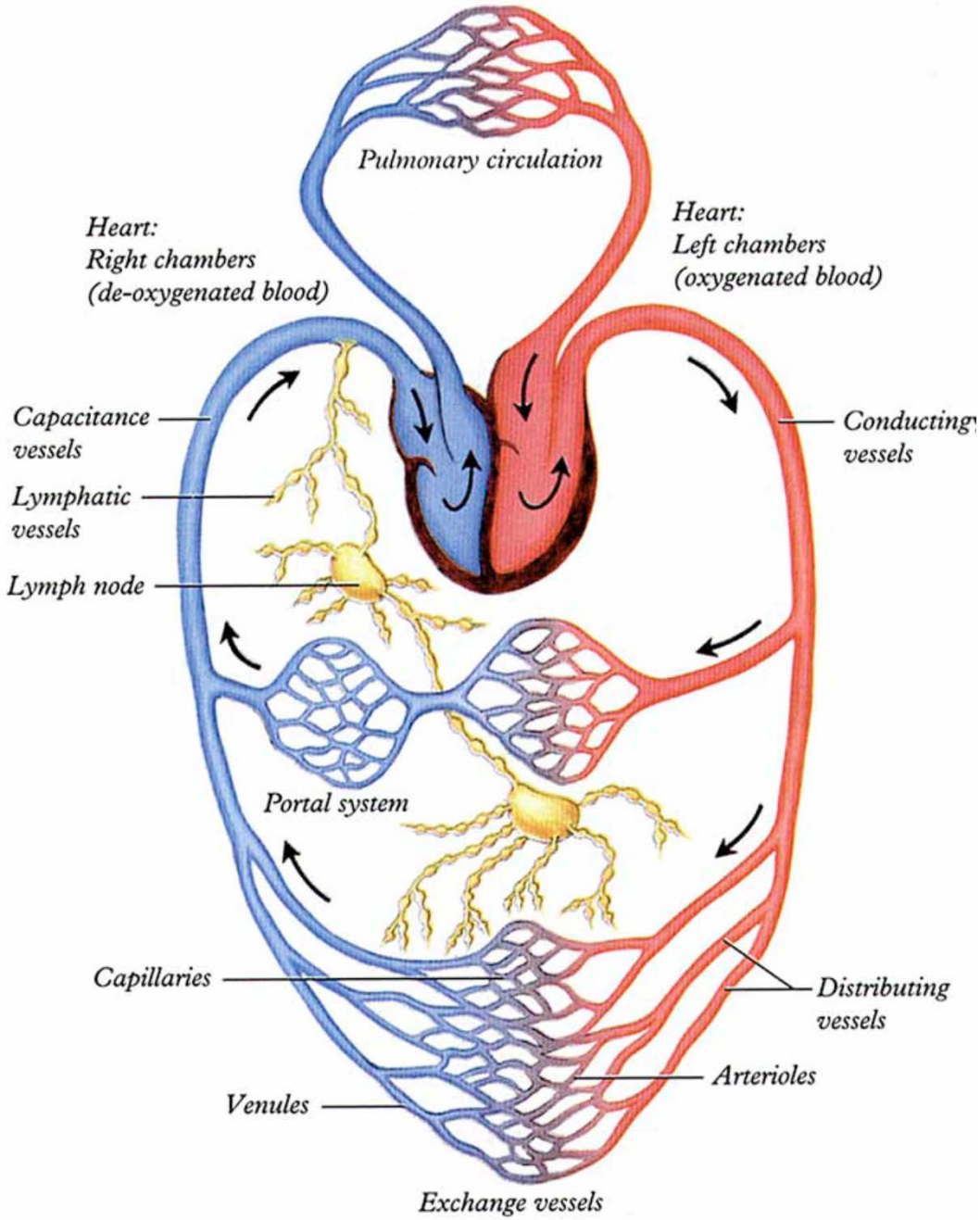
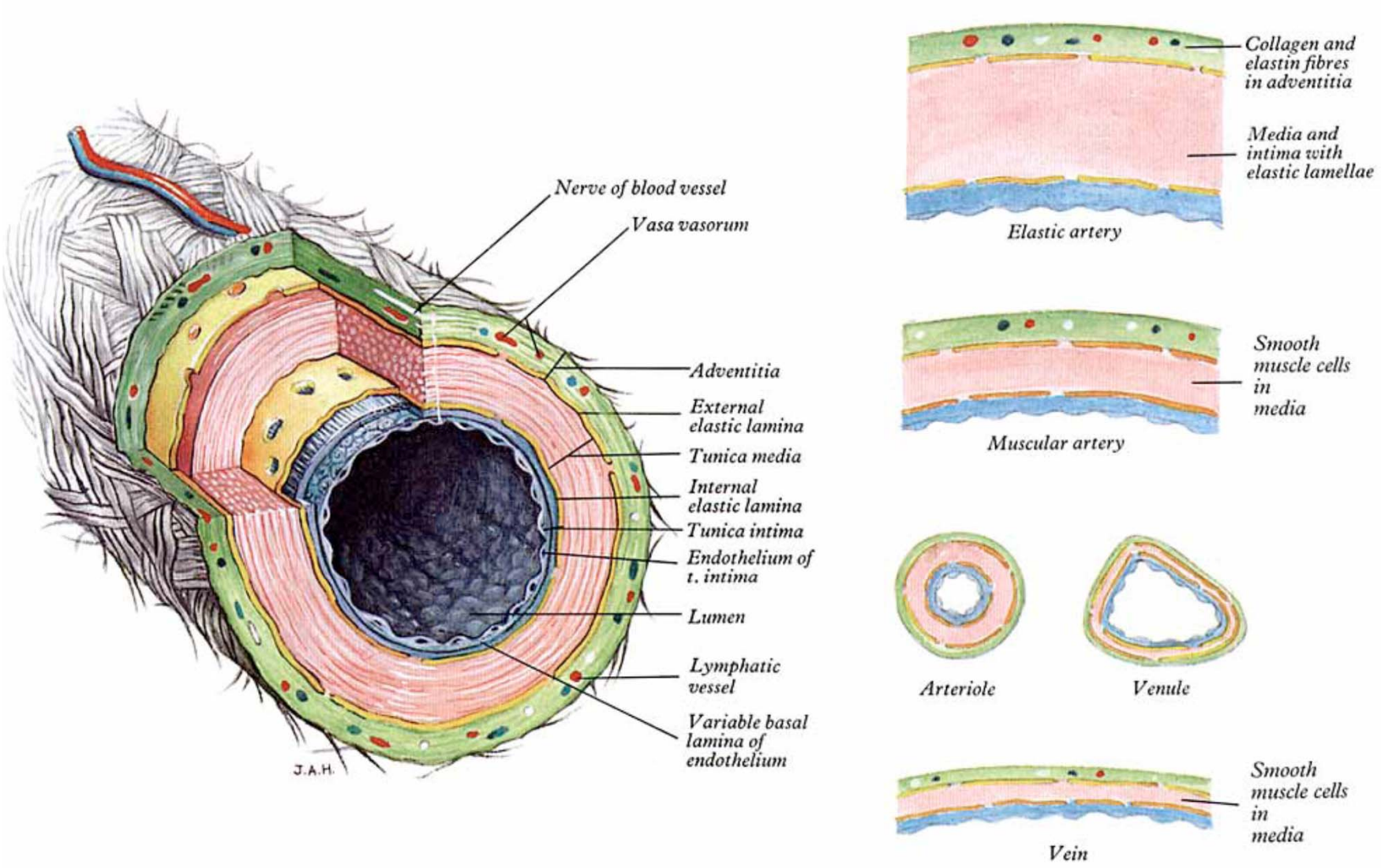

Pulmonary circulation
Heart:
Right chambers
(de-oxygenated blood)
Heart:
Left chambers
(oxygenated blood)
Capacitance
vessels
Lymphatic
vessels
Lymph node
Conducting
vessels
Portal system
Capillaries
Distributing
vessels
Arterioles
Venules
Exchange vessels

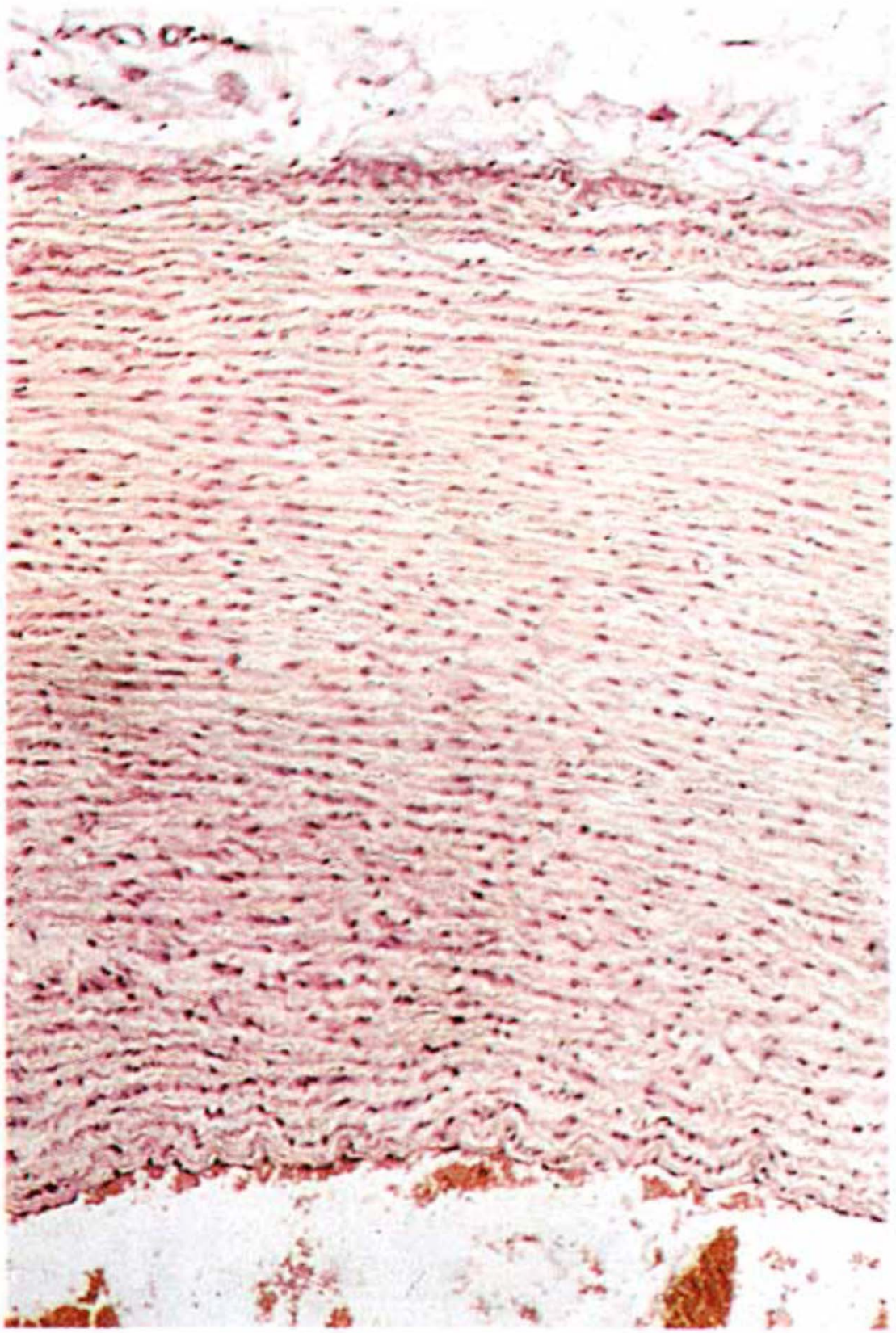
Vascular system

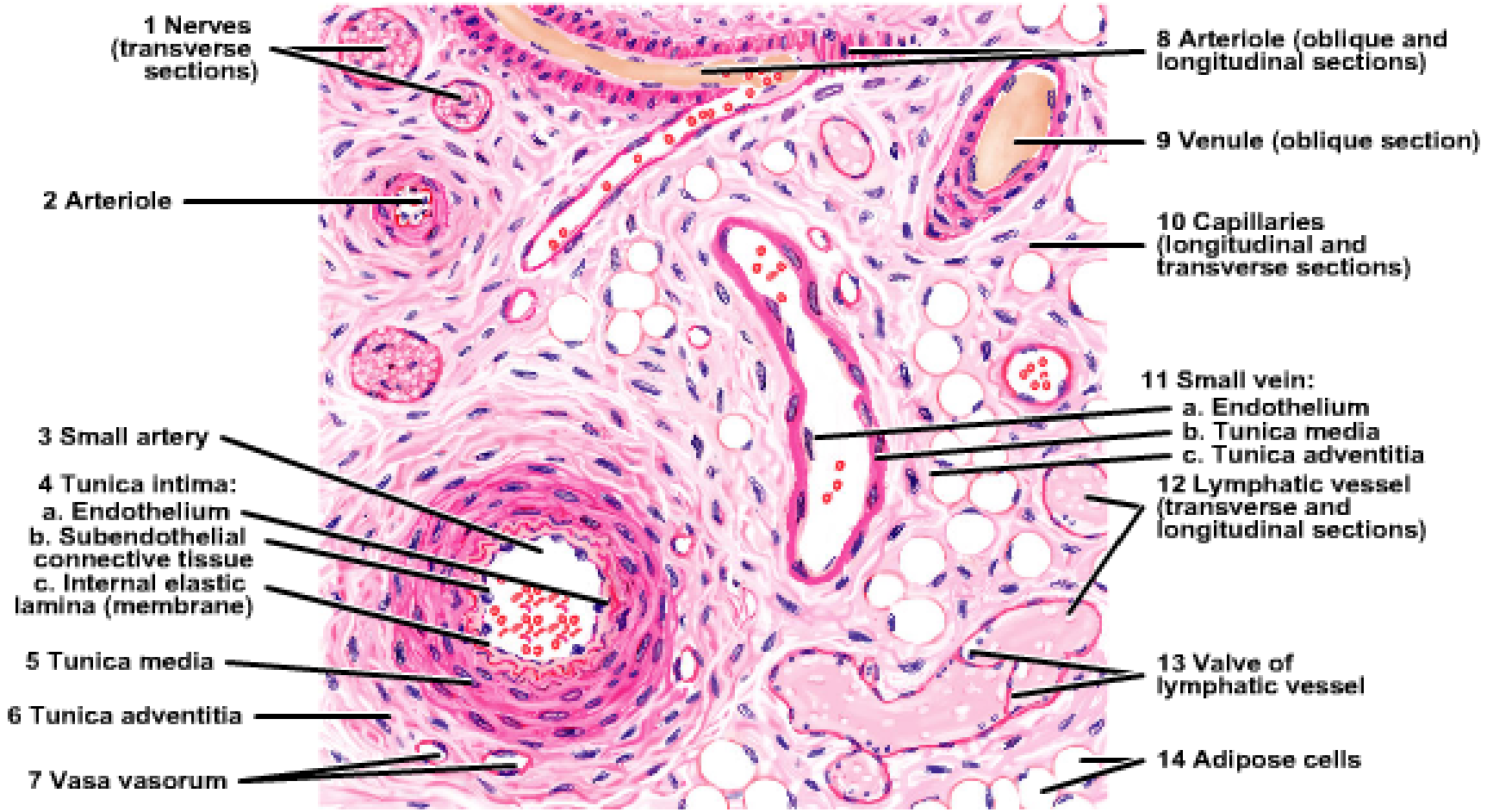
Number		
Size		
Branching pattern:		collateral
		terminal
Anastomosis:		end-to-end
		convergence
		transversal
Relations:	to	veins/nerves
		joints/Bones

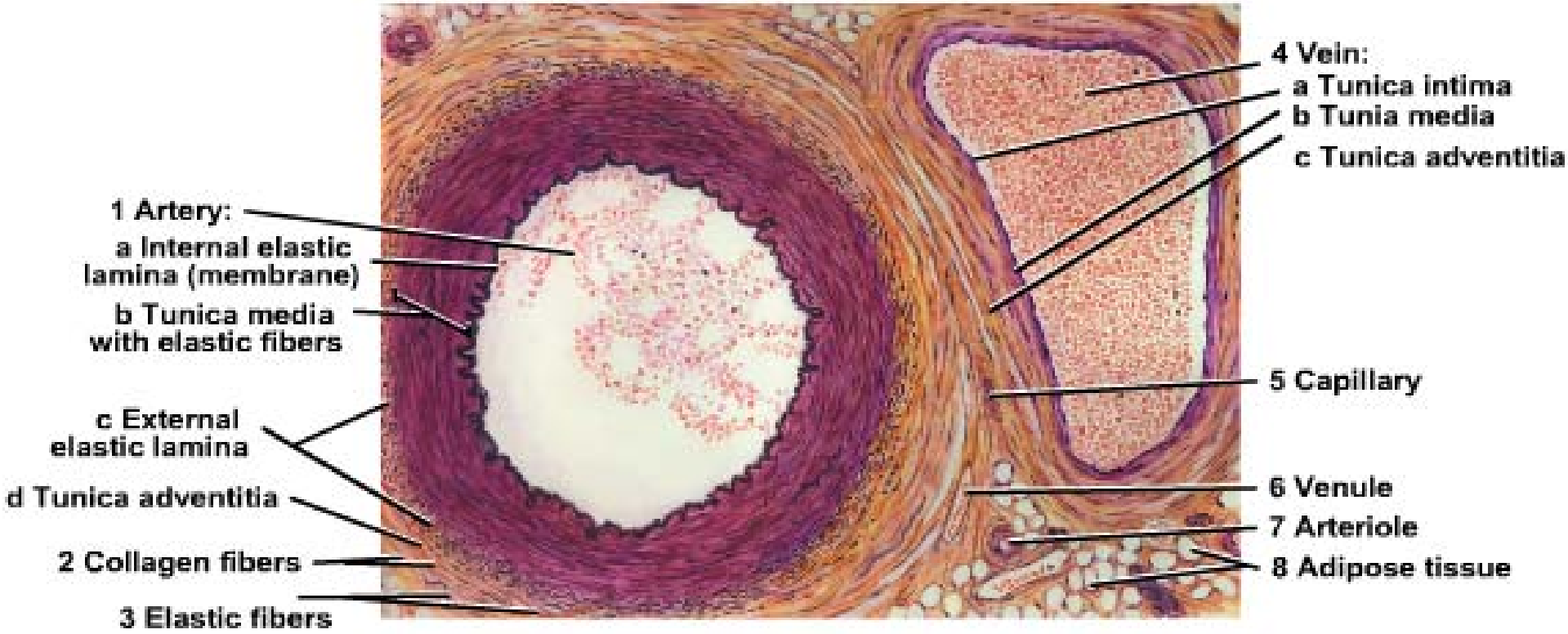
Classification of vessels

- Arteries: elastic
  muscular
- Capillaries: Continuous
  fenestrated
  sinusoids
- Veins


Nerve of blood vessel
Vasa vasorum
Adventitia
External elastic lamina
Tunica media
Internal elastic lamina
Tunica intima
Endothelium of t. intima
Lumen
Lymphatic vessel
Variable basal lamina of endothelium
J.A.H.
Collagen and elastin fibres in adventitia
Media and intima with elastic lamellae
Elastic artery
Smooth muscle cells in media
Muscular artery
Arteriole
Venule
Smooth muscle cells in media
Vein




1 Nerves (transverse sections)
2 Arteriole
3 Small artery
4 Tunica intima:
a. Endothelium
b. Subendothelial connective tissue
c. Internal elastic lamina (membrane)
5 Tunica media
6 Tunica adventitia
7 Vasa vasorum
8 Arteriole (oblique and longitudinal sections)
9 Venule (oblique section)
10 Capillaries (longitudinal and transverse sections)
11 Small vein:
a. Endothelium
b. Tunica media
c. Tunica adventitia
12 Lymphatic vessel (transverse and longitudinal sections)
13 Valve of lymphatic vessel
14 Adipose cells


1 Artery:
a Internal elastic lamina (membrane)
b Tunica media with elastic fibers
c External elastic lamina
d Tunica adventitia
2 Collagen fibers
3 Elastic fibers
4 Vein:
a Tunica intima
b Tunia media
c Tunica adventitia
5 Capillary
6 Venule
7 Arteriole
8 Adipose tissue

Classification of vessels

- Functionally:
    - Conducting
    - Distributing
    - Resistance
    - Exchange
    - Capacitance/reservoir

Blood circulation

- Dynamics:
  - Propulsive force
  - Elasticity of arteries
  - Hydrostatic pressure
  - Hydraulic pressure

Applied Aspect

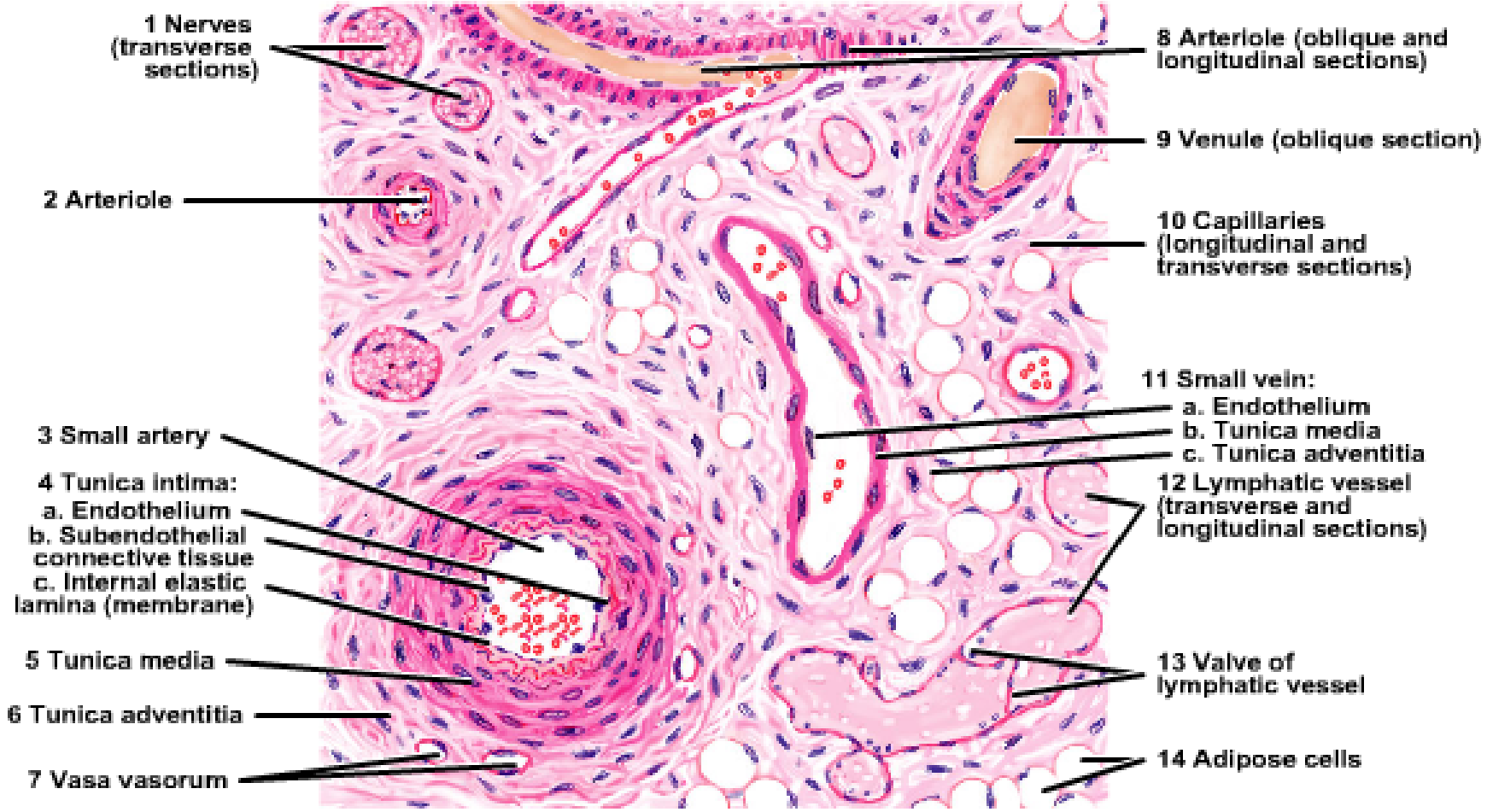
- Arterio – Venous Anastomosis
- Blood supply of vessels
- End arteries: Anatomical
  Physiological

Nerve & Blood Supply

- Autonomic nervous system.
  Regulate Muscle contraction
  Diameter & tone of vessels.
- Vasa vasorum

Veins

- Venules
- Small Veins
- Medium Veins
- Large Veins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8 Arteriole (oblique and longitudinal sections)
9 Venule (oblique section)
10 Capillaries (longitudinal and transverse sections)
11 Small vein:
a. Endothelium
b. Tunica media
c. Tunica adventitia
12 Lymphatic vessel (transverse and longitudinal sections)
13 Valve of lymphatic vessel
14 Adipose cells

Venous Circulation

- Pressure Gradient
- Negative pressure in thorax
- Muscular contraction
- Arterial pulsation.
- Arterio-venous anastomoses
- Force of gravity.

Portal circulation

Lymphatic System

- Lymph vessels
- Lymph capillaries
- Lymphatic ducts
- Lymphatic organs:
  - Lymph node
  - Tonsils
  - Spleen
  - Thymus
  - Peyer’s patches
  - Lymphatic follicles

Lymphatic circulation

- Filtration pressure
- Rhythmic contraction of the smooth muscles.
- Muscular contraction
- Arterial pulsation
- Respirator movements
- Negative pressure