

# HISTOLOGY SLIDES WITH IDENTIFICATION POINTS

FOR 1<sup>ST</sup> YEAR MBBS

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***IMPORTANT: Slides are followed by their identification points.***

Happy learning! 😊

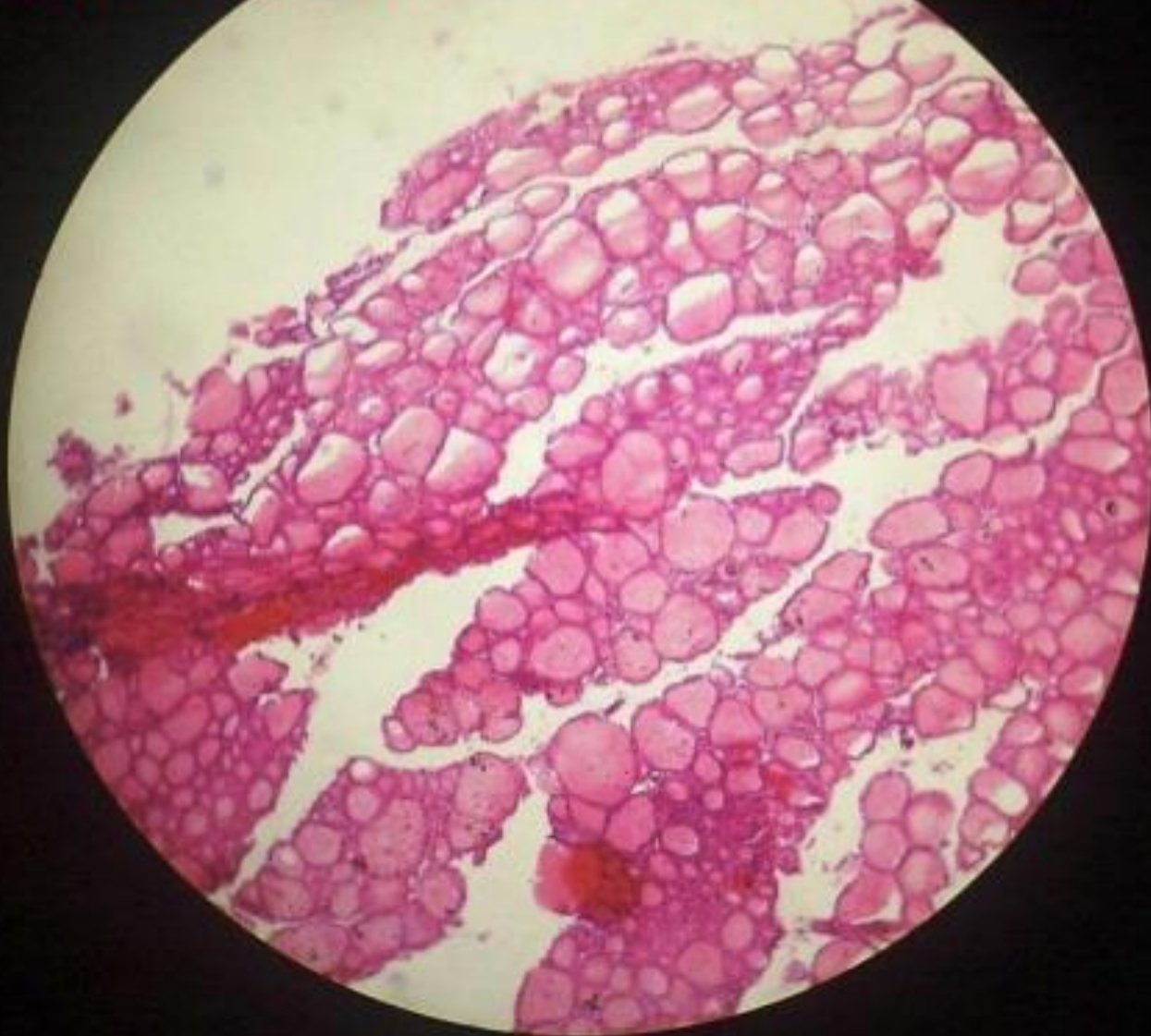


# SIMPLE SQUAMOUS EPITHELIUM

## IDENTIFICATION POINTS

- Appearance: Flattened cells
- Surface view: rounded central nucleus

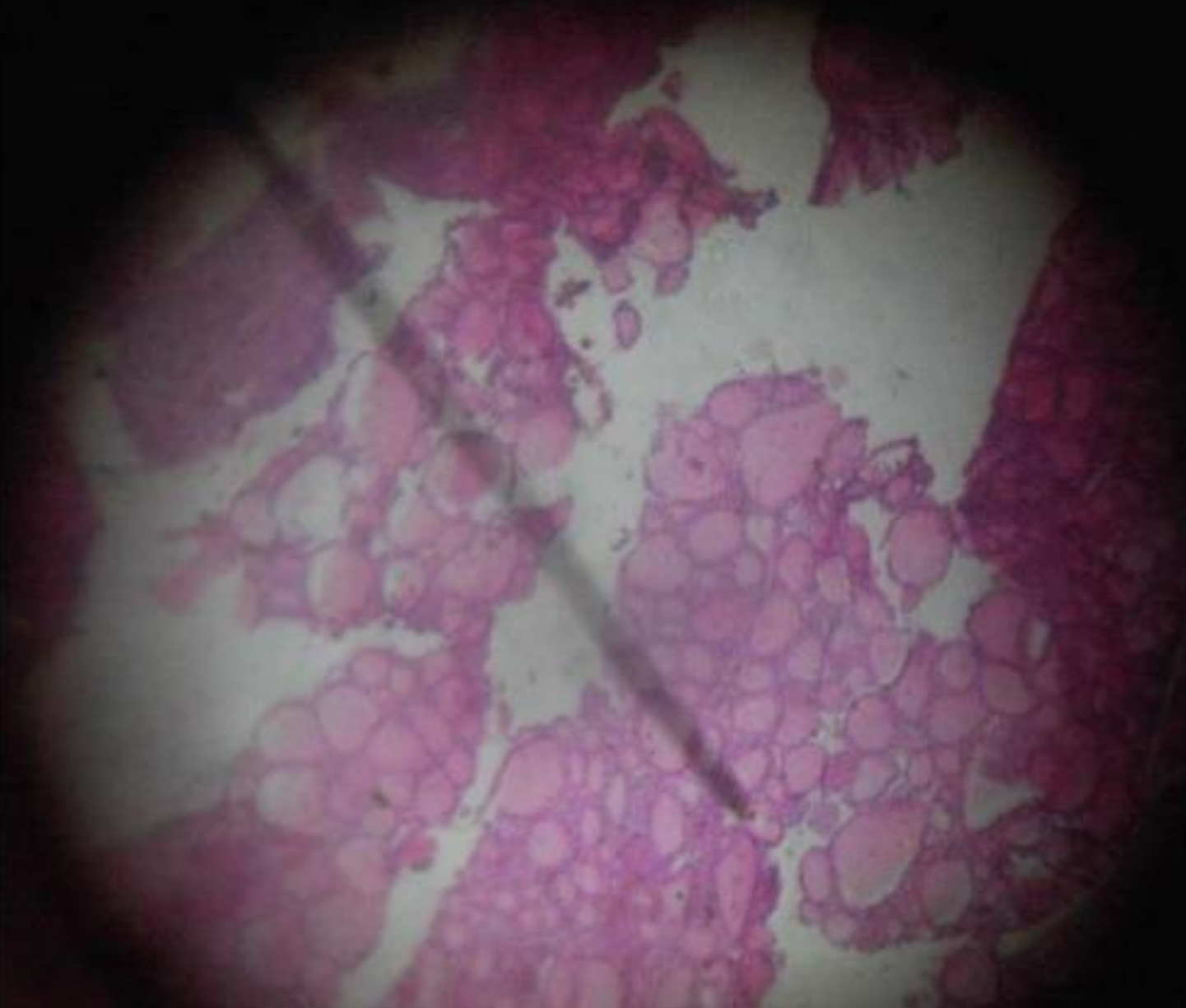
## Simple cuboidal epithelium (thyroid follicle)



# **SIMPLE CUBOIDAL EPITHELIUM**

## **IDENTIFICATION POINTS**

- Cuboidal cells
- Central rounded nuclei



# STRATIFIED CUBOIDAL EPITHELIUM

## IDENTIFICATION POINTS

- Multilayered Basal cells: high cuboidal or low columnar cells
- Surface layer: cuboidal



*Sp columnar epi with goblet cells*



# **SIMPLE COLUMNAR EPITHELIUM WITH GOBLET CELLS**

## **IDENTIFICATION POINTS**

- Elongated column shaped cells (height is greater than width)
- Elongated basal nuclei



# STRATIFIED SQUAMOUS NON KERATINIZED EPITHELIUM

## IDENTIFICATION POINTS

- Surface squamous flattened cells
- No keratin

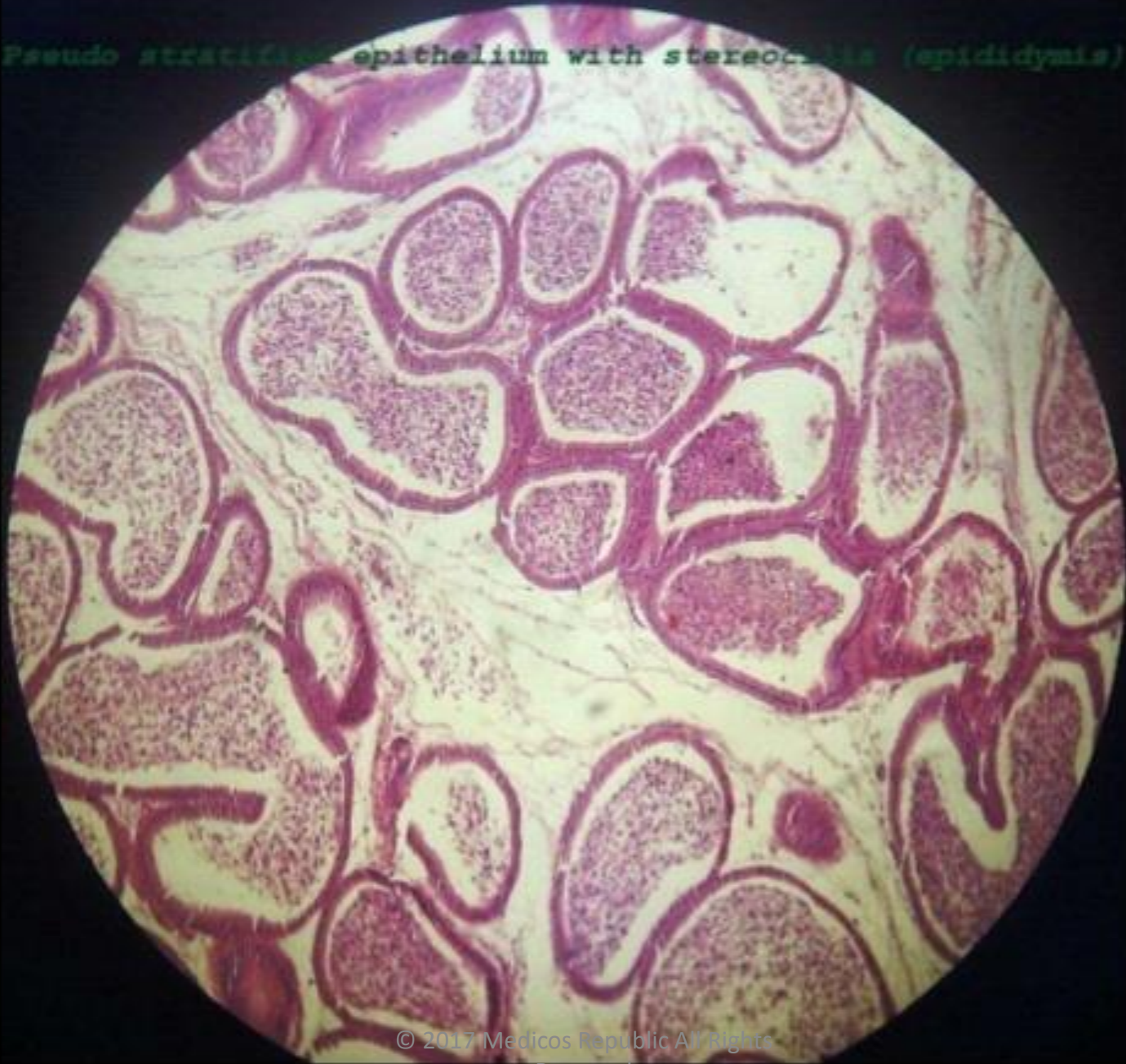


# SIMPLE COLUMNAR EPITHELIUM

## IDENTIFICATION POINTS

- Single layer of elongated cells
- Height of cell is greater than width of cell with elongated basal nuclei

Pseudo stratified epithelium with stereocilia (epididymis)

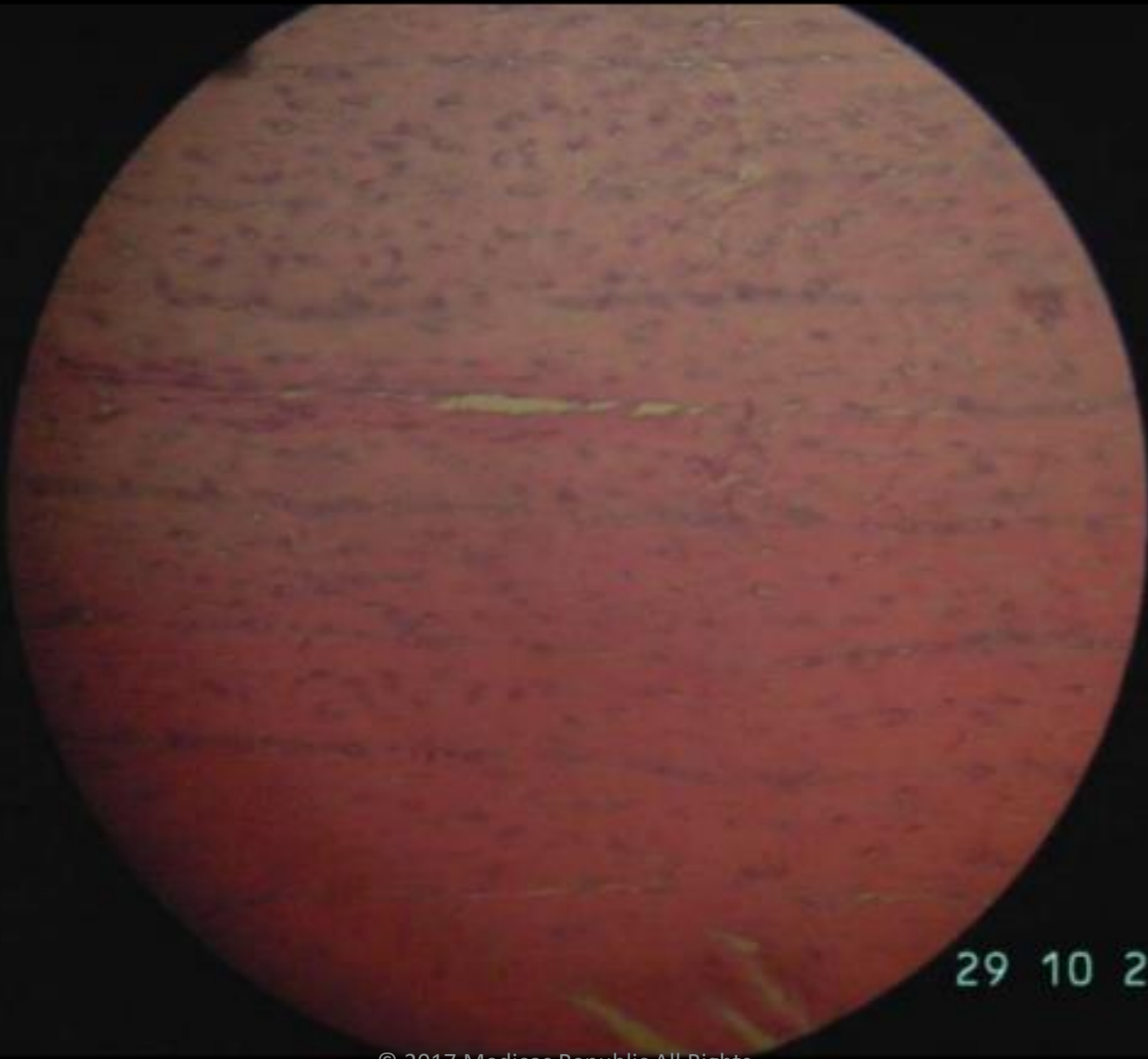


# PSEUDO STRATIFIED COLUMNAR EPITHELIUM

## IDENTIFICATION POINTS

- Single layer of cells
- Nuclei lying at different levels; give the false appearance of "stratified" epithelium





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# FIBRO CARTILAGE

## IDENTIFICATION POINTS:

- No perichondrium
- Chondrocytes within lacunae, arranged in rows

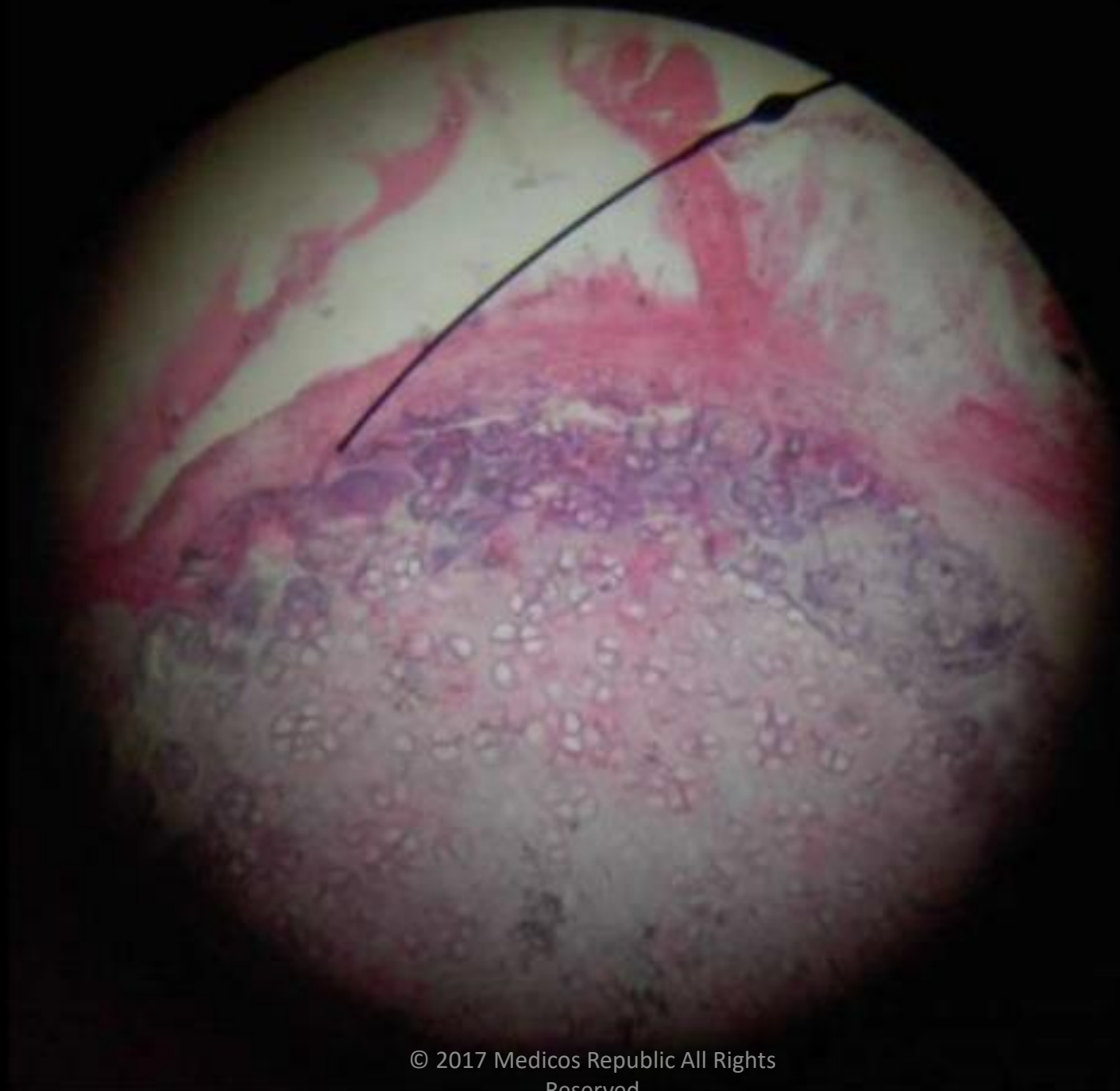
# ELASTIC CARTILAGE



# ELASTIC CARTILAGE

## IDENTIFICATION

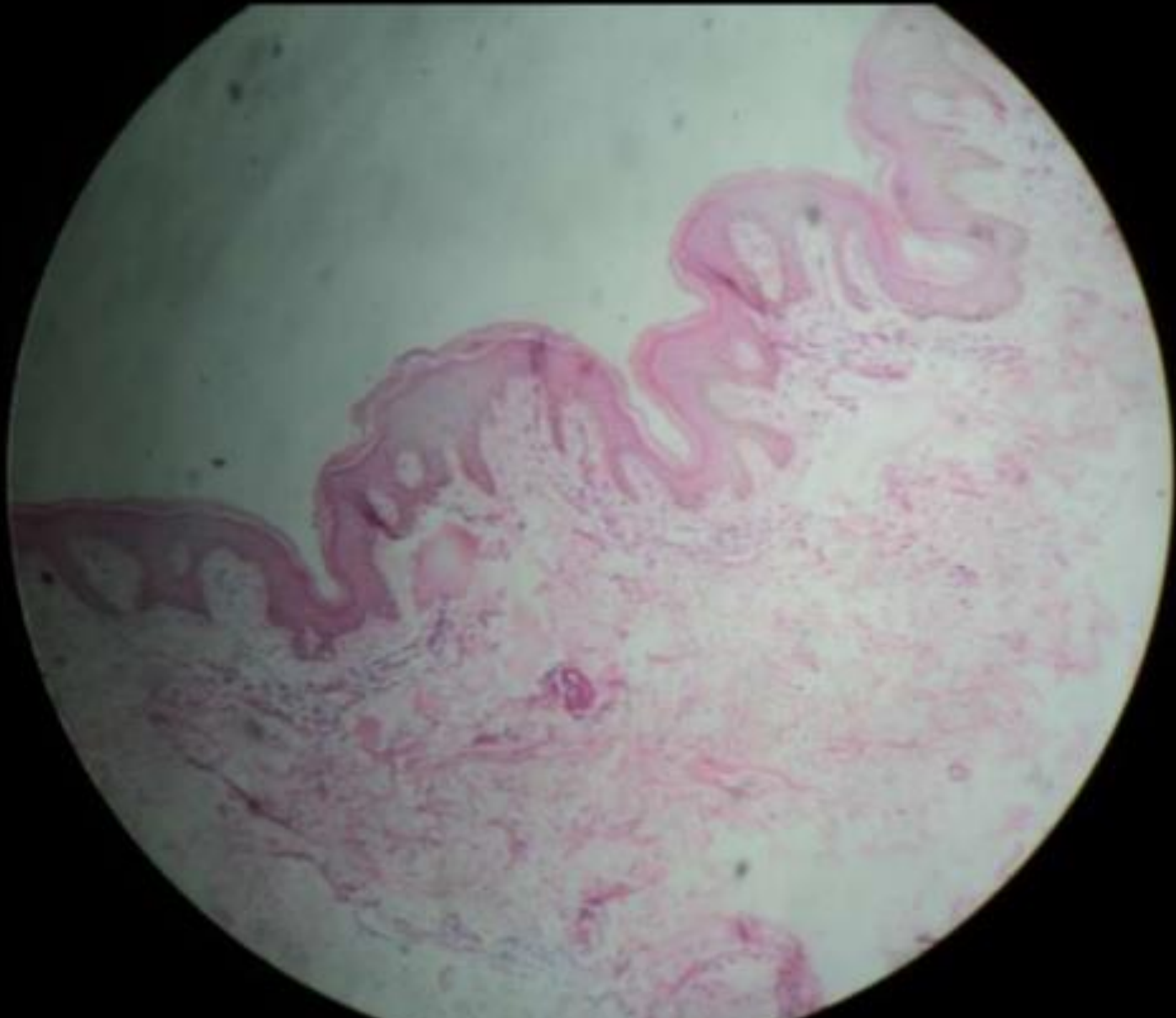
- Perichondrium is present
- Elastic fibres in matrix
- Chondrocytes in lacunae in the form of isogenous groups



# HYALINE CARTILAGE

## IDENTIFICATION POINTS:

- Dense Irregular CT (perichondrium)
- Chondrocytes (in the form of isogenous groups) within lacunae
- Visibility to naked eye: Bluish white translucent appearance



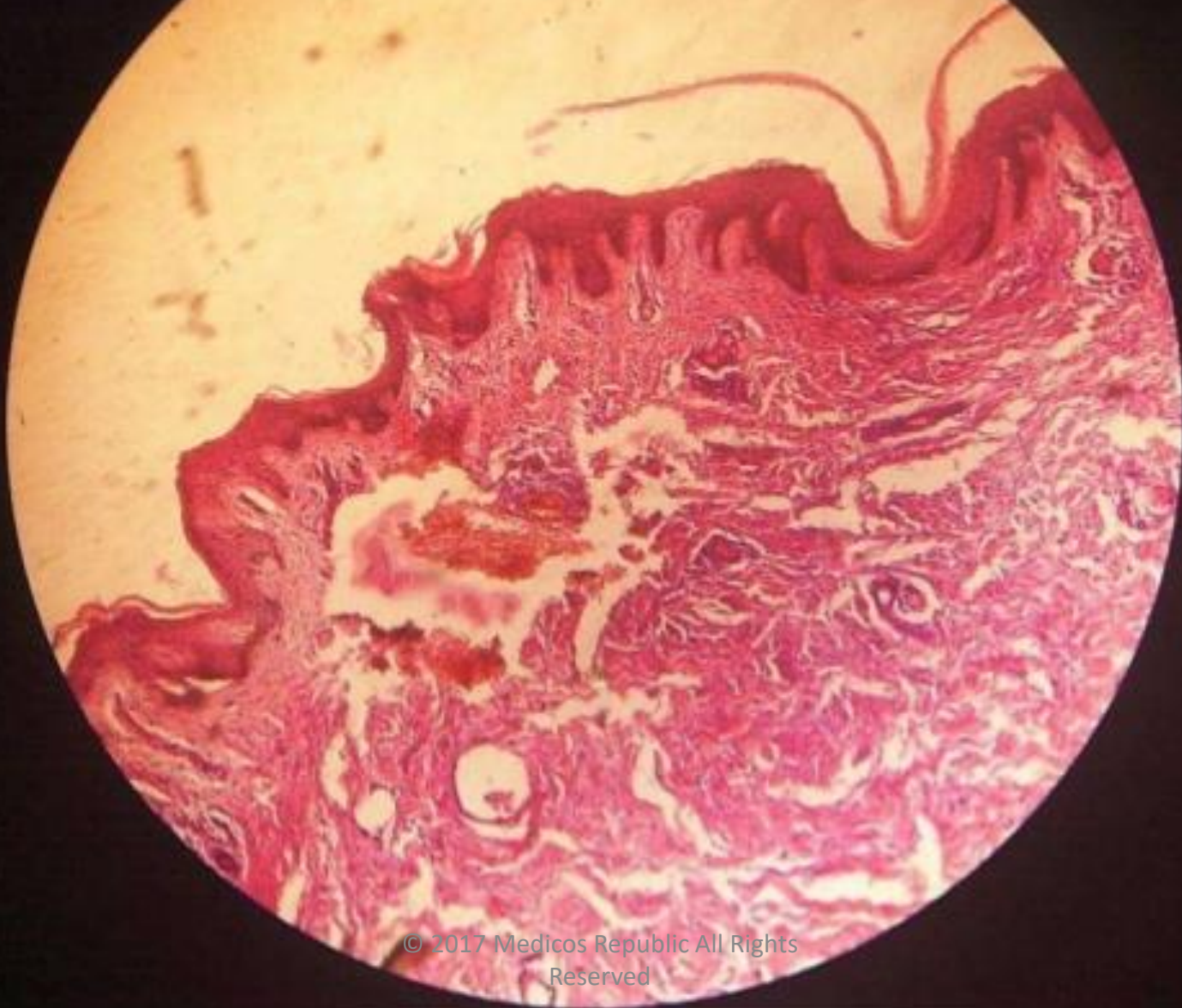
# THIN SKIN

## IDENTIFICATION POINTS:

- Stratified squamous keratinized epithelium
- Hair follicles and roots present
- Sebaceous and sweat glands present



# **(Thick) SKIN**



# THICK SKIN

## IDENTIFICATION POINTS:

- Stratified squamous keratinized epithelium
- No hair roots and follicles
- Pacinian corpuscles

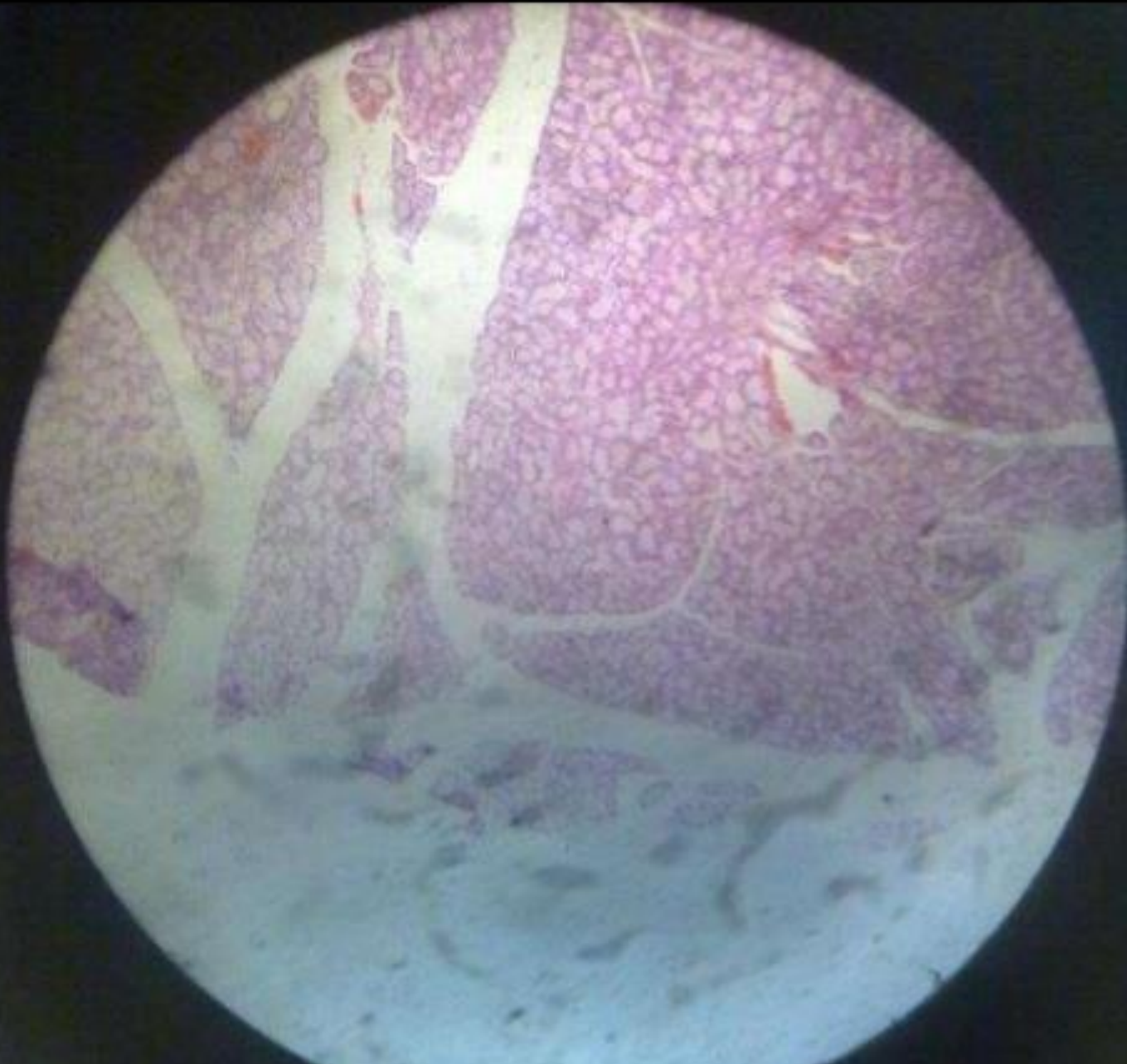
DENSE REGULAR CONNECTIVE TISSUE



# DENSE REGULAR CONNECTIVE TISSUE

## IDENTIFICATION POINTS:

- Parallel collagen fibers in the form of bundles
- Compressed elongated fibroblasts between the collagen fibers

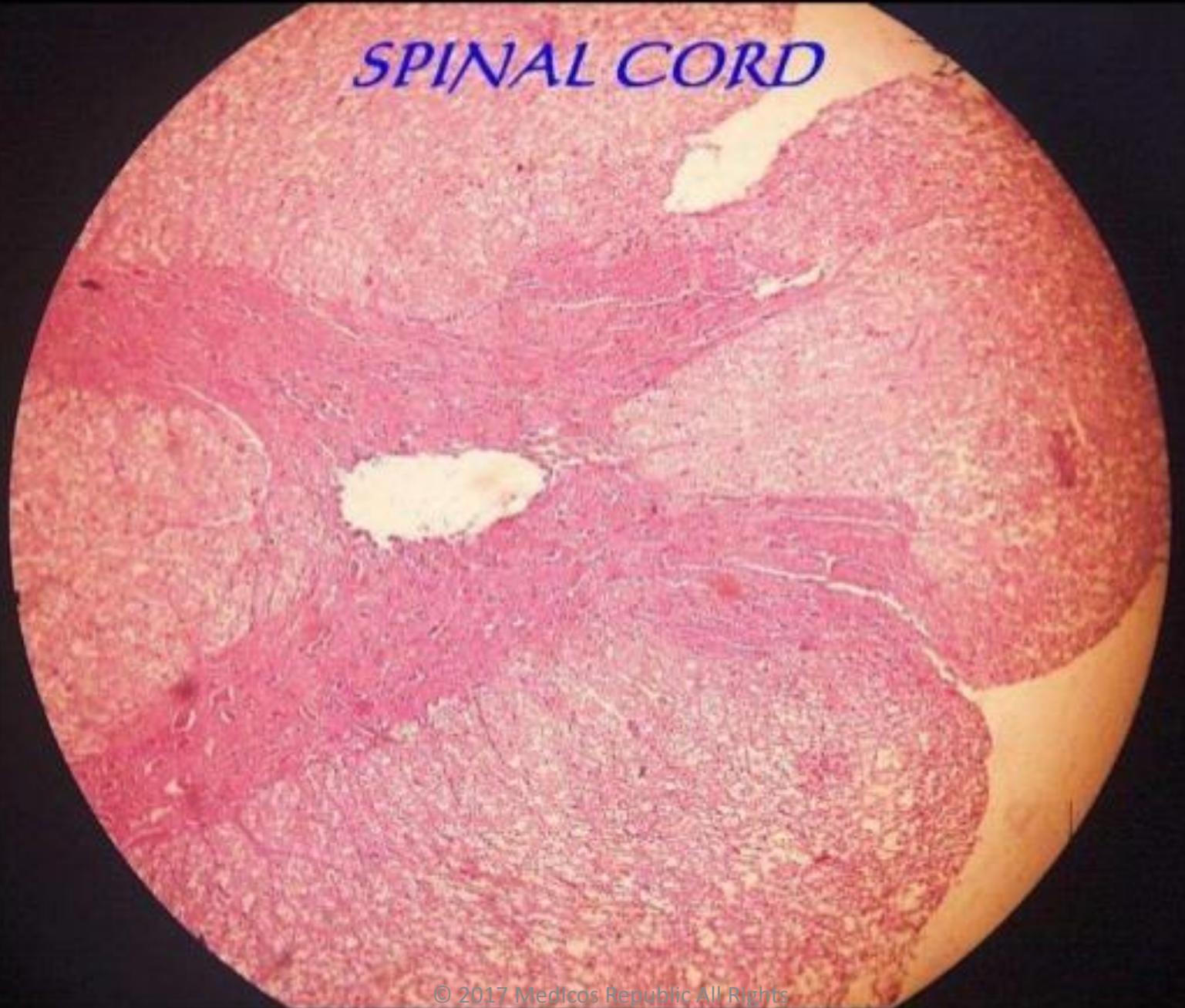


# MUCOUS ACINI

## IDENTIFICATION POINTS:

- Pyramidal cells
- Flattened nuclei towards the base

*SPINAL CORD*



# SPINAL CORD

## IDENTIFICATION POINTS:

- Central canal
- Butterfly shaped grey matter
- Dorsal median sulcus and ventral median fissure (depending on the portion under examination)



*Articular cartilage*



# ARTICULAR CARTILAGE

## IDENTIFICATION POINTS:

- Superficial tangential layer
- Intermediate transitional layer
- Radial zone
- Calcified zone

Compact bone

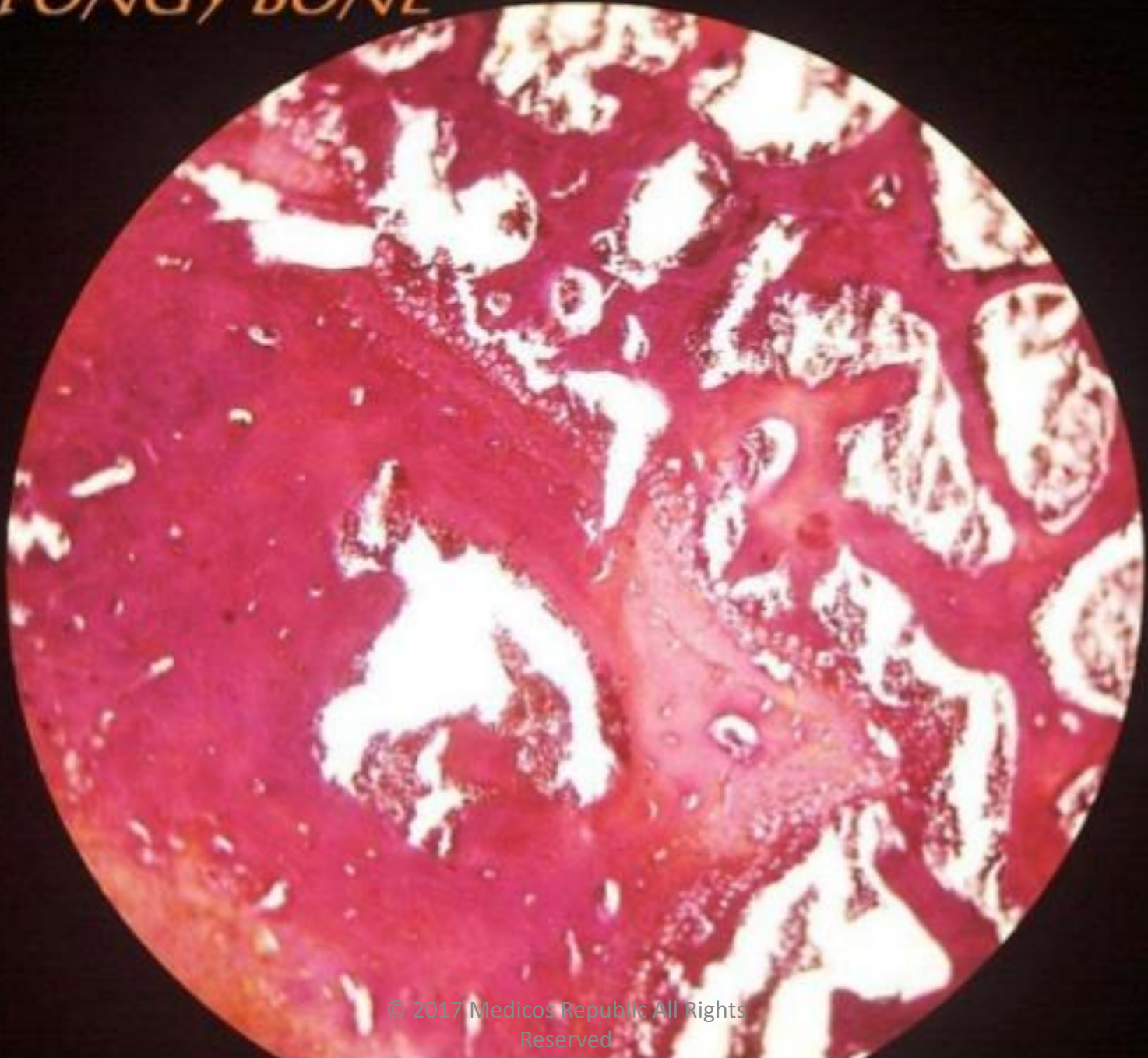


# COMPACT BONE

## IDENTIFICATION POINTS:

- Haversian Canal
- Lamellae
- Osteocytes in lacunae

# *SPONGY BONE*

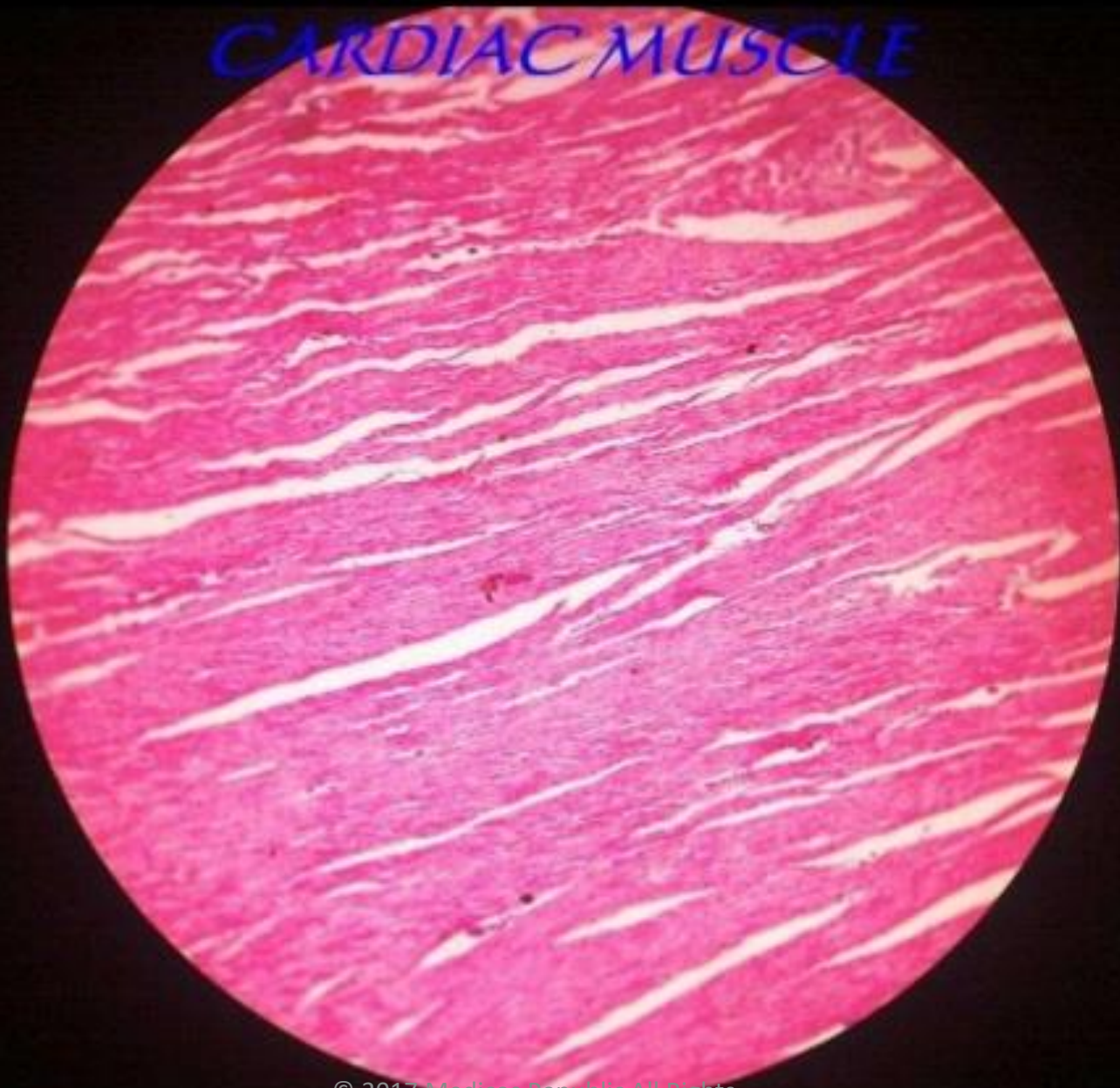


# SPONG BONES

## IDENTIFICATION POINTS:

- Trabeculae
- Red marrow

# CARDIAC MUSCLE



# CARDIAC MUSCLE

## IDENTIFICATION POINTS:

- Striated Appearance
- Intercalated discs



# SMOOTH MUSCLE



# SMOOTH MUSCLE

## IDENTIFICATION POINTS:

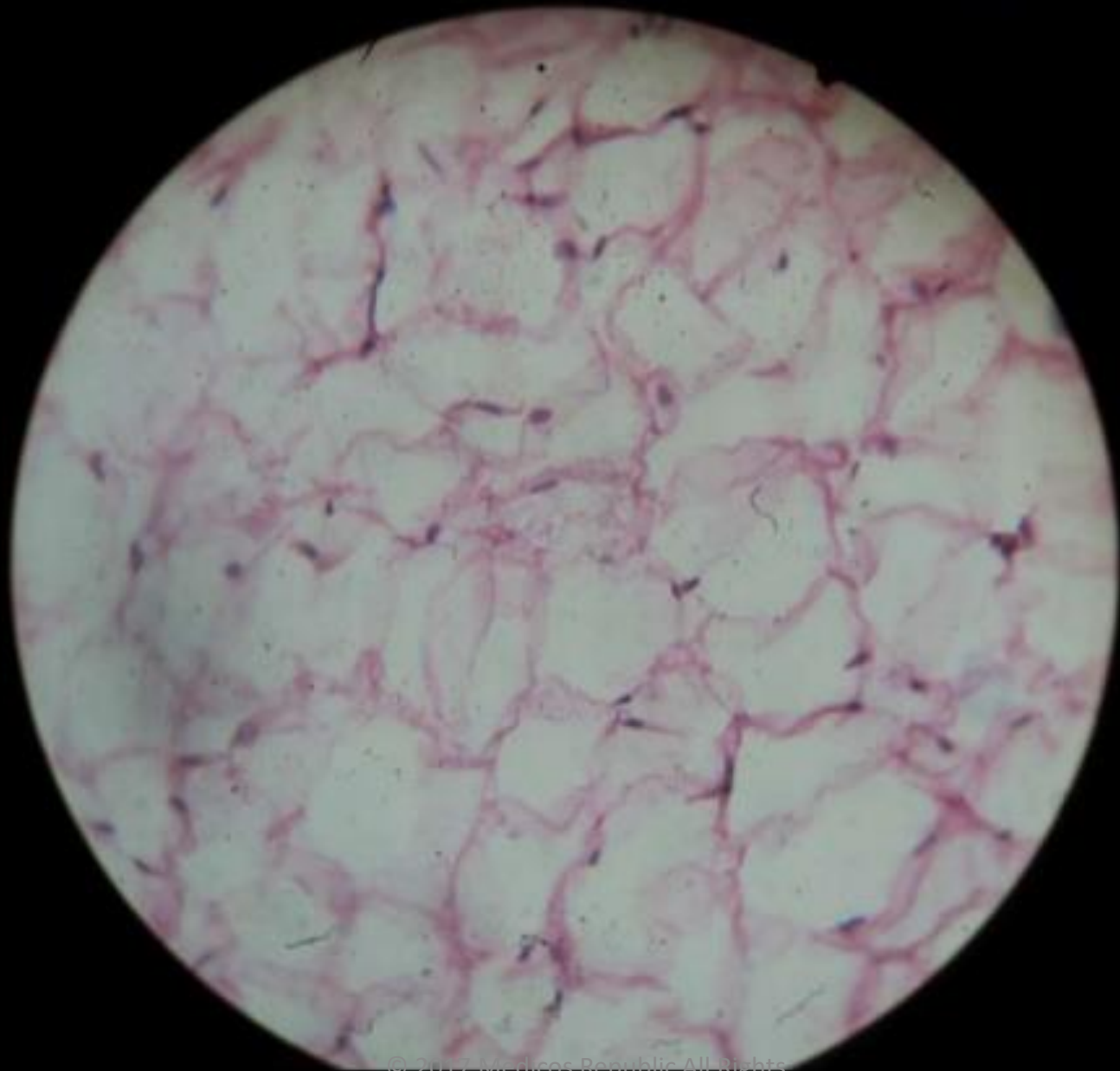
- Non-striated appearance
- Single central nucleus
- Spindle shaped cells

SKELETAL  
MUSCLE

# SKELETAL MUSCLES

## IDENTIFICATION POINTS:

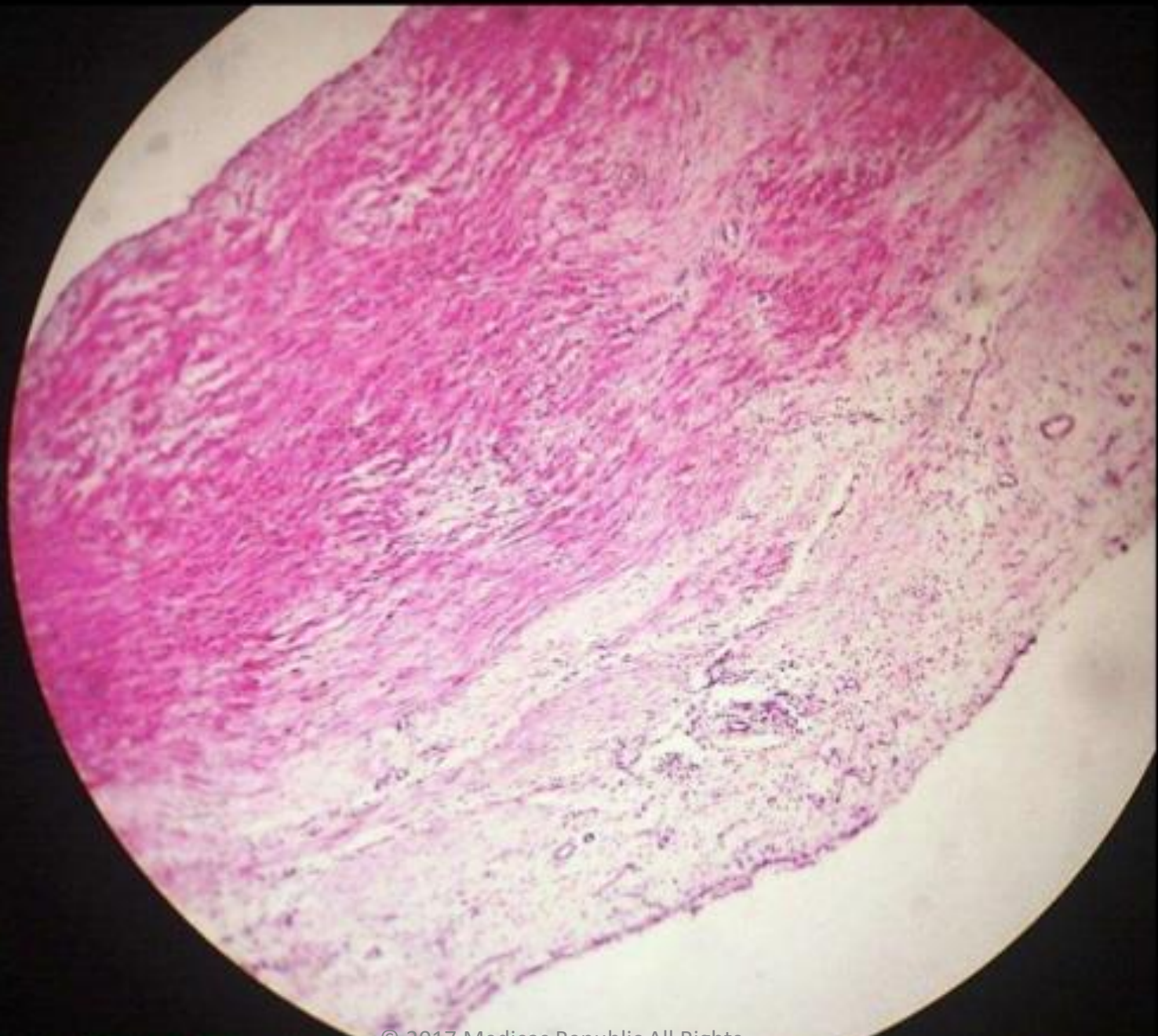
- Characteristic striated appearance
- Peripheral nuclei
- Nucleus ovoid in shape



# ADIPOSE TISSUE

## IDENTIFICATION POINTS:

- Unilocular
- Nuclei towards periphery



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ELASTIC ARTERY

# ELASTIC ARTERY

## IDENTIFICATION POINTS:

- No distinct outer and inner elastic membranes
- Tunica adventitia: merges with CT, contains vasa vasorum
- Tunica media: elastic fibres are present in a large amount



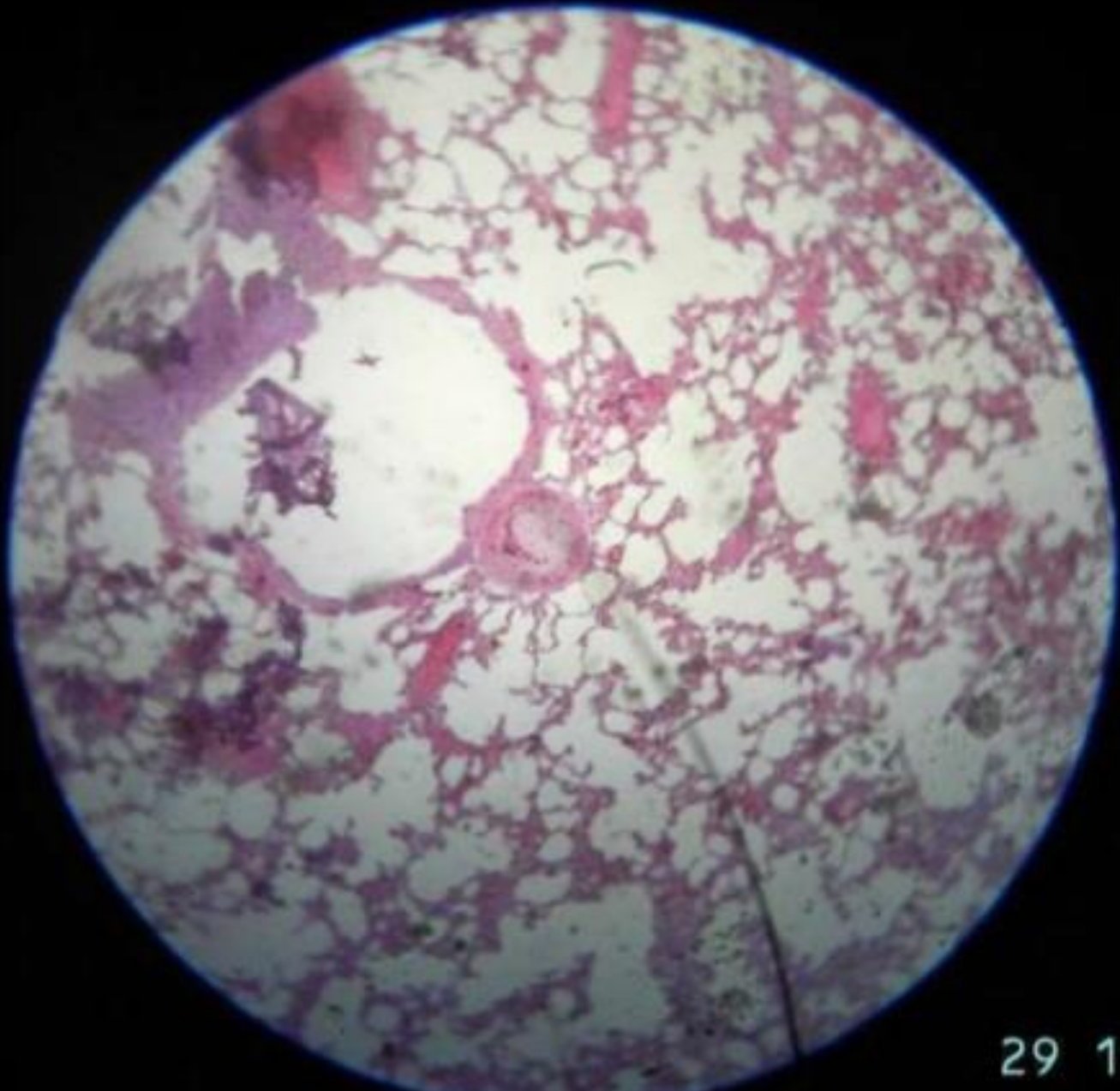
# *SPLEEN*



# SPLEEN

## IDENTIFICATION POINTS:

- Red pulp: splenic cord and venous sinuses
- White pulp: contains lymphatic nodules and germinal centre

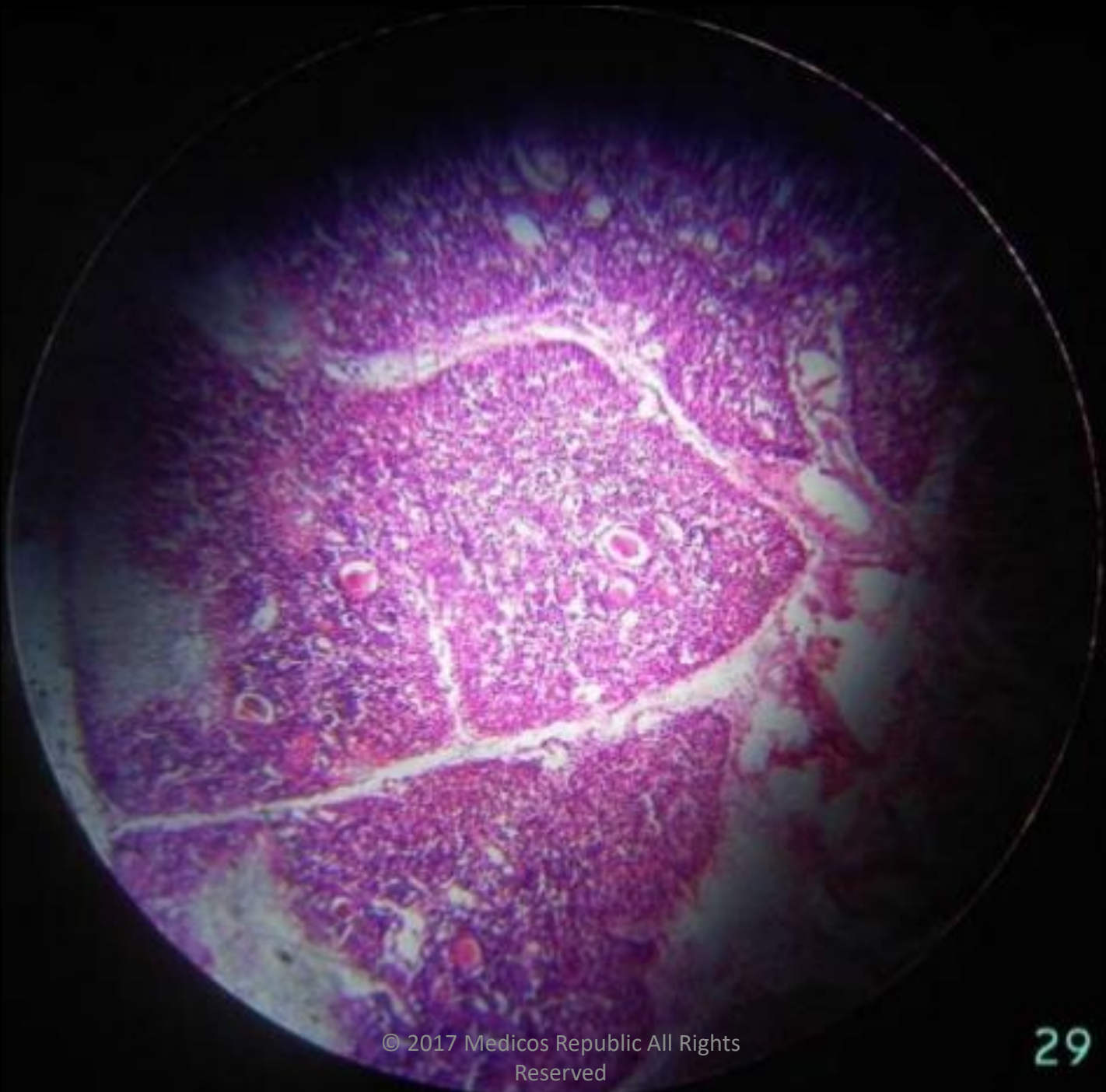


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# LUNGS

## IDENTIFICATION POINTS:

- Alveoli: Type I alveolar cells (simple squamous epithelium); Type II alveolar cells (cuboidal cells)
- Respiratory bronchioles: lined by simple cuboidal epithelium

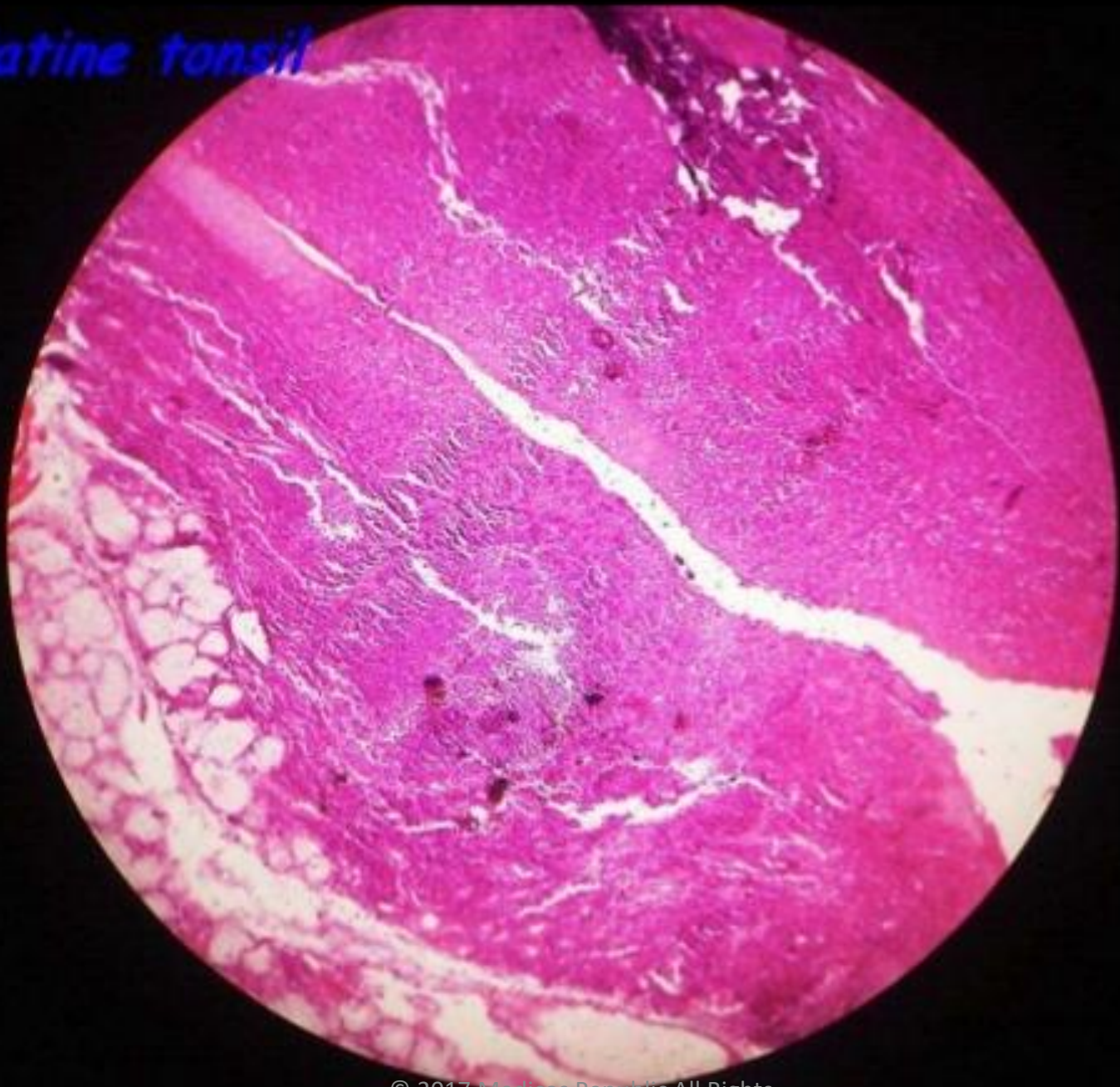


# THYMUS

## IDENTIFICATION POINTS:

- Medulla is lightly stained
- Hassall's corpuscles in medulla

*Palatine tonsil*



# TONSIL

## IDENTIFICATION POINTS:

- Stratified squamous non keratinized epithelium
- Crypt
- Trabeculae
- Lymphatic nodules



# THE END

THANK YOU! 😊

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