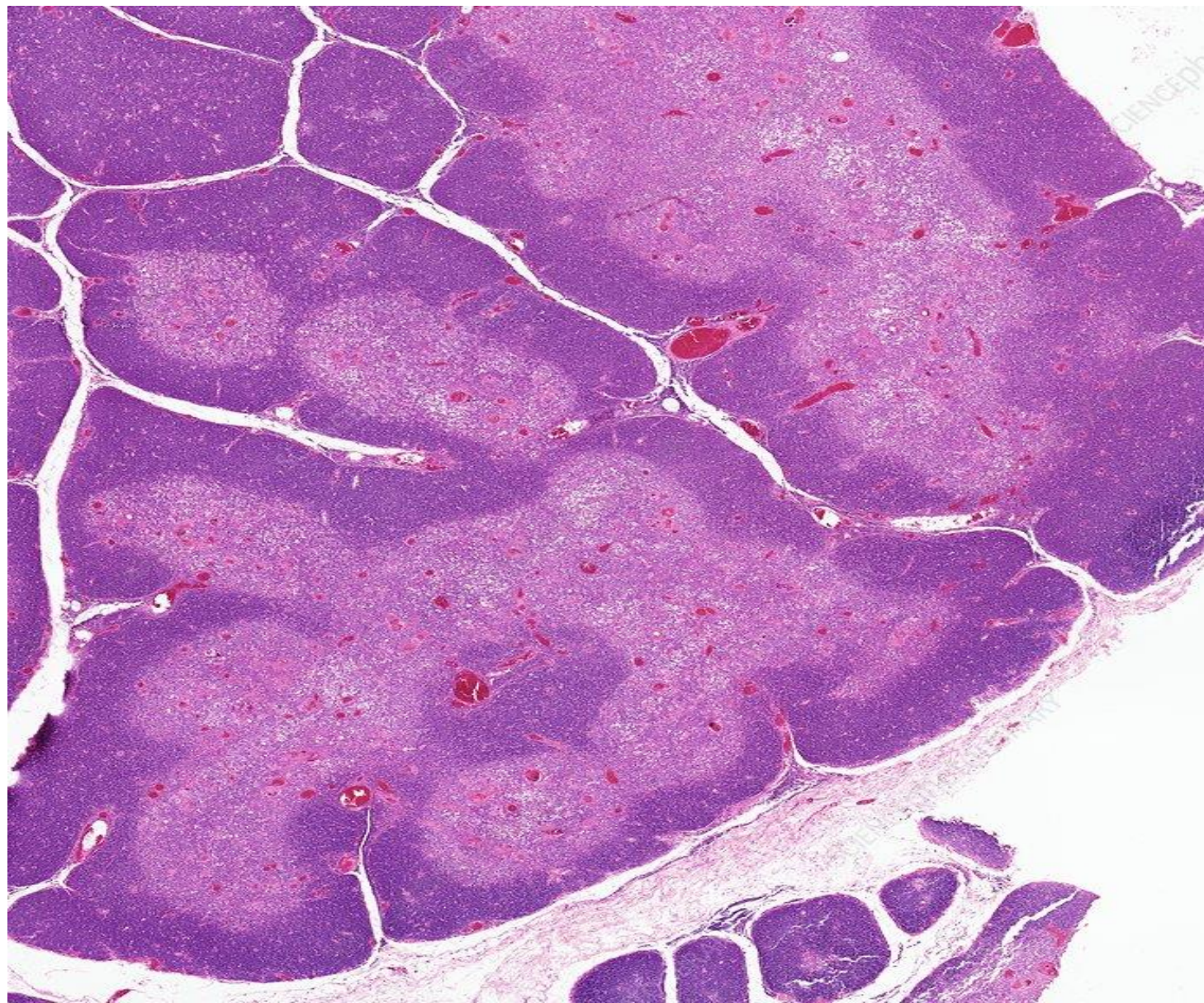
Tonsil



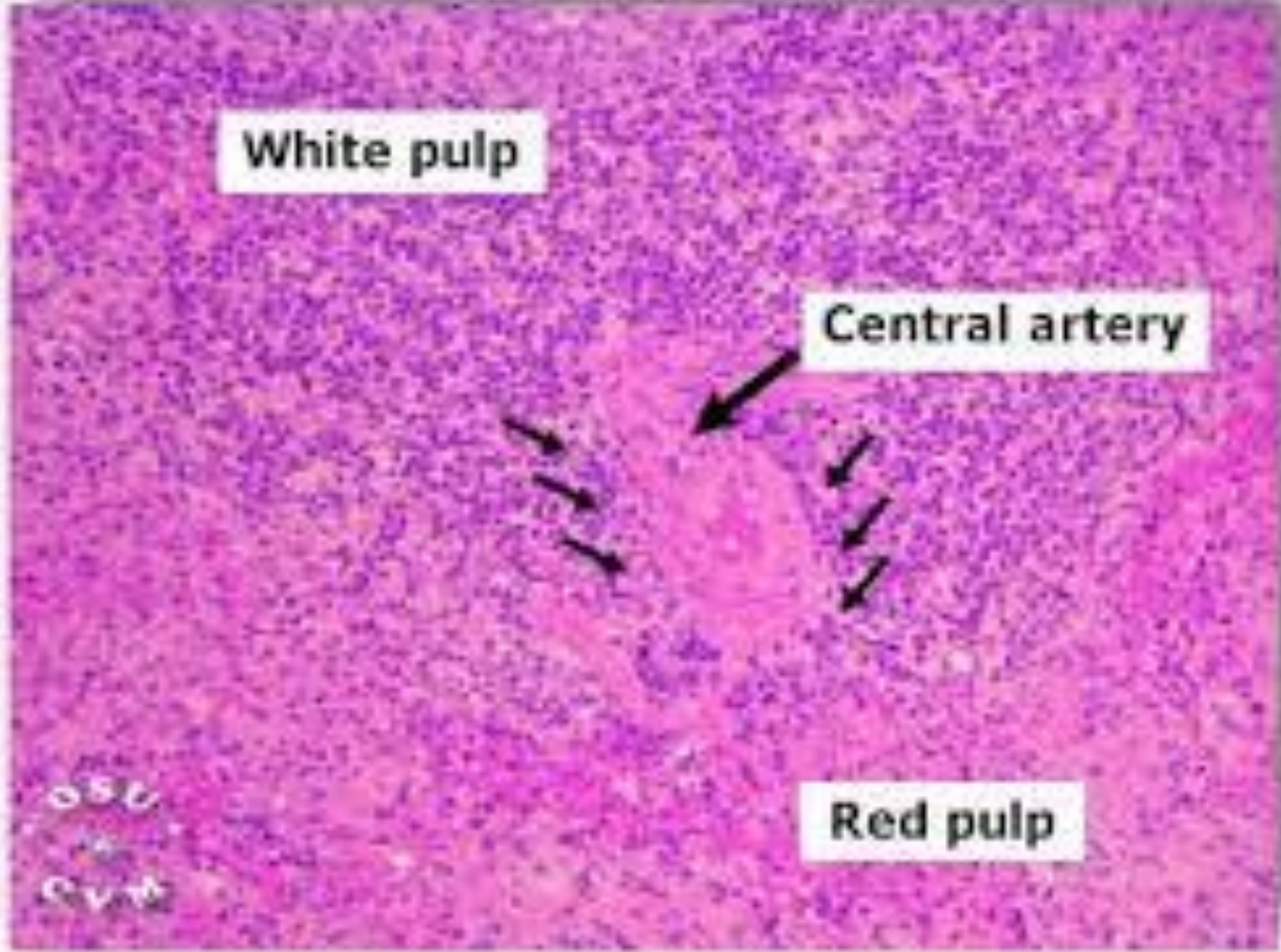
Thymus

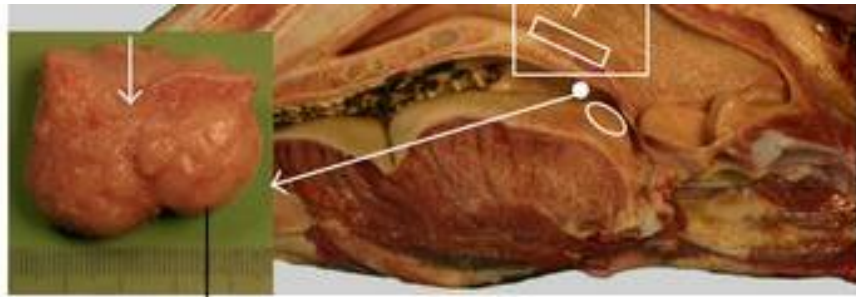


thymus

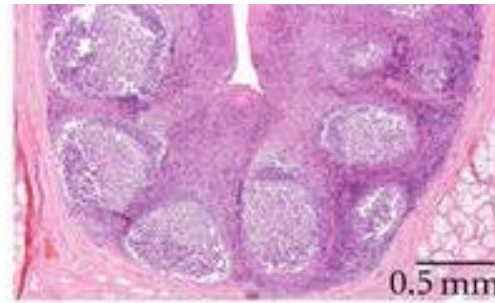


Spleen





(a)



(b)



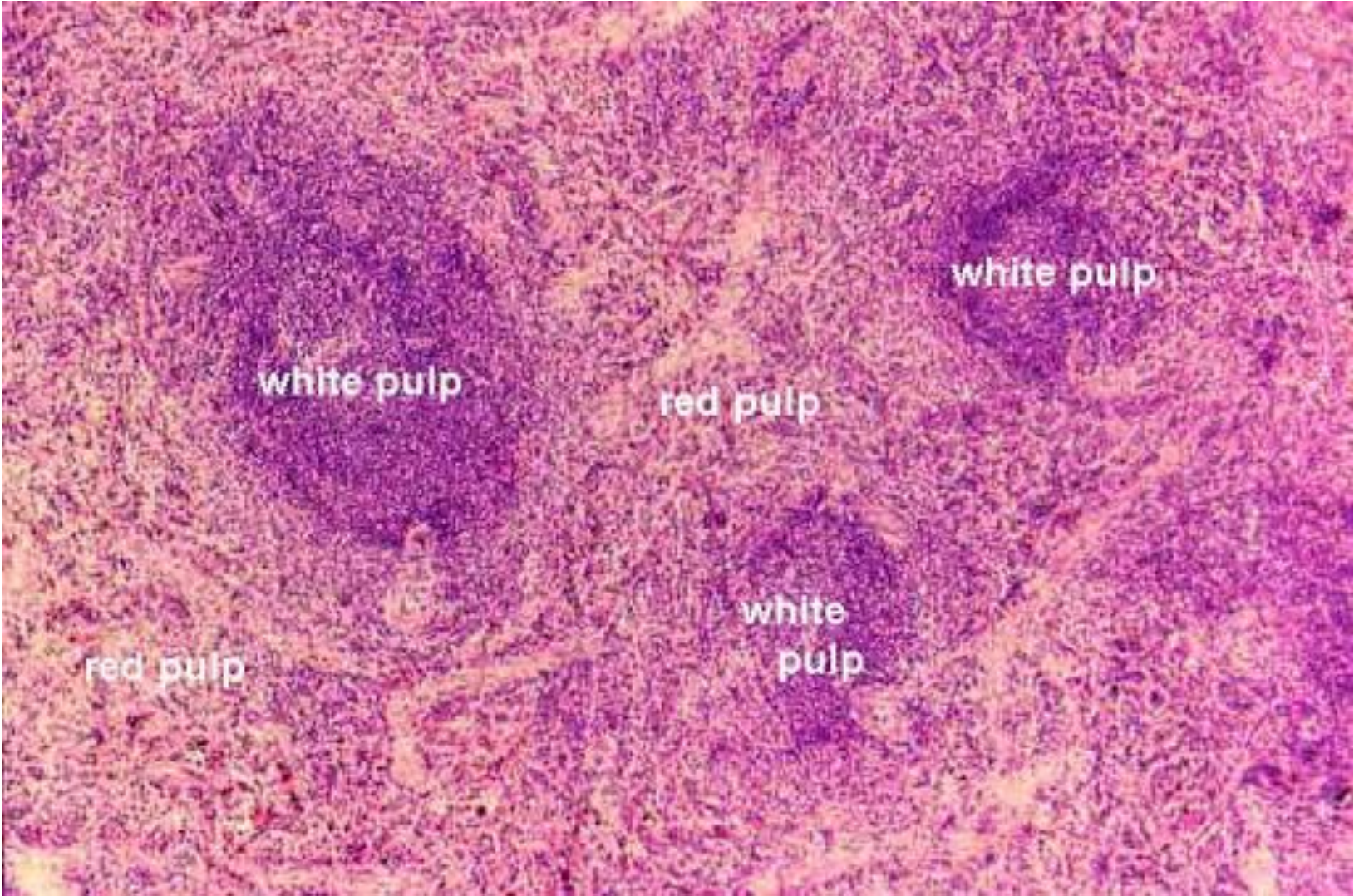
Tonsillar follicle
with central crypt



Infold

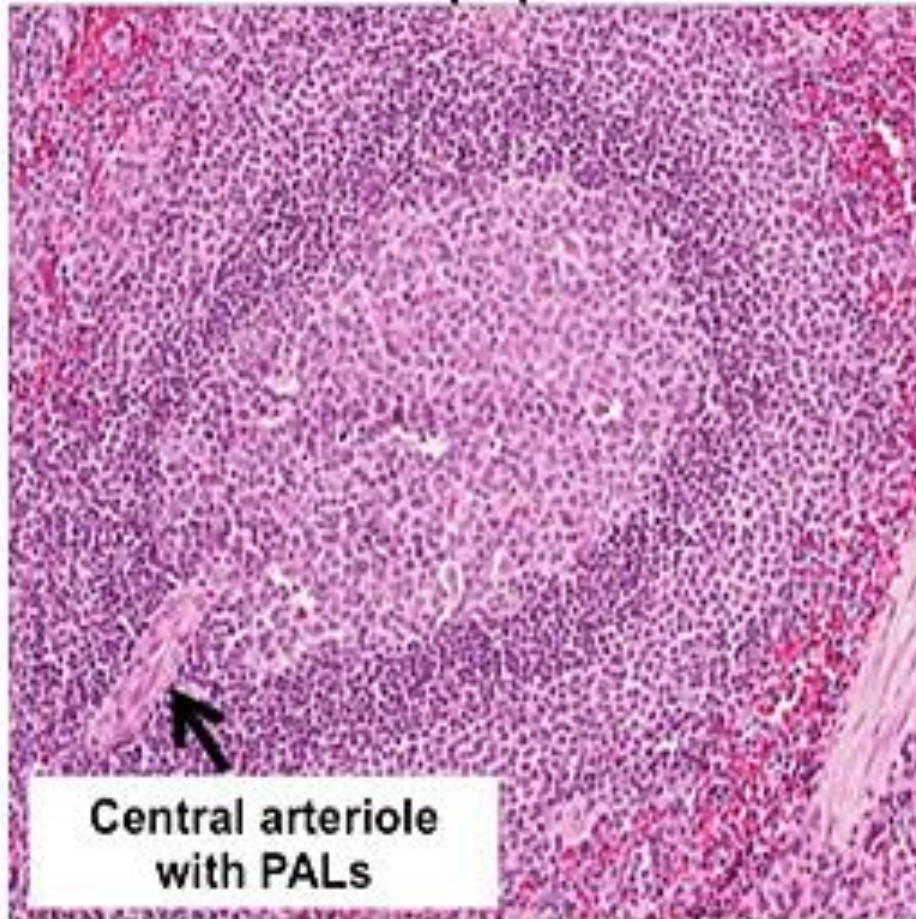
Tonsil

Spleen

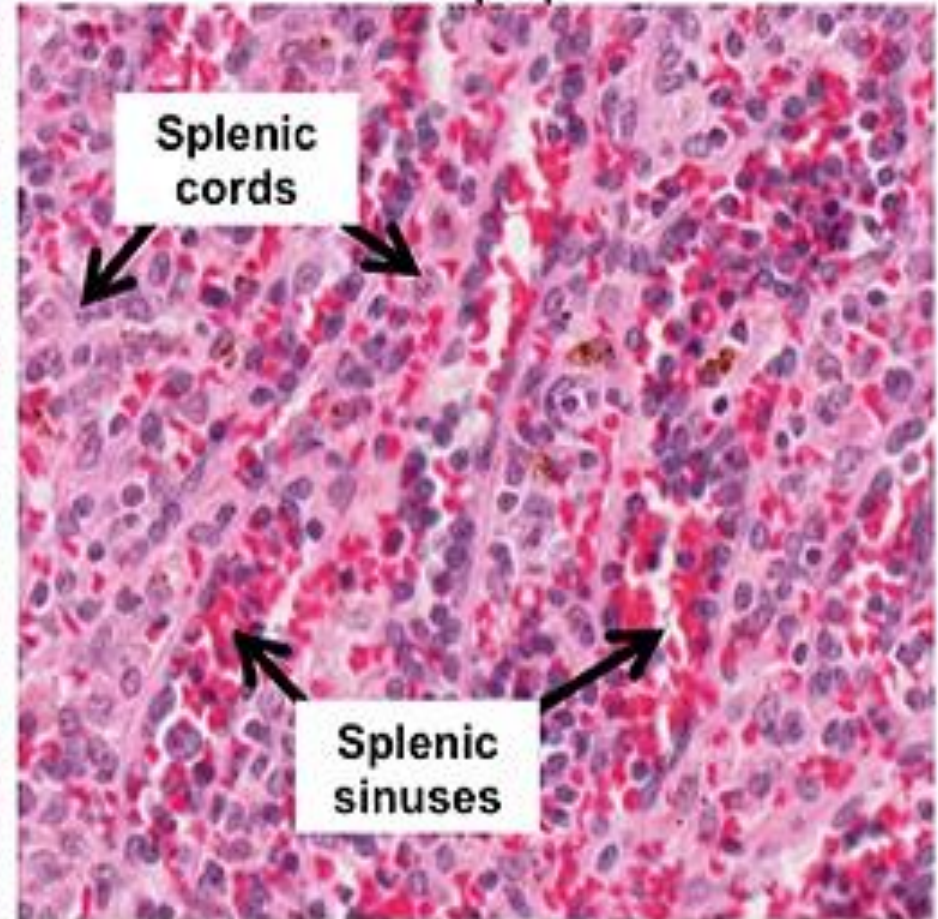


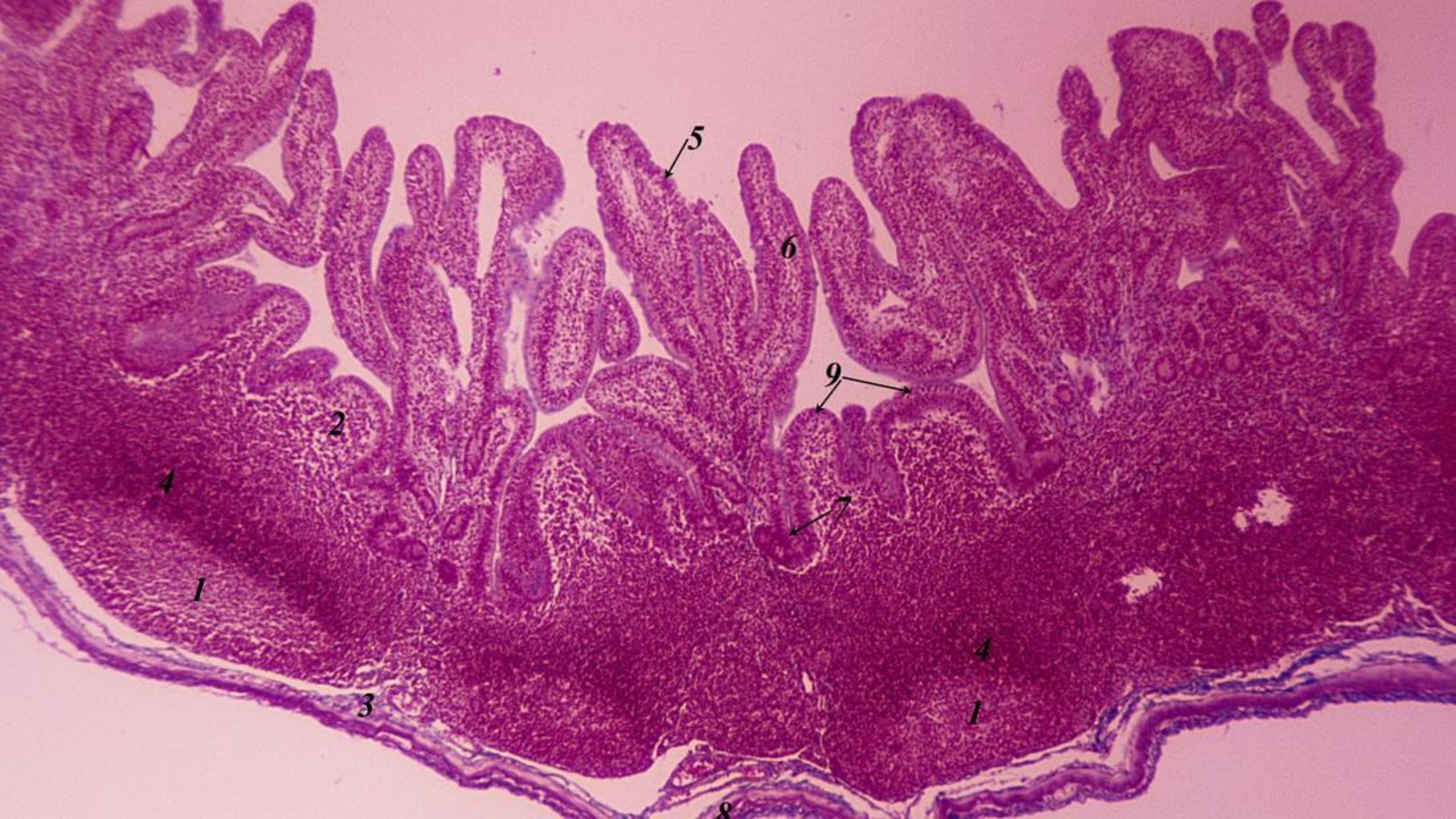
Spleen

White pulp

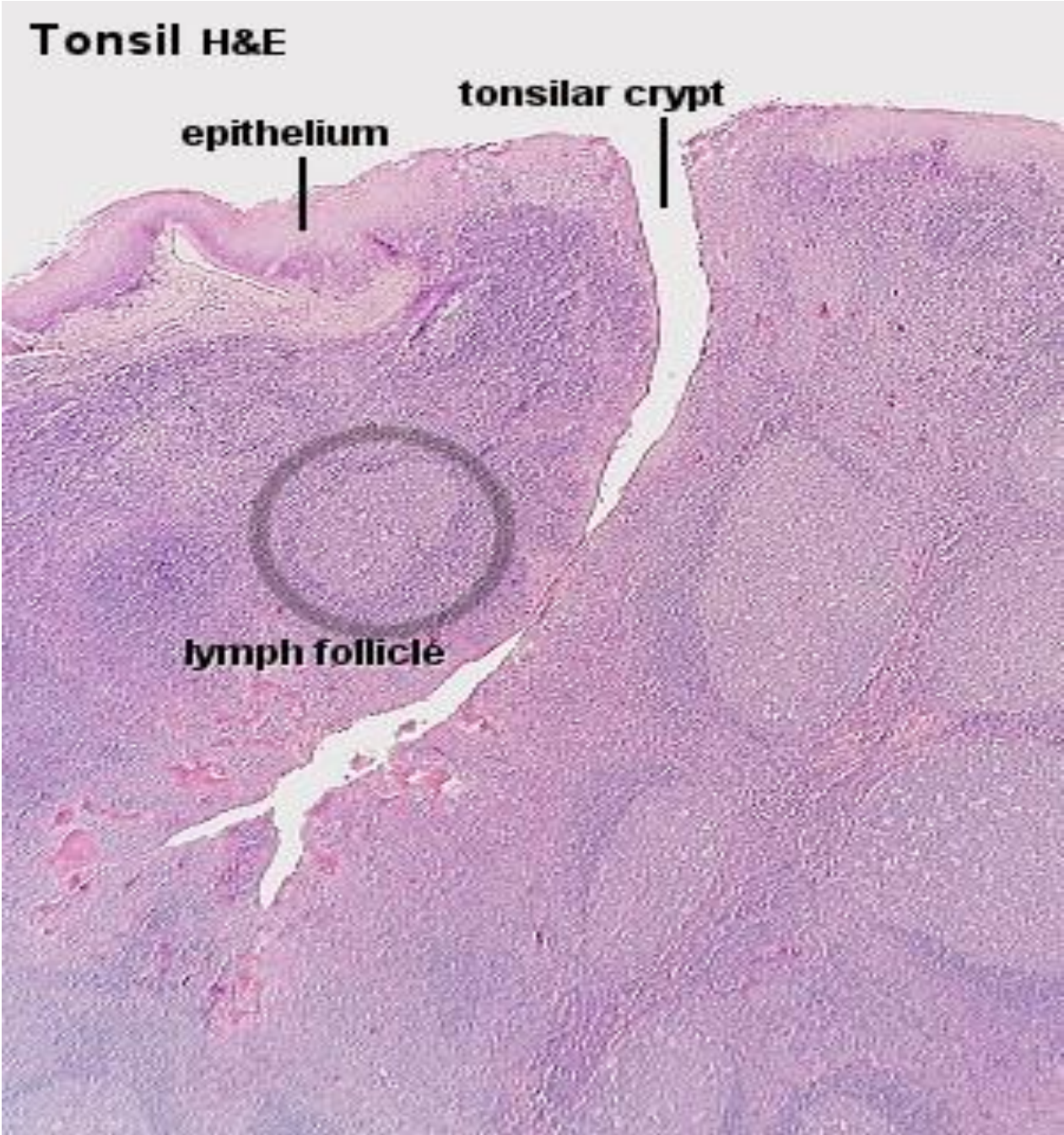


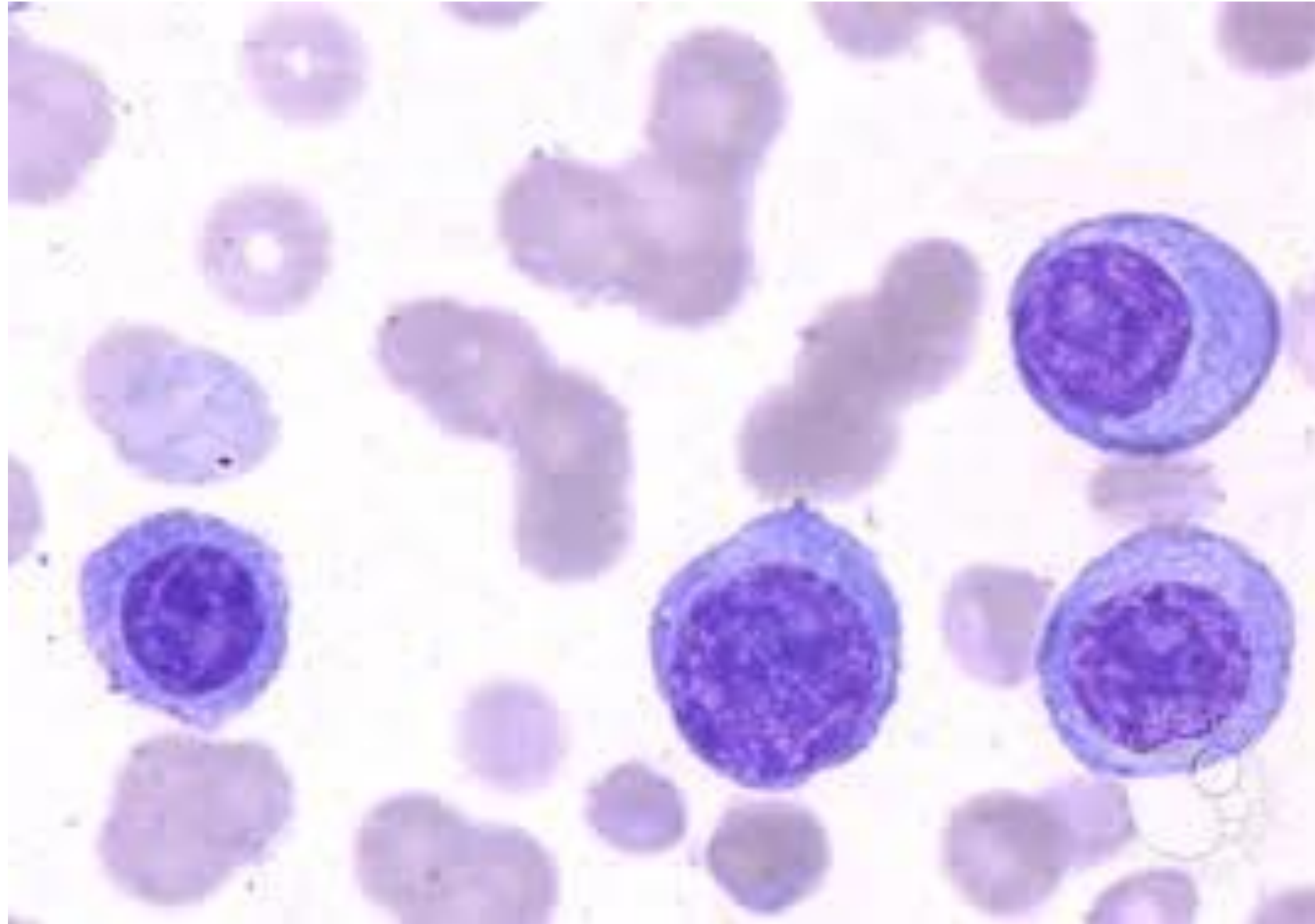
Red pulp





Tonsil





Plasma cells

