

Inside the Tissues

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[**GO**](#)

A dynamic and interesting way to learn everything about
Human Tissues!

Inside the Tissues

Miguel is a very smart boy; he is very excited to learn about the tissues of the human body and how they work. We will help you get to the end of the game and know everything about it.



Rules



Play



Credits

CREDITS

This game was developed in the year 2020 by Sara Spinola Clemente (MECSMA student), Carlos Alberto Sanches Pereira and Ana Paula Cunha Pereira (supervisors), as the final product of the master's degree in Health and Environmental Sciences Teaching at UniFOA and should be used as an educational tool for high school students.



RULES

First, select the tissue of interest to play. It is possible to select one tissue at a time as the content is applied in the discipline.

The game starts by clicking on the number 1 box on the board and will be directed to the first question. The player must choose the alternative he considers right and click on the corresponding letter.

According to the hit or miss, the player will be directed to different pages.

If the answer is correct the player will be directed to a slide that contains the explanation of the question, then he must click on “advance”, directing to the board and “Miguel” will jump to the next square, until reaching the 20th question. Completing that tissue, being able to go to another one.

If the answer is incorrect, the player will be directed to a slide explaining why that statement is incorrect, he must return to the question, using an arrow written “back” until he chooses the correct alternative.

It can be played according to the number of participants proposed by the teacher.



CHOOSE A TISSUE!!

NERVOUS TISSUE

CONNECTIVE TISSUE

EPITHELIAL TISSUE

MUSCLE TISSUE

BONE TISSUE

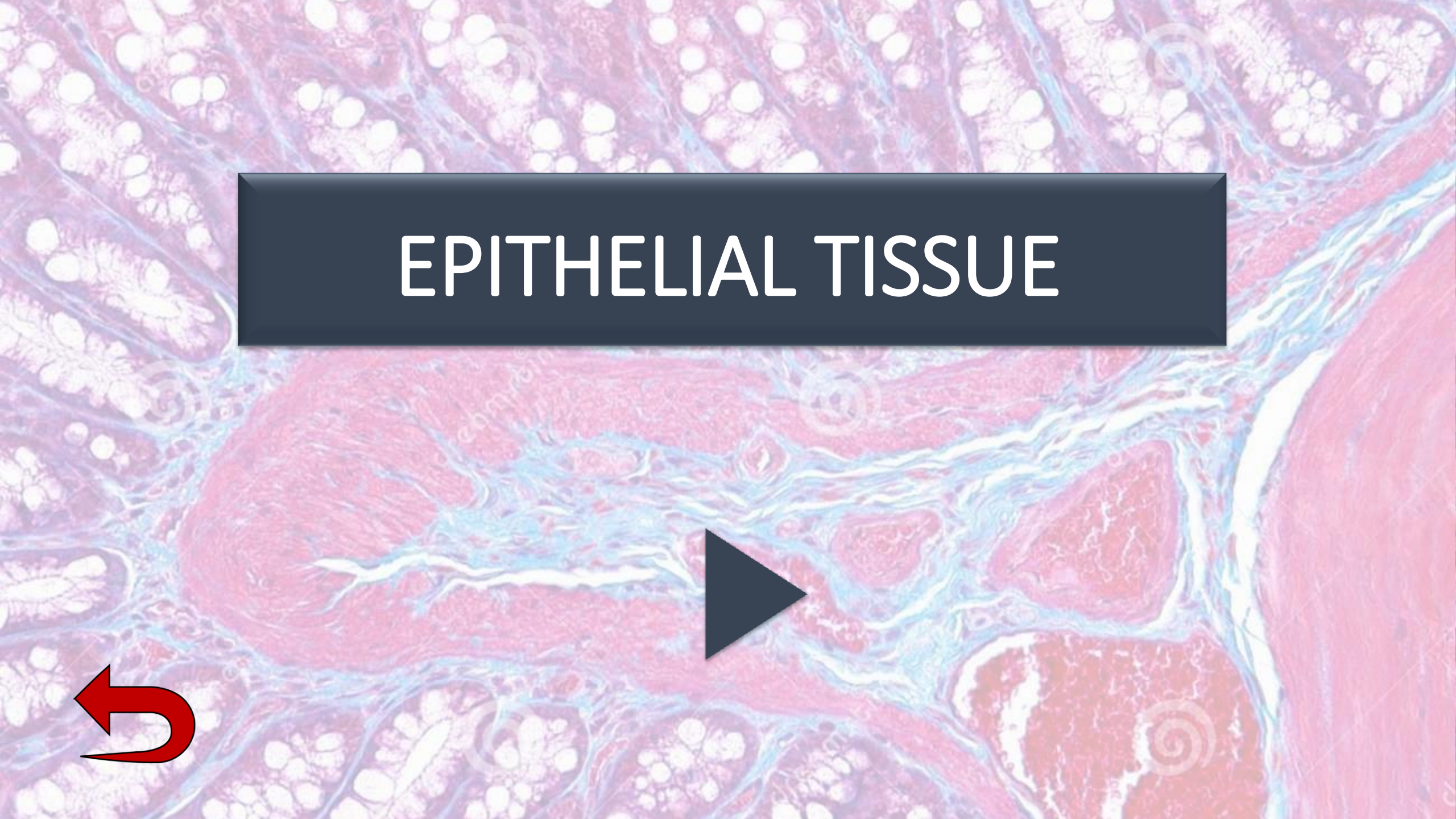
**CARTILAGINOUS
TISSUE**

ADIPOSE TISSUE

**CIRCULATORY
SYSTEM**



EPITHELIAL TISSUE





INICIO



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FIM

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INICIO

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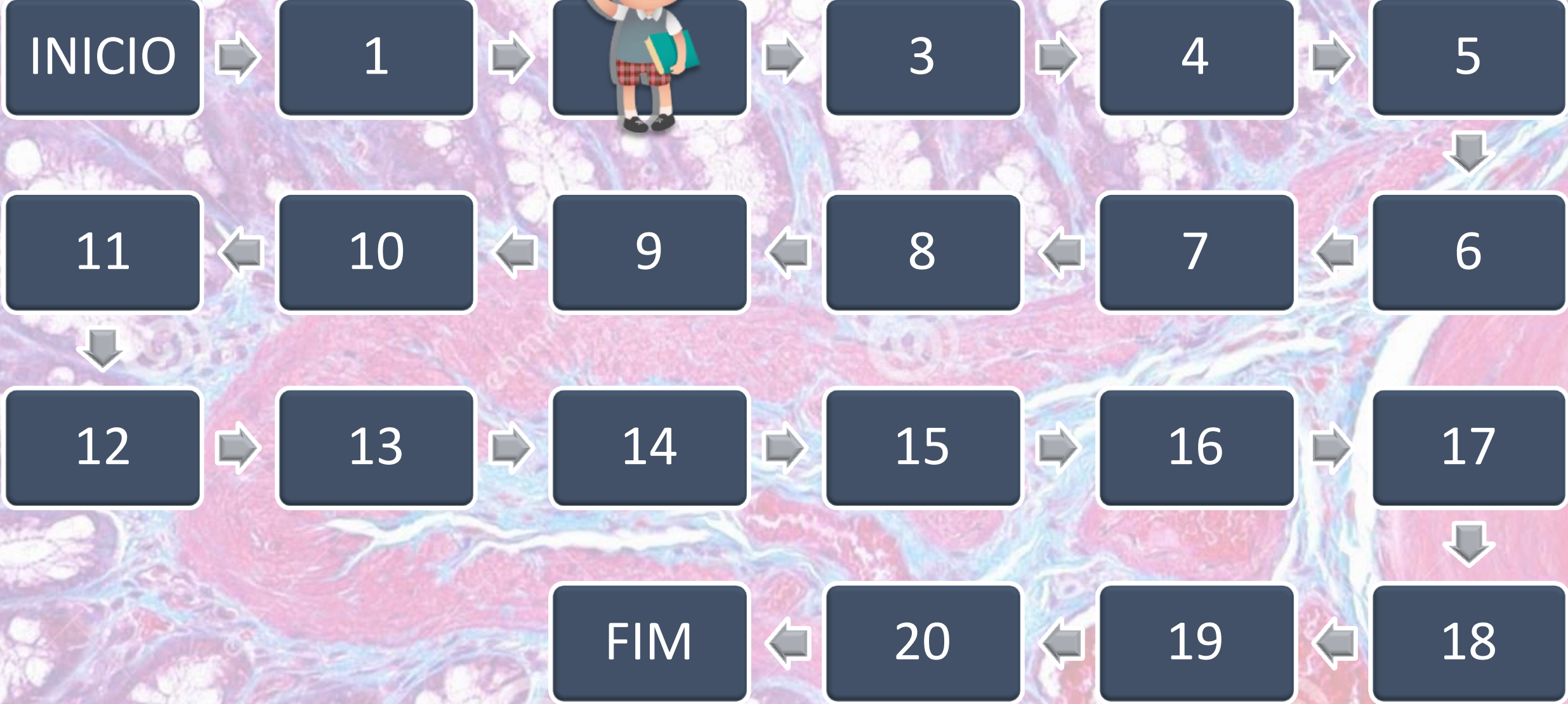
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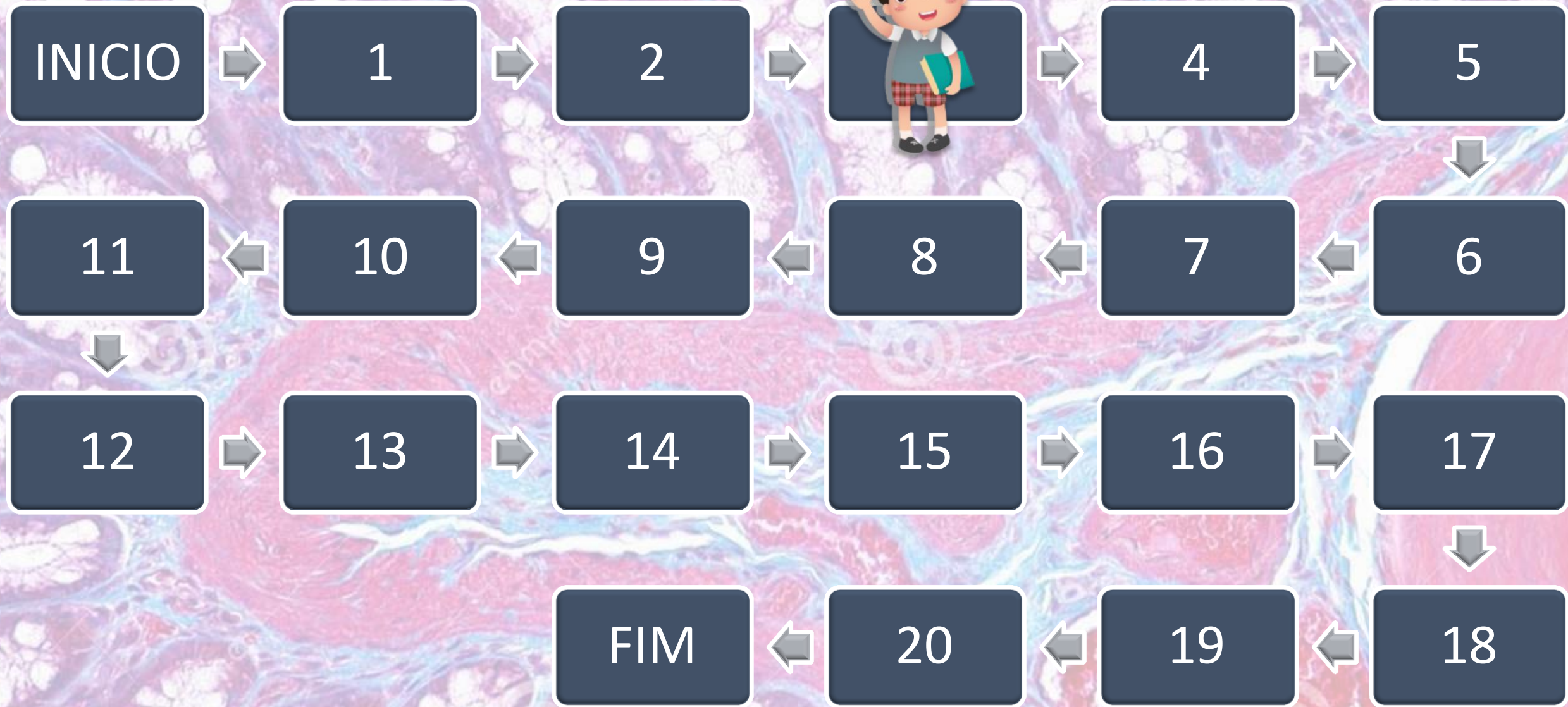
FIM

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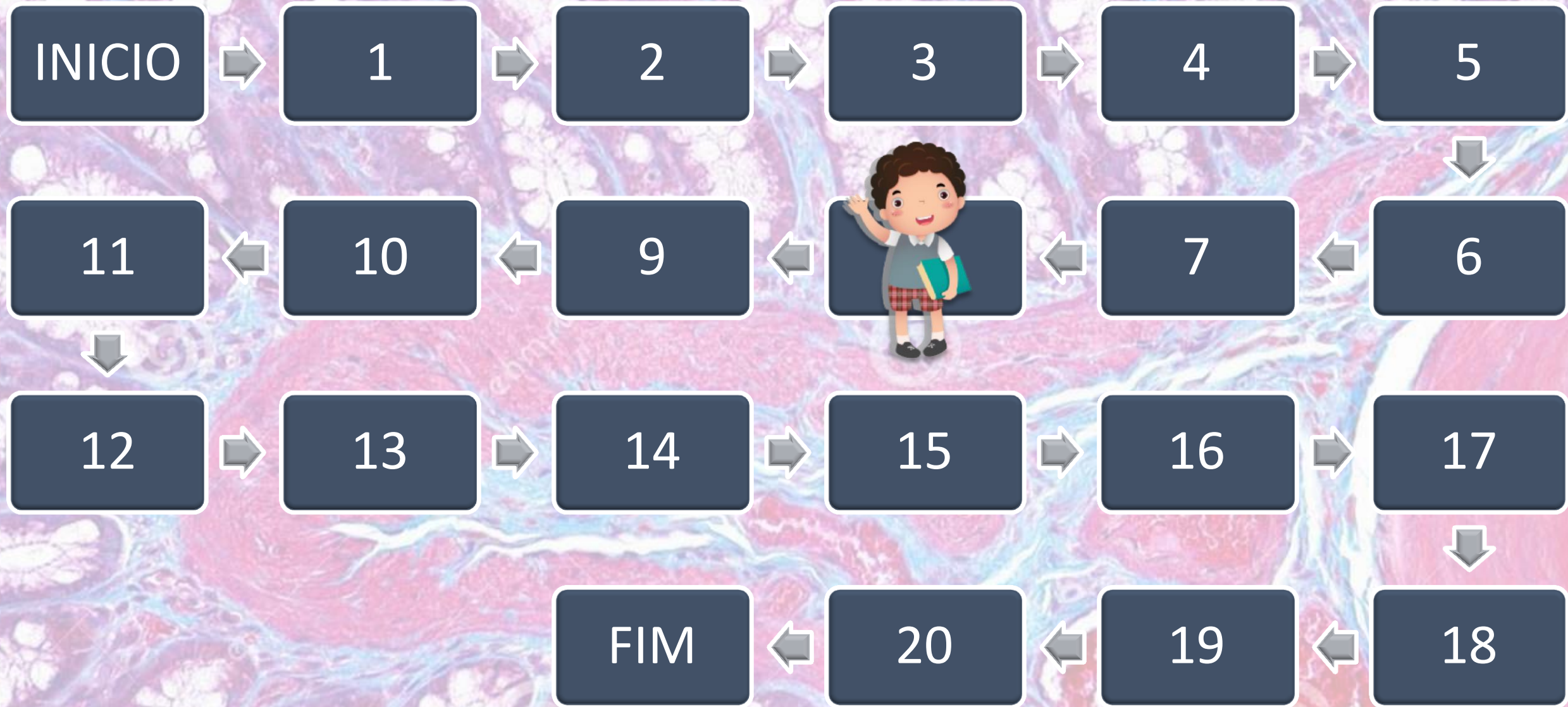


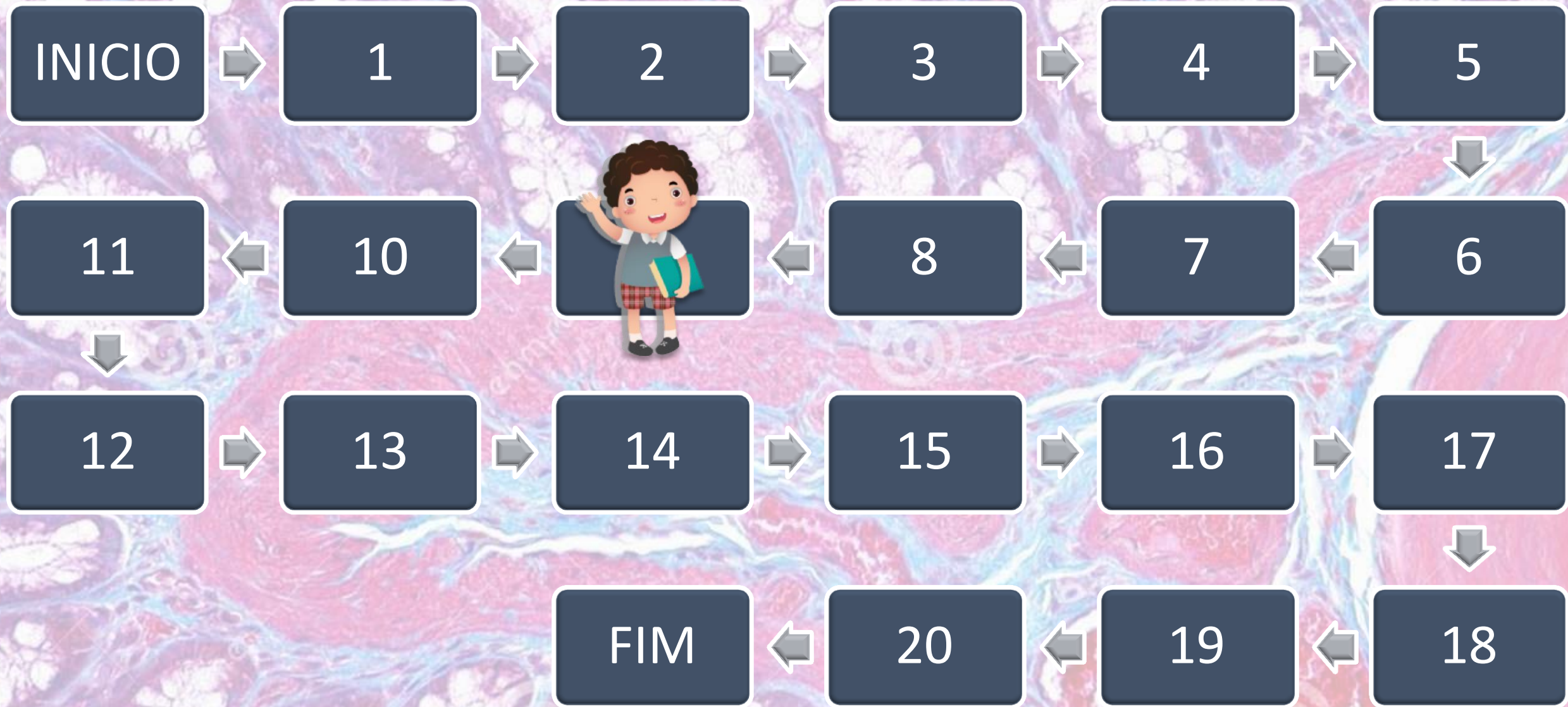














INICIO

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FIM

20

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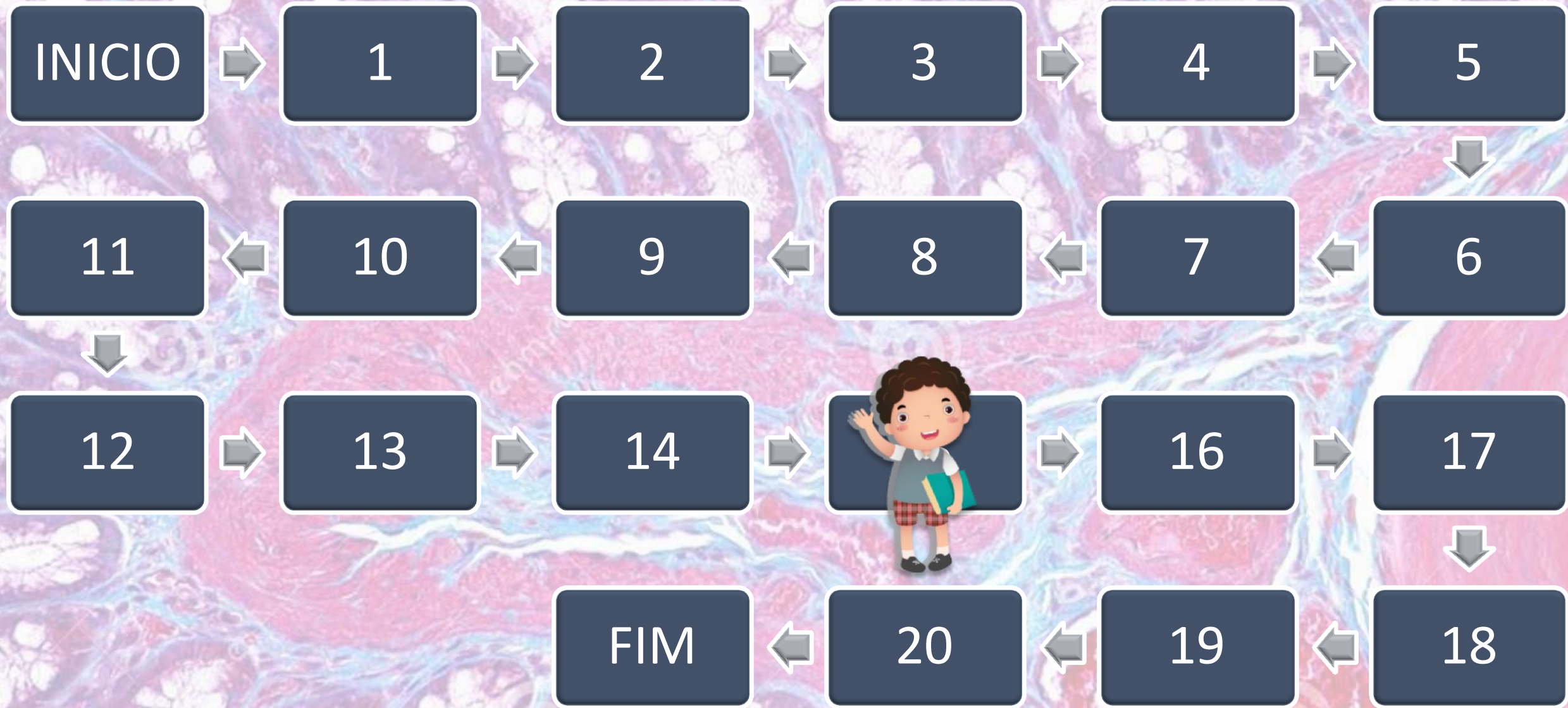
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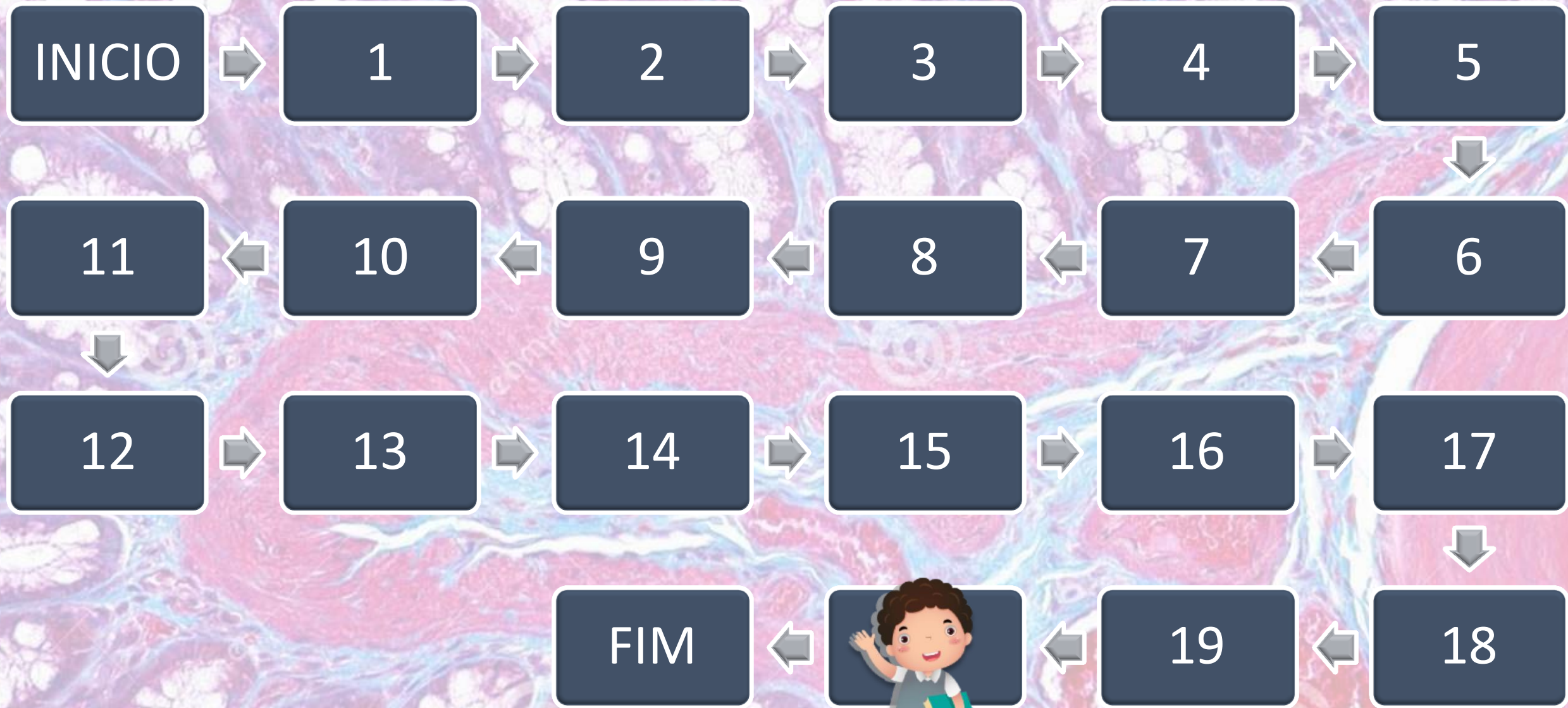


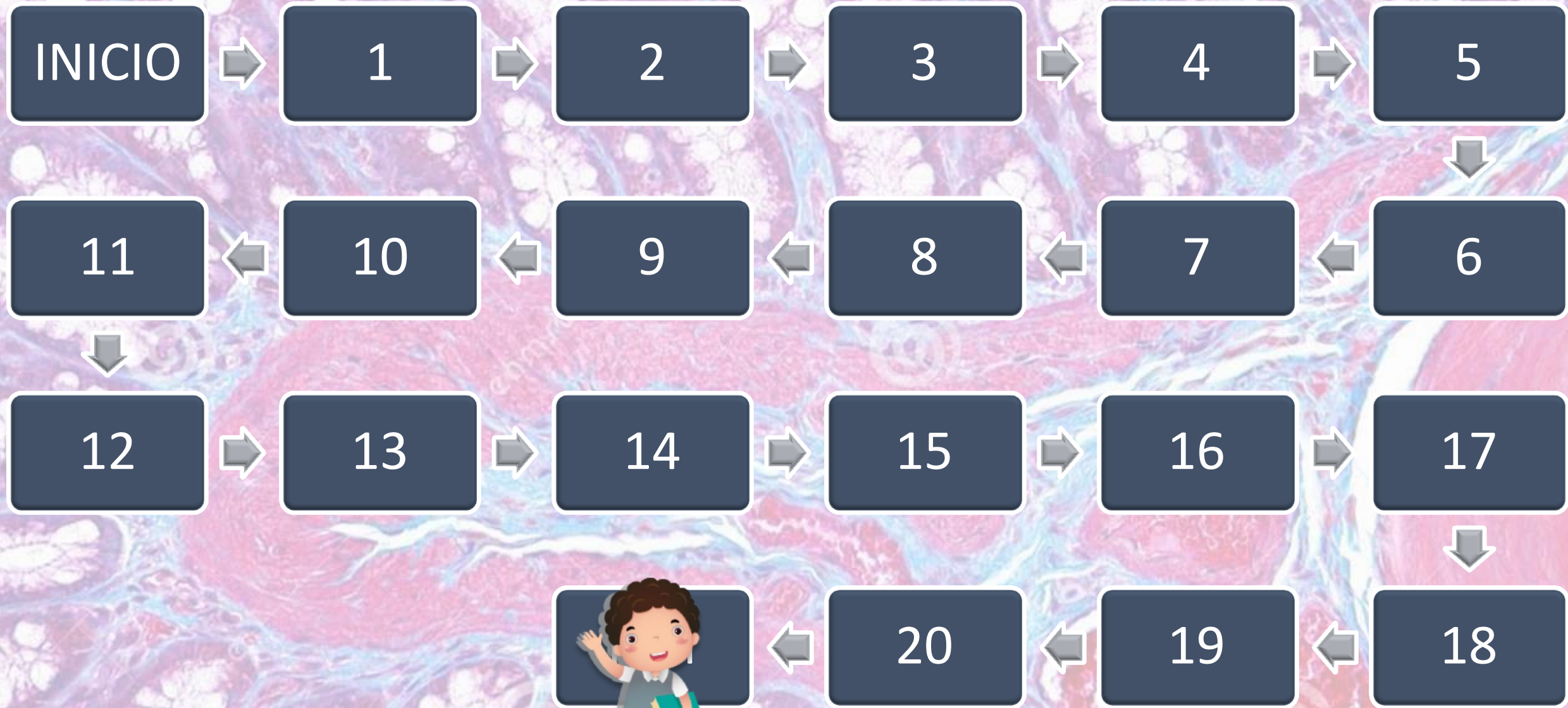














1. The epithelial tissue is characterized by:

a) Presence of cytokeratin in its cells.

b) Abundance of extracellular matrix.

c) Capacity of contraction of its cells.

d) Presence of cells that transmit electric impulses.

Cytokeratins are keratin proteins that make up intermediate filaments found in the intracytoplasmic cytoskeleton of epithelial tissue.



Go

The epithelial tissue is made up of juxtaposed polyhedral cells with little extracellular matrix.

It's
WRONG

← Back

Muscle contraction is a physiological process characteristic of muscle fibers

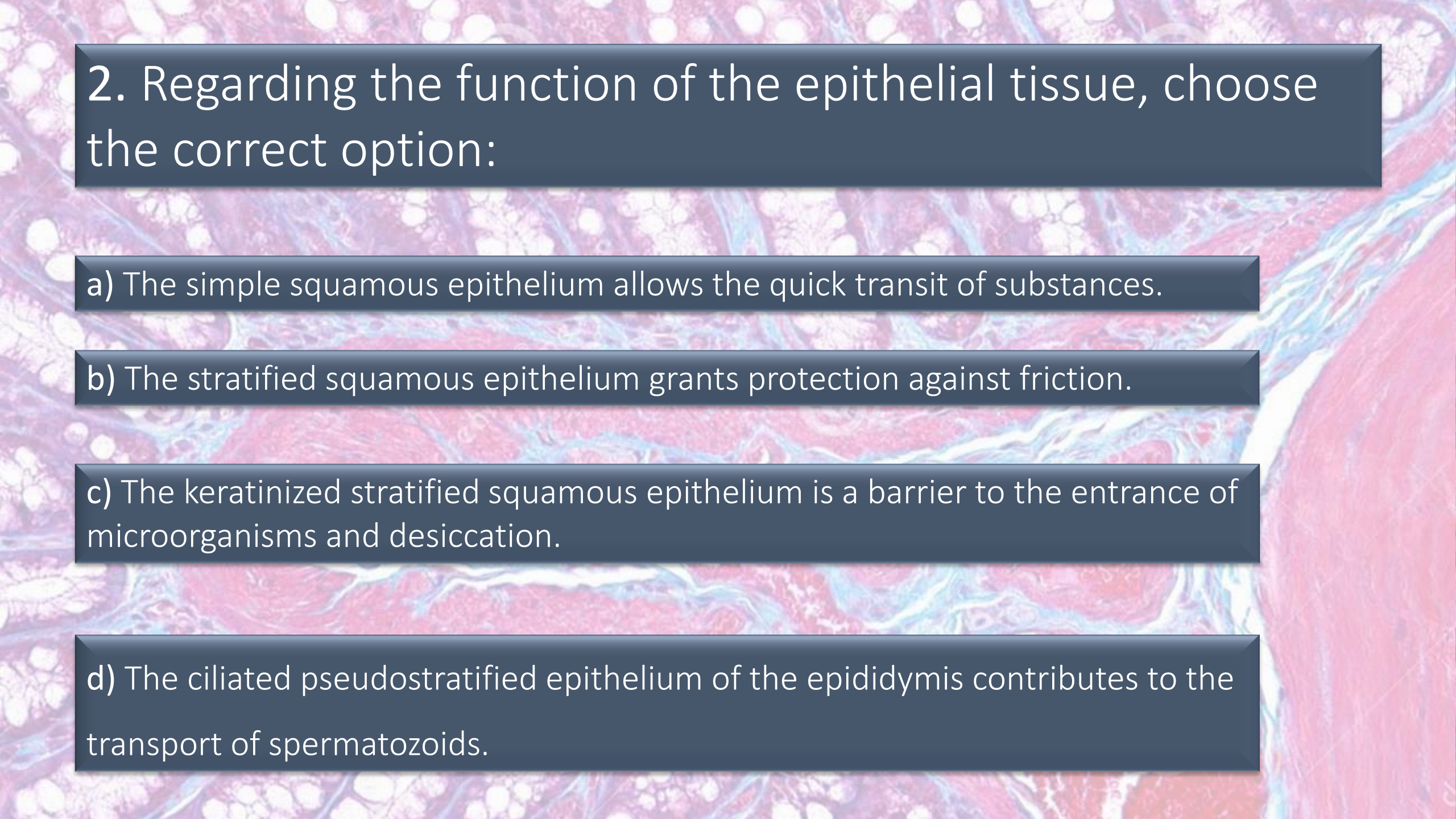
IT'S
WRONG

← Back

Neurons are the cells that make up the nervous system, responsible for conducting, receiving and transmitting nerve impulses throughout the body, making it responsive to the environment

IT'S
WRONG

← Back

A microscopic image of tissue, likely a histological section, showing various cellular structures and connective tissue. The tissue is stained with hematoxylin and eosin (H&E), resulting in pink and blue colors. The image shows a complex arrangement of cells and fibers, with some areas appearing more densely packed than others. The overall appearance is that of a histological section of an organ, possibly the epididymis as mentioned in the text.

2. Regarding the function of the epithelial tissue, choose the correct option:

a) The simple squamous epithelium allows the quick transit of substances.

b) The stratified squamous epithelium grants protection against friction.

c) The keratinized stratified squamous epithelium is a barrier to the entrance of microorganisms and desiccation.

d) The ciliated pseudostratified epithelium of the epididymis contributes to the transport of spermatozooids.

The skin is the largest organ of the human body. It is essential for protection against friction

It's
WRONG

← Back

Simple Pavement Epithelium: composed of flat, irregularly shaped cells that form a continuous surface. Found covering surfaces involved in passive transport of gases and liquids such as the lung surface (pleura), blood capillaries (endothelium), and peritoneum (peritoneum)

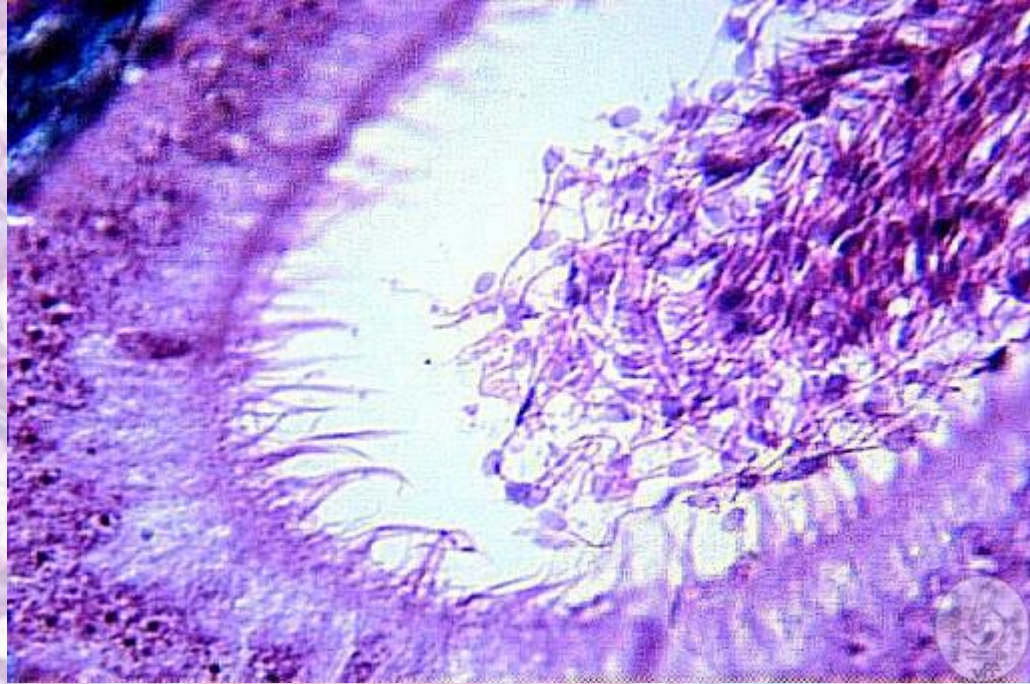
IT'S
WRONG

Back

They are important in the formation of a barrier against the penetration of substances and to make the skin impervious to water, preventing dehydration of the body.

**IT'S
WRONG**

Back



Ciliate Cylindrical Epithelial Tissue





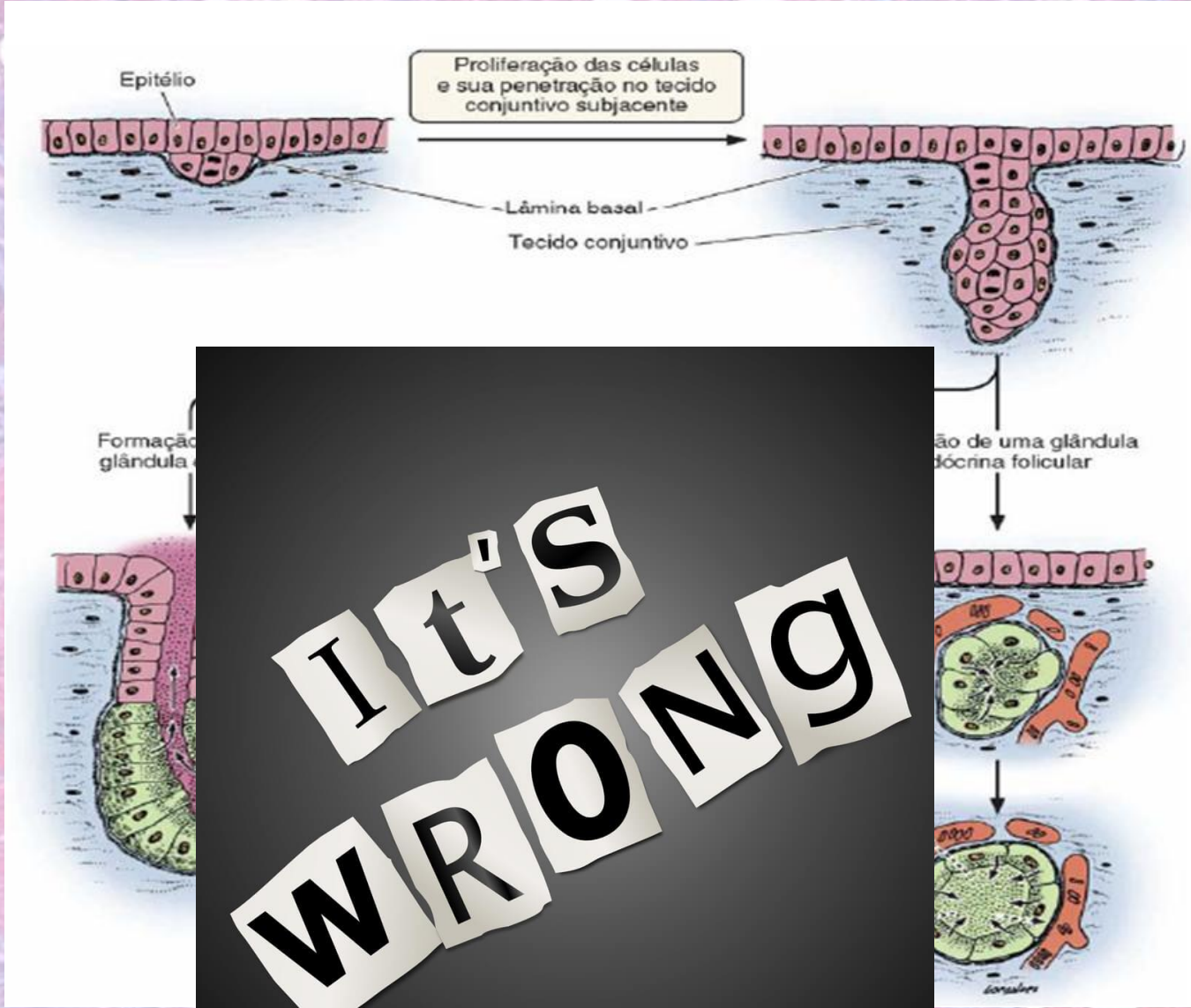
3. When classifying a gland as endocrine, it is considered:

a) The preservation of the communication with the epithelium that originated it through ducts.

b) The presence of mucous and serous acini..

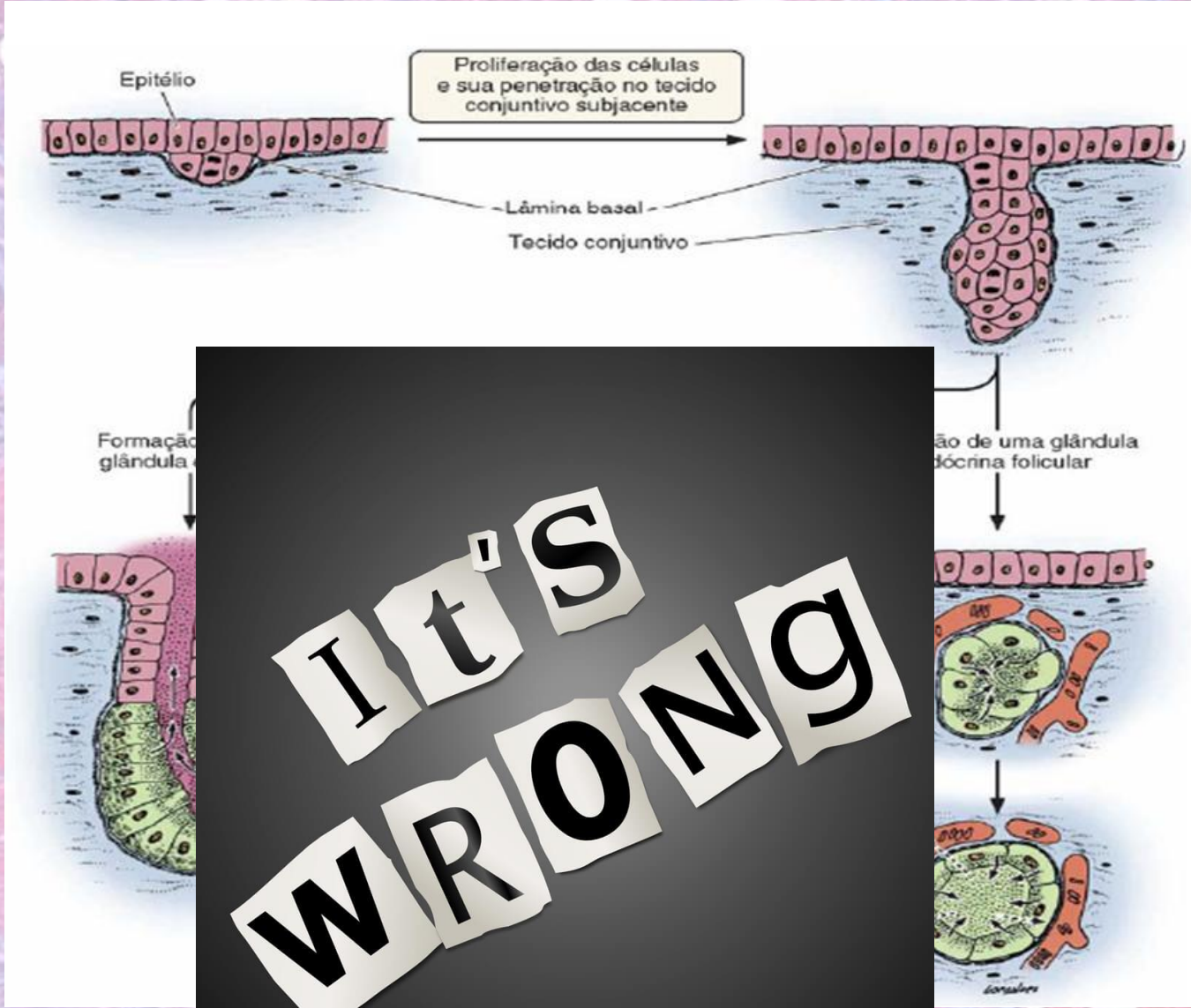
c) The fact that the secretion is lost with the cell.

d) The absence of ducts and the liberation of the secretion to the blood vessels.



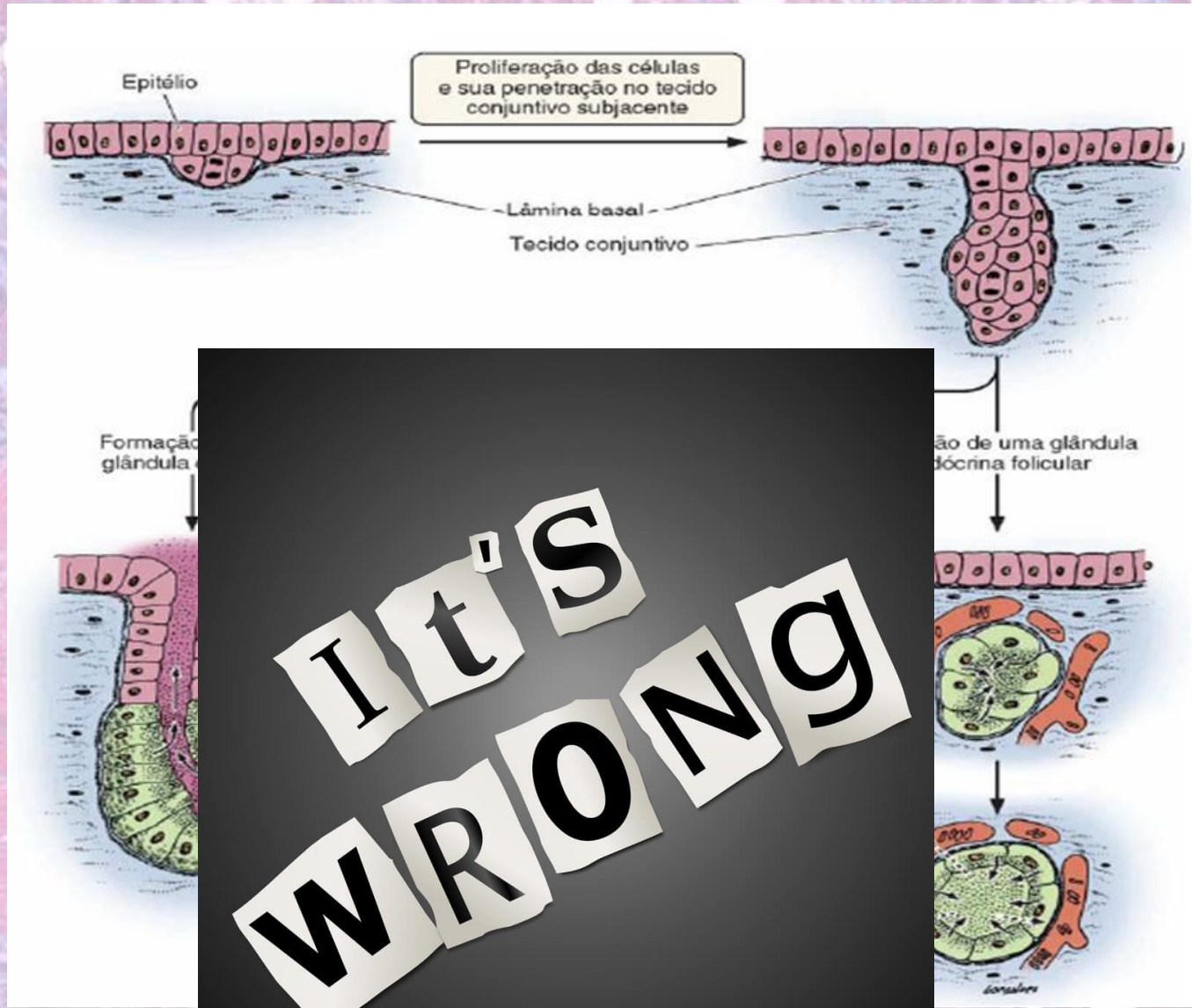
IT'S
WRONG

[Back](#)



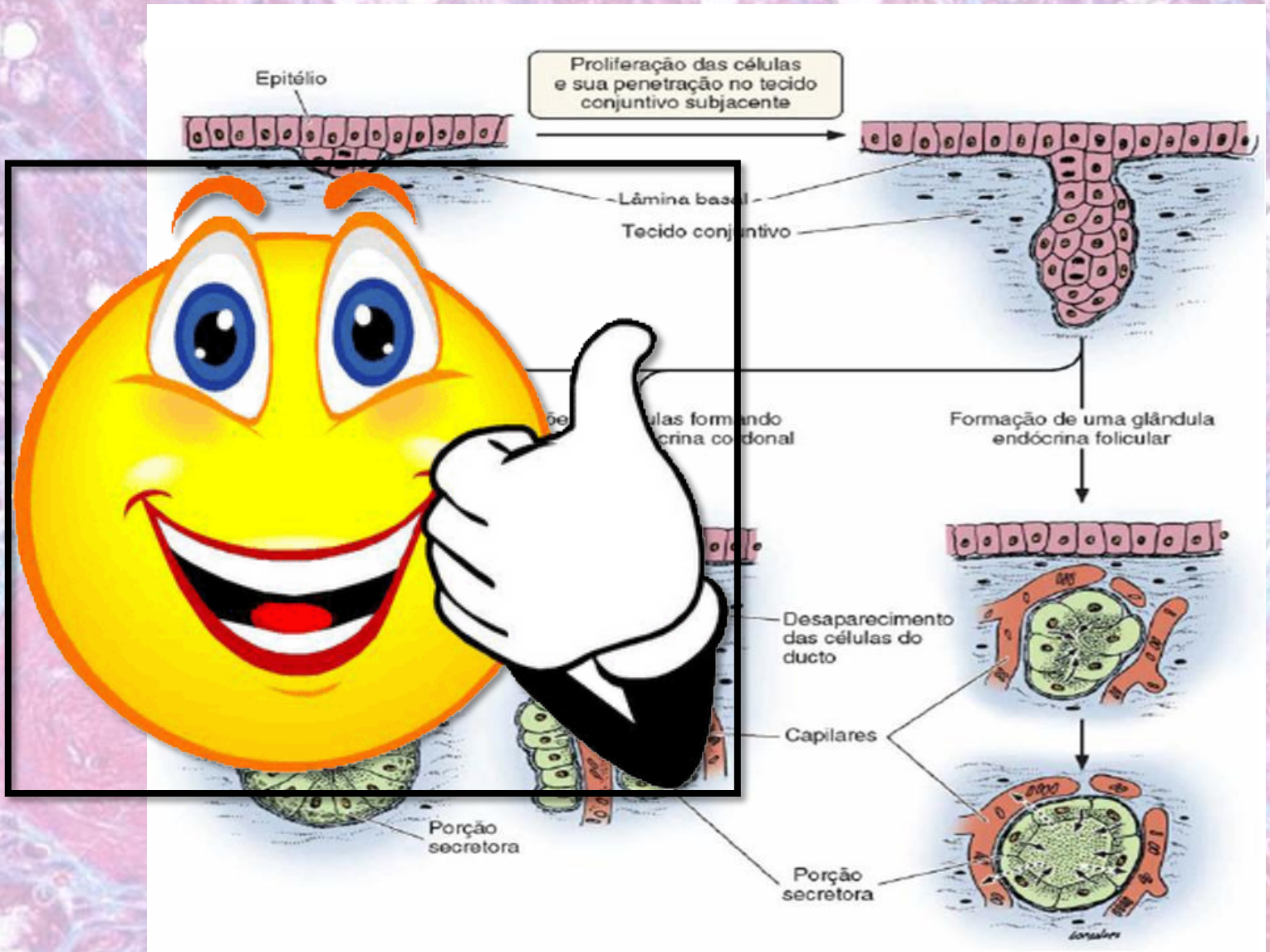
IT'S
WRONG

← Back



IT'S
WRONG

[Back](#)



A histological micrograph showing glandular tissue, likely from the prostate, stained with hematoxylin and eosin (H&E). The image displays several glandular units with acinar structures, surrounded by a dense network of connective tissue stroma. The glands are lined by a single layer of cuboidal epithelial cells. The stroma contains various cell types, including fibroblasts and smooth muscle cells, and is rich in collagen fibers, which appear pink. The overall architecture is organized into lobules separated by fibrous bands.

4. Regarding the extracellular matrix of the epithelial tissue:

a) It is made of a basal lamina and a glycocalyx

b) The basal lamina is made by glycoproteins, such as type III collagen, laminin and entactin, and proteoglycans.

c) The glycocalyx is made of the lipid portion of the plasmatic membrane.

d) All previous options are correct.

That's
right
Baby



Go

It is a matrix rich in proteins and polysaccharides. It has 5 main components: collagen type IV, laminin, fibronectin, entactin and heparansulfate.

**IT'S
WRONG**

← Back

Glycocalyx is an extracellular matrix, a layer external to the membrane, present formed by glycolipids, sphingolipids, glycoproteins and proteoglycans in the glycidic portion of glycoproteins and

IT'S
WRONG

There are incorrect statements !!!

IT'S
WRONG



A microscopic image of glandular tissue, likely the prostate, stained with hematoxylin and eosin (H&E). The image shows numerous glandular units, each consisting of a central duct surrounded by secretory cells. The ducts are lined by a simple cuboidal epithelium. The secretory cells are arranged in a circular pattern around the ducts. The overall structure is highly organized and repetitive.

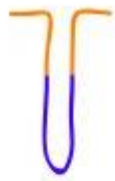
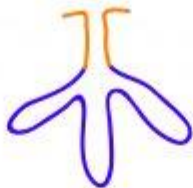


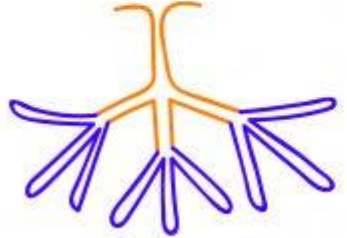
5. The gland is said:

a) branched, when your duct branches.

b) compound, when the secretory portion divides.


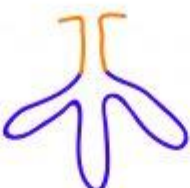


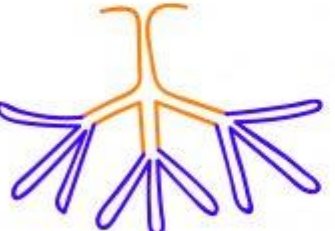
c) alveolar or tubular as to the shape of the secretory portion.

d) simple, when it is formed by a single layer of cells.

GLÂNDULAS SIMPLÉS	 <p>Tubulosa simples</p>	 <p>Tubulosa simples ramificada</p>	 <p>Tubulosa simples enovelada</p>	 <p>Acinosa (ou Alveolar) simples ramificada</p>
GLÂNDULAS COMPOSTAS	 <p>Tubulosa composta</p>			

**IT'S
WRONG**

Voltar

<p>GLÂNDULAS SIMPLES</p>	 <p>Tubulosa simples</p>	 <p>Tubulosa simples ramificada</p>	 <p>Tubulosa simples enovelada</p>	 <p>Acinosa (ou Alveolar) simples ramificada</p>
<p>GLÂNDULAS COMPOSTAS</p>	 <p>Tubulosa composta</p>			

**IT'S
WRONG**

Voltar

That's
right
Baby



Avançar



It's
WRONG

← Voltar

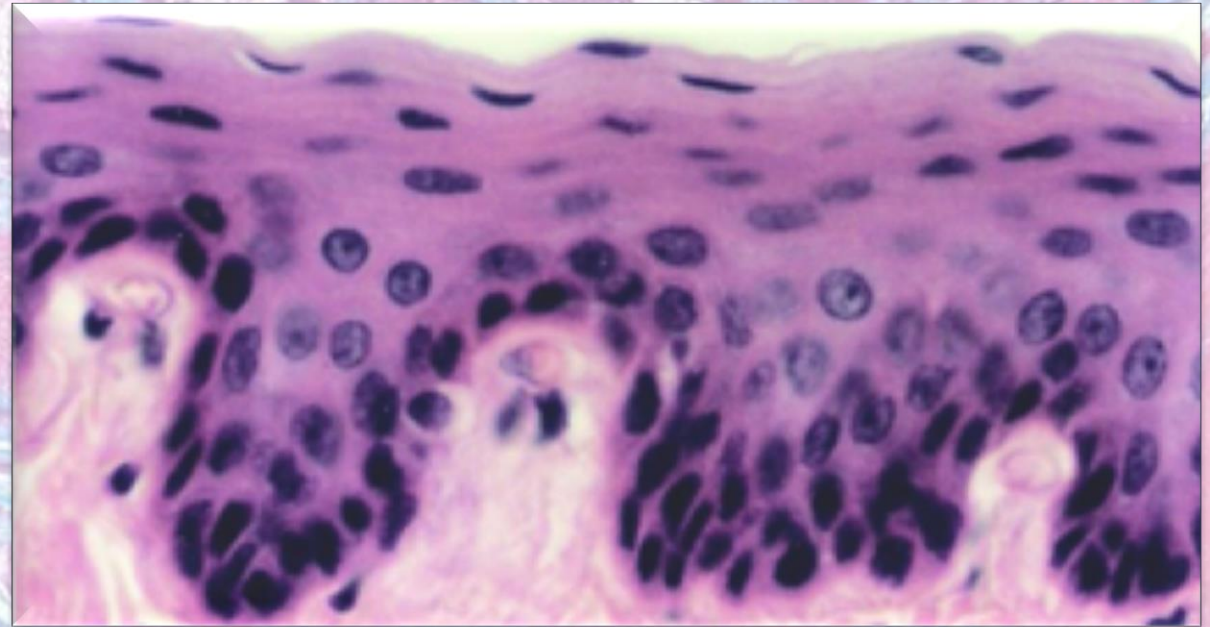
6. Classify the presented epithelium:

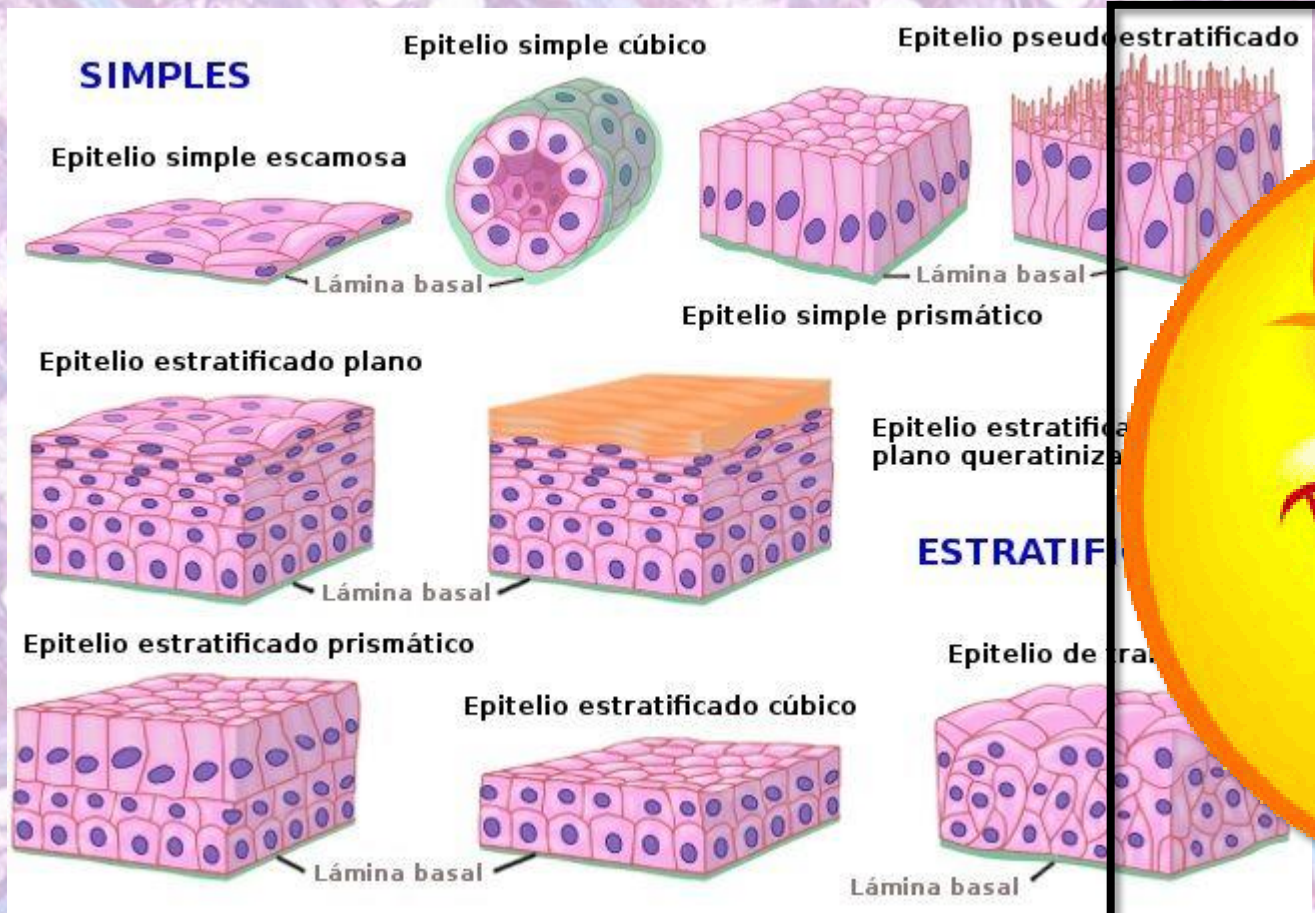
a) stratified pavy.

b) simple pavement.

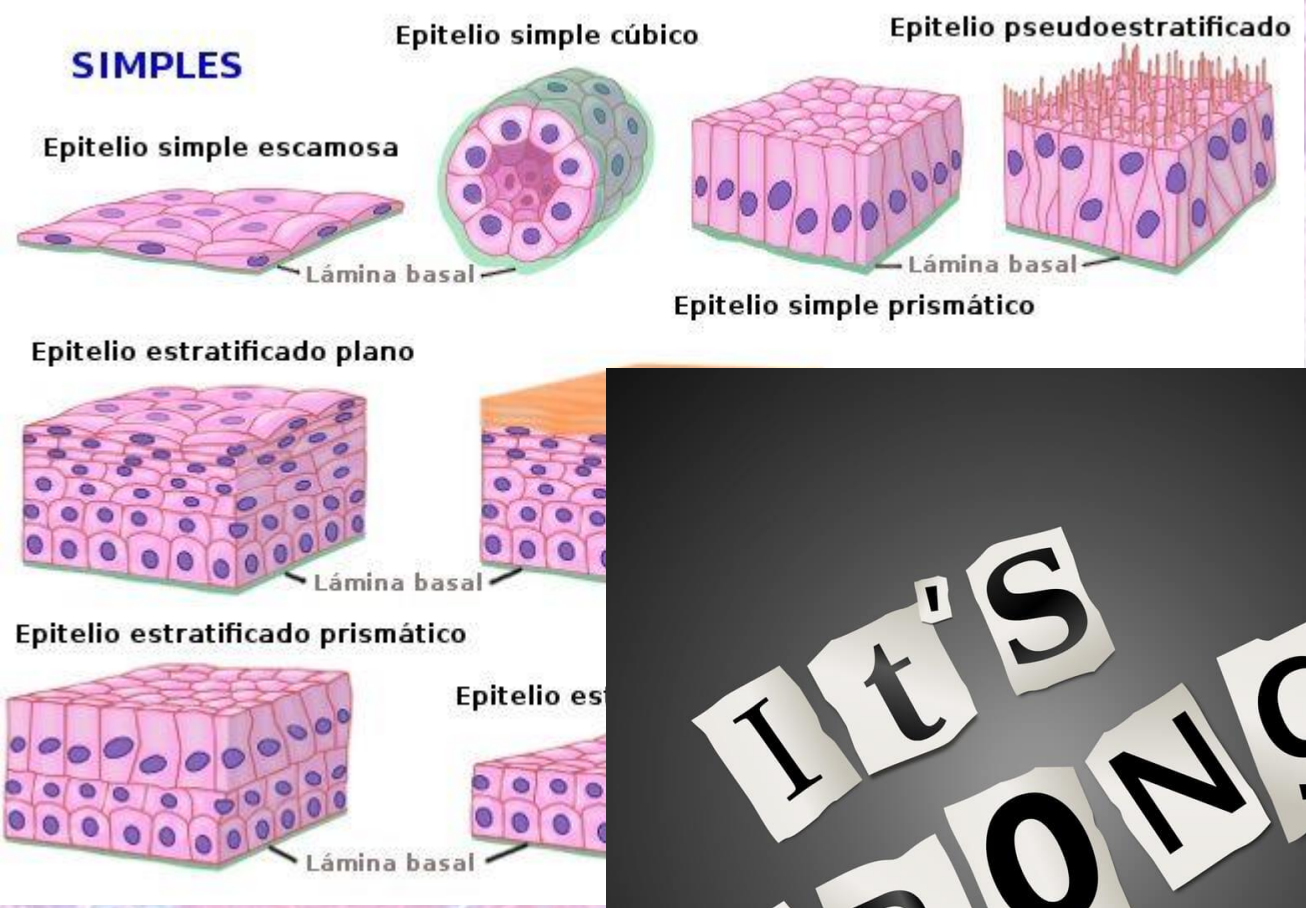
c) transition.

d) stratified keratinized pavement.





Avançar



**IT'S
WRONG**

Voltar

SIMPLES

Epitelio simple cúbico

Epitelio pseudoestratificado

Epitelio simple escamosa

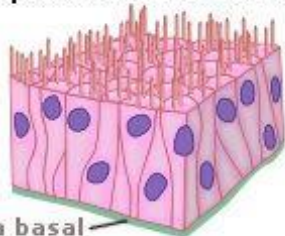
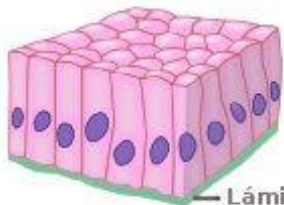
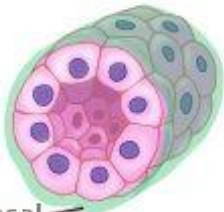


Lámina basal

Lámina basal

Epitelio simple prismático

Epitelio estratificado plano

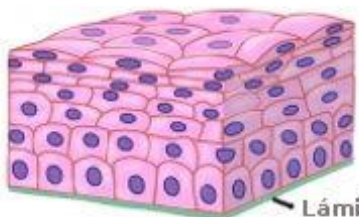


Lámina basal

Epitelio estratificado prismático

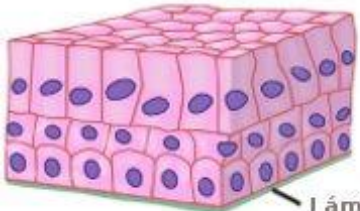


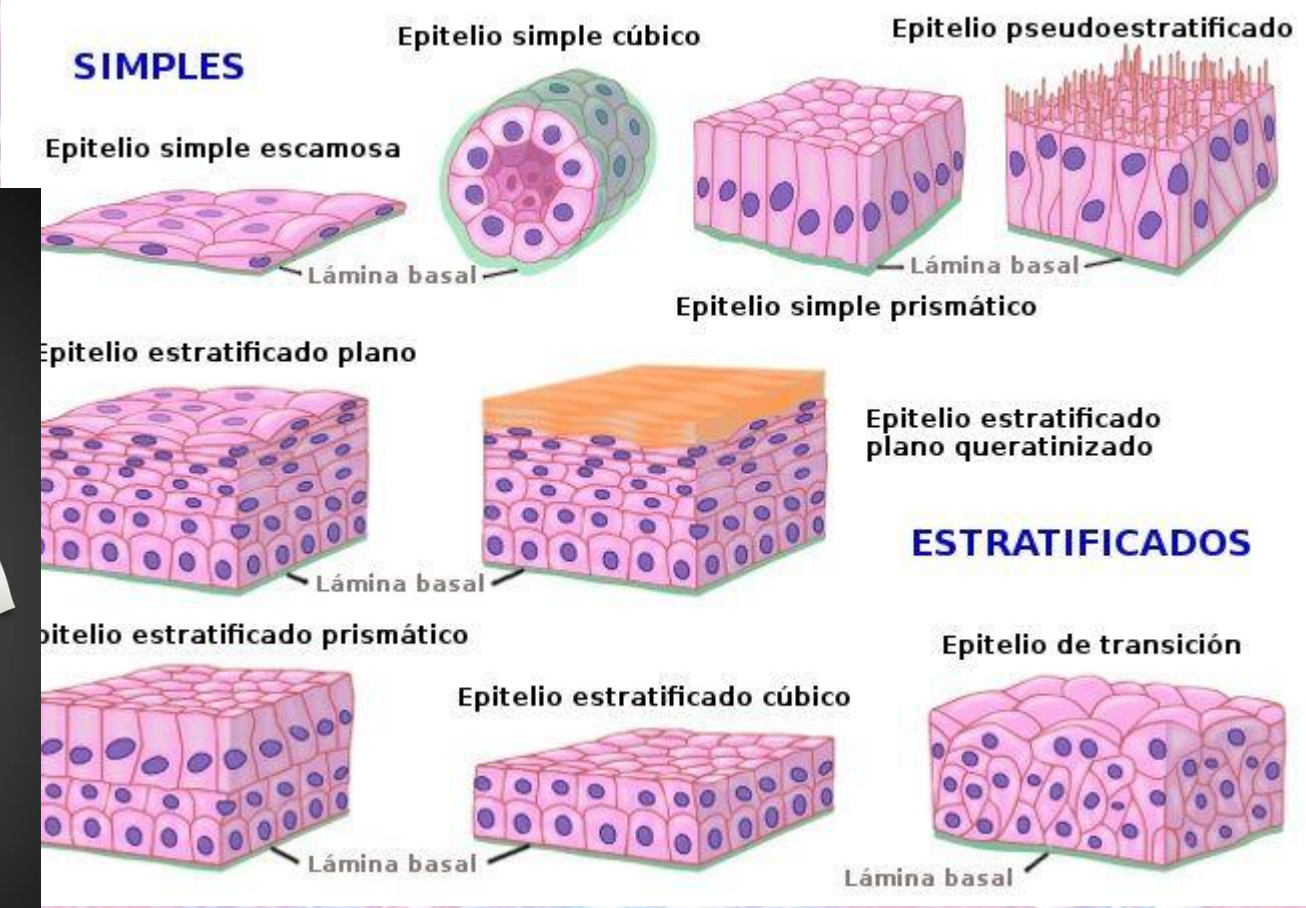
Lámina basal

Epitelio es

**IT'S
WRONG**

 Voltar

IT'S
WRONG



Voltar

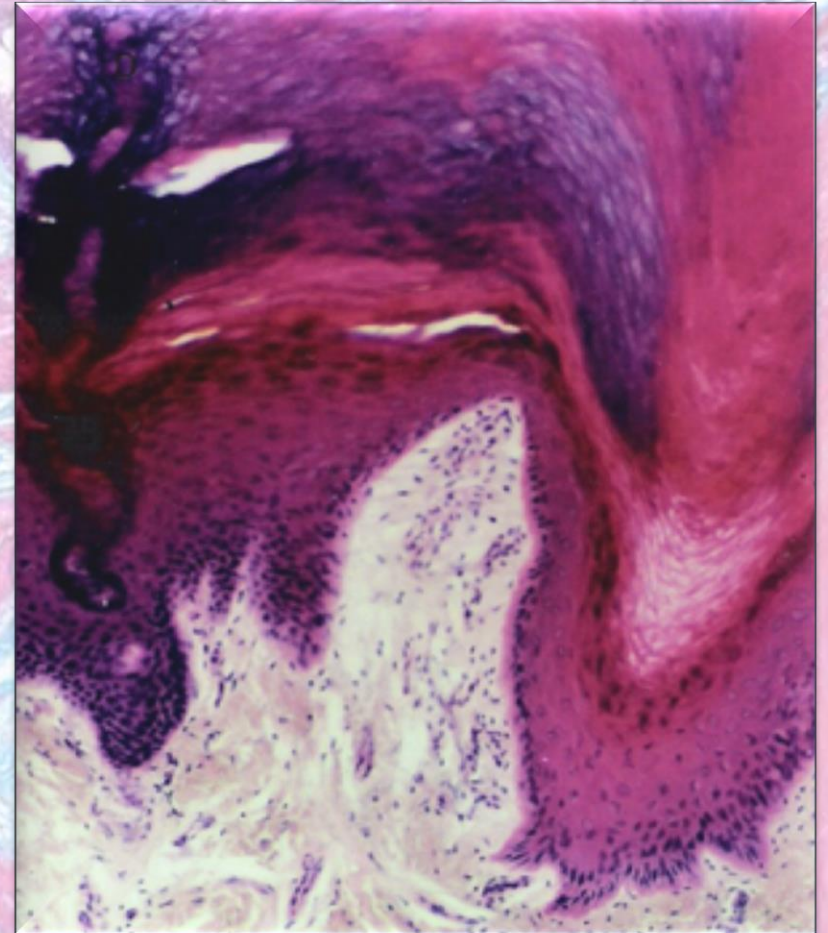
7. Classify the epithelium shown:

a) simple pavy.

b) transition.

c) stratified pavy.

d) stratified keratinized pavement.



SIMPLES

Epitelio simple cúbico

Epitelio pseudoestratificado

Epitelio simple escamosa

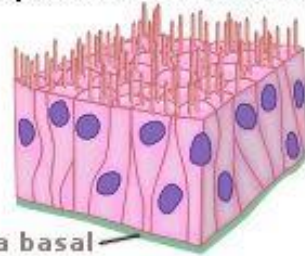
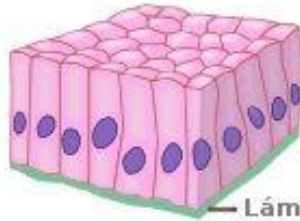
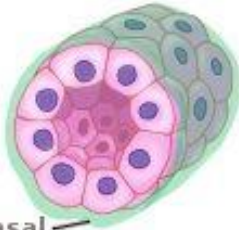
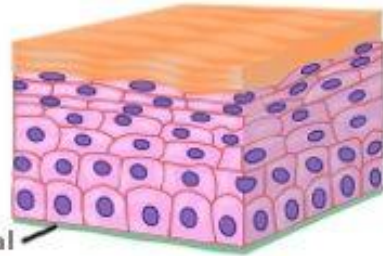


Lámina basal

Lámina basal

Epitelio simple prismático

Epitelio estratificado plano

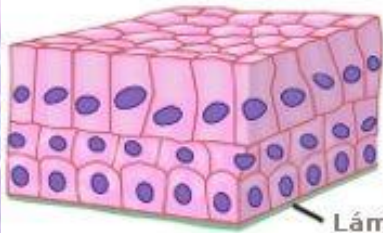


Epitelio estratificado plano queratinizado

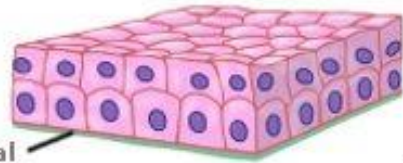
Lámina basal

ESTRATIFICADO

Epitelio estratificado prismático



Epitelio estratificado cúbico



Epitelio de transição

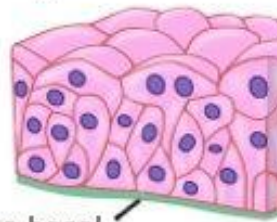


Lámina basal

Lámina basal

IT'S WRONG

Voltar

**IT'S
WRONG**

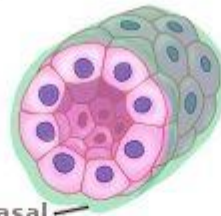
SIMPLES

Epitelio simple escamosa



Lámina basal

Epitelio simple cúbico



Epitelio pseudoestratificado

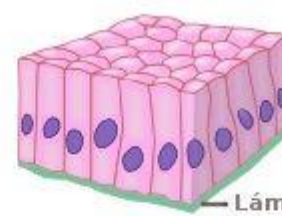
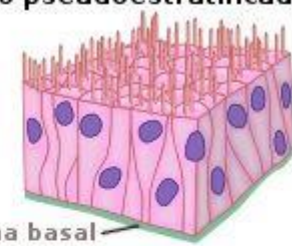


Lámina basal

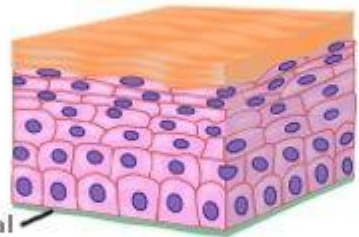
Epitelio simple prismático



Epitelio estratificado plano



Lámina basal



Epitelio estratificado plano queratinizado

ESTRATIFICADOS

Epitelio estratificado prismático

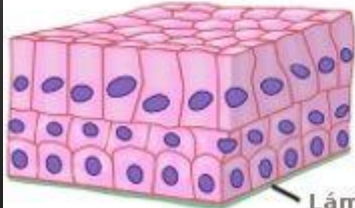
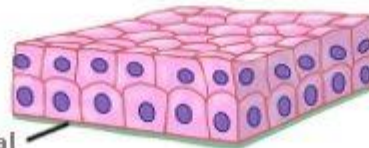


Lámina basal

Epitelio estratificado cúbico



Epitelio de transición

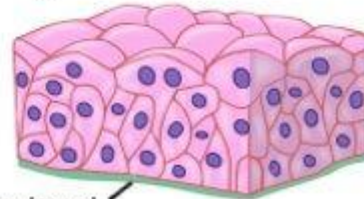
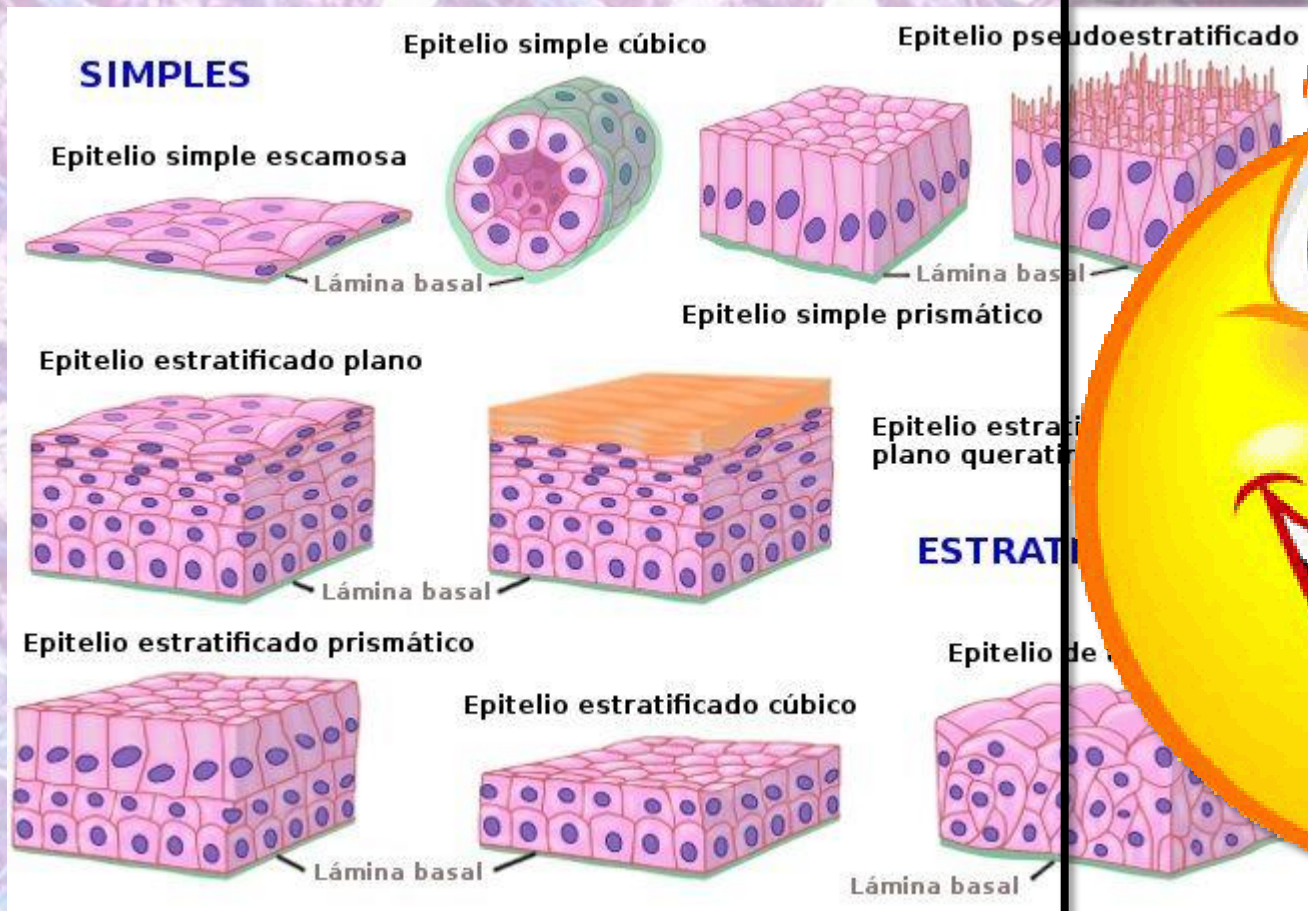


Lámina basal

Voltar



Avançar

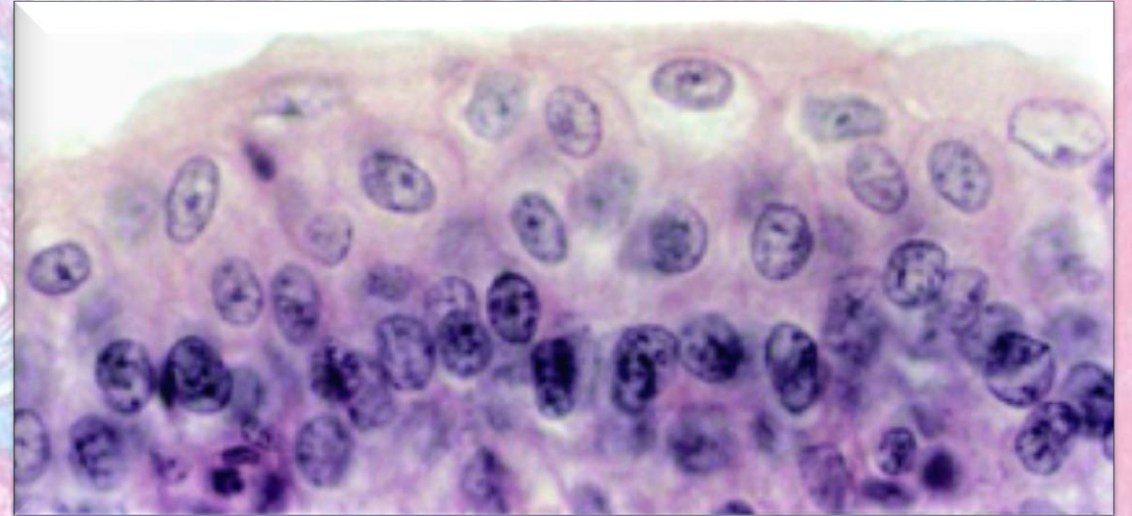
8. Name the epithelium of the photograph:

a) simple cubic epithelium.

b) transition epithelium.

c) cubic stratified epithelium.

d) cubic pseudo-stratified epithelium.



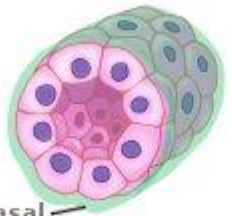
SIMPLES

Epitelio simple escamosa



Lámina basal

Epitelio simple cúbico



Epitelio pseudoestratificado

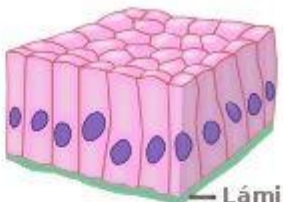
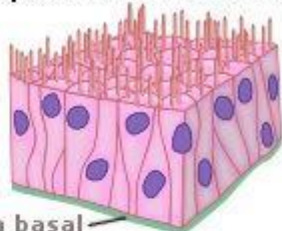


Lámina basal

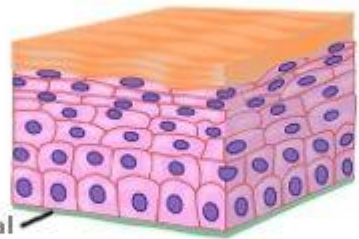


Epitelio simple prismático

Epitelio estratificado plano



Lámina basal



Epitelio estratificado plano queratinizado

ESTRATIFICADO

Epitelio estratificado prismático

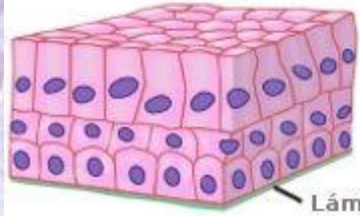
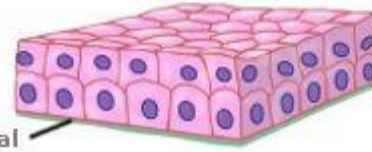


Lámina basal

Epitelio estratificado cúbico



Epitelio de trans

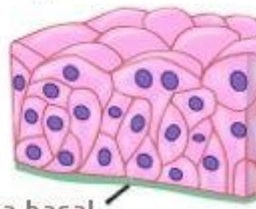


Lámina basal

IT'S WRONG

Voltar

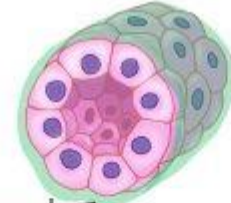
SIMPLES

Epitelio simple escamosa



Lámina basal

Epitelio simple cúbico



Epitelio pseudoestratificado

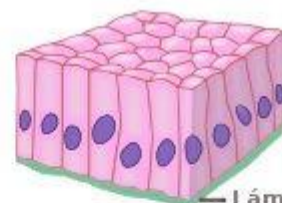
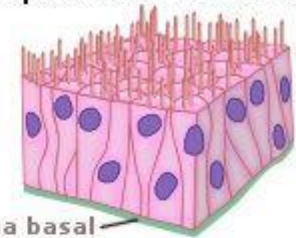


Lámina basal

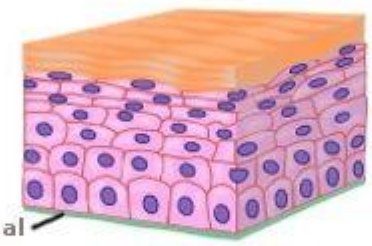


Epitelio simple prismático

Epitelio estratificado plano



Lámina basal



Epitelio estratificado plano queratinizado

ESTRATIFICADO

Epitelio estratificado prismático

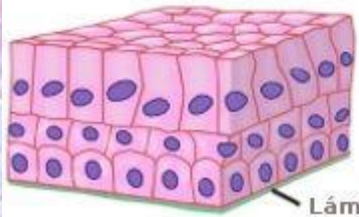


Lámina basal

Epitelio estratificado cúbico

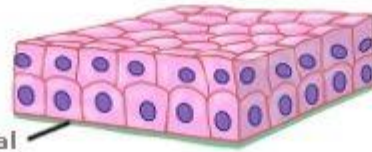
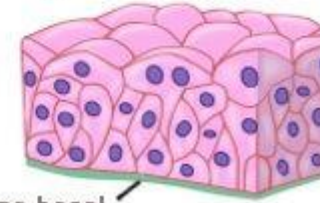


Lámina basal

Epitelio de transición



 Voltar

IT'S WRONG

**IT'S
WRONG**

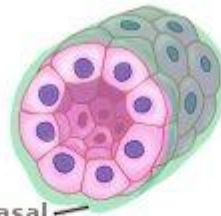
SIMPLES

Epitelio simple escamosa



Lámina basal

Epitelio simple cúbico



Epitelio pseudoestratificado

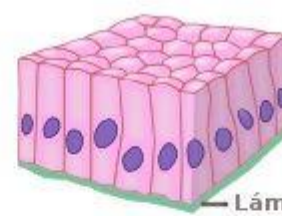
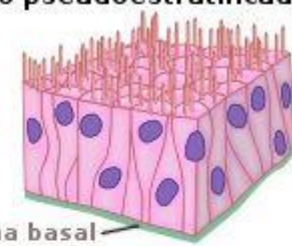


Lámina basal

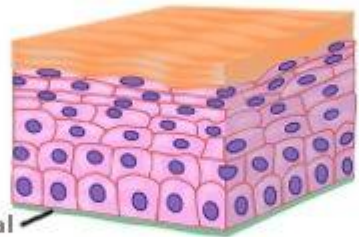
Epitelio simple prismático



Epitelio estratificado plano



Lámina basal



Epitelio estratificado plano queratinizado

ESTRATIFICADOS

Epitelio estratificado prismático

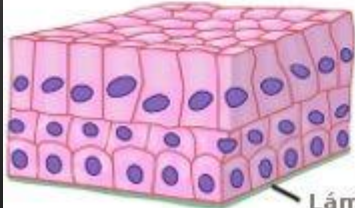
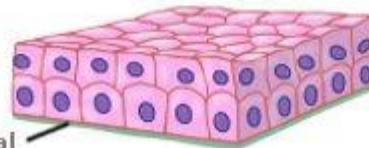


Lámina basal

Epitelio estratificado cúbico



Epitelio de transición

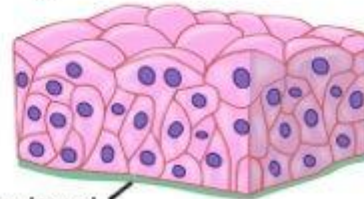


Lámina basal

Voltar

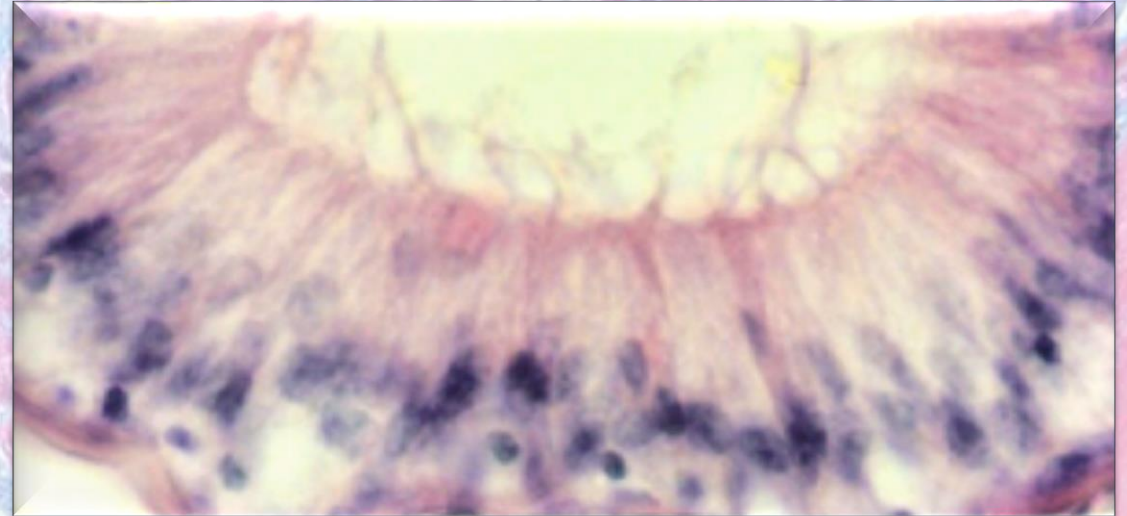
9. What is the epididymis of the epididymis?

a) simple with microvilli.

b) columnar ciliated pseudo-stratified.

c) columnar pseudo-stratified with stereocilia.

d) stratified columnar ciliate.



SIMPLES

Epitelio simple cúbico

Epitelio pseudoestratificado

Epitelio simple escamosa

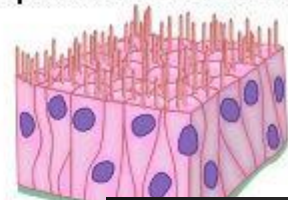
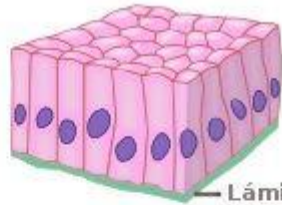
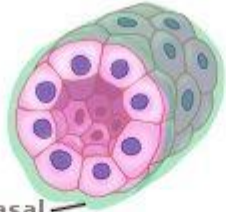
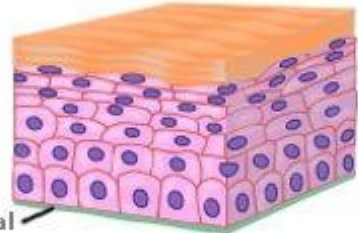


Lámina basal

Lámina basal

Epitelio simple prismático

Epitelio estratificado plano

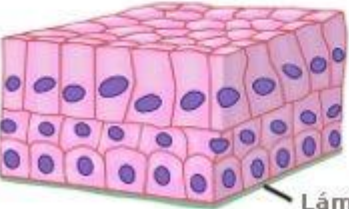


Epitelio estratificado plano queratinizado

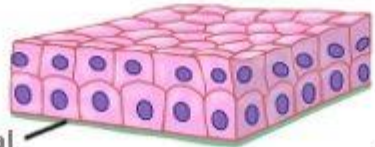
Lámina basal

ESTRATIFICADO

Epitelio estratificado prismático



Epitelio estratificado cúbico



Epitelio de transição

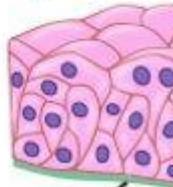
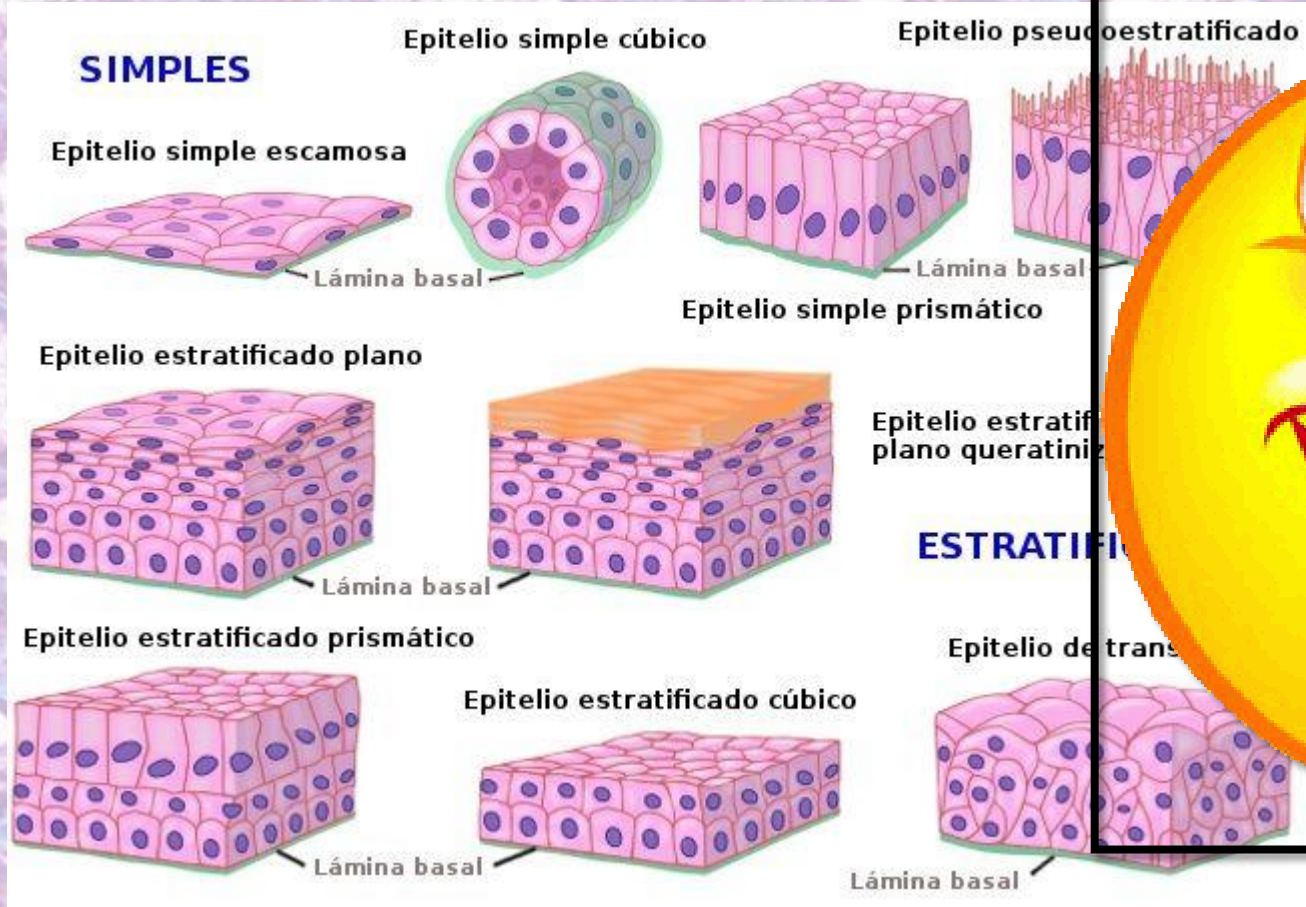


Lámina basal

Lámina basal

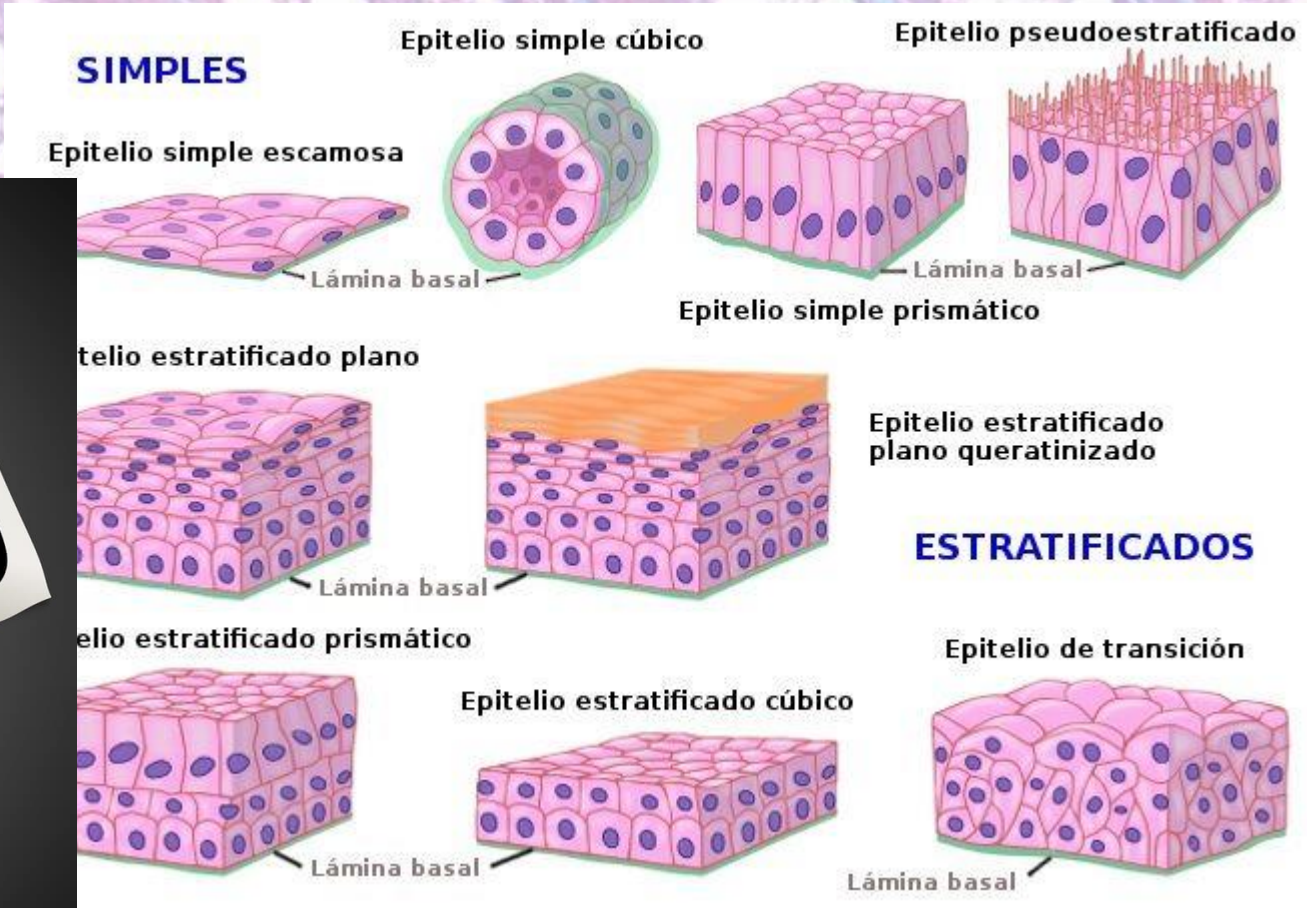
IT'S WRONG

Voltar



Avançar

IT'S
WRONG



← Voltar

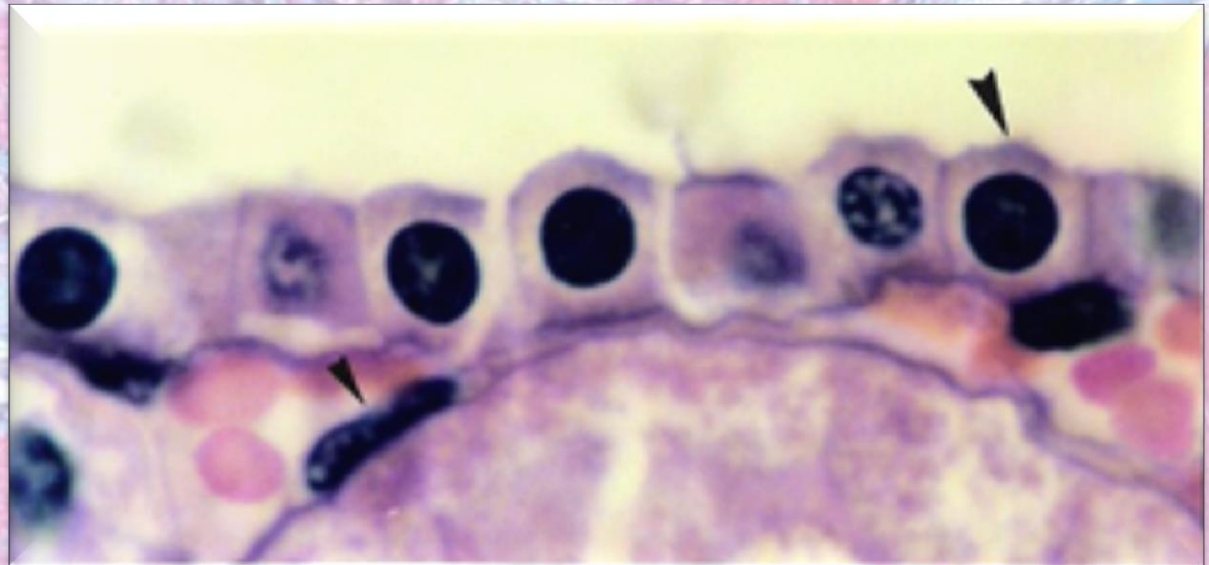
10. According to their shape, the cells shown with small arrow and big arrow are named respectively:

a) spherical and spherical.

b) pavy and cubic.

c) elongated and spherical.

d) flat and square.



SIMPLES

Epitelio simple cúbico

Epitelio pseudoestratificado

Epitelio simple escamosa

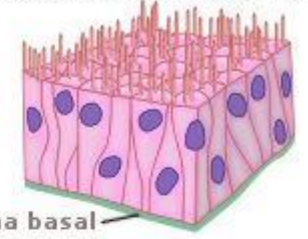
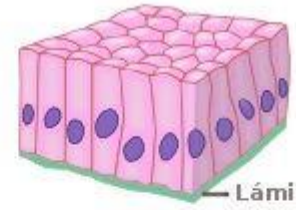
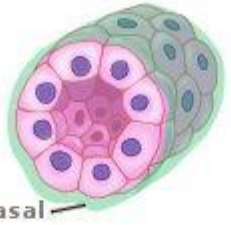
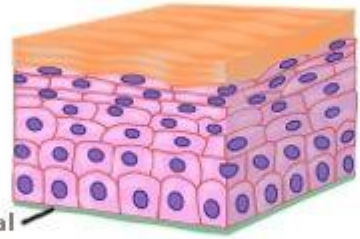


Lámina basal

Lámina basal

Epitelio simple prismático

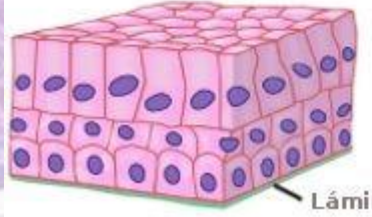
Epitelio estratificado plano



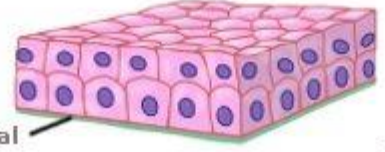
Epitelio estratificado plano queratinizado

Lámina basal

Epitelio estratificado prismático



Epitelio estratificado cúbico



ESTRATIFICADOS

Epitelio de transición

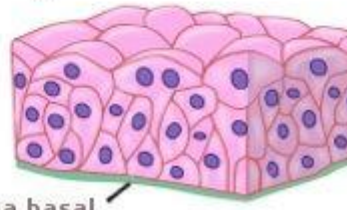
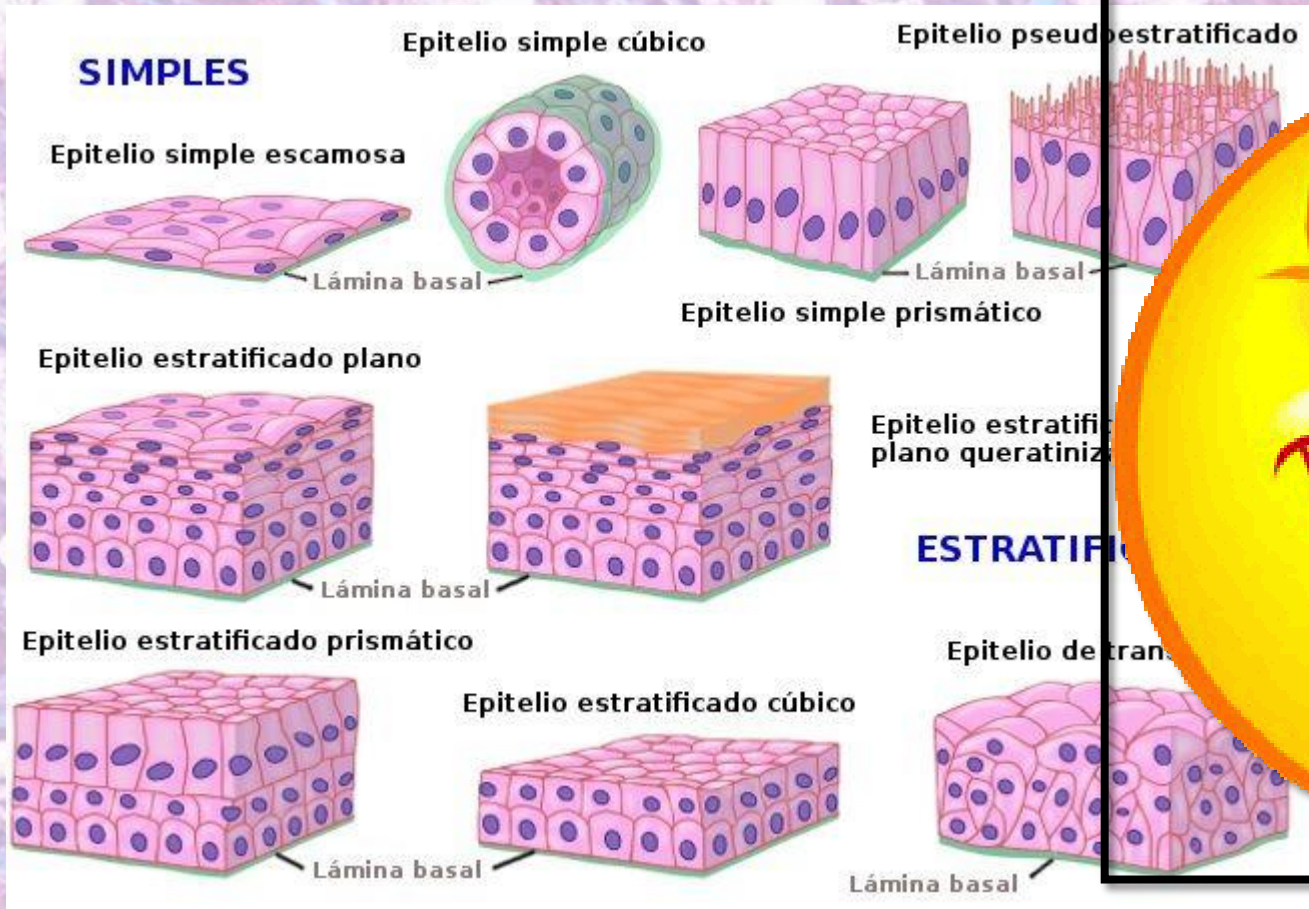


Lámina basal

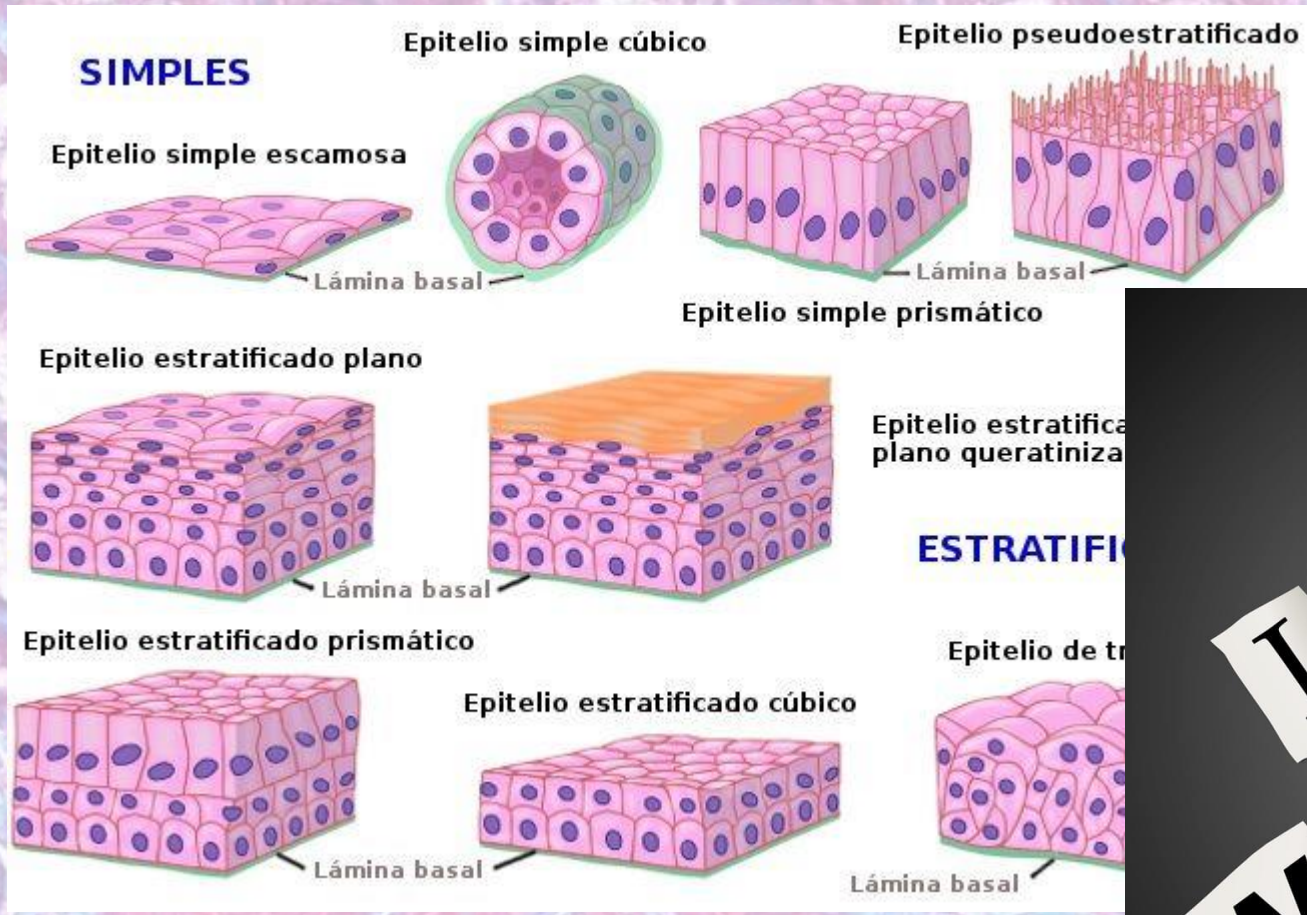
Lámina basal

**IT'S
WRONG**

Voltar



Avançar



**IT'S
WRONG**

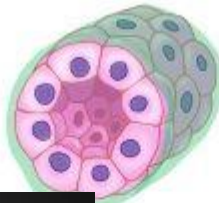
Voltar

SIMPLES

Epitelio simple escamosa



Epitelio simple cúbico



Epitelio pseudoestratificado

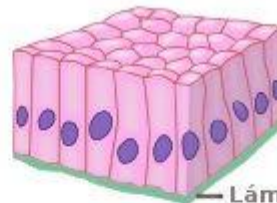
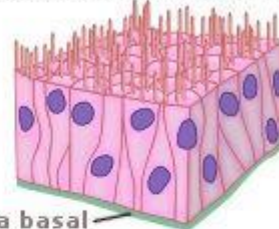
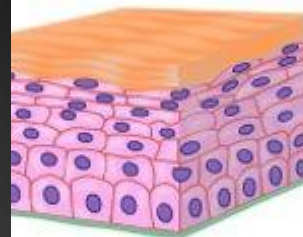


Lámina basal

Epitelio simple prismático



Epitelio estratificado plano queratinizado

ESTRATIFICADOS

Epitelio de transición

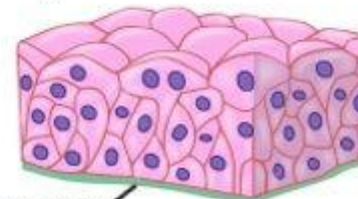
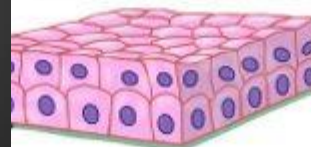


Lámina basal

Epitelio estratificado cúbico



IT'S
WRONG

Voltar

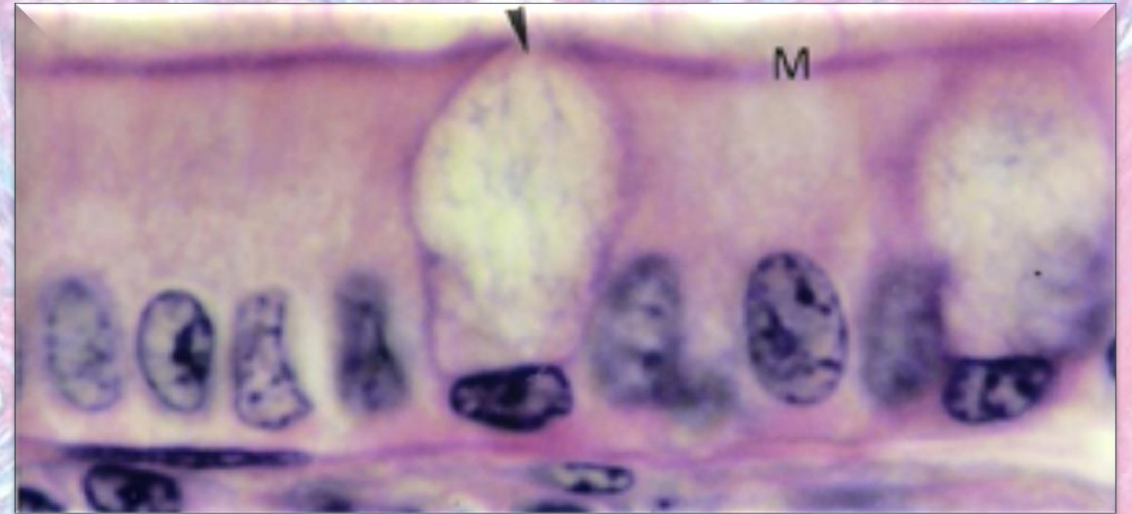
11. Check the incorrect alternative on the epithelium shown:

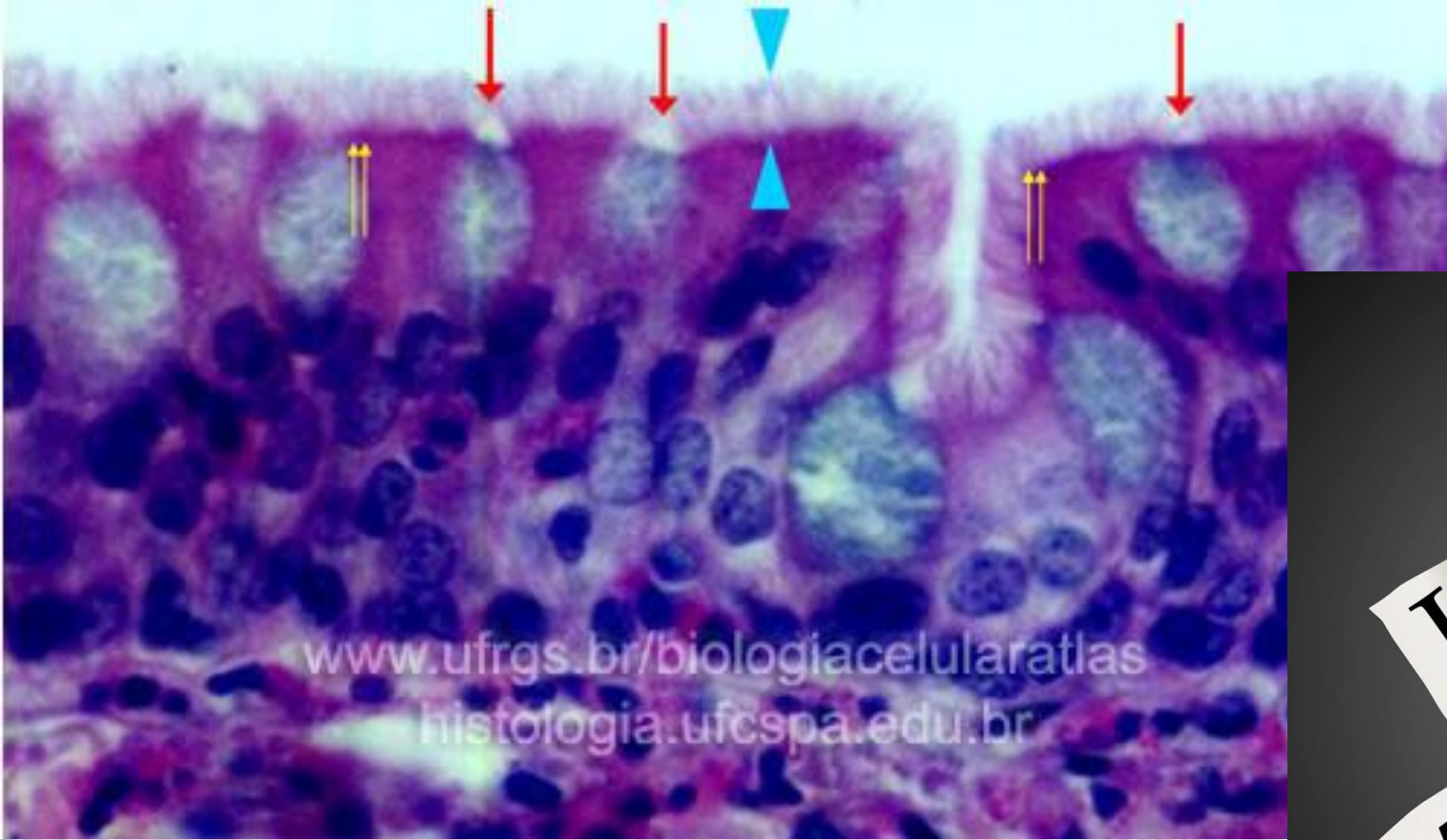
a) the arrow indicates a goblet cell.

b) the M indicates microvilli.

c) it is the epithelium that lines the intestine.

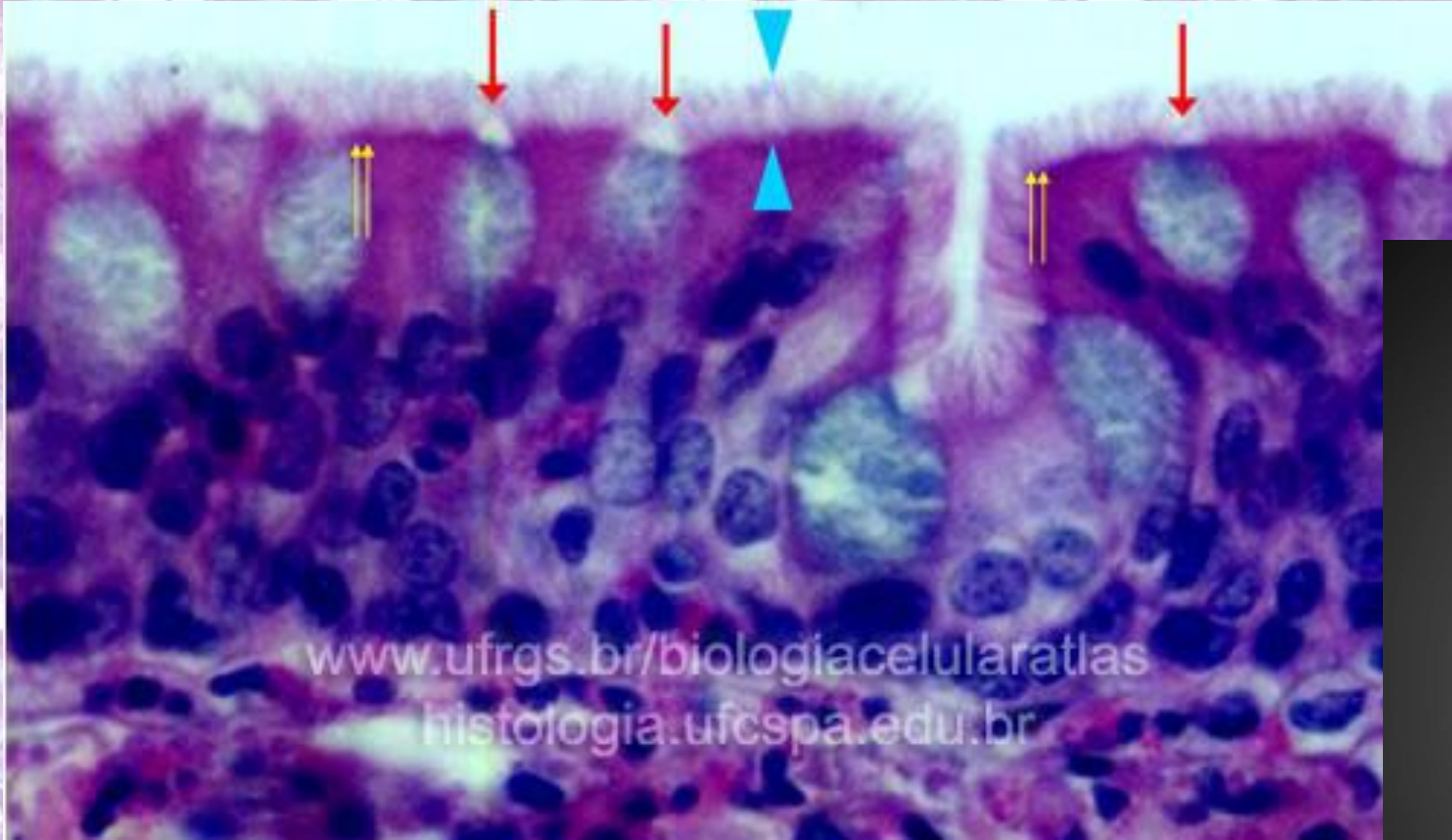
d) the epithelium is called a simple columnar.





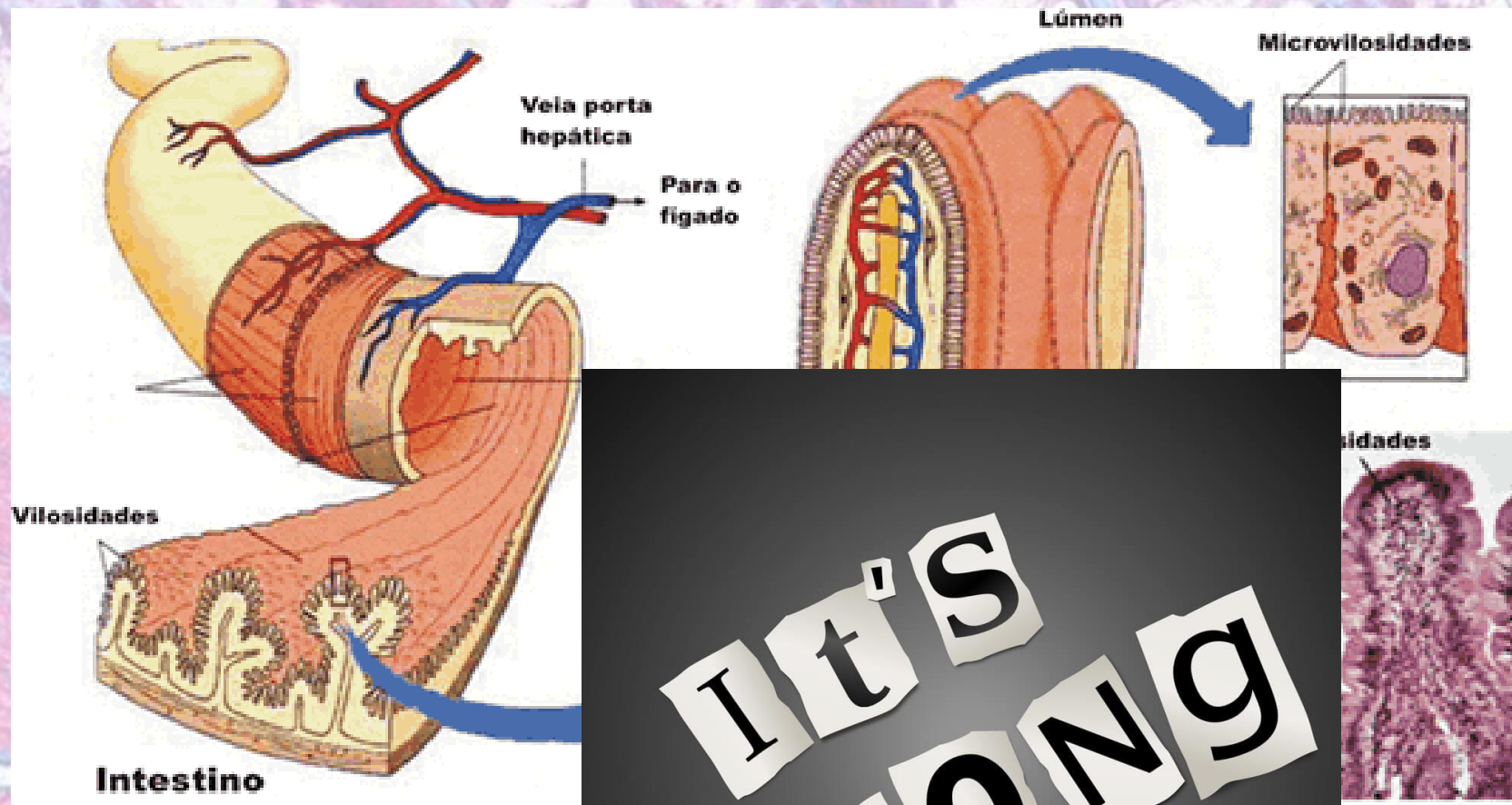
**IT'S
WRONG**

Voltar



**It's
WRONG**

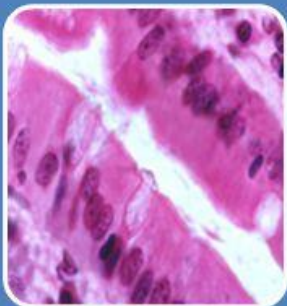
 Voltar



IT'S
WRONG

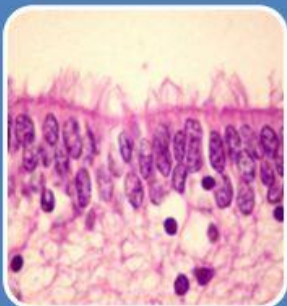
← Voltar

Epitélio simples cilíndrico



Epitélio simples cilíndrico

- Absortivo → microvilosidades
- Caliciforme → secretam mucosidade e acumulam na superfície apical



Epitélio simples cilíndrico ciliado

- Cílios → movimento coordenado



Avançar

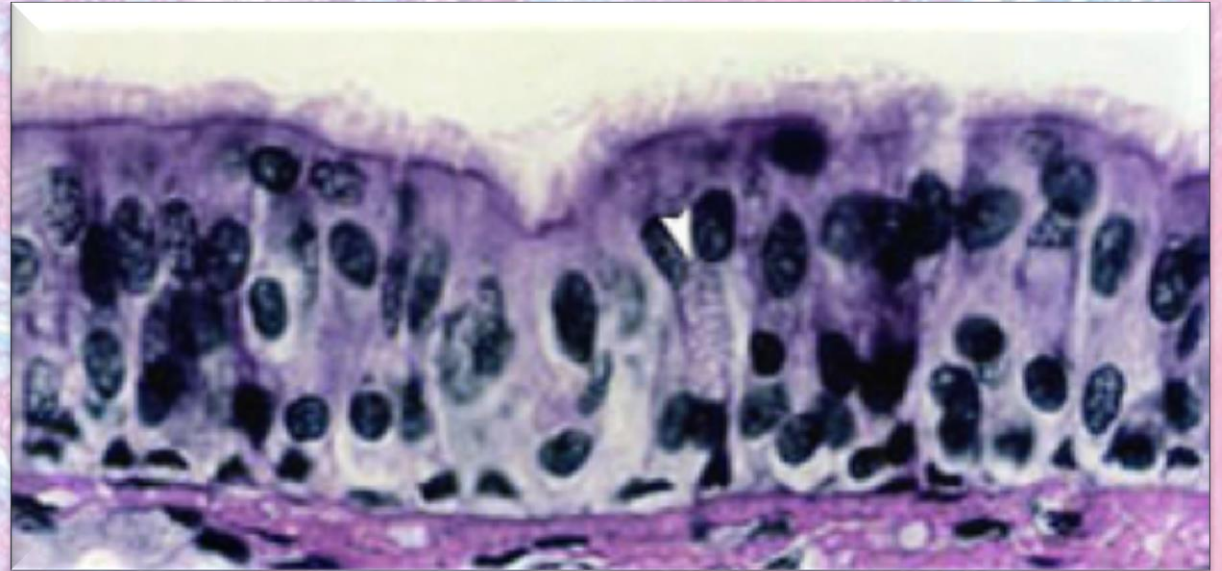
12. Check the incorrect alternative on the image shown:

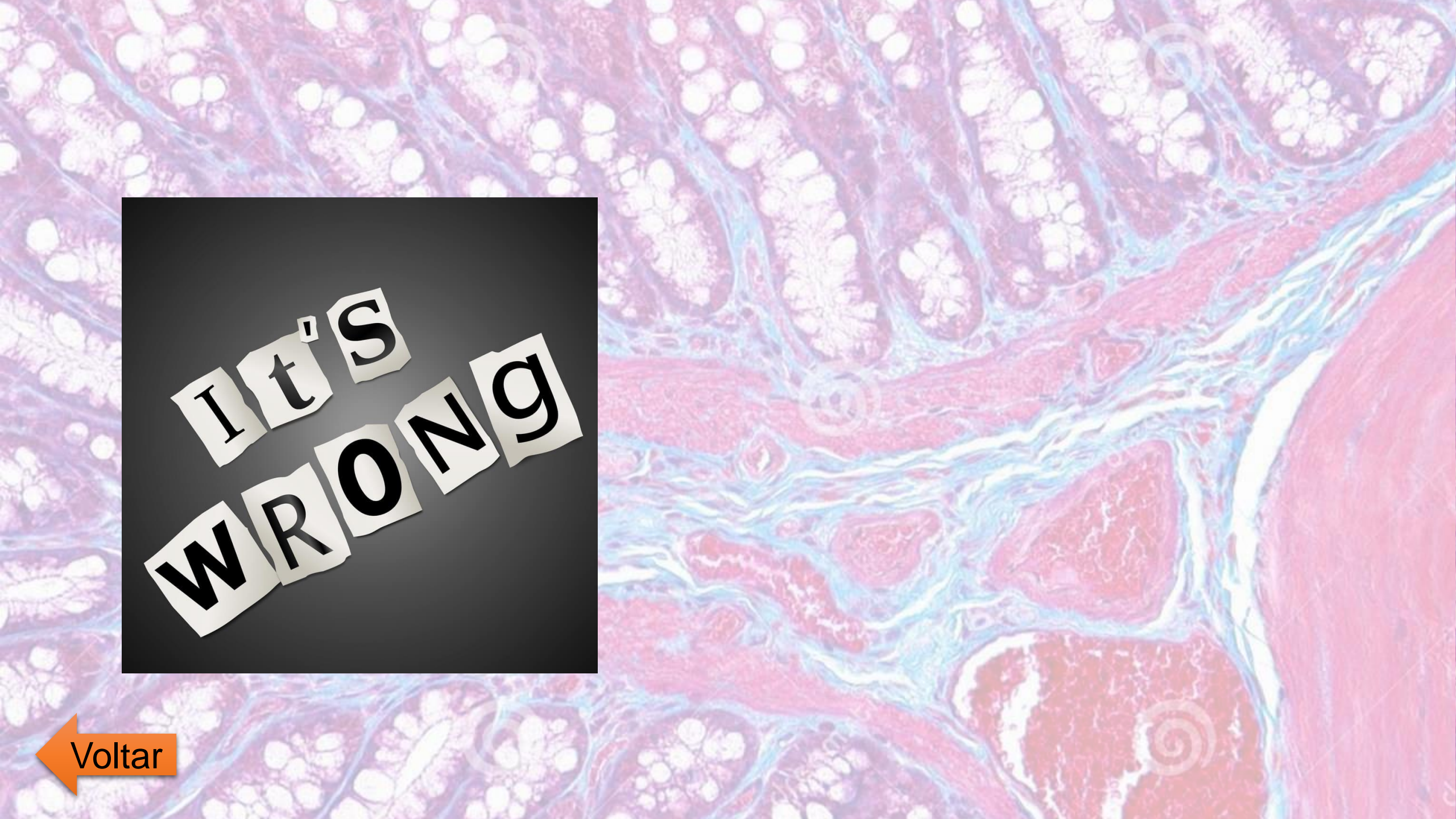
a) the arrow indicates the goblet cell.

b) cilia are on the apical surface.

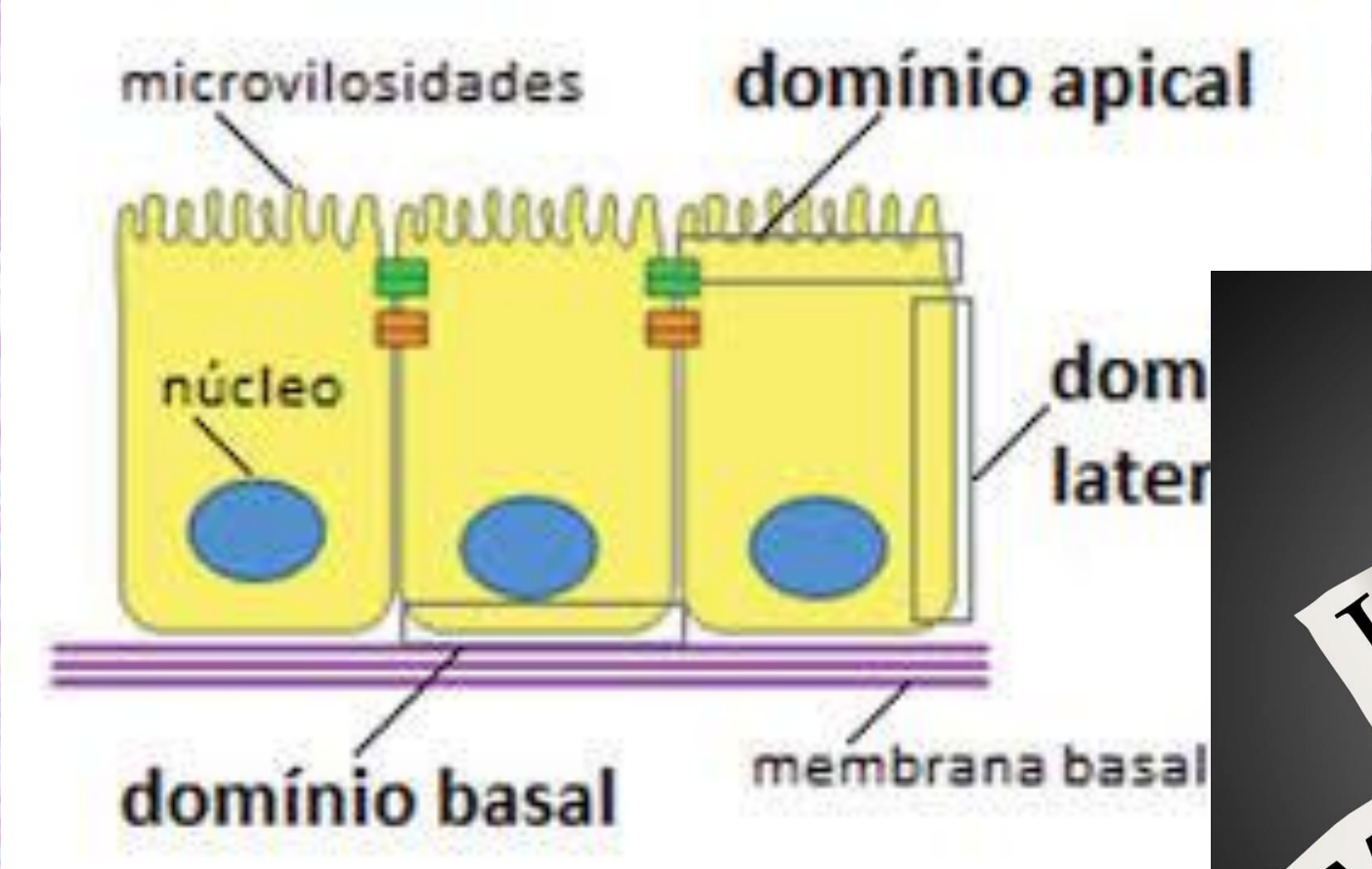
c) it is the epithelium that lines the trachea.

d) the epithelium is columnar stratified.



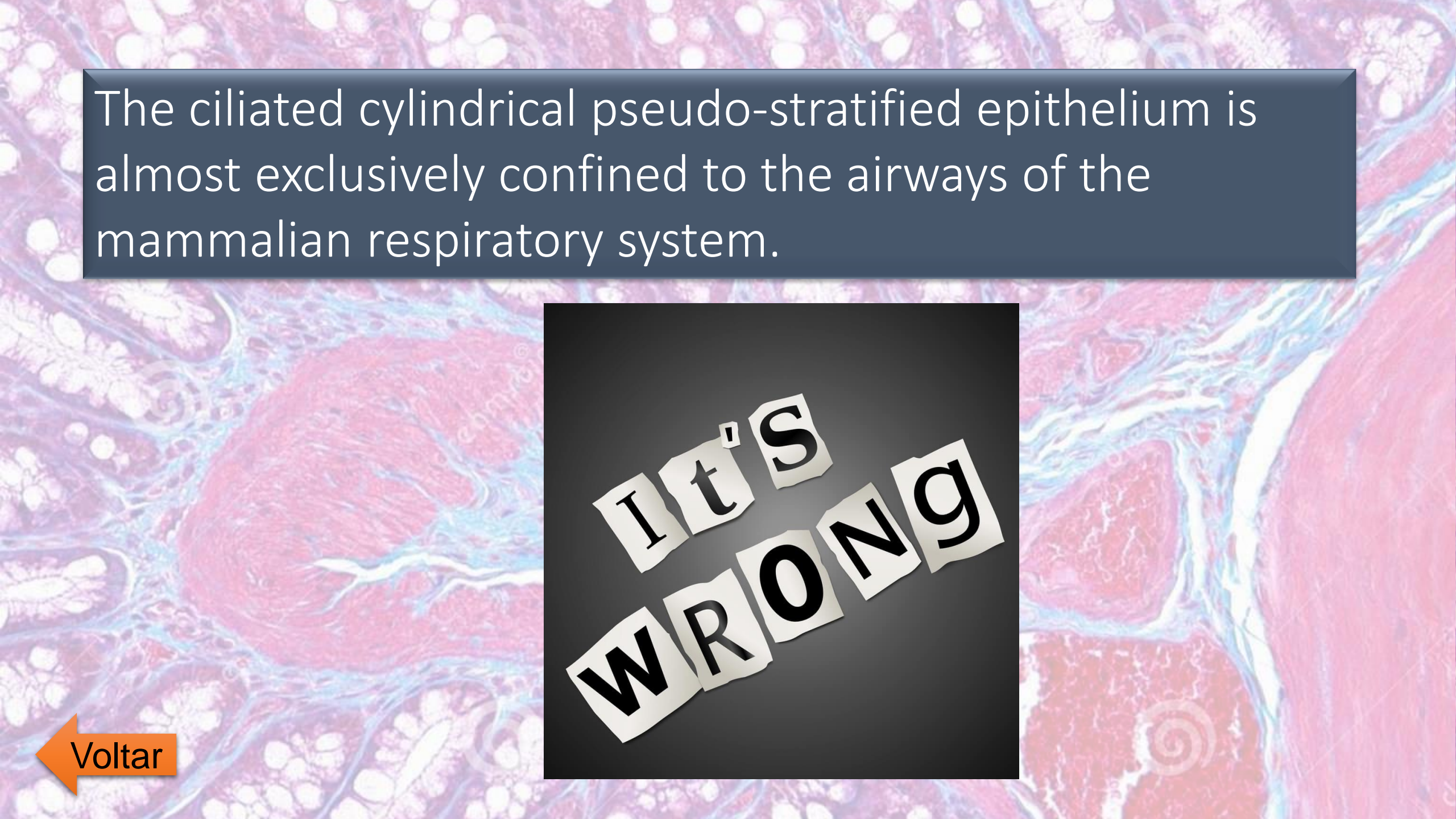


**It's
WRONG**



**IT'S
WRONG**

← Voltar



The ciliated cylindrical pseudo-stratified epithelium is almost exclusively confined to the airways of the mammalian respiratory system.

It's
WRONG

The ciliated cylindrical pseudo-stratified epithelium is almost exclusively confined to the airways of the mammalian respiratory system.



Avançar

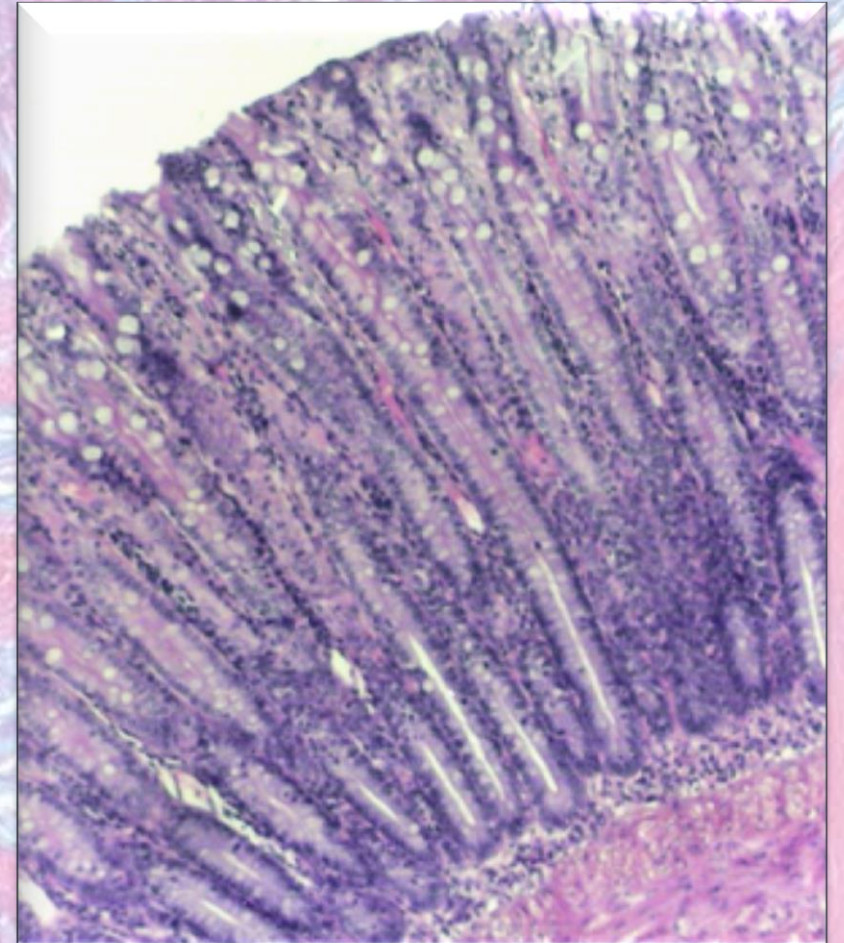
13. Class the gland shown:

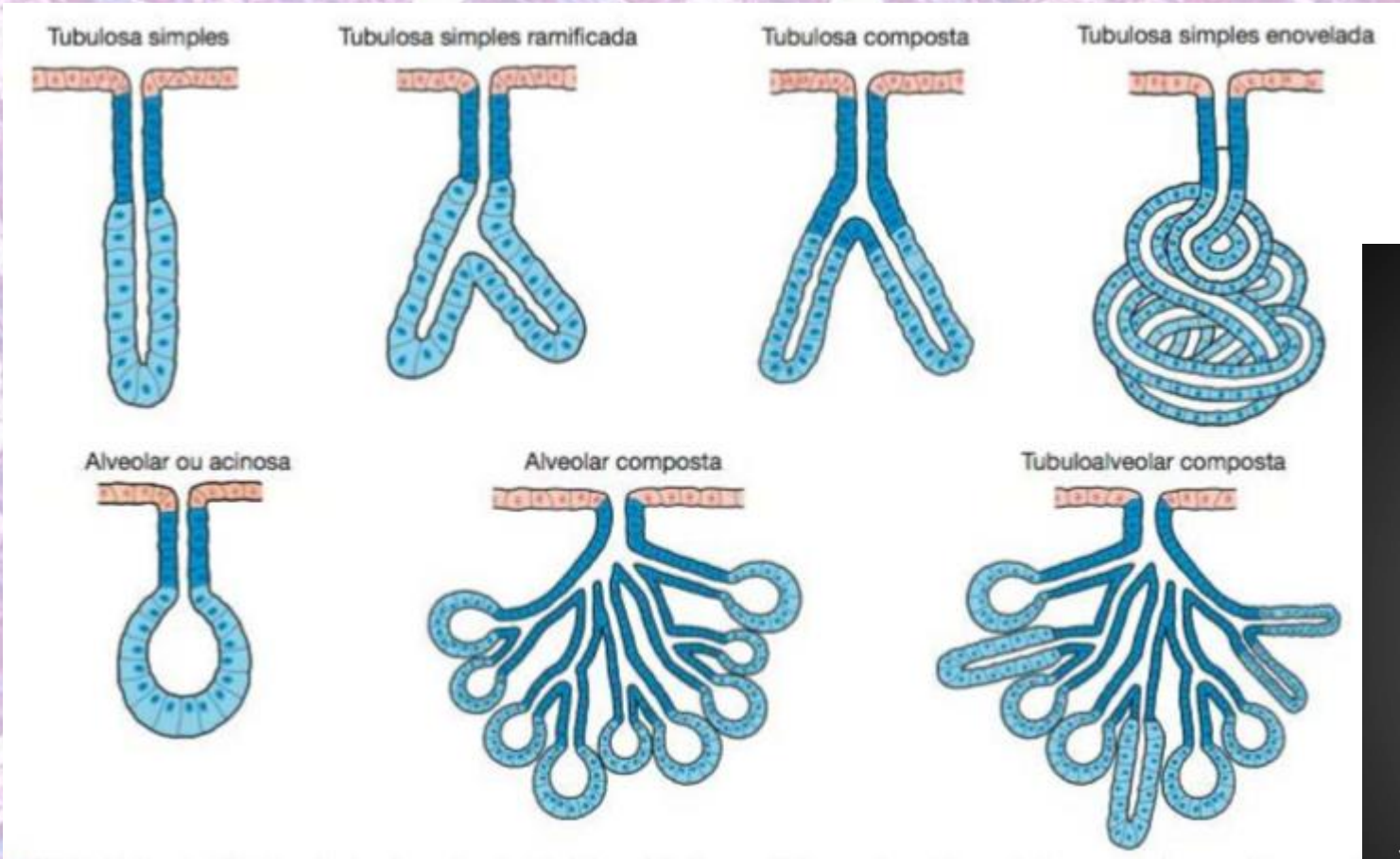
a) cord endocrine.

b) straight tubular exocrine gland.

c) branched alveolar exocrine gland.

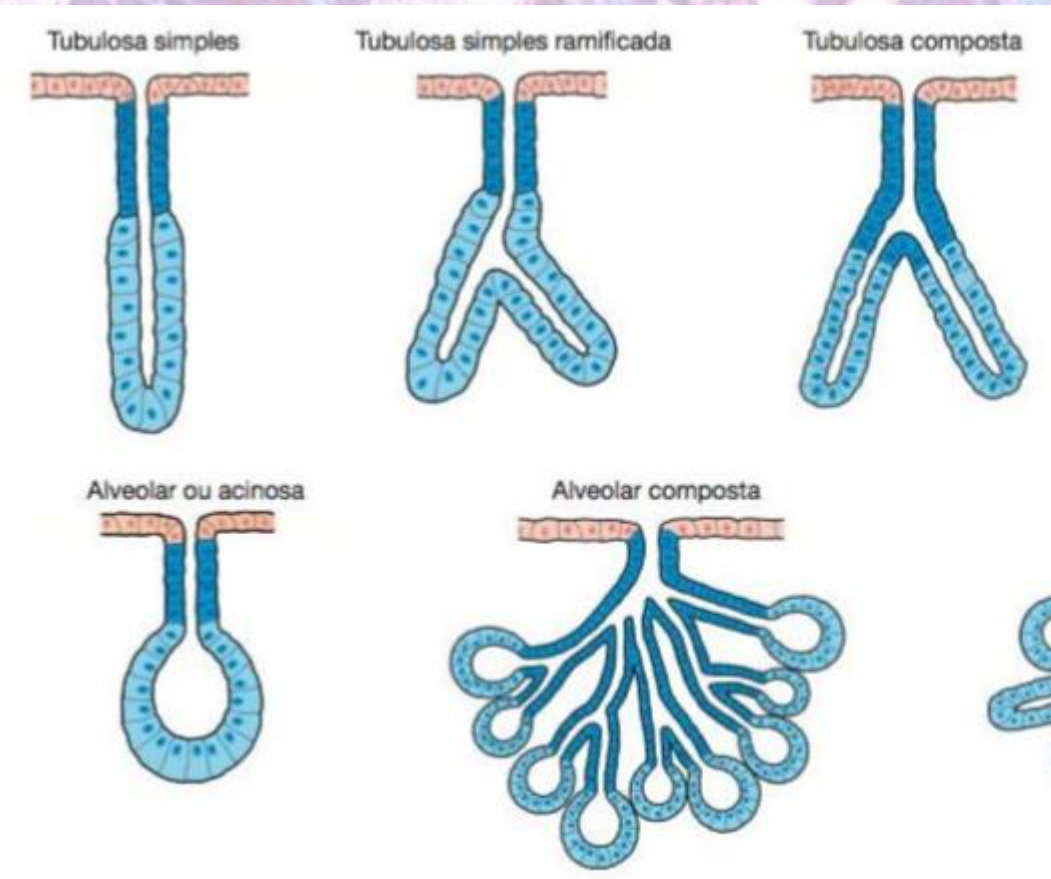
d) Lieberkühn gland.



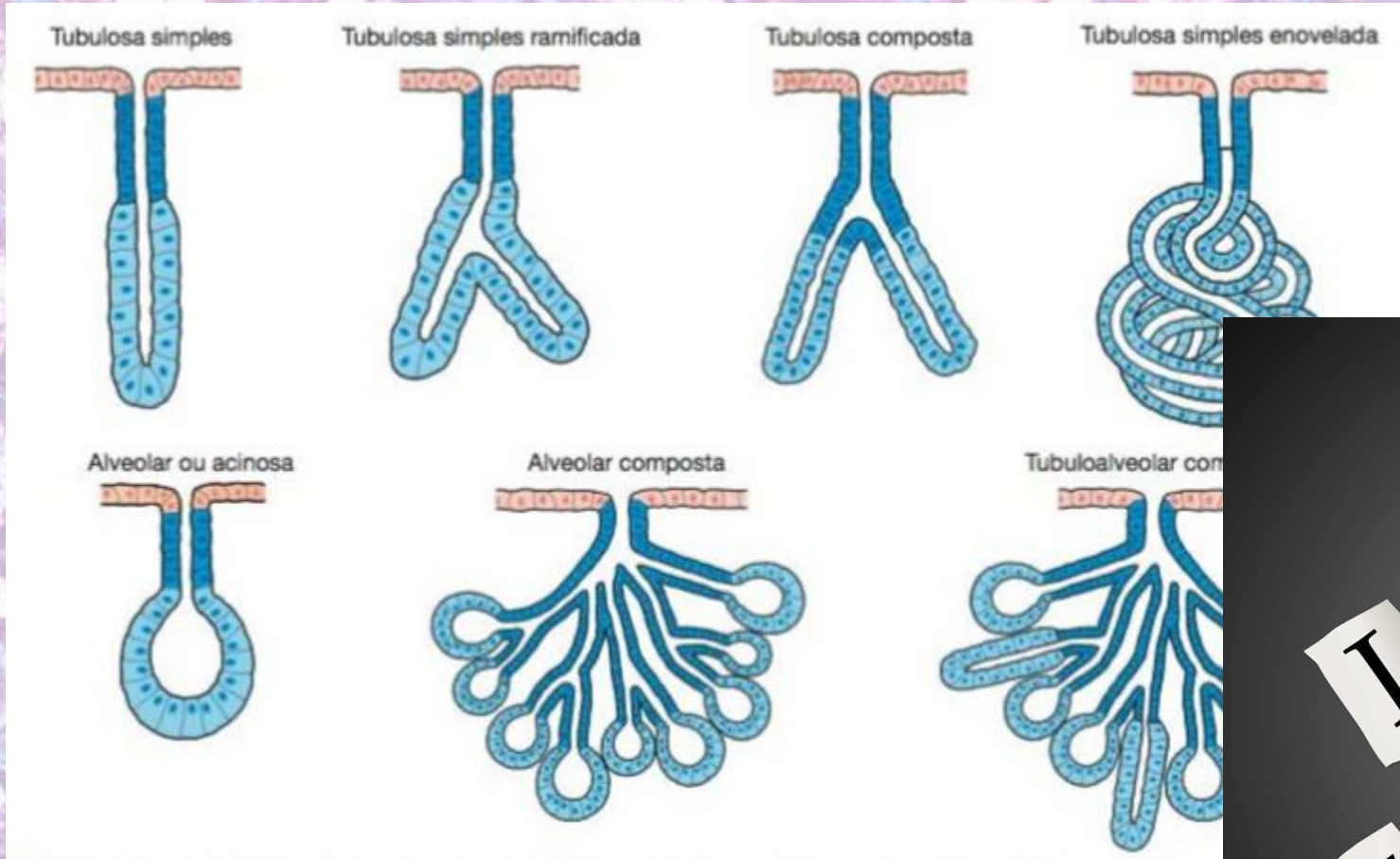


It's
WRONG

← Voltar



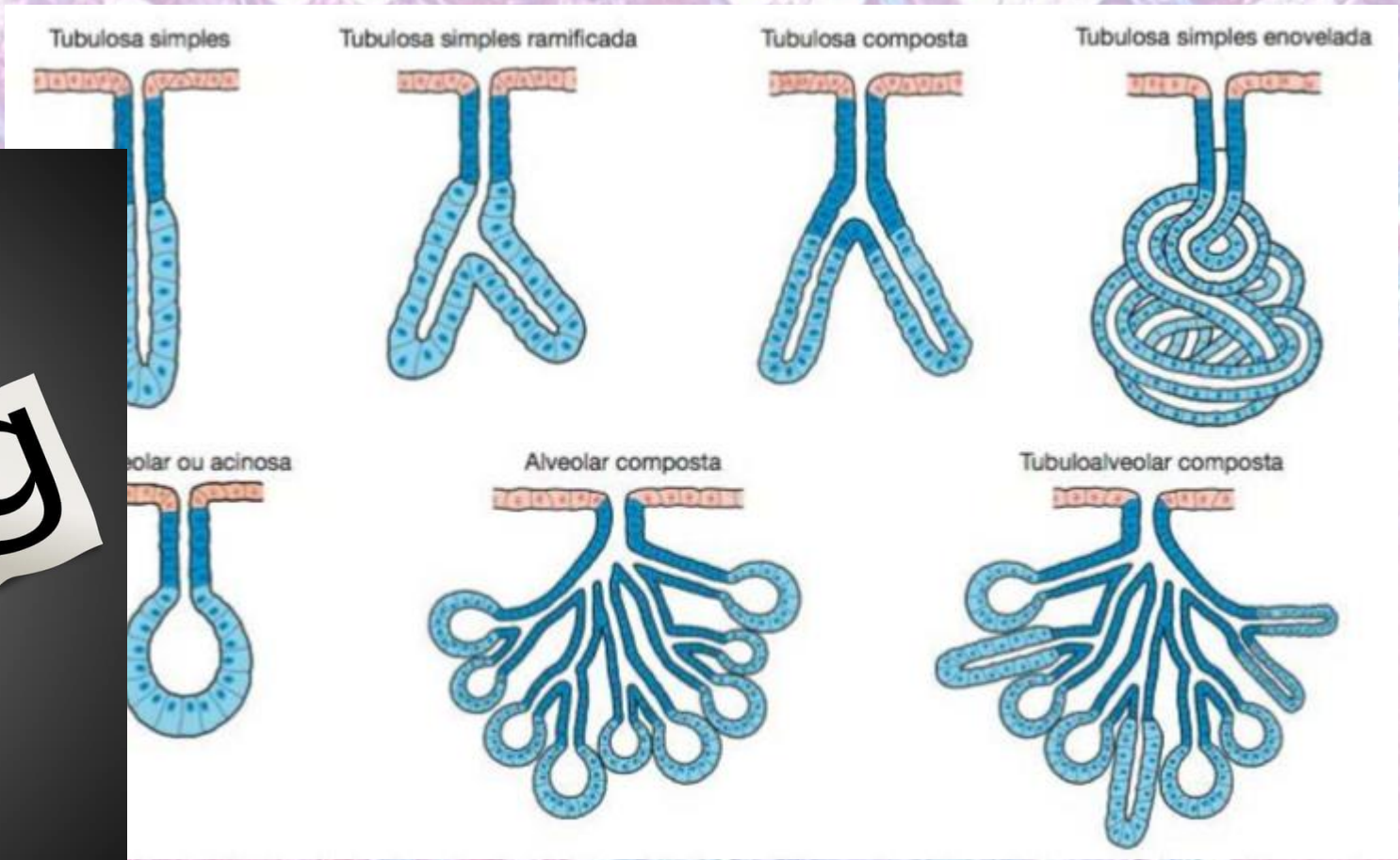
Avançar



IT'S
WRONG

← Voltar

It's
WRONG



← Voltar

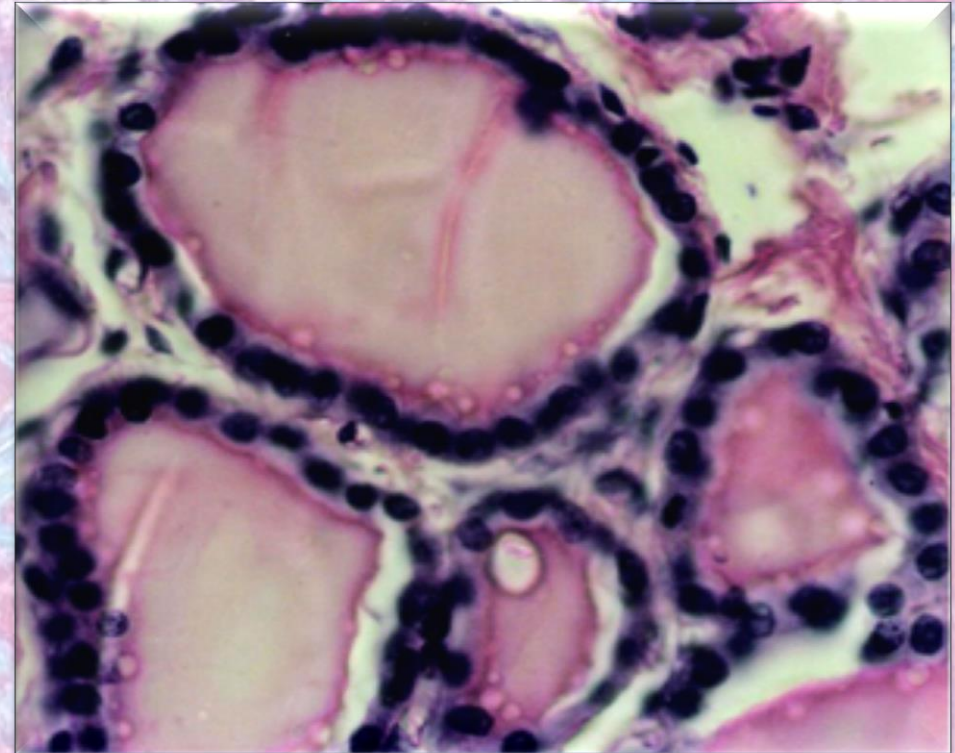
14. Rate the photo gland:

a) alveolar exocrine gland.

b) vesicular endocrine gland.

c) circular endocrine gland.

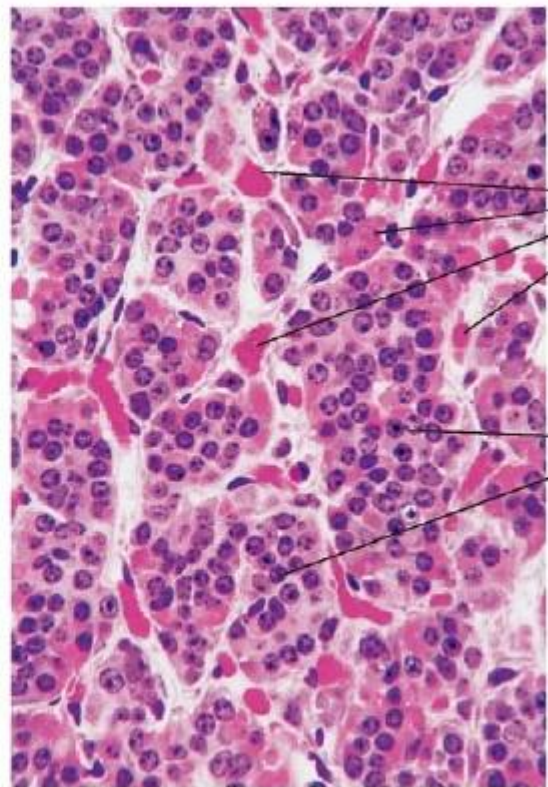
d) thyroid.



GLÂNDULAS ENDÓCRINAS



Vesicular



Cordonal

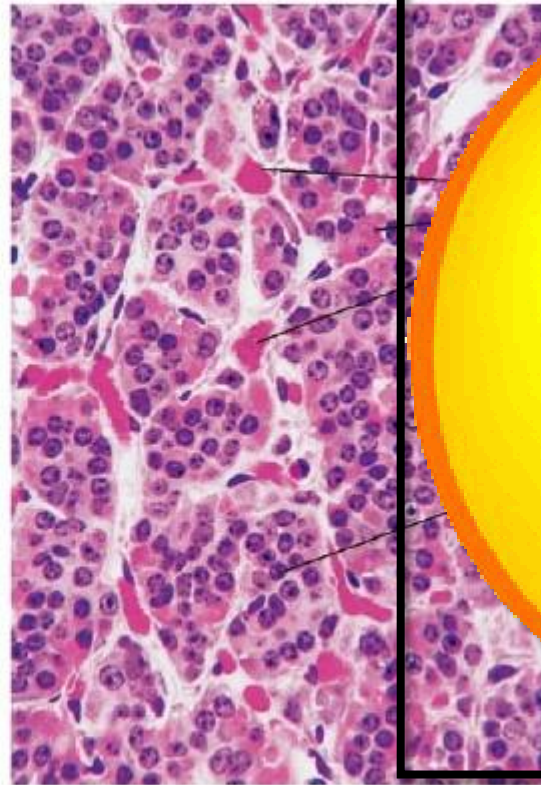
IT'S
WRONG

Voltar

GLÂNDULAS ENDÓCRINAS



Vesicular



Cordonal

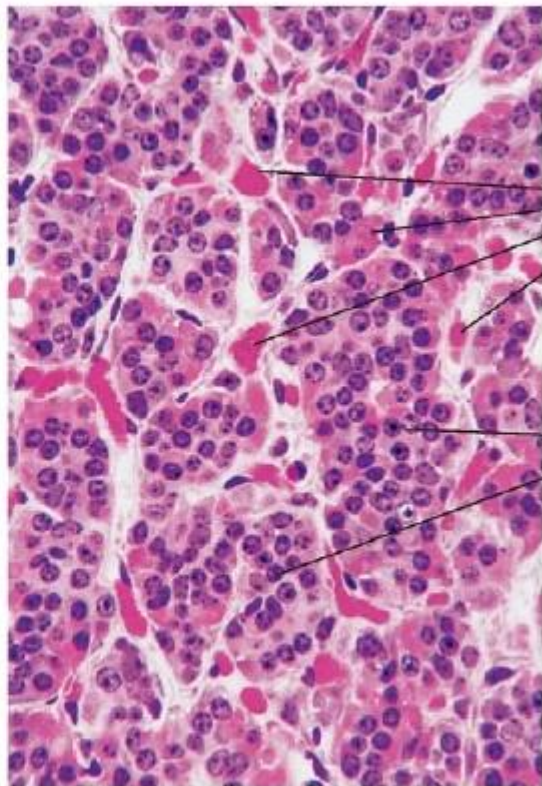


Avançar

GLÂNDULAS ENDÓCRINAS



Vesicular



Cordonal

IT'S
WRONG

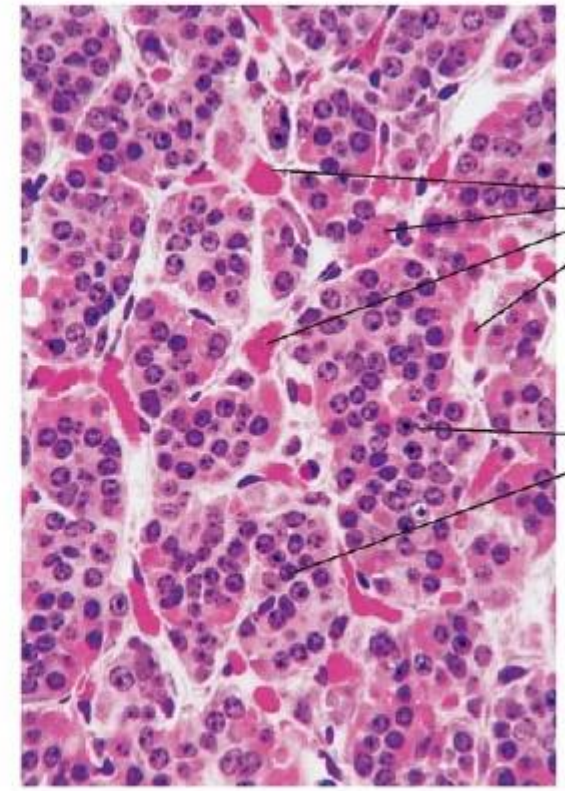
Voltar

GLÂNDULAS ENDÓCRINAS

**It's
WRONG**



Vesicular



Cordonal

 Voltar

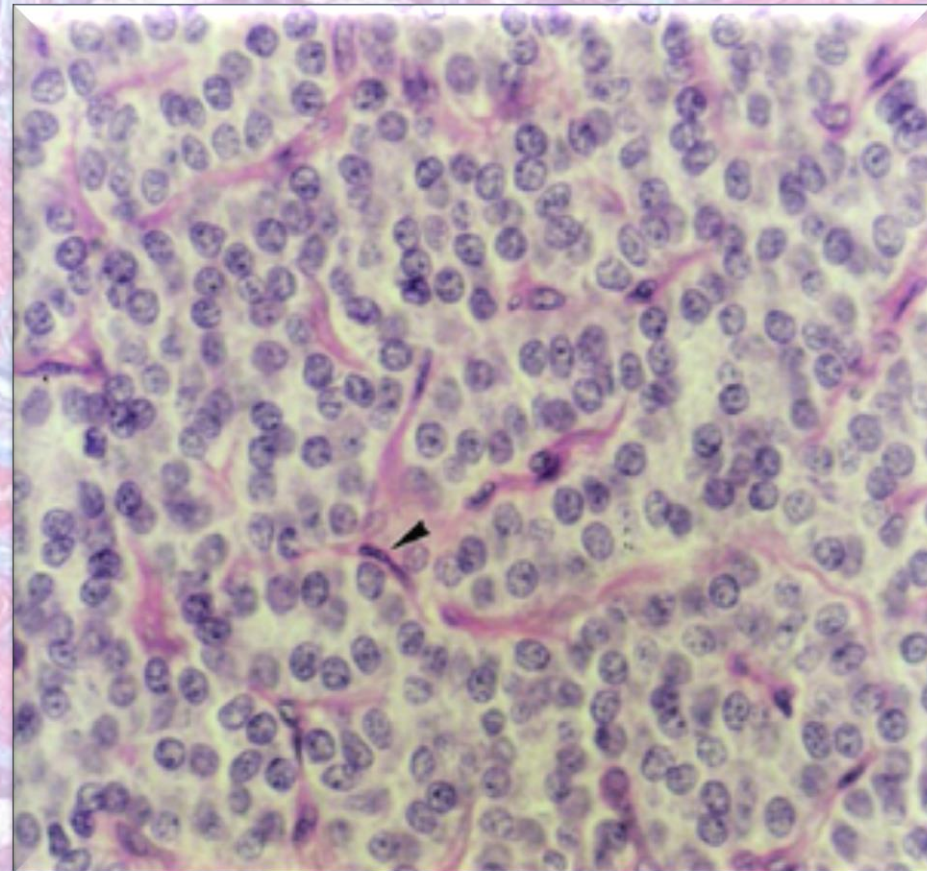
15. What is the classification of the gland shown?

a) parathyroid.

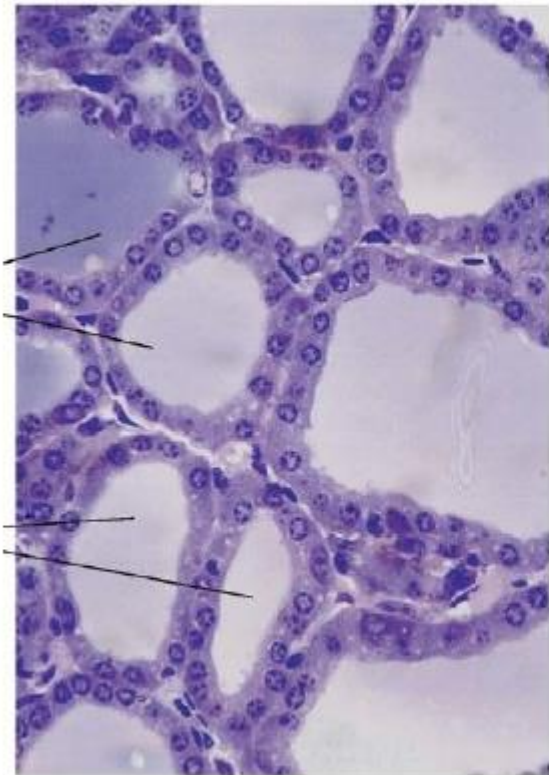
b) tubular exocrine gland.

c) cord endocrine.

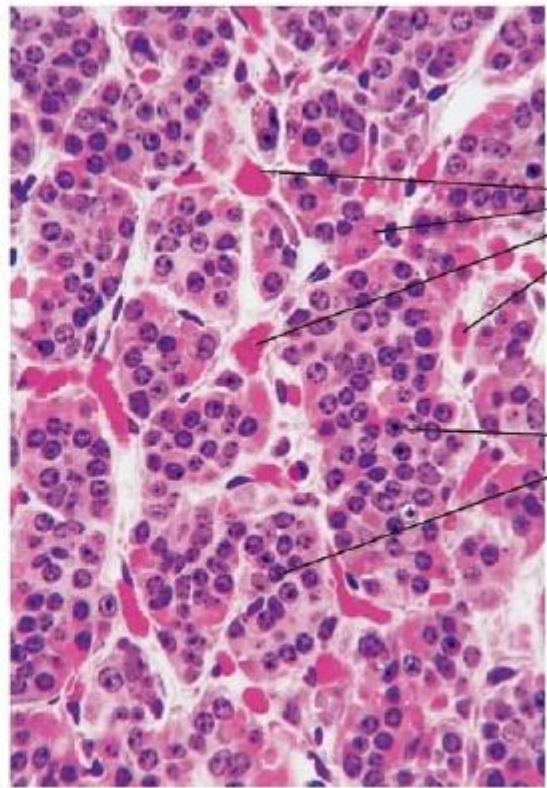
d) cordonal exocrine gland.



GLÂNDULAS ENDÓCRINAS



Vesicular



Cordonal

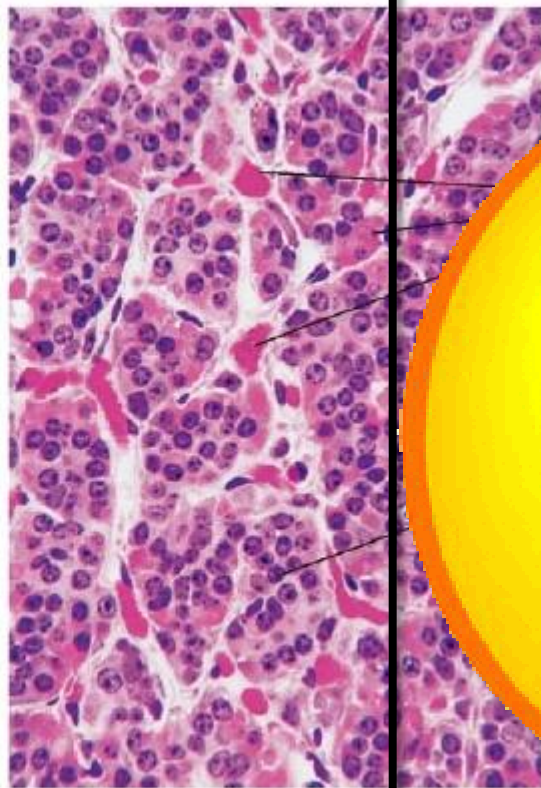
It's
WRONG

← Voltar

GLÂNDULAS ENDÓCRINAS



Vesicular



Cordonal

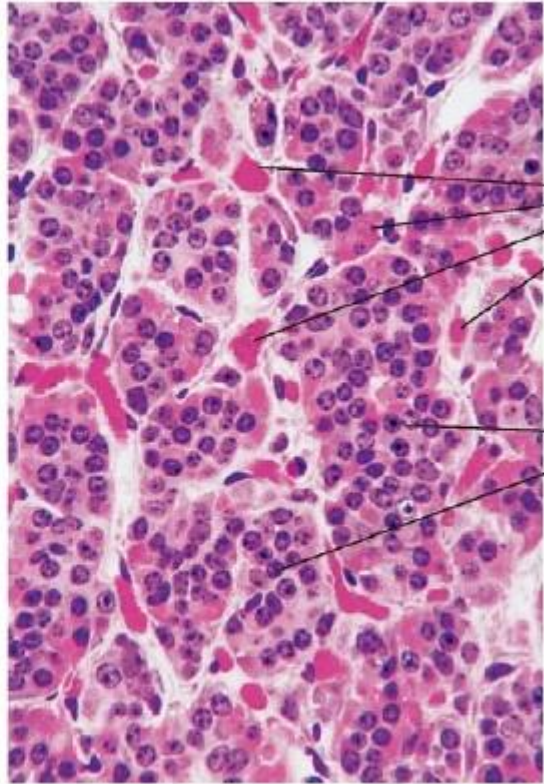


Go

GLÂNDULAS ENDÓCRINAS



Vesicular



Cordonal

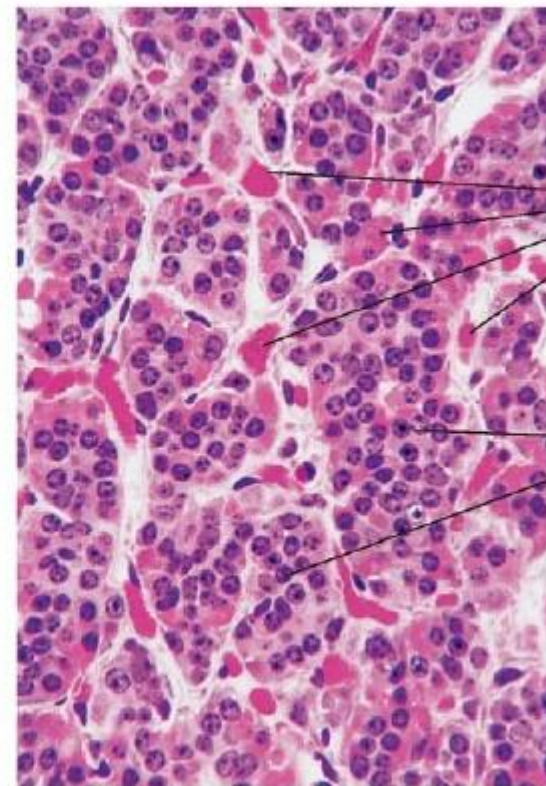
IT'S
WRONG

Voltar

GLÂNDULAS ENDÓCRINAS



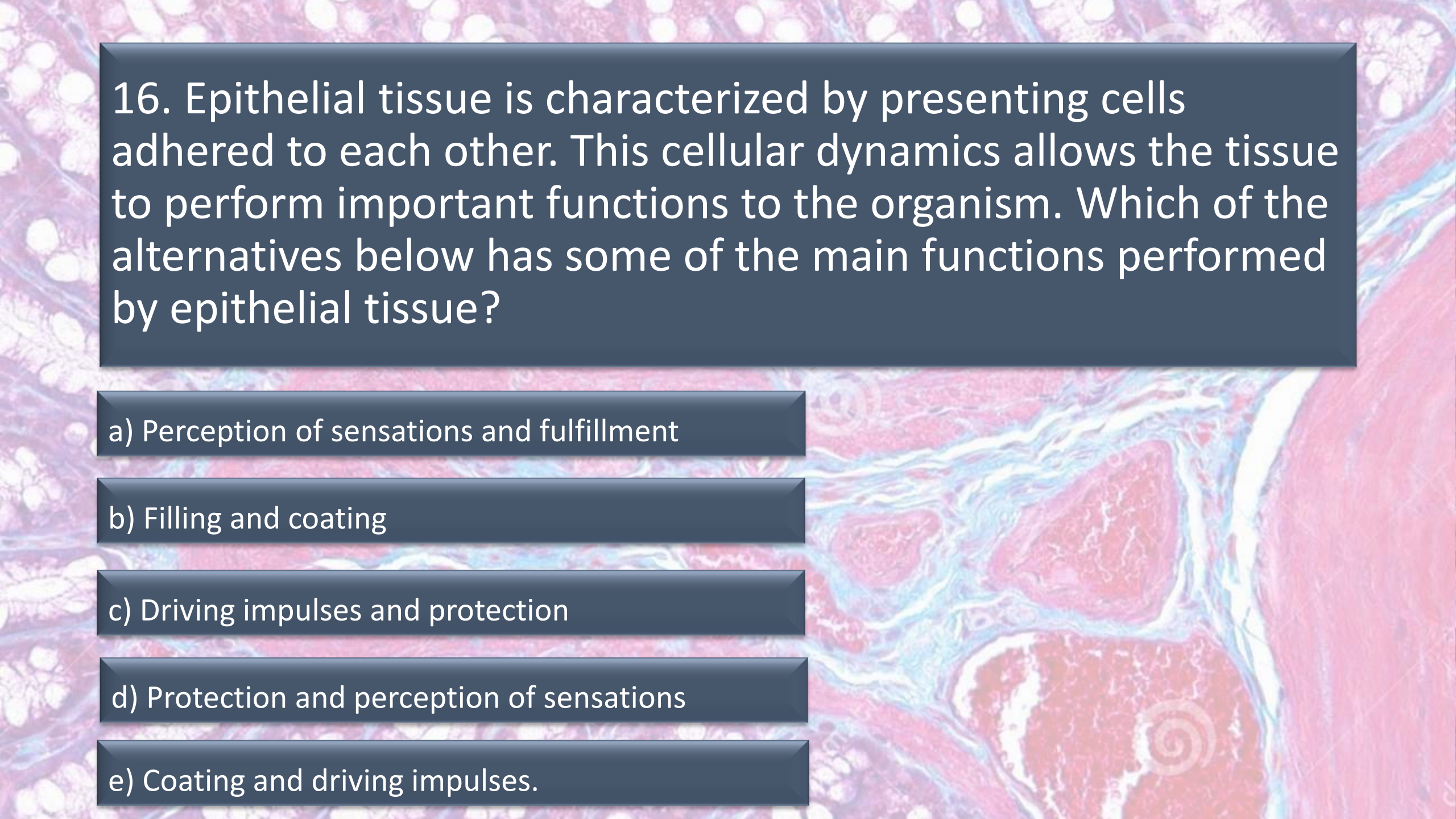
ular



Cordonal

It's
WRONG

Voltar

The background of the slide is a microscopic image of tissue, likely stained with hematoxylin and eosin (H&E). The image shows various cellular structures, including what appears to be a glandular or ductal structure on the right side. A large, dark blue rectangular overlay covers the top half of the image, containing white text. Below this overlay, five smaller, dark blue rectangular buttons are arranged vertically, each containing a multiple-choice option. The overall layout is clean and educational.

16. Epithelial tissue is characterized by presenting cells adhered to each other. This cellular dynamics allows the tissue to perform important functions to the organism. Which of the alternatives below has some of the main functions performed by epithelial tissue?

a) Perception of sensations and fulfillment

b) Filling and coating

c) Driving impulses and protection

d) Protection and perception of sensations

e) Coating and driving impulses.

A – Wrong - The filling function is not performed

issue.

It's
WRONG

Voltar

B – Wrong - The filling function is not performed by the epithelial tissue.

IT'S
WRONG

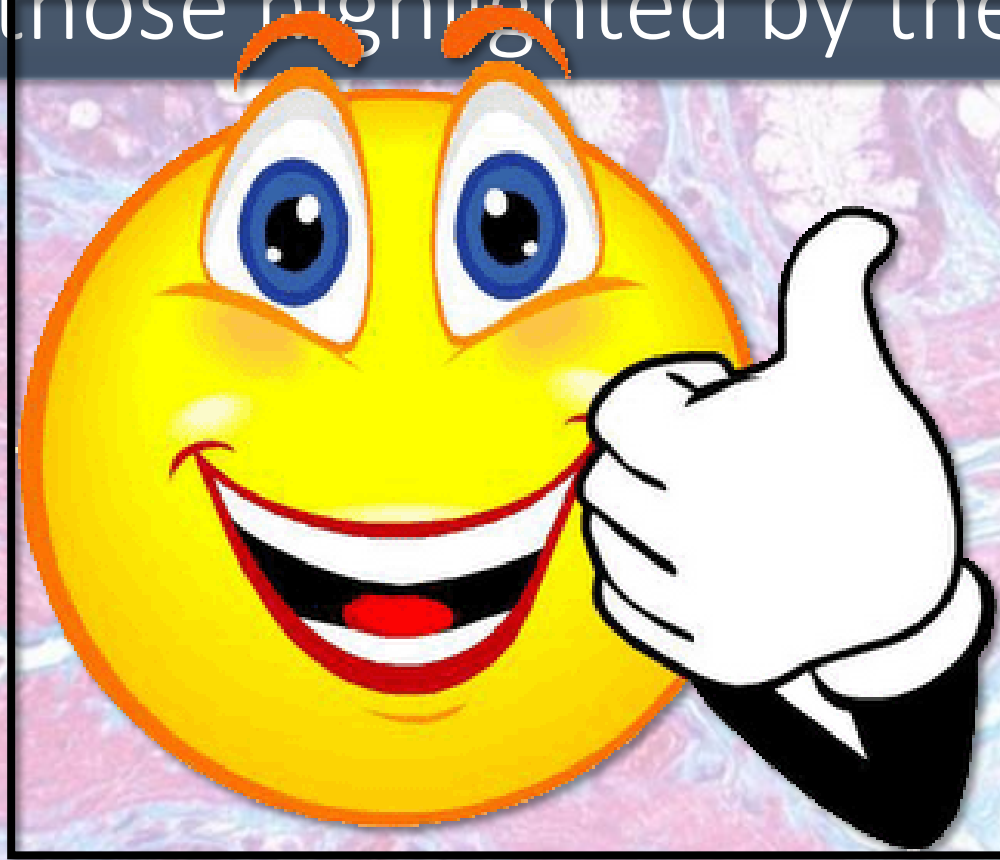
← Voltar

C – Wrong - The impulse conduction function is not performed by the epithelial tissue.

IT'S
WRONG

← Voltar

D – Correct - The epithelium performs, among other functions, those highlighted by the alternative.

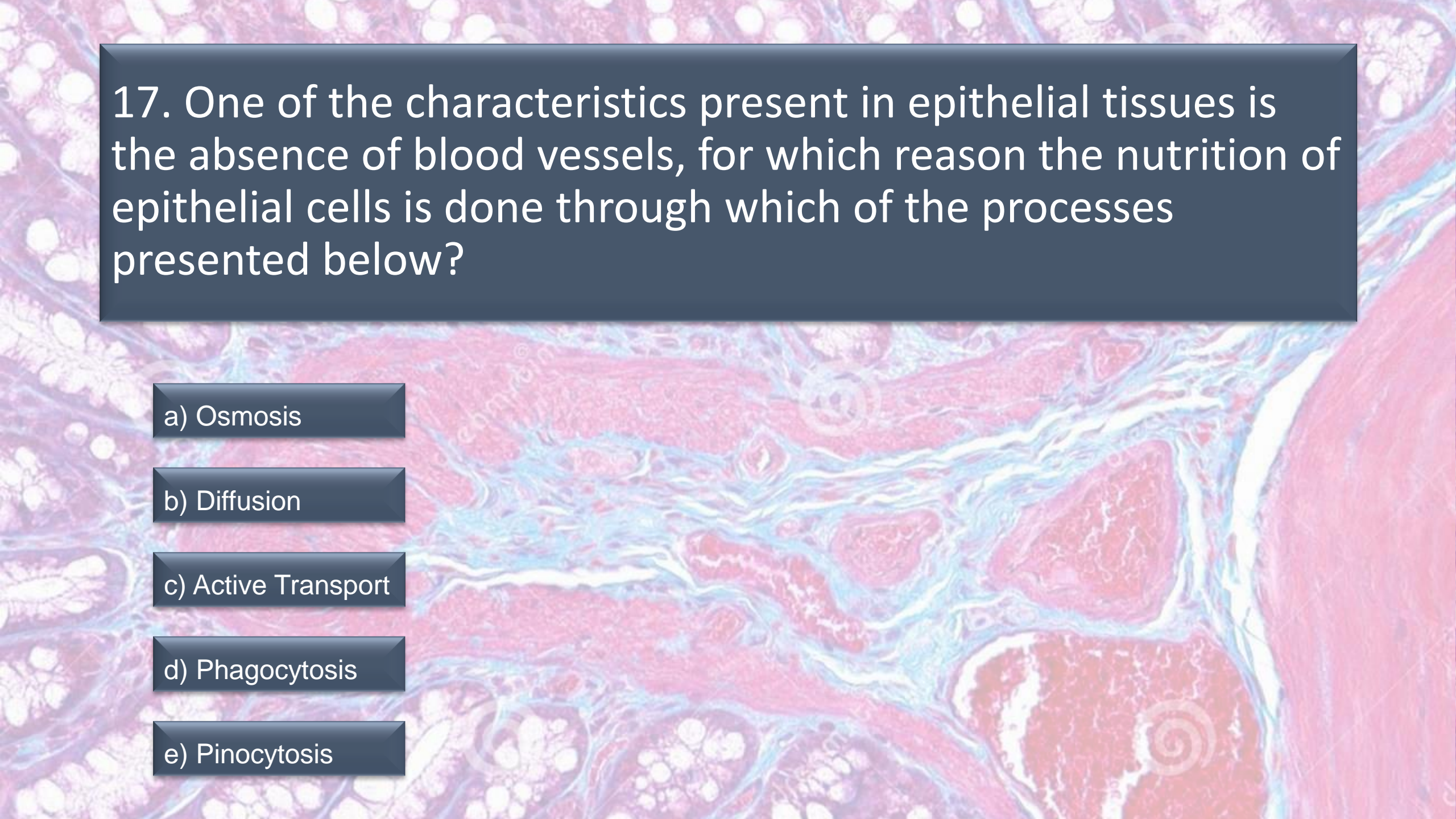


Avançar

E – Wrong - The impulse conduction function is not performed by the epithelial tissue

IT'S
WRONG





17. One of the characteristics present in epithelial tissues is the absence of blood vessels, for which reason the nutrition of epithelial cells is done through which of the processes presented below?

a) Osmosis

b) Diffusion

c) Active Transport

d) Phagocytosis

e) Pinocytosis

A – Wrong - The process does not occur from the osmotic difference, but through the process of diffusion of sub

IT'S
WRONG

← Voltar

B – Correct - The process occurs through the diffusion of substances, from the conjunctive cells.



Avançar

C – Wrong - The process does not require energy expenditure, therefore it is not characterized as an active process.

IT'S
WRONG

 [Voltar](#)

D – Wrong - The process does not occur as endocytosis, but through simple diffusion.

IT'S
WRONG

 [Voltar](#)

E – Wrong - The process does not occur as endocytosis, but through simple diffusion.

IT'S
WRONG





18. Regarding epithelial tissues, it is NOT CORRECT to state that:

a) They always rely on connective tissue.

b) They have no vascularization.

c) They are always formed by paving cells arranged in layers.

d) They are separated from connective tissues by acellular membranes.

e) They are nourished by diffusion.

A – Wrong for the question - Epithelial cells are always in contact with epithelial tissue.

IT'S
WRONG

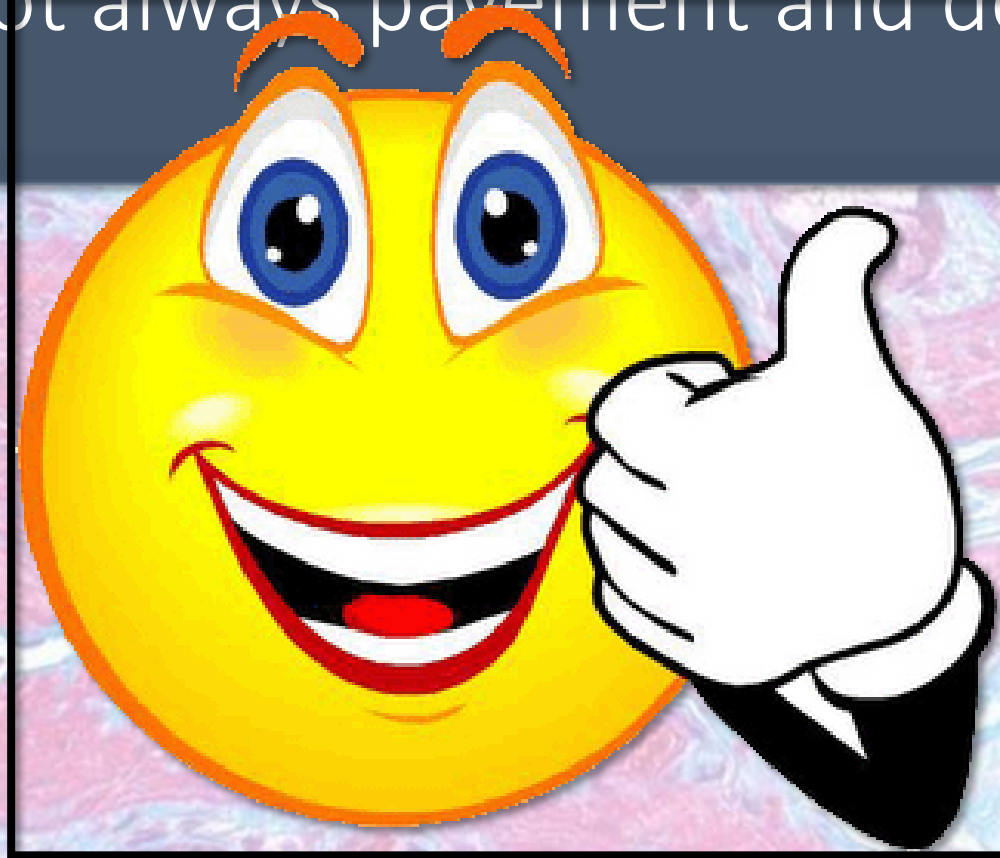
← Voltar

B – Wrong for the question - The cells of the epithelium do not present vascularization.

IT'S
WRONG

← Voltar

C – Correct for the question - The cells that make up the tissue are not always pavement and do not always form layers.



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D – Wrong for the question - The separation between the tissues is made by a kind of acellular canvas.

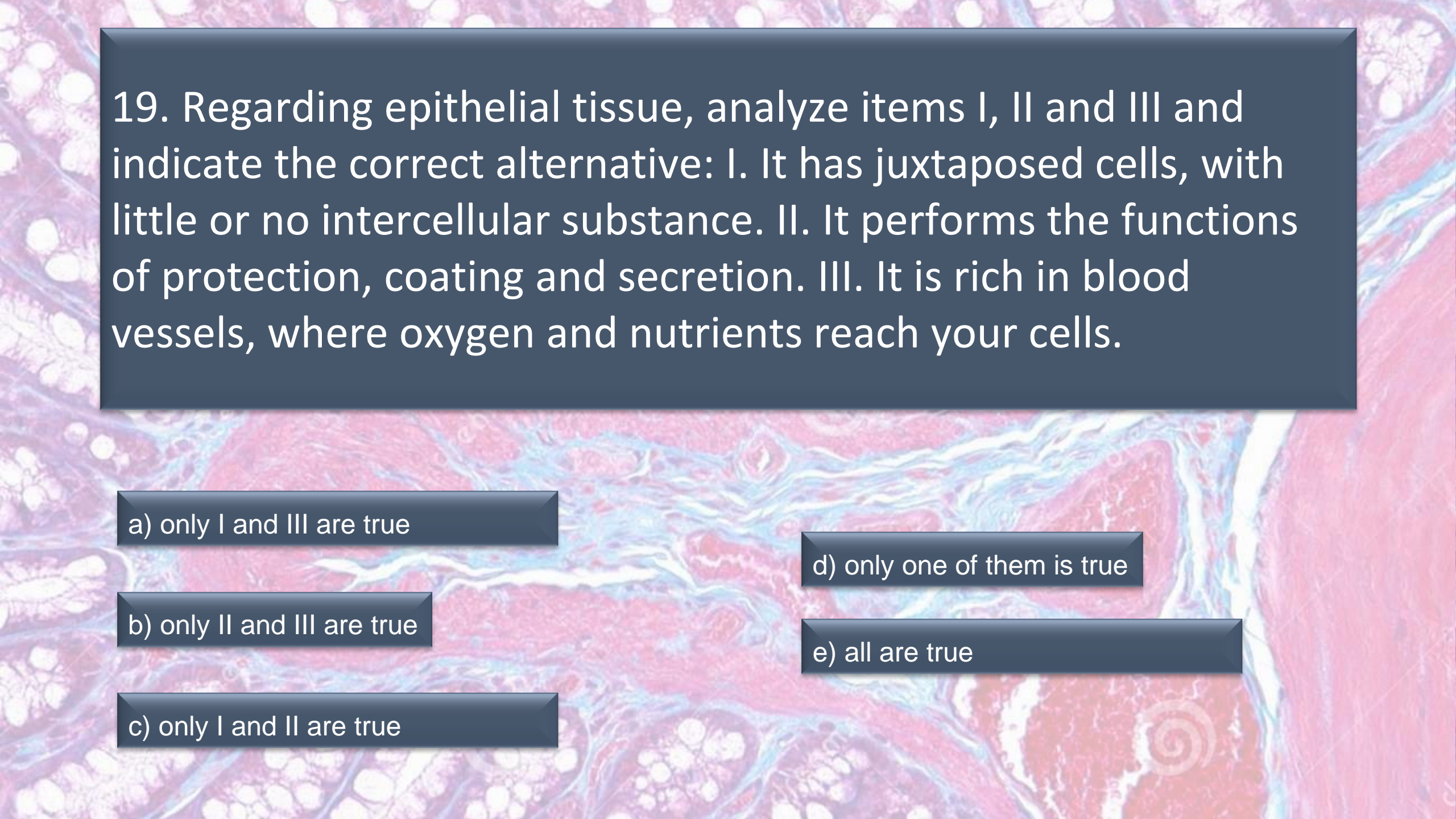
IT'S
WRONG

← Voltar

E – Wrong for the question - Epithelial cells are nourished by diffusion, from the related connective tissue.

IT'S
WRONG





19. Regarding epithelial tissue, analyze items I, II and III and indicate the correct alternative: I. It has juxtaposed cells, with little or no intercellular substance. II. It performs the functions of protection, coating and secretion. III. It is rich in blood vessels, where oxygen and nutrients reach your cells.

a) only I and III are true

b) only II and III are true

c) only I and II are true

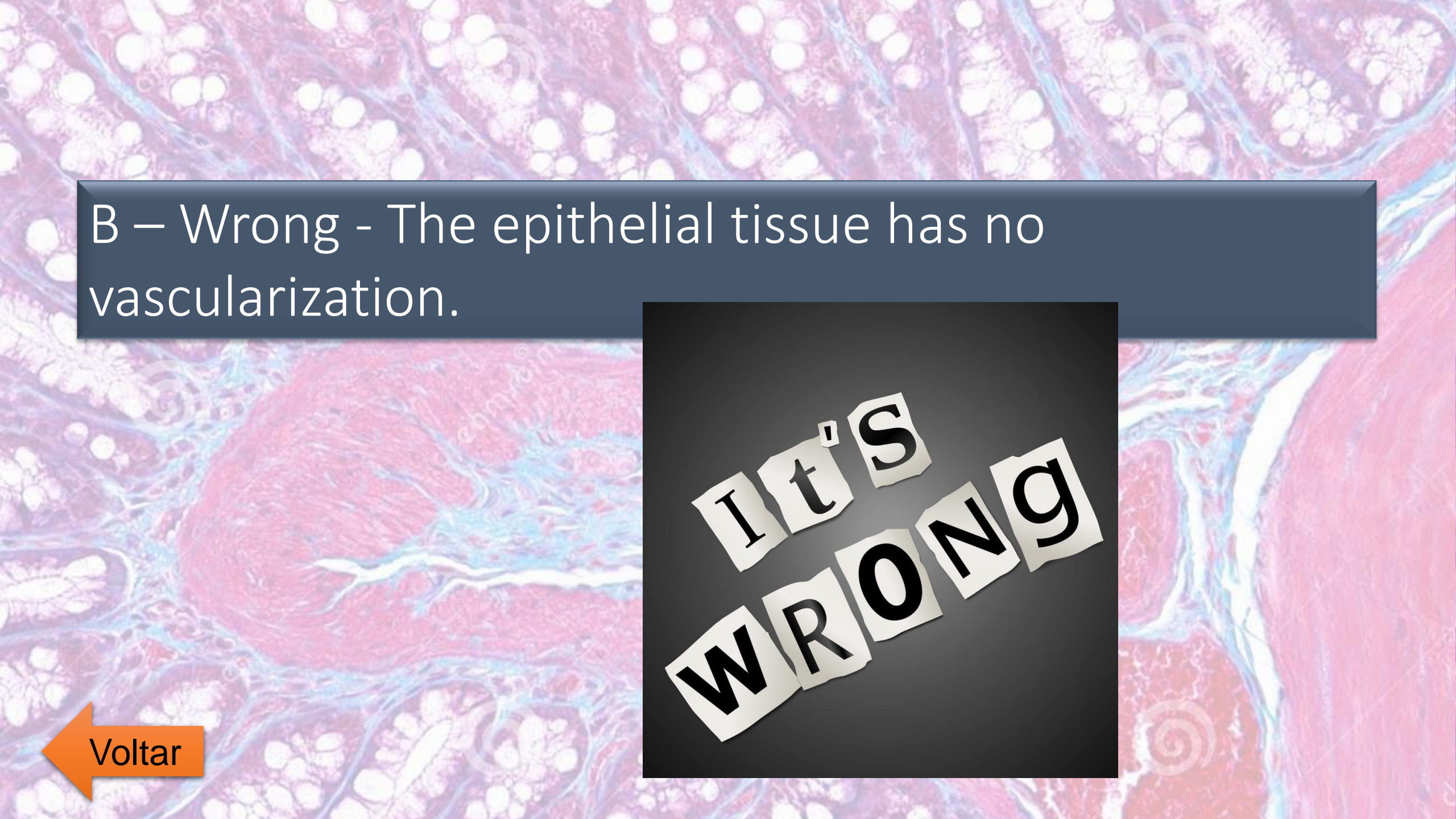
d) only one of them is true

e) all are true

A – Wrong - The epithelial tissue has no vascularization.

It's
WRONG

← Voltar



B – Wrong - The epithelial tissue has no vascularization.

IT'S
WRONG



Voltar

C – Correct - The characteristics presented are common to the epithelial tissue.



Avançar

D – Wrong - Alternatives I and II are true.

IT'S
WRONG

← Voltar

E – Wrong - Alternative II is incorrect.

IT'S
WRONG



Voltar

20. The coating epithelia can be classified according to the number of cell layers and the shape of the cells present. There are epitheliums that present only a simple layer of cells, however, these are arranged at different heights, giving the tissue the impression that it is an epithelium formed by more than one cell. This type of epithelial tissue, in relation to the number of cell layers, is called:

a) Stratified simple epithelial tissue

b) Cubic epithelial tissue

c) Transition epithelial tissue

d) Pseudostratified tissue

e) Stratified epithelial tissue

A – Wrong - The epithelium cannot be simple and stratified at the same time.

IT'S
WRONG

← Voltar

B – Wrong - The epithelium in question does not refer to the shape of the cell, but to the number of layers.

It's
WRONG

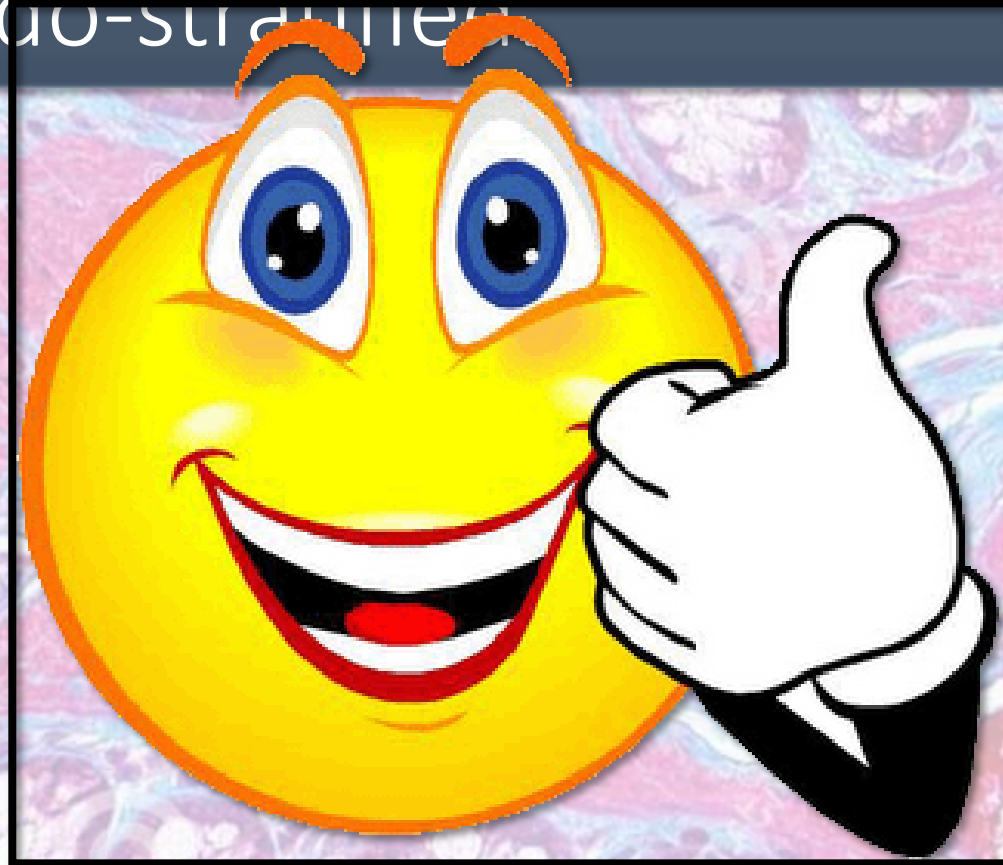
← Voltar

C – Wrong - The transition epithelium is related to cells that change shape, not being the case.

IT'S
WRONG

← Voltar

D – Correct - The epithelium mentioned is a stratified false (pseudo), justifying the name that receives pseudo-stratified



Avançar

E – Wrong - The question makes it very clear that the tissue in question is simple, formed by only one layer of cells.

IT'S
WRONG



Voltar

A histological micrograph of muscle tissue, likely stained with Masson's trichrome. The image shows multiple muscle fibers with a pinkish-red cytoplasm and blue-stained connective tissue. A central black arrow points to a single muscle fiber. A red arrow in the bottom left corner points to the left. A black box with white text is centered in the upper half of the image.

MUSCLE TISSUE

A microscopic image of muscle tissue, showing various cellular structures and fibers. The image is used as a background for the text boxes.

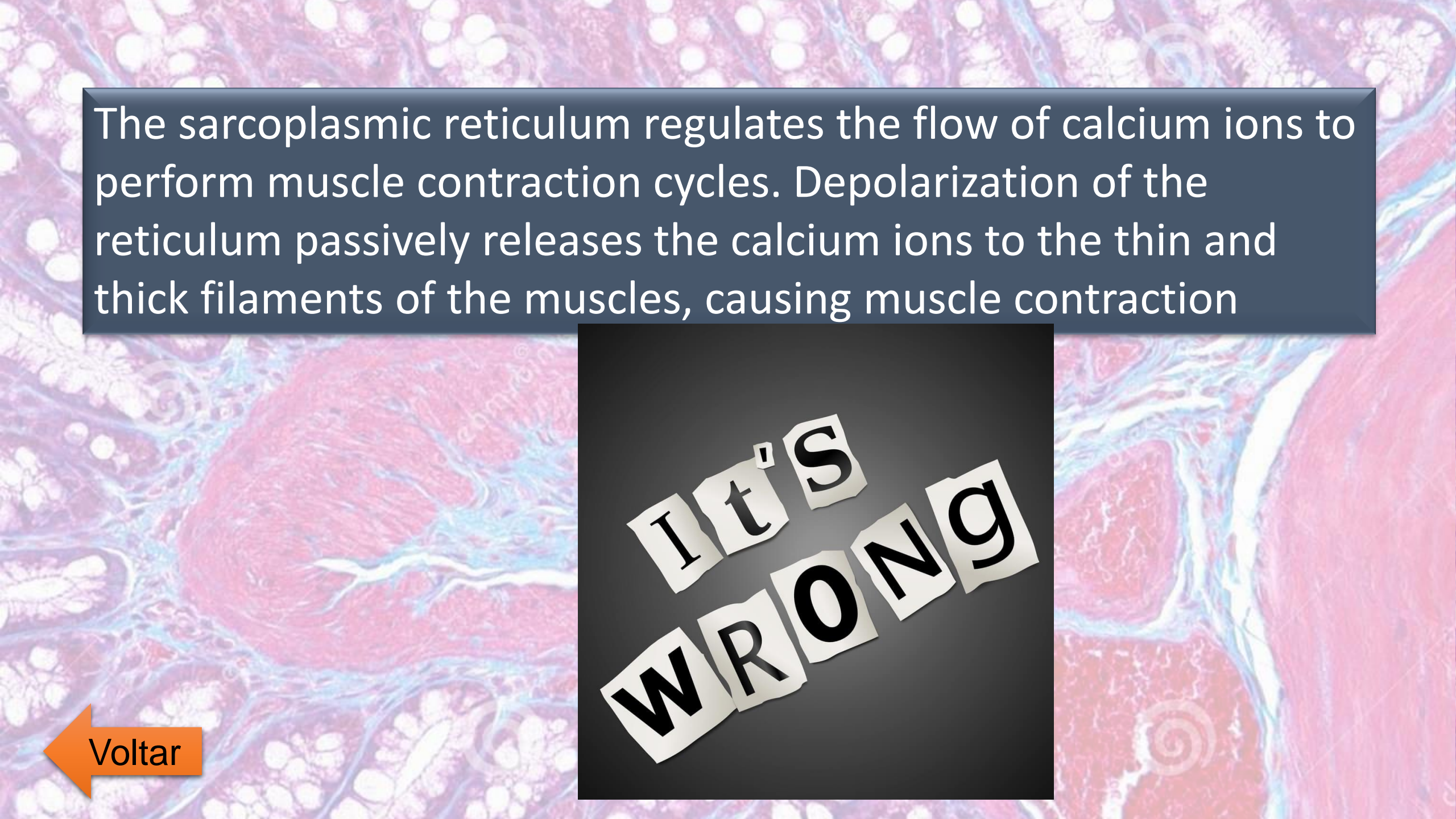
1. About muscle contraction:

a) the sarcoplasmic reticulum contributes to the control of intracellular sodium levels necessary for contraction.

b) the presence of the calcium ion in the cytoplasm is necessary for muscle relaxation.

c) tropomyosin breaks down ATP.

d) the sliding of the actin filaments over the myosin filaments promotes shortening of the sarcomere.



The sarcoplasmic reticulum regulates the flow of calcium ions to perform muscle contraction cycles. Depolarization of the reticulum passively releases the calcium ions to the thin and thick filaments of the muscles, causing muscle contraction

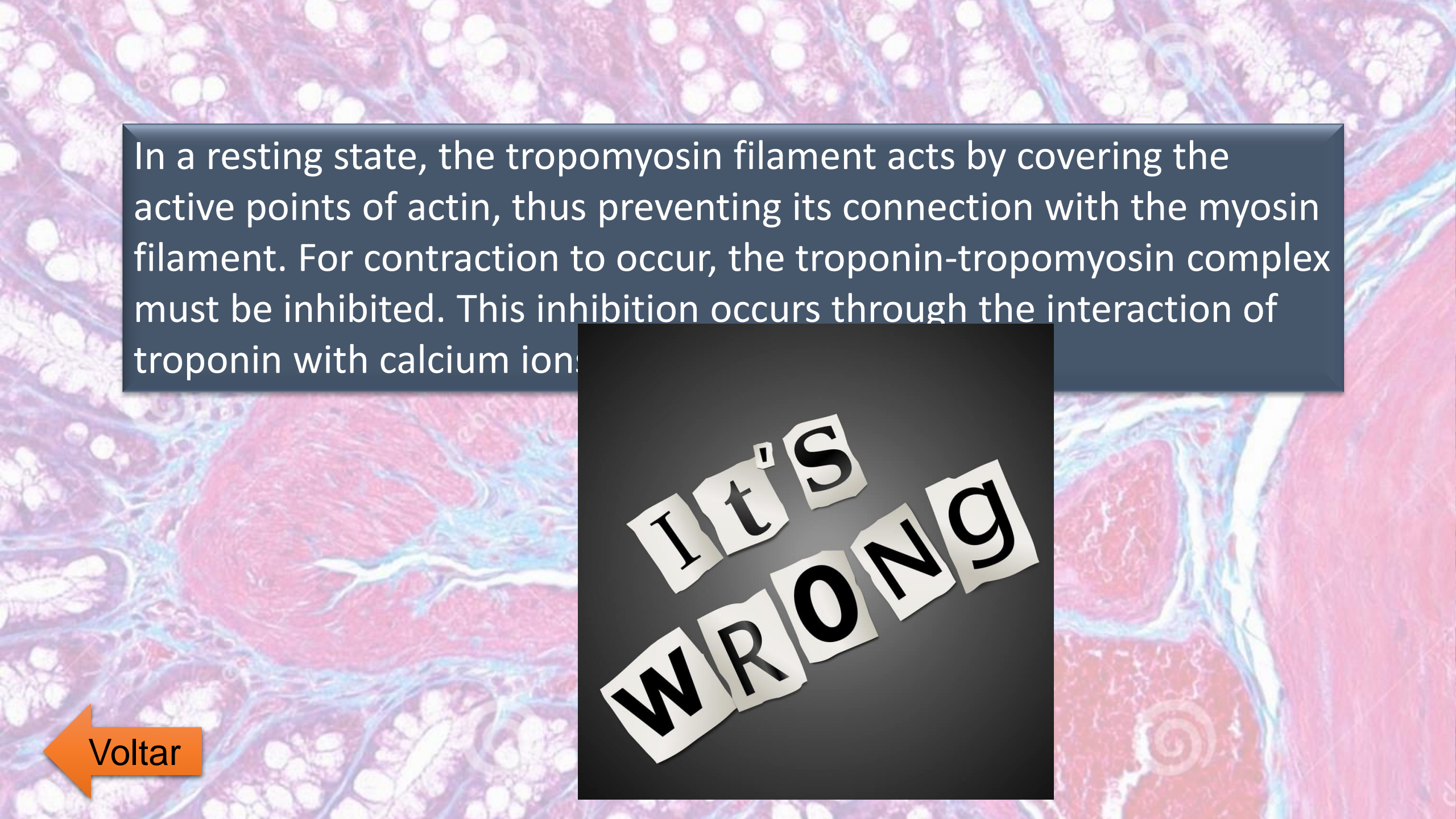
It's
WRONG

← Voltar

The energy needed for muscle contraction comes from the hydrolysis of ATP. The availability of calcium comes from the release of this ion from the sarcoplasmic reticulum, when depolarized. Calcium has the important function of exposing a myosin binding site in the

It's
WRONG

← Voltar



In a resting state, the tropomyosin filament acts by covering the active points of actin, thus preventing its connection with the myosin filament. For contraction to occur, the troponin-tropomyosin complex must be inhibited. This inhibition occurs through the interaction of troponin with calcium ions.

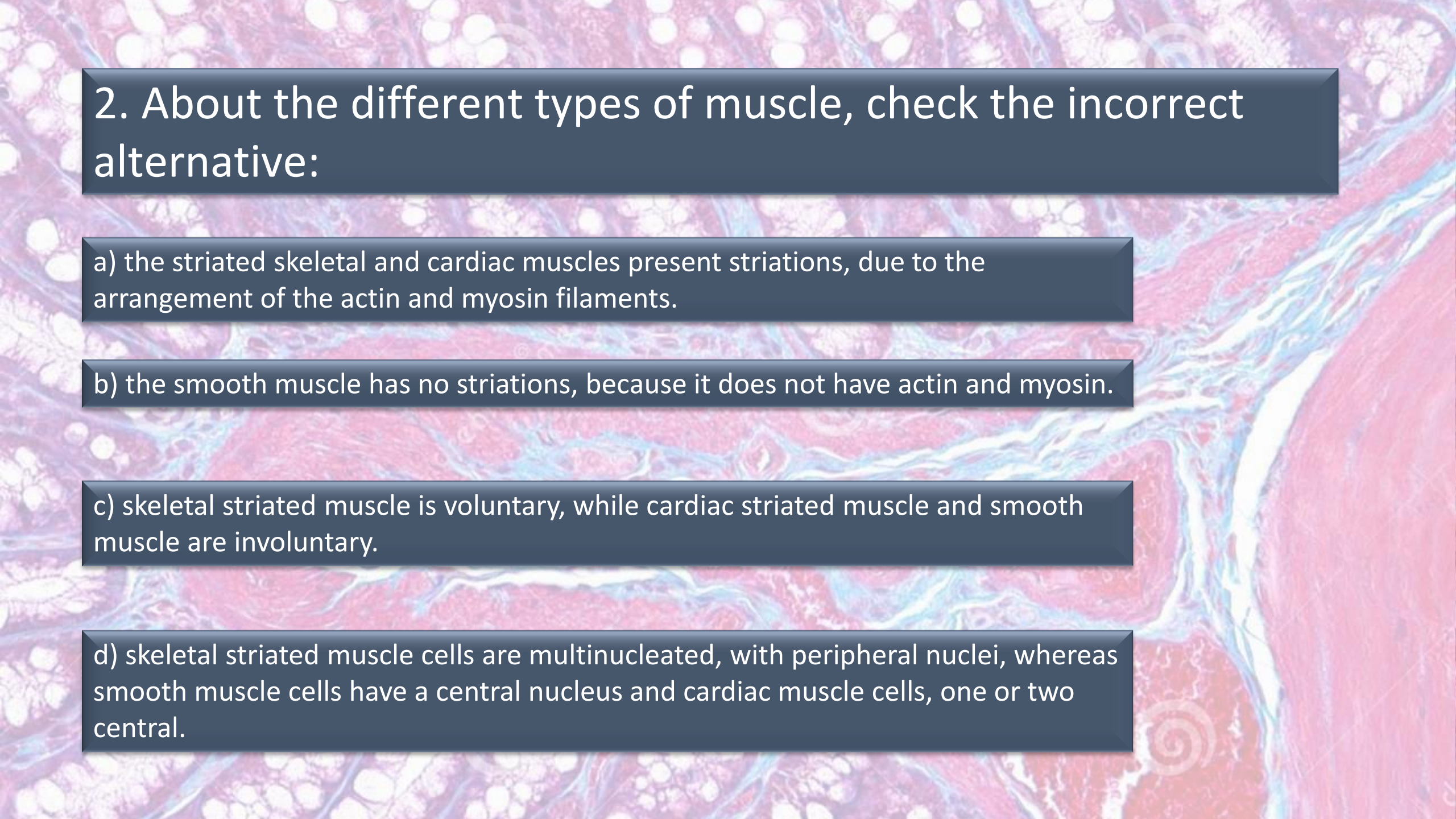
IT'S
WRONG



Voltar



Avançar



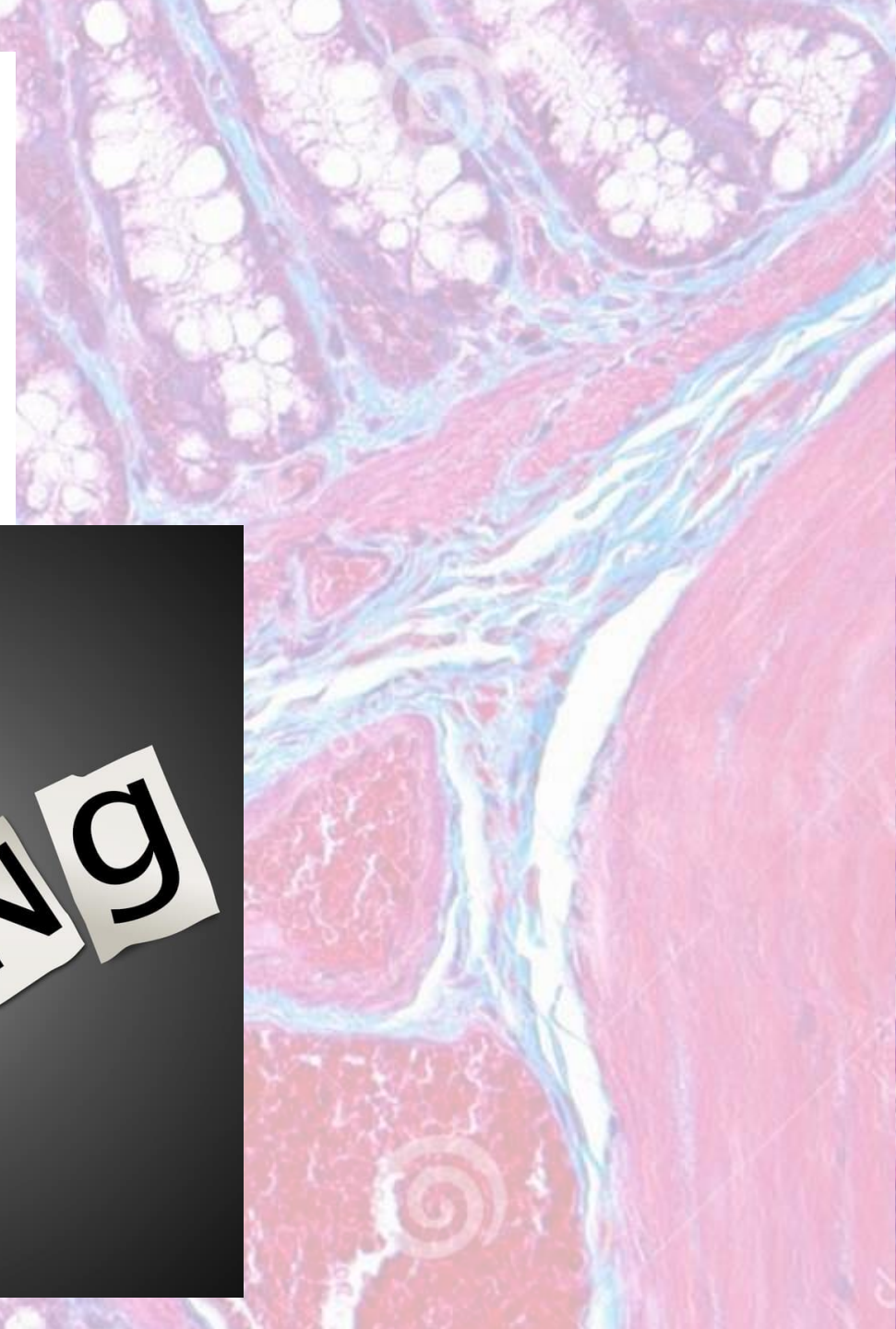
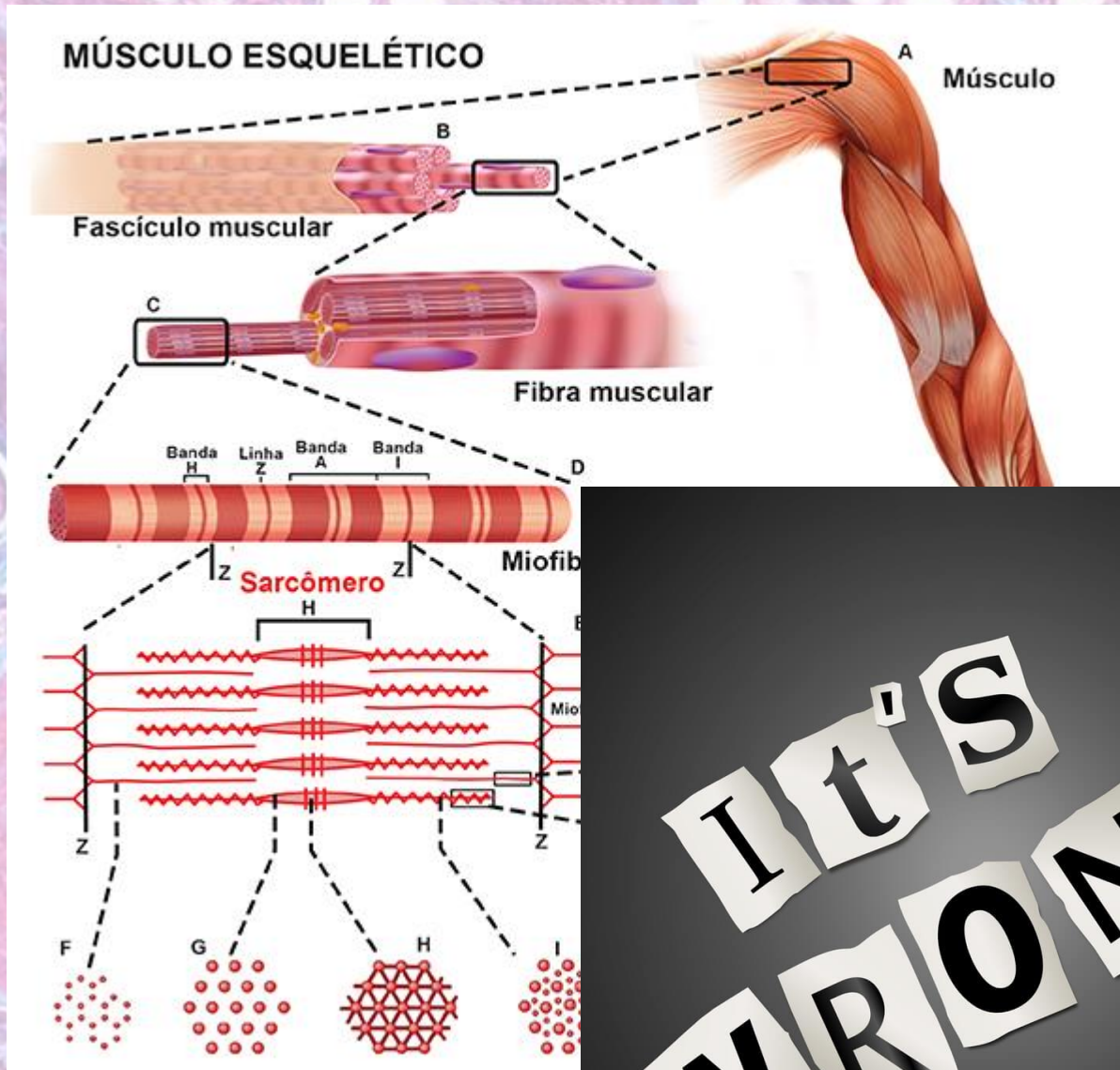
2. About the different types of muscle, check the incorrect alternative:

a) the striated skeletal and cardiac muscles present striations, due to the arrangement of the actin and myosin filaments.

b) the smooth muscle has no striations, because it does not have actin and myosin.

c) skeletal striated muscle is voluntary, while cardiac striated muscle and smooth muscle are involuntary.

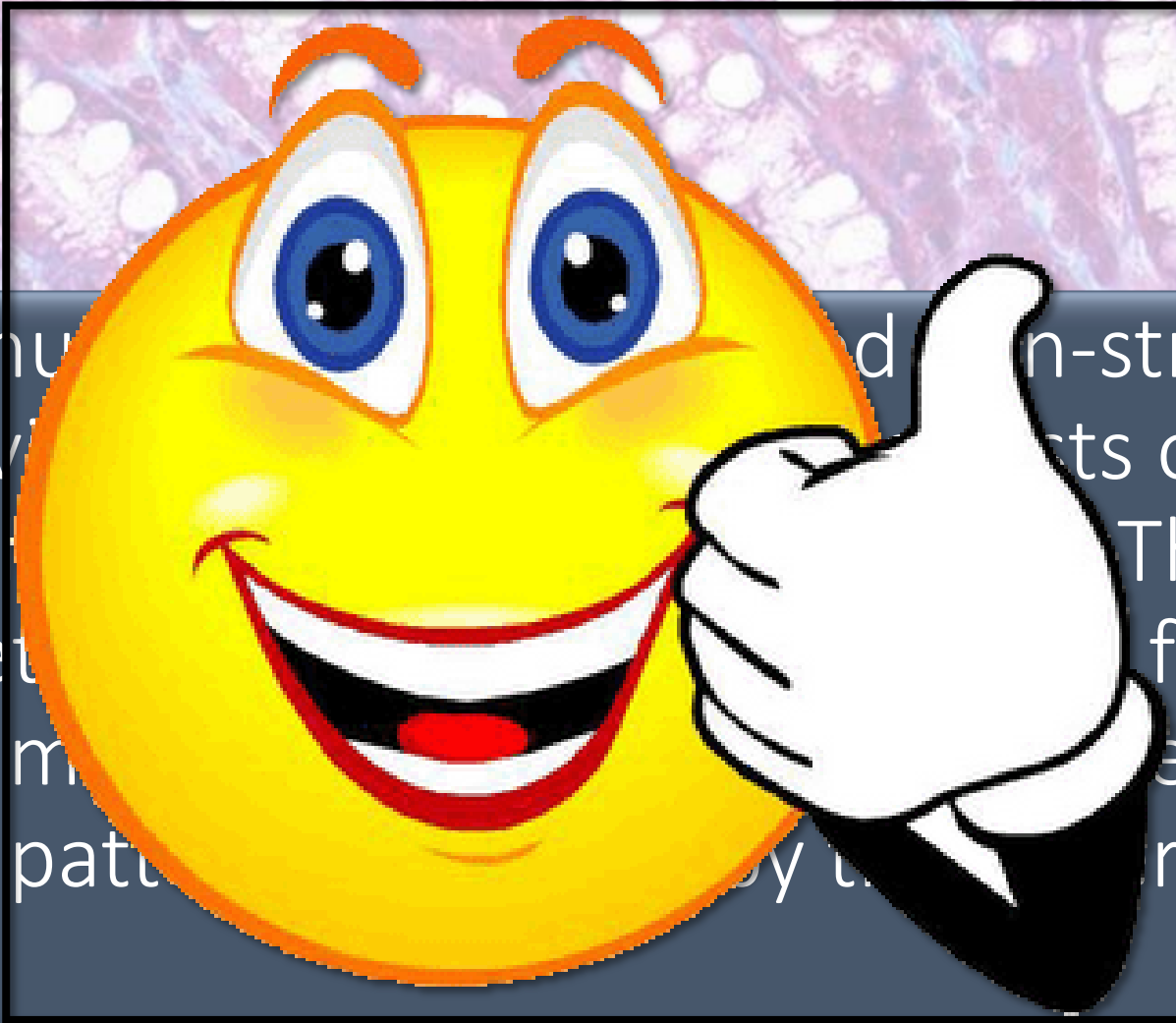
d) skeletal striated muscle cells are multinucleated, with peripheral nuclei, whereas smooth muscle cells have a central nucleus and cardiac muscle cells, one or two central.







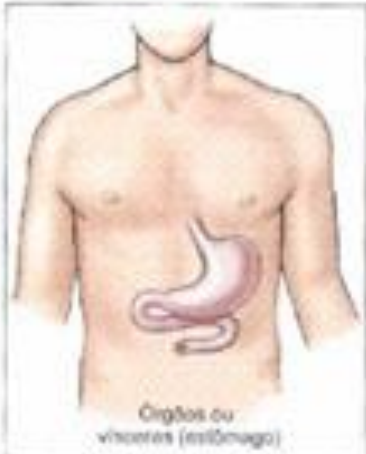

**IT'S
WRONG**

← Voltar

Smooth muscle tissue or visceral muscle is a type of non-striated muscle tissue. It consists of mononucleated cells. The absence of striations is due to the absence of filaments of actin and myosin. These stretch and contract by the same pathway as skeletal muscle cells.



Avançar

Aparência da célula:		
		
Músculo estriado esquelético	Músculo liso	Músculo cardíaco
Localização:		
		
Cobrindo o esqueleto	Órgãos ou vísceras (estômago)	Coração
Descrição:		
Estriado voluntário	Não-estriado involuntário	Estriado involuntário

**IT'S
WRONG**

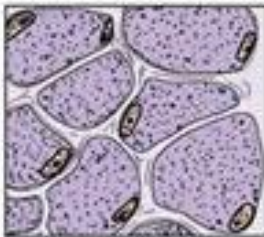
 Voltar

Tipos de músculo

Músculo esquelético



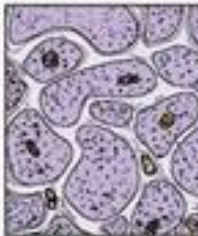
Cortes transversais



Atividade

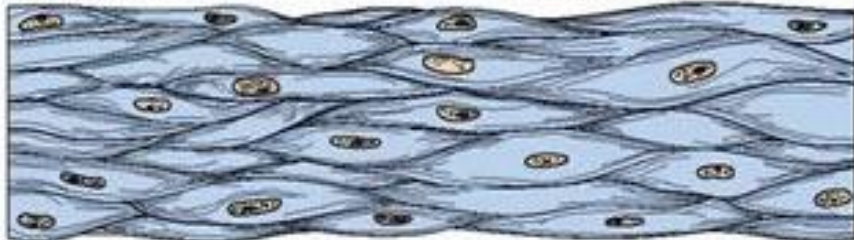
Contração forte,
rápida,
descontínua e
voluntária

Músculo cardíaco



Músculo liso

Discos intercalares



IT'S
WRONG

Voltar



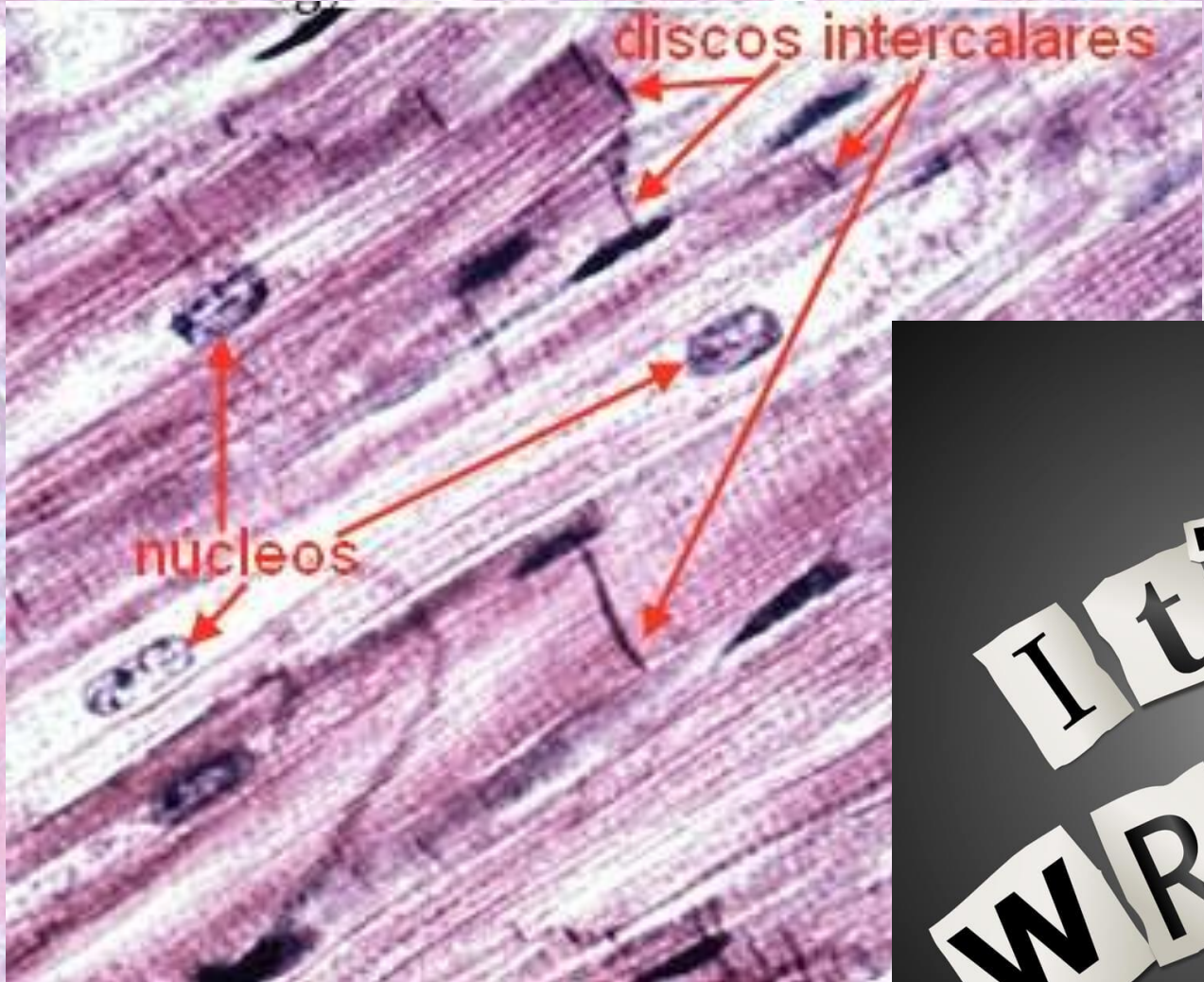
3. On the interim discs, check the incorrect alternative:

a) they are observed under the light microscope as straight lines or stairs.

b) interdigitations, desmosomes and adhesion zones promote the union of cells.

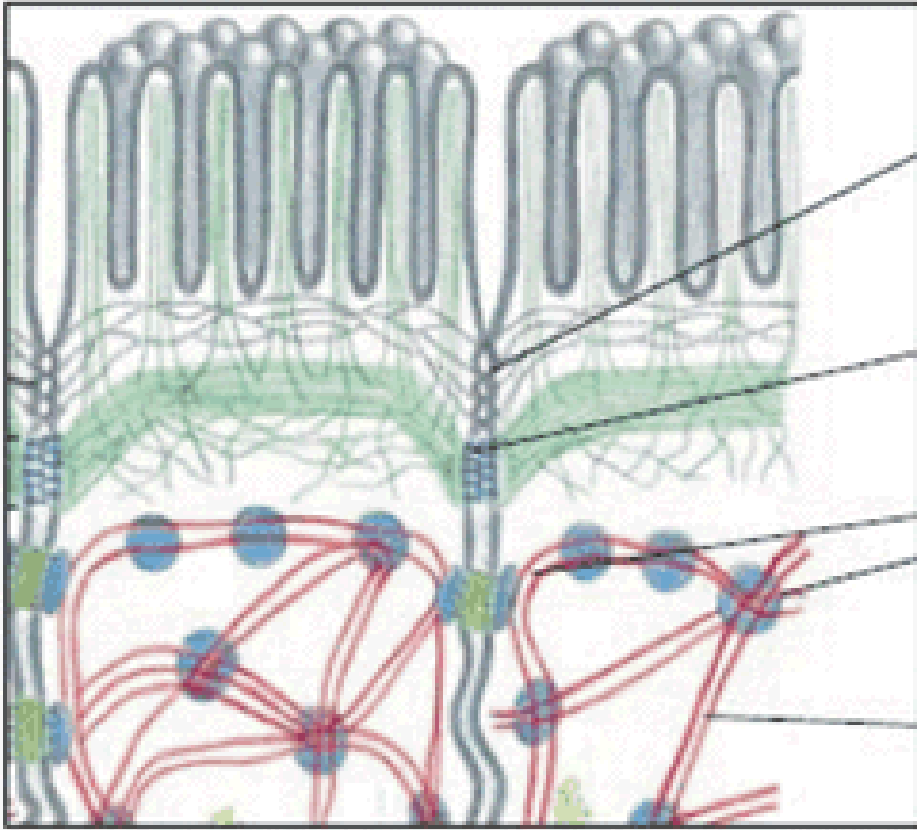
c) the gap junctions allow the rapid passage of ions between cells, promoting the synchronization of cell contraction.

d) are present in the striated skeletal muscle.



IT'S
WRONG

← Voltar

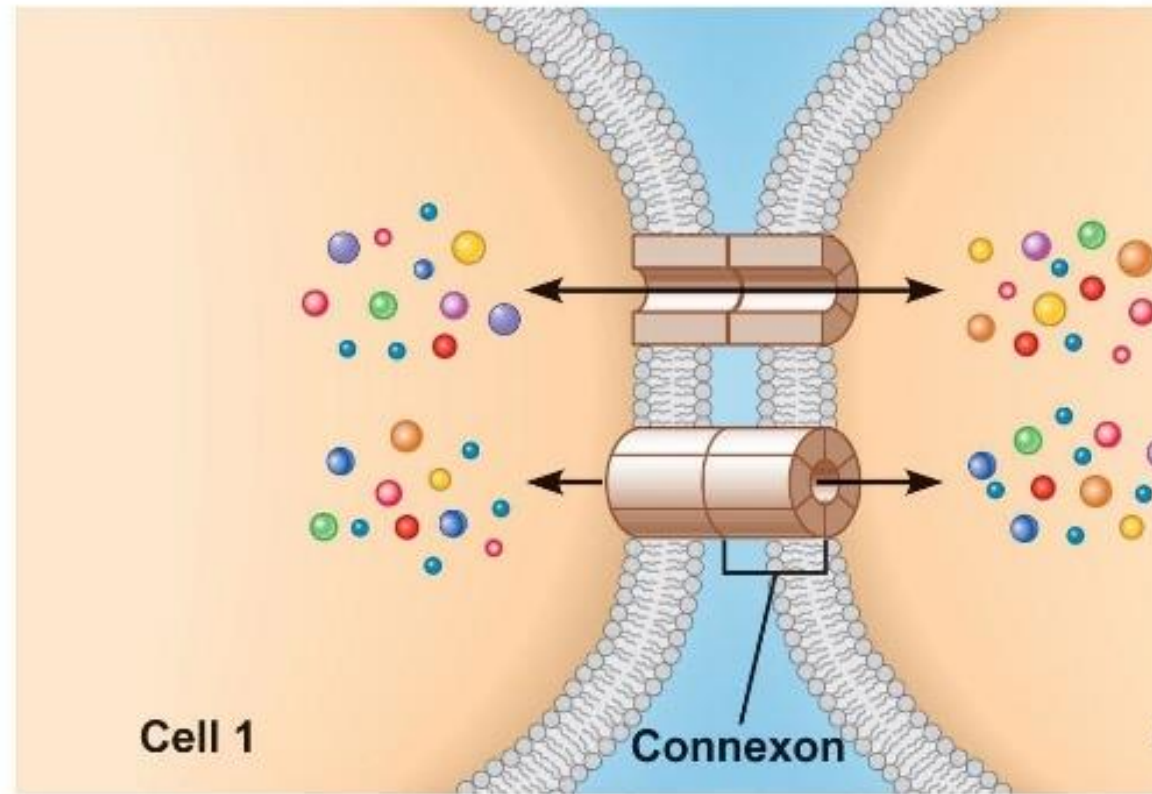


**Zona
Oclusiva**

**IT'S
WRONG**

Voltar

Junções Comunicantes



IT'S
WRONG

← Voltar

The intercalated structures present only in the cardiac



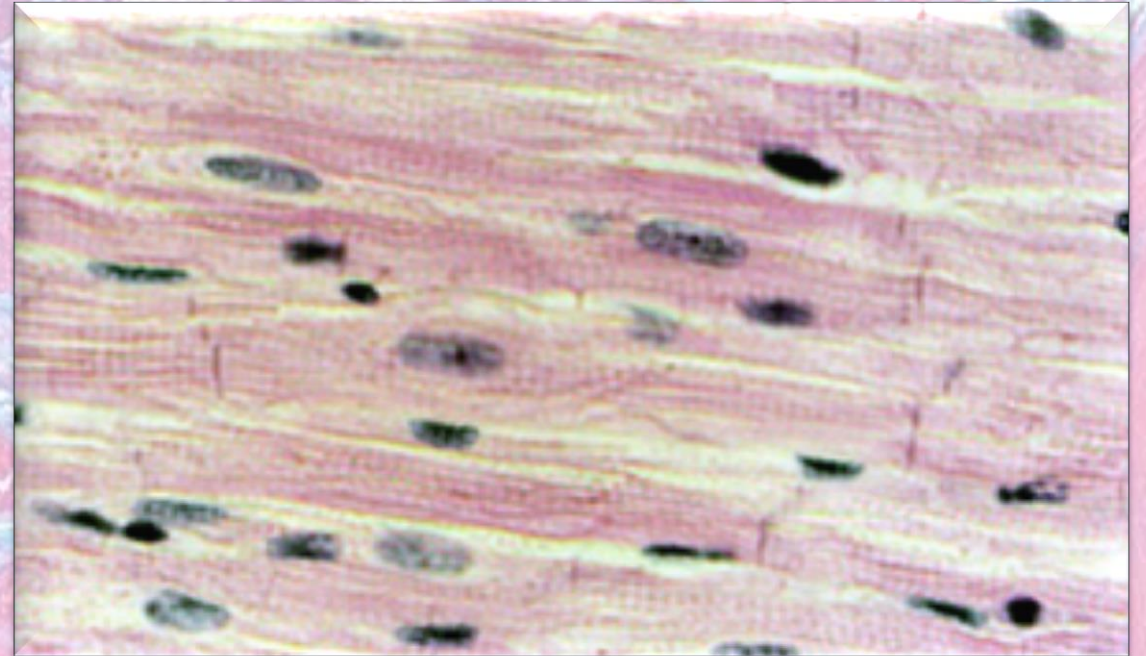
4. The cut shown is of muscle:

a) Cardiac striated muscle.

b) Muscular striated skeletal.

c) Smooth muscle.


d) Modeled Connective



The striated cardiac muscle is found only in the heart, forming the myocardium. The cells of the striated cardiac muscle are branched and are joined together through gap junctions in the plasma membrane.




Avançar



The intercalated discs and gap junctions are present only in the cardiac striated muscle.

**IT'S
WRONG**

A microscopic image of cardiac tissue stained with hematoxylin and eosin (H&E). The image shows several intercalated discs, which are specialized junctional complexes between adjacent cardiac muscle cells. One prominent intercalated disc is stained blue, highlighting its structure. The surrounding tissue is pink, representing the cytoplasm and nuclei of the muscle cells.

The intercalated discs sap structures present only in the cardiac striated muscle.

**IT'S
WRONG**

An orange arrow pointing to the left, containing the name 'Voltar' in white text.

Voltar

Patterned: formed by collagen fibers arranged in bundles with fixed orientation, giving the fabric characteristics of greater resistance than that of non-modeled and loose fabric.

**IT'S
WRONG**



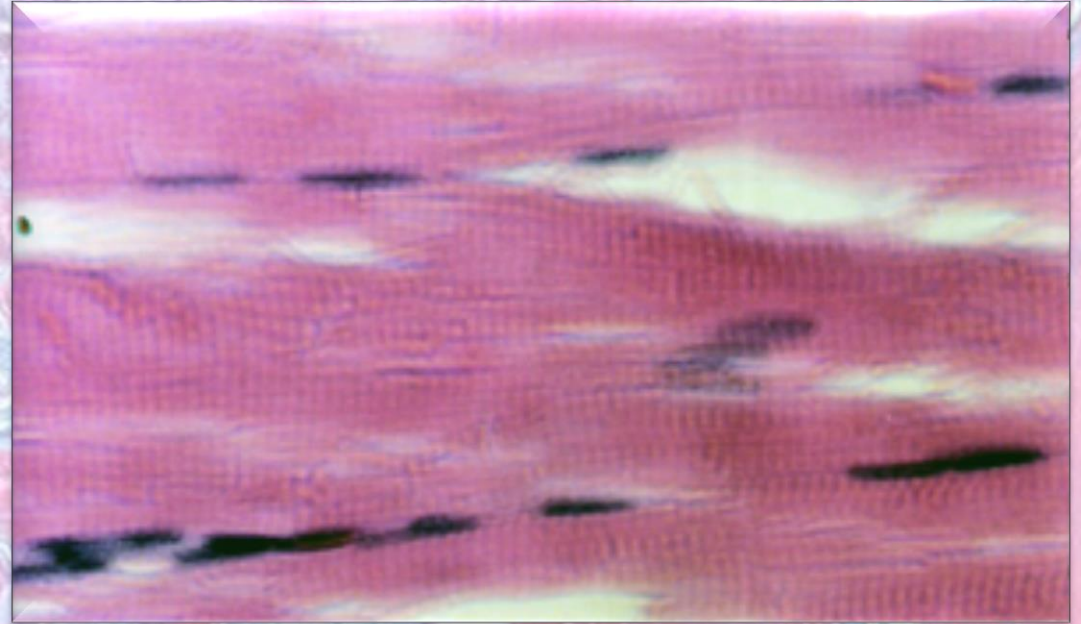
5. The image is of muscle:

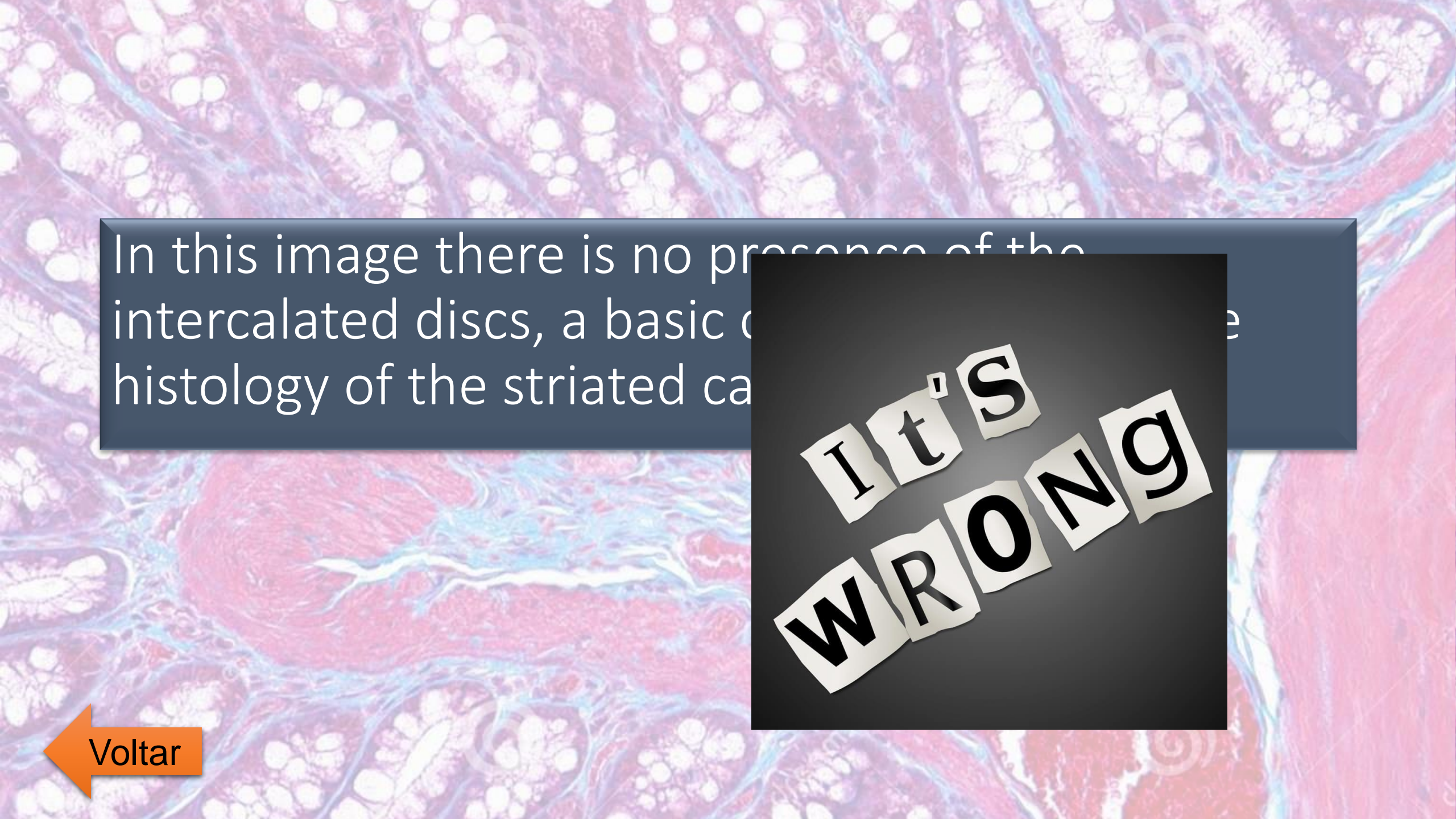
a) Cardiac striated muscle.

b) Muscular striated skeletal.

c) Smooth muscle.

d) Modeled Connective





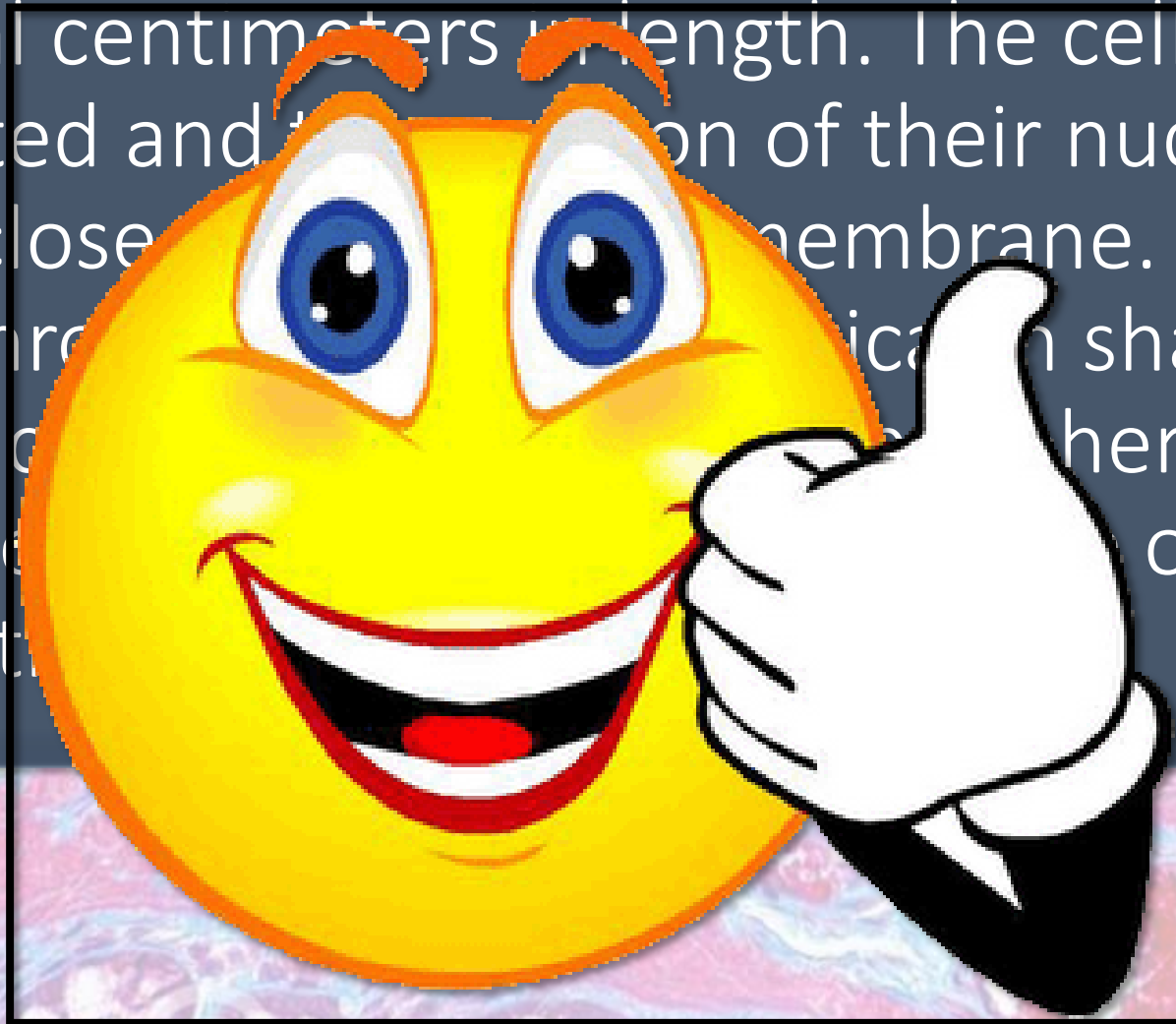
In this image there is no presence of the
intercalated discs, a basic of the
histology of the striated ca

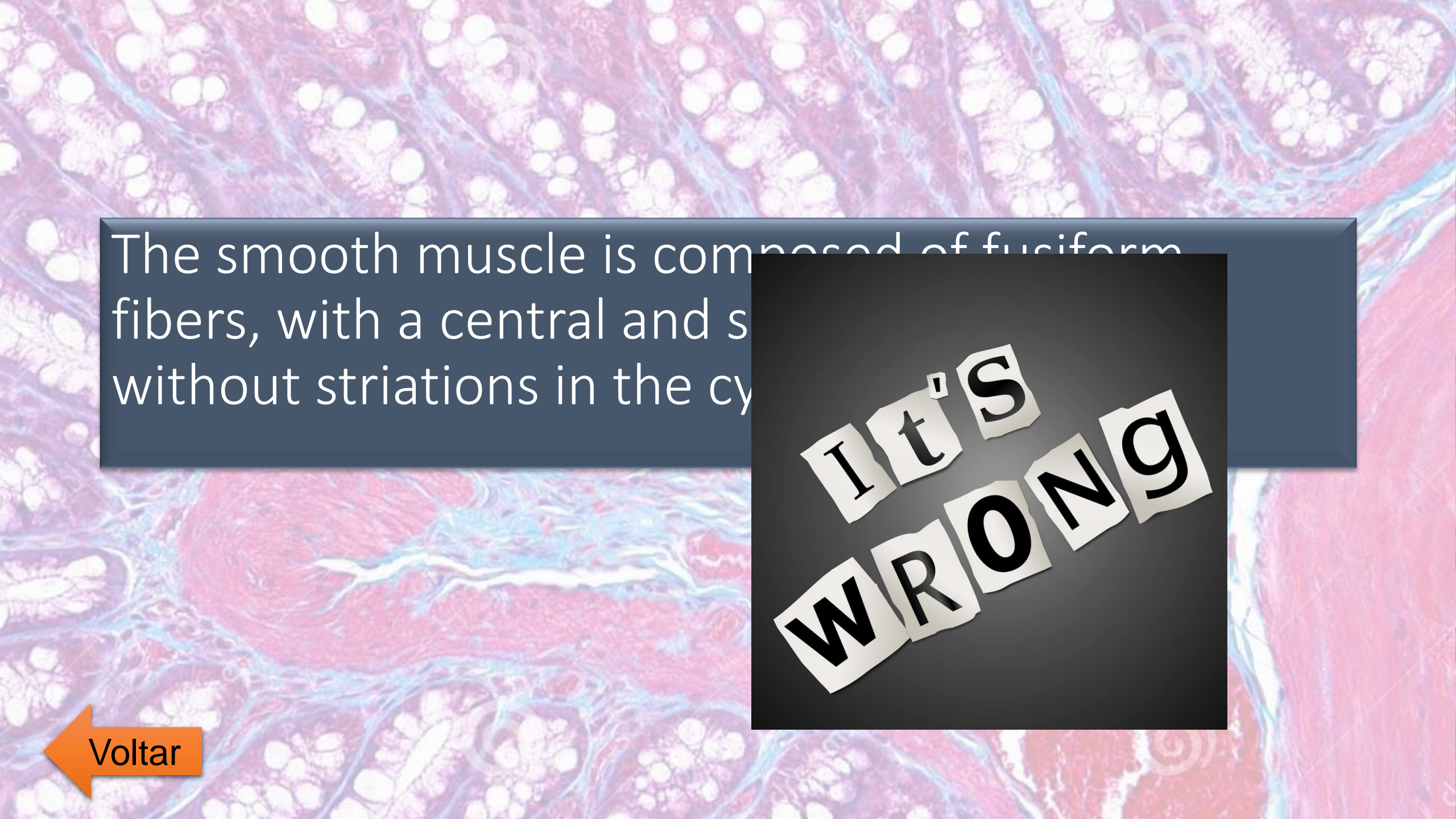
IT'S
WRONG



Voltar

The fibers are long cells in the form of cylinders that can reach several centimeters in length. The cells are multinucleated and the position of their nuclei is peripheral, close to the cell membrane. The cores have clear chromatin and a cylindrical shape that resembles a corkscrew. Another important feature is the presence of peripheral nuclei, and another important feature is the presence of transverse striations in the fibers.



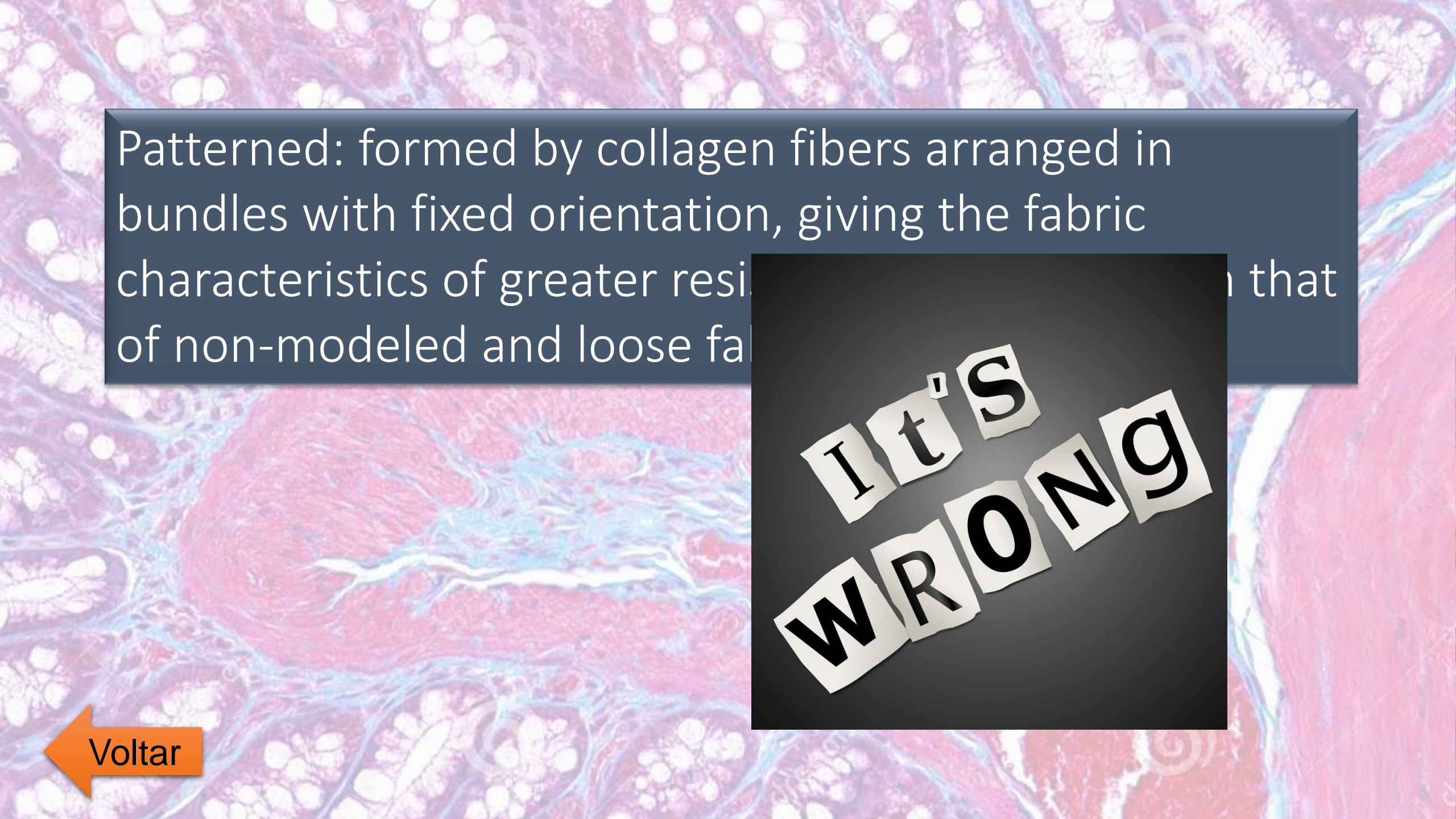
A histological section of smooth muscle tissue, stained with hematoxylin and eosin (H&E). The image shows numerous smooth muscle cells with spindle-shaped nuclei and a central, pale-staining nucleus. The cells are arranged in bundles, and the overall appearance is that of a dense, fibrous tissue. The background is a light pink color, and the nuclei are stained a deep purple.

The smooth muscle is composed of fusiform fibers, with a central and spindle-shaped nucleus without striations in the cytoplasm.

**IT'S
WRONG**

An orange arrow pointing to the left, with the word "Voltar" written in white text inside it.

Voltar



Patterned: formed by collagen fibers arranged in bundles with fixed orientation, giving the fabric characteristics of greater resistance than that of non-modeled and loose fabric.

**IT'S
WRONG**

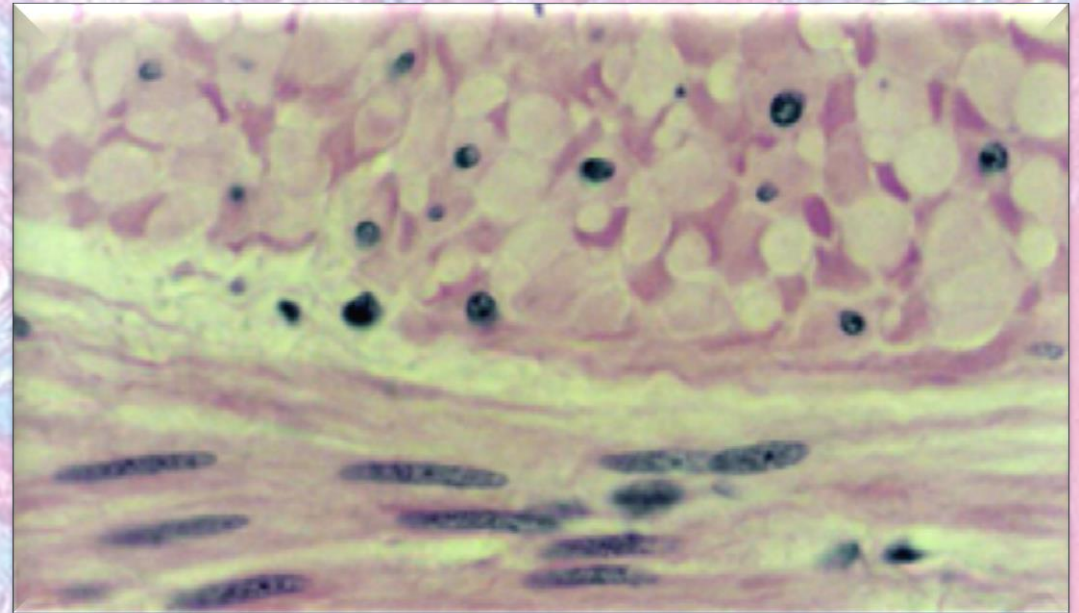
6. The photo shown corresponds to the muscle ...

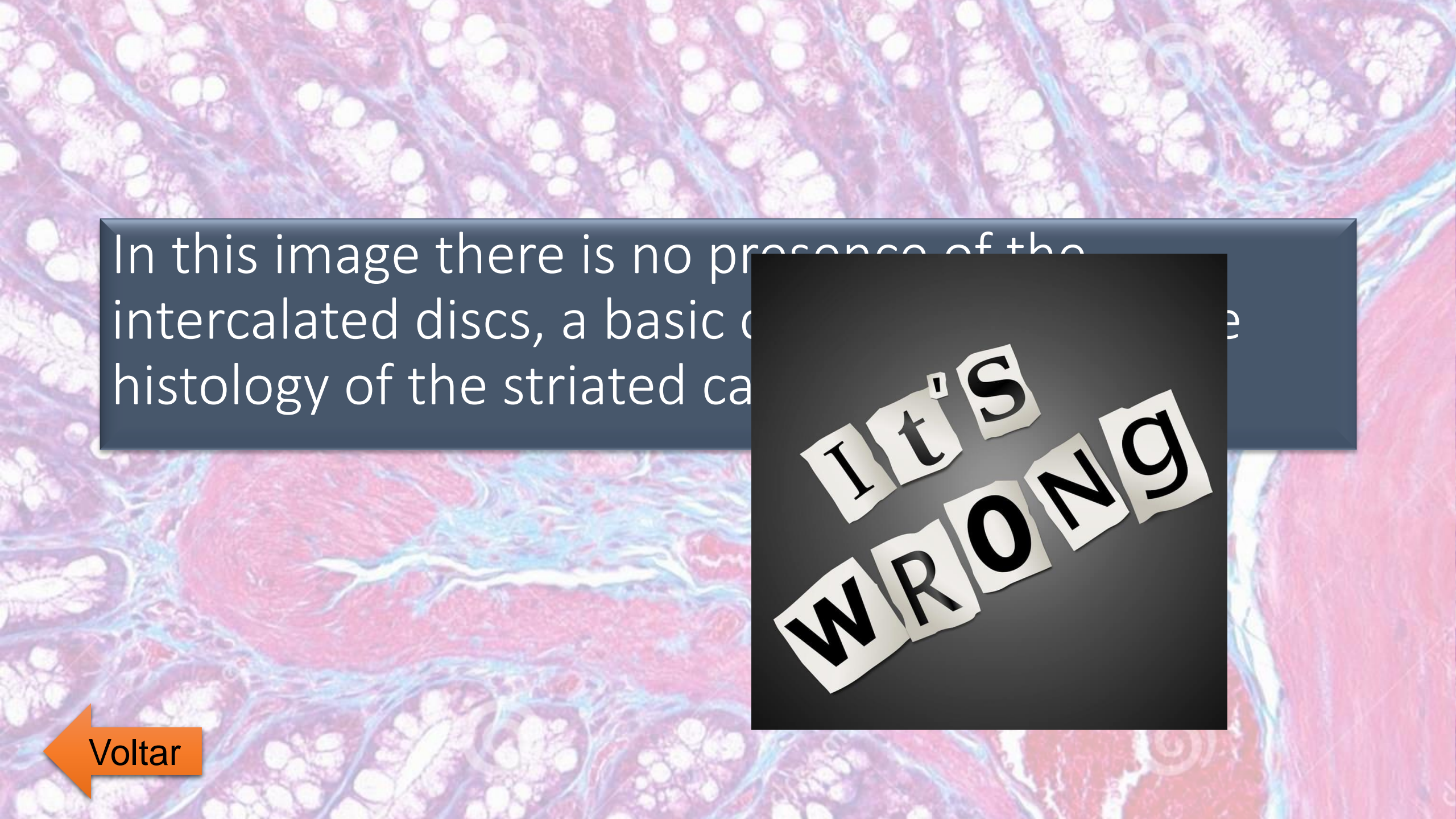
a) Cardiac striated muscle.

b) Muscular striated skeletal.

c) Smooth muscle.

d) Modeled Connective





In this image there is no presence of the
intercalated discs, a basic of
histology of the striated ca

IT'S
WRONG



Voltar

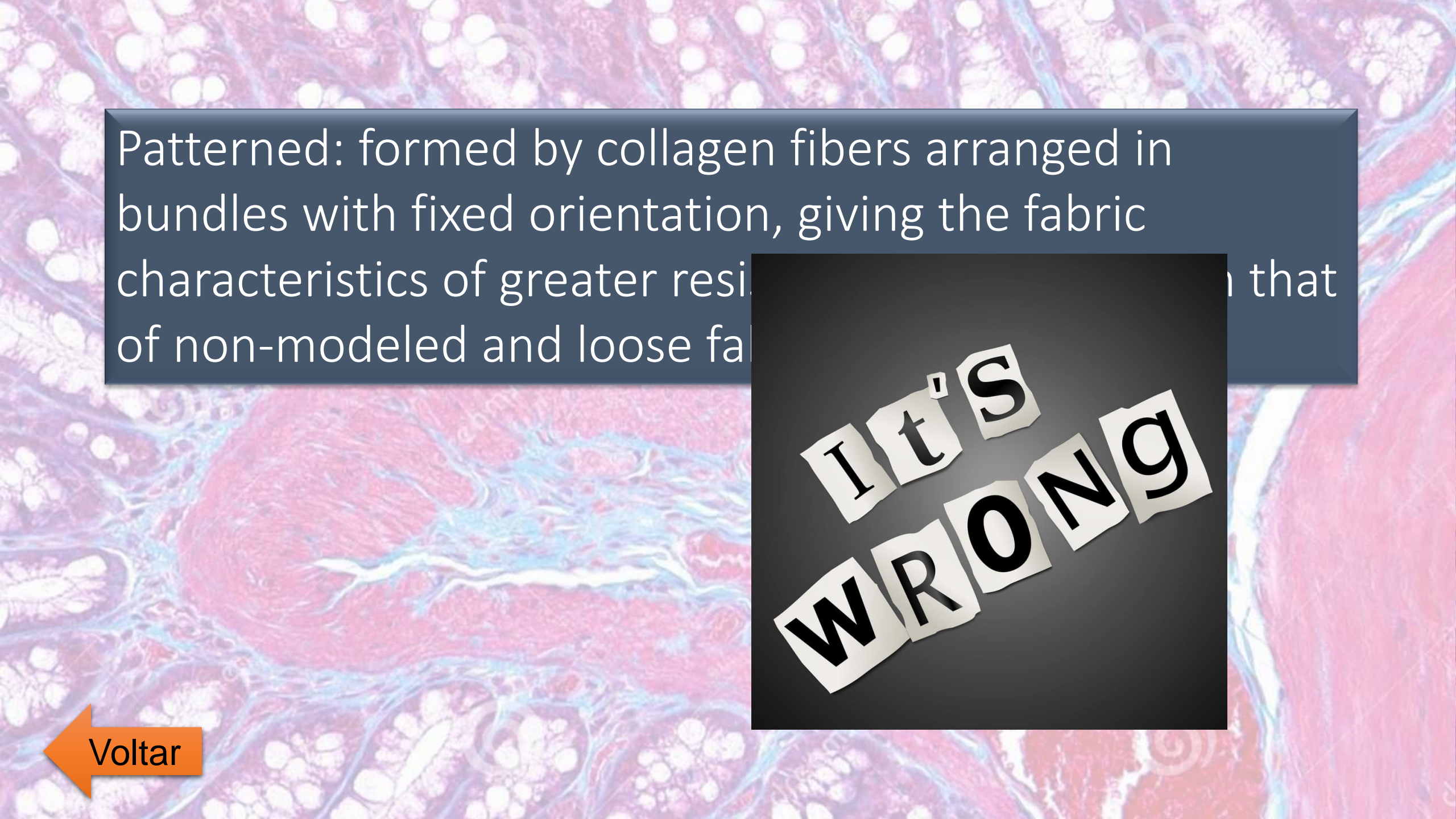
The fibers are long cells in the form of cylinders that can reach several centimeters in length. The cells are multinucleated and the position of their nuclei is peripheral, close to the plasma membrane. The nuclei have clear chromatin and are arranged in a regular pattern, which resembles a cigar. In addition, another important feature is the presence of striations in the cytoplasm.

**IT'S
WRONG**

The smooth muscle is composed of fusiform fibers, with a central nucleus and without striations in



Avançar

The background of the slide is a histological micrograph showing collagen fibers. The fibers are arranged in bundles with a fixed orientation, which is characteristic of patterned collagen. The fibers are stained blue, and the surrounding tissue is stained pink. The bundles are arranged in a way that gives the fabric characteristics of greater resistance to tearing than that of non-modeled and loose fabric.

Patterned: formed by collagen fibers arranged in bundles with fixed orientation, giving the fabric characteristics of greater resistance to tearing than that of non-modeled and loose fabric.

**IT'S
WRONG**

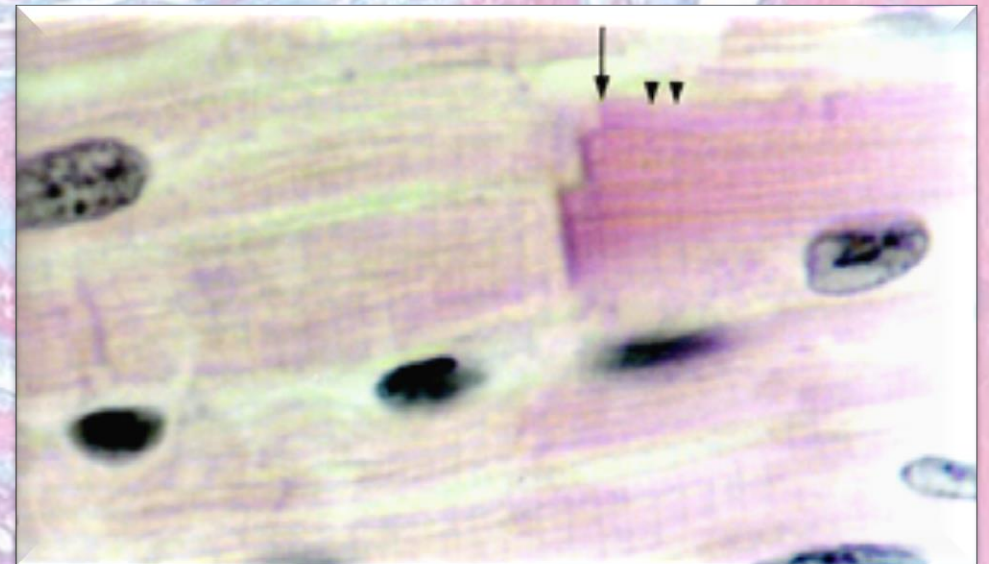
7. In this image, the arrow and the arrow heads respectively indicate:

a) the junction between the cells and the Z disks in the skeletal striated muscle.

b) the intercalated disc and the Z lines in the striated cardiac muscle.

c) the interleaving disc and the A bands.

d) the interleaving disc and I bands.





IT'S
WRONG

← Voltar



Avançar



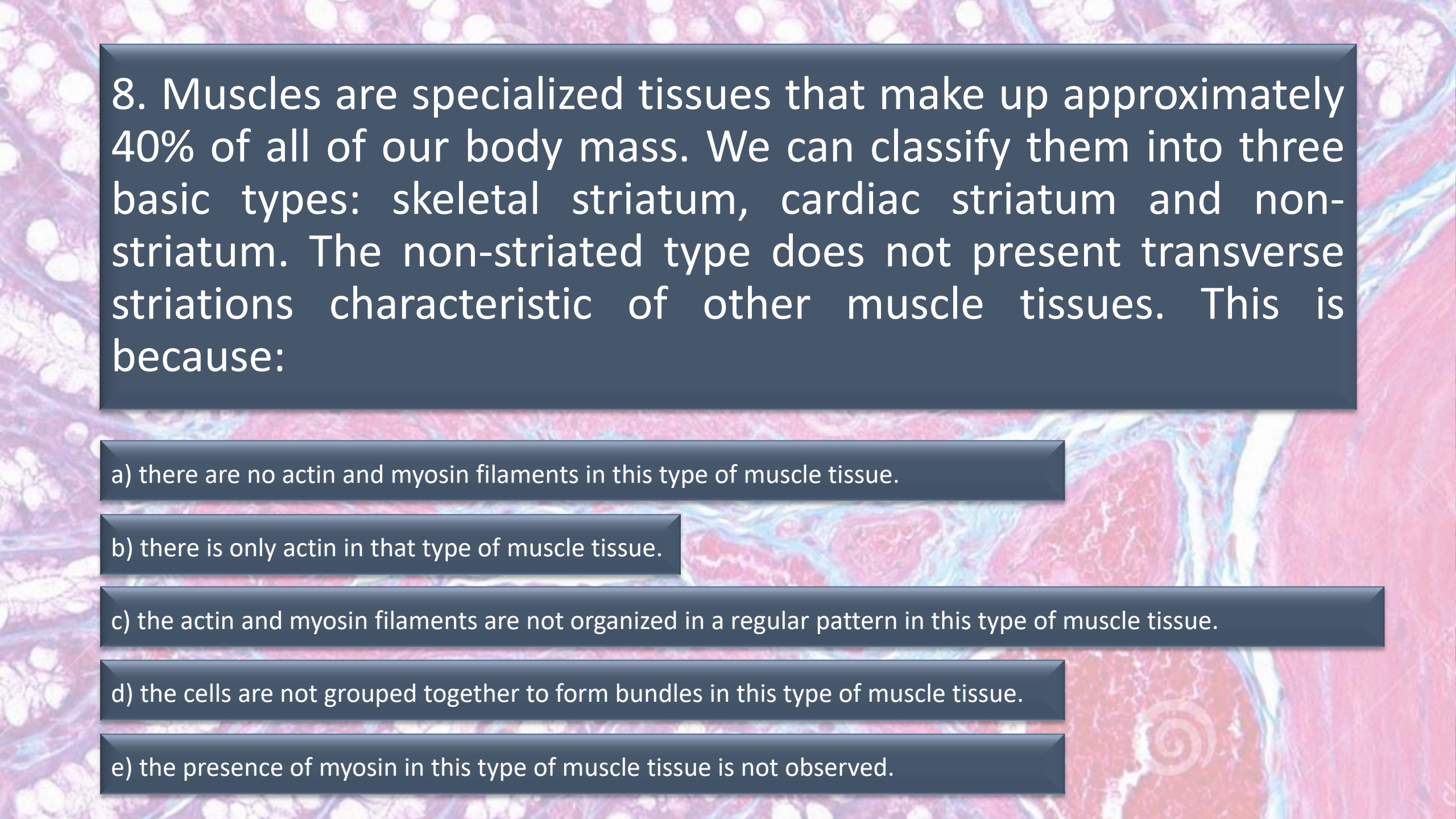
IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar

A microscopic image of muscle tissue, showing various fibers and structures. The image is used as a background for the text boxes.

8. Muscles are specialized tissues that make up approximately 40% of all of our body mass. We can classify them into three basic types: skeletal striatum, cardiac striatum and non-striatum. The non-striated type does not present transverse striations characteristic of other muscle tissues. This is because:

a) there are no actin and myosin filaments in this type of muscle tissue.

b) there is only actin in that type of muscle tissue.

c) the actin and myosin filaments are not organized in a regular pattern in this type of muscle tissue.

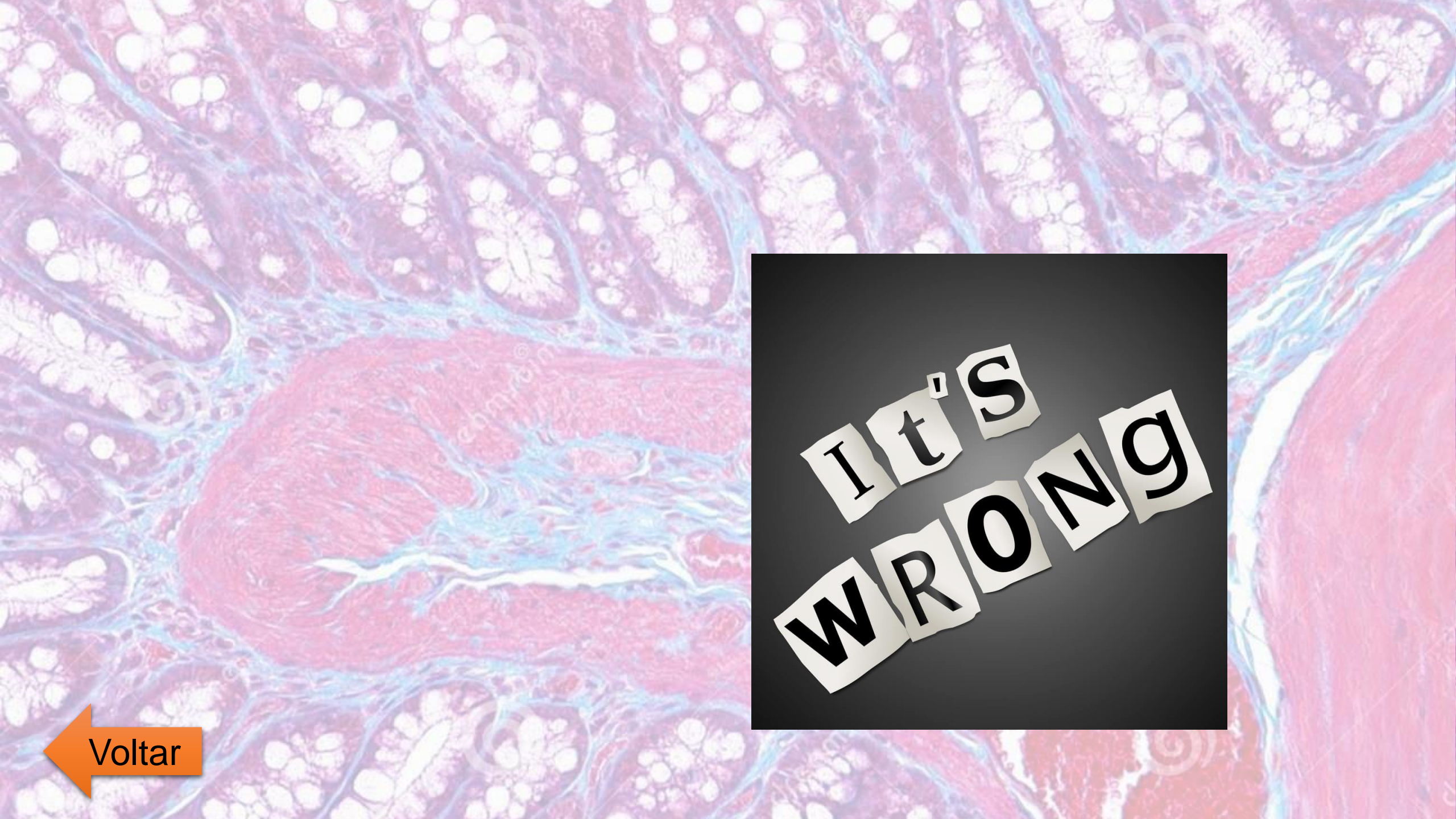
d) the cells are not grouped together to form bundles in this type of muscle tissue.

e) the presence of myosin in this type of muscle tissue is not observed.



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar

Alternative c Although the actin and myosin filaments are arranged according to the long axis of the cell, they are not organized in a regular pattern. Non-striated muscle tissue does not present transverse striations.



Avançar



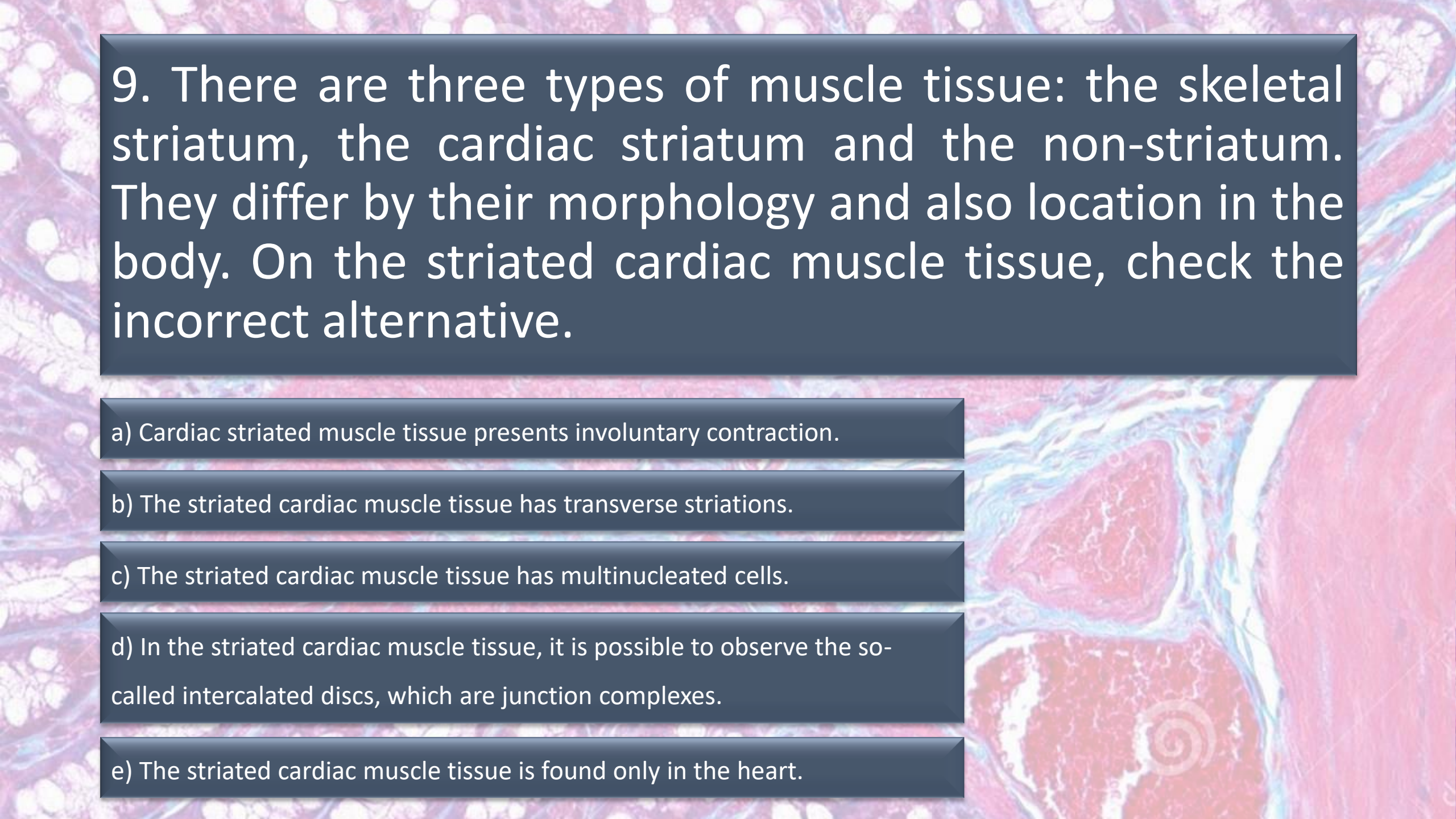
IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



9. There are three types of muscle tissue: the skeletal striatum, the cardiac striatum and the non-striatum. They differ by their morphology and also location in the body. On the striated cardiac muscle tissue, check the incorrect alternative.

a) Cardiac striated muscle tissue presents involuntary contraction.

b) The striated cardiac muscle tissue has transverse striations.

c) The striated cardiac muscle tissue has multinucleated cells.

d) In the striated cardiac muscle tissue, it is possible to observe the so-called intercalated discs, which are junction complexes.

e) The striated cardiac muscle tissue is found only in the heart.



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar

Alternative "c". The cells make up the striated cardiac muscle. All have a central nucleus (some may also have, in some cases, two nuclei (binucleate)).



Avançar



myofibrils.

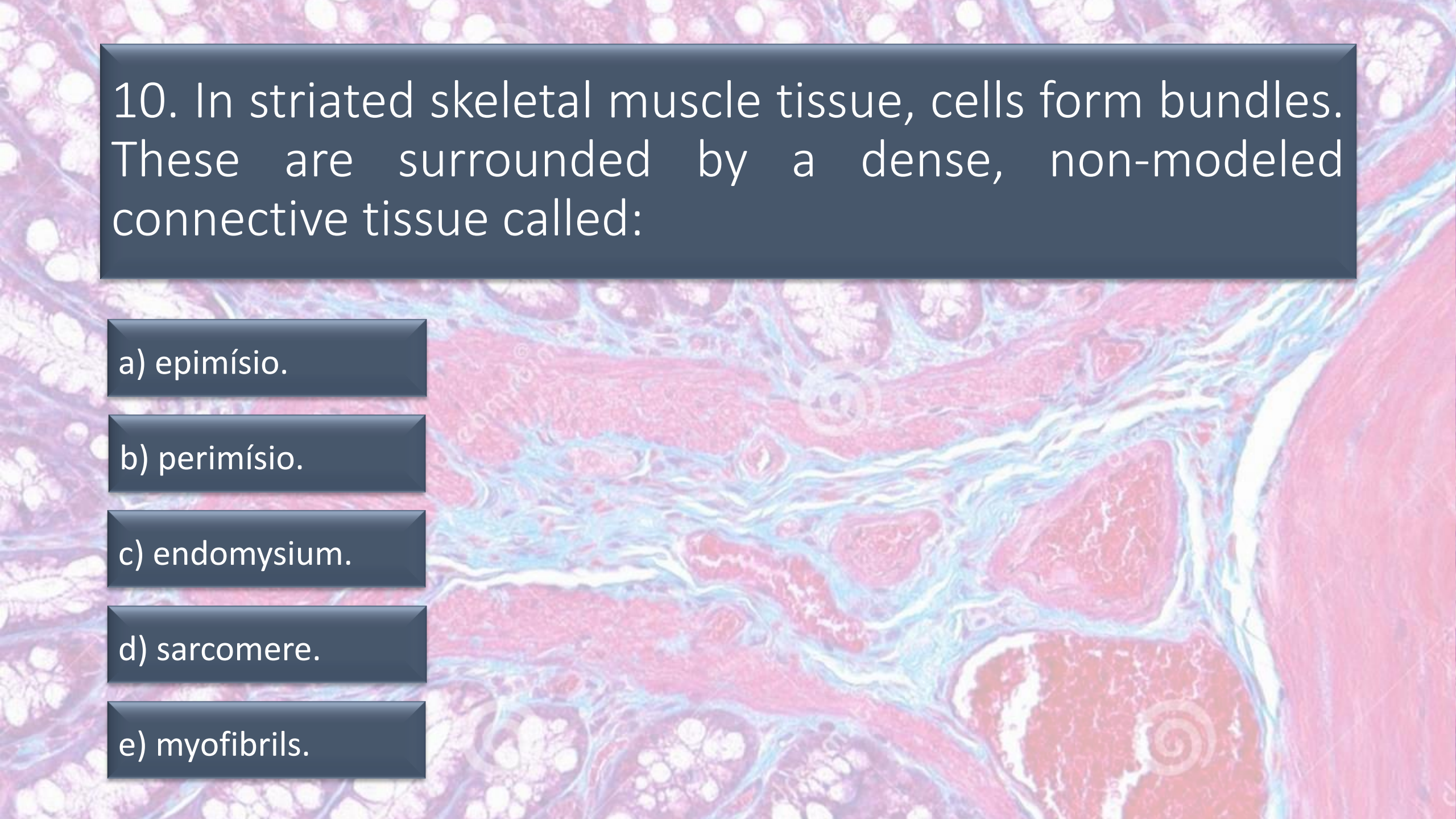
IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



10. In striated skeletal muscle tissue, cells form bundles. These are surrounded by a dense, non-modeled connective tissue called:

a) epimísio.

b) perimísio.

c) endomysium.

d) sarcomere.

e) myofibrils.



IT'S
WRONG

← Voltar

Alternative “b”. Each muscle fiber, called a fiber, is surrounded by connective tissue called the sarcolemma. The set of fibers, that is, the bundles, is surrounded by the epimysium.



Avançar



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar

11. It consists of uninucleated cells that have central nuclei. In its cytoplasm we find myofibrils, forming light and dark discs. To form the tissue, these cells are placed in continuity with each other, and the adhesion between them, made by the intercalated discs, presents rapid and involuntary contractions. This is the description of the fabric:

a) epithelial

b) conjunctive

c) cardiac striated muscle

d) non-striated muscle

e) skeletal striated muscle



IT'S
WRONG

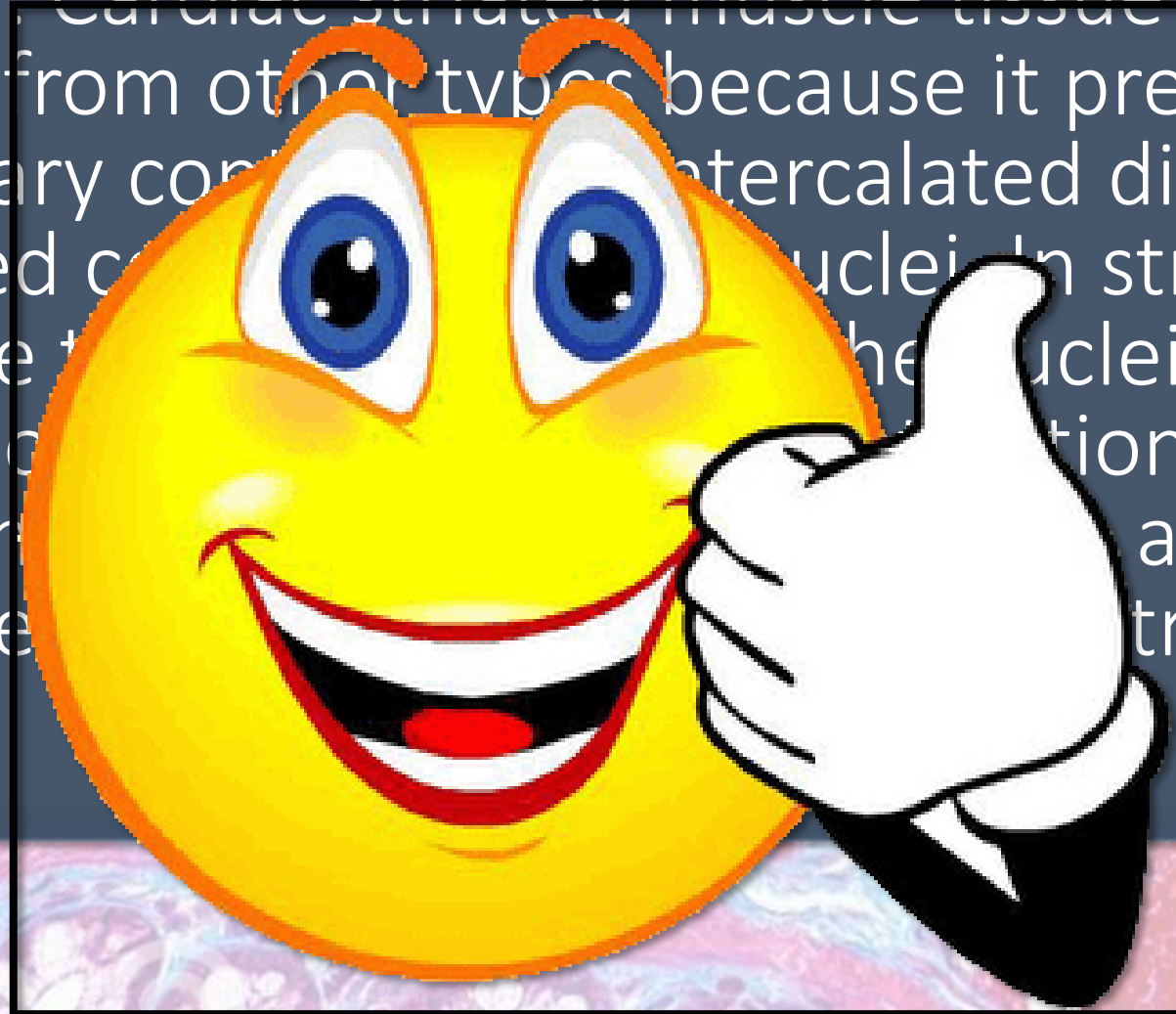
← Voltar



IT'S
WRONG

← Voltar

Alternative “c” Cardiac striated muscle tissue can be differentiated from other types because it presents rapid involuntary contraction, intercalated discs and mononucleated cells. In striated skeletal muscle the nuclei are on the periphery of the cells and the contraction is voluntary. In the heart, the nuclei are on the periphery of the cells and the contraction is slow.



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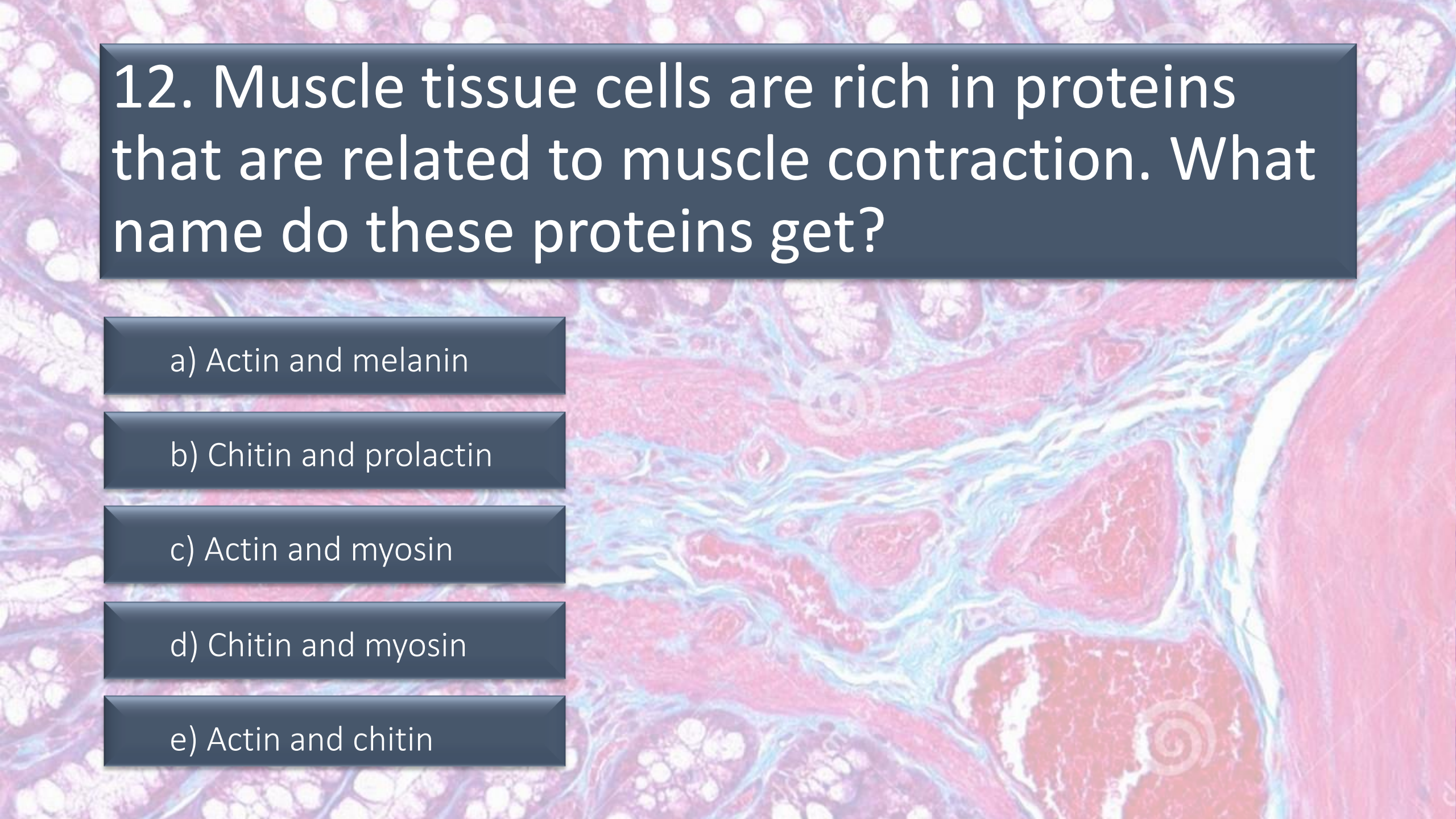
IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar

A microscopic image of muscle tissue, showing various muscle fibers and connective tissue. The image is stained with hematoxylin and eosin (H&E), showing pink muscle fibers and blue connective tissue. The muscle fibers are arranged in a somewhat disorganized manner, with some fibers appearing to be in cross-section and others in longitudinal section. The connective tissue is visible as a network of blue-stained fibers surrounding the muscle fibers.

12. Muscle tissue cells are rich in proteins that are related to muscle contraction. What name do these proteins get?

a) Actin and melanin

b) Chitin and prolactin

c) Actin and myosin

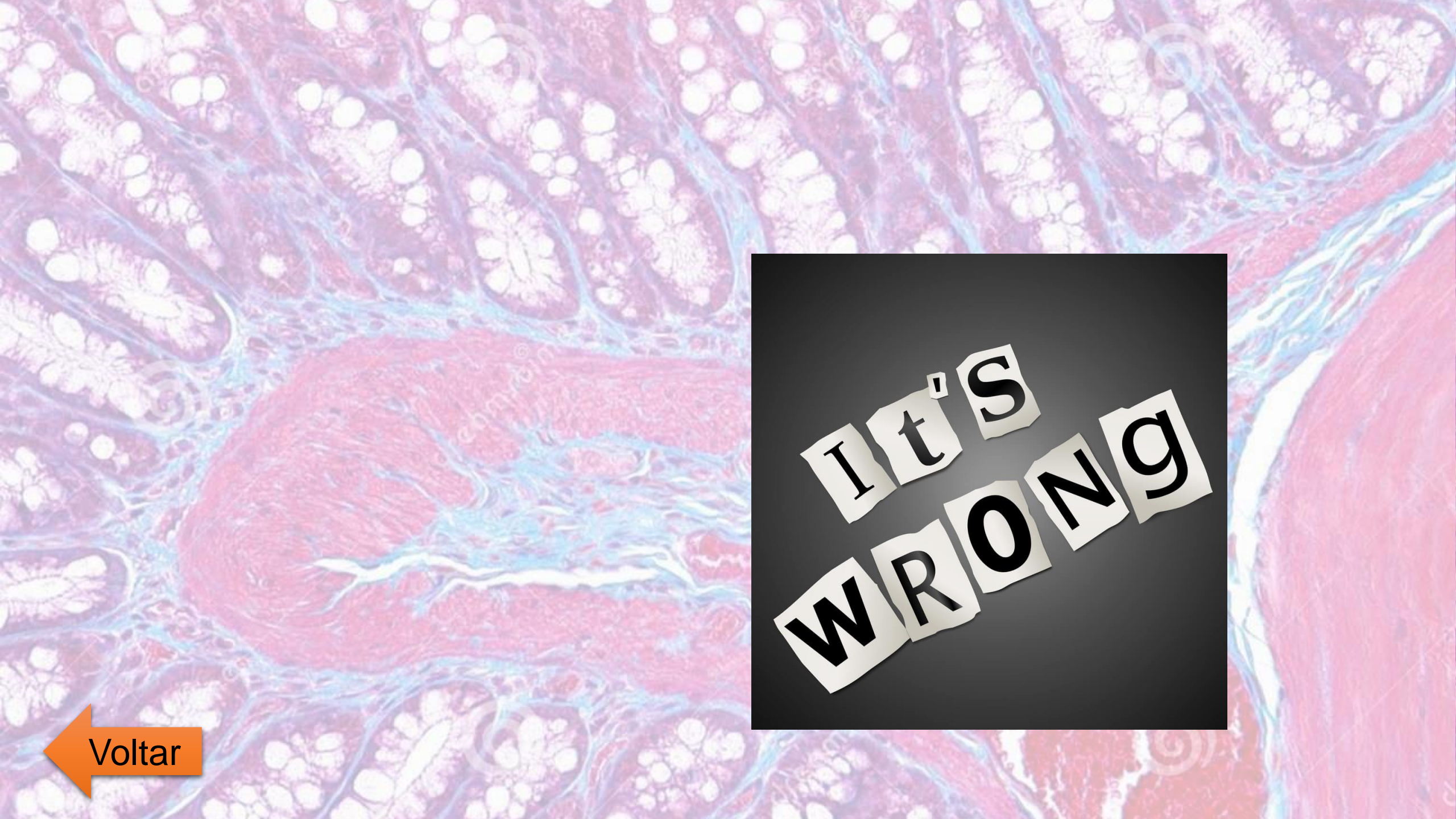
d) Chitin and myosin

e) Actin and chitin



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar

Alternative "c". Muscles have filaments of actin and myosin. The proteins slide over each other, causing contraction.





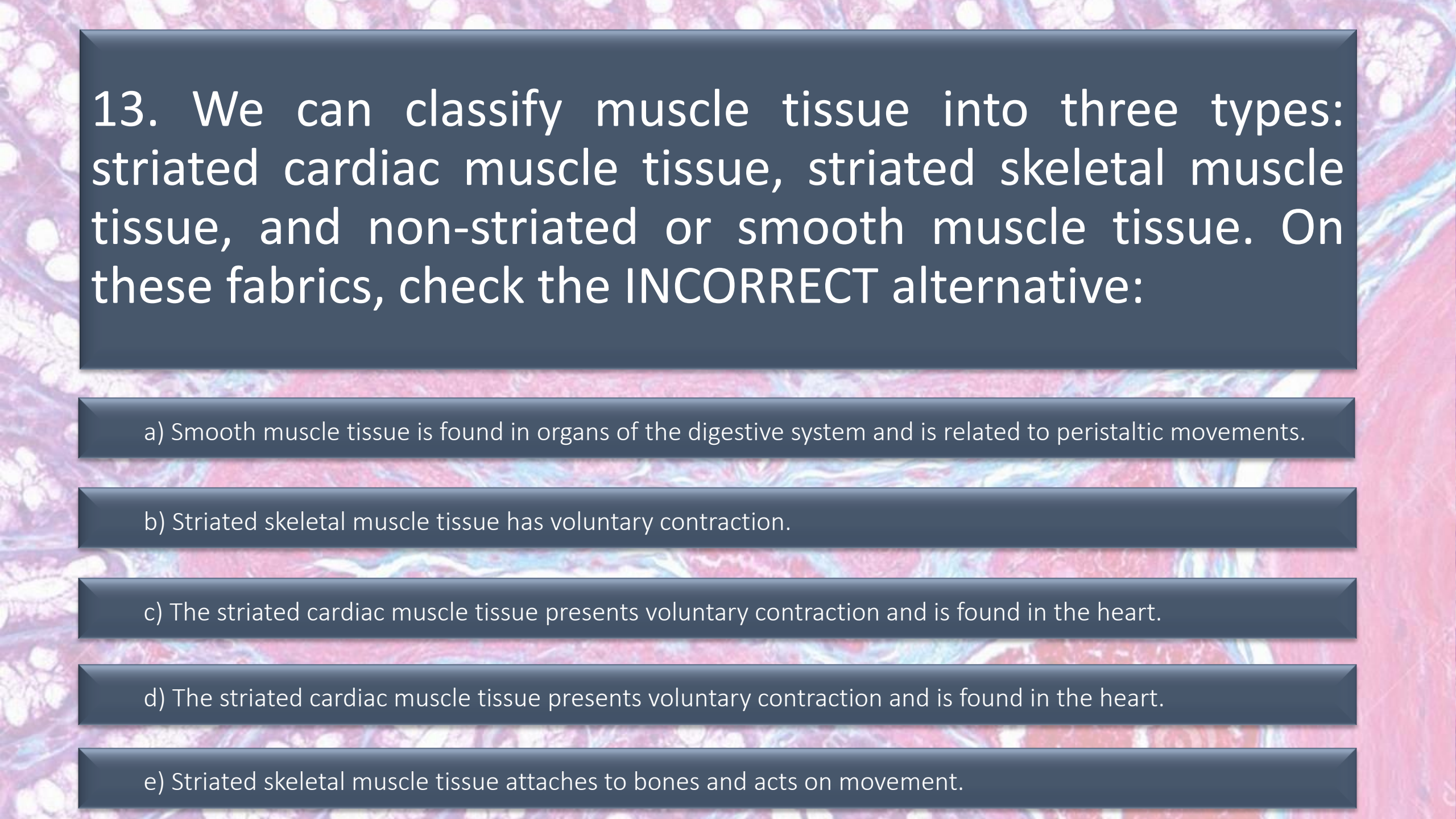
IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar

The background of the slide is a microscopic image of muscle tissue, showing various fibers and structures in shades of pink, purple, and blue. The text is overlaid on a dark blue rectangular box.

13. We can classify muscle tissue into three types: striated cardiac muscle tissue, striated skeletal muscle tissue, and non-striated or smooth muscle tissue. On these fabrics, check the INCORRECT alternative:

a) Smooth muscle tissue is found in organs of the digestive system and is related to peristaltic movements.

b) Striated skeletal muscle tissue has voluntary contraction.

c) The striated cardiac muscle tissue presents voluntary contraction and is found in the heart.

d) The striated cardiac muscle tissue presents voluntary contraction and is found in the heart.

e) Striated skeletal muscle tissue attaches to bones and acts on movement.



IT'S
WRONG

← Voltar



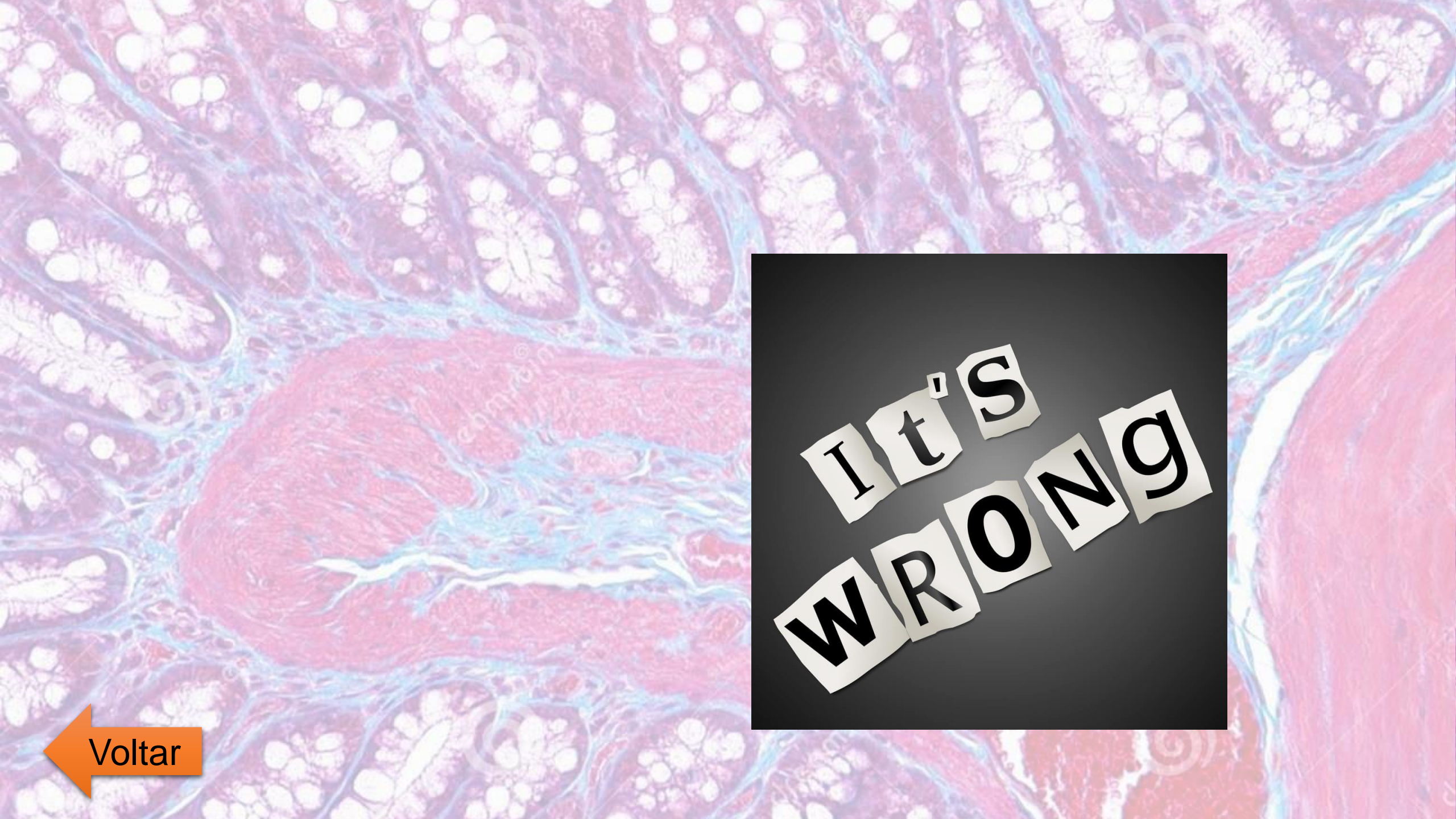
IT'S
WRONG

← Voltar

Alternative “c”. The striated muscle tissue, found in the heart, presents involuntary contractions that cannot be controlled by the conscious mind.



Avançar



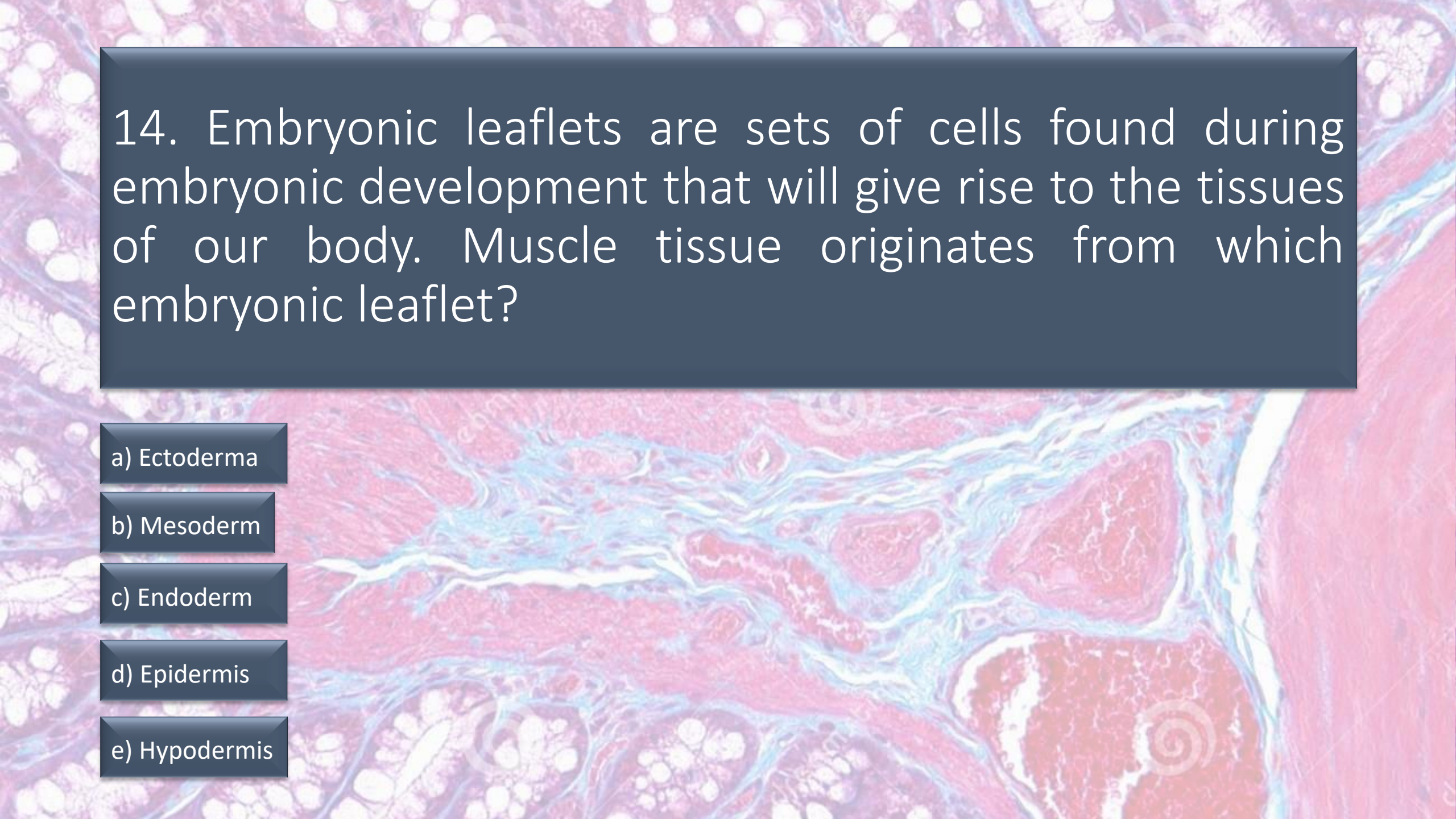
IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



14. Embryonic leaflets are sets of cells found during embryonic development that will give rise to the tissues of our body. Muscle tissue originates from which embryonic leaflet?

a) Ectoderma

b) Mesoderm

c) Endoderm

d) Epidermis

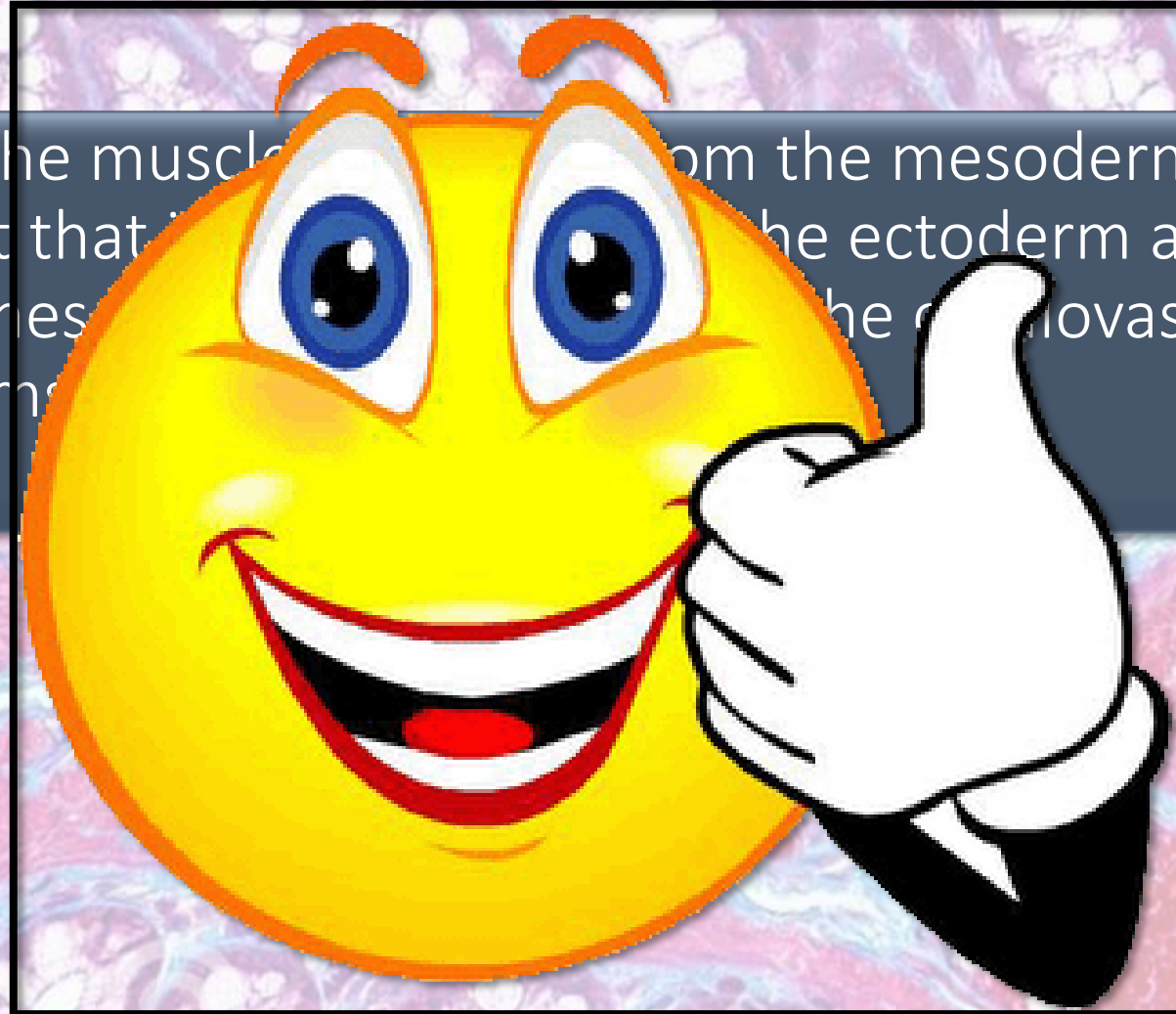
e) Hypodermis



IT'S
WRONG

← Voltar

Alternative “b”. The muscle is derived from the mesoderm, an embryonic leaflet that is situated between the ectoderm and the endoderm. The mesoderm gives rise to the cardiovascular, urinary and genital systems.



Avançar



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



15. The traditional beef steak consists of:

a) smooth muscle tissue, which is characterized by involuntary contractions.

b) fibrous striated muscle tissue, which is characterized by involuntary contraction.

c) smooth muscle tissue, which is characterized by constant and vigorous contractions.

d) striated muscle tissue, characterized by presenting peristaltic contractions regulated by calcium.

e) skeletal muscle tissue, which is characterized by voluntary contractions.



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



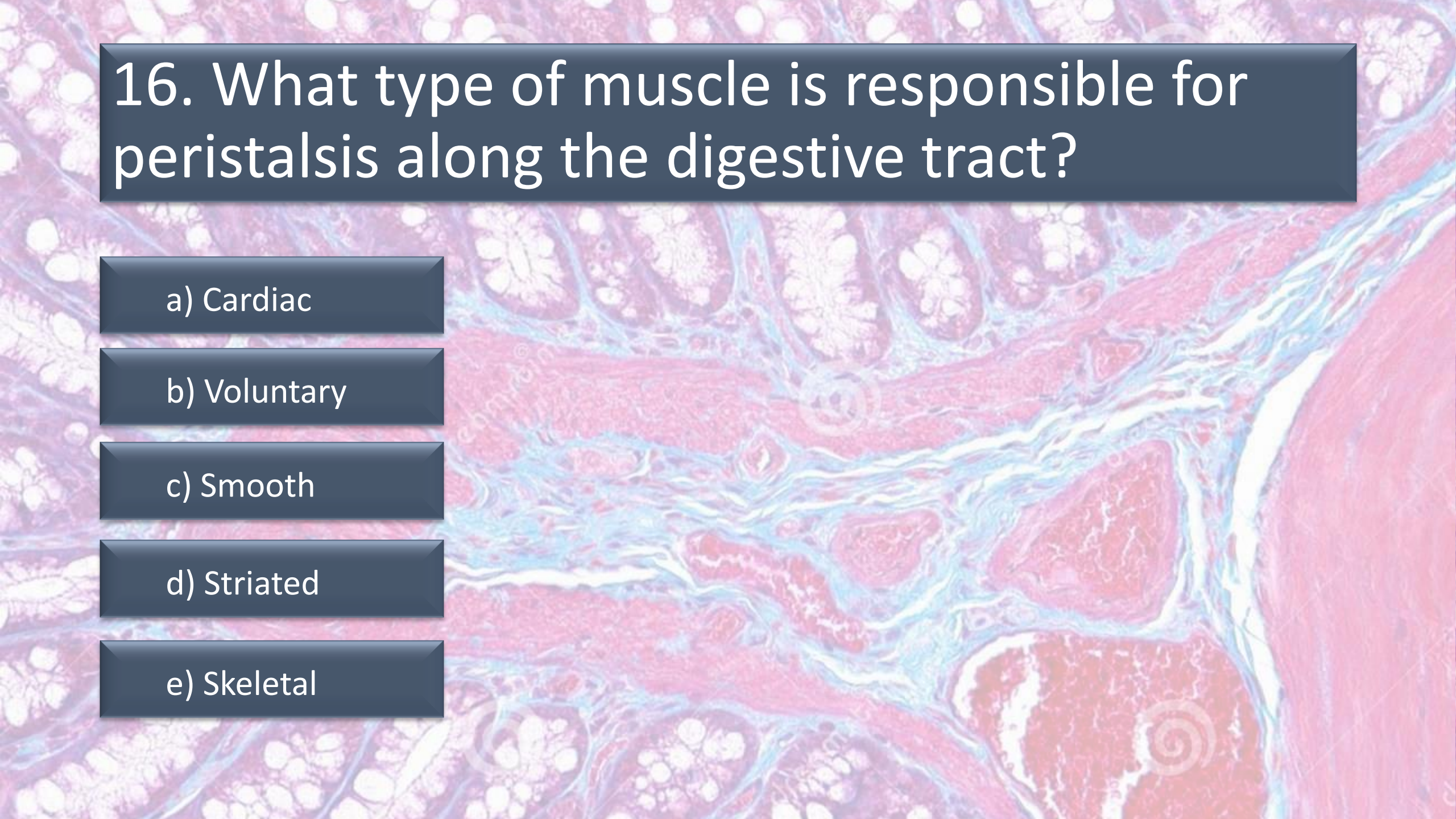
IT'S
WRONG

← Voltar

Alternative “e”. The steak is striated skeletal muscle tissue and its characteristic is striation. This fabric constitutes what some people call



Avançar



16. What type of muscle is responsible for peristalsis along the digestive tract?

a) Cardiac

b) Voluntary

c) Smooth

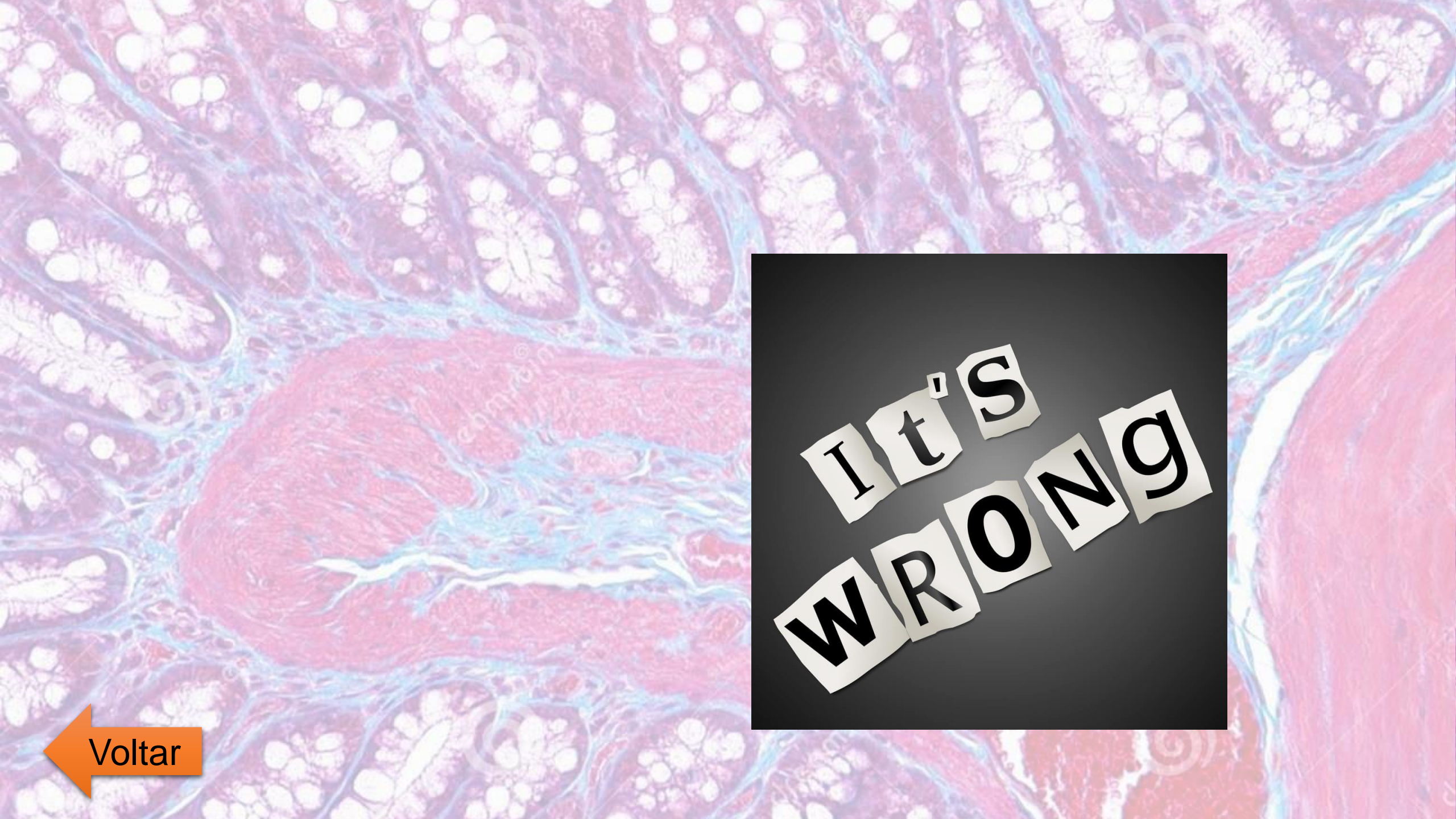
d) Striated

e) Skeletal



IT'S
WRONG

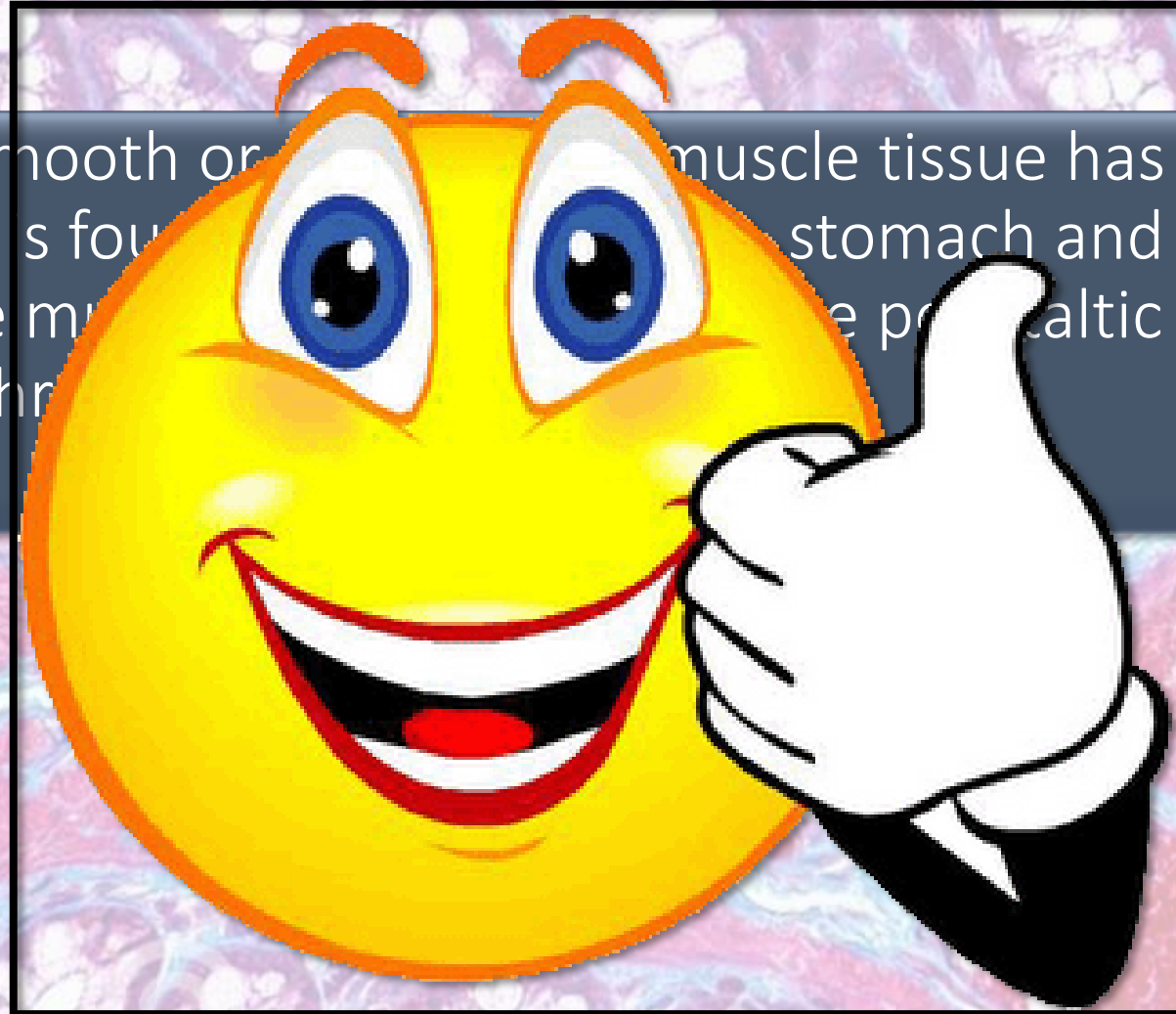
← Voltar



IT'S
WRONG

← Voltar

Alternative “c”. Smooth or muscle tissue has involuntary contractions and is found in the stomach and intestines. In these organs, the muscle tissue produces peristaltic movements that move food through the digestive tract.



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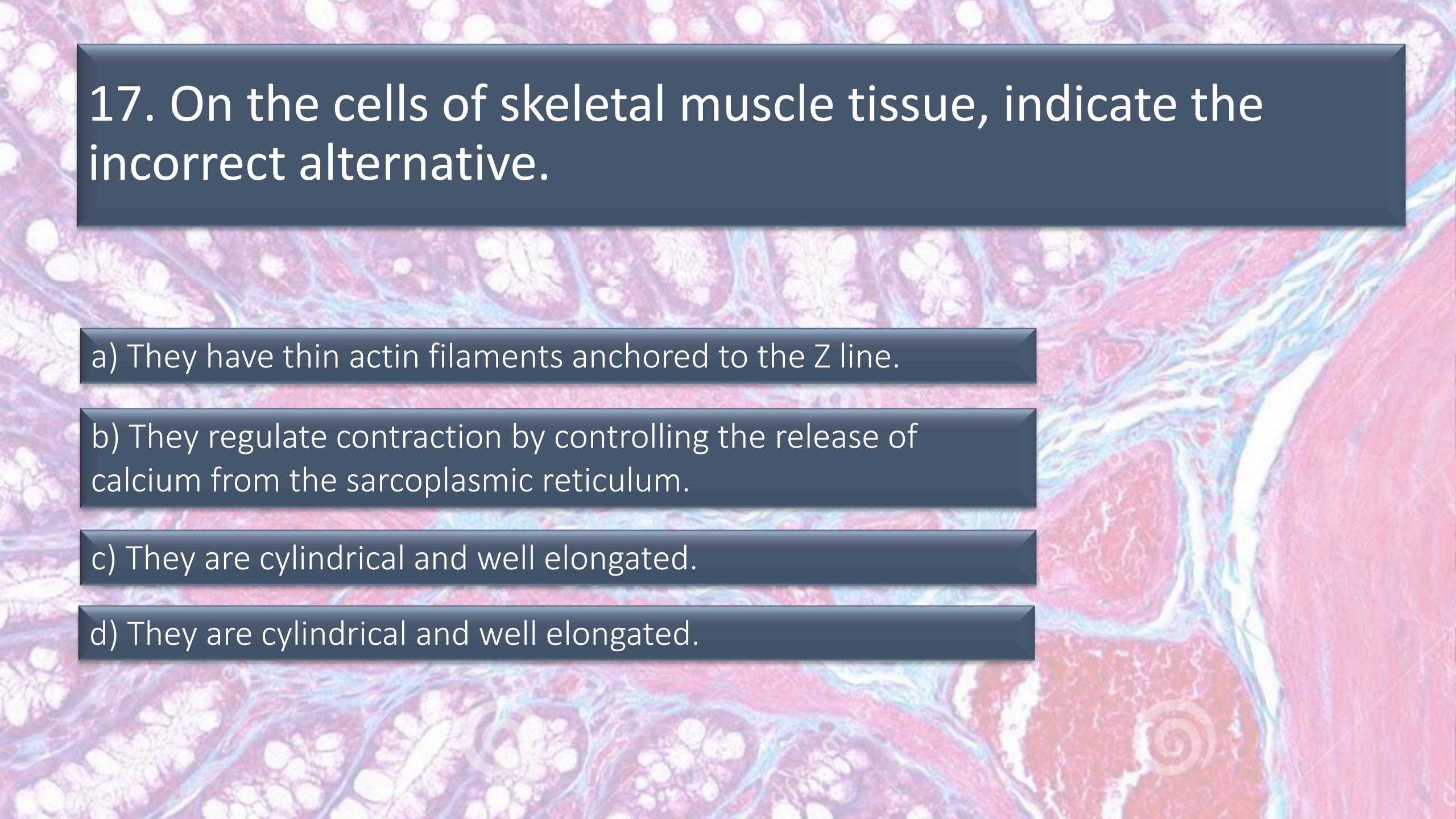
IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



17. On the cells of skeletal muscle tissue, indicate the incorrect alternative.

a) They have thin actin filaments anchored to the Z line.

b) They regulate contraction by controlling the release of calcium from the sarcoplasmic reticulum.

c) They are cylindrical and well elongated.

d) They are cylindrical and well elongated.



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar

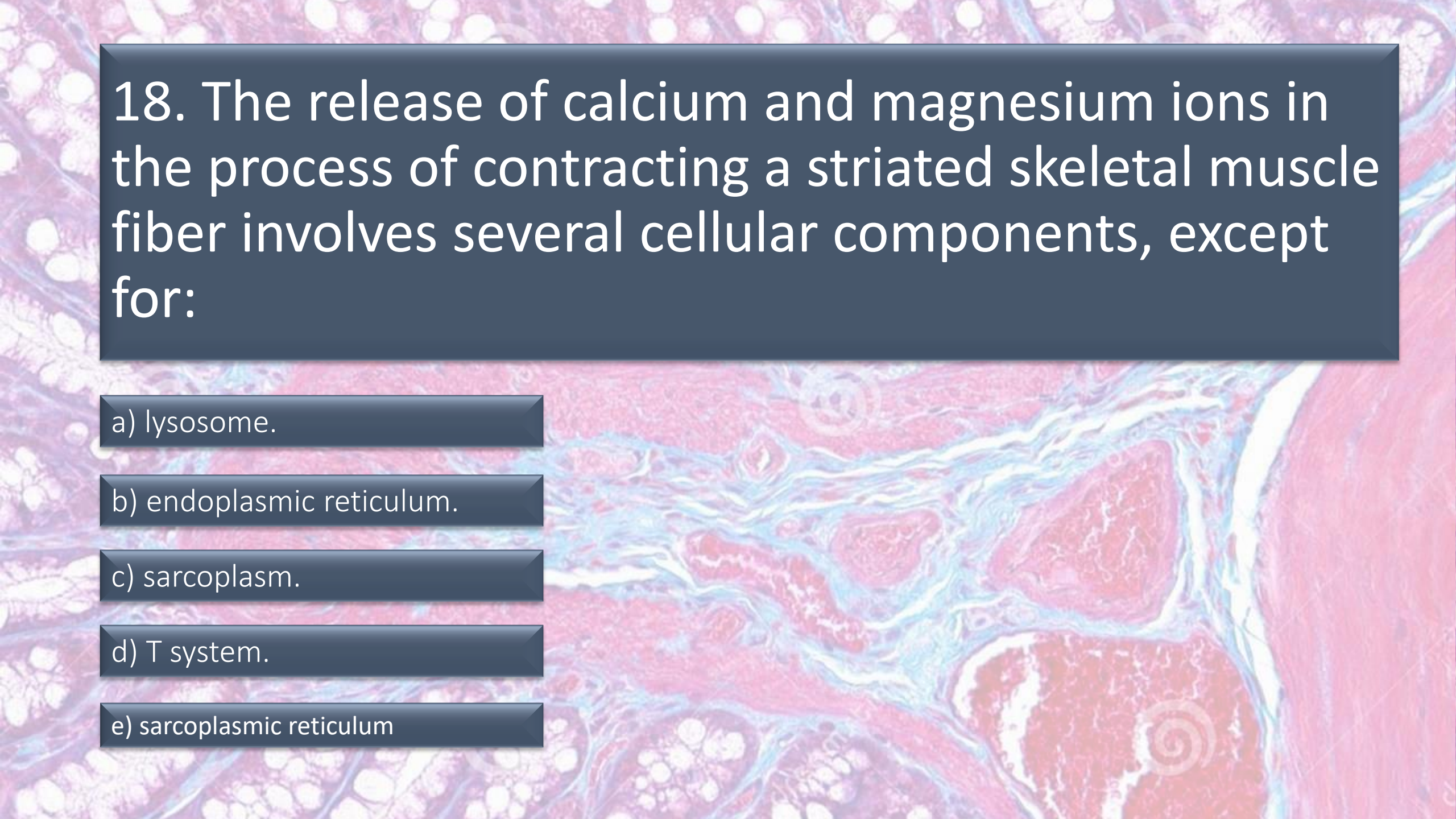


IT'S
WRONG

← Voltar



Avançar



18. The release of calcium and magnesium ions in the process of contracting a striated skeletal muscle fiber involves several cellular components, except for:

a) lysosome.

b) endoplasmic reticulum.

c) sarcoplasm.

d) T system.

e) sarcoplasmic reticulum



IT'S
WRONG

← Voltar



IT'S
WRONG

← Voltar



Avançar



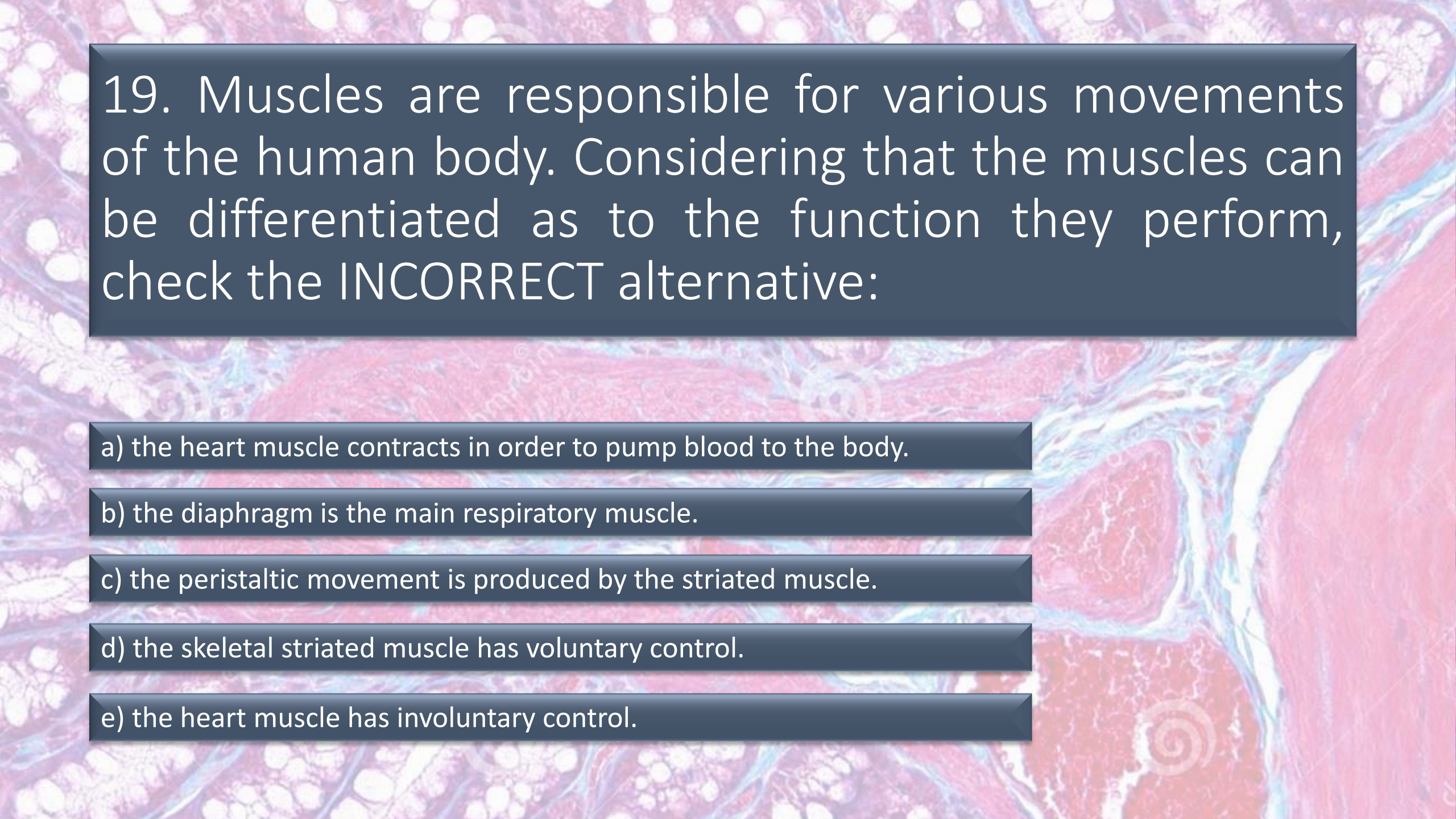
IT'S
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The background of the slide is a microscopic image of muscle tissue, showing various types of muscle fibers and connective tissue. The image is stained with hematoxylin and eosin (H&E), giving it a pink and purple hue. The muscle fibers are arranged in a somewhat organized manner, with some showing striations. The overall appearance is that of a histological section of muscle tissue.

19. Muscles are responsible for various movements of the human body. Considering that the muscles can be differentiated as to the function they perform, check the INCORRECT alternative:

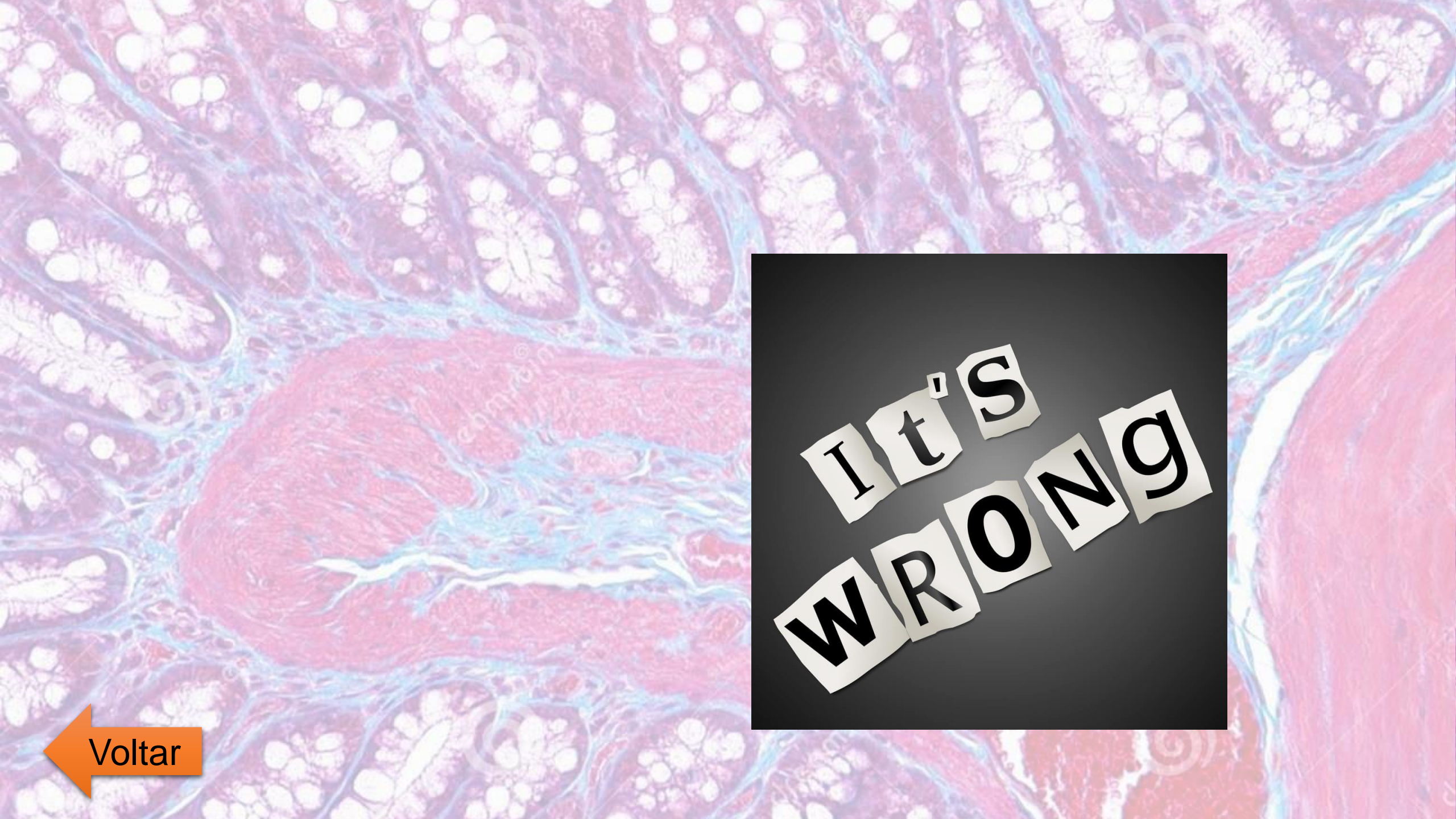
a) the heart muscle contracts in order to pump blood to the body.

b) the diaphragm is the main respiratory muscle.

c) the peristaltic movement is produced by the striated muscle.

d) the skeletal striated muscle has voluntary control.

e) the heart muscle has involuntary control.



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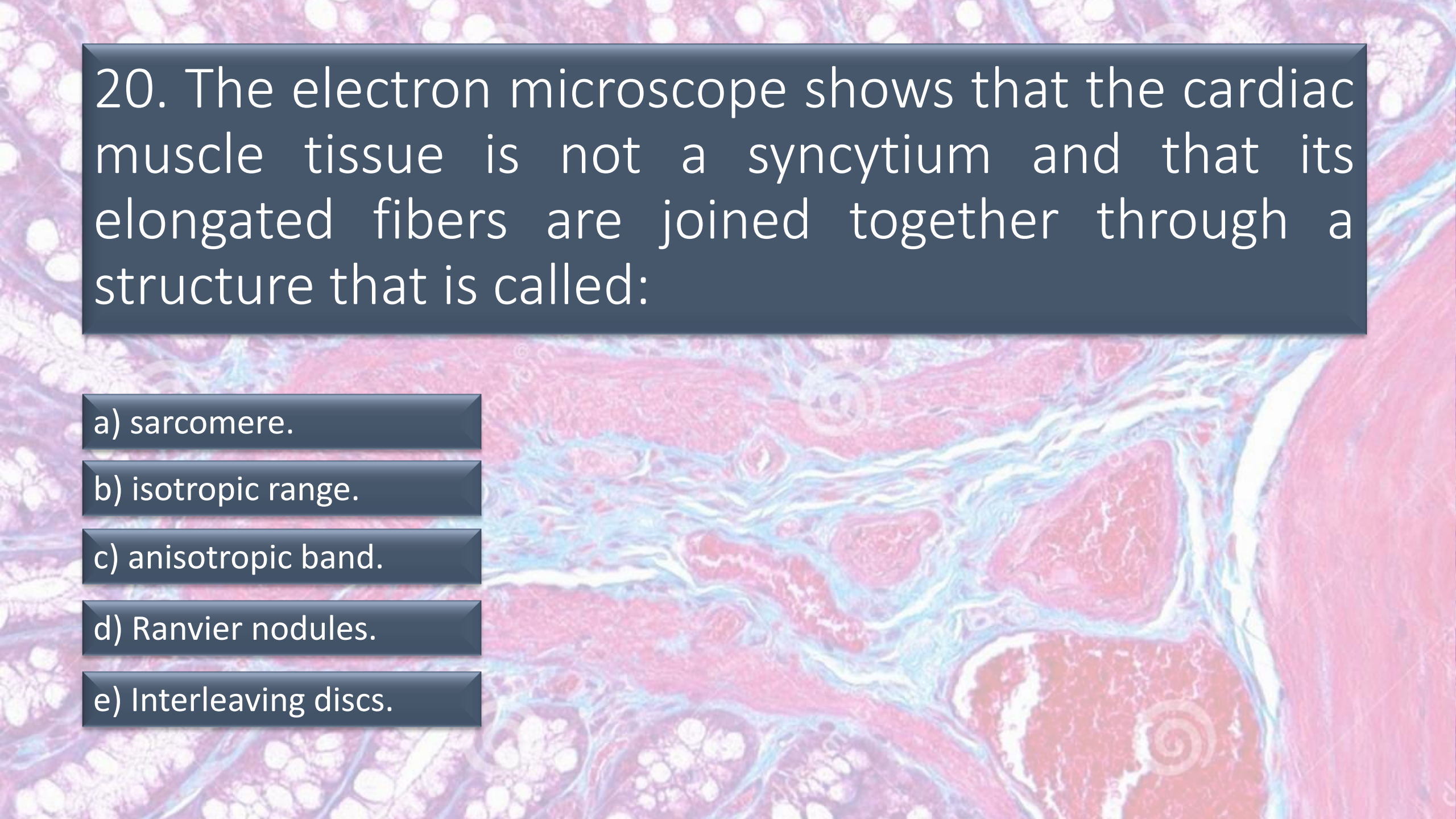
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20. The electron microscope shows that the cardiac muscle tissue is not a syncytium and that its elongated fibers are joined together through a structure that is called:

a) sarcomere.

b) isotropic range.

c) anisotropic band.

d) Ranvier nodules.

e) Interleaving discs.



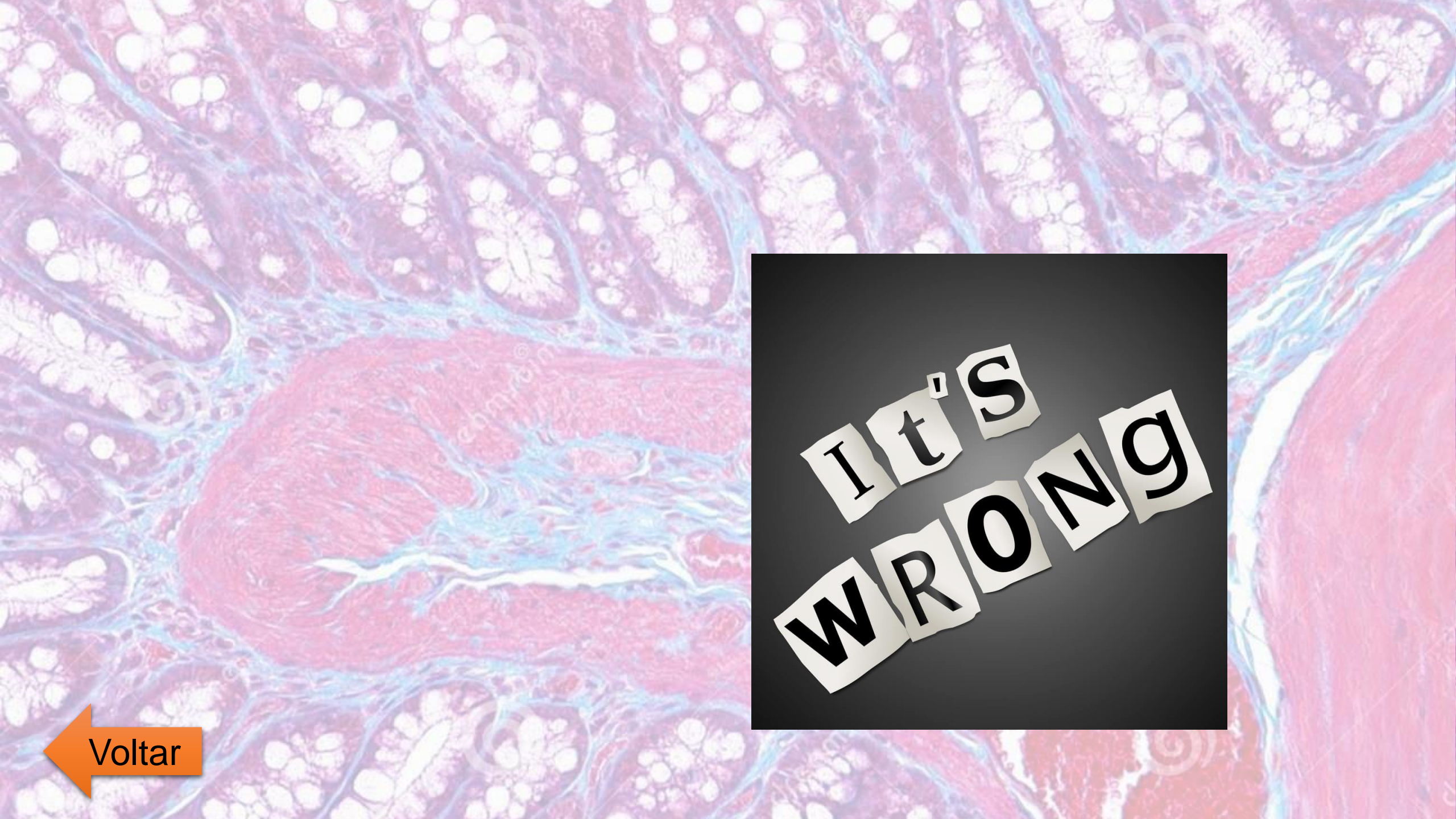
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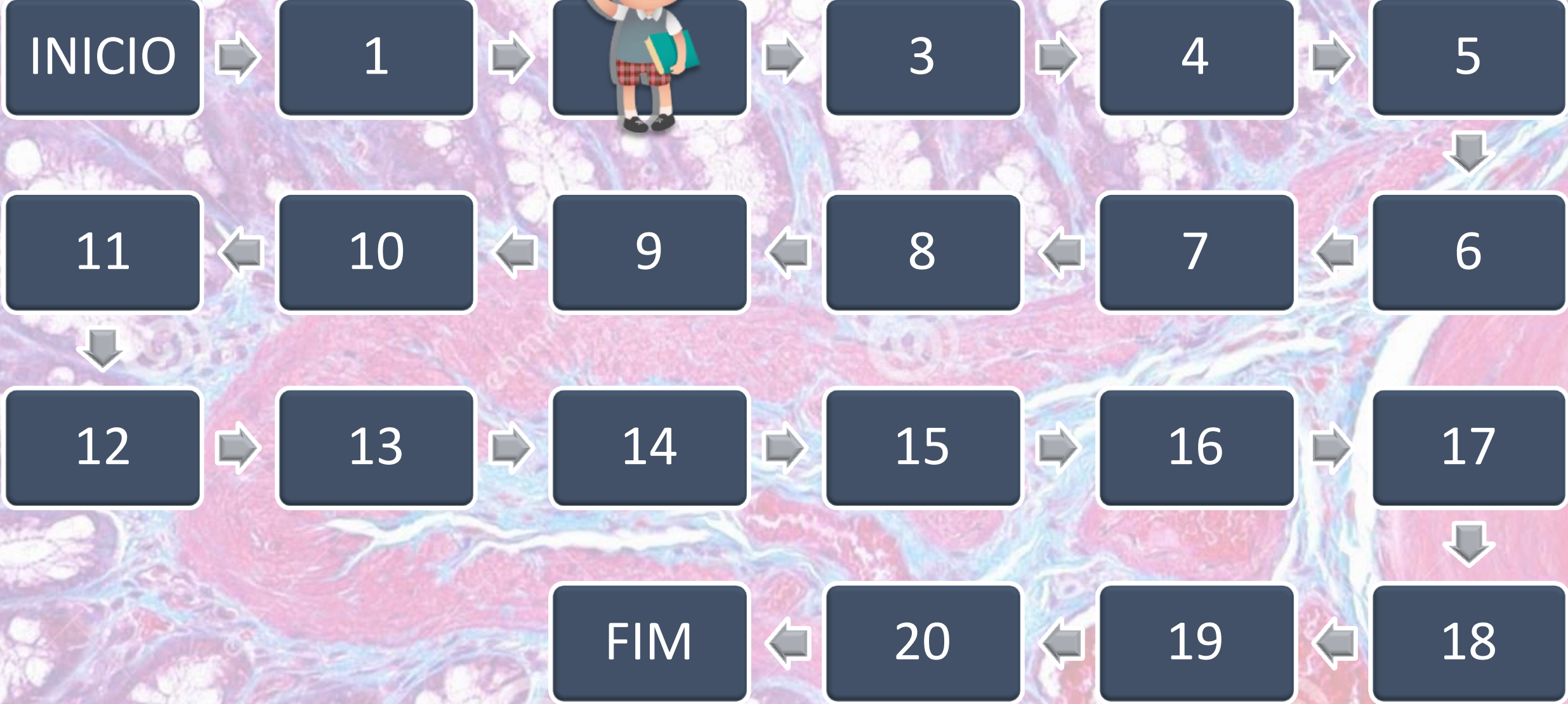
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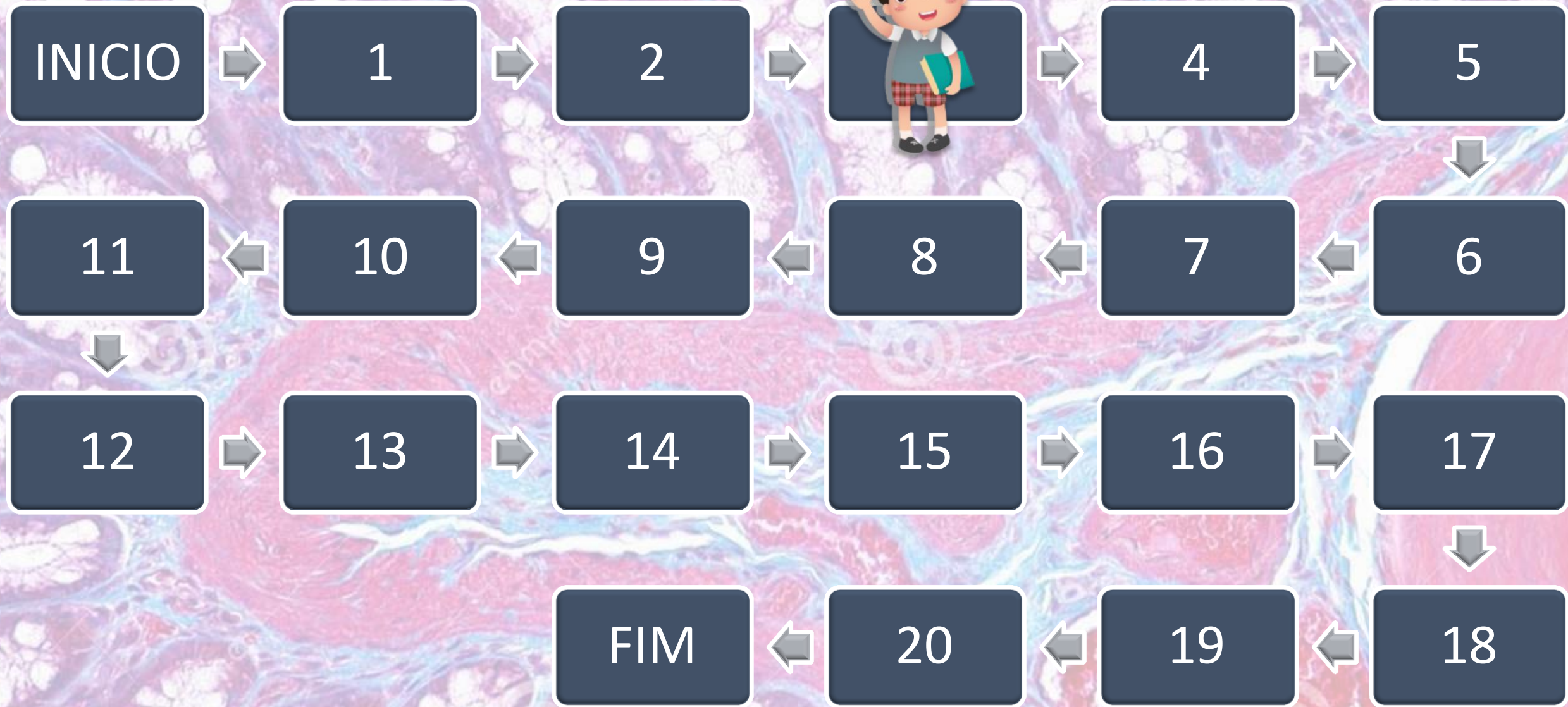
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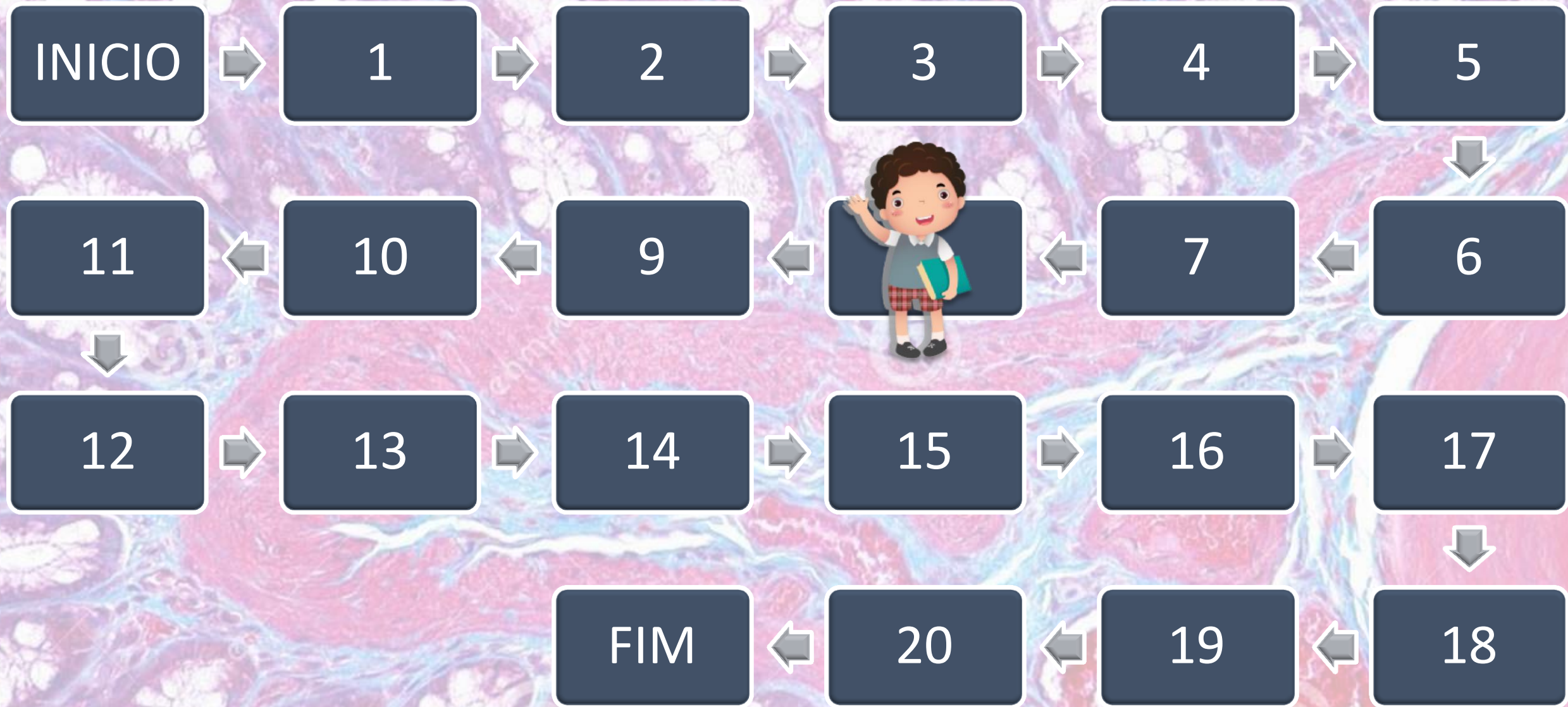


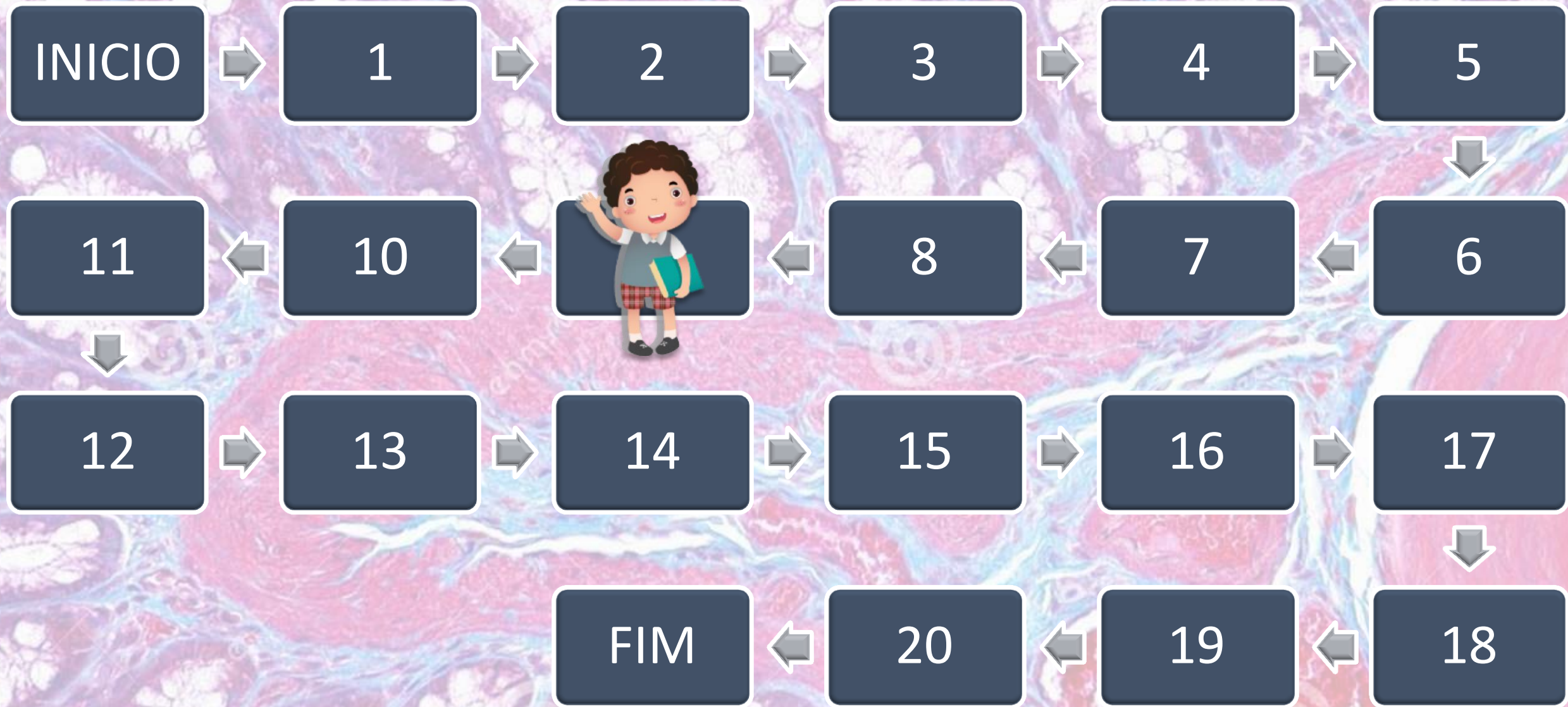












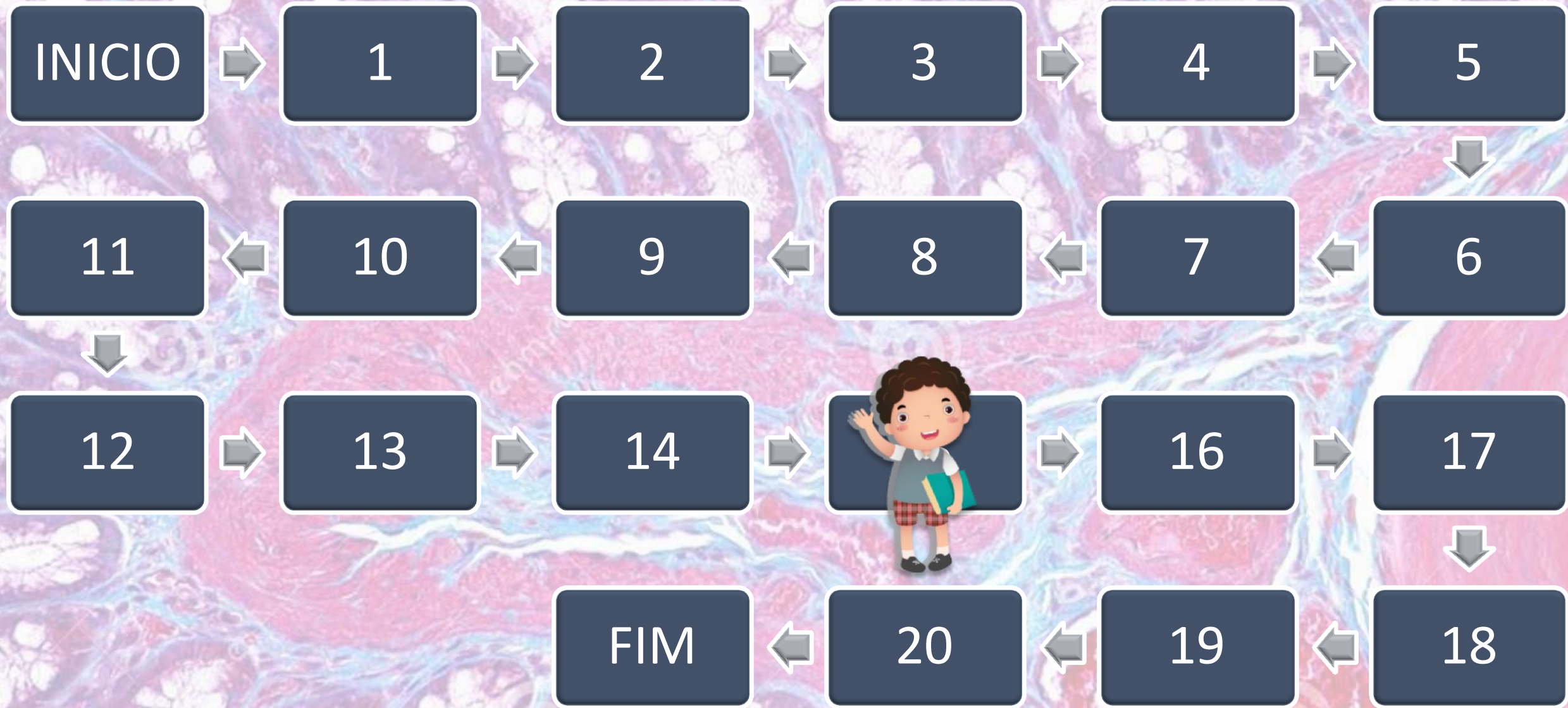










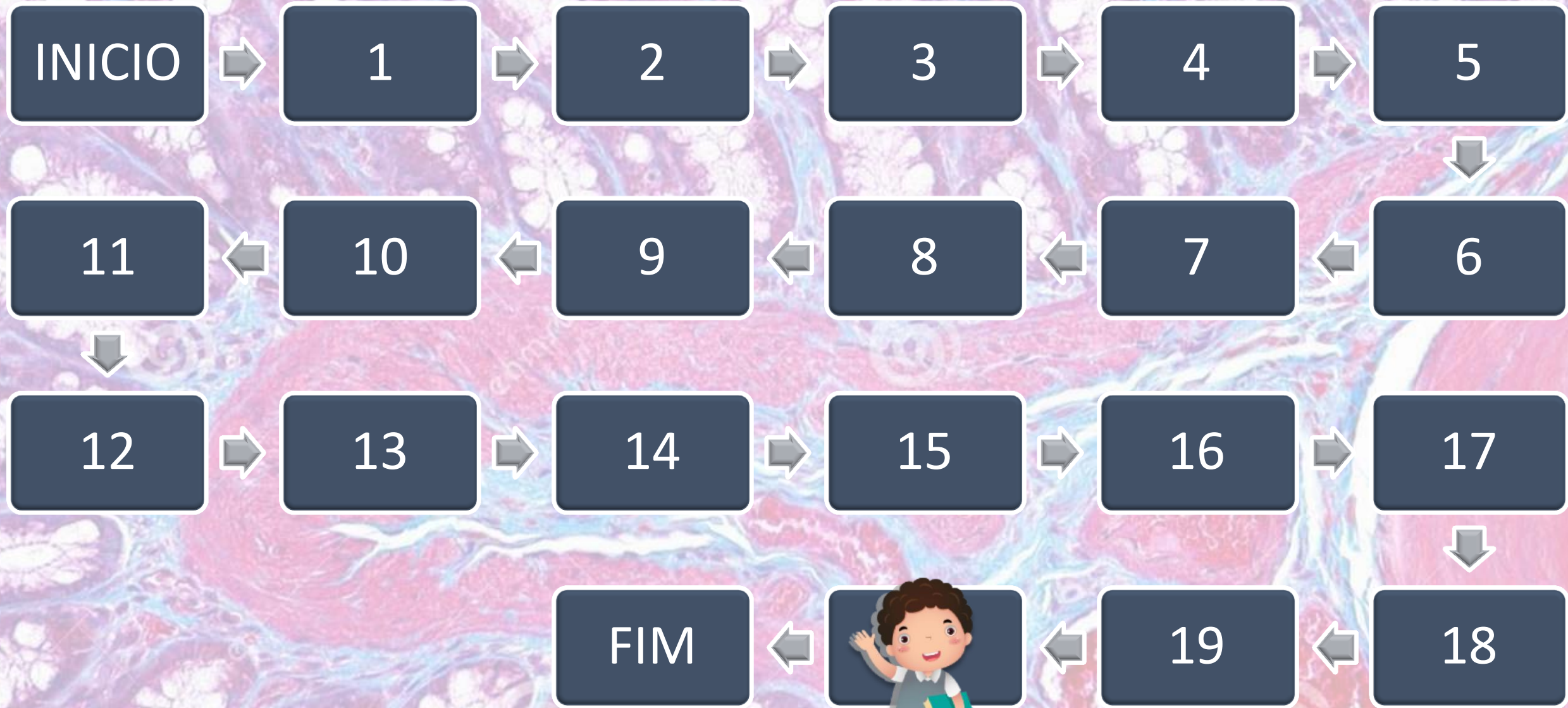


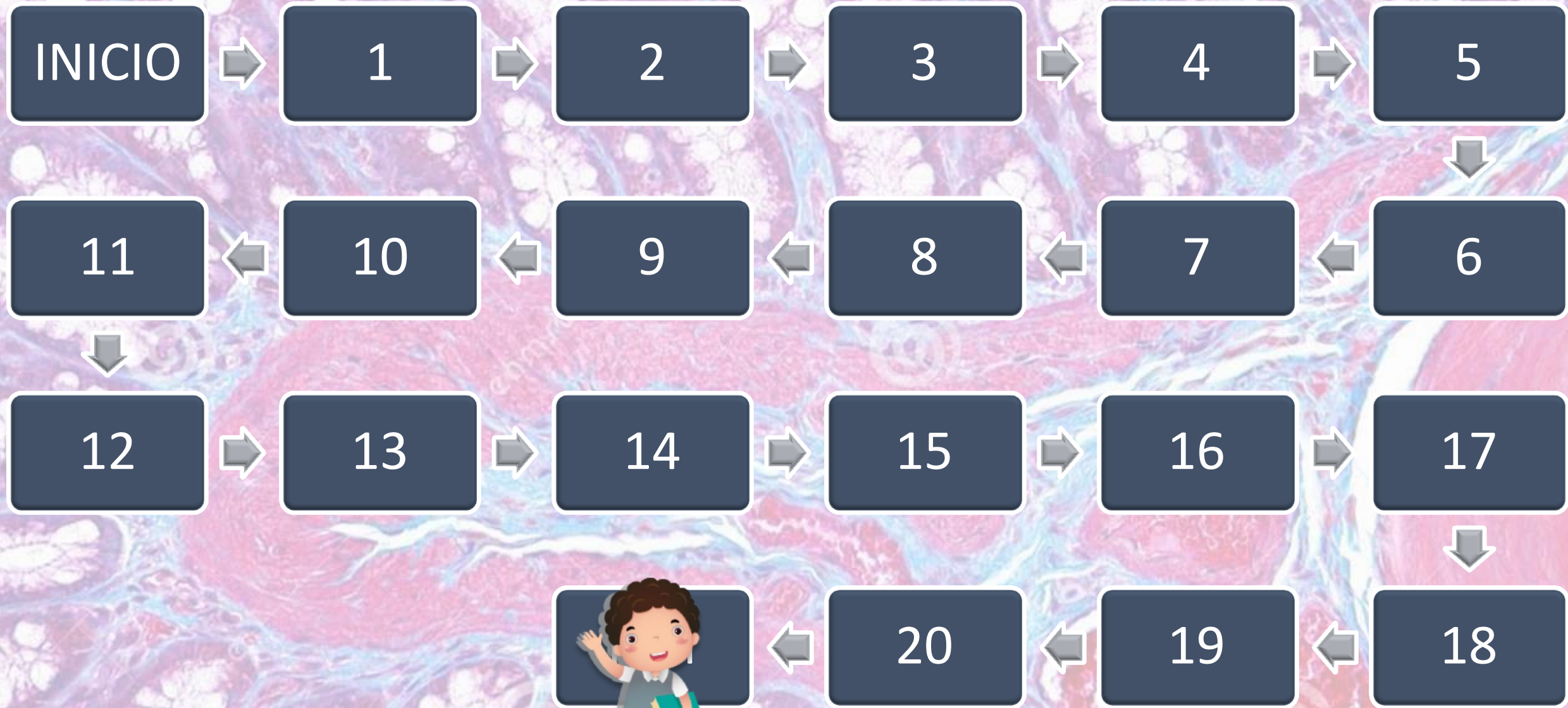












A histological section of connective tissue, likely stained with Masson's trichrome. The image shows a dense network of collagen fibers stained blue, interspersed with pink-stained cellular components and extracellular matrix. A central black arrow points to a specific area of the tissue, and a red arrow in the bottom left corner points to another area. A black rectangular box with white text is overlaid in the upper center.

CONNECTIVE TISSUE





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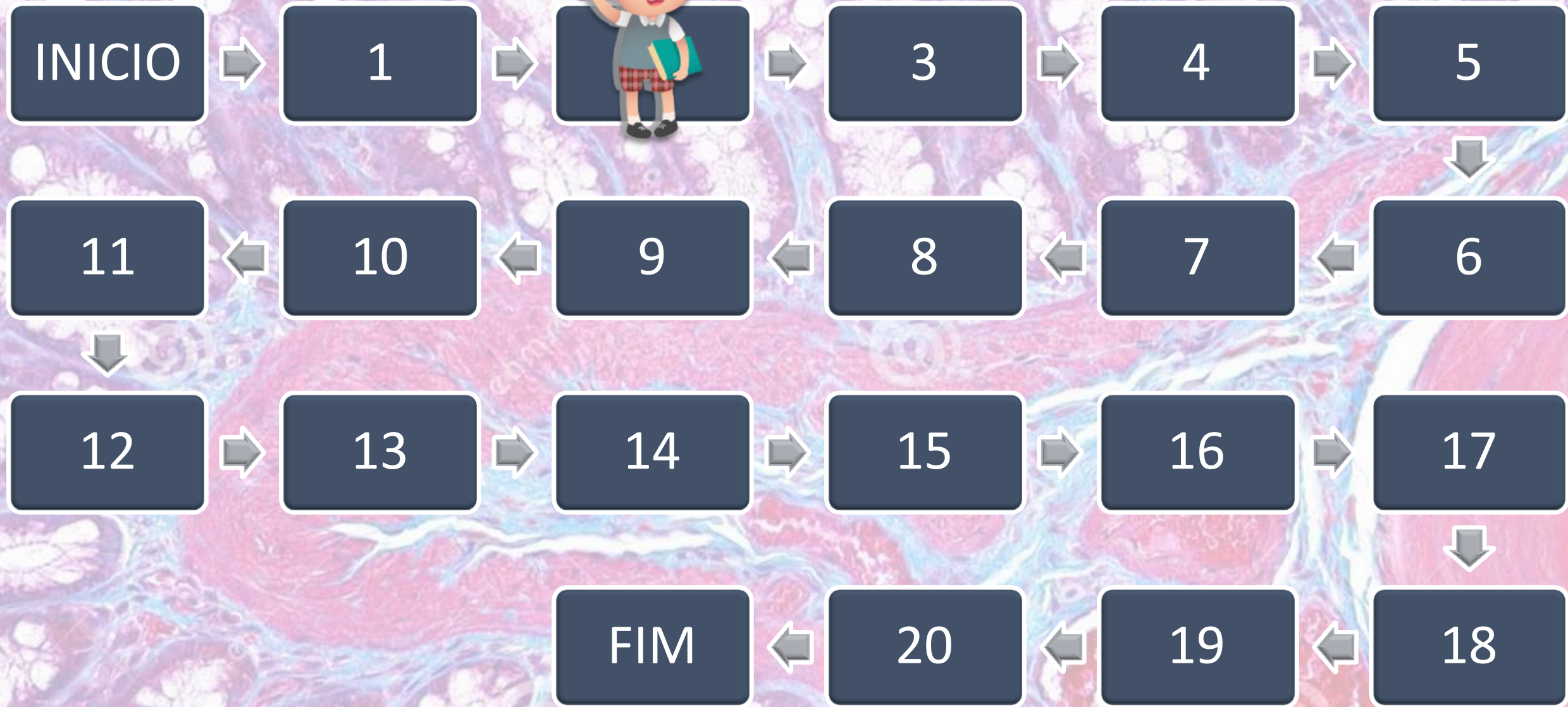
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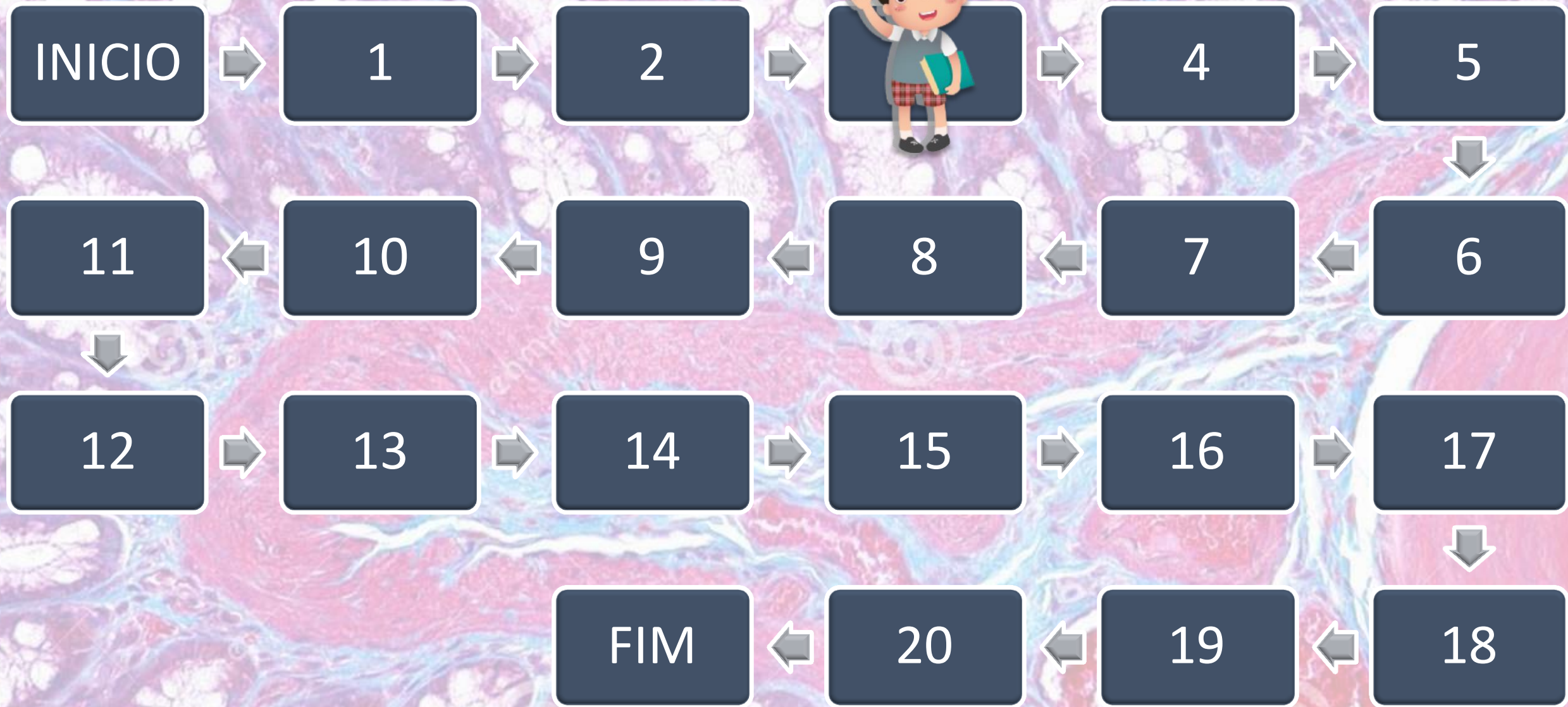
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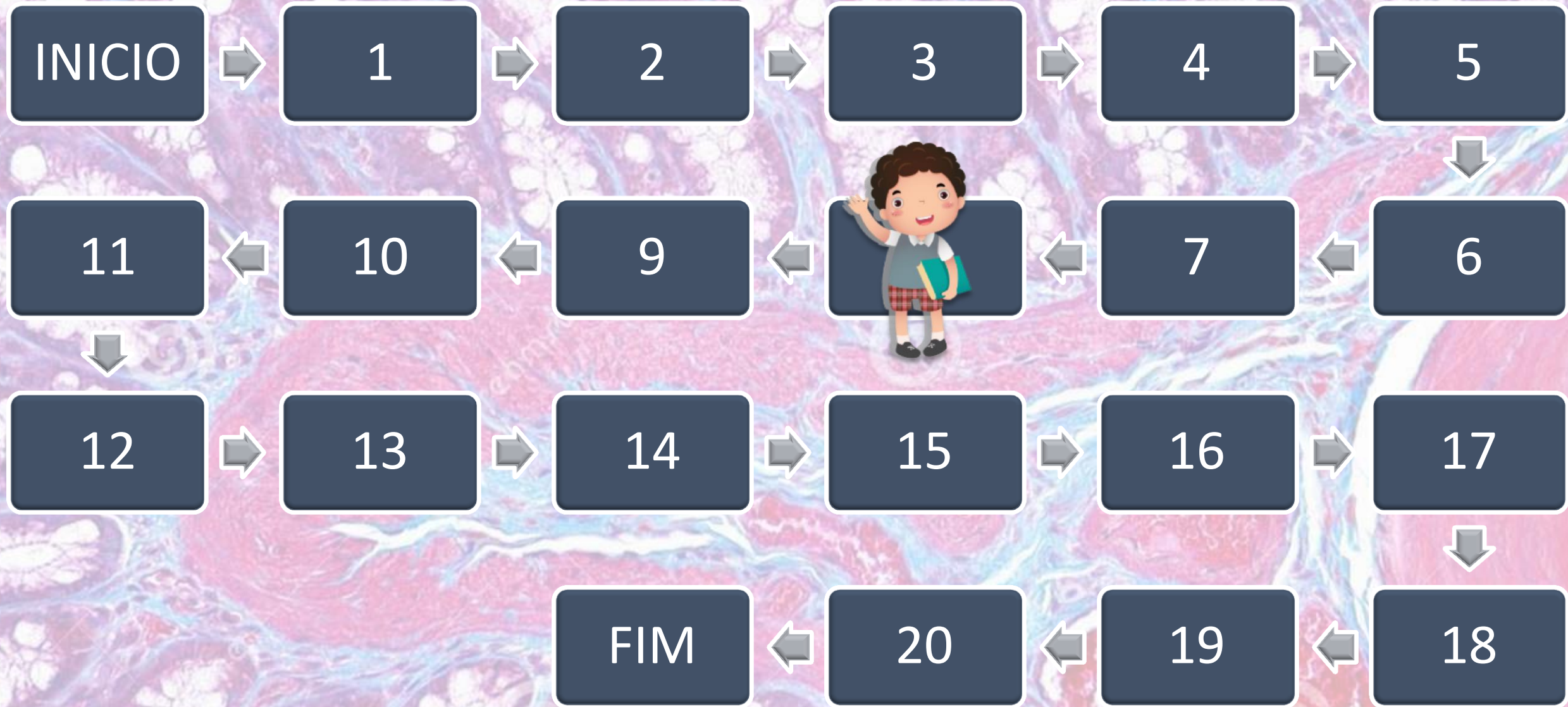


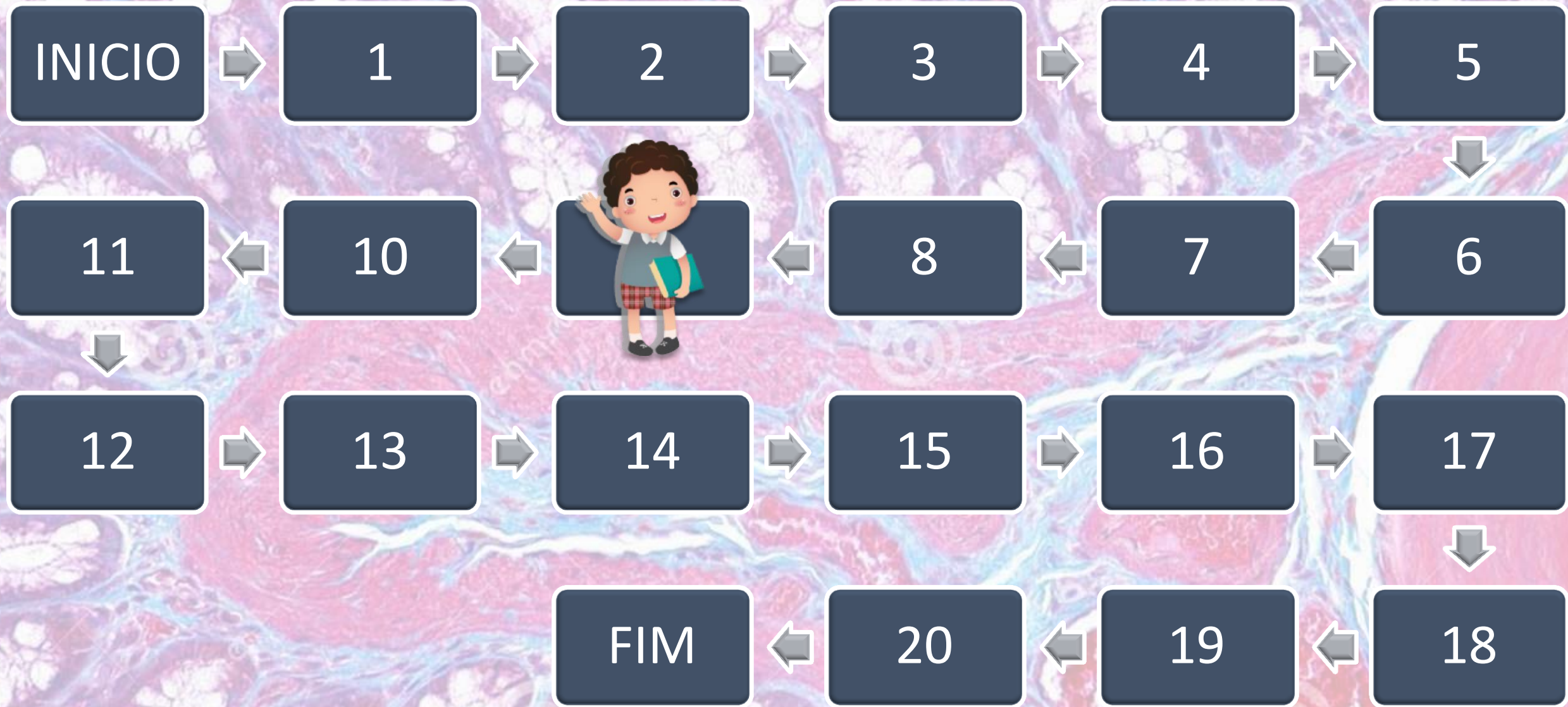














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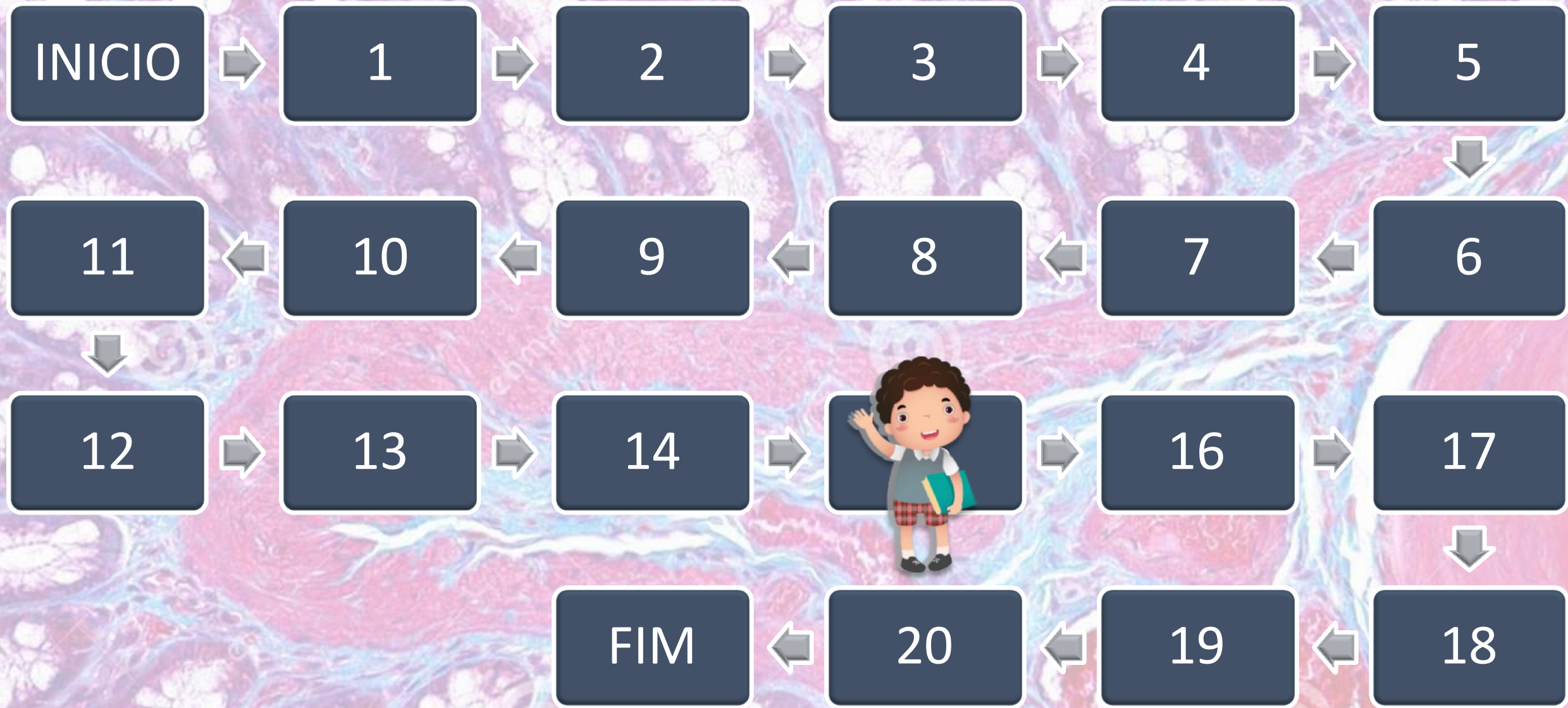
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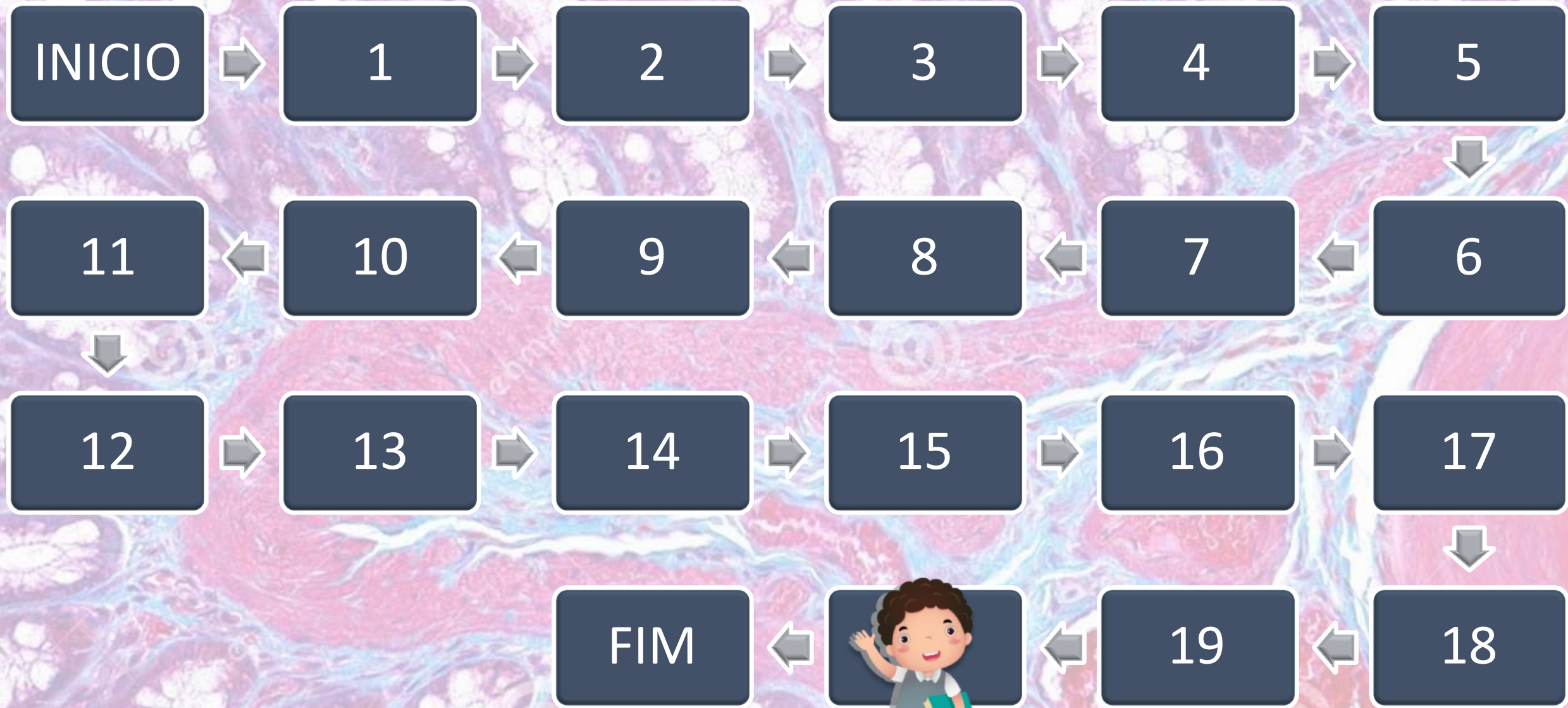


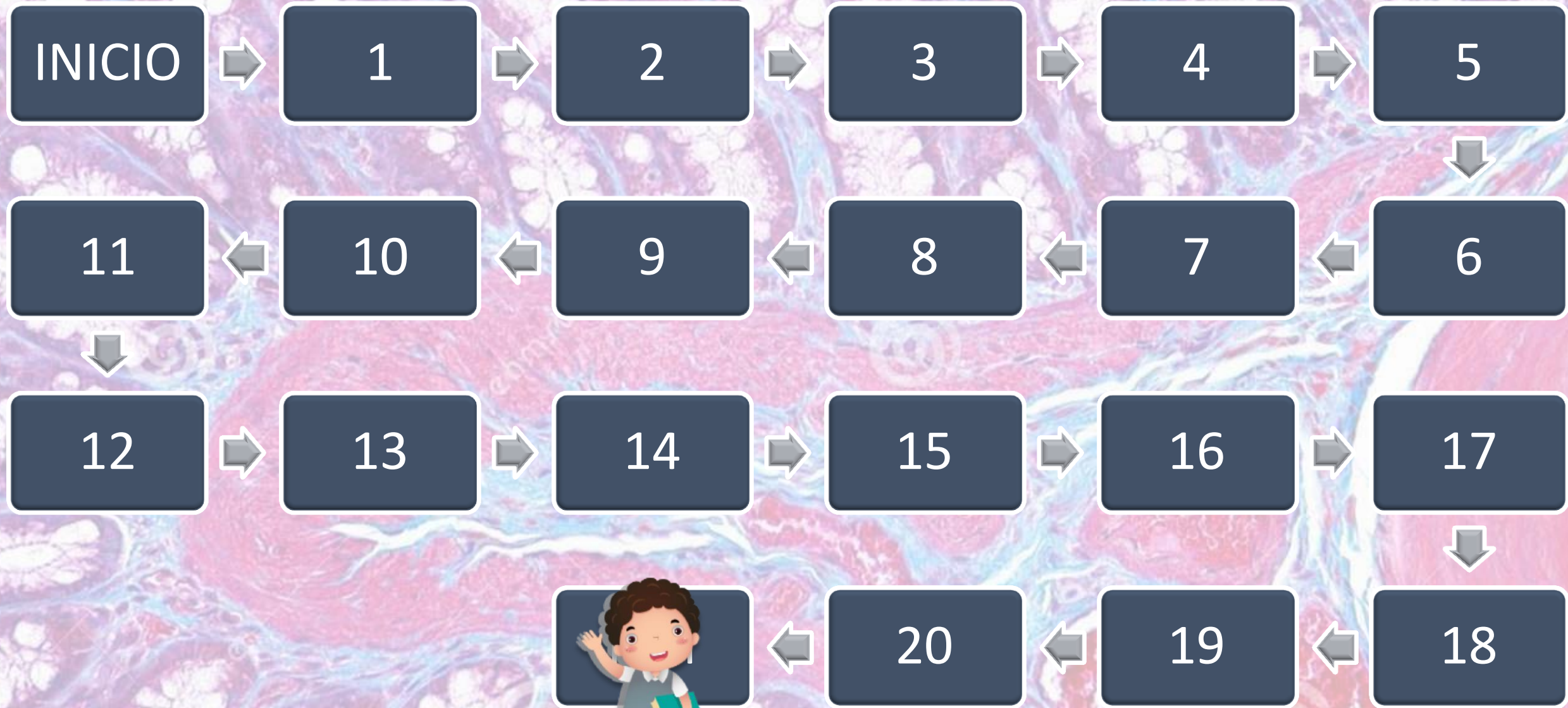


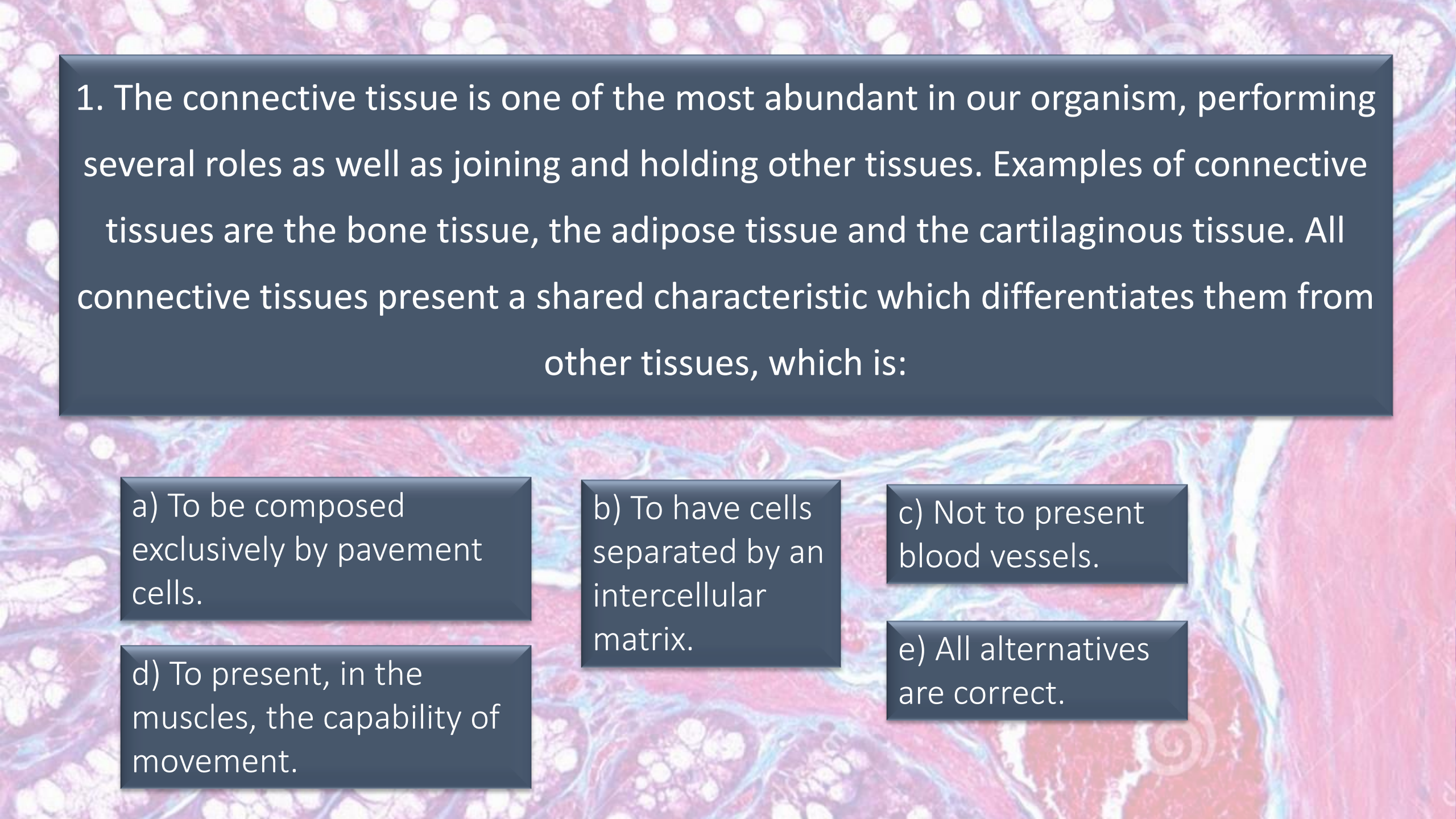












1. The connective tissue is one of the most abundant in our organism, performing several roles as well as joining and holding other tissues. Examples of connective tissues are the bone tissue, the adipose tissue and the cartilaginous tissue. All connective tissues present a shared characteristic which differentiates them from other tissues, which is:

a) To be composed exclusively by pavement cells.

b) To have cells separated by an intercellular matrix.

c) Not to present blood vessels.

d) To present, in the muscles, the capability of movement.

e) All alternatives are correct.

A – Wrong – The connective tissue does not have a characteristic

It's
WRONG



← Back

B – Correct – One of the main characteristics of the connective tissue is the presence of the cellular matrix.



Advance

C – Wrong – The connective tissue has vascularization.

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D – Wrong – The connective tissue does not have this ability, but other connective tissues.

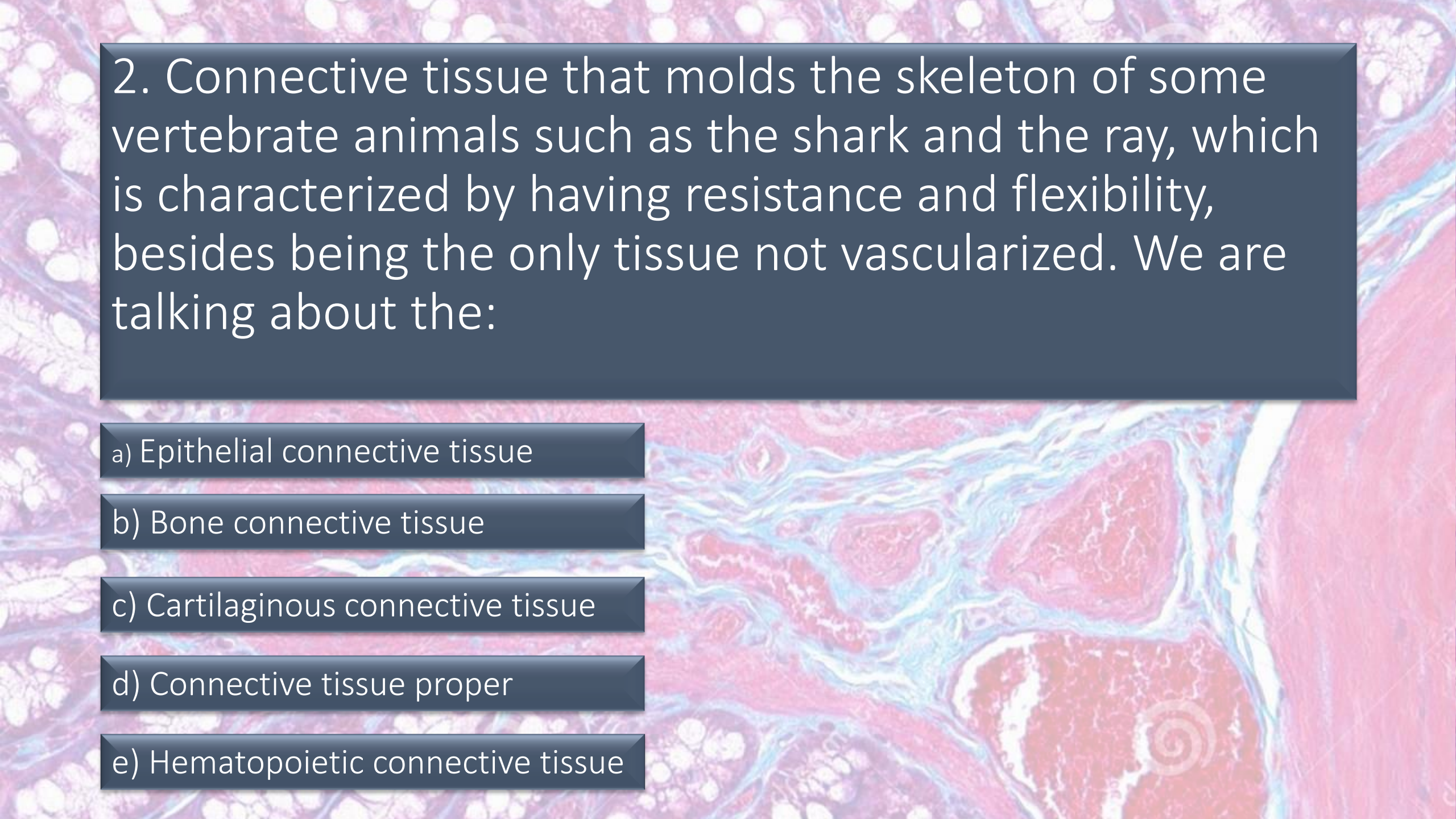
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E – Wrong – Only option B is correct.

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A microscopic image of connective tissue, likely cartilage, stained with Masson's trichrome. The image shows a dense network of collagen fibers stained blue, interspersed with chondrocytes (small, rounded cells) and chondrocytes (larger, rounded cells) embedded in a matrix. The overall appearance is fibrous and organized.

2. Connective tissue that molds the skeleton of some vertebrate animals such as the shark and the ray, which is characterized by having resistance and flexibility, besides being the only tissue not vascularized. We are talking about the:

a) Epithelial connective tissue

b) Bone connective tissue

c) Cartilaginous connective tissue

d) Connective tissue proper

e) Hematopoietic connective tissue

A – Wrong –
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C – Correct – cartilaginous tissue presents all the characteristics mentioned on the task.



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D – Wrong -
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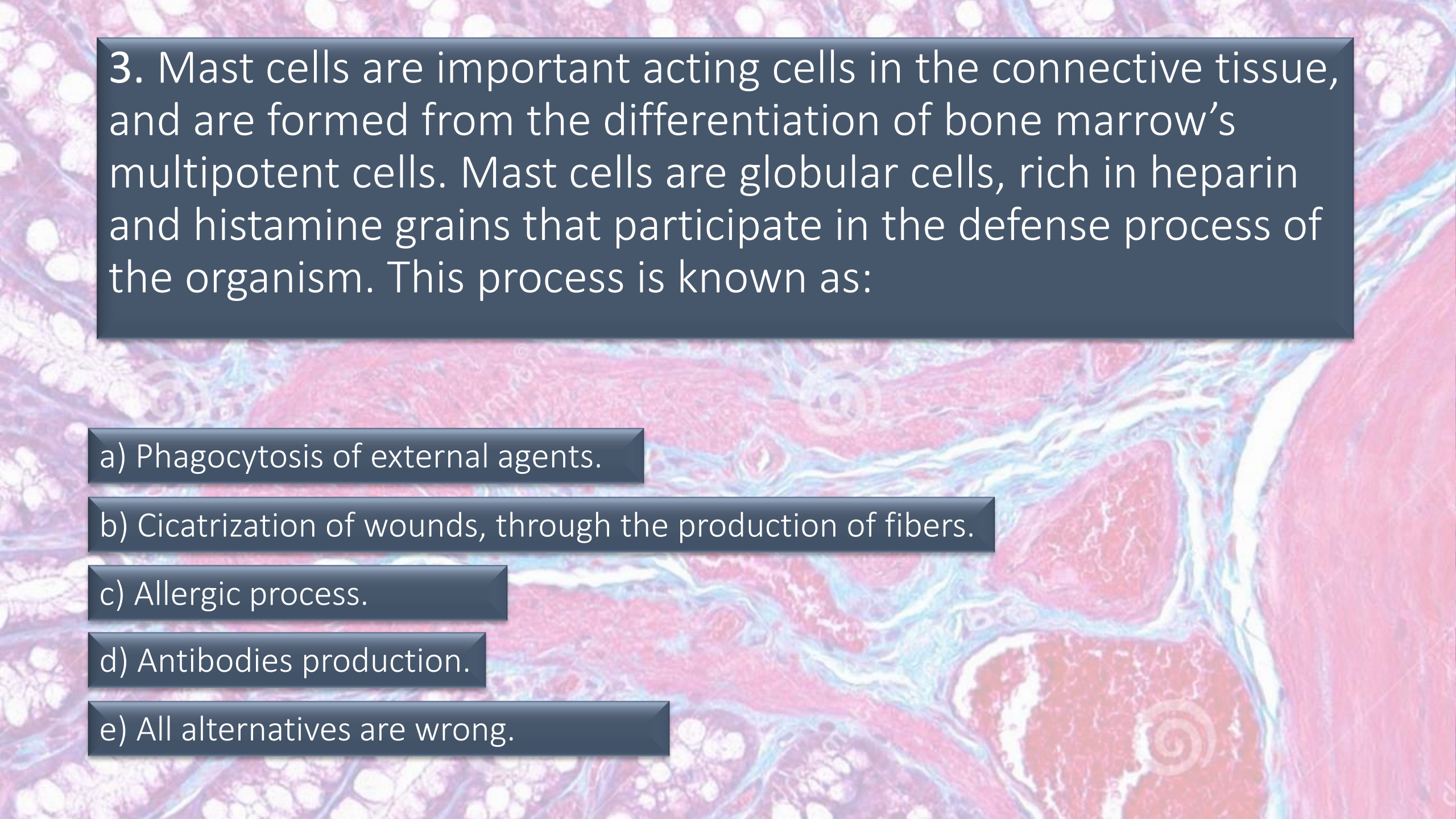
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A microscopic image of connective tissue, likely stained with Masson's trichrome. The image shows a dense network of collagen fibers (stained blue) and various cells, including mast cells (stained pink/red). The mast cells are globular and contain dark granules. The overall structure is fibrous and organized into bundles.

3. Mast cells are important acting cells in the connective tissue, and are formed from the differentiation of bone marrow's multipotent cells. Mast cells are globular cells, rich in heparin and histamine grains that participate in the defense process of the organism. This process is known as:

a) Phagocytosis of external agents.

b) Cicatrization of wounds, through the production of fibers.

c) Allergic process.

d) Antibodies production.

e) All alternatives are wrong.

A – Wrong –
MACROPHAGE

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B – Wrong –
FIBROBLAST

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← Back

C – Correct – the anaphylactic/allergic process happens due to the release of histamine by the mast cells.



Advance

D – Wrong -
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E – Wrong –

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← Back

A histological section of connective tissue, likely stained with Masson's trichrome. The image shows a dense network of collagen fibers stained blue, interspersed with various cellular components and structures. The overall appearance is that of a complex, fibrous tissue matrix.

4. These are part of the connective tissues, except:

a) Bone tissue

b) Muscle tissue

c) Adipose tissue

d) Cartilaginous tissue

e) Blood tissue

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B – Correct – Muscle tissue presents long cells with contraction capacity, which is not a characteristic of the connective tissue.



Avançar

C – Wrong – Adipose tissue presents characteristic features, but it is not classified as a connective tissue.

**IT'S
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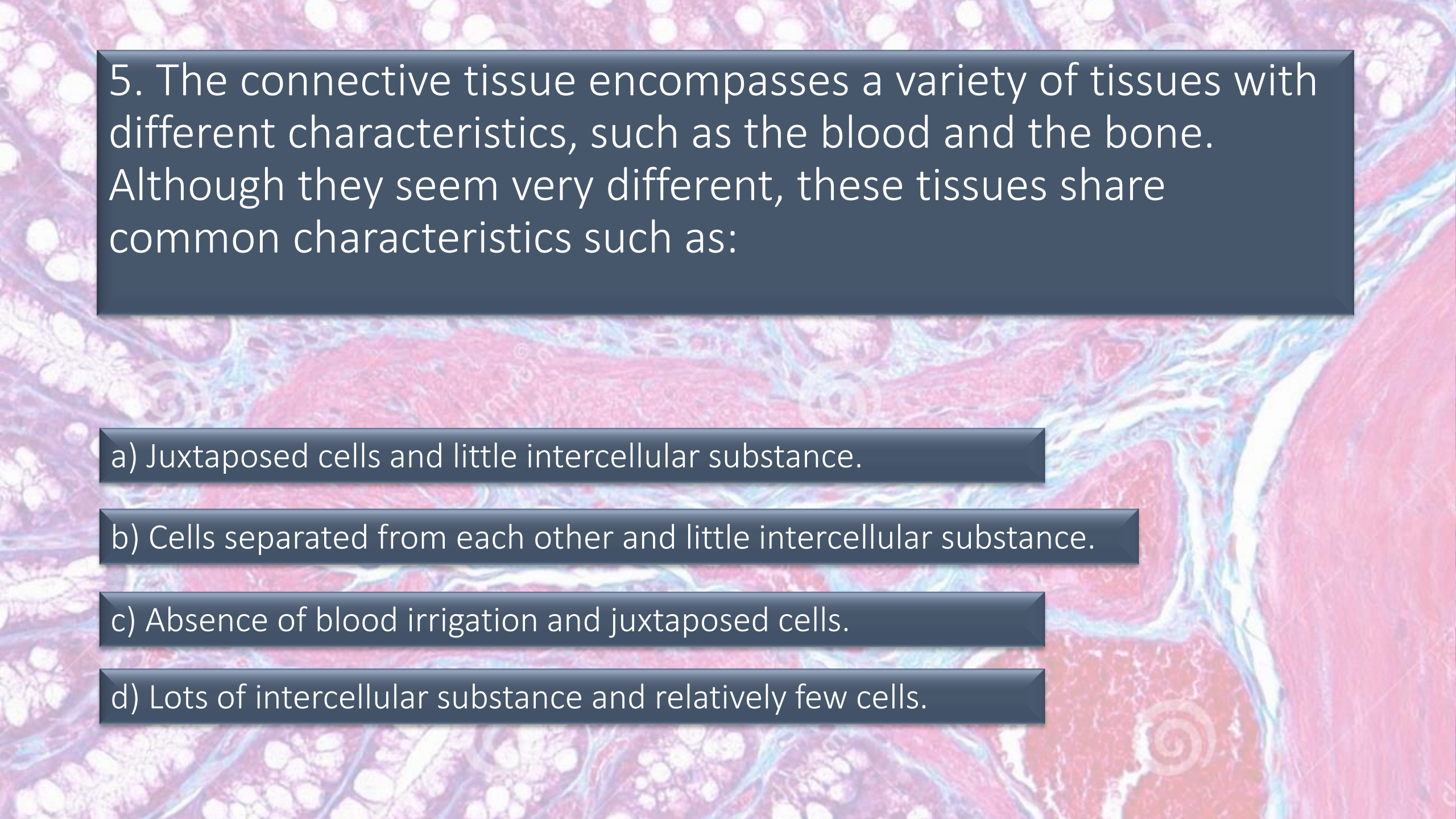
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5. The connective tissue encompasses a variety of tissues with different characteristics, such as the blood and the bone. Although they seem very different, these tissues share common characteristics such as:

a) Juxtaposed cells and little intercellular substance.

b) Cells separated from each other and little intercellular substance.

c) Absence of blood irrigation and juxtaposed cells.

d) Lots of intercellular substance and relatively few cells.



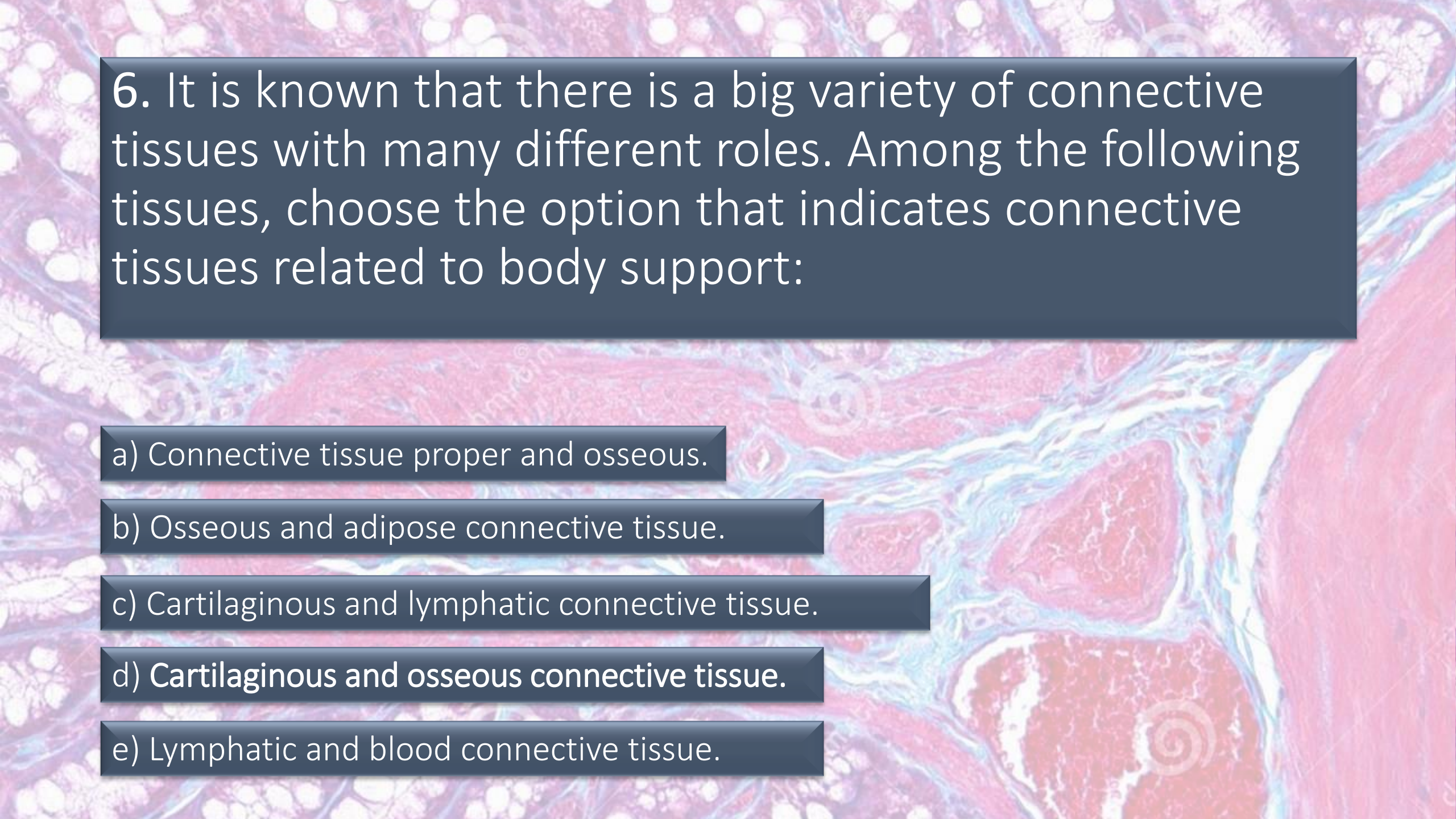




The connective tissue presents relatively few cells, which are distant from each other with a big amount of intercellular substance between them.



Advance

A microscopic image of connective tissue, likely stained with Masson's trichrome. The image shows a dense network of collagen fibers (stained blue) and various cells (stained pink/red). The fibers are arranged in a complex, interwoven pattern, characteristic of connective tissue. There are also some larger, more rounded structures that could be cells or small vessels.

6. It is known that there is a big variety of connective tissues with many different roles. Among the following tissues, choose the option that indicates connective tissues related to body support:

a) Connective tissue proper and osseous.

b) Osseous and adipose connective tissue.

c) Cartilaginous and lymphatic connective tissue.

d) Cartilaginous and osseous connective tissue.

e) Lymphatic and blood connective tissue.





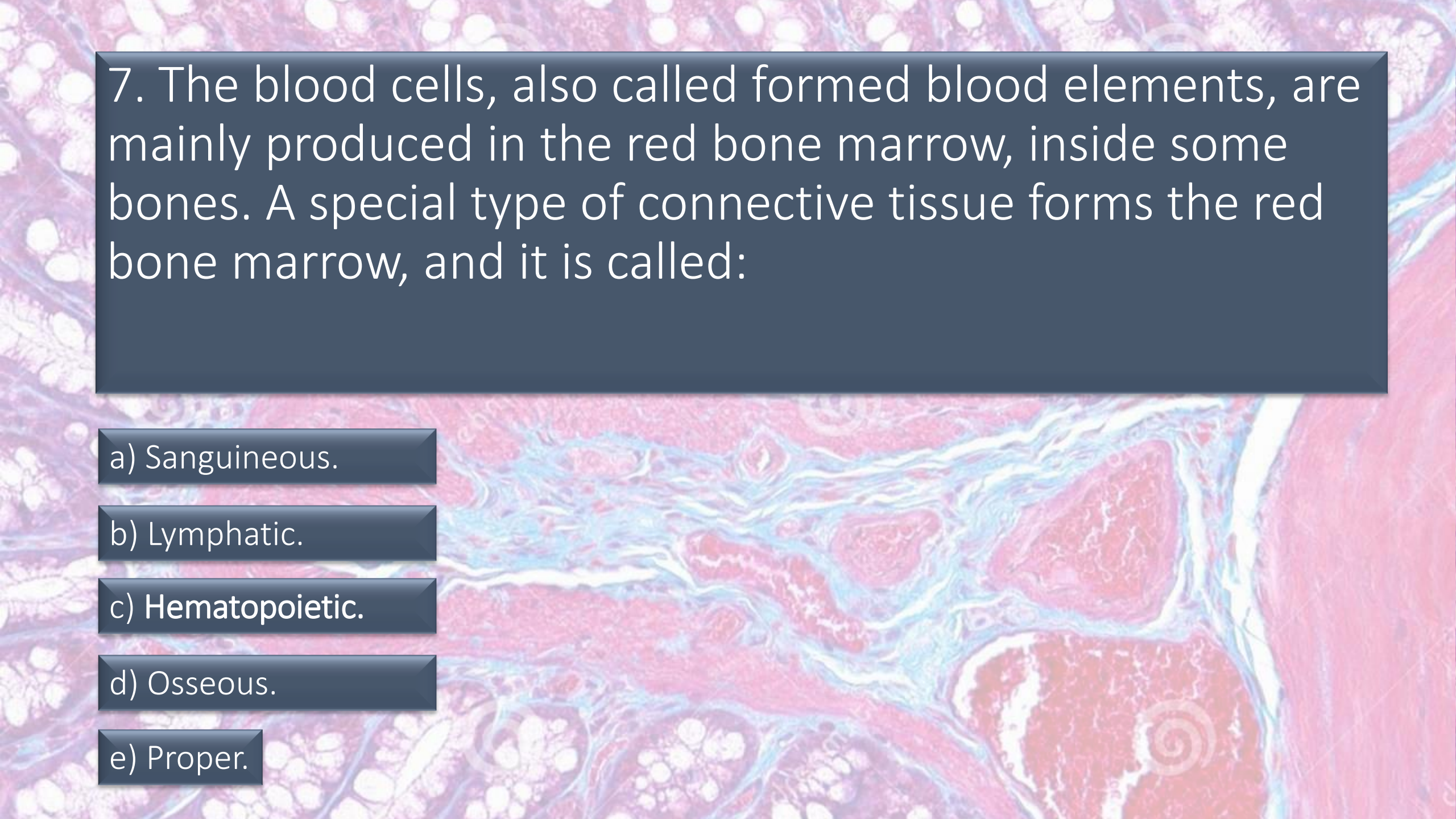


Cartilaginous and osseous tissues present a certain resistance, which guarantees body support and protection of vital organs, such as the skull.



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A microscopic image of bone tissue, showing a network of trabeculae (bony spicules) stained pink, with marrow spaces in between. The marrow is stained a darker red/purple. The overall structure is porous and interconnected.

7. The blood cells, also called formed blood elements, are mainly produced in the red bone marrow, inside some bones. A special type of connective tissue forms the red bone marrow, and it is called:

a) Sanguineous.

b) Lymphatic.

c) Hematopoietic.

d) Osseous.

e) Proper.





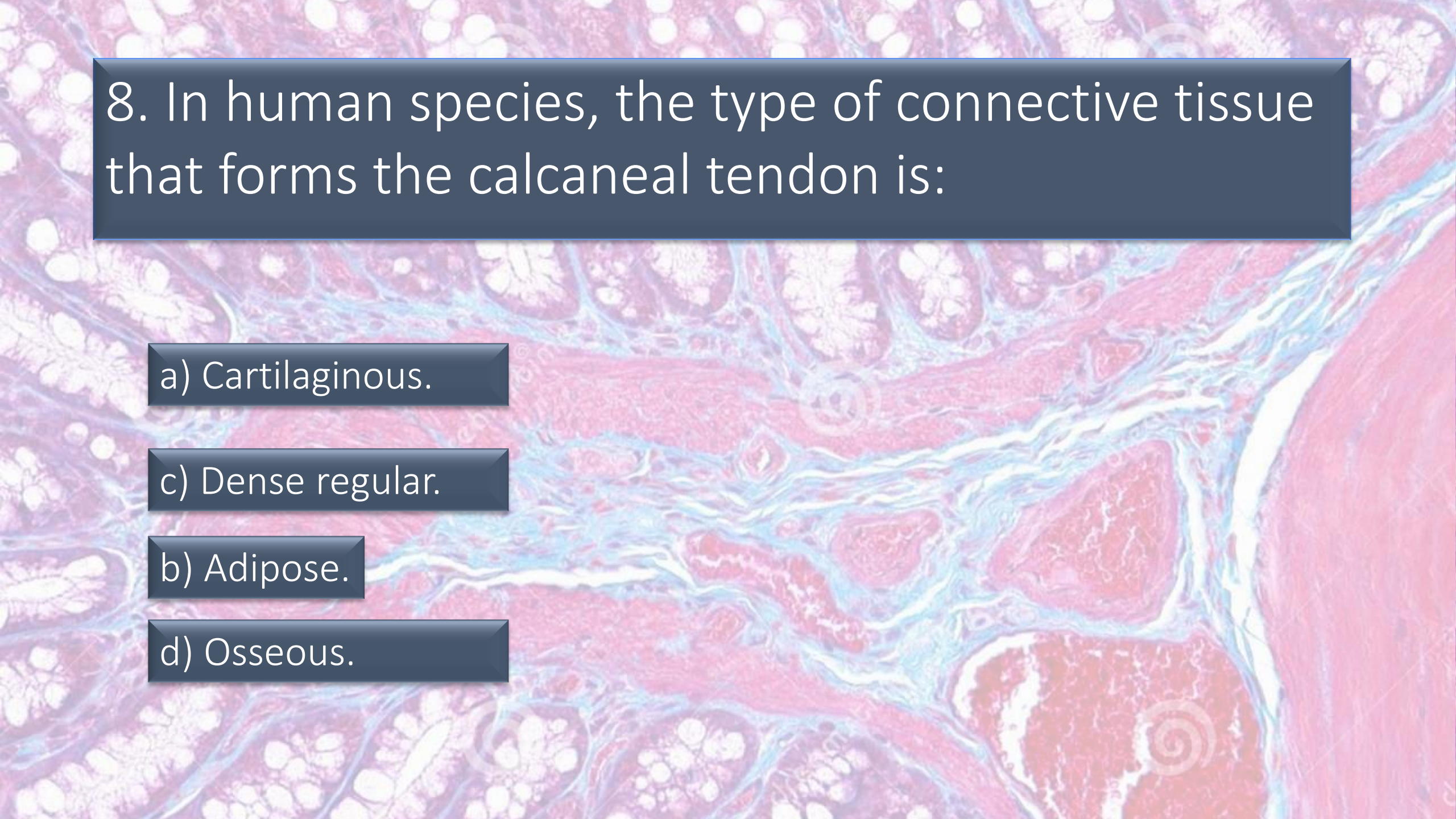
The hematopoietic tissue is a special type of connective tissue, which is related to the production of blood cells.



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8. In human species, the type of connective tissue that forms the calcaneal tendon is:

a) Cartilaginous.

c) Dense regular.

b) Adipose.

d) Osseous.



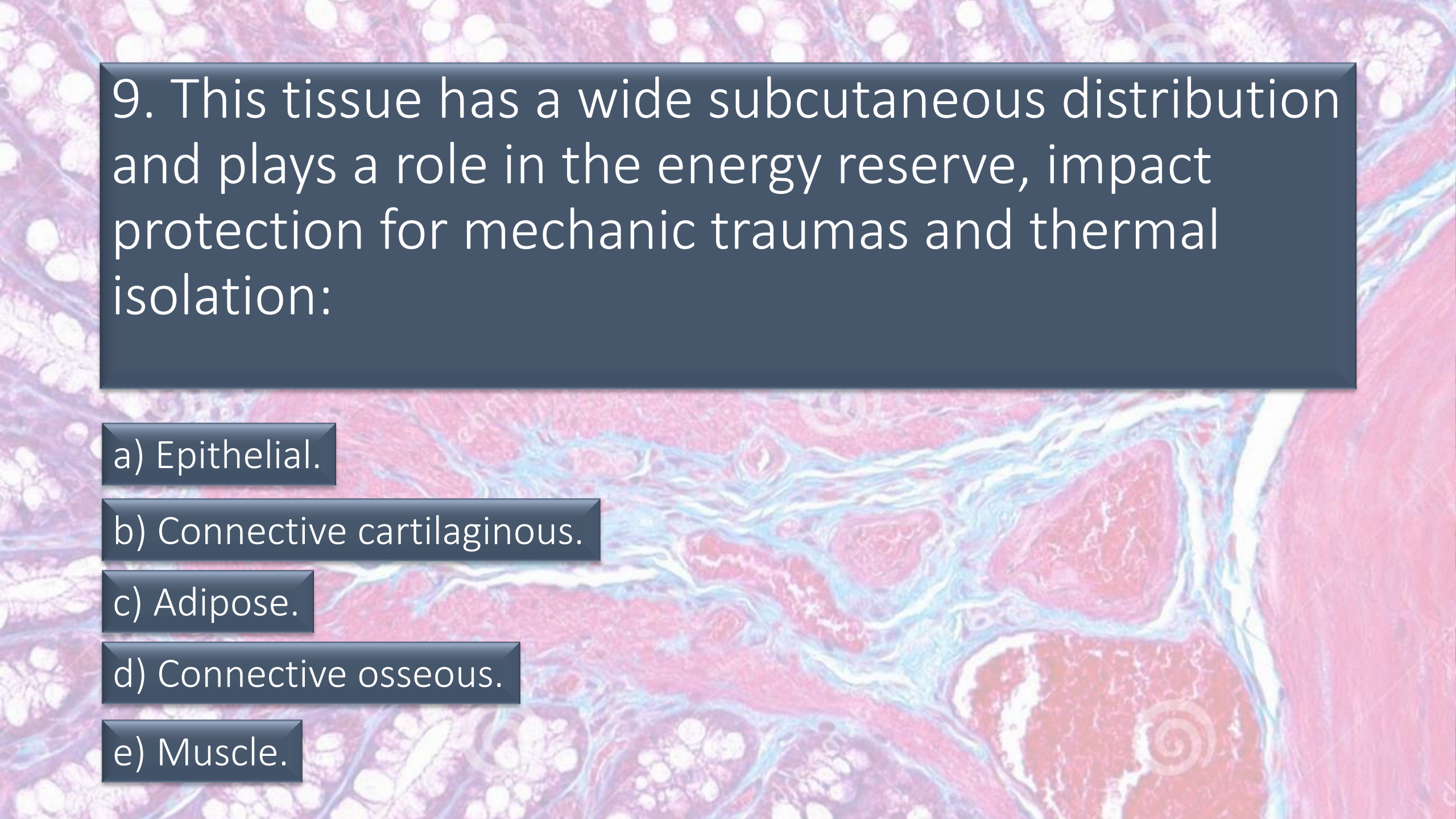
Dense regular connective tissue, also called tendon dense connective tissue, presents several collagenous fibers parallel oriented which gain resistance. This tissue though is very resistant, is not very elastic.



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9. This tissue has a wide subcutaneous distribution and plays a role in the energy reserve, impact protection for mechanic traumas and thermal isolation:

a) Epithelial.

b) Connective cartilaginous.

c) Adipose.

d) Connective osseous.

e) Muscle.





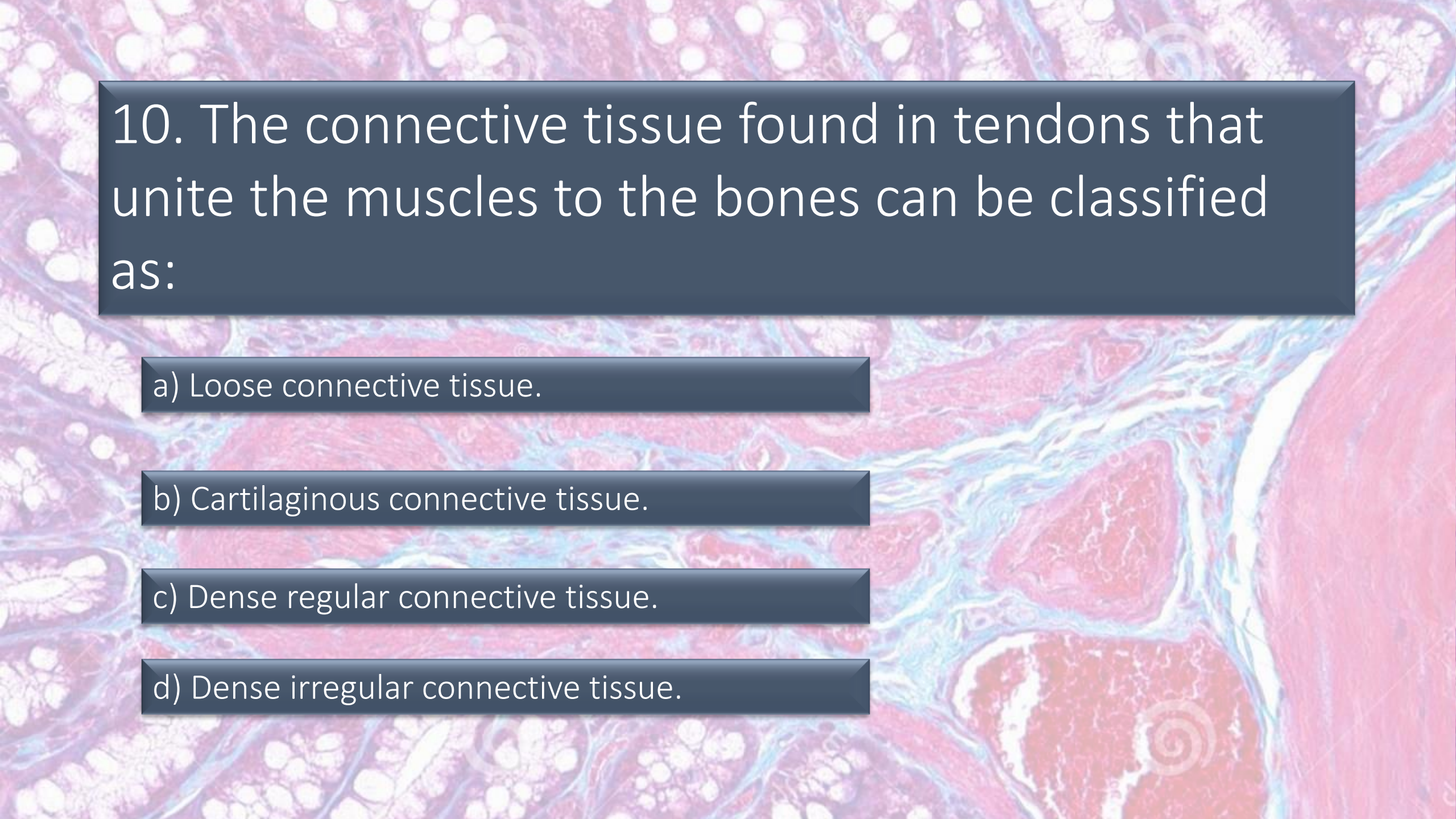
The adipose tissue is formed by cells that store fat (adipose cells) and some collagenous fibers. This tissue acts as energy reserve, protects against impacts and provides thermal insulation.



Avançar





A histological micrograph of a tendon cross-section. The image shows a dense network of collagen fibers stained blue, forming an irregular pattern. Interspersed among these fibers are bundles of muscle fibers, which are stained pink. The overall structure is highly organized and fibrous, characteristic of dense irregular connective tissue.

10. The connective tissue found in tendons that unite the muscles to the bones can be classified as:

a) Loose connective tissue.

b) Cartilaginous connective tissue.

c) Dense regular connective tissue.

d) Dense irregular connective tissue.



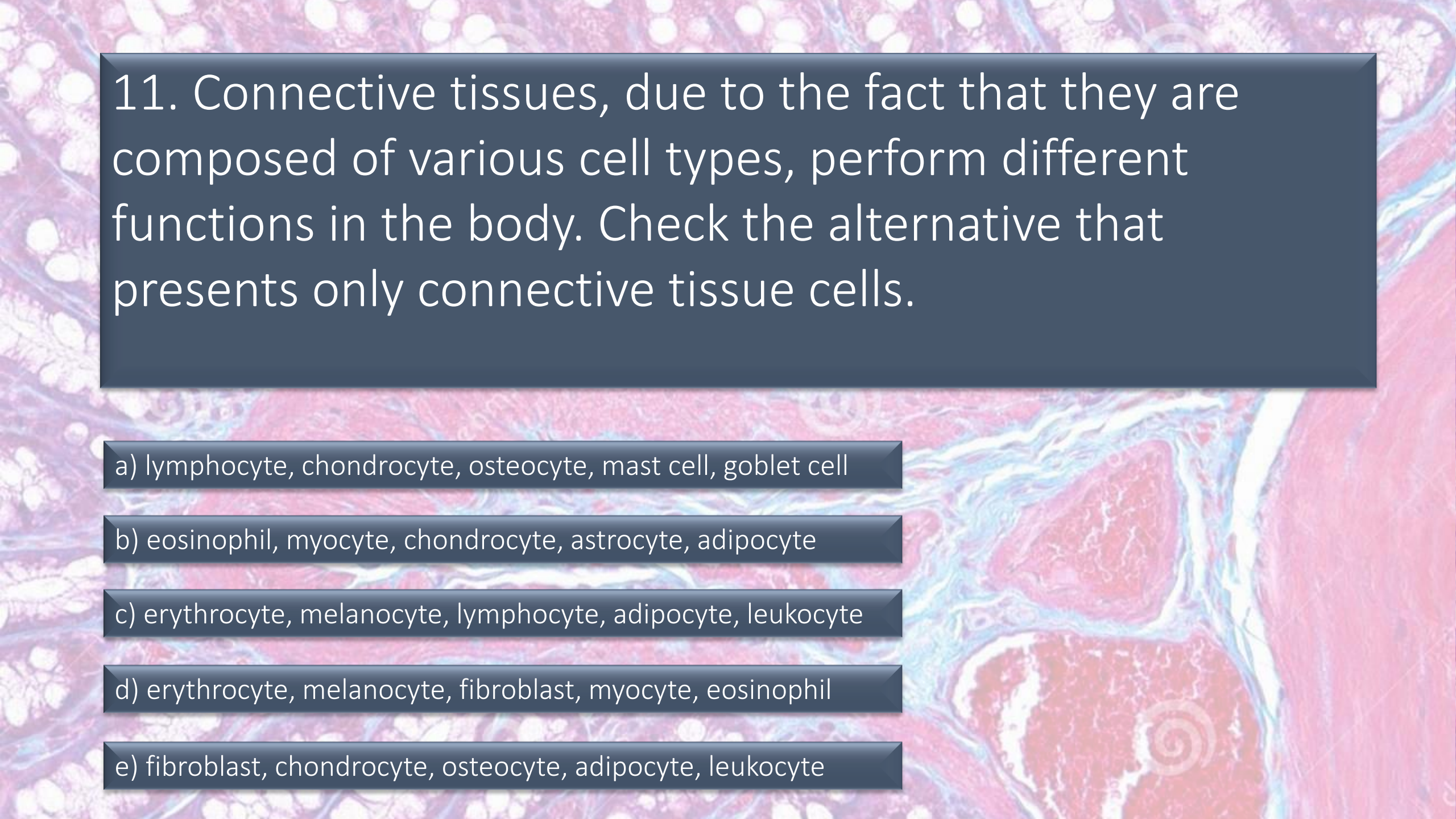


That's
right
Baby



Avançar





11. Connective tissues, due to the fact that they are composed of various cell types, perform different functions in the body. Check the alternative that presents only connective tissue cells.

a) lymphocyte, chondrocyte, osteocyte, mast cell, goblet cell

b) eosinophil, myocyte, chondrocyte, astrocyte, adipocyte

c) erythrocyte, melanocyte, lymphocyte, adipocyte, leukocyte

d) erythrocyte, melanocyte, fibroblast, myocyte, eosinophil

e) fibroblast, chondrocyte, osteocyte, adipocyte, leukocyte





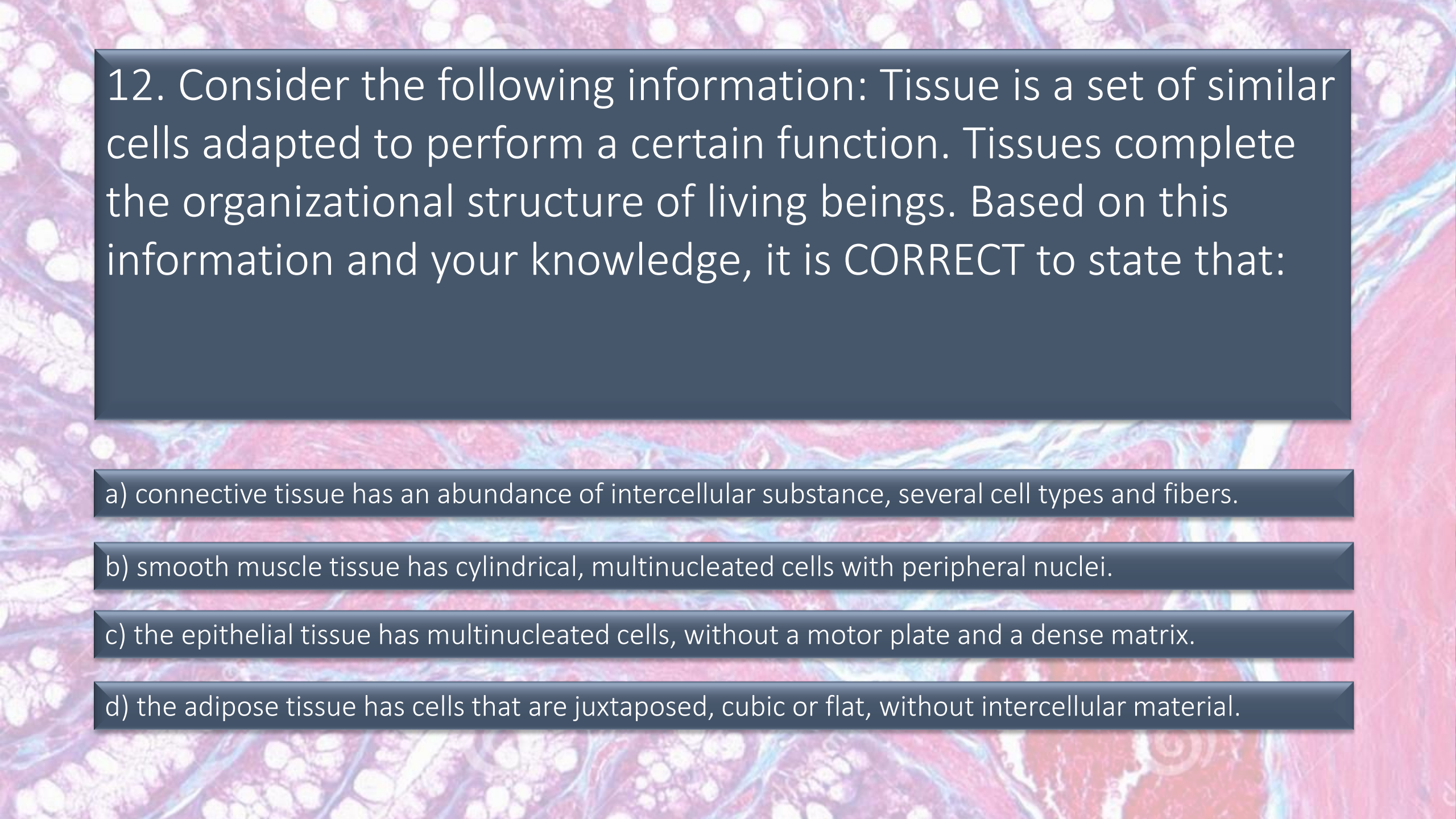




CERTO



Avançar

A microscopic image of tissue, likely stained with hematoxylin and eosin (H&E). The image shows various cellular structures, including what appears to be glandular or ductal structures on the left and a more fibrous or muscular area on the right. The background is a mix of pink and purple hues.

12. Consider the following information: Tissue is a set of similar cells adapted to perform a certain function. Tissues complete the organizational structure of living beings. Based on this information and your knowledge, it is CORRECT to state that:

a) connective tissue has an abundance of intercellular substance, several cell types and fibers.

b) smooth muscle tissue has cylindrical, multinucleated cells with peripheral nuclei.

c) the epithelial tissue has multinucleated cells, without a motor plate and a dense matrix.

d) the adipose tissue has cells that are juxtaposed, cubic or flat, without intercellular material.

• CERTO

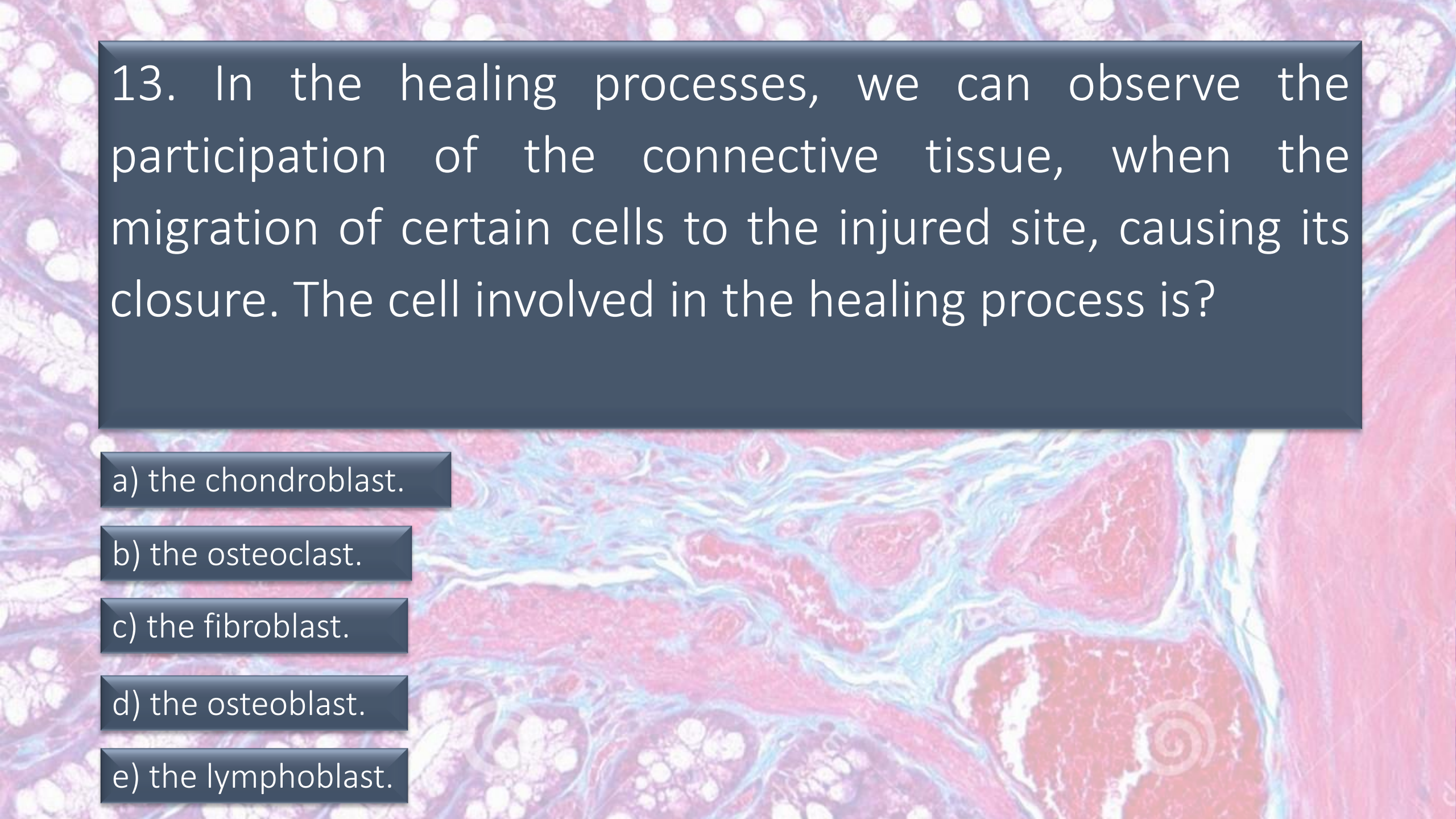


Avançar







The background of the slide is a microscopic image of connective tissue, showing various cells and fibers. A large, dark blue rectangular area is overlaid on the top half of the image, containing white text. Below this area, on the left side, are five smaller, dark blue rectangular boxes, each containing a lettered option. The overall image is a histological section, likely stained with Masson's trichrome, showing collagen fibers in blue and other tissue components in pink/red.

13. In the healing processes, we can observe the participation of the connective tissue, when the migration of certain cells to the injured site, causing its closure. The cell involved in the healing process is?

a) the chondroblast.

b) the osteoclast.

c) the fibroblast.

d) the osteoblast.

e) the lymphoblast.

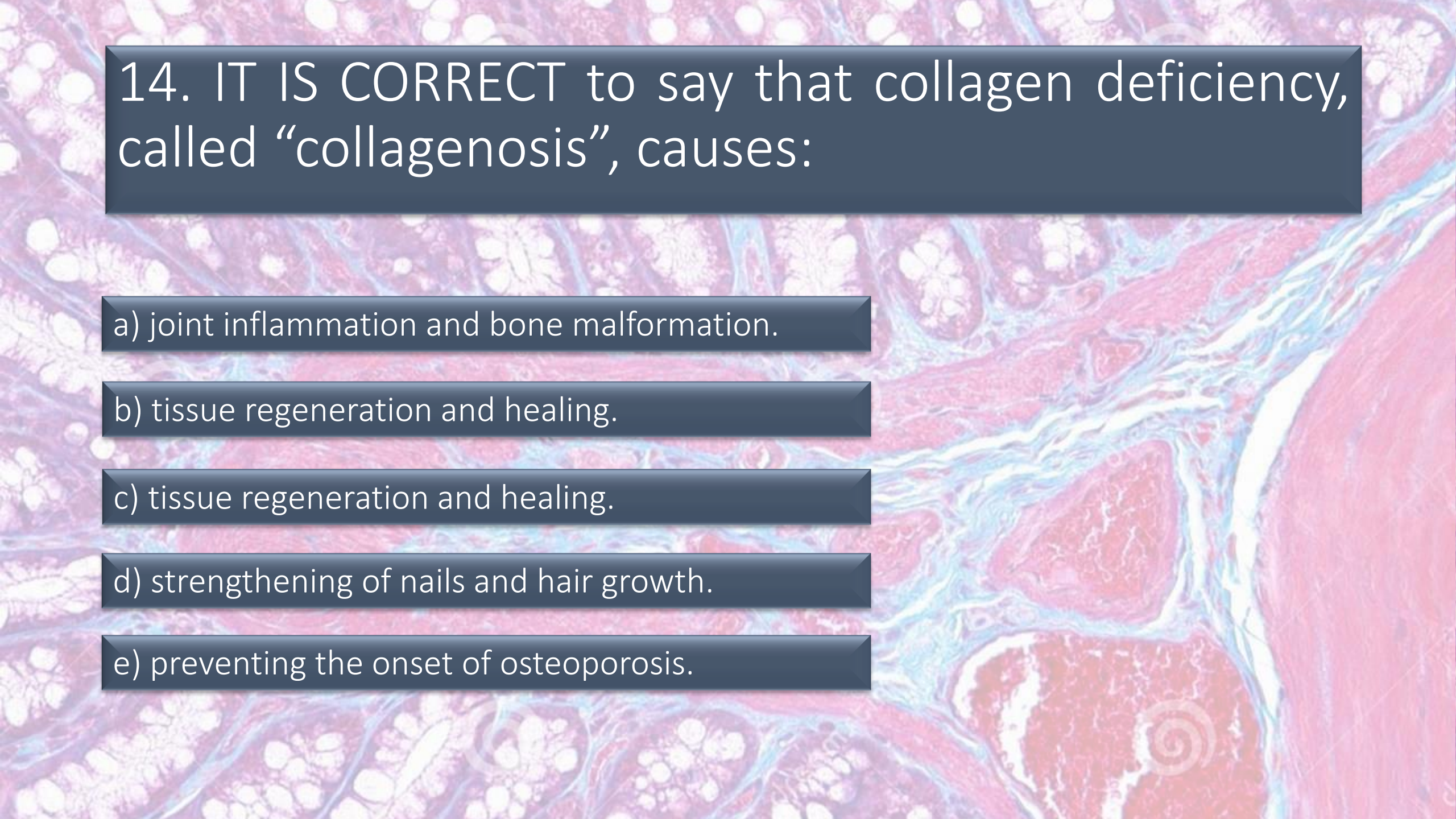




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A microscopic image of tissue, likely connective tissue, stained with Masson's trichrome. The collagen fibers are stained blue, while the surrounding tissue is stained pink. The image shows a dense network of collagen fibers, particularly in the lower right quadrant.

14. IT IS CORRECT to say that collagen deficiency, called “collagenosis”, causes:

a) joint inflammation and bone malformation.

b) tissue regeneration and healing.

c) tissue regeneration and healing.

d) strengthening of nails and hair growth.

e) preventing the onset of osteoporosis.

O colágeno é uma proteína presente em muitas partes do corpo humano, dentre elas, no tecido ósseo e cartilaginoso. Assim, a deficiência de colágeno pode causar problemas articulares e ósseos.



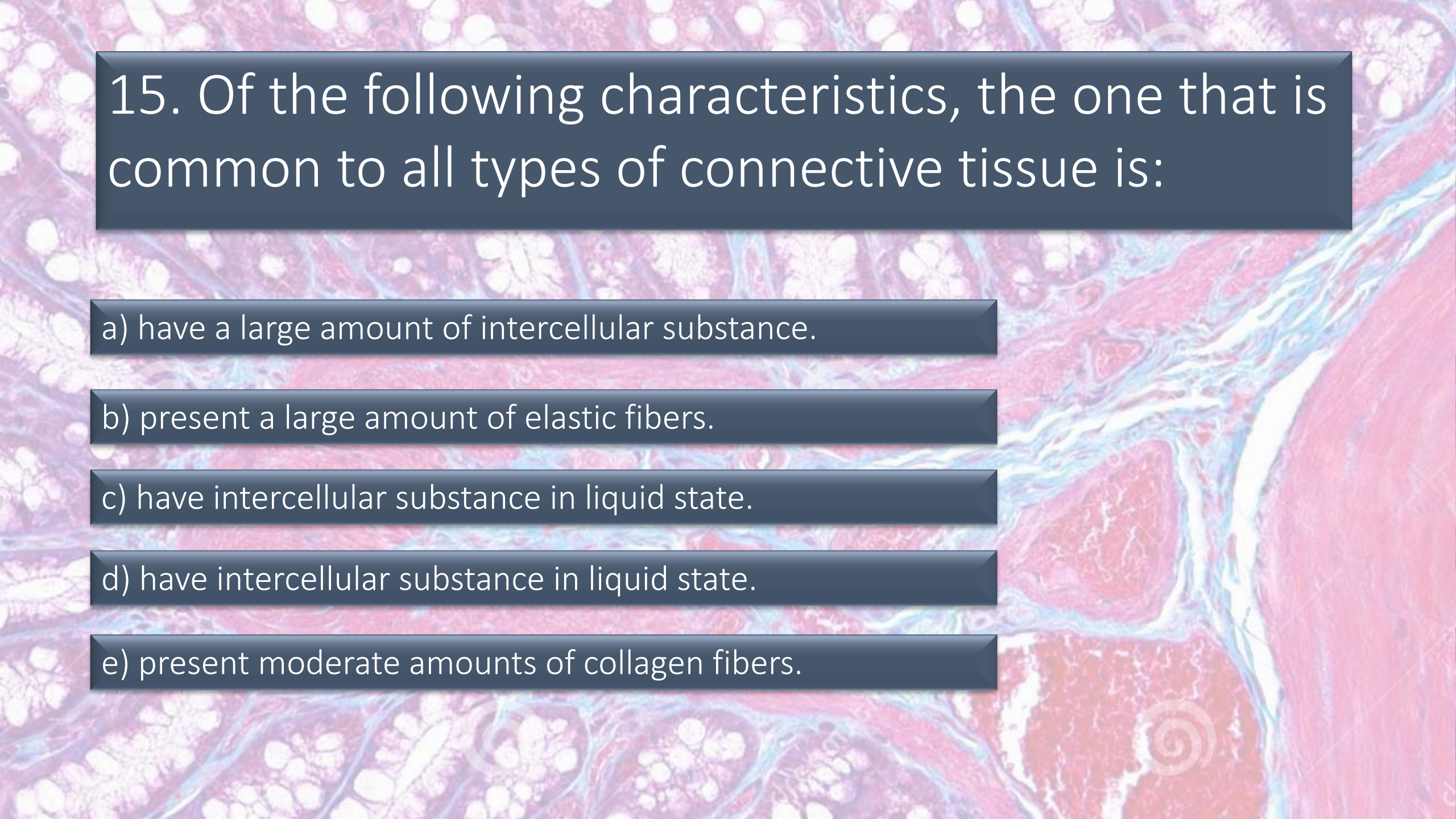
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A microscopic image of connective tissue, likely stained with Masson's trichrome. The image shows a dense network of collagen fibers (stained blue) and elastic fibers (stained red). The fibers are arranged in a complex, interwoven pattern, characteristic of dense irregular connective tissue. The background is a light pinkish-purple color.

15. Of the following characteristics, the one that is common to all types of connective tissue is:

a) have a large amount of intercellular substance.

b) present a large amount of elastic fibers.

c) have intercellular substance in liquid state.

d) have intercellular substance in liquid state.

e) present moderate amounts of collagen fibers.

- certo



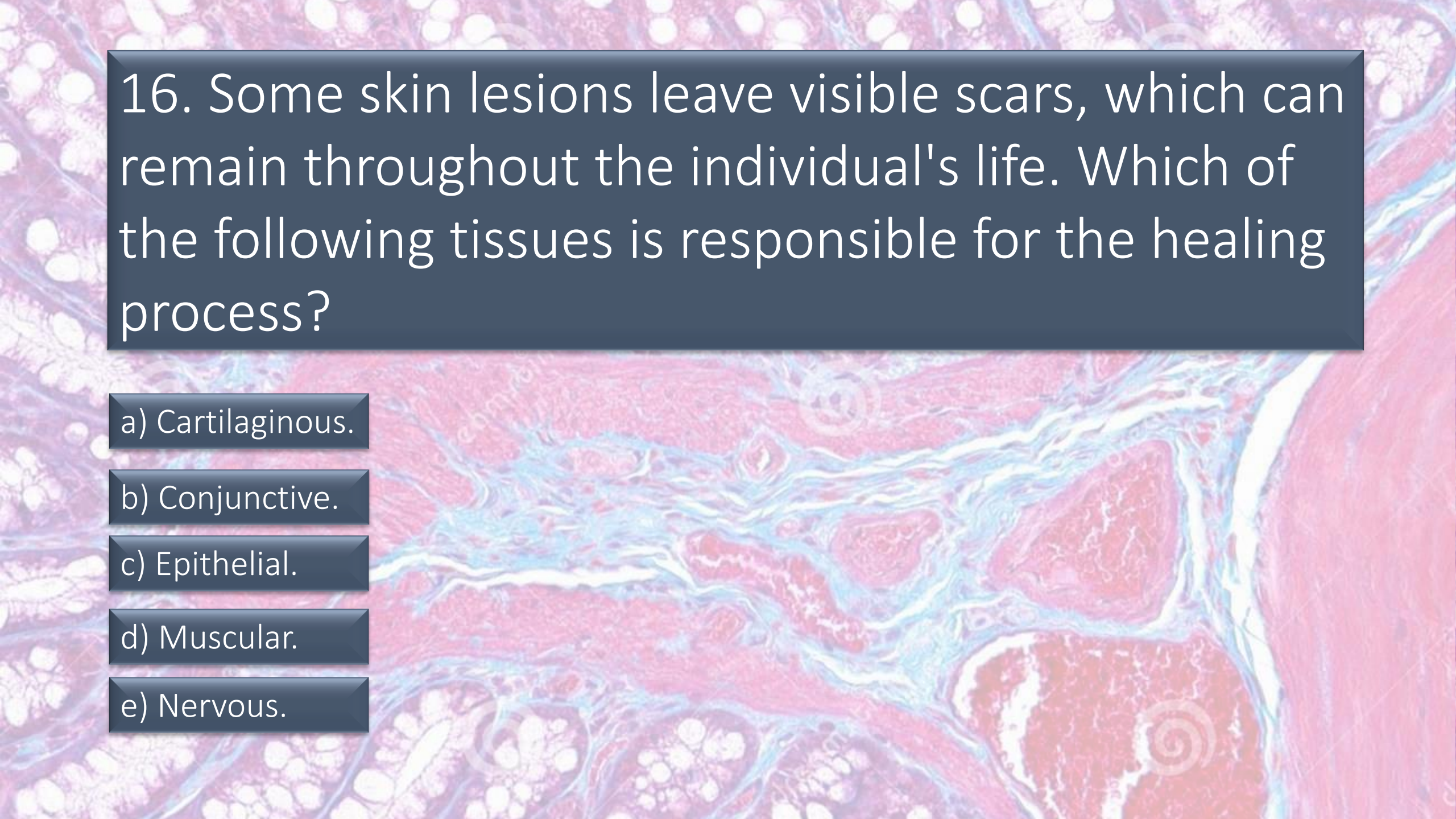
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A microscopic image of skin tissue, likely stained with Masson's trichrome. The image shows various layers of the skin, including the epidermis, dermis, and subcutaneous tissue. The dermis is characterized by a dense network of collagen fibers, which are stained blue, and various cellular structures, including fibroblasts and blood vessels, which are stained pink. The overall appearance is that of a complex, multi-layered tissue structure.

16. Some skin lesions leave visible scars, which can remain throughout the individual's life. Which of the following tissues is responsible for the healing process?

a) Cartilaginous.

b) Conjunctive.

c) Epithelial.

d) Muscular.

e) Nervous.



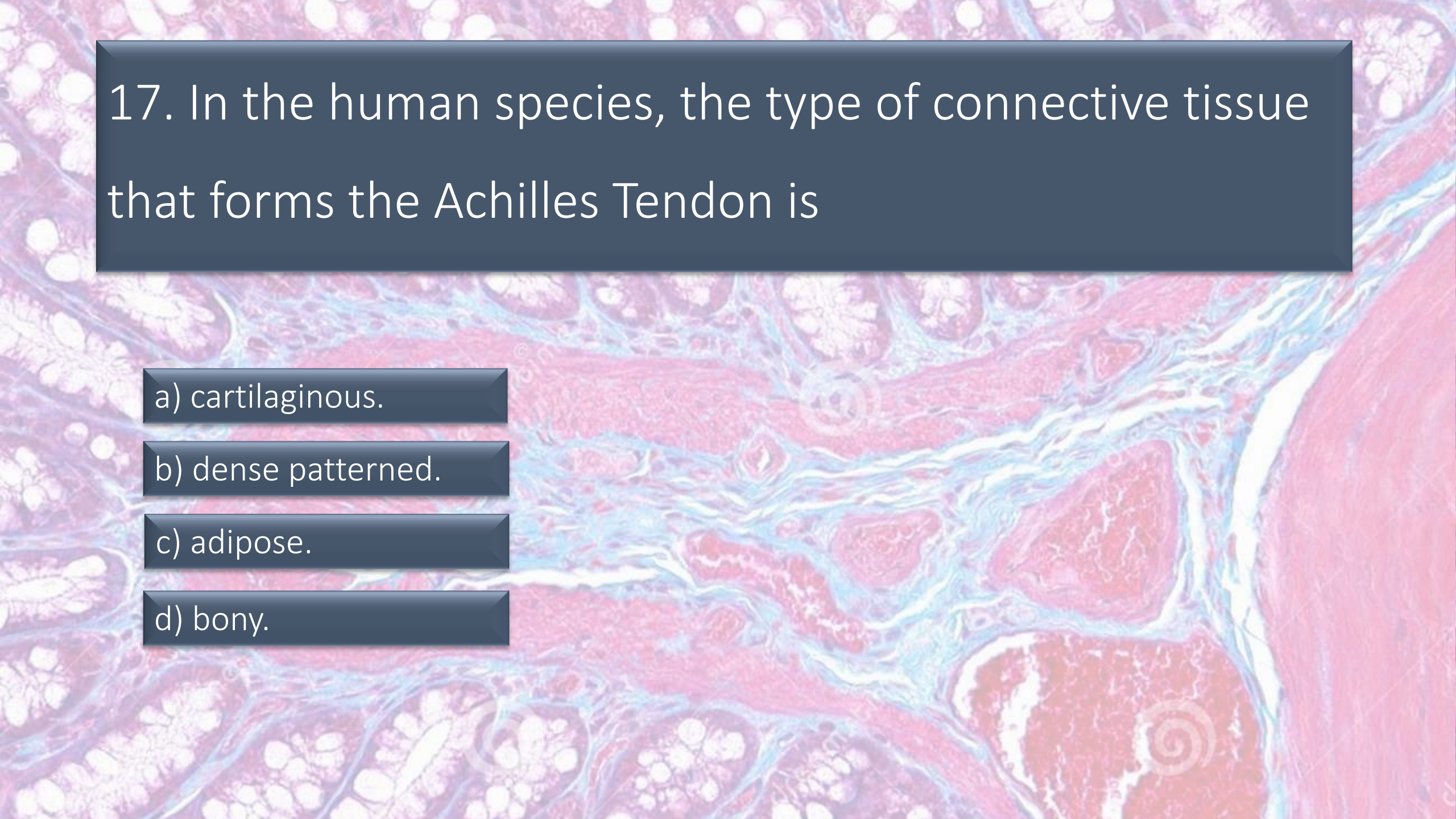


Avançar







A histological section of the Achilles tendon, stained with Masson's trichrome. The image shows a dense arrangement of collagen fibers, which appear blue, interspersed with bundles of smooth muscle and fibroblasts, which are stained pink. The overall structure is highly organized and fibrous, characteristic of a tendon.

17. In the human species, the type of connective tissue that forms the Achilles Tendon is

a) cartilaginous.

b) dense patterned.

c) adipose.

d) bony.

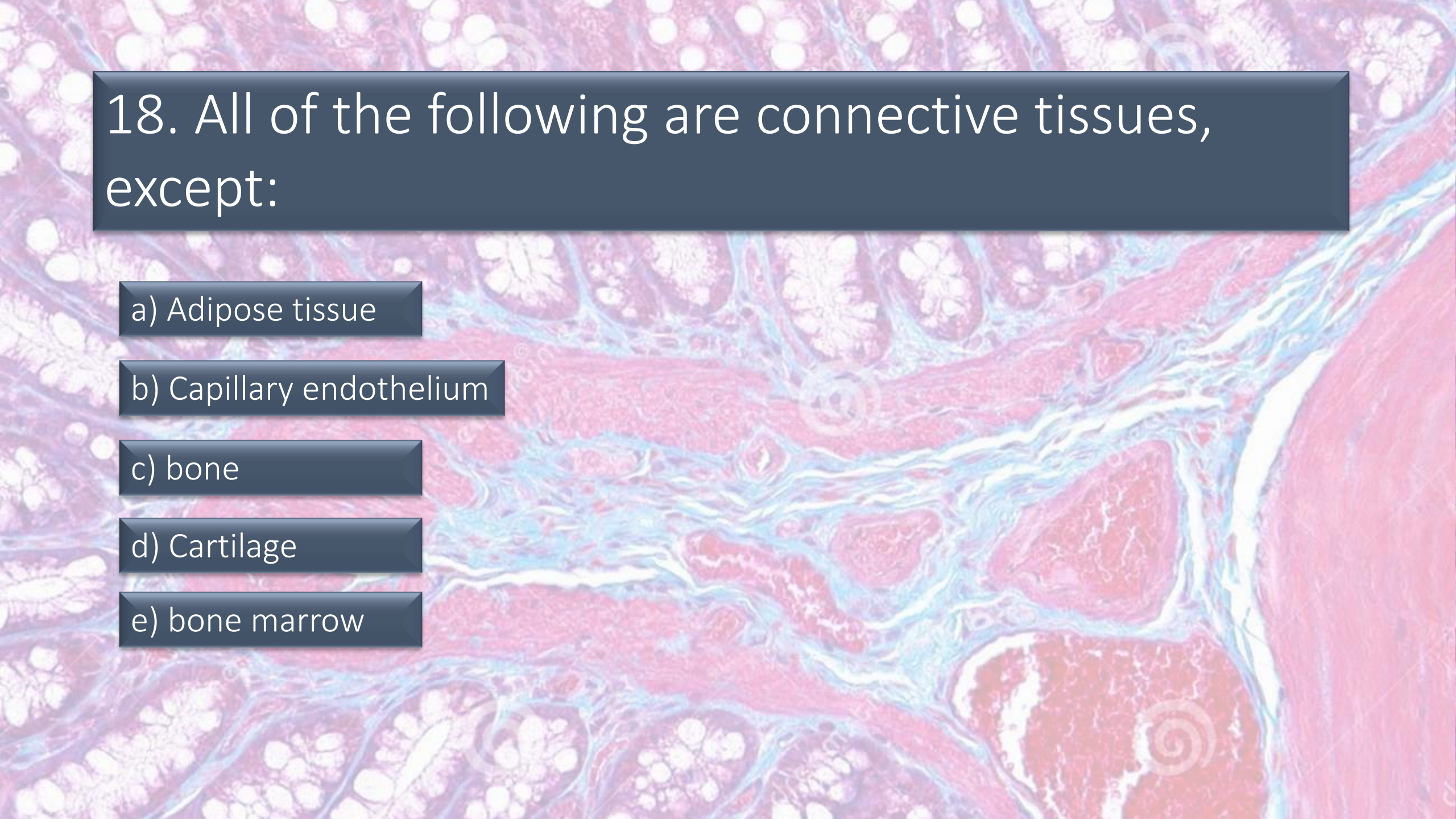




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18. All of the following are connective tissues, except:

a) Adipose tissue

b) Capillary endothelium

c) bone

d) Cartilage

e) bone marrow



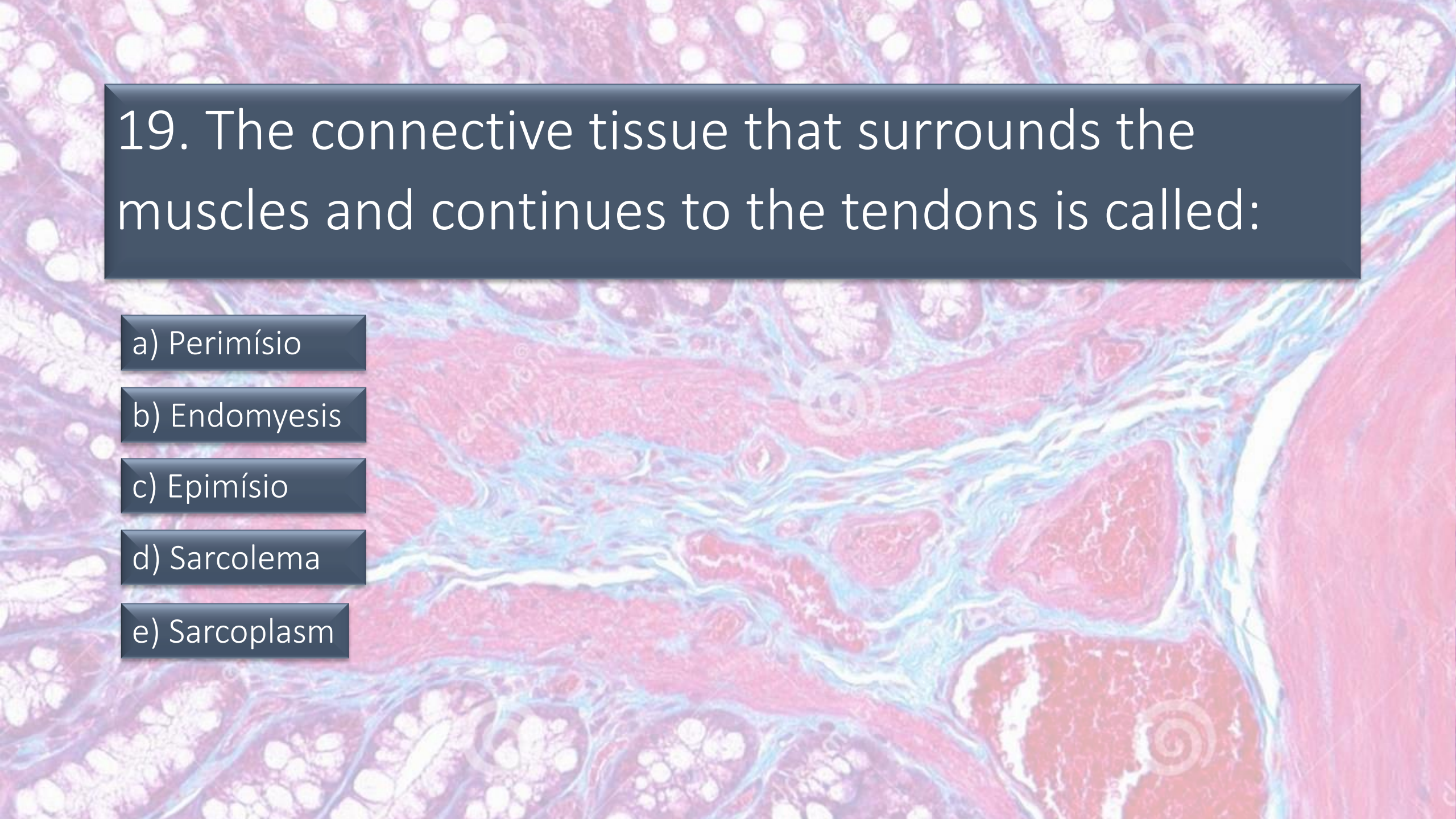


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19. The connective tissue that surrounds the muscles and continues to the tendons is called:

a) Perimísio

b) Endomyesis

c) Epimísio

d) Sarcolema

e) Sarcoplasm





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20. About the functions of the fibroblast, check the incorrect alternative:

a) Synthesis of collagen fibers.

b) Synthesis of elastic fibers.

c) Synthesis of reticular fibers.

d) Basal lamina synthesis.

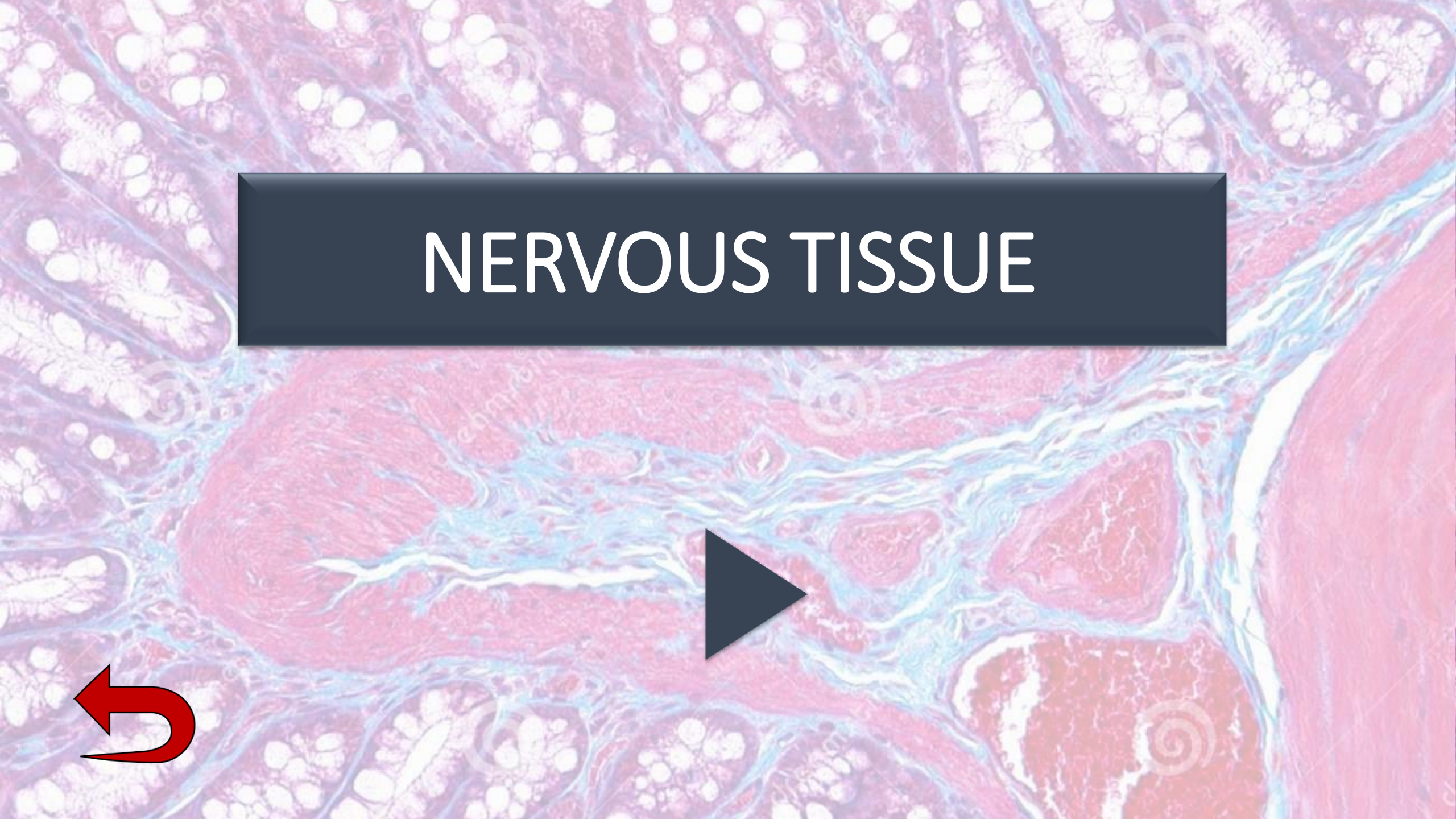






Avançar

NERVOUS TISSUE





1. Myelin is produced by:

a fibrous astrocytes.

b protoplasmic astrocytes.

c Schwann cells in the central nervous system and oligodendrocytes in the peripheral nervous system.

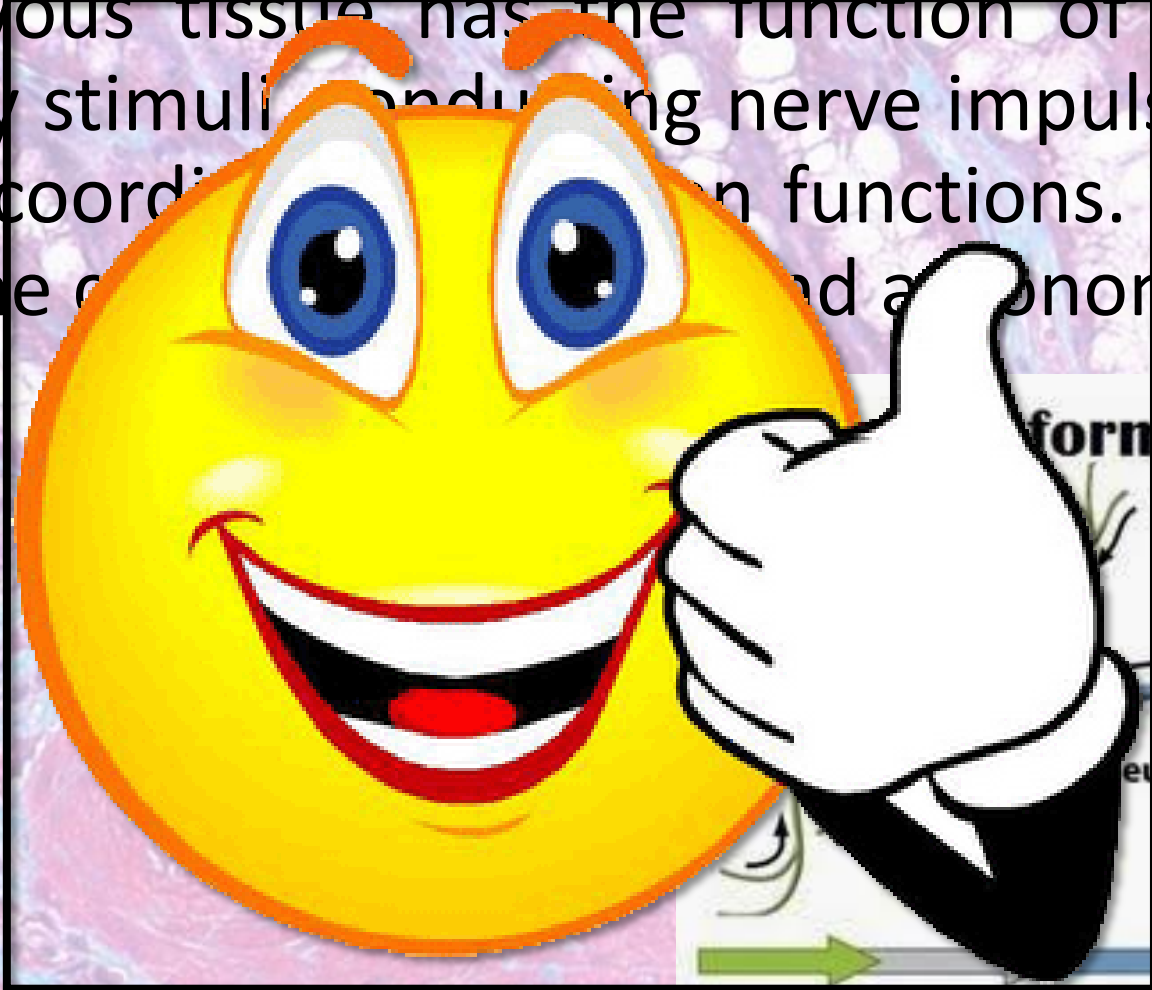
d oligodendrocytes in the central nervous system and Schwann cells in the peripheral nervous system.







Nervous tissue has the function of capturing environmental or body stimuli and conducting nerve impulses and interpreting them, in the coordination of functions. This tissue forms the organs of the central and peripheral nervous systems.



Avançar

A microscopic image of a spinal cord cross-section, stained with hematoxylin and eosin (H&E). The image shows the central canal, surrounding white matter, and the outer meninges. The central canal is a small, clear space in the center. The white matter is composed of myelinated axons, appearing as dense, pinkish-purple bundles. The gray matter is located on the inner side of the white matter, forming a butterfly shape. The meninges are the protective layers surrounding the spinal cord, appearing as thin, pinkish-purple layers. The overall structure is complex and highly organized.

2. Purkinje cells are:

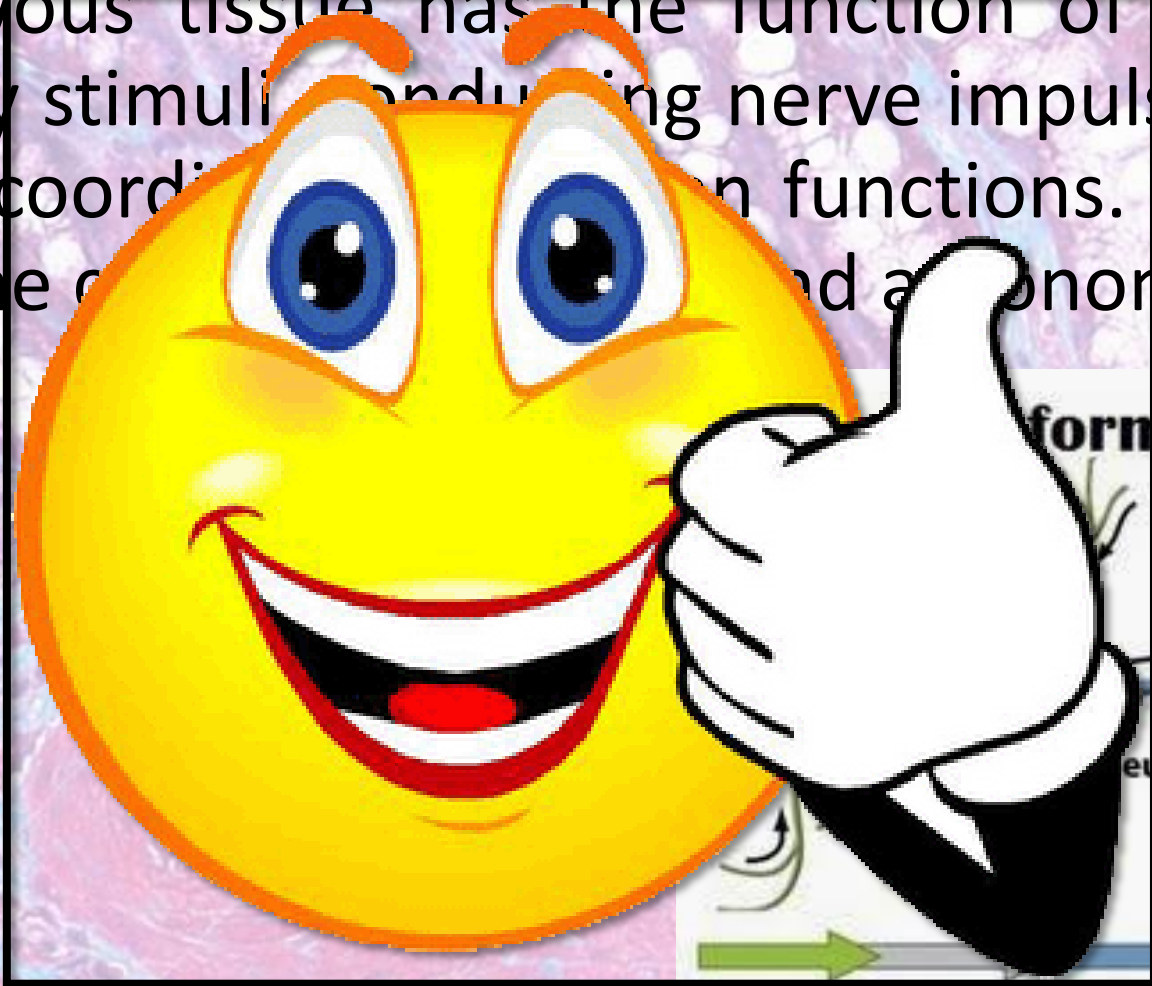
a Purkinje cells are:

b neurons in the brain.

c neurons in the spinal cord.

d neurons of the sensory ganglia.

Nervous tissue has the function of capturing environmental or body stimuli and conducting nerve impulses and interpreting them, in the coordination of functions. This tissue forms the organs of the central and peripheral nervous systems.

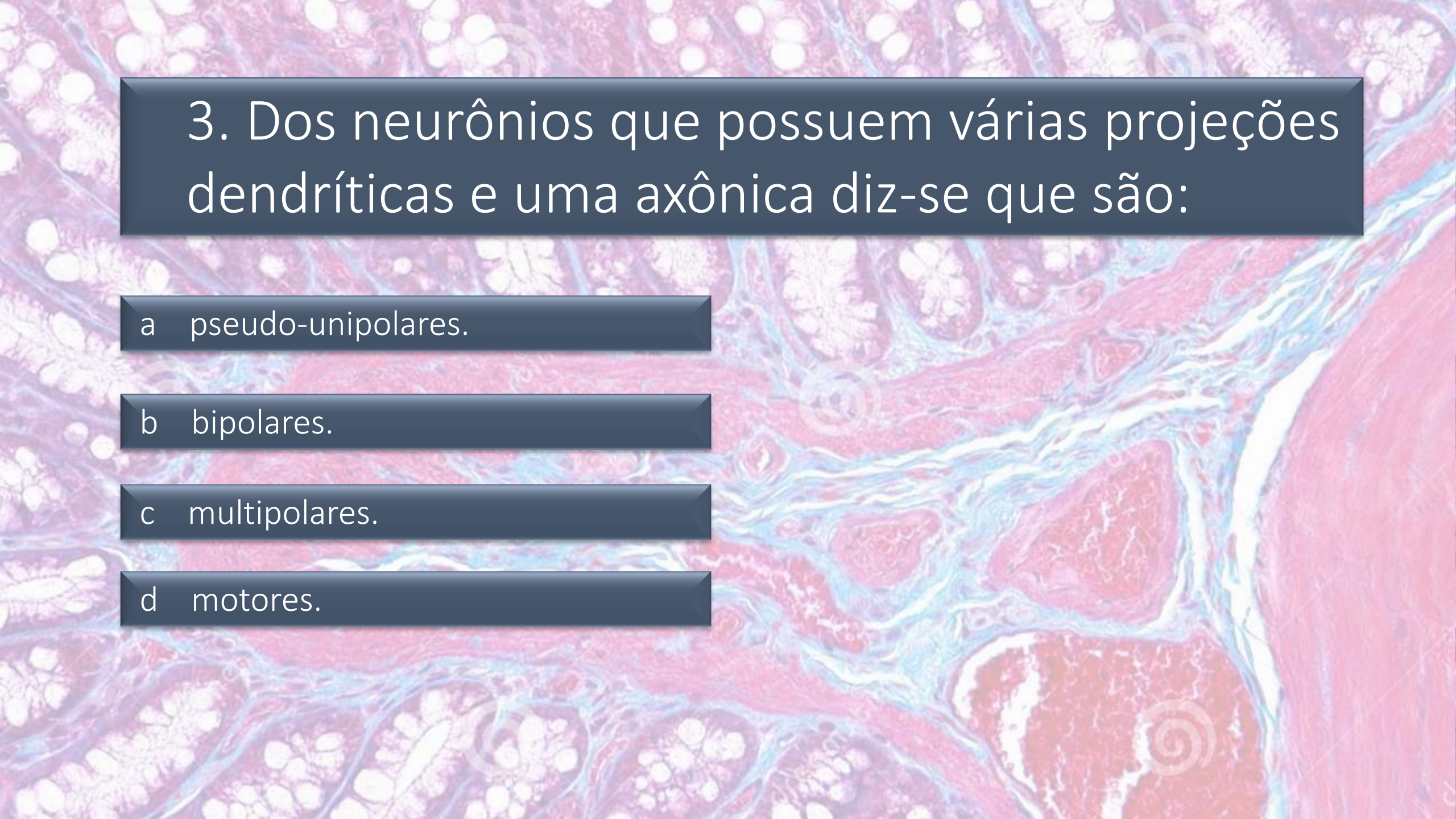


Avançar







The background of the slide is a microscopic image of neural tissue, likely a cross-section of the brain or spinal cord. It shows various structures including what appears to be the cerebral cortex with its characteristic layers, and underlying white matter with myelinated axons. The image is stained, showing different colors for different tissue components. A large, dark, semi-transparent text box is overlaid on the top left portion of the image, containing the main question and four multiple-choice options.

3. Dos neurônios que possuem várias projeções dendríticas e uma axônica diz-se que são:

a pseudo-unipolares.

b bipolares.

c multipolares.

d motores.



VOCÊ ERROU!!!!



Voltar



VOCÊ ERROU!!!!

 Voltar

O **tecido nervoso** tem como função de captar estímulos ambientais e do próprio corpo, conduzir impulsos nervosos e interpretá-los para a ordenação das funções dos órgãos. Este tecido é a base dos sistemas nervosos central, periférico e autônomo.

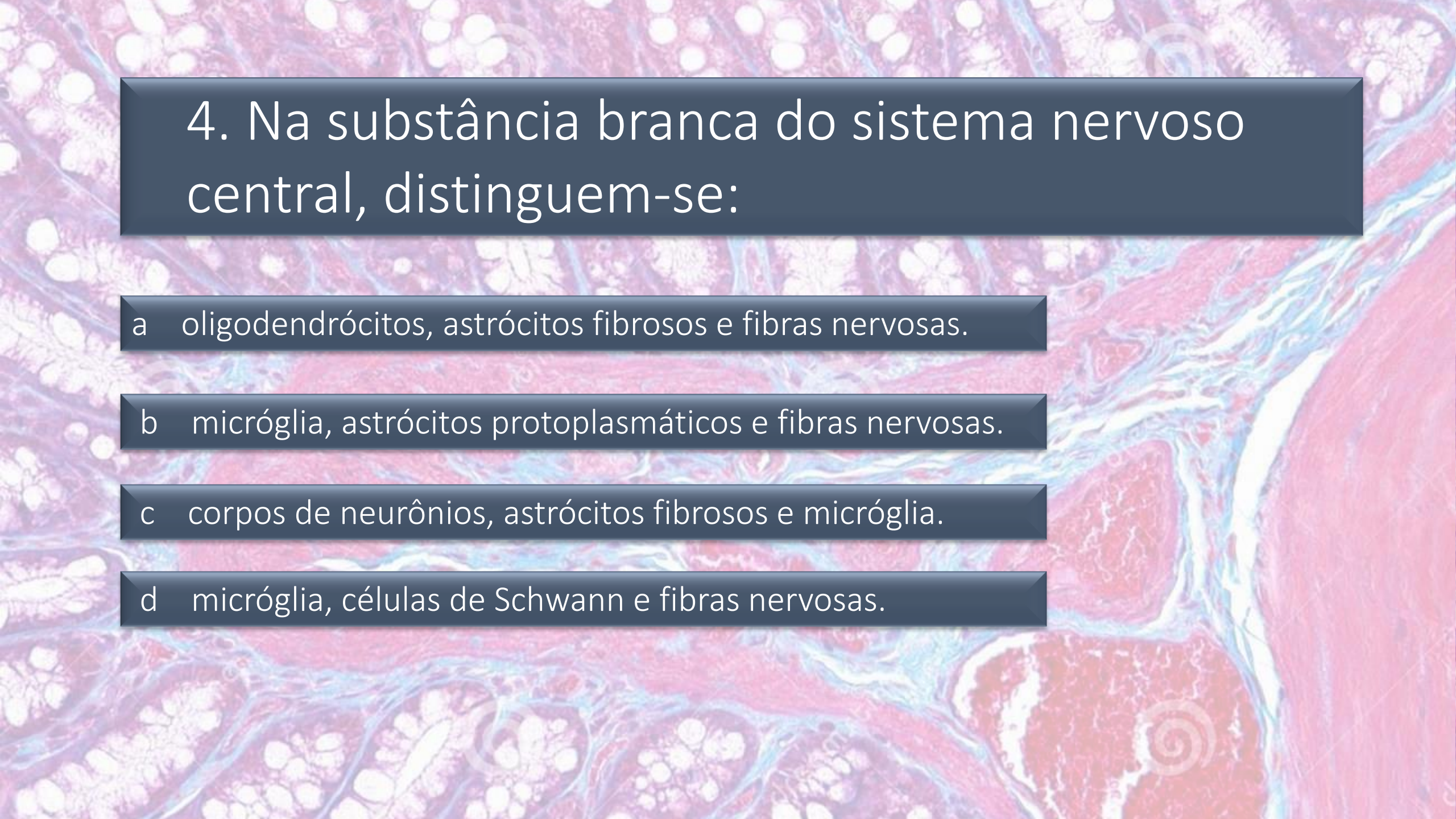


Avançar



VOCÊ ERROU!!!!!!





4. Na substância branca do sistema nervoso central, distinguem-se:

a oligodendrócitos, astrócitos fibrosos e fibras nervosas.

b micróglia, astrócitos protoplasmáticos e fibras nervosas.

c corpos de neurônios, astrócitos fibrosos e micróglia.

d micróglia, células de Schwann e fibras nervosas.

O **tecido nervoso** tem como função de captar estímulos ambientais e do próprio corpo, conduzir impulsos nervosos e interpretá-los para a ordenação das funções dos órgãos. Este tecido é a base dos sistemas nervosos central, periférico e autônomo.



Avançar



VOCÊ ERROU!!!!

 Voltar



VOCÊ ERROU!!!!

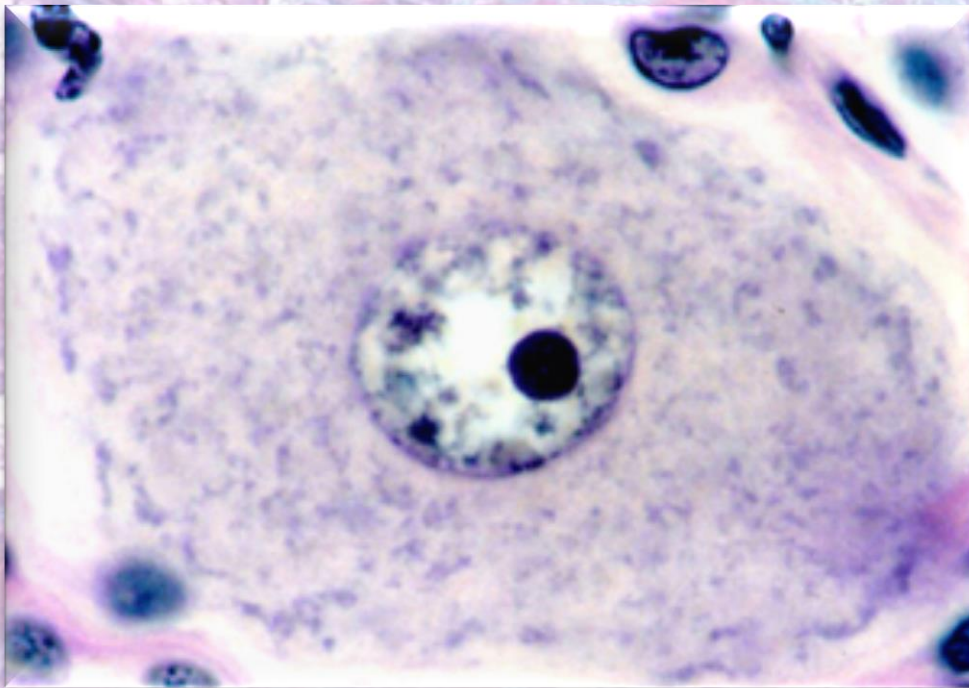
 Voltar



VOCÊ ERROU!!!!

 Voltar

5. Sobre a imagem mostrada, assinale a alternativa incorreta:



a) trata-se do neurônio pseudo-unipolar dos gânglios sensitivos.

b) os grânulos basófilos foram denominados corpúsculos de Nissl.

c) a basofilia do citoplasma está relacionada à abundância de ribossomos.

d) o neurônio é cercado por oligodendrócitos.



VOCÊ ERROU!!!!



Voltar



VOCÊ ERROU!!!!

 Voltar



VOCÊ ERROU!!!!!

 Voltar

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Avançar

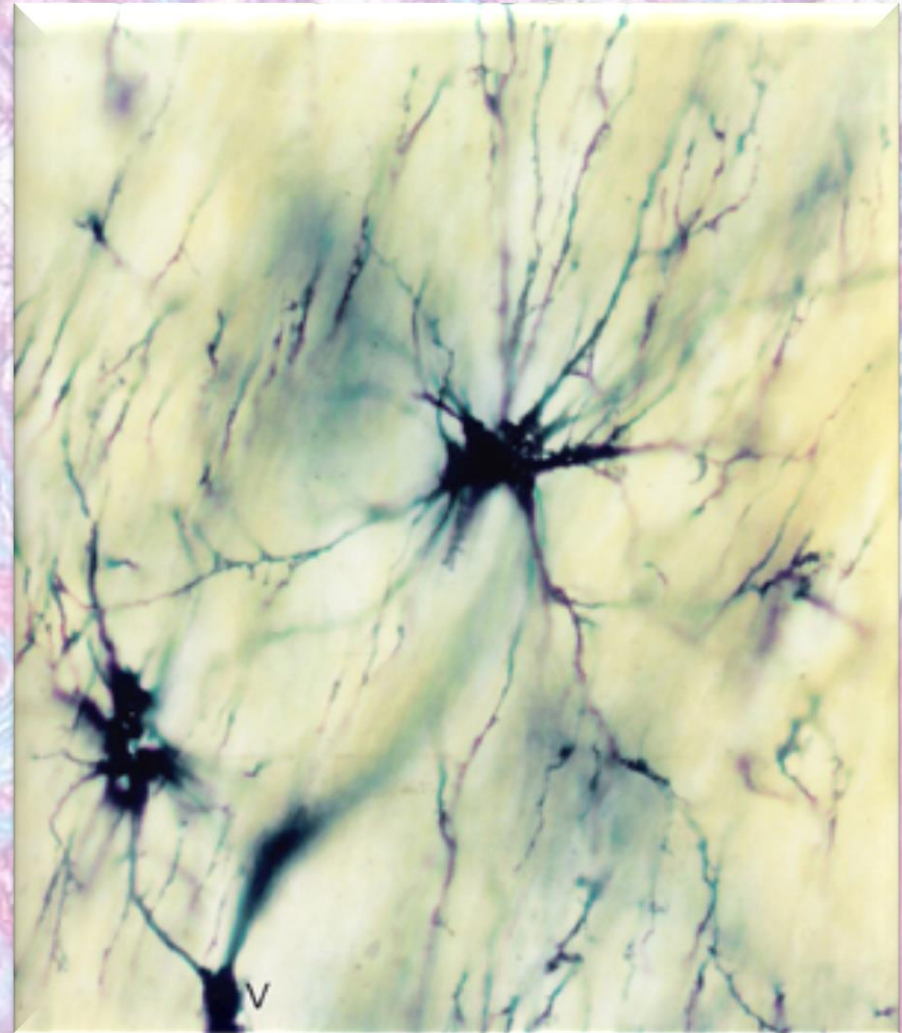
6. Qual é a célula exibida?

a neurônio.

b micróglia.

c astrócito protoplasmático.

d astrócito fibroso.





VOCÊ ERROU!!!!

Voltar



VOCÊ ERROU!!!!

 Voltar



VOCÊ ERROU!!!!!

 Voltar

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Avançar

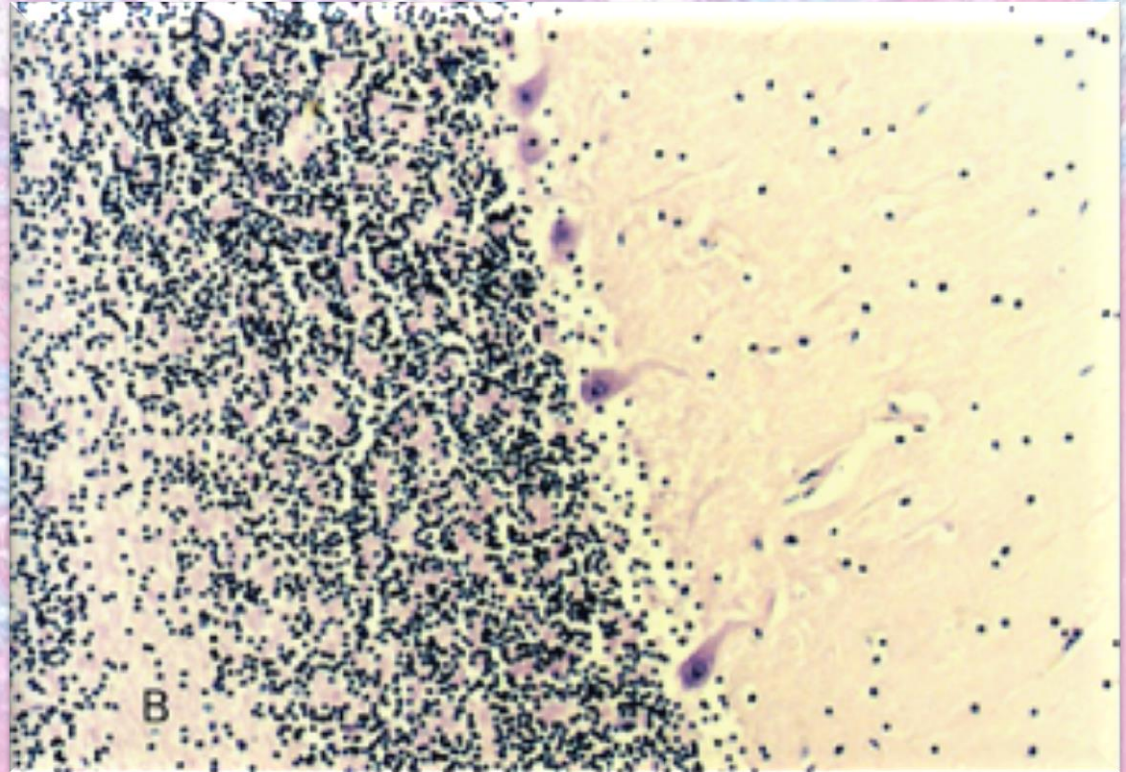
7. O corte mostrado é de:

a cérebro.

b cerebelo.

c medula espinhal.

d gânglio sensitivo.





VOCÊ ERROU!!!!

Voltar

O **tecido nervoso** tem como função de captar estímulos ambientais e do próprio corpo, conduzir impulsos nervosos e interpretá-los para a ordenação das funções dos órgãos. Este tecido é a base dos sistemas nervosos central, periférico e autônomo.



Avançar



VOCÊ ERROU!!!!

 Voltar



VOCÊ ERROU!!!!!!



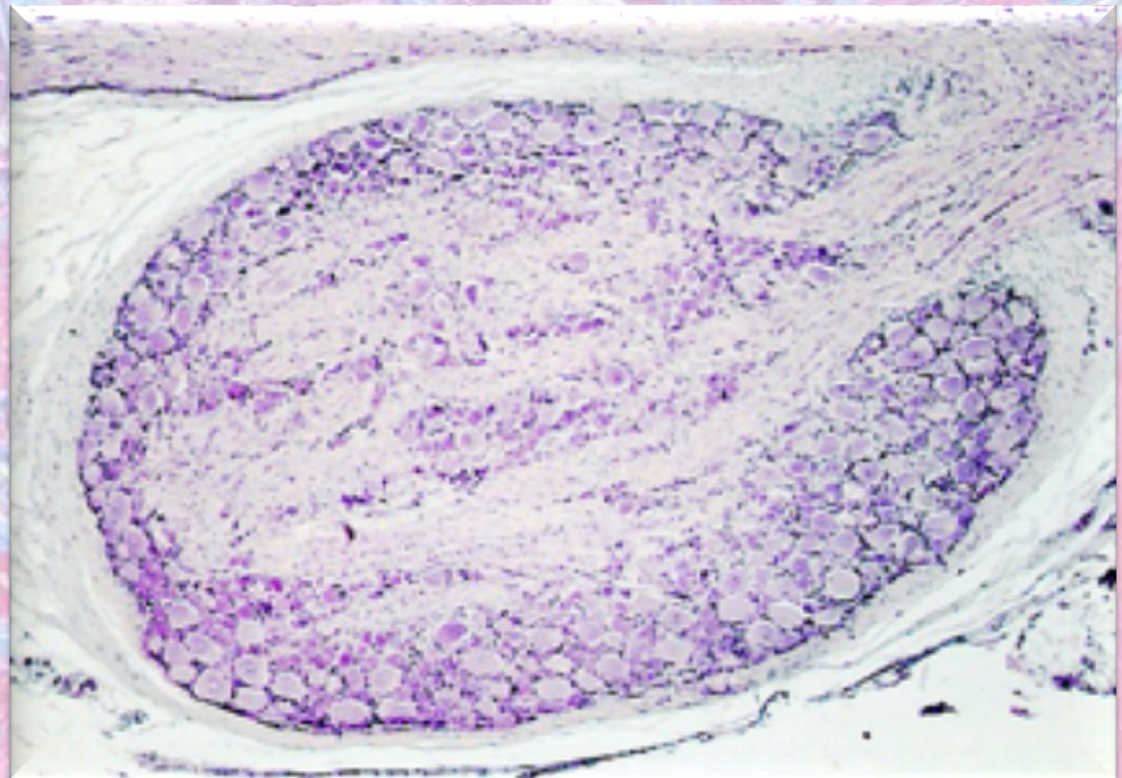
8. A imagem exibida é de:

a cérebro.

b cerebelo.

c medula espinhal.

d gânglio sensitivo.





VOCÊ ERROU!!!!



Voltar



VOCÊ ERROU!!!!

 Voltar



VOCÊ ERROU!!!!!!



O **tecido nervoso** tem como função de captar estímulos ambientais e do próprio corpo, conduzir impulsos nervosos e interpretá-los para a ordenação das funções dos órgãos. Este tecido é a base dos sistemas nervosos central, periférico e autônomo.



Avançar

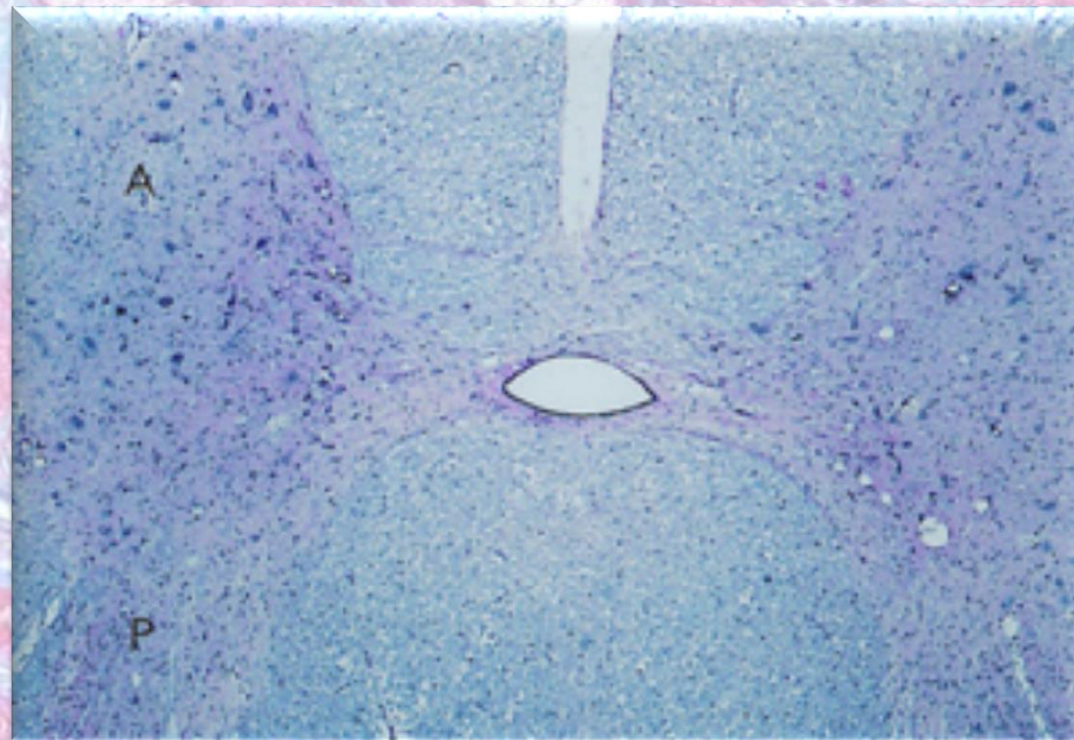
9. A imagem exibida é de:

a cérebro.

b cerebelo.

c medula espinhal.

d gânglio sensitivo.





VOCÊ ERROU!!!!



Voltar



VOCÊ ERROU!!!!

 Voltar

O **tecido nervoso** tem como função de captar estímulos ambientais e do próprio corpo, conduzir impulsos nervosos e interpretá-los para a ordenação das funções dos órgãos. Este tecido é a base dos sistemas nervosos central, periférico e autônomo.



Avançar



VOCÊ ERROU!!!!



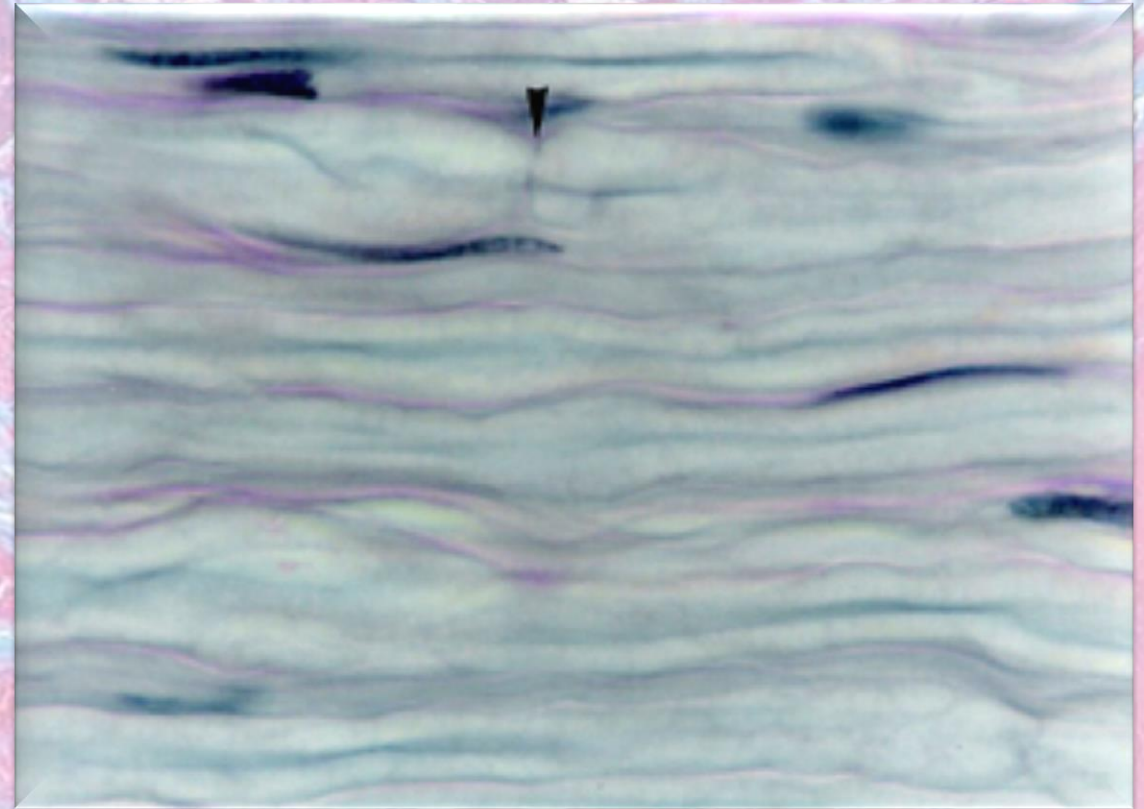
10. A fotomicrografia corresponde a:

a sinapse.

b nóculo de Ranvier.

c incisuras de Schmidt-Lantermann.

d internóculo.





VOCÊ ERROU!!!!

 Voltar

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Avançar



VOCÊ ERROU!!!!

 Voltar



VOCÊ ERROU!!!!!

 Voltar

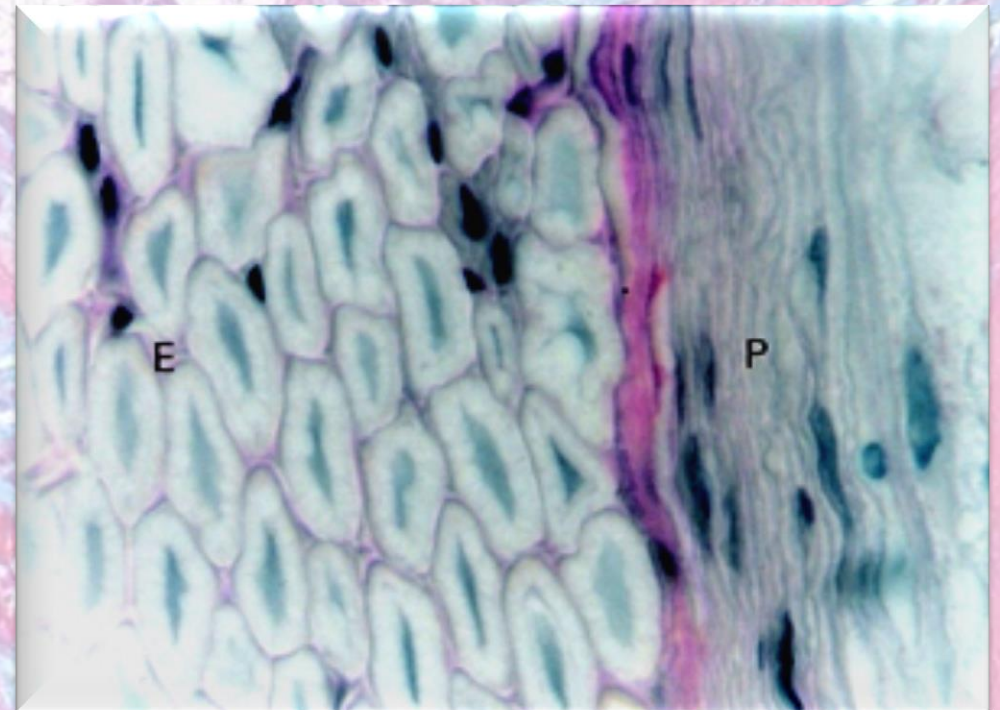
11. Assinale a alternativa incorreta sobre a fotografia apresentada:

a corte transversal de um nervo.

b P indica o perineuro.

c E corresponde ao epineuro.

d Além dos envoltórios, há um conjunto de fibras nervosas, com seus axônios e bainha de mielina, e, entre elas, núcleos de células de Schwann.





VOCÊ ERROU!!!!

 Voltar



VOCÊ ERROU!!!!

 Voltar

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Avançar



VOCÊ ERROU!!!!!!

 Voltar

12. Aproximadamente 10% do tecido nervoso são formados pelos neurônios, células especiais que possuem a capacidade de transmitir, de forma rápida e eficiente, sinais e estímulos recebidos de diversas partes do organismo. Essas sensações são transmitidas de um neurônio a outros através de um mecanismo conhecido como:

a) mitose

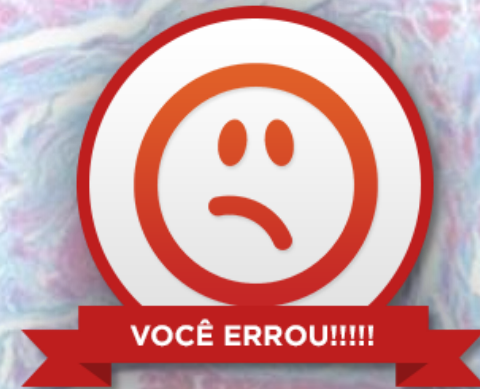
b) pinocitose

c) osmose

d) sinapse

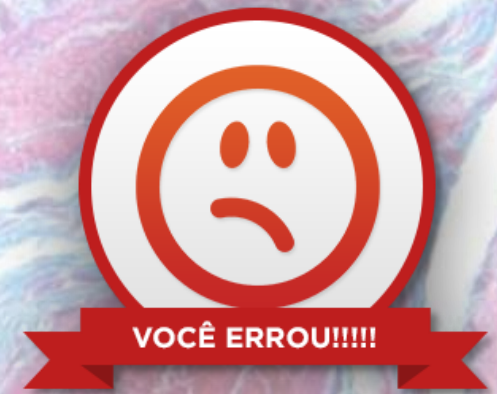
e) coagulação

A – Errada – O processo mitótico está relacionado à divisão celular, não à condução de impulsos nervosos.



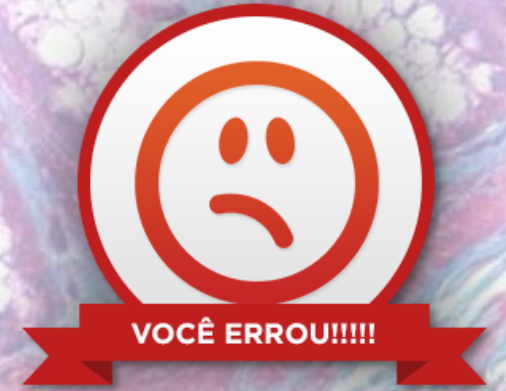
Voltar

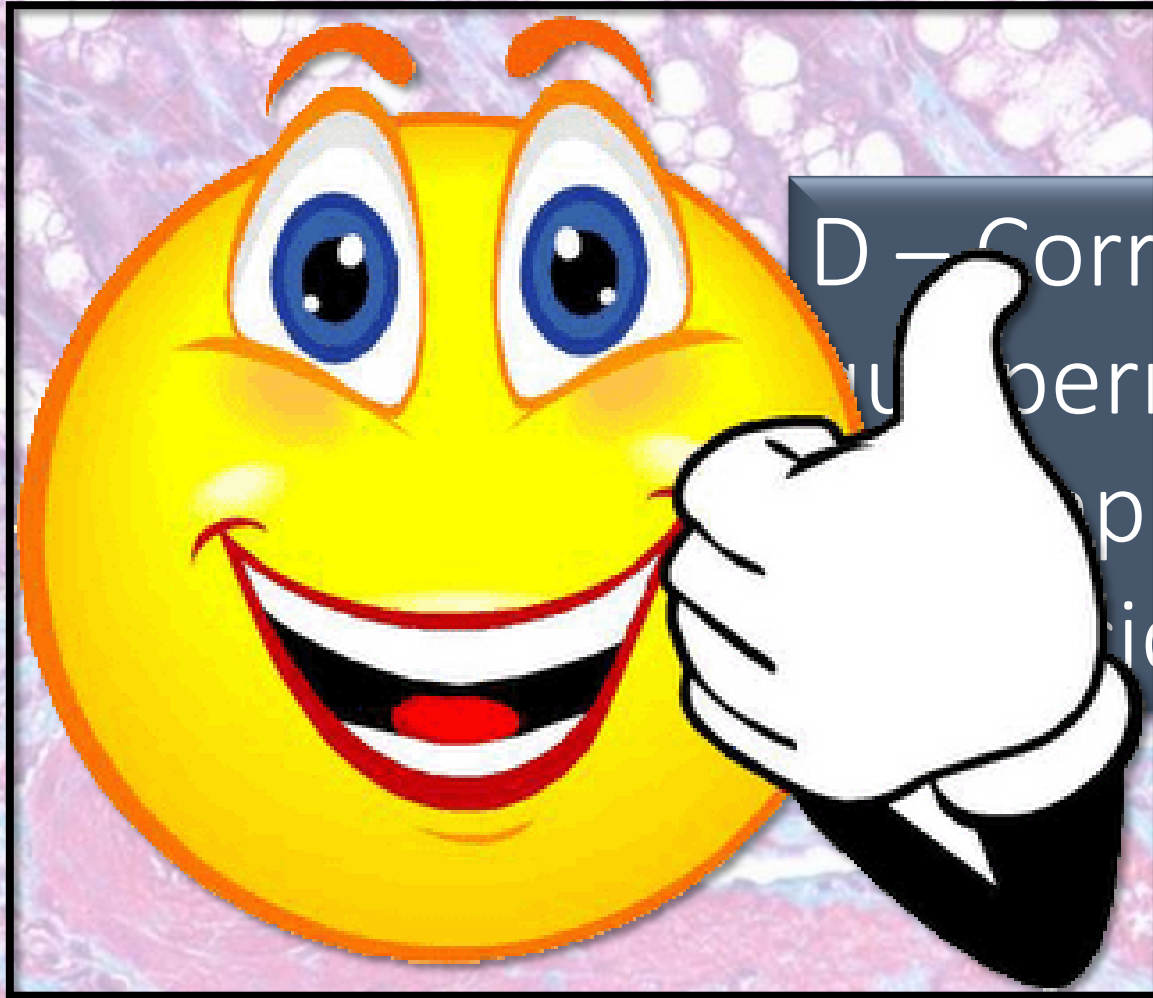
B – Errada – Esta é uma endocitose em que ocorre o englobamento de líquido pela célula, não tem a ver com impulsos nervosos.



Voltar

C – Errada – Osmose é a passagem de solvente em razão de uma diferença de concentração, não se relaciona à propagação de impulsos.





D – Correta – O processo que permite a propagação de impulsos nervosos é conhecido como sinapse.

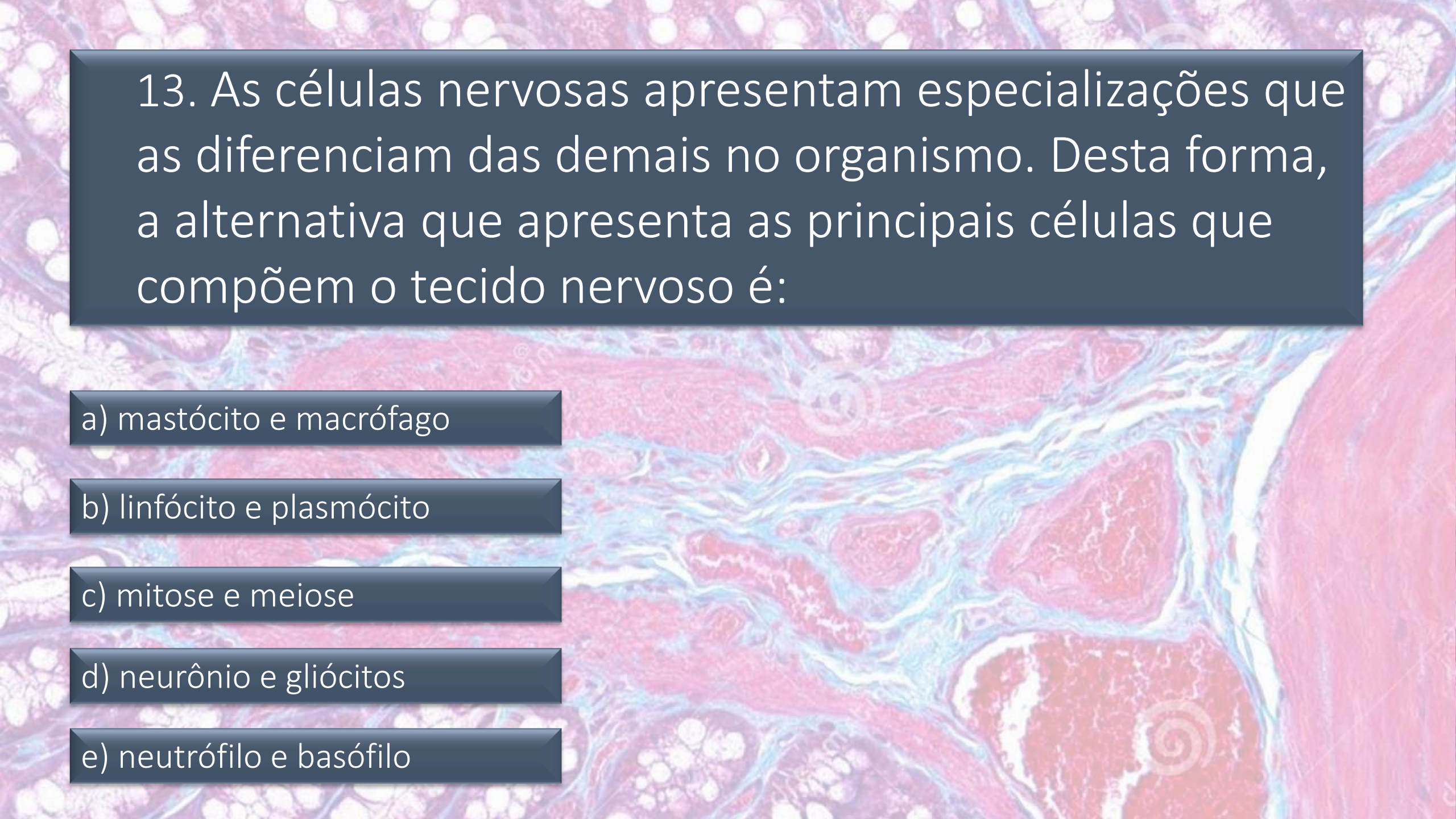
Avançar

E – Errada – Coagulação está associada à ação dos fibroblastos e não está relacionada à propagação de impulsos.



VOCÊ ERROU!!!!

Voltar



13. As células nervosas apresentam especializações que as diferenciam das demais no organismo. Desta forma, a alternativa que apresenta as principais células que compõem o tecido nervoso é:

a) mastócito e macrófago

b) linfócito e plasmócito

c) mitose e meiose

d) neurônio e gliócitos

e) neutrófilo e basófilo

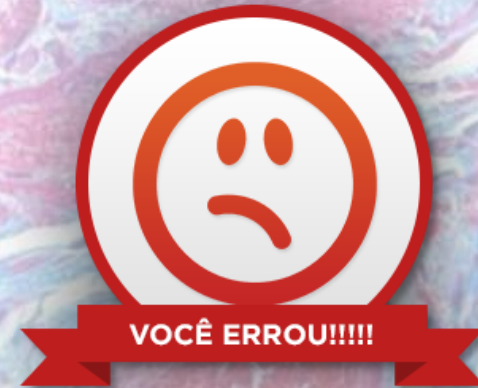
A – Errada – As células apresentadas estão presentes no tecido conjuntivo.



VOCÊ ERROU!!!!

Voltar

B – Errada – As células apresentadas estão presentes no tecido conjuntivo.



Voltar

C – Errada – Os processos apresentados são de divisão celular, não são nomes de células.



VOCÊ ERROU!!!!

Voltar



D – Correta – As células nervosas são as apresentadas por esta alternativa.

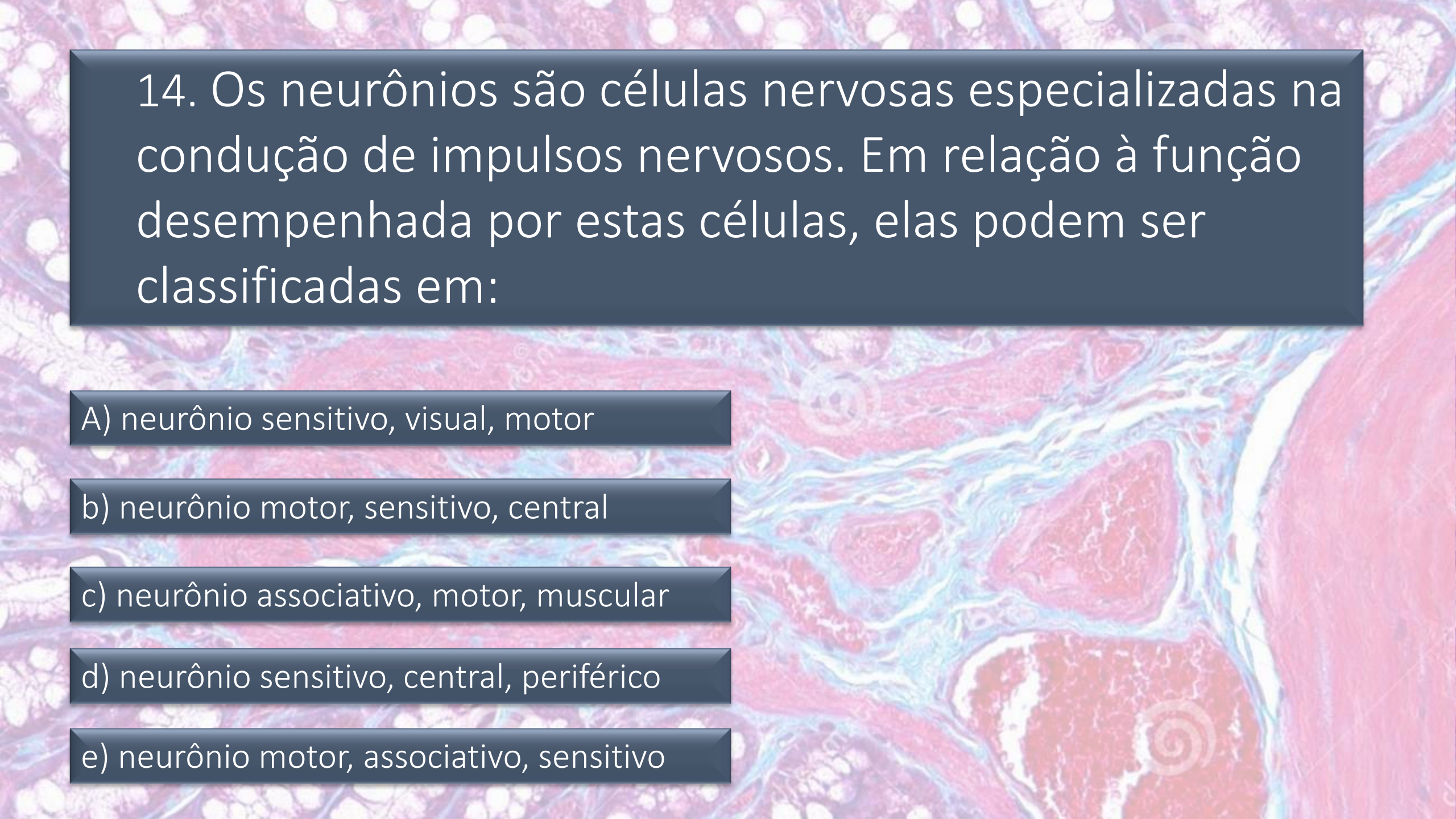
Avançar

E – Errada – As células apresentadas atuam em reações imunes e não possuem relação com os processos nervosos.



VOCÊ ERROU!!!!

Voltar

The background of the slide is a microscopic image of neural tissue, likely stained with hematoxylin and eosin (H&E). The image shows various cellular structures, including what appears to be a large multipolar neuron with a prominent nucleus and nucleolus, surrounded by other cells and connective tissue. A dark blue rectangular overlay is positioned in the upper left quadrant, containing white text. Below this overlay, five smaller dark blue rectangular boxes are arranged vertically, each containing a lettered option (A through E) in white text. The overall layout is clean and educational, typical of a presentation slide.

14. Os neurônios são células nervosas especializadas na condução de impulsos nervosos. Em relação à função desempenhada por estas células, elas podem ser classificadas em:

A) neurônio sensitivo, visual, motor

b) neurônio motor, sensitivo, central

c) neurônio associativo, motor, muscular

d) neurônio sensitivo, central, periférico

e) neurônio motor, associativo, sensitivo



A – Errada – Não existe neurônio visual. O que forma o nervo óptico é classificado como sensitivo.

VOCÊ ERROU!!!!

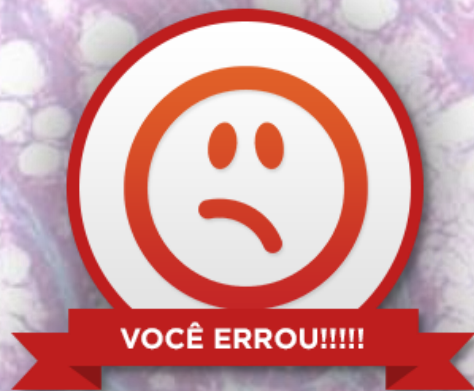




B – Errada – Não existe neurônio central, uma vez que todos apresentam as mesmas capacidades.

ERROU!!!!

 Voltar



C – Errada – O neurônio que conduz o impulso até a fibra muscular é chamado de neurônio motor, assim não existe muscular.





VOCÊ ERROU!!!!

D – Errada – Não existe a classificação funcional dos neurônios em central e periférico.

 Voltar



E – Correta – Em relação à função desempenhada os neurônios são classificados nestes três grupos.

Avançar 

A microscopic image of nervous tissue, showing various cell types and structures. The image is stained with hematoxylin and eosin (H&E), showing a mix of pink and purple colors. The background is a complex network of fibers and cells, with some larger, more prominent structures that could be neurons or glial cells. The overall appearance is that of a dense, organized tissue.

15. Com relação às células nervosas, é correto afirmar:

a) nos vertebrados, além dos neurônios, o sistema nervoso é constituído por células gliais, cuja função é dar sustentação aos neurônios.

b) os dendritos são prolongamentos dos neurônios cuja função é transmitir para outras células os impulsos nervosos produzidos pelo corpo celular.

c) os axônios são genericamente chamados de fibras celulares, cuja função é conectar os corpos celulares.

d) o impulso nervoso, ou sinapse nervosa, é transmitido de um neurônio para outro com o auxílio dos mediadores químicos.



A – Correta – Exatamente! As células glia são as que envolvem, protegem e nutrem os neurônios.

Avançar



B – Errada – Os impulsos não são conduzidos neste sentido, e sim no sentido corpo-axônio.

VOCÊ ERROU!!!!

 Voltar



C – Errada – O conjunto de axônios é conhecido como fibra nervosa, ou simplesmente, nervo. **CÉ ERROU!!!!**

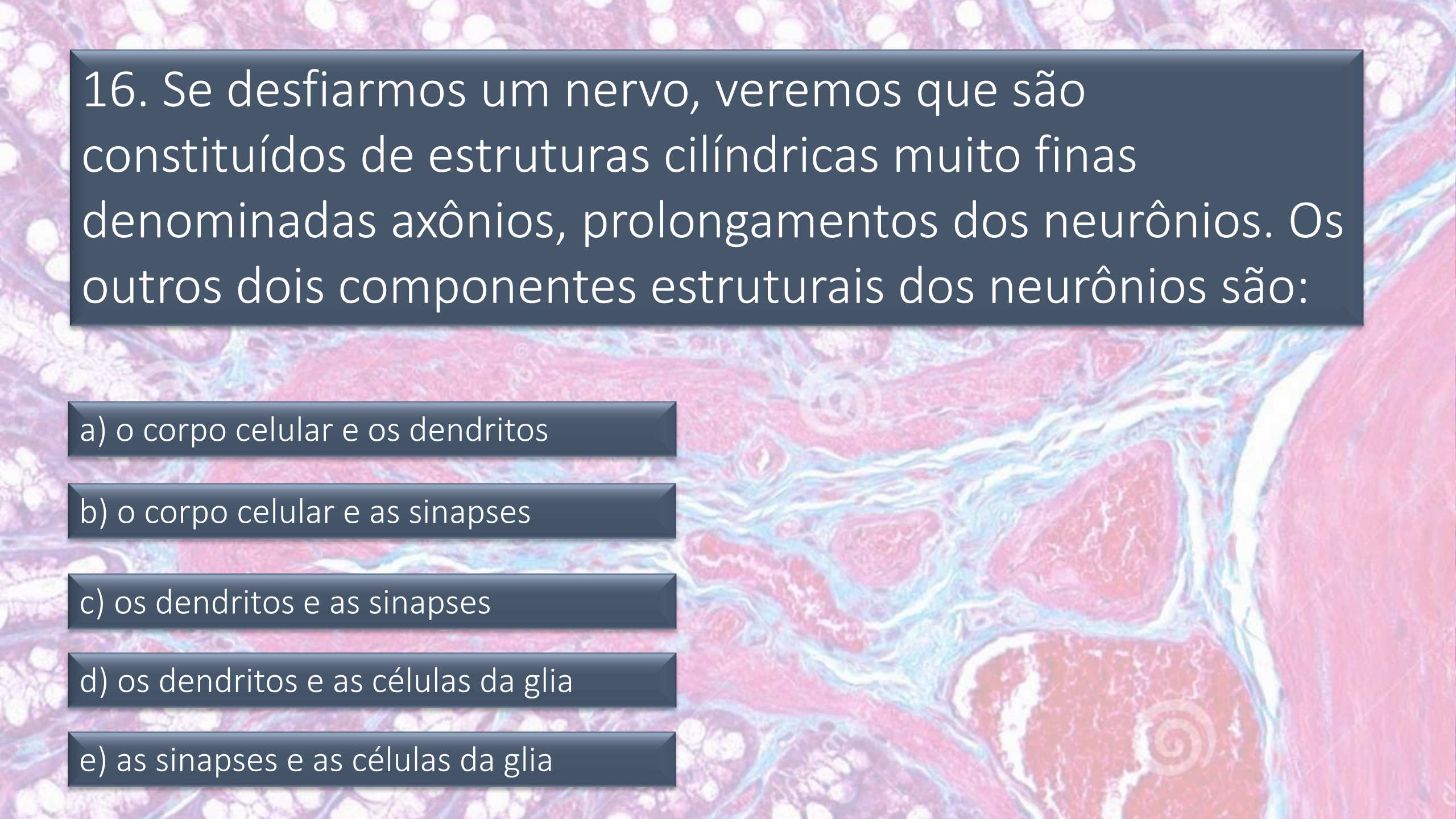
 Voltar



VOCÊ ERROU!!!!

D – Errada – Impulso nervoso não é sinônimo de sinapse nervosa, são eventos diferentes.

 Voltar



16. Se desfiarmos um nervo, veremos que são constituídos de estruturas cilíndricas muito finas denominadas axônios, prolongamentos dos neurônios. Os outros dois componentes estruturais dos neurônios são:

a) o corpo celular e os dendritos

b) o corpo celular e as sinapses

c) os dendritos e as sinapses

d) os dendritos e as células da glia

e) as sinapses e as células da glia



A – Correto – O nome das outras duas estruturas do neurônio são as apresentadas por esta alternativa.

Avançar 



B – Errada – As sinapses não são estruturas da célula nervosa.

VOCÊ ERROU!!!!

 Voltar



C – Errada – As sinapses não são estruturas da célula nervosa.

VOCÊ ERROU!!!!

[Voltar](#)



VOÇÊ ERROU!!!!!

D – Errada – As células da glia são células que fazem parte do tecido nervoso, assim como o neurônio.





VOÇÊ ERROU!!!!!

E – Errada – As células da glia são células que fazem parte do tecido nervoso, assim como o neurônio; e as sinapses não fazem parte da estrutura do neurônio.



17. Sabemos que os neurônios, também chamados de células nervosas, transmitem os impulsos nervosos para outras células. Entre a porção final do axônio e a superfície da célula seguinte existe um pequeno espaço onde neurotransmissores são lançados e garantem a passagem do impulso. Entre as alternativas a seguir, marque aquela que indica o nome correto desses pequenos espaços entre células.

a) Nódulo de Ranvier.

b) Sinapse.

c) Espaço intracelular.

d) Axônio.

e) Dendrito.



VOCÊ ERROU!!!!





Alternativa “b” O espaço localizado entre a porção final de um axônio de um neurônio e a superfície da célula seguinte é chamado de sinapse. É nesse local que ocorre a passagem do impulso nervoso de uma célula para outra.

Avançar



VOCÊ ERROU!!!!





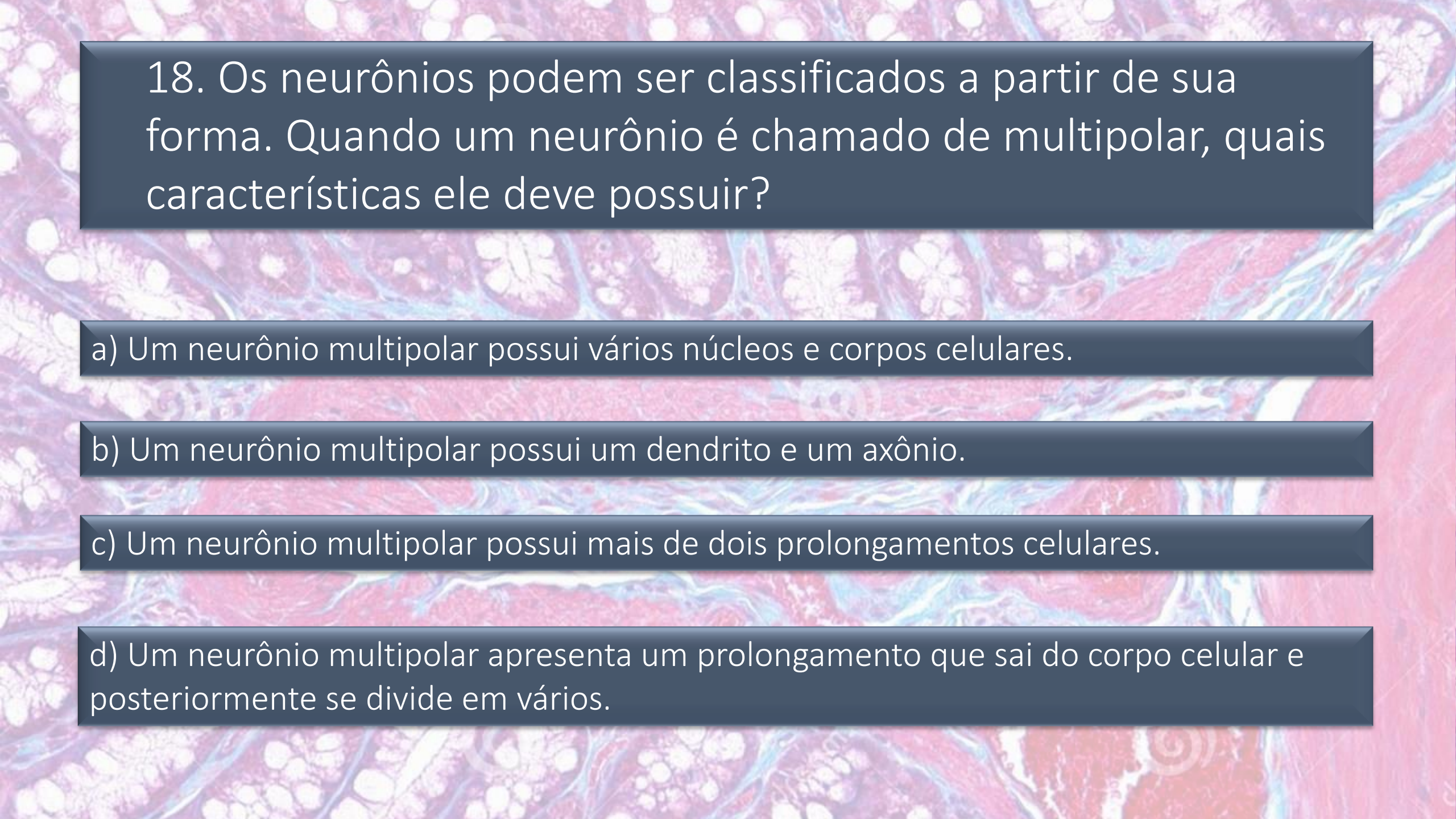
VOCÊ ERROU!!!!!!

 Voltar



VOCÊ ERROU!!!!!!



A microscopic image of tissue, likely stained with hematoxylin and eosin (H&E), showing various cellular structures and connective tissue. A light blue grid is overlaid on the image. The text is presented in white on dark blue rectangular backgrounds.

18. Os neurônios podem ser classificados a partir de sua forma. Quando um neurônio é chamado de multipolar, quais características ele deve possuir?

a) Um neurônio multipolar possui vários núcleos e corpos celulares.

b) Um neurônio multipolar possui um dendrito e um axônio.

c) Um neurônio multipolar possui mais de dois prolongamentos celulares.

d) Um neurônio multipolar apresenta um prolongamento que sai do corpo celular e posteriormente se divide em vários.



VOCÊ ERROU!!!!





VOCÊ ERROU!!!!





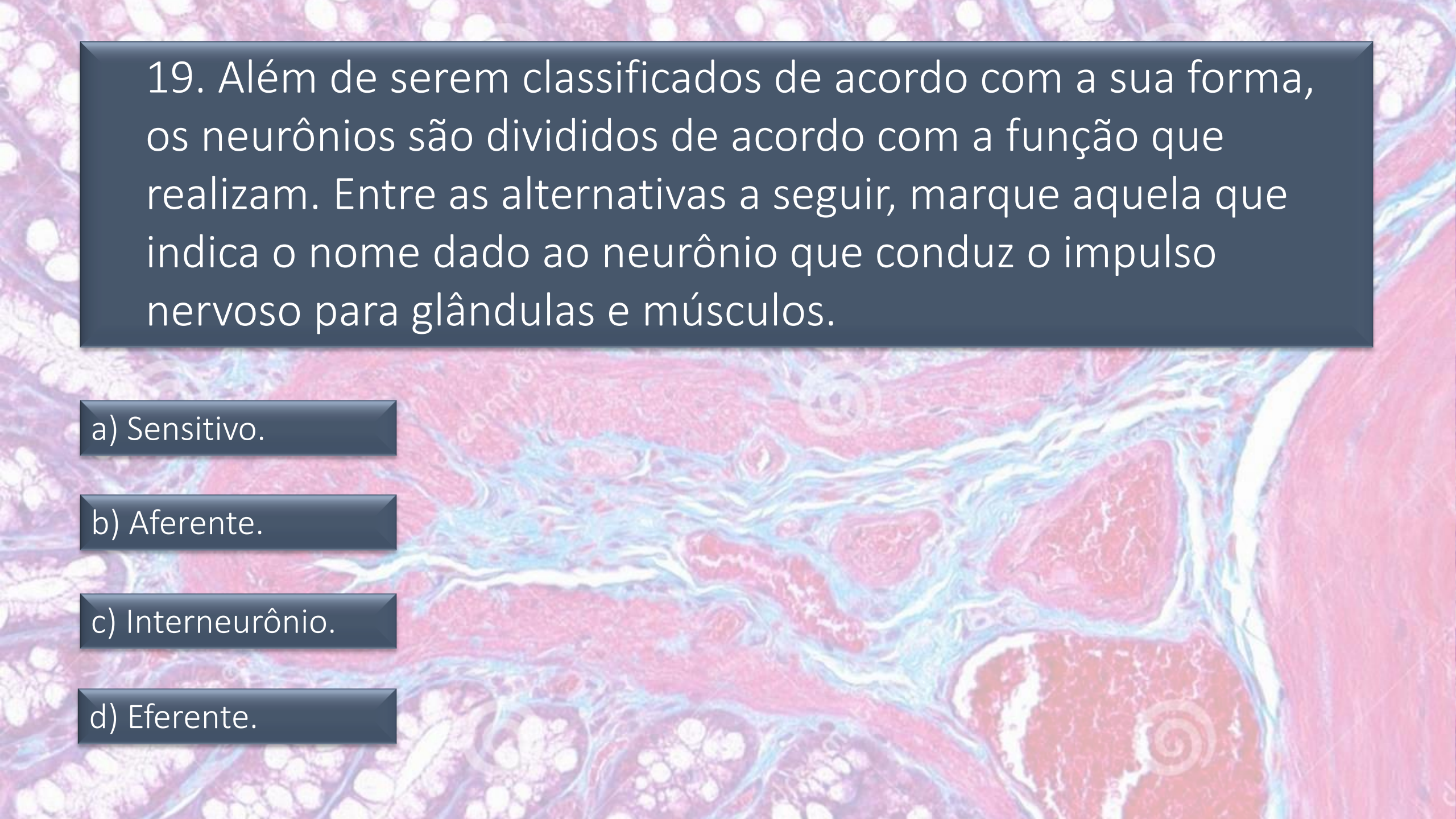
Alternativa "c" Os neurônios multipolares são os mais encontrados em nosso organismo e possuem mais de dois prolongamentos celulares.

Avançar 



VOCÊ ERROU!!!!



A microscopic image of neural tissue, likely a cross-section of a nerve or brain tissue, showing various cellular structures and fibers. The image is overlaid with a dark blue rectangular box containing white text. The text describes a question about neuron classification based on function. Below the main text box, there are four smaller dark blue boxes, each containing a multiple-choice option. The background image shows a complex network of fibers and cells, with some larger, more prominent structures that could be neurons or glial cells.

19. Além de serem classificados de acordo com a sua forma, os neurônios são divididos de acordo com a função que realizam. Entre as alternativas a seguir, marque aquela que indica o nome dado ao neurônio que conduz o impulso nervoso para glândulas e músculos.

a) Sensitivo.

b) Aferente.

c) Interneurônio.

d) Eferente.



VOCÊ ERROU!!!!





VOCÊ ERROU!!!!





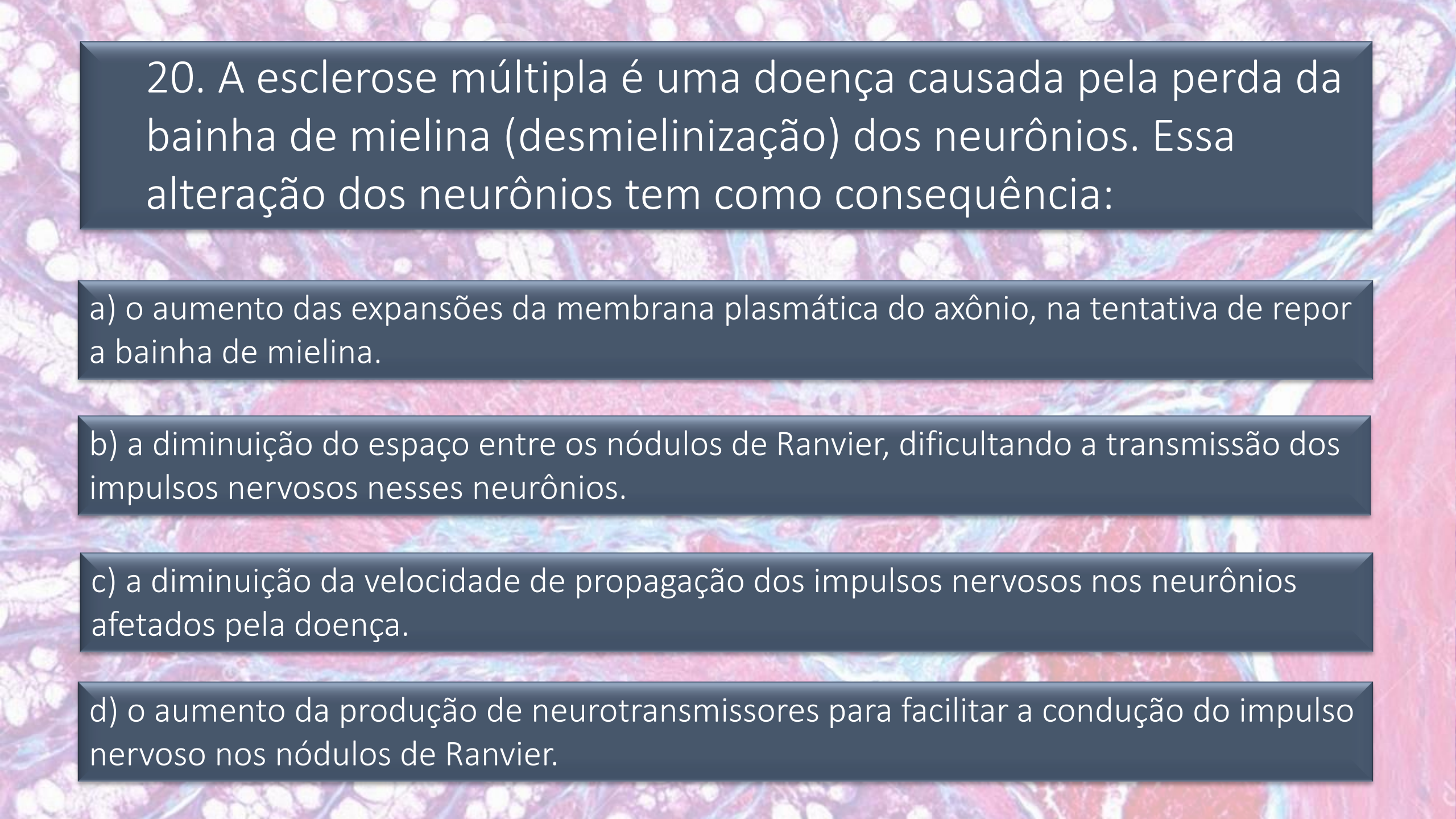
VOCÊ ERROU!!!!





Alternativa “d” O neurônio eferente, também chamado de motor, é responsável por conduzir o impulso nervoso para glândulas e músculos.

Avançar



20. A esclerose múltipla é uma doença causada pela perda da bainha de mielina (desmielinização) dos neurônios. Essa alteração dos neurônios tem como consequência:

a) o aumento das expansões da membrana plasmática do axônio, na tentativa de repor a bainha de mielina.

b) a diminuição do espaço entre os nódulos de Ranvier, dificultando a transmissão dos impulsos nervosos nesses neurônios.

c) a diminuição da velocidade de propagação dos impulsos nervosos nos neurônios afetados pela doença.

d) o aumento da produção de neurotransmissores para facilitar a condução do impulso nervoso nos nódulos de Ranvier.



VOCÊ ERROU!!!!





VOCÊ ERROU!!!!



Alternativa "c". Com a perda da bainha de mielina, os impulsos nervosos tornam-se mais lentos. Isso acontece porque a bainha de mielina é um isolante elétrico que faz com que a condução do impulso seja saltatória. Portanto, a alternativa correta é a mais rápida.



Avançar



VOCÊ ERROU!!!!





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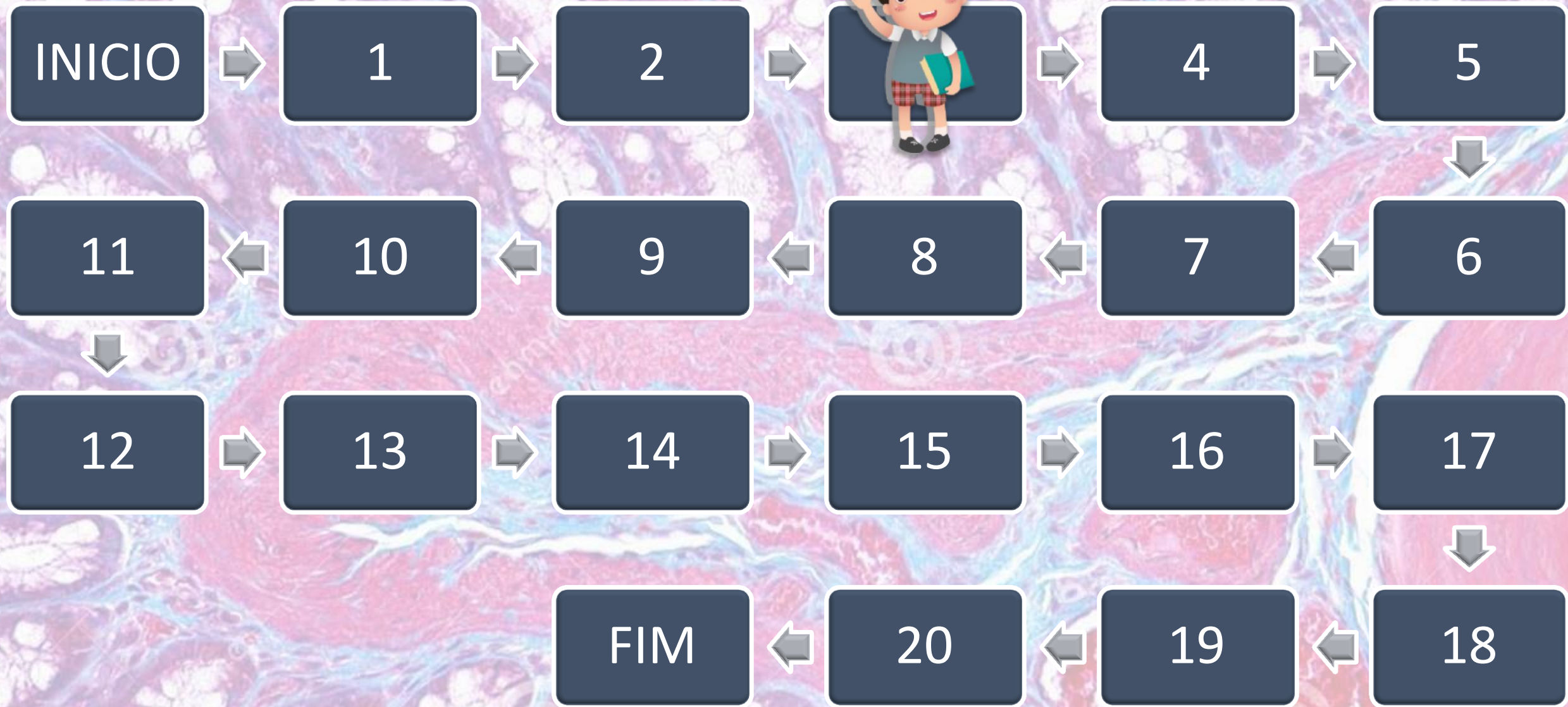
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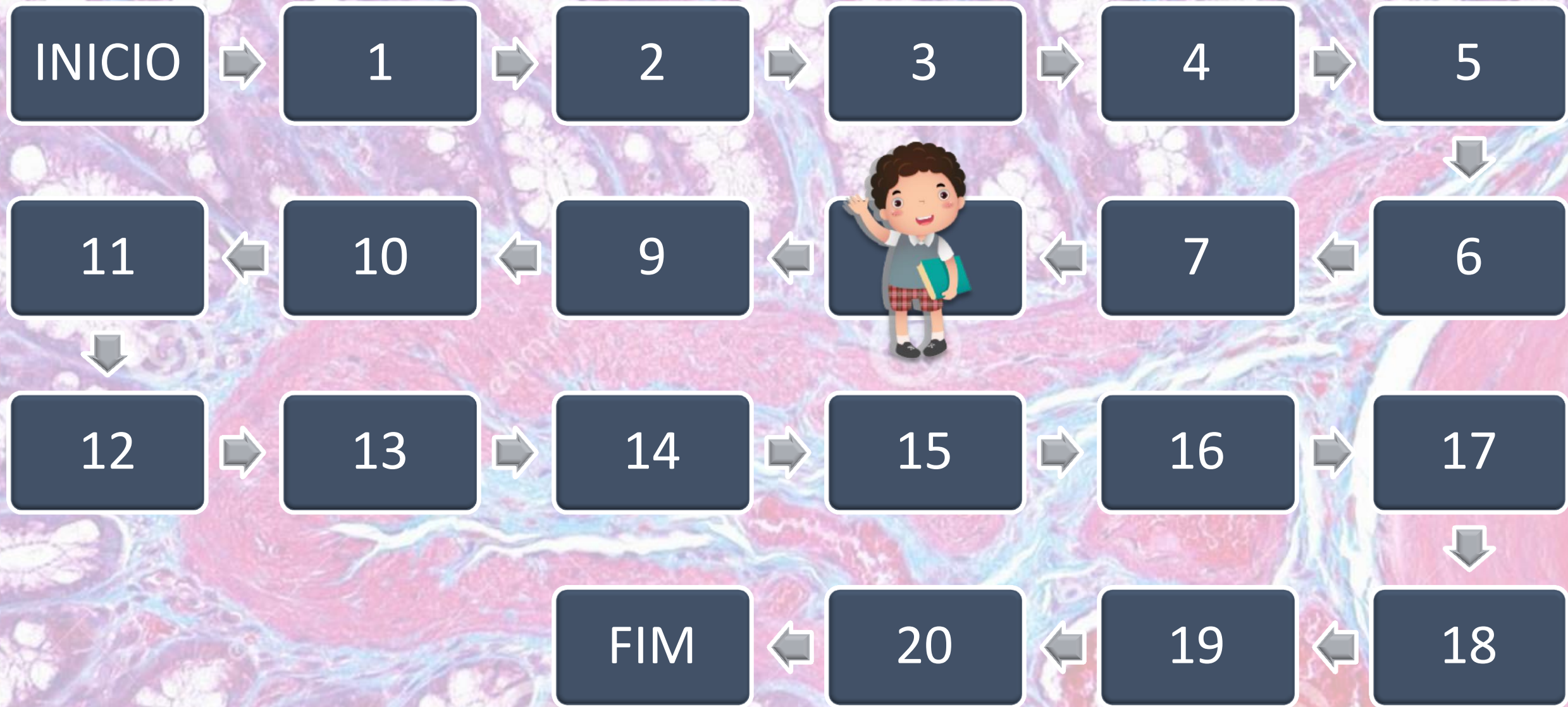
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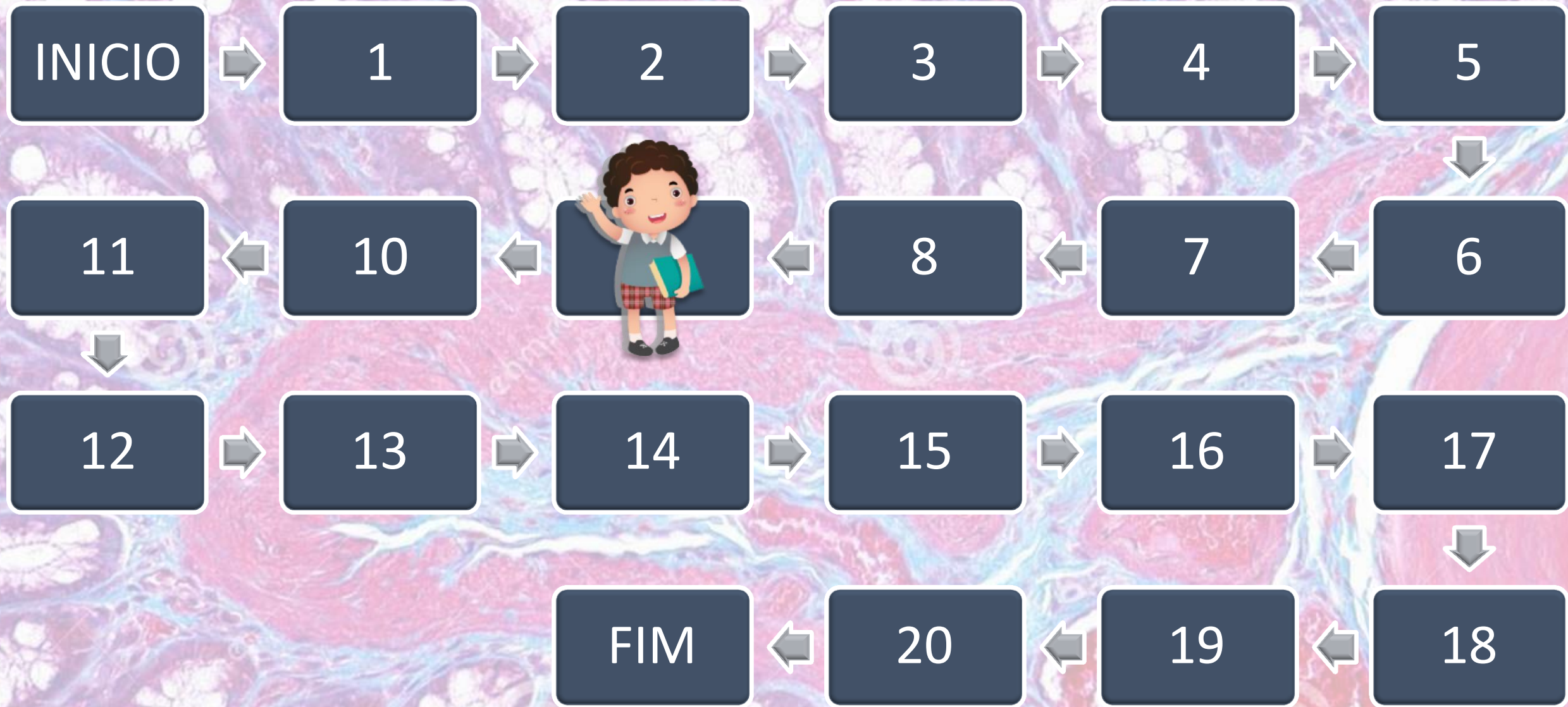
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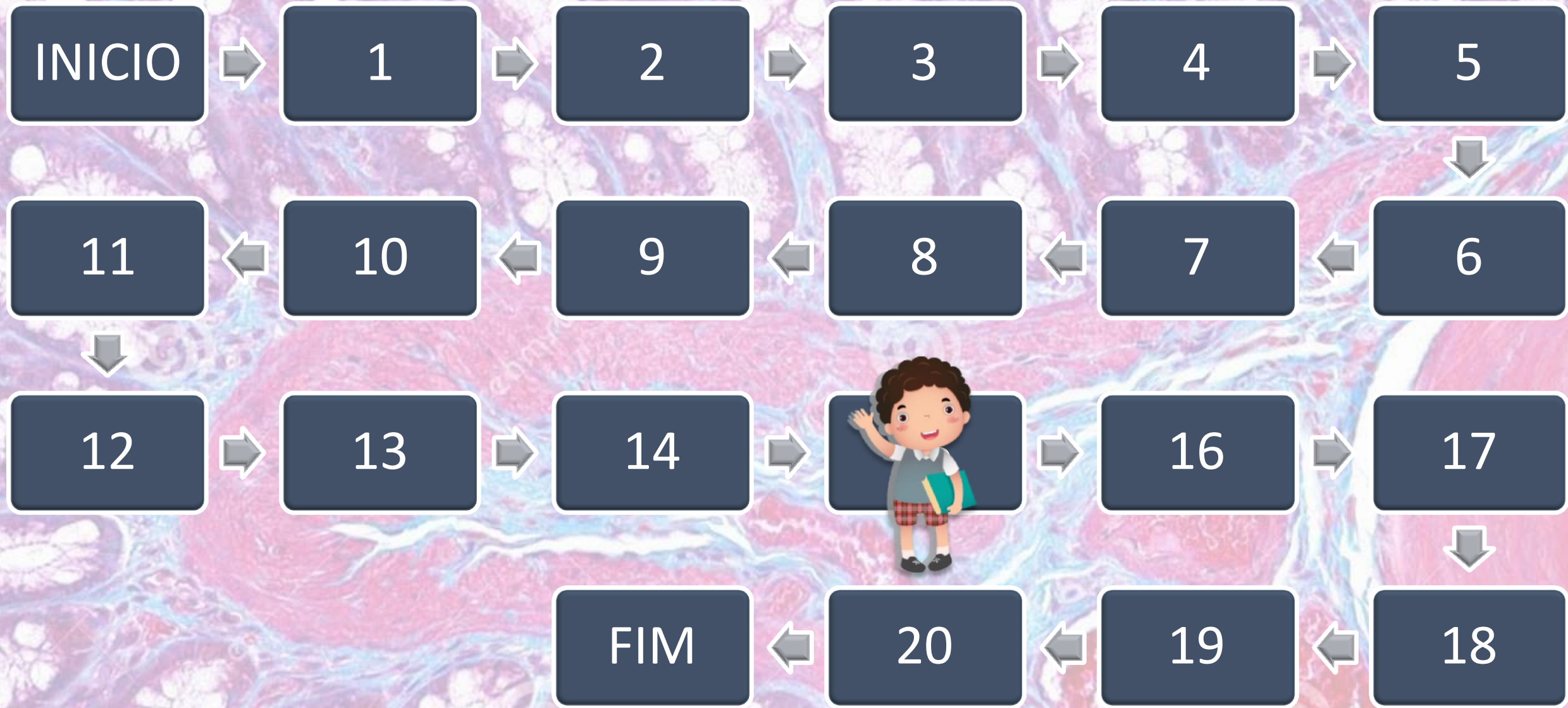
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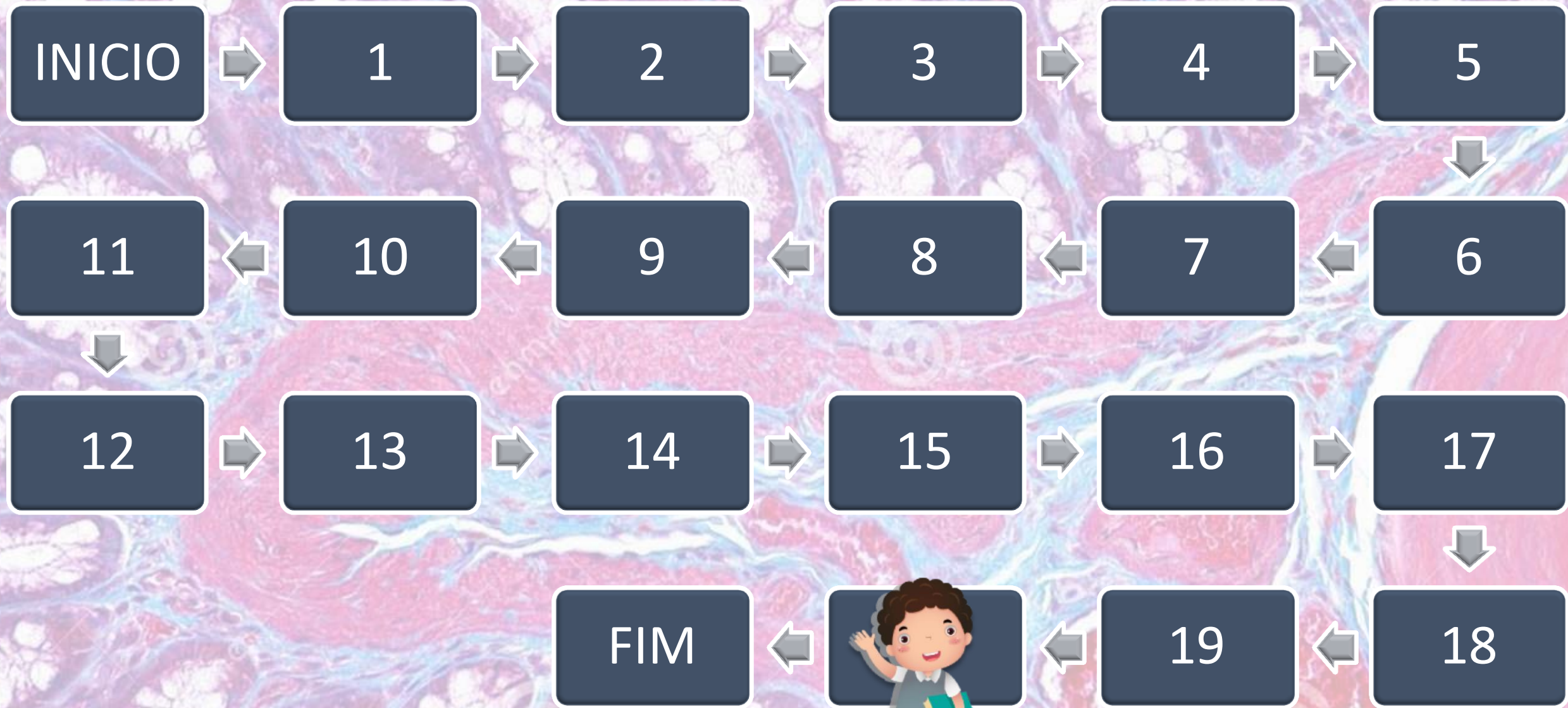


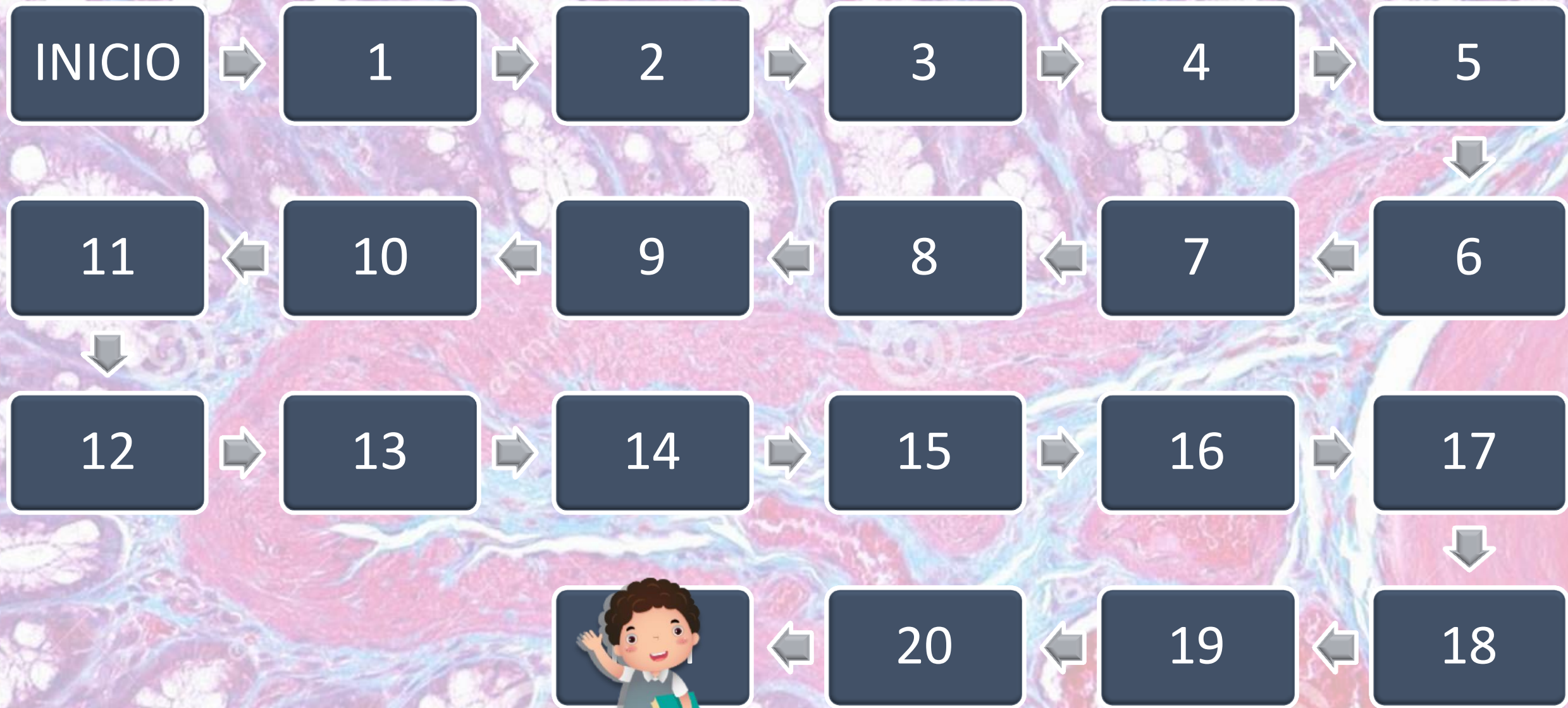












CIRCULATORY SYSTEM



The background of the slide is a histological micrograph of tissue, likely from the gastrointestinal tract, showing glandular structures and a network of capillaries. The capillaries are small, thin-walled vessels with a single layer of endothelial cells. The overall color palette is dominated by pink and purple hues, typical of H&E staining.

1. The capillaries:

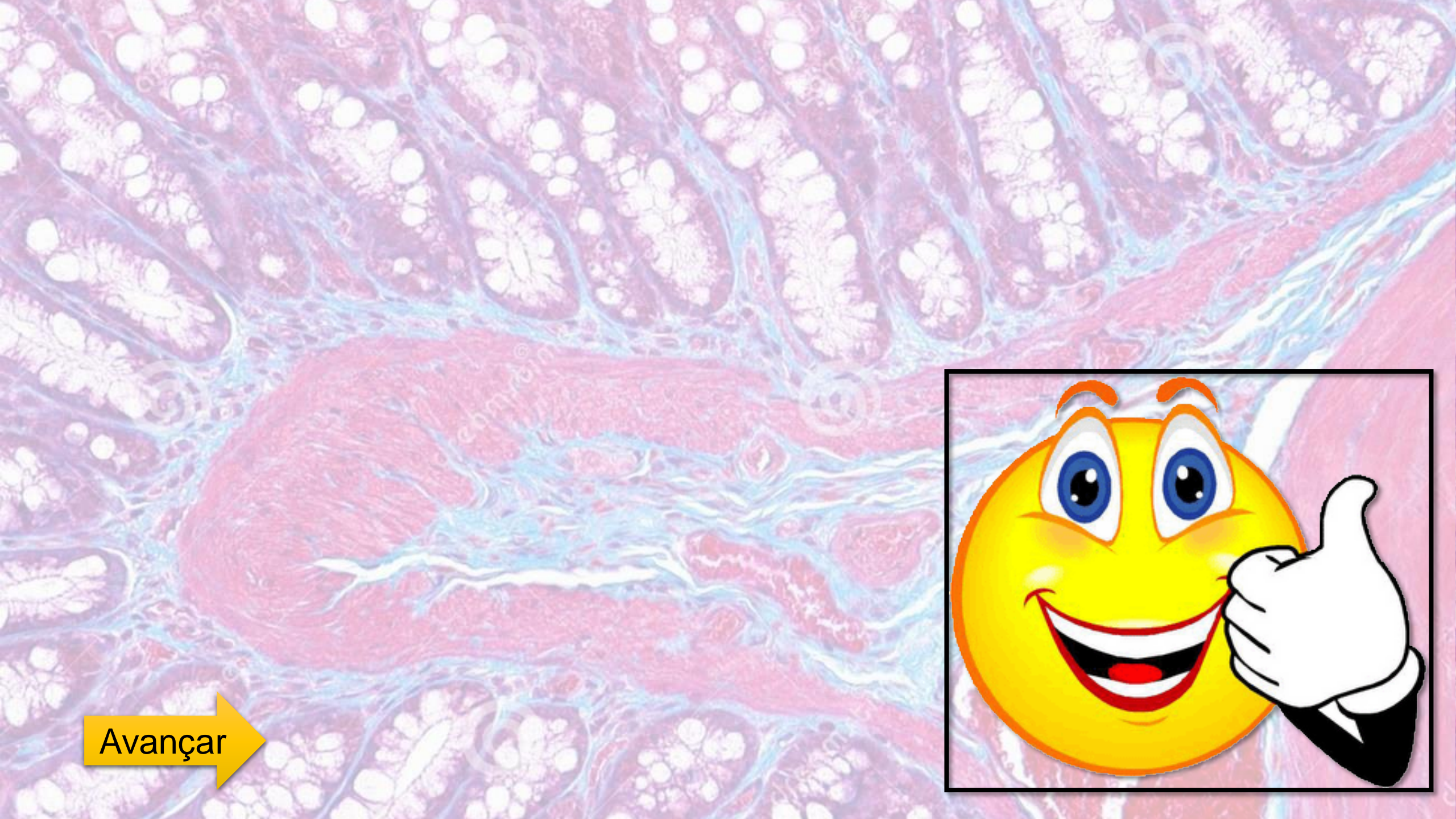
a) they are thin tubules, constituted of endothelium and own lamina.

b) They are a favorable place for the exchange between blood and tissues.

c) have a thrombogenic action, allowing circulating blood to coagulate.

d) are of stratified squamous epithelium.





Avançar





The background of the slide is a histological micrograph of tissue, likely stained with Masson's trichrome. It shows various types of capillaries: continuous capillaries with tight junctions, fenestrated capillaries with characteristic fenestrations and discontinuous basal lamina, and sinusoidal capillaries with irregular, tortuous lumens. The text is overlaid on this image in dark blue boxes.

2. About capillary types:

a) continuous capillaries have occlusion and adhesion junctions between endothelial cells.

b) fenestrated capillaries exhibit cracks between cells and discontinuous basal lamina.

c) sinusoidal capillaries are tortuous and of increased caliber

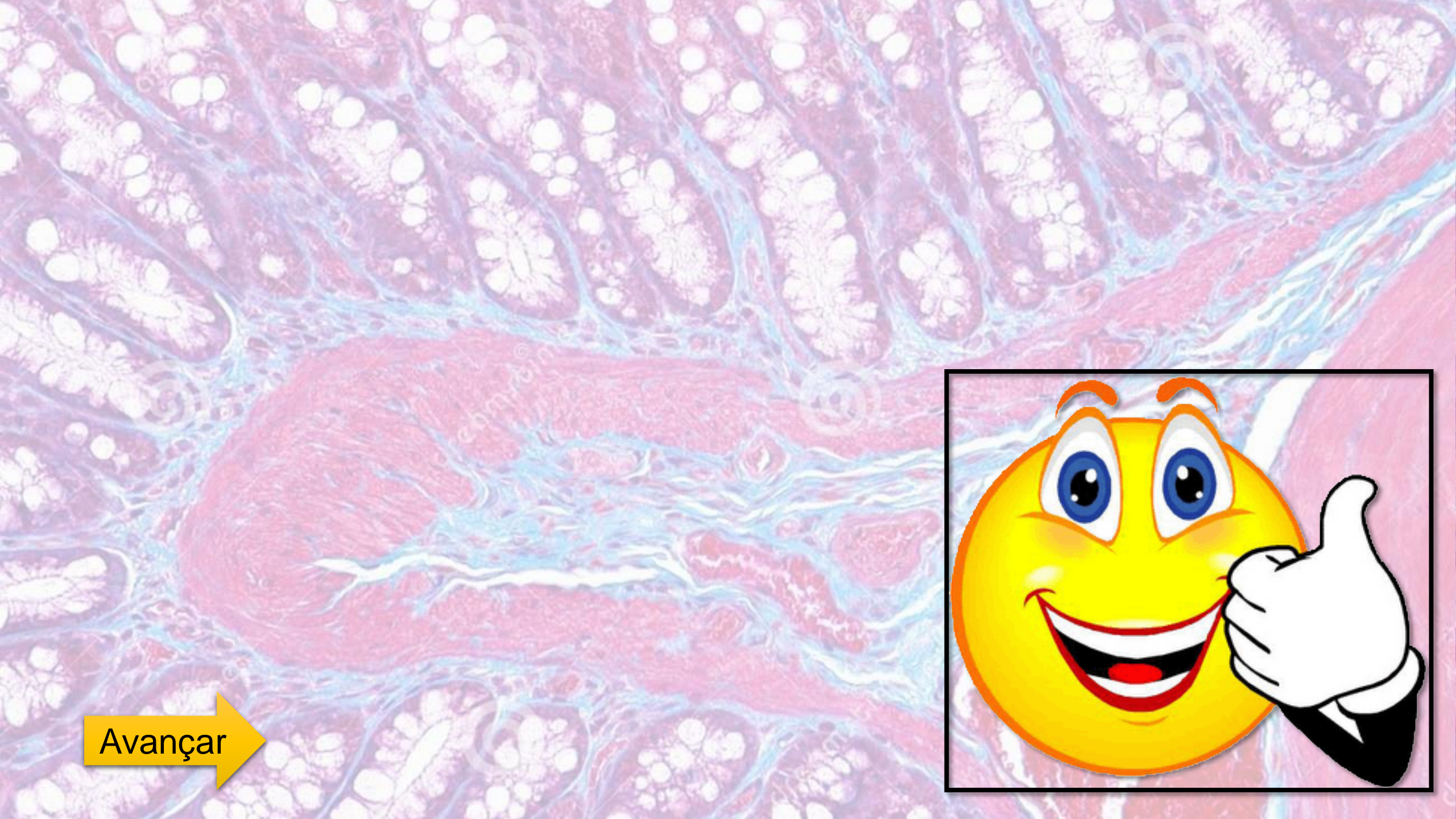
d) a and c are correct.





← Voltar





Avançar



3. The tunica media of large caliber arteries:

a) is thicker than the veins.

b) it is rich in elastic material.

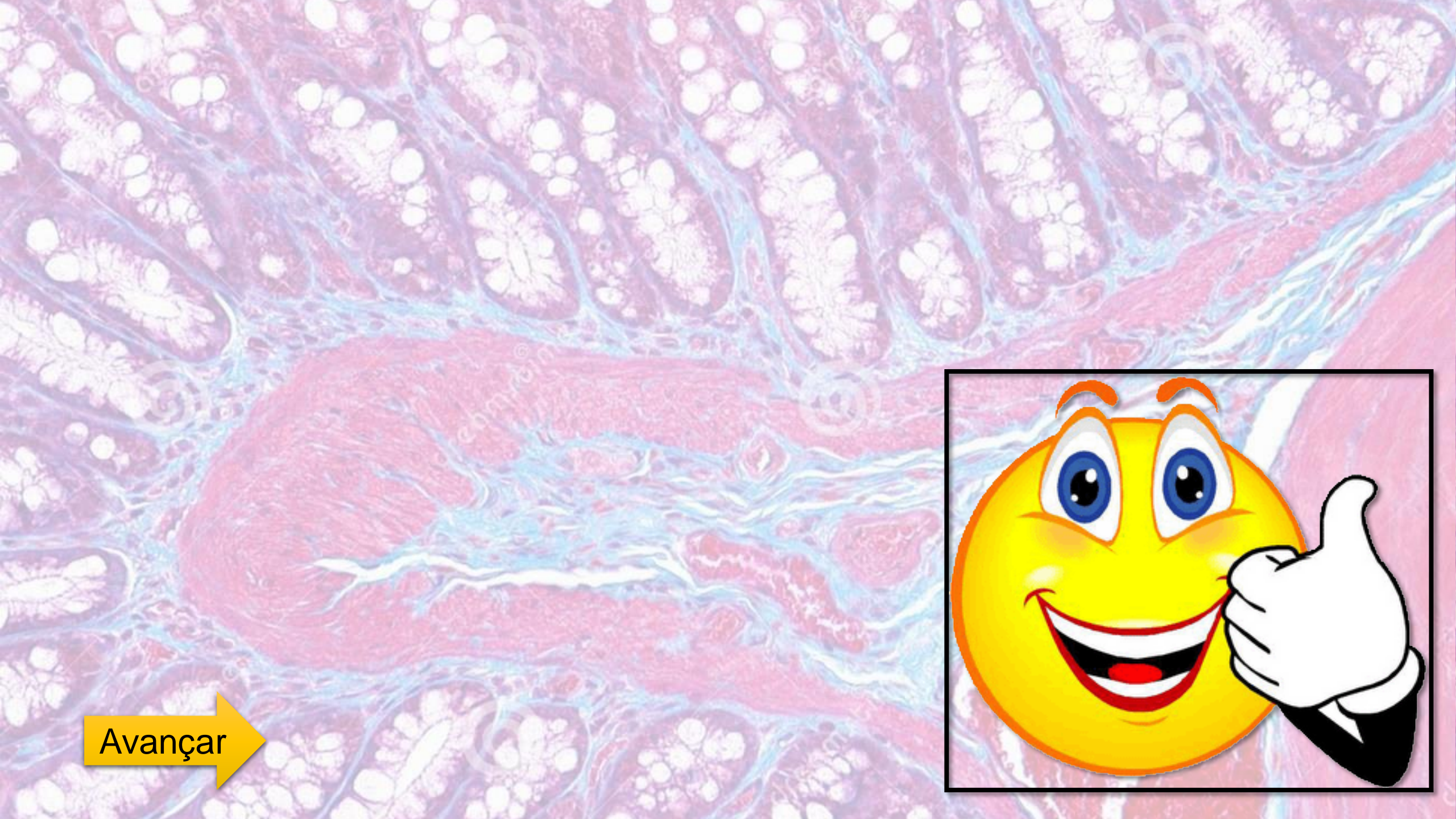
c) consists of striated muscle, collagen, elastic and reticular fibers

d) a and b are correct.









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The background image is a histological section of a vein wall, stained with Masson's trichrome. It shows the tunica adventitia, which is the outermost layer of the vein wall. This layer is composed of dense, non-modelled connective tissue and loose connective tissue. The image displays various cellular structures, including fibroblasts and collagen fibers, which are stained in shades of blue and pink. The overall appearance is that of a thick, fibrous layer surrounding the vein.

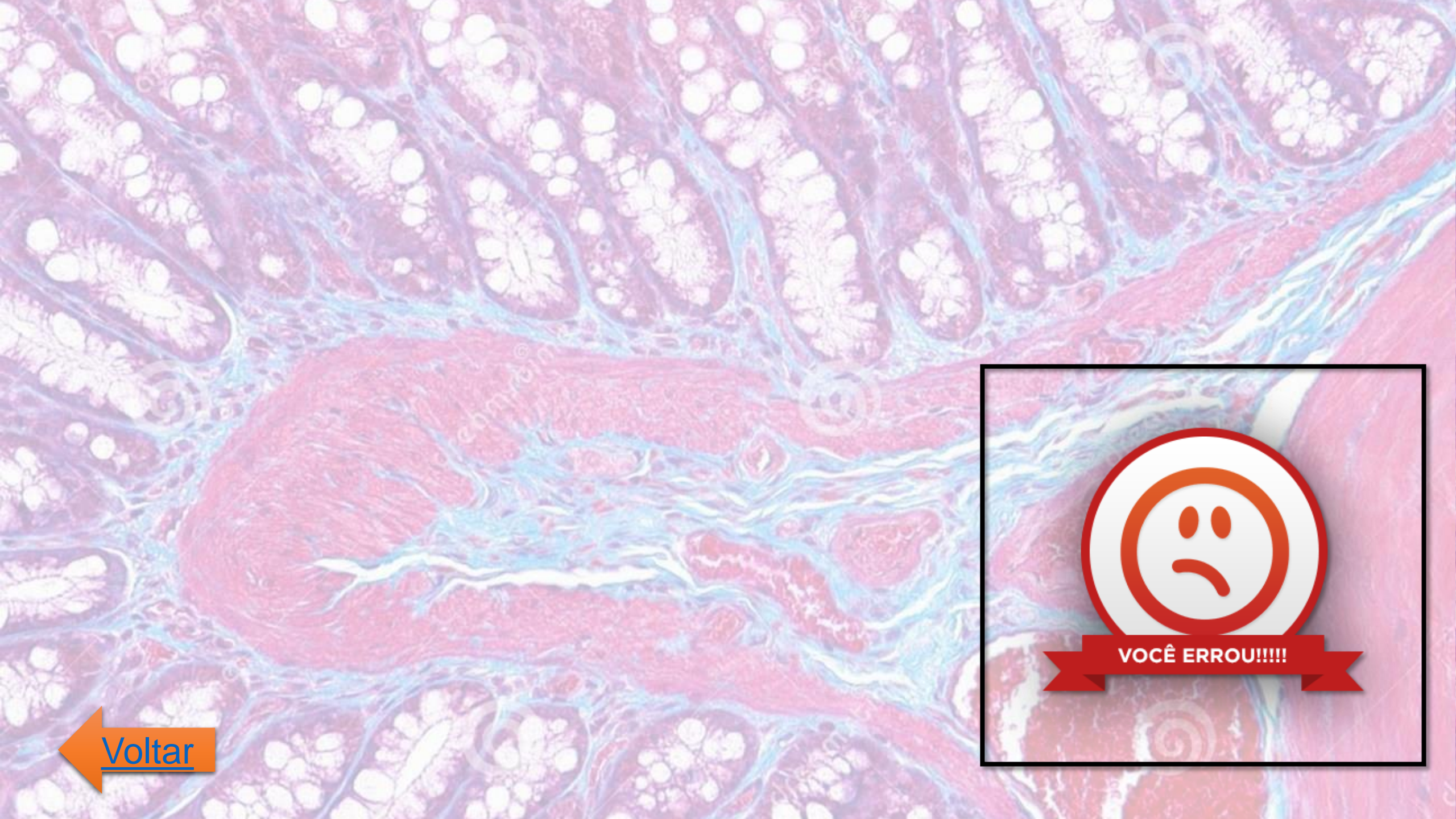
4. A túnica adventícia das veias:

a) é mais espessa que das artérias.

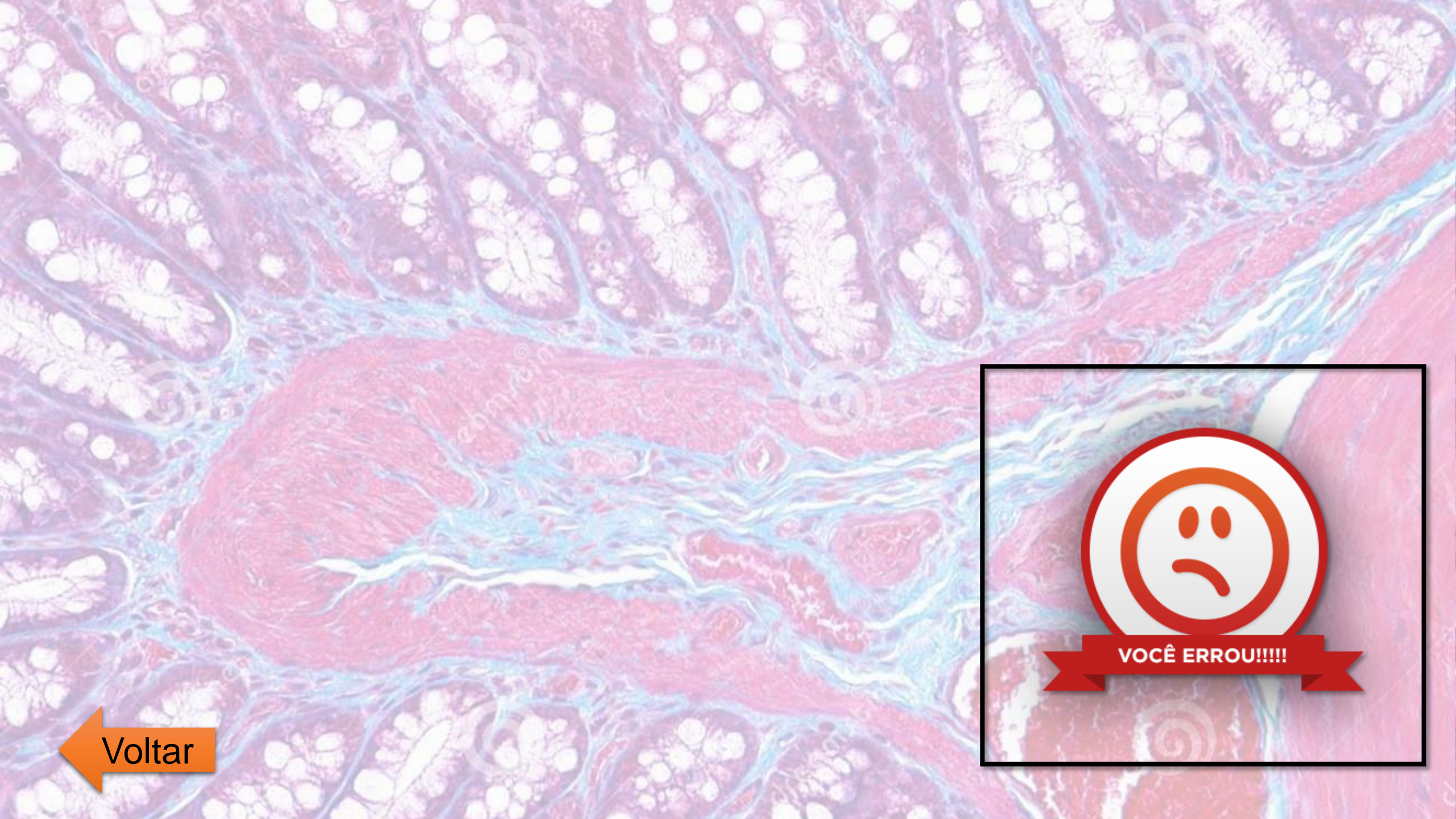
b) é constituída de tecido conjuntivo denso não modelado e de tecido conjuntivo frouxo.

c) é rica em vasos sanguíneos.

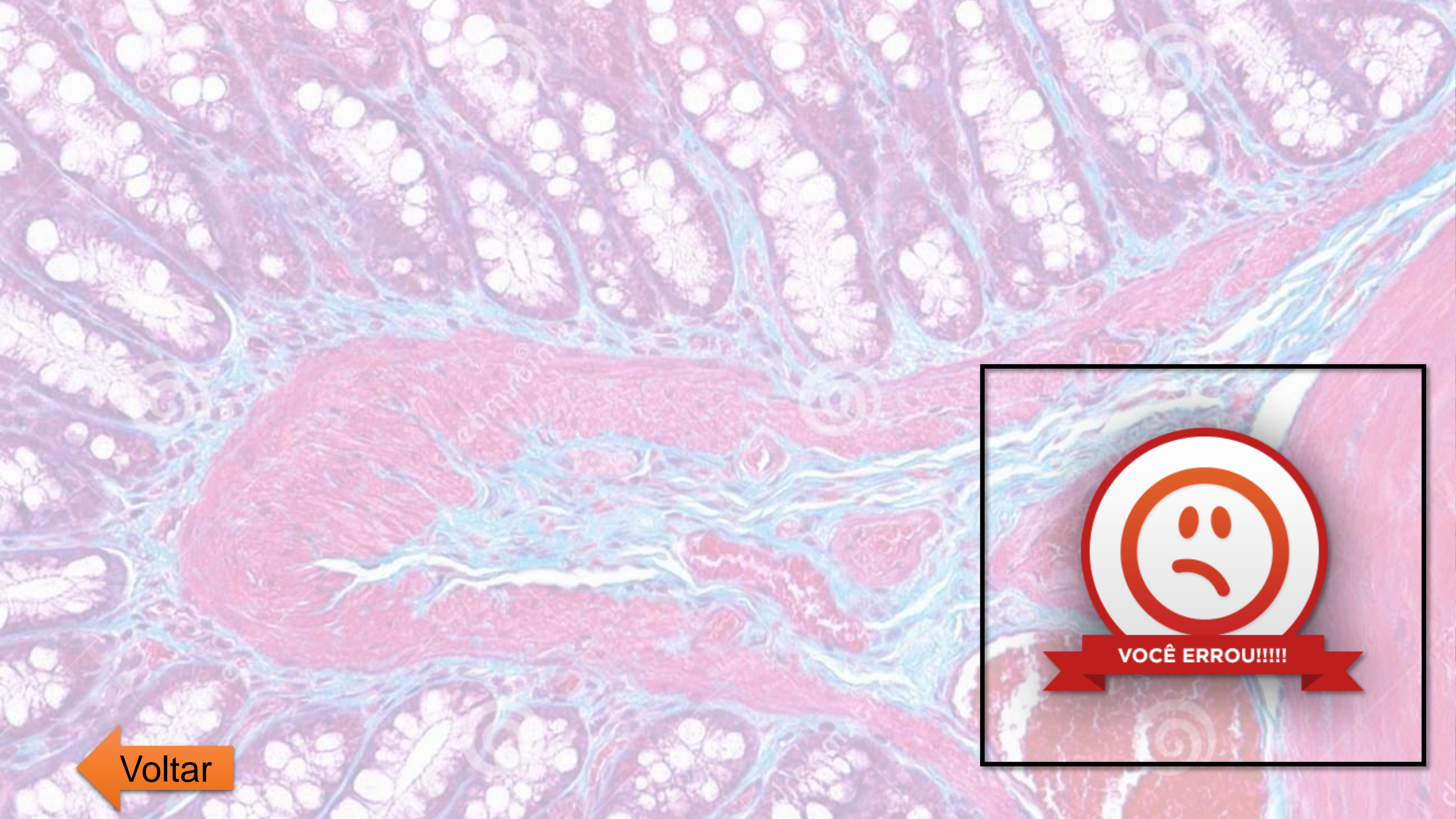
d) todas as afirmativas anteriores estão corretas!



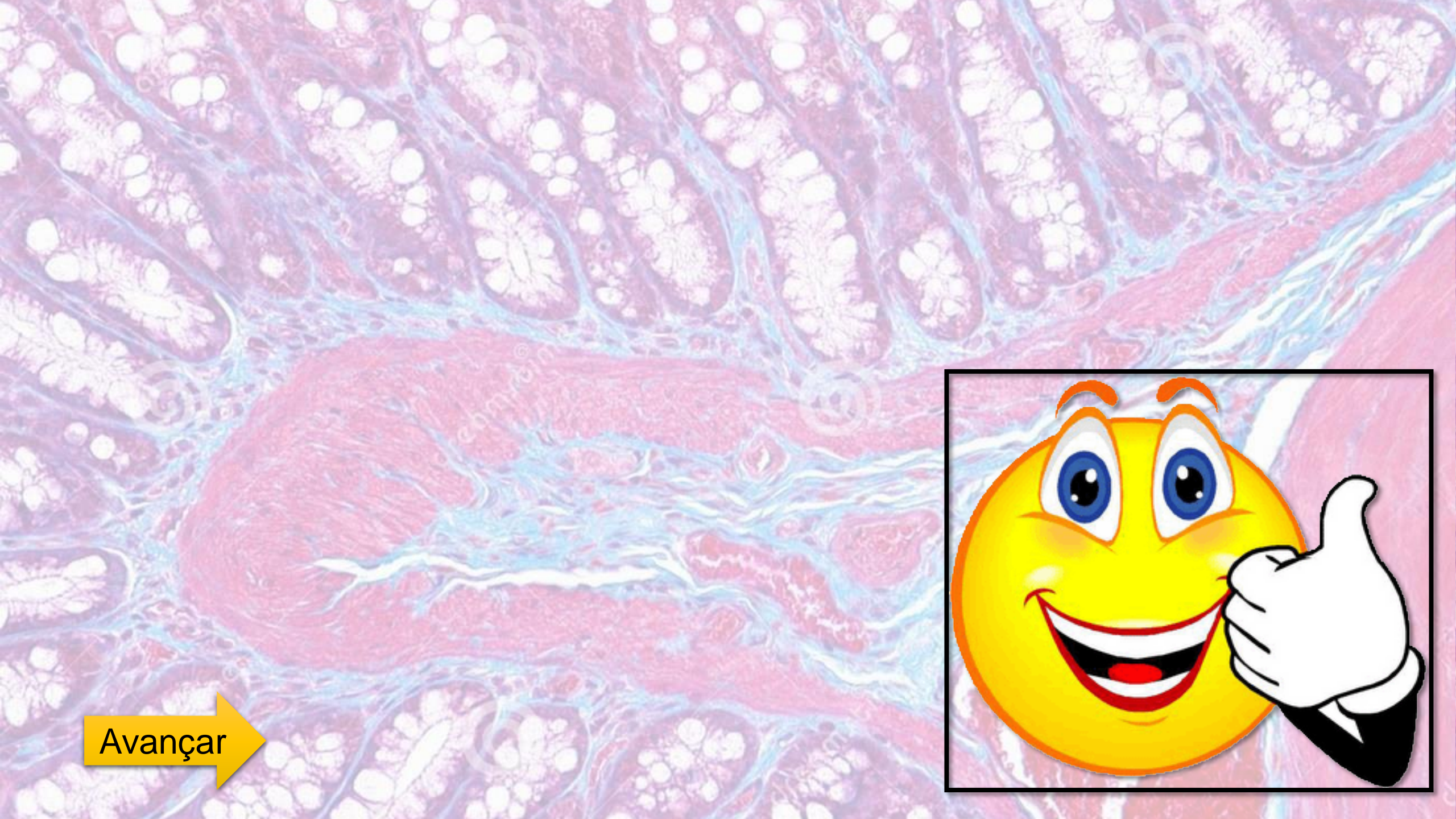
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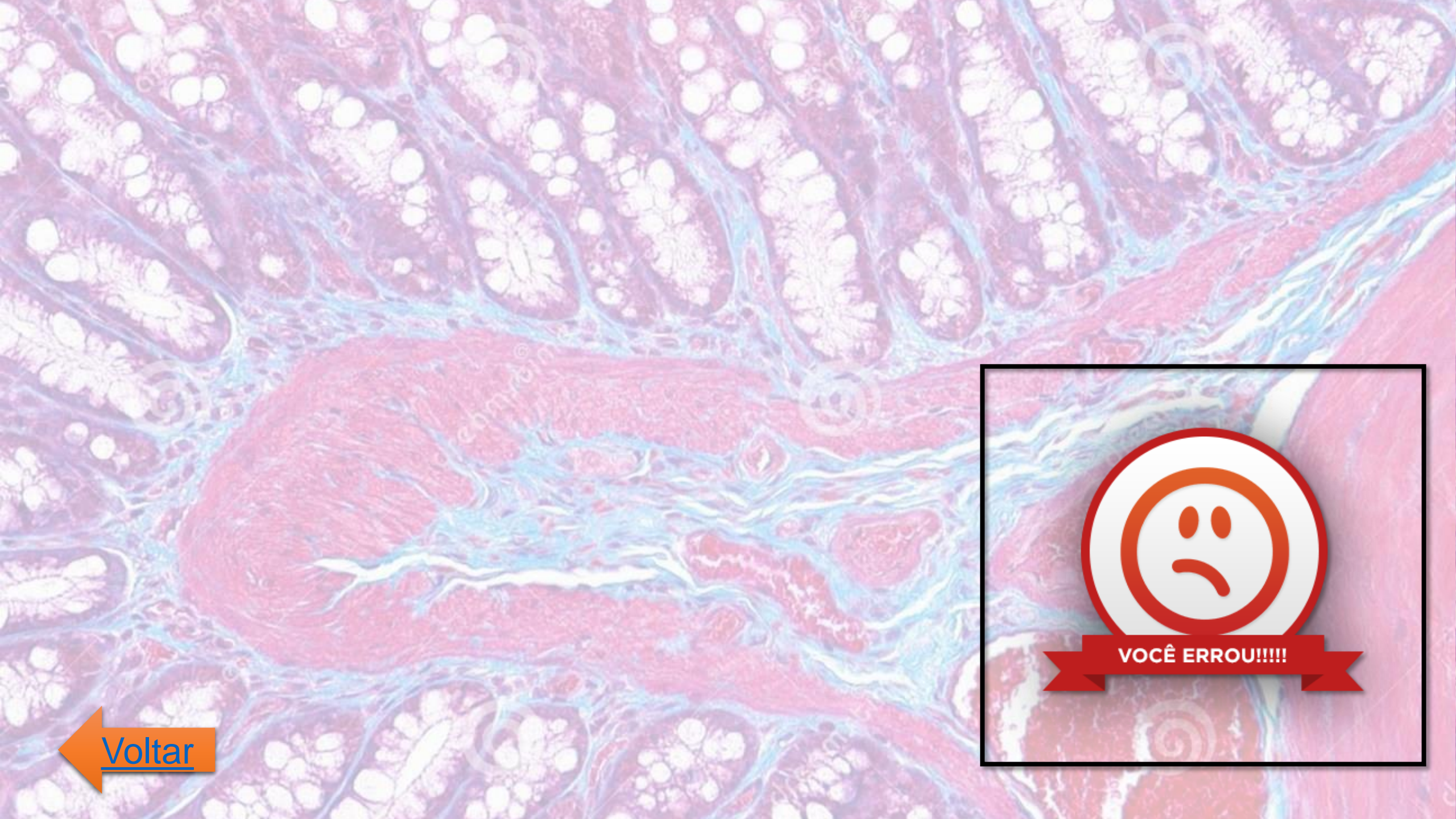
5. O sistema vascular linfático:

a) permite a circulação dos linfócitos e o transporte dos lipídios.

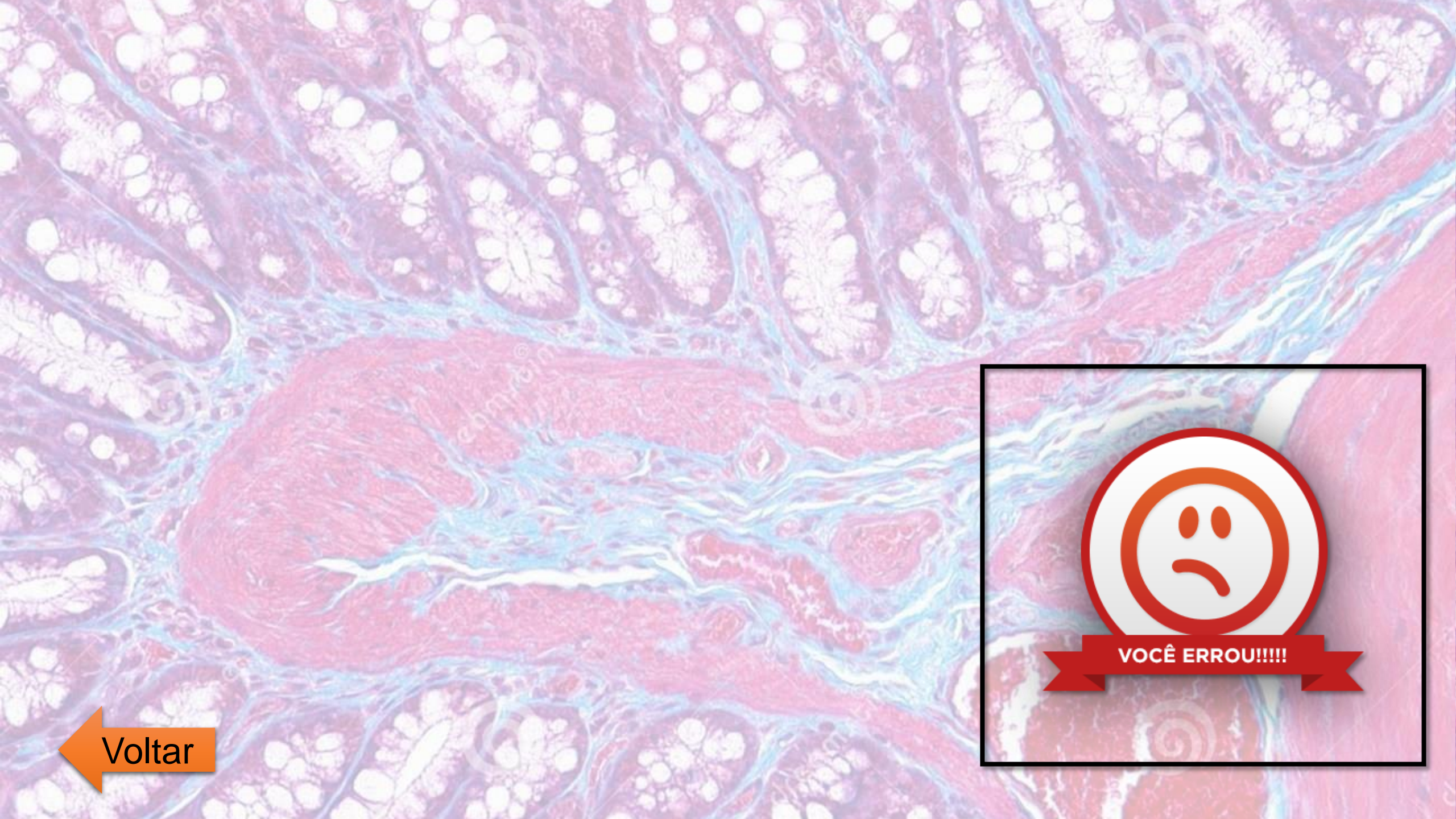
b) é formado pelos capilares linfáticos, vasos linfáticos e ductos linfáticos.

c) recolhe o líquido tecidual e o devolve ao sangue.

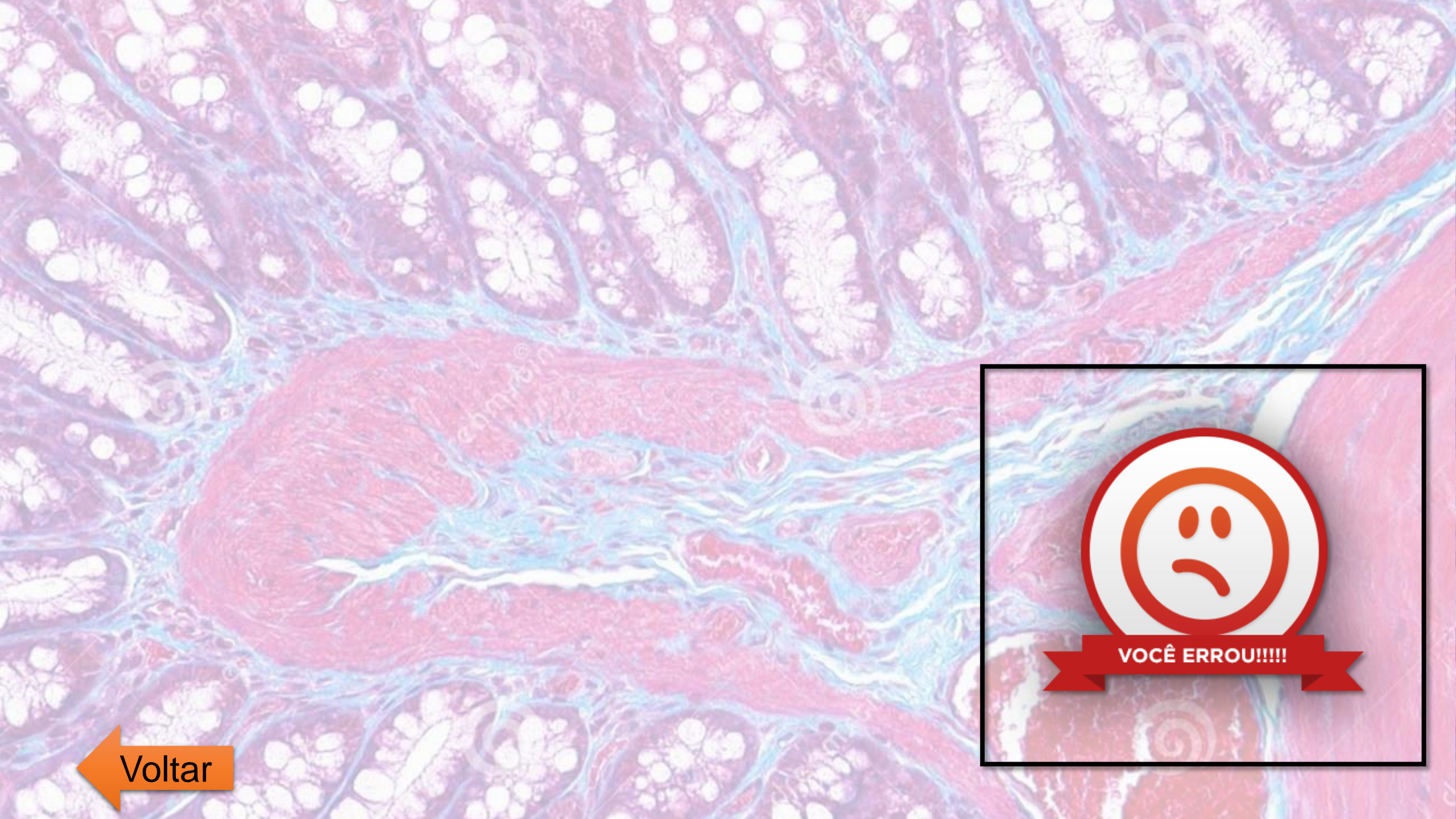
d) todas as afirmativas estão corretas.



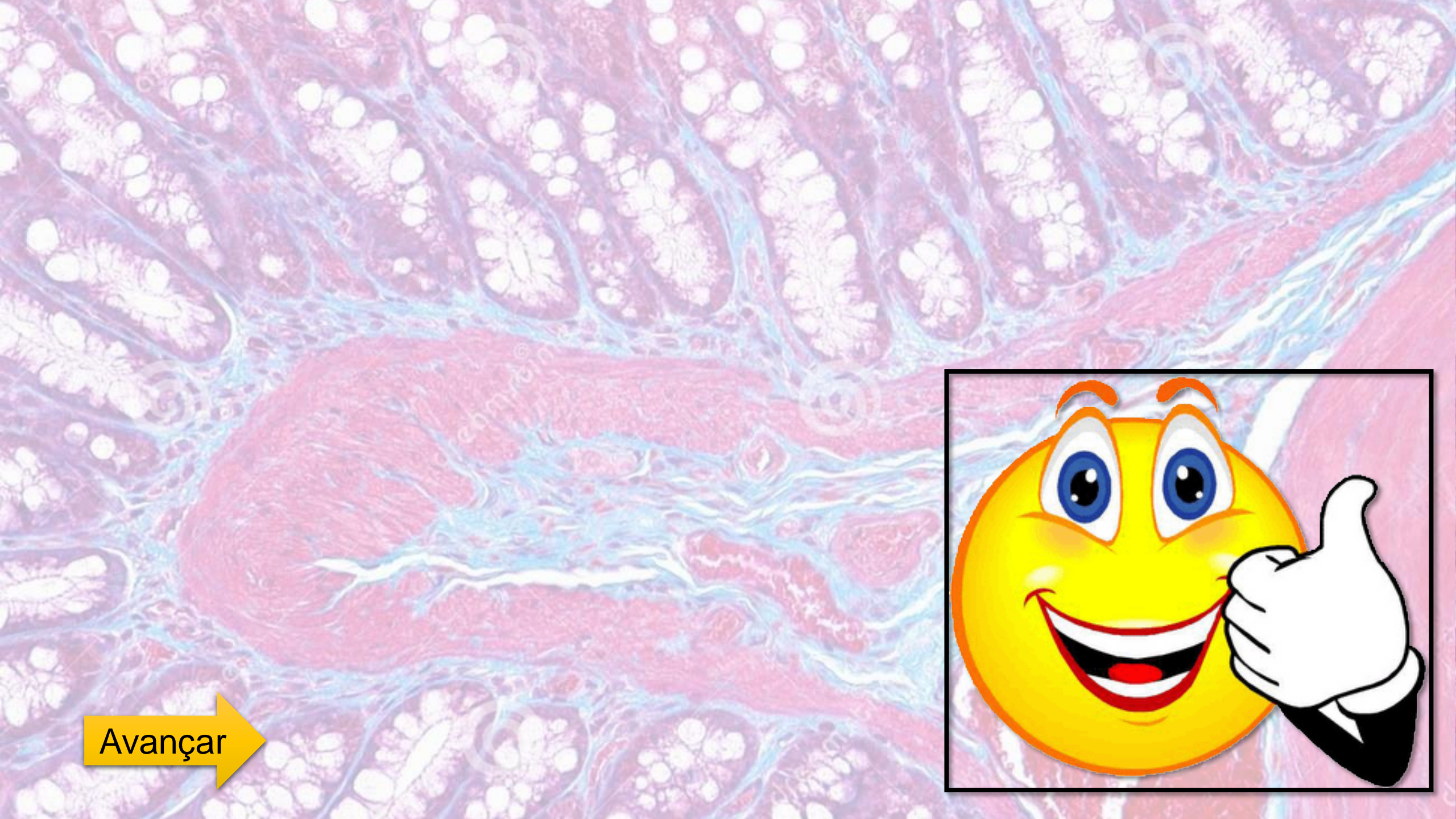
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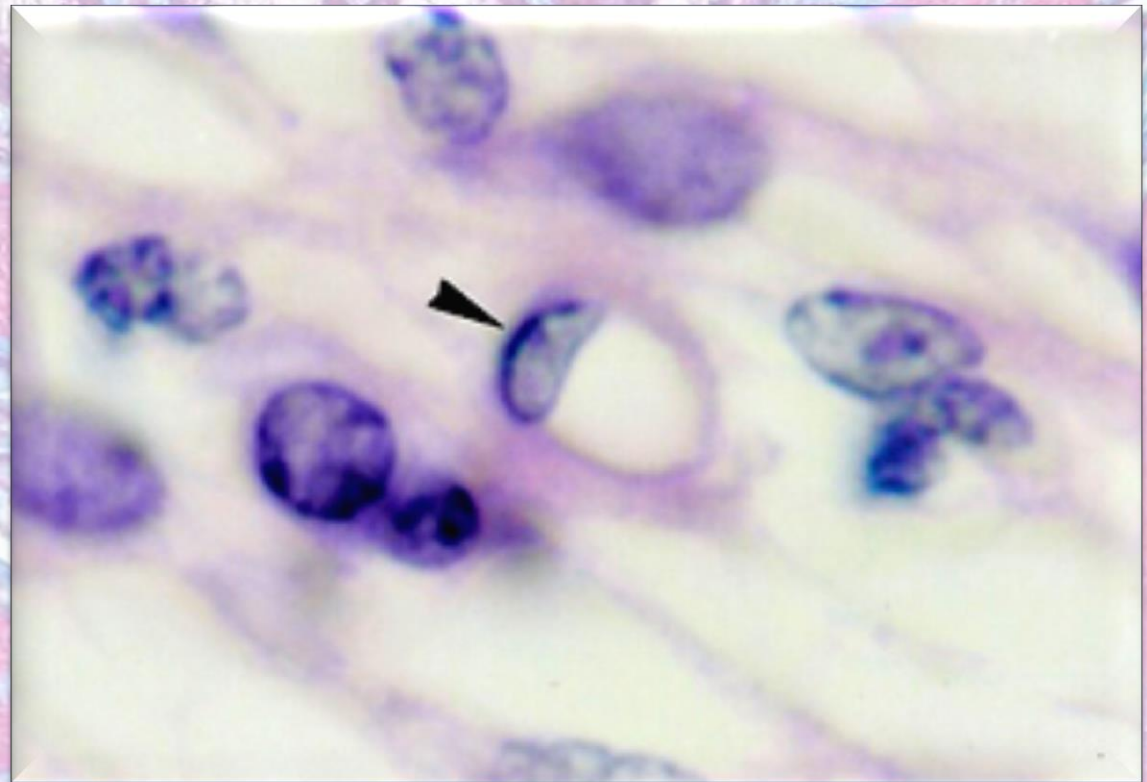
6. A estrutura apontada é:

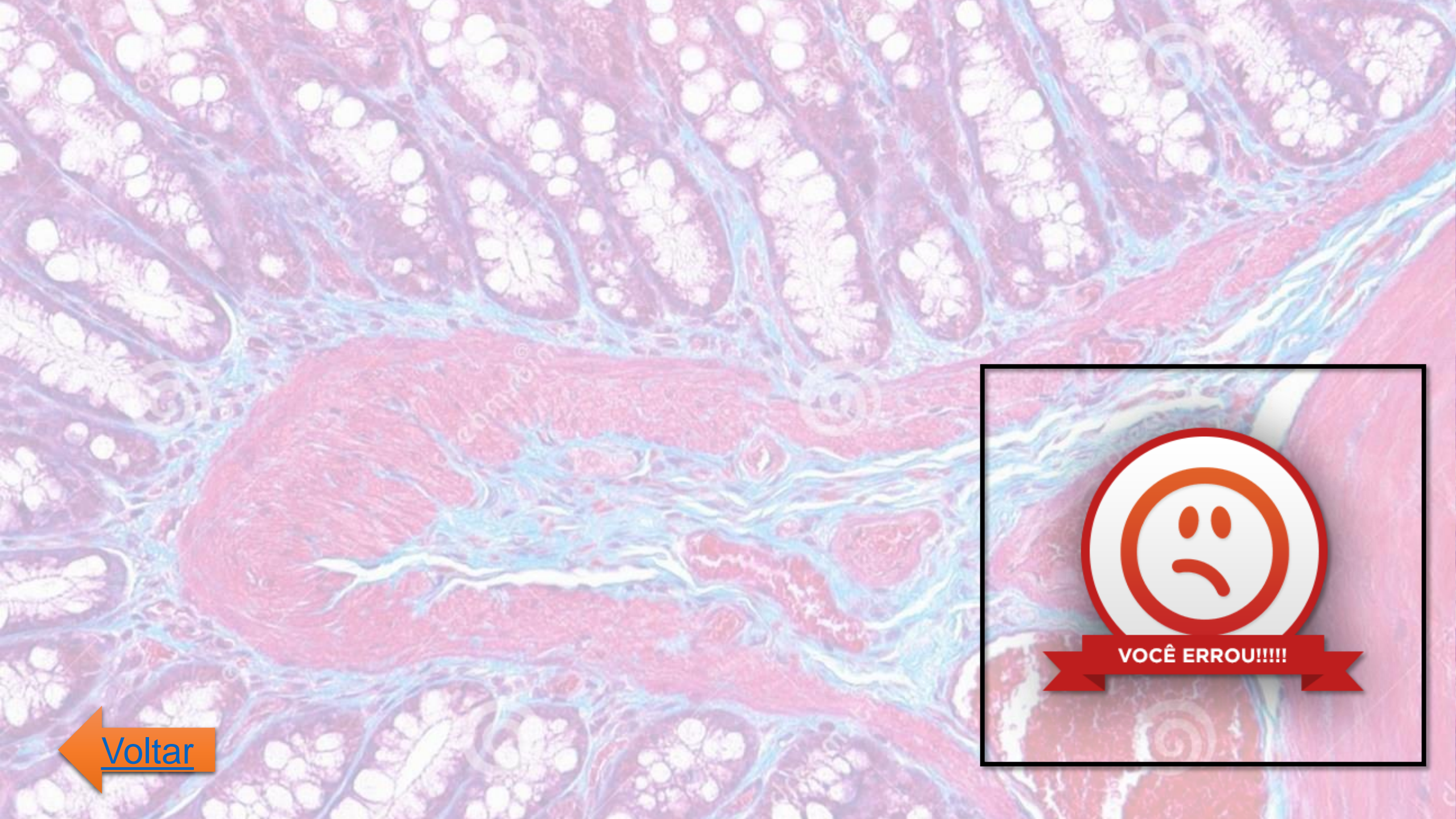
a) Arteriola

b) Vênula

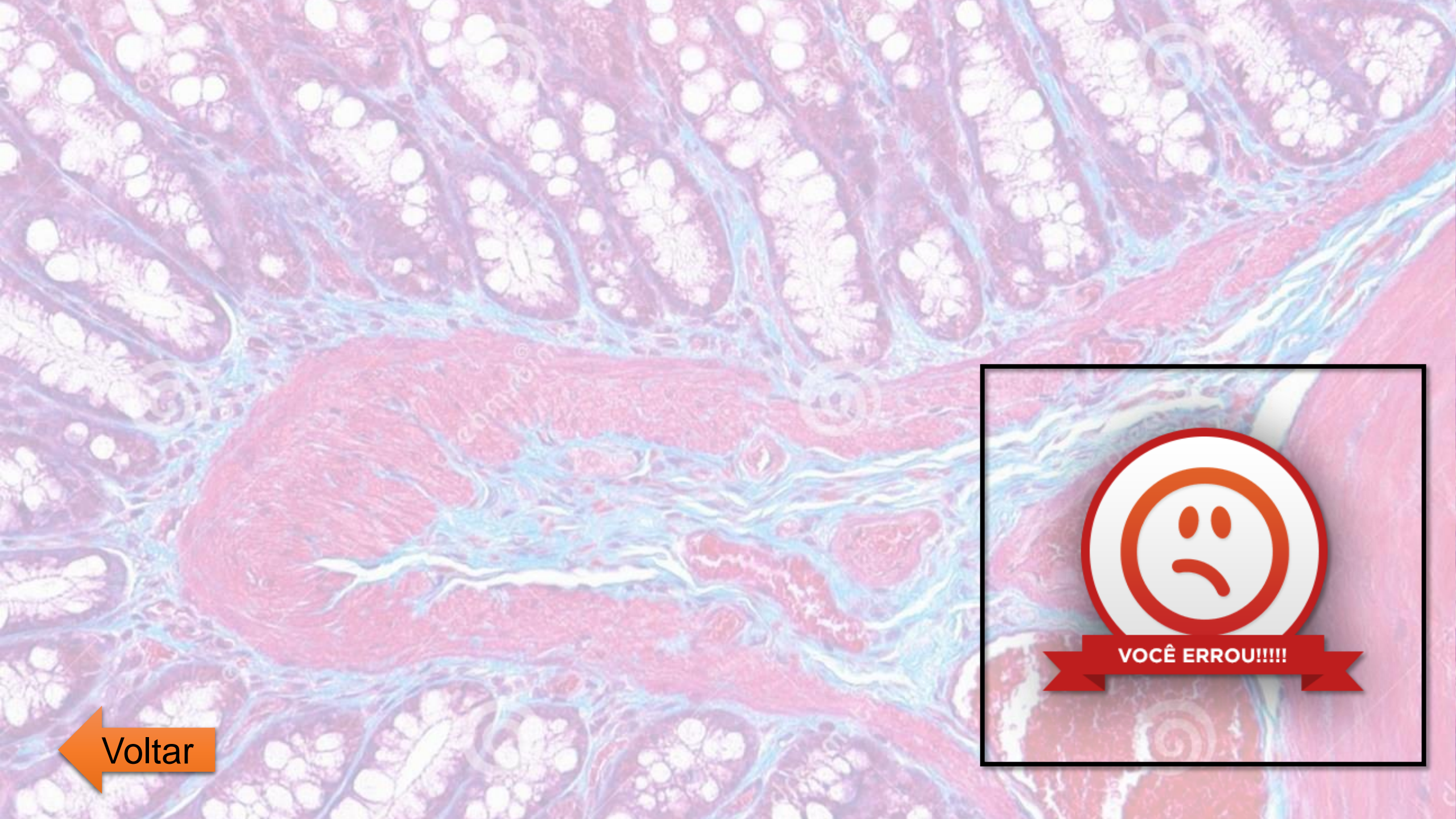
c) capilar

d) Artéria

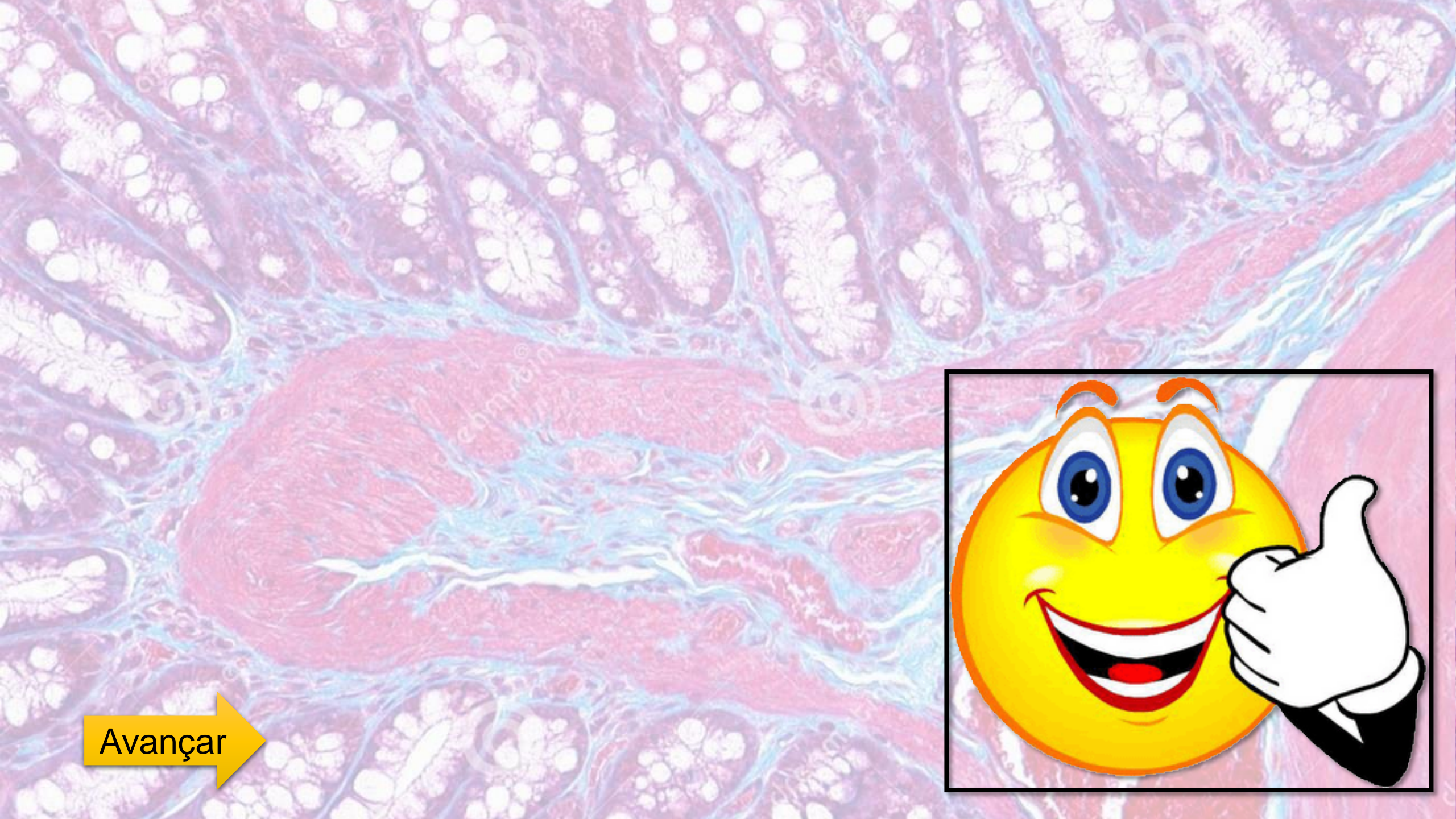




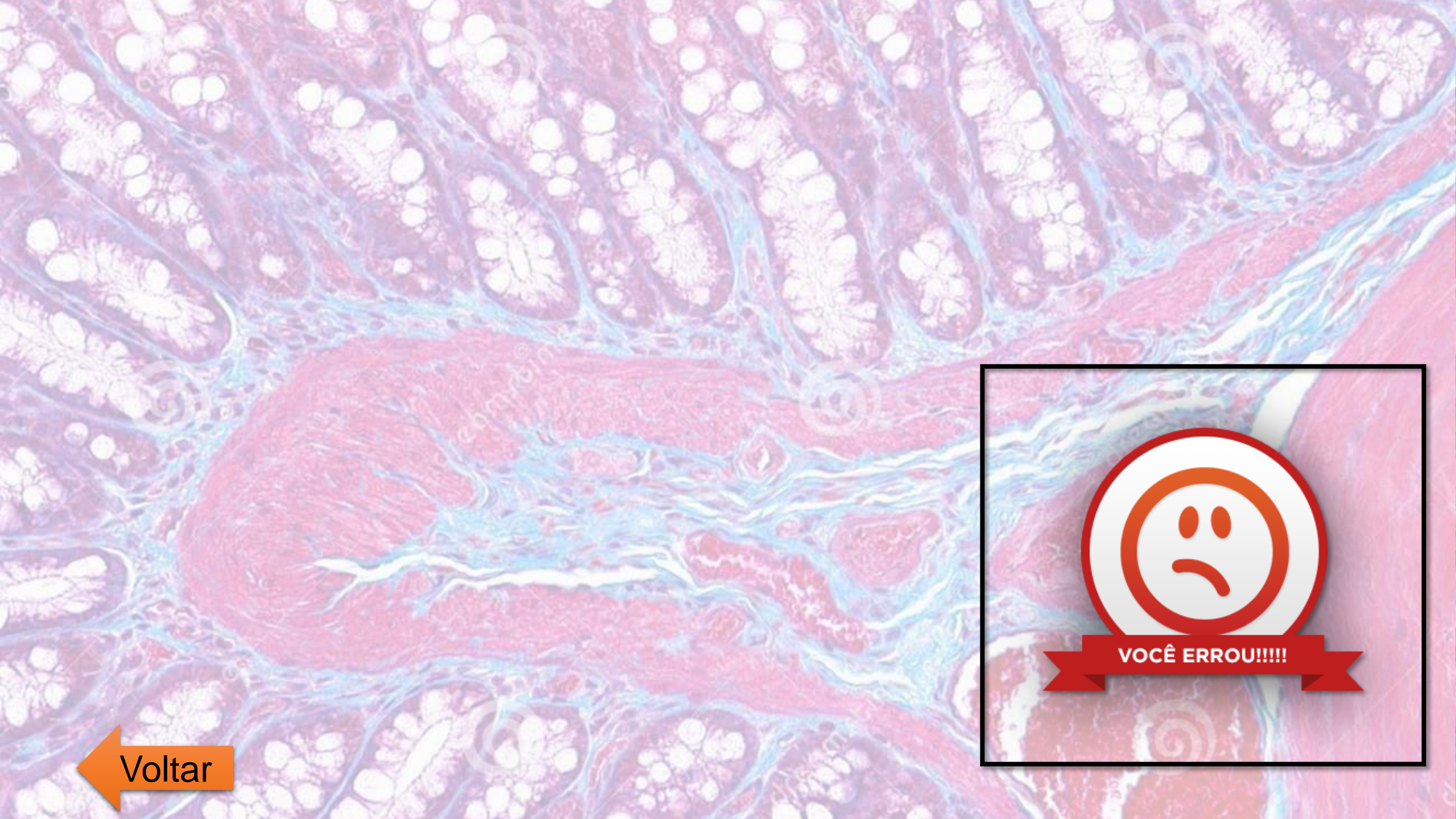
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VOCÊ ERROU!!!!

A red-bordered box containing a sad face icon (a white circle with a red outline, two dots for eyes, and a downward-curving line for a mouth) and a red ribbon banner below it with the text "VOCÊ ERROU!!!!" in white capital letters.

 Voltar

An orange arrow pointing to the left, with the word "Voltar" written in white text inside it.

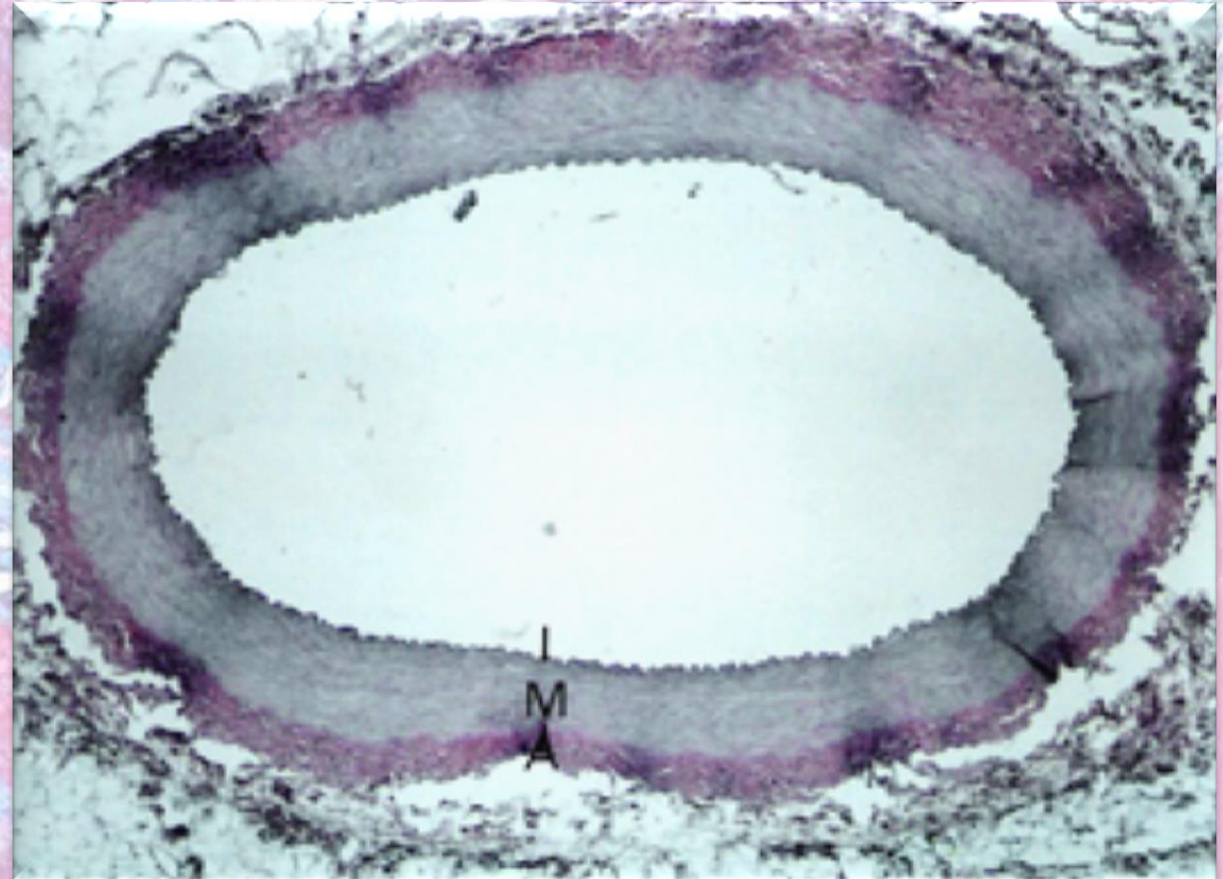
7. A estrutura apontada é:

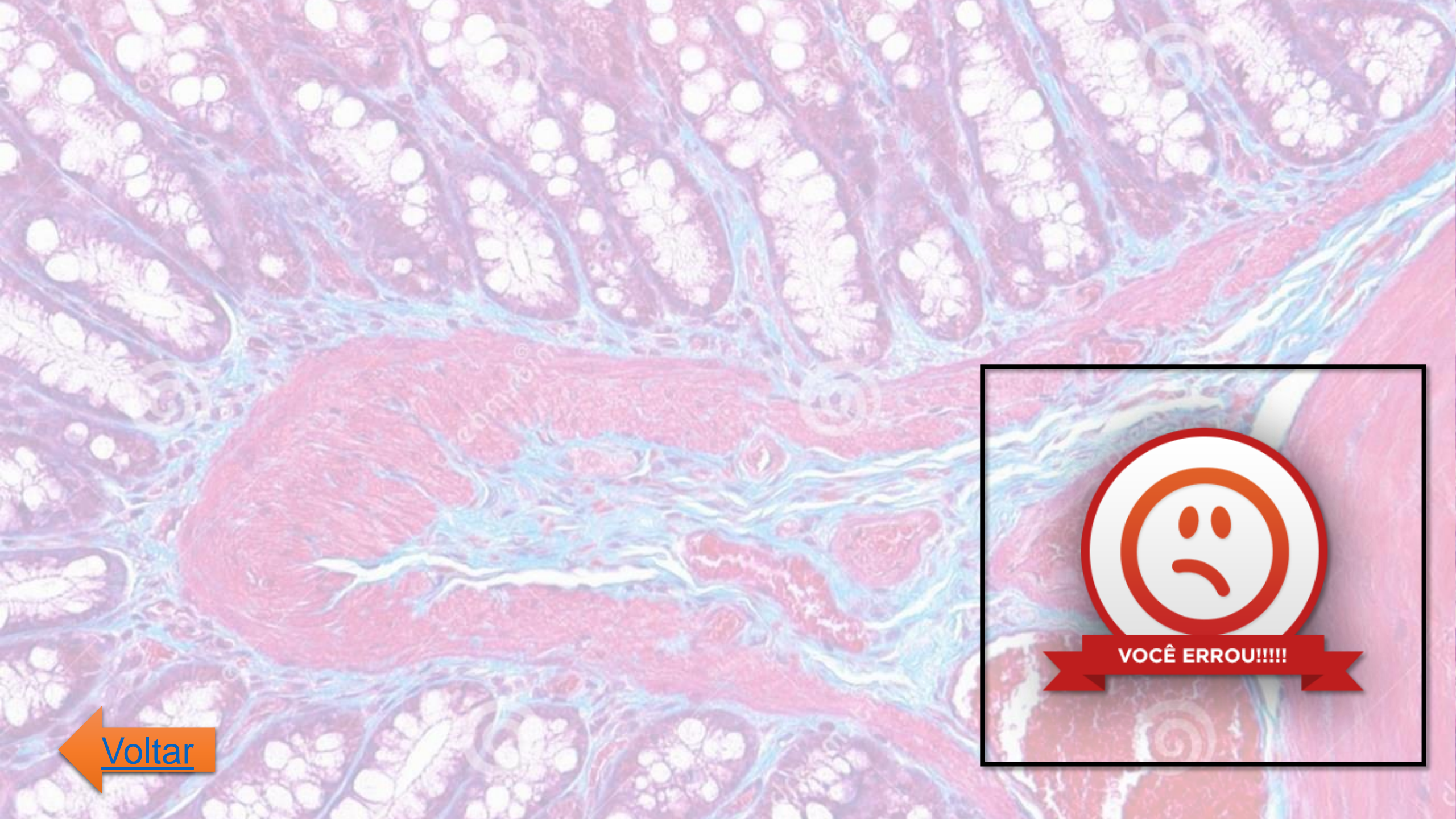
a) É um corte de uma veia de grande calibre.

b) É um corte de uma artéria de médio calibre.

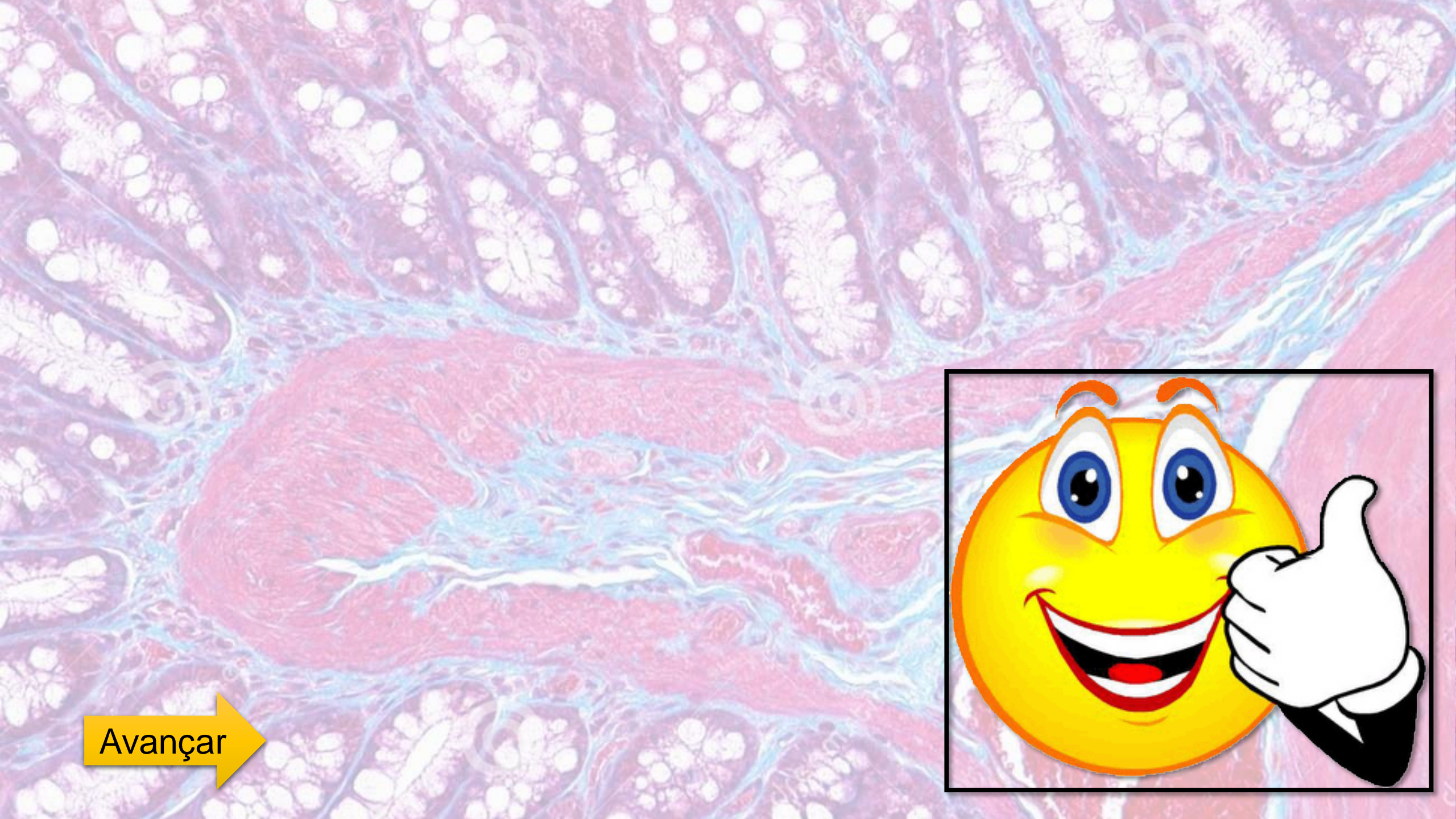
c) I indica a túnica interna.

d) M é a túnica muscular, e A é a túnica adventícia.

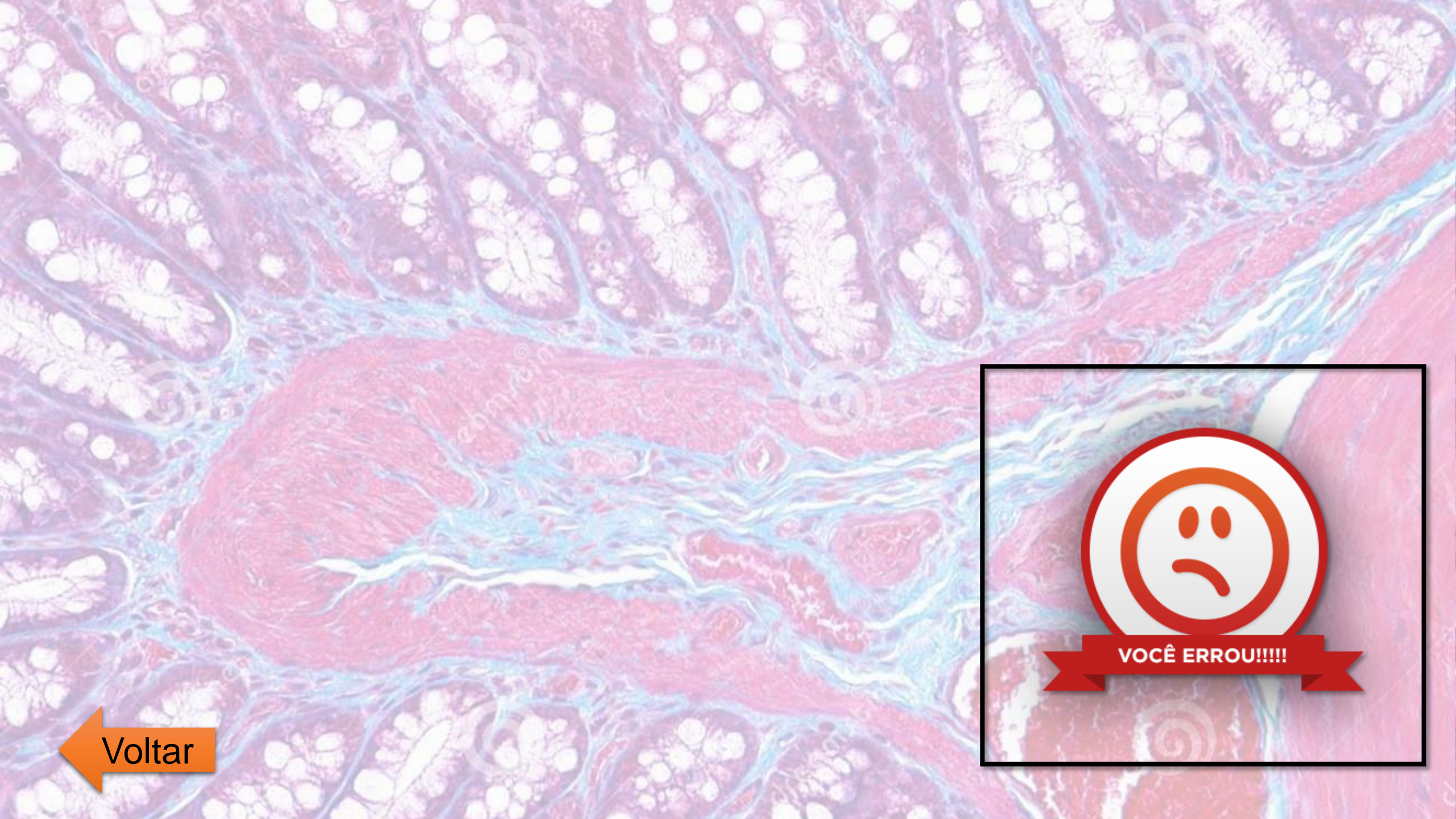




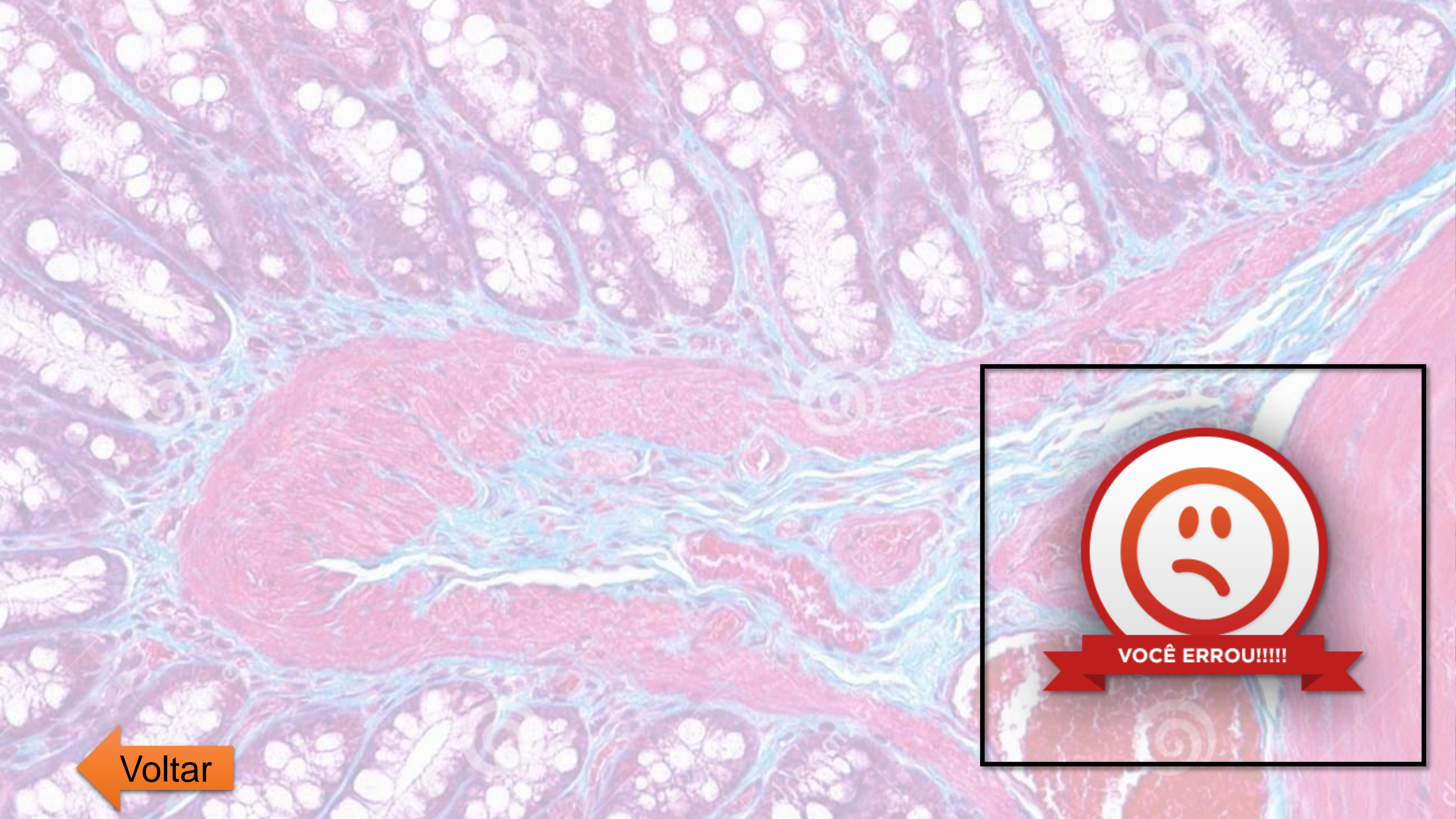
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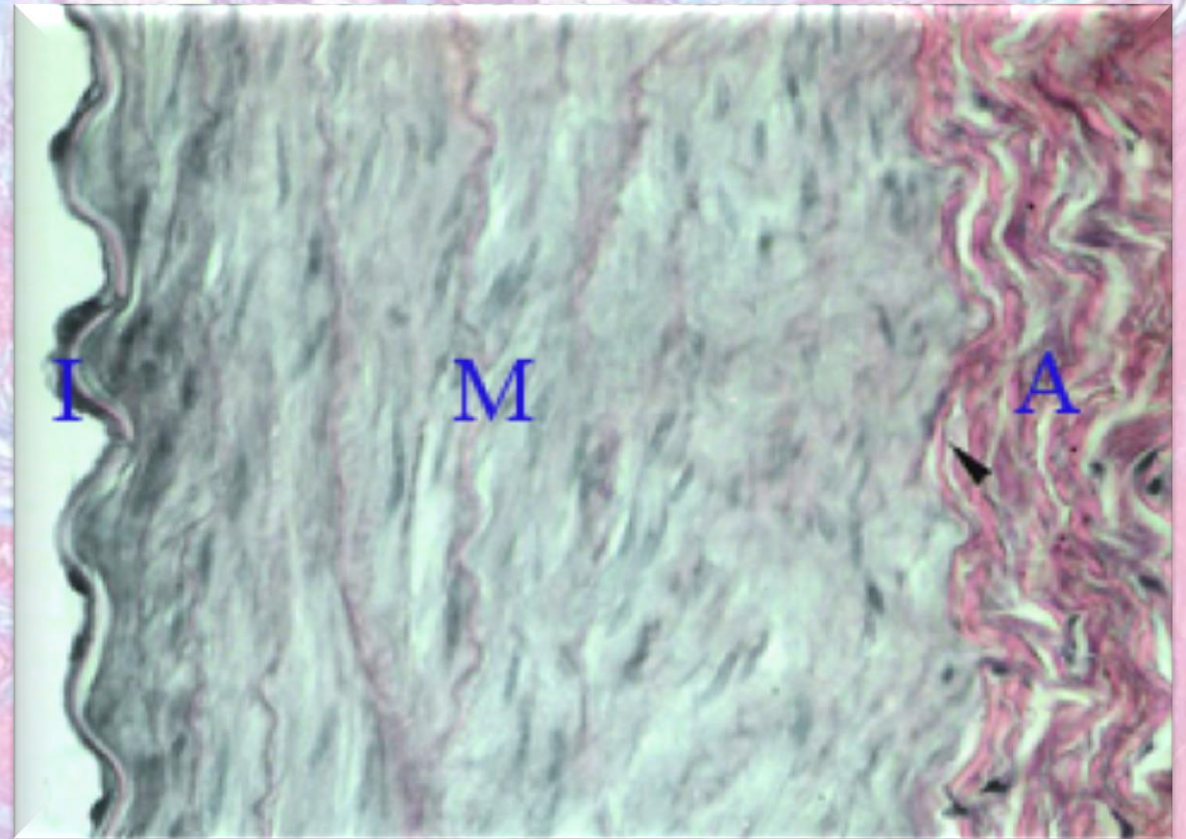
8. Assinale a alternativa incorreta sobre a imagem mostrada:

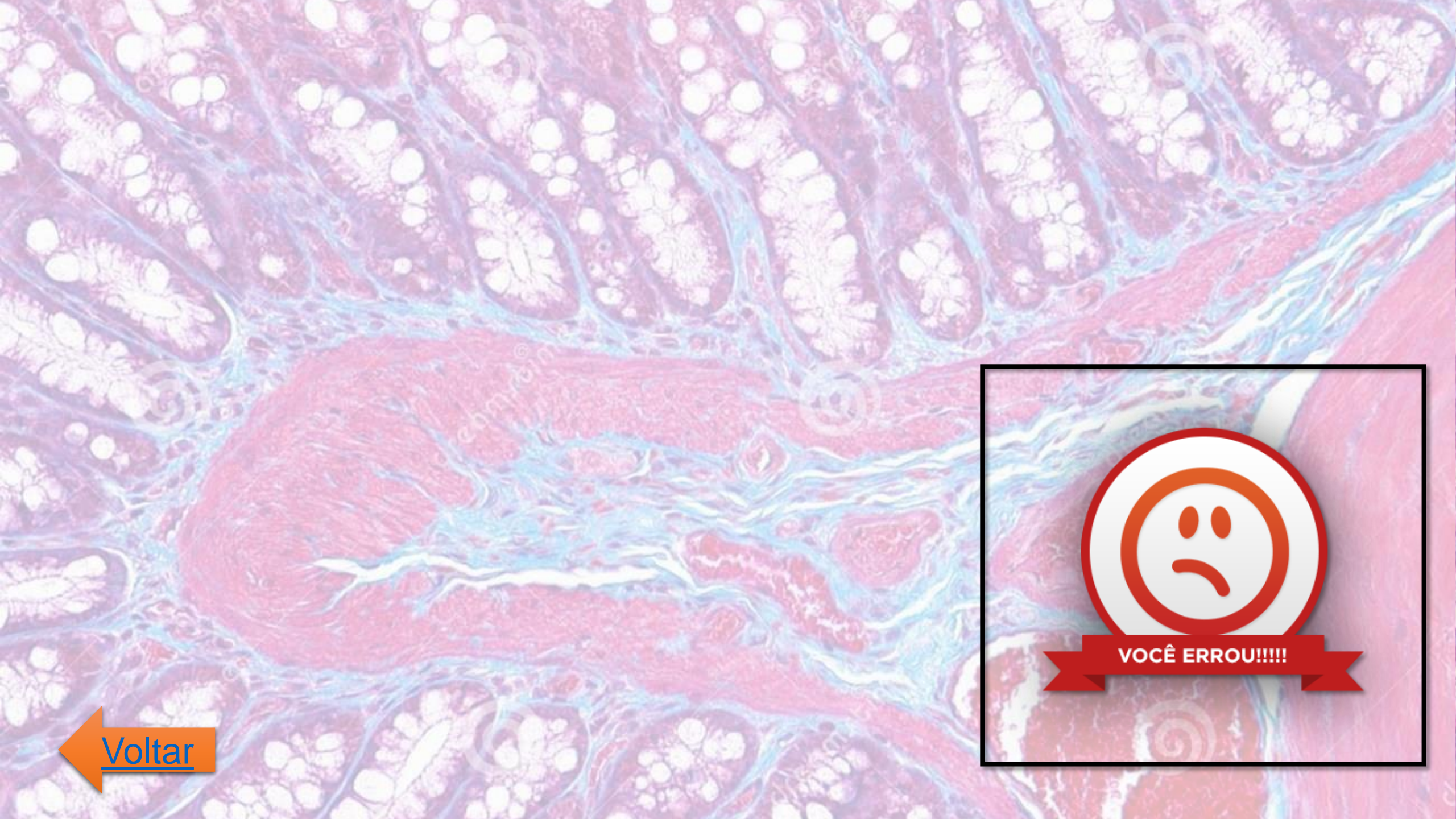
a) aumento maior da parede de uma artéria.

b) aumento maior da parede de uma veia.

c) a túnica íntima (I) é constituída pelo endotélio, pela camada subendotelial e pela lâmina elástica interna.

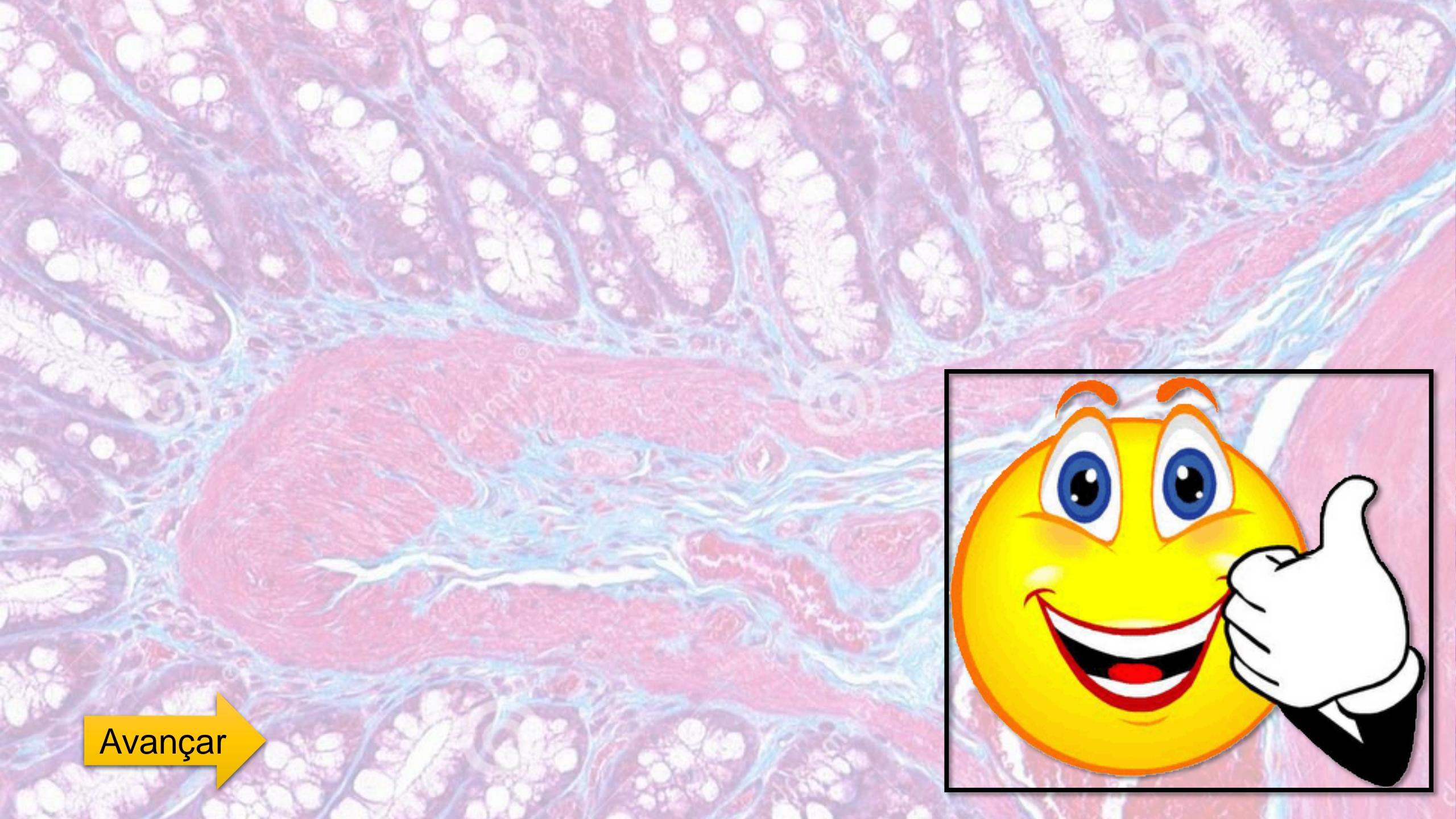
d) a túnica média (M) é uma camada espessa de músculo liso com fibras elásticas e, apontada pela seta, lâmina elástica externa.



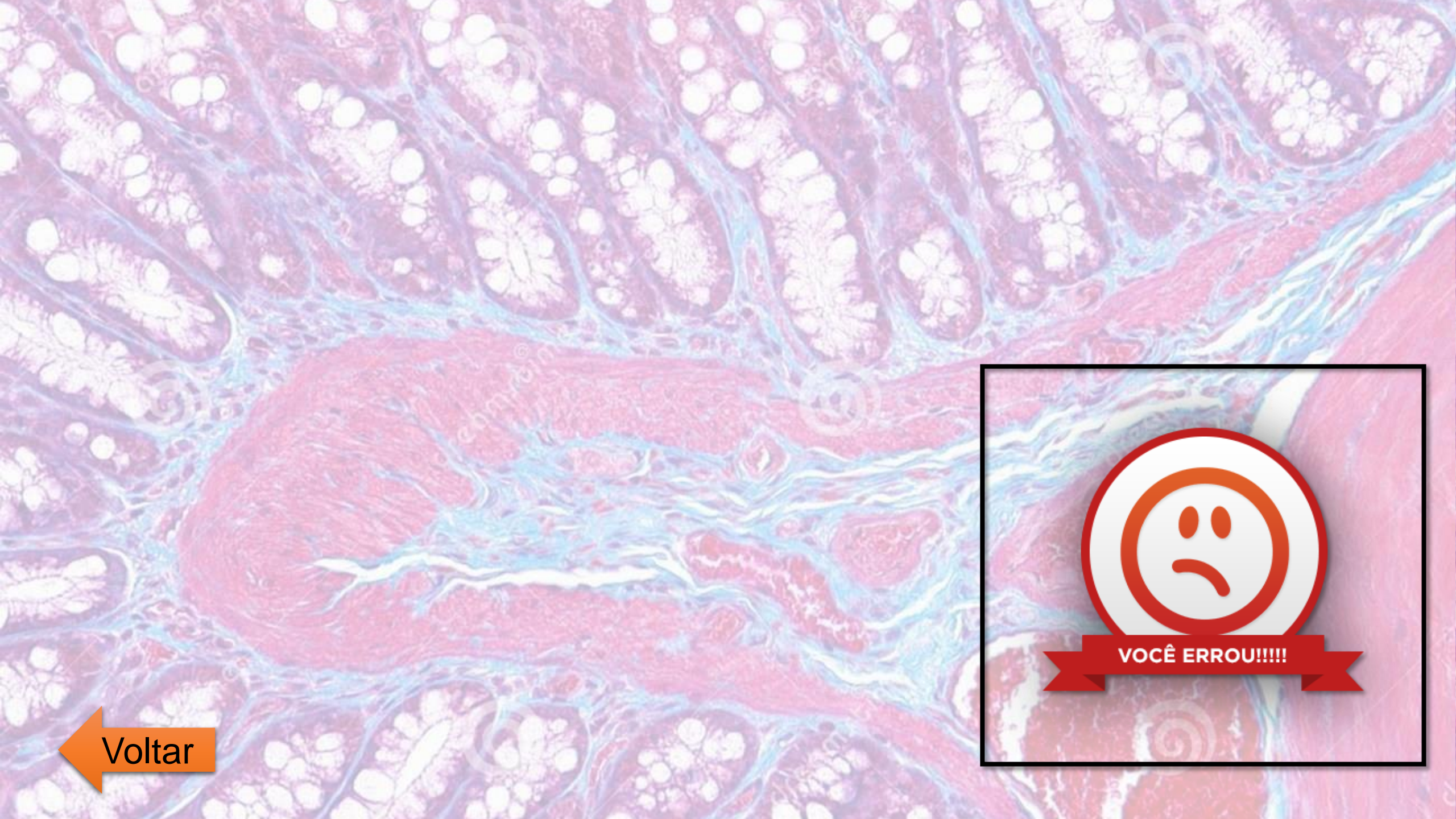


A red-bordered box containing a sad face icon (a white circle with a red outline and a downward-curving mouth) and a red banner with the text "VOCÊ ERROU!!!!" in white capital letters. This graphic is overlaid on the histological image, indicating a mistake or error.

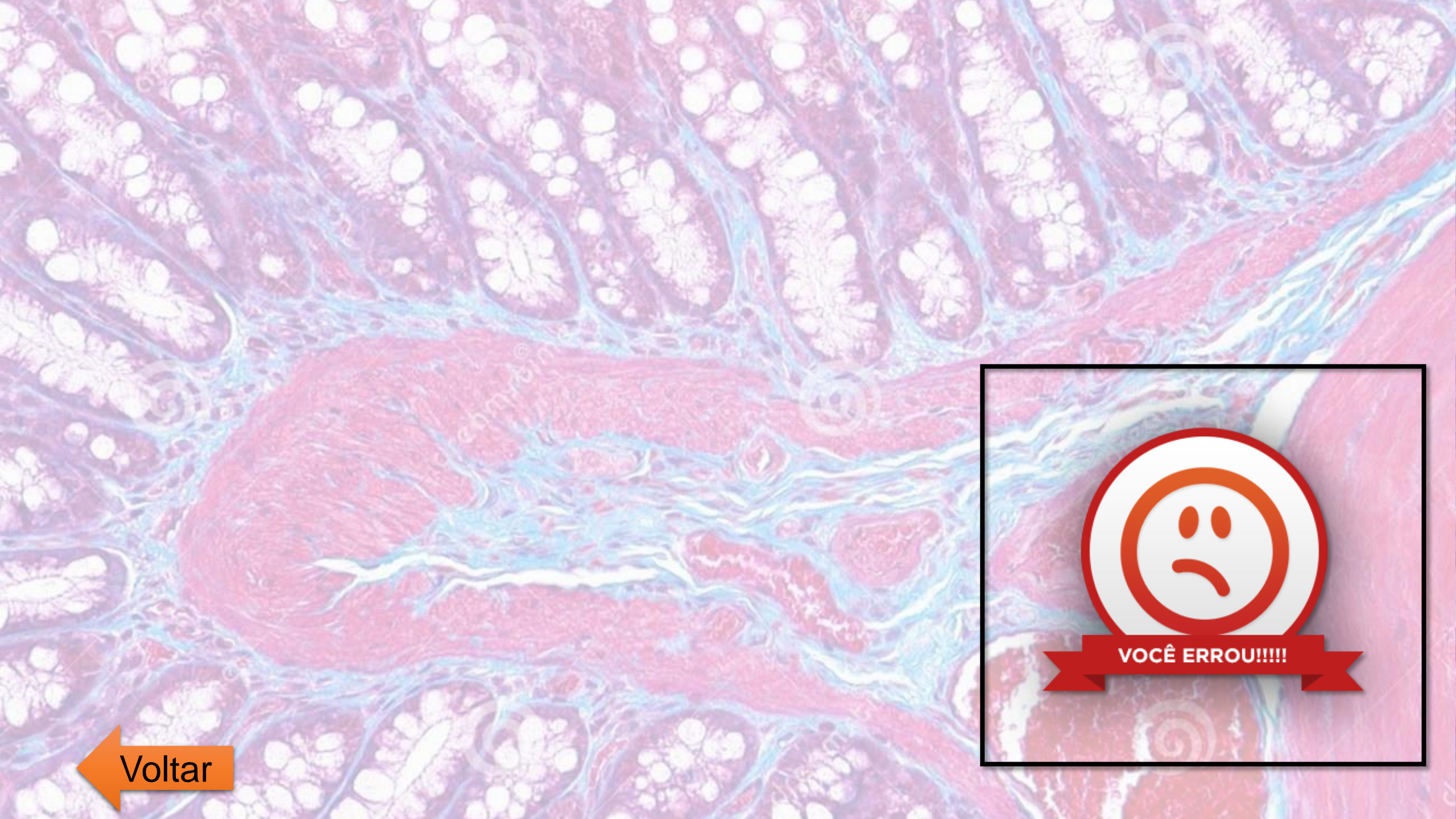
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9. O sistema cardiovascular é formado pelo coração e vasos sanguíneos, sendo essas últimas estruturas responsáveis pela condução do sangue pelo corpo. Entre as alternativas a seguir, marque o nome do vaso responsável por levar o sangue do coração em direção aos tecidos:

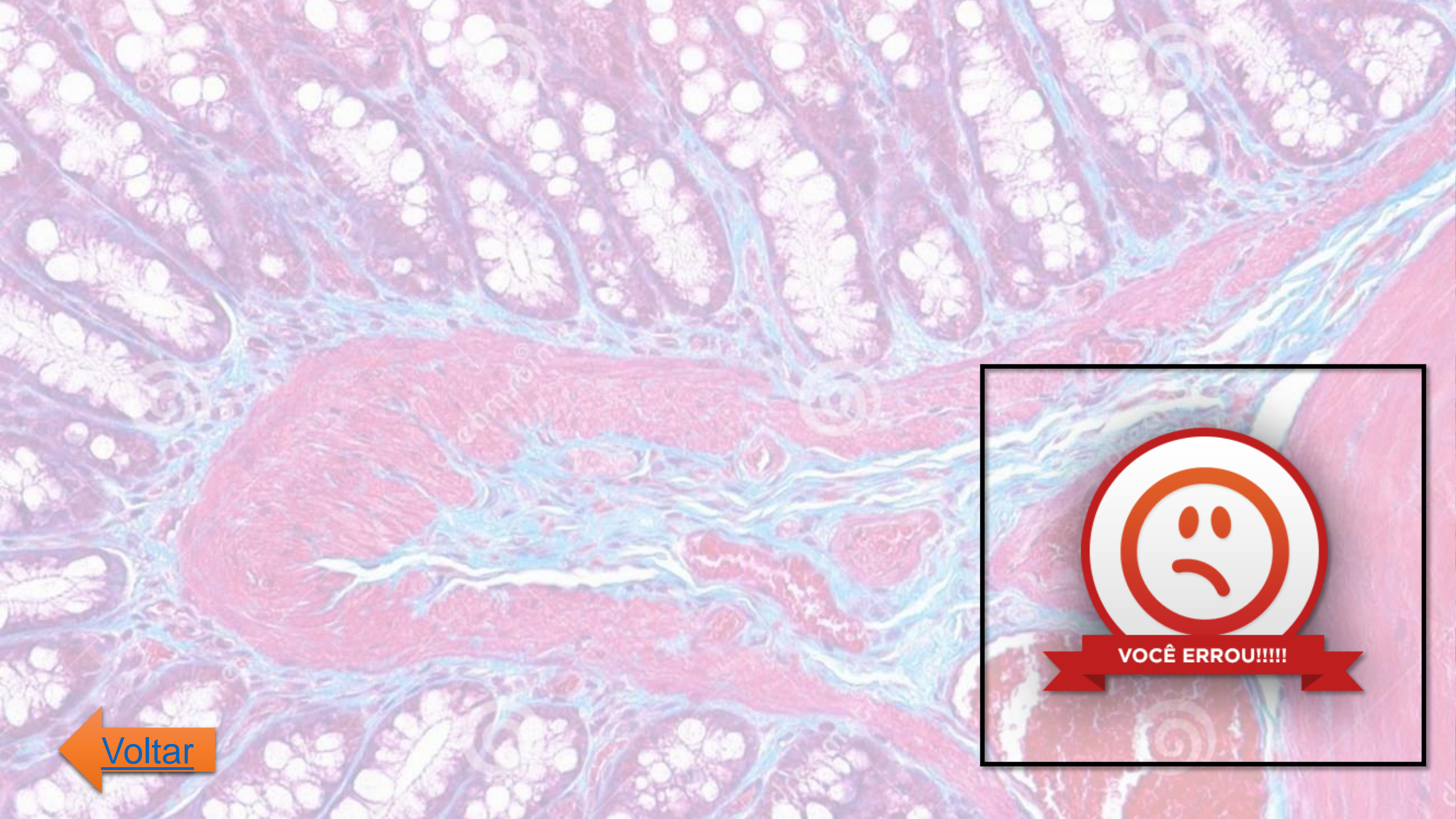
a) veias.

b) vênulas.

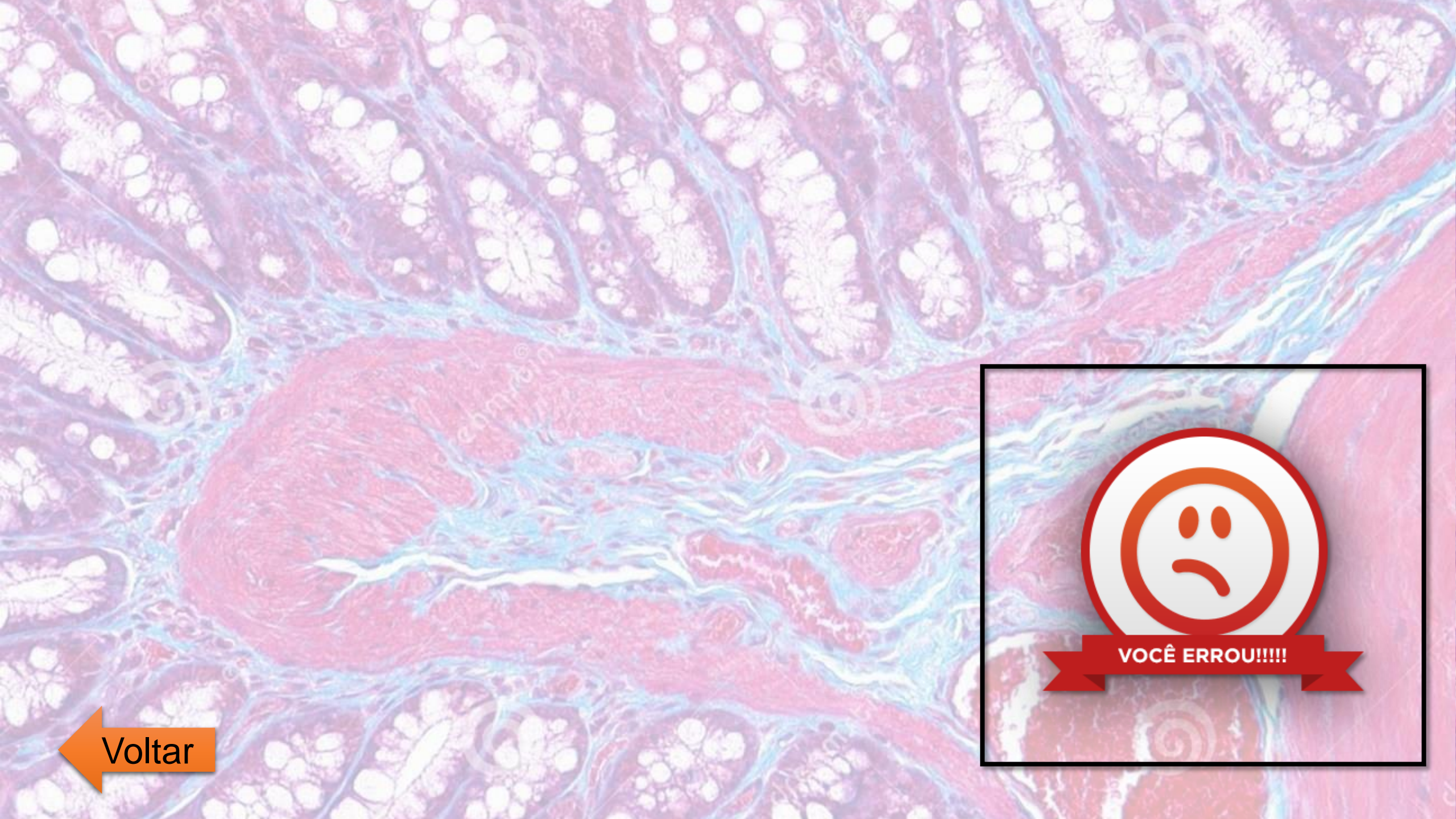
c) artérias.

d) linfonodos.

e) capilares.



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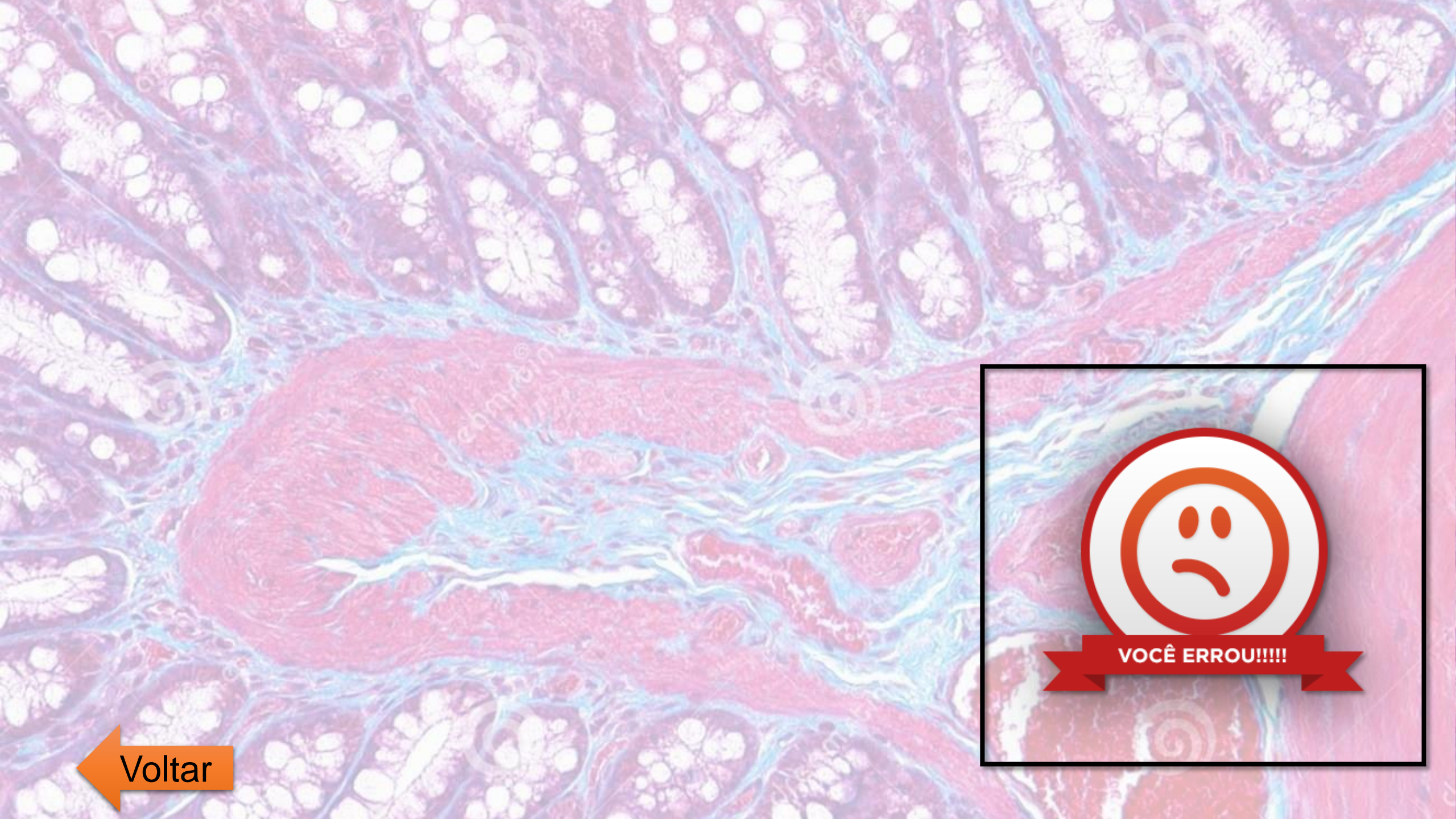


 Voltar

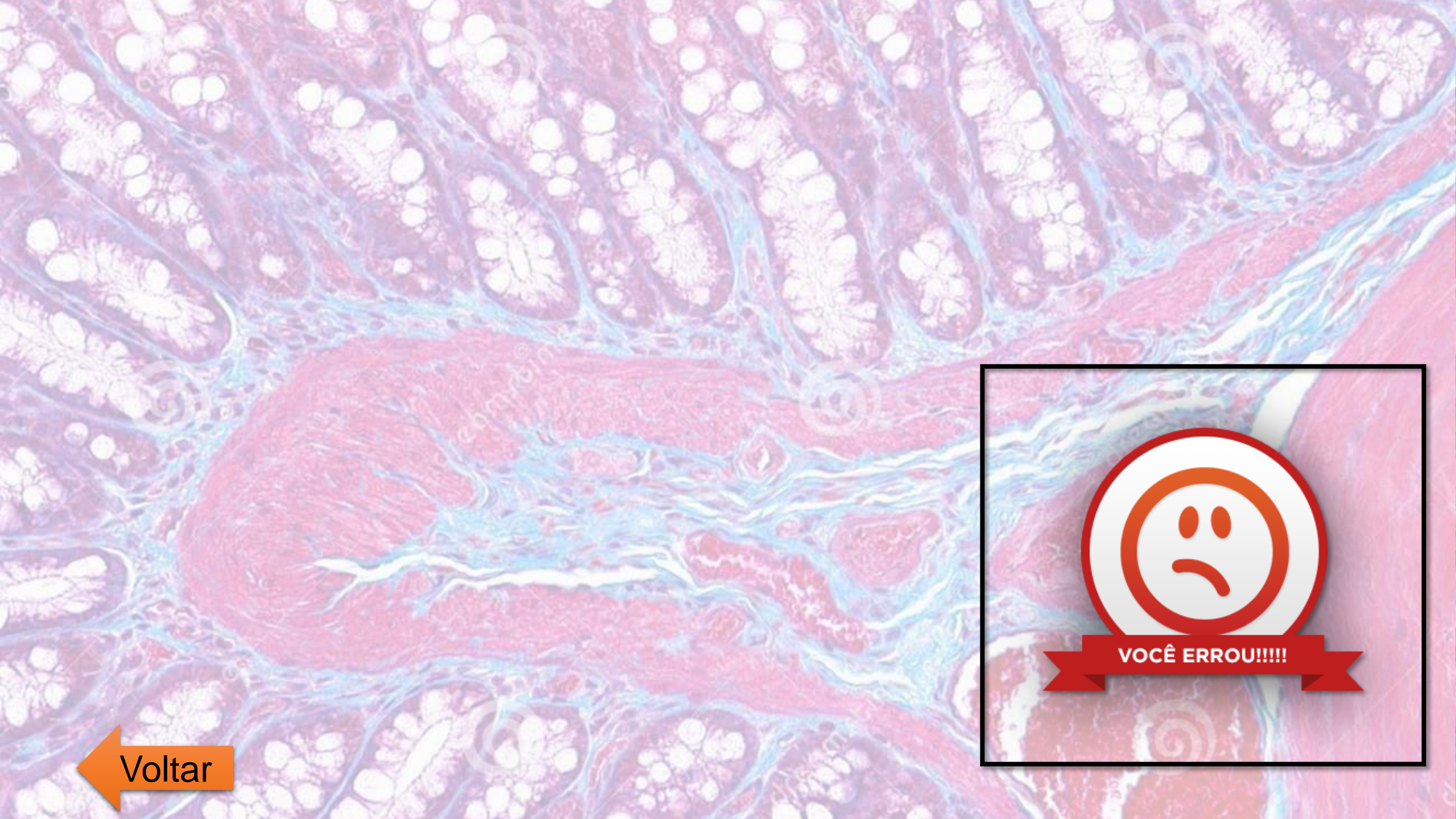
Alternativa “c”. Denominamos de artérias todos os vasos que levam o sangue do coração para outros tecidos e órgãos do corpo.

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 Voltar



 Voltar

10. É comum ouvirmos que as artérias são responsáveis por transportar sangue rico em oxigênio, anteriormente chamado de arterial. Entretanto, essa afirmação nem sempre é correta, uma vez que existe uma artéria que transporta sangue rico em gás carbônico e pobre em oxigênio. Entre as alternativas a seguir, marque aquela que indica a artéria que não transporta sangue rico em oxigênio.

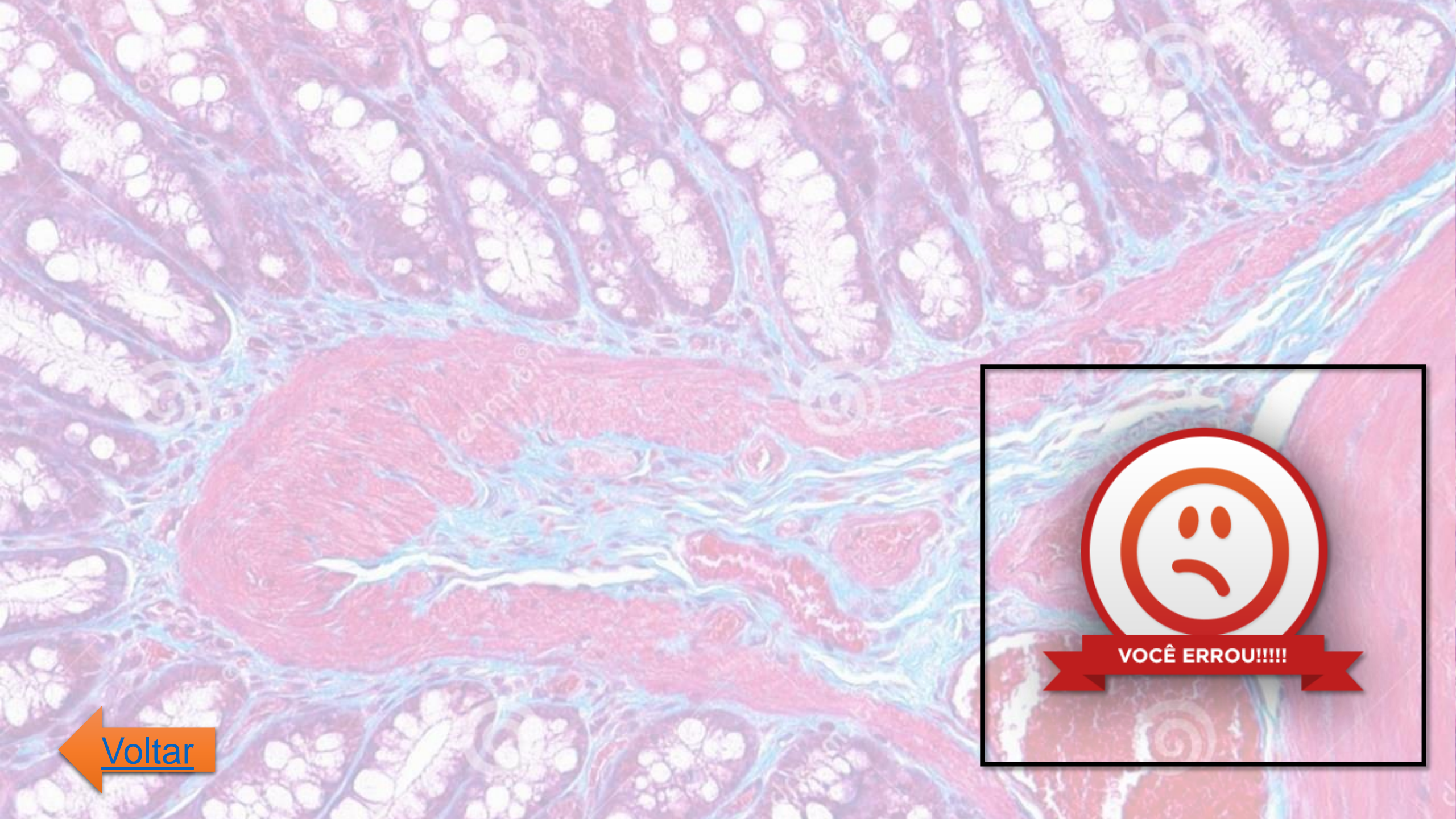
a) renal.

d) hepática.

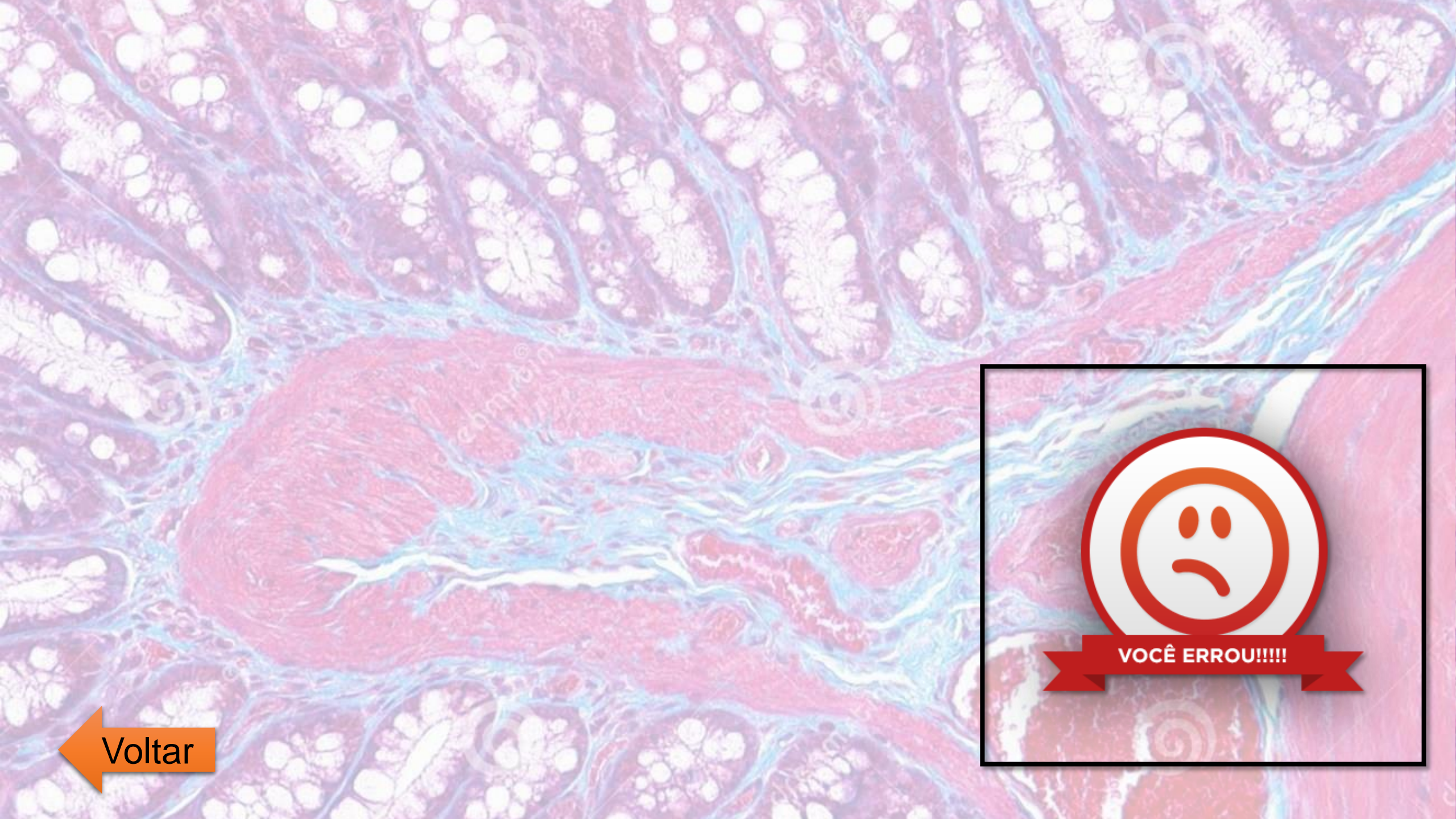
b) aorta.

e) capilar.

c) pulmonar.



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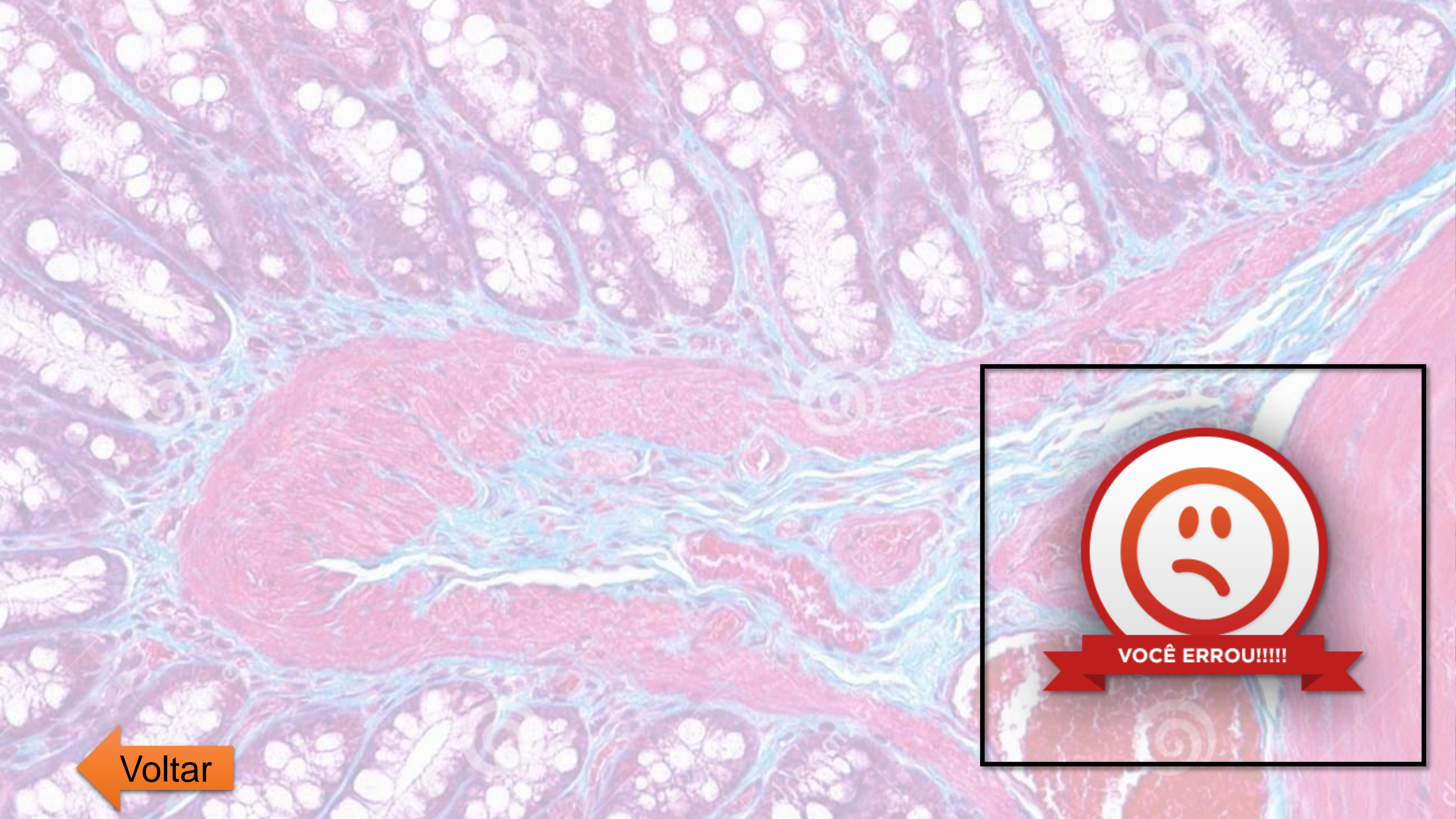


 Voltar

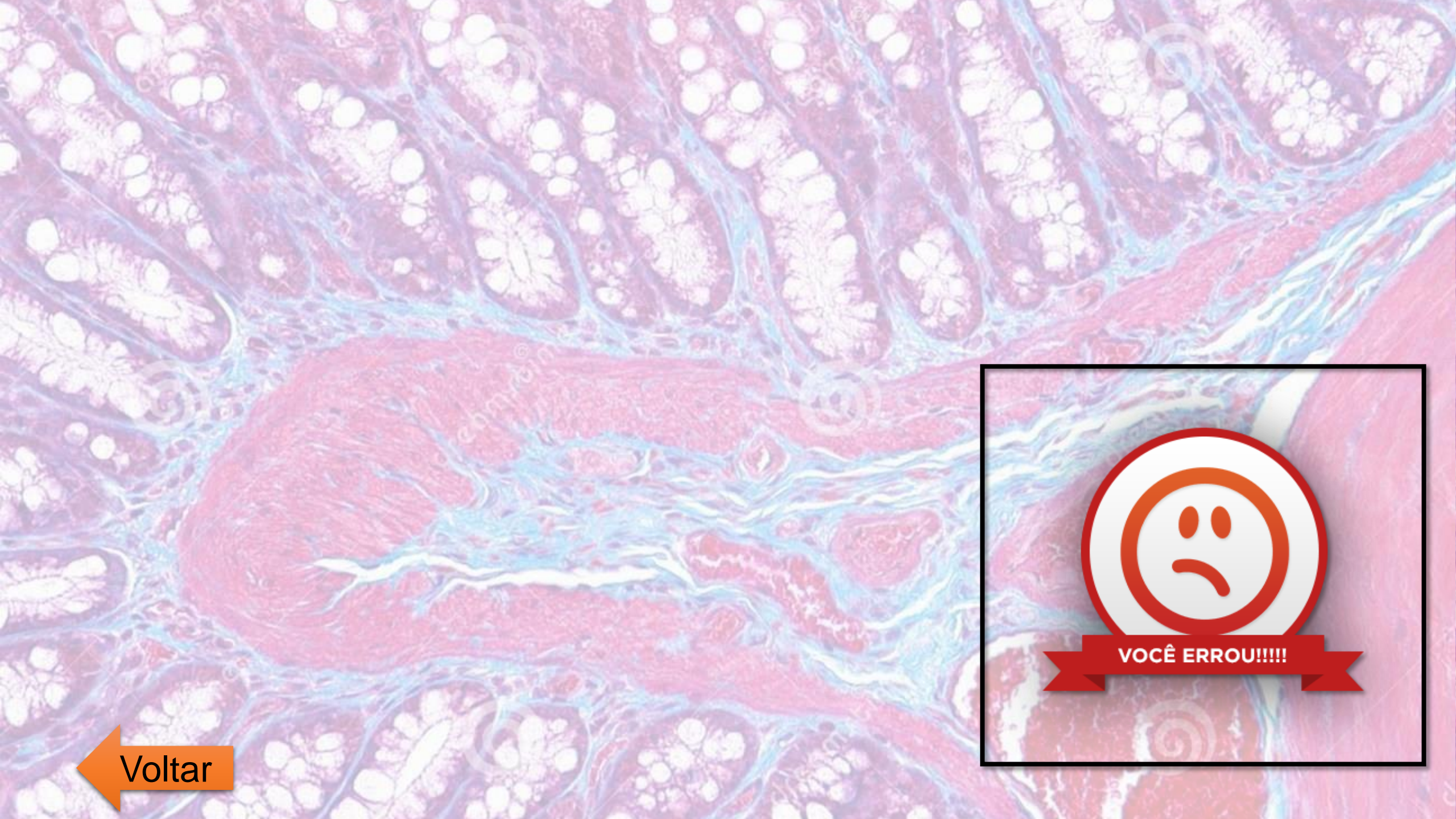
Alternativa “c”. A artéria pulmonar leva sangue pobre em oxigênio para o pulmão para que esse passe pelo processo de hematose.

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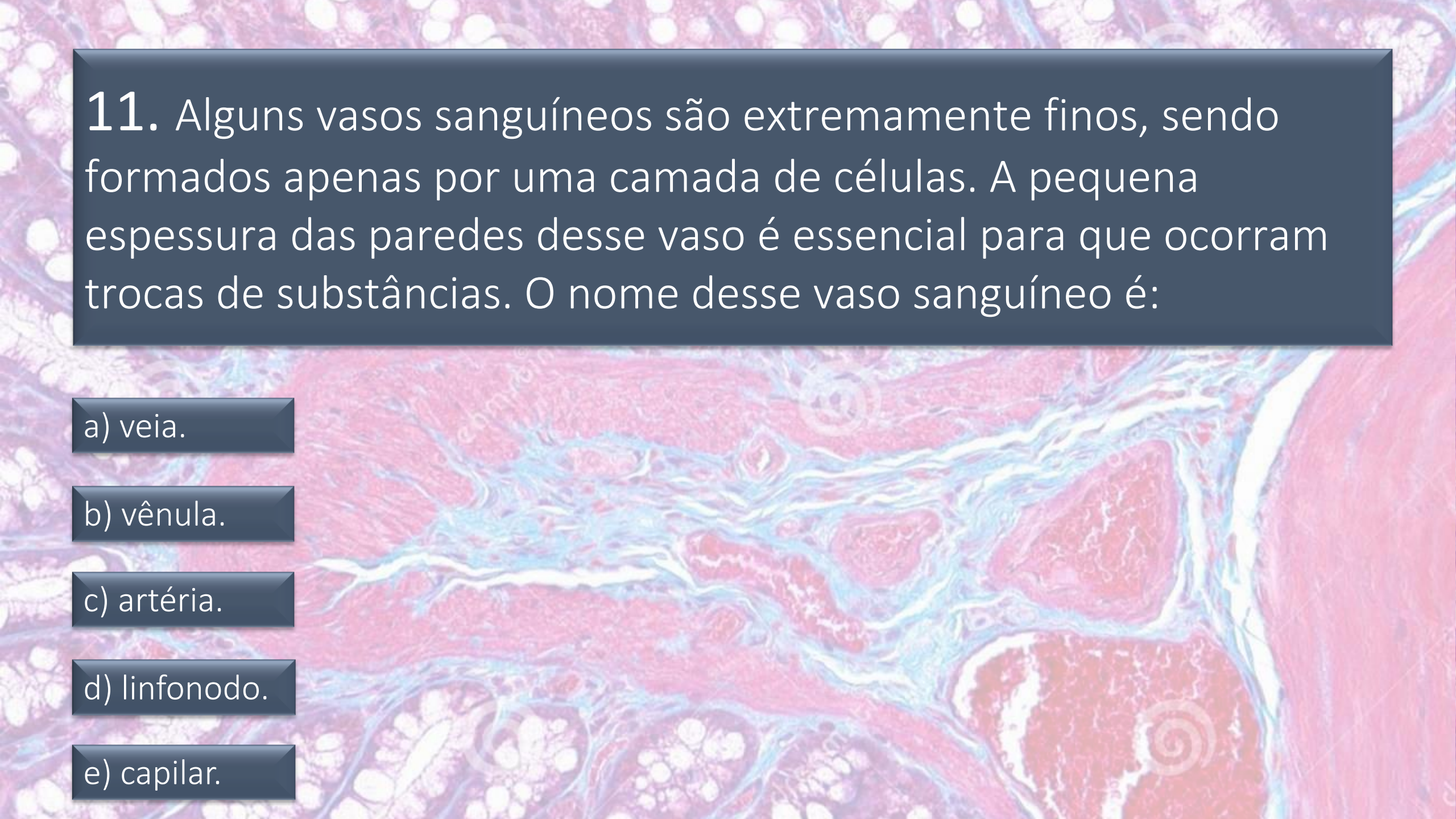




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11. Alguns vasos sanguíneos são extremamente finos, sendo formados apenas por uma camada de células. A pequena espessura das paredes desse vaso é essencial para que ocorram trocas de substâncias. O nome desse vaso sanguíneo é:

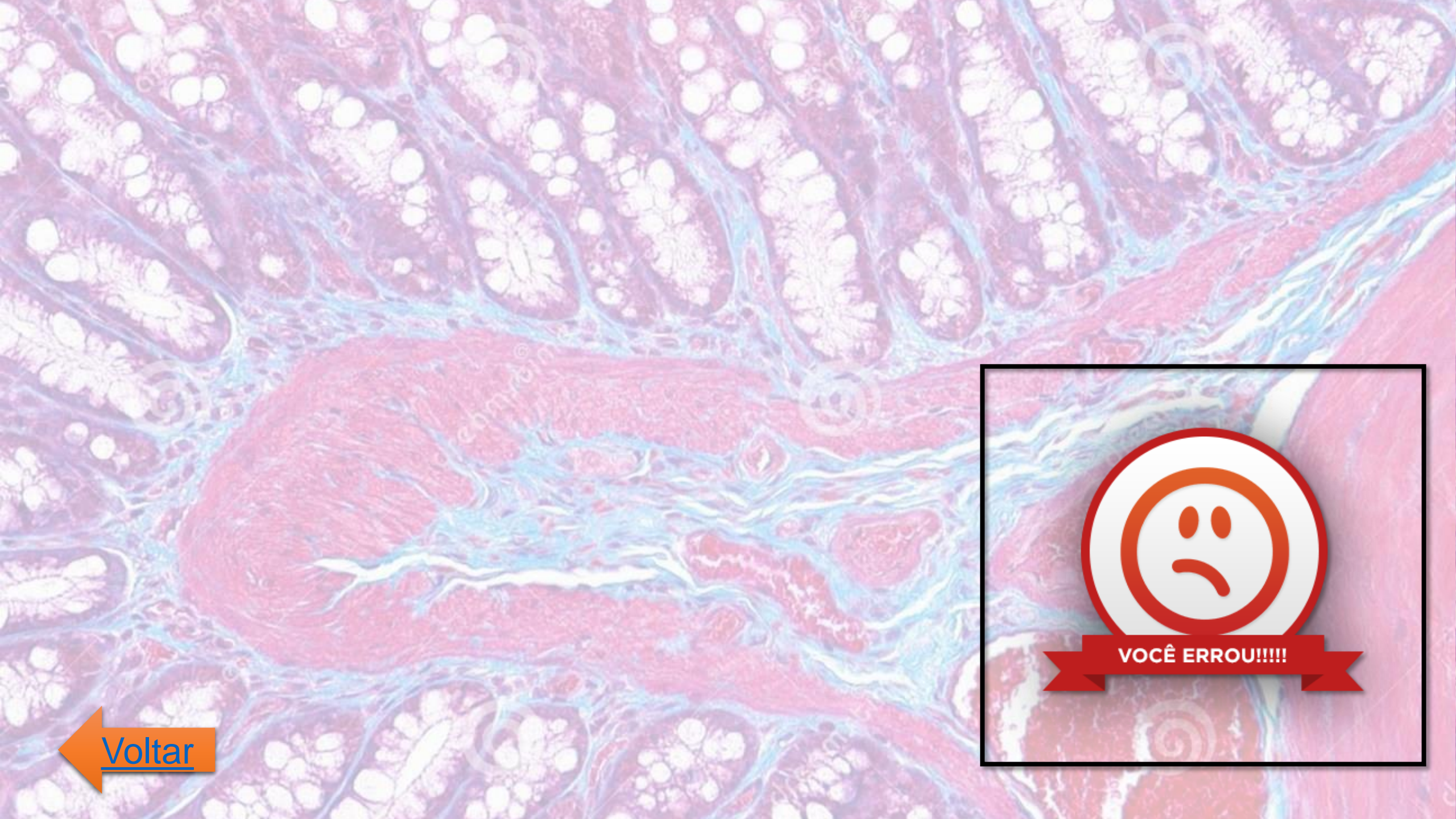
a) veia.

b) vênula.

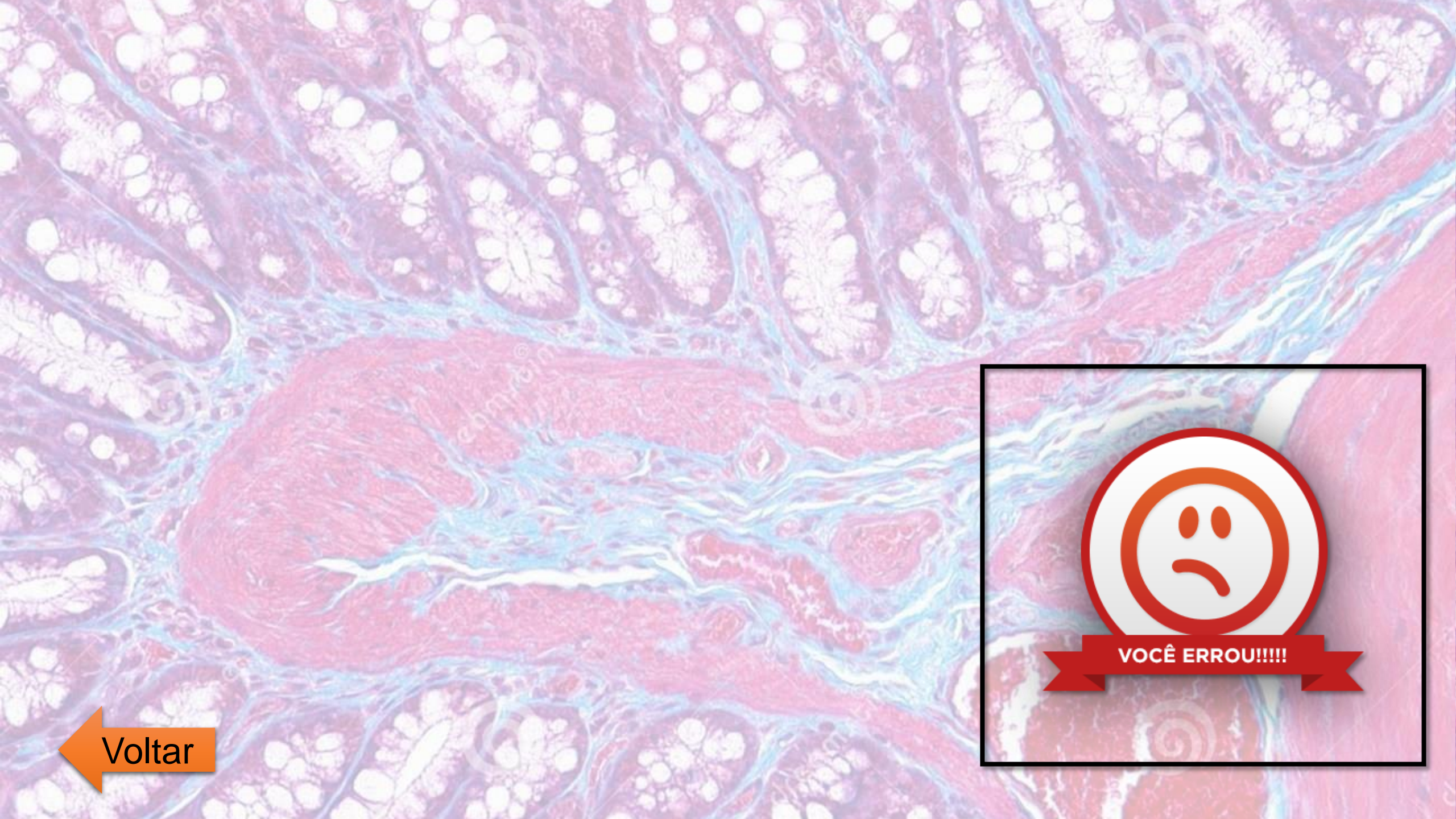
c) artéria.

d) linfonodo.

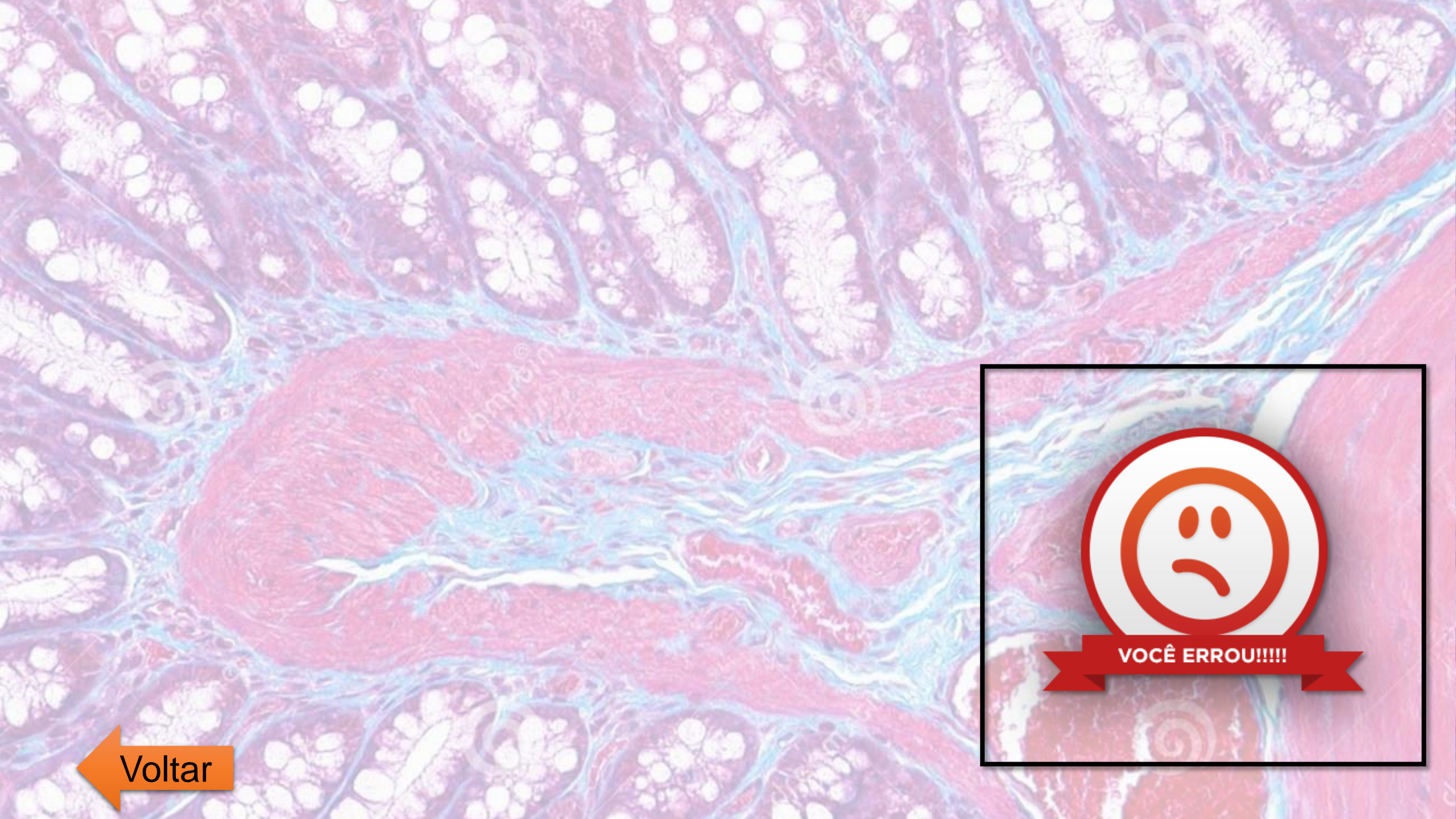
e) capilar.



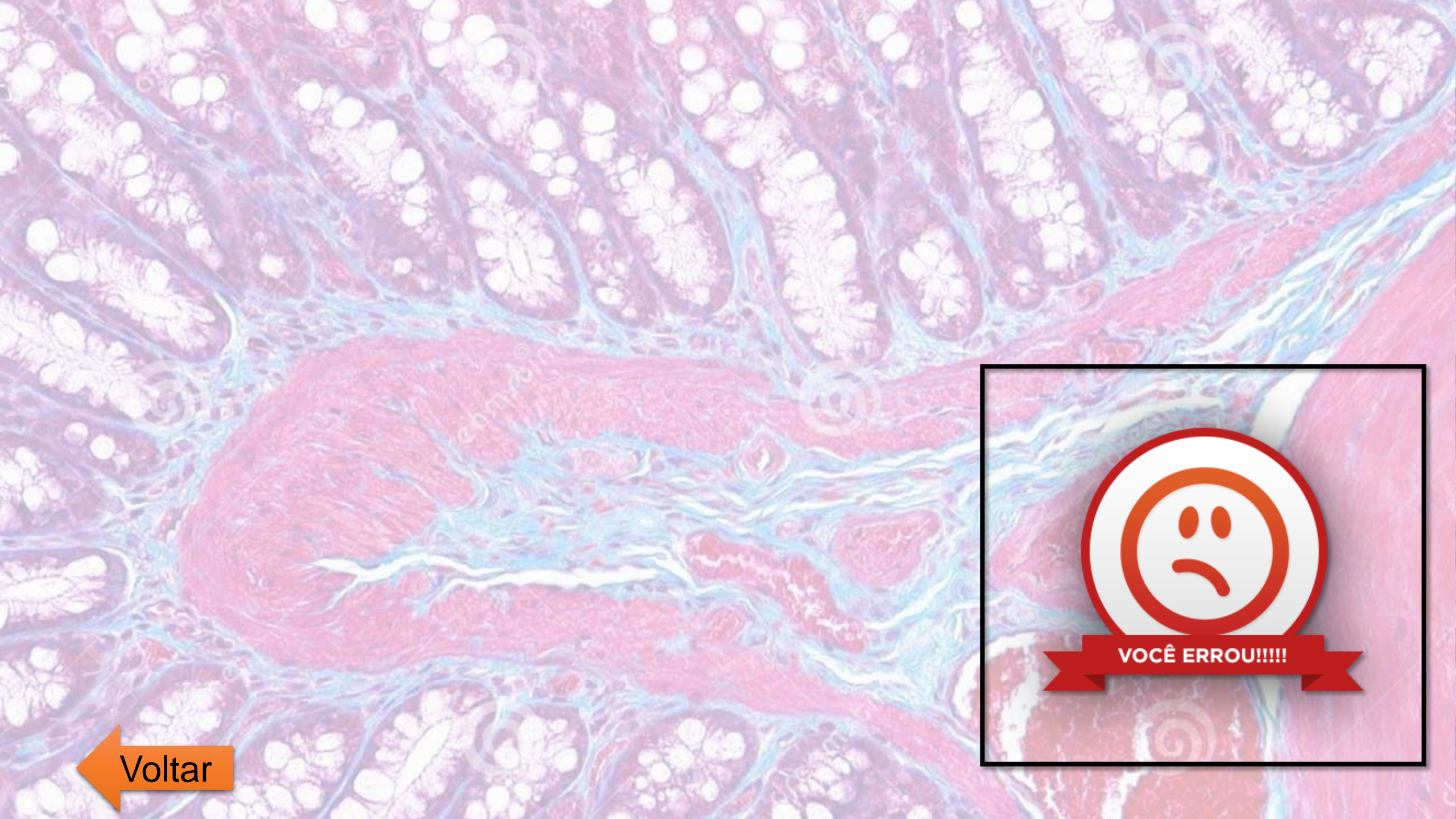
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Alternativa “e”. Os capilares são vasos muito finos formados por paredes com apenas uma camada de células, o que garante a troca de substâncias entre eles e os tecidos, garantindo a nutrição e a oxigenação.

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12. Os vasos sanguíneos, assim como o coração, são estruturas que compõem o nosso sistema cardiovascular. Eles são importantes porque garantem o transporte de sangue para todo o organismo, possibilitando a nutrição e oxigenação das células do corpo.

A respeito dos vasos sanguíneos, marque a alternativa correta:

a) Os capilares sanguíneos são constituídos por duas camadas de tecido denominadas túnicas.

b) As veias transportam sangue dos tecidos para o coração.

c) As veias coronárias irrigam o músculo do coração.

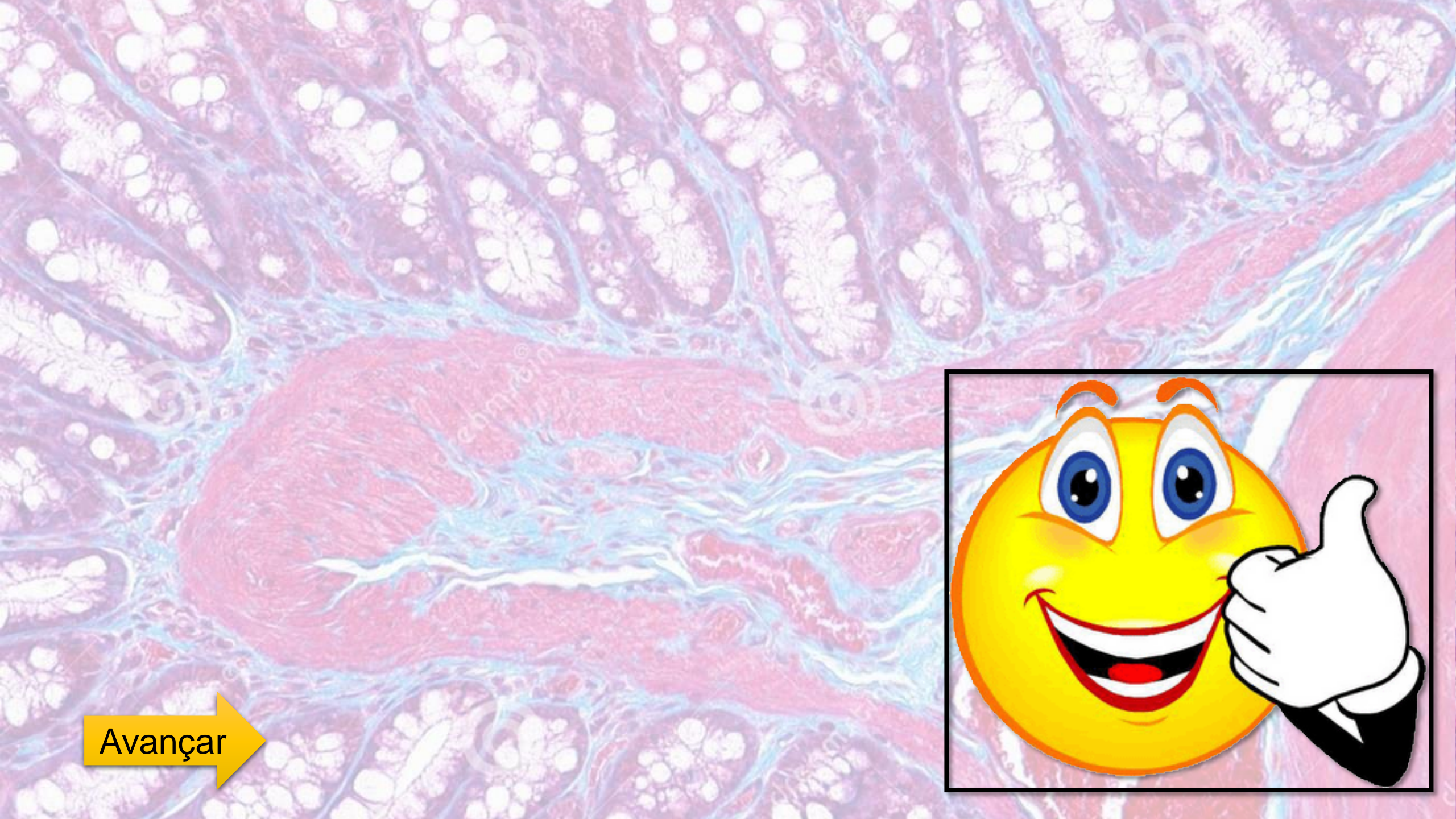
d) As artérias apresentam paredes mais delgadas quando comparadas às veias.

A alternativa “a” está incorreta porque os capilares são formados por uma única camada de células.



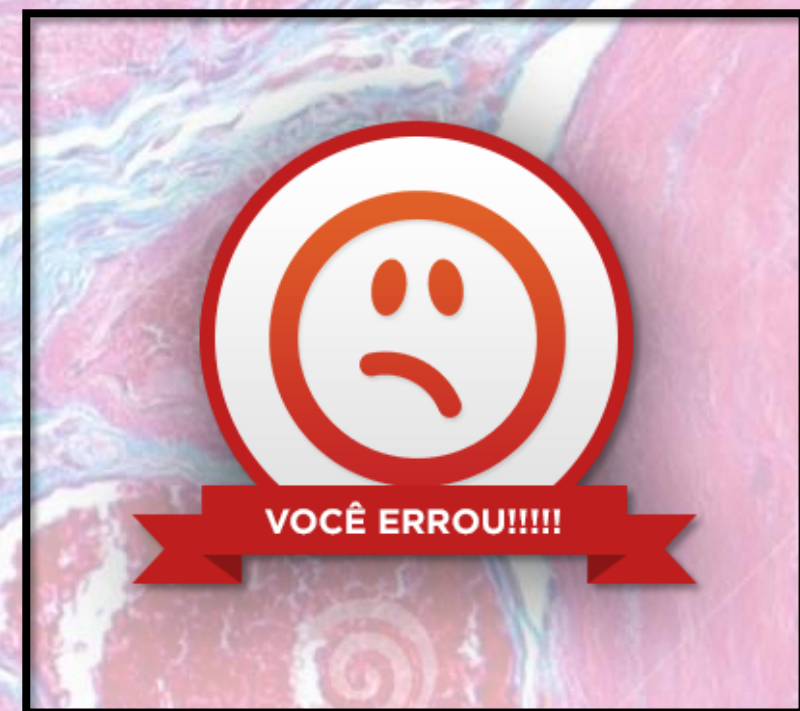
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A alternativa “c” está errada porque as artérias coronárias são responsáveis pela irrigação do músculo cardíaco.



a alternativa “d” está incorreta porque as artérias possuem paredes espessas quando comparadas às veias.



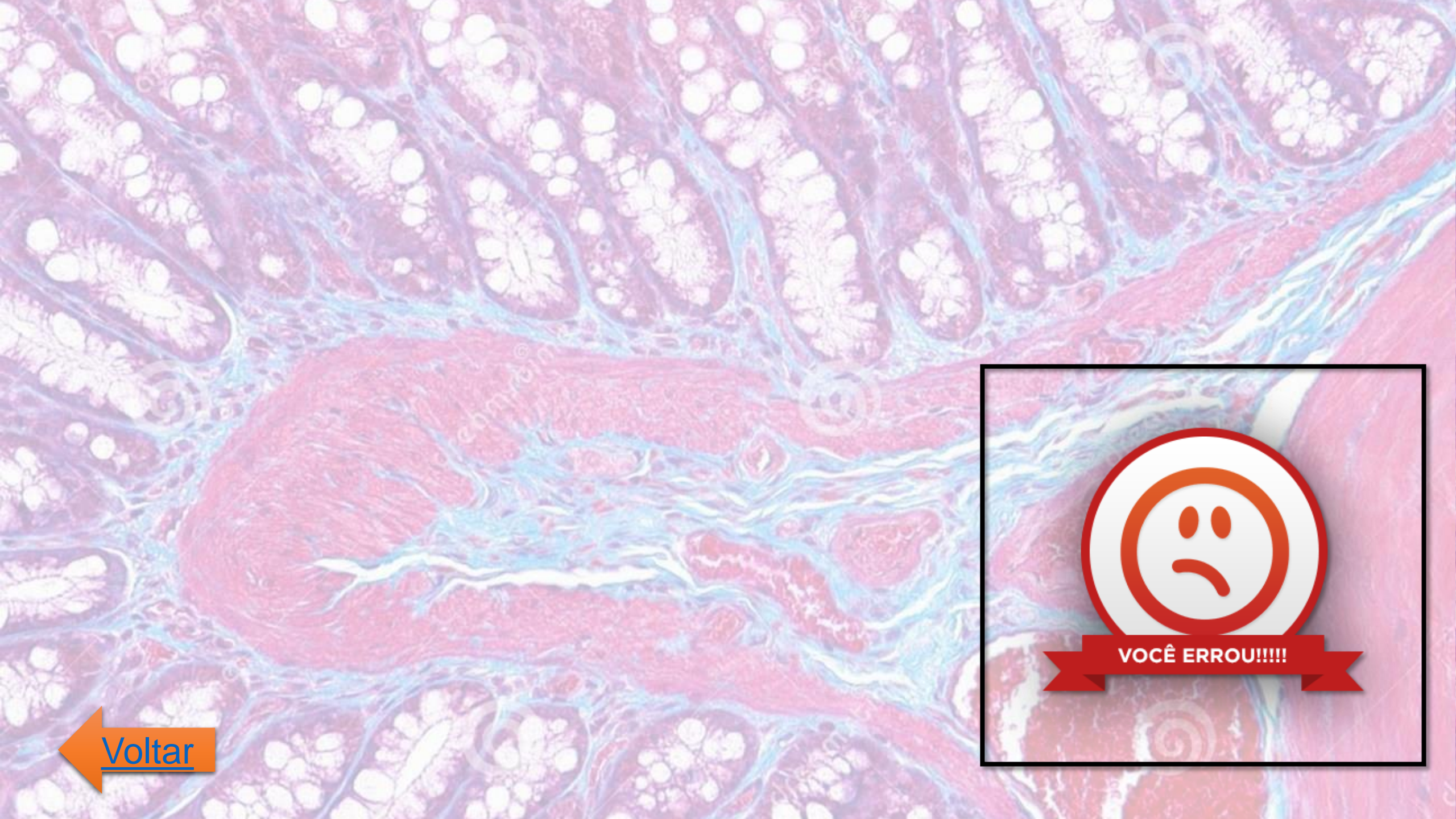
13. O termo "aterosclerose" foi criado para descrever a esclerose (endurecimento) arterial, que era acompanhada de depósitos gordurosos nas artérias. Sobre as artérias e os processos mencionados, é incorreto afirmar:

a) A artéria coronária alimenta o músculo cardíaco e lhe fornece sangue arterial, mesmo de seu lado direito.

b) Toda artéria conduz sangue arterial impulsionado pela contração cardíaca e direcionado pelas válvulas cardíacas.

c) A perda de elasticidade das artérias pode acarretar alterações na pressão mínima e máxima e sobrecarregar o coração.

d) É considerado fator favorecedor da aterosclerose o excesso de partículas LDL, que transportam grandes quantidades de colesterol no plasma sanguíneo.

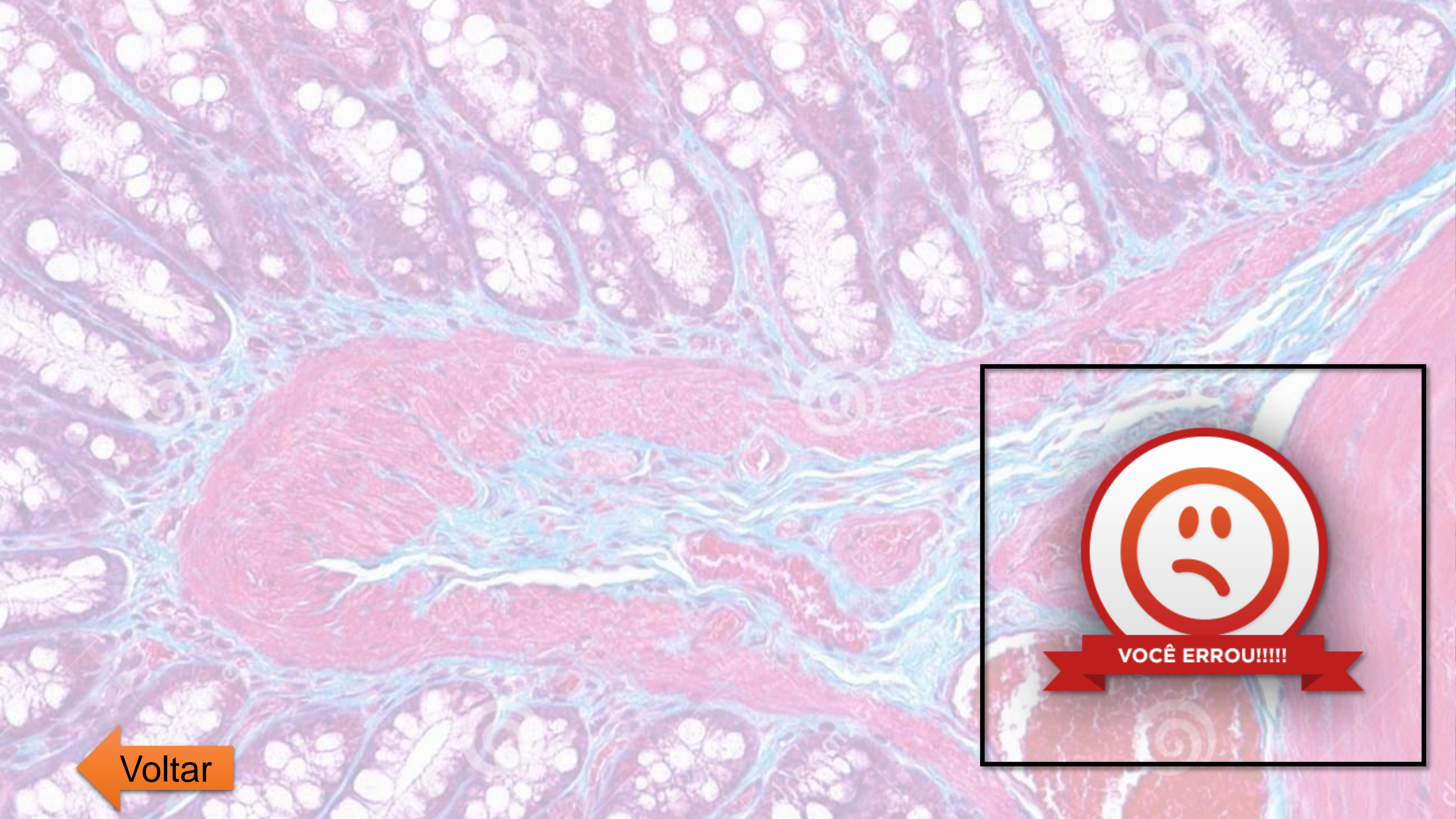


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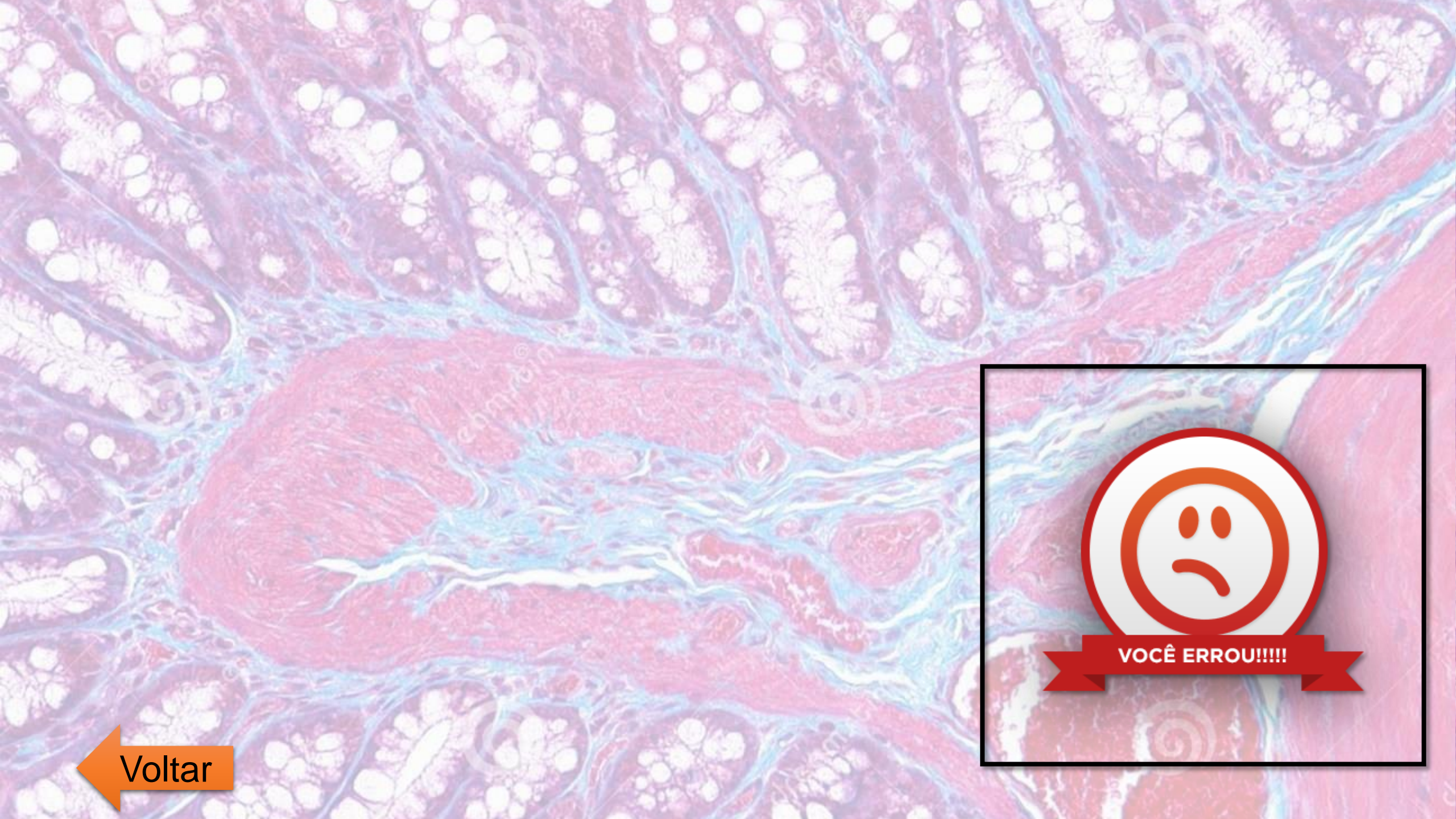
Alternativa “b”. Nem todas as artérias conduzem sangue arterial (rico em oxigênio). A artéria pulmonar é responsável por levar sangue pobre em oxigênio para o pulmão.

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14. I – A pressão máxima medida é obtida quando o ventrículo esquerdo se contrai e a mínima, quando ele relaxa.

II – A pressão sanguínea pode ser medida em qualquer parte do corpo, já que ela é igual em todo o sistema circulatório.

III – O paciente deve evitar esforços físicos antes do exame, pois isso alteraria os resultados.

IV – Os resultados serão alterados caso o paciente tenha ingerido alimentos excessivamente salgados antes do exame.

V – A pressão sanguínea é maior no coração e nas veias e menor nas grandes artérias.

As informações corretas são:

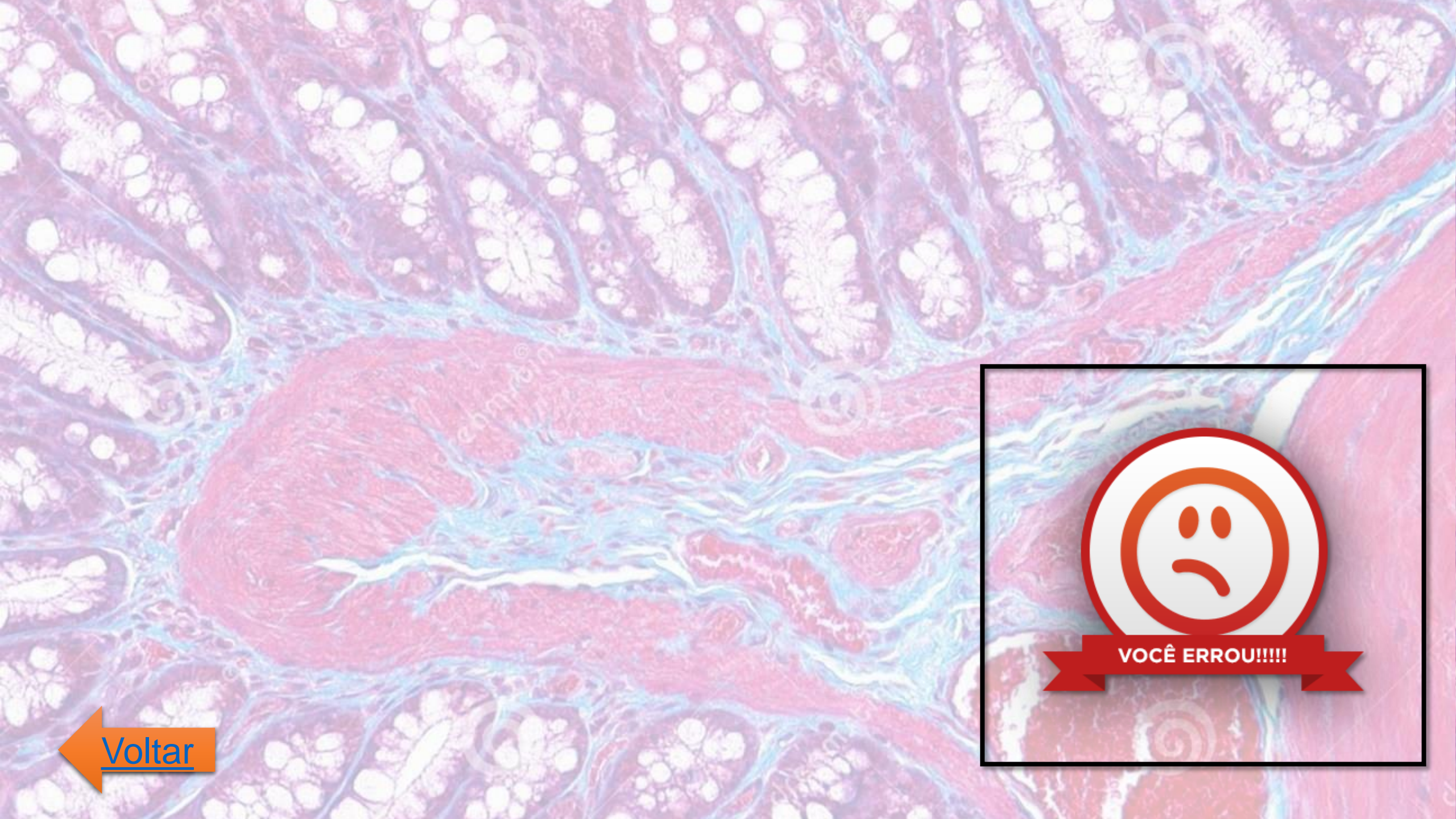
a) I, II e III.

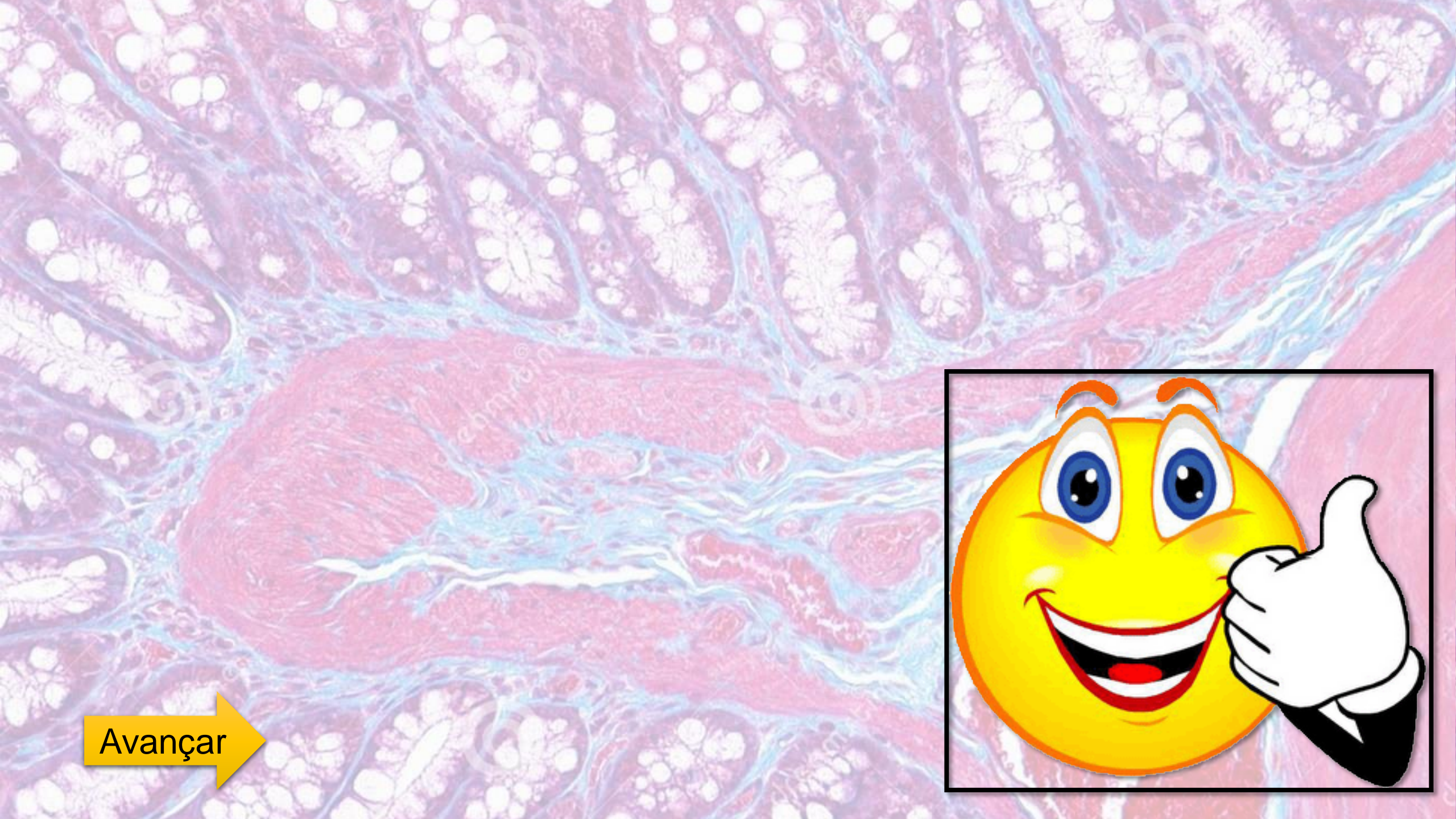
b) I, III e IV.

c) I, IV e V.

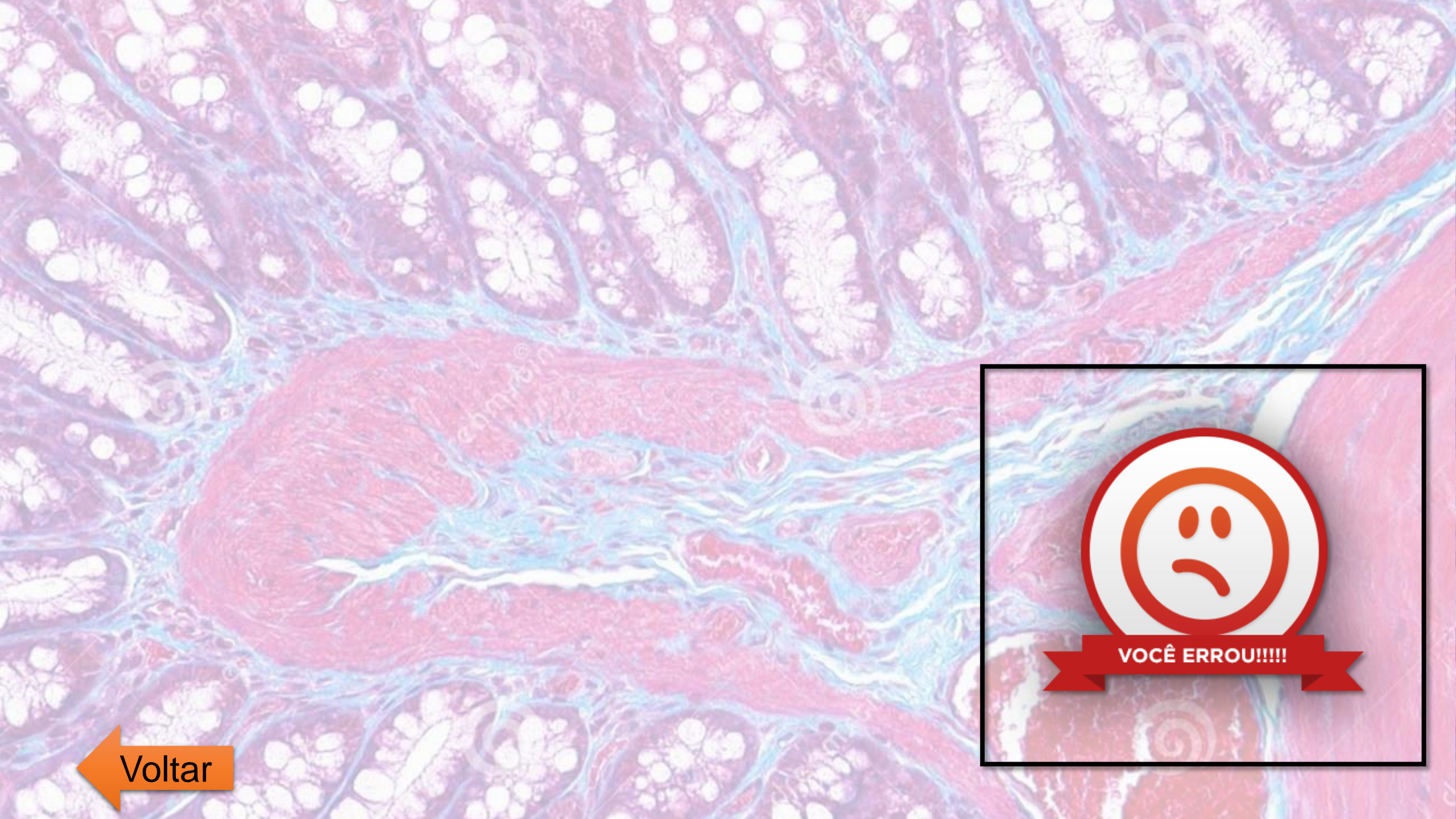
d) II, III e V.

e) III, IV e V.

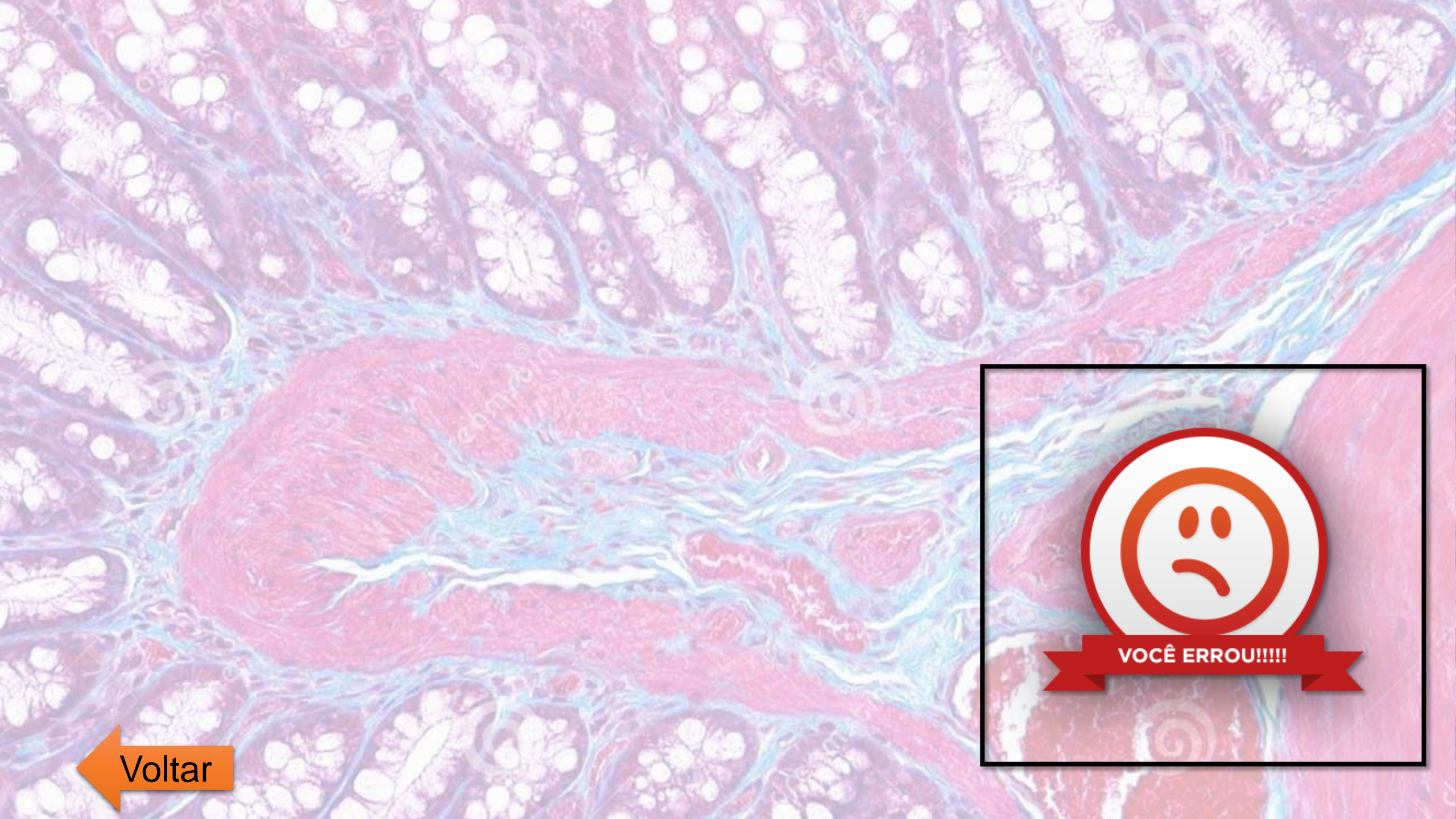




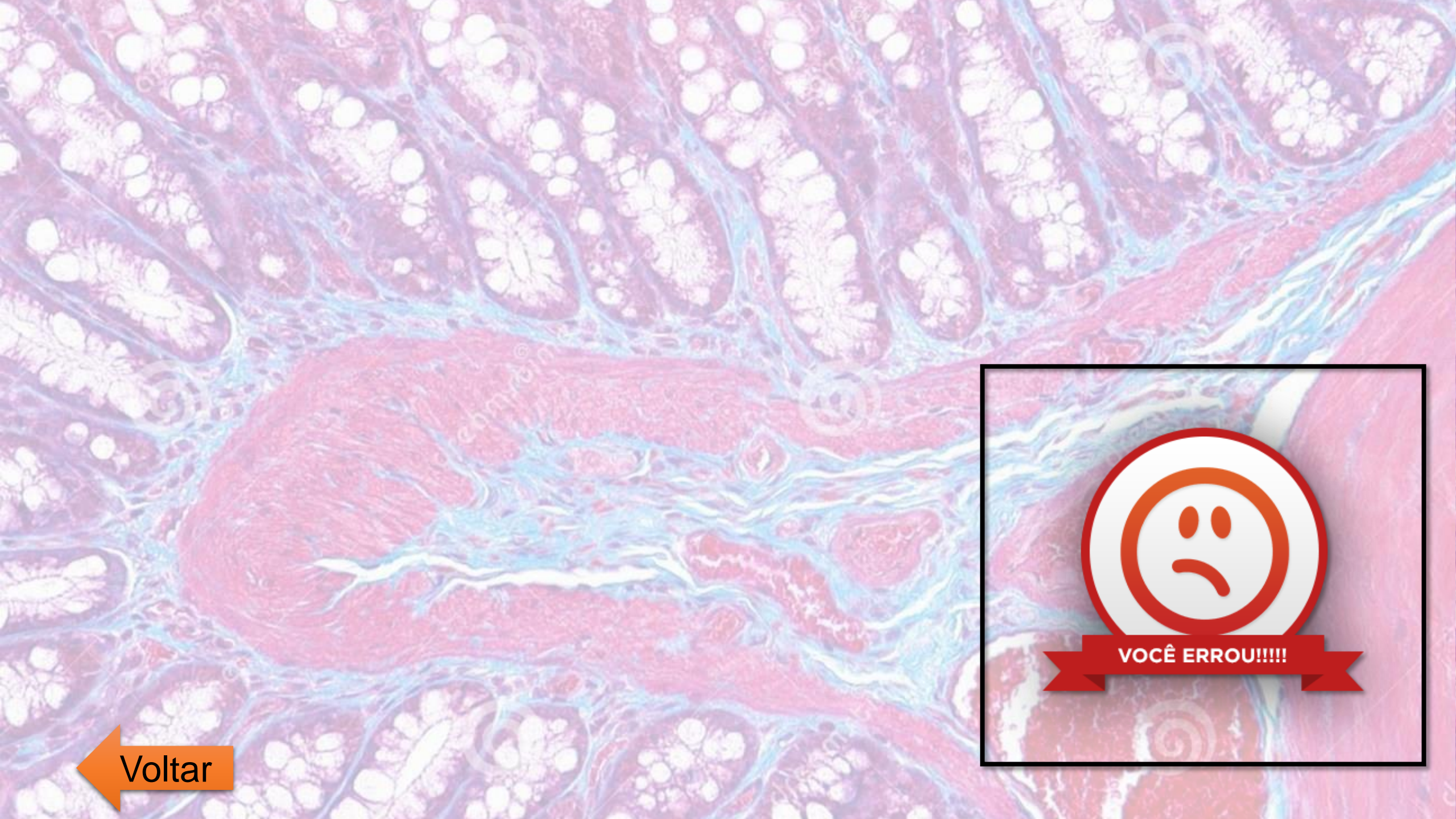
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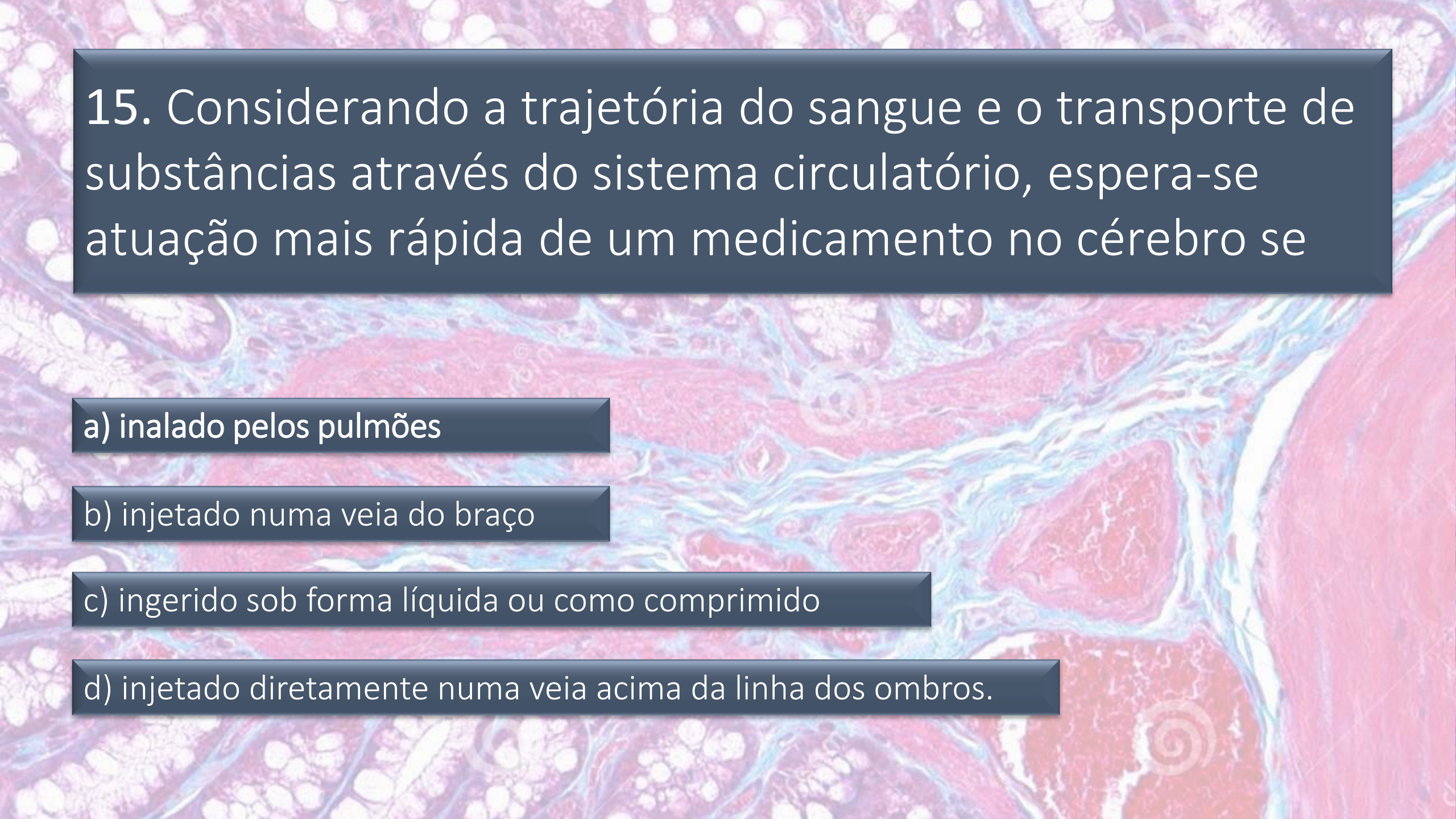
 Voltar



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A microscopic image of tissue, likely a histological section, with a blue overlay. The background is a pinkish-purple color, and the blue overlay highlights certain structures, possibly blood vessels or connective tissue. The text is overlaid on a dark blue rectangular background.

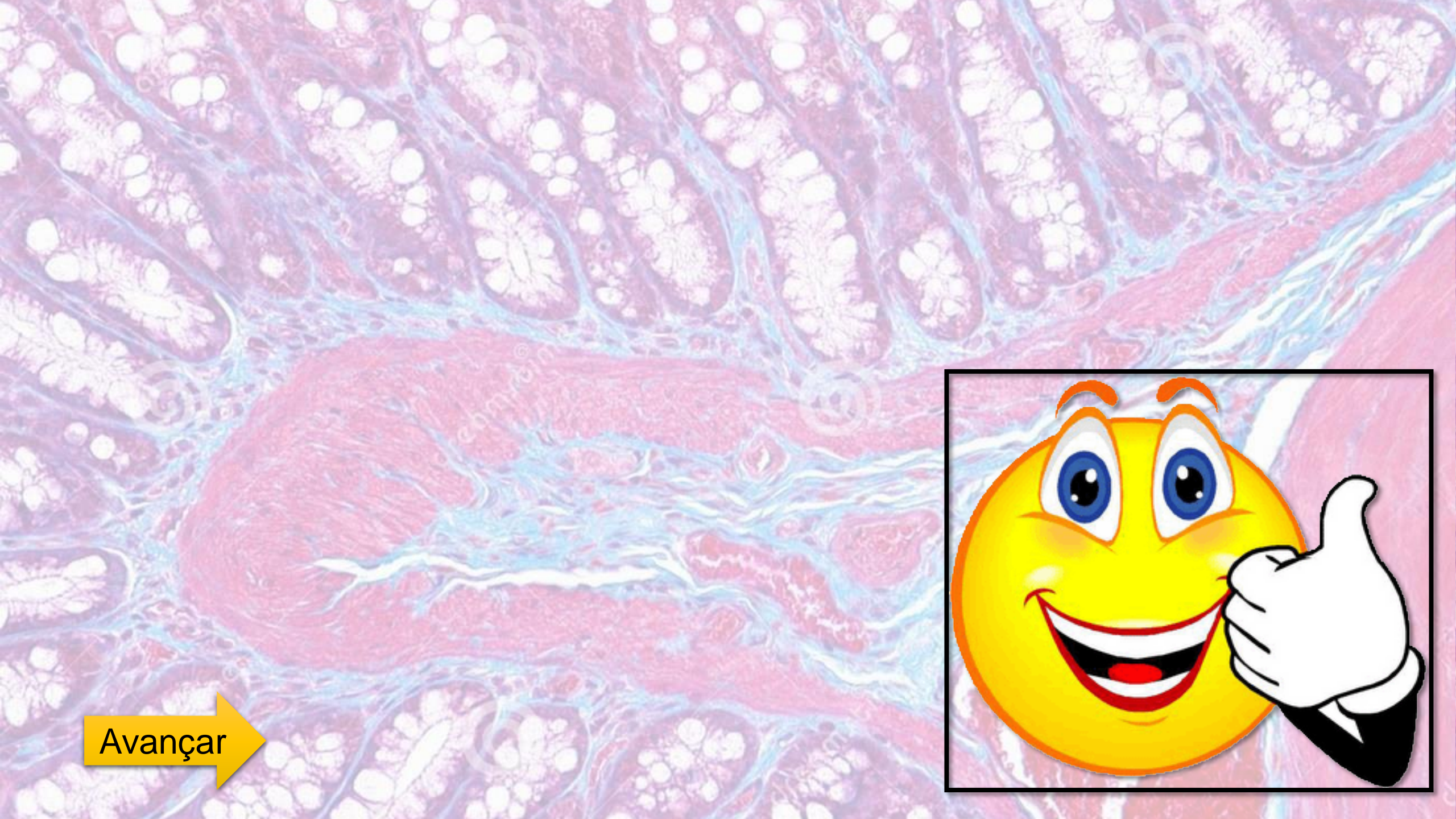
15. Considerando a trajetória do sangue e o transporte de substâncias através do sistema circulatório, espera-se atuação mais rápida de um medicamento no cérebro se

a) inalado pelos pulmões

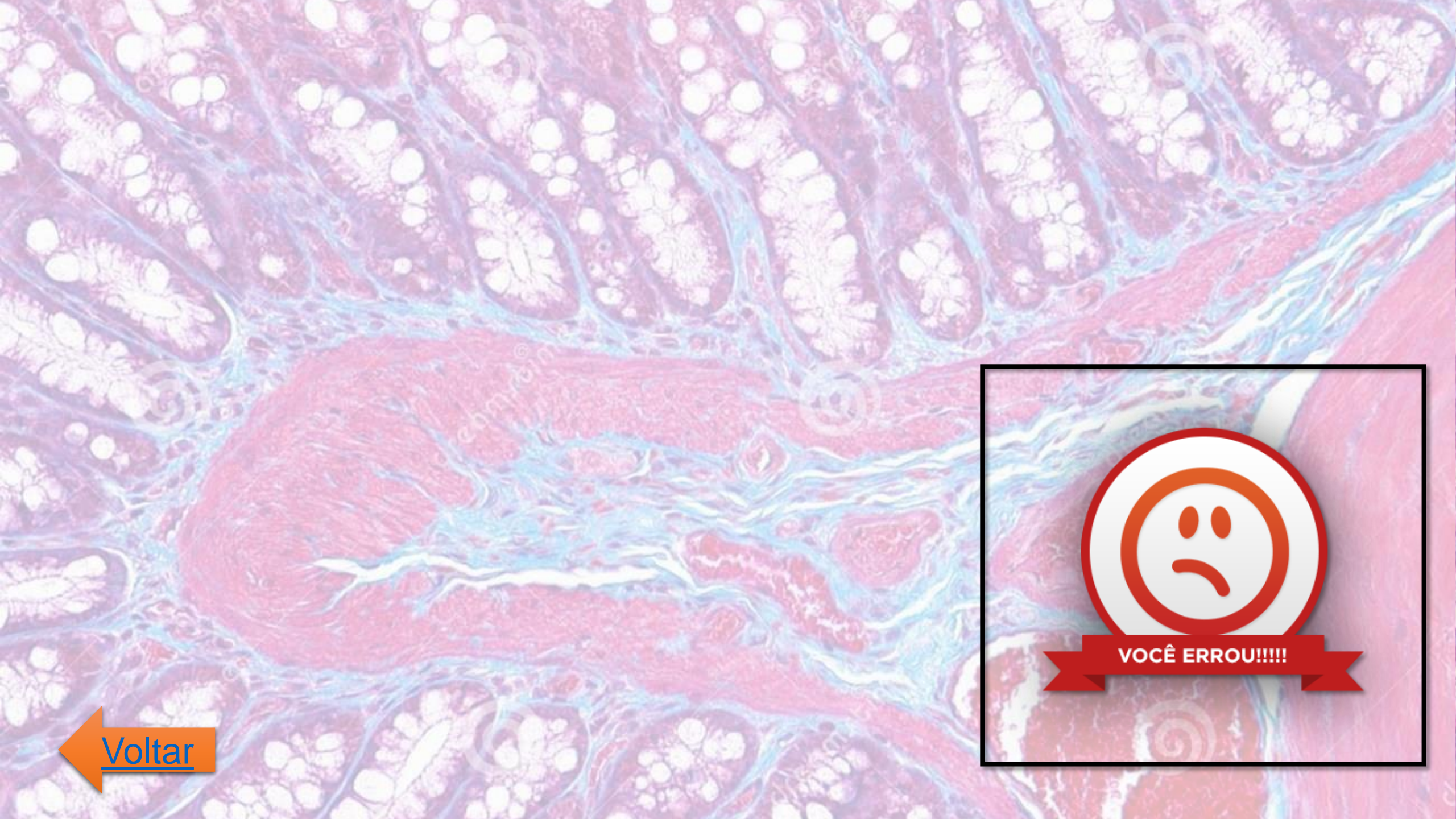
b) injetado numa veia do braço

c) ingerido sob forma líquida ou como comprimido

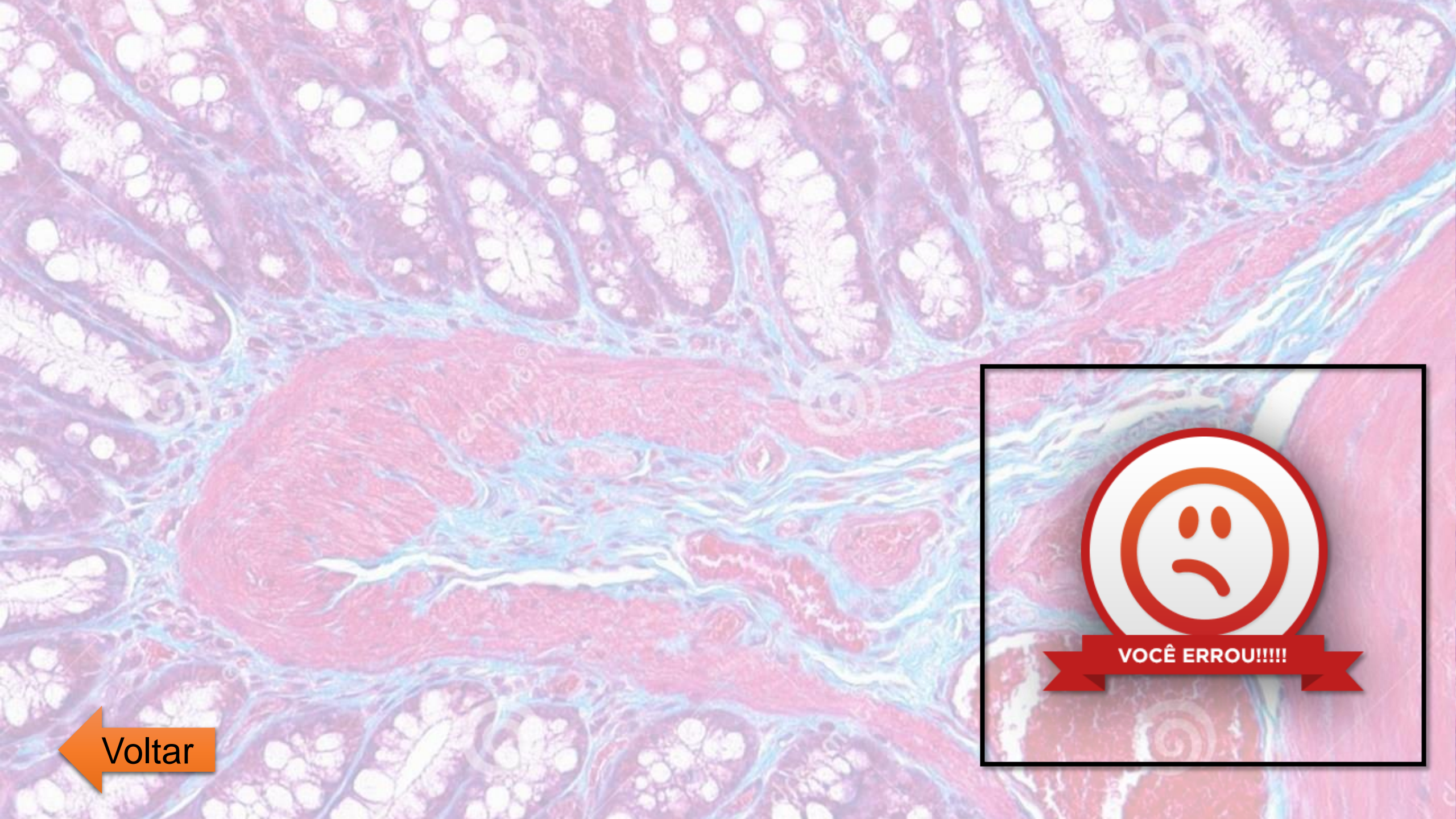
d) injetado diretamente numa veia acima da linha dos ombros.



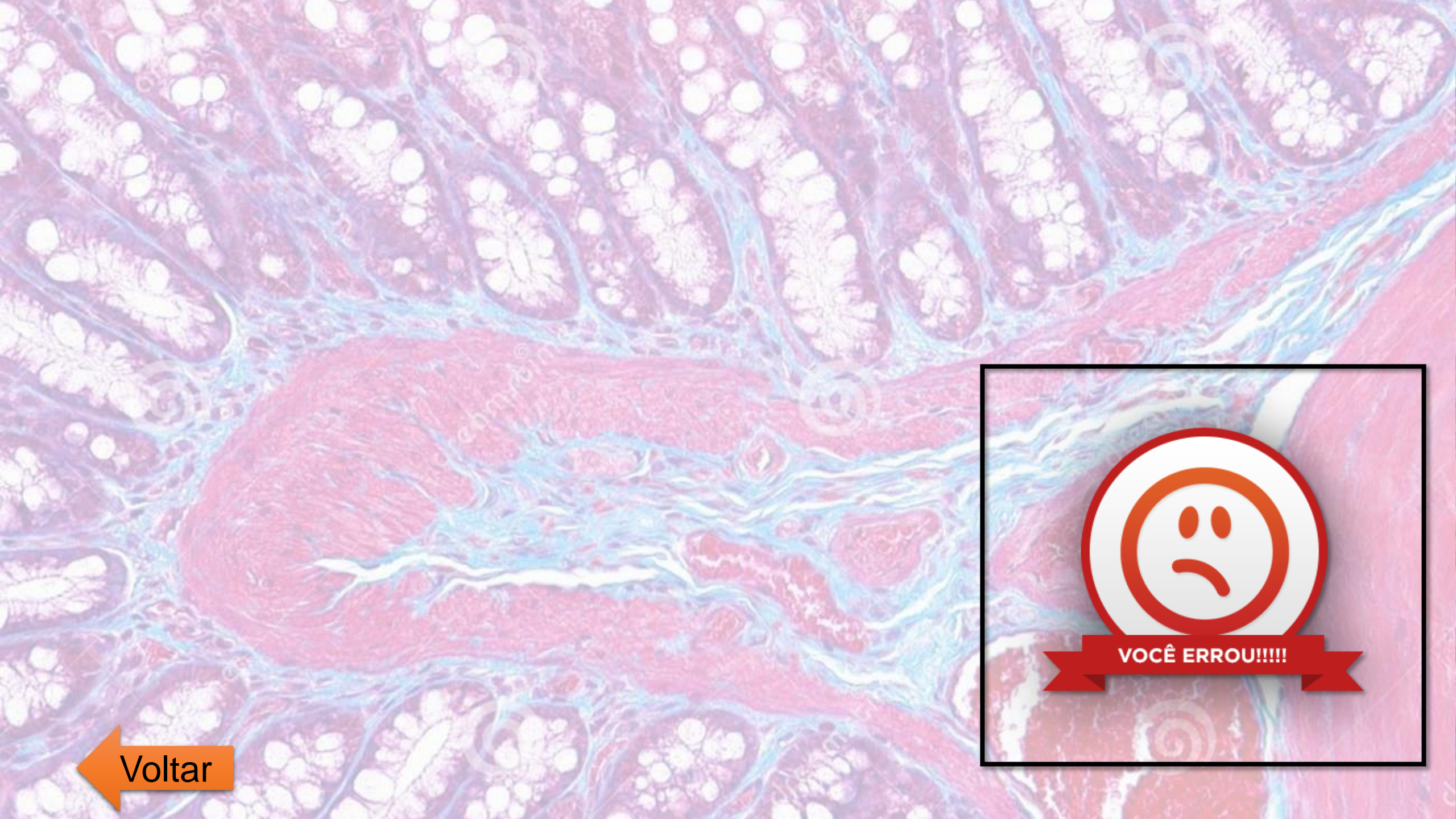
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 Voltar



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16. A dor de cabeça, reação orgânica desencadeada por inúmeros fatores, ocorre quando há

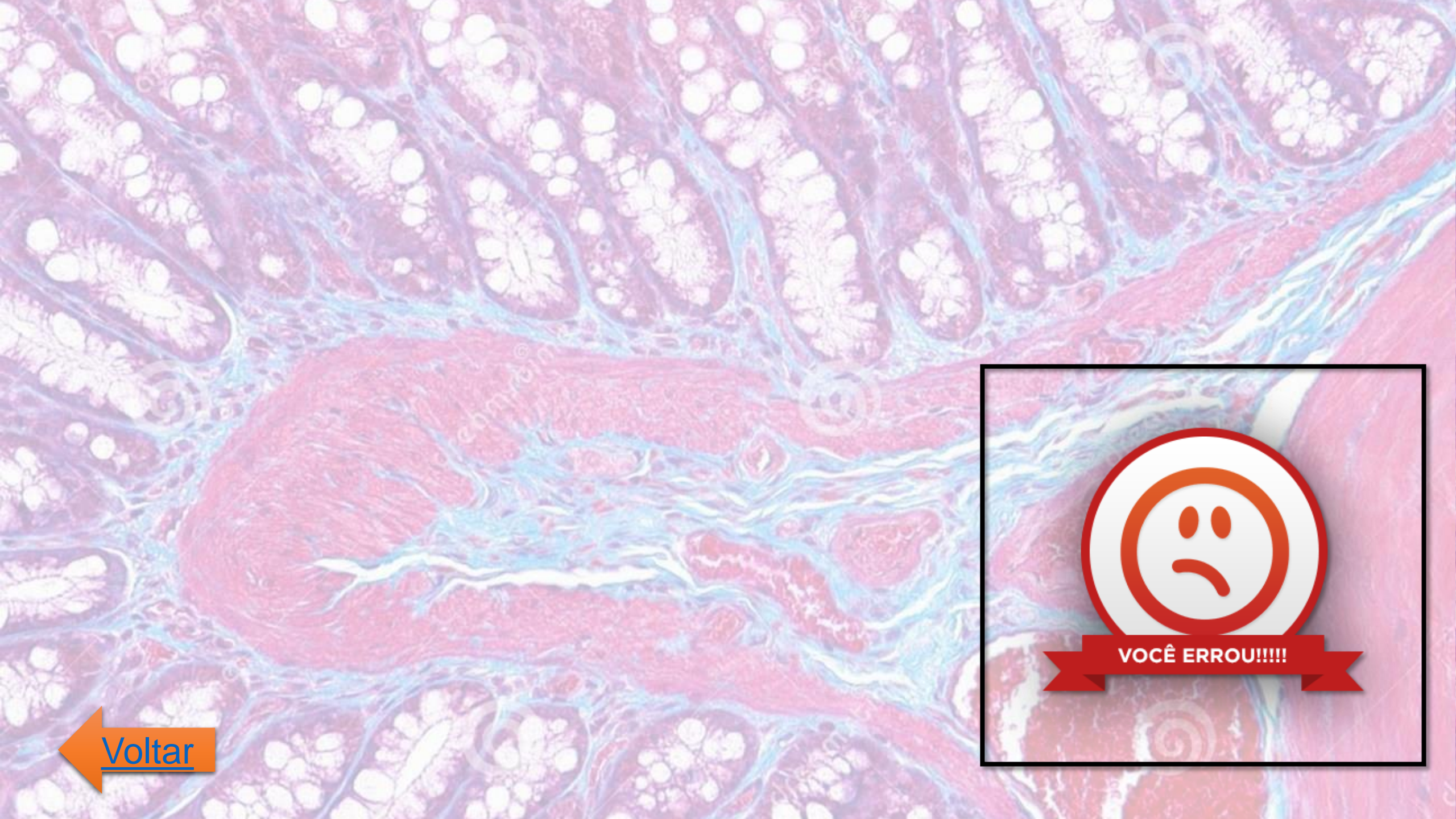
a) dificuldade de respiração, seguida de diminuição da pressão arterial.

b) depósito de gordura nas artérias, com conseqüente aumento da pressão arterial.

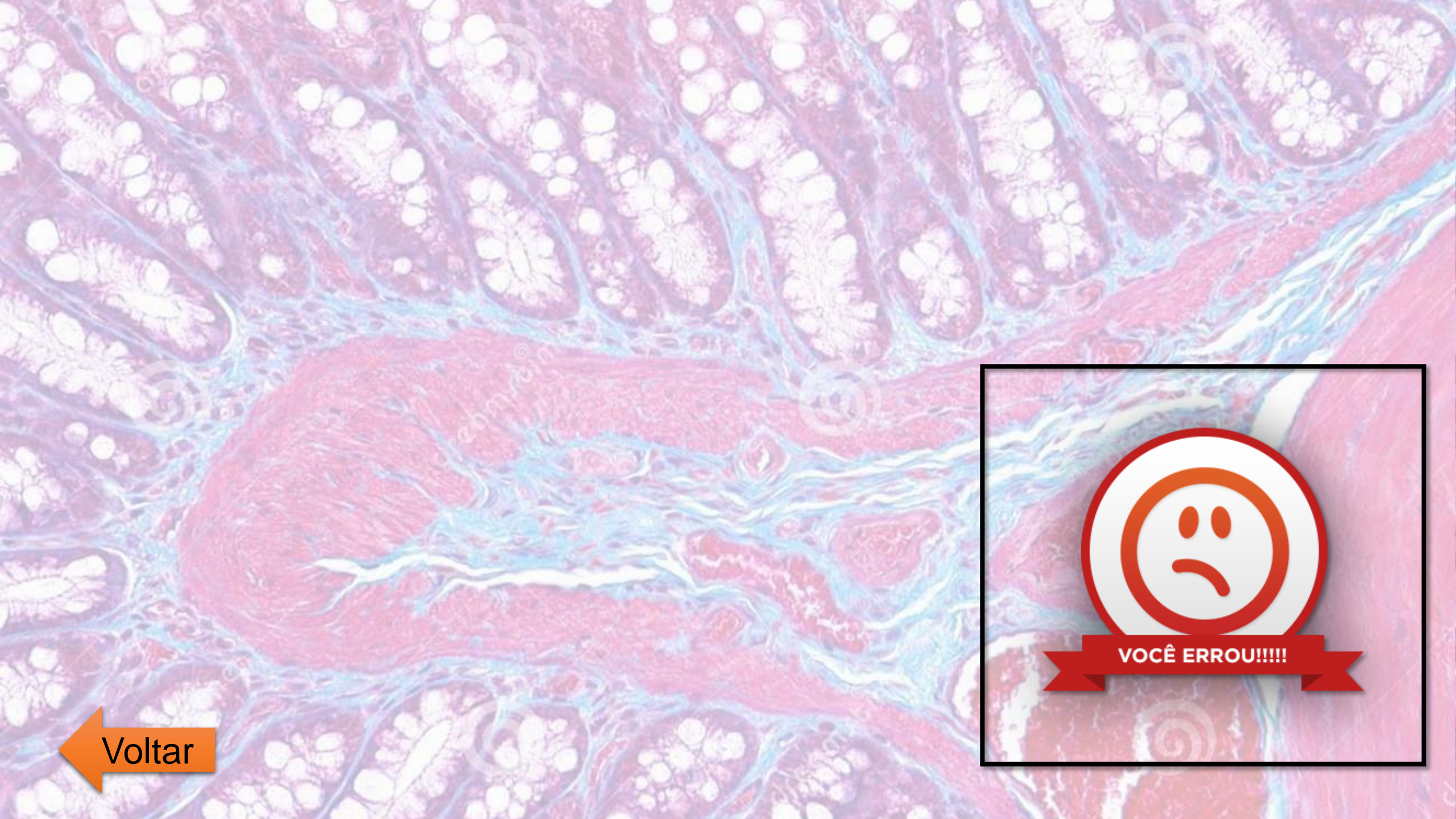
c) produção de substâncias tóxicas agressivas ao sistema nervoso central.

d) contração seguida de dilatação dos vasos sanguíneos cerebrais.

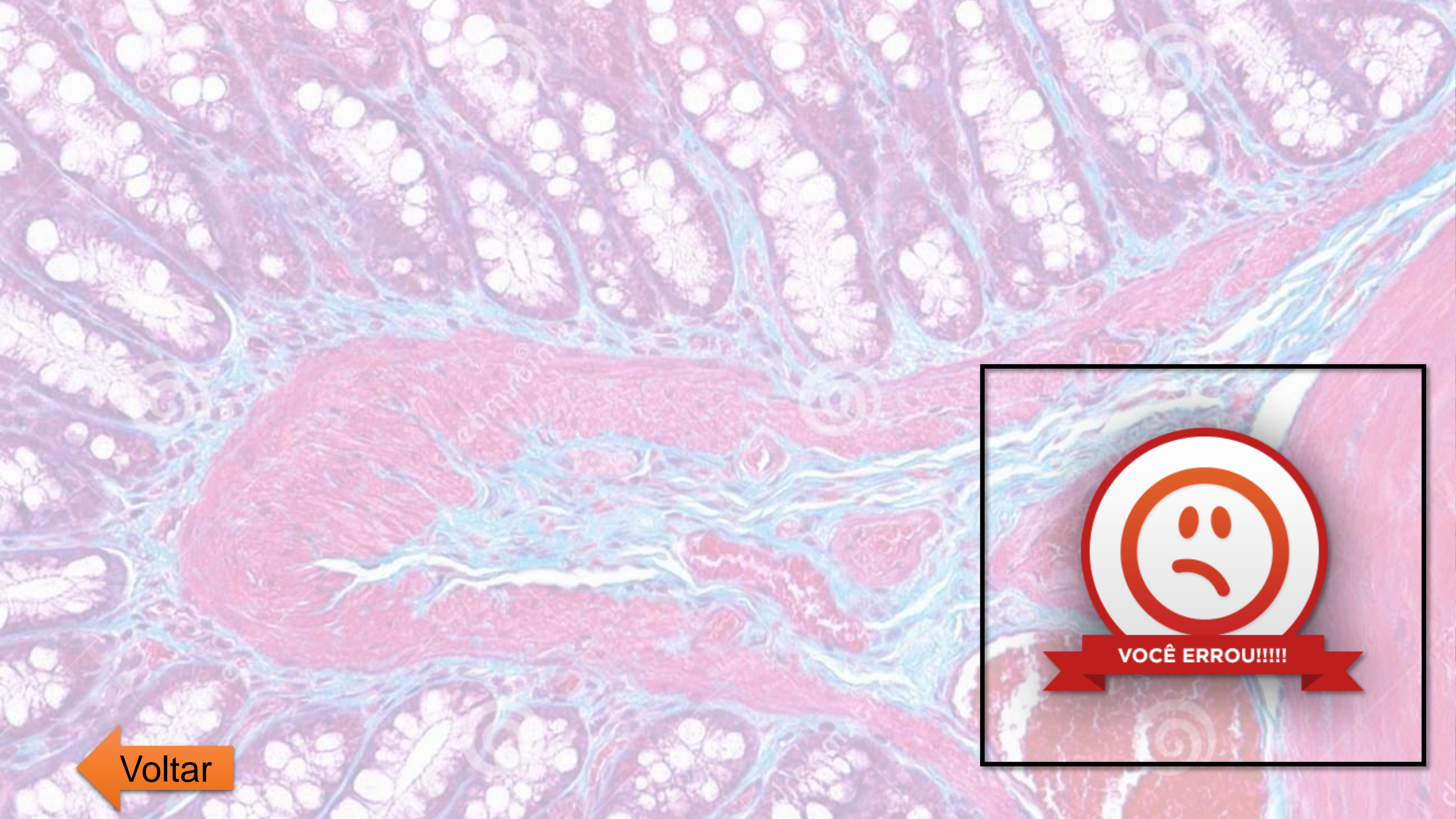
e) inflamação dos vasos linfáticos, com aumento da produção de plaquetas.



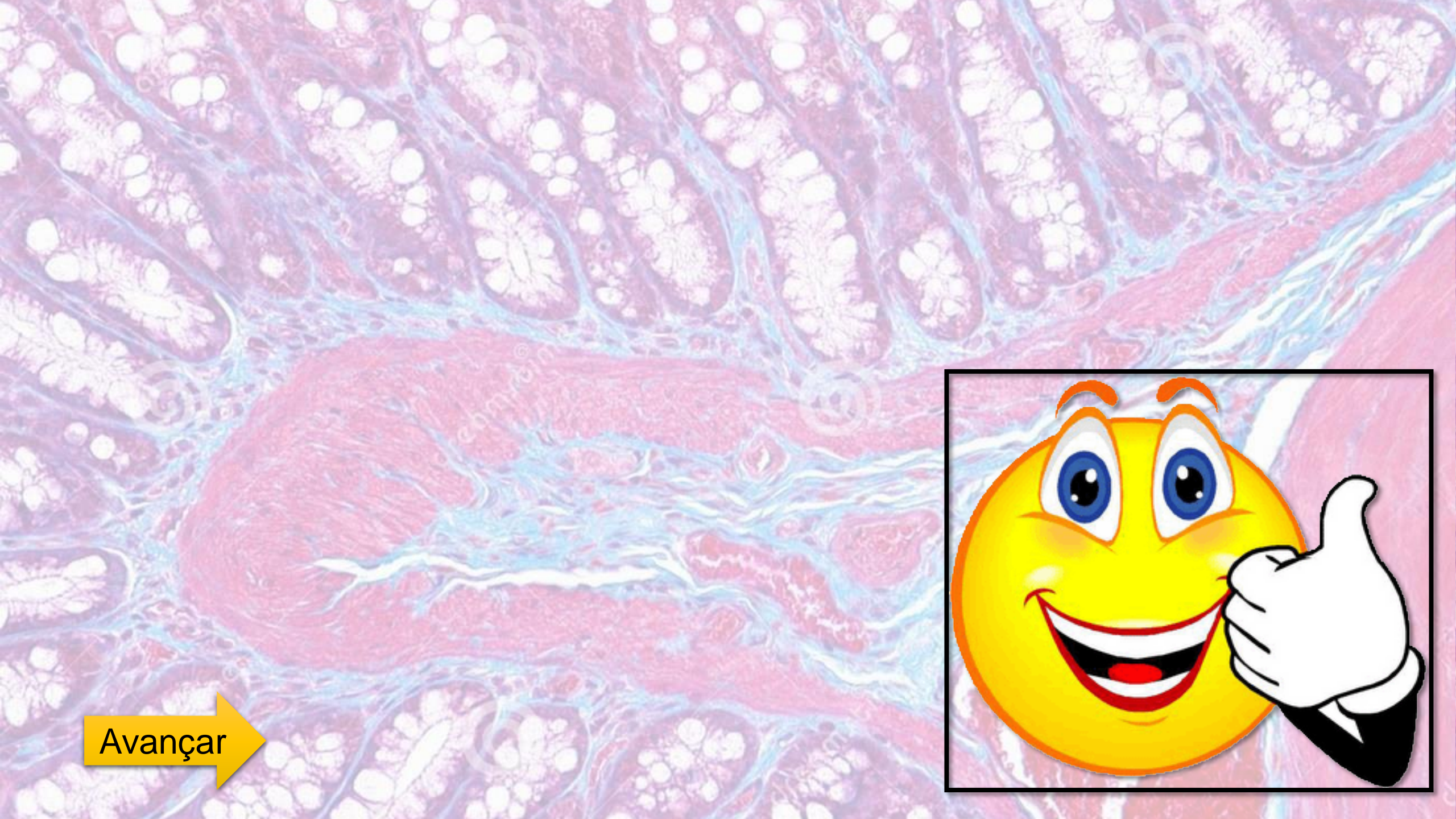
 [Voltar](#)



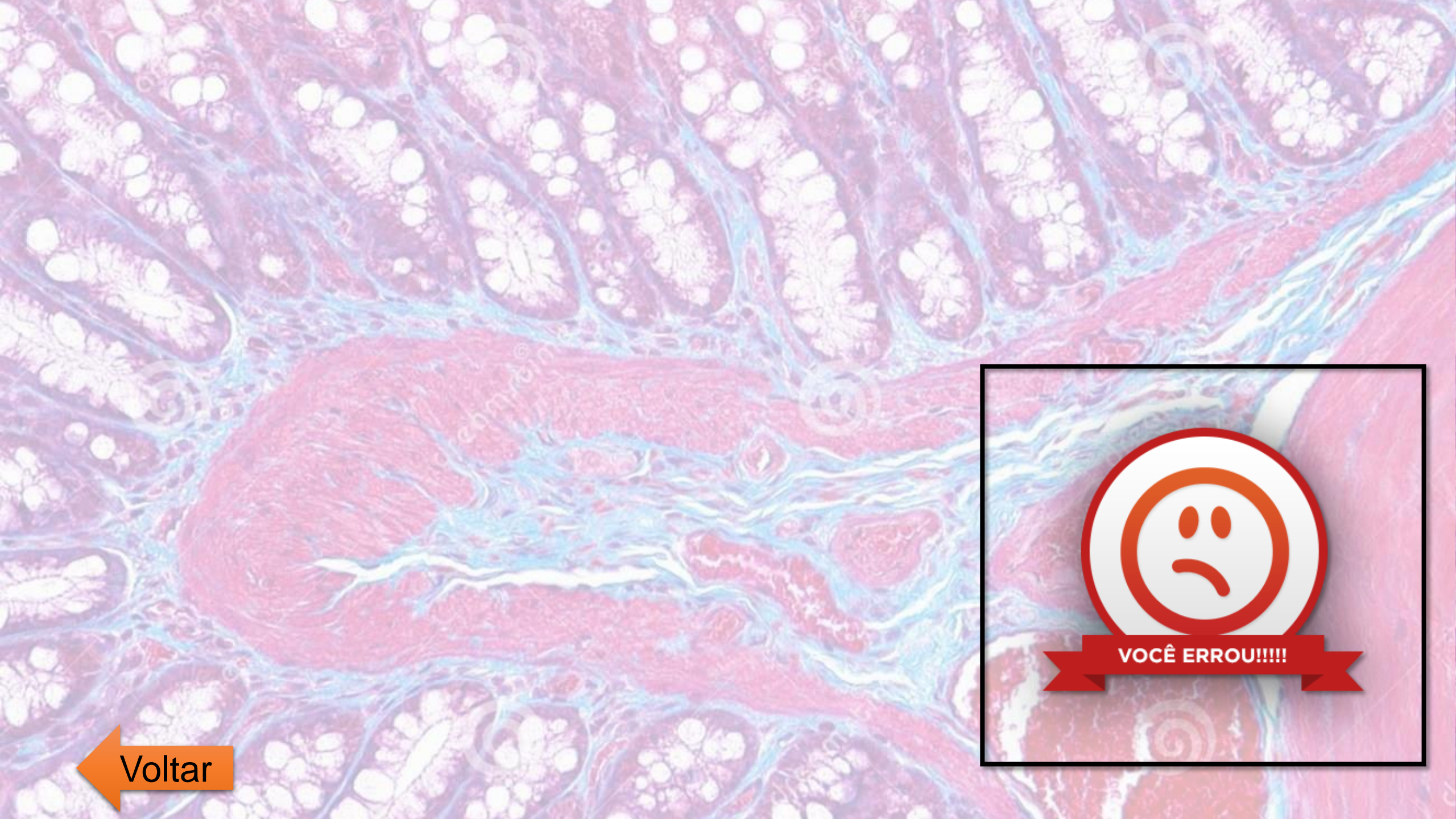
 Voltar



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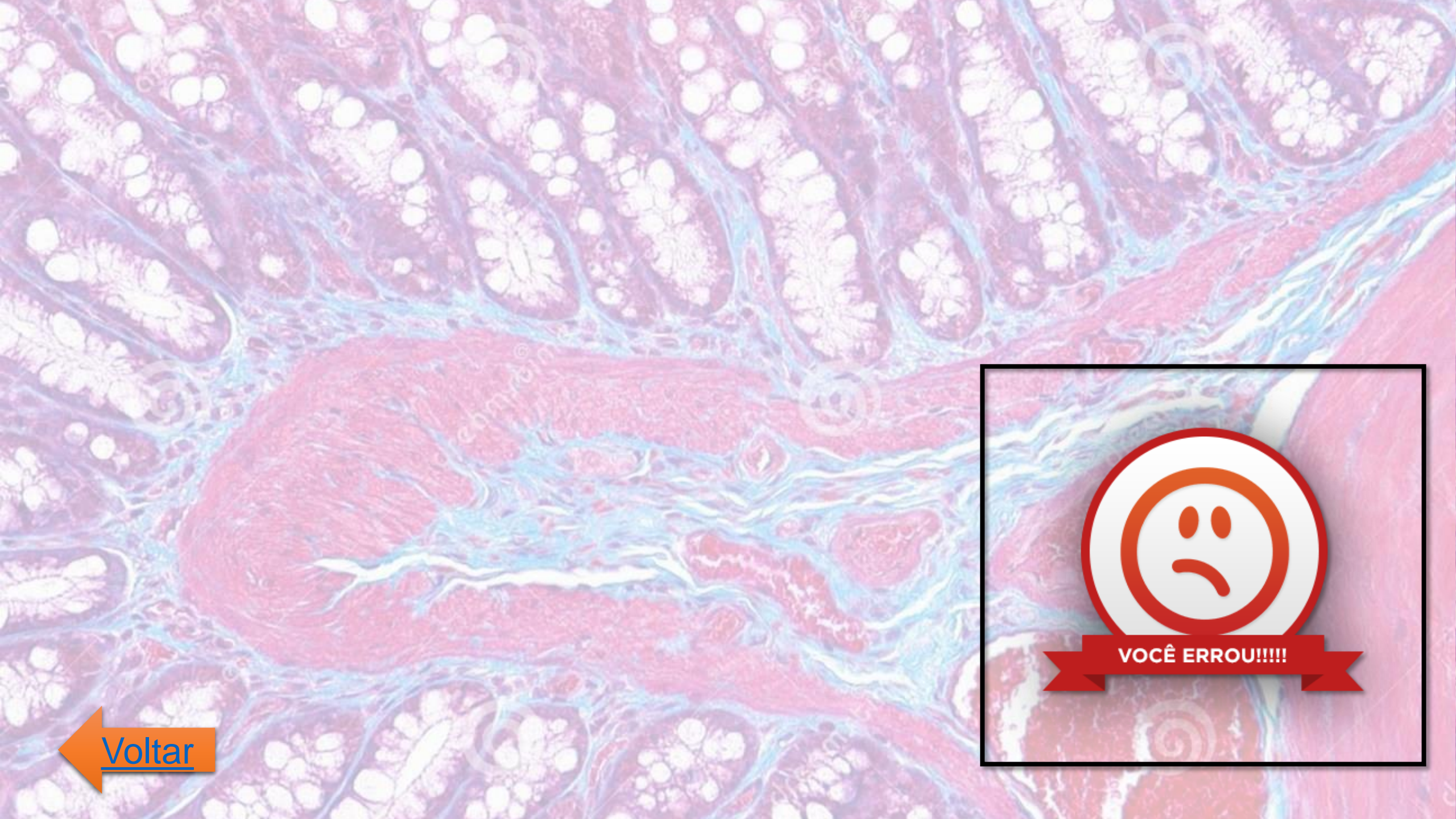
17. Artérias são vasos sanguíneos que transportam o sangue do coração para os tecidos, enquanto veias trazem o sangue para o coração. Admita, no entanto, que as artérias fossem definidas como vasos que transportassem sangue oxigenado e as veias, vasos que transportassem sangue desoxigenado. Nesse caso, a artéria e a veia que deveriam inverter suas denominações, no ser humano, seriam, respectivamente, as conhecidas como:

a) renal e renal.

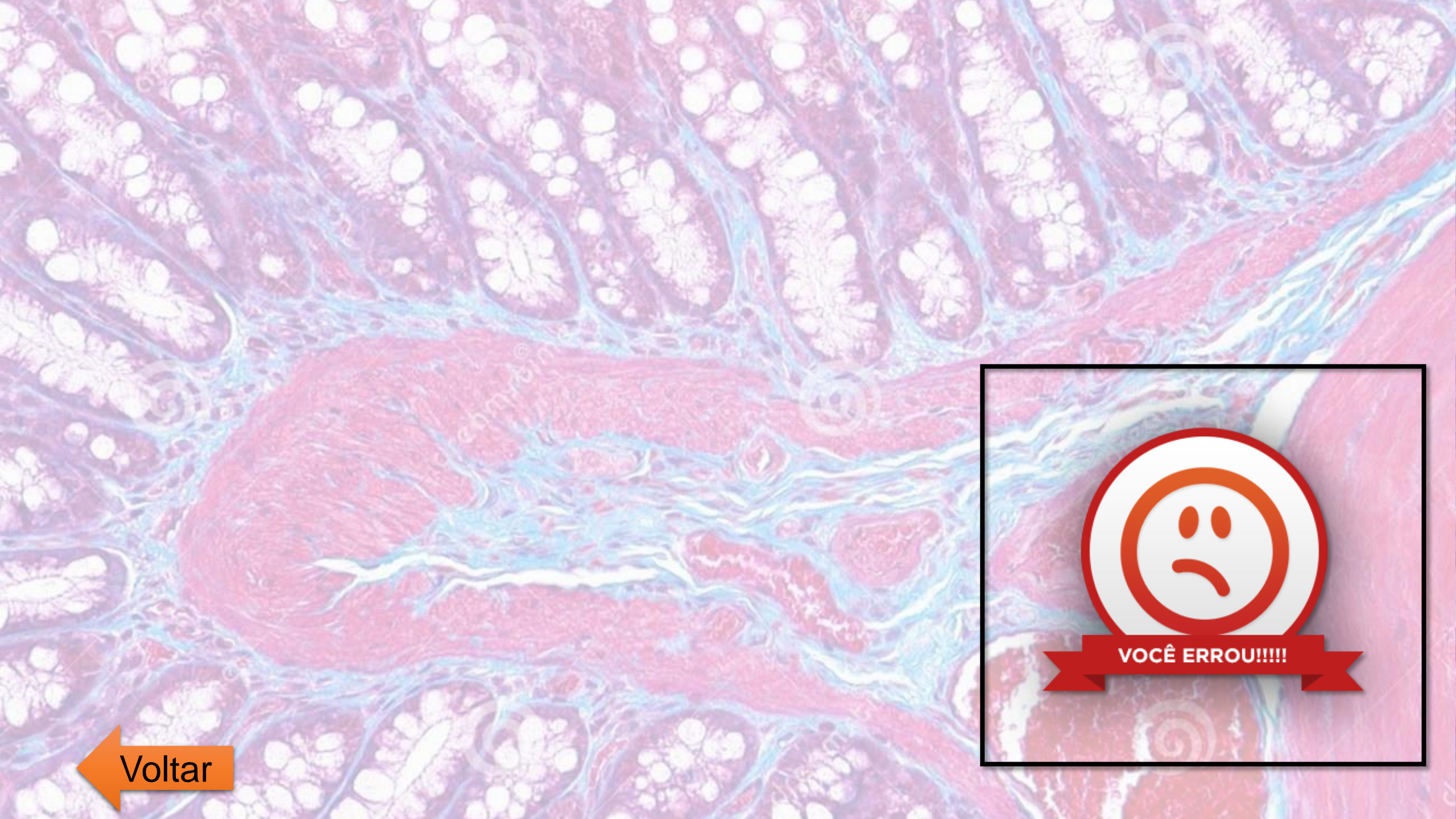
b) aorta e cava.

c) coronária e porta.

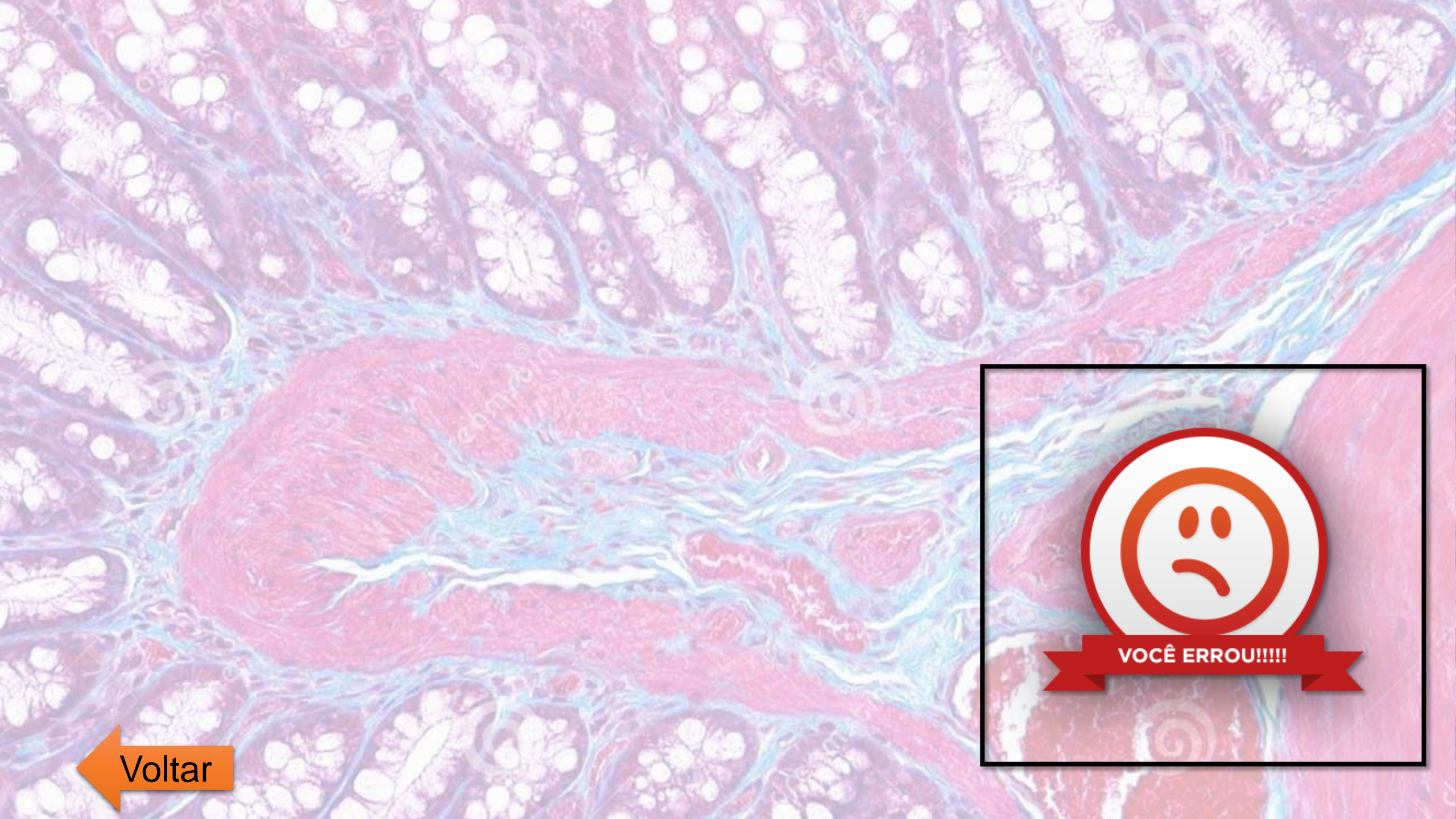
d) pulmonar e pulmonar.



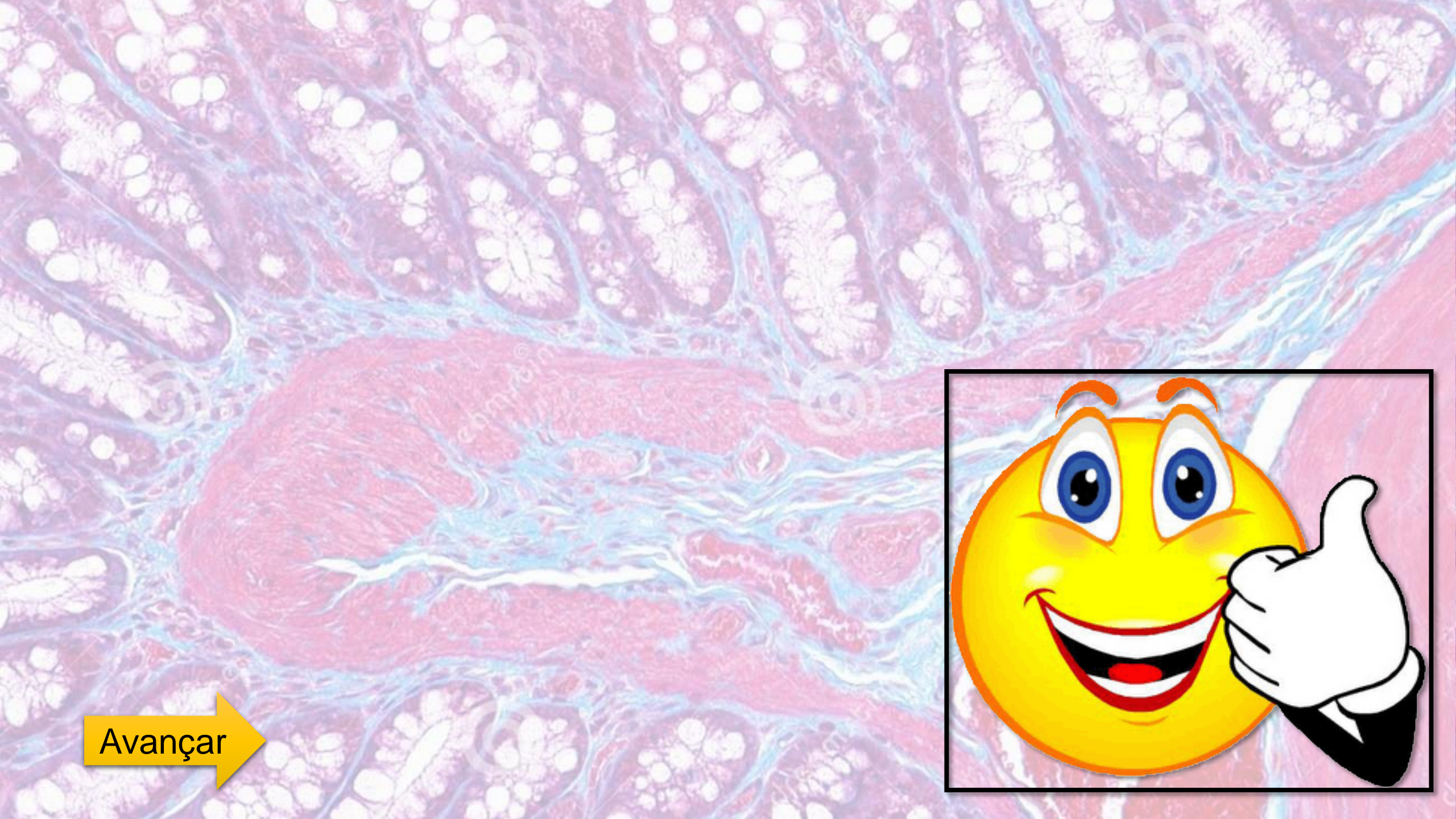
 [Voltar](#)



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18. Em relação à circulação humana, é incorreto afirmar:

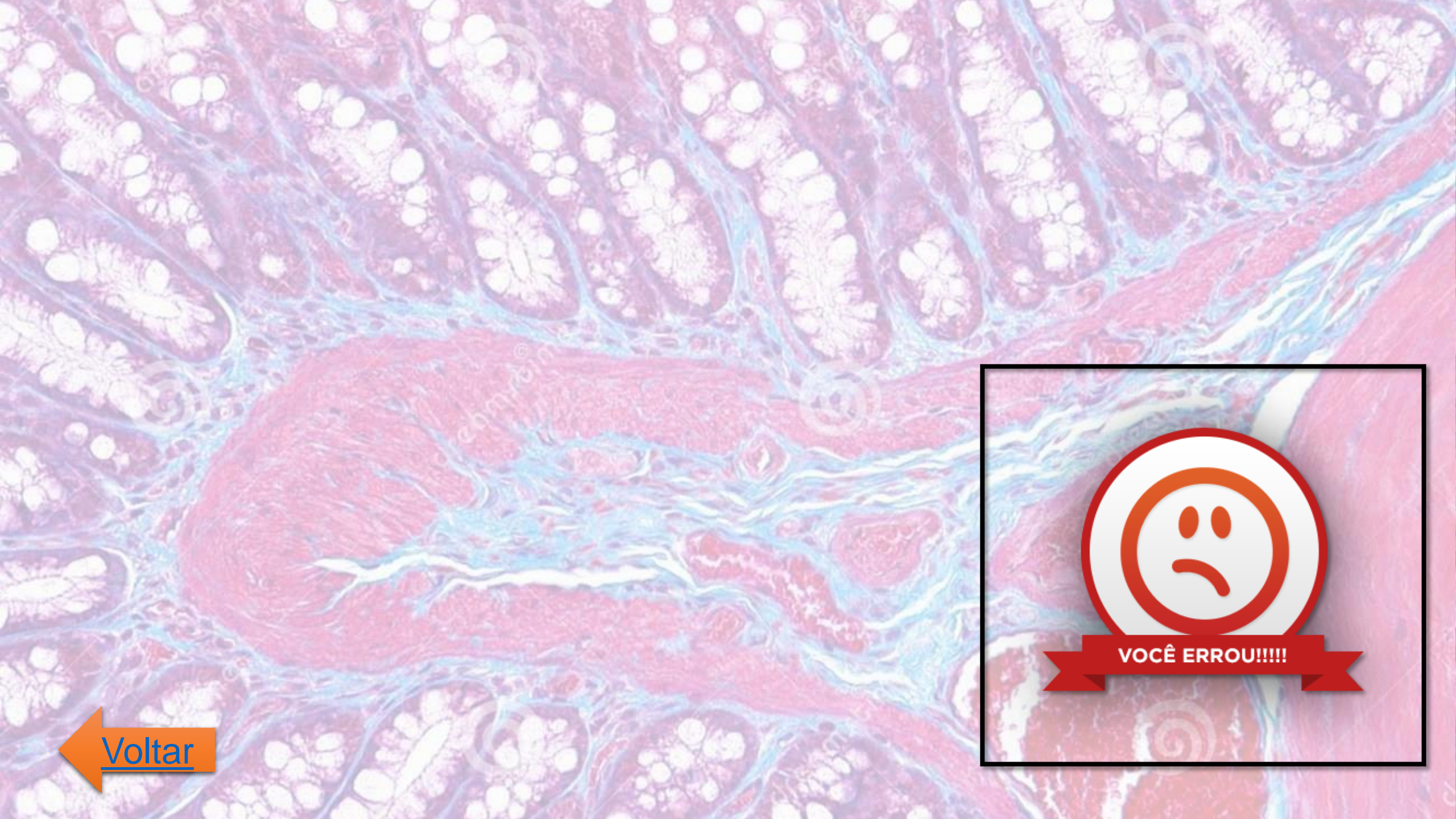
a) Todo vaso que sai do coração é artéria.

b) Todo vaso que chega ao coração é veia.

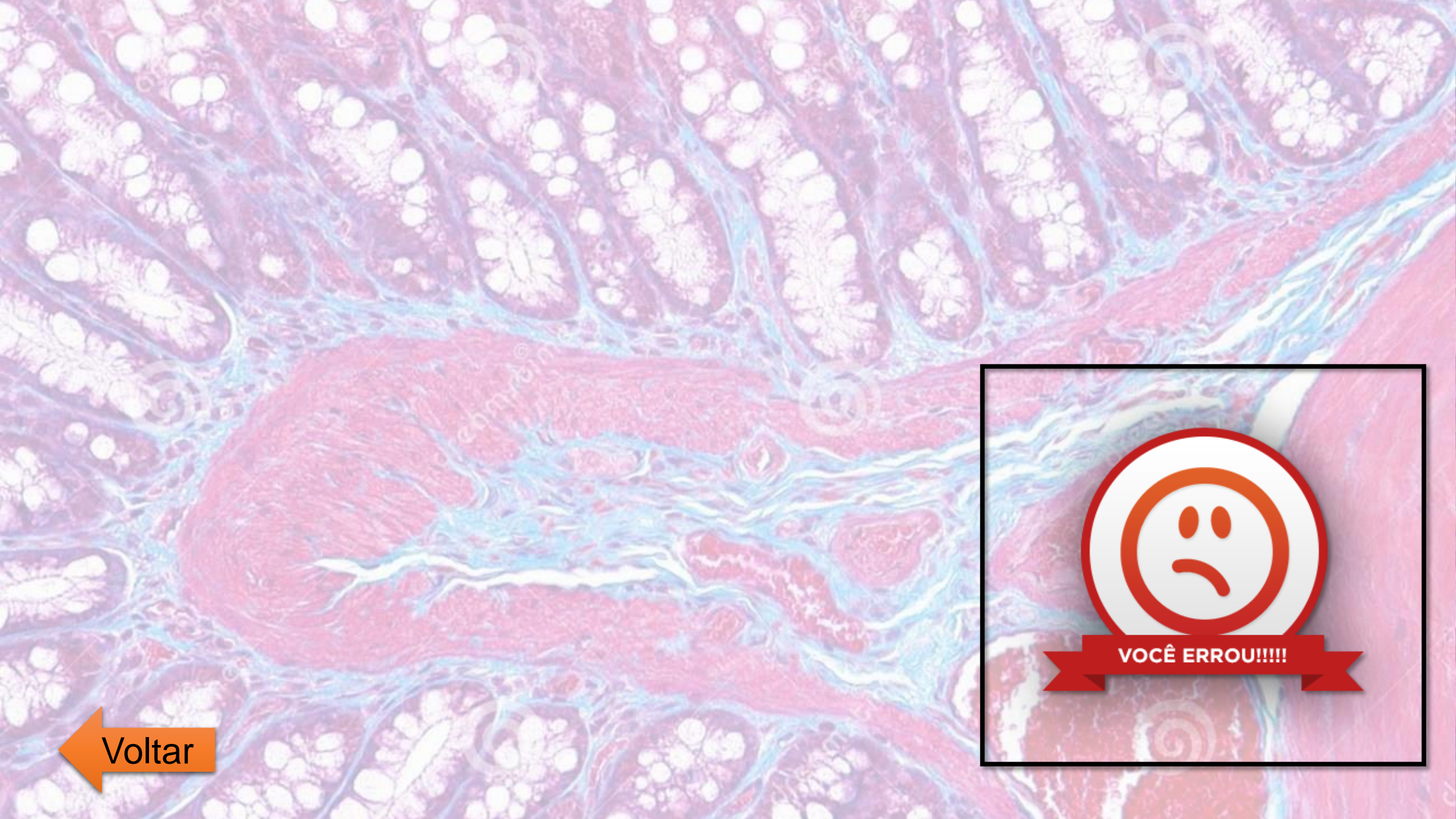
c) Todo sangue que chega ao coração é sangue venoso.

d) O sangue rico em oxigênio é o arterial.

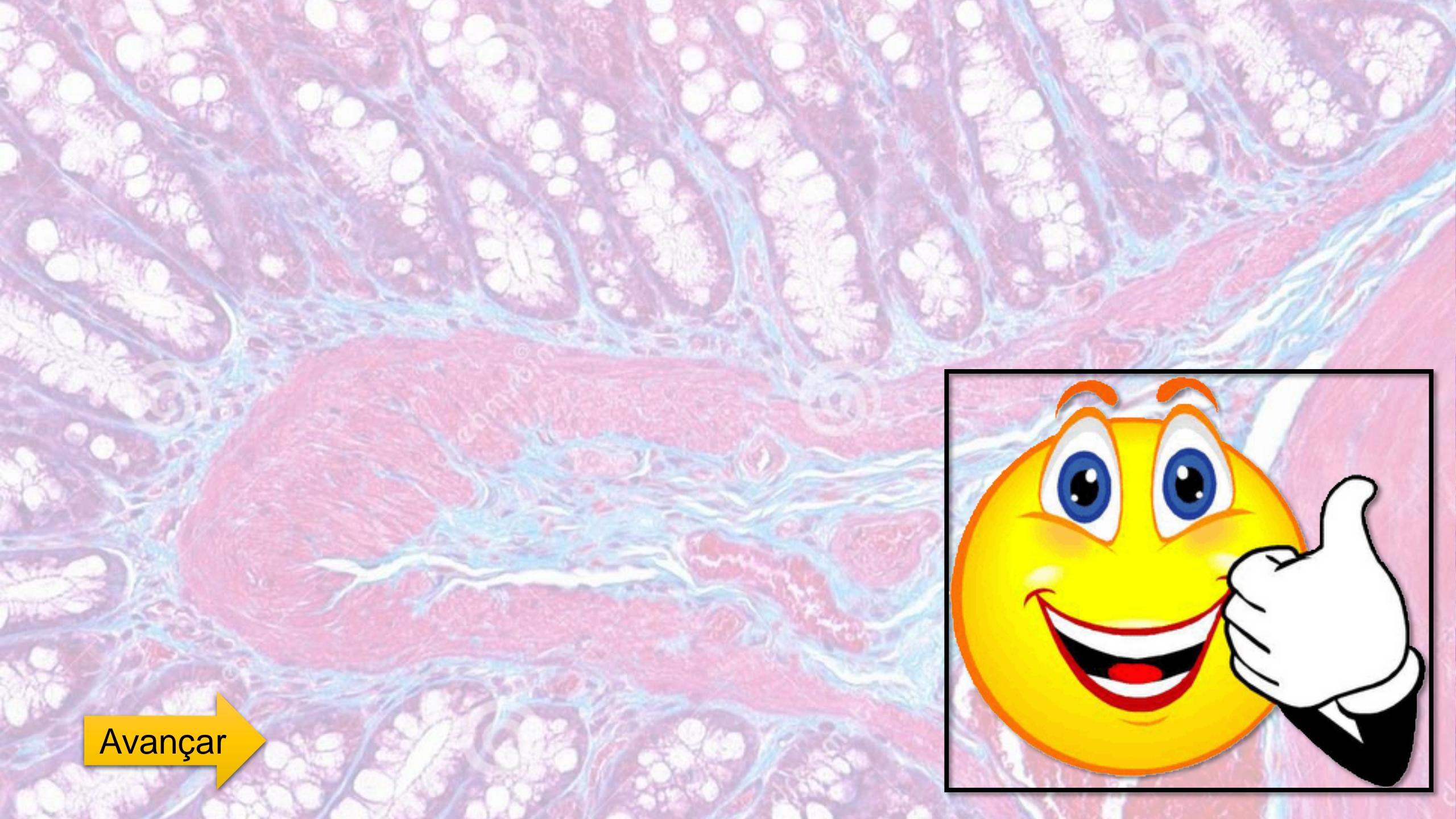
e) O sangue venoso passa do átrio direito para o ventrículo direito.



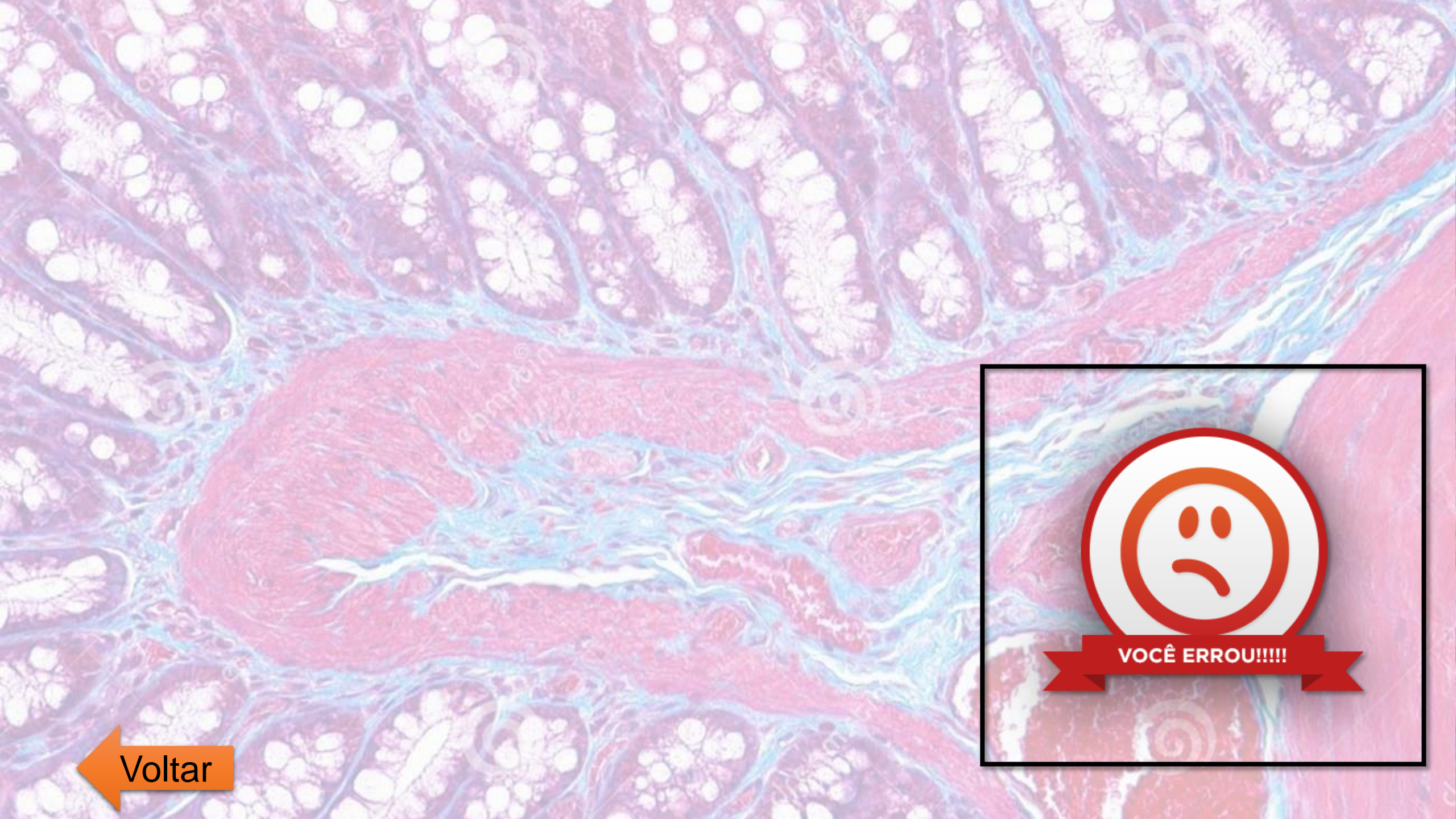
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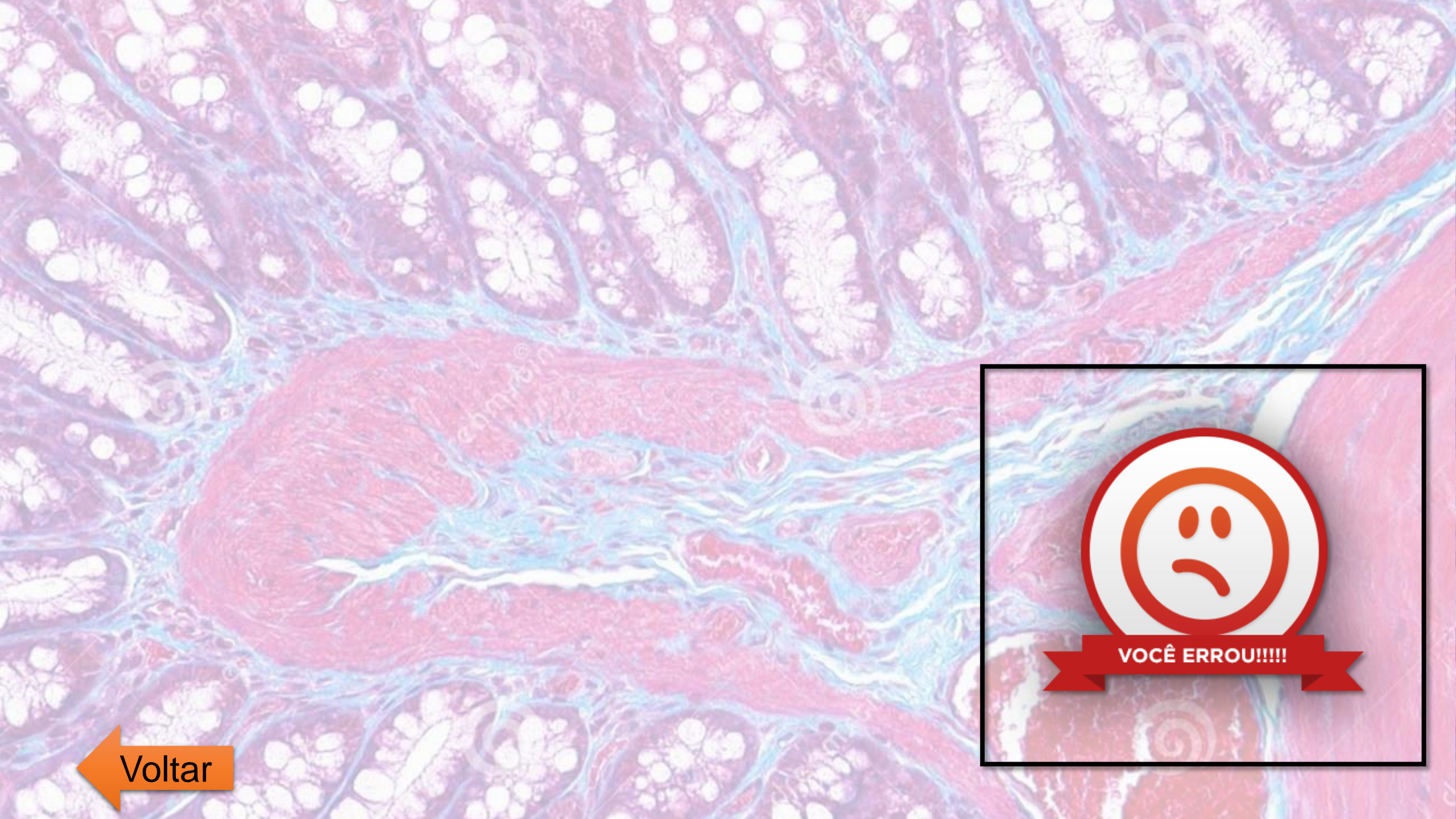
 Voltar



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The background of the slide is a microscopic image of heart tissue, likely stained with Masson's trichrome, showing various cellular structures and connective tissue in shades of pink, purple, and blue. A dark blue, semi-transparent rectangular box is overlaid at the top, containing the main question. Below it, five more similar boxes are arranged vertically, each containing one of the multiple-choice options.

19. A função do nóculo sinoatrial no coração humano é:

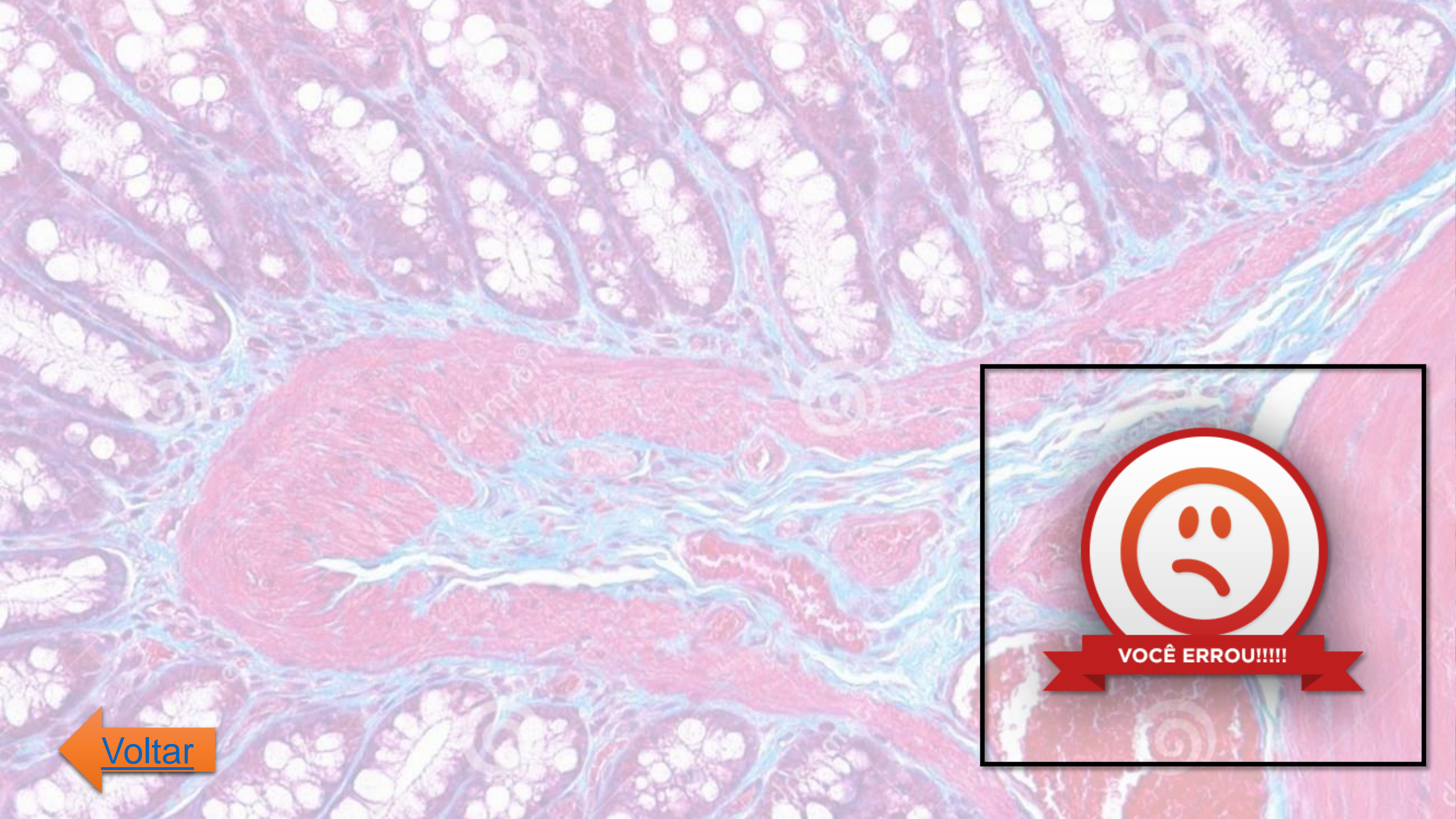
a) regular a circulação coronariana.

b) controlar a abertura e o fechamento da válvula tricúspide.

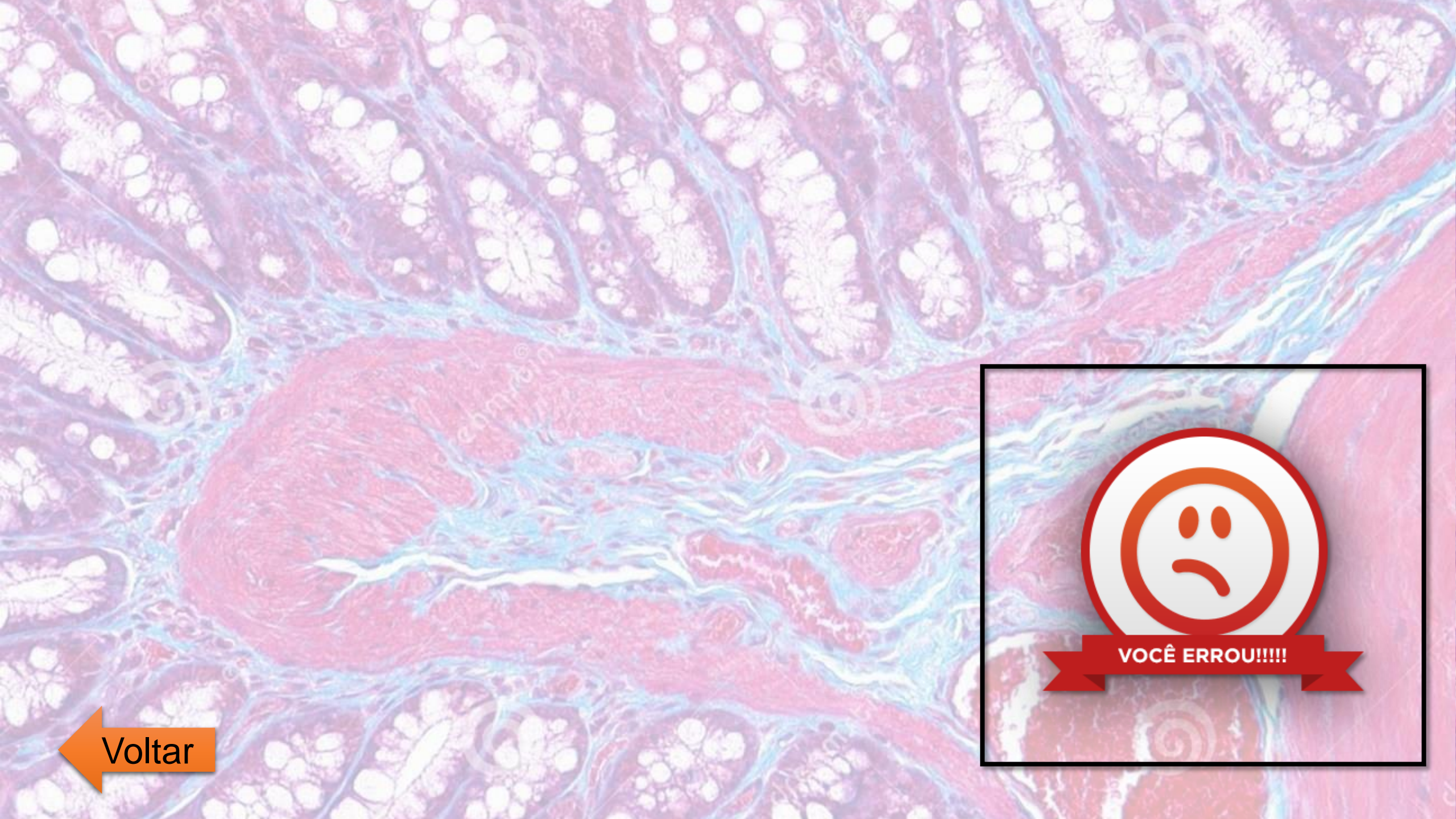
c) funcionar como marca-passo, controlando a ritmicidade cardíaca.

d) controlar a abertura e o fechamento da válvula mitral.

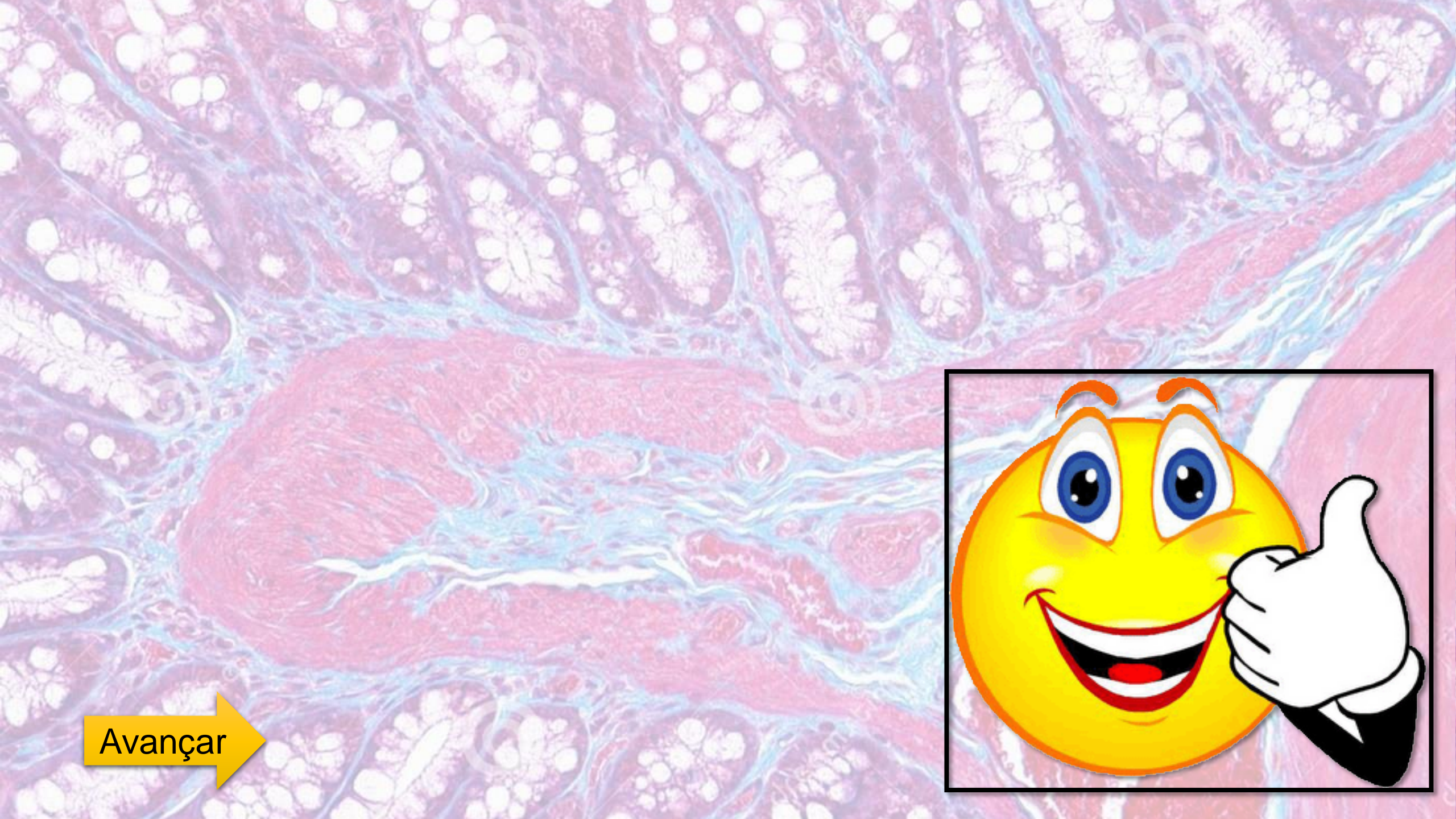
e) controlar a pressão diastólica da aorta.



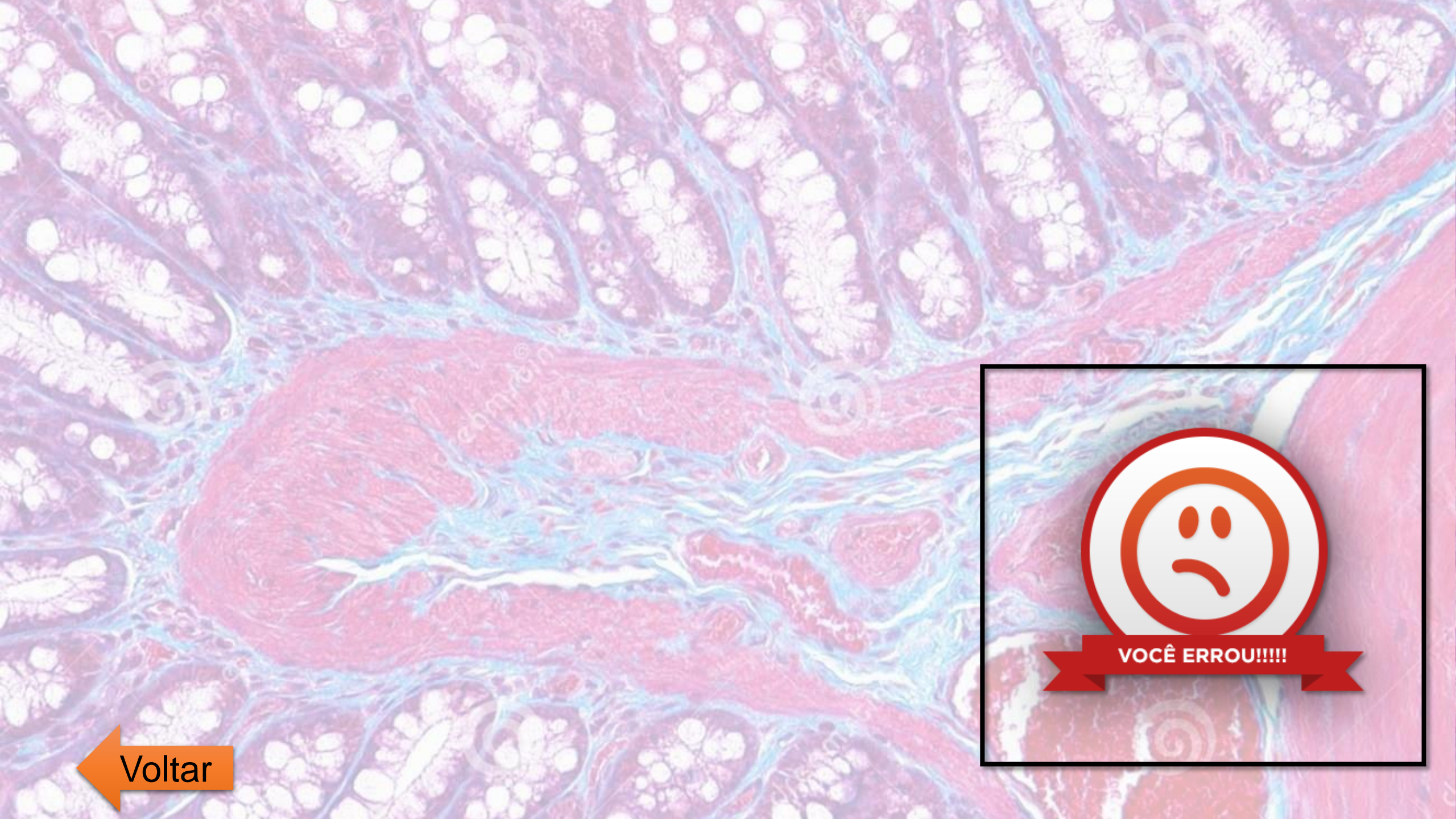
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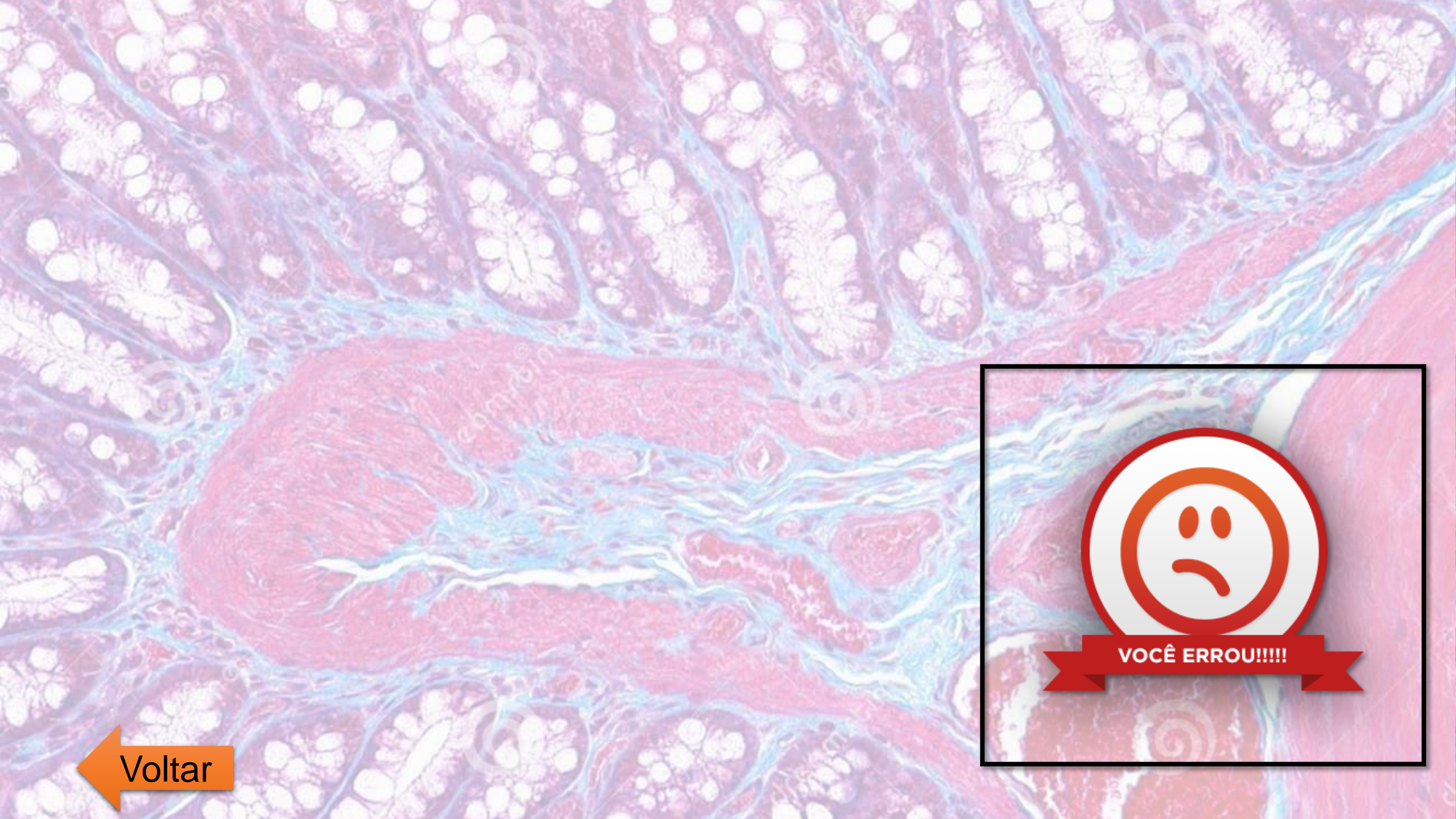
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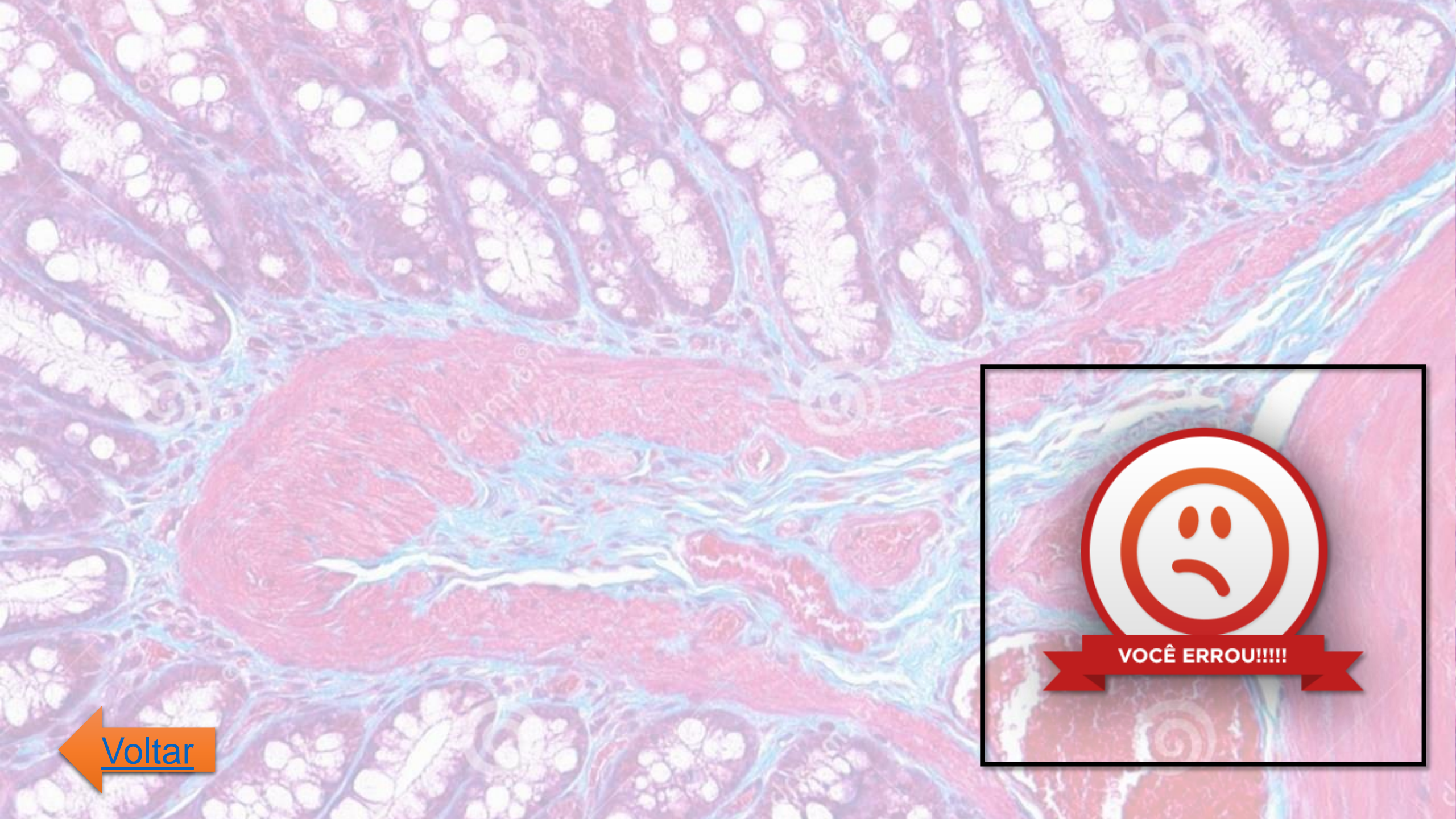
20. Sobre a origem das células sangüíneas:

a) ocorre no tecido sangüíneo.

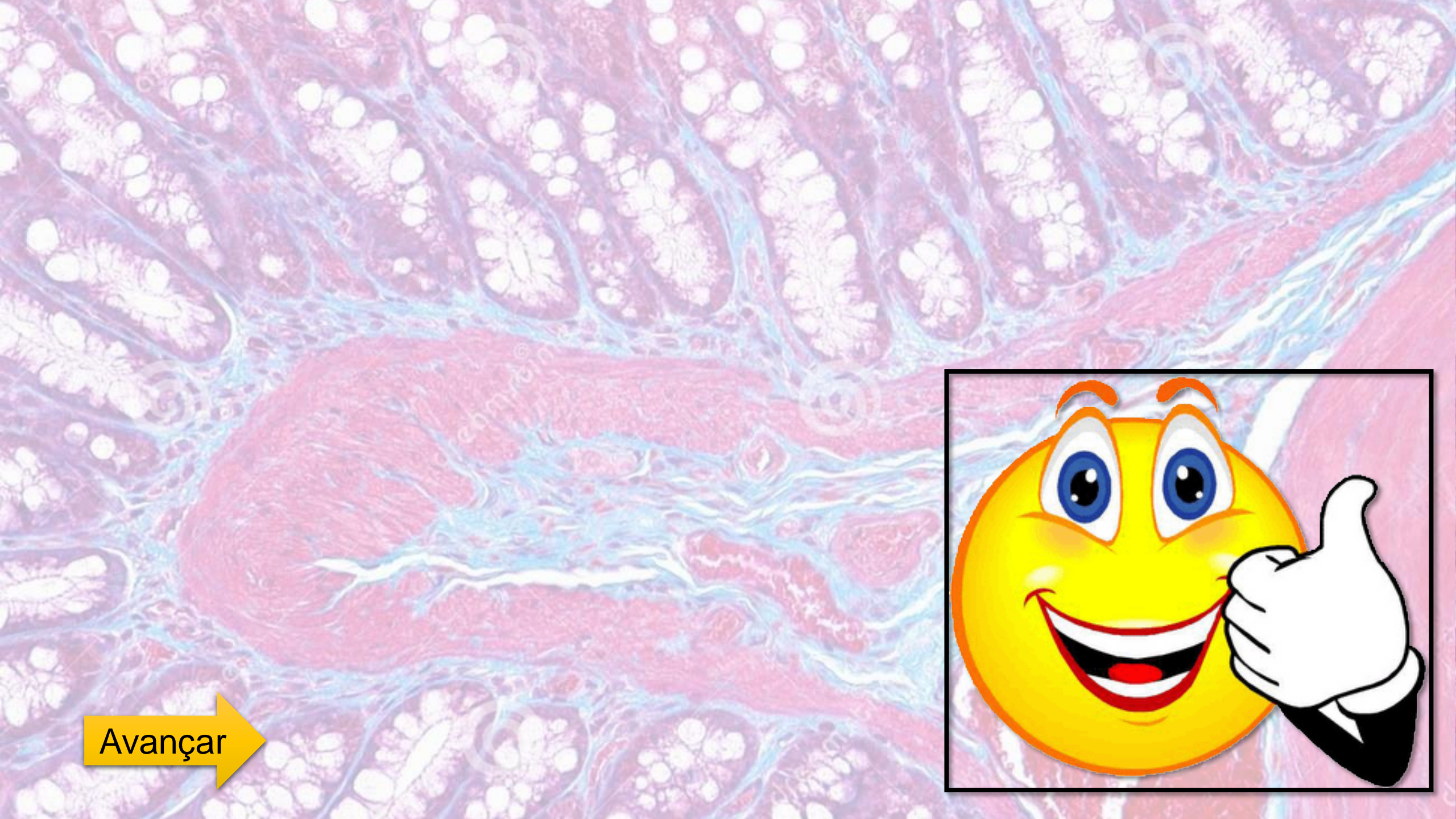
b) a célula-tronco hematopoética pluripotente é o antecessor comum.

c) a eritropoetina estimula a produção de eritrócitos em situações de excesso de oxigênio.

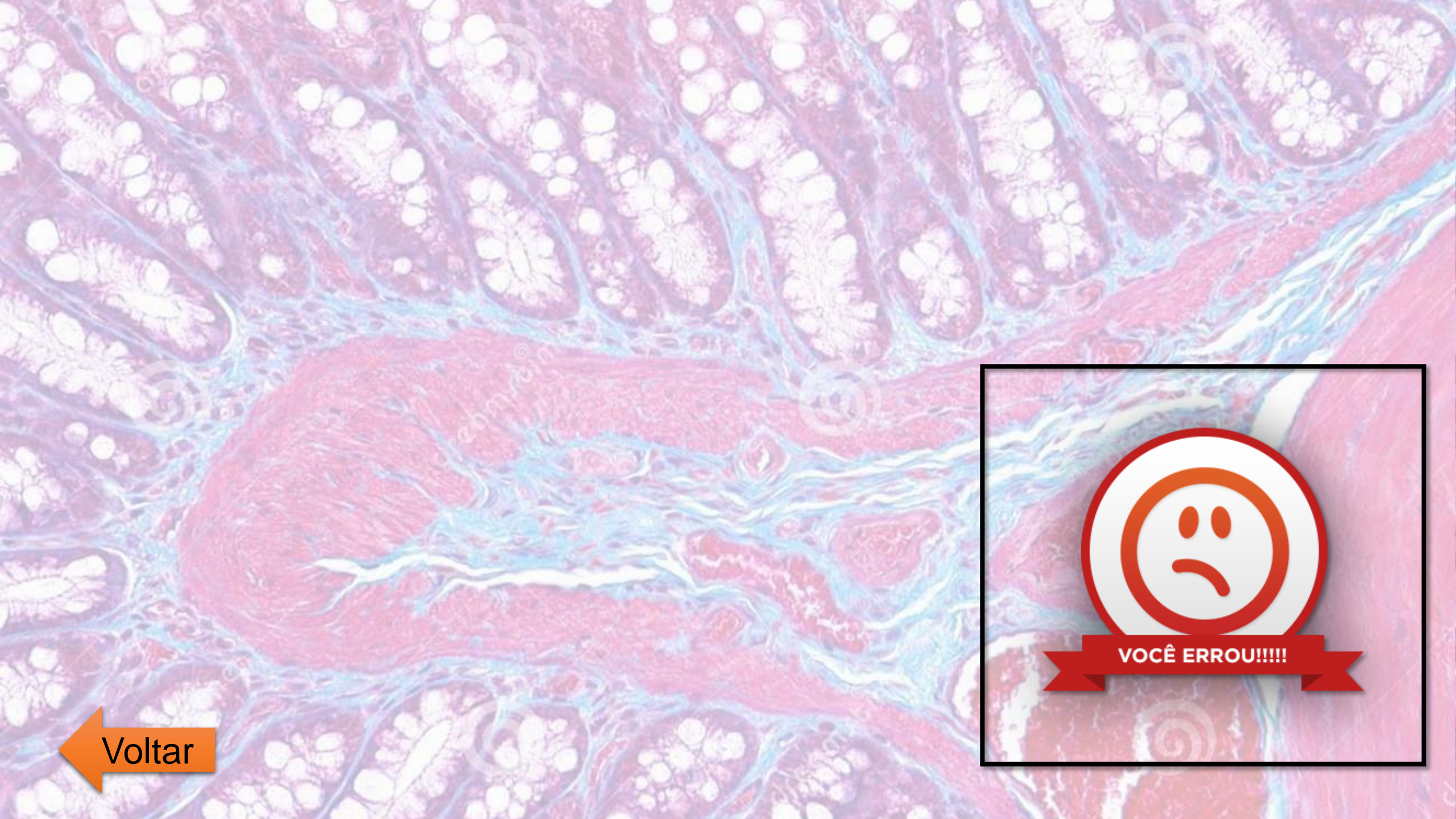
d) o linfócito B diferencia-se no baço.



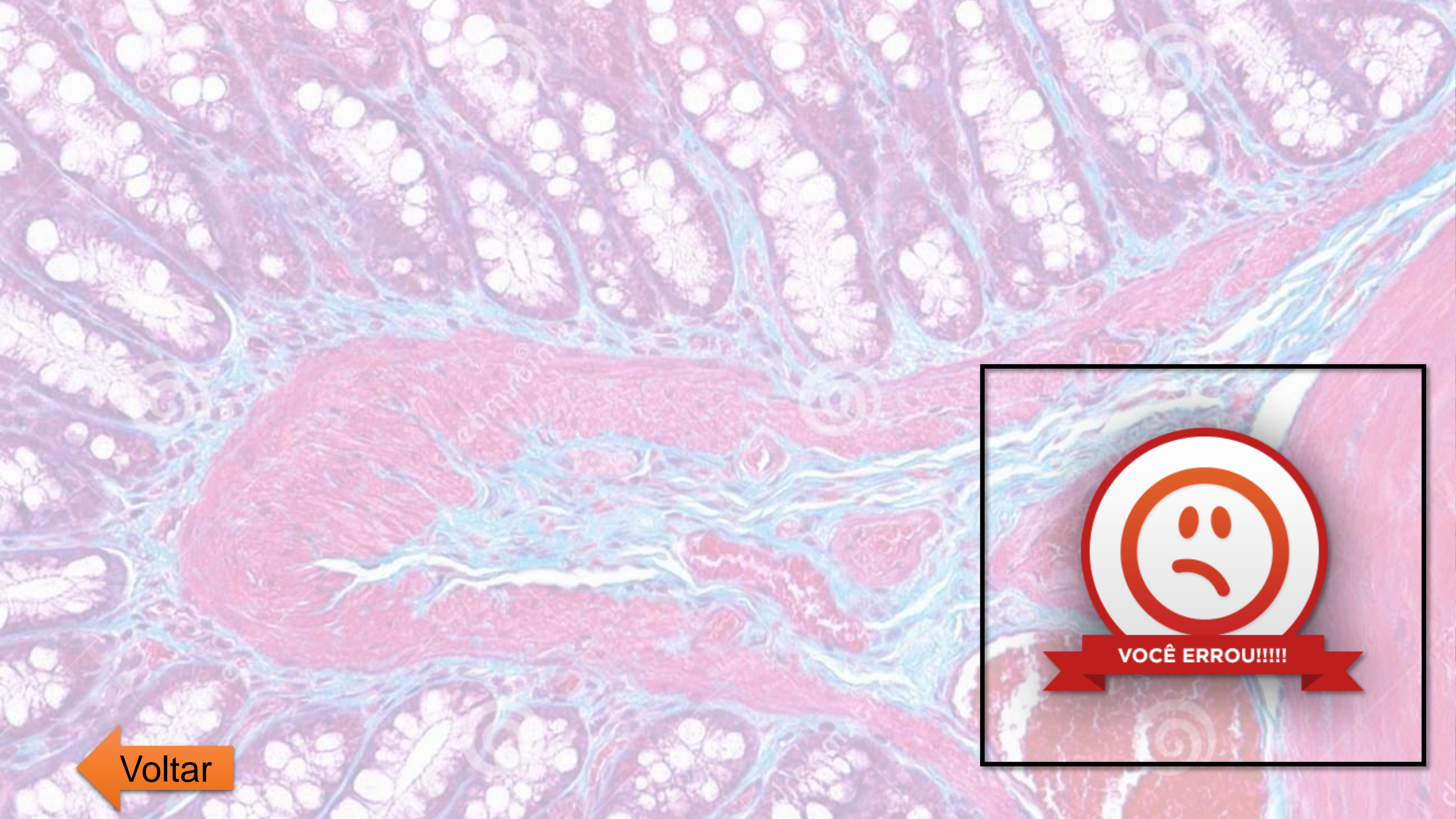
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Avançar



 Voltar



 Voltar



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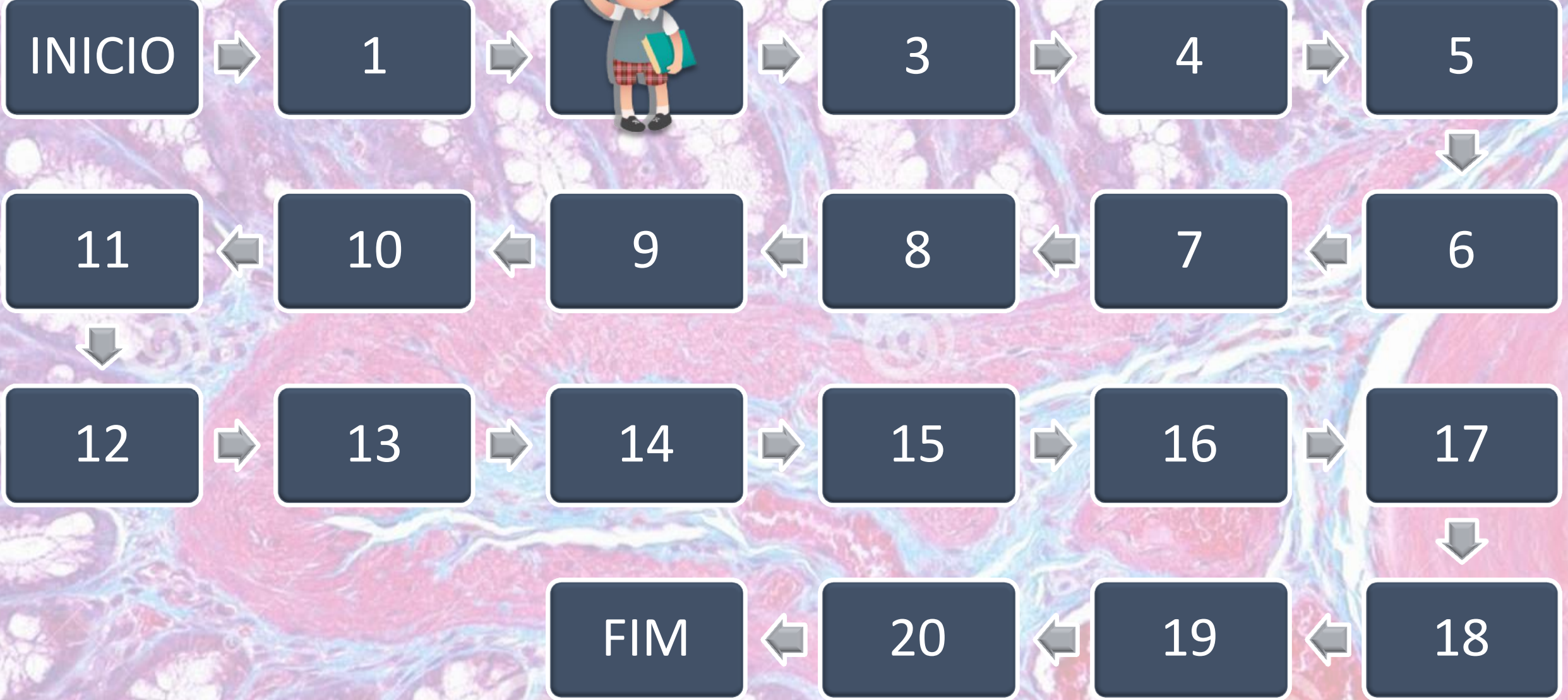
17

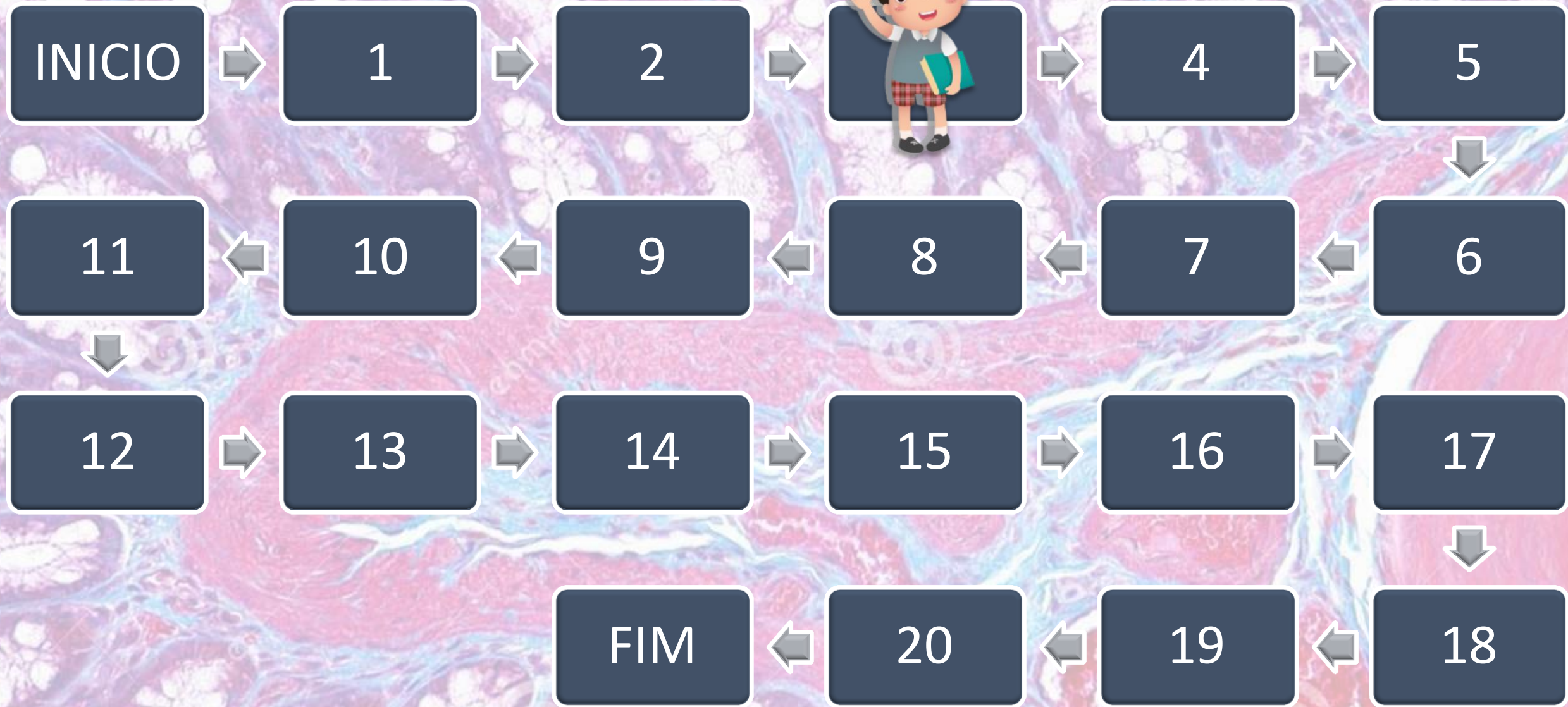
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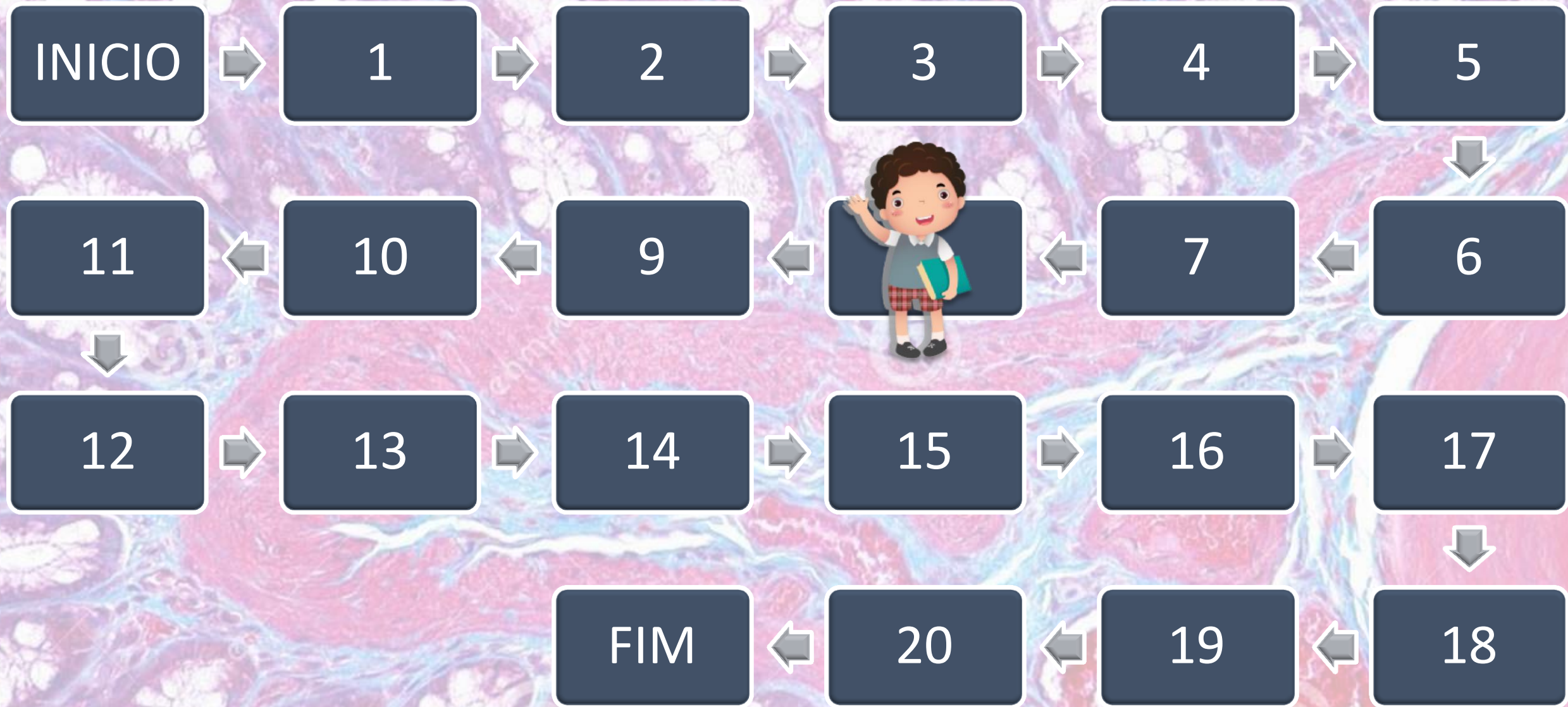


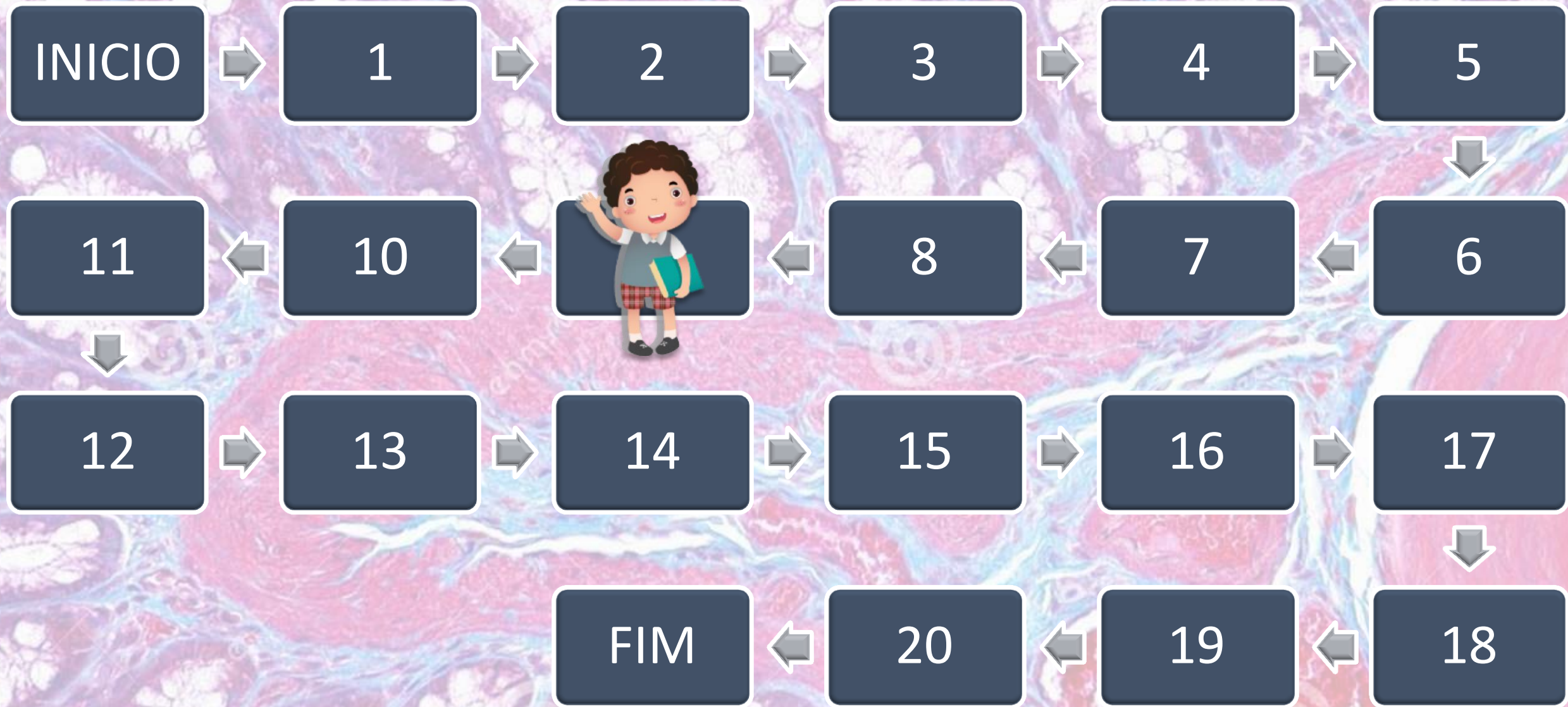














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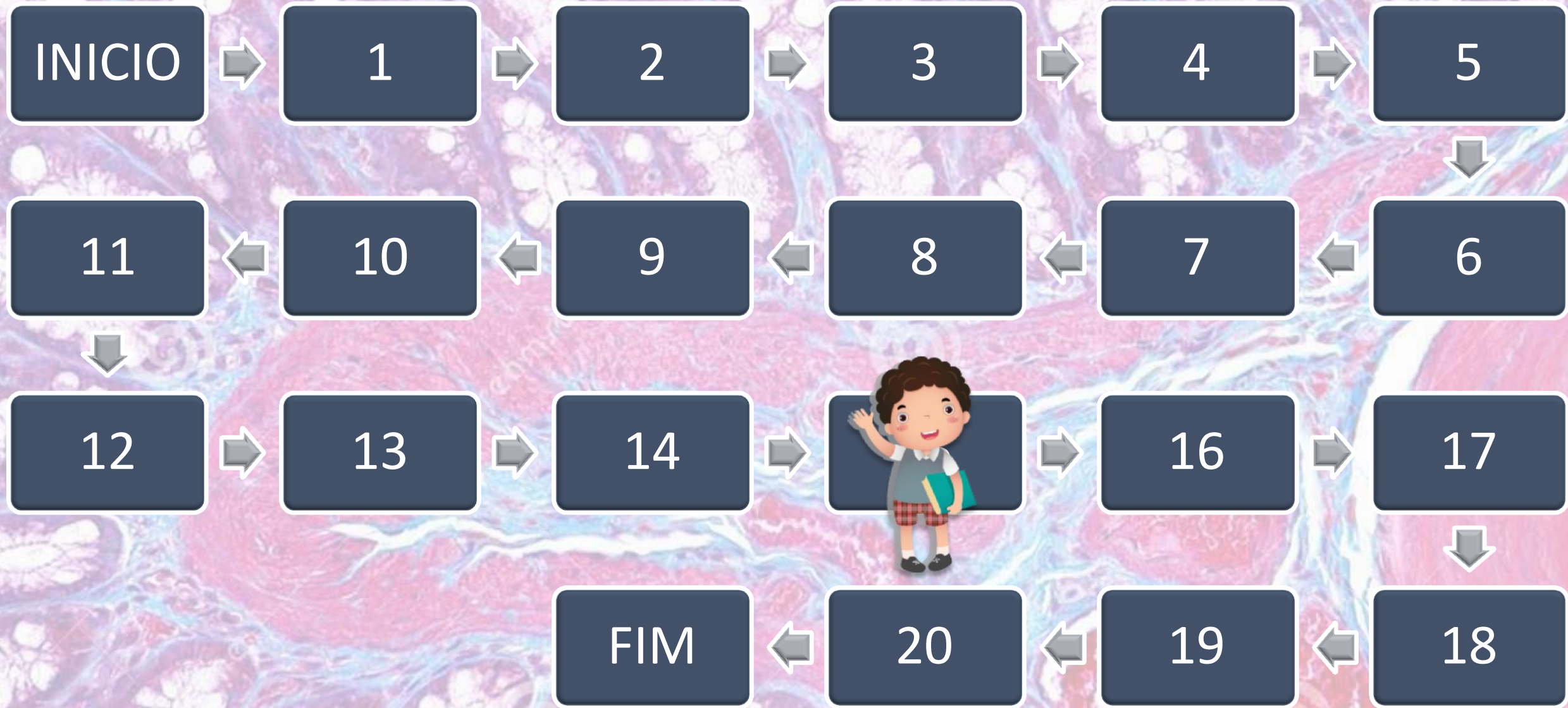
18









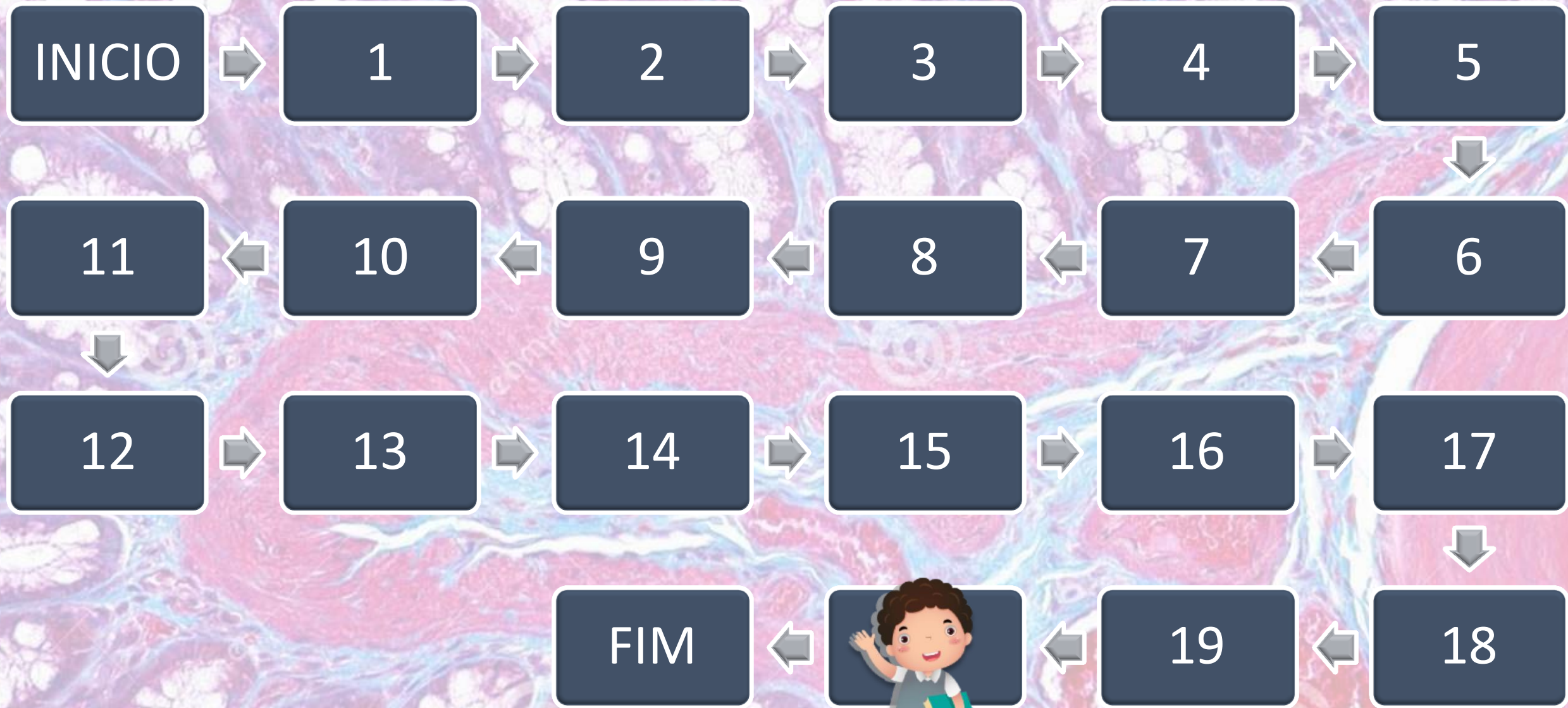


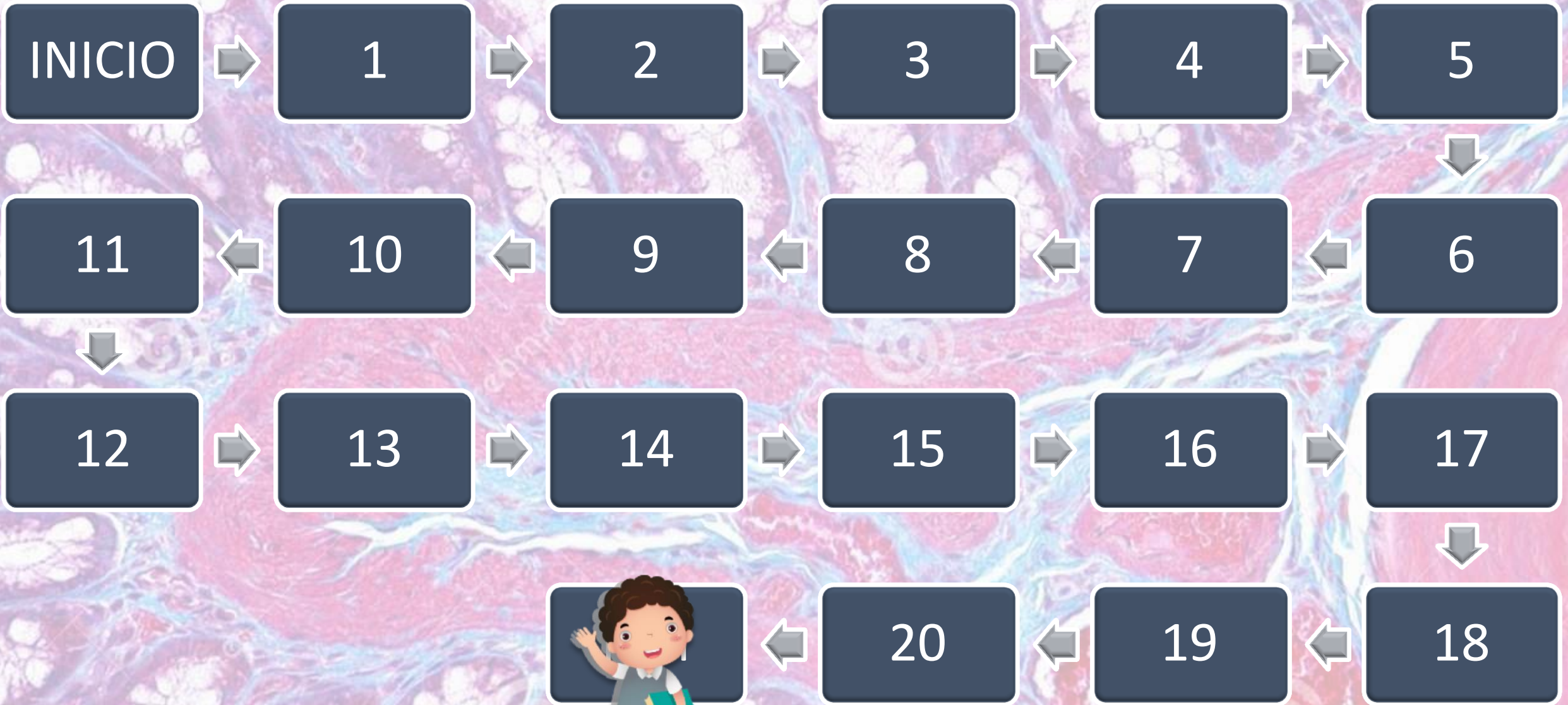




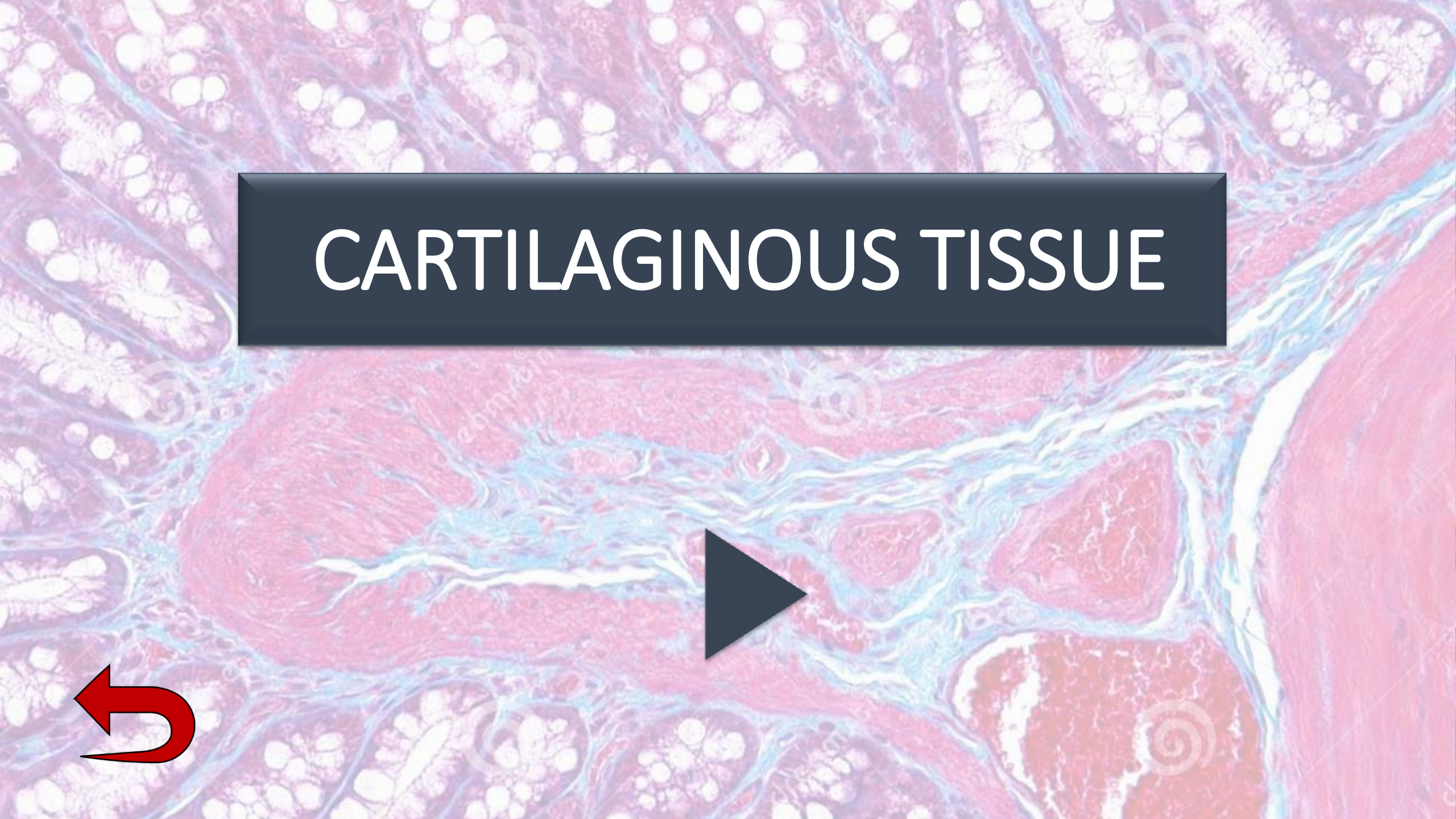


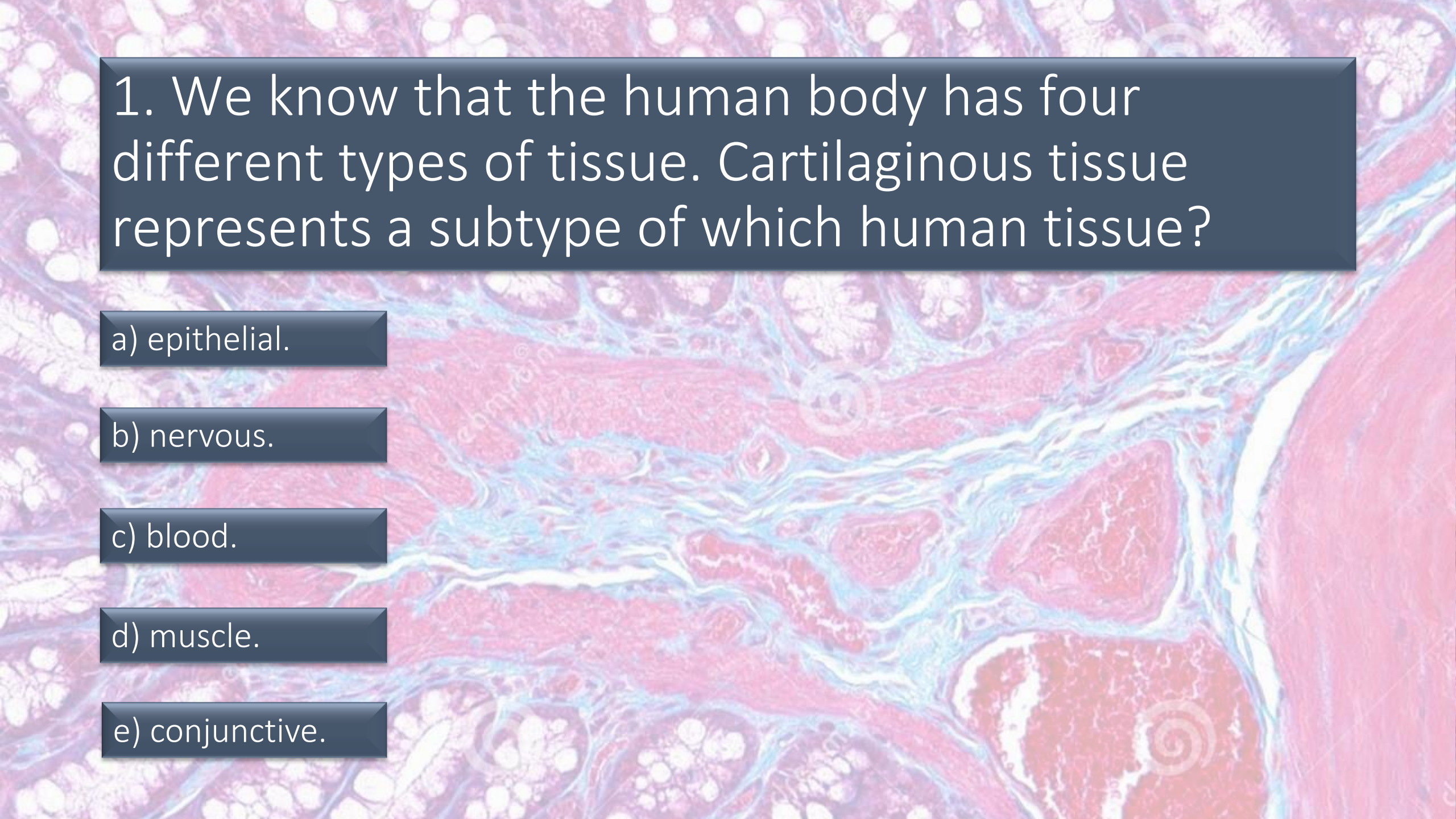






CARTILAGINOUS TISSUE





1. We know that the human body has four different types of tissue. Cartilaginous tissue represents a subtype of which human tissue?

a) epithelial.

b) nervous.

c) blood.

d) muscle.

e) conjunctive.





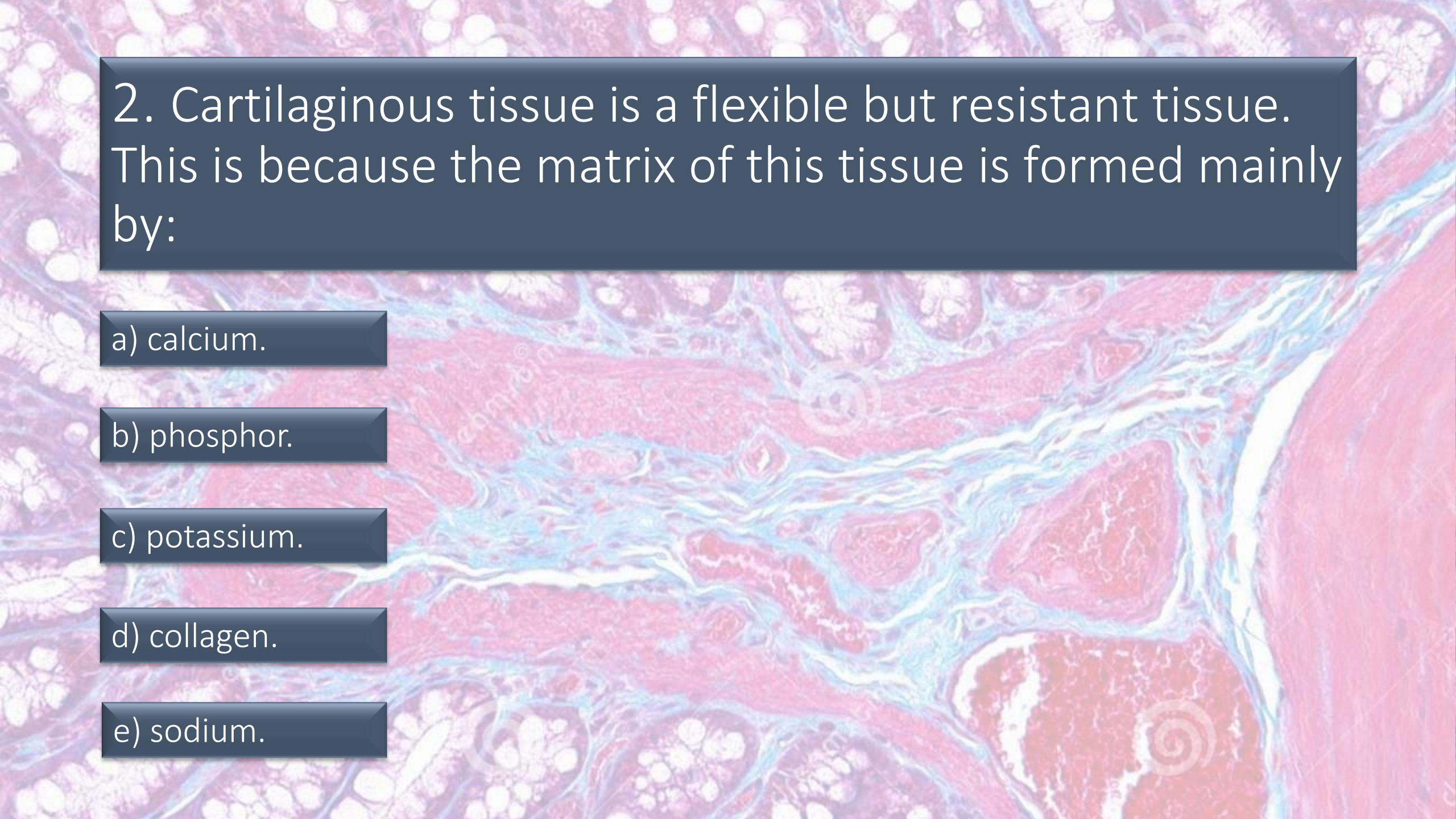




Alternativa “e”. O tecido cartilaginoso é um tipo de tecido conjuntivo, assim como os tecidos ósseo, adiposo, conjuntivo propriamente dito e sanguíneo.

Avançar





2. Cartilaginous tissue is a flexible but resistant tissue. This is because the matrix of this tissue is formed mainly by:

a) calcium.

b) phosphor.

c) potassium.

d) collagen.

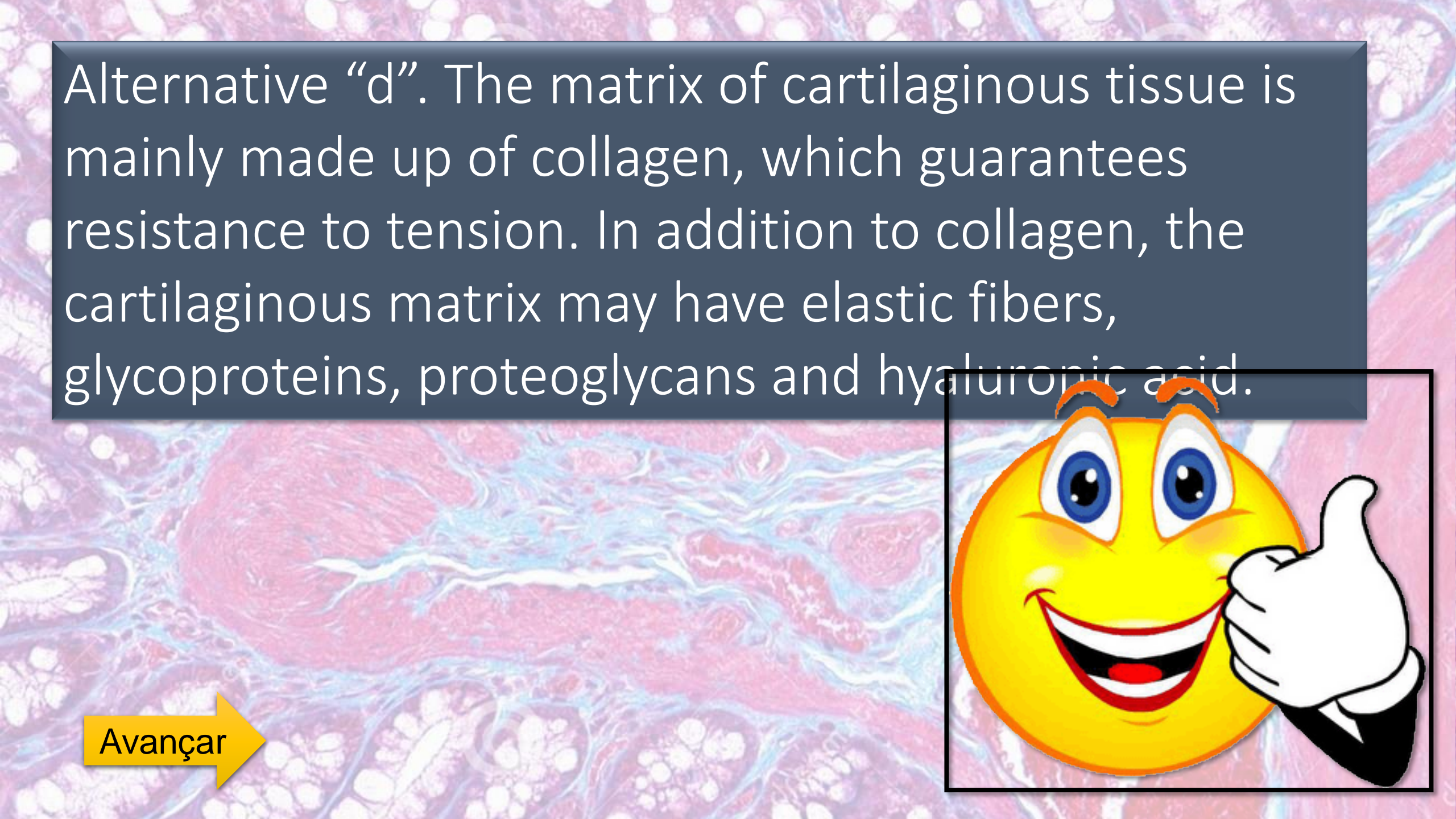
e) sodium.





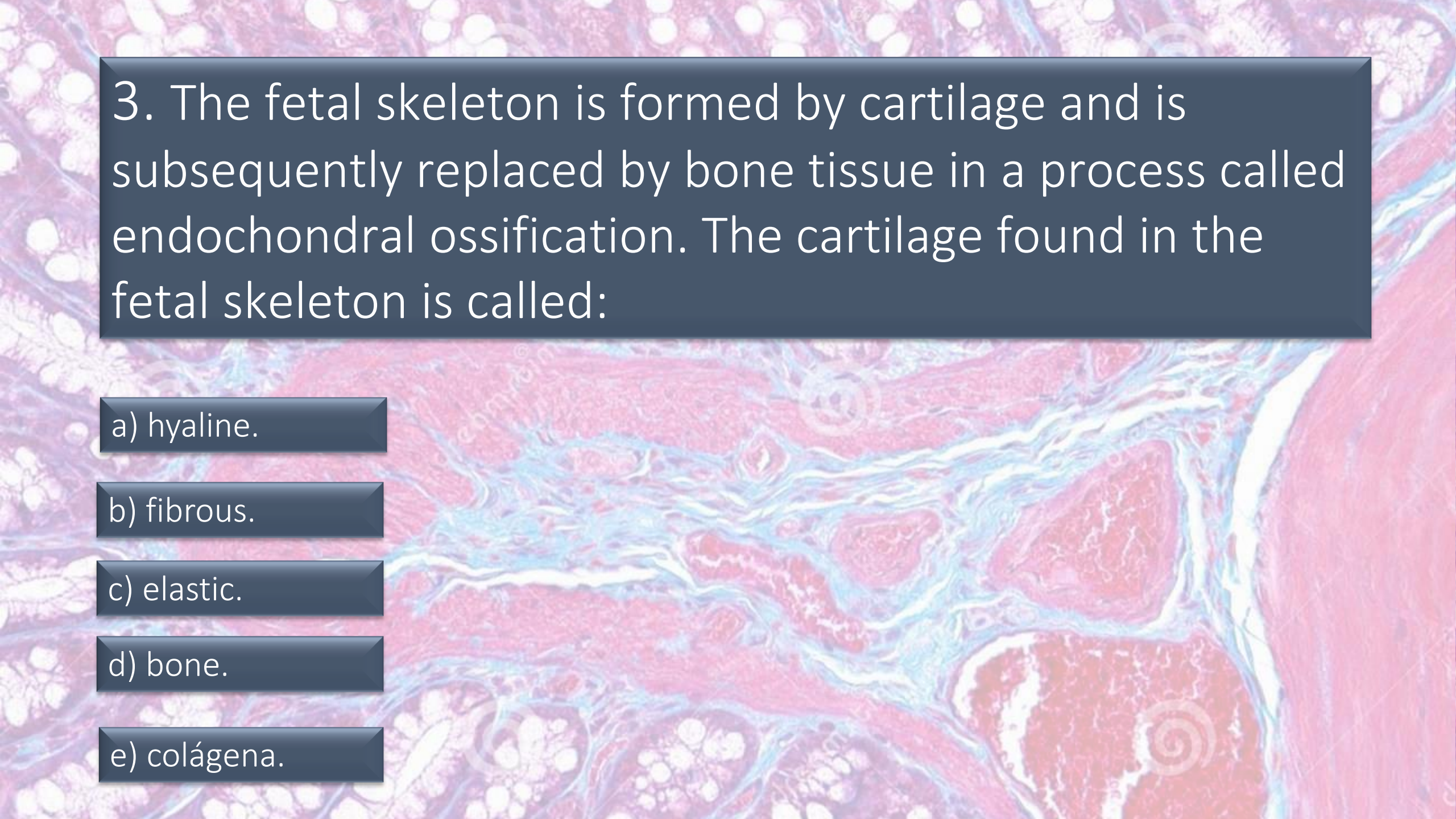


Alternative “d”. The matrix of cartilaginous tissue is mainly made up of collagen, which guarantees resistance to tension. In addition to collagen, the cartilaginous matrix may have elastic fibers, glycoproteins, proteoglycans and hyaluronic acid.





← Voltar



3. The fetal skeleton is formed by cartilage and is subsequently replaced by bone tissue in a process called endochondral ossification. The cartilage found in the fetal skeleton is called:

a) hyaline.

b) fibrous.

c) elastic.

d) bone.

e) colágena.

Alternative “a”. Hyaline cartilage is a firm and flexible cartilage that constitutes our first skeleton.

Avançar







← Voltar





← Voltar

4. O tecido cartilaginoso é encontrado em várias partes do nosso corpo, tais como orelha, nariz, traqueia e regiões articulares. Sobre esse tecido, marque a alternativa correta.

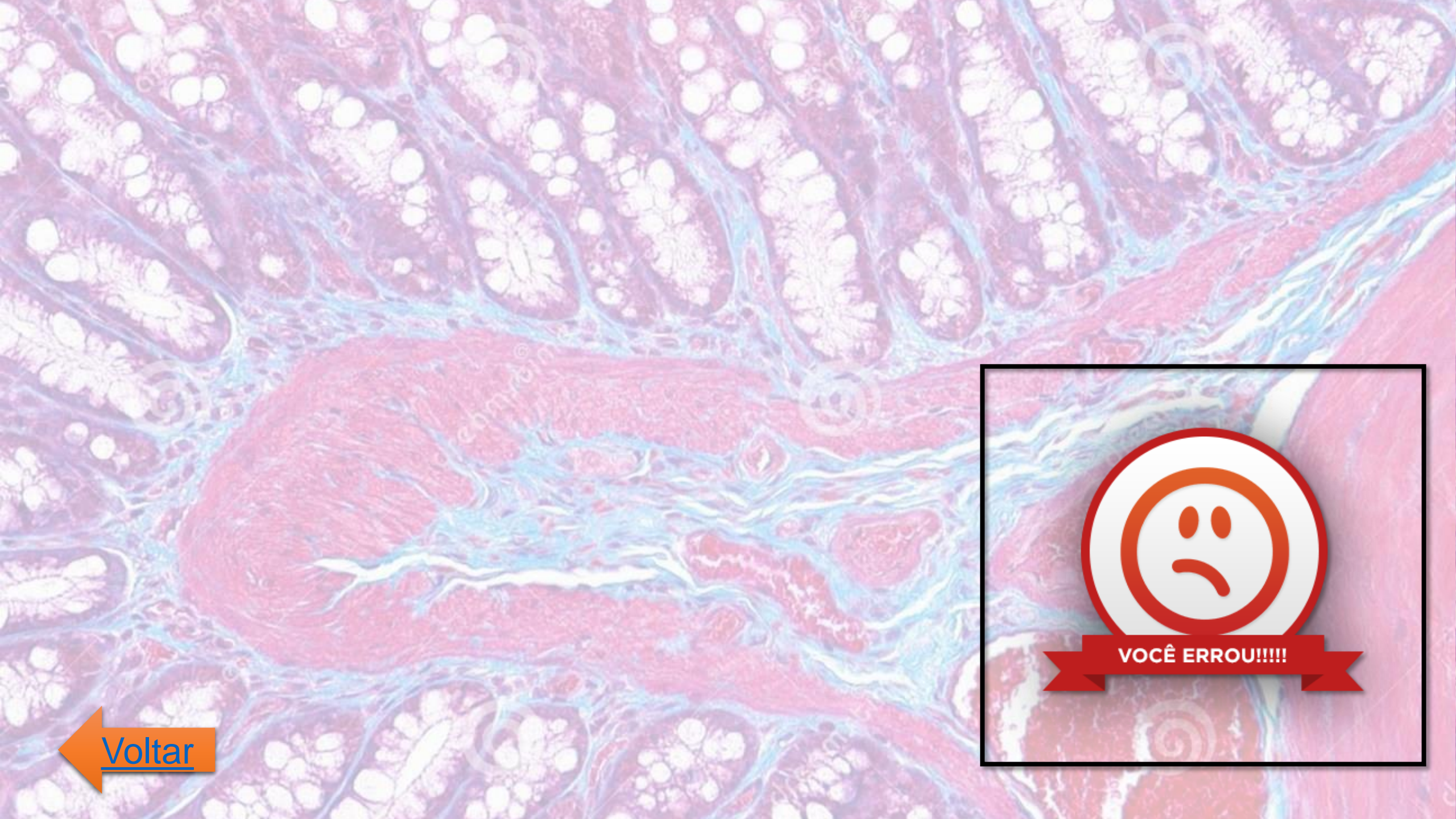
a) O tecido cartilaginoso é um tipo de tecido epitelial.

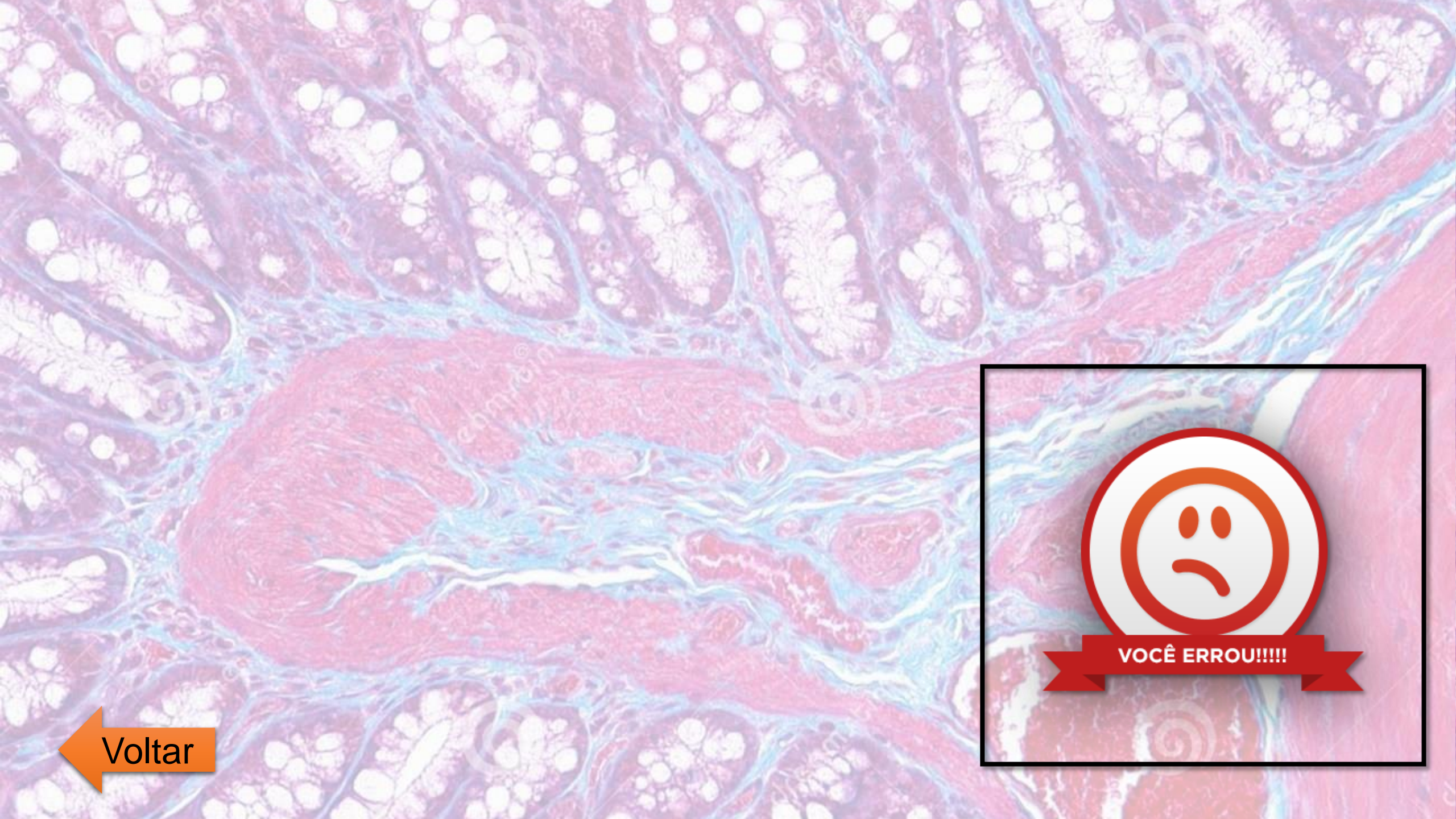
b) Osteócitos, condrócitos e condroblastos são células encontradas no tecido cartilaginoso.

c) O tecido cartilaginoso não possui vasos sanguíneos.

d) O tecido cartilaginoso é um tecido resistente que possui matriz extracelular rica em sais de cálcio.

e) O tecido cartilaginoso, assim como a grande maioria dos tecidos conjuntivos, apresenta-se rico em nervos.



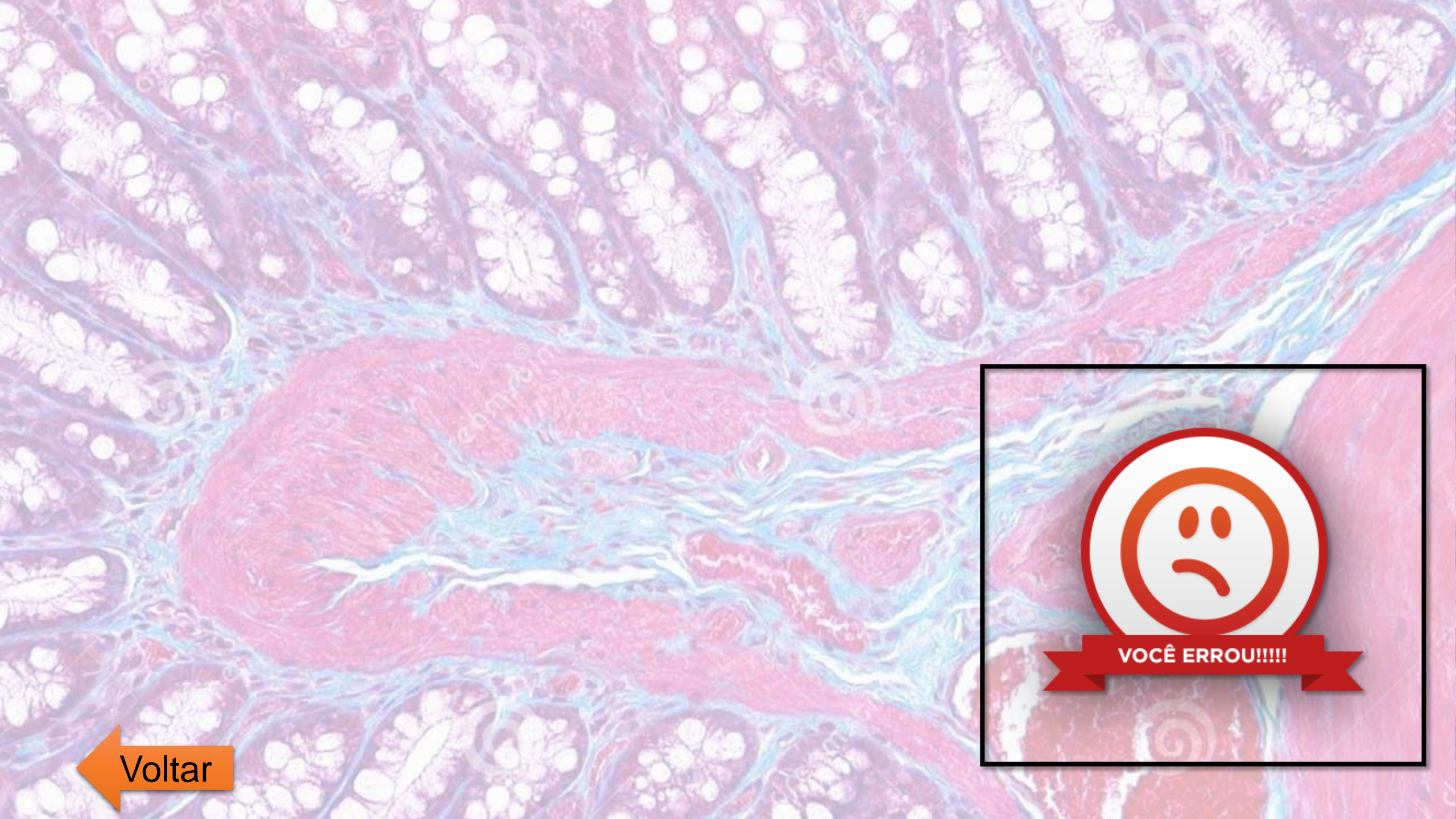


 Voltar

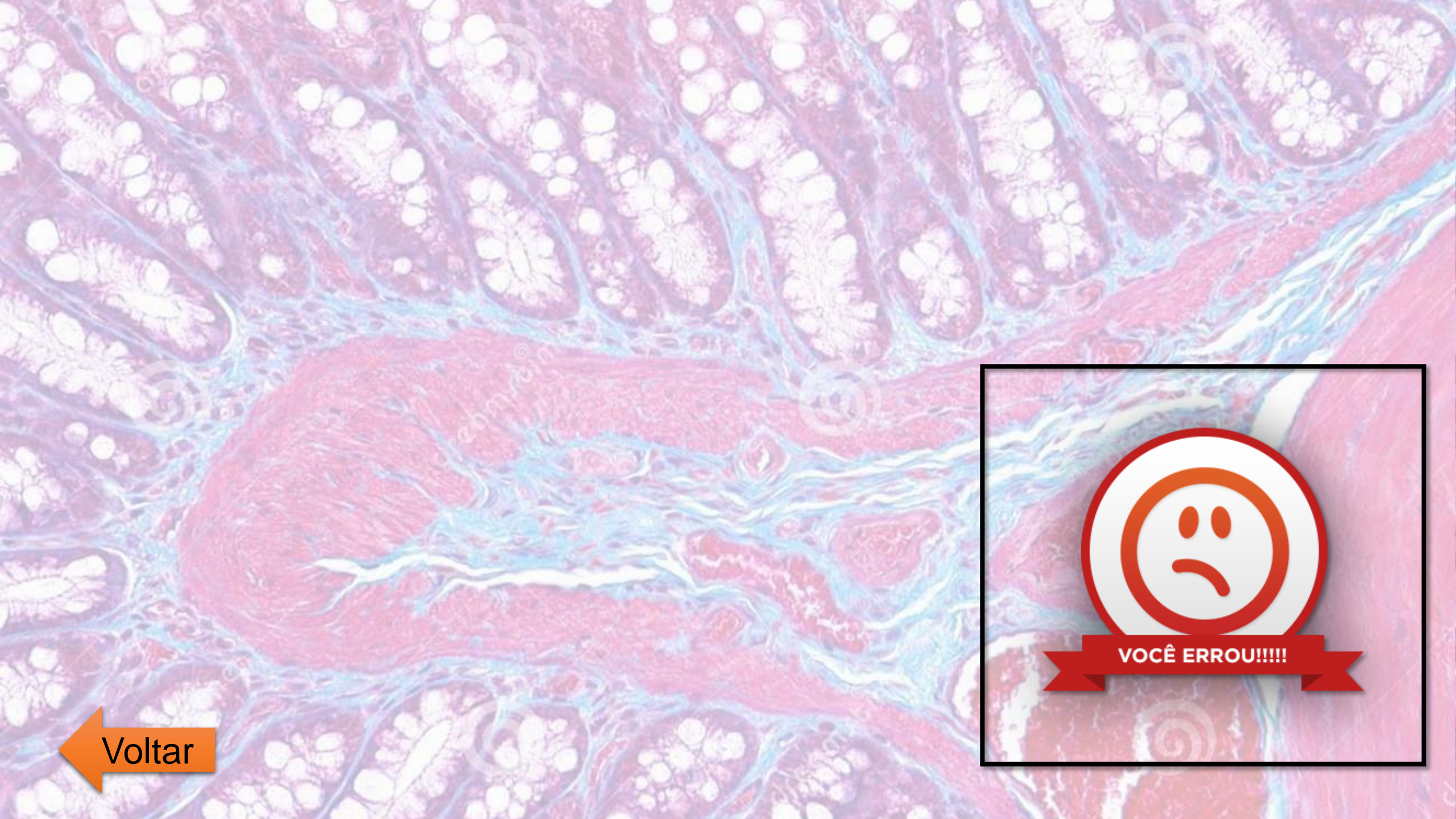
Alternativa “c”. A cartilagem, diferentemente dos outros tecidos conjuntivos, não apresenta vasos sanguíneos e linfáticos nem a presença de nervos.

Avançar





 Voltar



 Voltar

5. É um tipo de tecido conjuntivo de consistência rígida que tem função de sustentação e de revestimento de superfícies articulares. Suas células, condrócitos e condroblastos, são responsáveis pela formação das fibras colágenas e da substância intercelular, denominada de matriz. Assinale a alternativa que indica corretamente o tecido correspondente

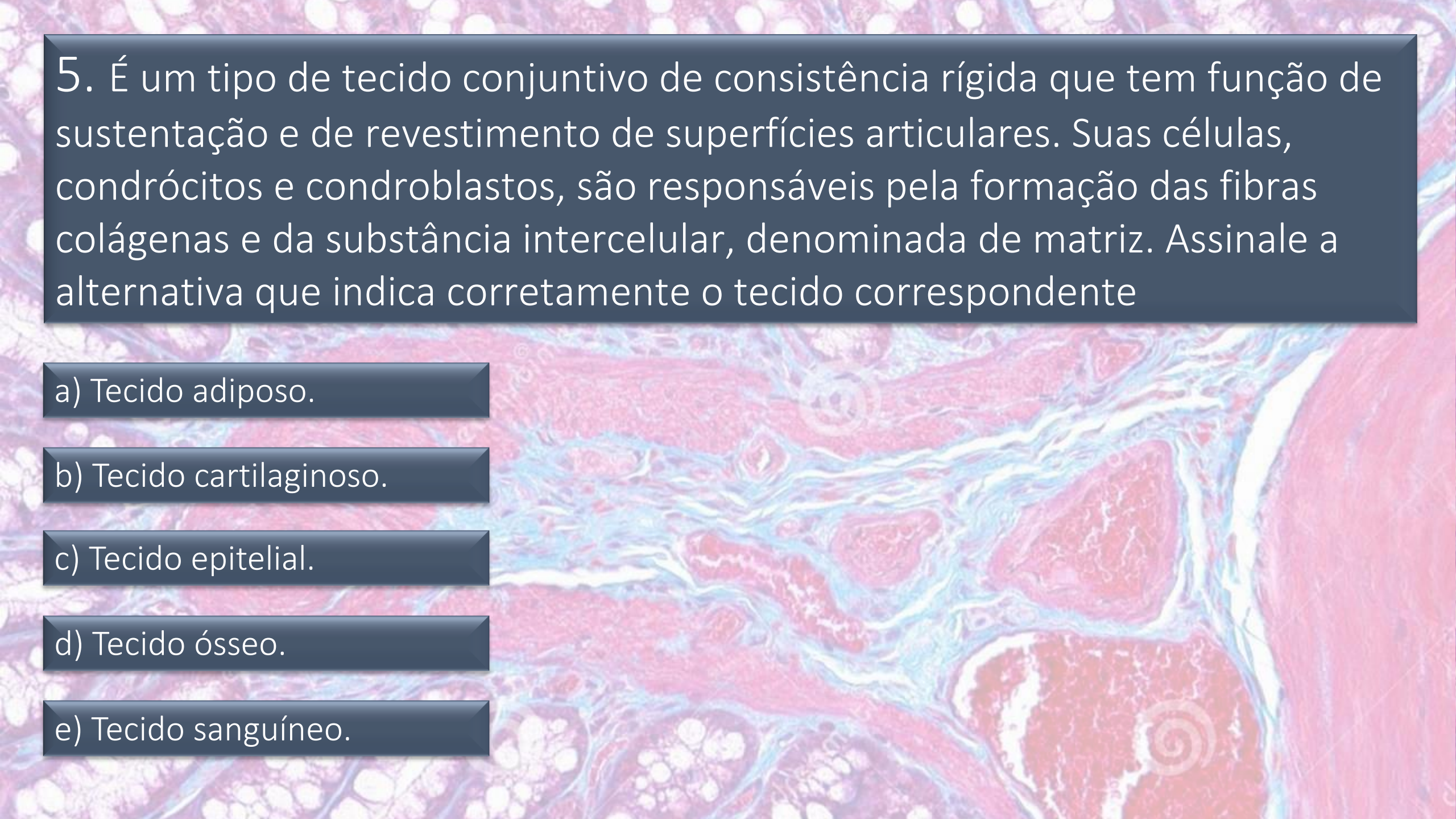
a) Tecido adiposo.

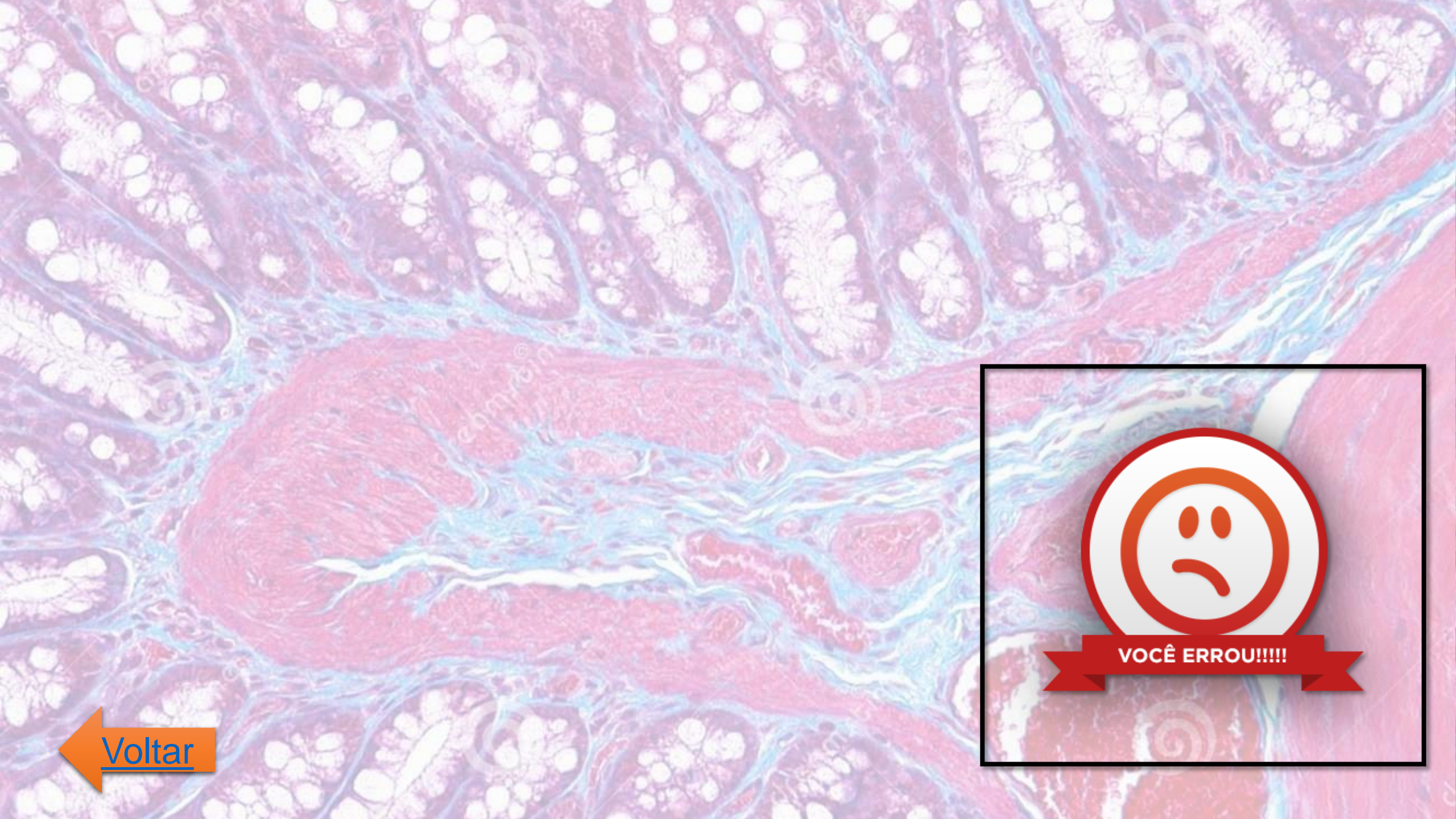
b) Tecido cartilaginoso.

c) Tecido epitelial.

d) Tecido ósseo.

e) Tecido sanguíneo.



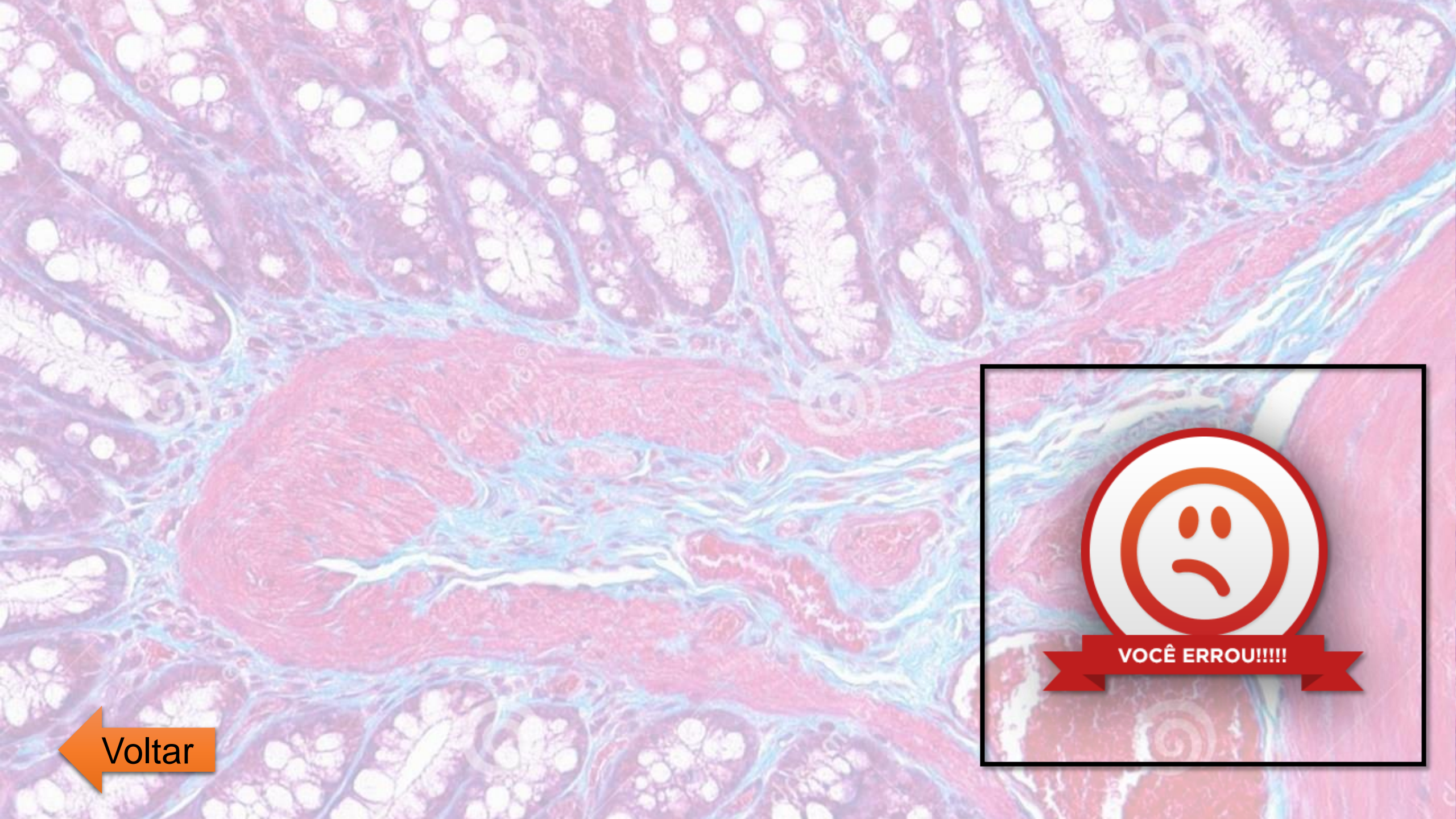


 [Voltar](#)

Alternativa “b”. O enunciado refere-se ao tecido cartilaginoso, mais precisamente a cartilagem hialina, que é encontrada nas articulações, amortece impactos e evita o atrito.

Avançar

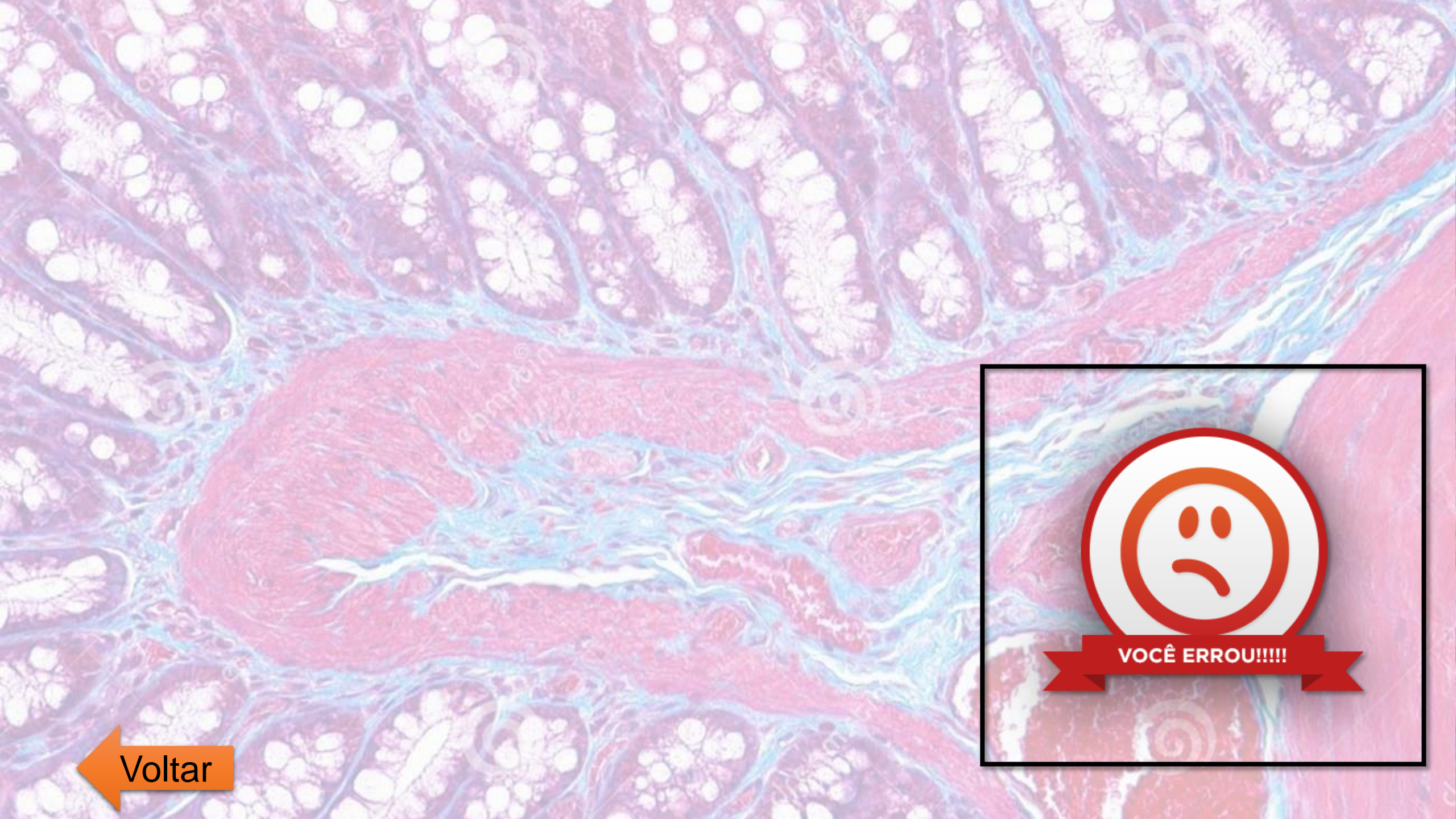




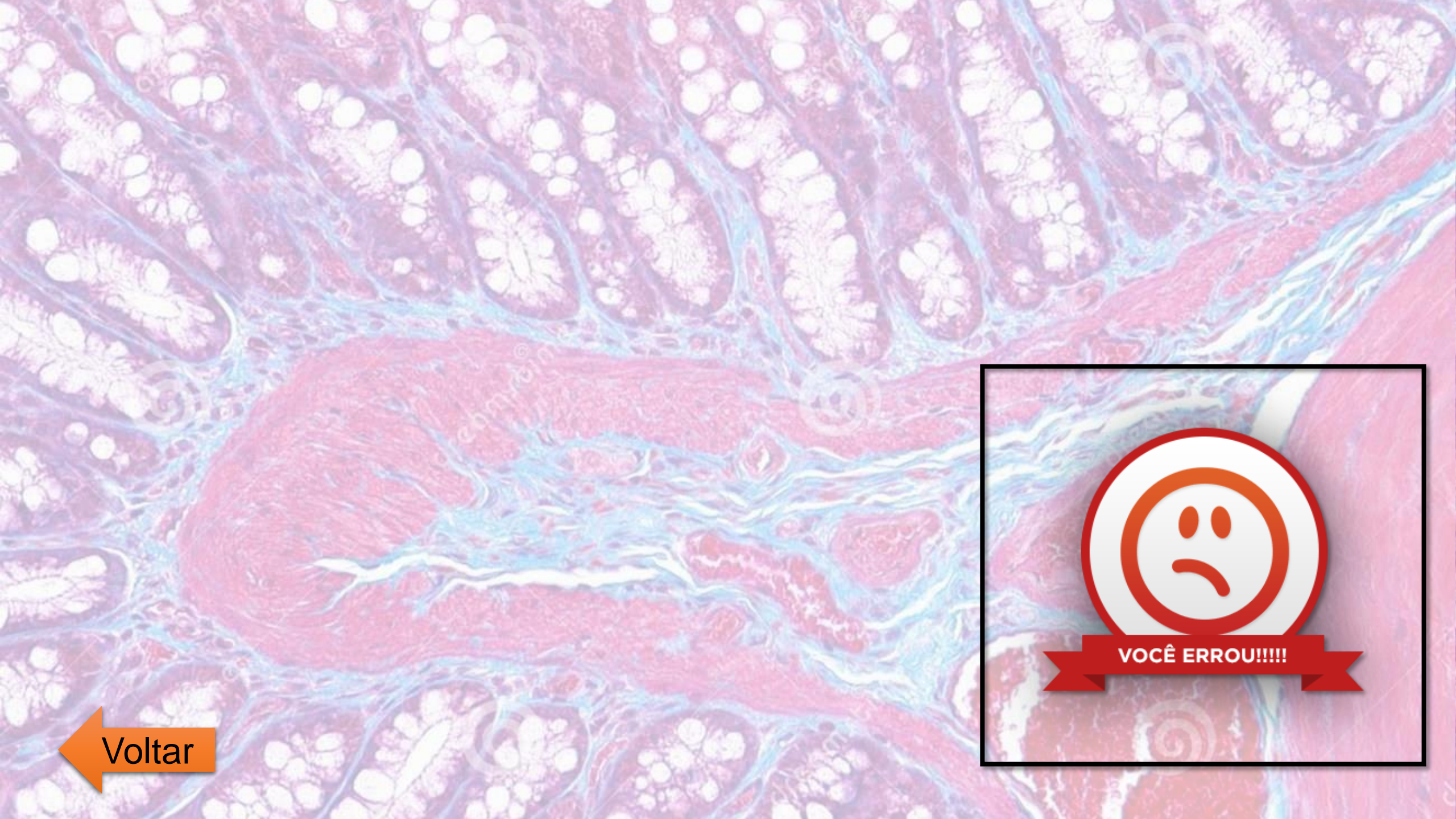
 Voltar



VOCÊ ERROU!!!!



 Voltar



 Voltar

6. Sabemos que a cartilagem pode ser classificada em três tipos principais: hialina, elástica e fibrosa. A respeito desses três tipos, marque a alternativa incorreta:

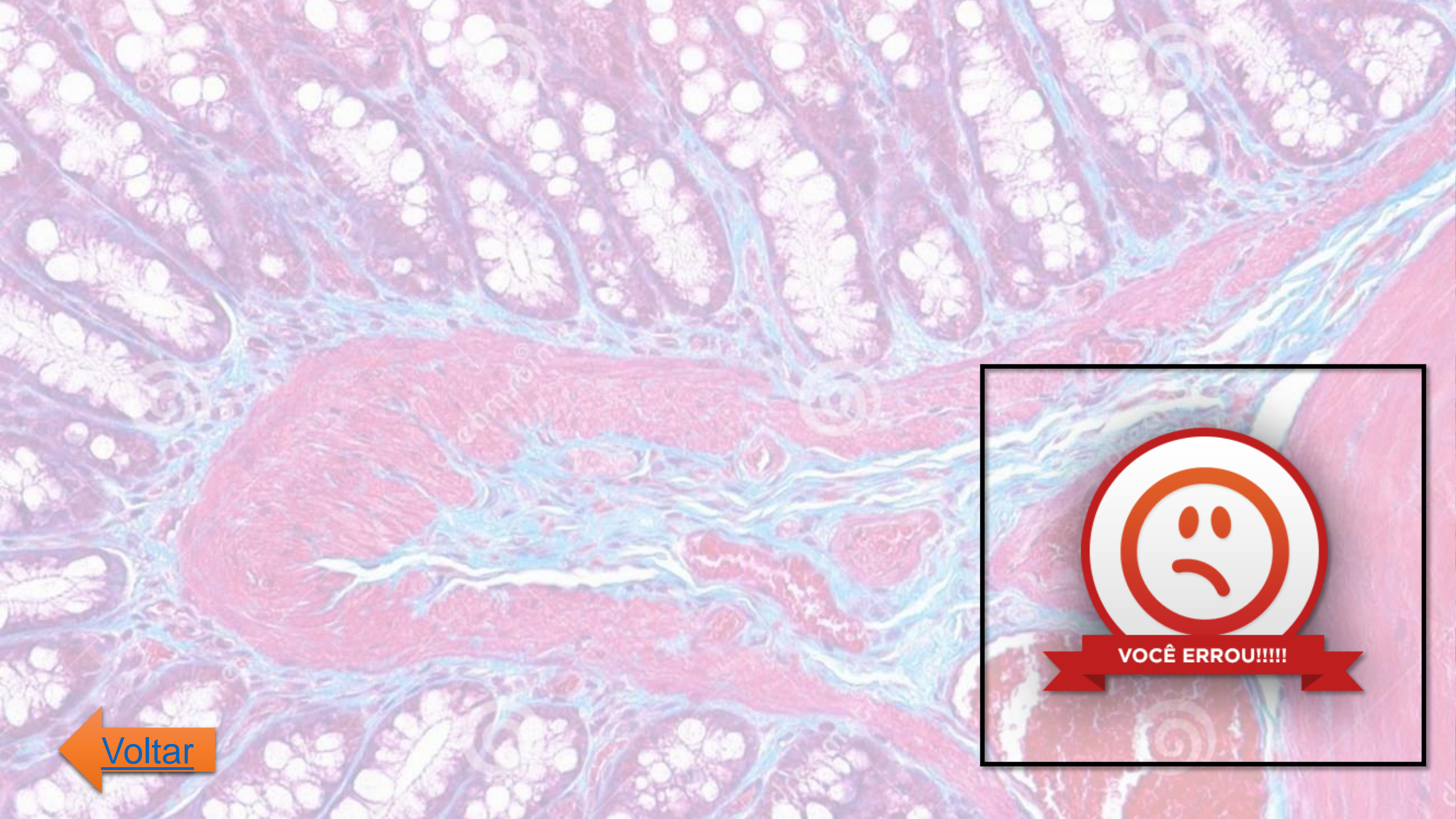
a) A cartilagem elástica está presente na orelha e caracteriza-se por sua flexibilidade.

b) A cartilagem fibrosa está associada ao tecido conjuntivo denso.

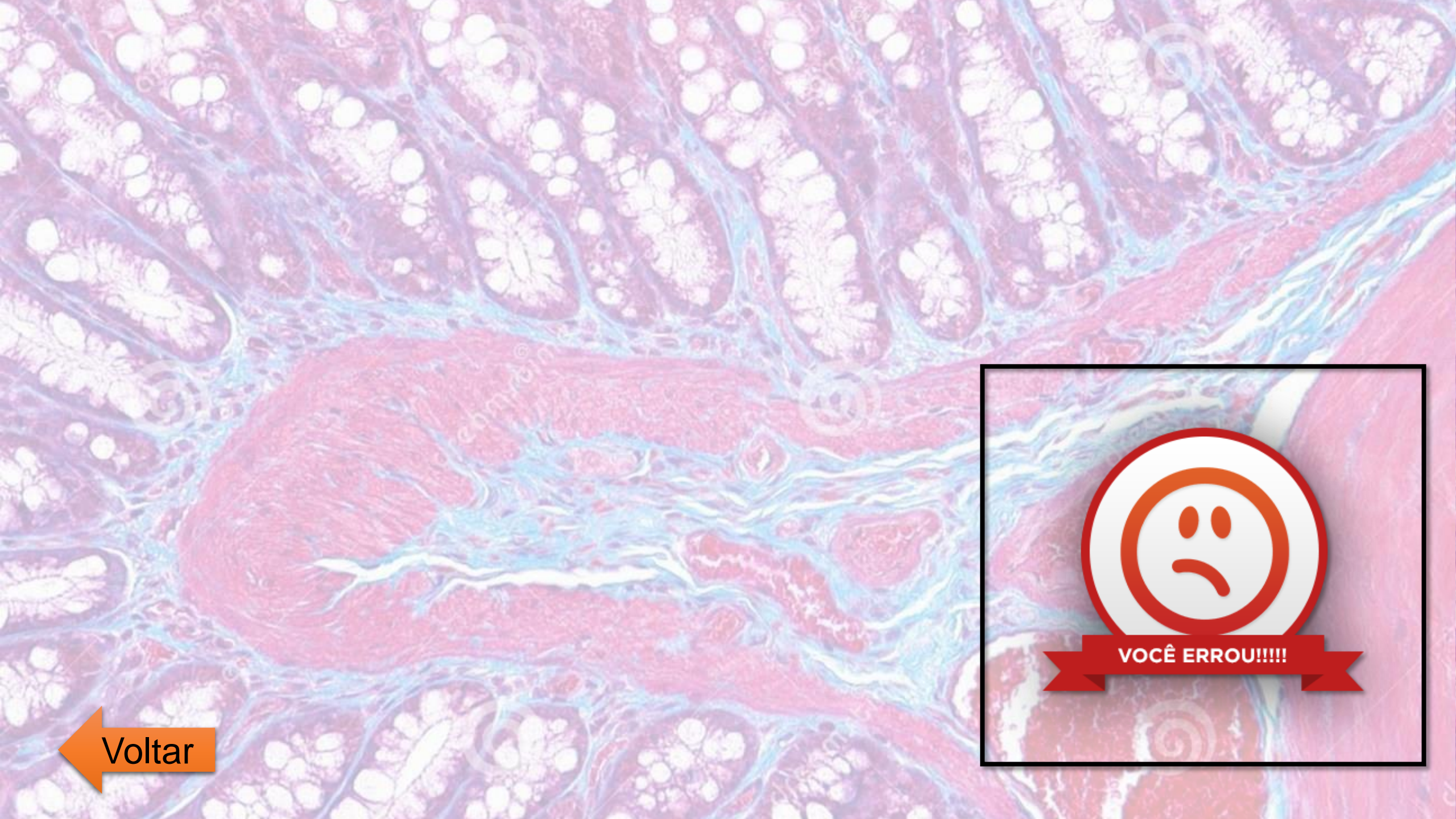
c) Nos meniscos das articulações dos joelhos, encontramos cartilagem fibrosa.

d) A cartilagem hialina normalmente não é envolvida pelo pericôndrio.

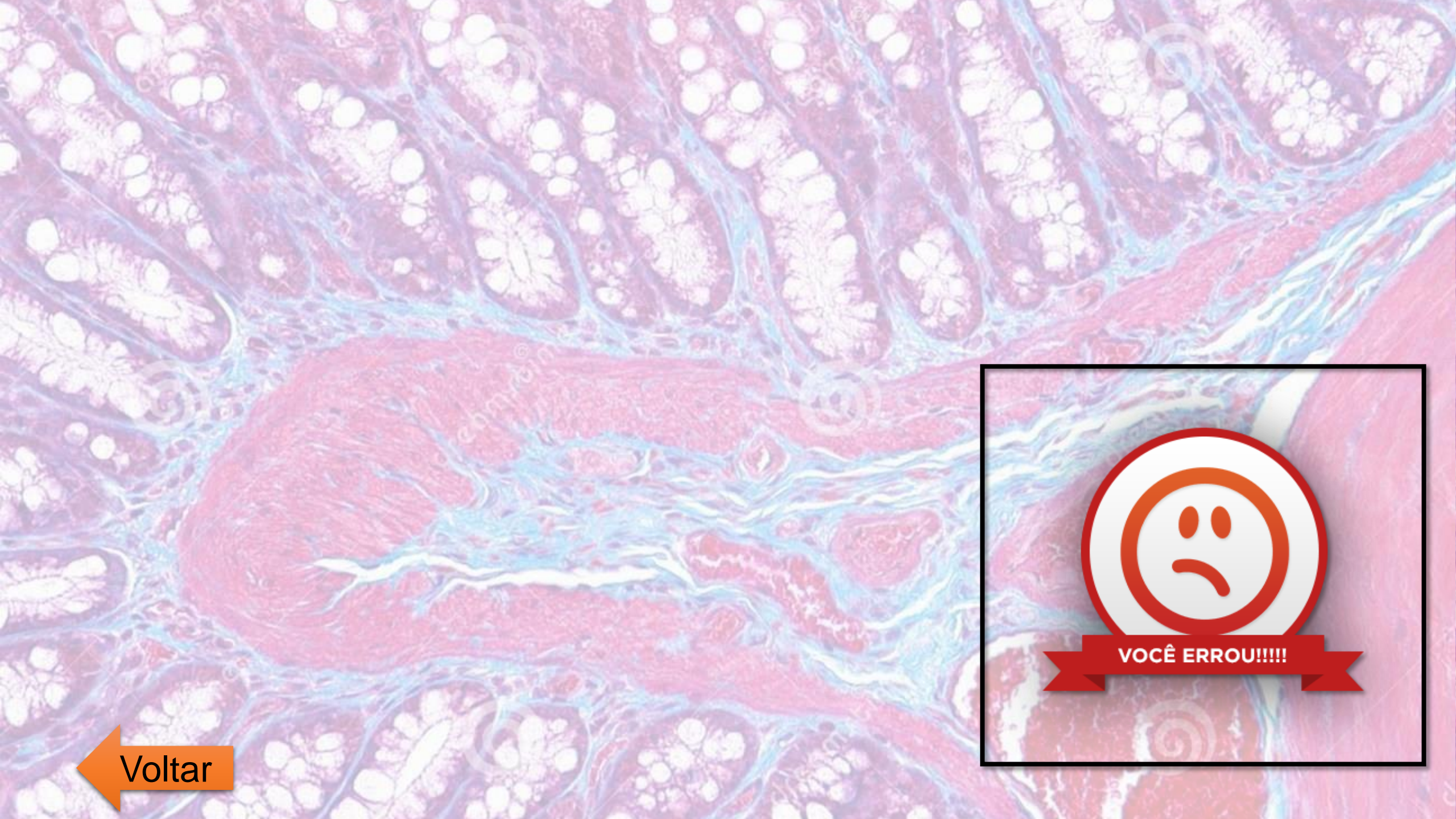
e) A cartilagem fibrosa é resistente à tração e apresenta grande quantidade de fibras colágenas.



 [Voltar](#)



 Voltar

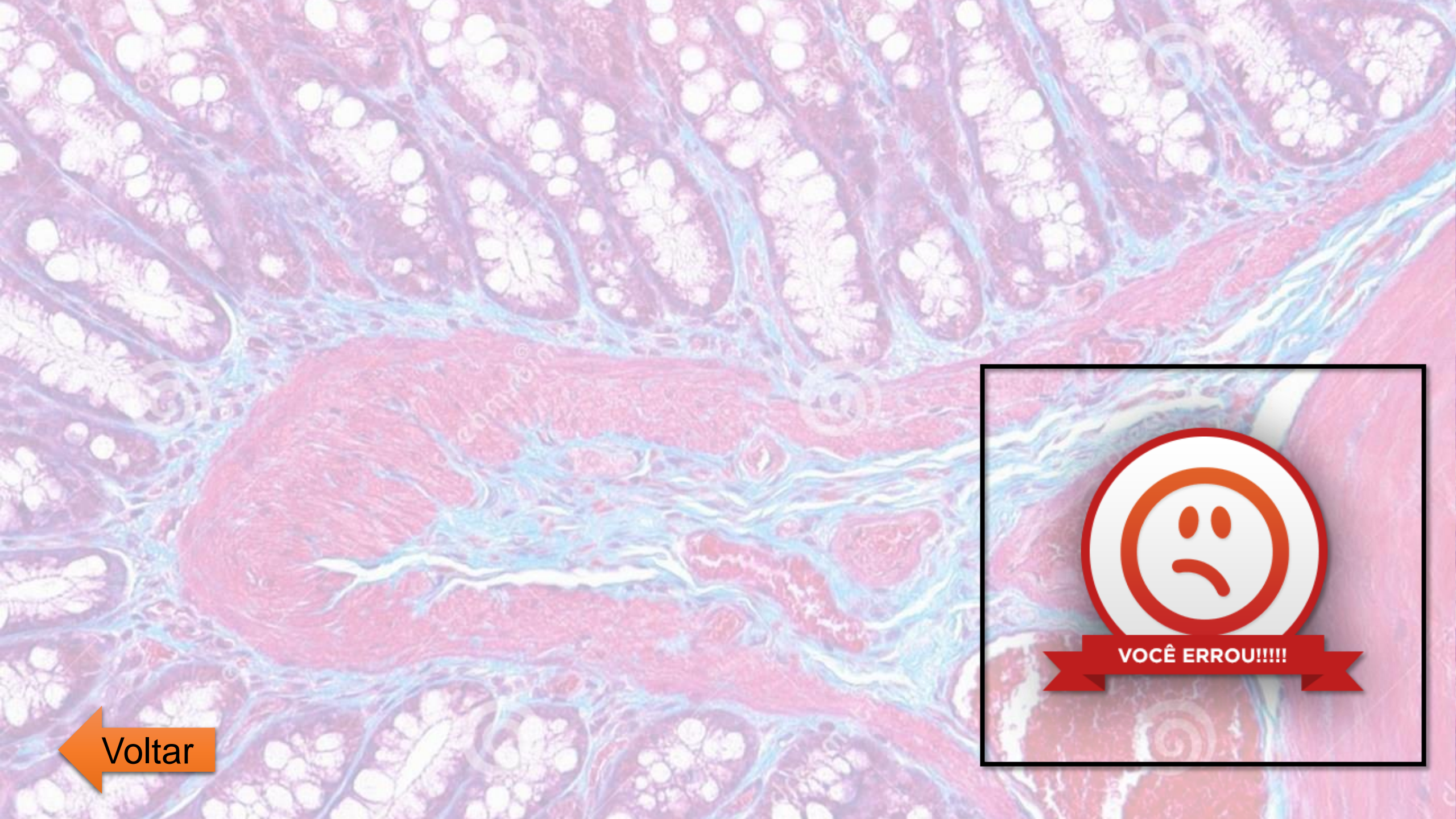


 Voltar

Alternativa “d”. A cartilagem hialina geralmente apresenta pericôndrio, um tipo de tecido conjuntivo que envolve a grande maioria das cartilagens.

Avançar





 Voltar

7. A cartilagem que compõe os discos intervertebrais é bastante resistente e rica em feixes colágenos. Graças a essas características, podemos afirmar que essa cartilagem é classificada como

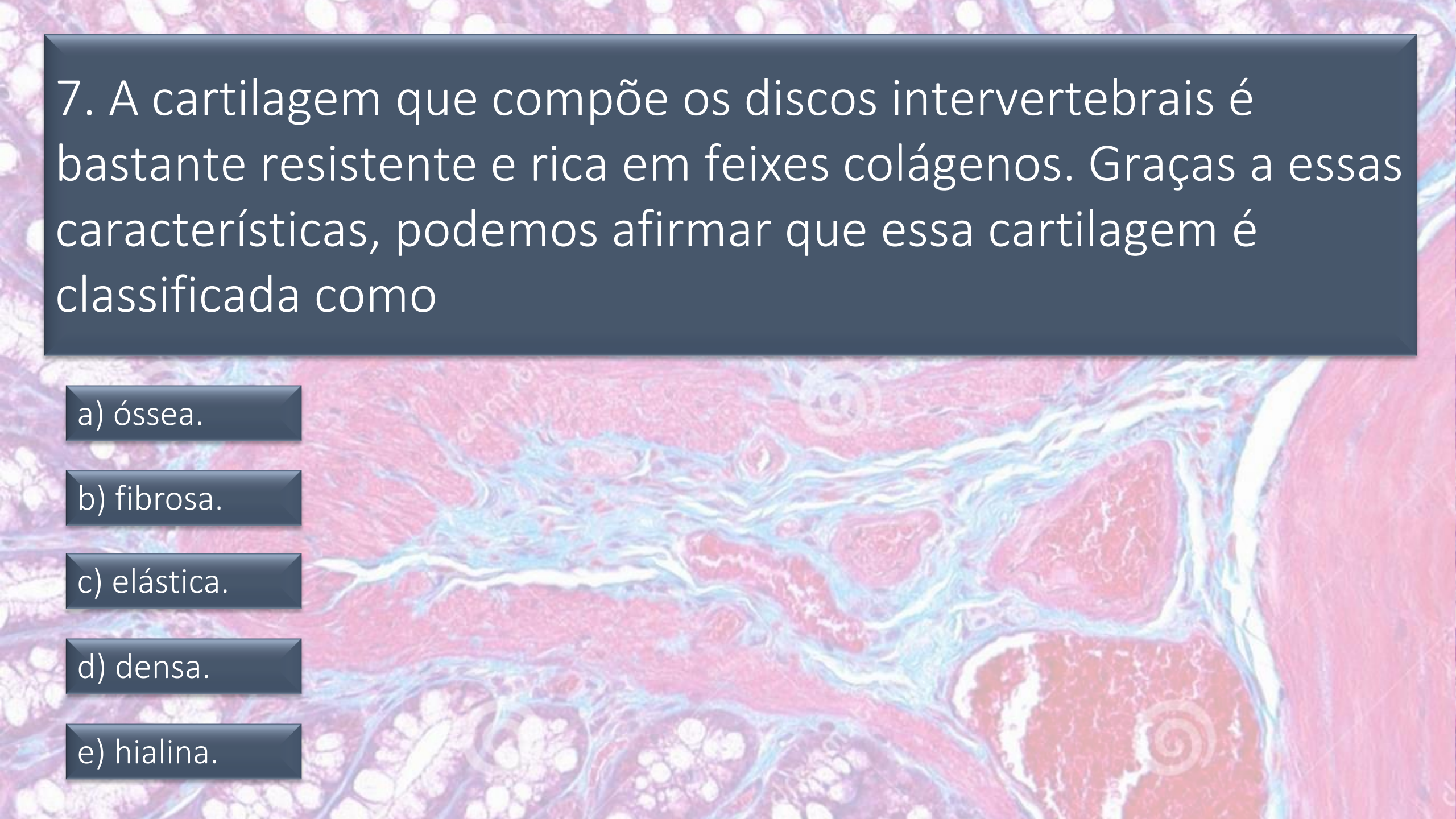
a) óssea.

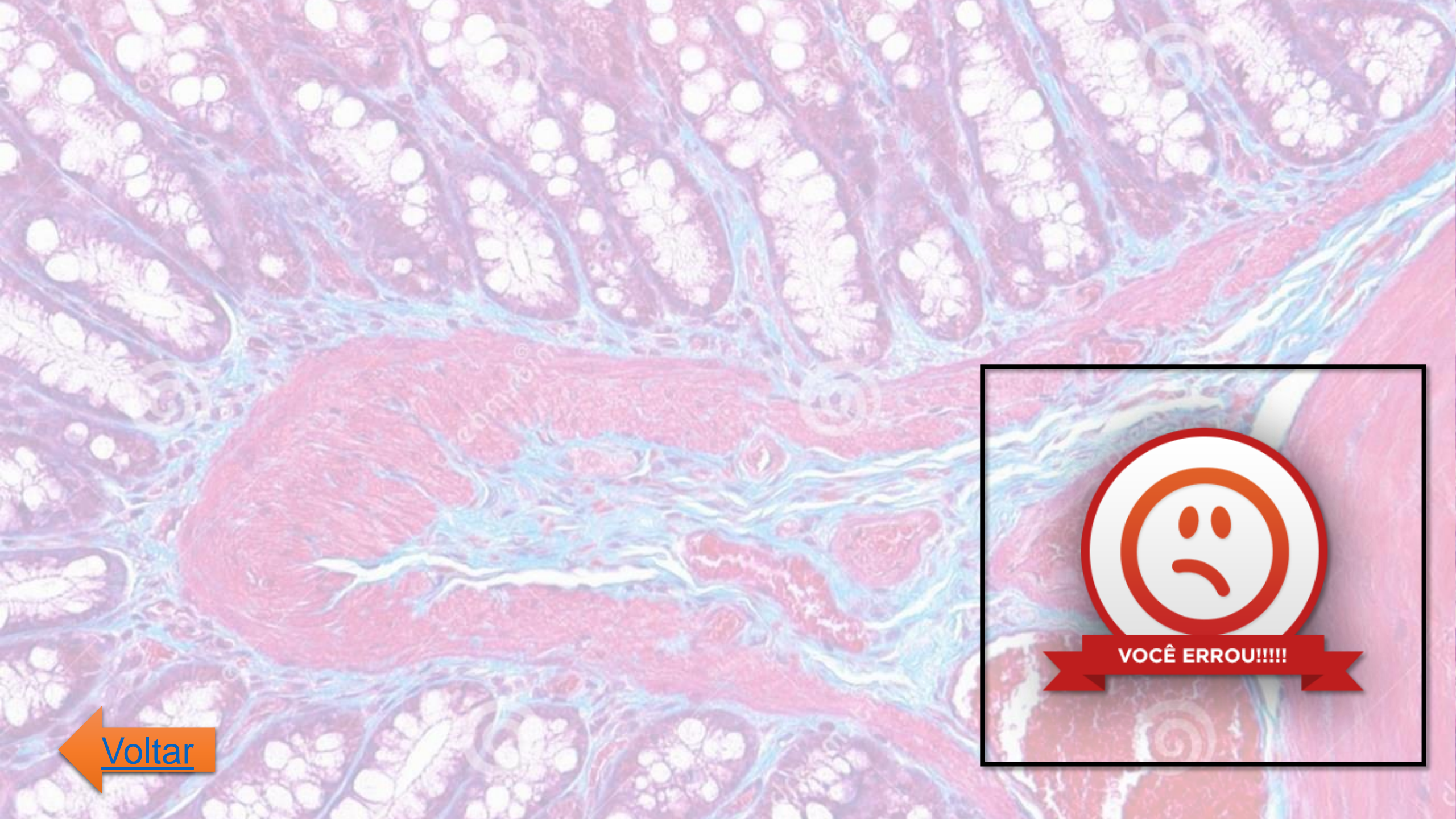
b) fibrosa.

c) elástica.

d) densa.

e) hialina.



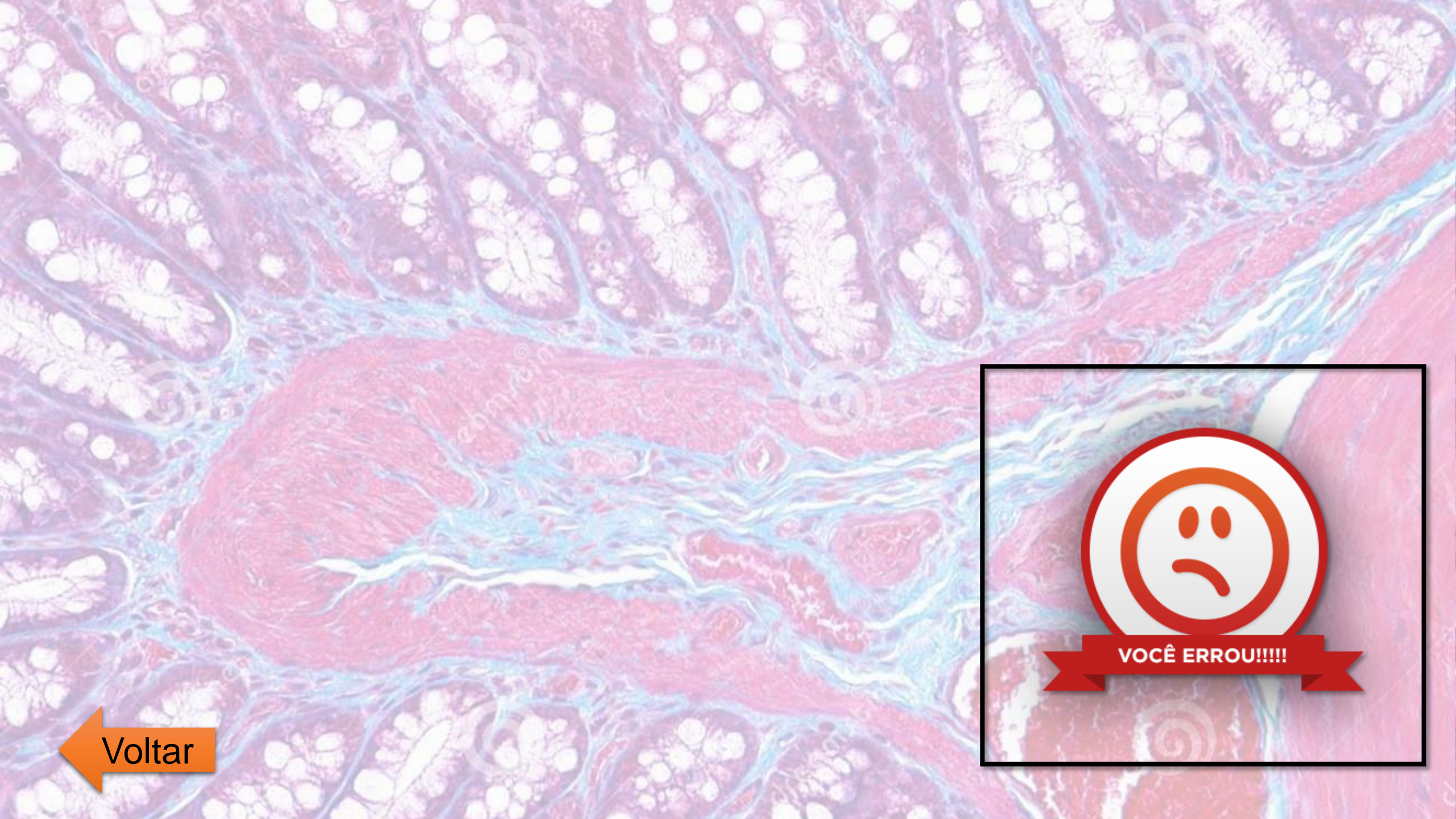


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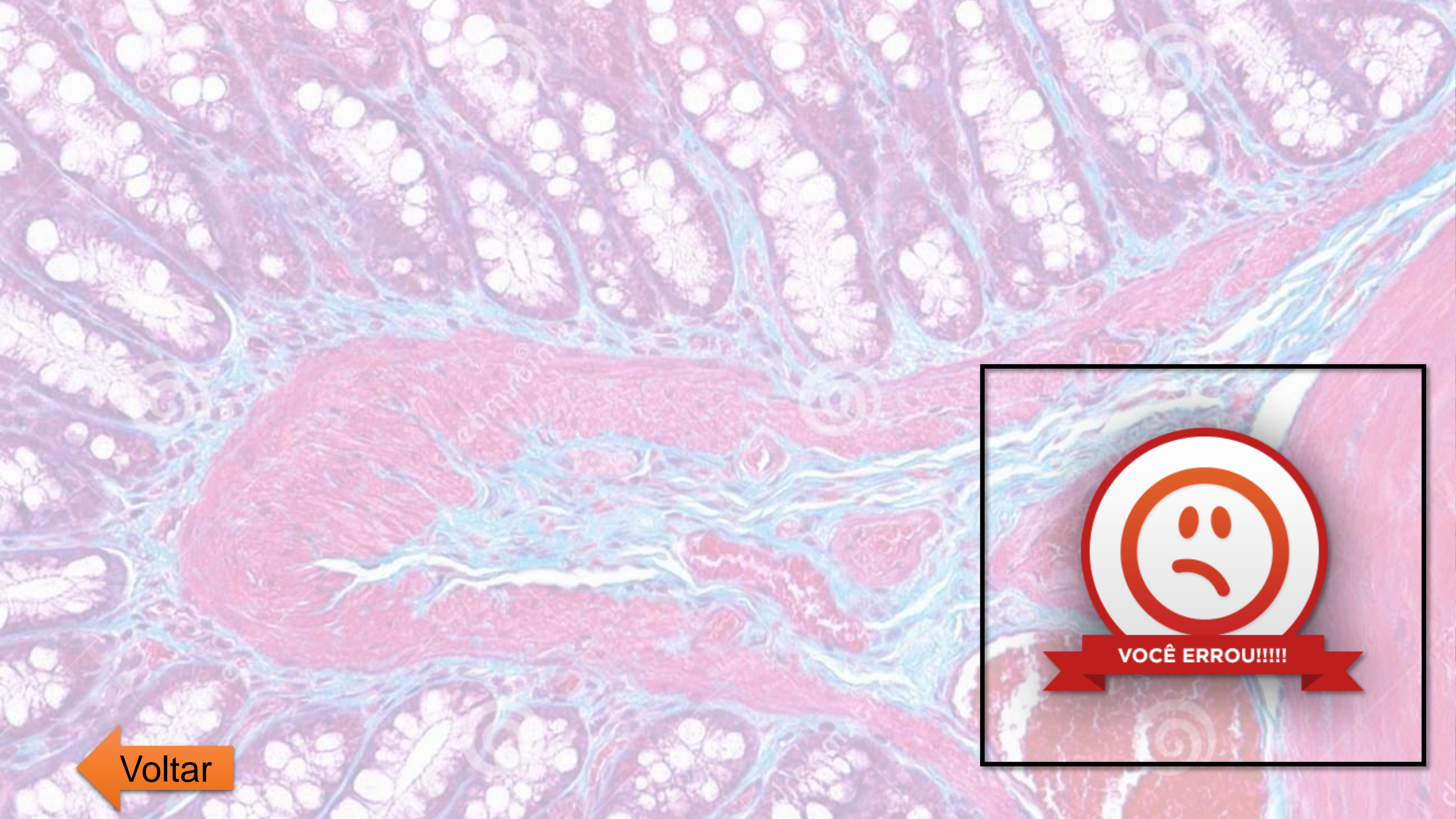
Alternativa “b”. As cartilagens com alta concentração de feixes colágenos recebem a denominação de fibrosas.

Avançar

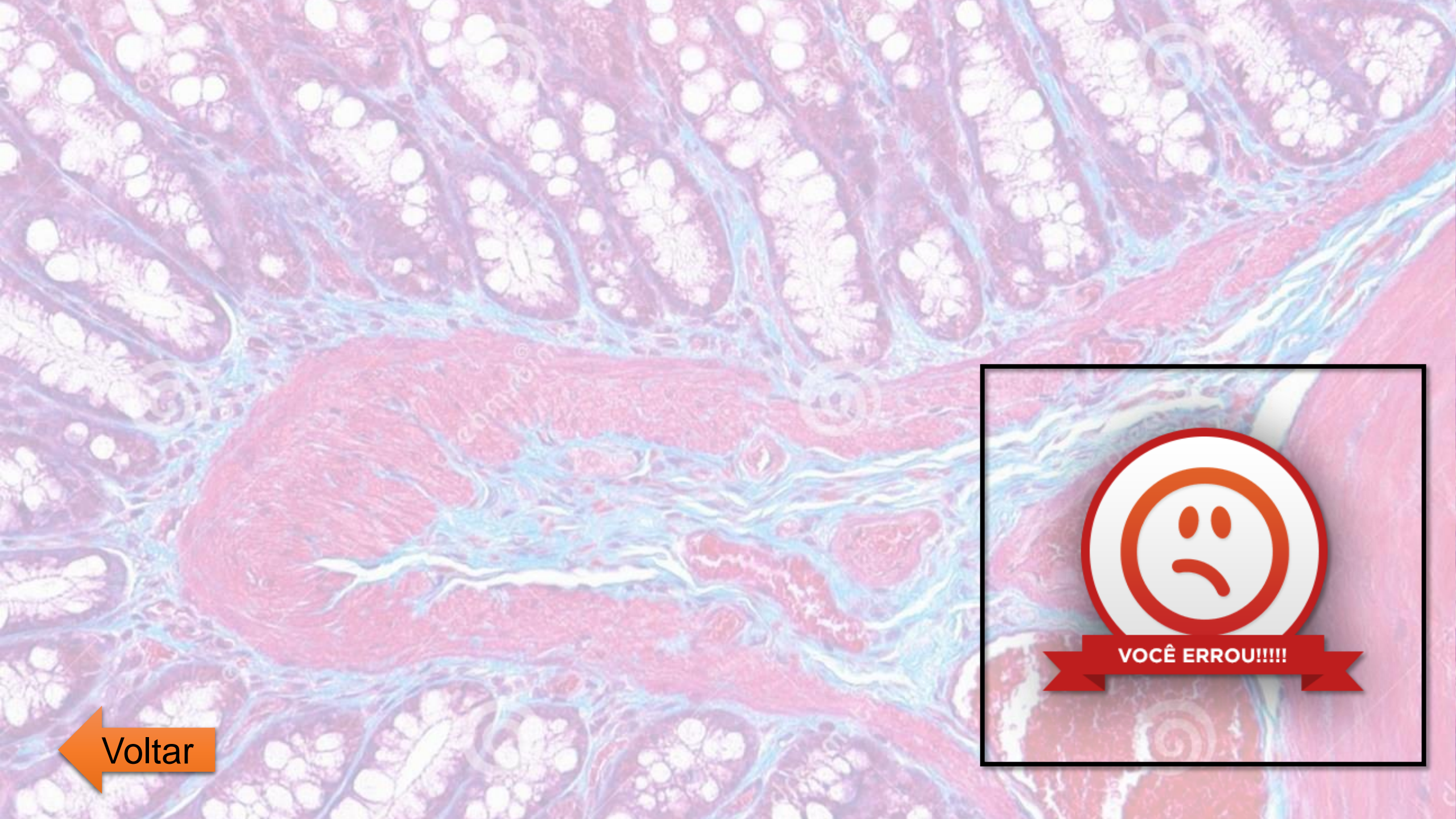




 Voltar



 Voltar



 Voltar

8. As cartilagens são classificadas por meio da análise da quantidade de fibras presentes em cada uma delas. As cartilagens que formam o primeiro esqueleto do feto, por exemplo, apresentam poucas fibras colágenas e são classificadas como:

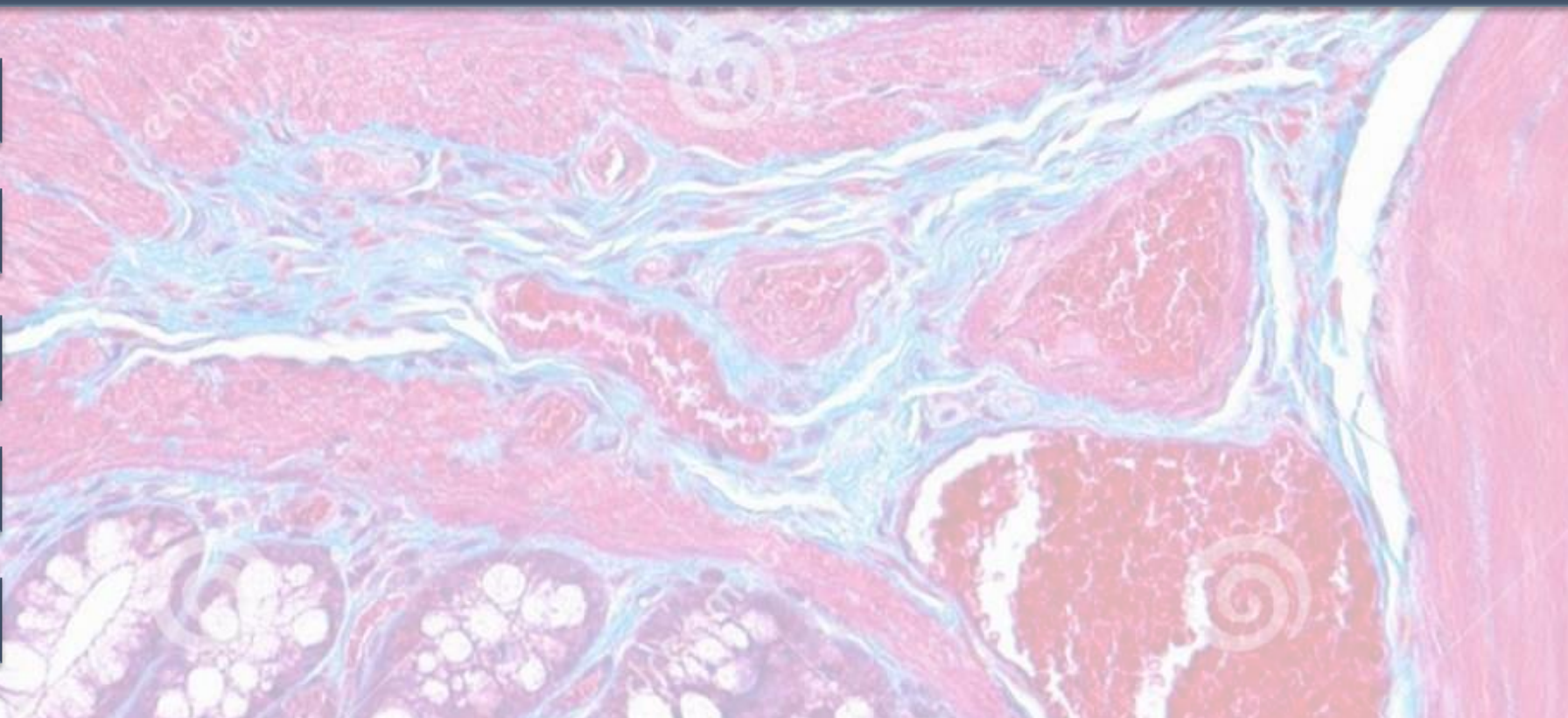
a) fibrosas.

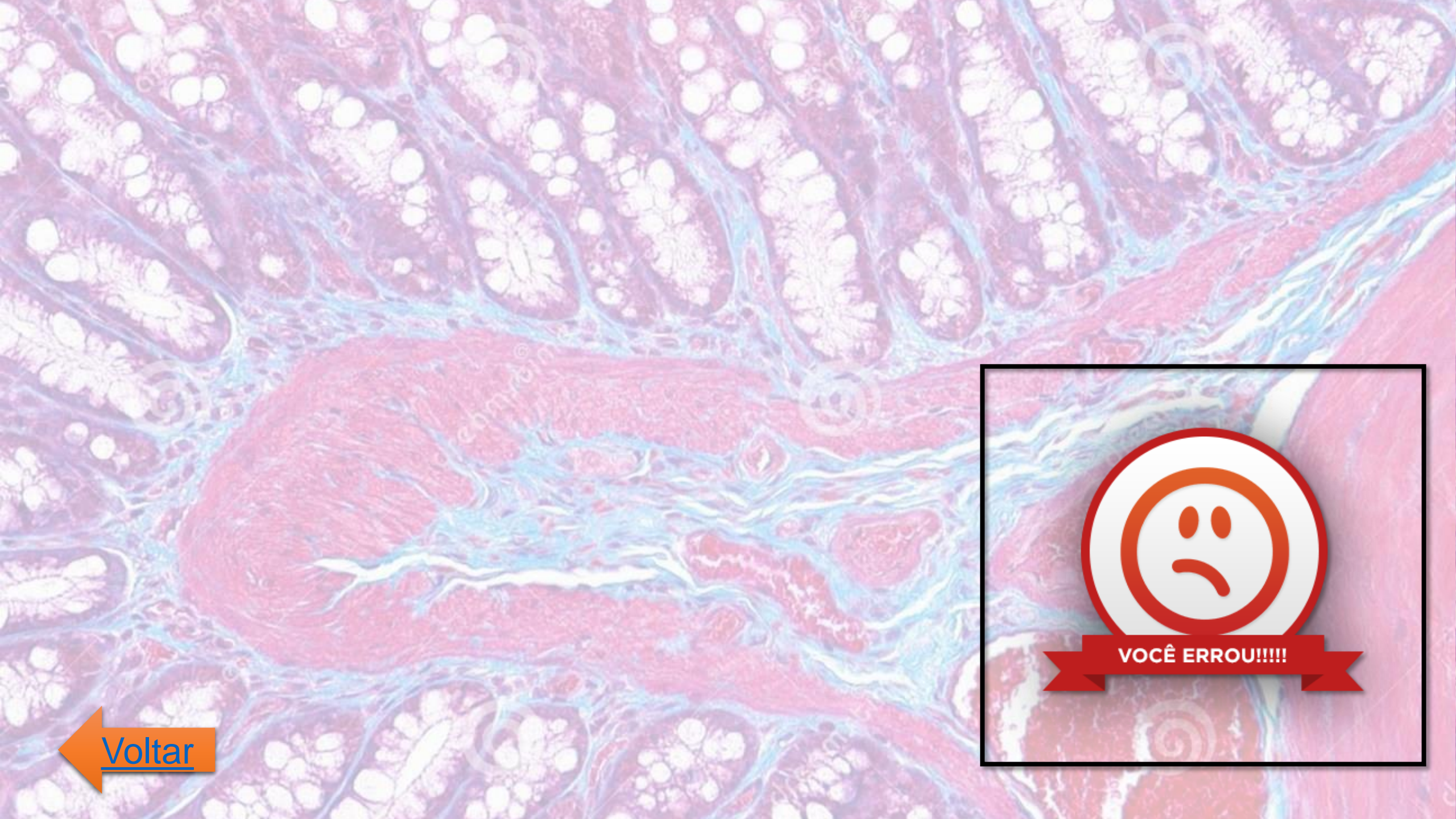
b) densas.

c) modeladas.

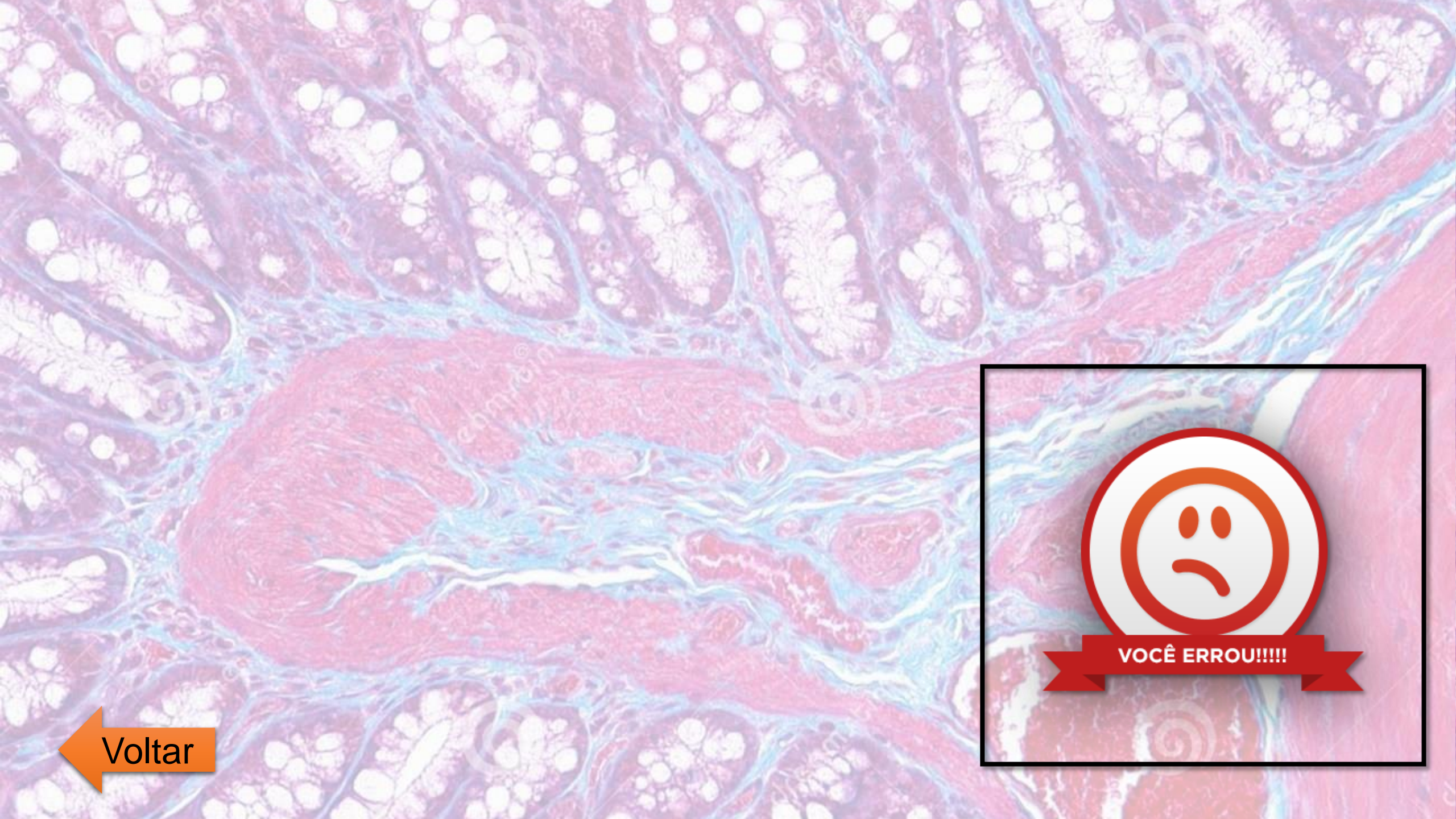
d) hialinas.

e) elásticas.

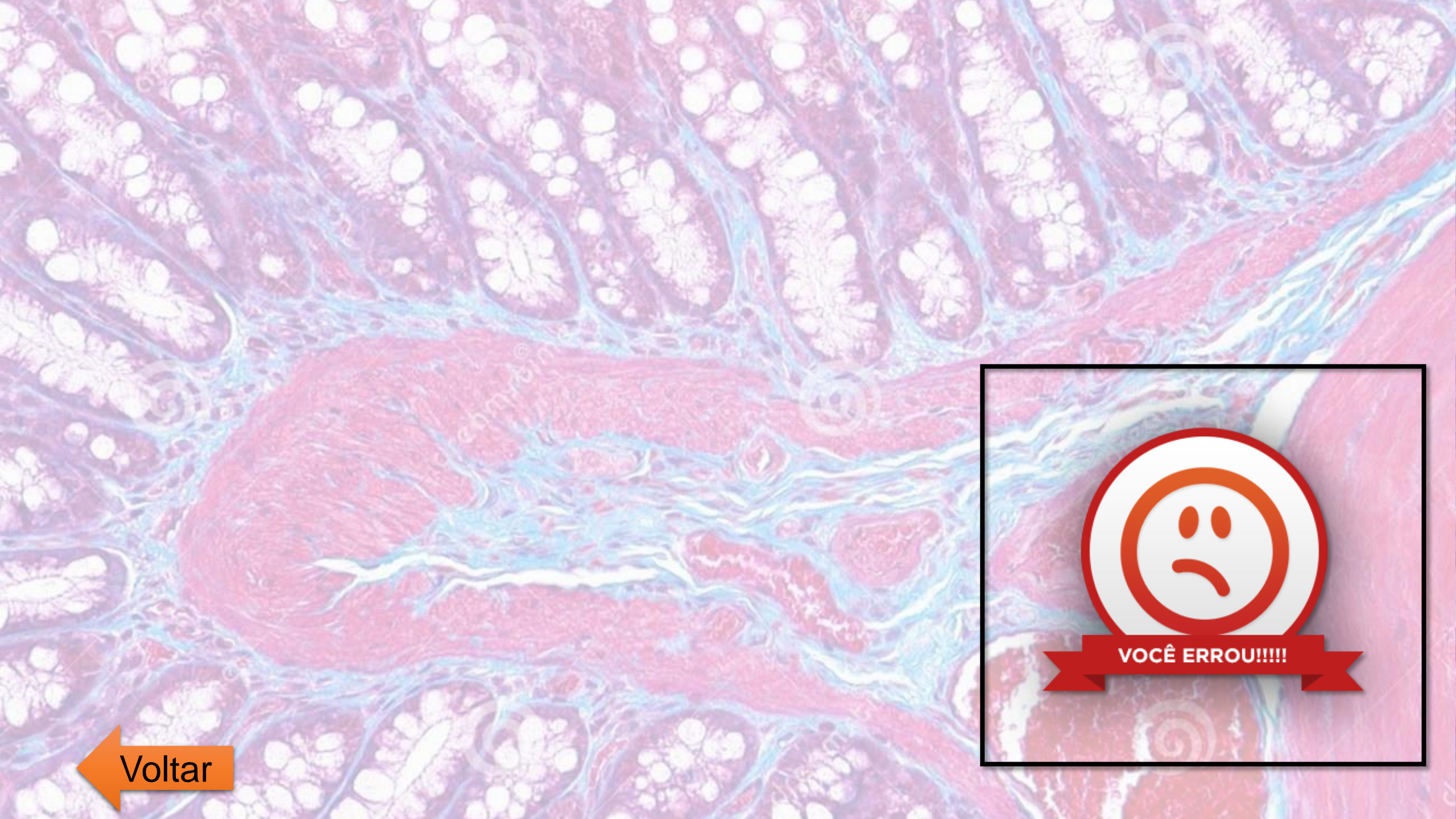




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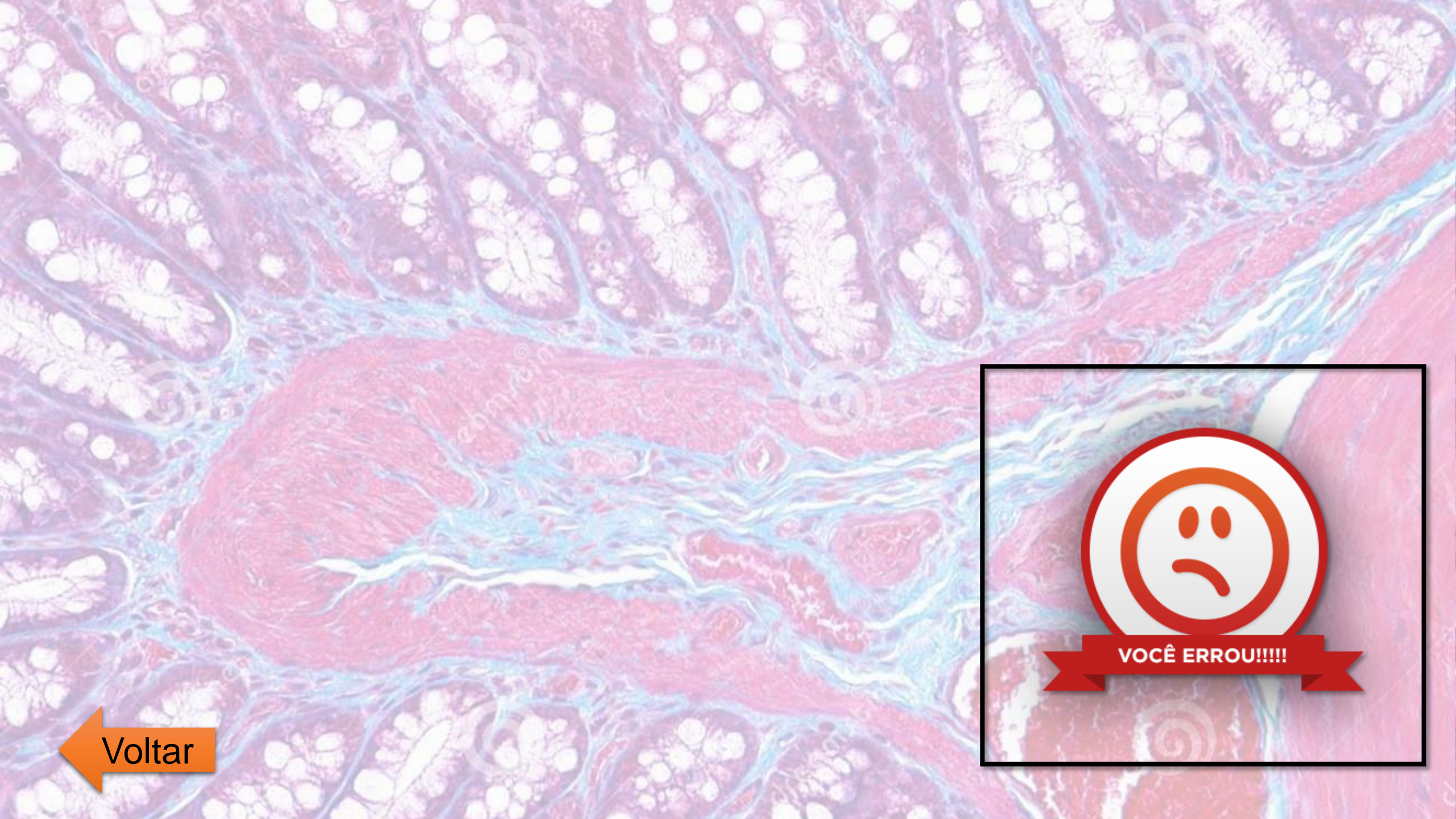


 Voltar

Alternativa “d”. As cartilagens hialinas caracterizam-se pela presença de poucas fibras colágenas. Além disso, são ricas em substância fundamental e água.

Avançar





 Voltar

9. A seguir há uma lista com algumas partes do corpo formadas por cartilagem. Identifique a única estrutura formada por cartilagem elástica.

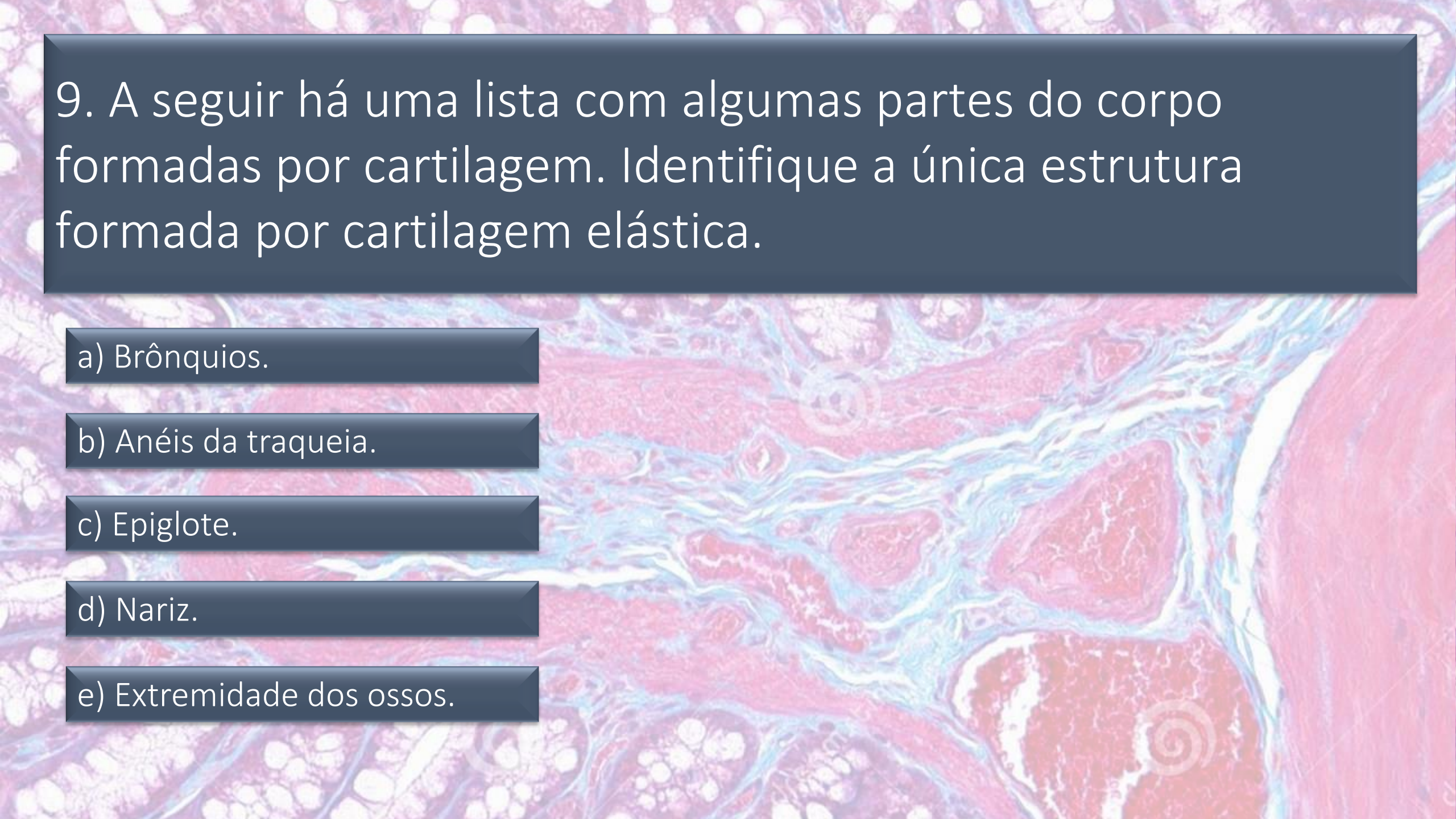
a) Brônquios.

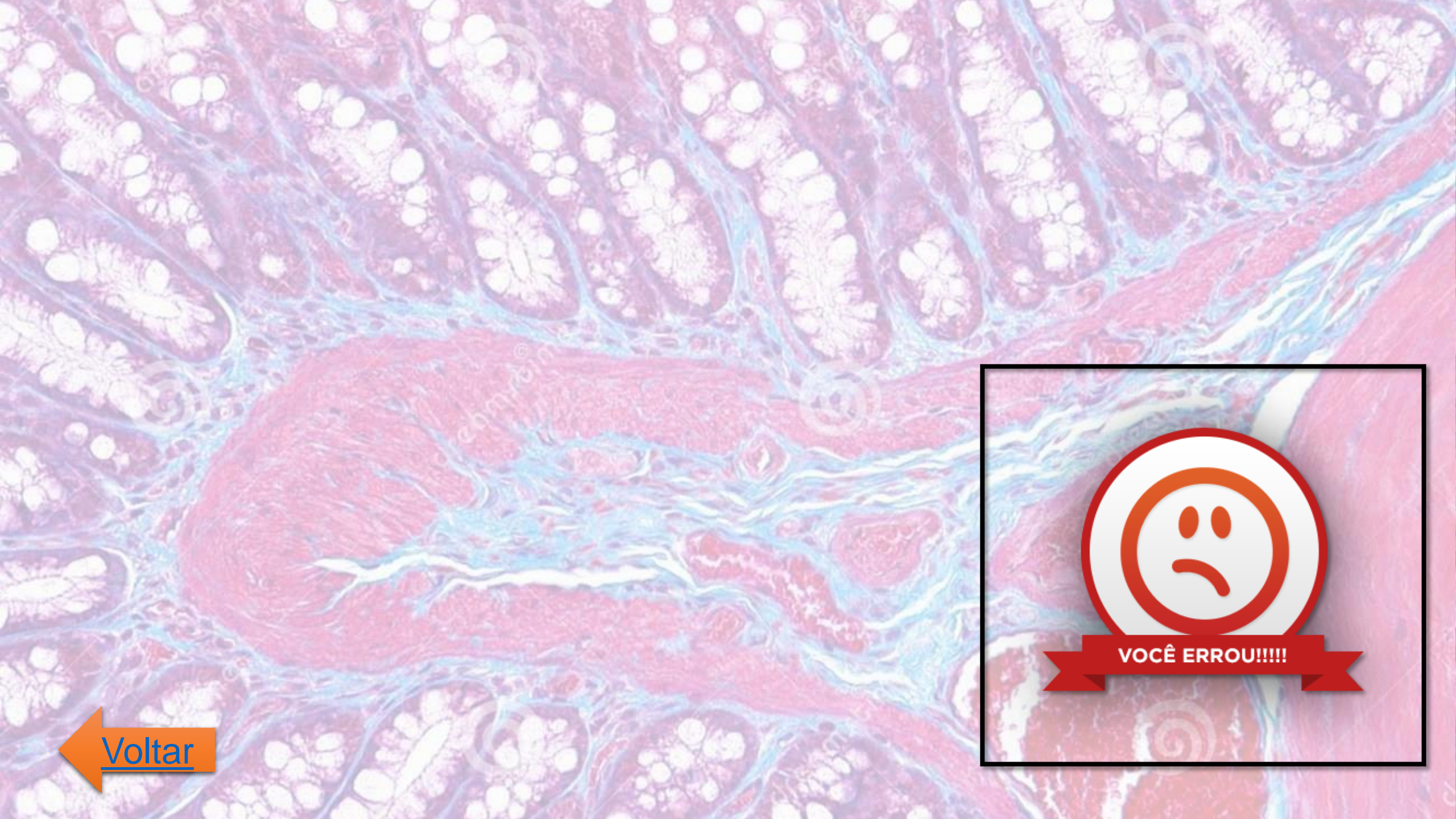
b) Anéis da traqueia.

c) Epiglote.

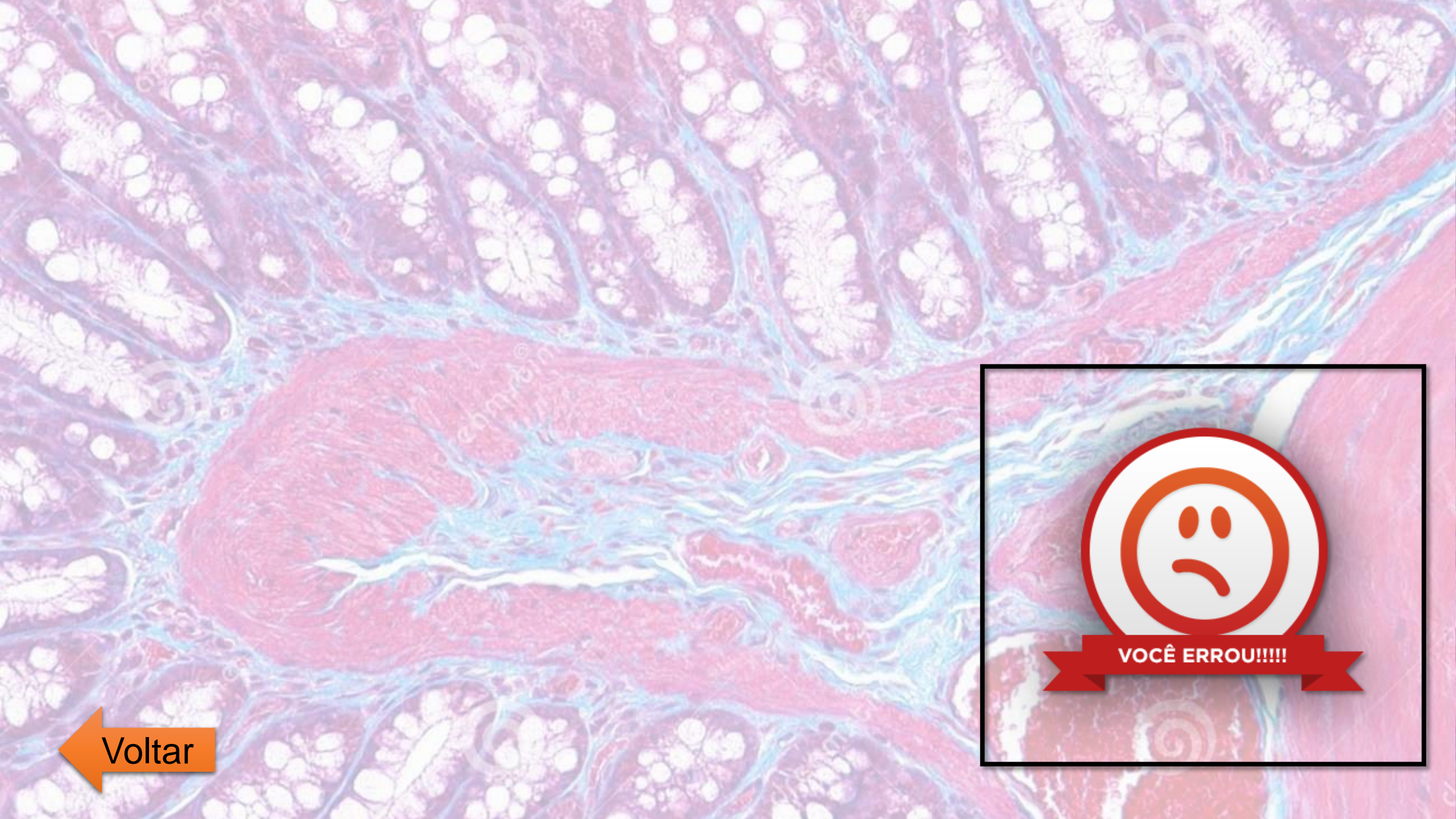
d) Nariz.

e) Extremidade dos ossos.





 [Voltar](#)

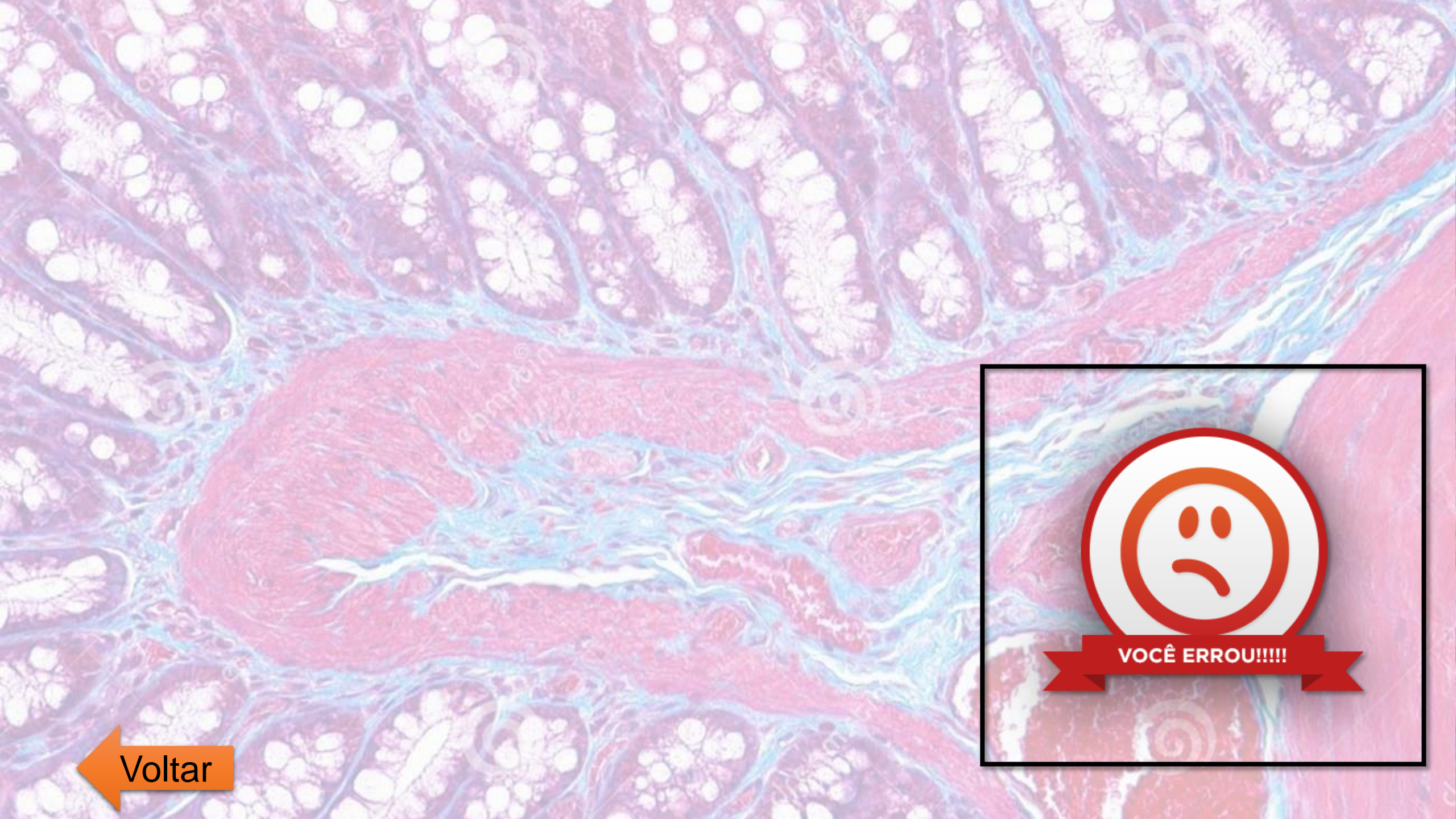


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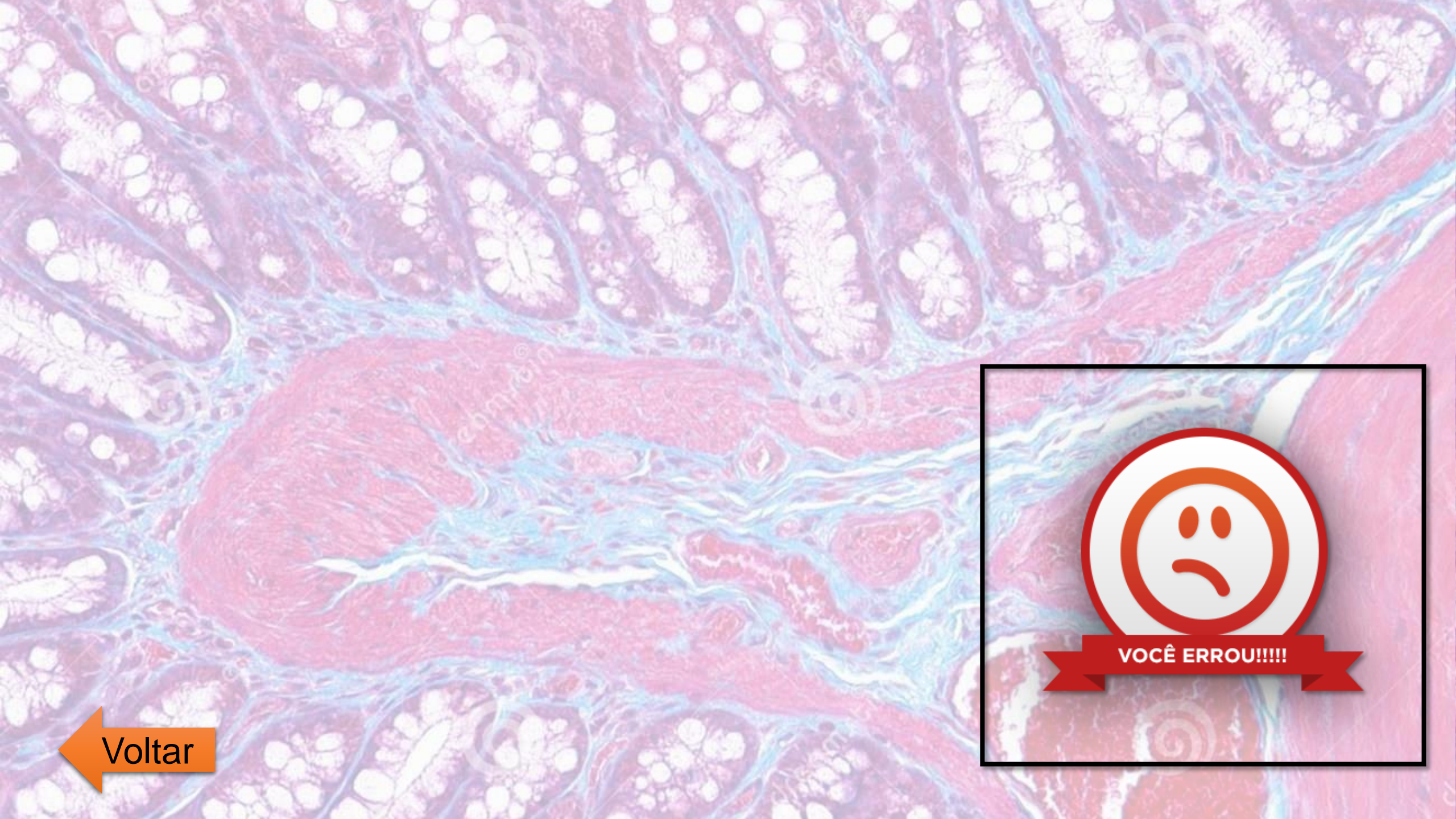
Alternativa “c”. A epiglote é formada por cartilagem elástica, enquanto todas as outras estruturas citadas são formadas por cartilagem hialina.

Avançar





 Voltar



 Voltar

10. O pericôndrio é uma camada de tecido conjuntivo normalmente encontrada revestindo as cartilagens. A única cartilagem que não é revestida por essa camada é a:

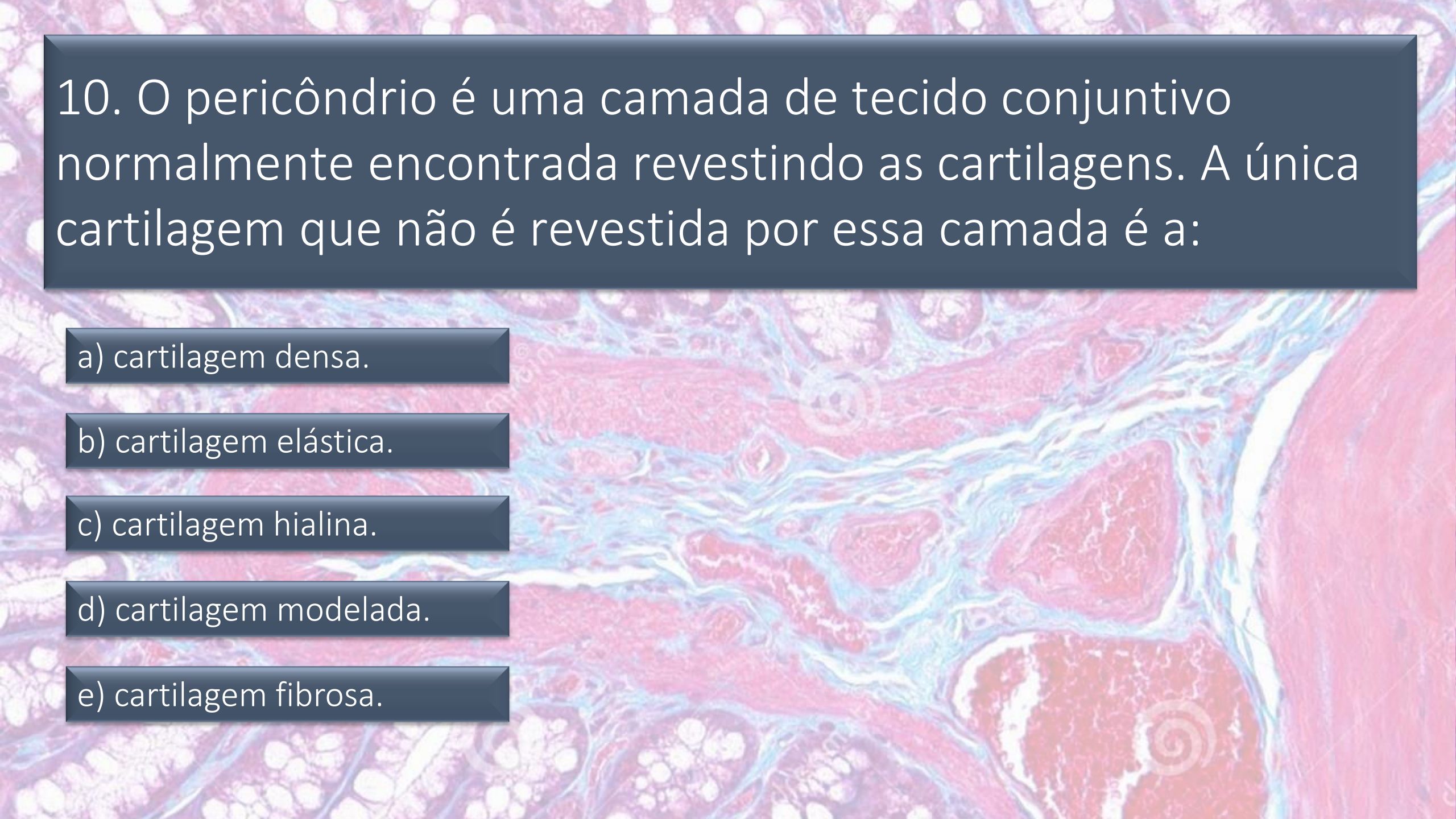
a) cartilagem densa.

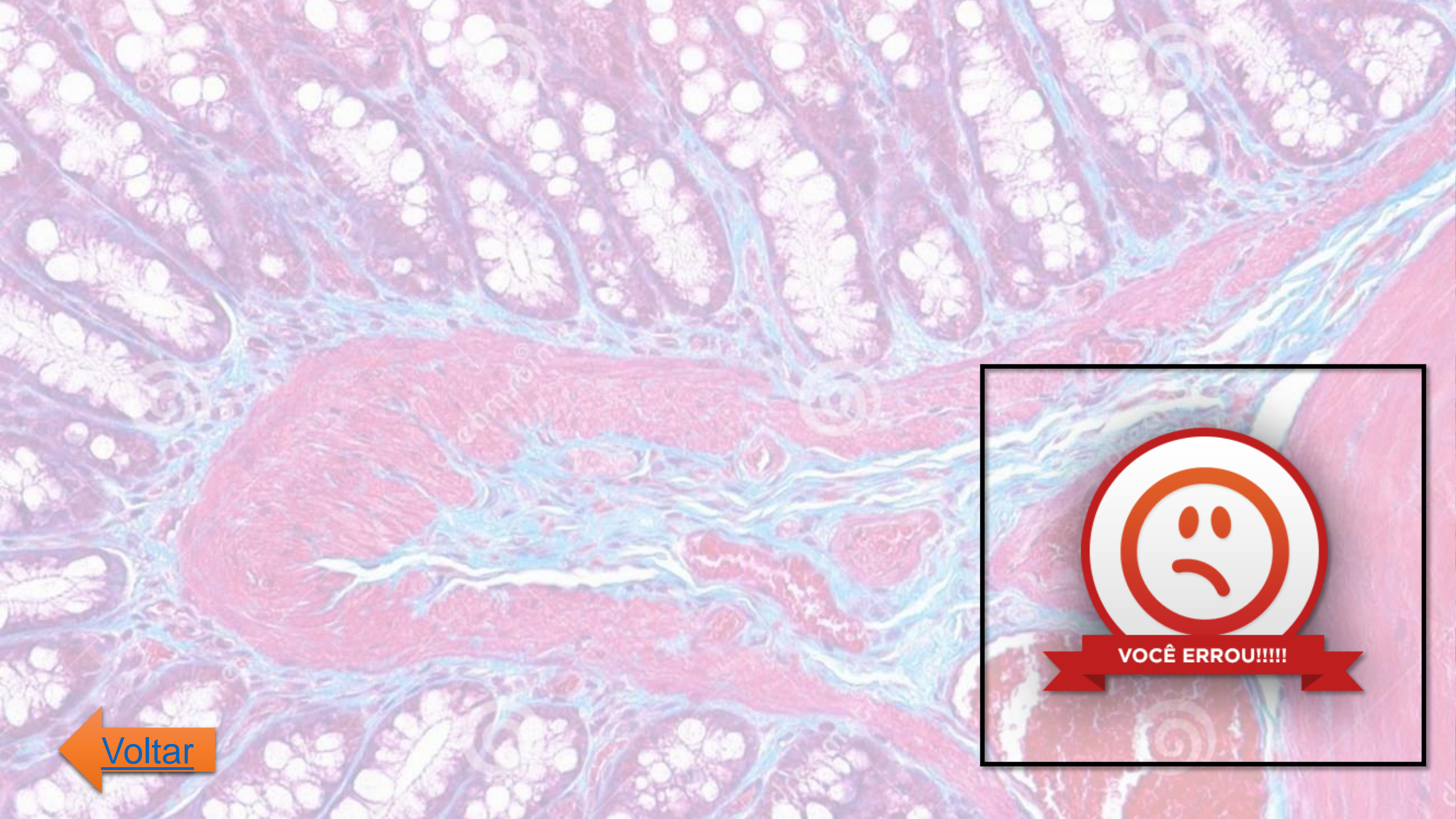
b) cartilagem elástica.

c) cartilagem hialina.

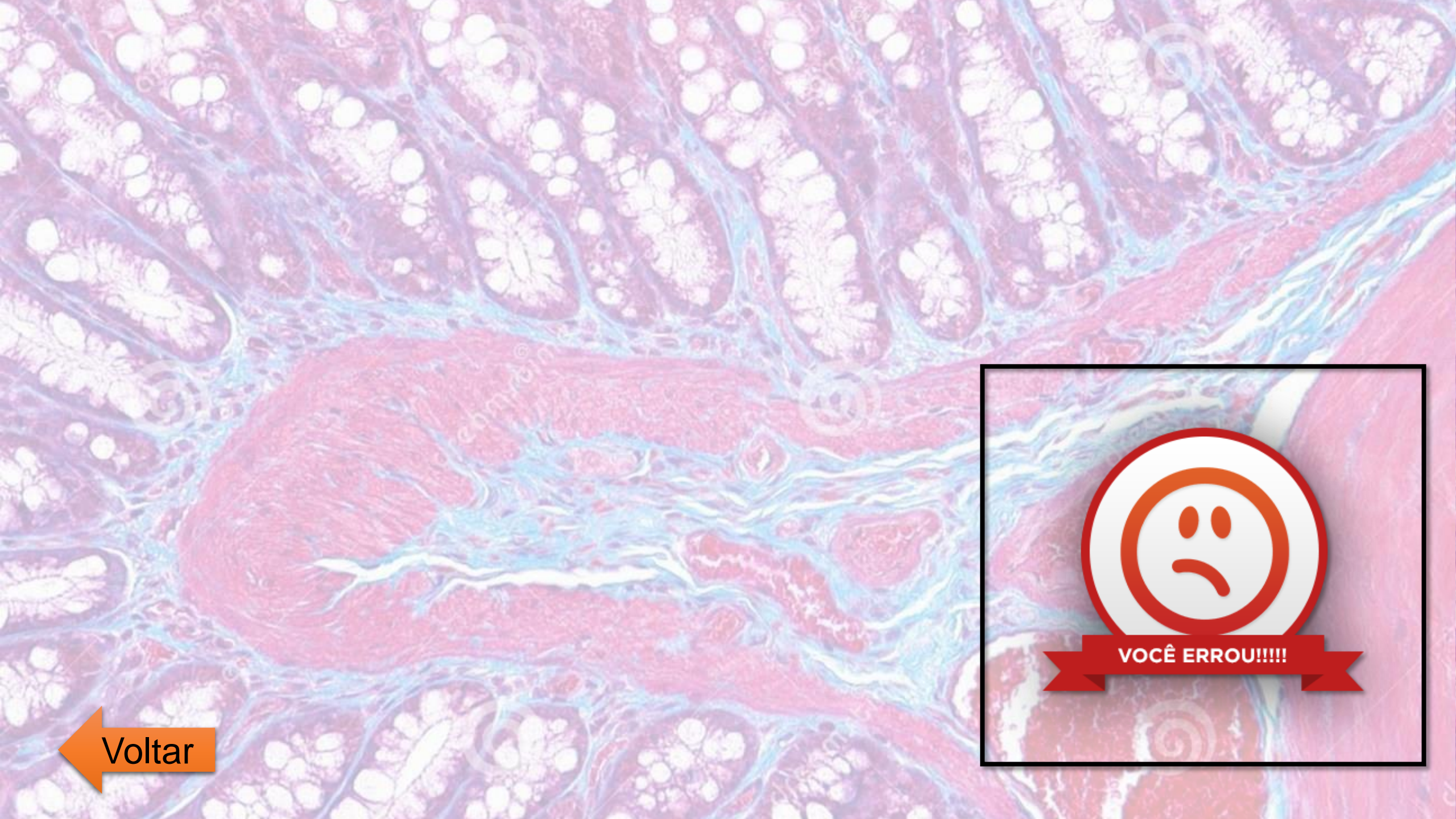
d) cartilagem modelada.

e) cartilagem fibrosa.

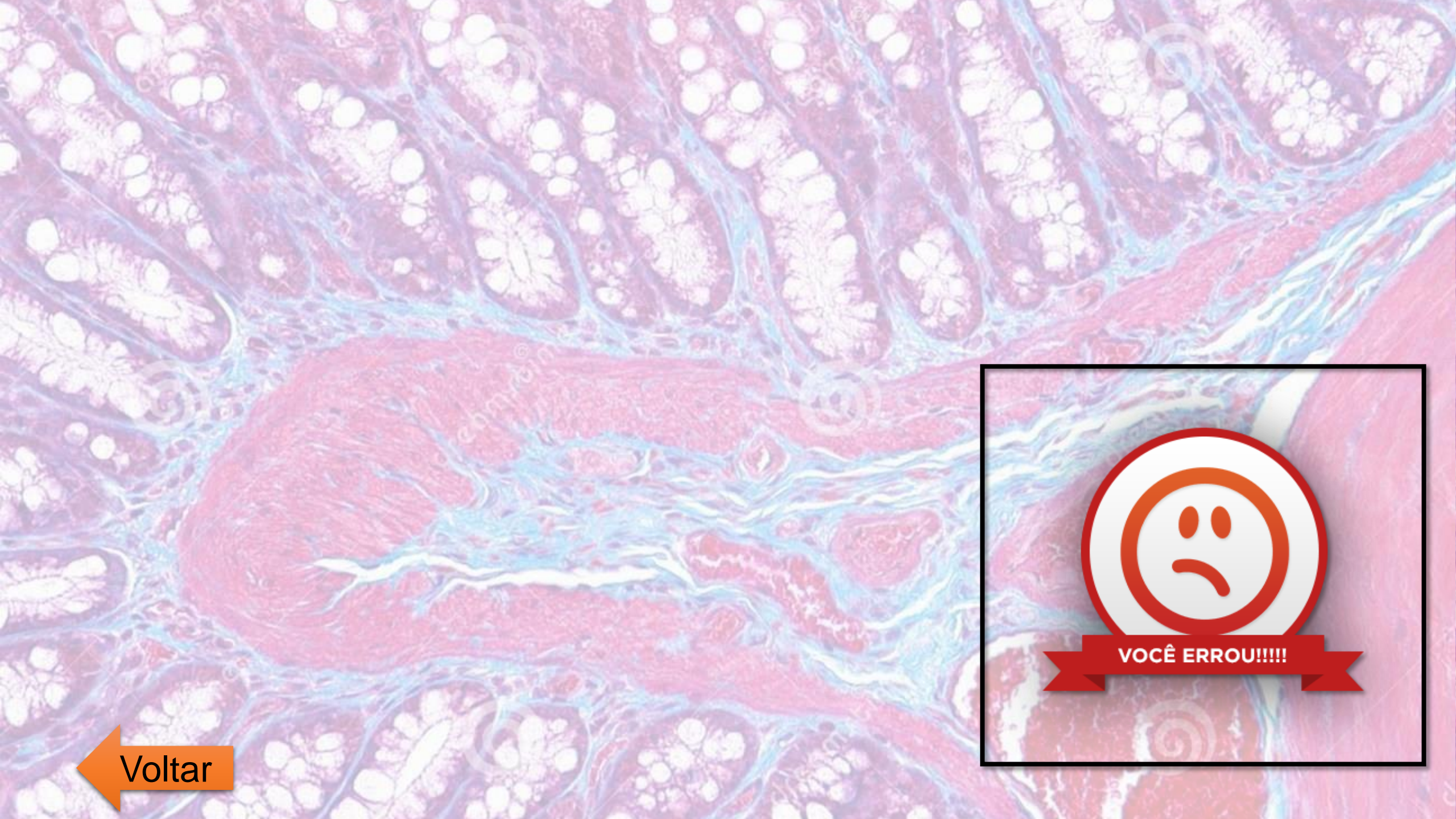




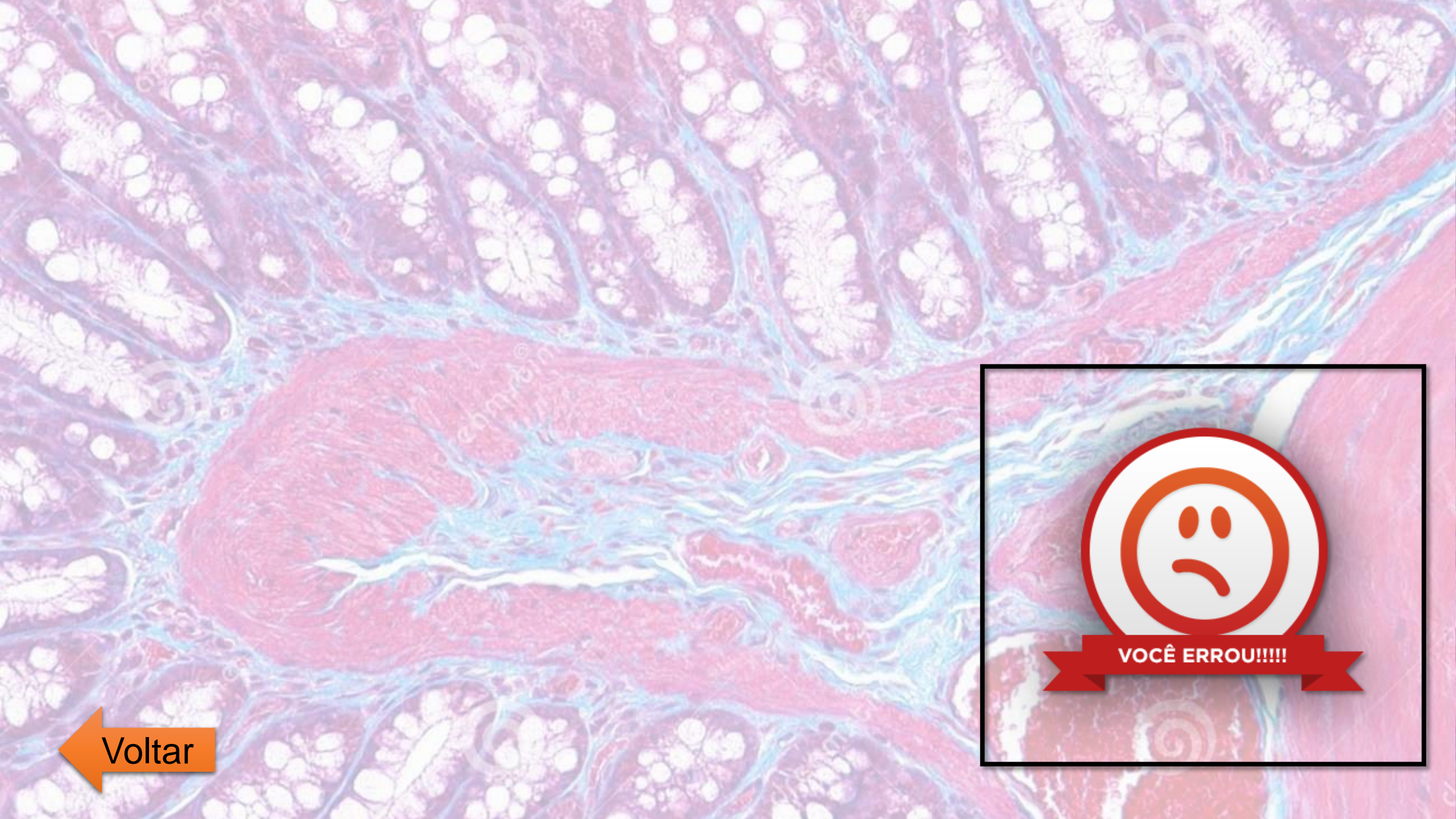
 [Voltar](#)



 Voltar



 Voltar



 Voltar

Alternativa “e”. Por estar associado ao tecido conjuntivo denso, não se observa a presença de pericôndrio em cartilagens fibrosas.

Avançar



11. Os tecidos humanos podem ser classificados em quatro grandes grupos, os quais possuem alguns subtipos. O tecido cartilaginoso, por exemplo, é um tipo de tecido:

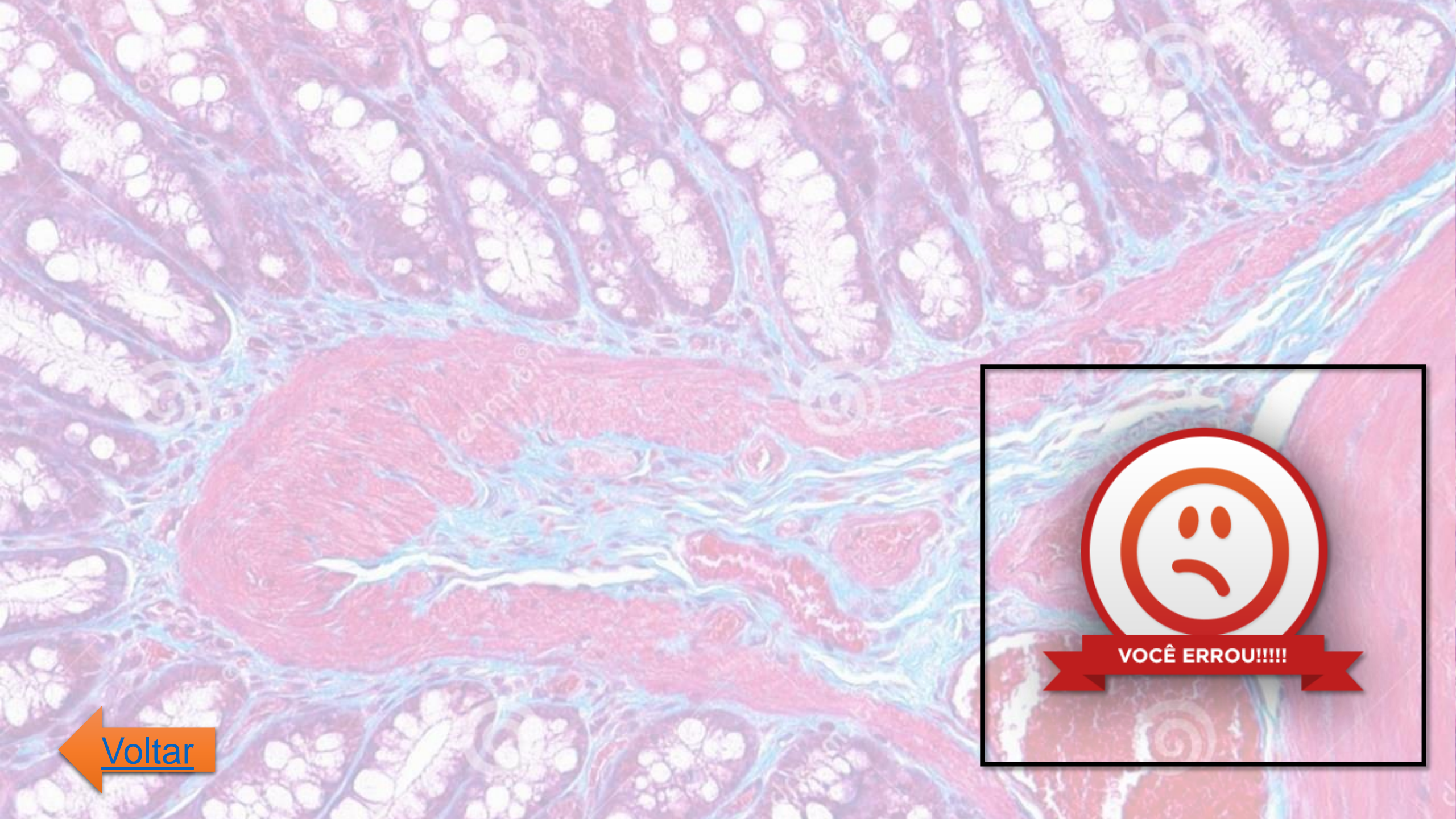
a) epitelial

b) muscular

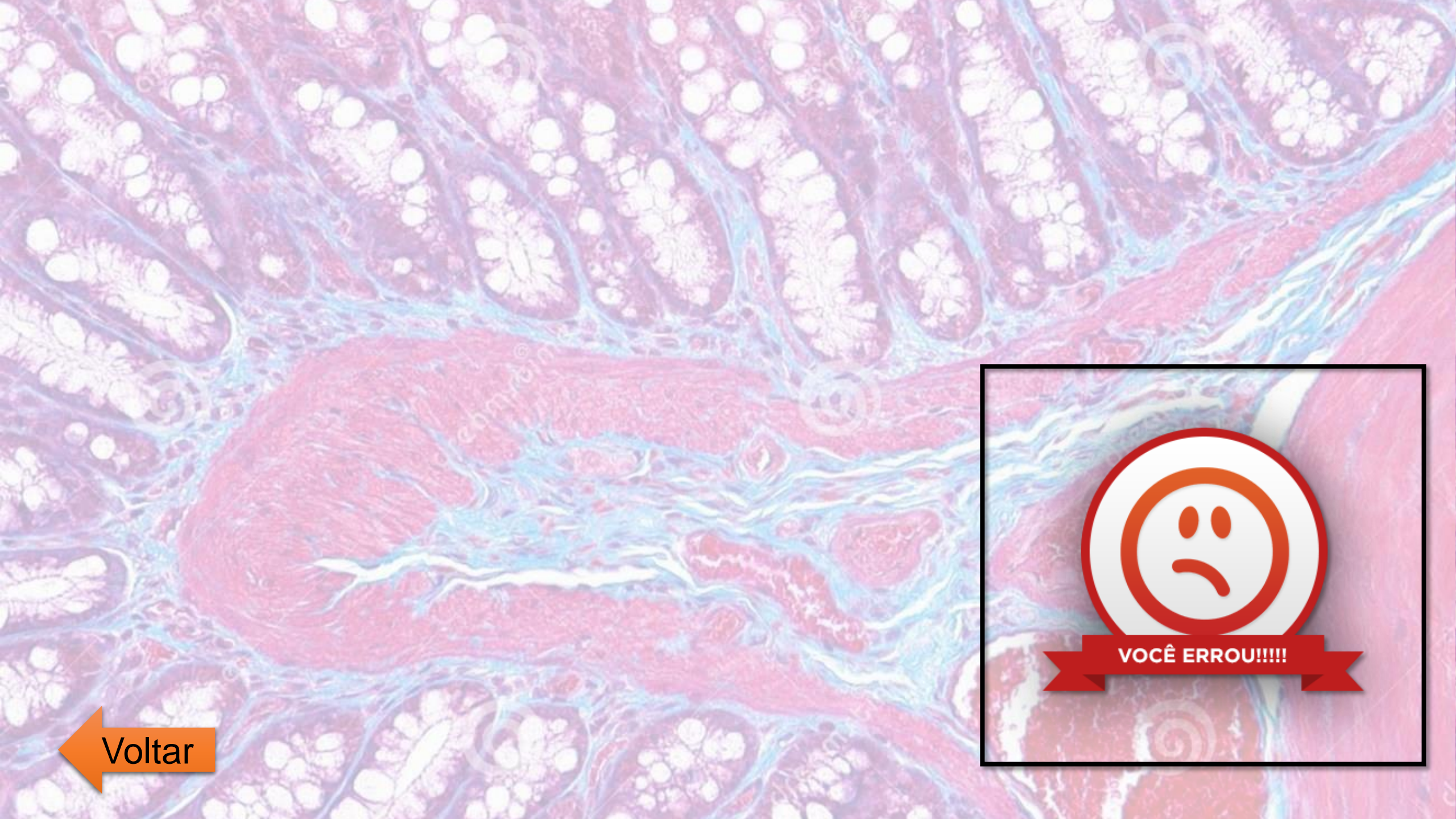
c) ósseo

d) conjuntivo

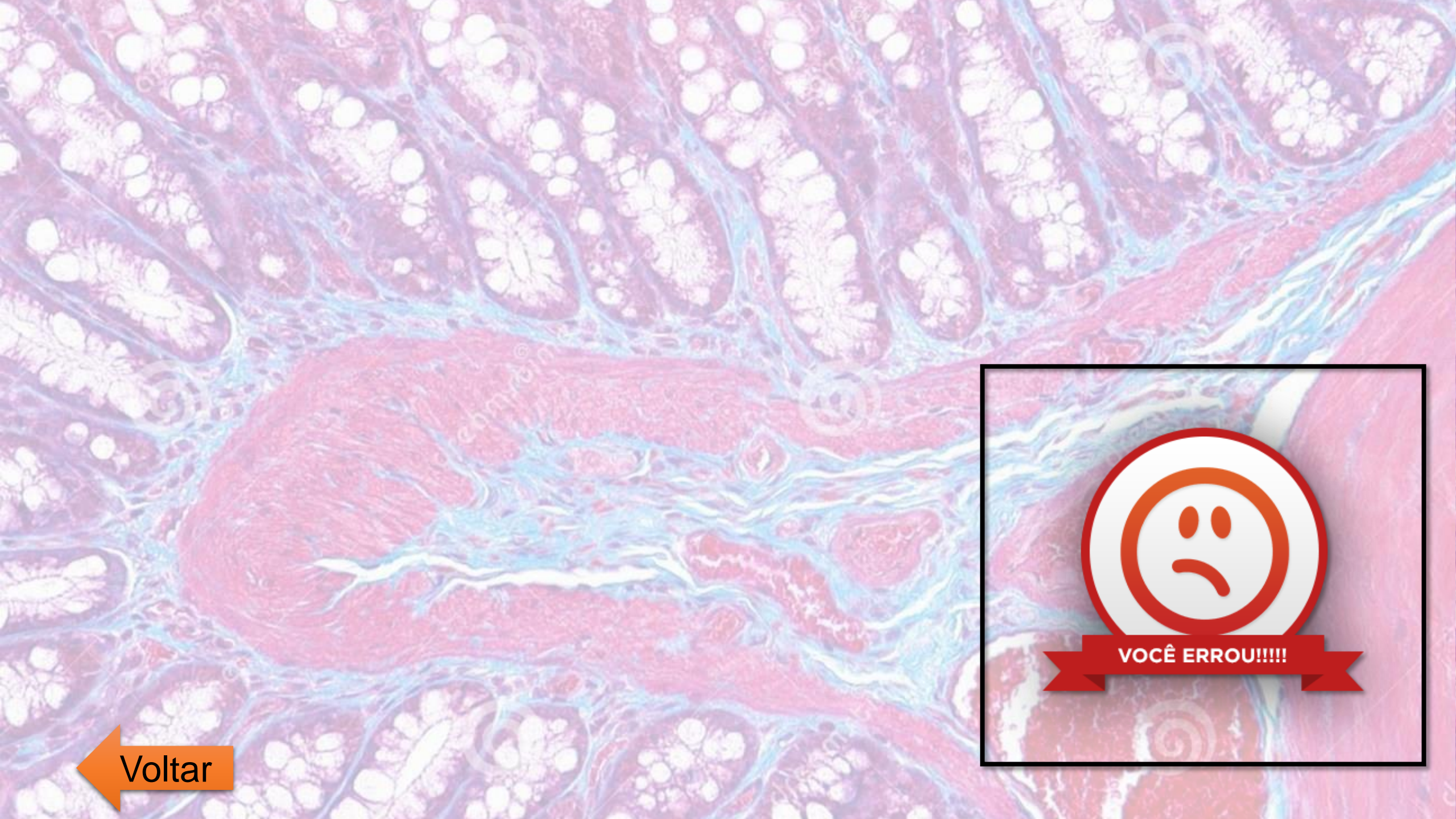
e) nervoso



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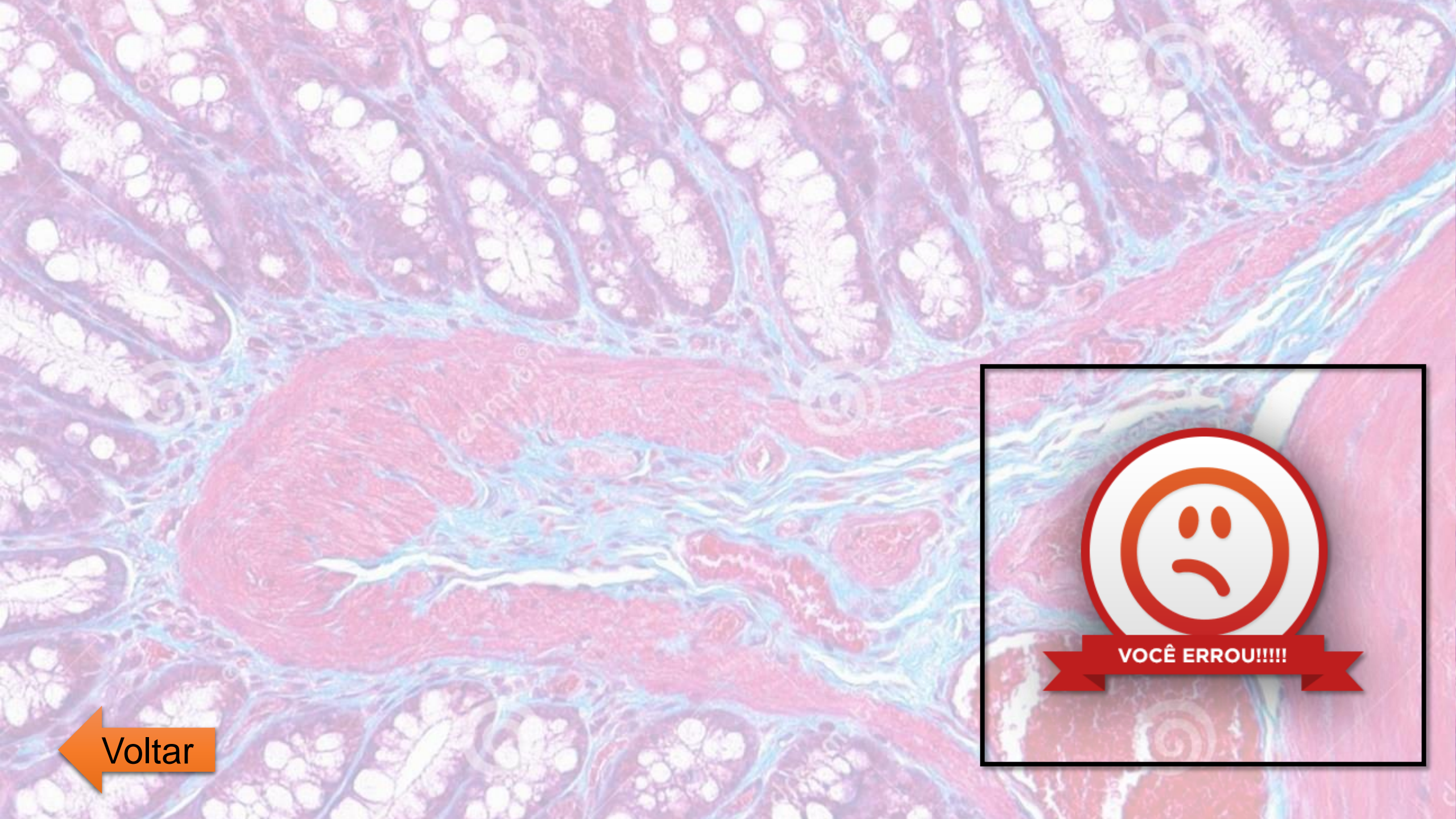


 Voltar

Alternativa “d”. O tecido cartilaginoso é um exemplo de tecido conjuntivo, bem como o tecido ósseo e o sangue.

Avançar





 Voltar

12. O tecido cartilaginoso é um tecido que possui consistência rígida e é fundamental para a formação dos ossos na vida intrauterina e também depois do nascimento. Analise as alternativas seguintes e marque aquela que indica corretamente o nome da célula que faz parte desse tecido.

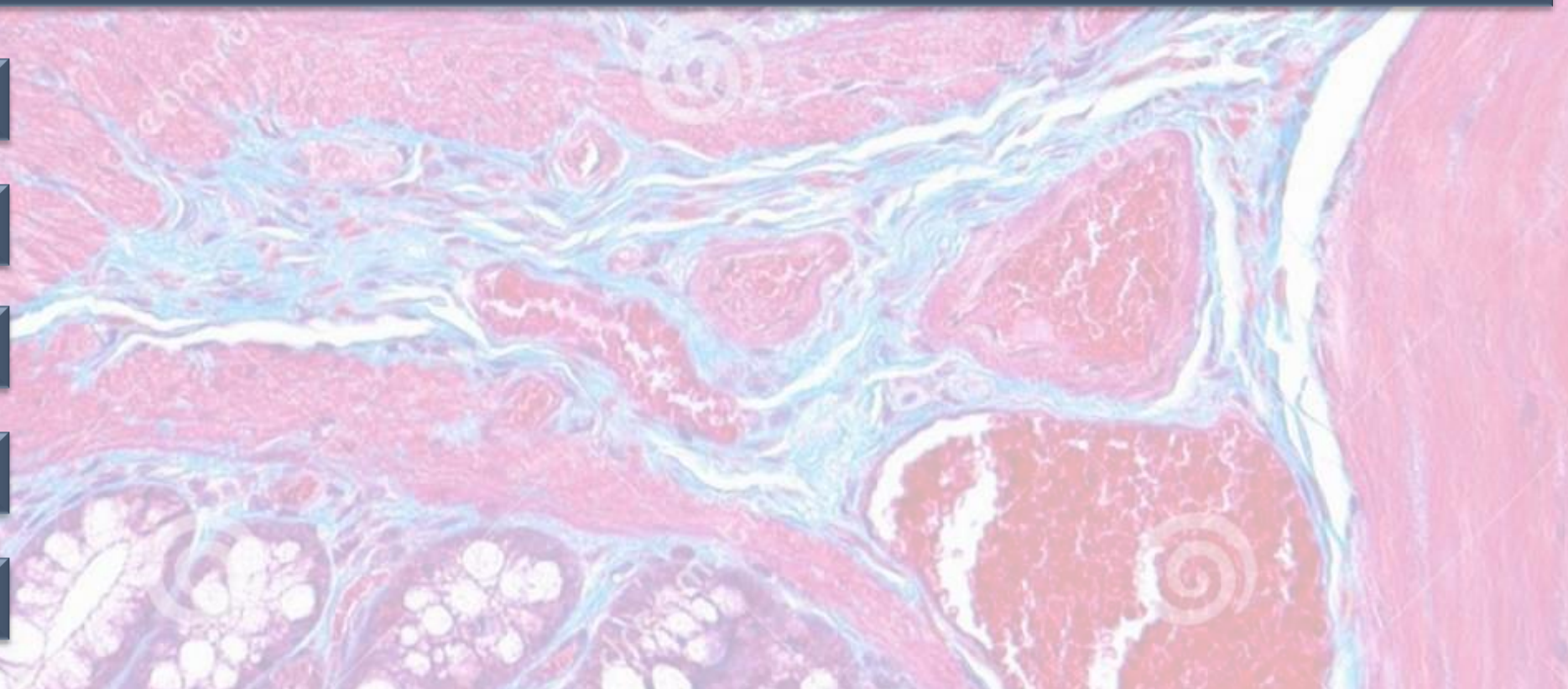
a) Osteócito

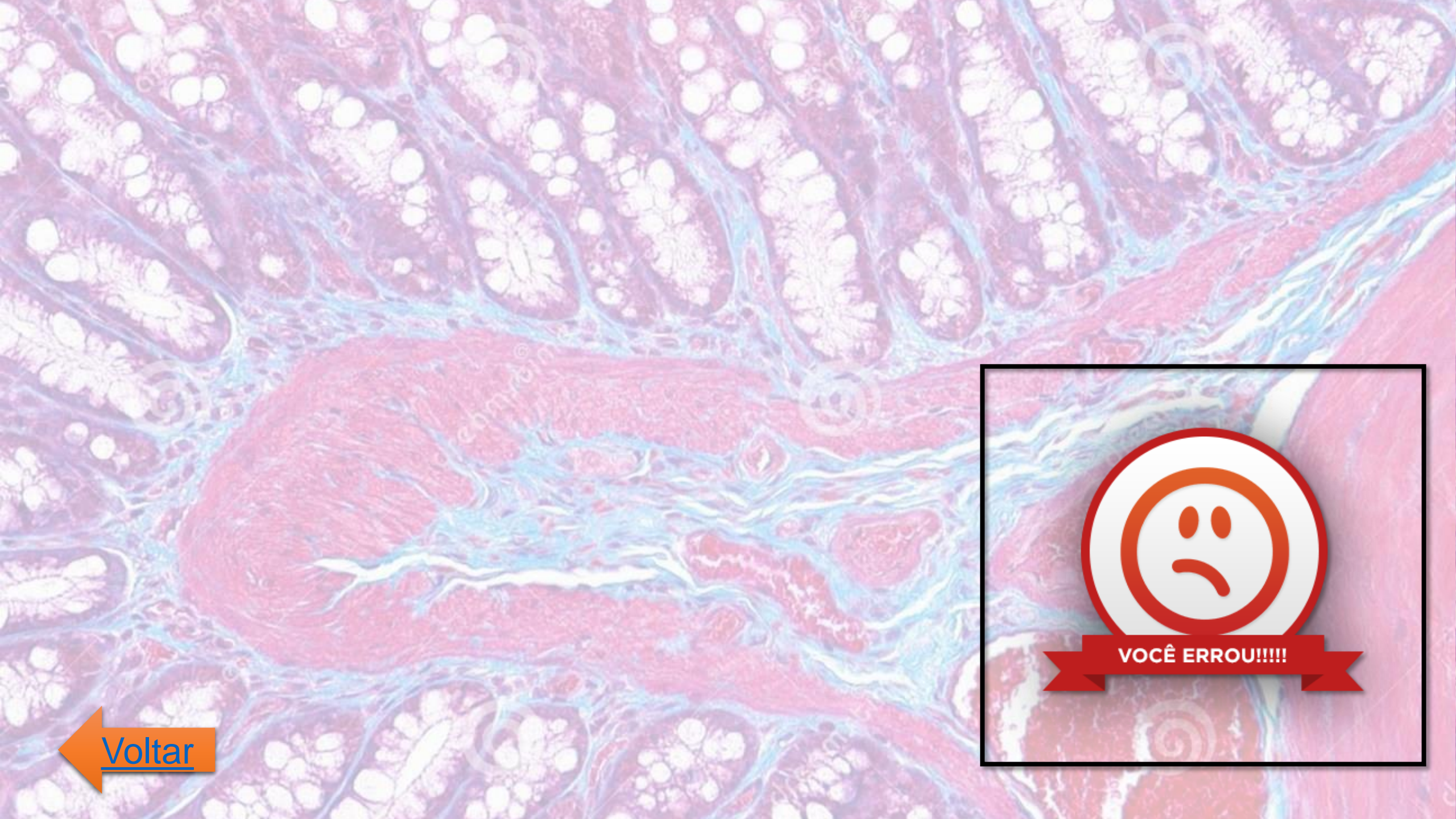
b) Adipócito

c) Hepatócito

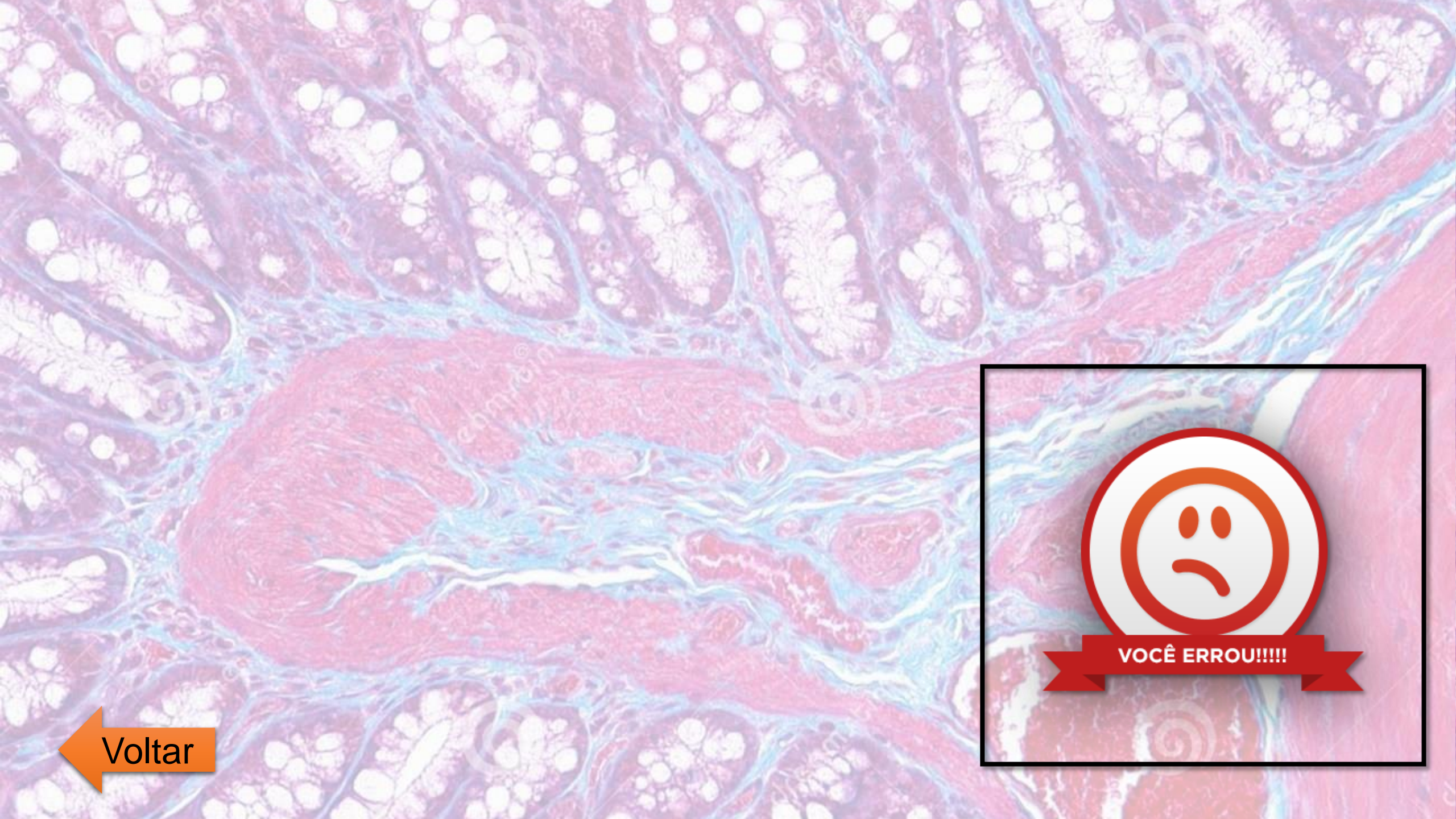
d) Eritrócito

e) Condrócito

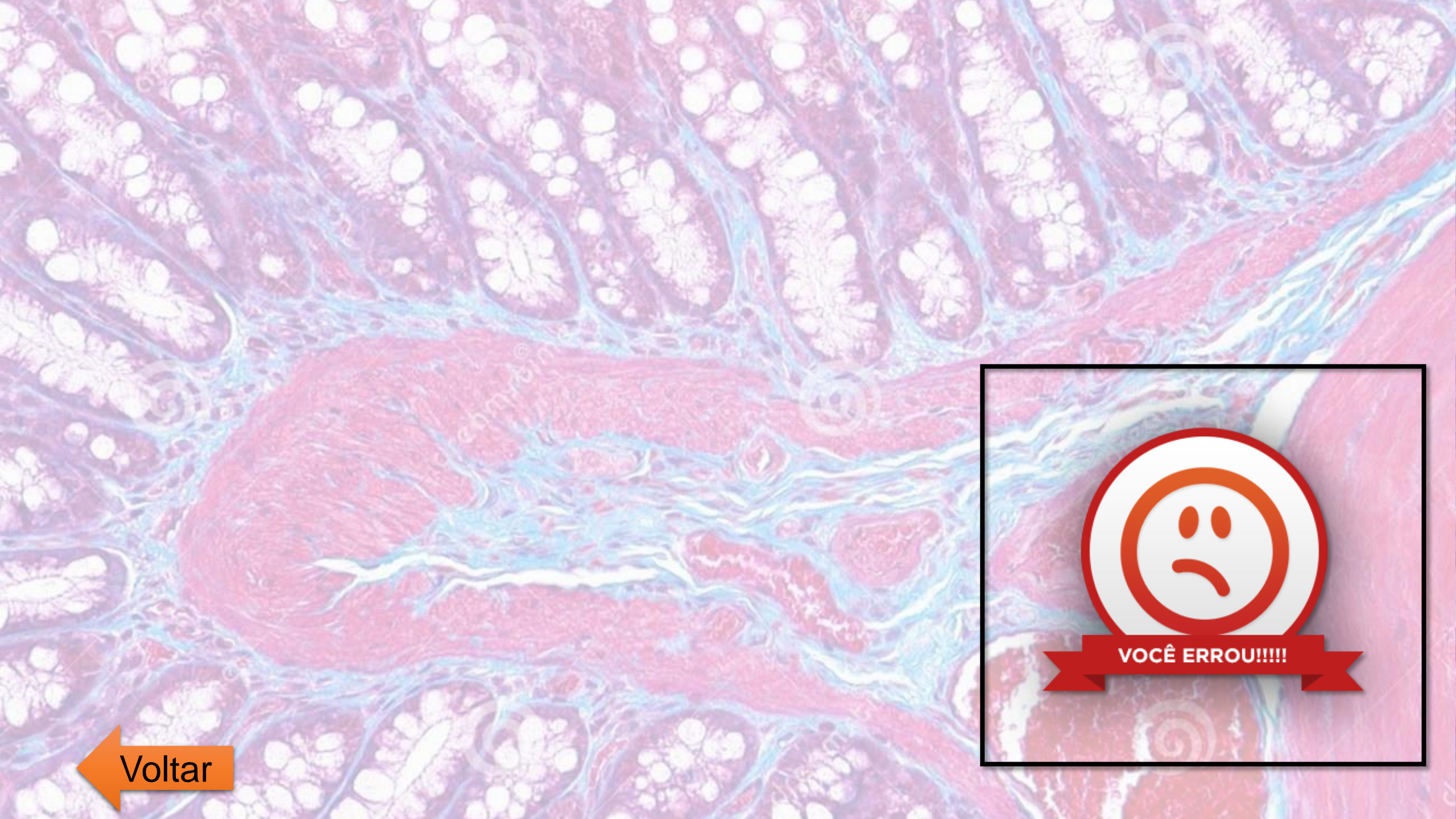




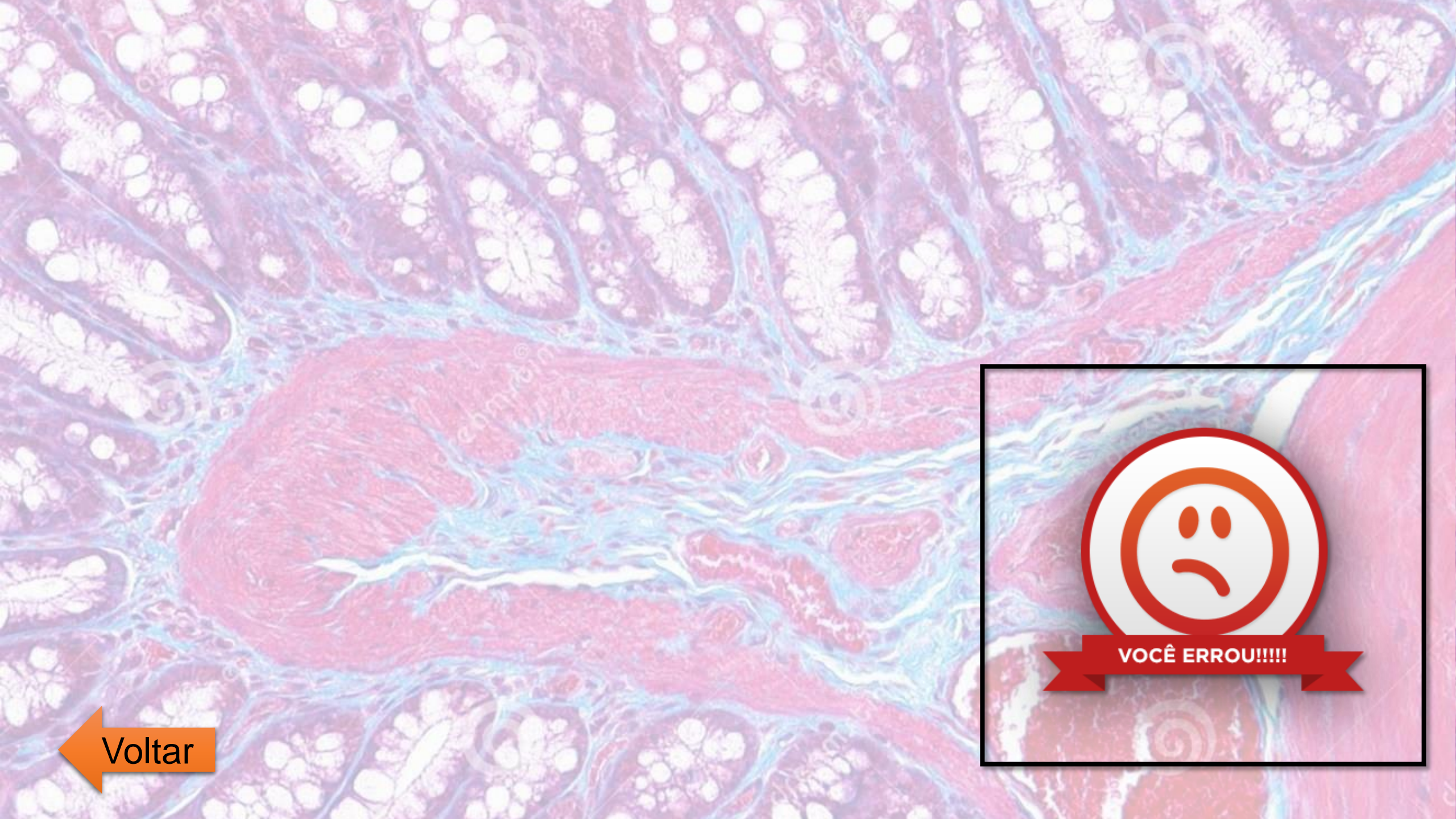
 [Voltar](#)



 Voltar



 Voltar



 Voltar

Alternativa “e”. Os condrócitos são células do tecido cartilaginoso que ocupam as lacunas existentes na matriz da cartilagem.

Avançar



13. A cartilagem pode ser classificada em três tipos distintos. Marque aquela que se caracteriza por formar o esqueleto do feto no início do desenvolvimento.

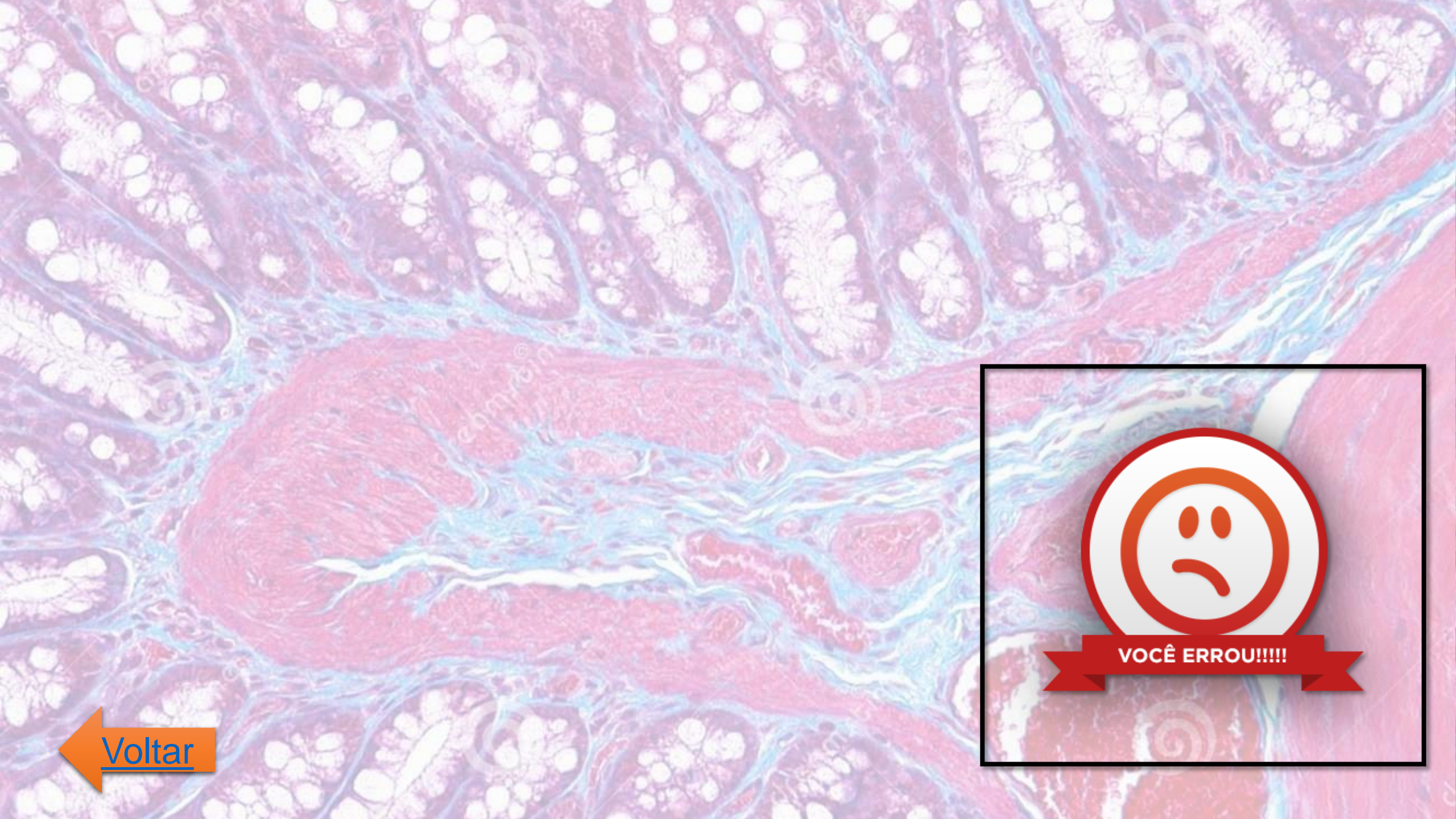
a) Cartilagem elástica

b) Cartilagem hialina

c) Cartilagem fibrosa

d) Cartilagem delgada

e) Fibrocartilagem

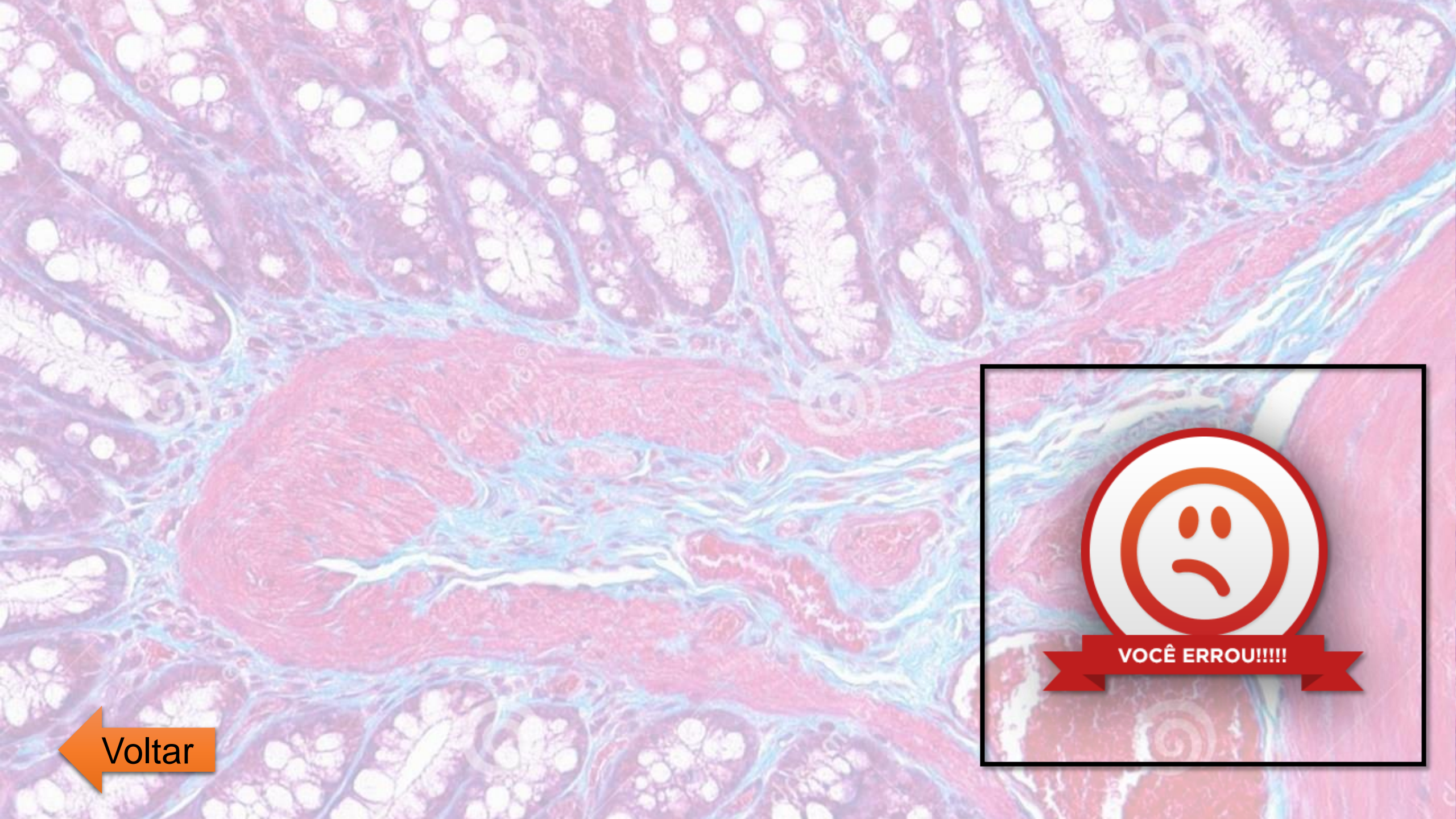


 [Voltar](#)

Alternativa “b”. A cartilagem hialina é a encontrada com mais frequência em nosso corpo. É ela quem forma o primeiro esqueleto do embrião, o qual é depois substituído por tecido ósseo.

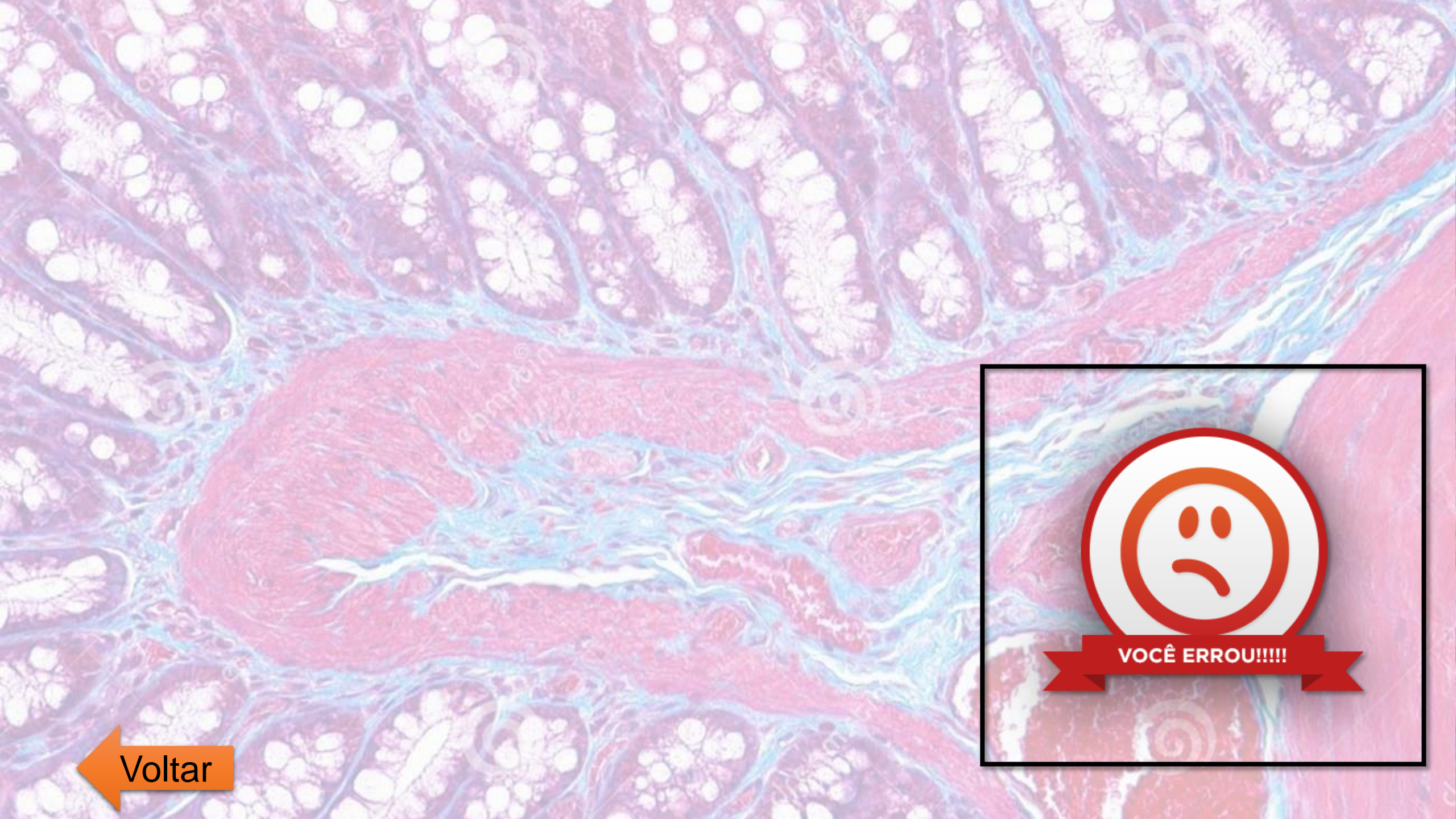
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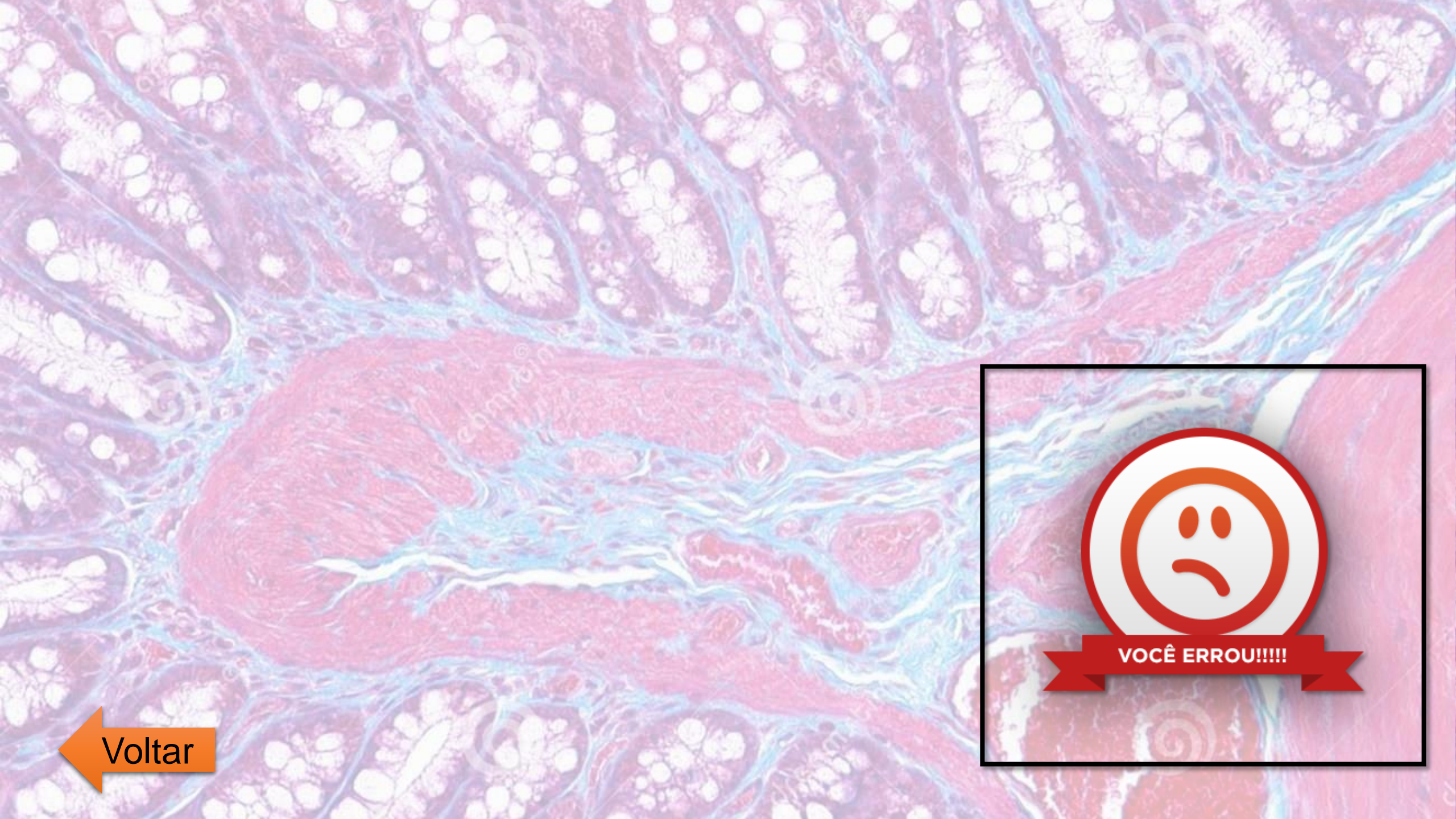


A red-bordered box containing a sad face icon (a white circle with a red outline and a downward-curving mouth) and a red banner with the text "VOCÊ ERROU!!!!" in white capital letters. The box is positioned in the lower right quadrant of the image, overlapping the histological section.


 Voltar



 Voltar



 Voltar

A microscopic image of cartilage tissue, stained with Masson's trichrome. The image shows a dense network of collagen fibers (stained blue) and chondrocytes (stained pink) embedded in a matrix. The chondrocytes are arranged in small clusters or cords, and the overall structure is highly organized and dense.

14. São exemplos de células presentes no tecido cartilaginoso:

a) Condrócitos e condroblastos

b) Melanócitos e mielócitos

c) Trombócitos e trombina

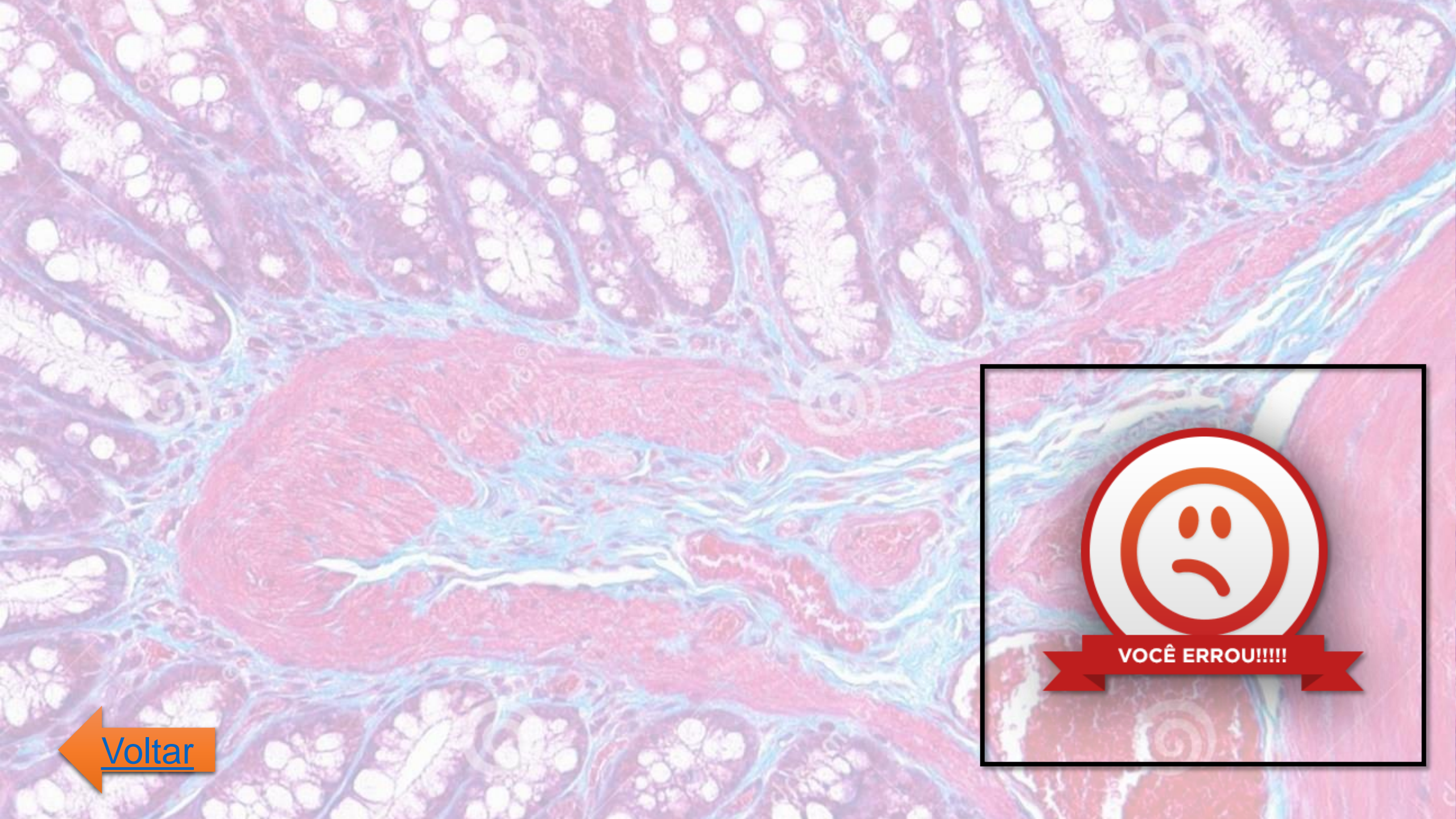
d) Osteócitos e osteoblastos

e) Fibrócitos e mieloblastos

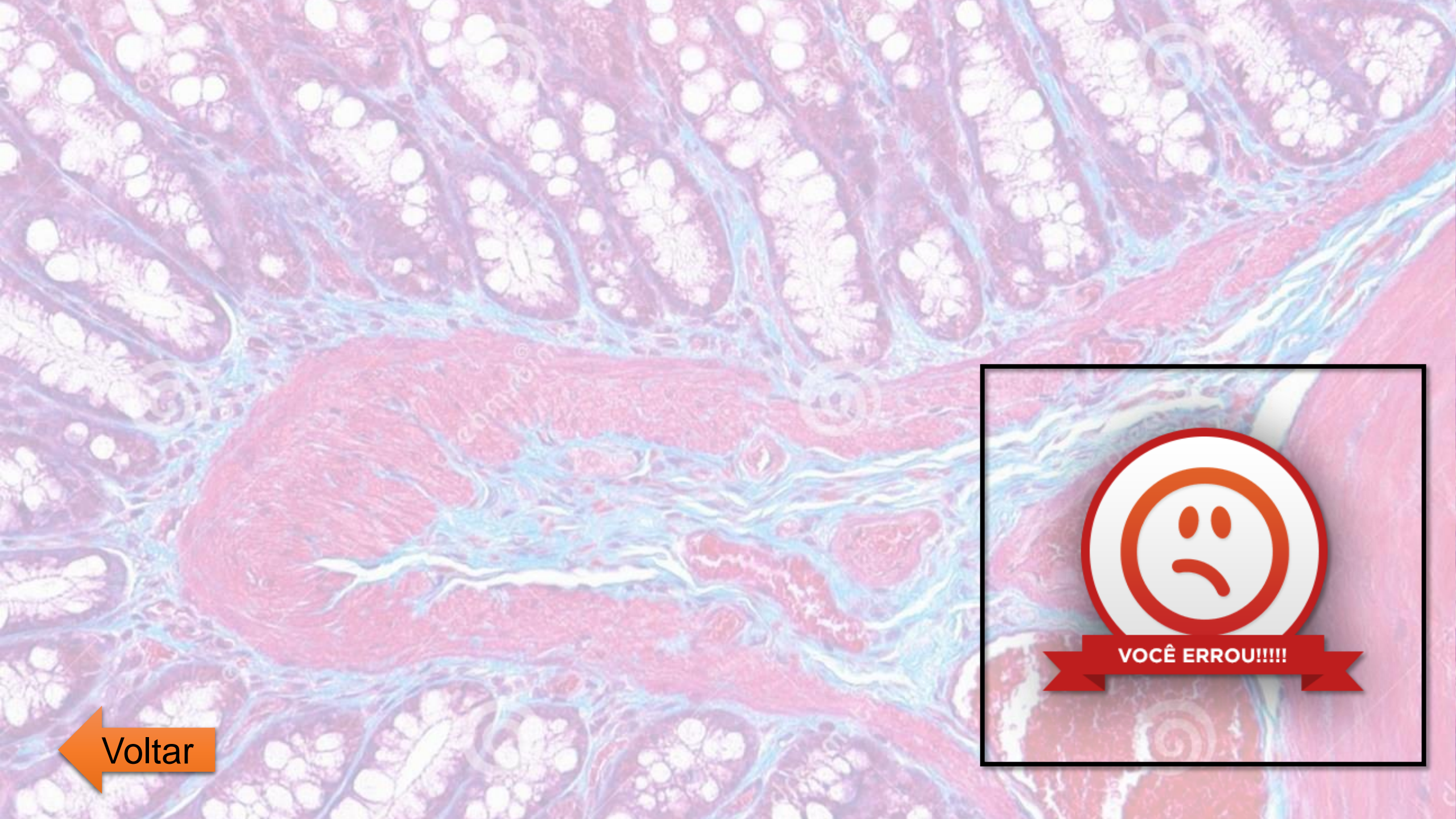
Alternativa “a”. Os condroblastos amadurecem e tornam-se condrócitos no tecido cartilaginoso.

Avançar

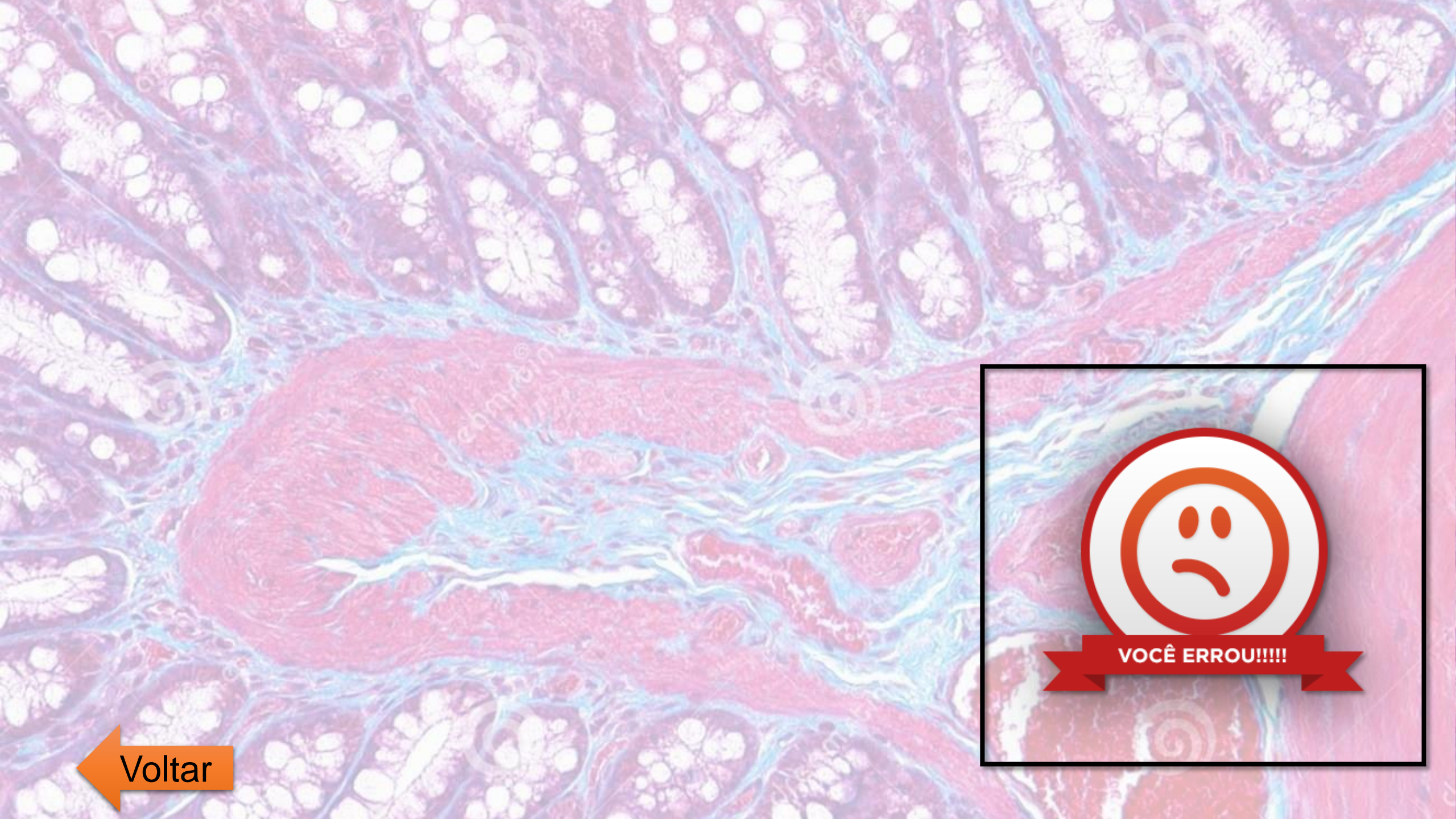




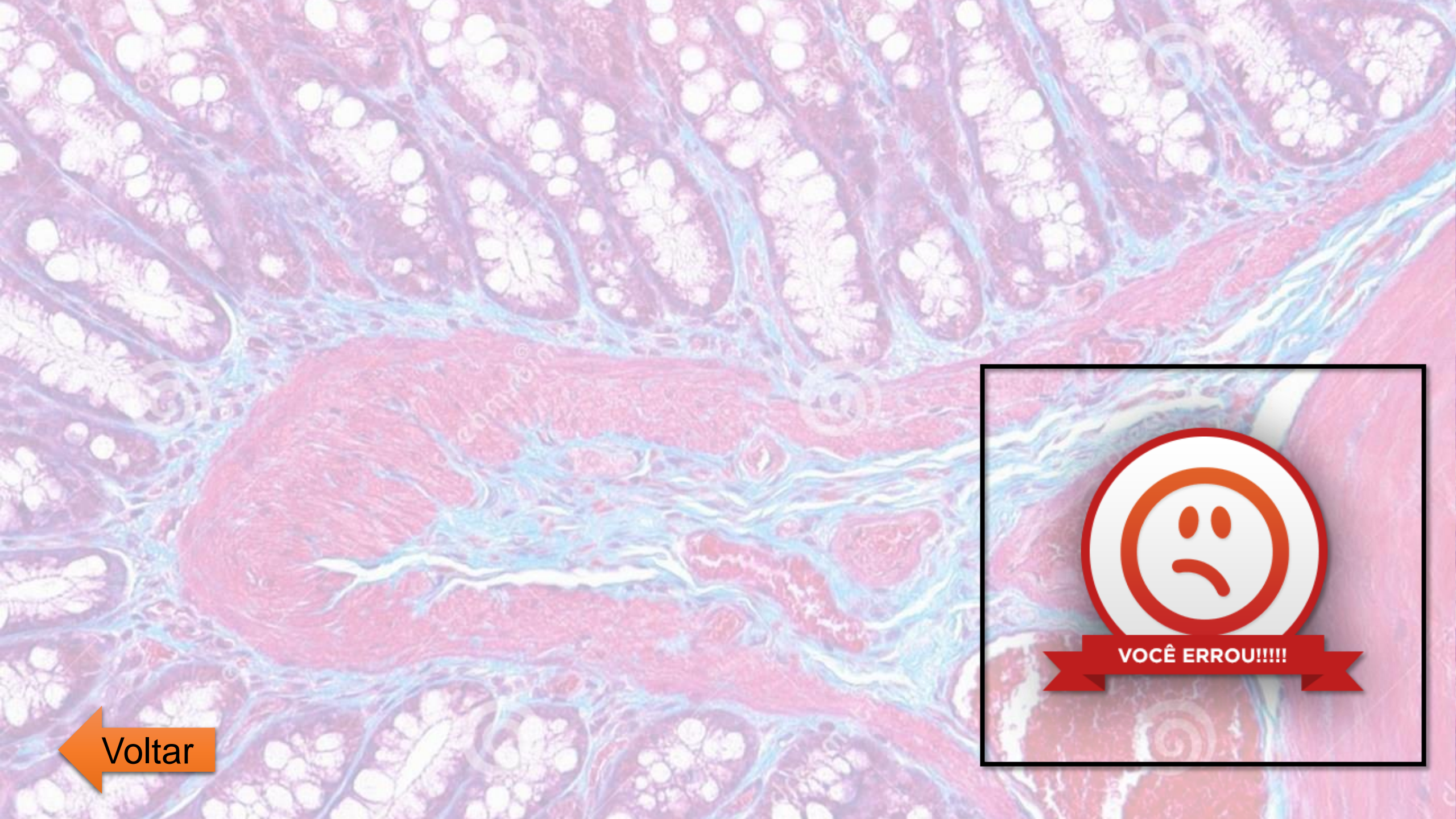
 [Voltar](#)



 Voltar



 Voltar



 Voltar

15. Leia as afirmativas seguintes:

I. É um tipo de tecido conjuntivo especial.

II. Tecido avascularizado.

III. A matriz extracelular é produzida por condroblastos e condrócitos.

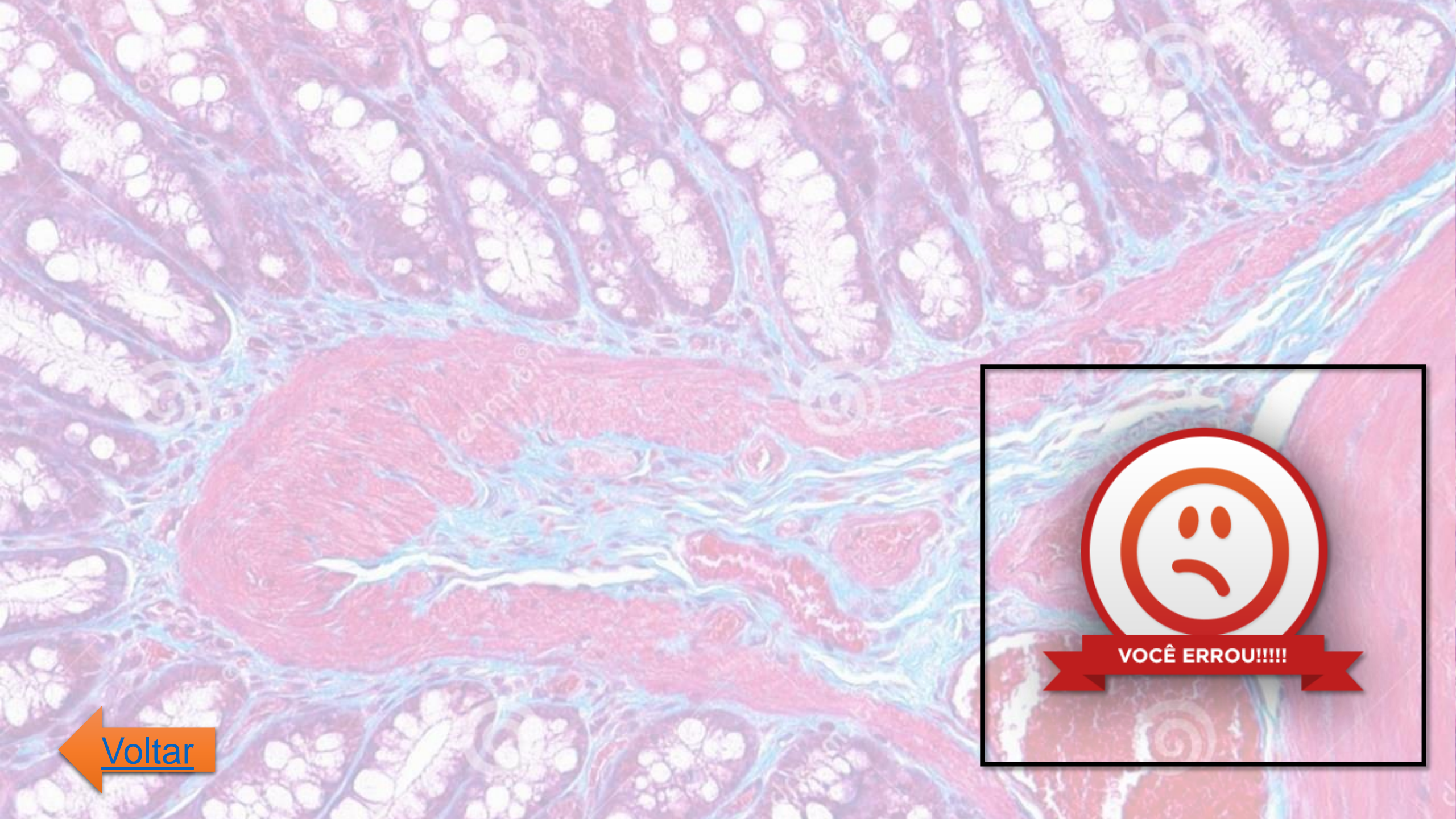
As características citadas referem-se ao tecido:

a) ósseo

b) adiposo

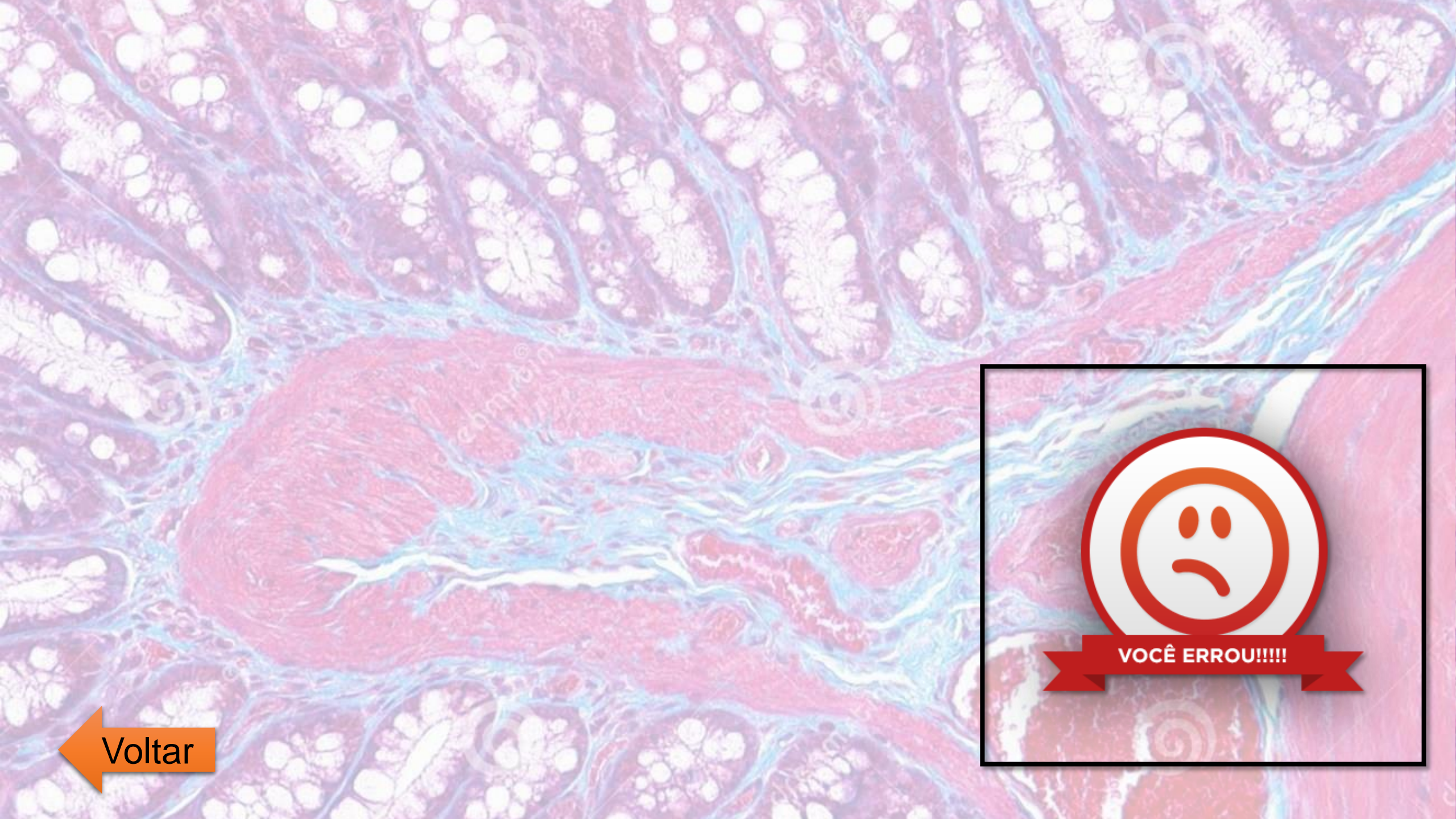
c) cartilaginoso

d) conjuntivo frouxo



VOCÊ ERROU!!!!

 [Voltar](#)

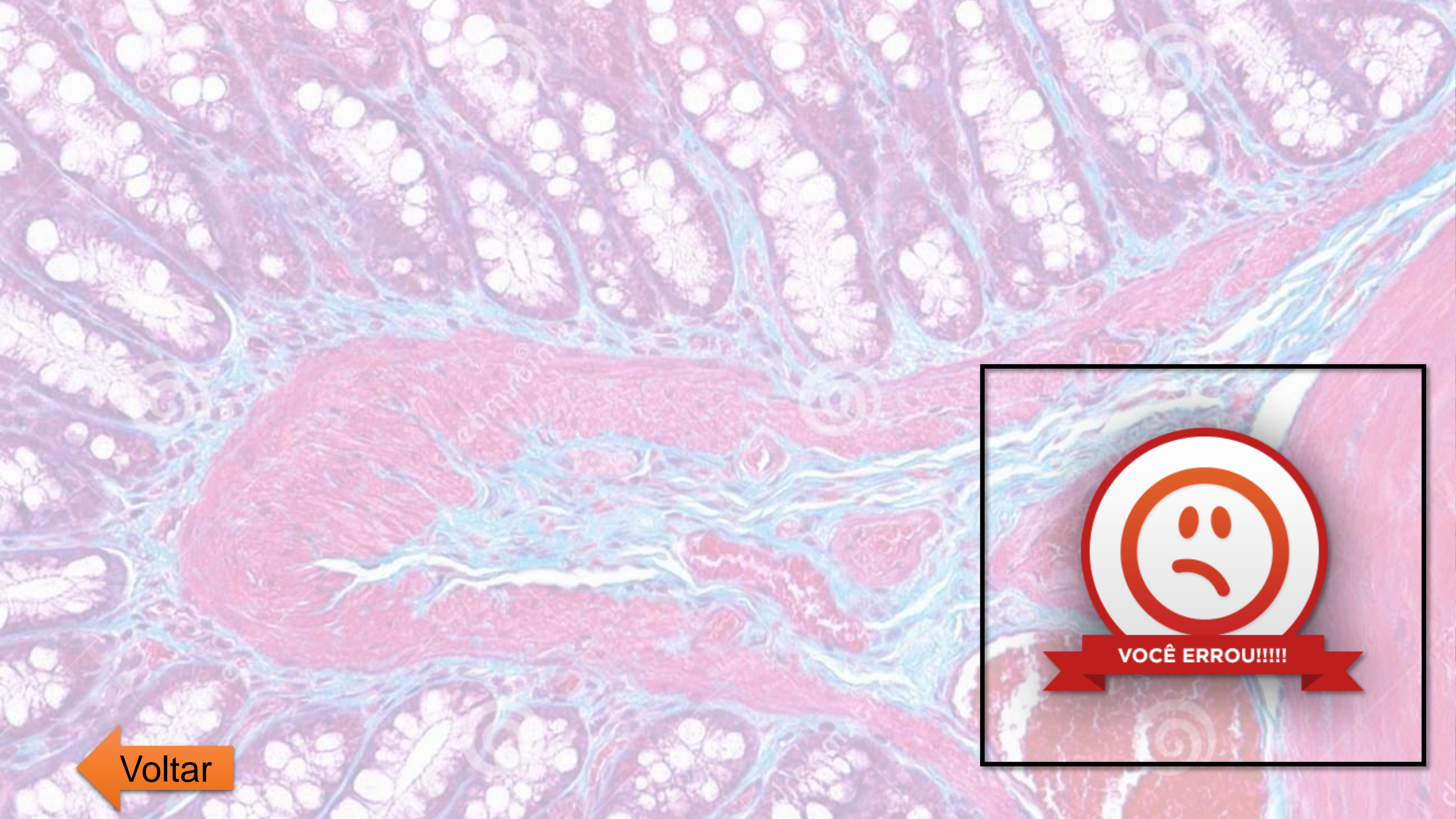


 Voltar

Alternativa “c”. As características citadas correspondem ao tecido cartilaginoso. Esse tecido é do tipo conjuntivo, que não apresenta vasos sanguíneos e apresenta condroblastos e condrócitos como tipos celulares.

Avançar





 Voltar



16. A respeito do tecido cartilaginoso, é correto afirmar que:

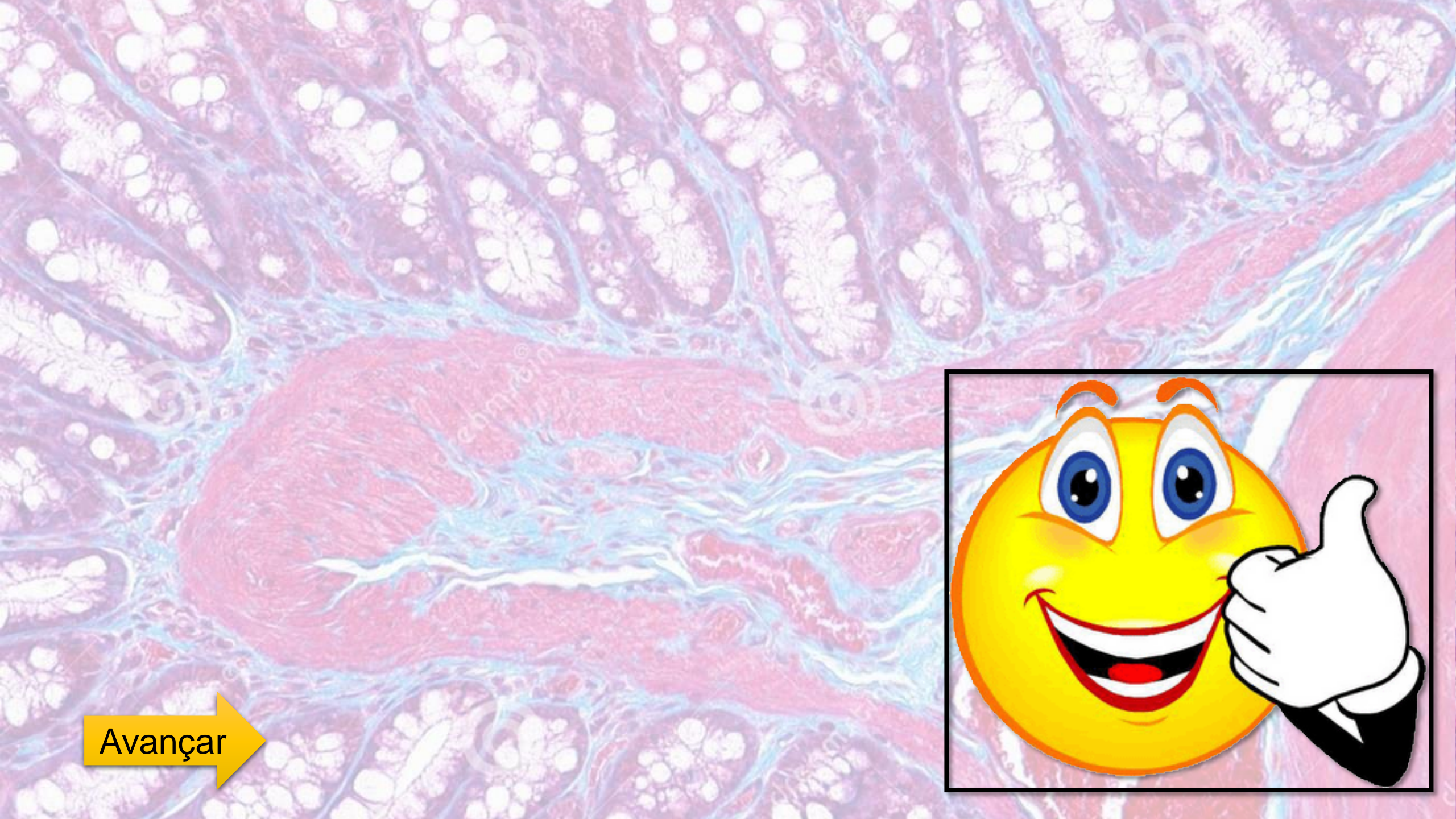
a) apresenta vasos sanguíneos para sua oxigenação.

b) possui pouca substância intercelular.

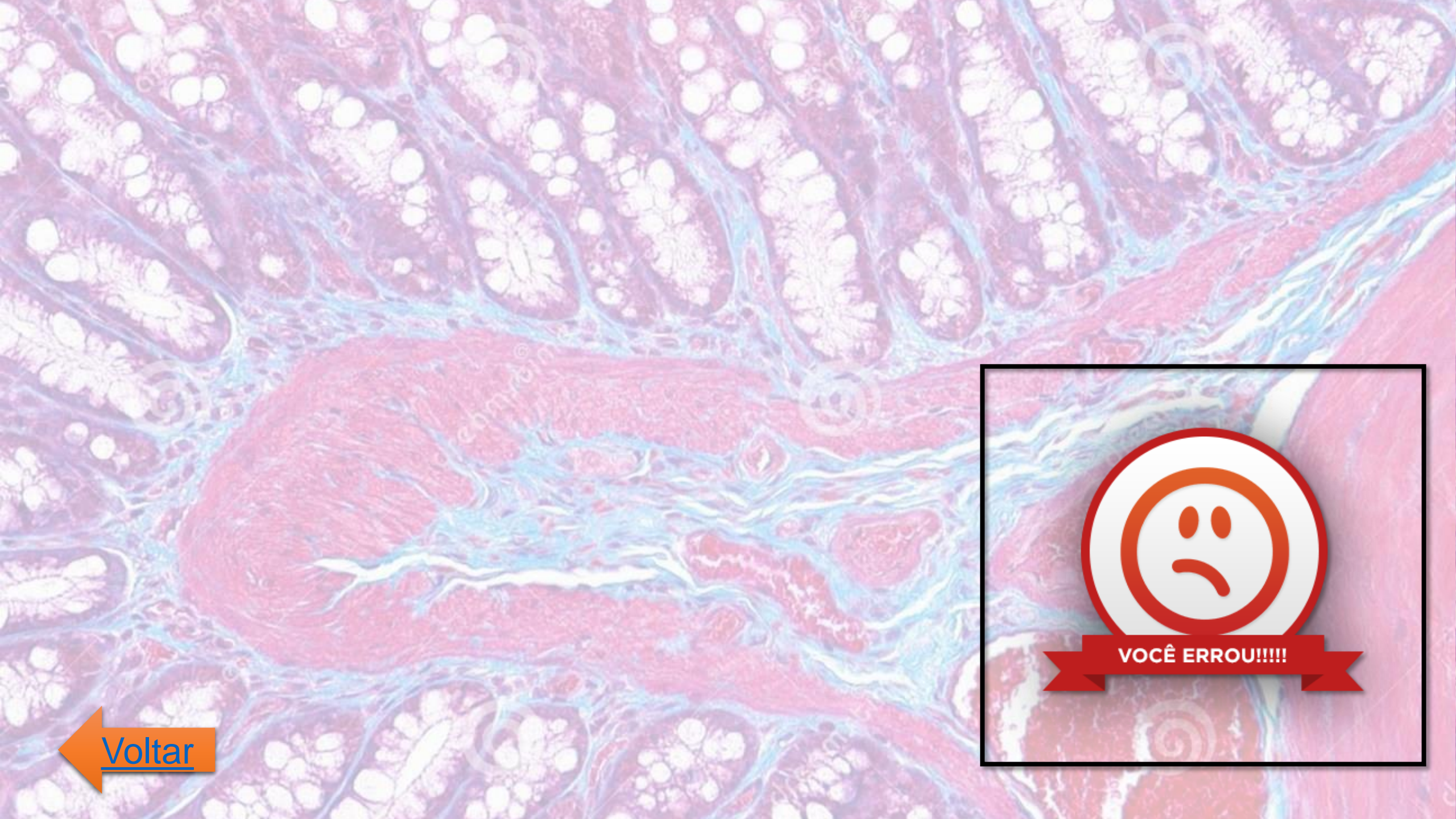
c) aparece apenas nas articulações.

d) pode apresentar fibras proteicas como o colágeno entre suas células.

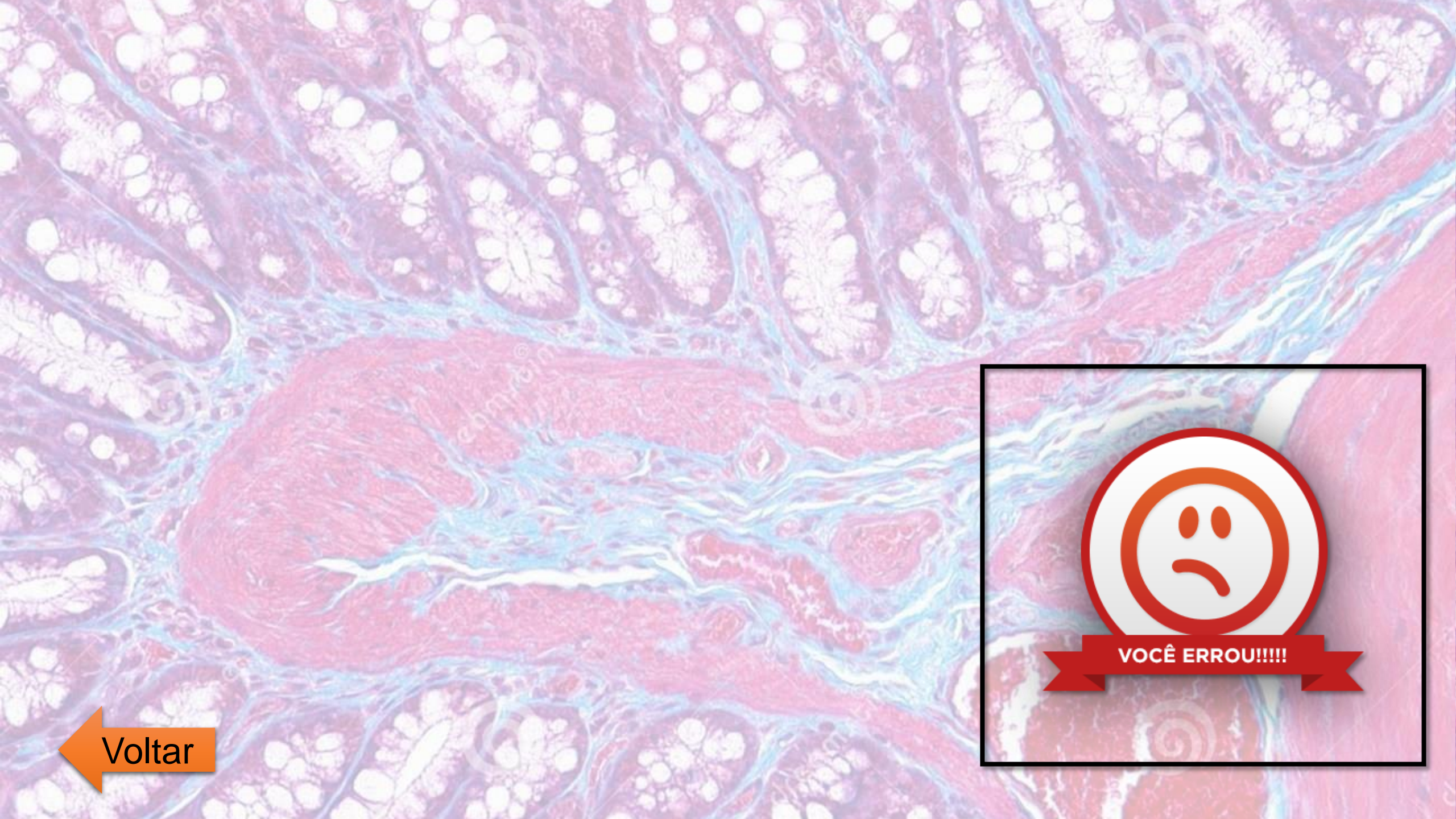
e) se origina a partir do tecido ósseo.



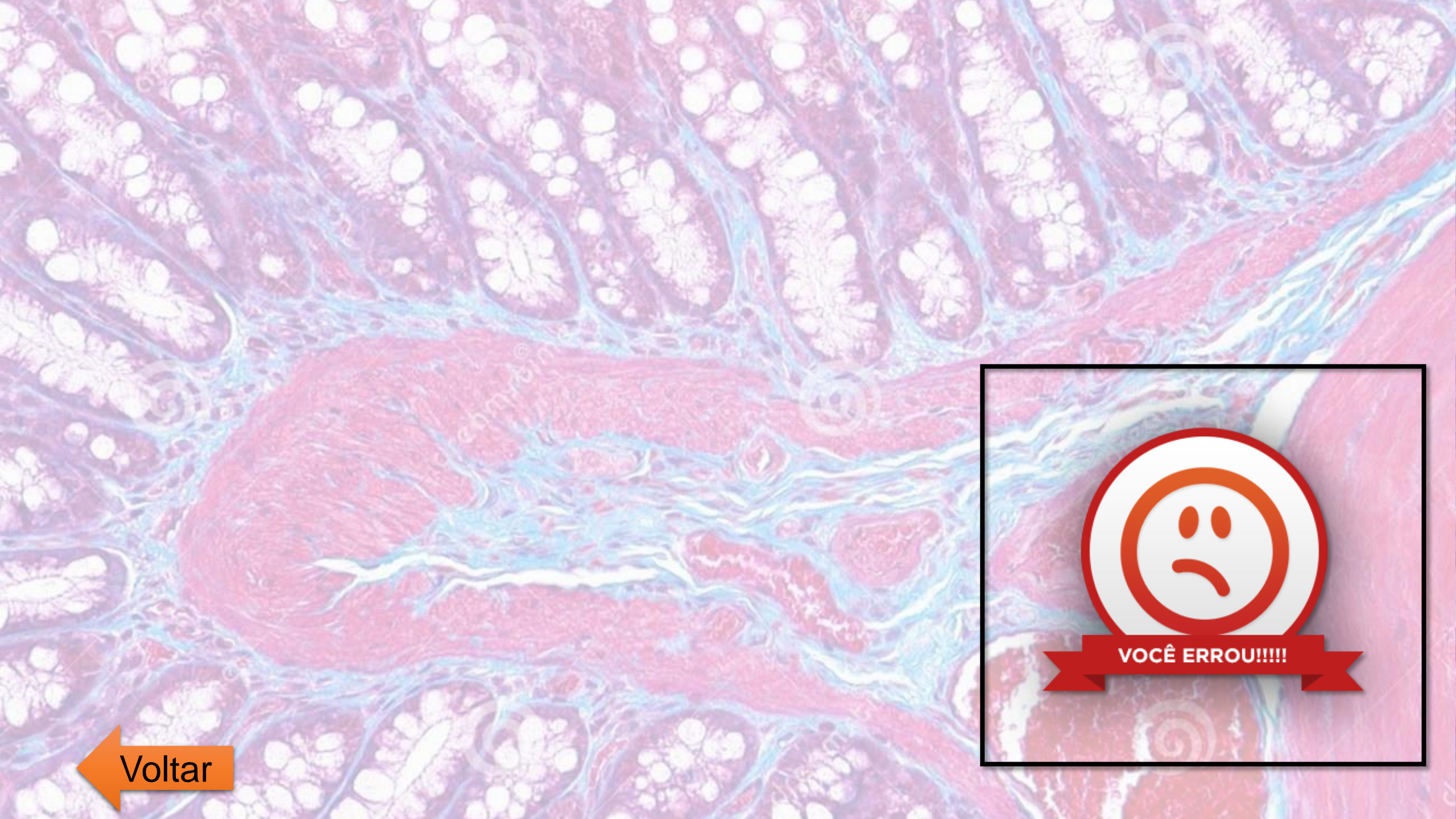
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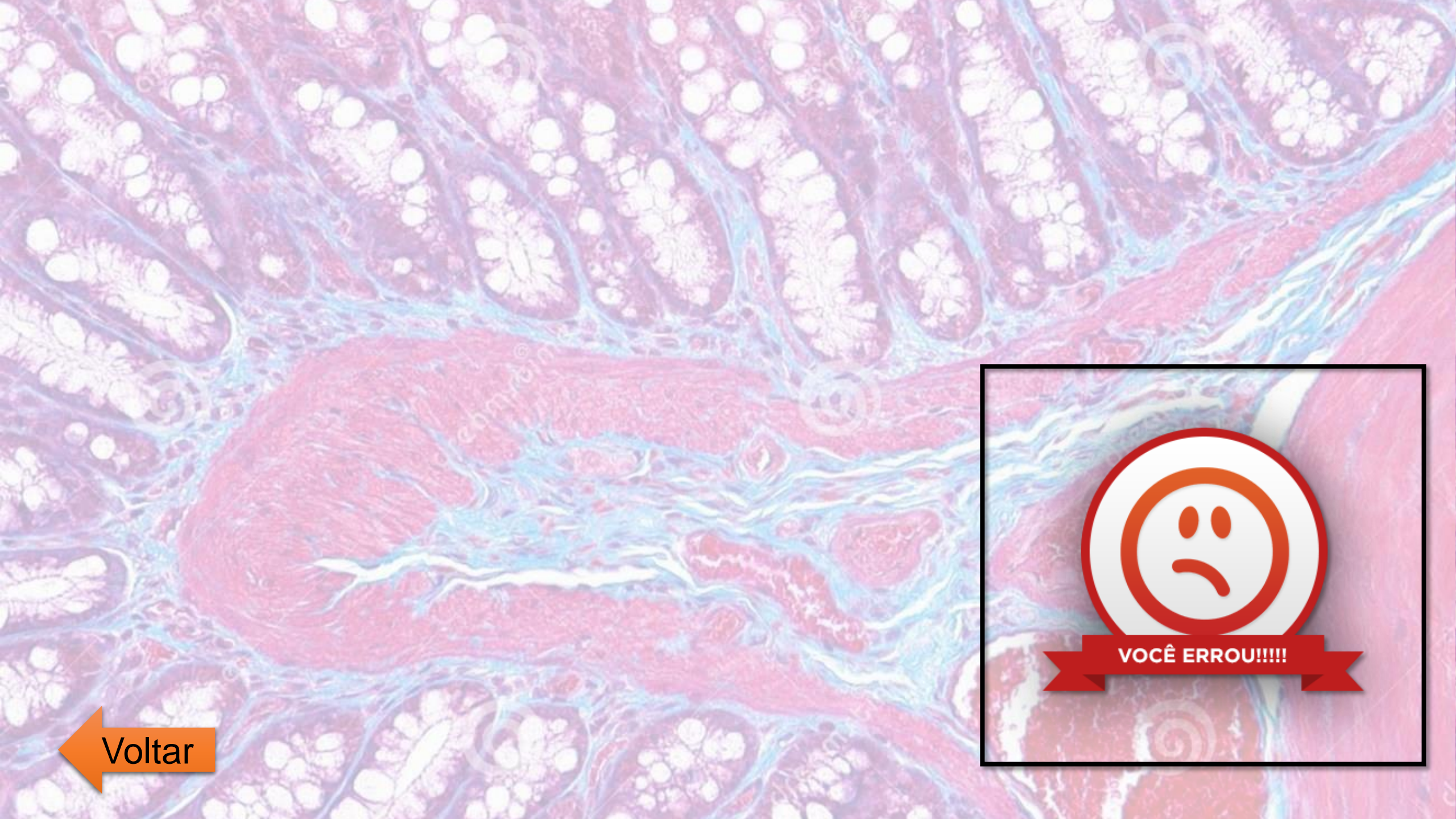
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 Voltar



 Voltar



 Voltar

17. Um dos grandes problemas do câncer é a metástase, uma vez que células do tumor se espalham pelo corpo e invadem outros tecidos. Por serem de rápido crescimento, tais células necessitam de grande suprimento de nutrientes. Quando essa invasão ocorre em cartilagens, não há o desenvolvimento de tumor, pois o tecido cartilaginoso:

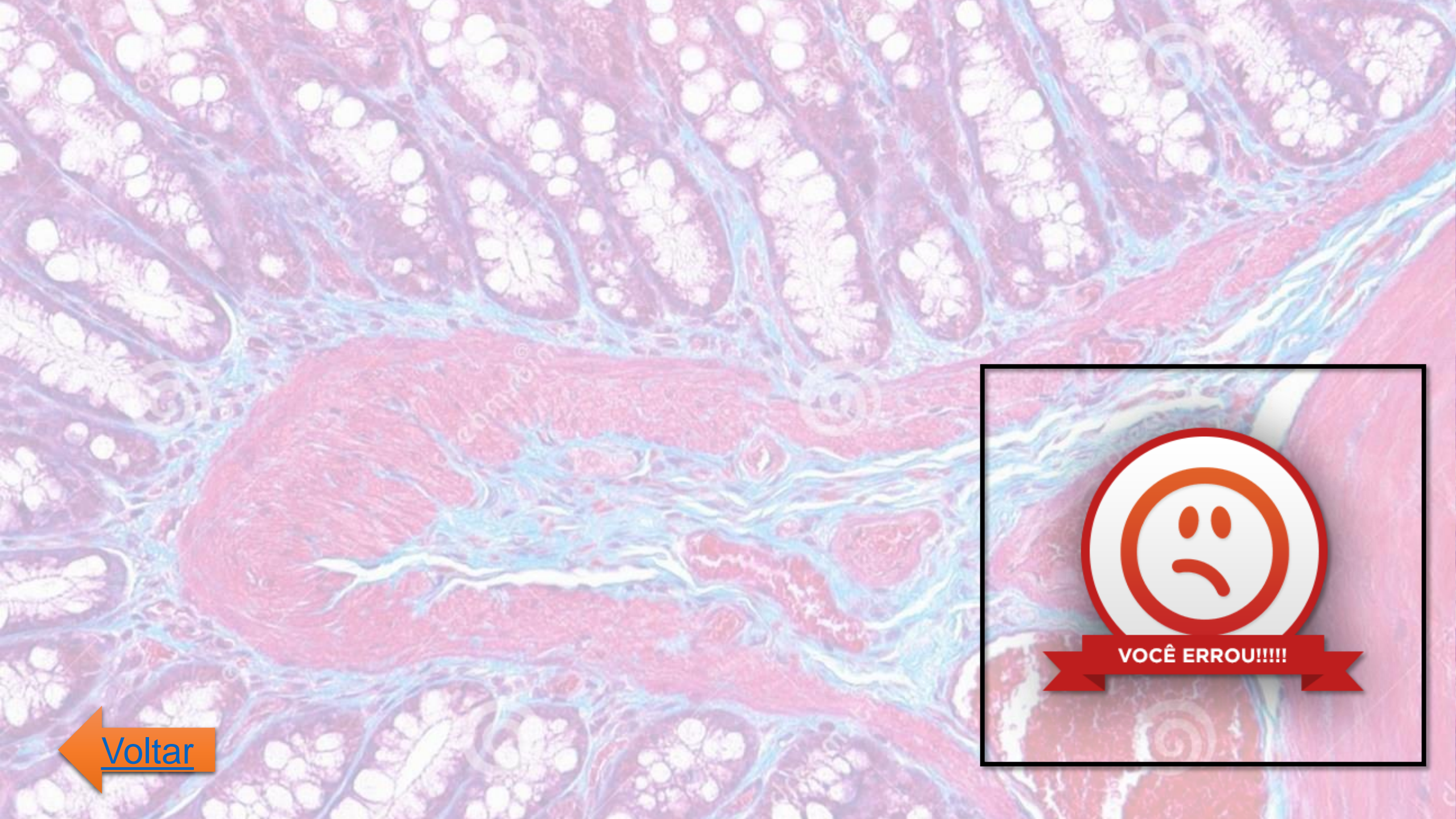
a) possui inibidores específicos do crescimento de células cancerosas.

b) não possibilita a formação de vasos sanguíneos.

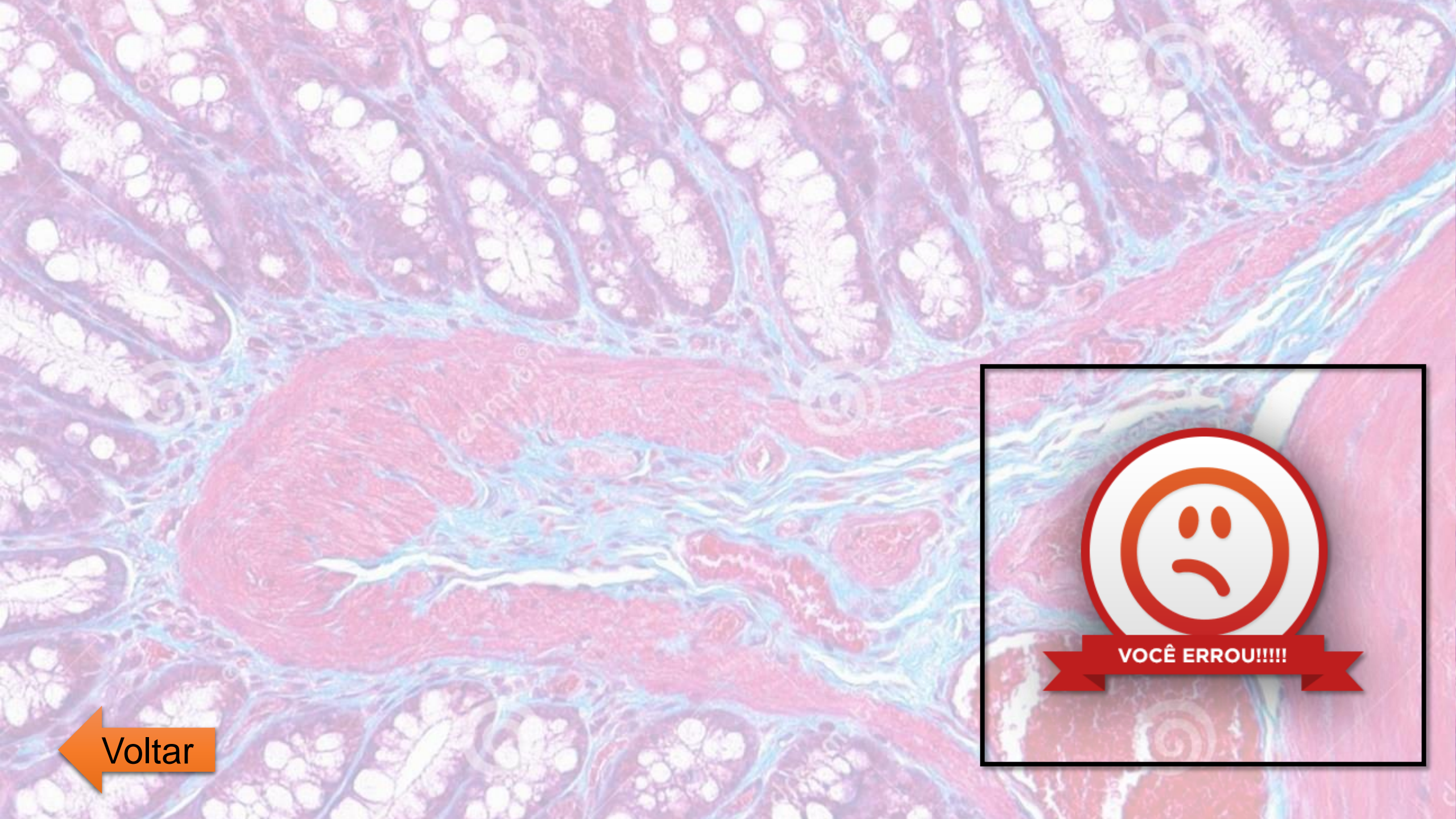
c) possui muita matriz extracelular, dificultando o crescimento do tumor.

d) não possui muita matriz extracelular, dificultando a instalação dos tumores.

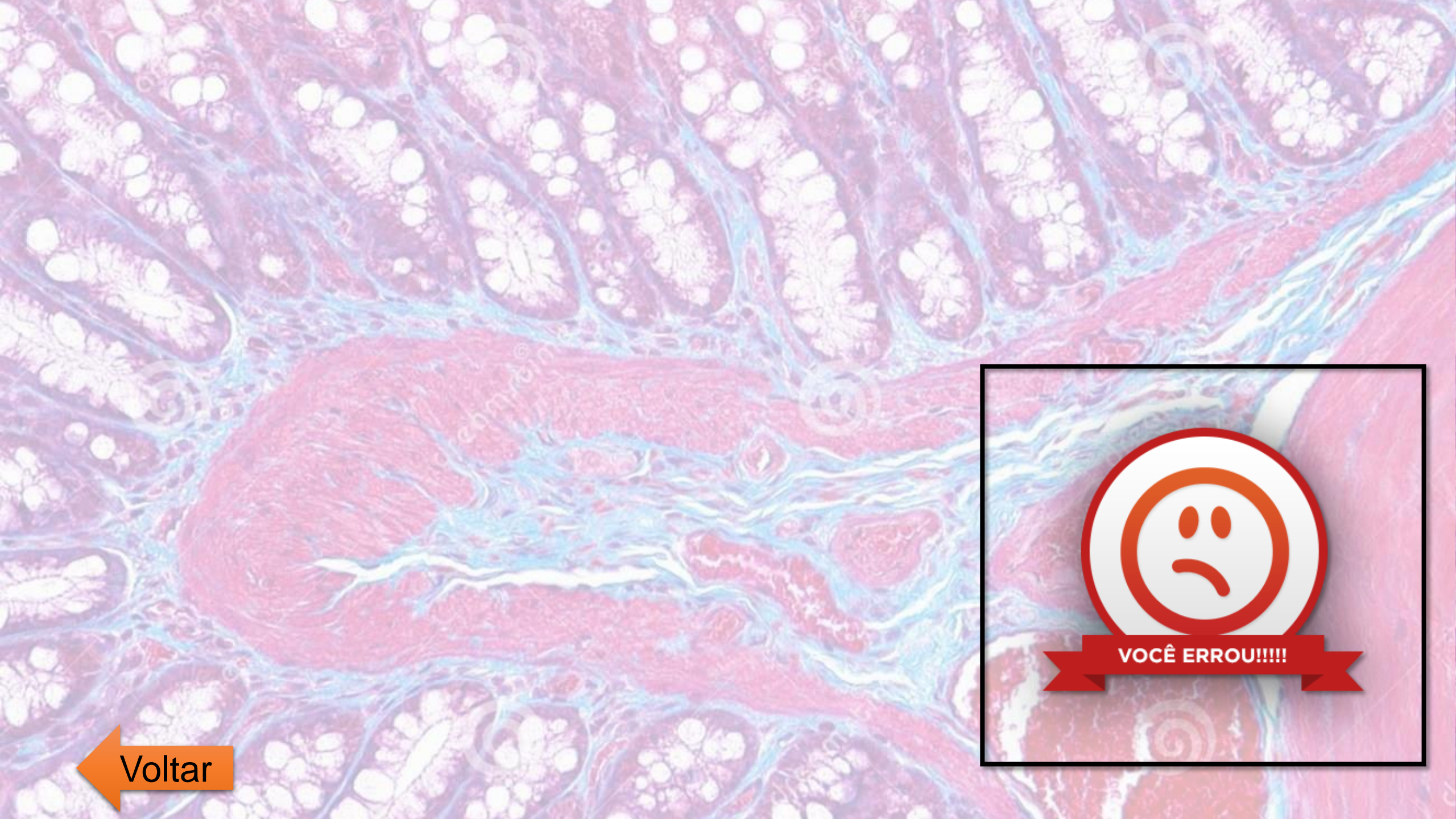
e) possui células fagocitárias que atacam o tumor.



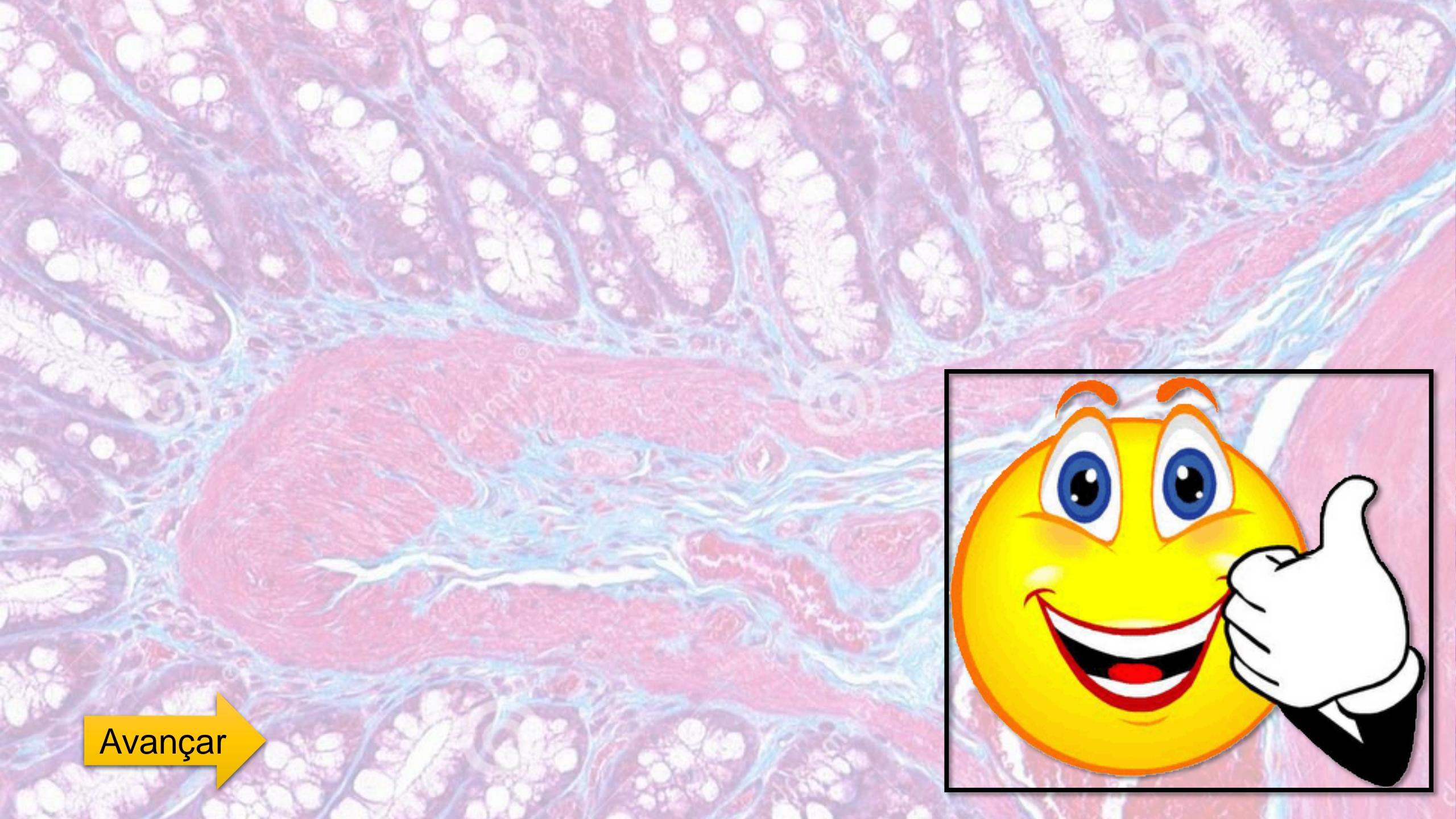
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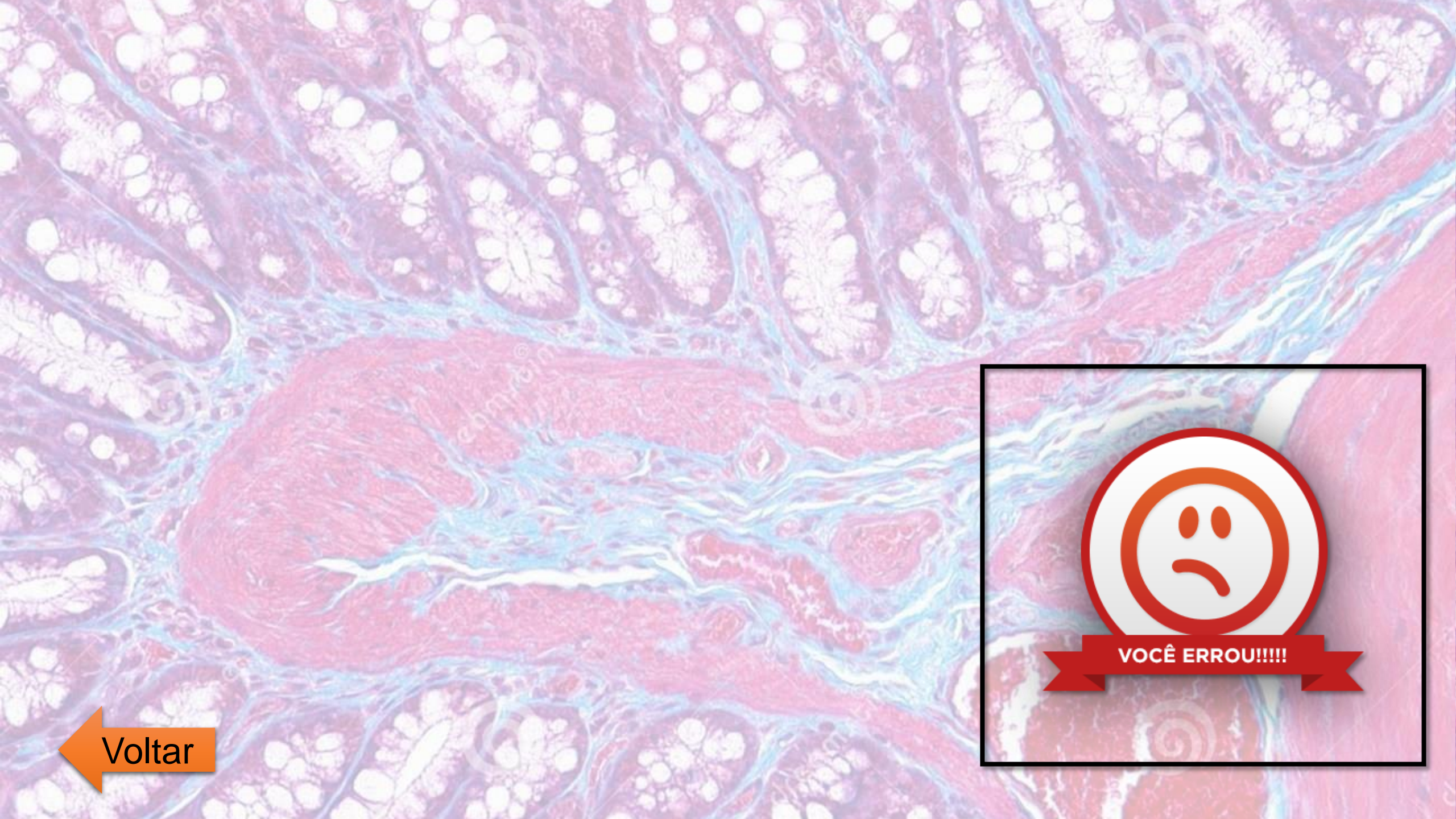
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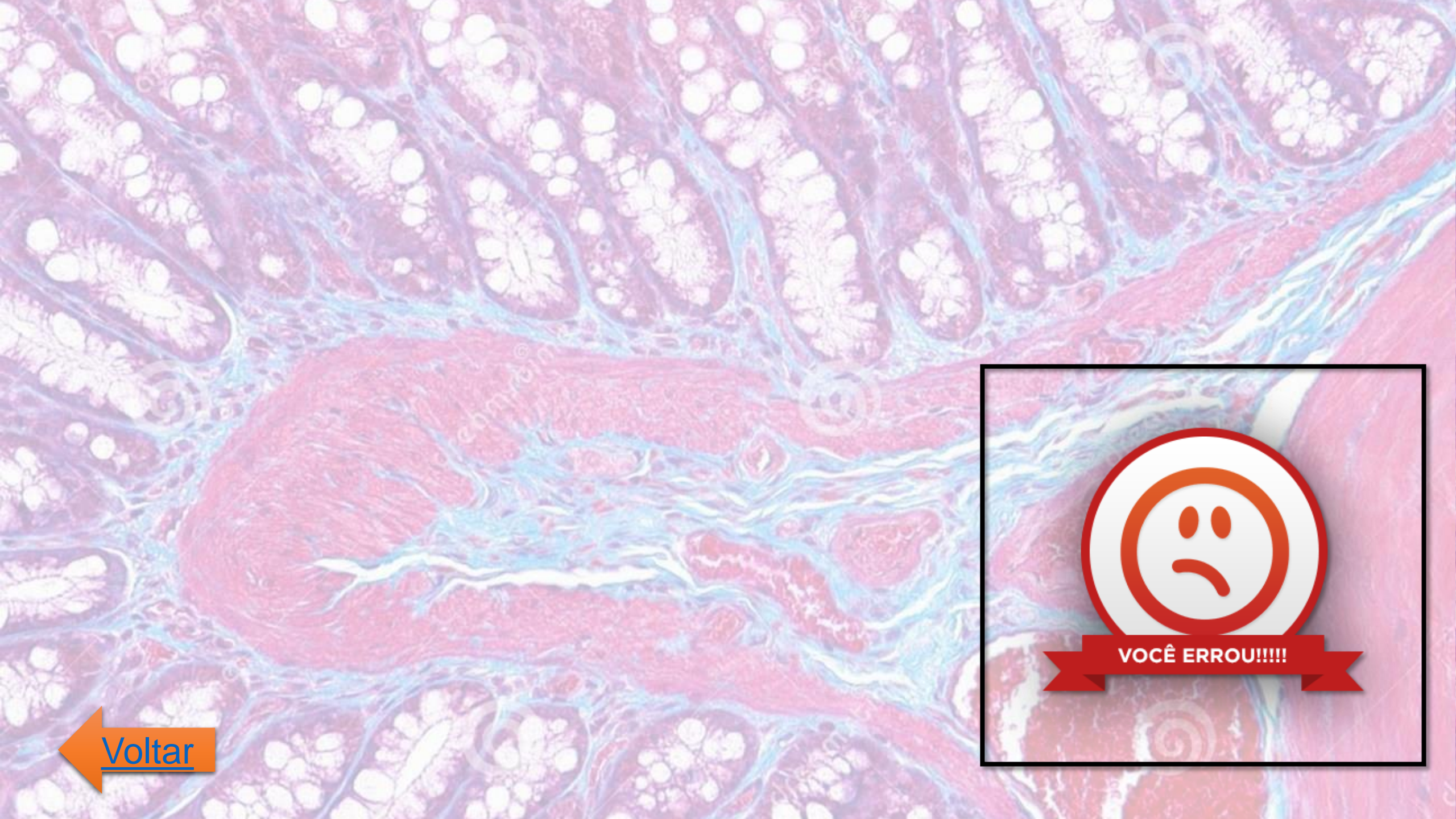
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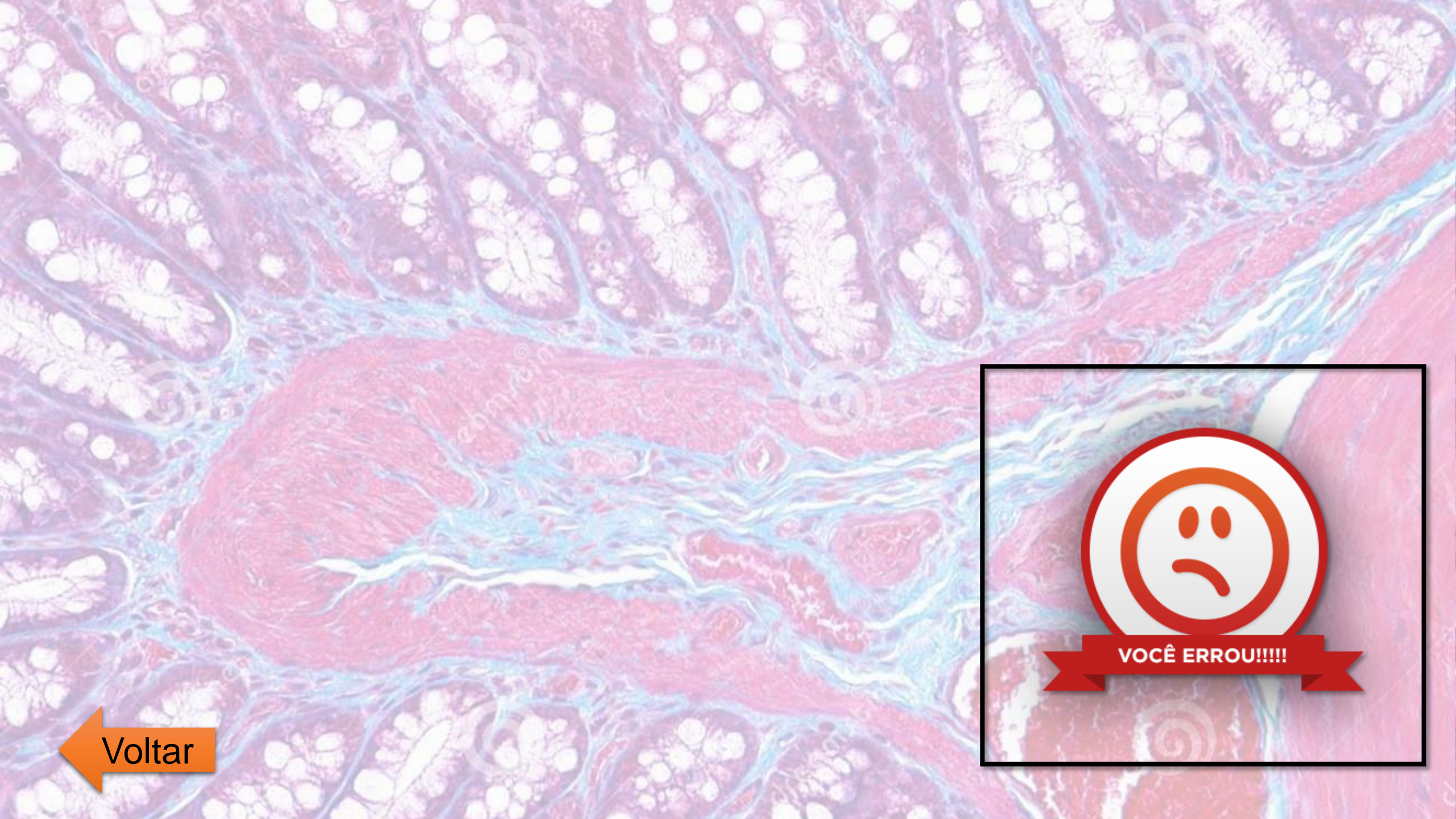
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18. Tecido Conjuntivo Cartilaginoso: Sobre o Tecido Cartilaginoso é correto afirmar que:

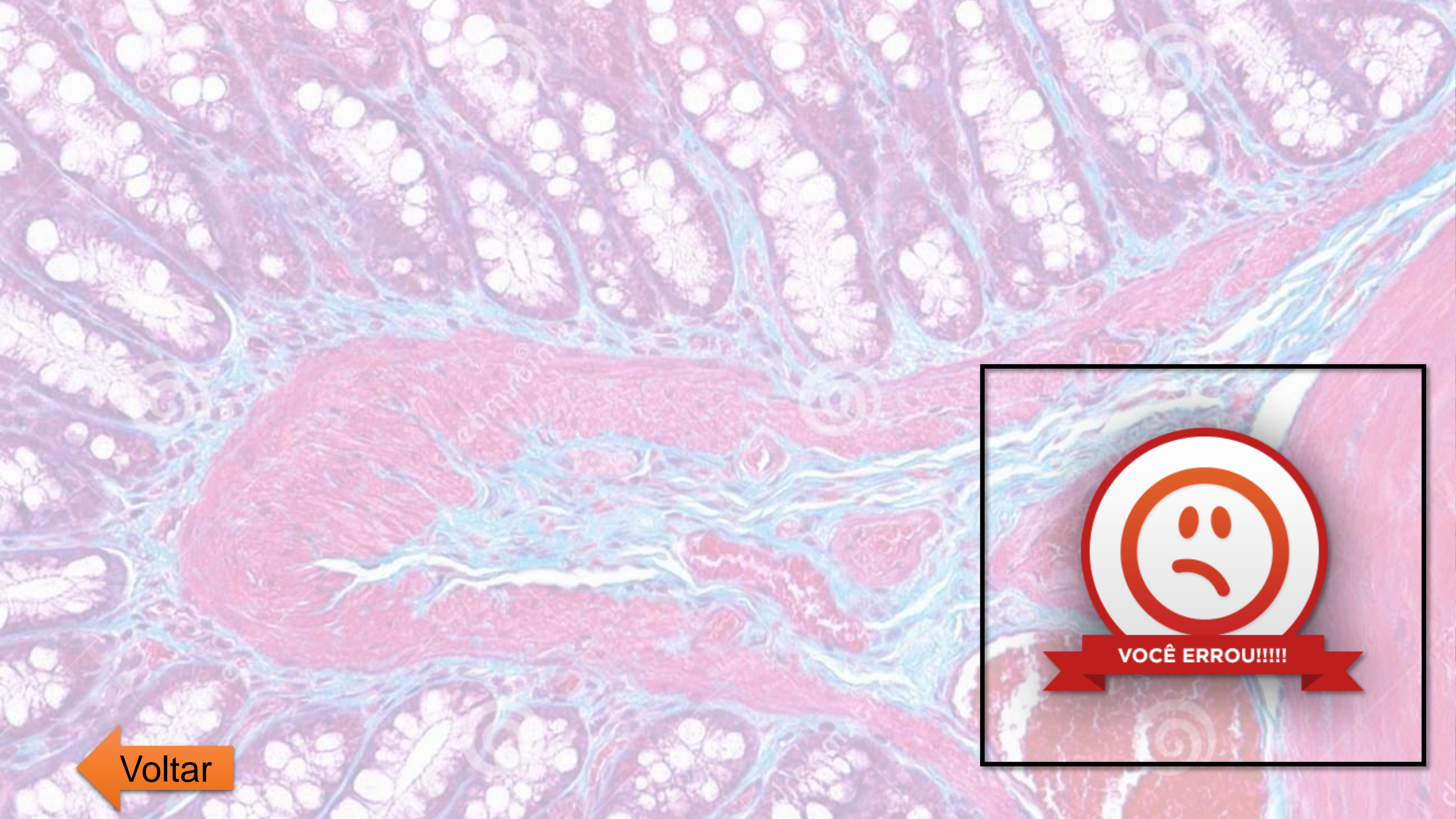
- a) A cartilagem hialina está presente nos pontos de ligação entre os tendões e os ossos.
- b) A cartilagem hialina e a cartilagem fibrosa possuem pericôndrio que é formado principalmente por fibroblastos e fibras de colágeno.
- c) A cartilagem elástica possui feixes de fibras de colágeno idênticas a cartilagem hialina.
- d) A matriz cartilaginosa é diferente ao longo do mesmo tecido cartilaginoso.
- e) A cartilagem hialina constitui o primeiro esqueleto fetal.



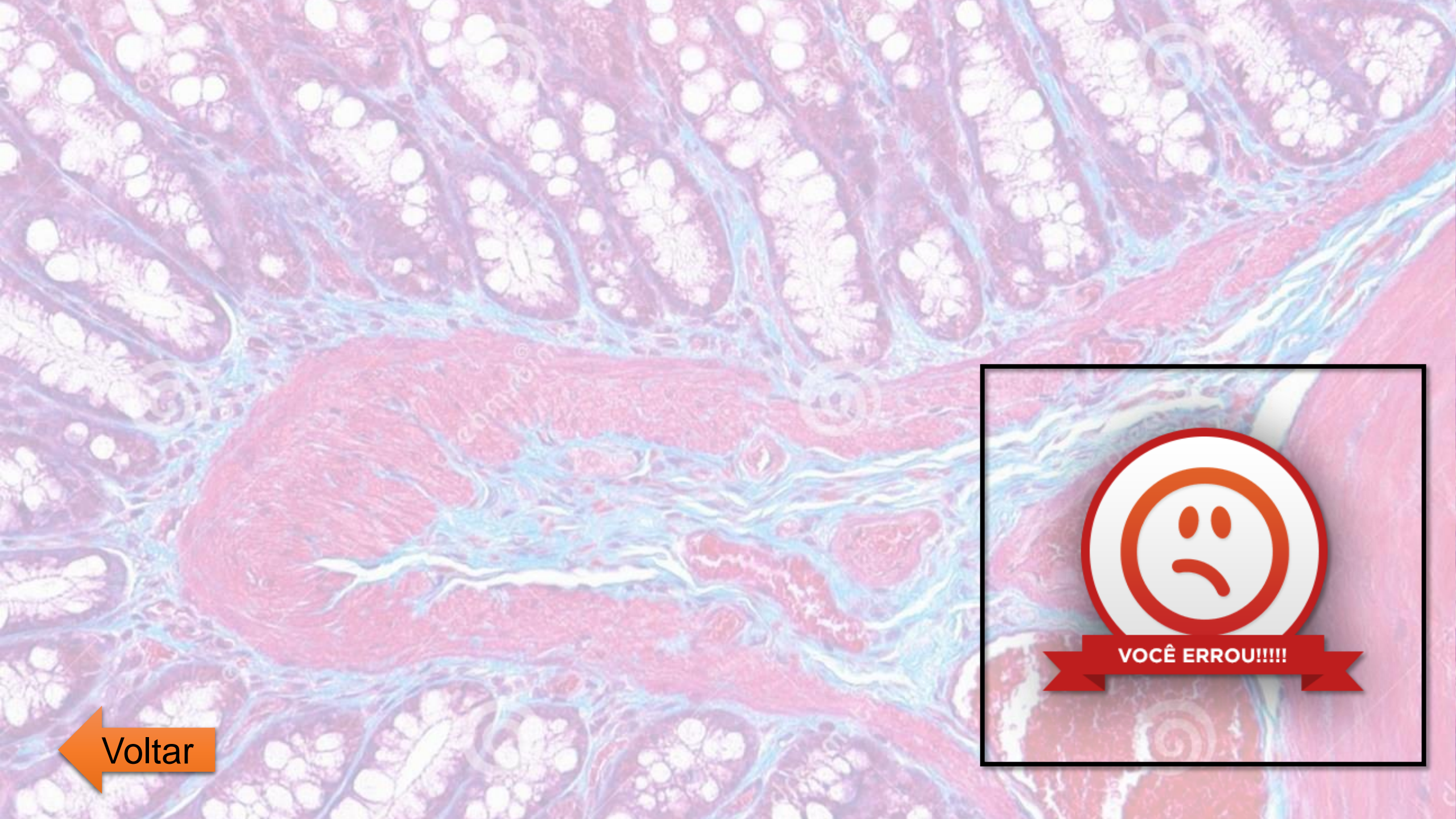
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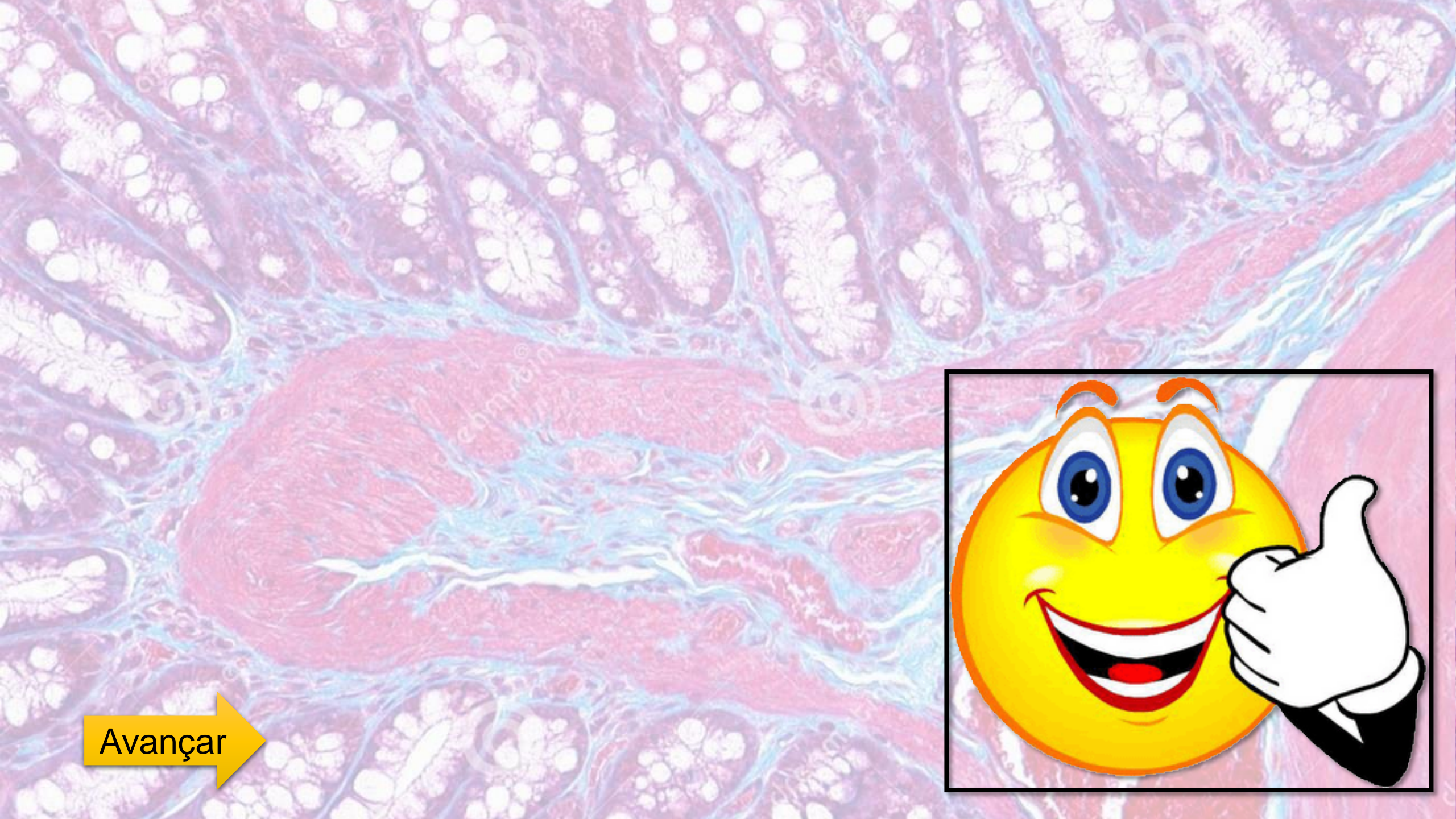
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19. São exemplos de células presentes no tecido cartilaginoso:

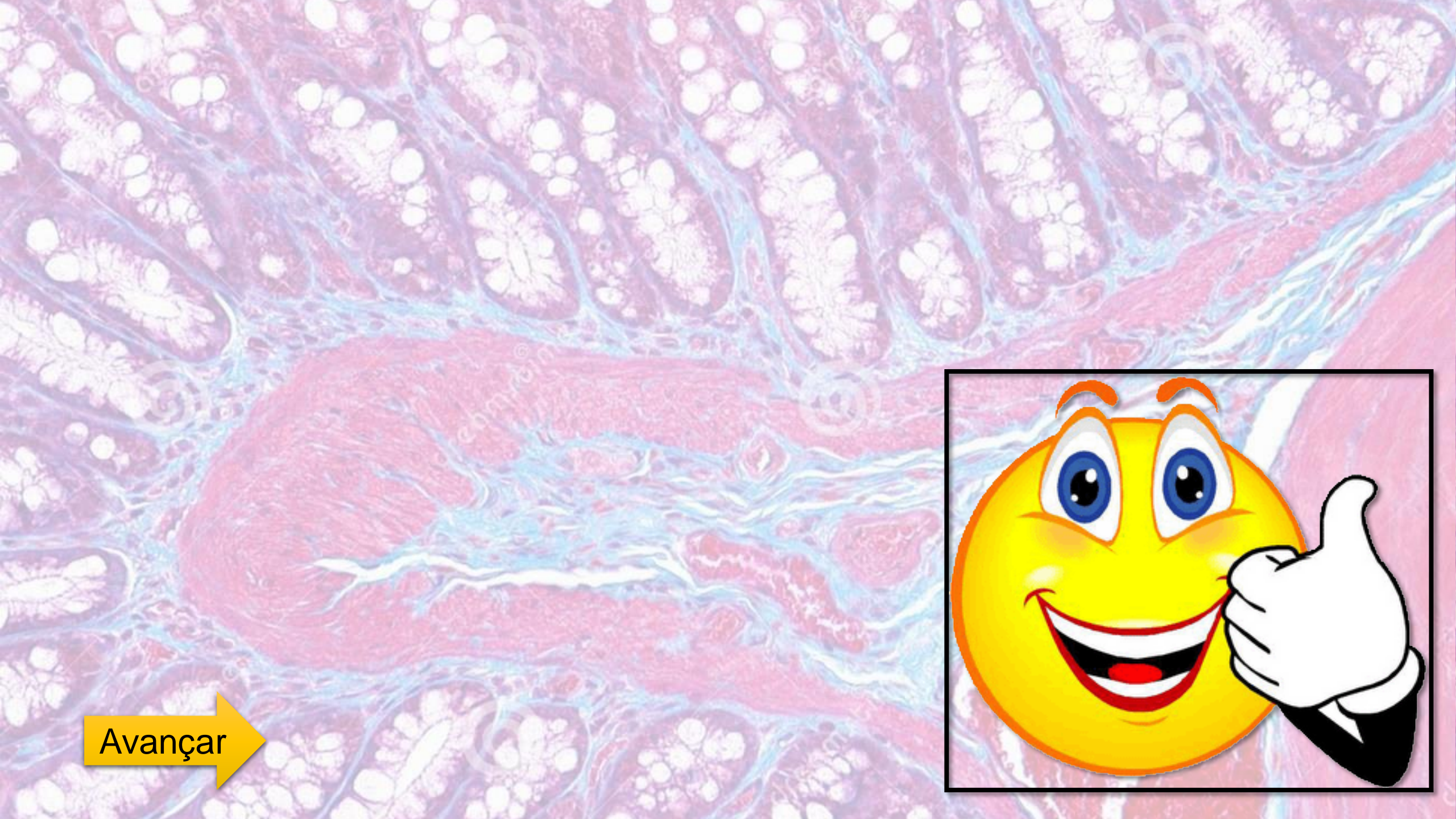
a) Condrócitos e condroblastos.

b) Melanócitos e mielócitos.

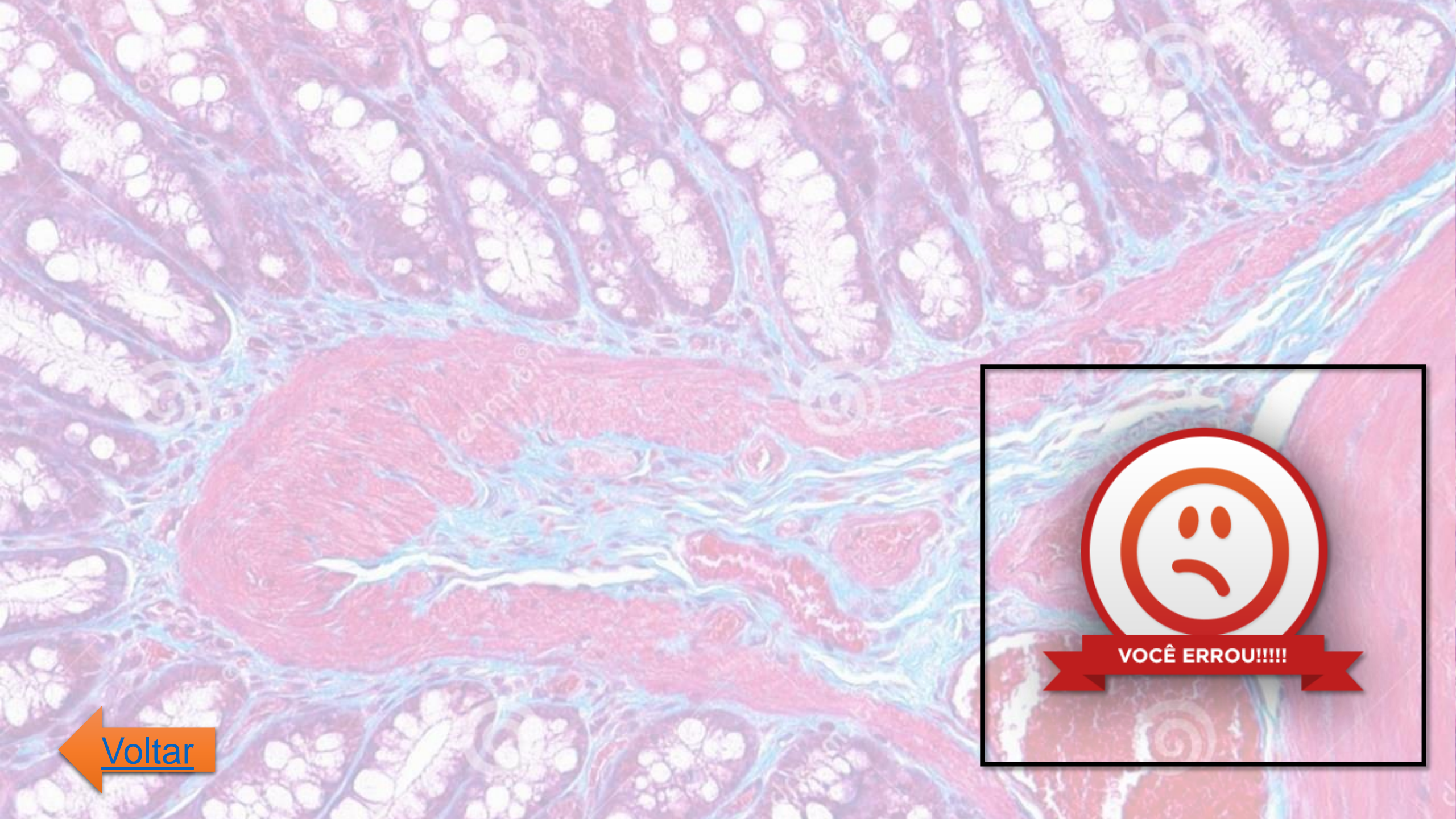
c) Trombócitos e trombina.

d) Osteócitos e osteoblastos.

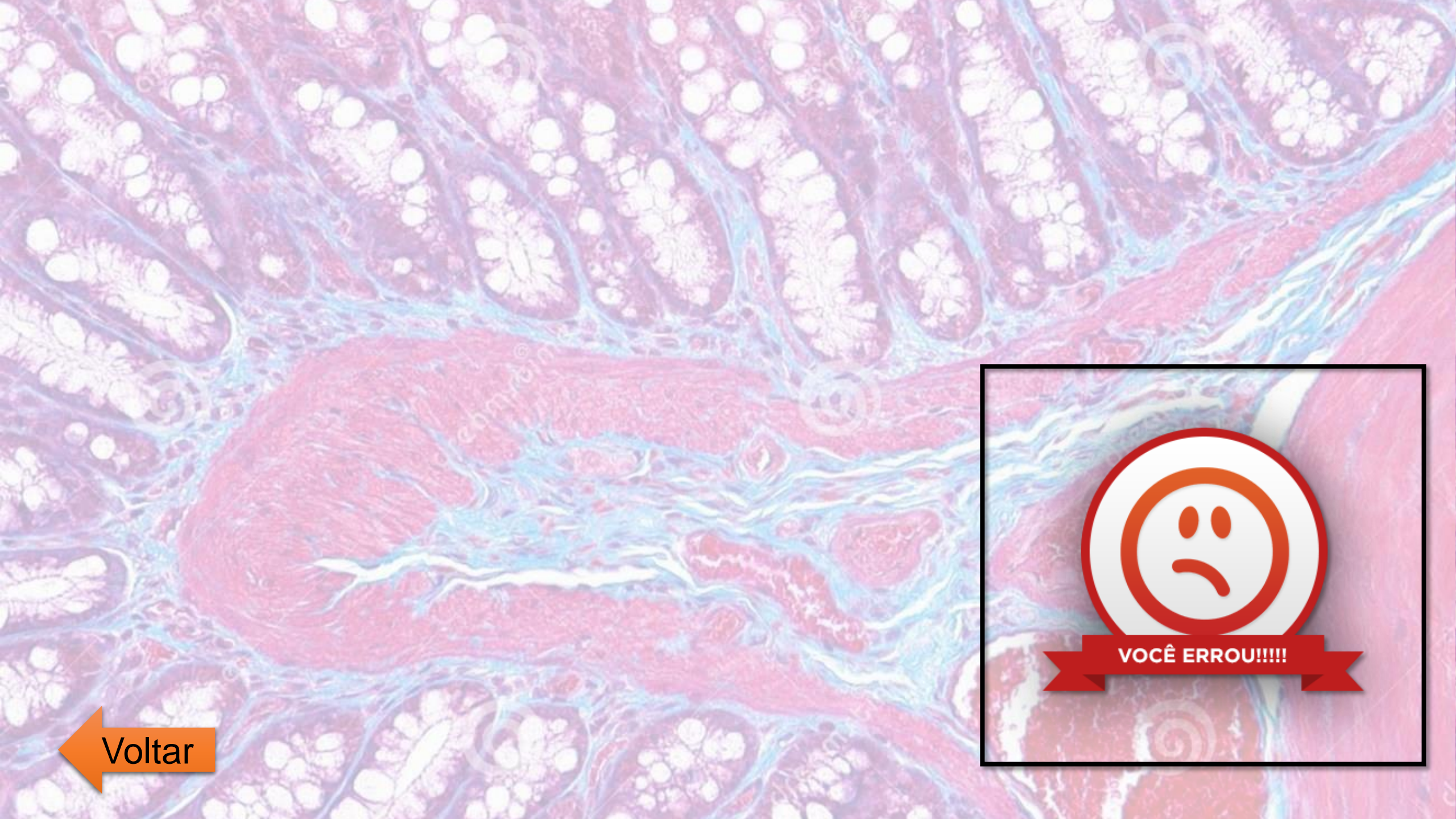
e) Fibrócitos e mieloblastos.



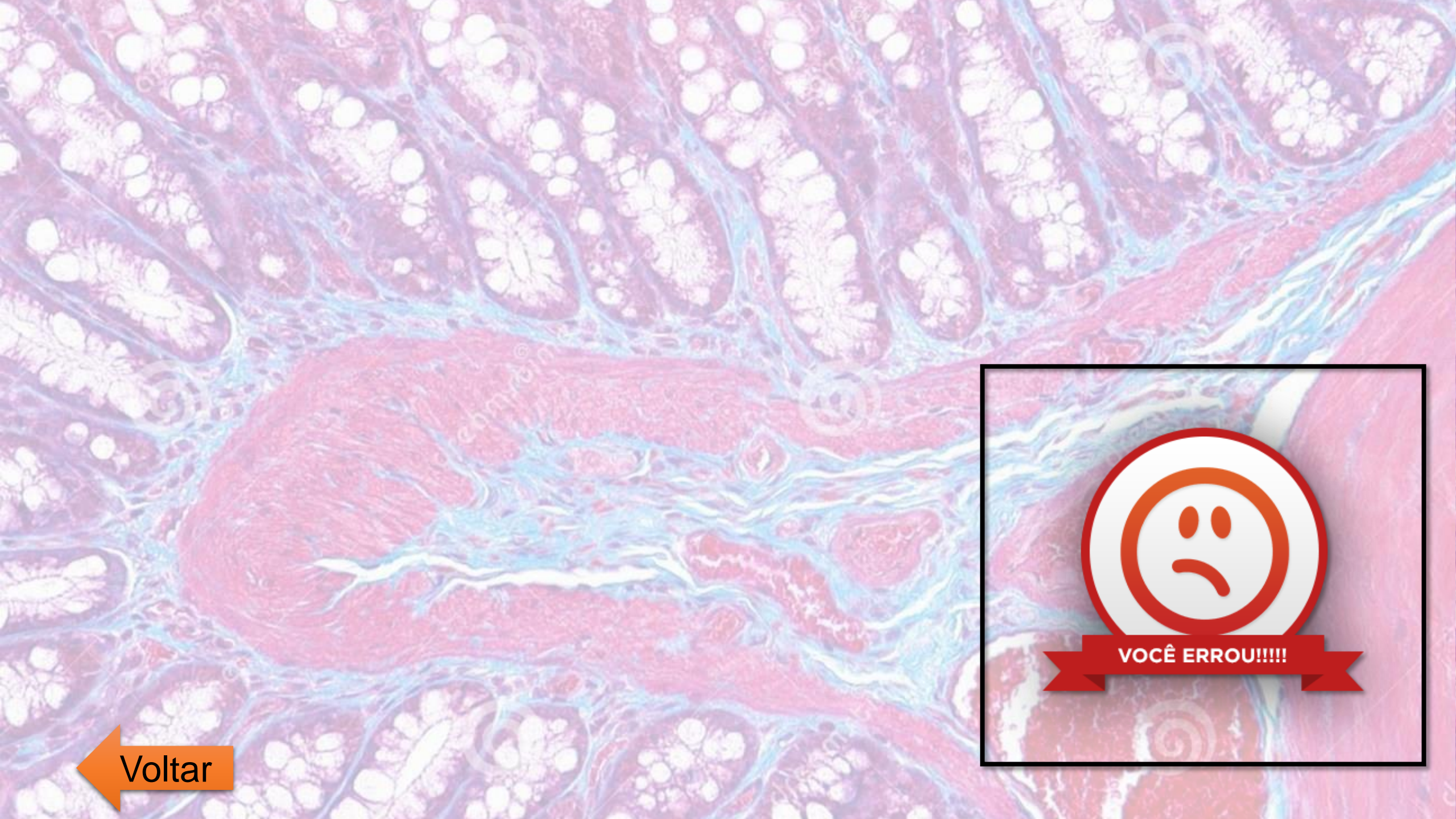
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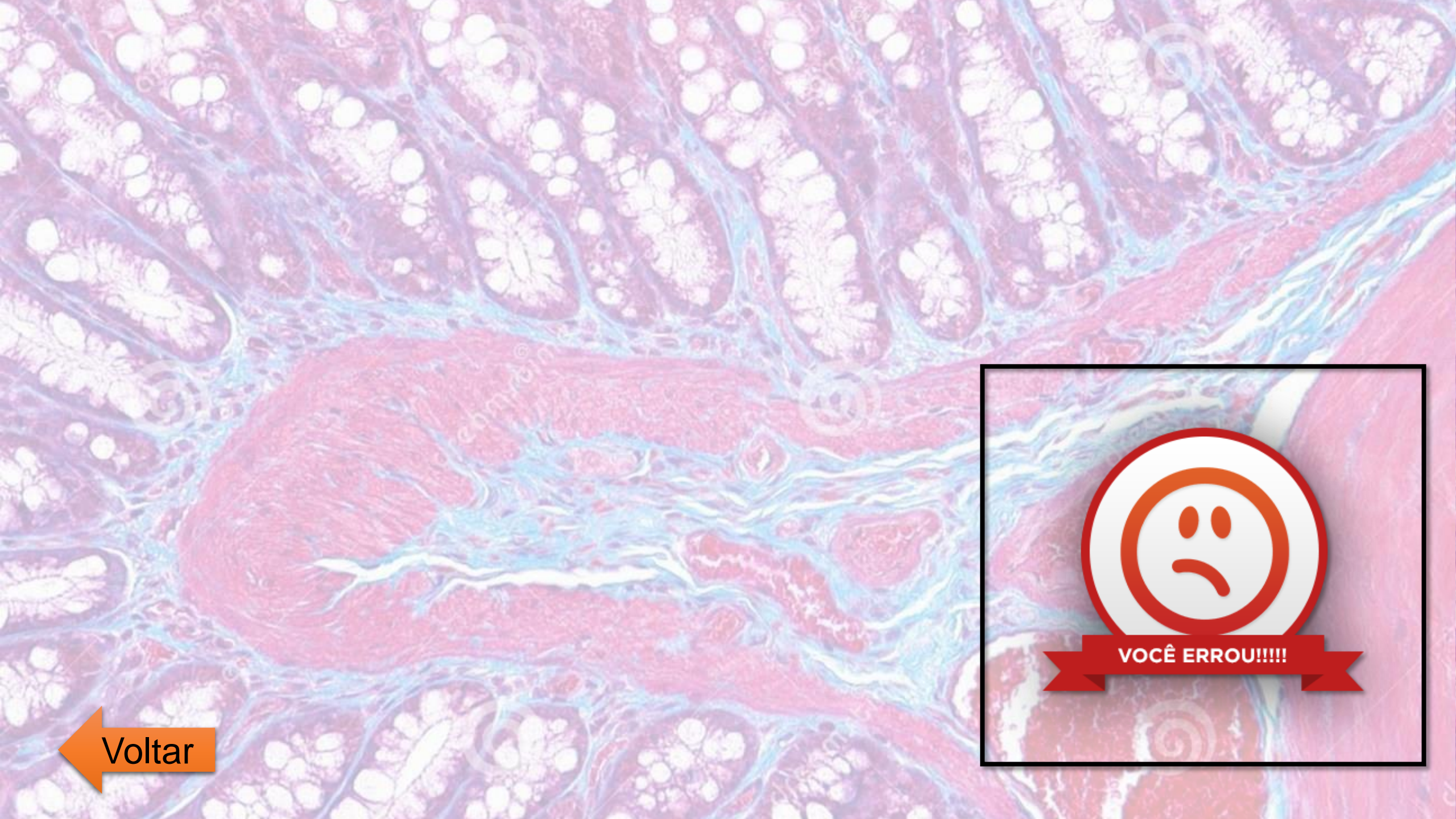
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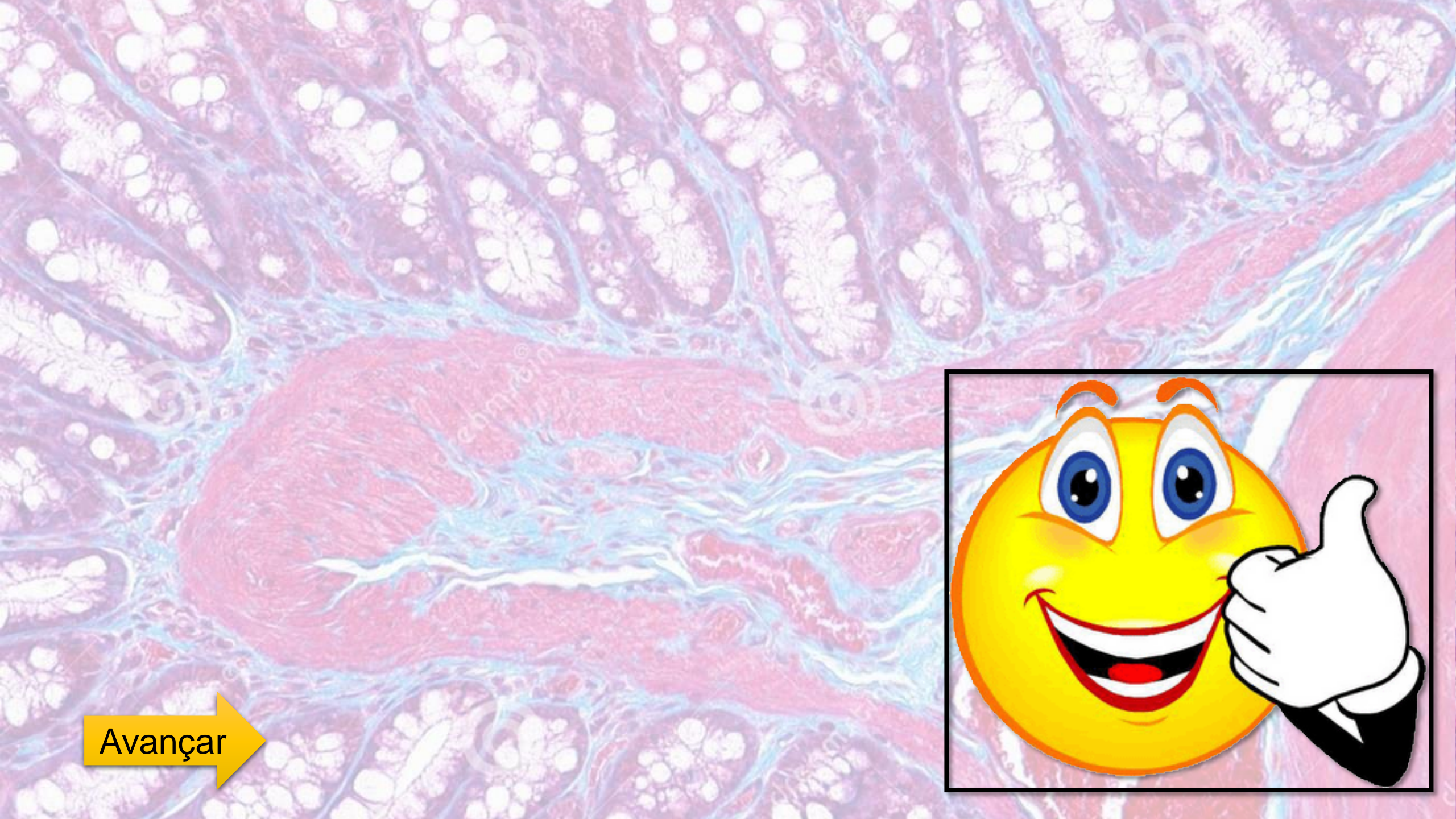
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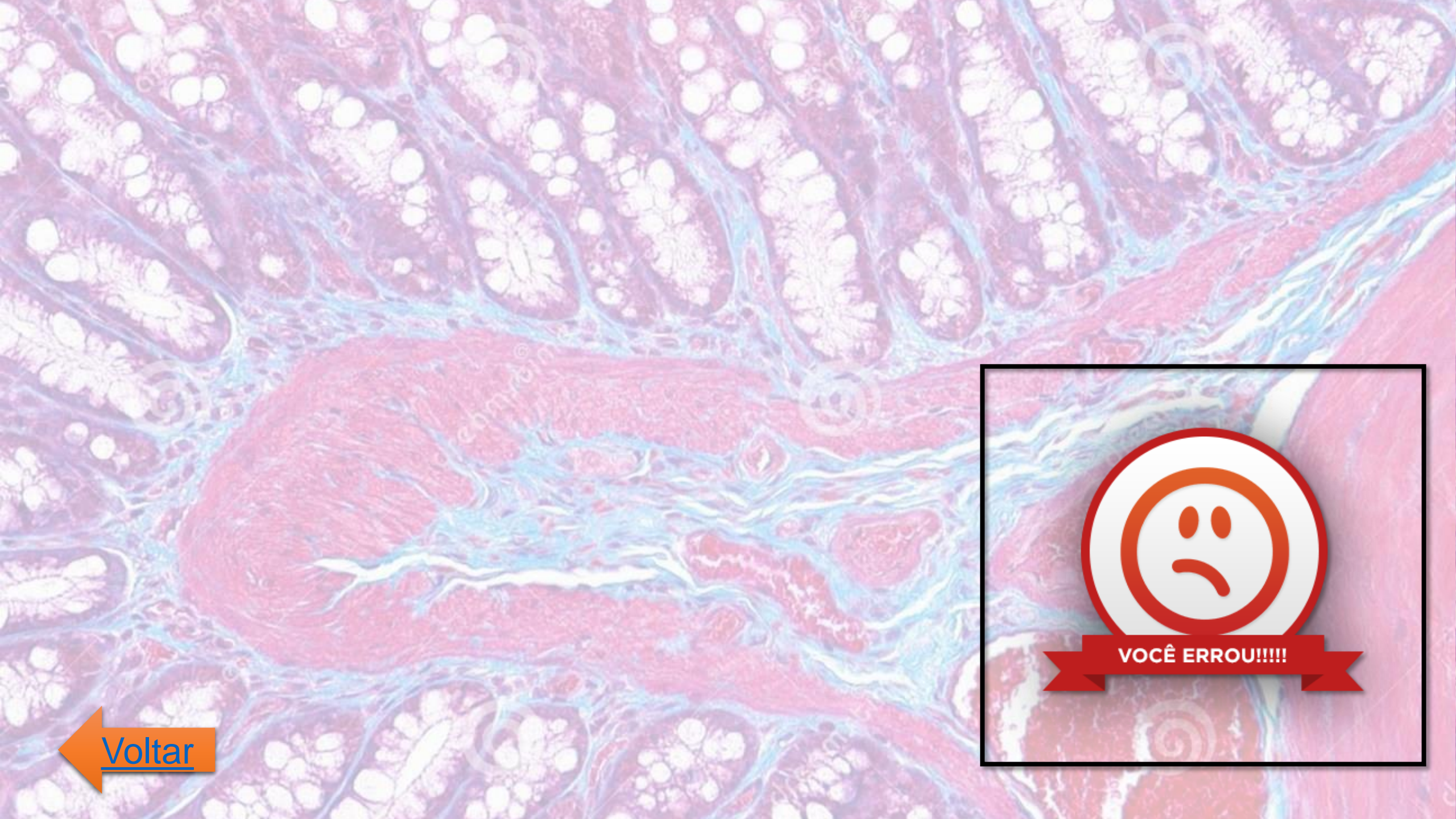
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20. Em relação ao tecido cartilaginoso indique a opção incorreta:

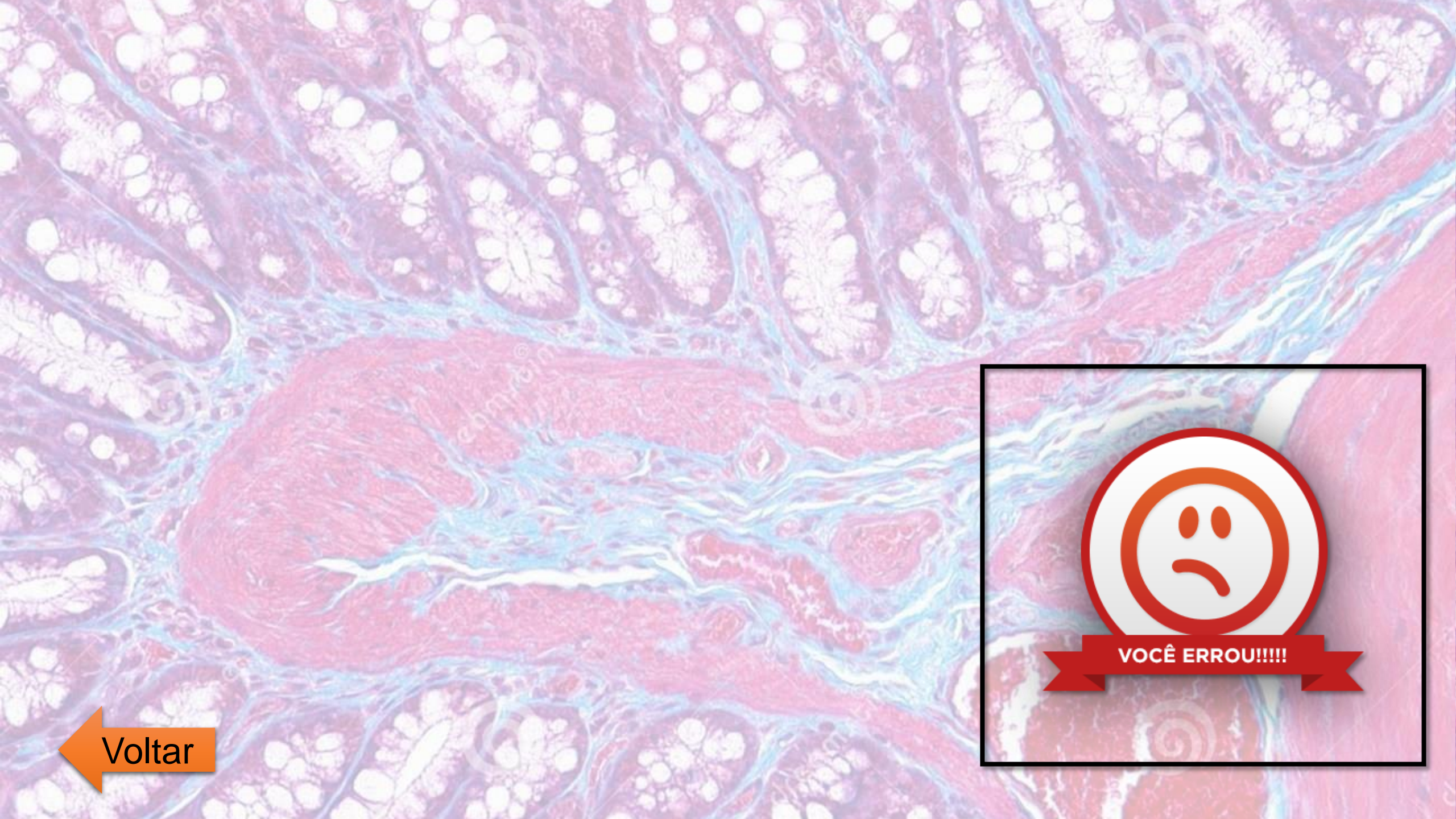
- a) suas células tem grande atividade metabólica, usando preferencialmente a respiração anaeróbica;
- b) é rico em fibras, que definem o tipo de tecido cartilaginoso;
- c) tem matriz rígida, mas flexível;
- d) funciona como amortecedor nas principais articulações do corpo;
- e) serve de molde á ossificação endocondral.



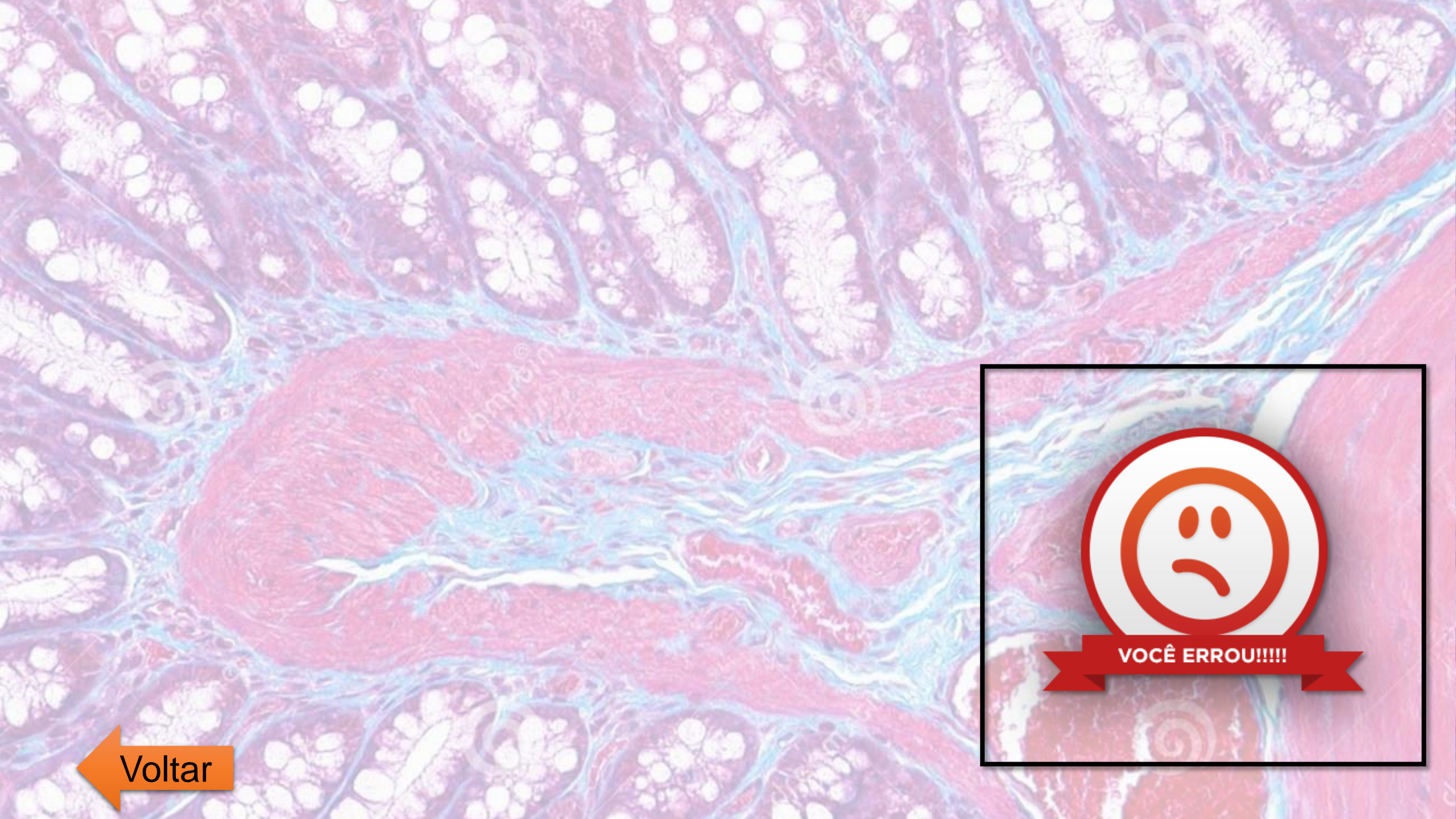
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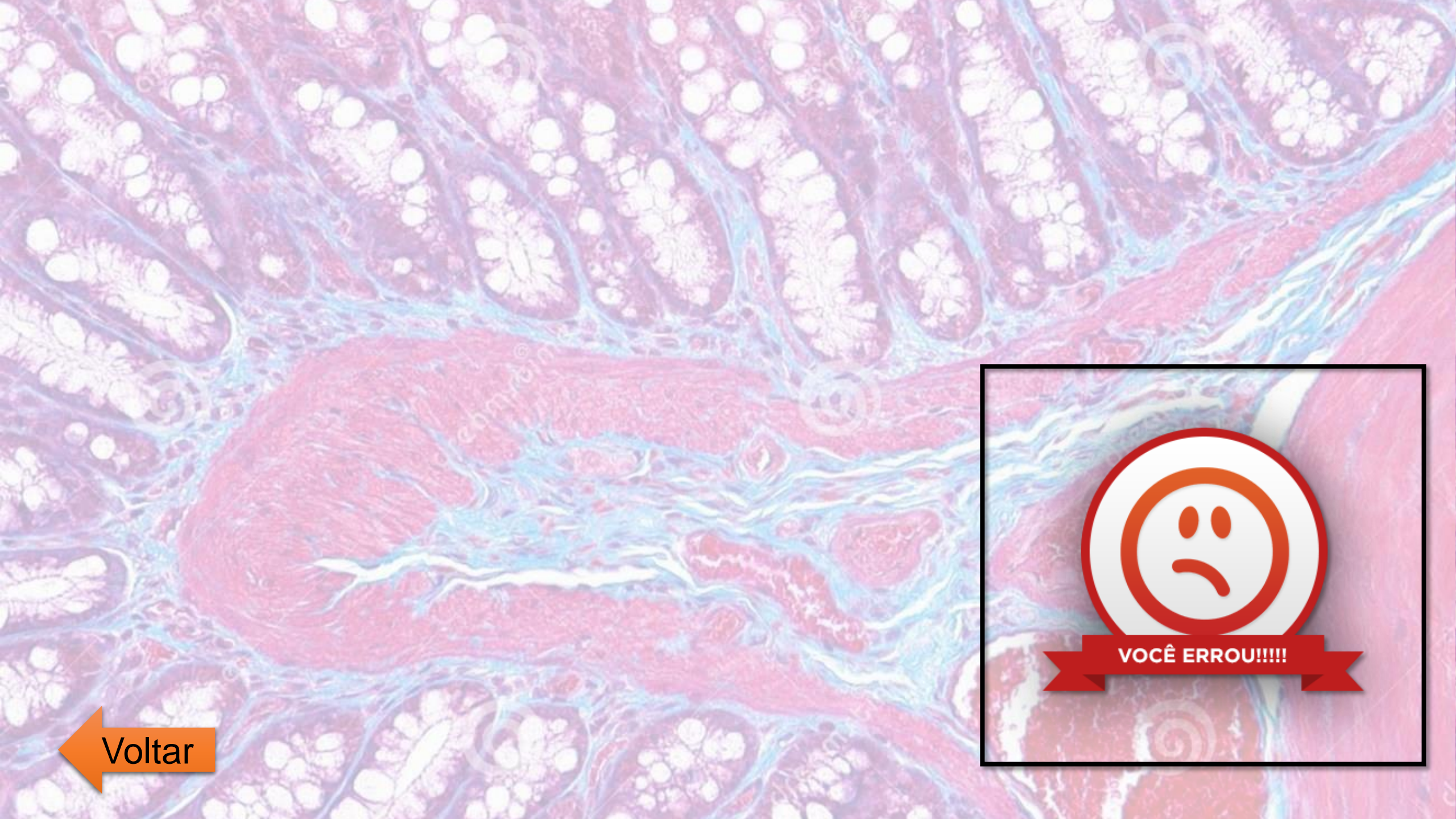
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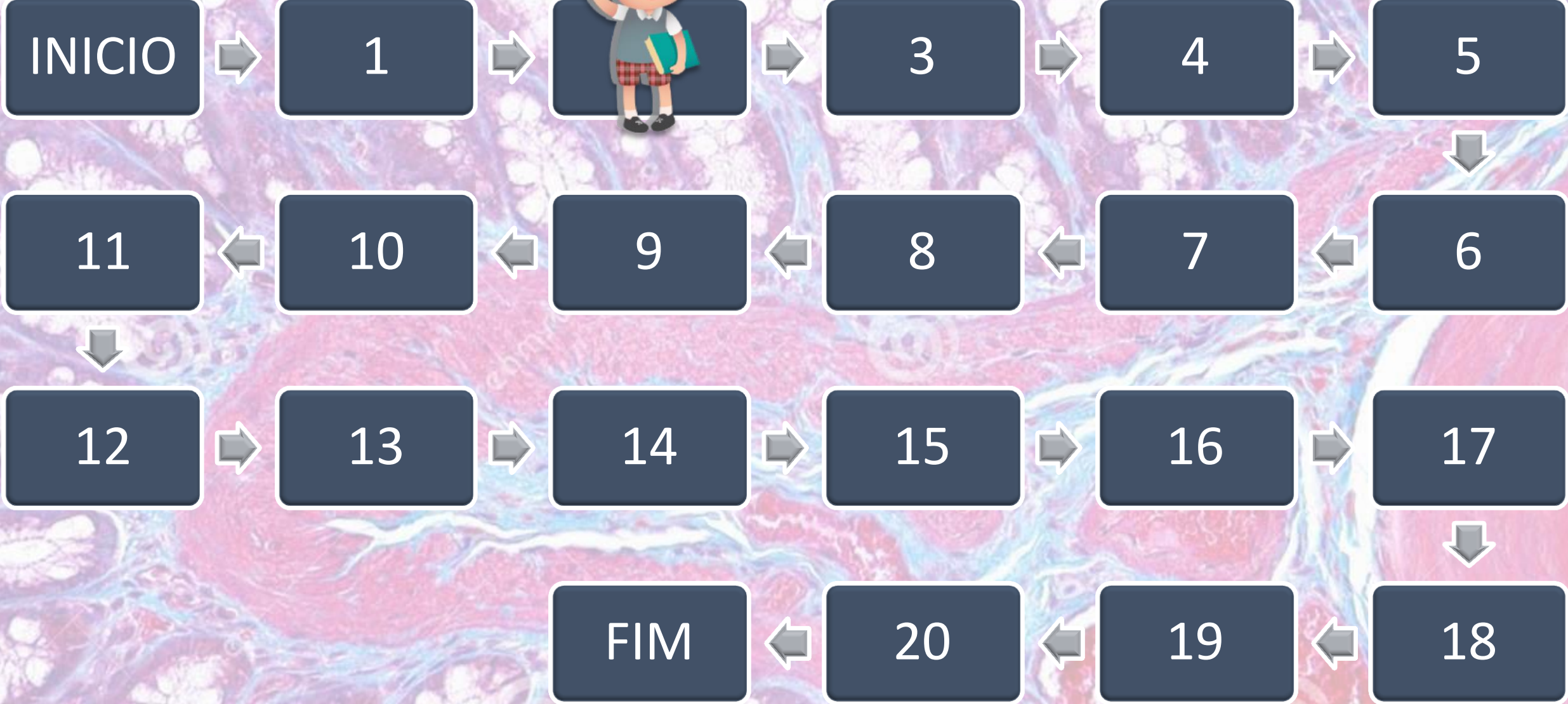
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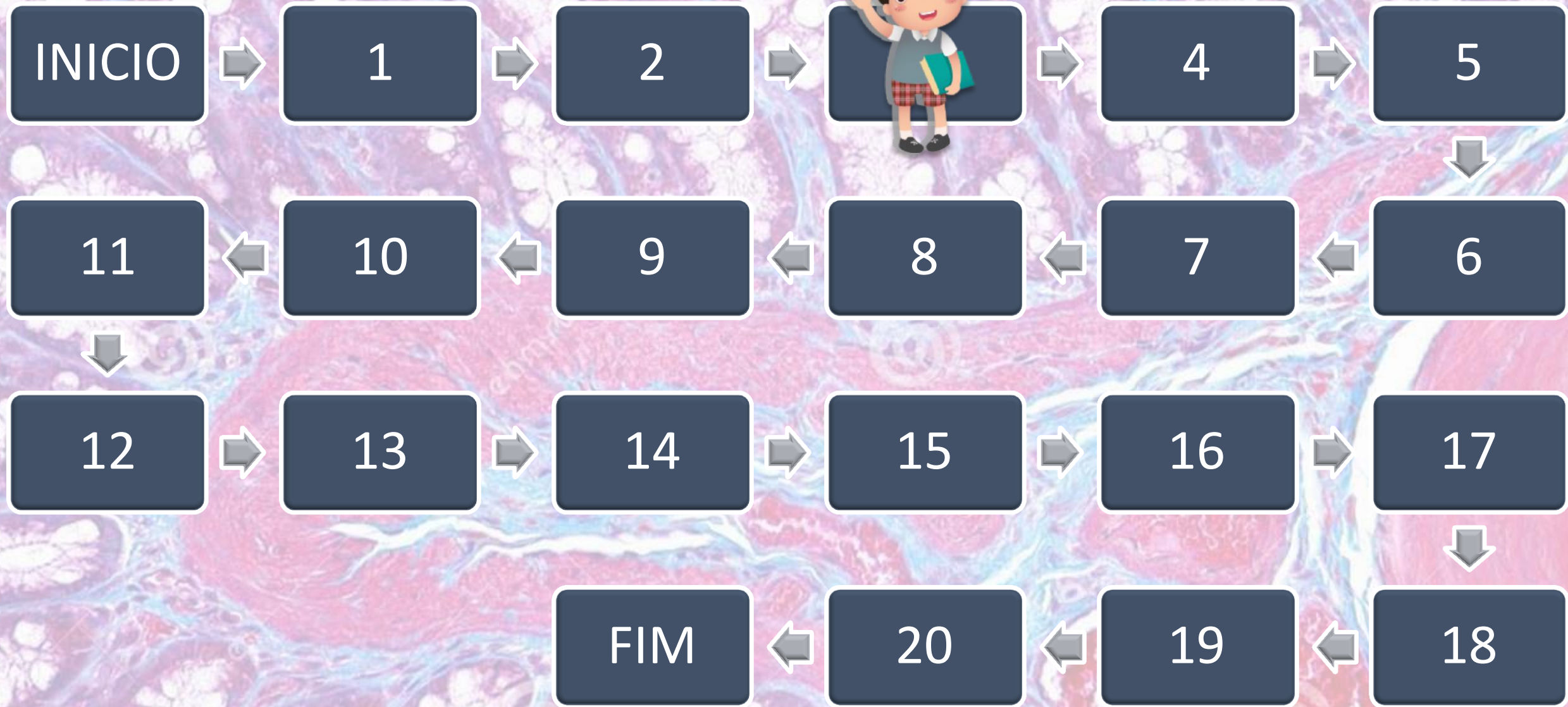
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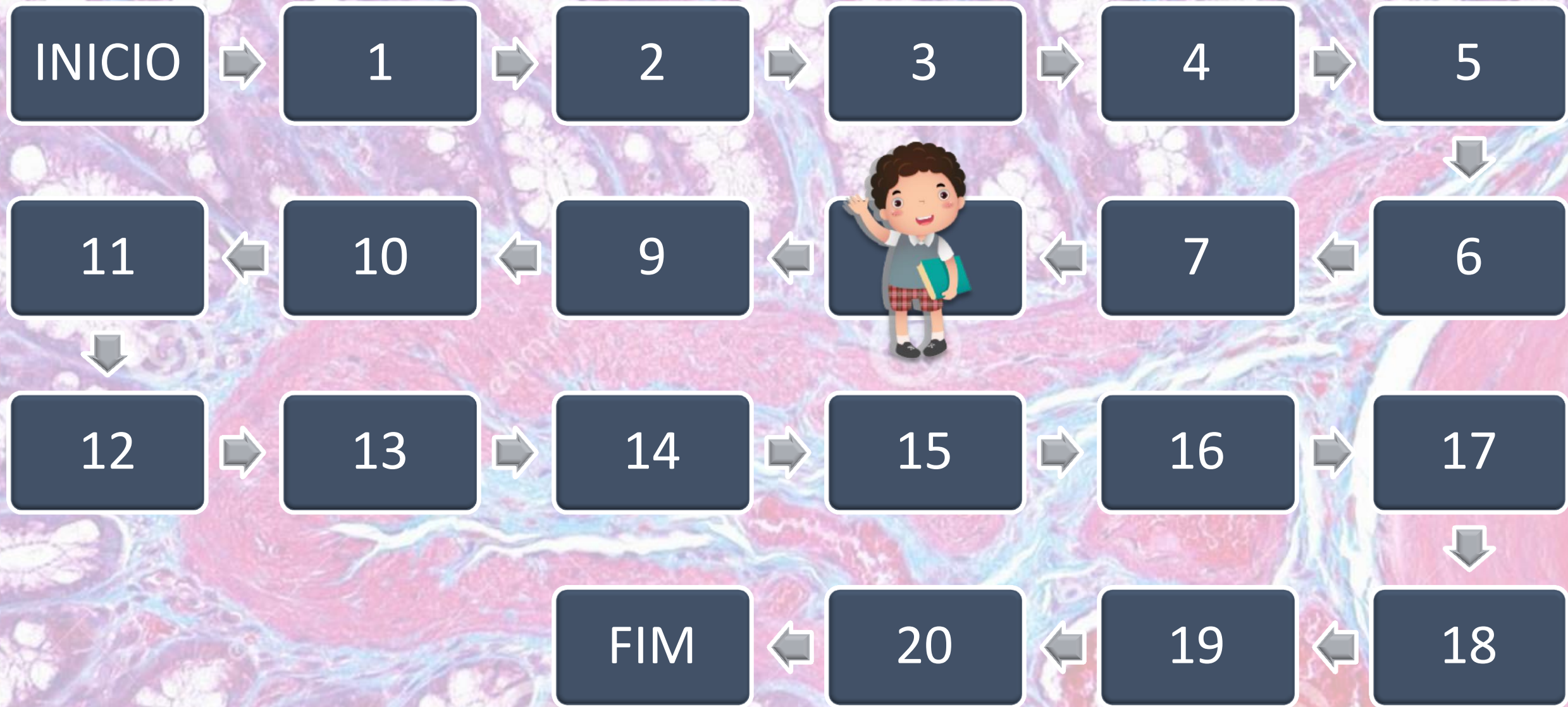
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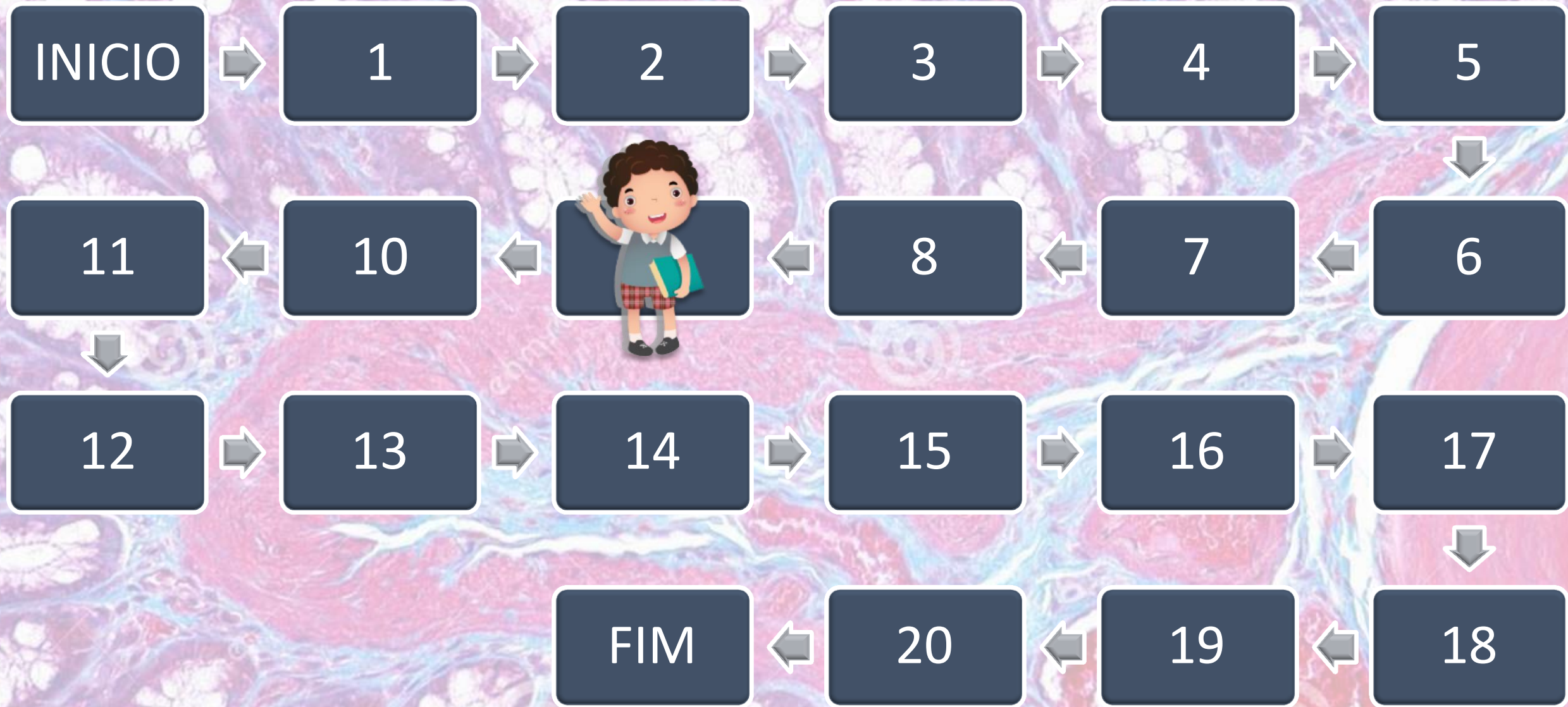
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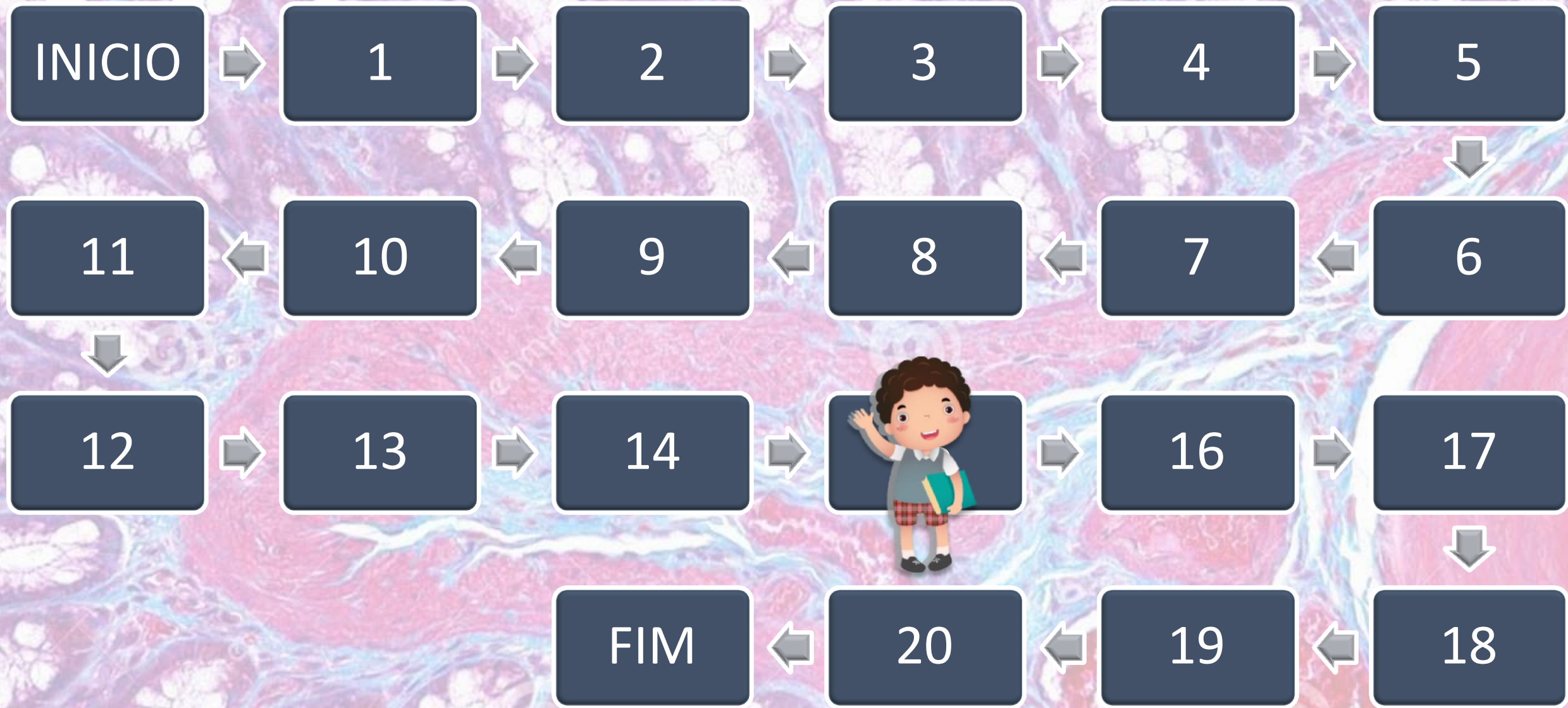
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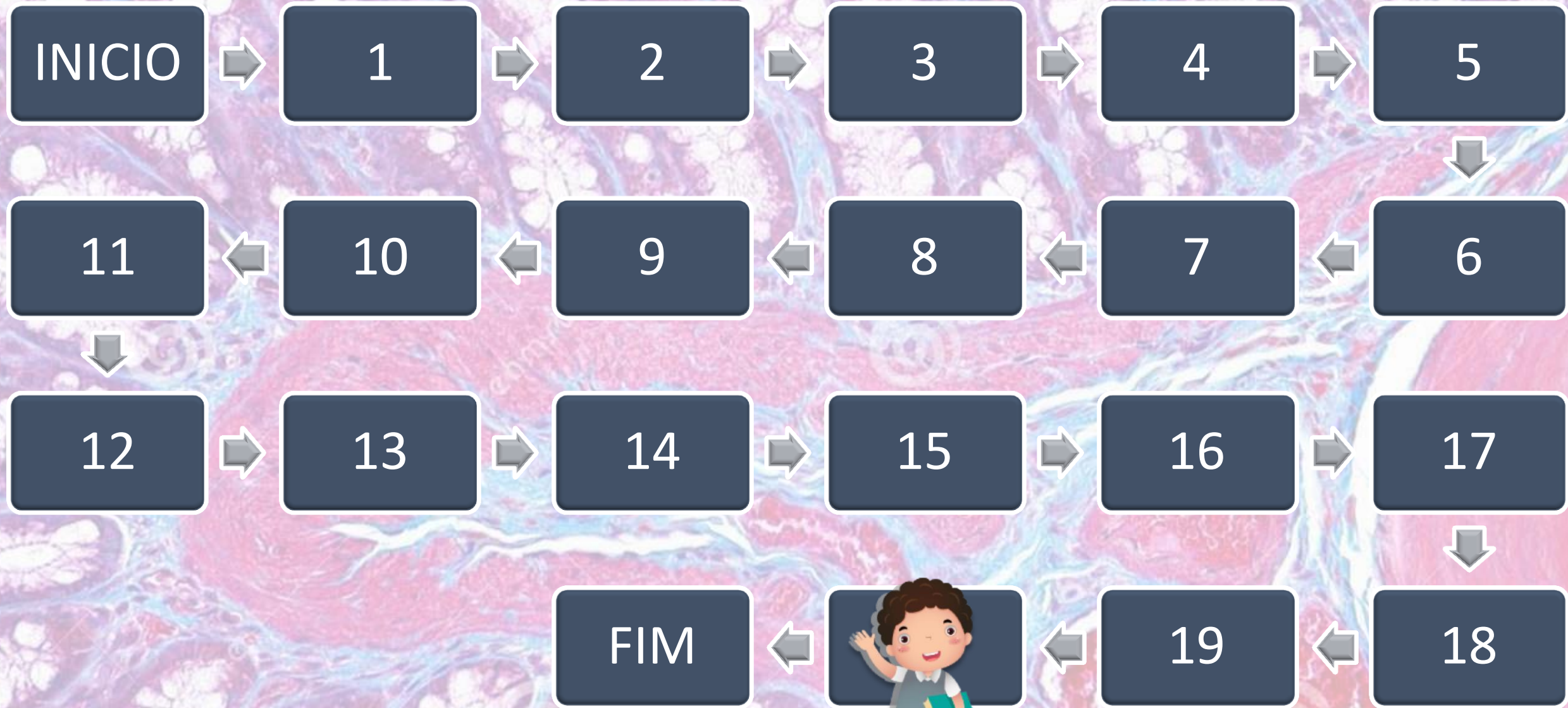


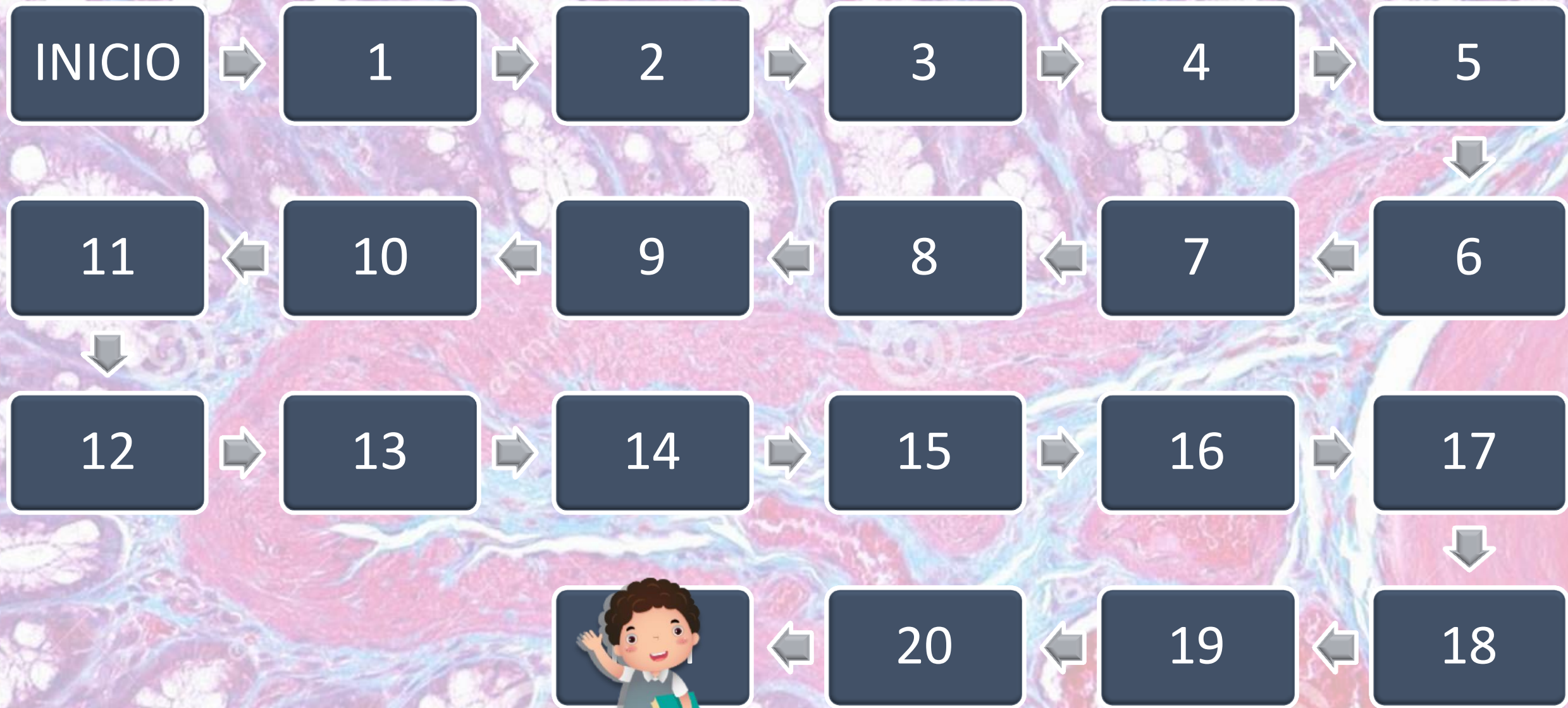












BONE TISSUE





1. Have hematopoietic function:

a) the parotid glands

b) the heart cavities

c) the liver and pancreas

d) the brain and the cerebellum

e) the red bone marrow





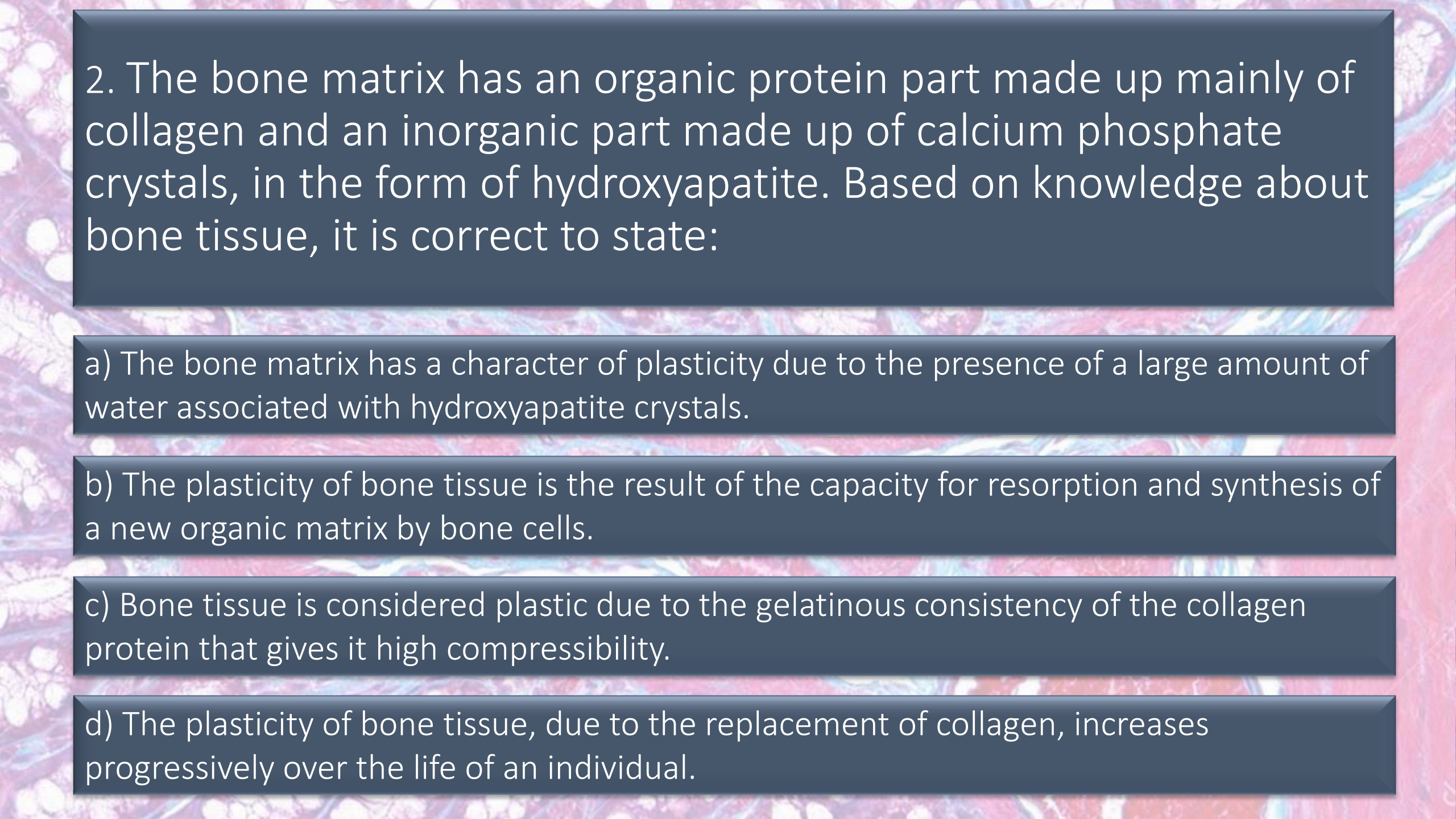
← Voltar





Alternative “e”. Hematopoietic tissue is responsible for the formation of blood cells and is found in the red bone marrow and in some organs, such as the thymus, spleen and lymph nodes.



A microscopic view of bone tissue, showing a complex network of collagen fibers and mineralized matrix. The image is stained, likely with hematoxylin and eosin, highlighting the cellular and fibrous components of the bone structure.

2. The bone matrix has an organic protein part made up mainly of collagen and an inorganic part made up of calcium phosphate crystals, in the form of hydroxyapatite. Based on knowledge about bone tissue, it is correct to state:

a) The bone matrix has a character of plasticity due to the presence of a large amount of water associated with hydroxyapatite crystals.

b) The plasticity of bone tissue is the result of the capacity for resorption and synthesis of a new organic matrix by bone cells.

c) Bone tissue is considered plastic due to the gelatinous consistency of the collagen protein that gives it high compressibility.

d) The plasticity of bone tissue, due to the replacement of collagen, increases progressively over the life of an individual.



Alternative “b”. Bone tissue is constantly remodeling, thanks to the action of osteoclasts and osteoblasts. Osteoclasts work by promoting bone resorption, while osteoblasts are related to the secretion of the components of the organic matrix.

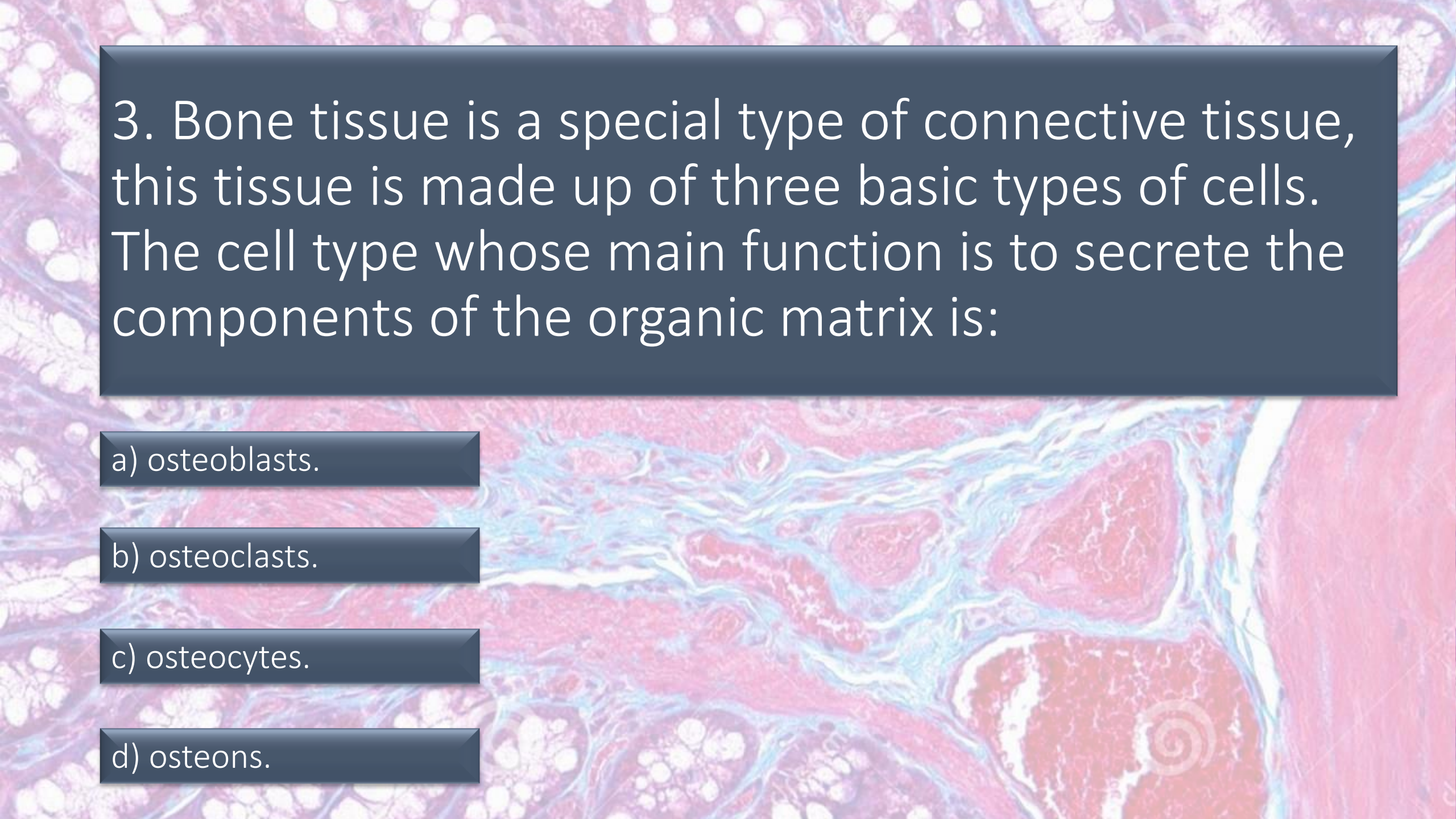


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A histological micrograph of bone tissue. The image shows several osteons, which are the basic structural units of bone. Each osteon consists of concentric layers of bone tissue surrounding a central canal. The tissue is stained with hematoxylin and eosin (H&E), showing pink cytoplasm and purple nuclei. Large, multinucleated cells, likely osteoclasts, are visible within the tissue, particularly in the lower right quadrant. The overall structure is highly organized and shows the characteristic lamellar pattern of bone.

3. Bone tissue is a special type of connective tissue, this tissue is made up of three basic types of cells. The cell type whose main function is to secrete the components of the organic matrix is:

a) osteoblasts.

b) osteoclasts.

c) osteocytes.

d) osteons.

Alternative “a”. Osteoblasts have as their main function the synthesis of the constituents of the organic matrix. They are essential for bone formation, remodeling and repair.

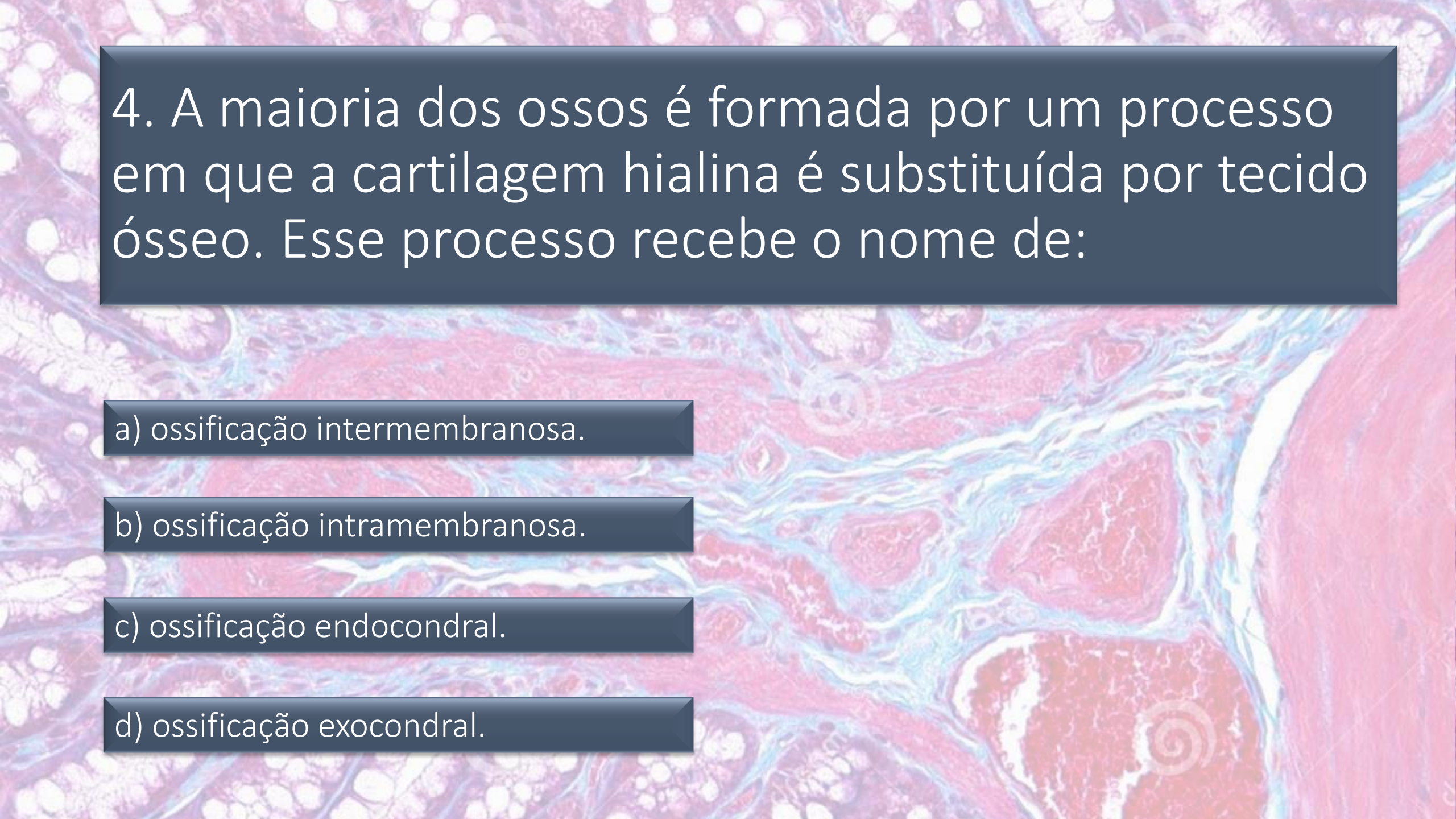


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The background of the slide is a histological micrograph. It shows various tissue structures stained with hematoxylin and eosin (H&E). There are areas of dense, pink-stained connective tissue, likely collagen fibers, and some lighter, more cellular areas that could represent cartilage or other soft tissue components. The overall appearance is that of a complex biological structure, possibly a developing bone or joint.

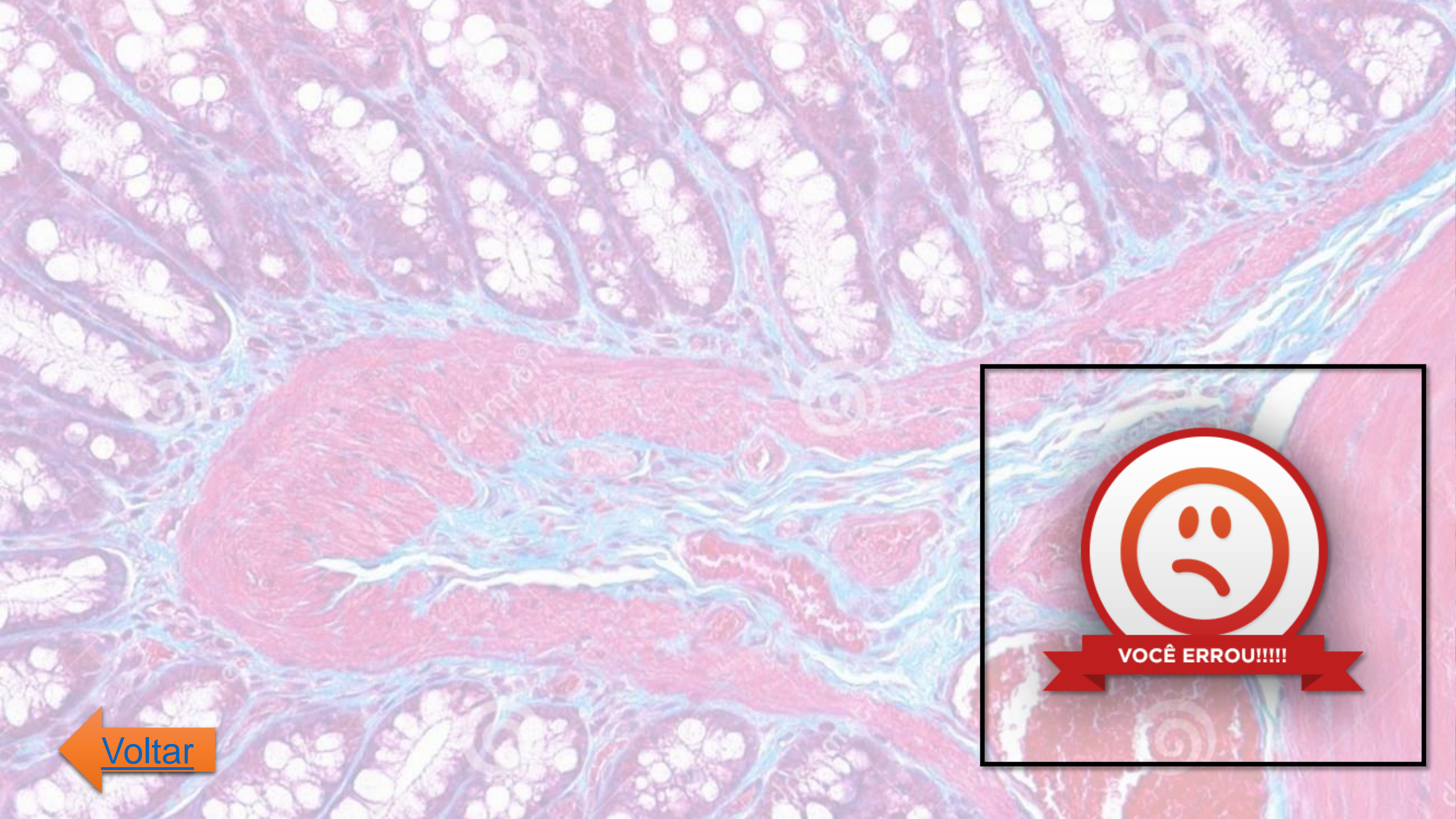
4. A maioria dos ossos é formada por um processo em que a cartilagem hialina é substituída por tecido ósseo. Esse processo recebe o nome de:

a) ossificação intermembranosa.

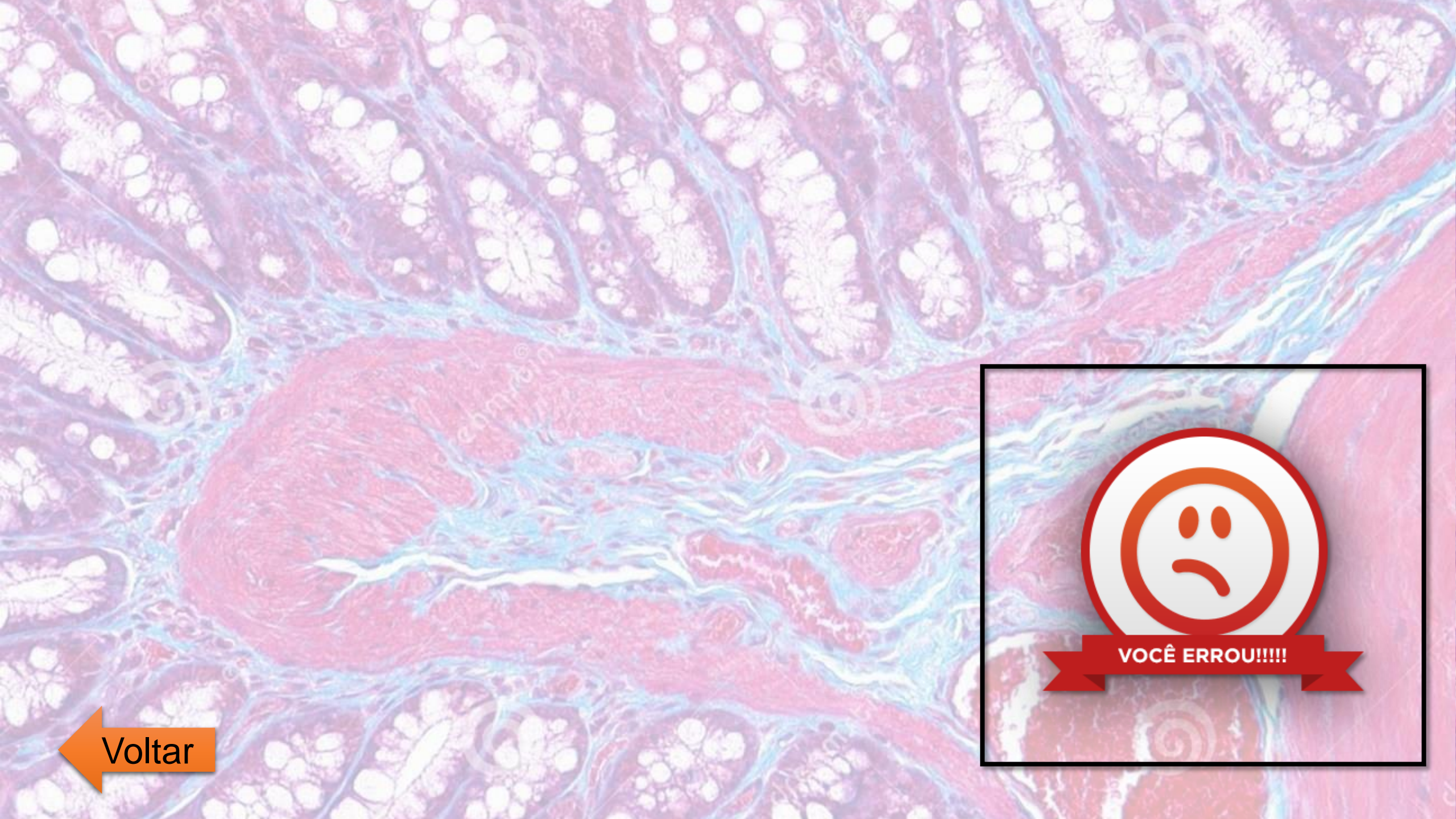
b) ossificação intramembranosa.

c) ossificação endocondral.

d) ossificação exocondral.



 [Voltar](#)

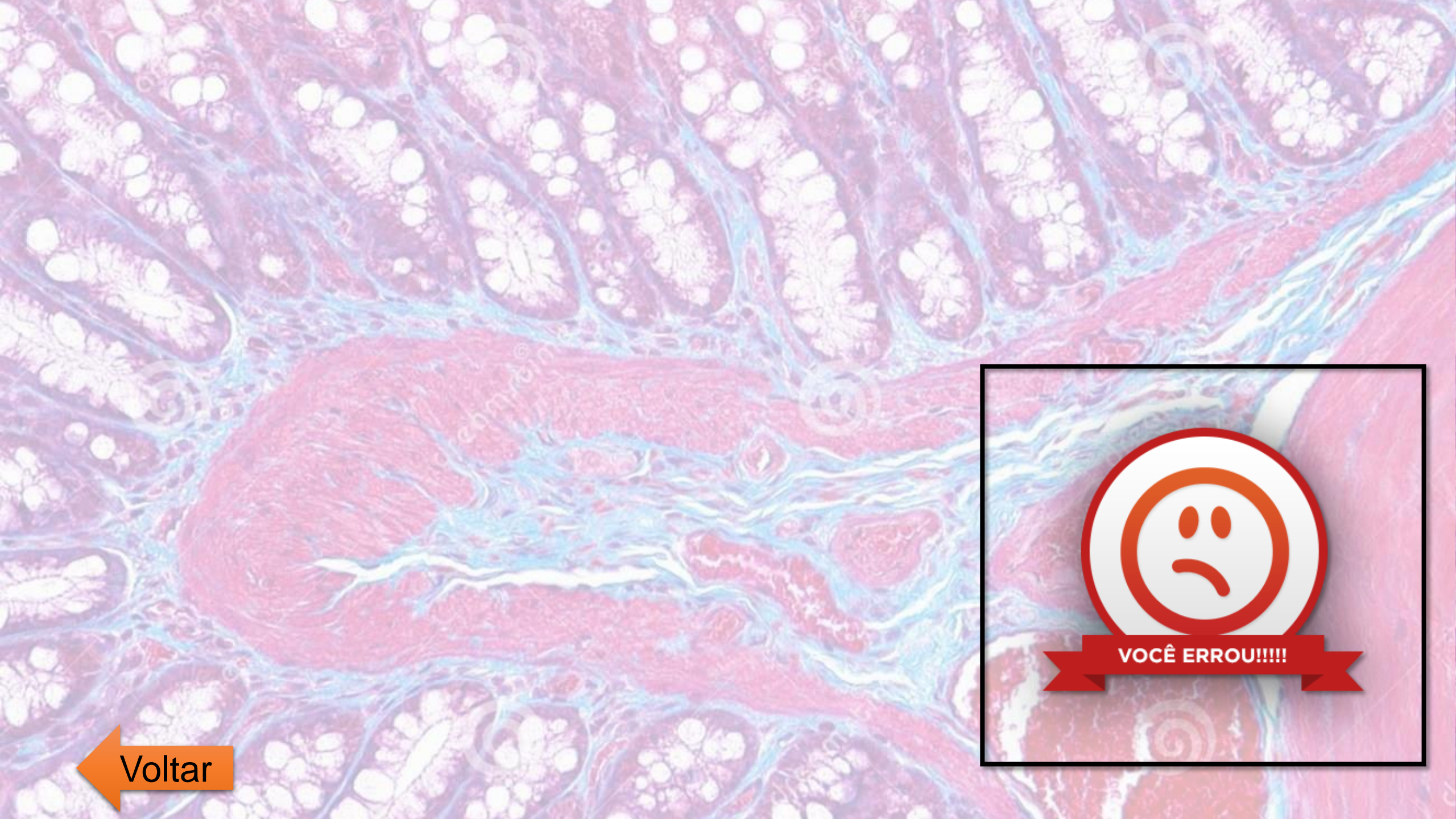


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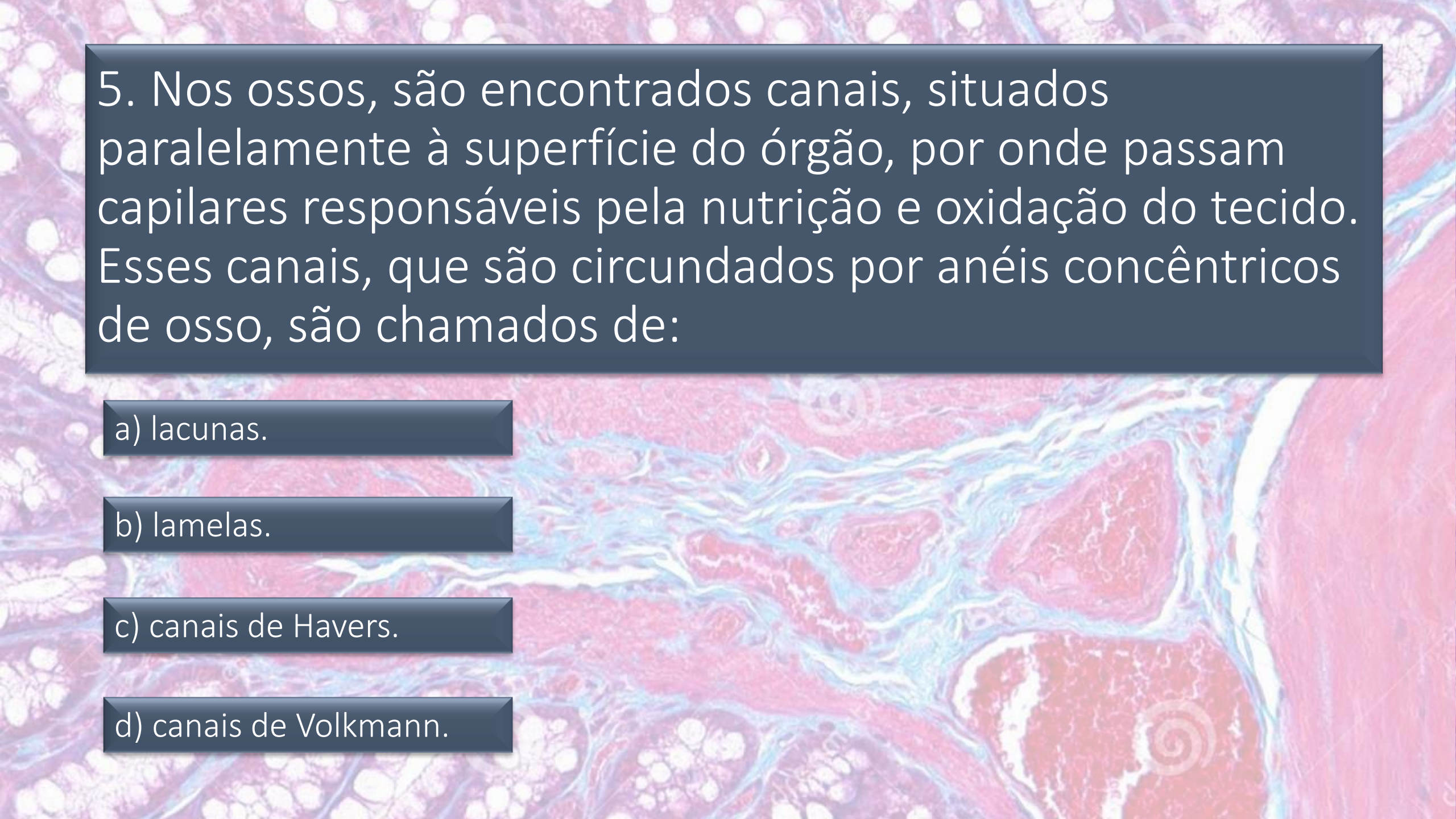
Alternativa “c”. Na ossificação endocondral, o osso será formado a partir de um molde de cartilagem hialina. Esse processo inicia-se normalmente após o final dos primeiros três meses de gravidez.



Avançar



 Voltar

A histological section of bone tissue stained with hematoxylin and eosin (H&E). The image shows several osteons, which are the basic structural units of bone. Each osteon is a circular or polygonal structure composed of concentric layers of bone tissue called lamellae. In the center of each osteon is a central canal (canal of Havers), which contains blood vessels and nerves. Between the osteons are smaller spaces called interstitial canals (canals of Volkmann). The overall structure is highly organized and shows the characteristic concentric arrangement of lamellae around the central canals.

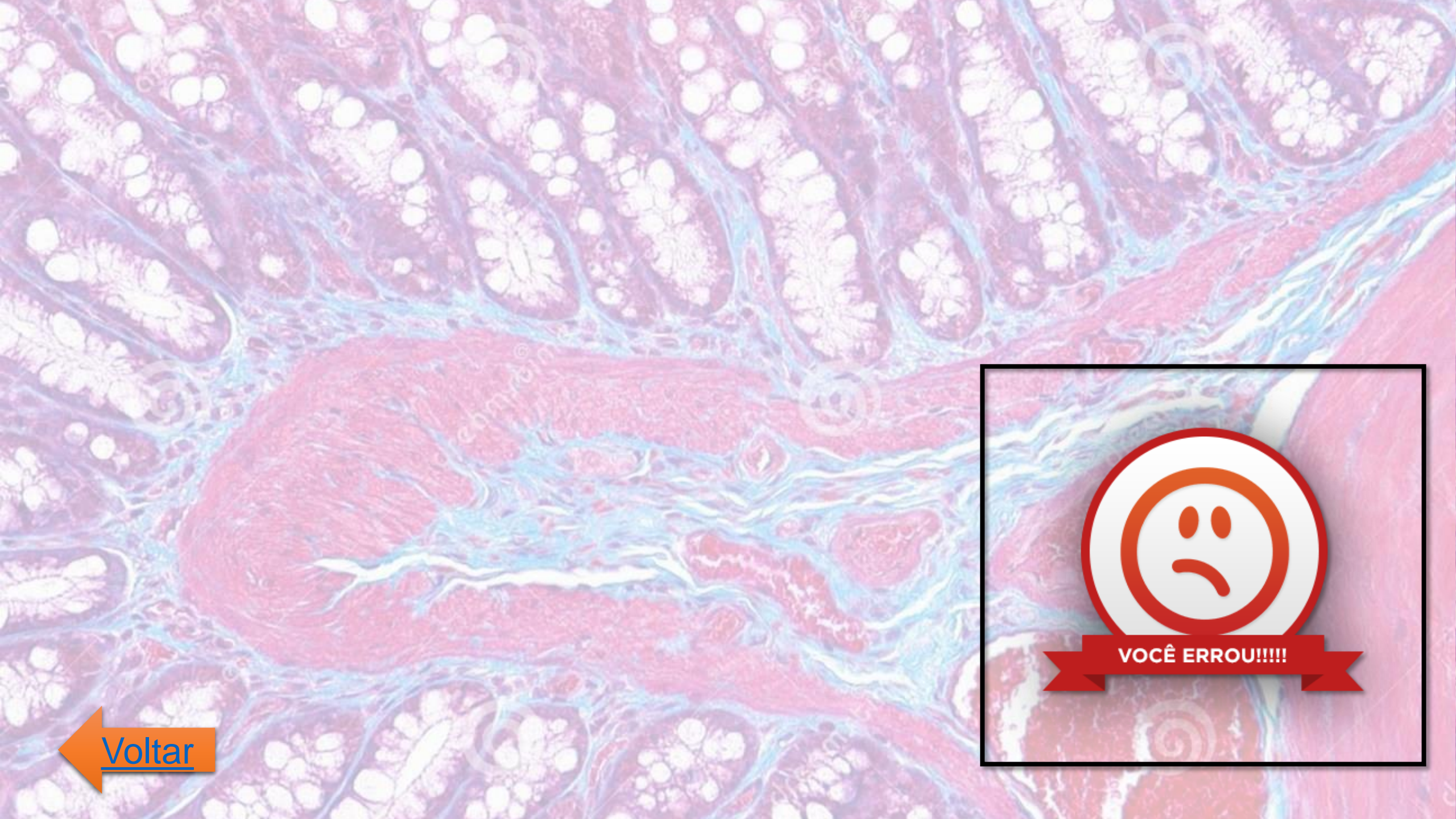
5. Nos ossos, são encontrados canais, situados paralelamente à superfície do órgão, por onde passam capilares responsáveis pela nutrição e oxidação do tecido. Esses canais, que são circundados por anéis concêntricos de osso, são chamados de:

a) lacunas.

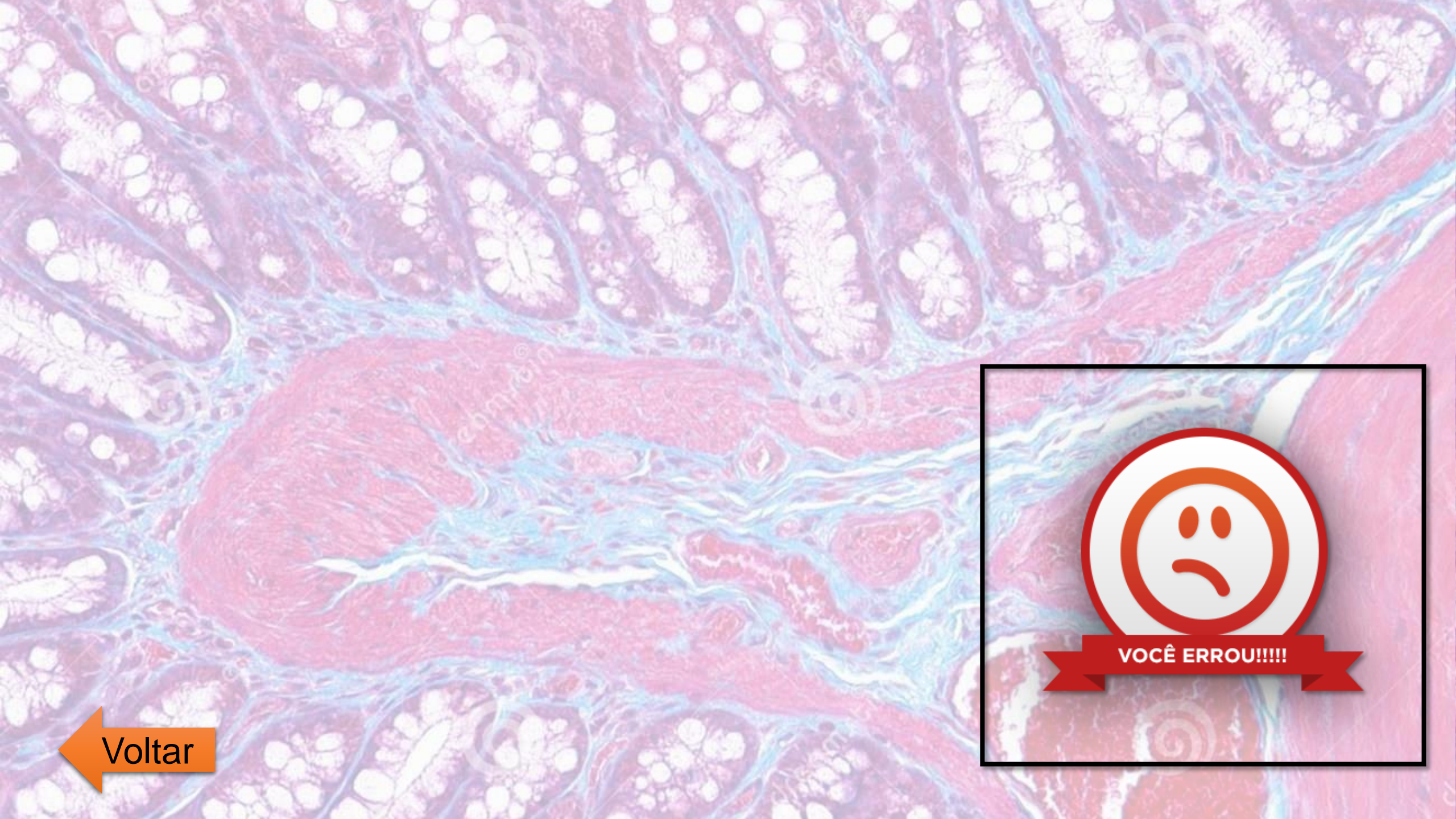
b) lamelas.

c) canais de Havers.

d) canais de Volkmann.



 [Voltar](#)

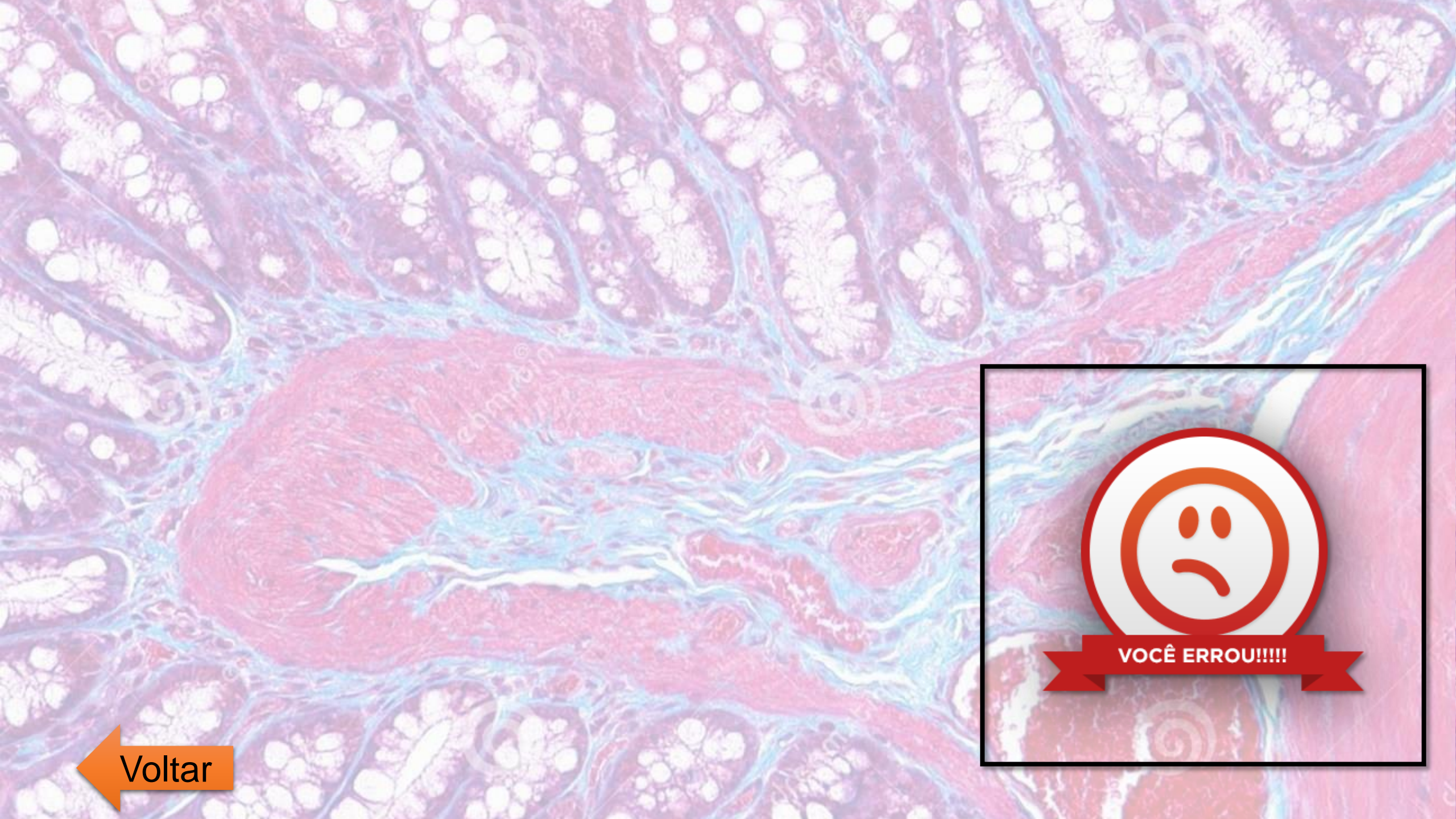


 Voltar

Alternativa “c”. Os canais de Havers são pequenos canais por onde passam vasos sanguíneos que trazem oxigênio e nutrientes para as células do tecido ósseo. Além disso, é através desses vasos que são eliminados os produtos do catabolismo.



Avançar



 Voltar

6. O tecido ósseo, apesar do que muitos pensam, é também um tecido vivo. Ele é composto por diferentes tipos celulares e uma matriz mineralizada. A respeito desse tecido, marque a alternativa incorreta:

a) Nutrientes e gases difundem-se pela matriz óssea.

b) Células especiais do tecido ósseo são responsáveis pela produção de matriz óssea.

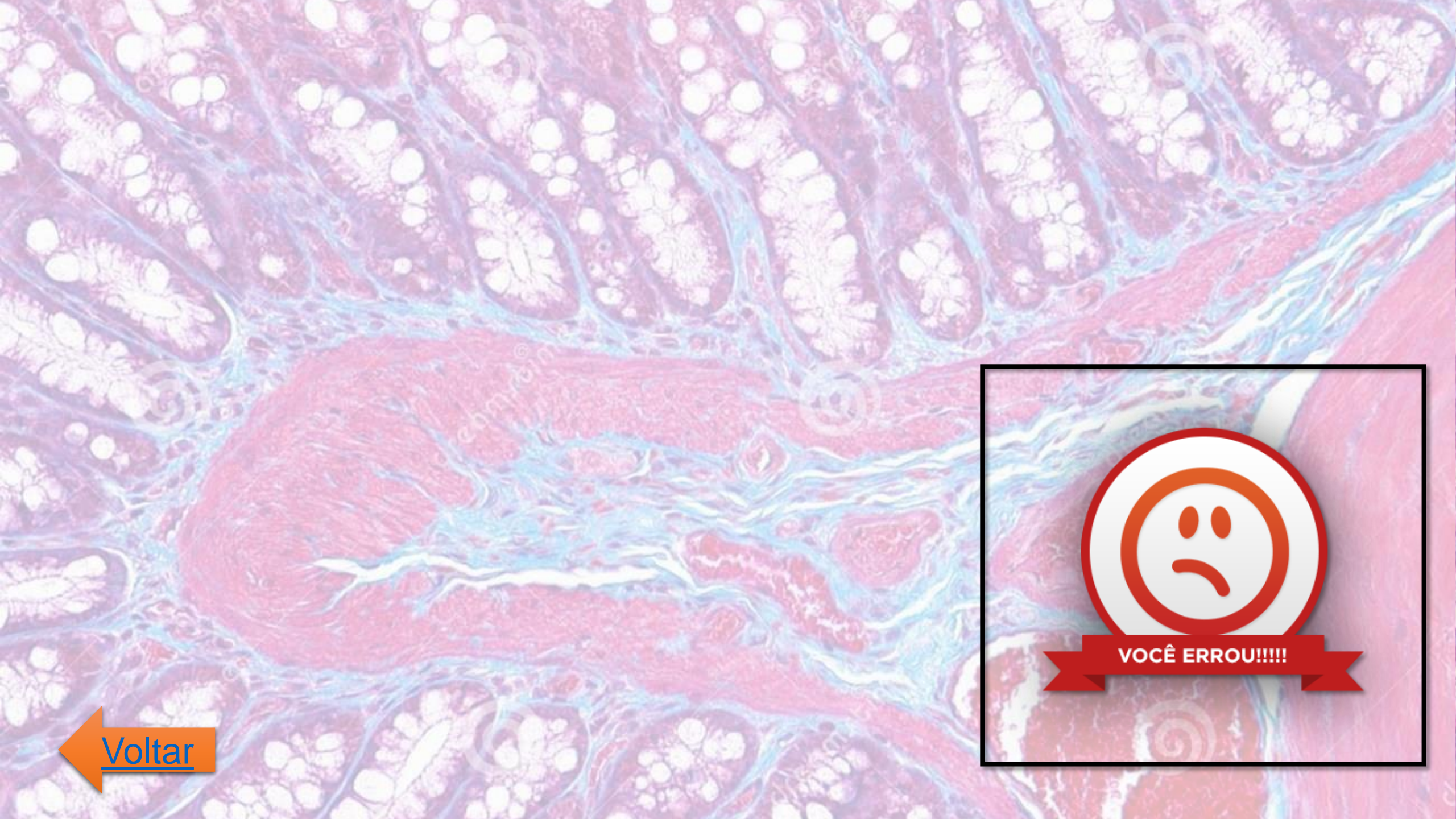
c) Algumas células do tecido ósseo são capazes de destruir a matriz e reabsorvê-la.

d) O tecido ósseo é responsável por fornecer sustentação e proteção, além de auxiliar na movimentação do corpo.

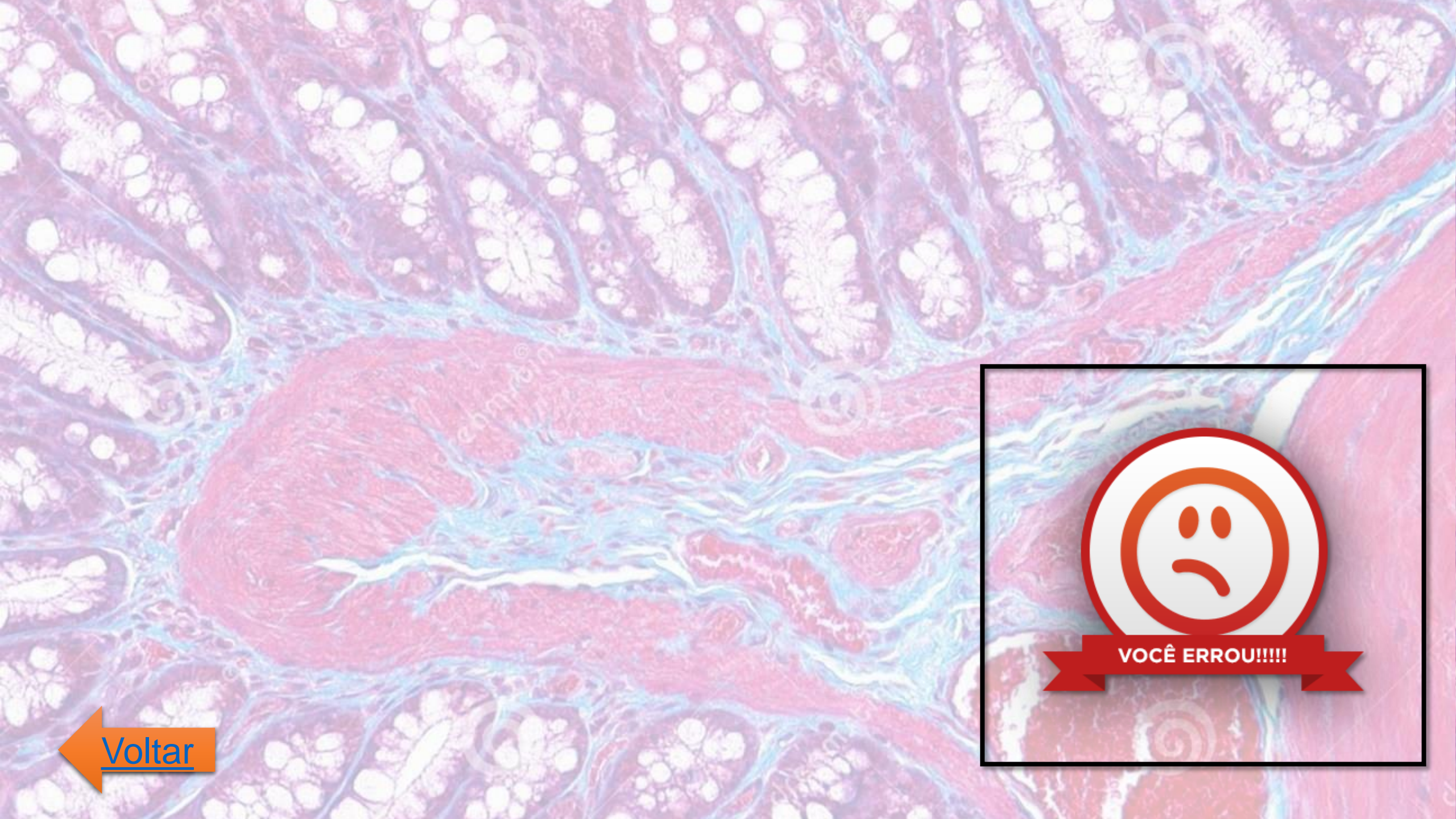
e) Vasos sanguíneos são encontrados nas cavidades dos ossos.

Alternativa “a”. Nutrientes e gases não são capazes de difundir-se pela matriz, sendo necessária, portanto, a participação de vasos sanguíneos para garantir esse processo.

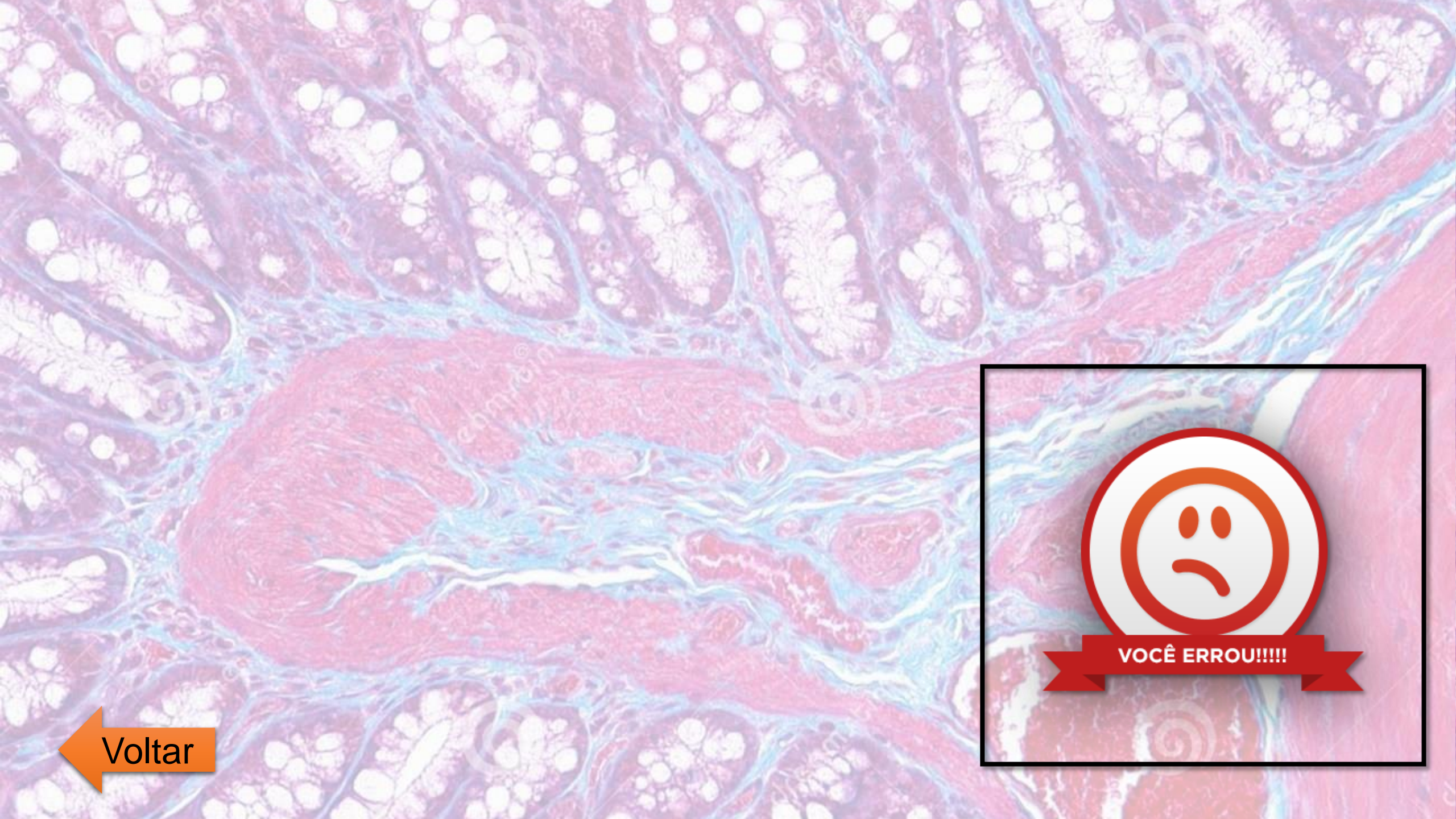




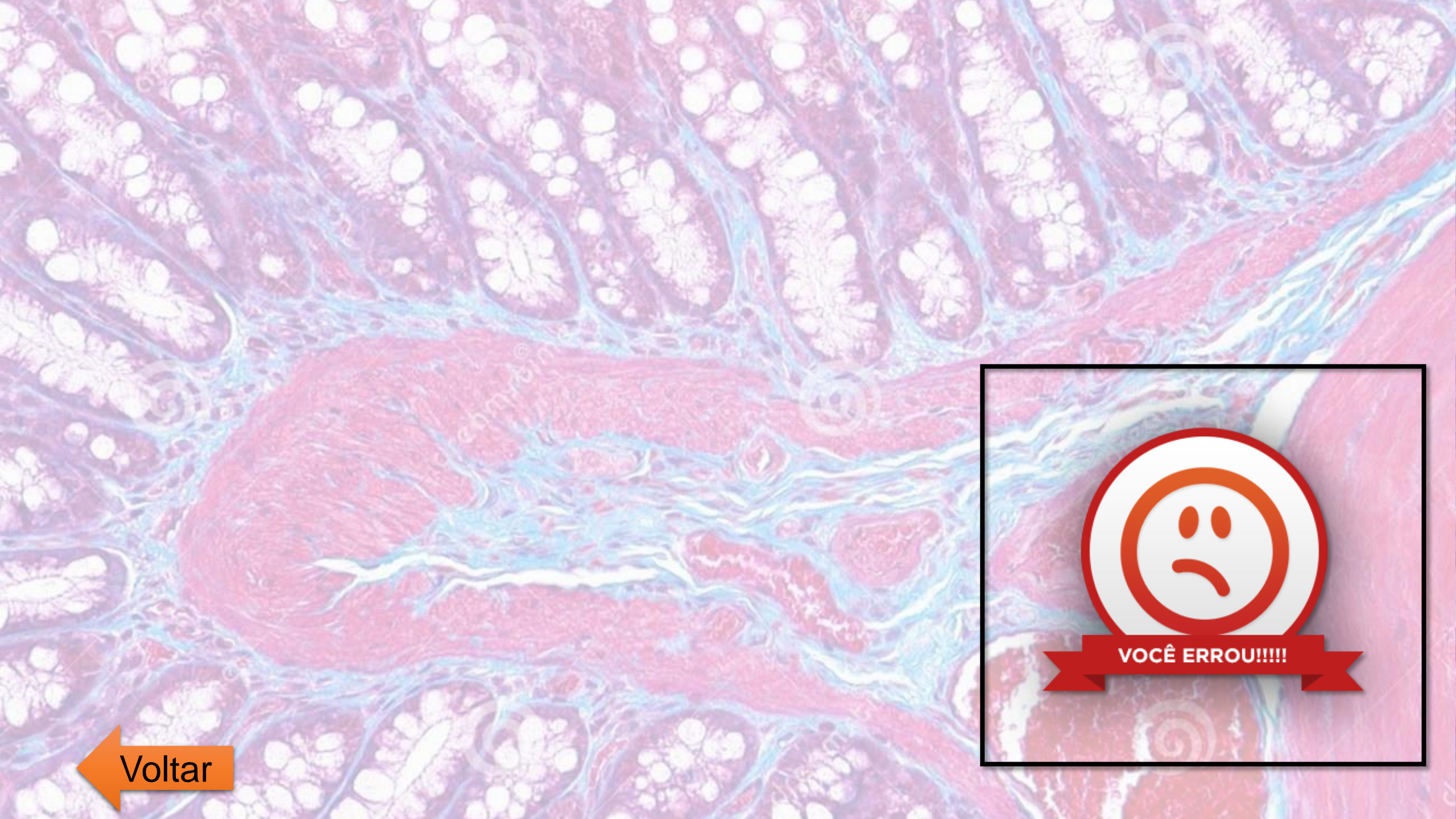
 [Voltar](#)



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 Voltar



 Voltar

7. Sabemos que o tecido ósseo apresenta diferentes tipos celulares que desempenham variadas funções. Dentre elas, podemos destacar os _____, que são responsáveis pela produção da matriz óssea.

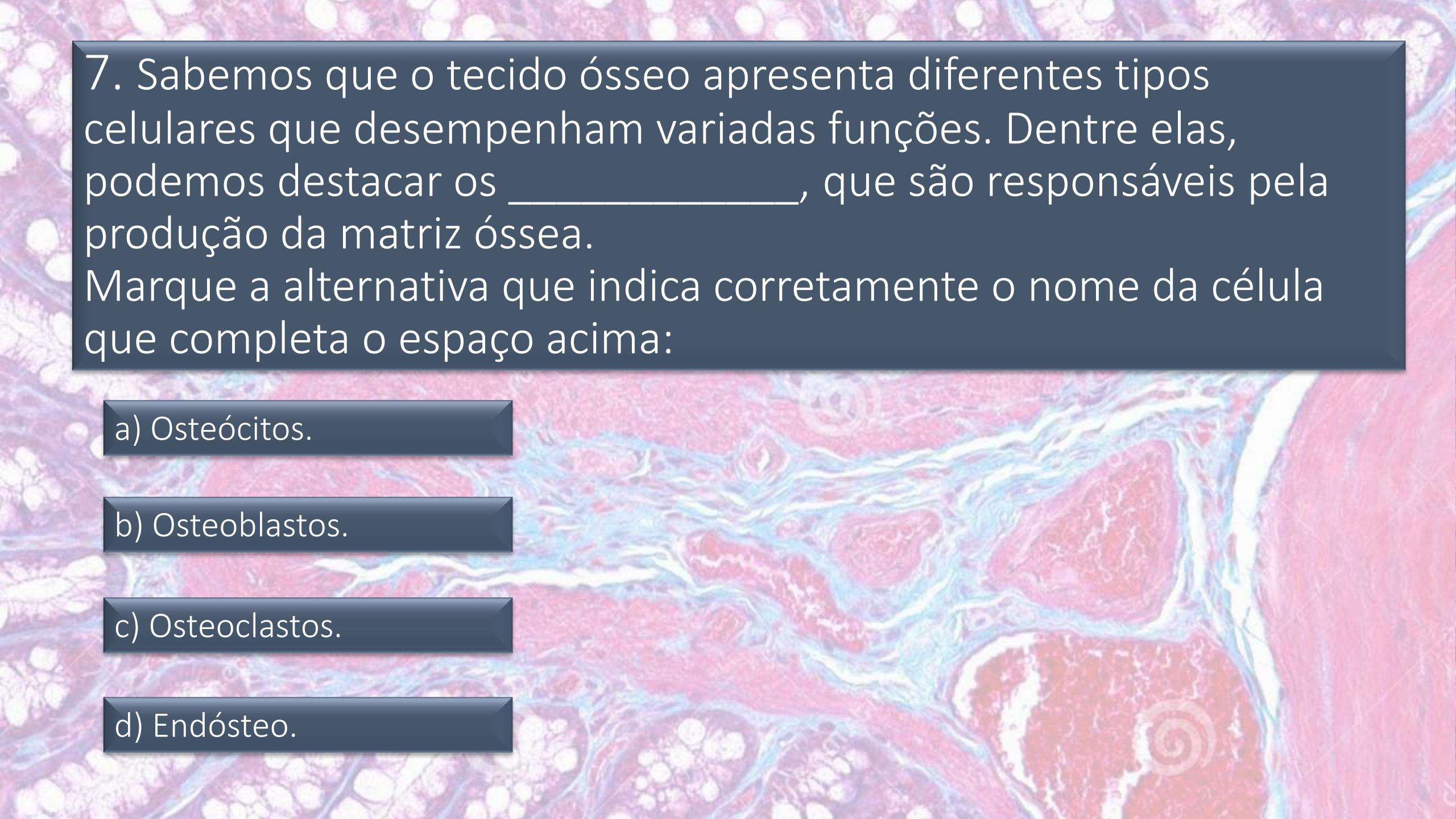
Marque a alternativa que indica corretamente o nome da célula que completa o espaço acima:

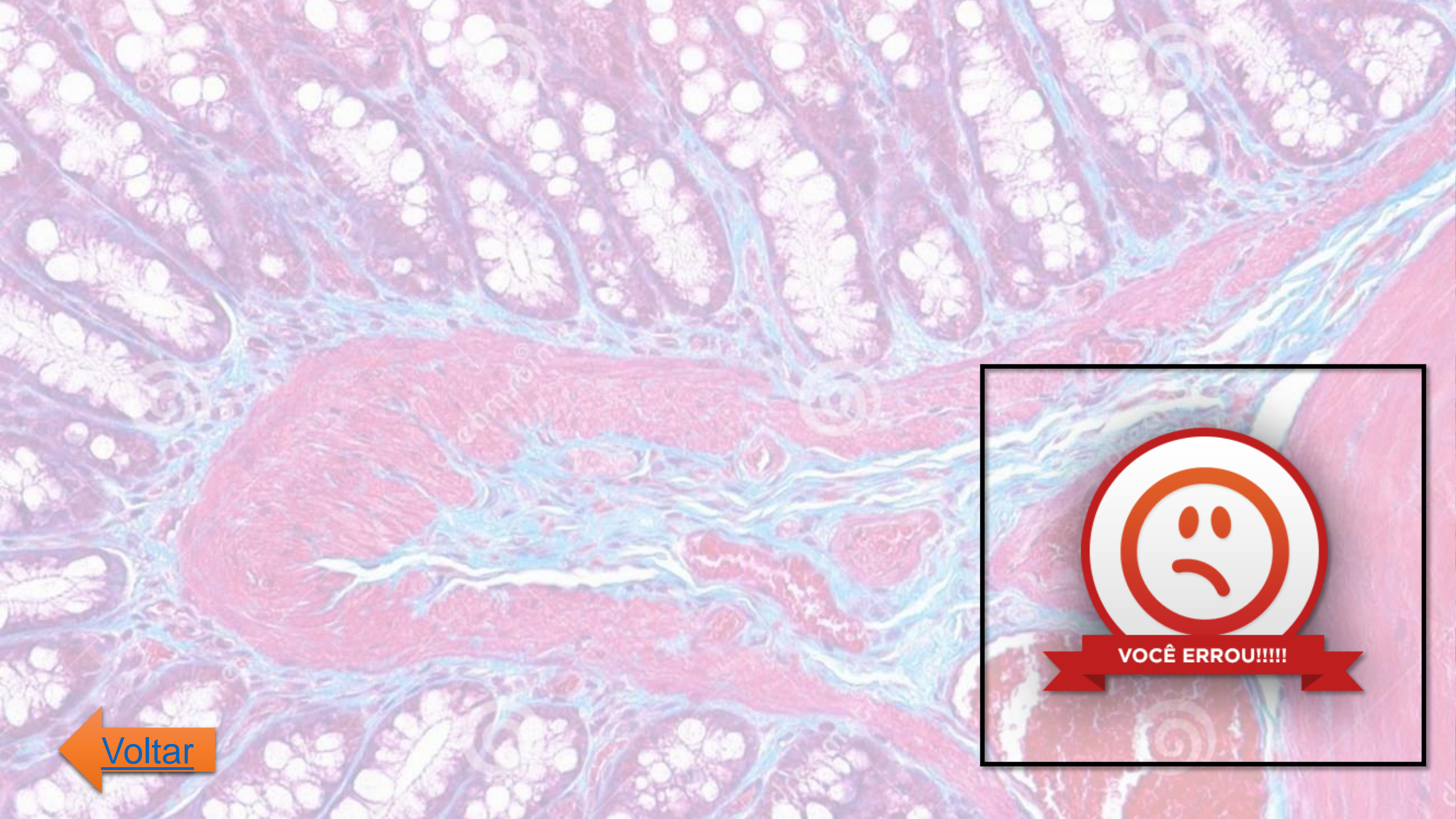
a) Osteócitos.

b) Osteoblastos.

c) Osteoclastos.

d) Endóstio.



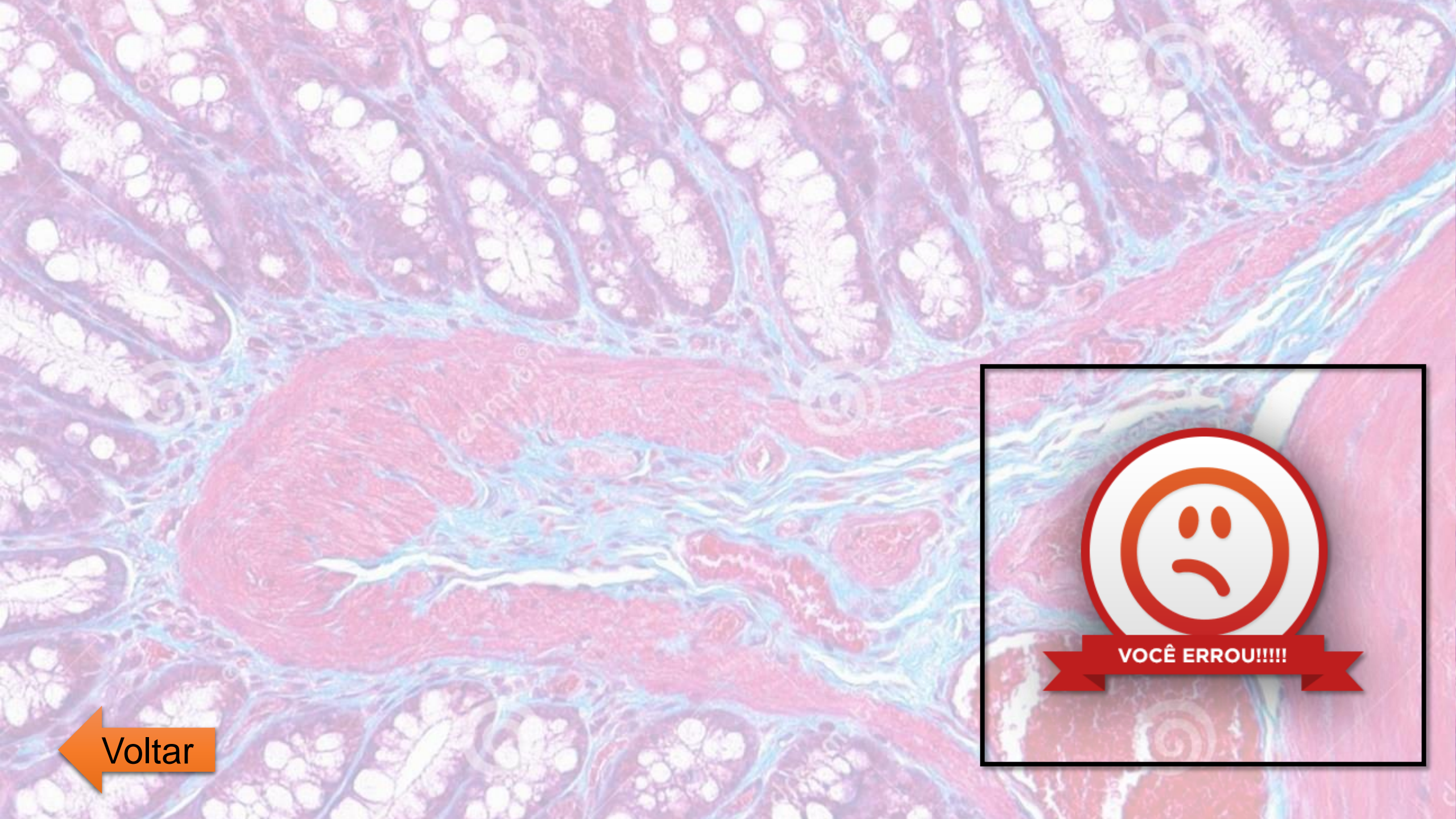


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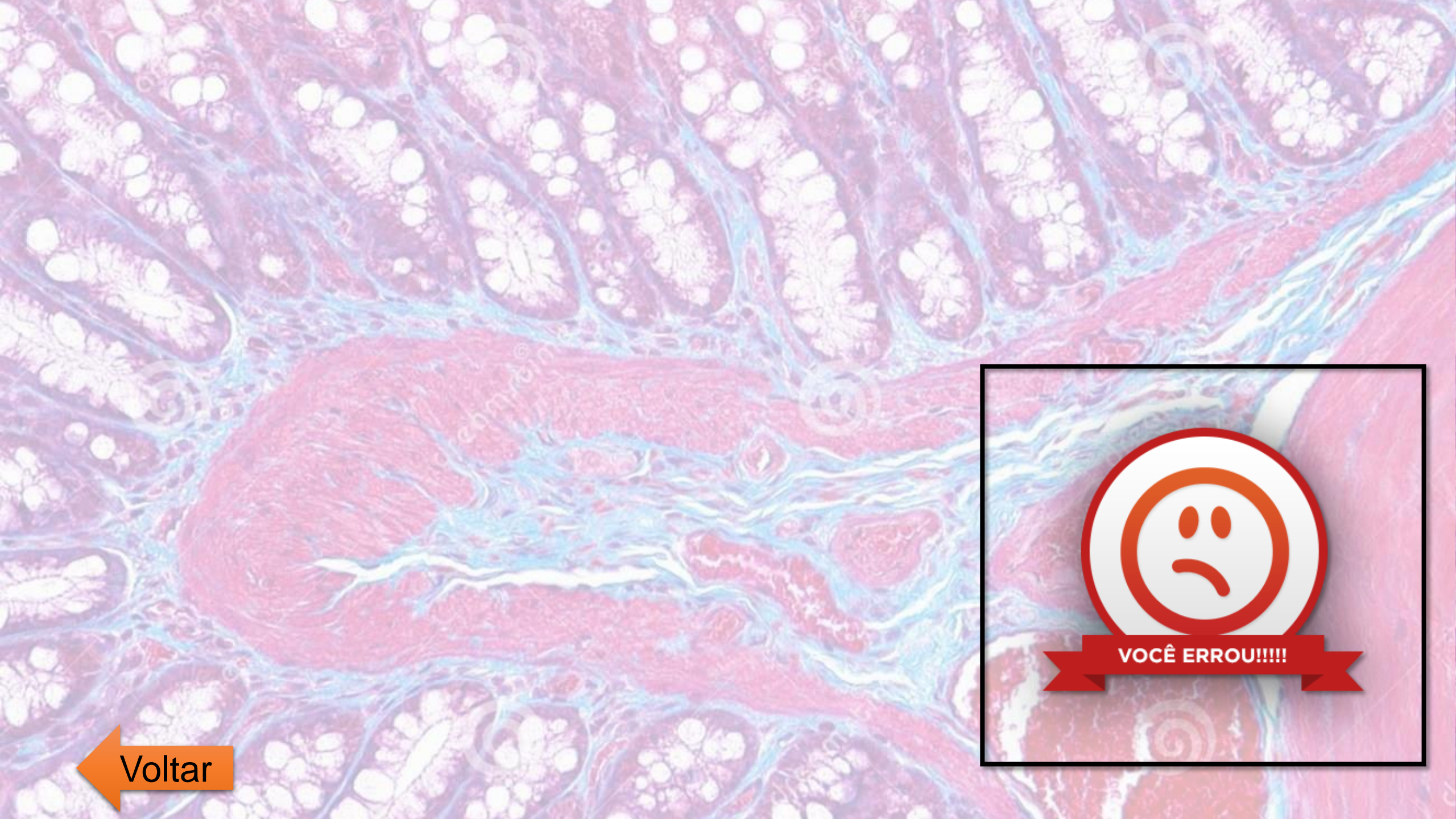
Alternativa “b”. Os osteoblastos são responsáveis pela deposição da matriz, que ocorre ao redor da própria célula.



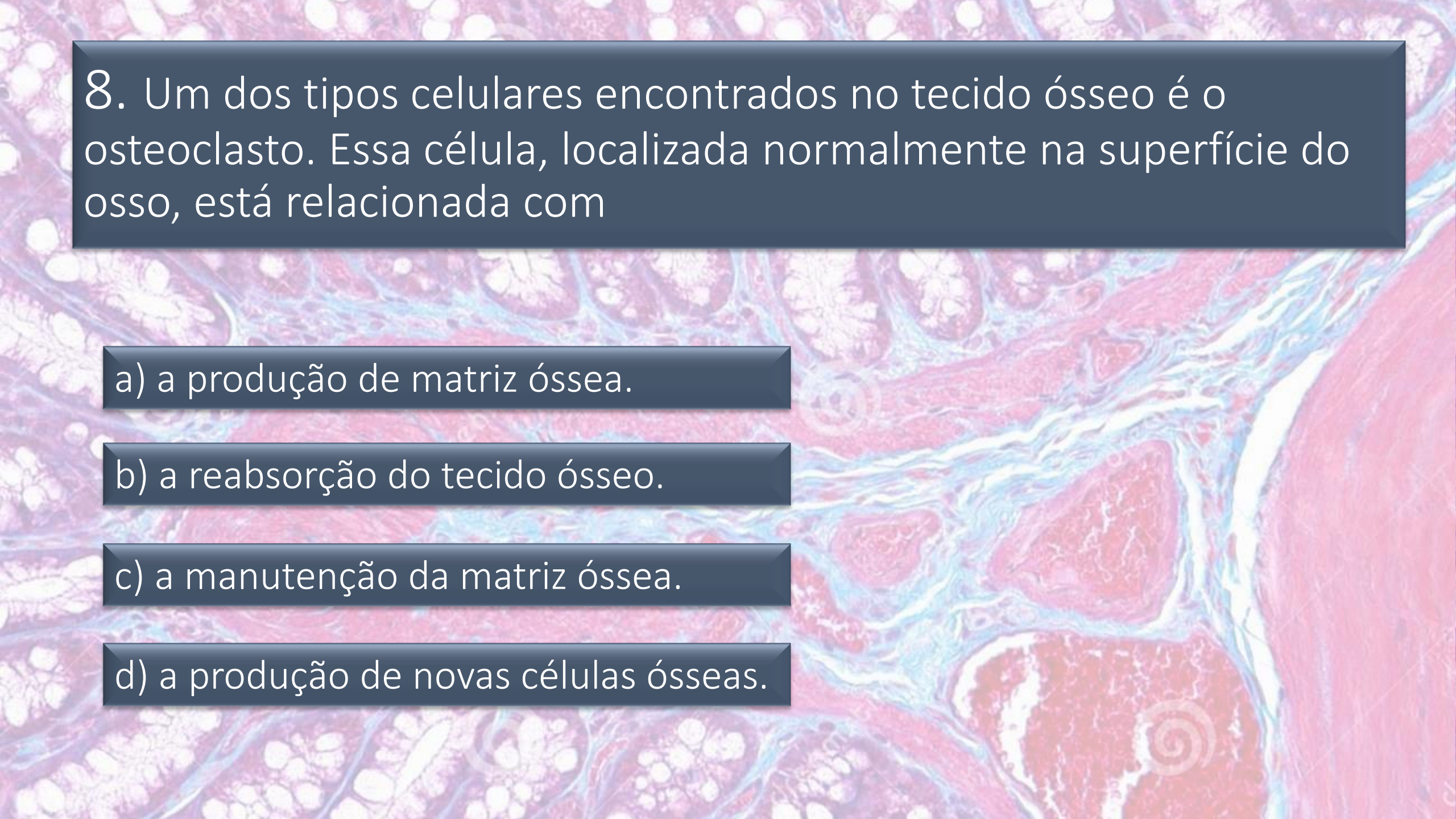
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 Voltar



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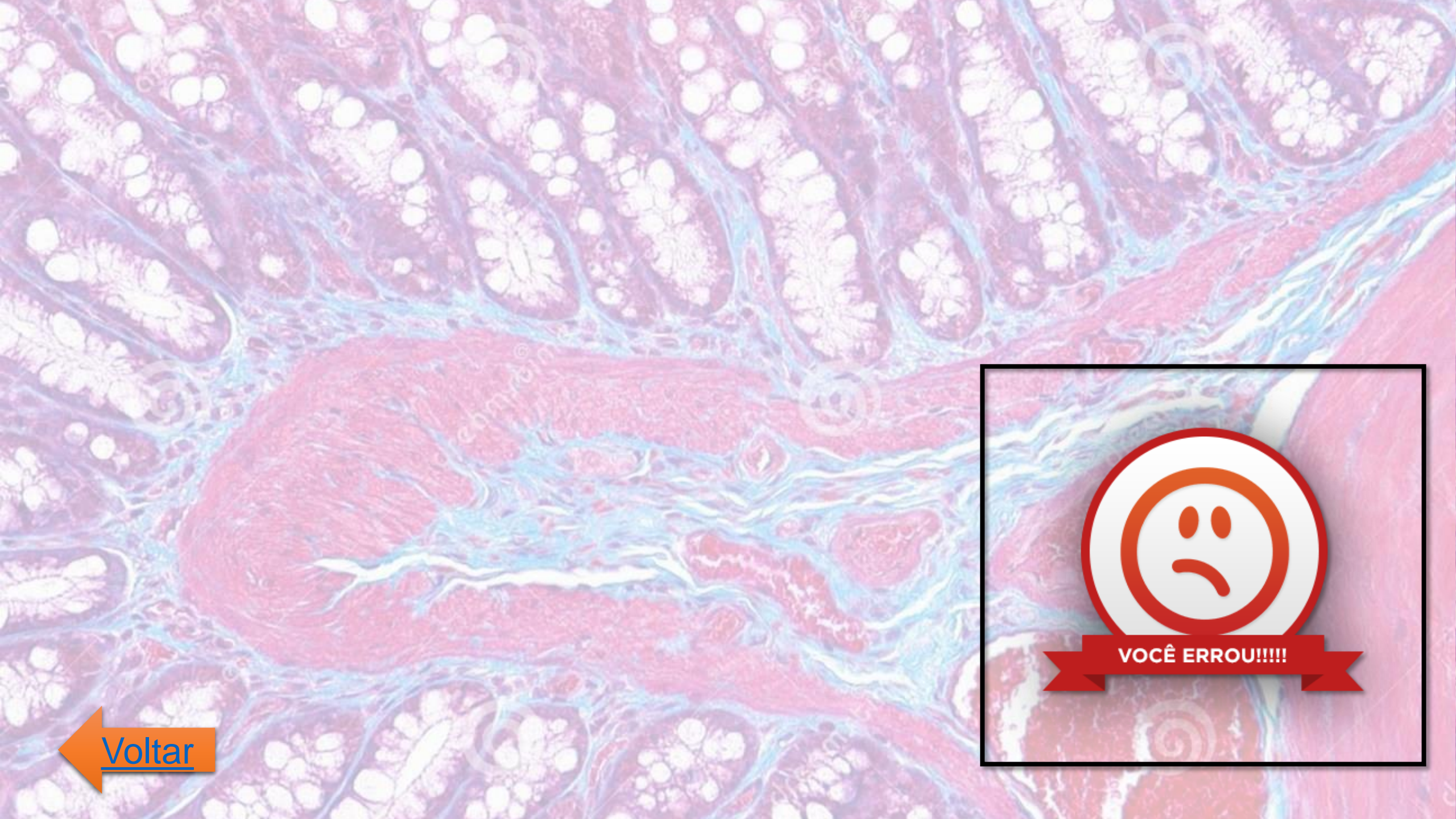
8. Um dos tipos celulares encontrados no tecido ósseo é o osteoclasto. Essa célula, localizada normalmente na superfície do osso, está relacionada com

a) a produção de matriz óssea.

b) a reabsorção do tecido ósseo.

c) a manutenção da matriz óssea.

d) a produção de novas células ósseas.

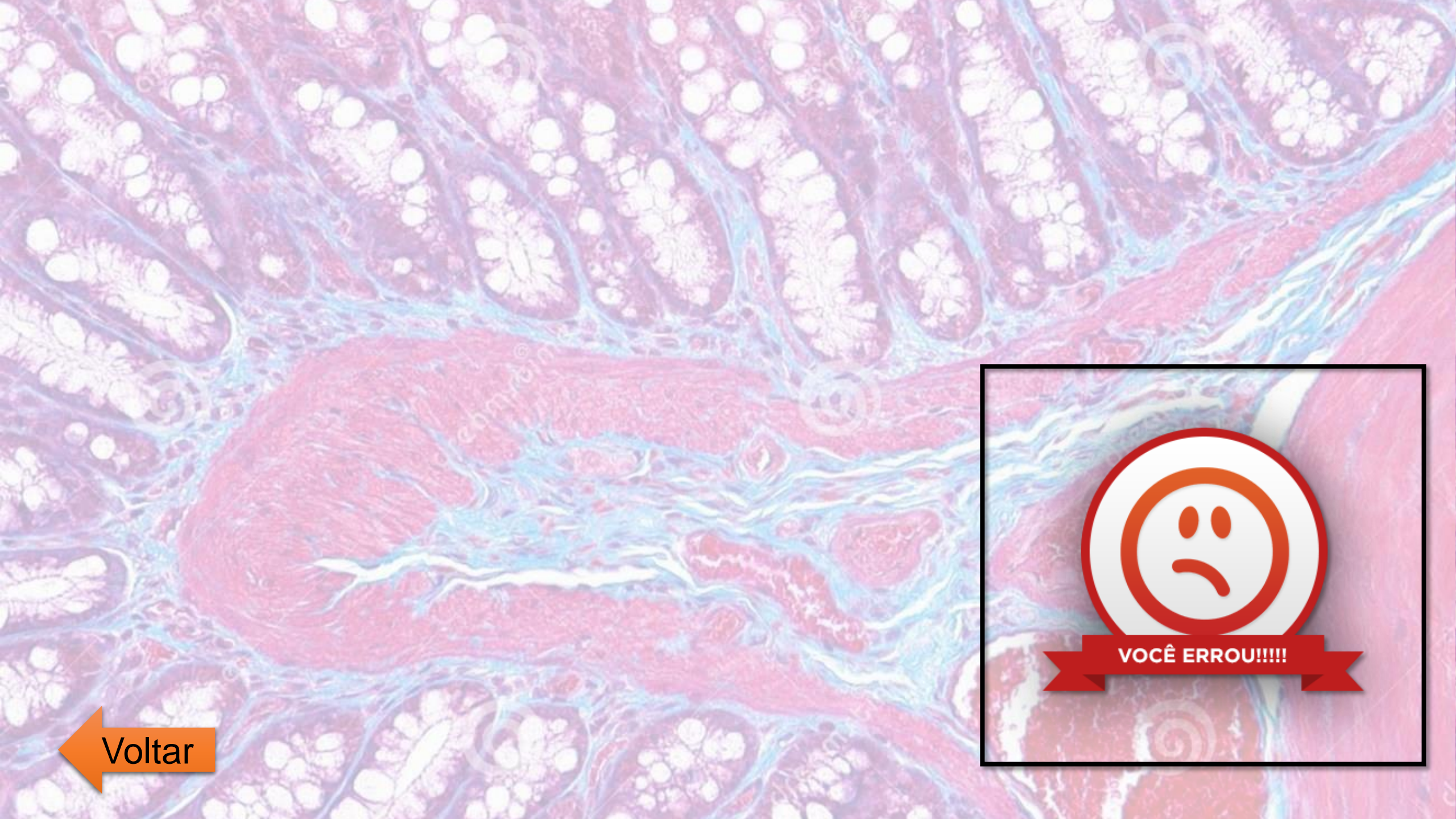


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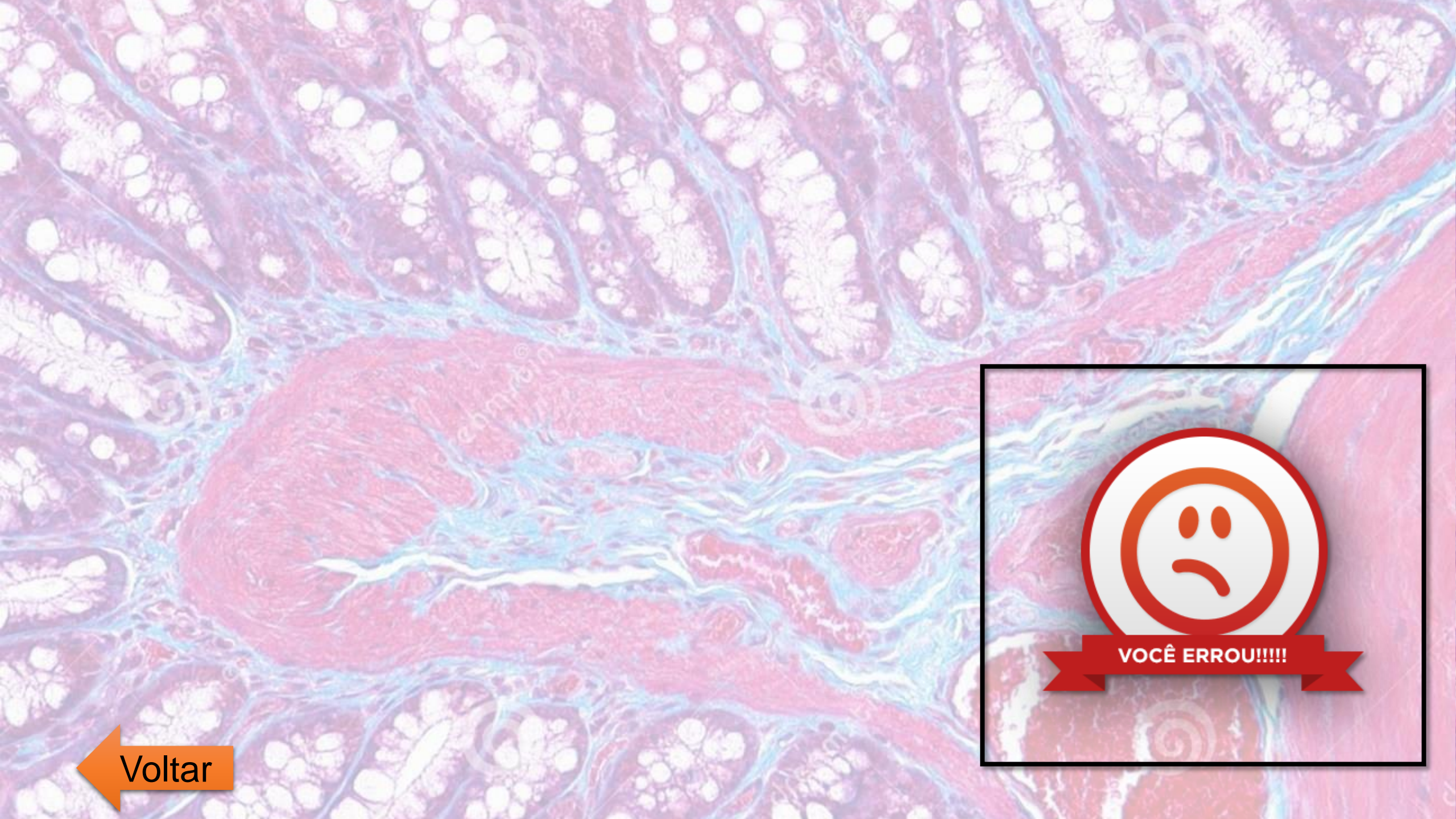
Alternativa “b”. Os osteoclastos estão relacionados com a destruição da matriz óssea e a reabsorção do tecido.



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 Voltar



 Voltar

9. Indique a alternativa que se refere corretamente ao tecido ósseo:

a) Tecido conjuntivo com matriz calcificada composta por fibras orgânicas e sais inorgânicos; vascularizado.

b) Tecido de origem mesodérmica, avascular; suas células, os condroblastos, produzem abundante material intercelular.

c) Constituído de células arredondadas, com núcleo e grande parte do citoplasma restritos à periferia das mesmas pelo acúmulo de gordura.

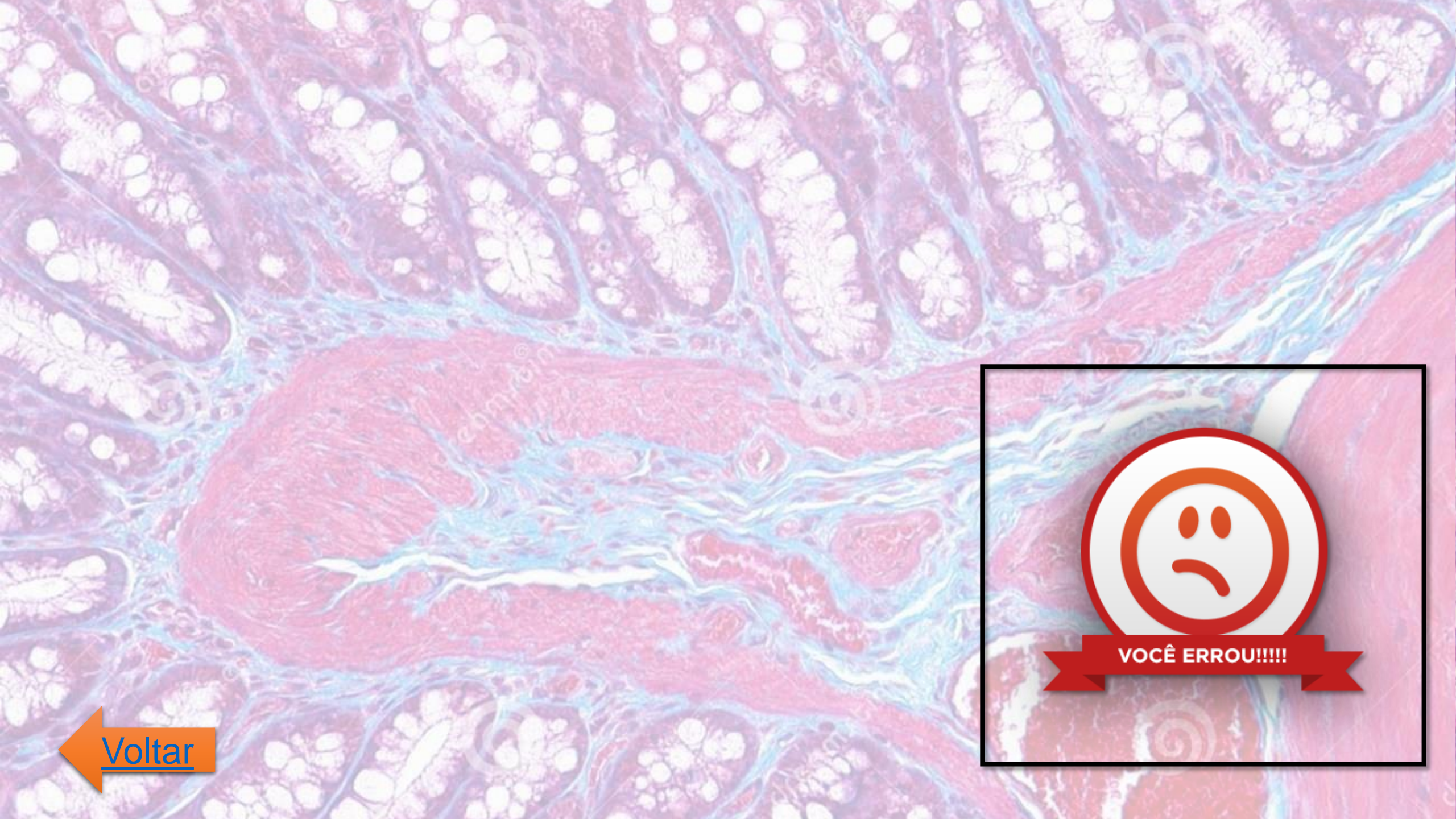
d) Constituído de células alongadas, plurinucleadas, envolvidas por bainha de tecido conjuntivo; tem origem mesodérmica.

e) Pode derivar-se embrionariamente da ectoderme, da mesoderme ou da endoderme e, com algumas exceções, é vascular.

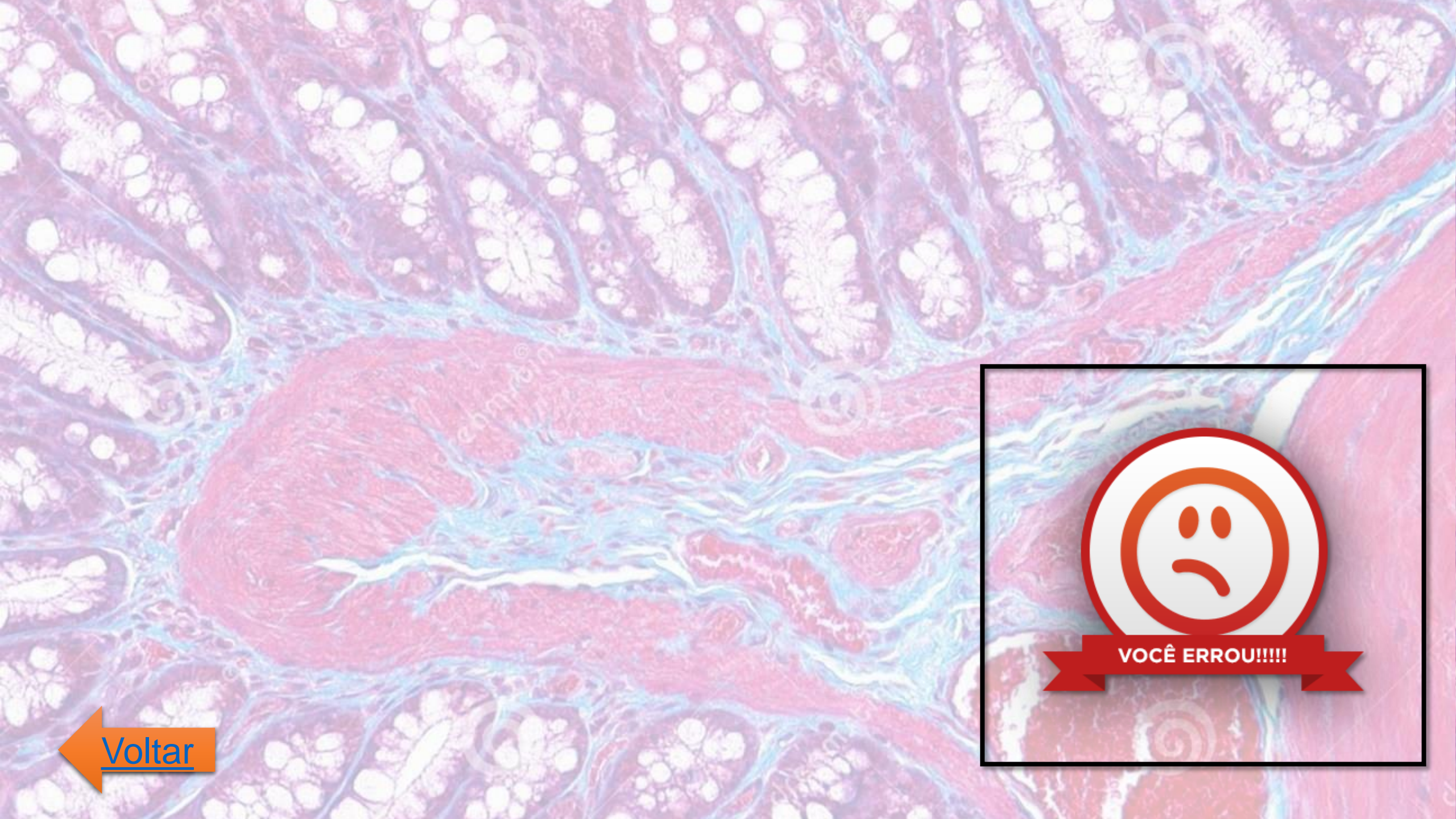
Alternativa "a". O tecido ósseo é um tecido formado por células (osteócitos, osteoclastos e osteoblastos) e matriz mineralizada rica em colágeno. É um tipo de tecido conjuntivo vascularizado.



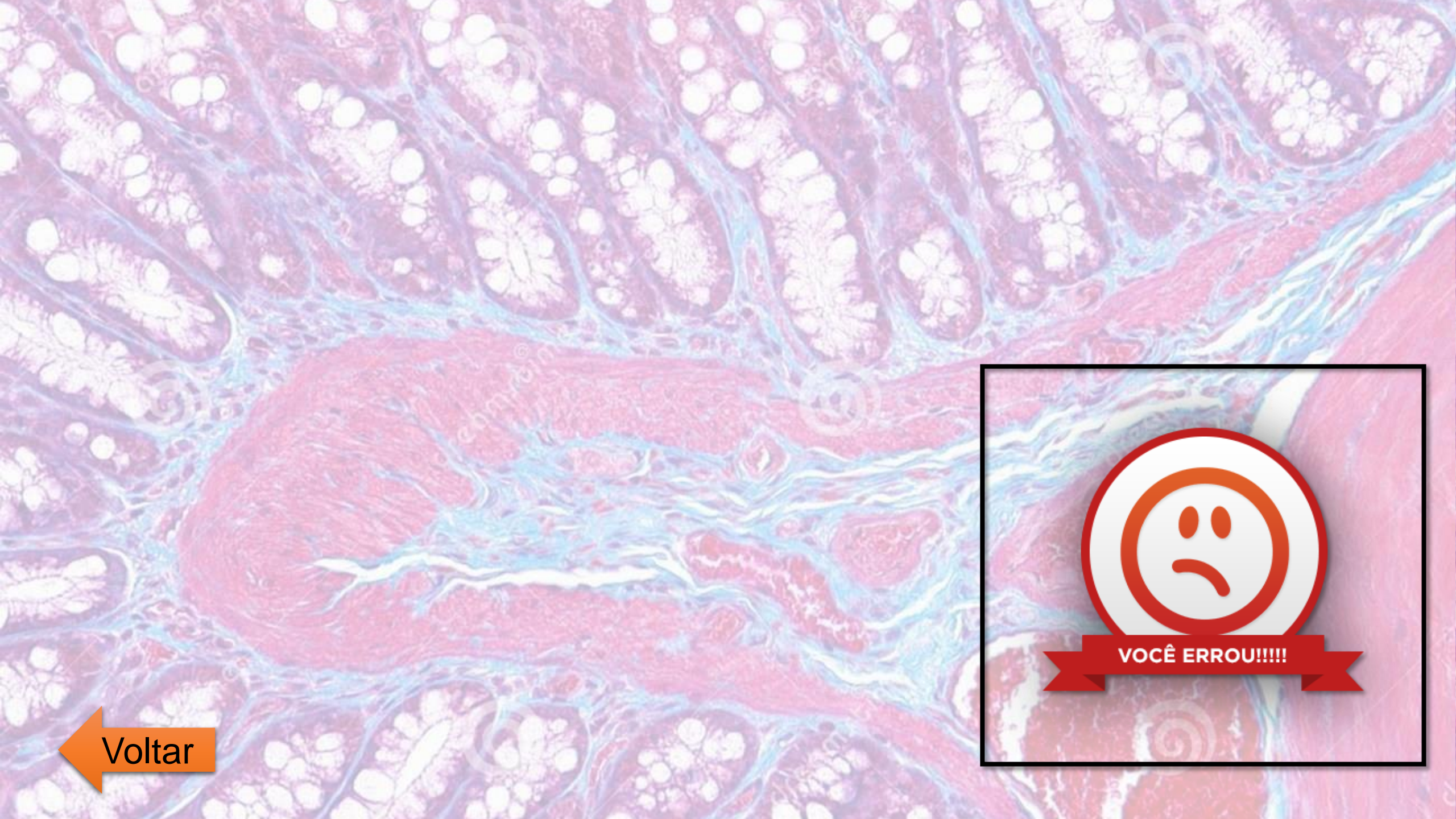
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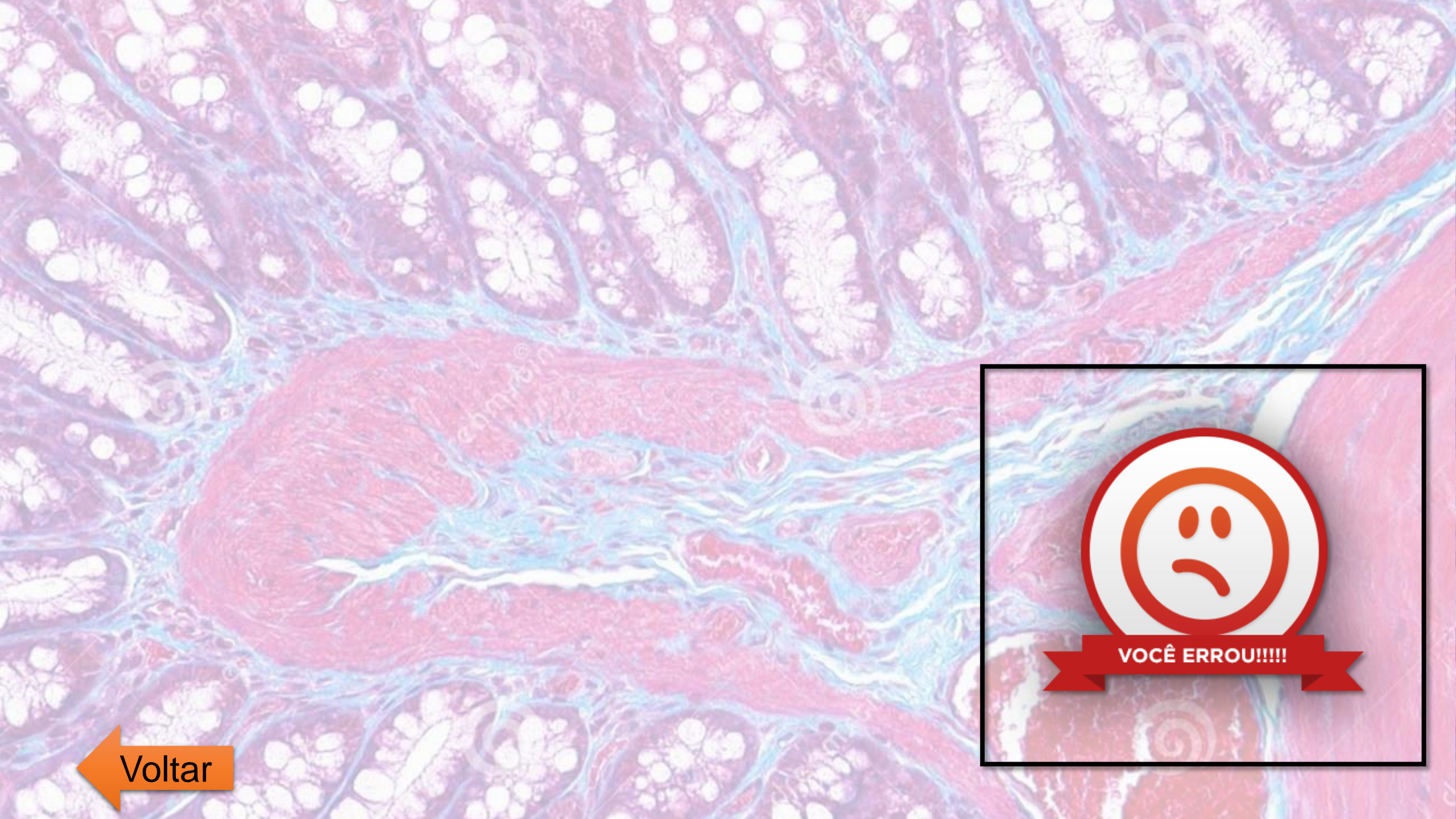
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 Voltar



 Voltar

10. os medicamentos usados no combate à osteoporose tinham como objetivo reduzir a atividade das células responsáveis pela destruição da matriz óssea. Agora há um medicamento que age estimulando a reconstituição óssea. Este novo medicamento tem como função:

a) aumentar o número de osteoblastos, diminuindo a desproporção metabólica entre osteoblastos e osteoclastos.

b) estimular a produção do paratormônio, diminuindo a ação dos osteoblastos.

c) aumentar o metabolismo dos osteoclastos, diminuindo a desmineralização do osso.

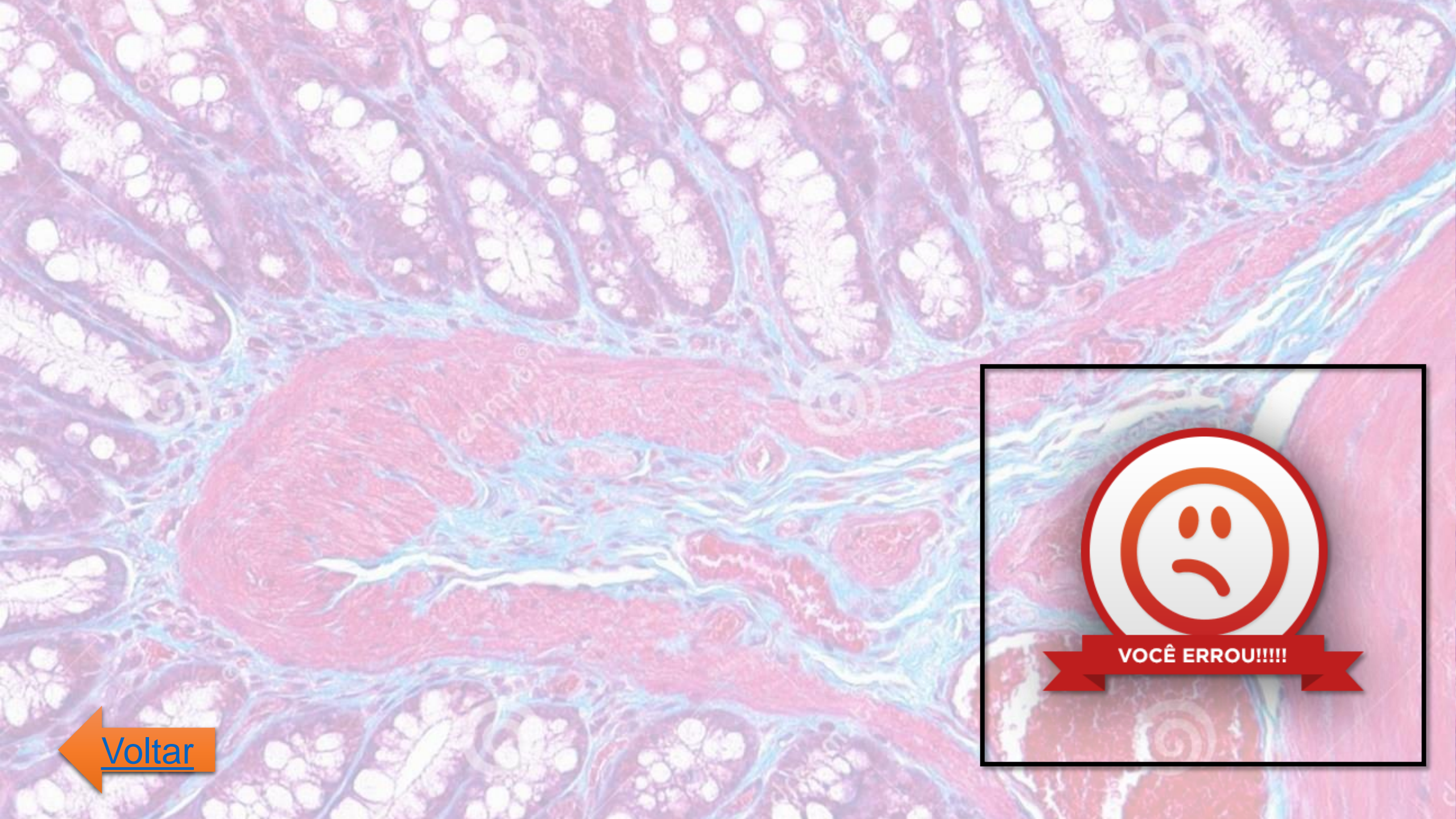
d) inibir a produção de calcitonina, hormônio responsável pela deposição de cálcio na matriz óssea.

e) diminuir o metabolismo dos osteoblastos responsáveis pela destruição da matriz óssea.

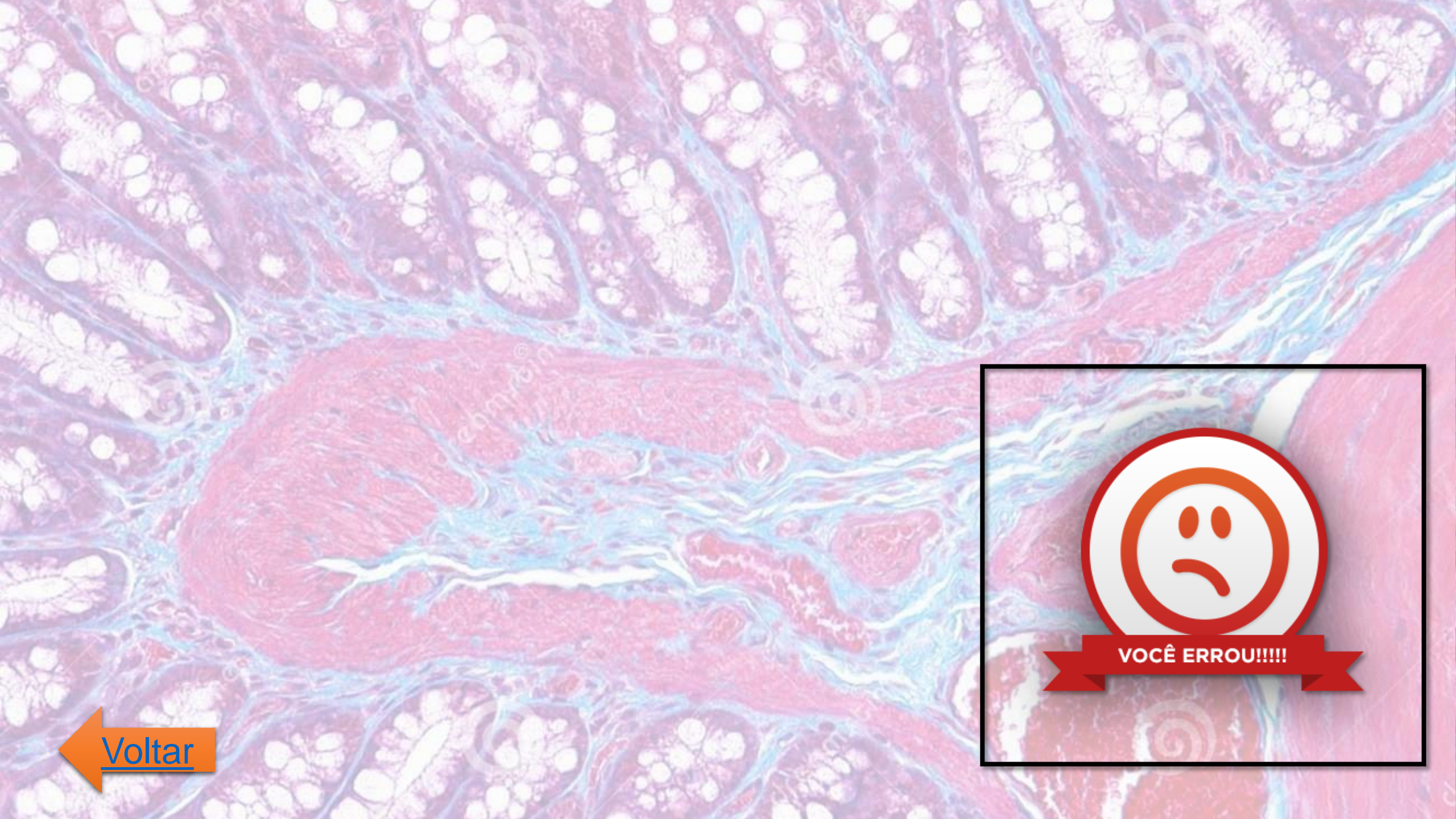
Alternativa “a”. Como os osteoblastos são as células do tecido ósseo responsáveis pela produção da matriz óssea, eles serão estimulados pelo medicamento.



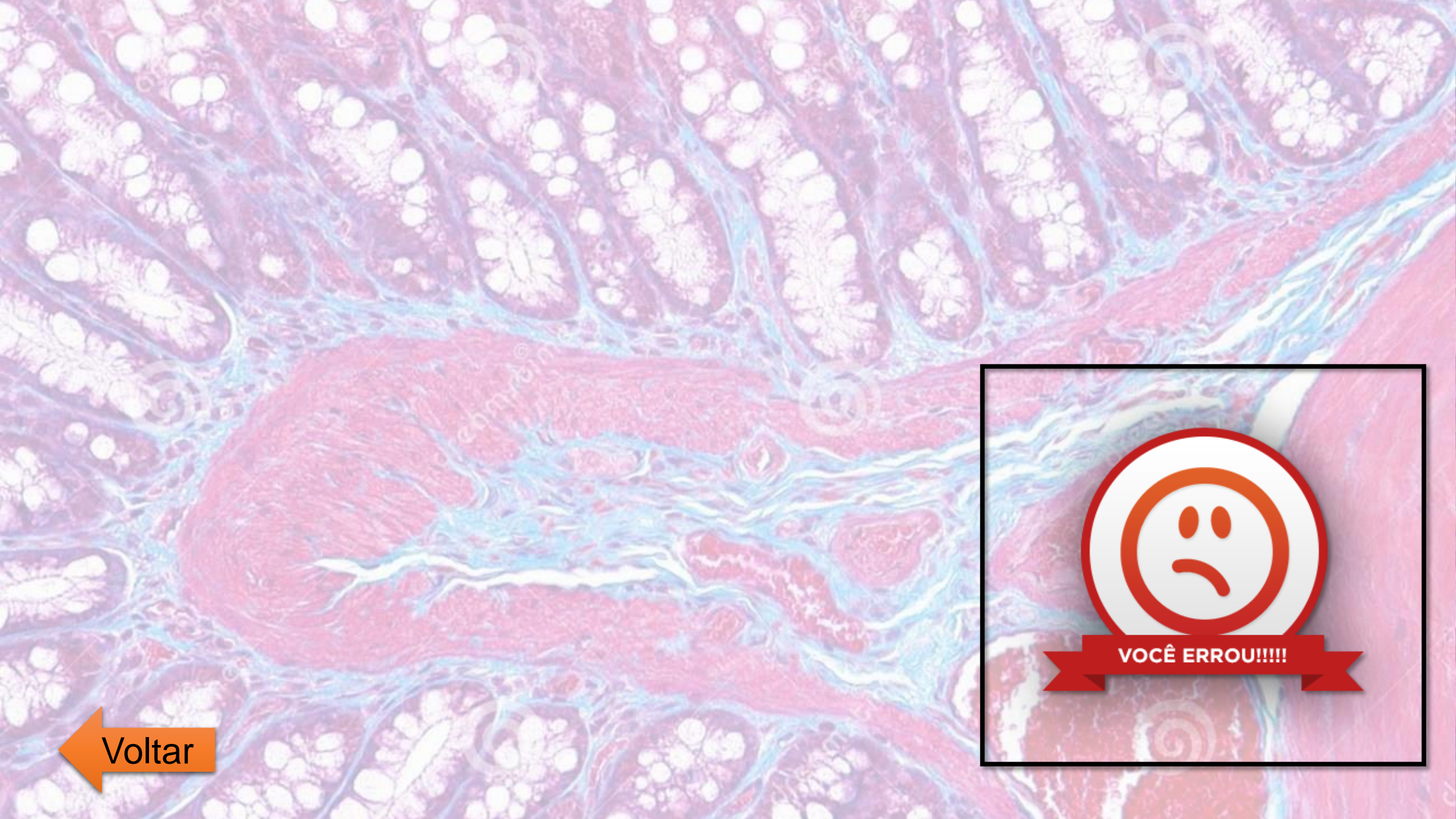
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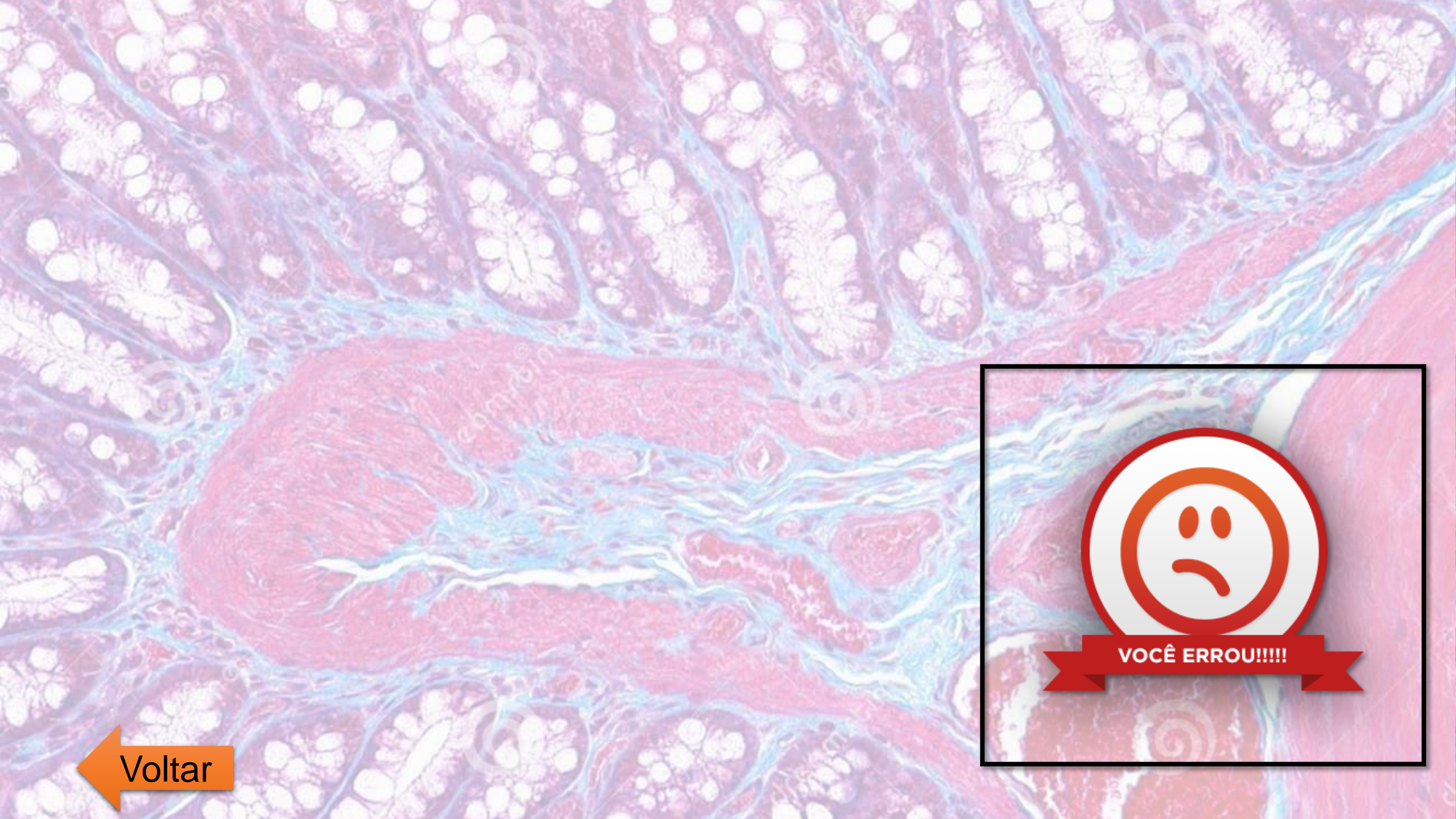
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 Voltar



11. O tecido ósseo é o principal constituinte dos ossos. Em relação a esse tecido, é correto afirmar que:

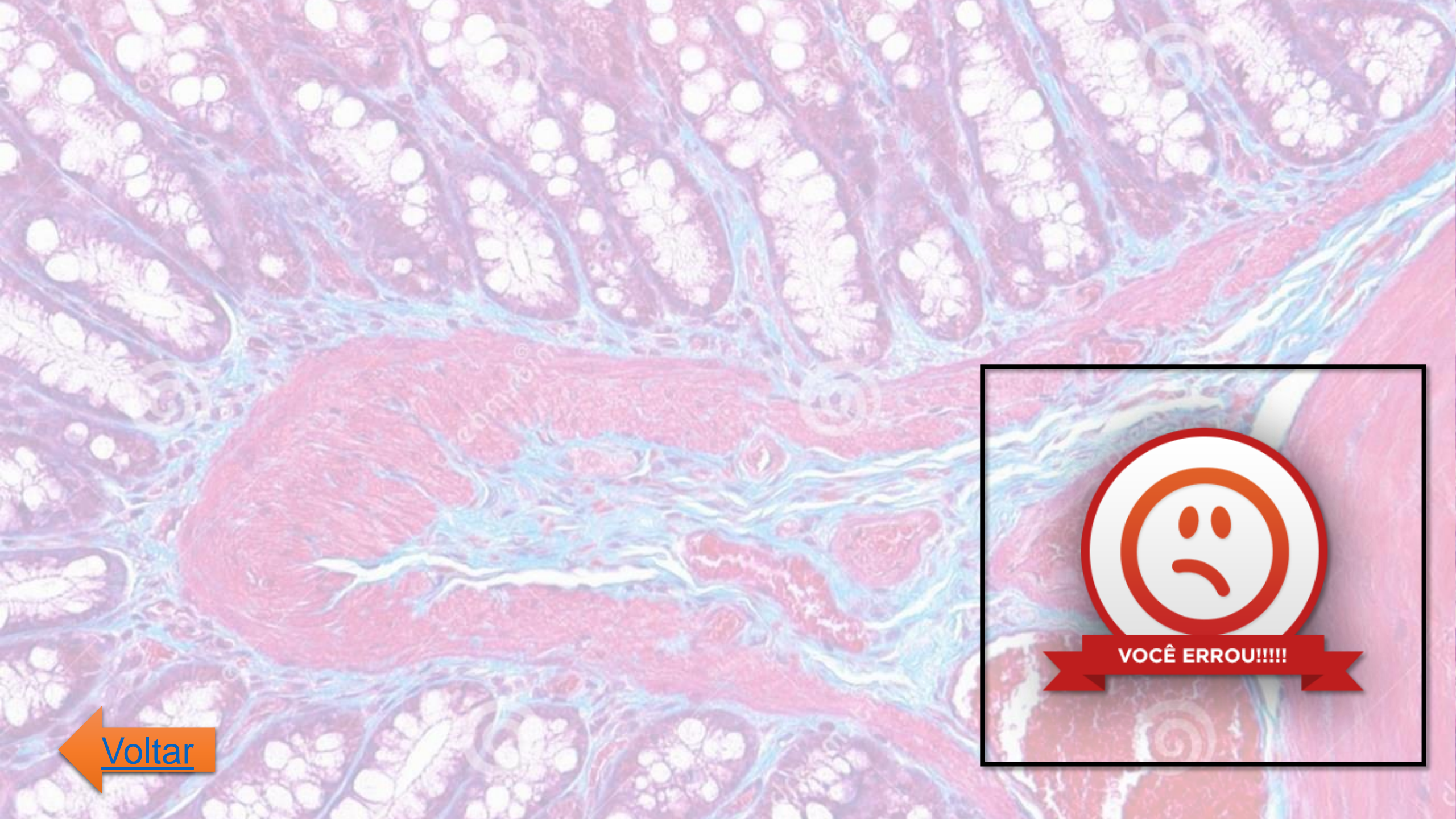
A) os compostos minerais do tecido ósseo são responsáveis por sua flexibilidade.

B) o disco epifisiário é a estrutura a partir da qual ocorre o crescimento dos ossos longos.

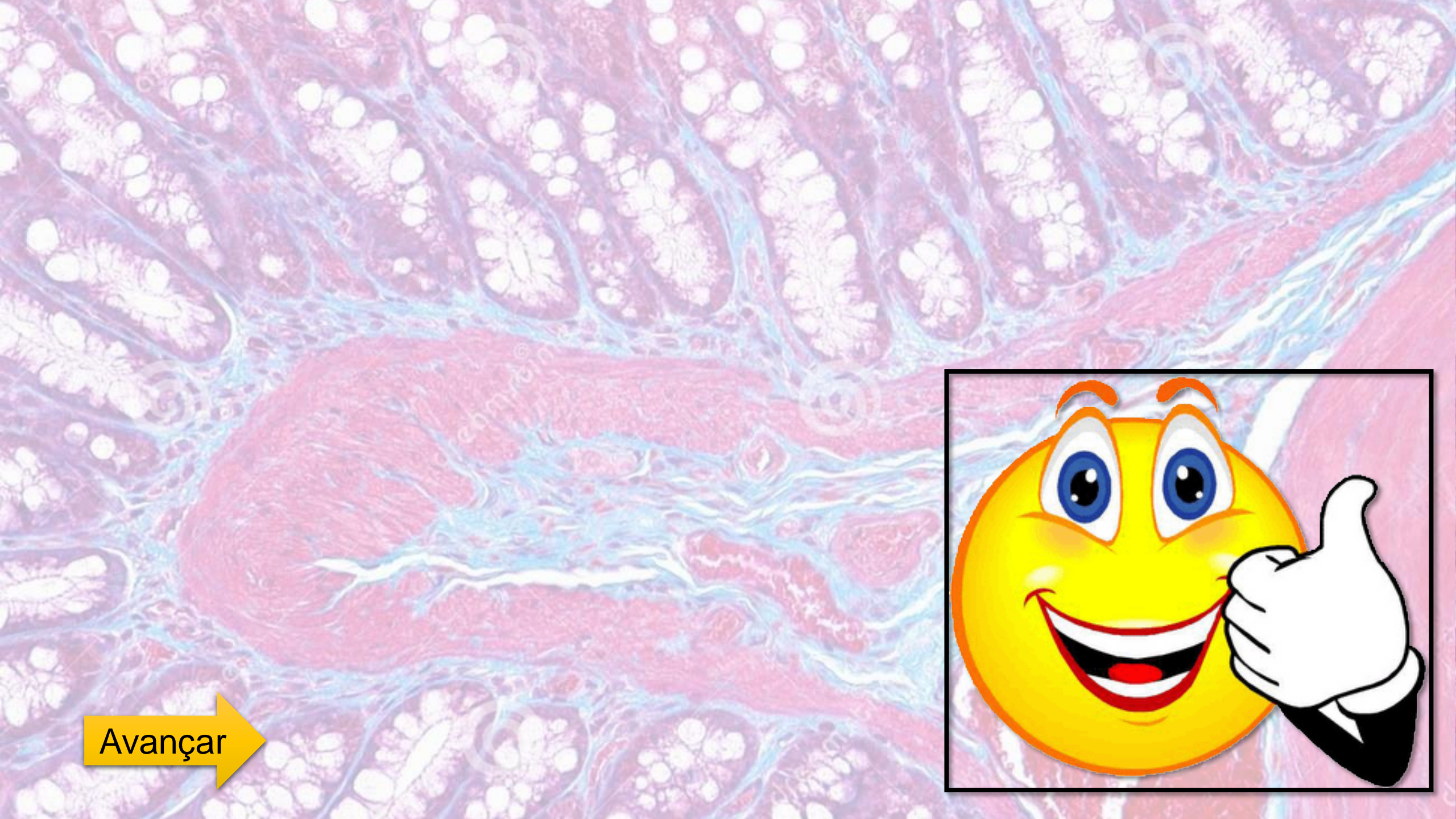
C) o osso não apresenta sensibilidade devido à ausência de fibras nervosas.

D) os osteoblastos são estimulados por um hormônio das glândulas paratireoides para a remoção de cálcio do sangue.

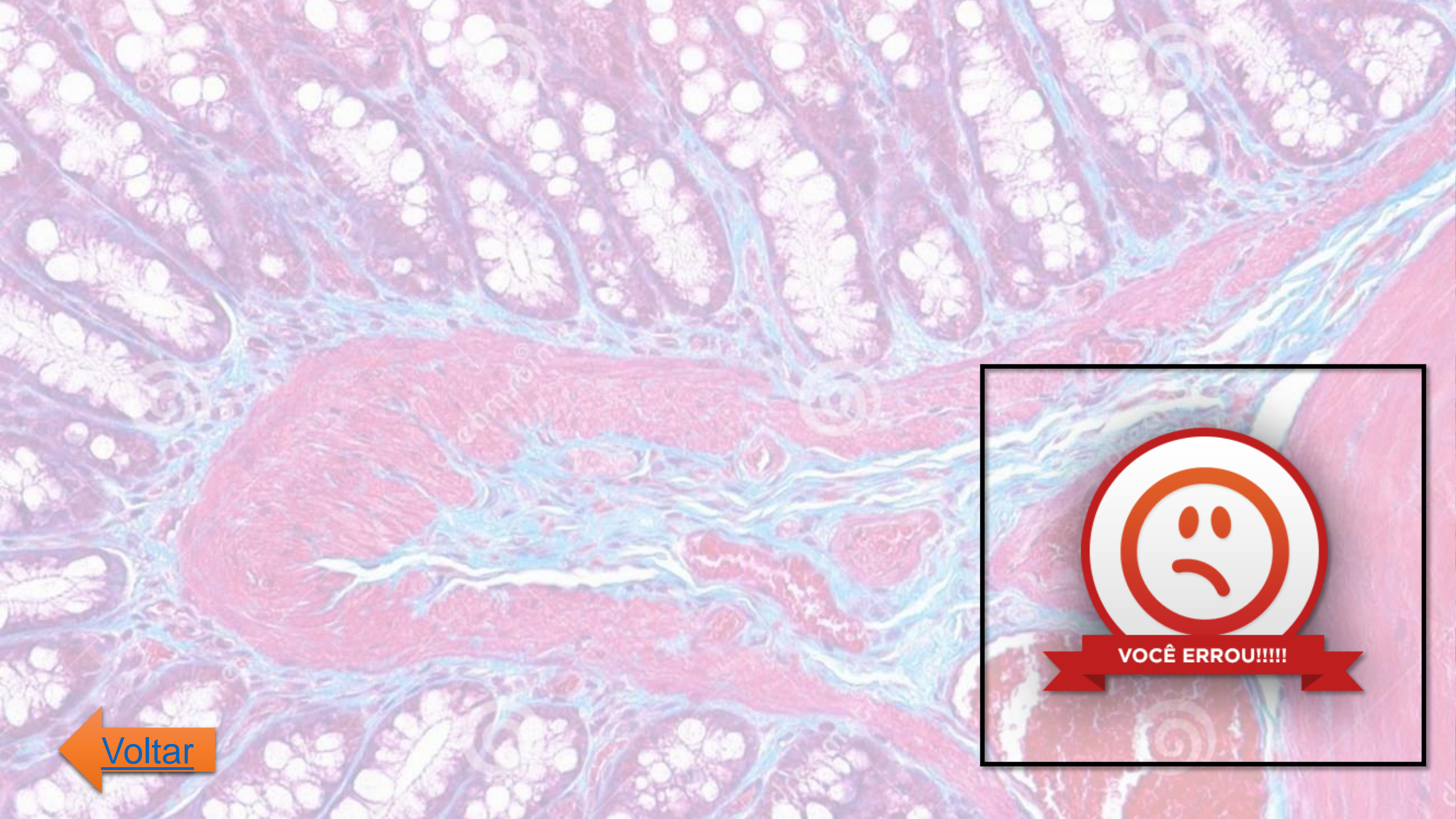
E) os osteoclastos formam osso novo para preencher o espaço deixado pelos osteoblastos.



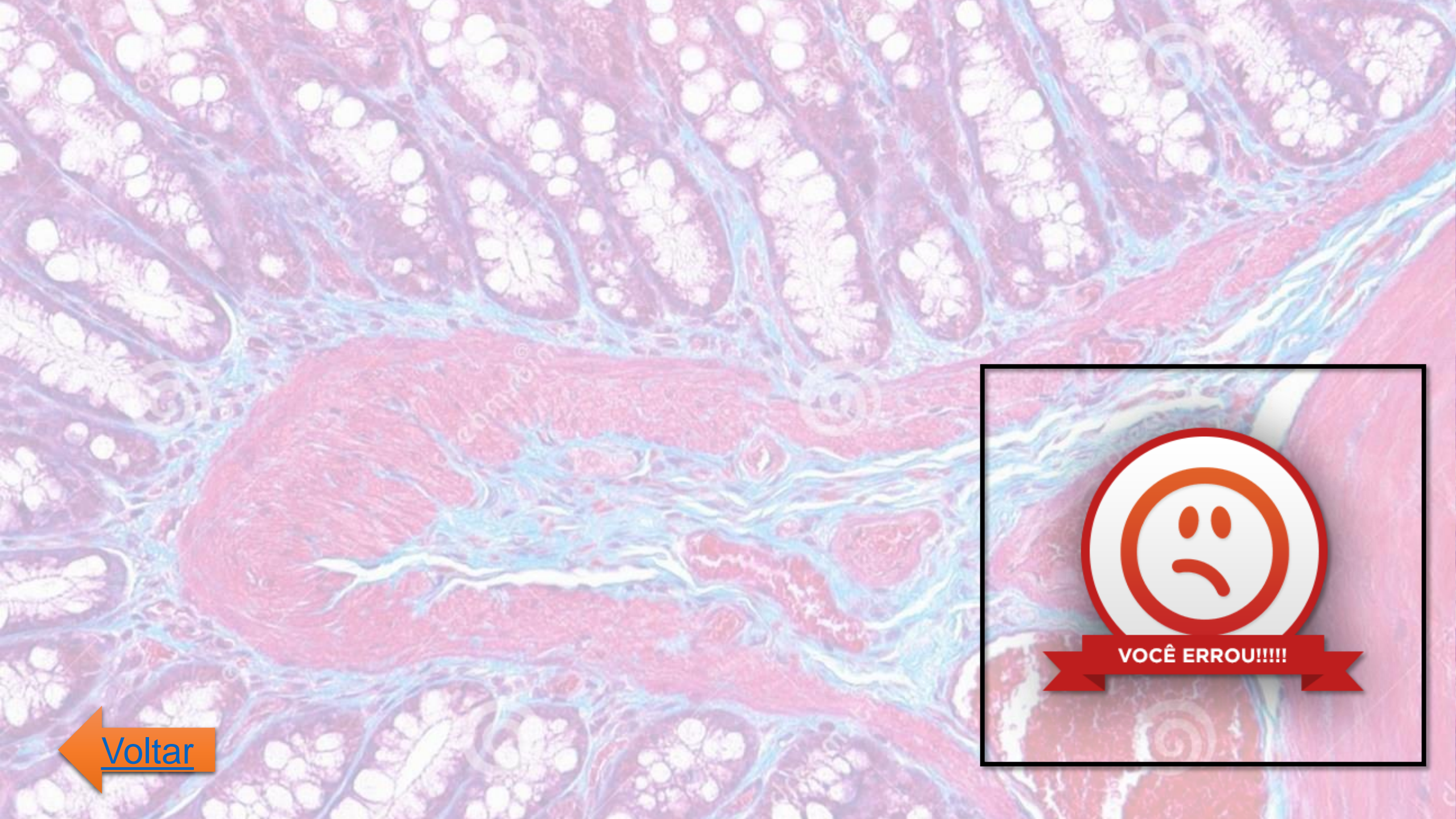
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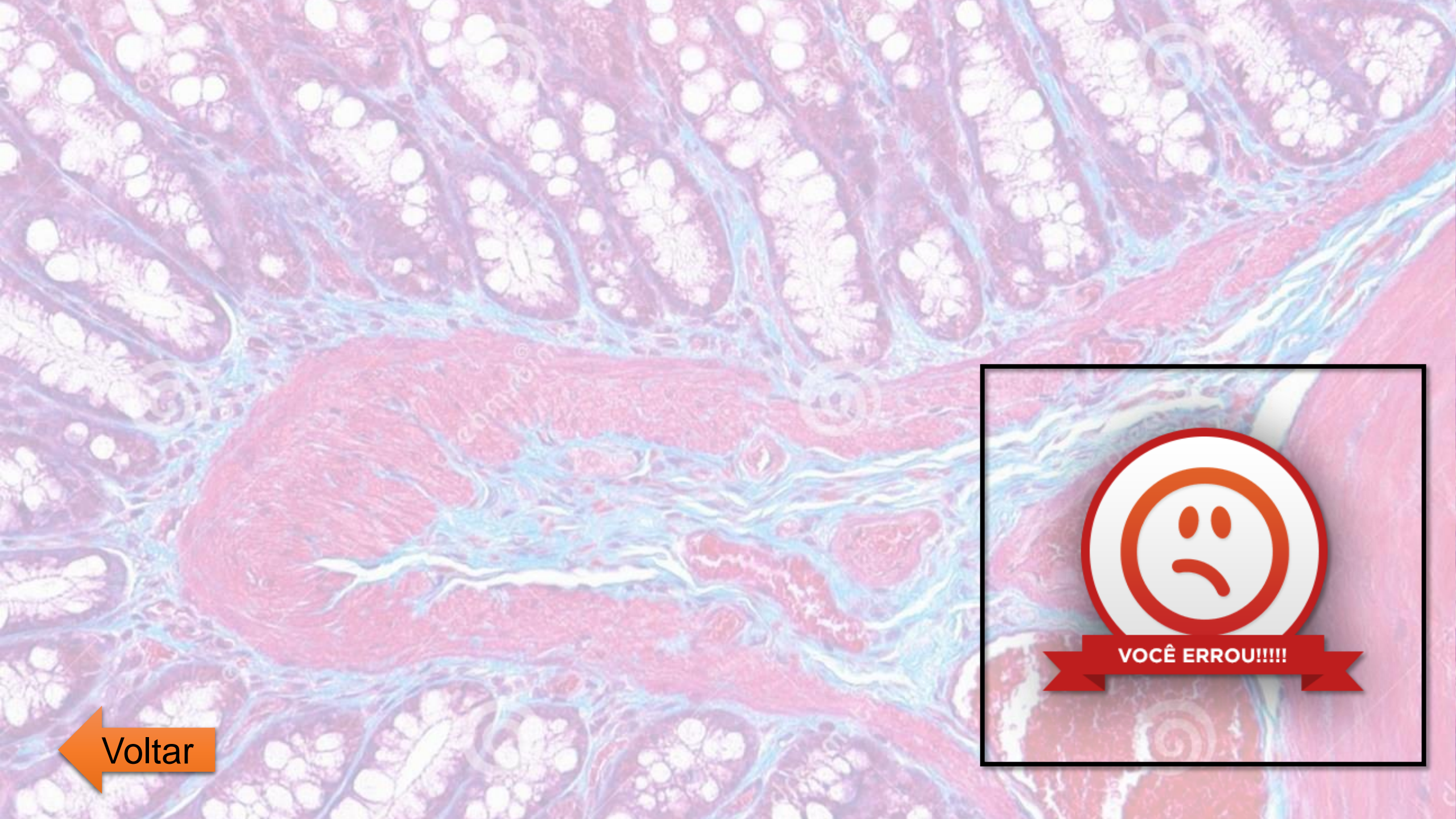
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12. No processo de ossificação, o papel dos osteoclastos é:

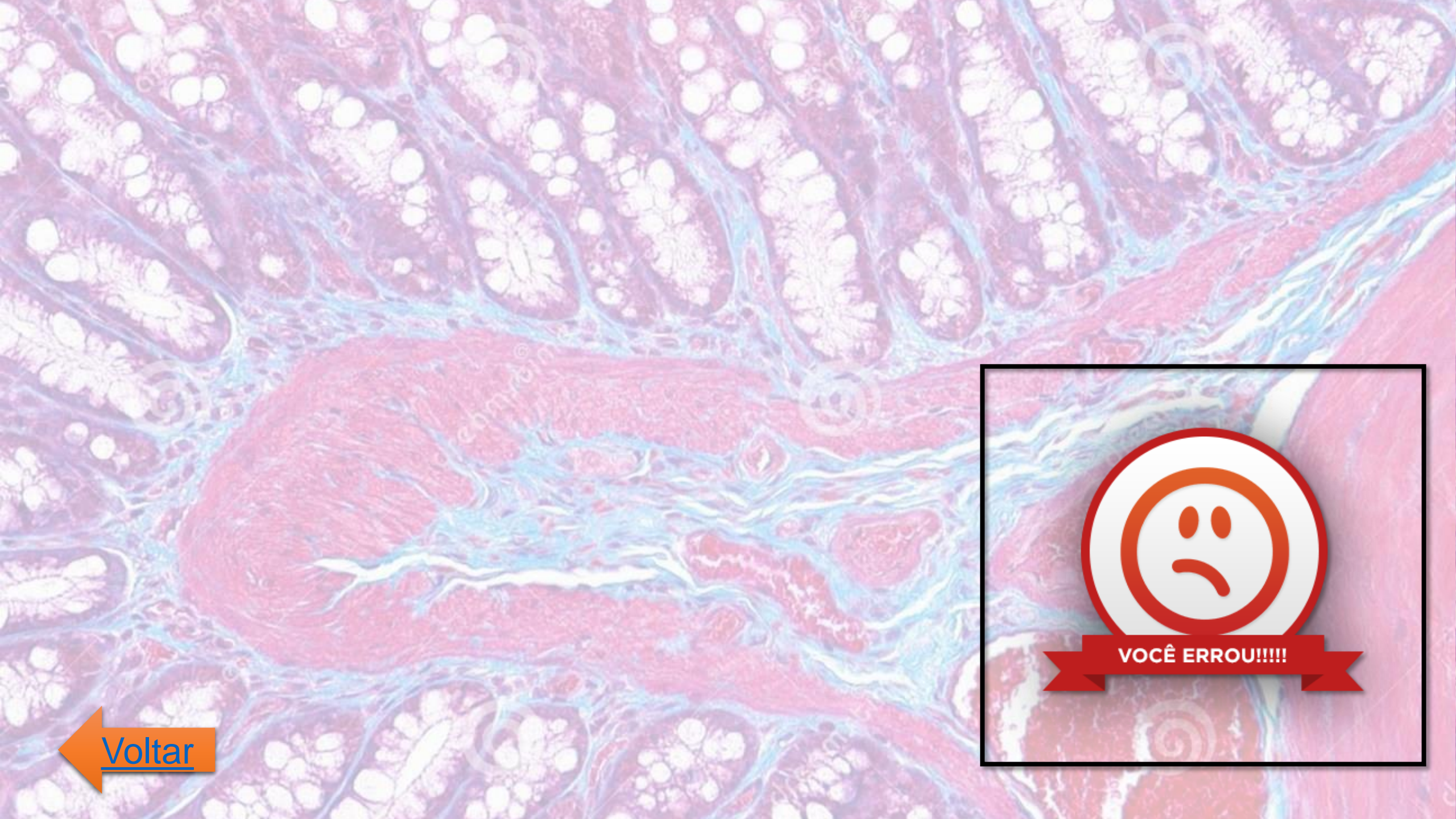
a) Promover a deposição de cálcio nas epífises

b) Reabsorver a matriz óssea

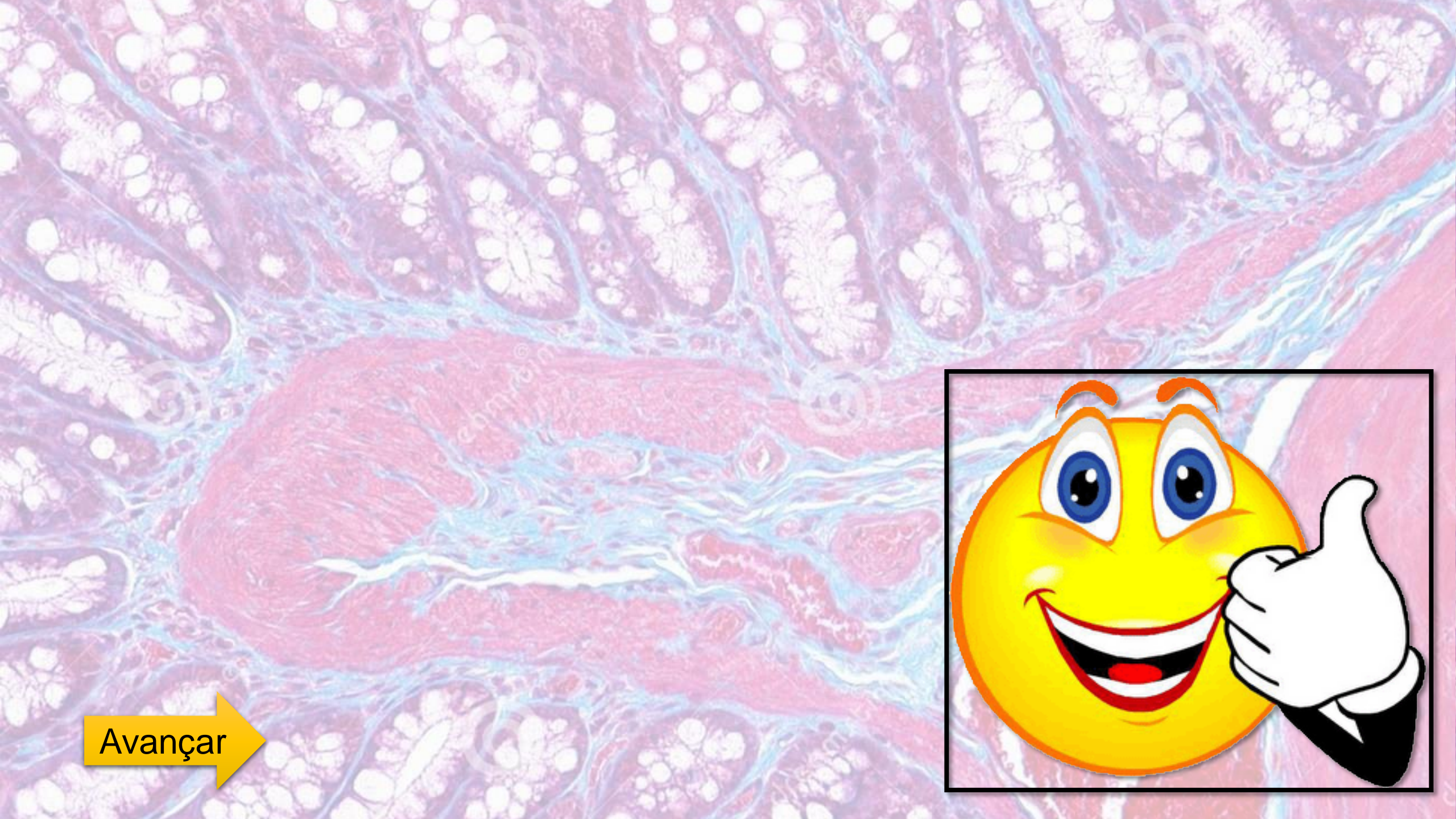
c) Revestir o periósteo

d) Reforçar as suturas cranianas

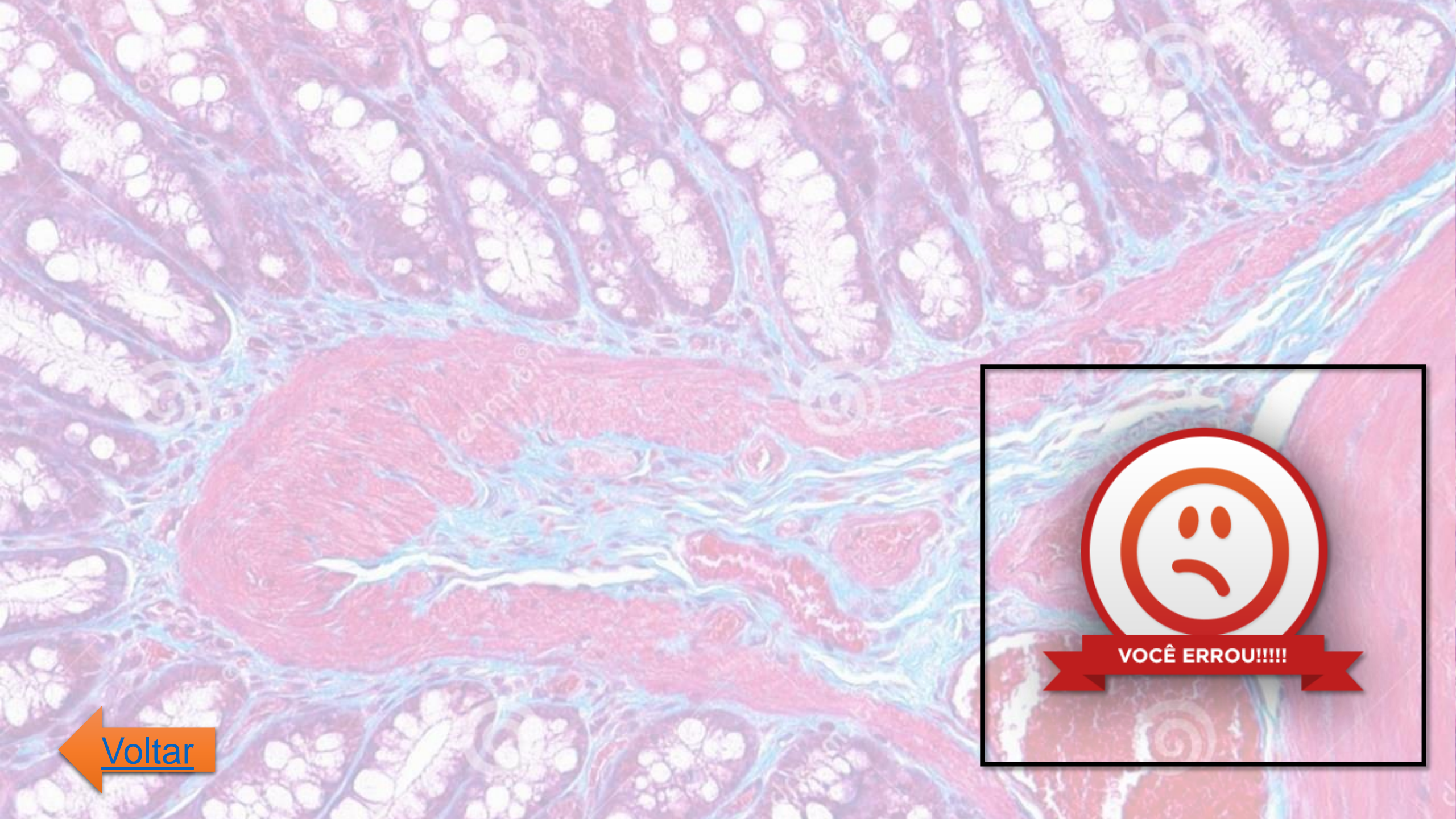
e) Formar, por mitoses, os osteócitos



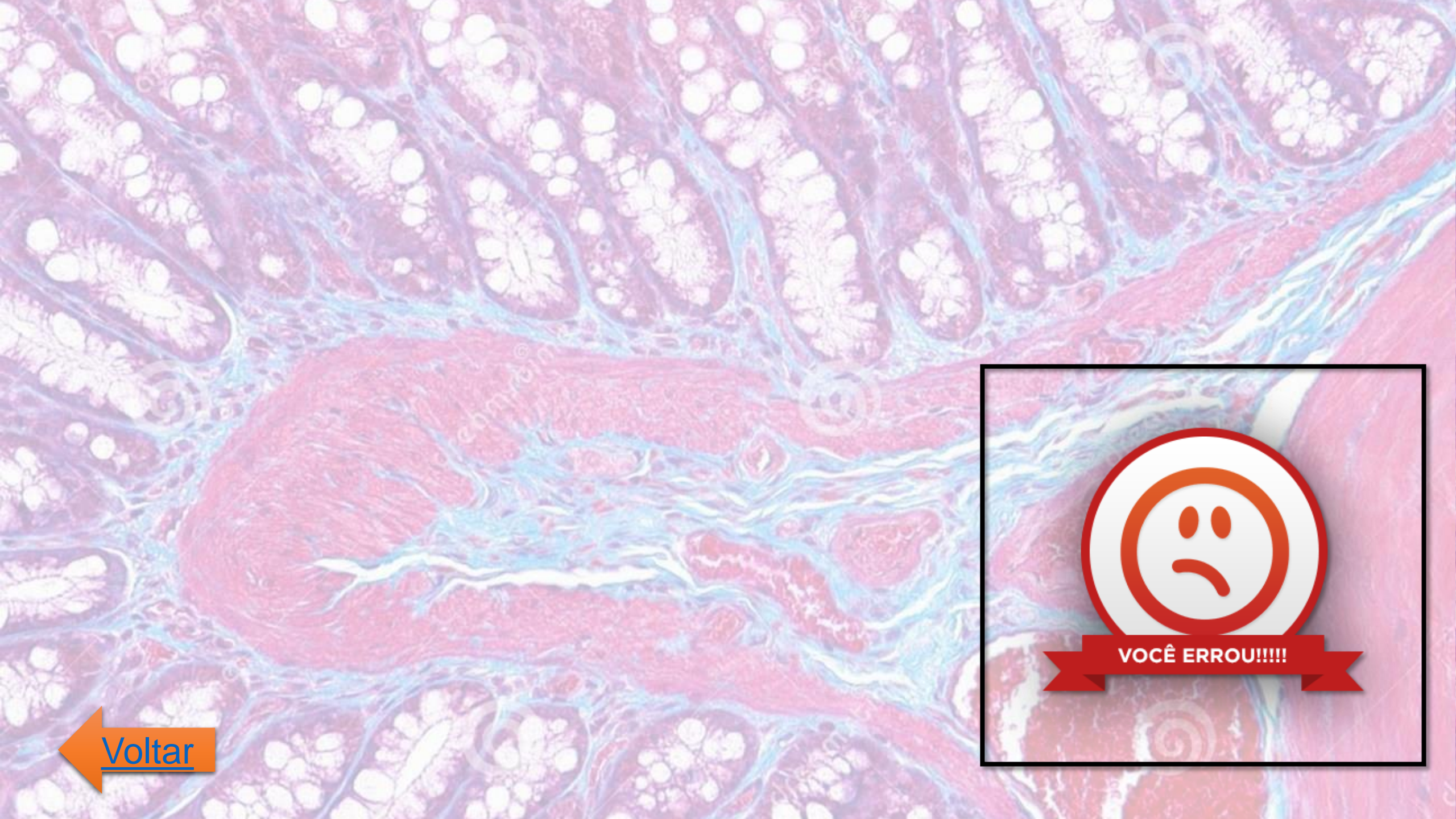
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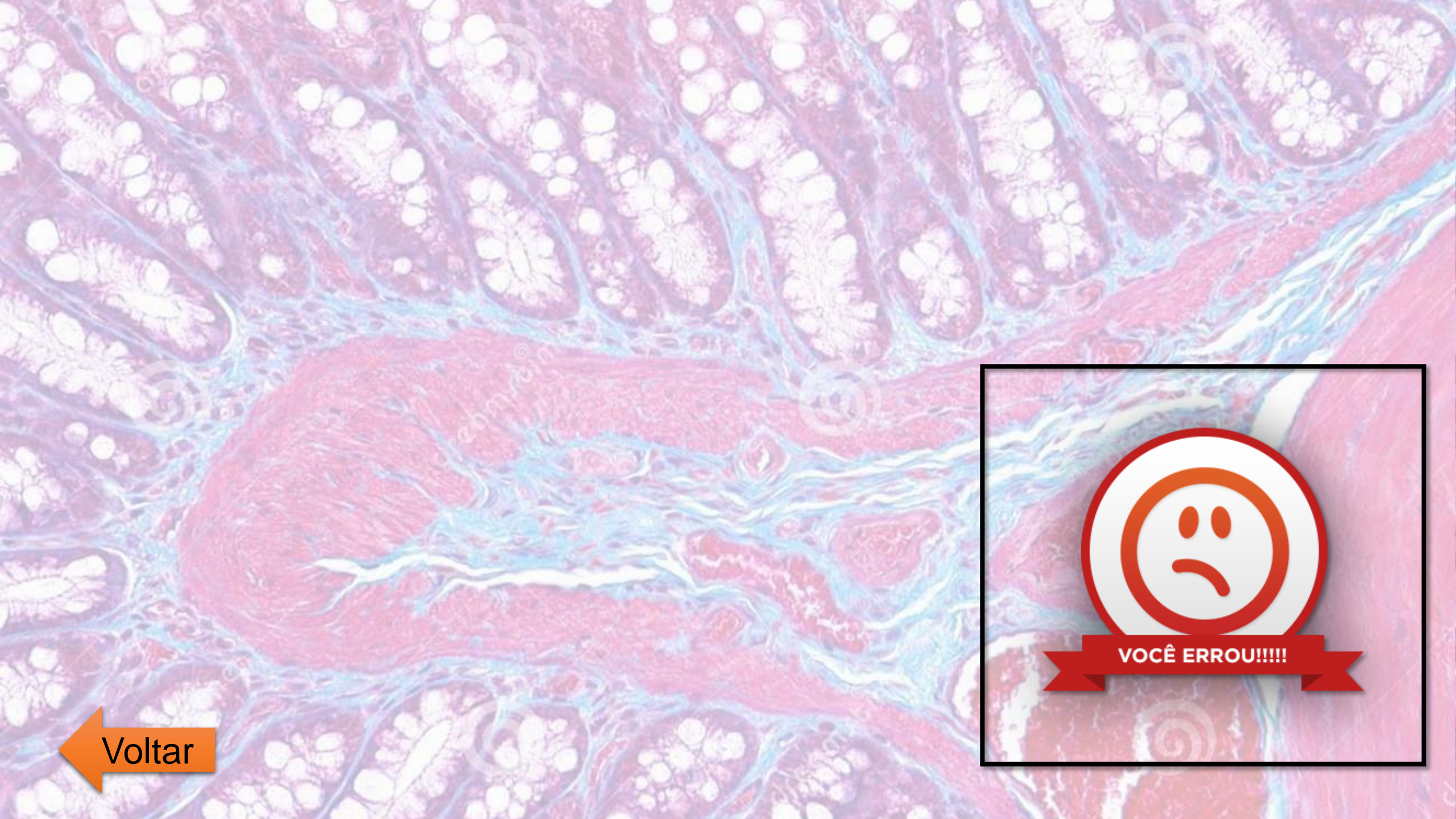
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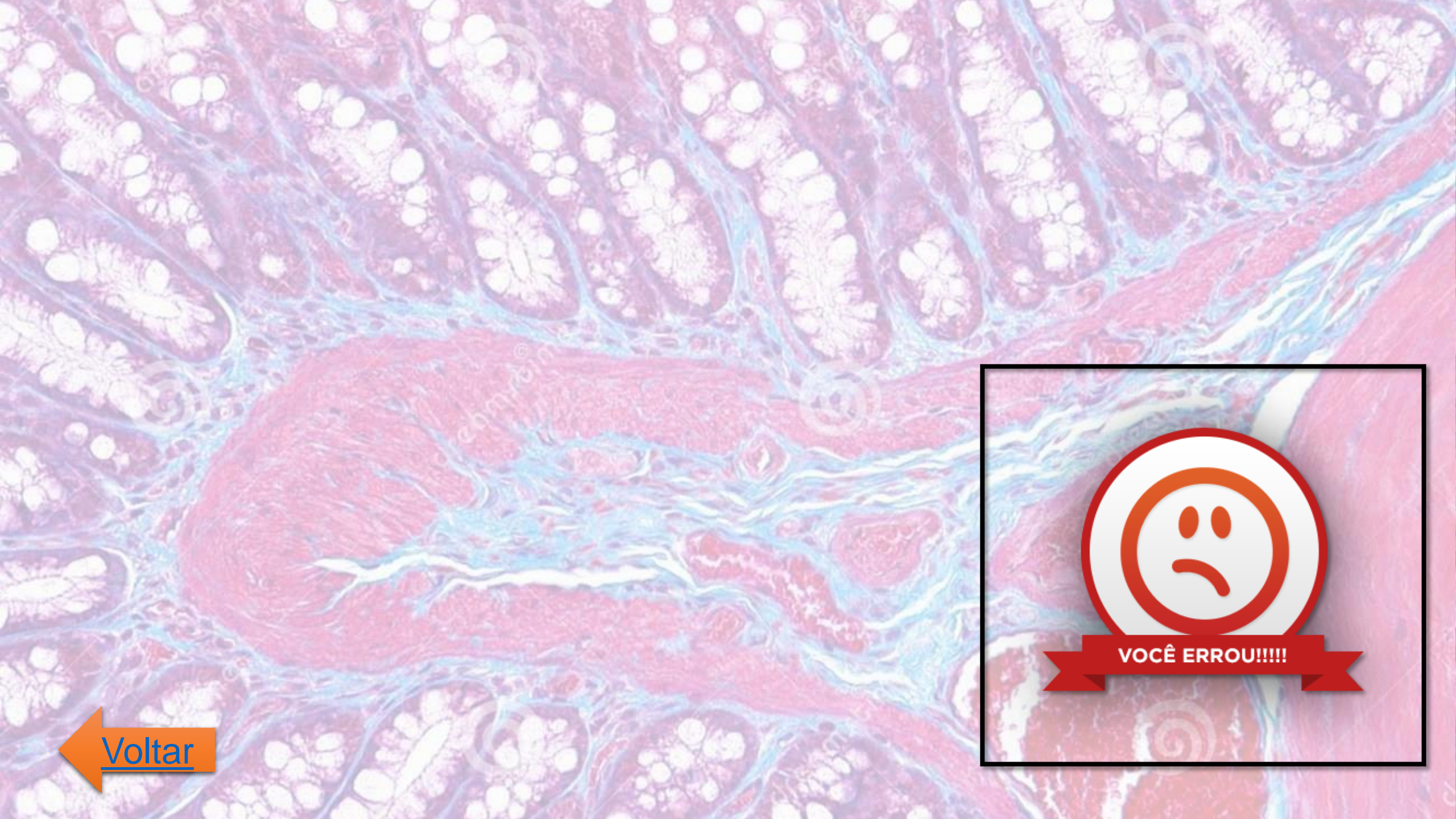
13. Sobre os vários fatores envolvidos na formação do osso, é correto afirmar que:

a) A fixação do cálcio no tecido ósseo depende da presença de vitamina D, cuja síntese é diminuída em indivíduos que têm o hábito de tomar sol.

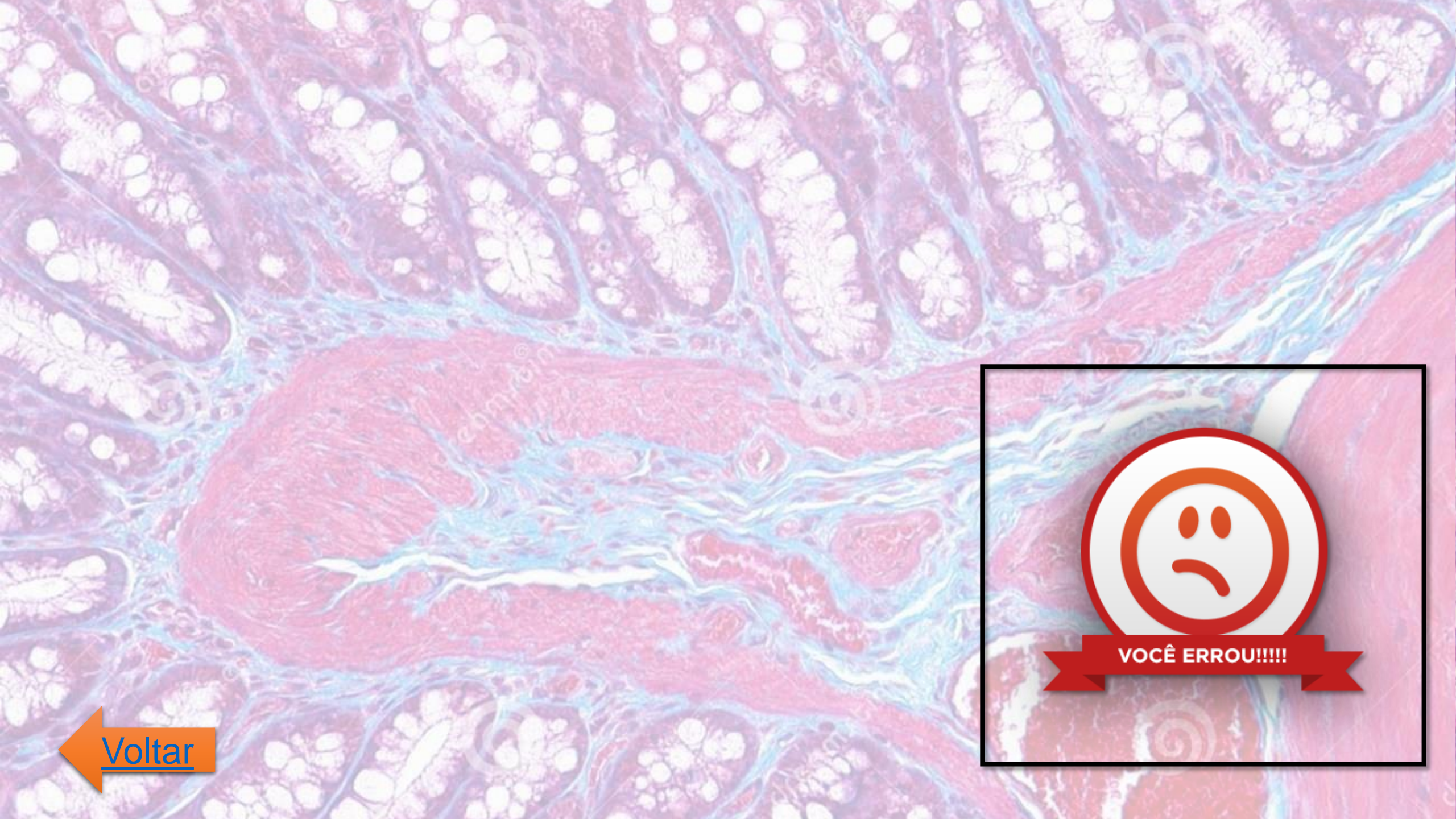
b) O excesso de vitamina C pode levar à diminuição da densidade óssea, pois essa vitamina causa degradação das moléculas de colágeno.

c) Os osteoblastos e os osteoclastos são células responsáveis, respectivamente, pela captura de cálcio e pela absorção de vitamina D.

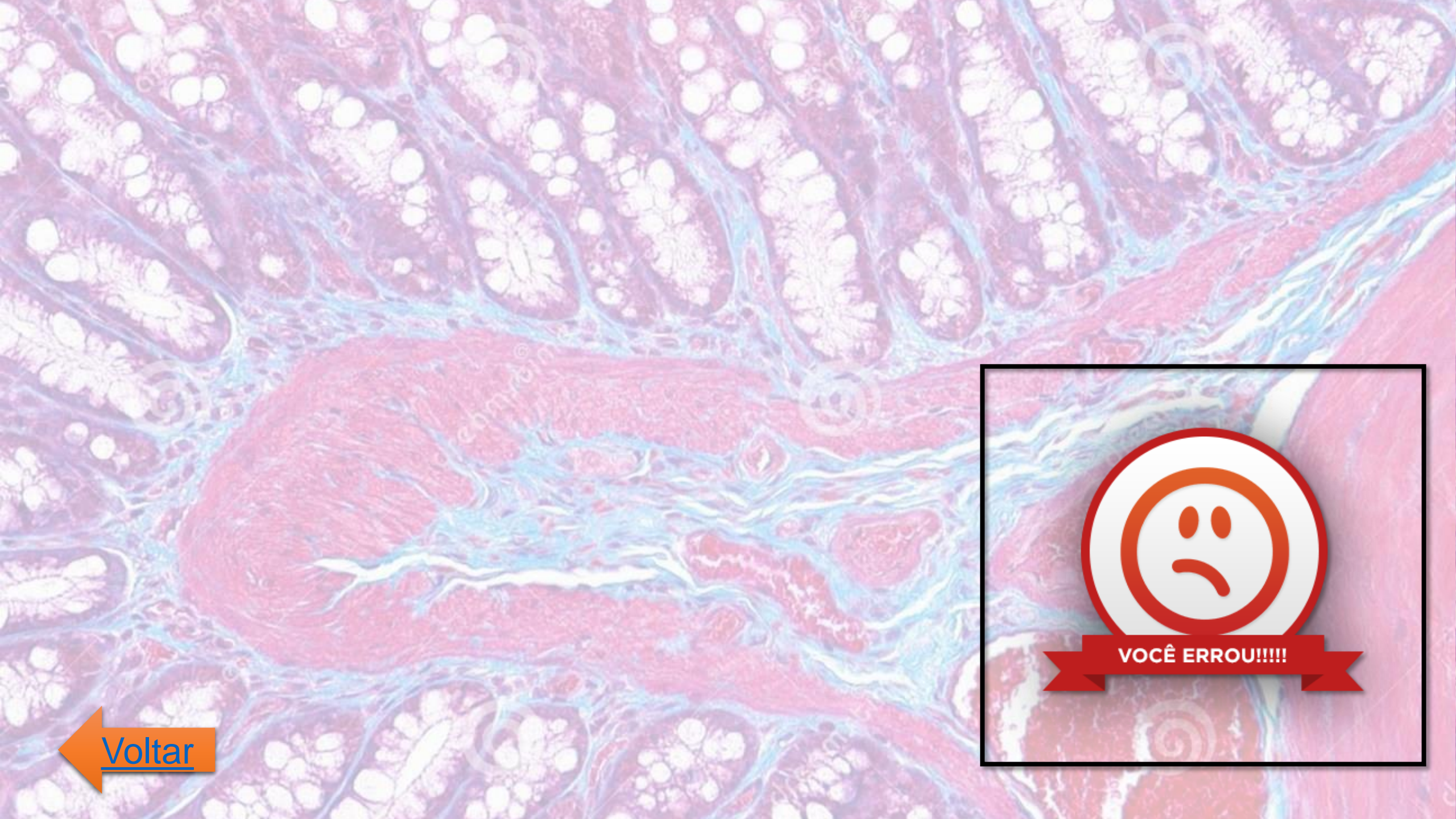
d) Os osteoblastos e os osteoclastos são células responsáveis, respectivamente, pela produção e pela degradação de componentes da matriz óssea



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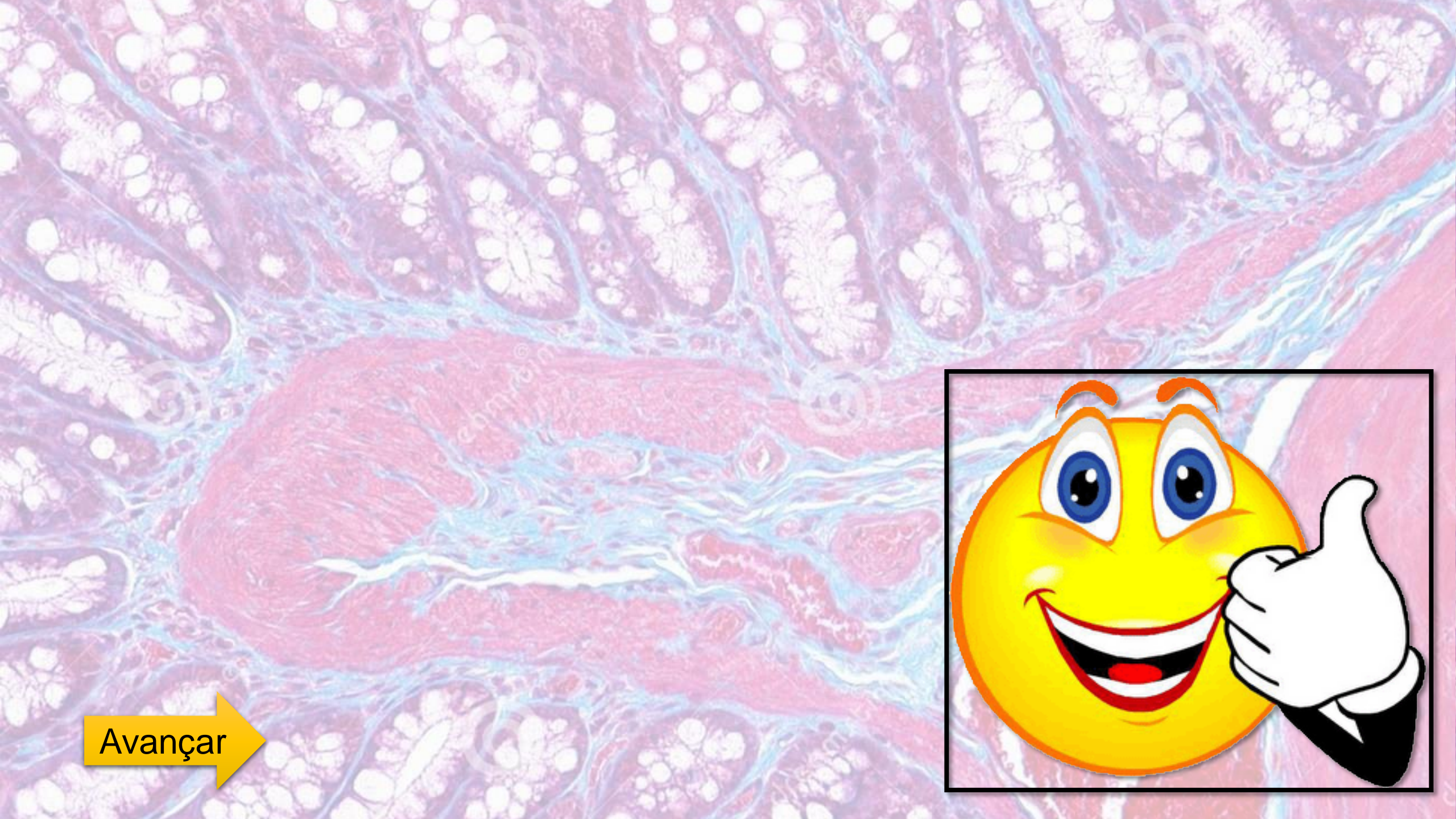


VOCÊ ERROU!!!!

A red-bordered box containing a sad face icon (a white circle with a red outline and a downward-curving mouth) and a red ribbon banner with the text "VOCÊ ERROU!!!!" in white capital letters.

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An orange arrow pointing to the left, with the word "Voltar" written in blue text below it.



Avançar

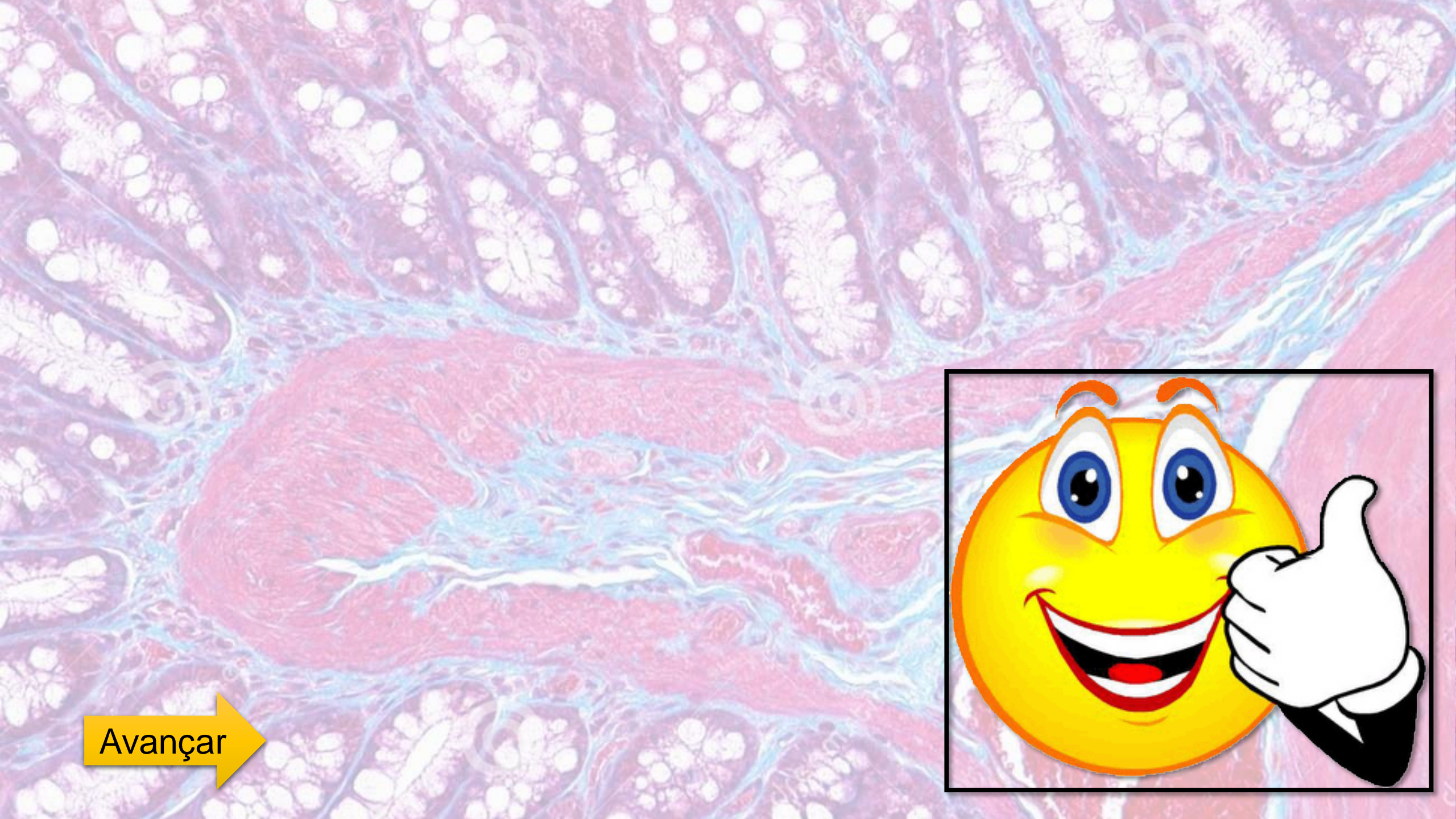
14. O disco epifisário:

a) está localizado entre as epífises e a diáfise dos ossos longos.

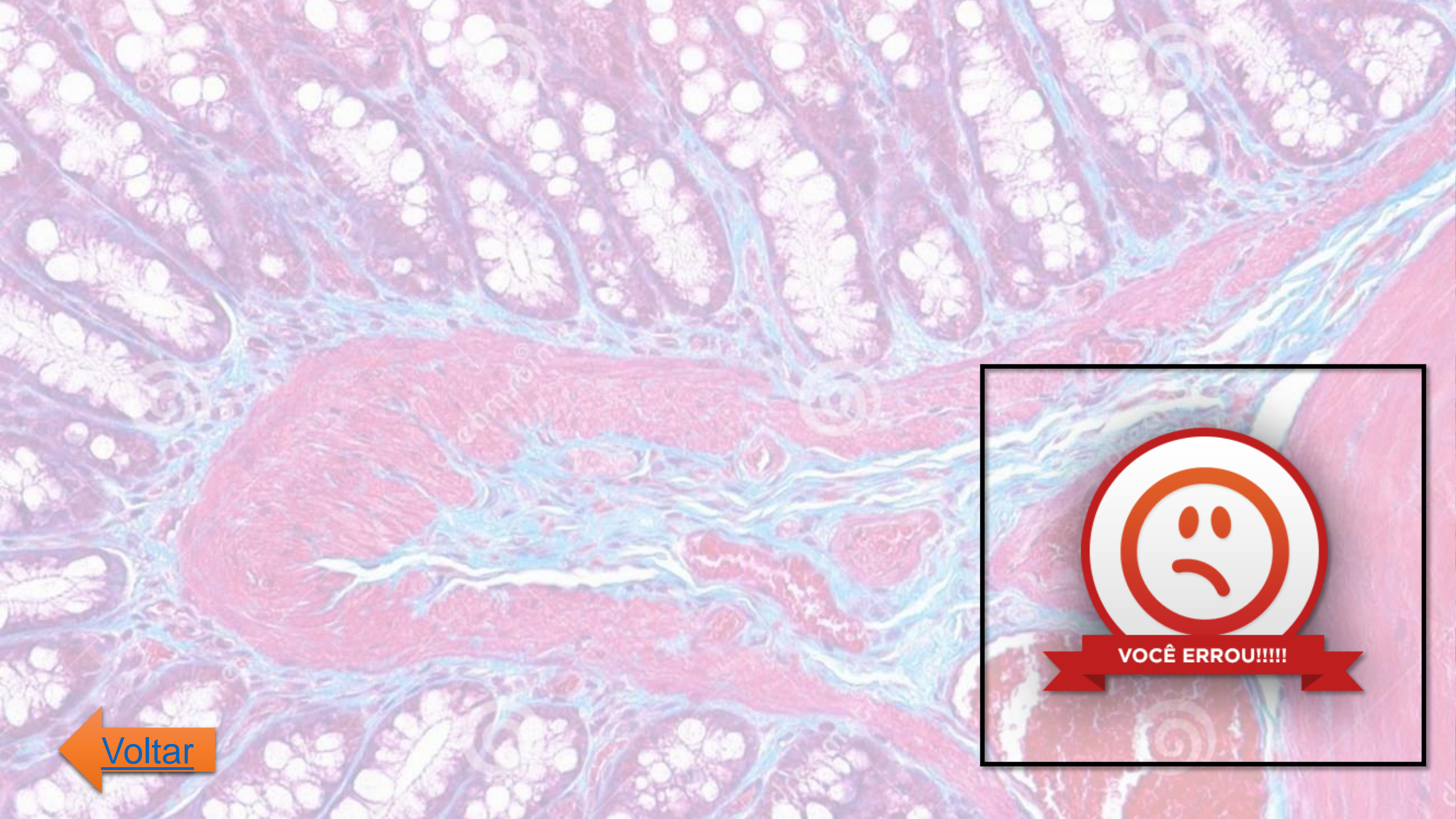
b) é uma placa de cartilagem hialina que produz osso.

c) é constituído pelas zonas de cartilagem em repouso, cartilagem seriada, cartilagem hipertrófica, cartilagem calcificada e cartilagem ossificada.

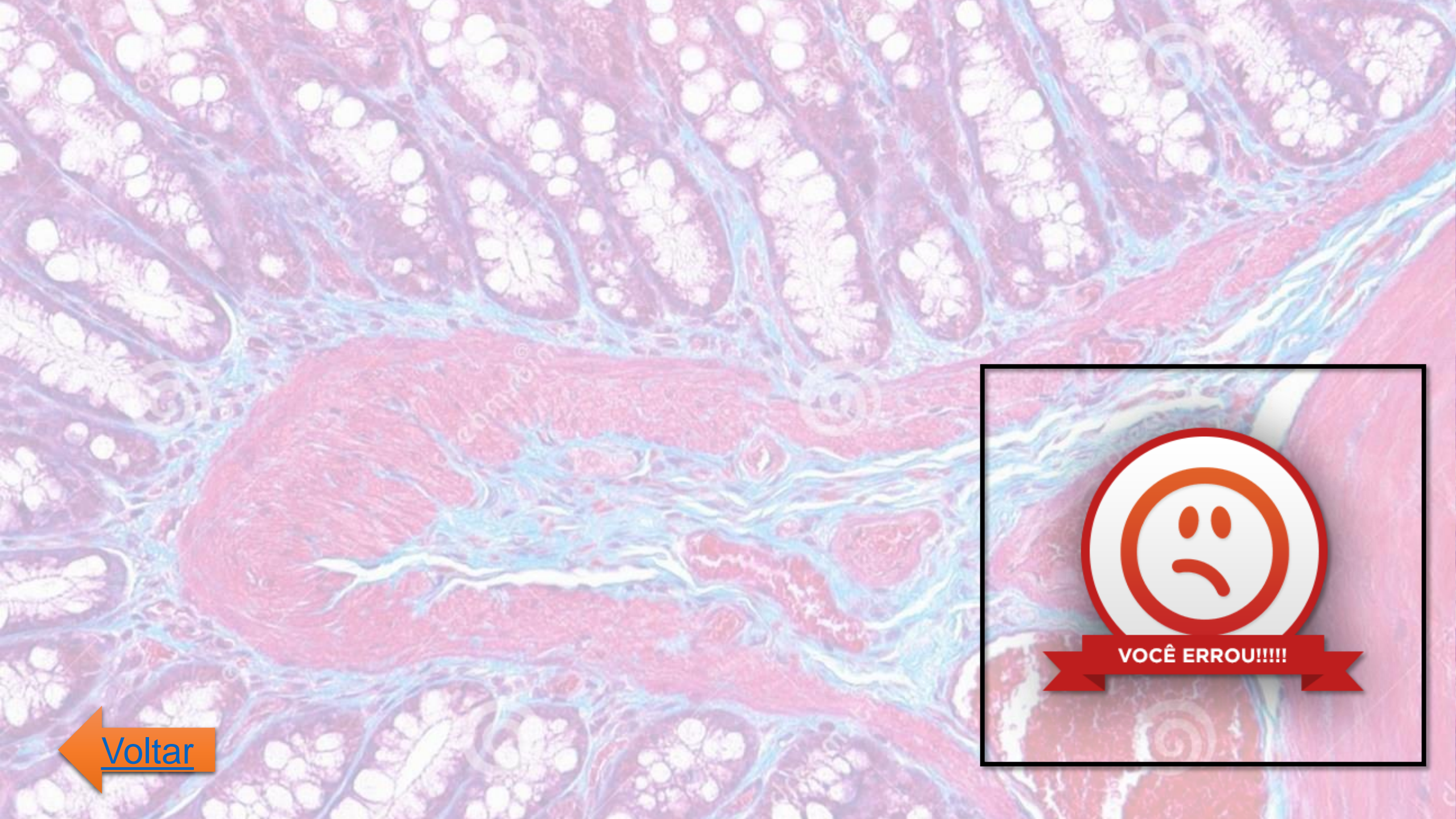
d) é ativo durante toda a vida.



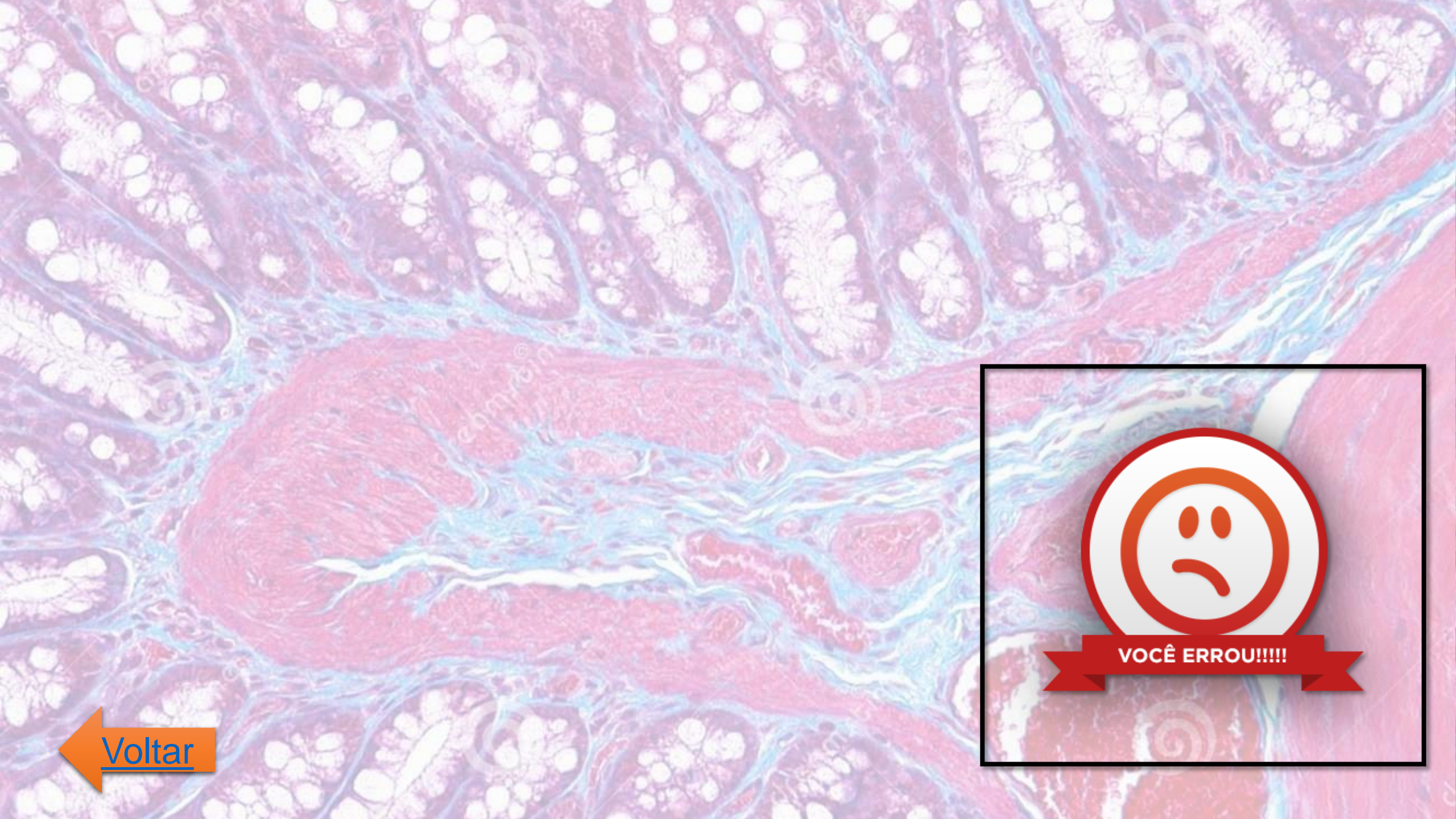
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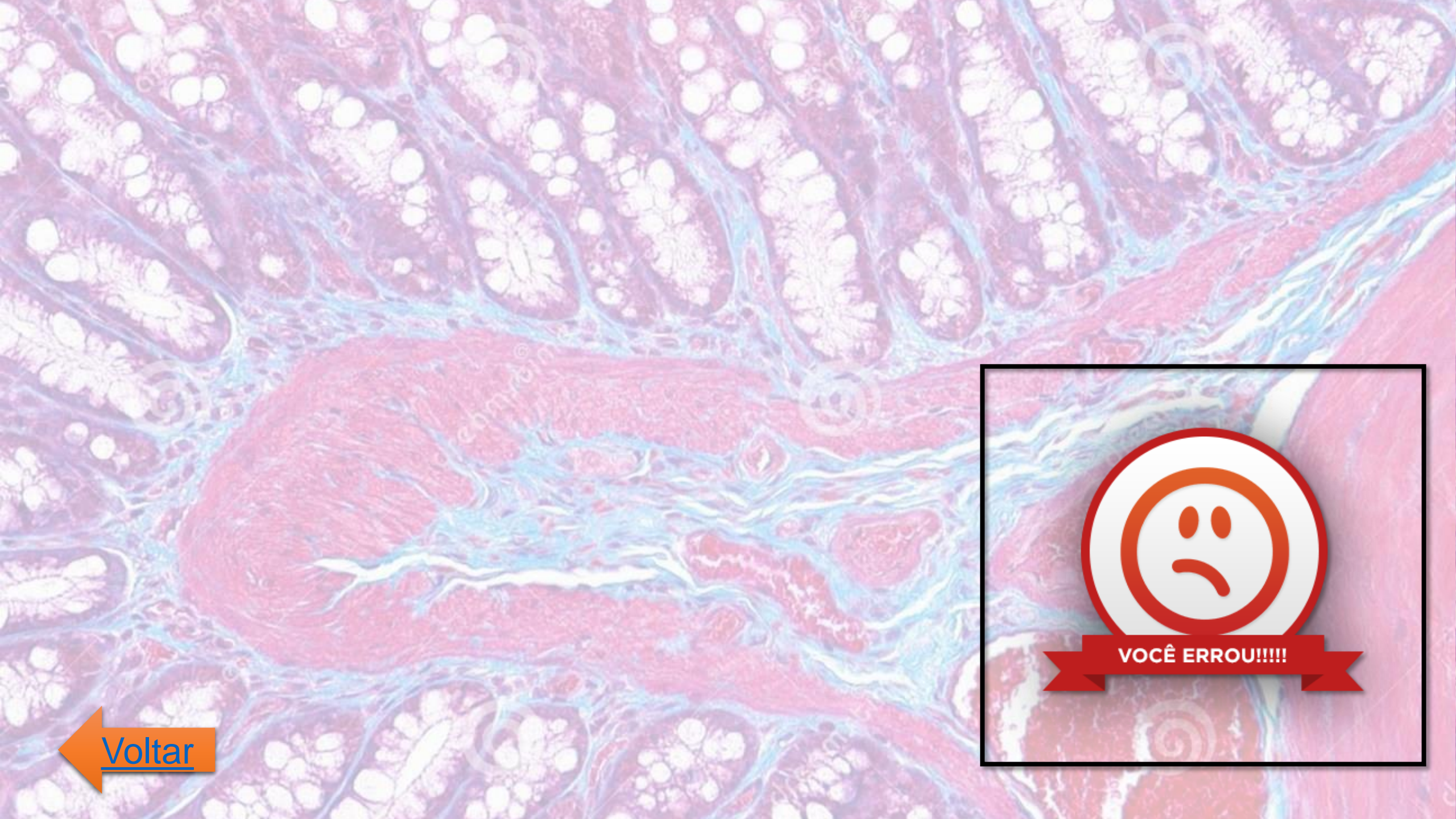
15. Sobre o tecido ósseo, assinale a alternativa incorreta:

a) é depósito de sais minerais.

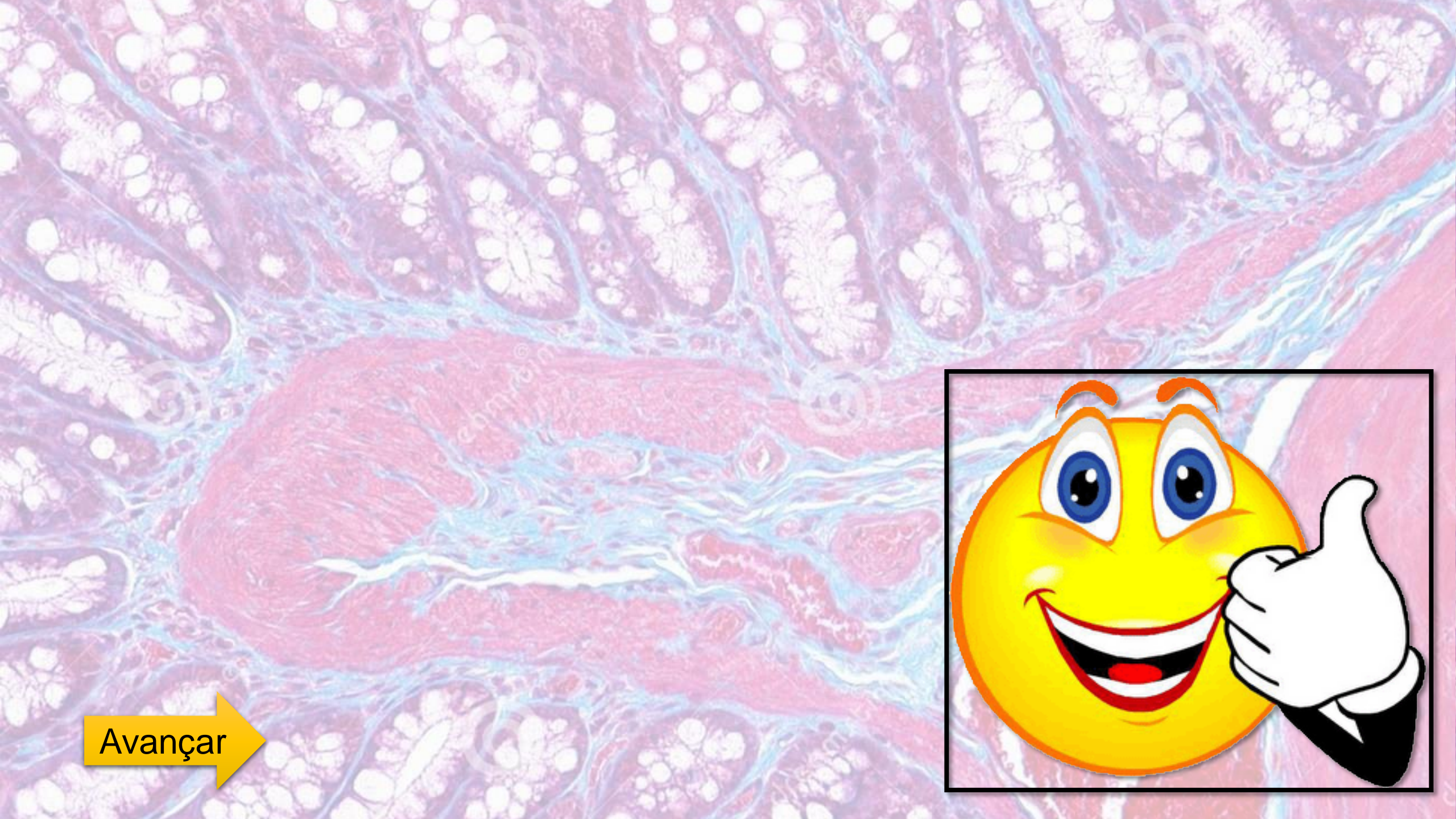
b) é formado a partir de um molde cartilaginoso (ossificação intramembranosa) ou de uma membrana de conjuntivo (ossificação endocondral).

c) é constituído pelas células osteoprogenitoras, osteoblastos, osteócitos e osteoclastos.

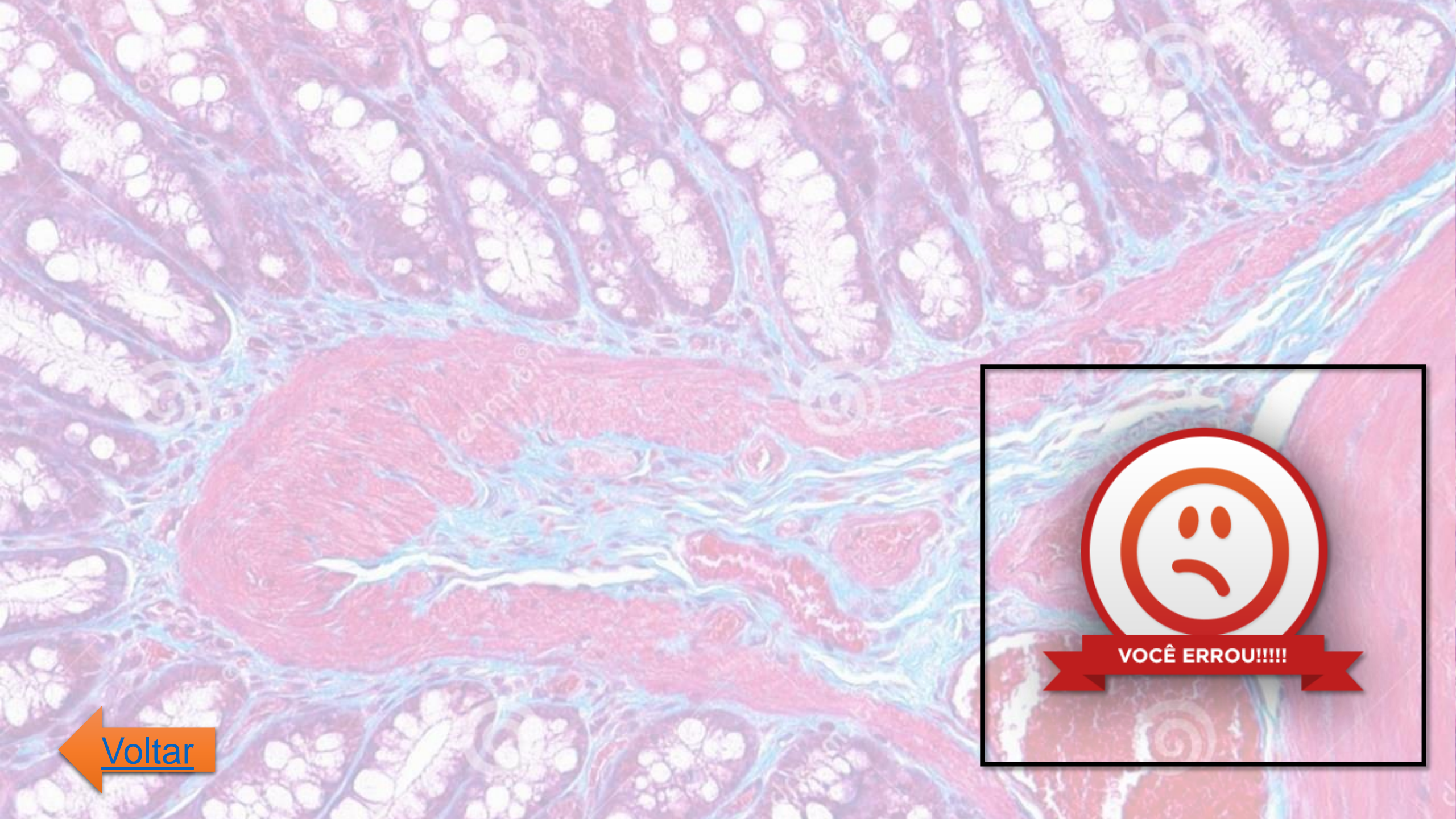
d) protege o SNC e os órgãos vitais.



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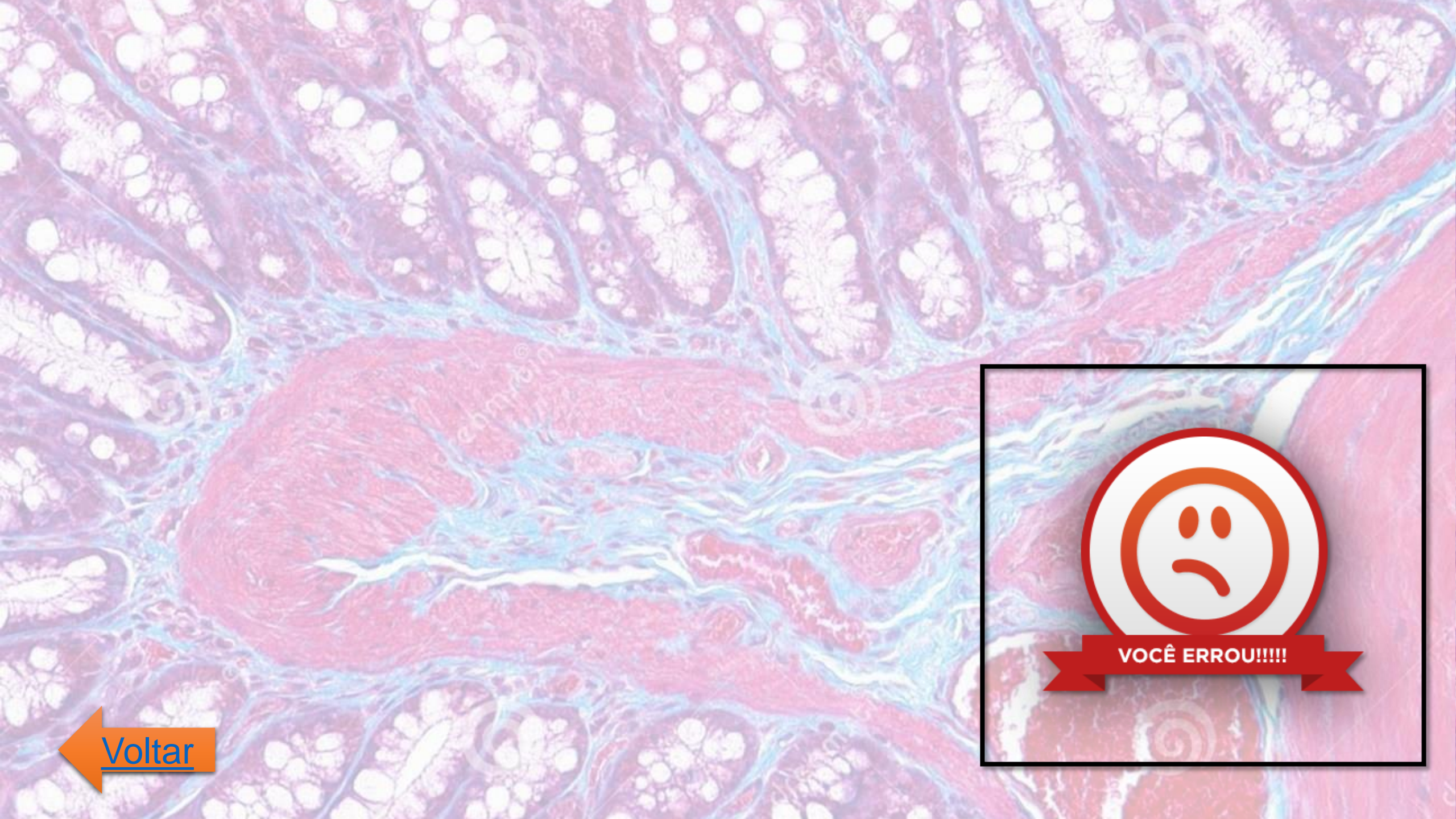


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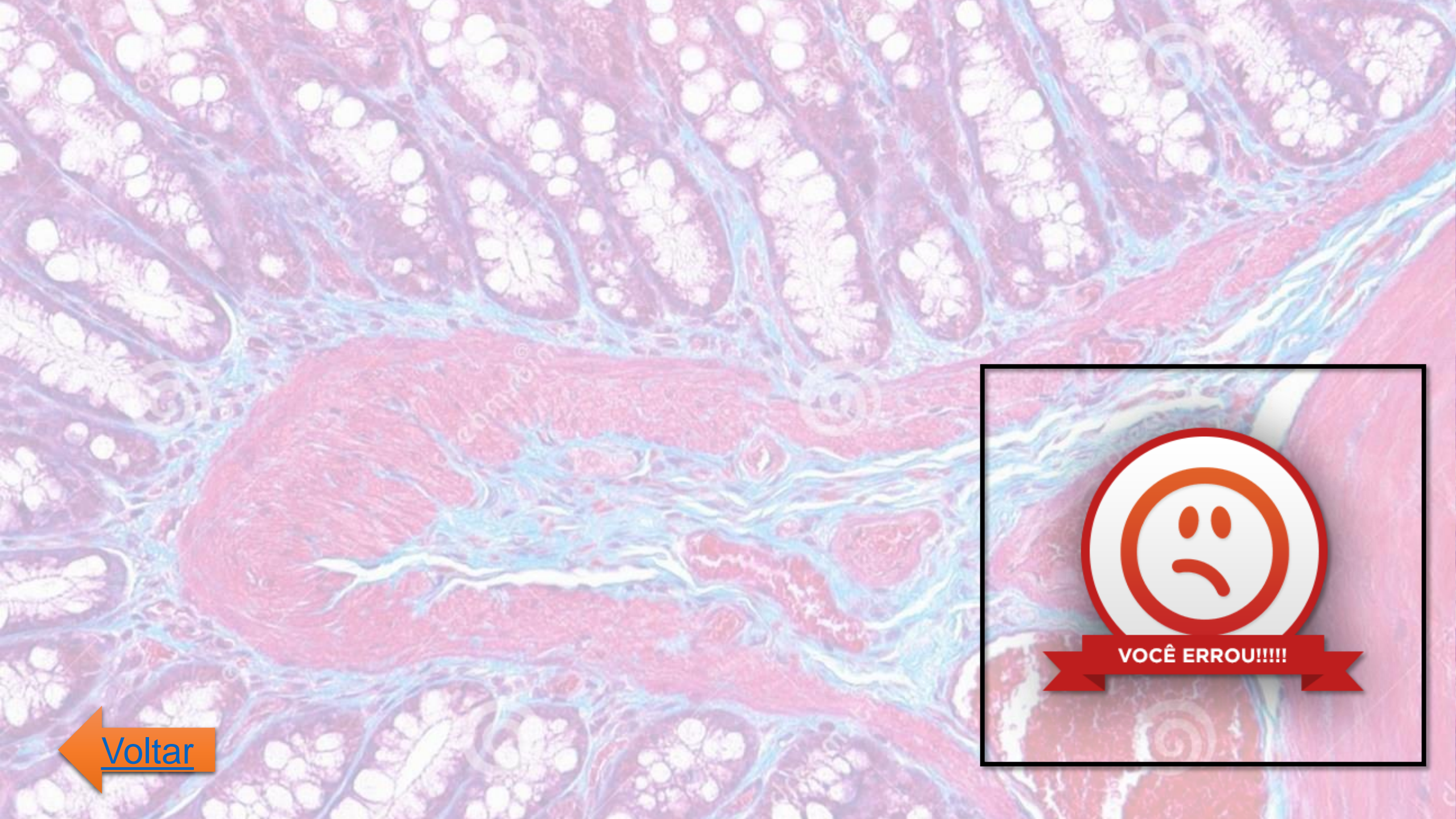
16. Sobre o tecido ósseo, assinale a alternativa errada:

a) o osso compacto apresenta os sistemas de Havers.

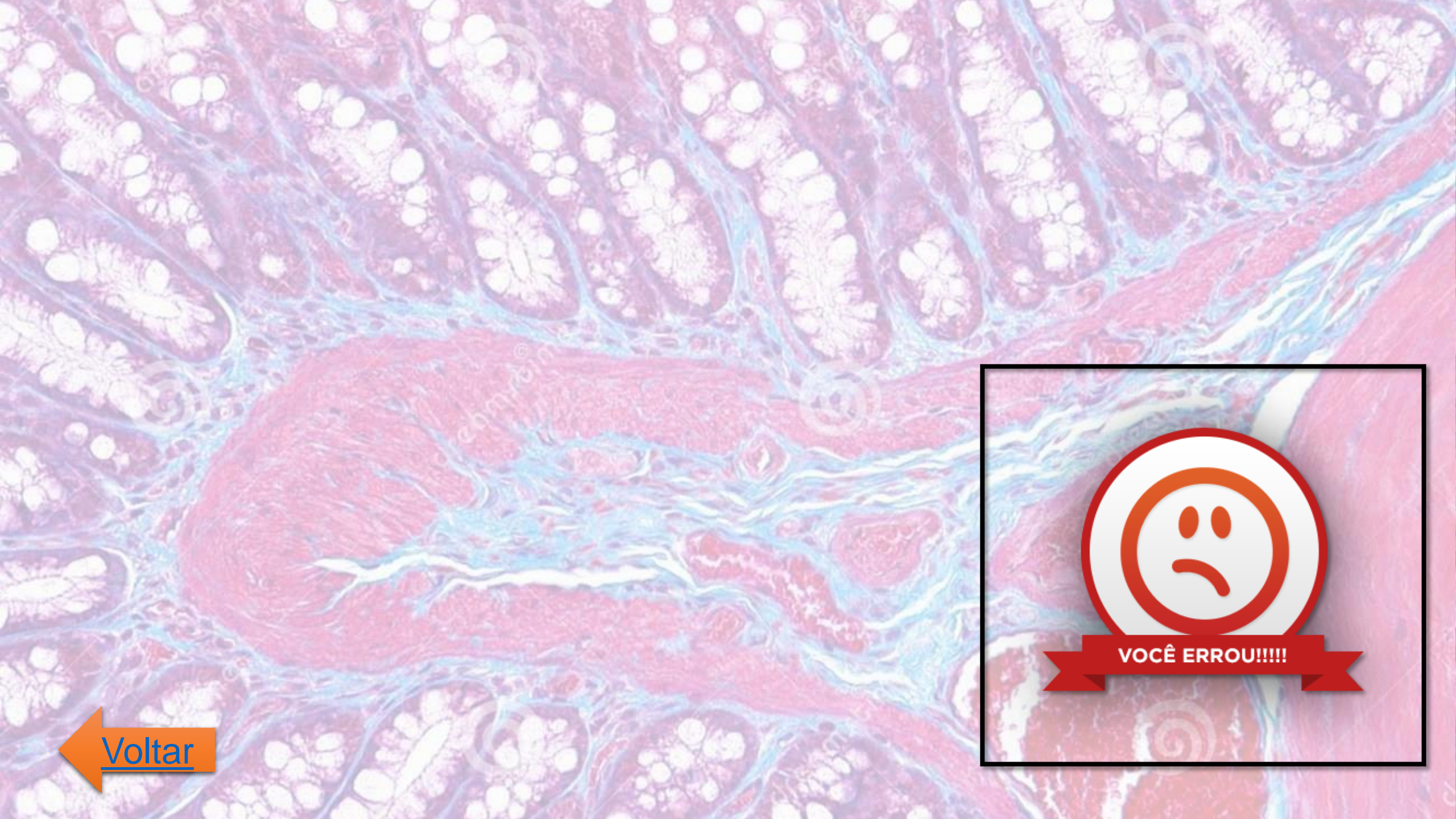
b) o osso esponjoso possui cavidades com a medula óssea.

c) os osteoclastos realizam a remodelação do tecido ósseo.

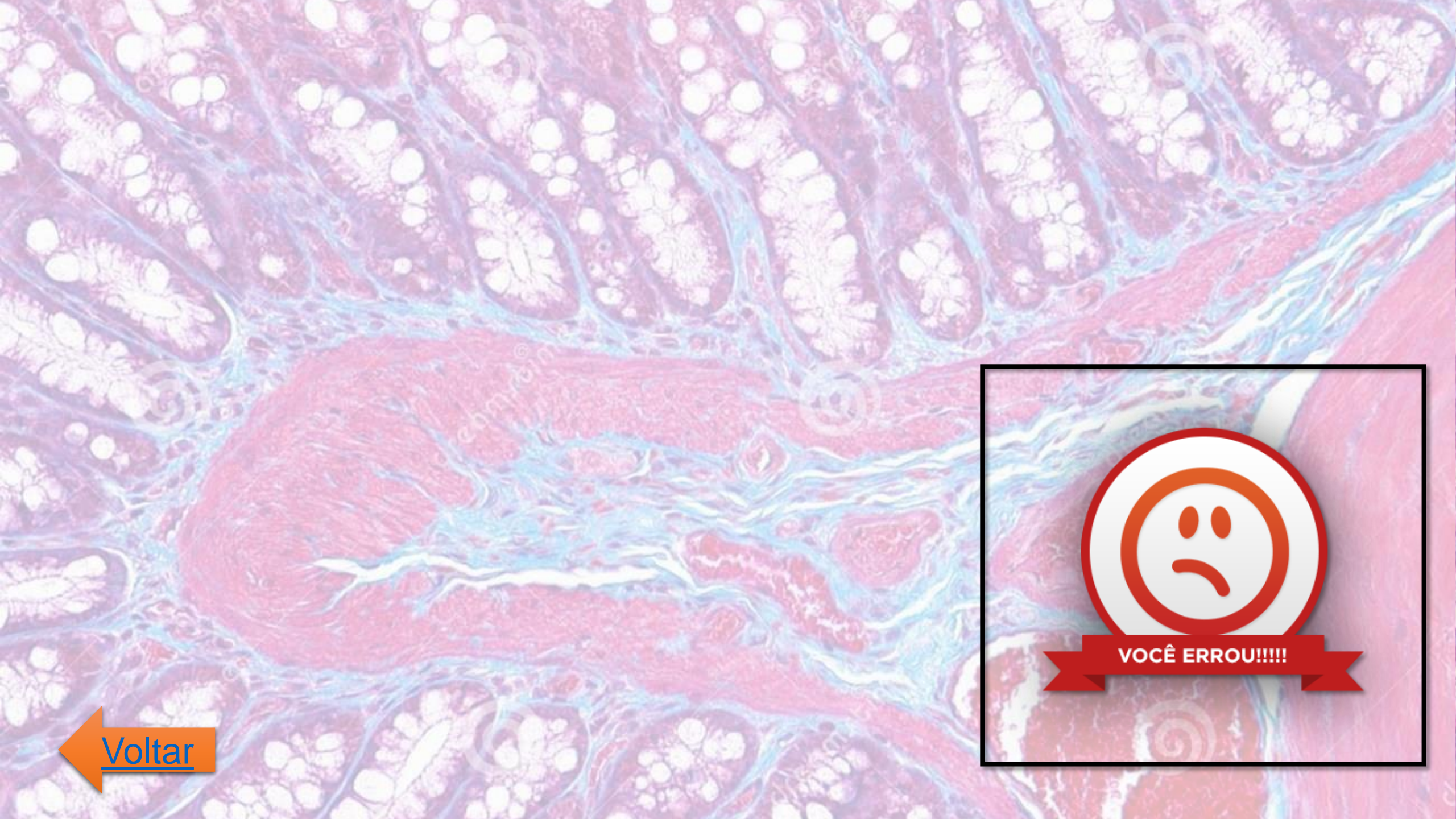
d) a calcificação da matriz óssea envolve o depósito de cristais de hidroximagnetita.



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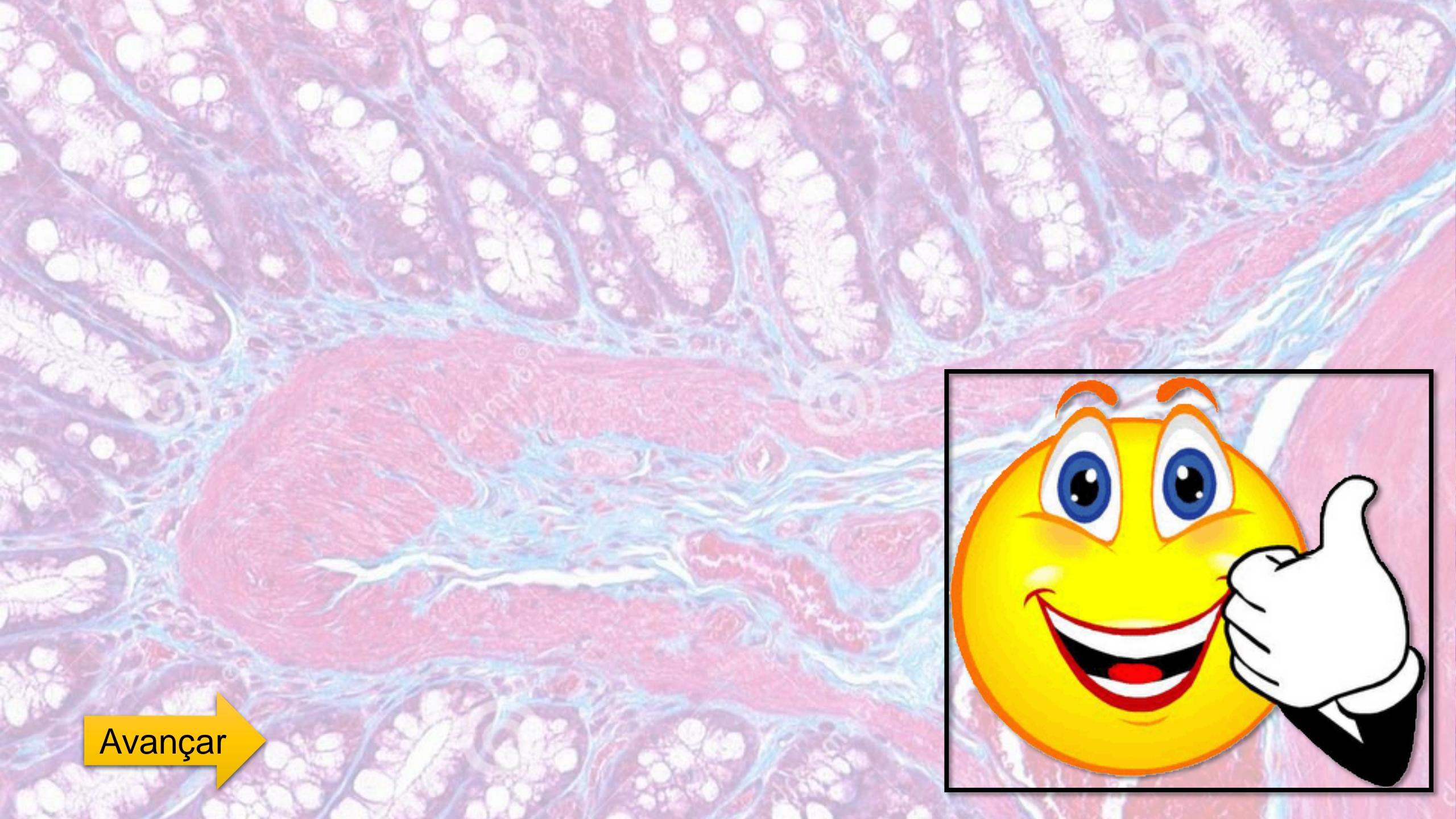


VOCÊ ERROU!!!!

A red-bordered box containing a red sad face icon (a white circle with a red outline, two dots for eyes, and a downward-curving line for a mouth) positioned above a red ribbon banner with the text "VOCÊ ERROU!!!!" in white, bold, uppercase letters.

 [Voltar](#)

An orange arrow pointing to the left, with the word "Voltar" written in blue text inside the arrow's shaft.



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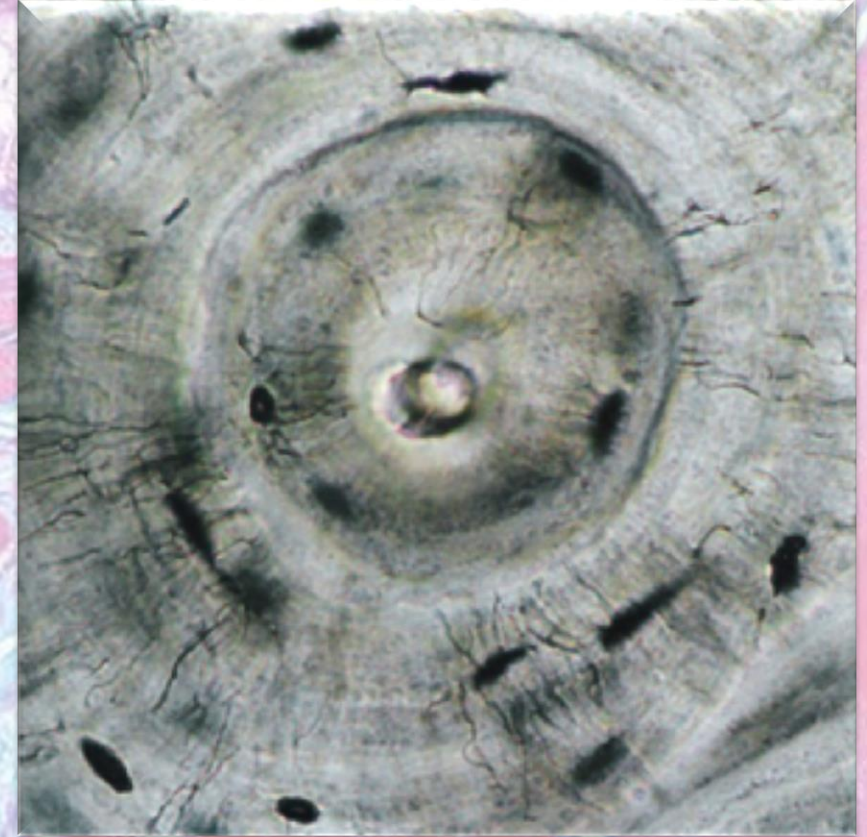
17. Assinale a alternativa que não corresponde ao que é exibido na fotografia:

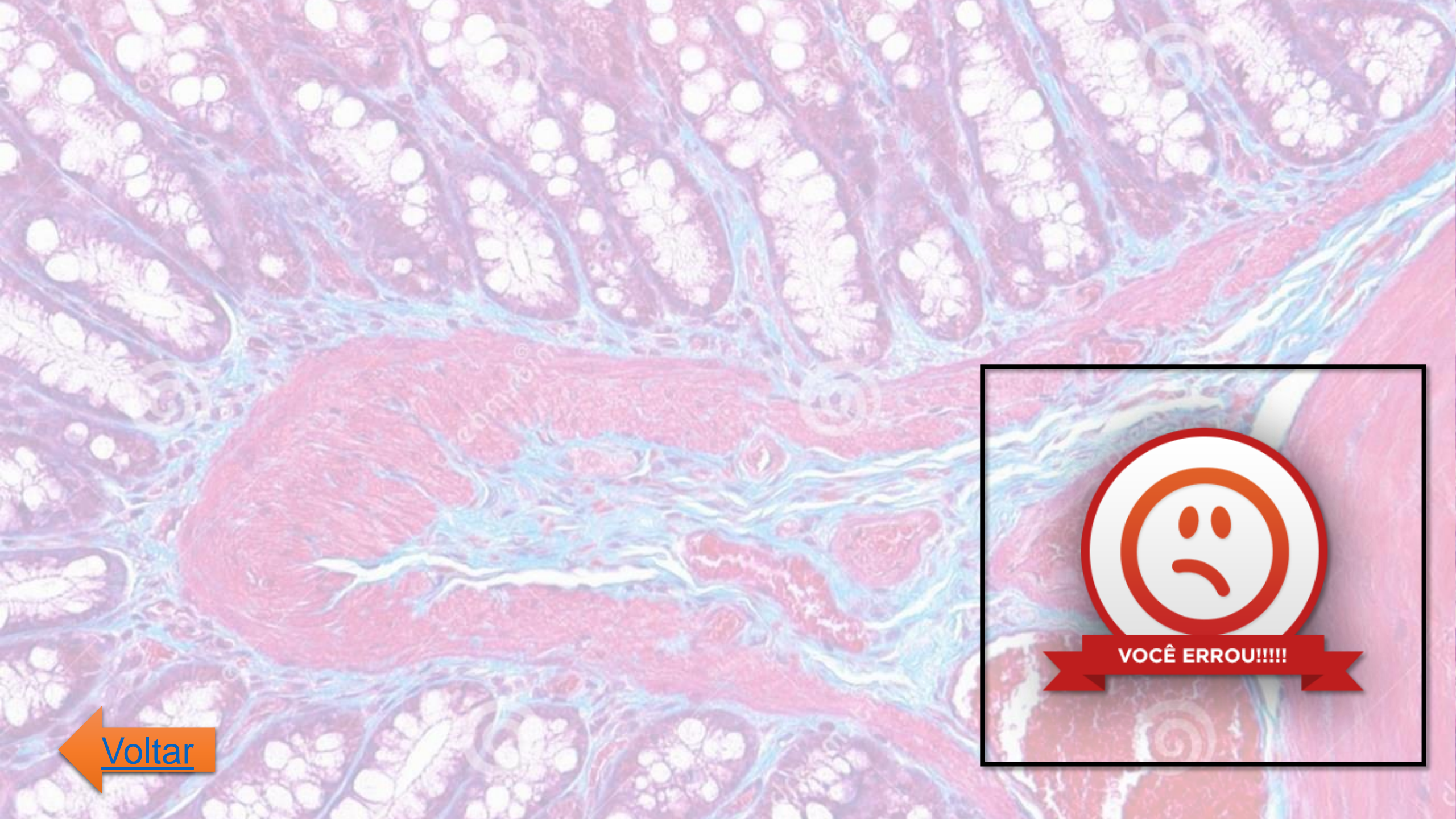
a) osso compacto.

b) sistema de Havers.

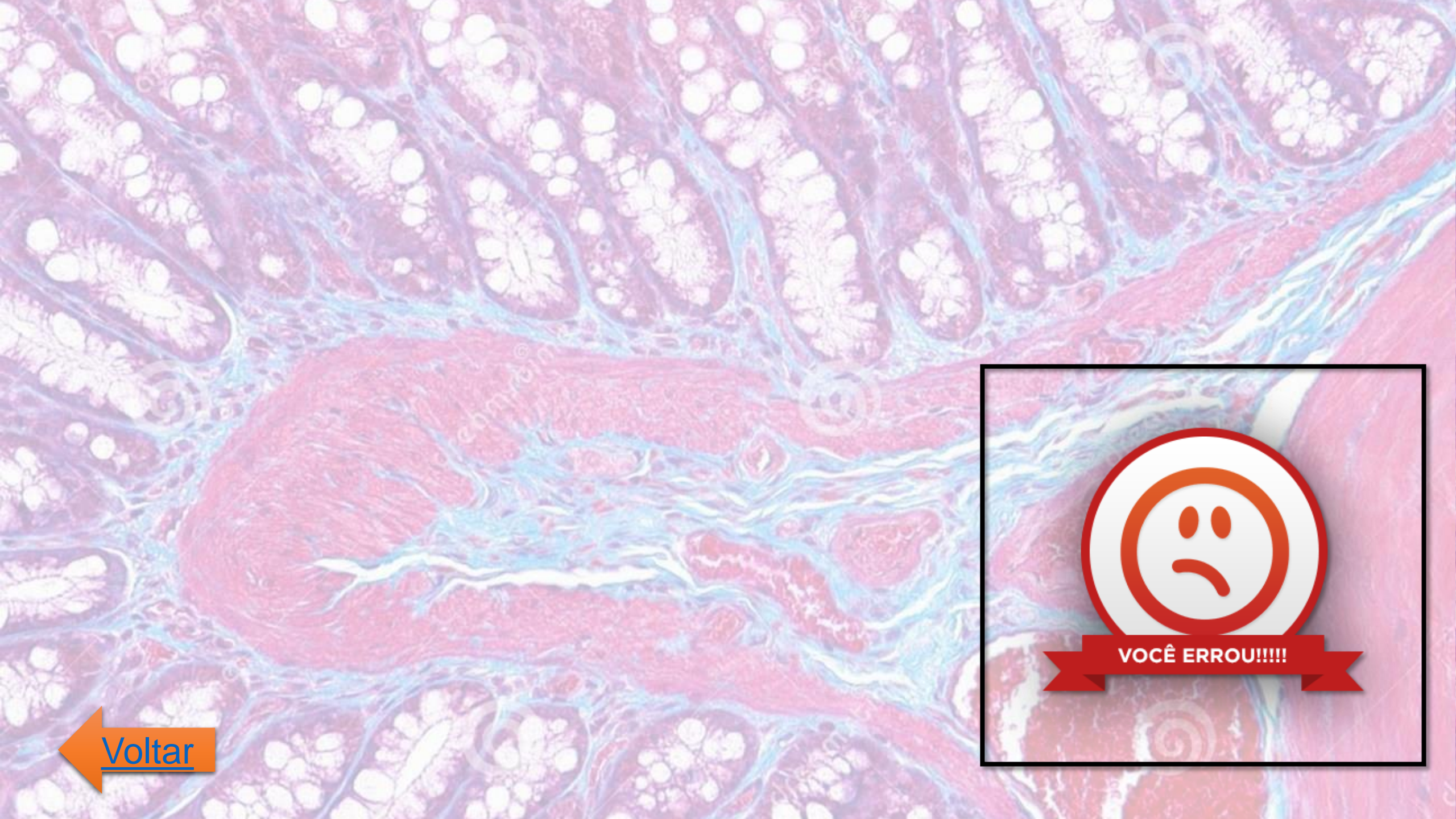
c) canal de Havers, lamelas ósseas, lacunas e canalículos.

d) canal de Volkmann, lamelas ósseas e osteócitos.

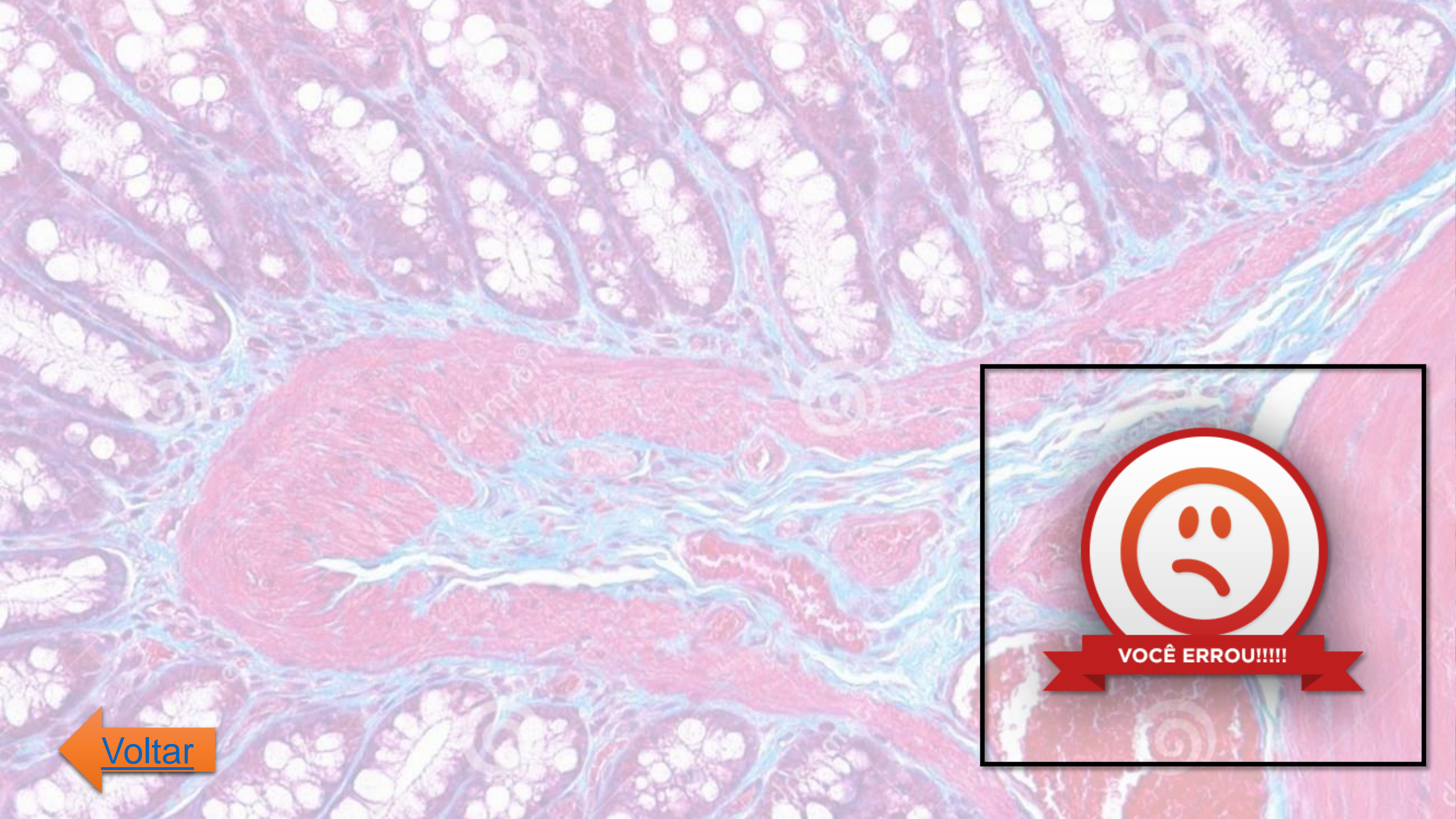




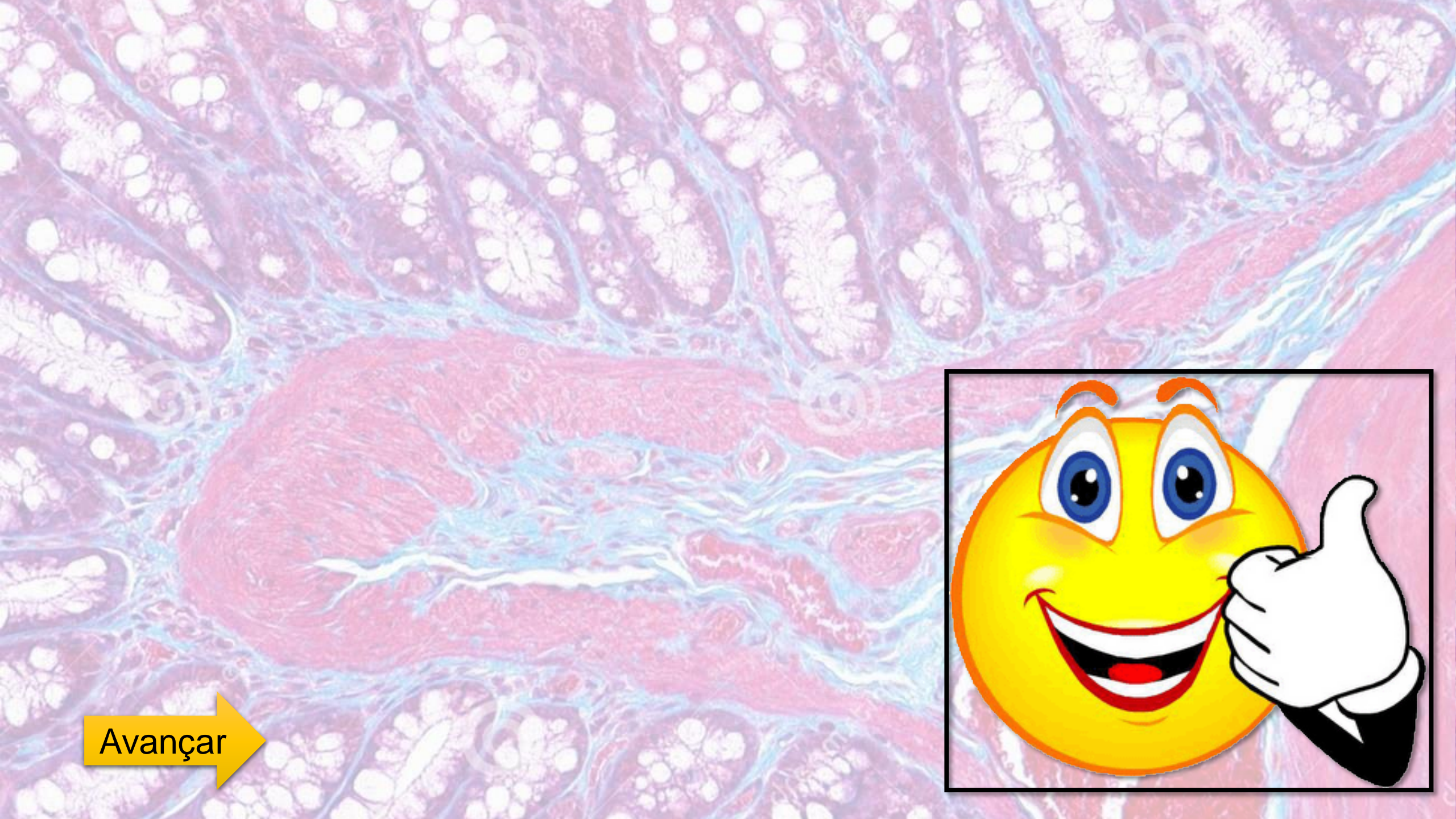
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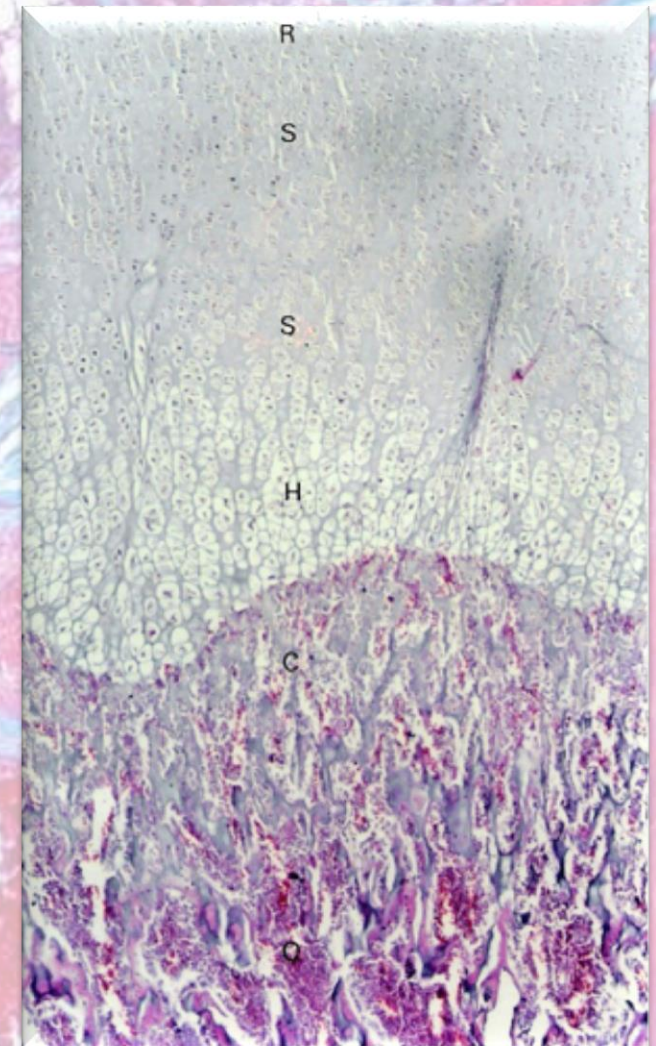
18. Assinale a alternativa incorreta sobre a imagem exibida:

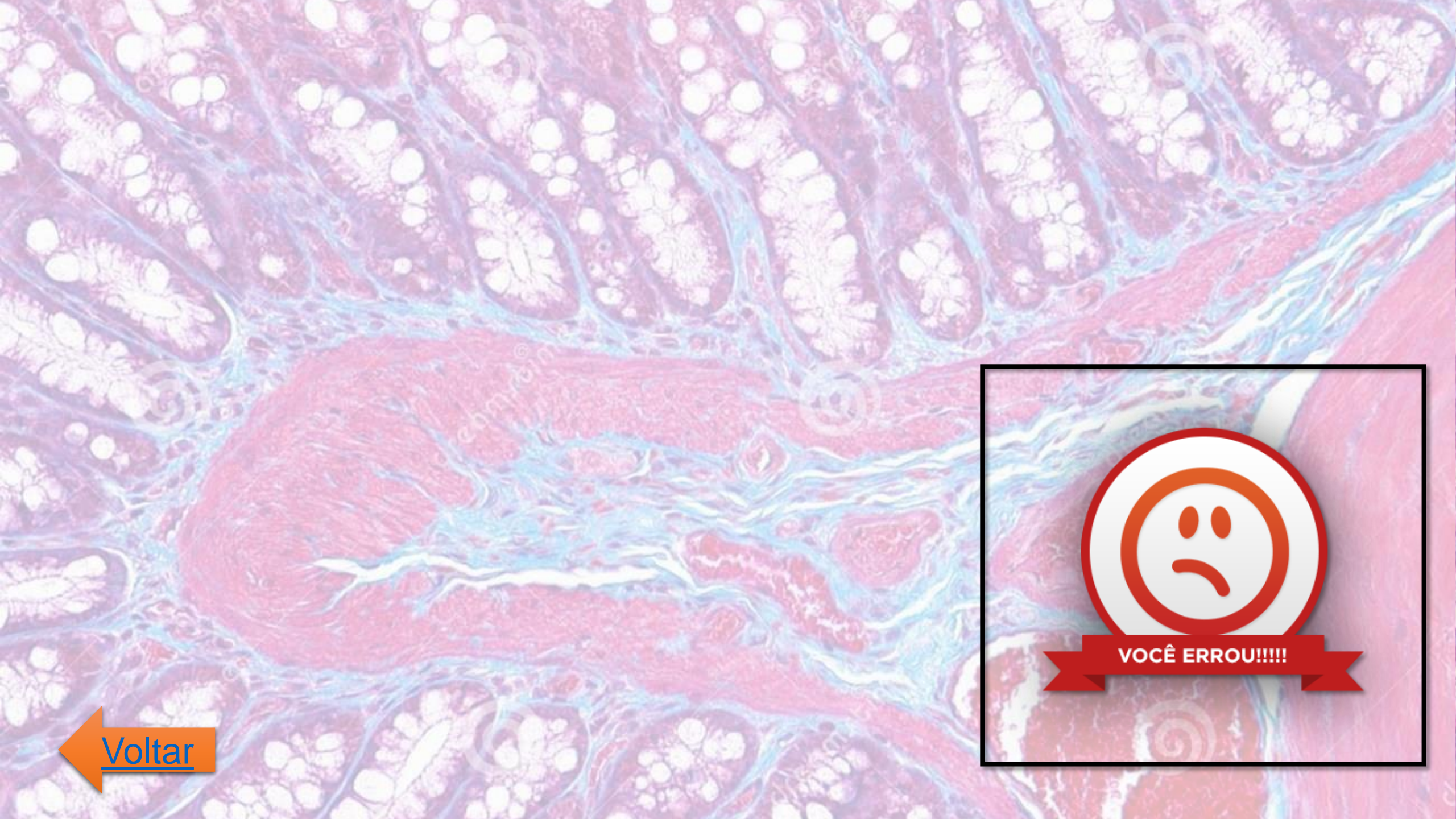
a) corte do disco epifisário.

b) R indica a zona de cartilagem em repouso; S, cartilagem seriada; H, cartilagem hipertrófica; C, cartilagem calcificada, e O, zona de ossificação.

c) é uma placa de cartilagem hialina que permite o crescimento dos ossos longos até os 20 anos.

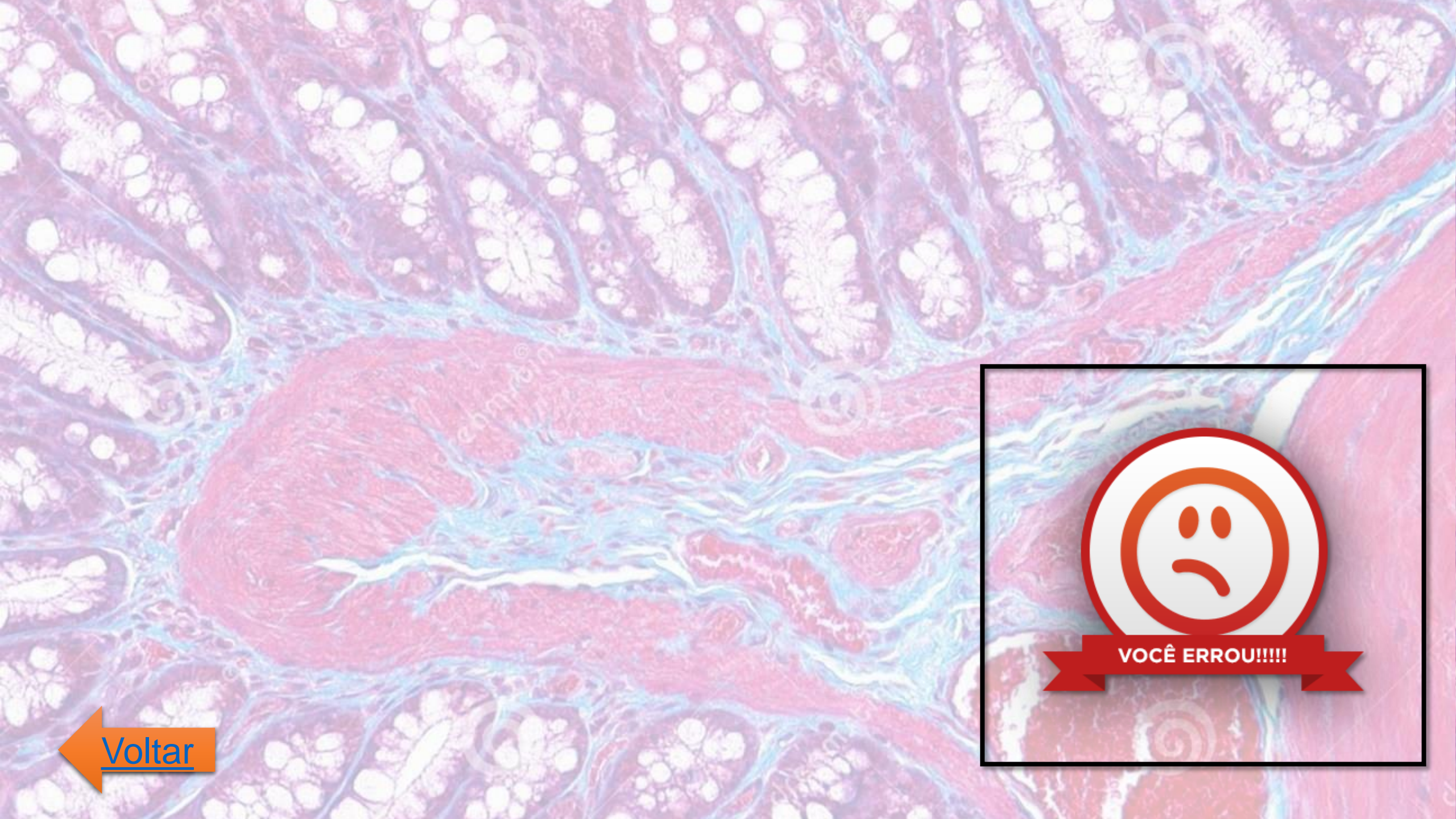
d) este tipo de ossificação é denominada intracondral.



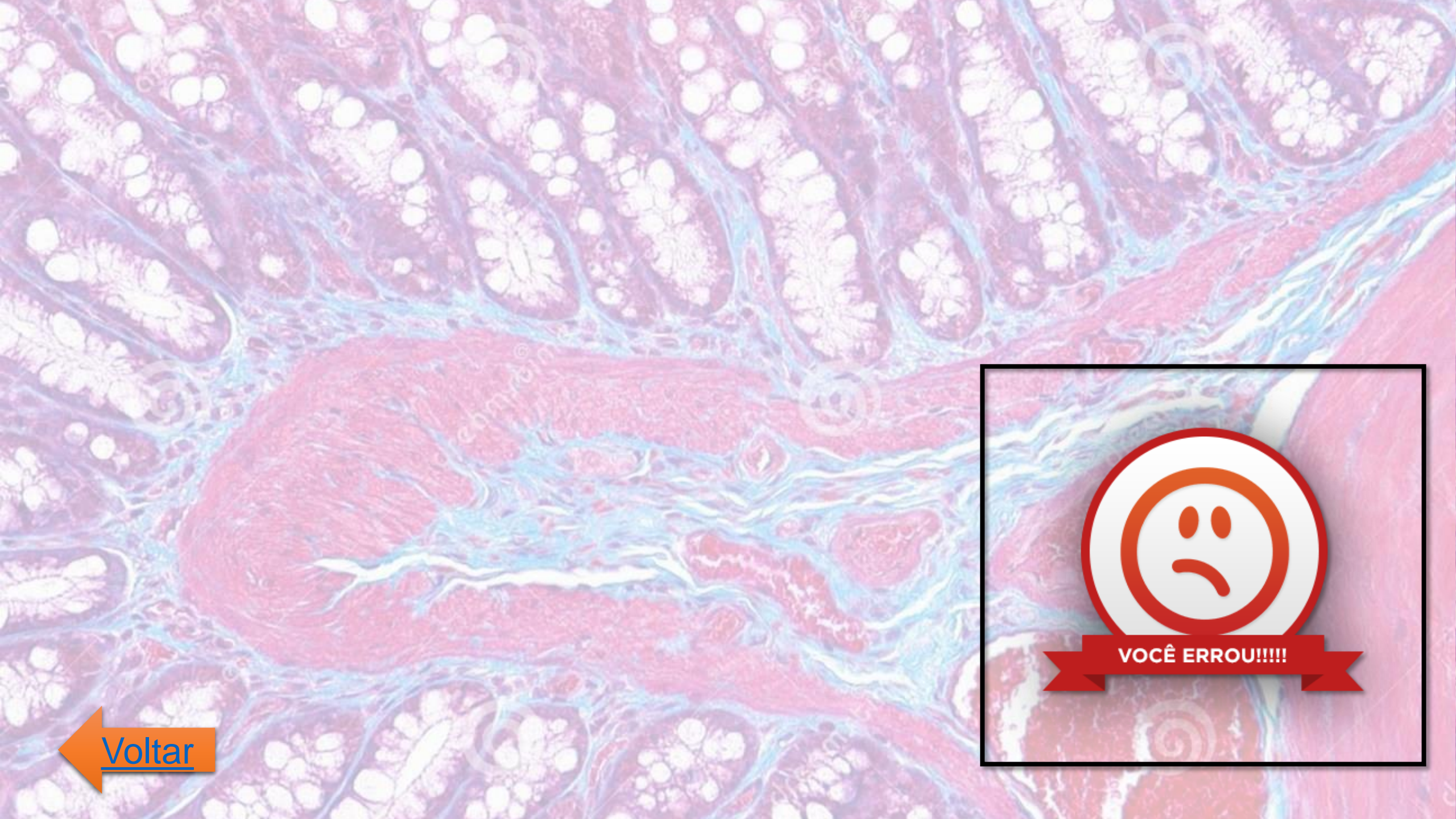


VOCÊ ERROU!!!!

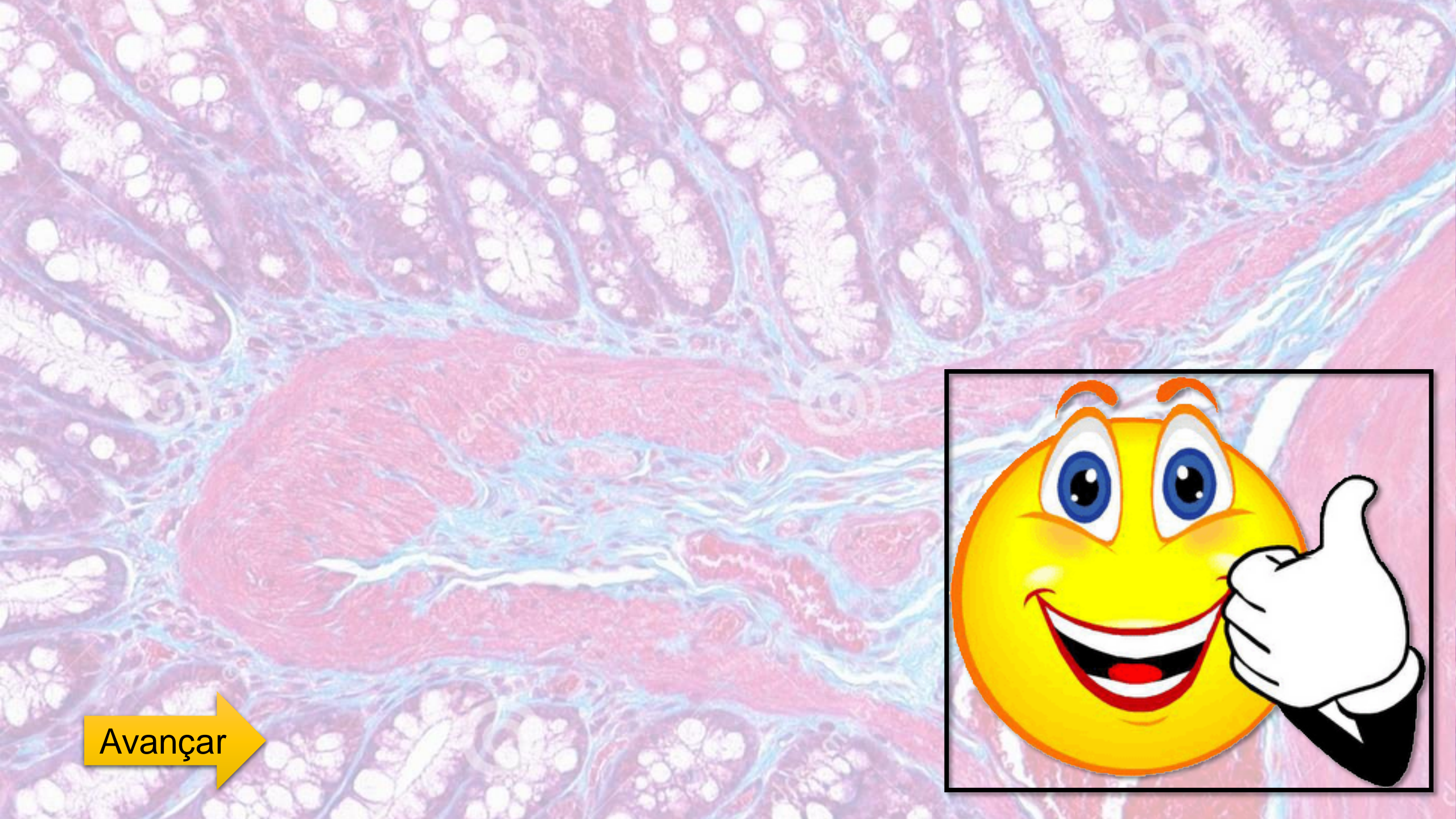
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19. Leia as afirmativas seguintes:

I. É um tipo de tecido conjuntivo especial.

II. Tecido vascularizado.

III. A matriz extracelular é produzida por osteoblastos

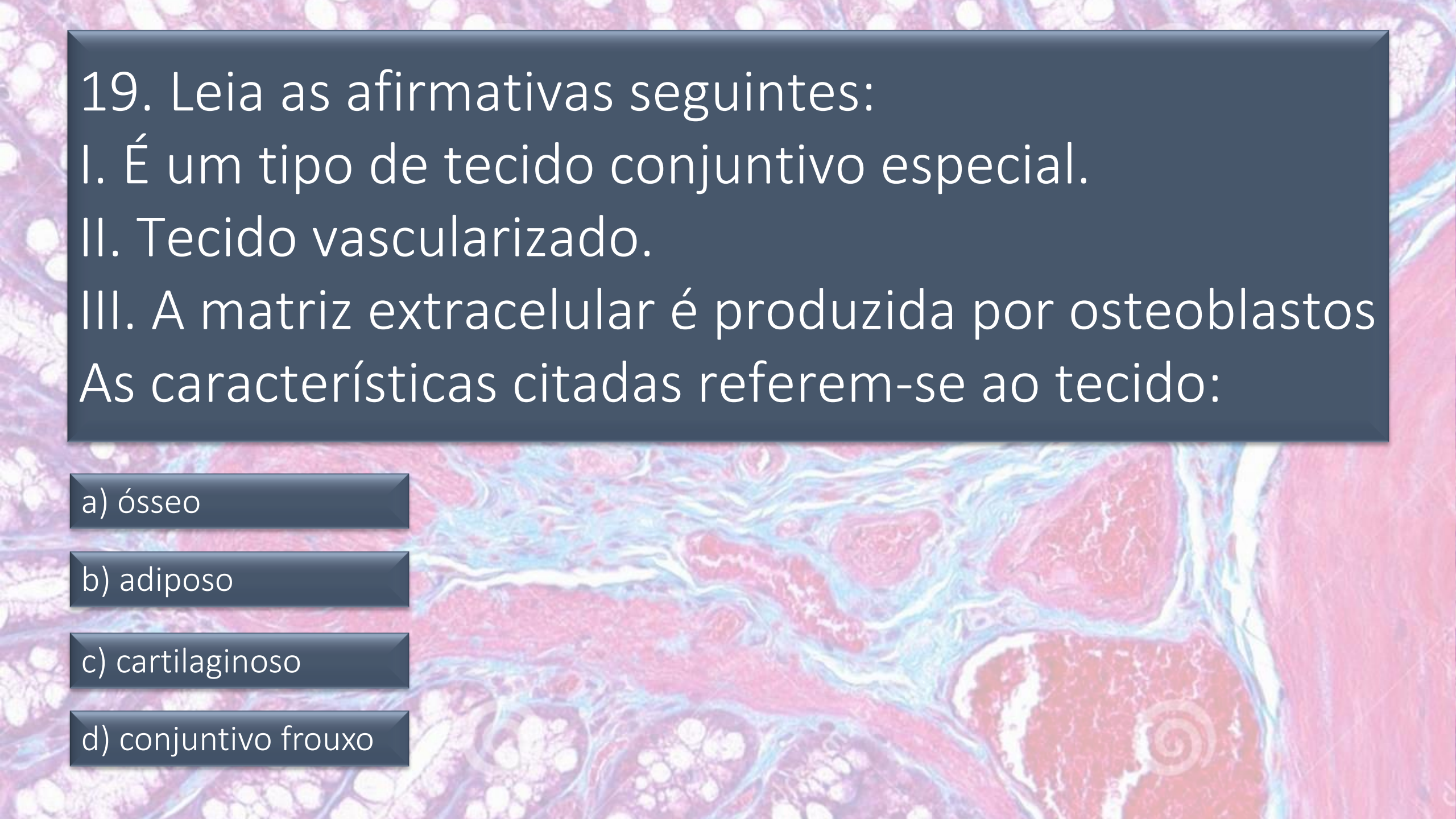
As características citadas referem-se ao tecido:

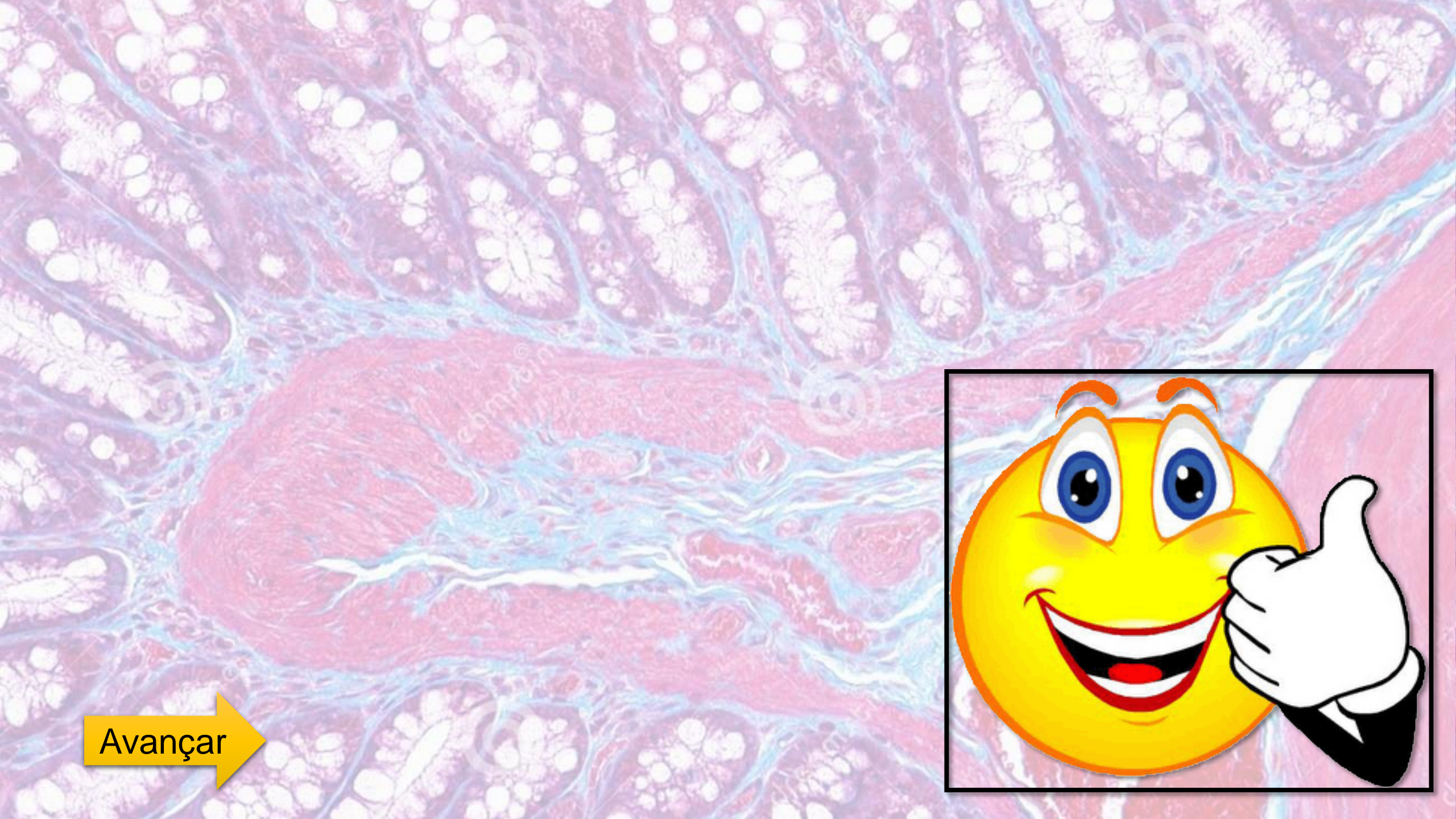
a) ósseo

b) adiposo

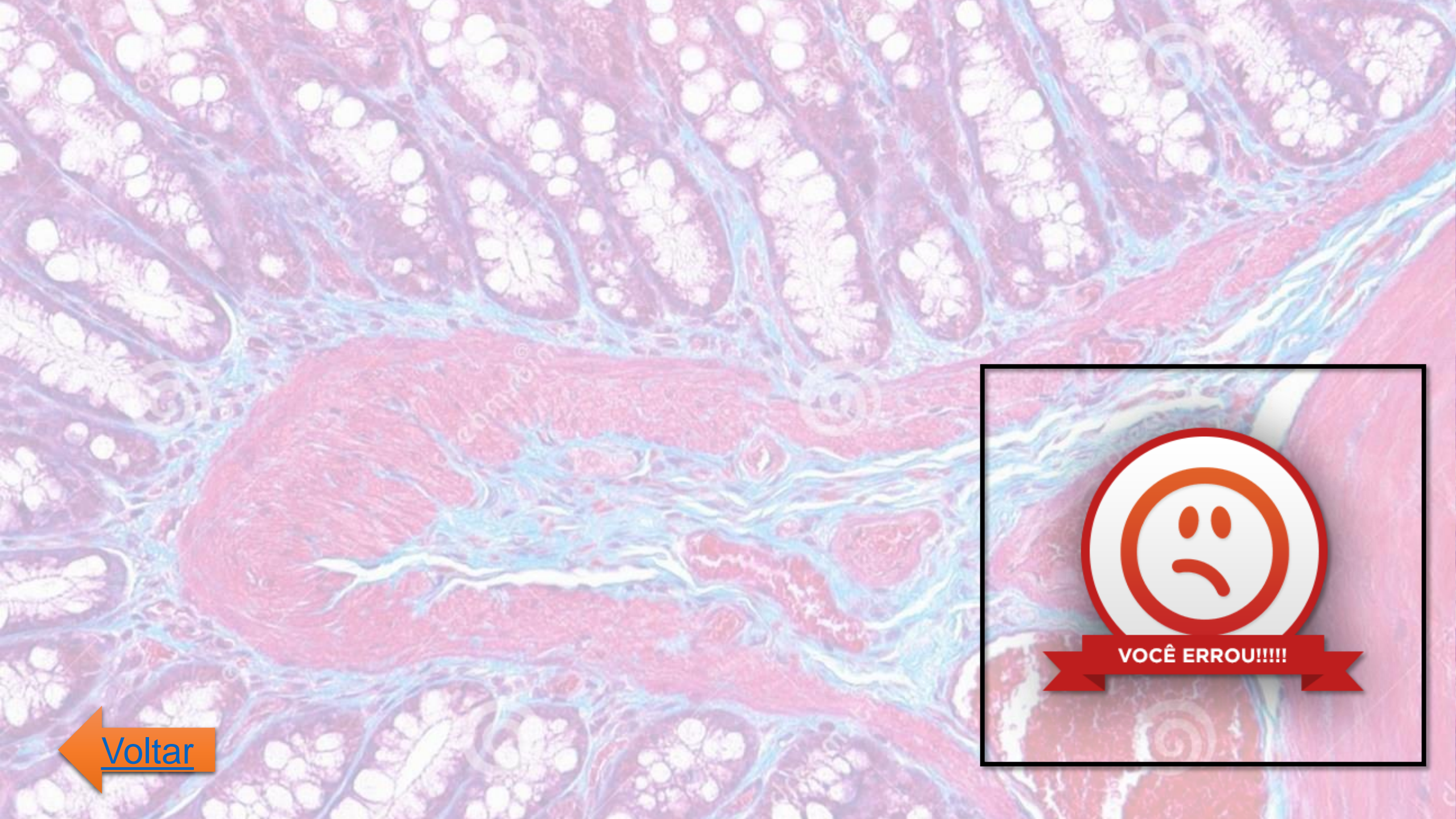
c) cartilaginoso

d) conjuntivo frouxo

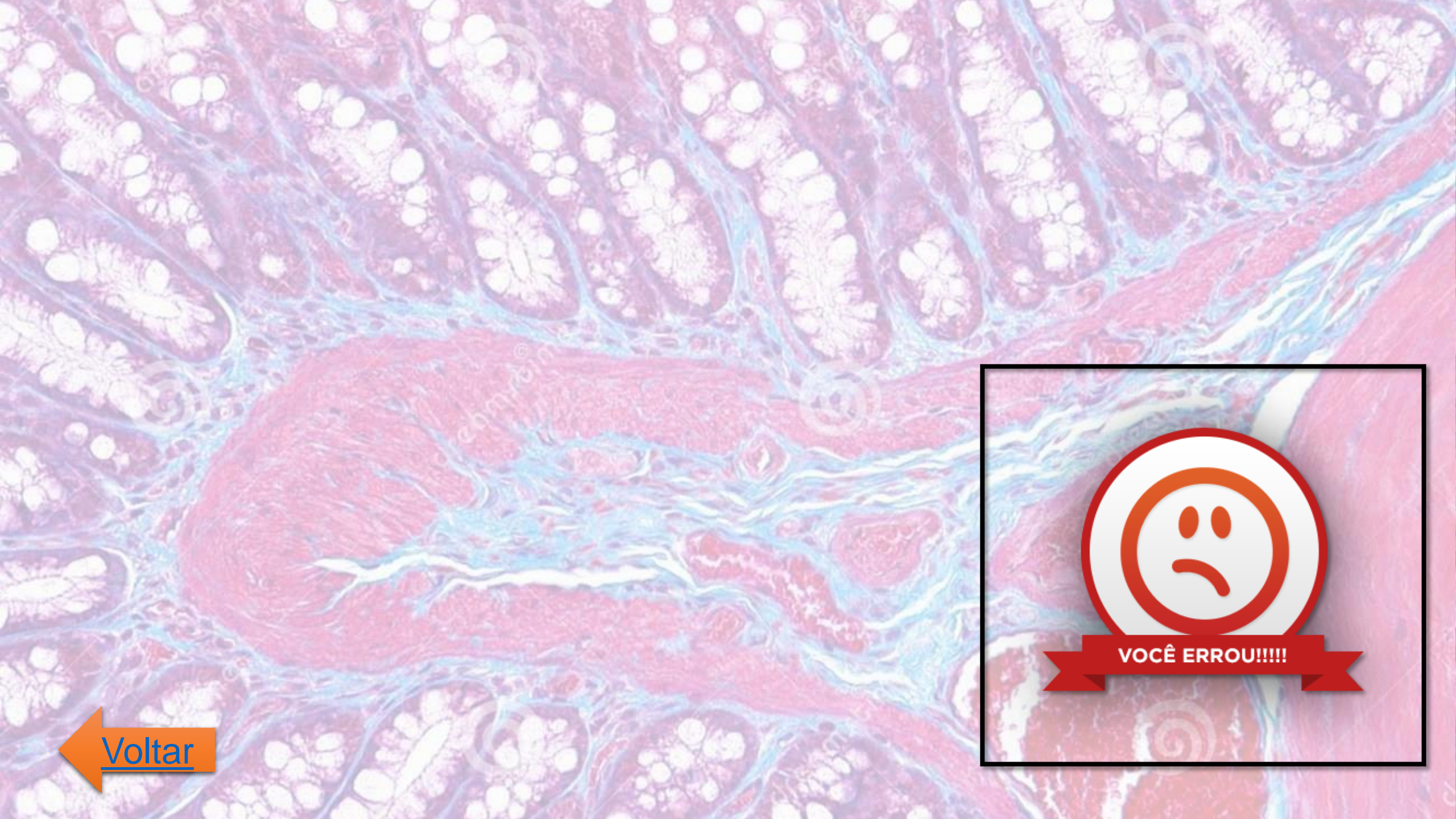




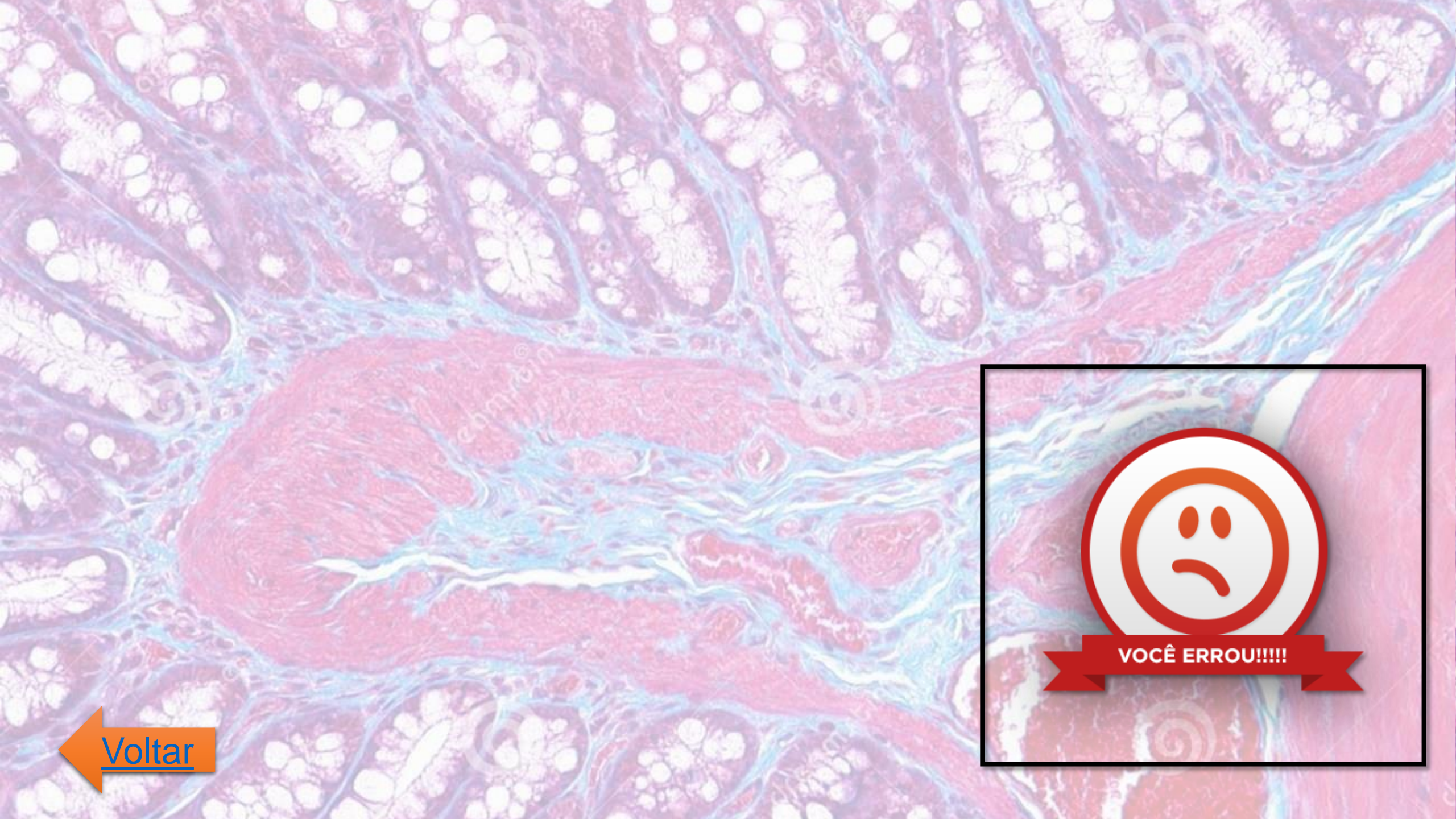
Avançar



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20. As células que formam o tecido ósseo são os _____, que se situam em lacunas no interior da matriz óssea, os _____, que produzem a parte orgânica da matriz e os _____, que são células gigantes multinucleadas, relacionadas com a reabsorção do tecido ósseo.

Assinale a alternativa cujas palavras completam correta e respectivamente as lacunas da frase acima.

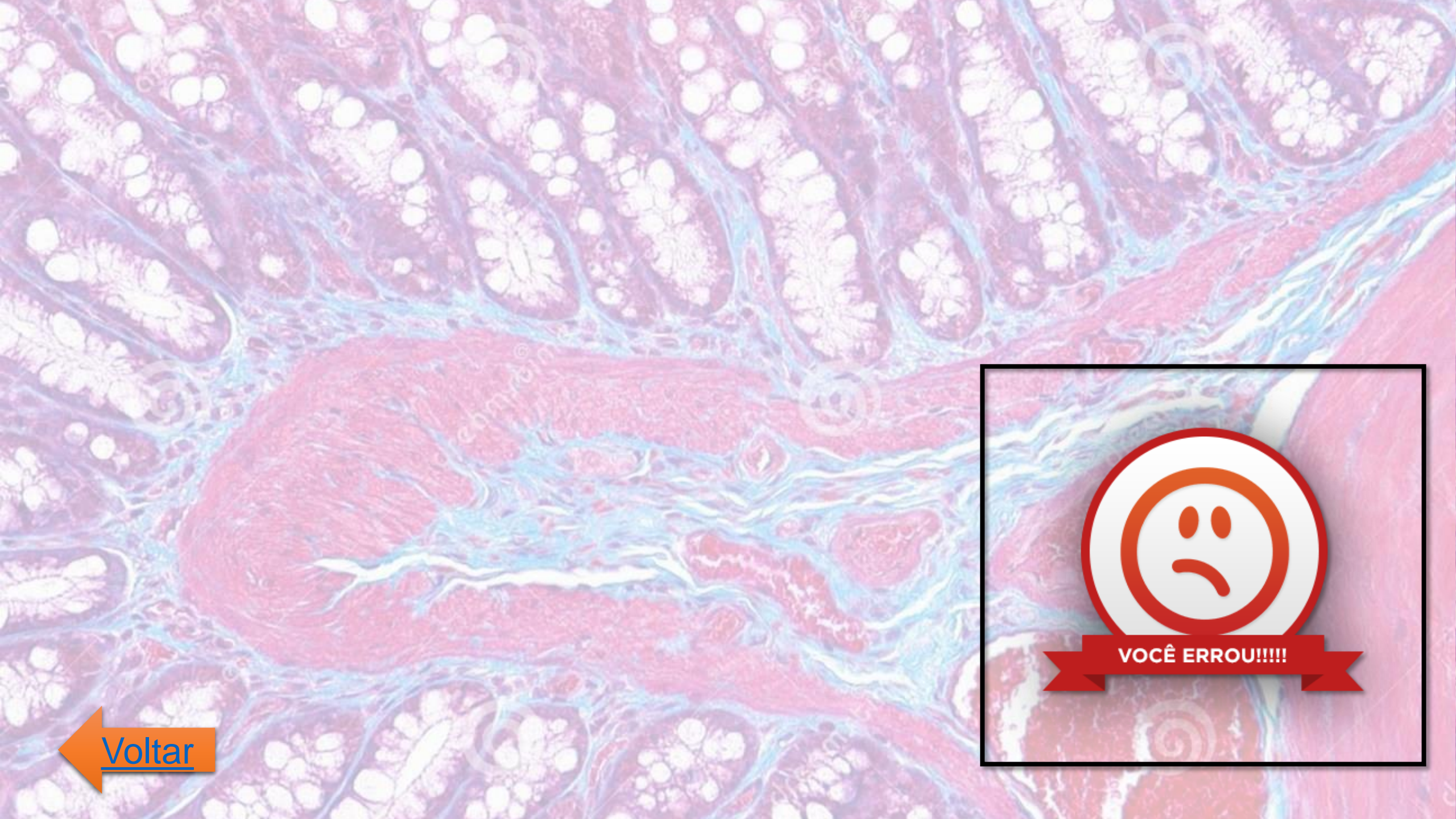
a) osteoblastos – osteoclastos – osteócitos

d) osteócitos – osteoclastos – osteoblastos

b) osteoblastos – osteócitos – osteoclastos

e) osteócitos – osteoblastos – osteoclastos

c) osteoclastos – osteoblastos – osteócitos

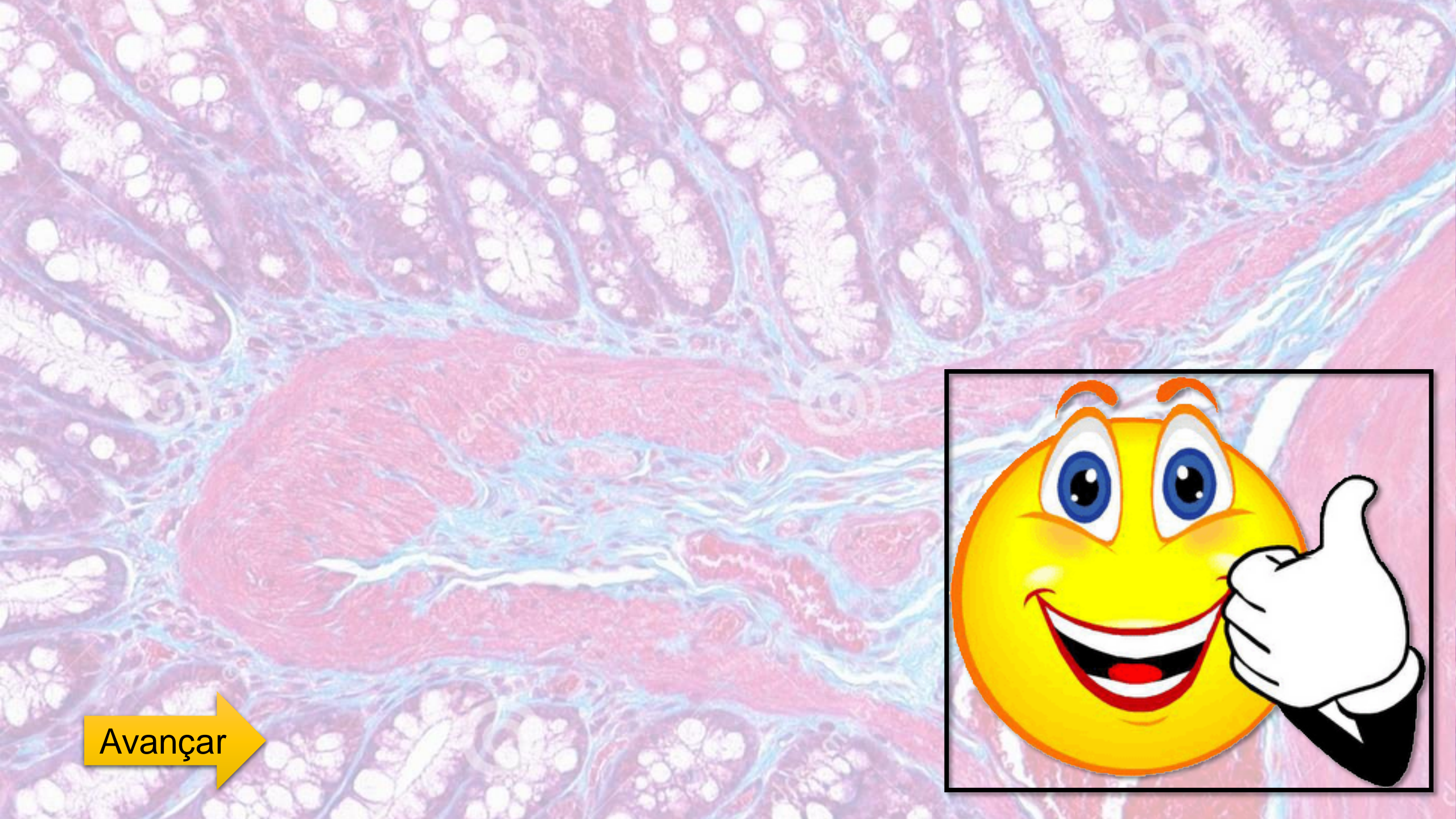


VOCÊ ERROU!!!!

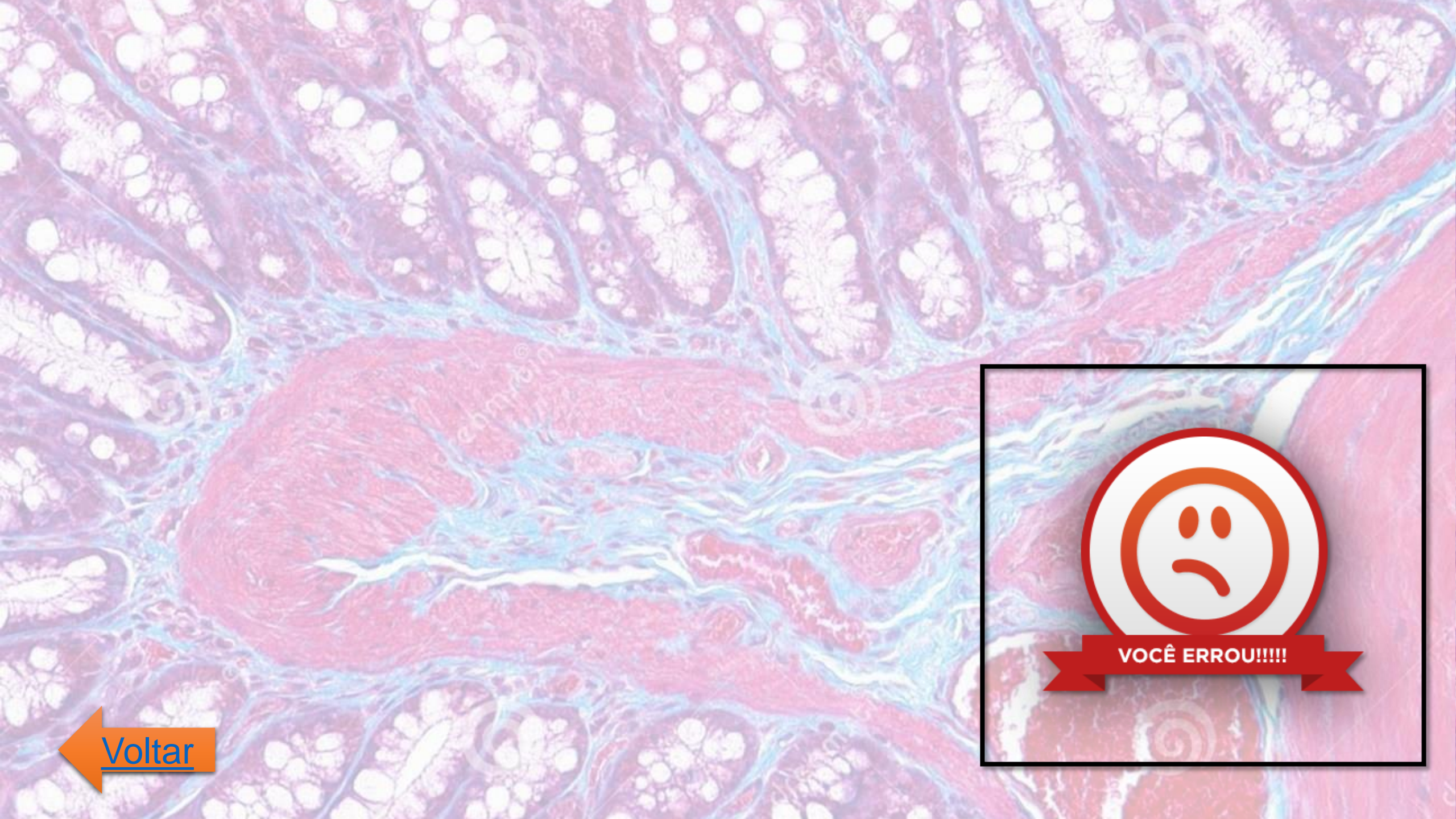
A red-bordered box containing a sad face icon (a white circle with a red outline and a downward-curving mouth) and a red ribbon banner with the text "VOCÊ ERROU!!!!" in white capital letters.

 Voltar

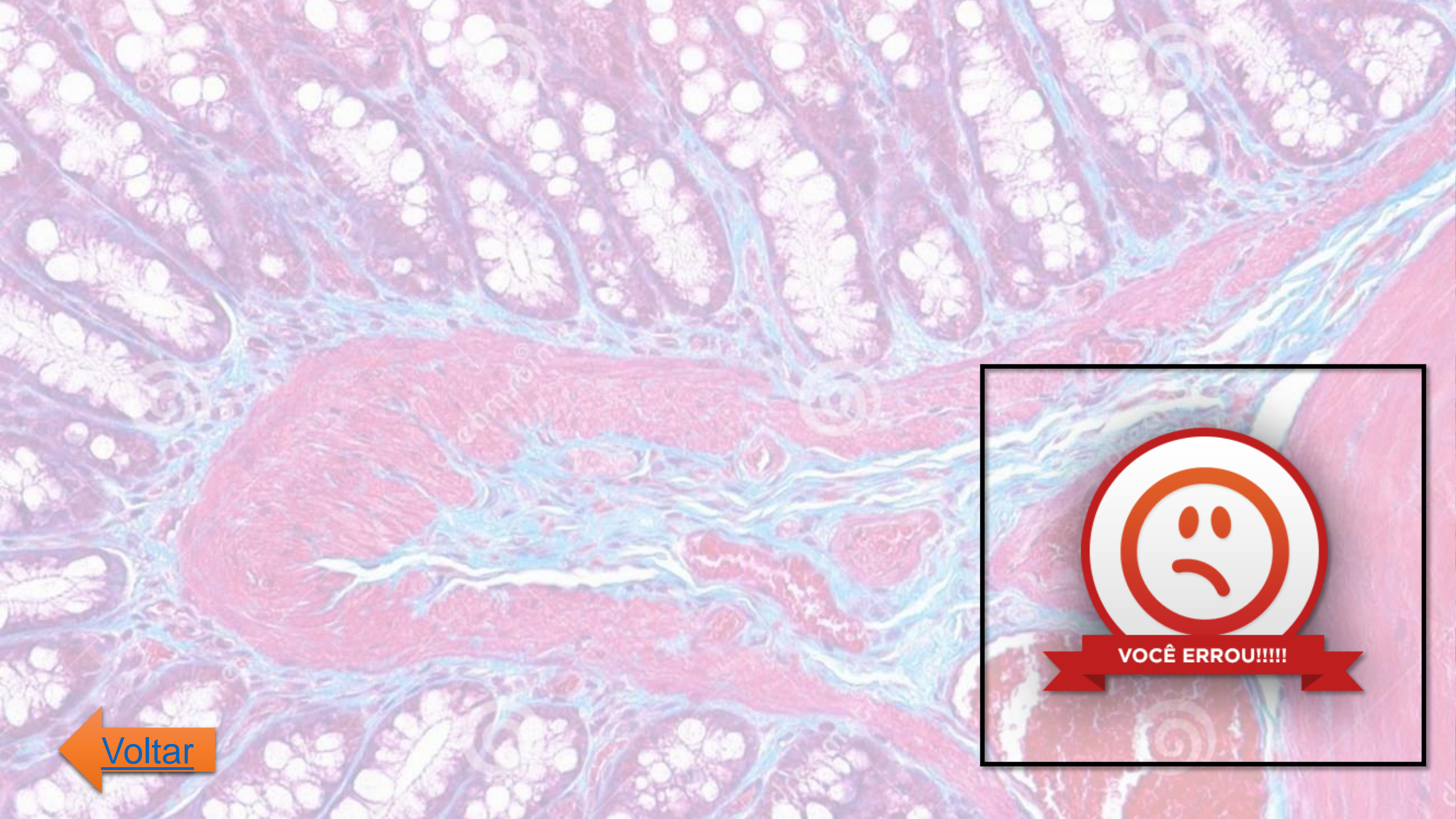
An orange arrow pointing to the left, with the word "Voltar" written in blue text below it.



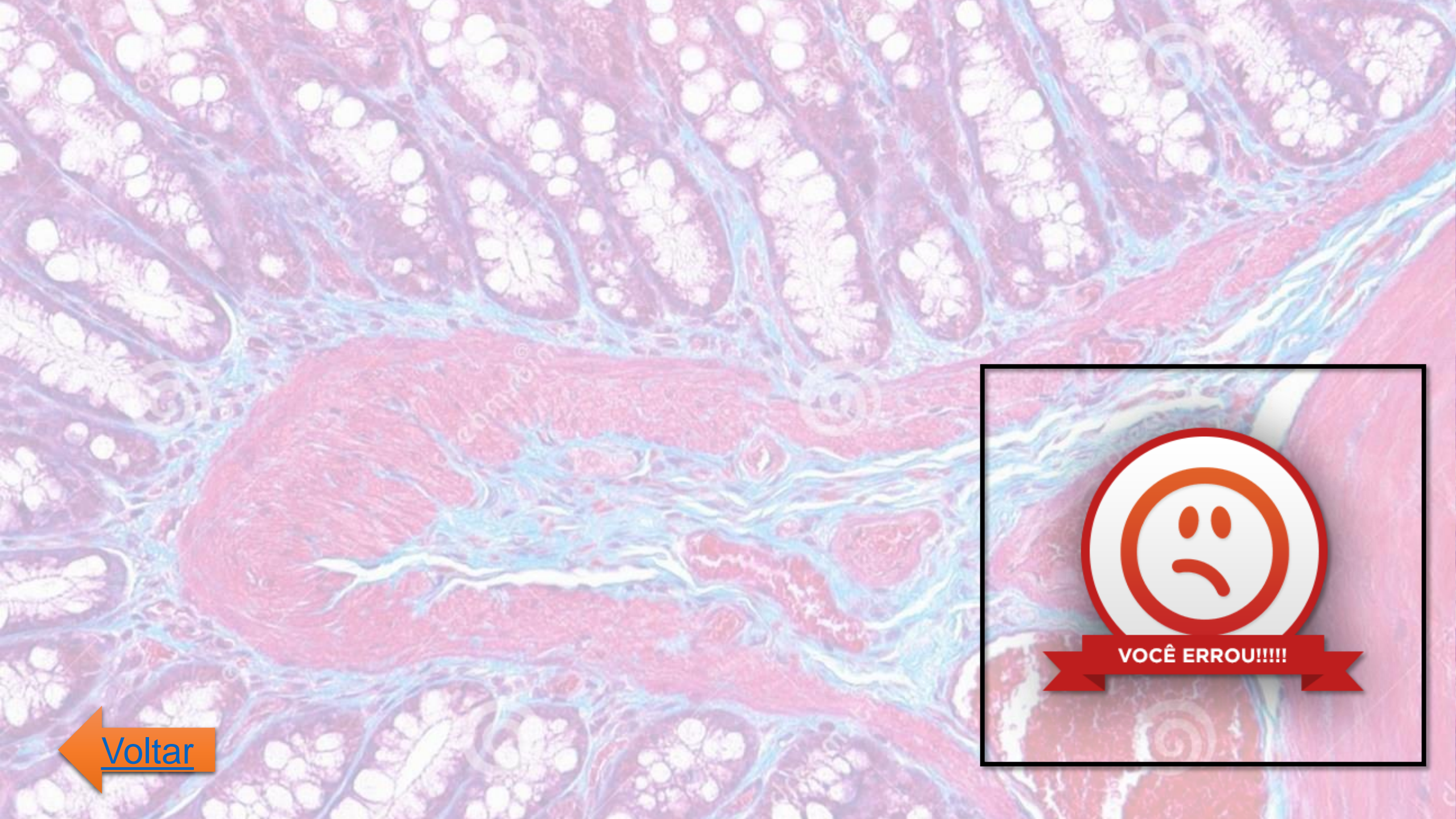
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INICIO



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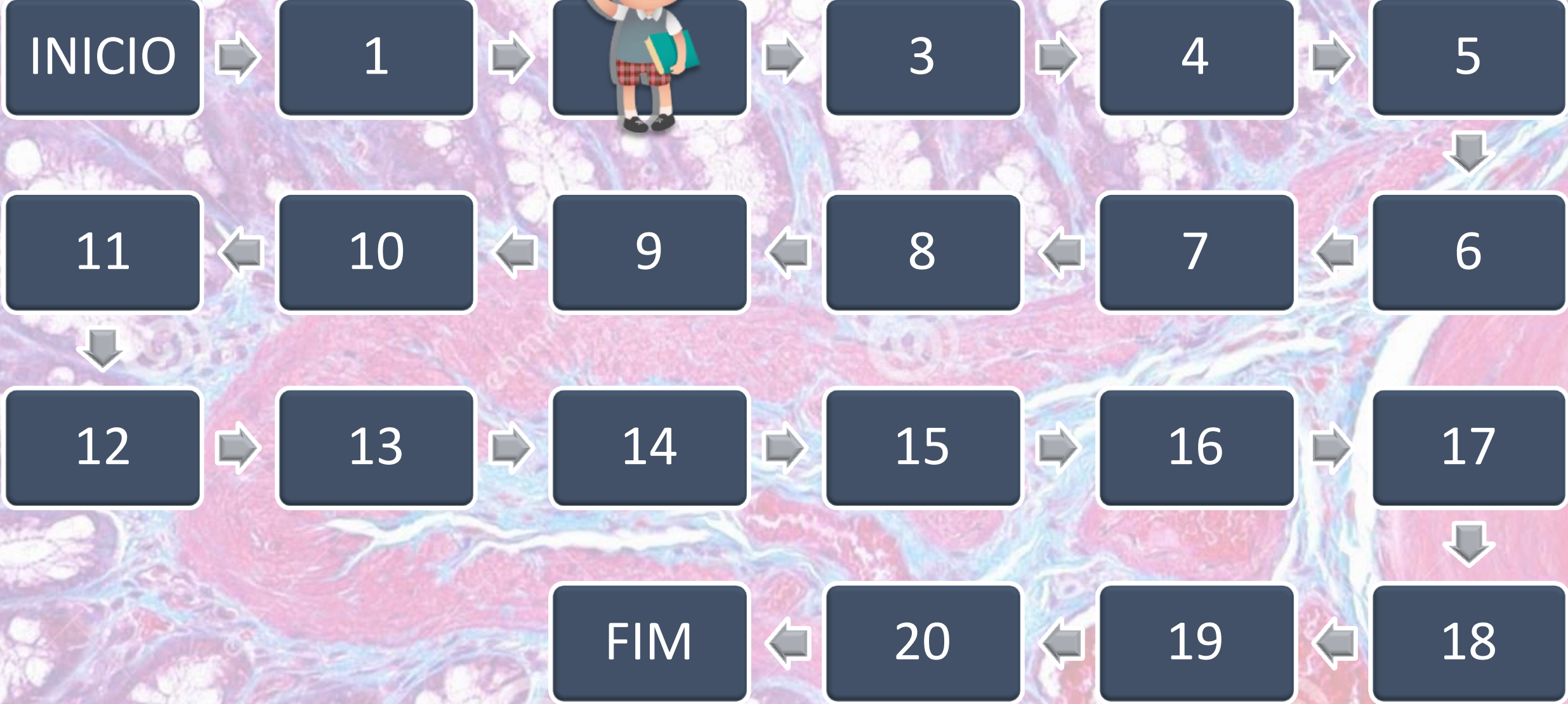
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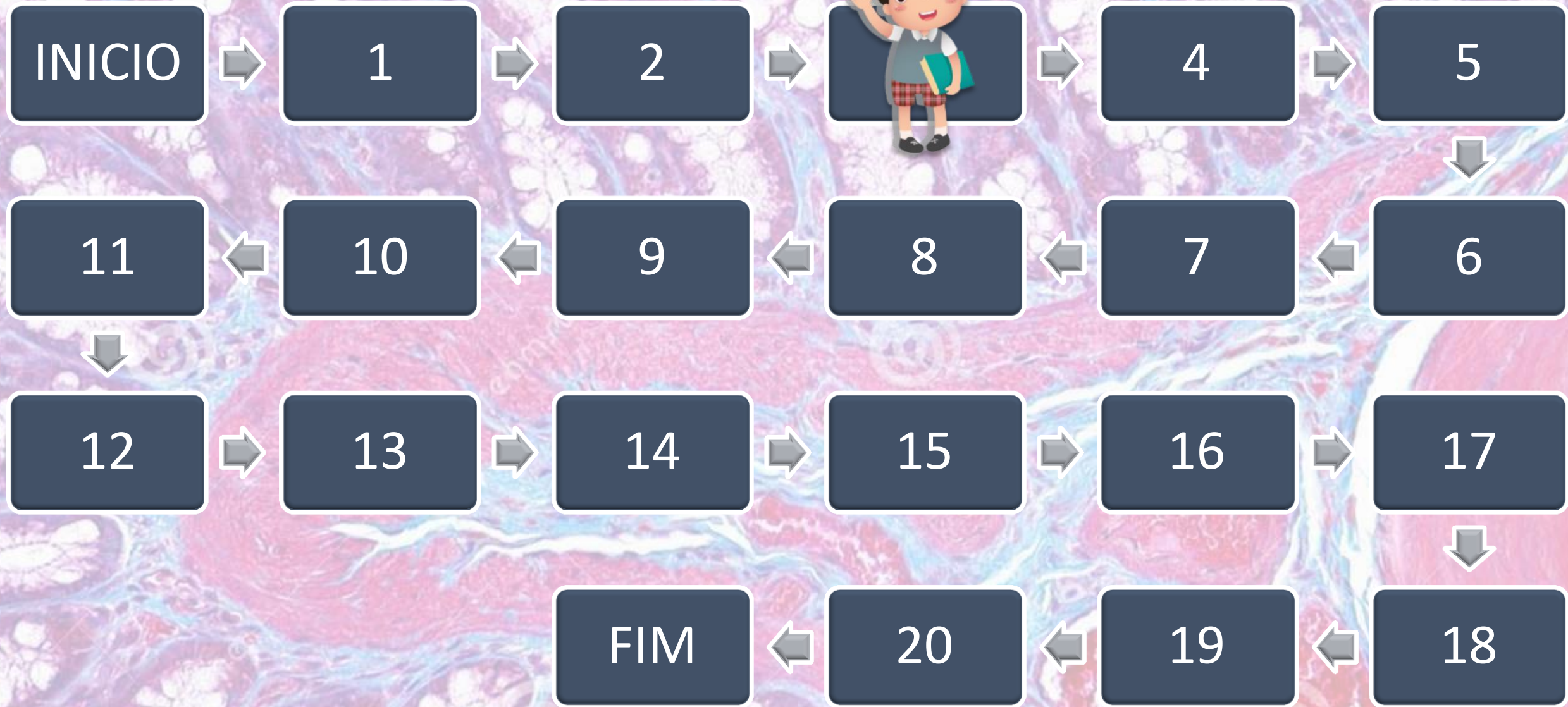
FIM

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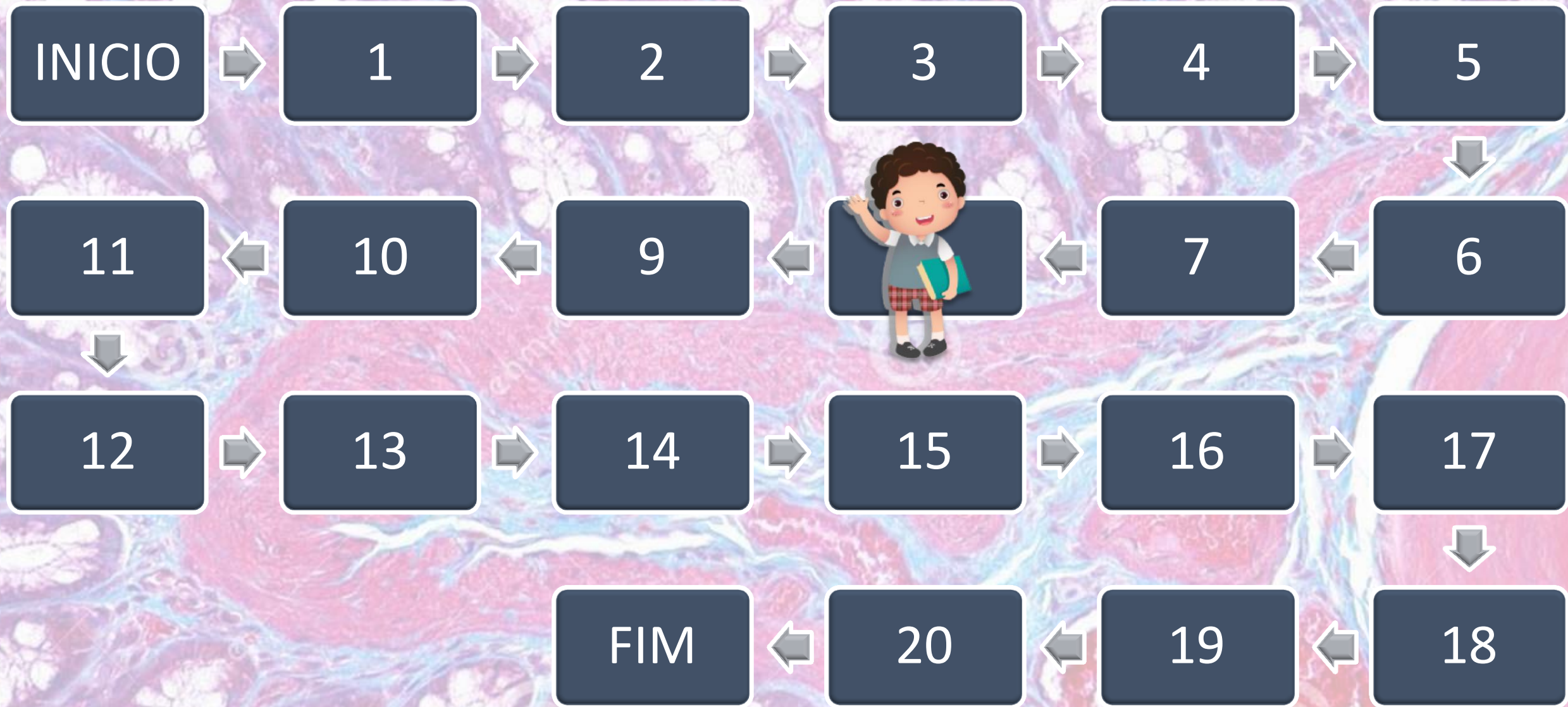


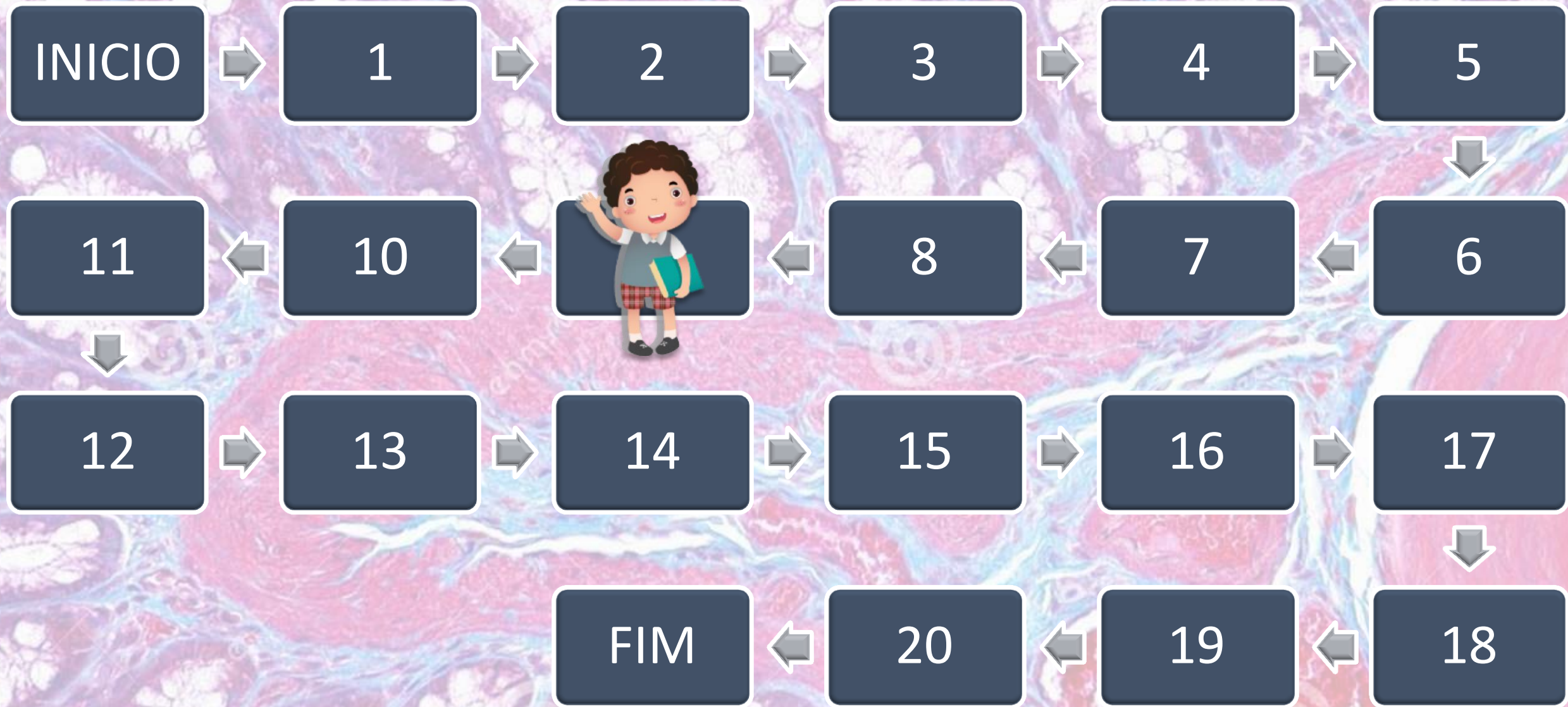












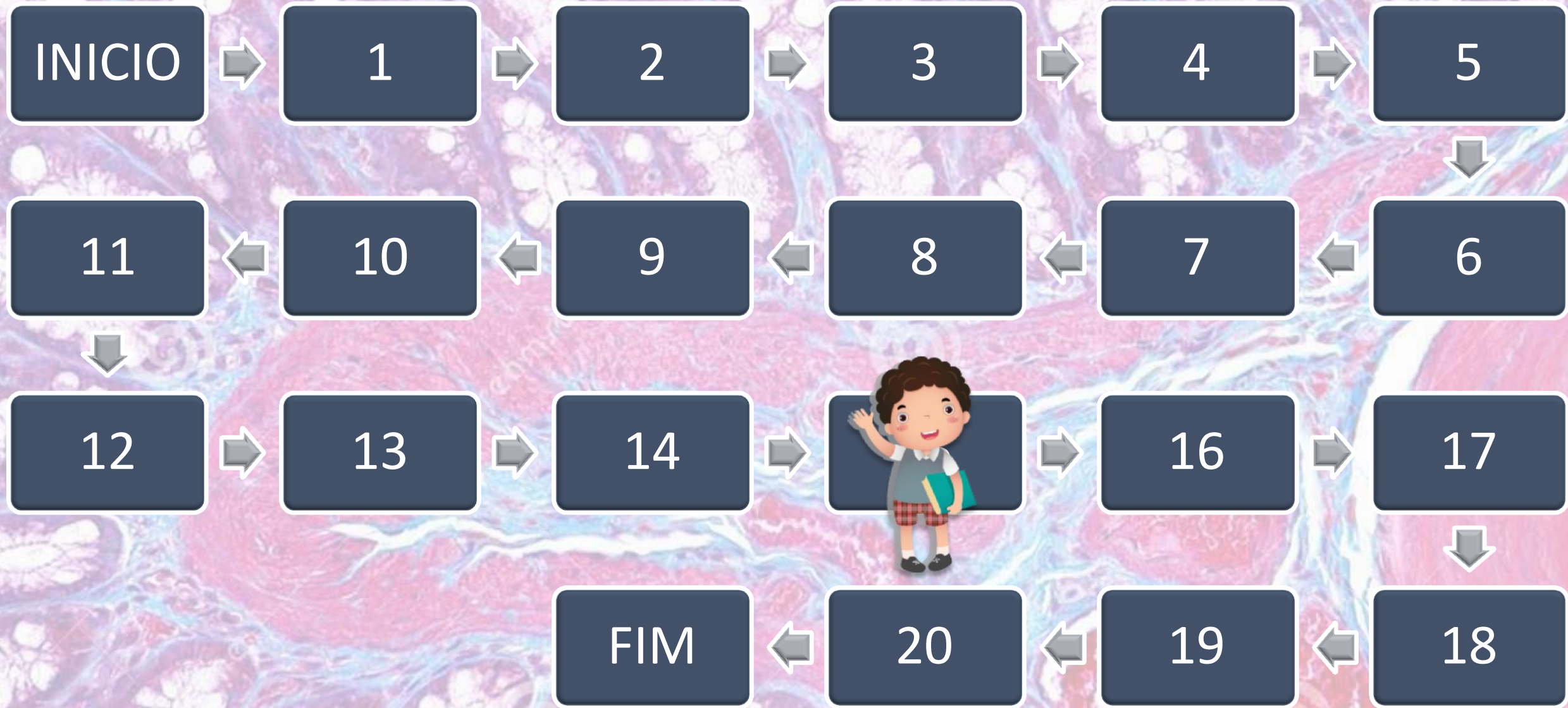








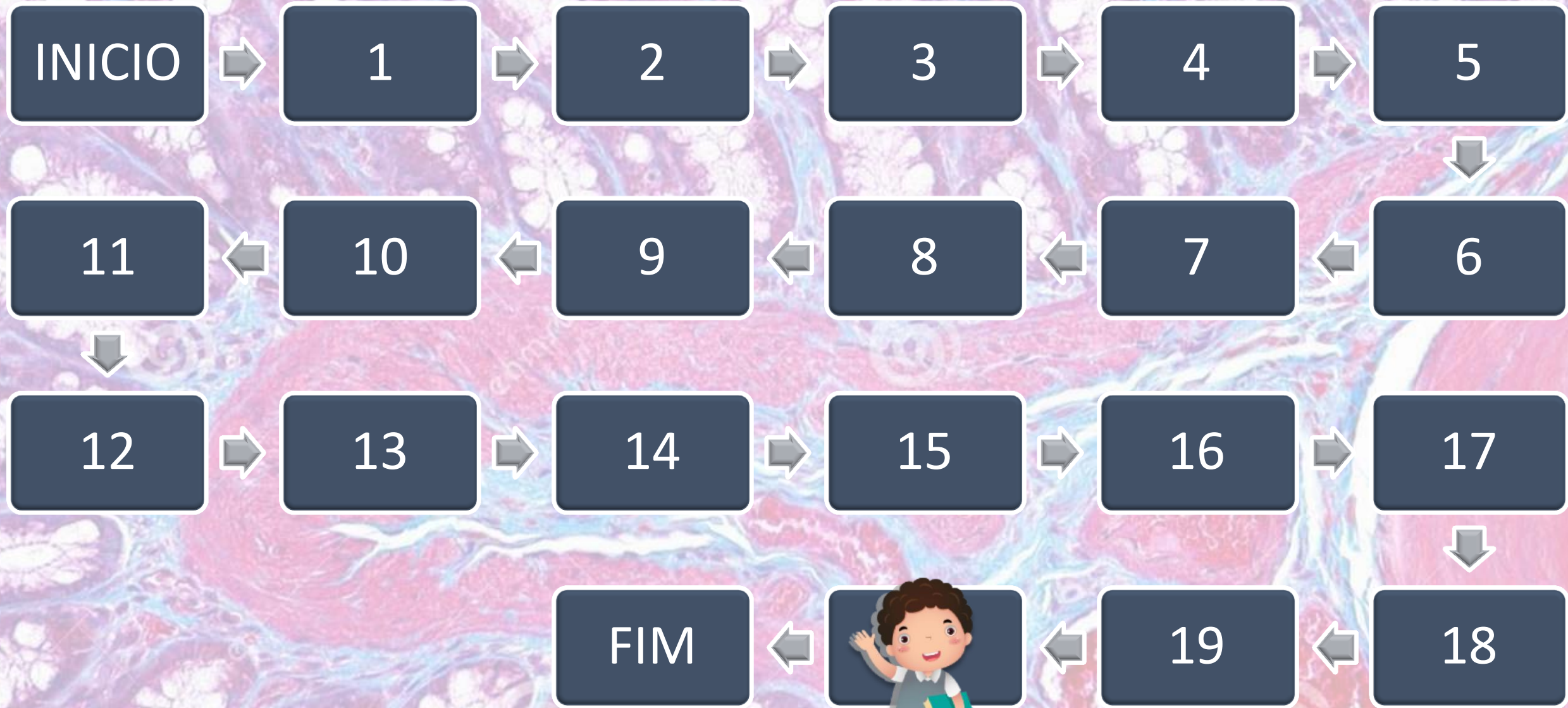


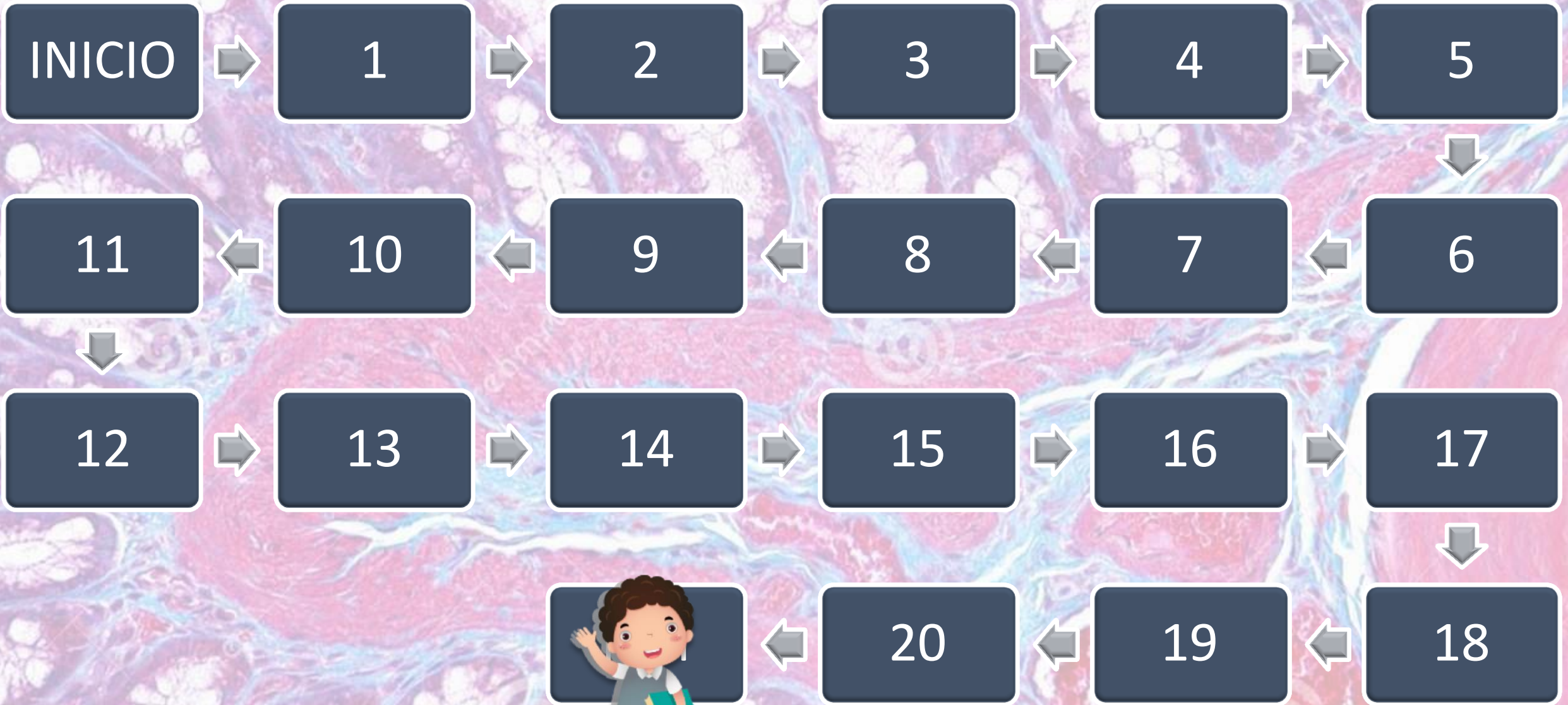






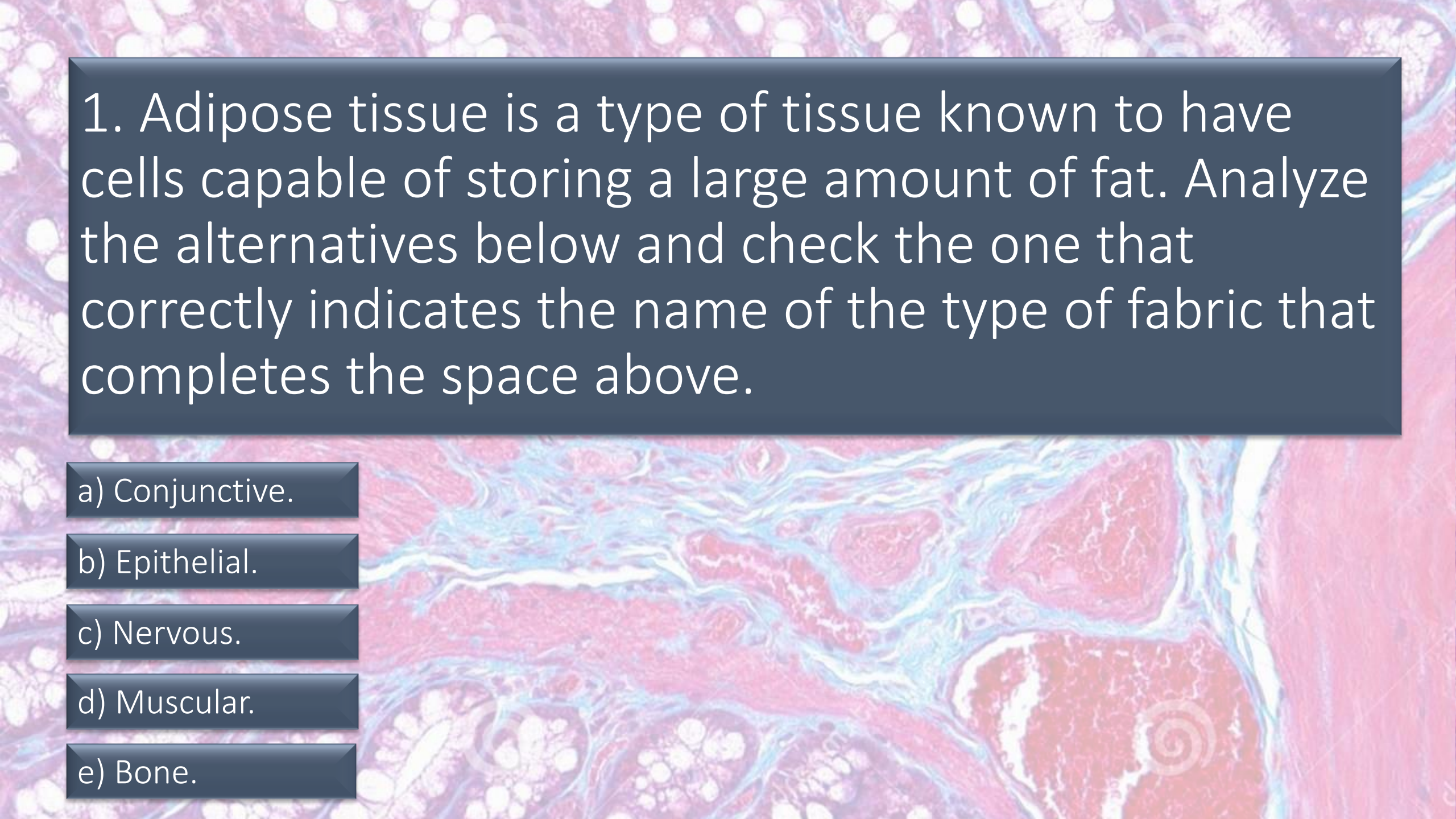






ADIPOSE TISSUE





1. Adipose tissue is a type of tissue known to have cells capable of storing a large amount of fat. Analyze the alternatives below and check the one that correctly indicates the name of the type of fabric that completes the space above.

a) Conjunctive.

b) Epithelial.

c) Nervous.

d) Muscular.

e) Bone.

Alternative “a”. Adipose tissue is a type of connective tissue that has cells specialized in the accumulation of fat.

Avançar

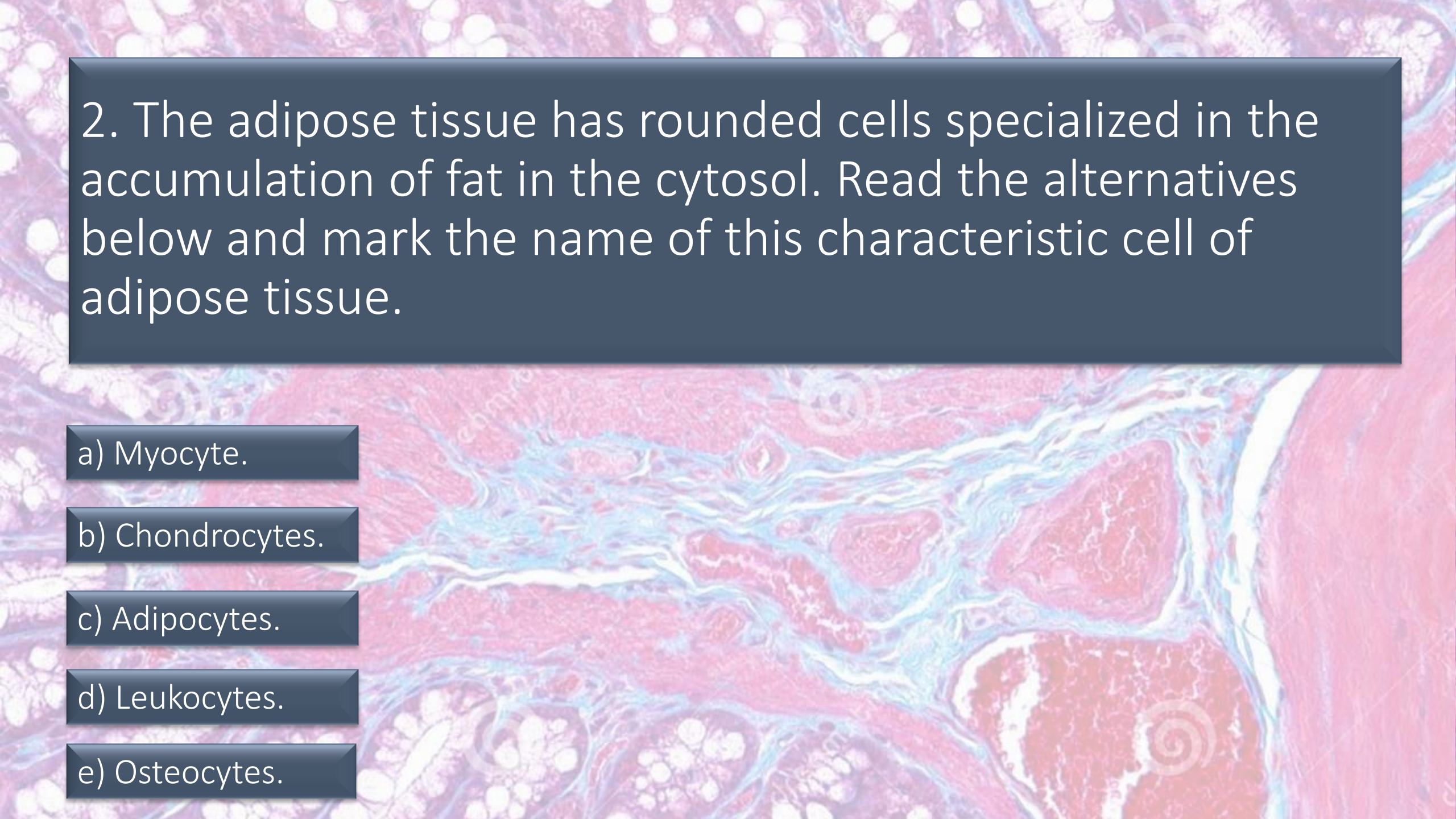












2. The adipose tissue has rounded cells specialized in the accumulation of fat in the cytosol. Read the alternatives below and mark the name of this characteristic cell of adipose tissue.

a) Myocyte.

b) Chondrocytes.

c) Adipocytes.

d) Leukocytes.

e) Osteocytes.





← Voltar

Alternative “c”. The typical cells of adipose tissue are adipocytes.

Avançar







3. In the adipose tissue there are cells that have a large amount of fat inside. This fat may be fused into a single large droplet, which occupies most of the cell, or distributed in small droplets throughout the cytoplasm. The adipose tissue that contains cells with a single drop of lipid is called:

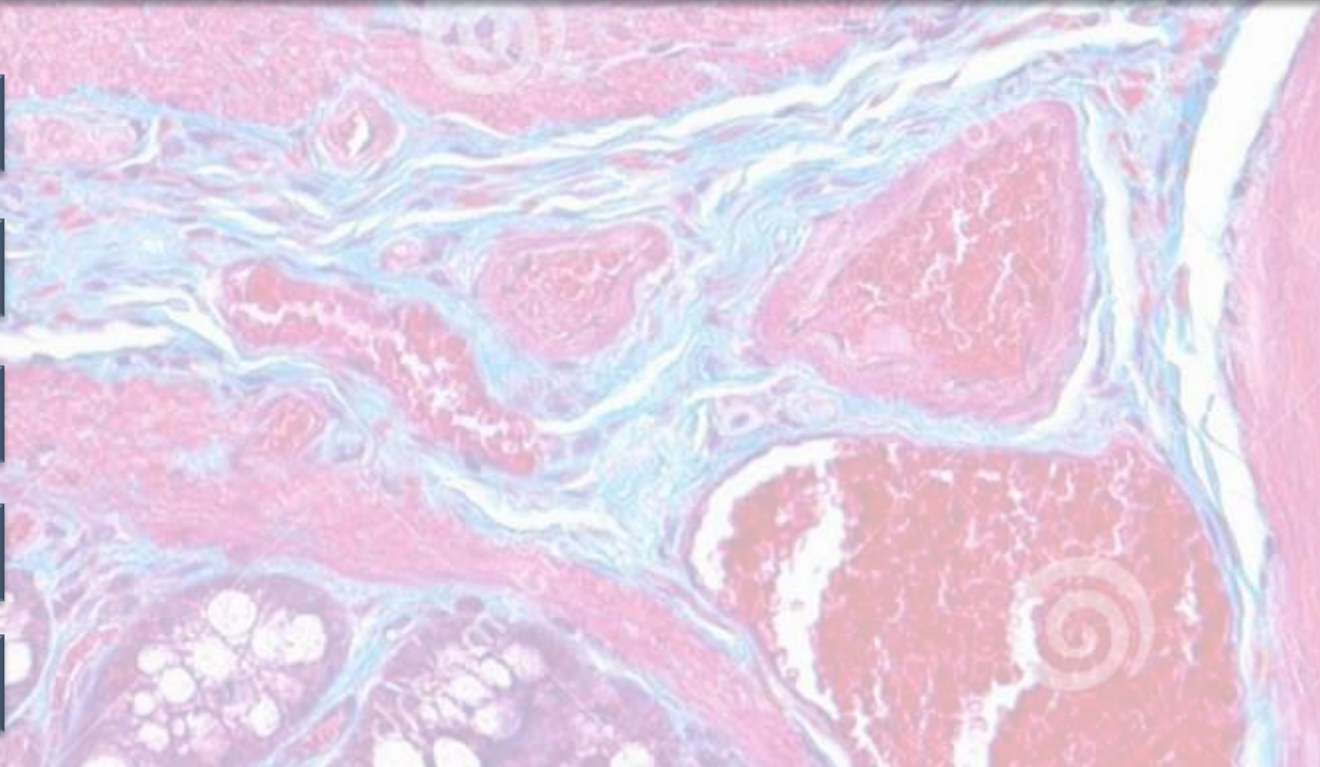
a) Tecido adiposo unicelular.

b) Multicellular adipose tissue.

c) Unilocular adipose tissue.

d) Multilocular adipose tissue.

e) Unimodular adipose tissue.







← Voltar

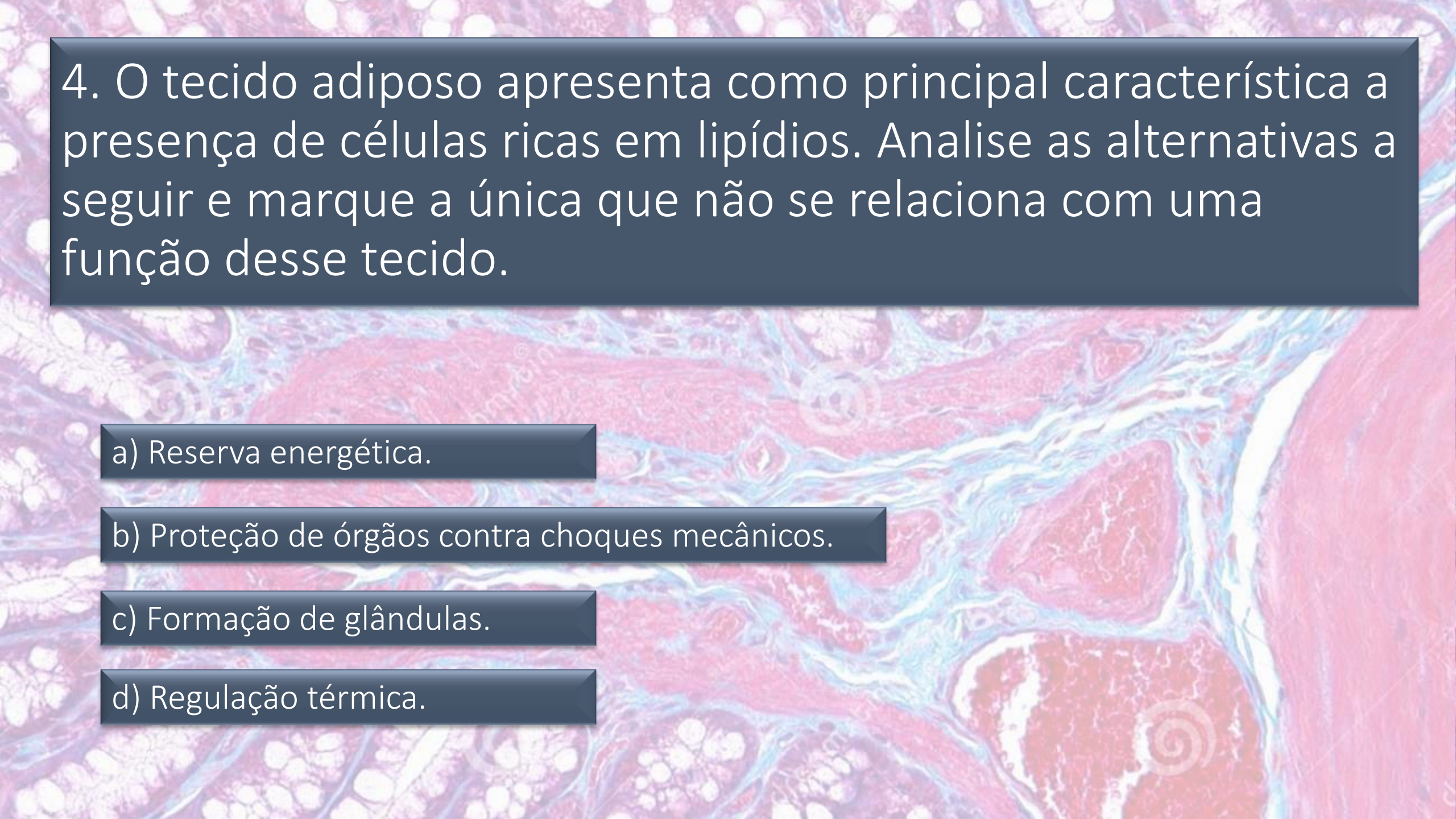
Alternative “c”. The unilocular adipose tissue appears in our body in greater quantity than the multilocular tissue and presents only a drop of lipids, which occupies a large part of the cell.

Avançar









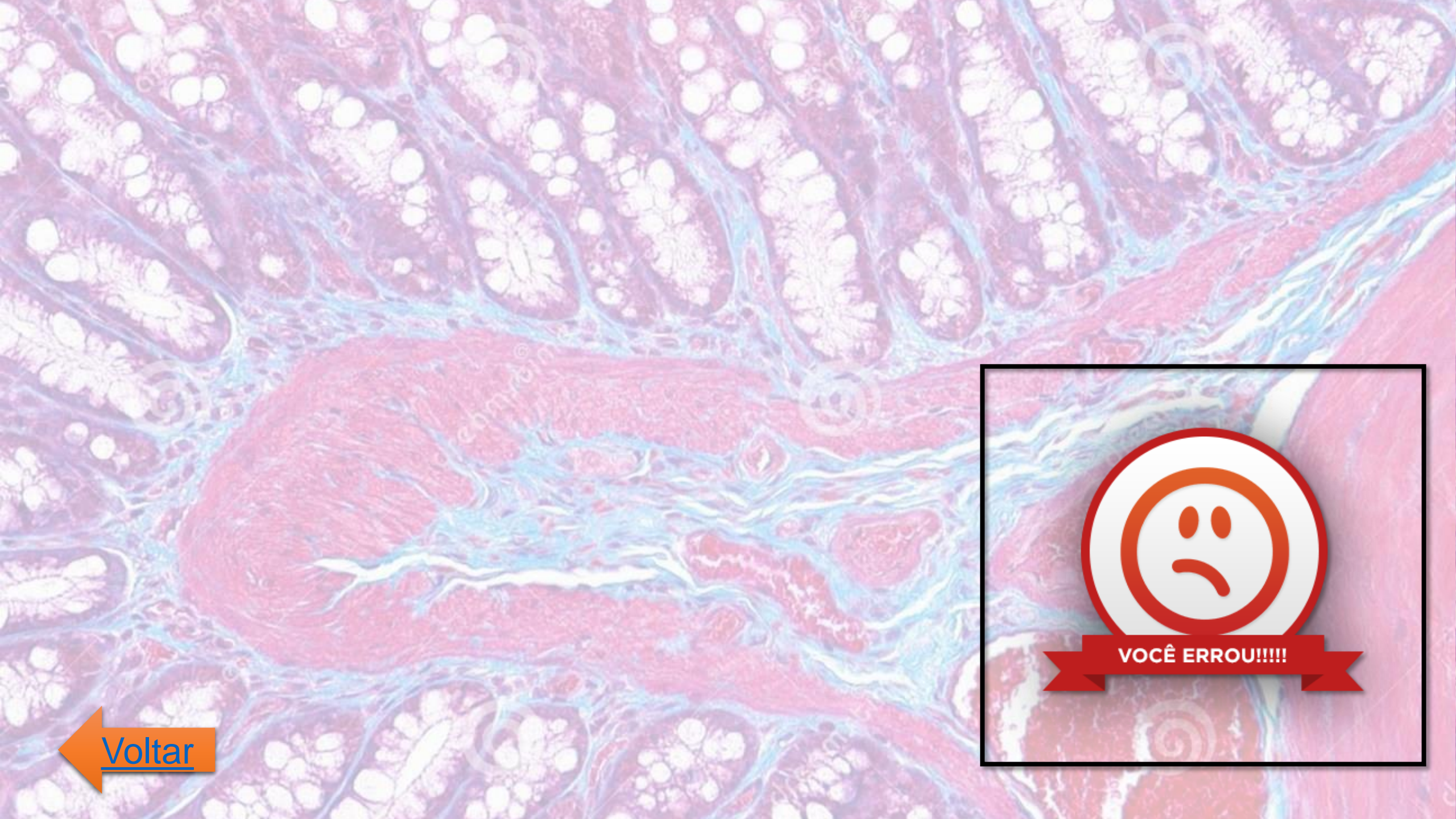
4. O tecido adiposo apresenta como principal característica a presença de células ricas em lipídios. Analise as alternativas a seguir e marque a única que não se relaciona com uma função desse tecido.

a) Reserva energética.

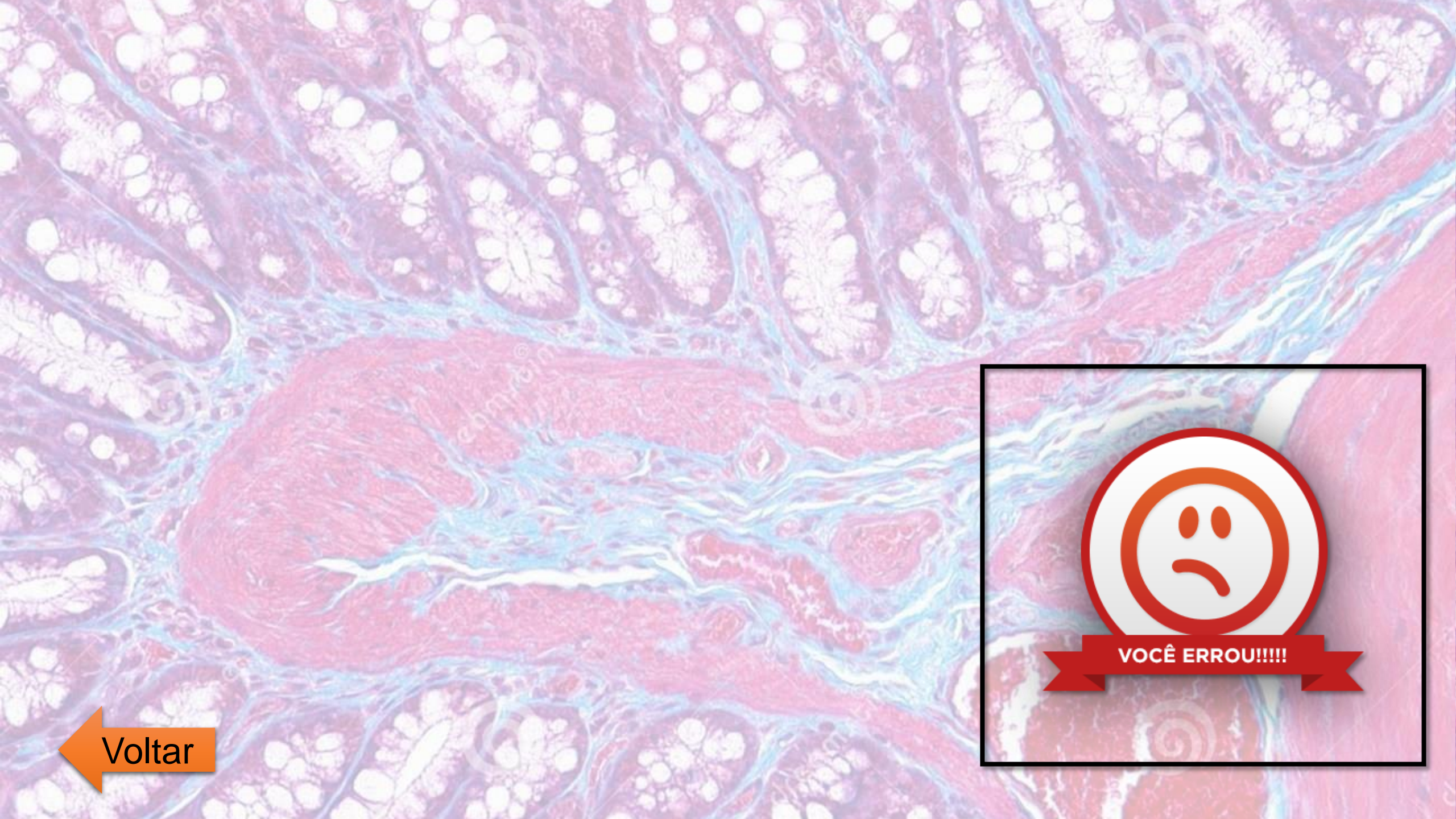
b) Proteção de órgãos contra choques mecânicos.

c) Formação de glândulas.

d) Regulação térmica.



 [Voltar](#)

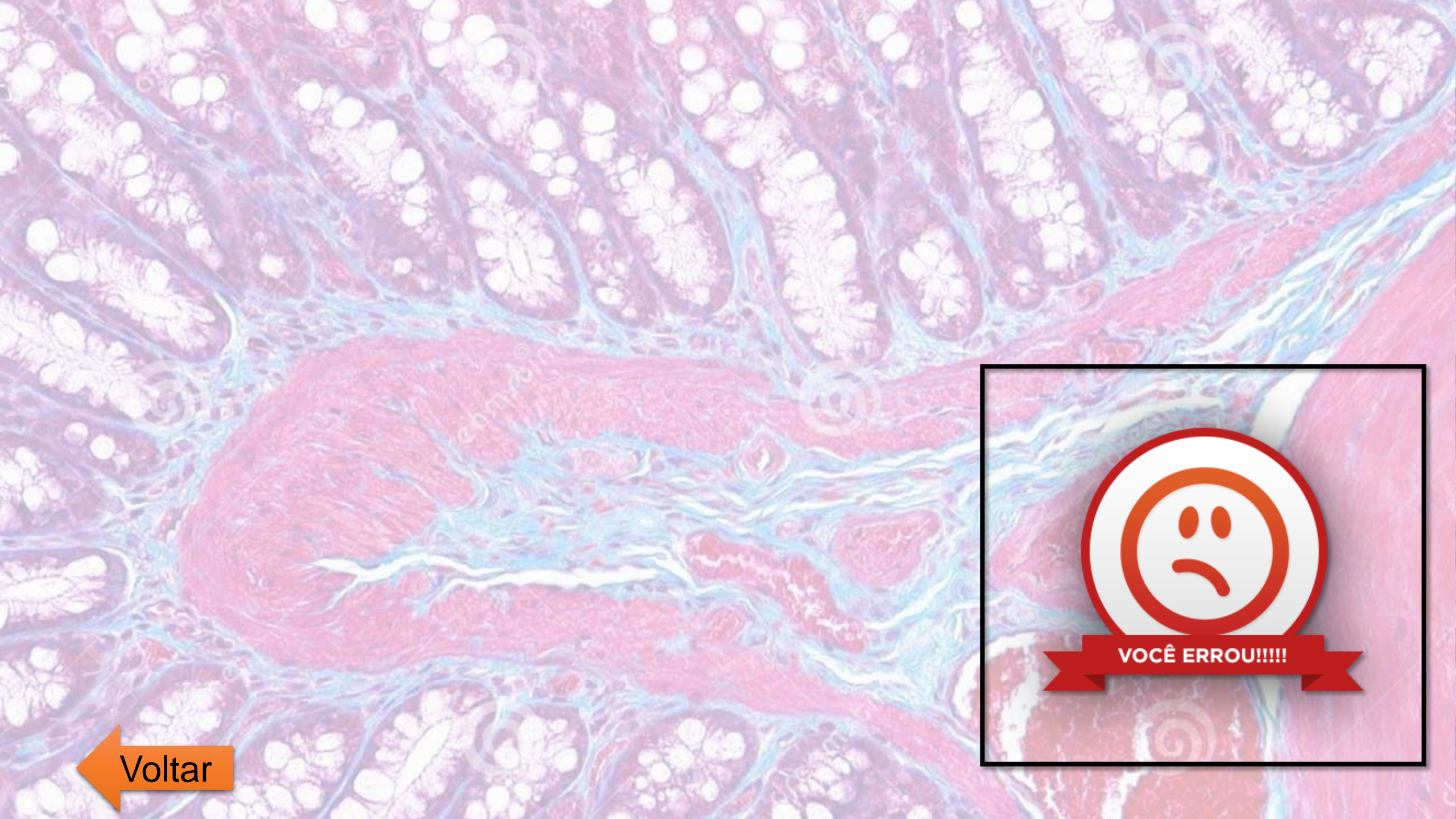


 Voltar

Alternativa “c”. A formação de glândulas é uma função atribuída ao tecido epitelial.

Avançar





 Voltar

5. Tecido de ampla distribuição subcutânea, exercendo funções de reservas de energia, proteção contra choques mecânicos e isolamento térmico.

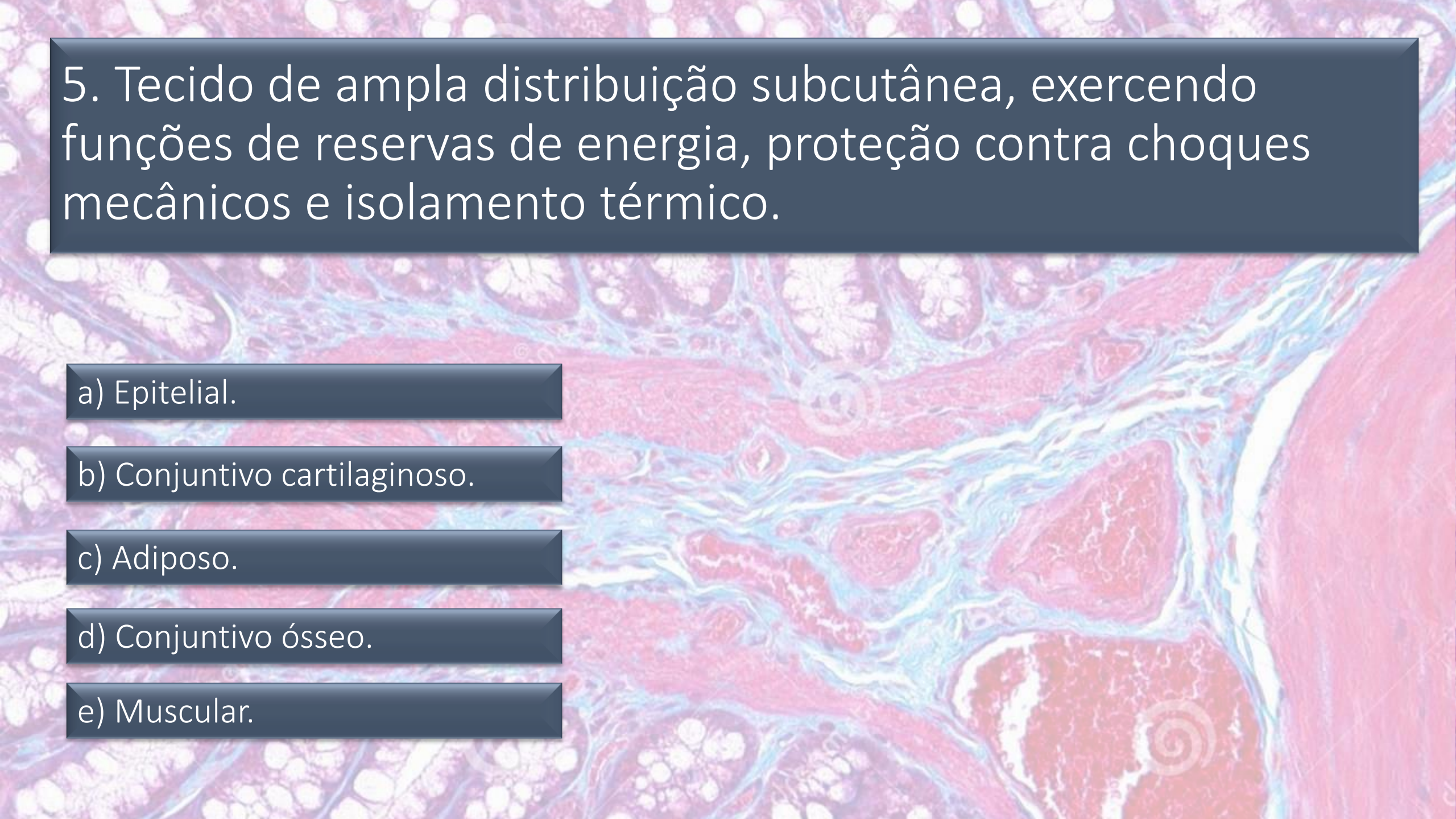
a) Epitelial.

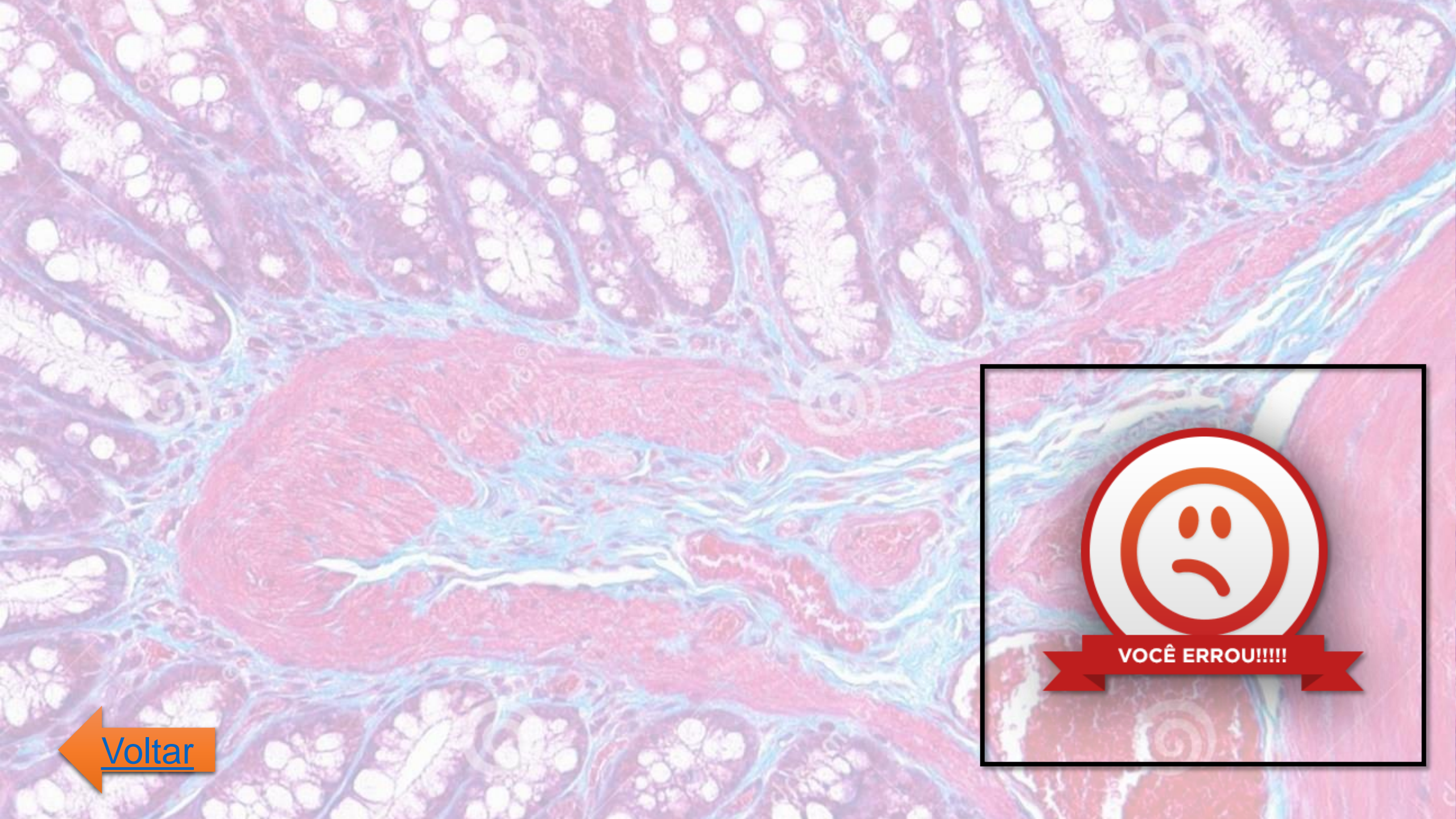
b) Conjuntivo cartilaginoso.

c) Adiposo.

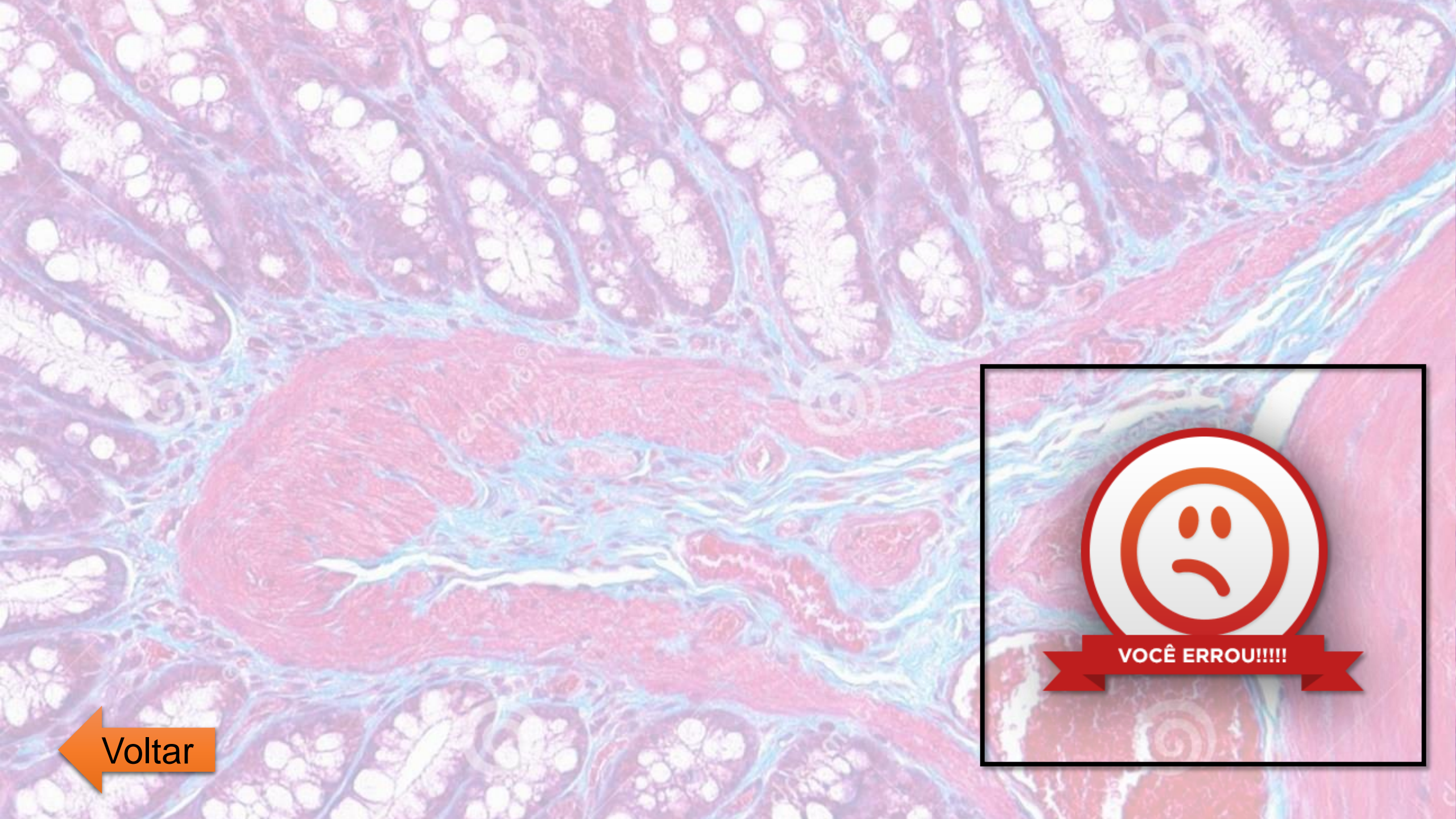
d) Conjuntivo ósseo.

e) Muscular.





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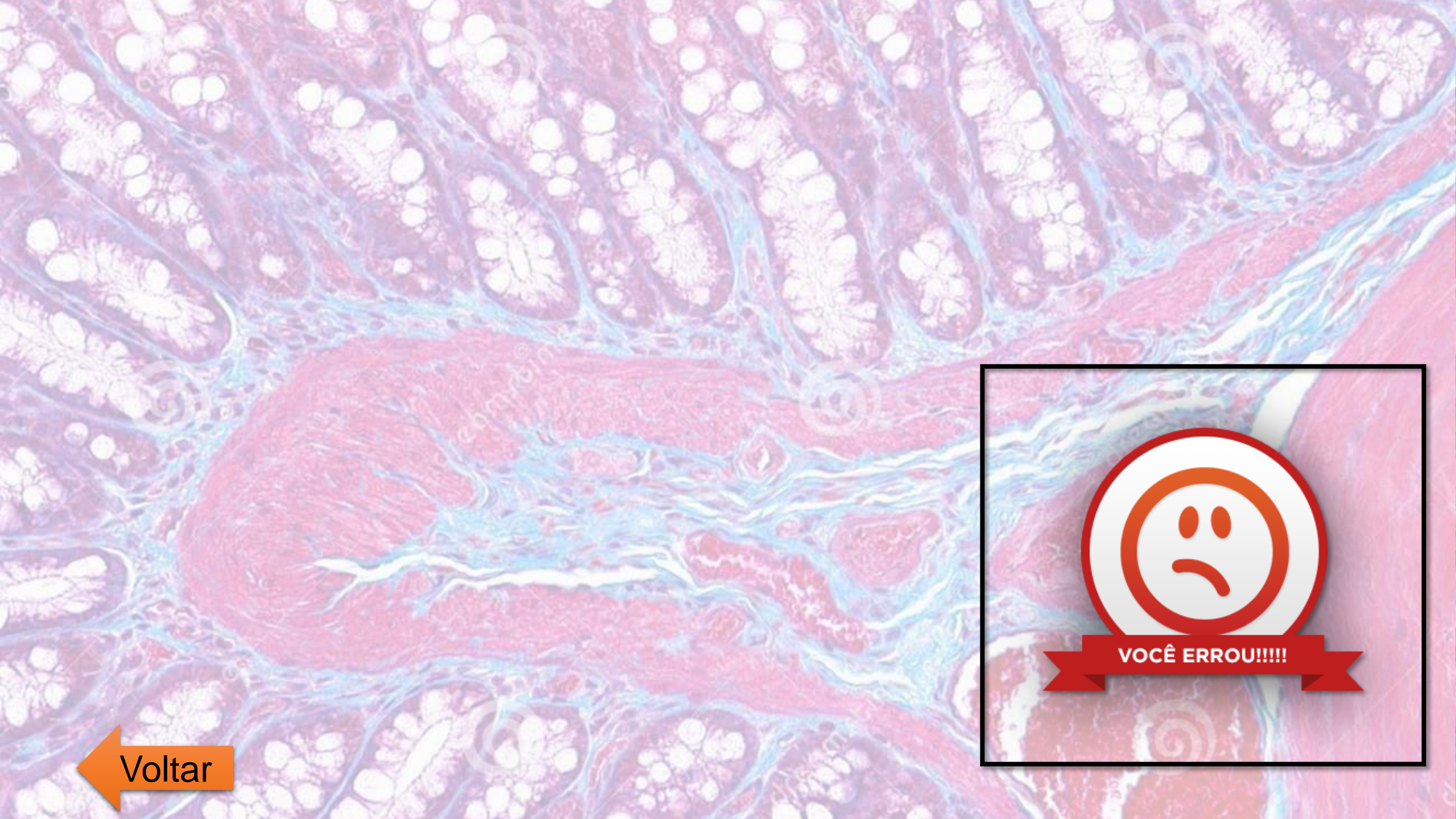


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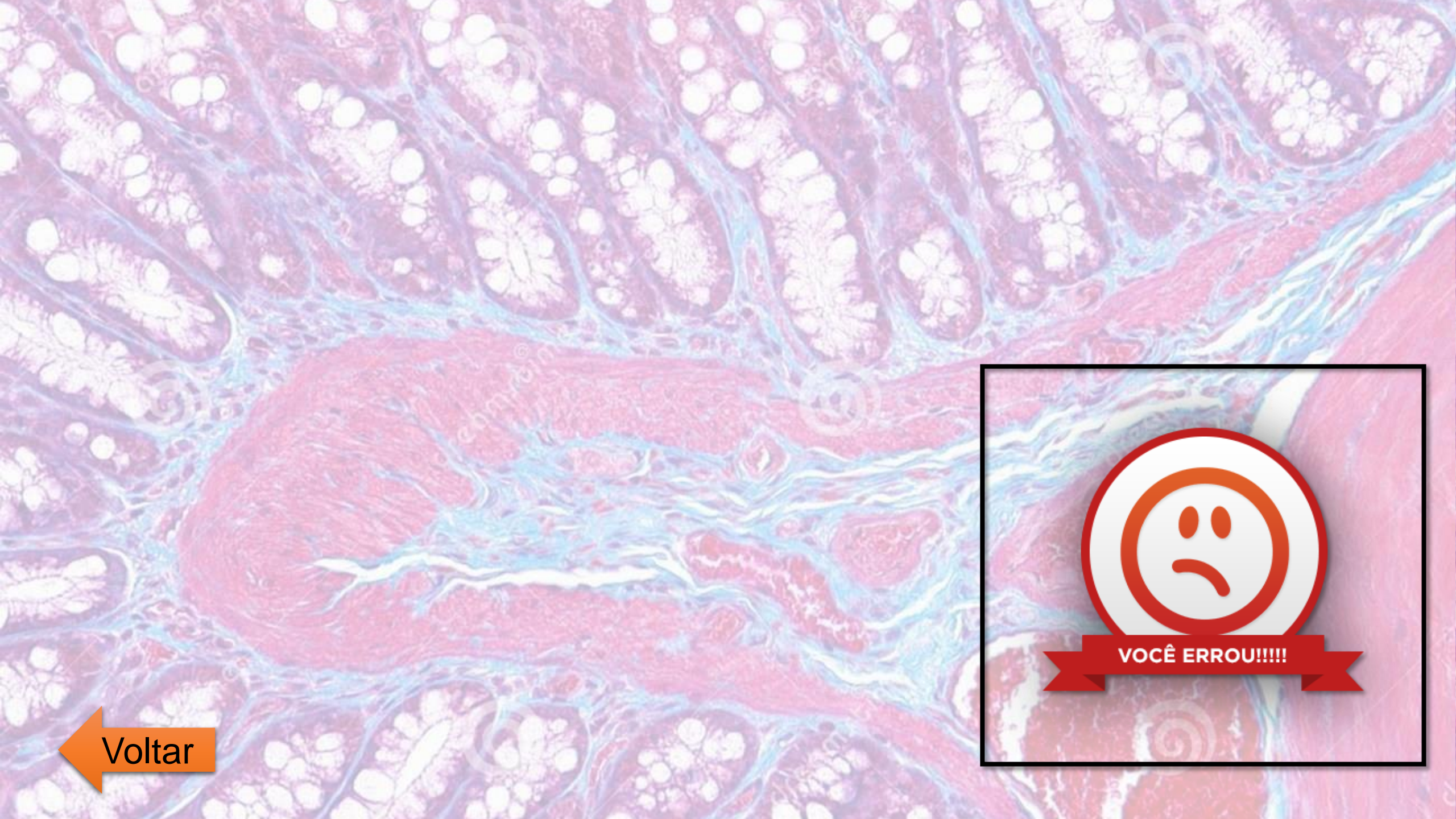
Alternativa “c”. O tecido adiposo apresenta células ricas em lipídios e é conhecido normalmente como gordura. Ele apresenta como funções principais a proteção contra o frio e choques mecânicos, além de funcionar como uma reserva de energia.

Avançar

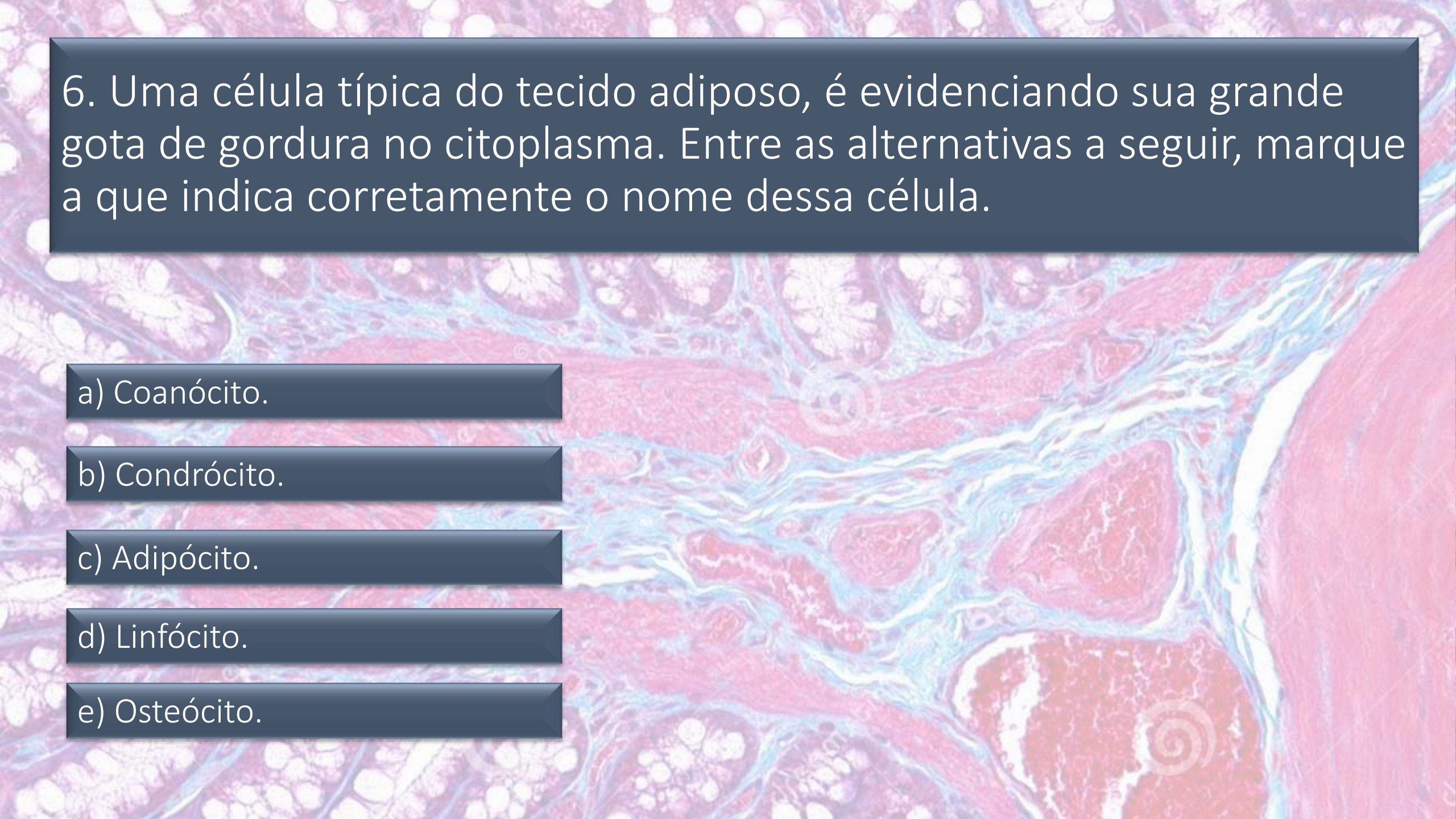




 Voltar



 Voltar



6. Uma célula típica do tecido adiposo, é evidenciando sua grande gota de gordura no citoplasma. Entre as alternativas a seguir, marque a que indica corretamente o nome dessa célula.

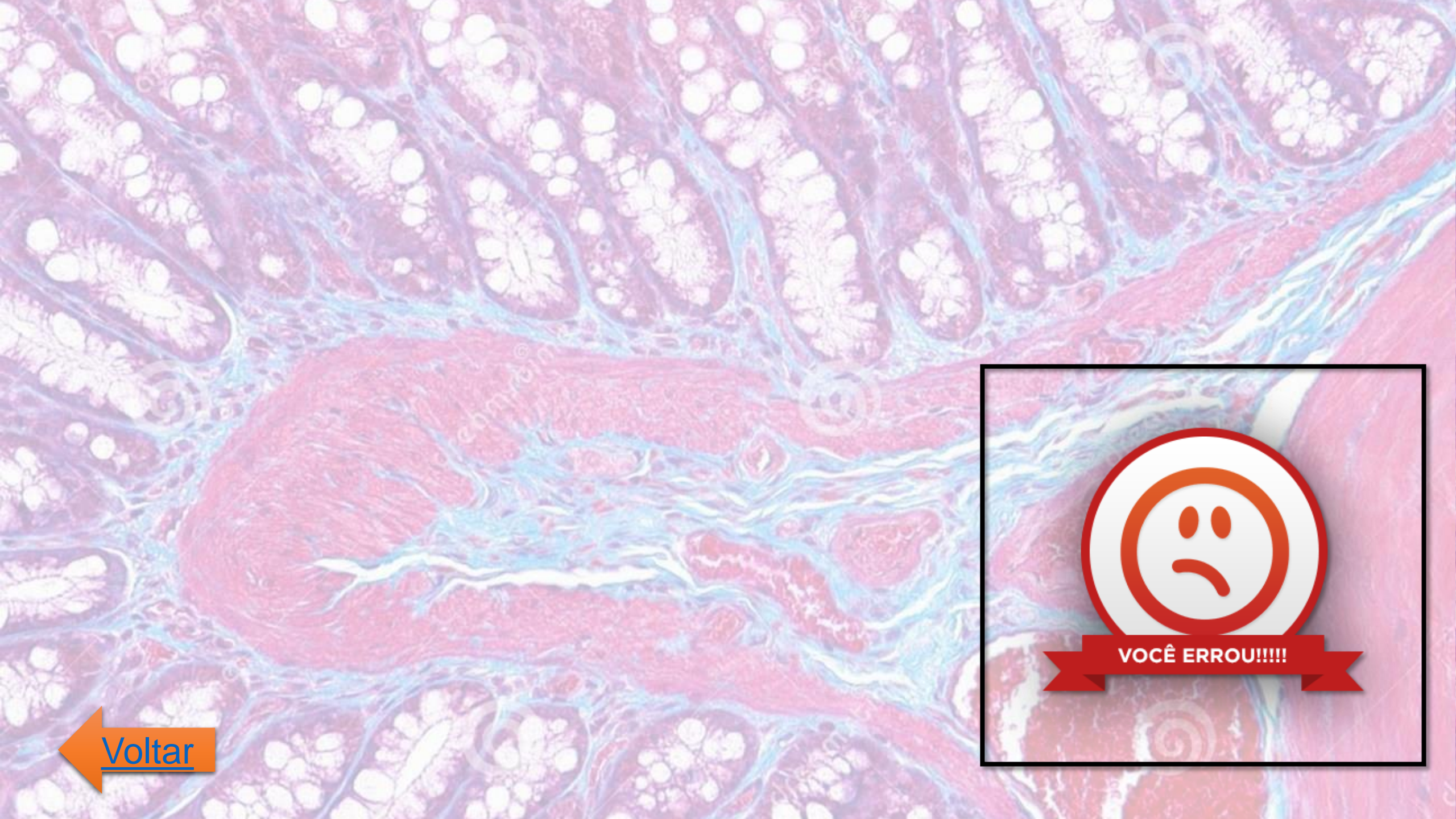
a) Coanócito.

b) Condrócito.

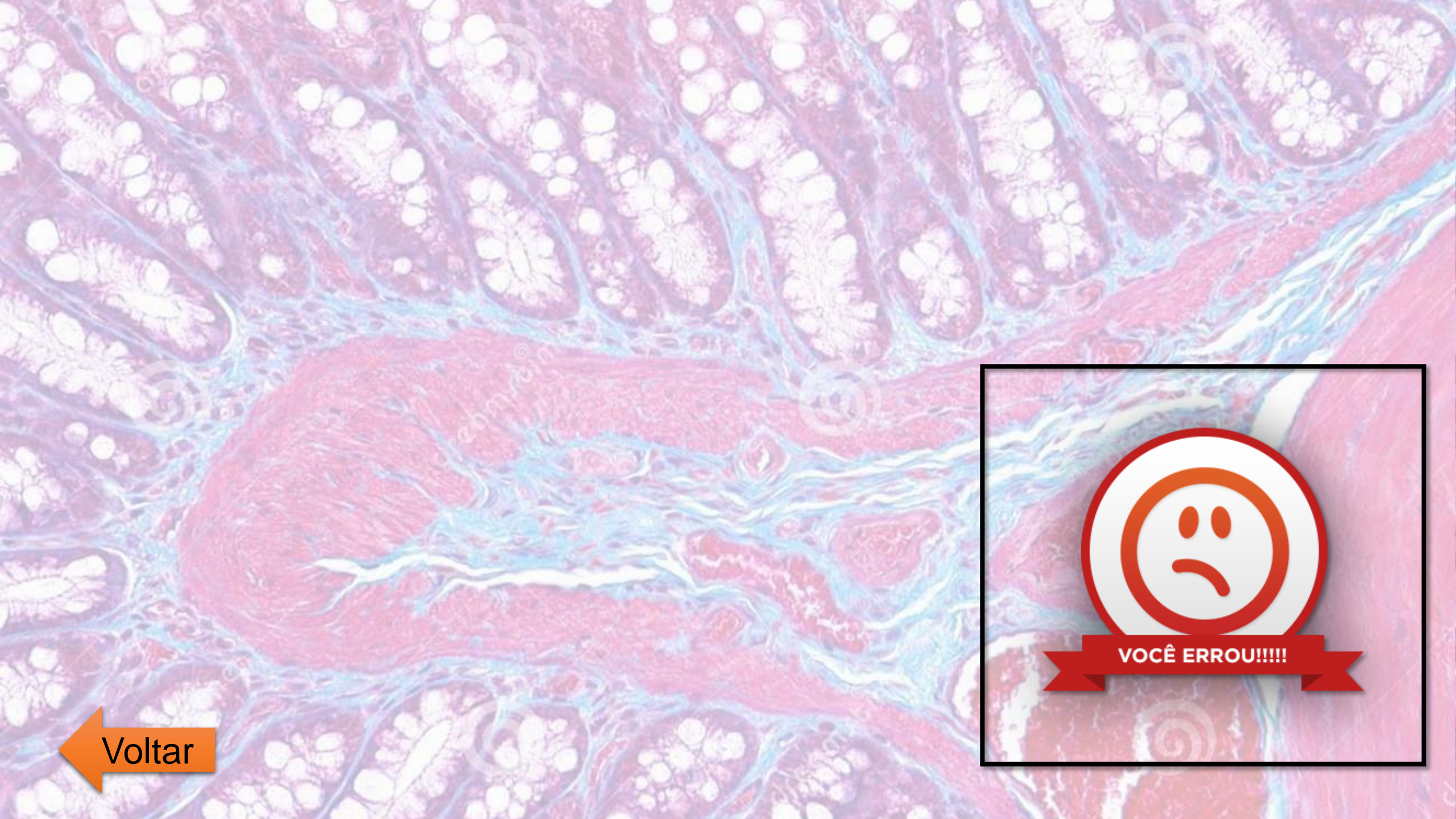
c) Adipócito.

d) Linfócito.

e) Osteócito.



 [Voltar](#)

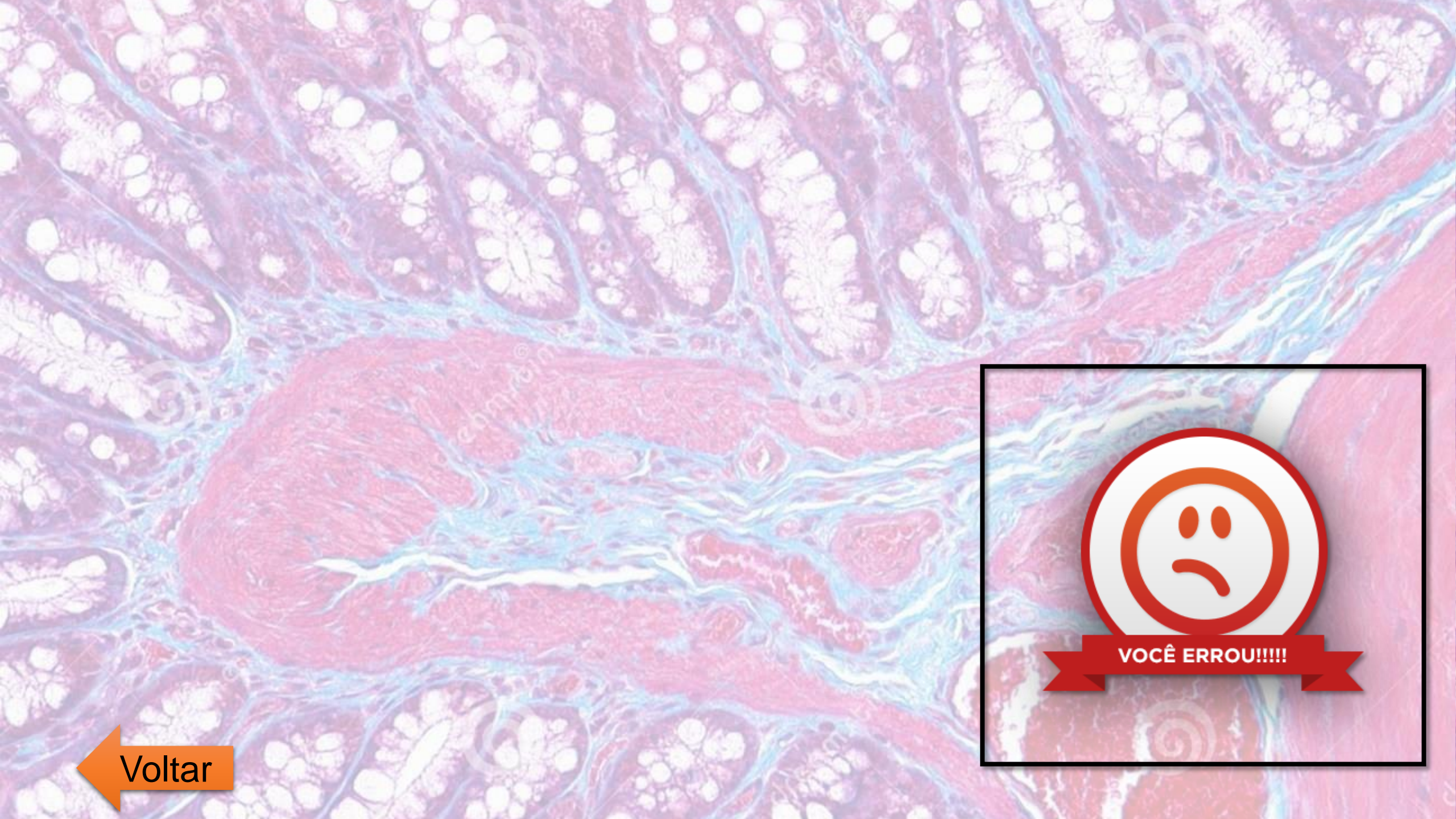


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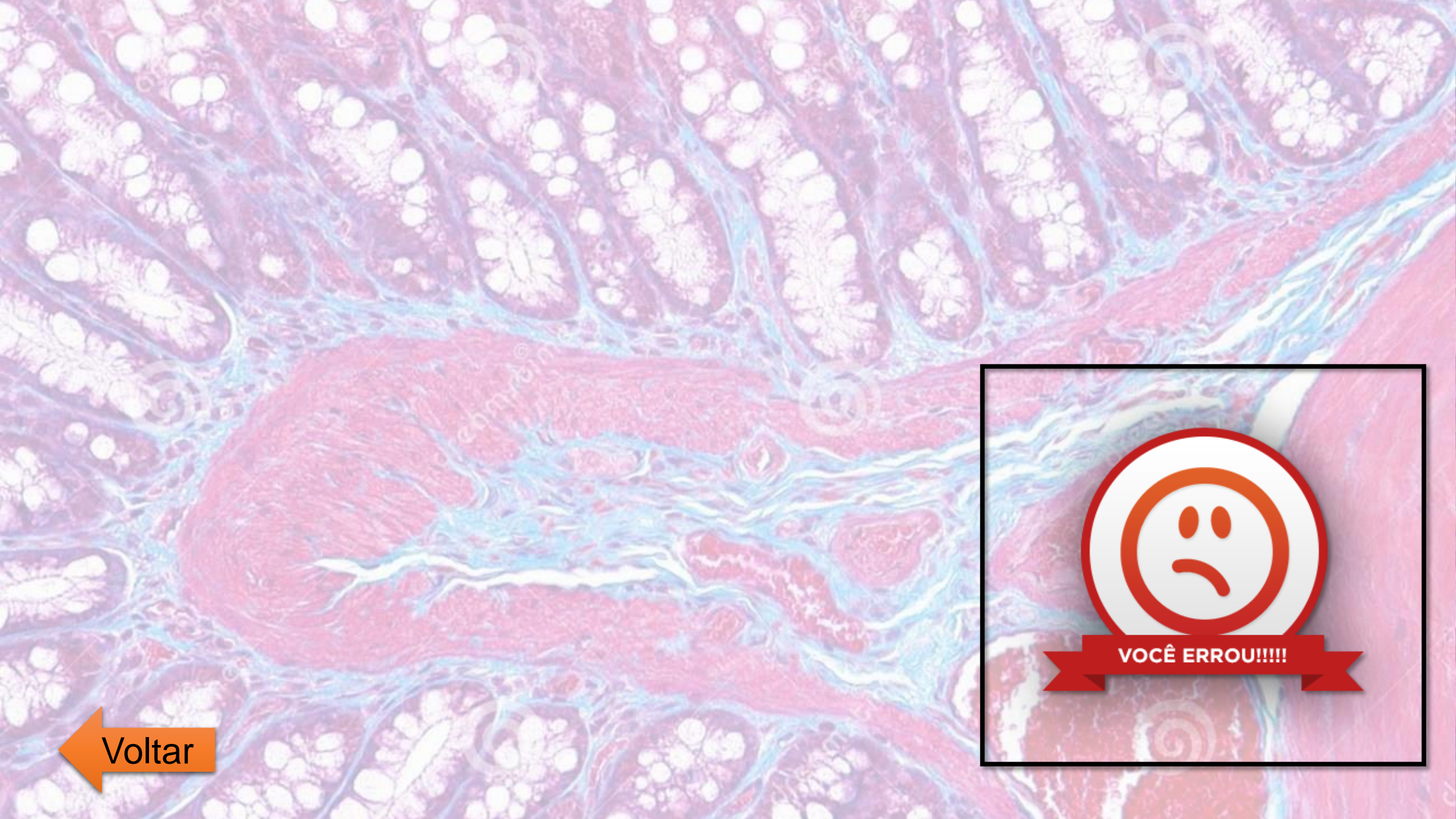
Alternativa “c”. O adipócito é a célula típica do tecido adiposo. Ela possui uma grande quantidade de gordura em seu interior.

Avançar

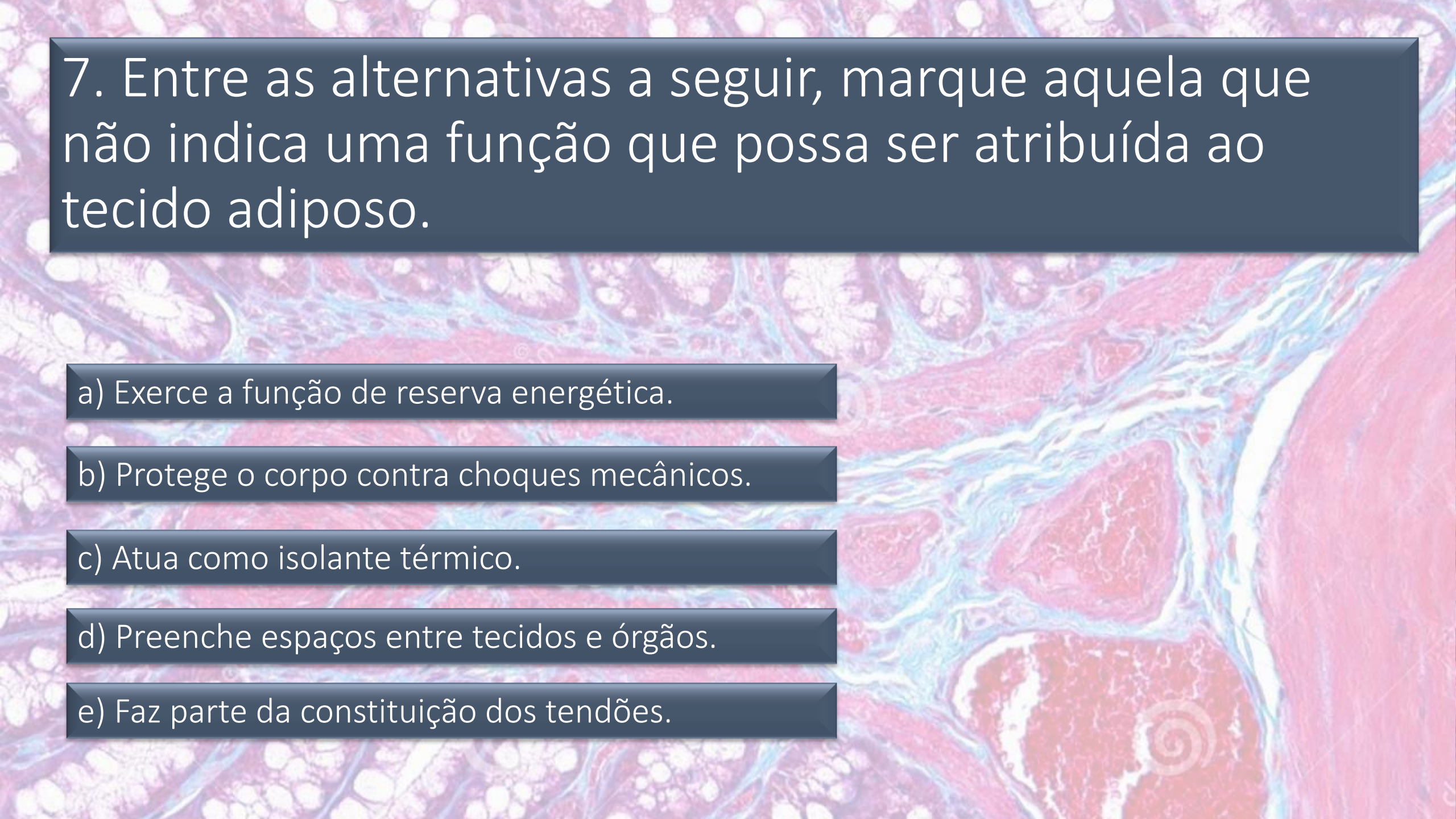




 Voltar



 Voltar

A microscopic image of adipose tissue, showing large, clear, rounded cells (adipocytes) with thin, pink-stained cytoplasm and nuclei pushed to the periphery. The cells are arranged in a honeycomb pattern, separated by thin layers of connective tissue.

7. Entre as alternativas a seguir, marque aquela que não indica uma função que possa ser atribuída ao tecido adiposo.

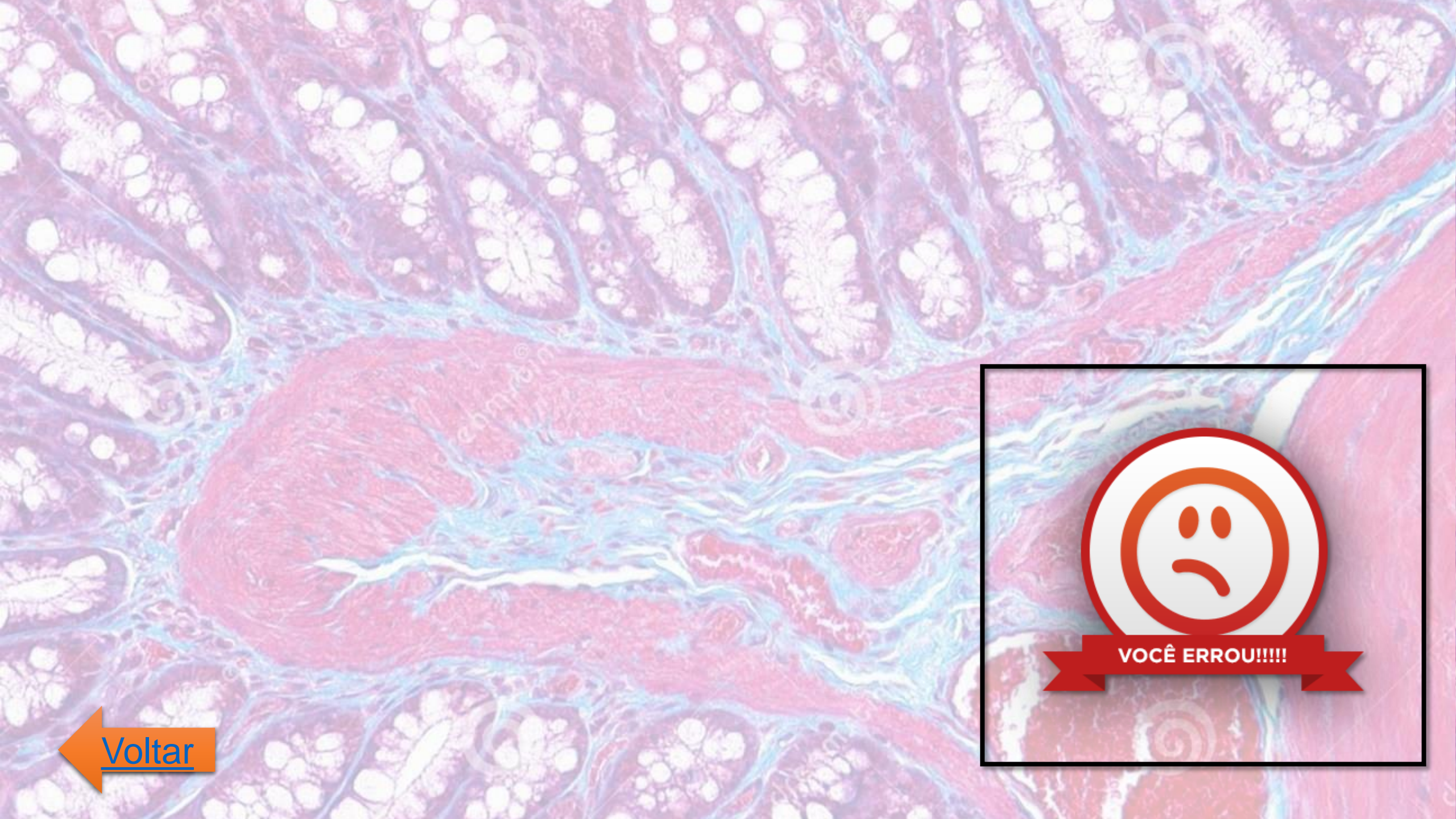
a) Exerce a função de reserva energética.

b) Protege o corpo contra choques mecânicos.

c) Atua como isolante térmico.

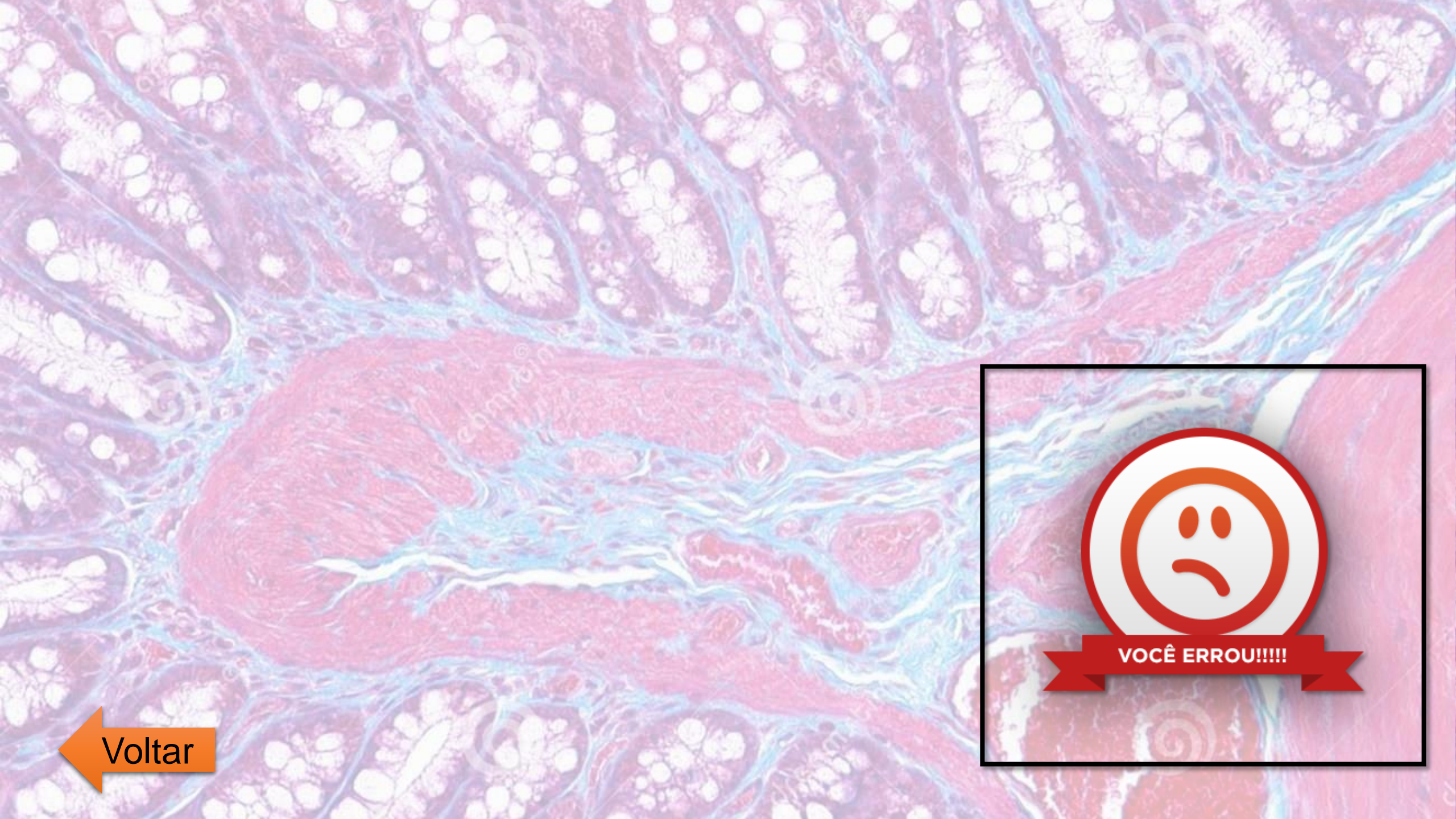
d) Preenche espaços entre tecidos e órgãos.

e) Faz parte da constituição dos tendões.

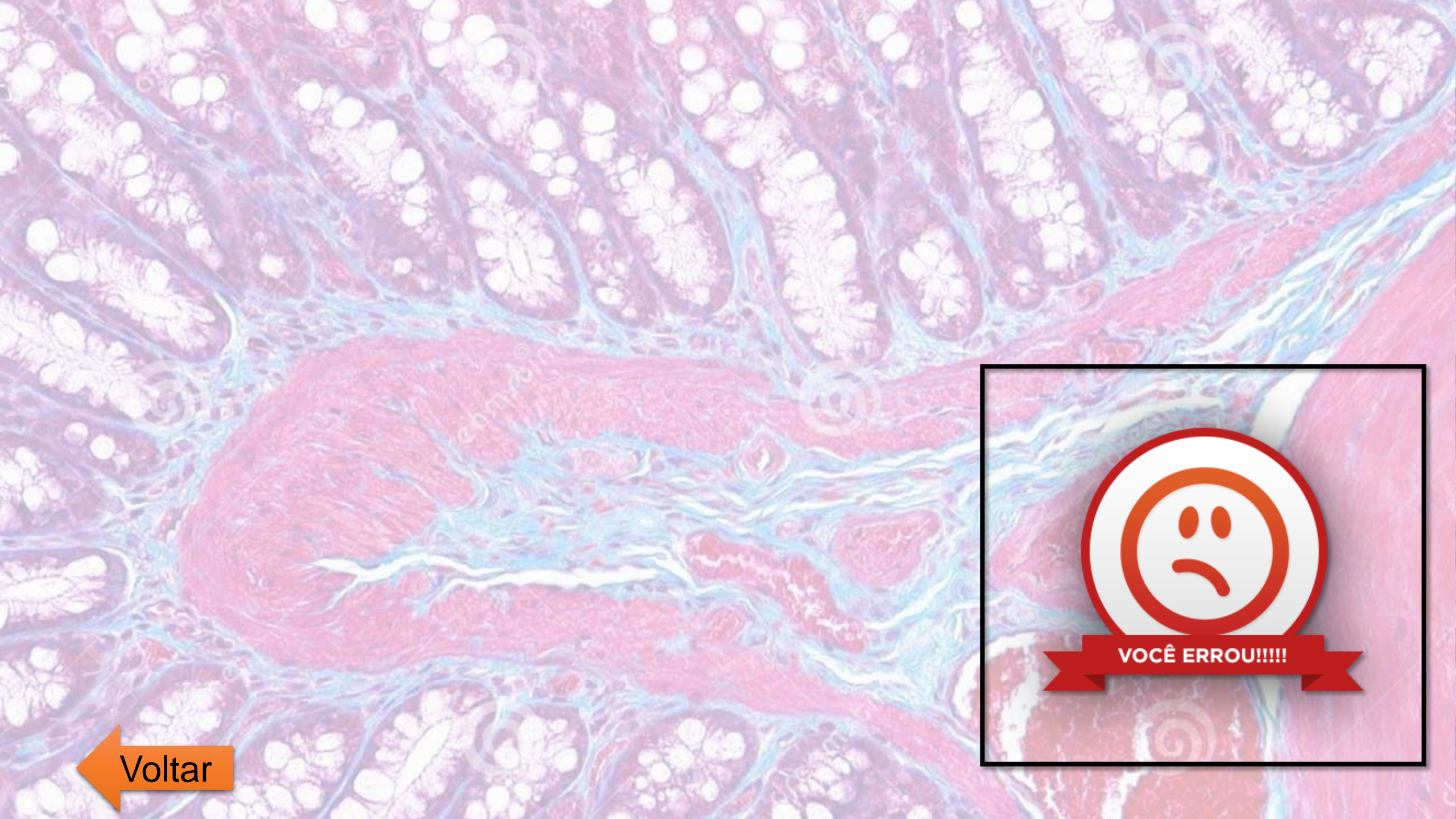


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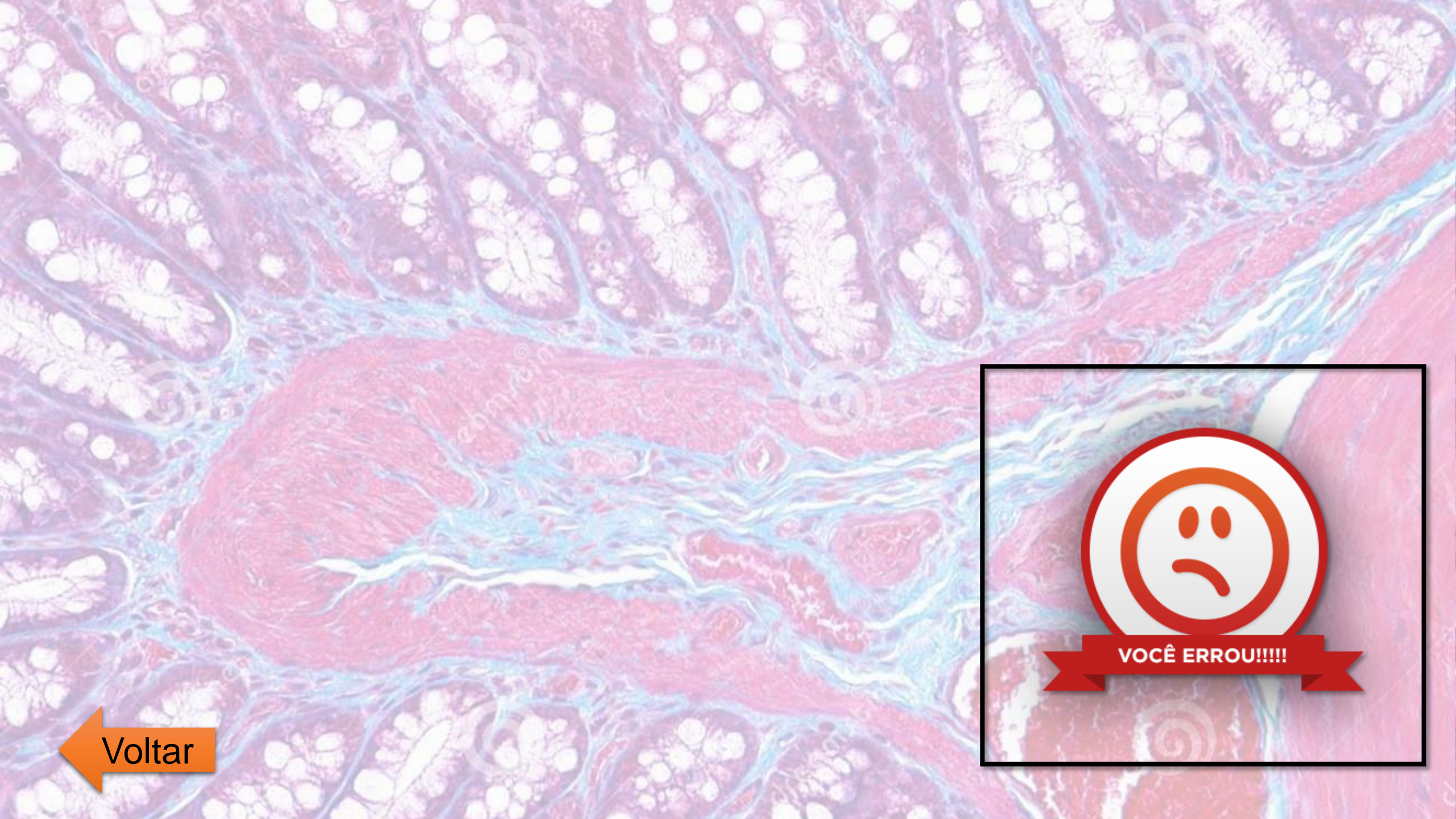
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Alternativa “e”. Os tendões são formados por tecido conjuntivo denso modelado, também chamado de tendinoso.

Avançar





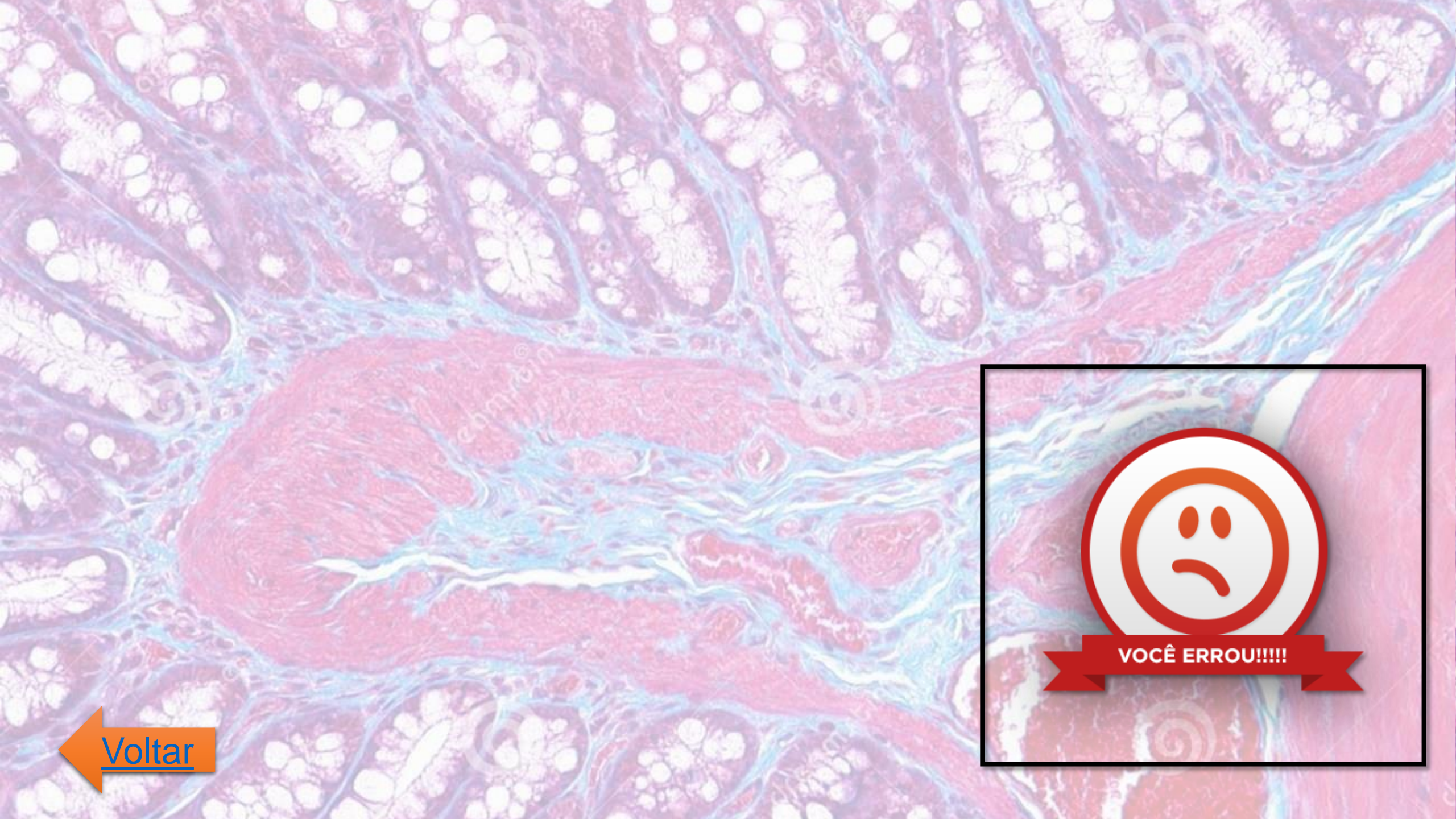
8. O tecido adiposo é um tipo de tecido:

a) epitelial.

b) conjuntivo.

c) muscular.

d) nervoso.



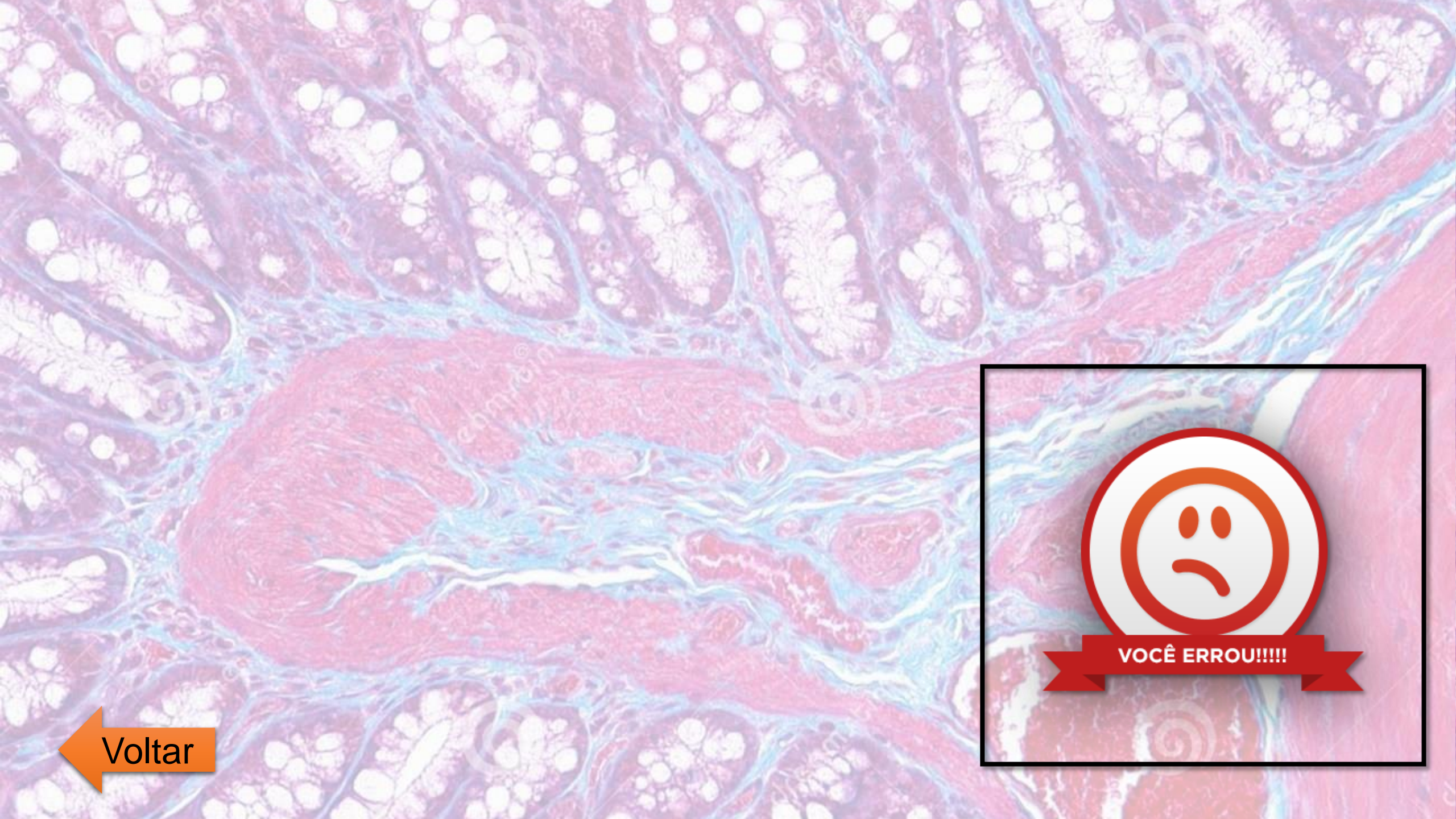
VOCÊ ERROU!!!!

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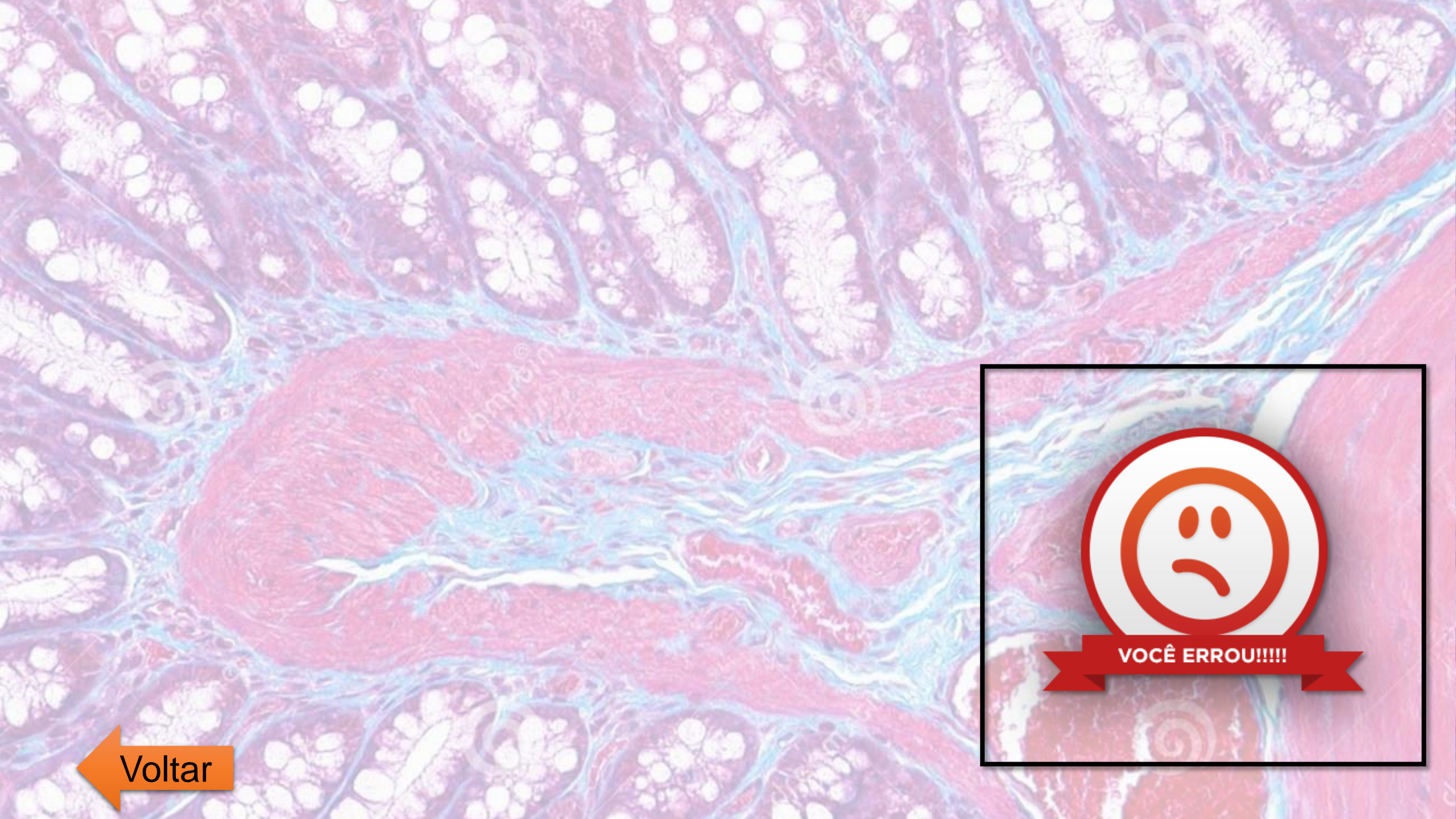
Alternativa “b”. O tecido adiposo é um tipo de tecido conjuntivo, assim como o tecido ósseo, cartilaginoso e o hemocitopoiético.

Avançar

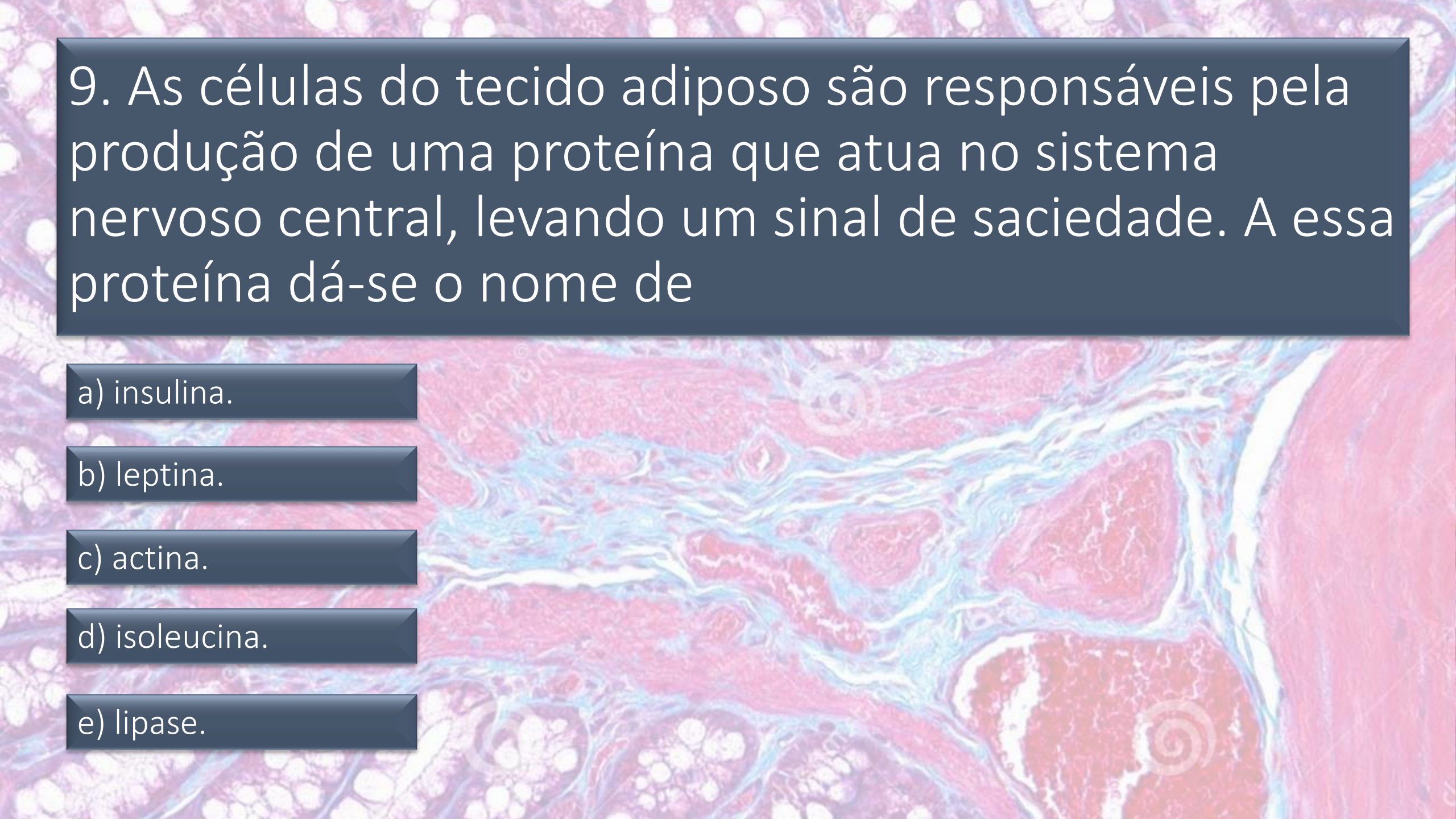




 Voltar



 Voltar

A microscopic image of adipose tissue, showing large, clear, lipid-filled cells (adipocytes) arranged in a honeycomb pattern. The cells are stained with hematoxylin and eosin (H&E), with the nuclei appearing as small, dark purple spots at the periphery of the cells. The background is a pinkish-red color, representing the connective tissue stroma.

9. As células do tecido adiposo são responsáveis pela produção de uma proteína que atua no sistema nervoso central, levando um sinal de saciedade. A essa proteína dá-se o nome de

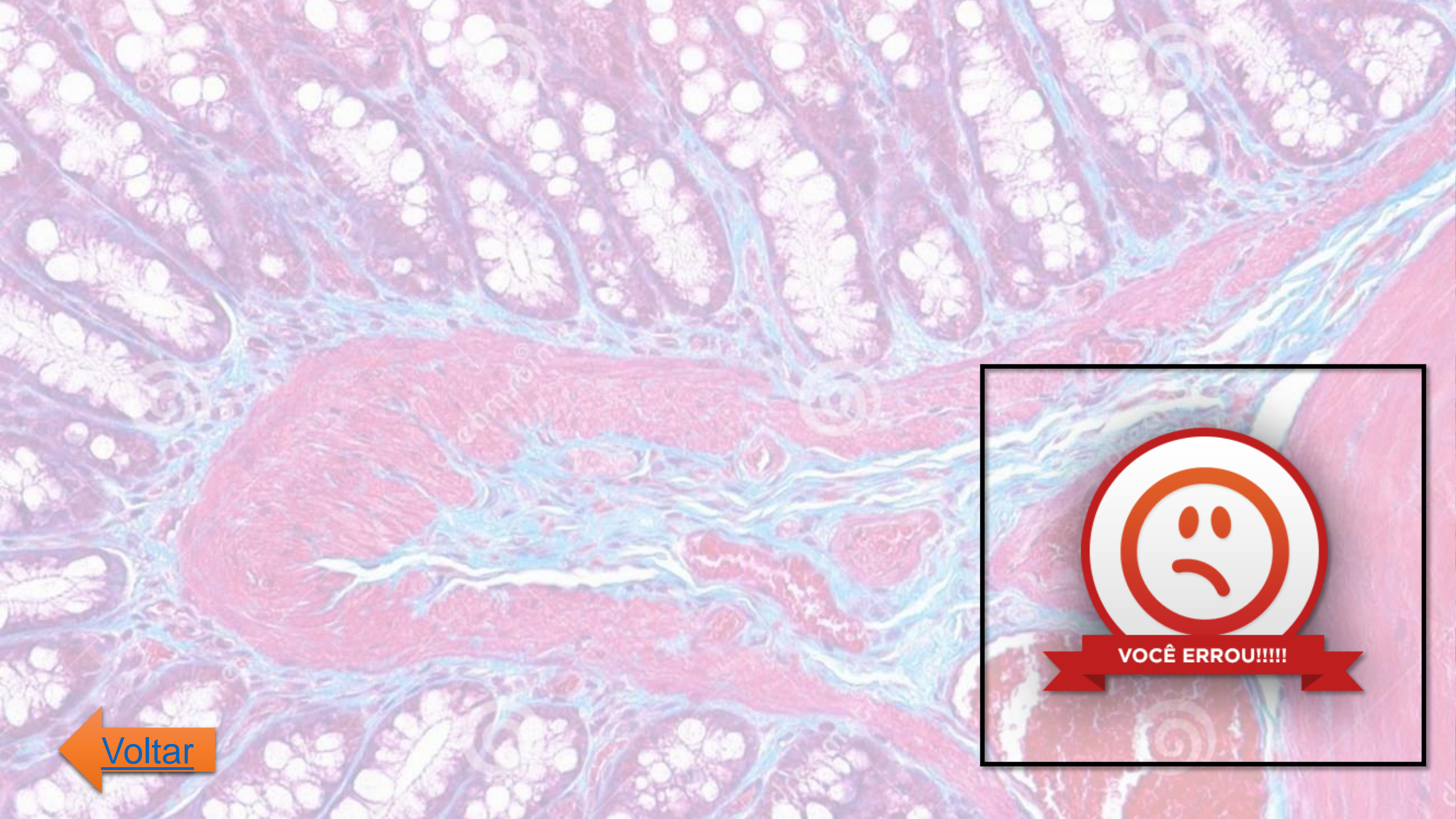
a) insulina.

b) leptina.

c) actina.

d) isoleucina.

e) lipase.

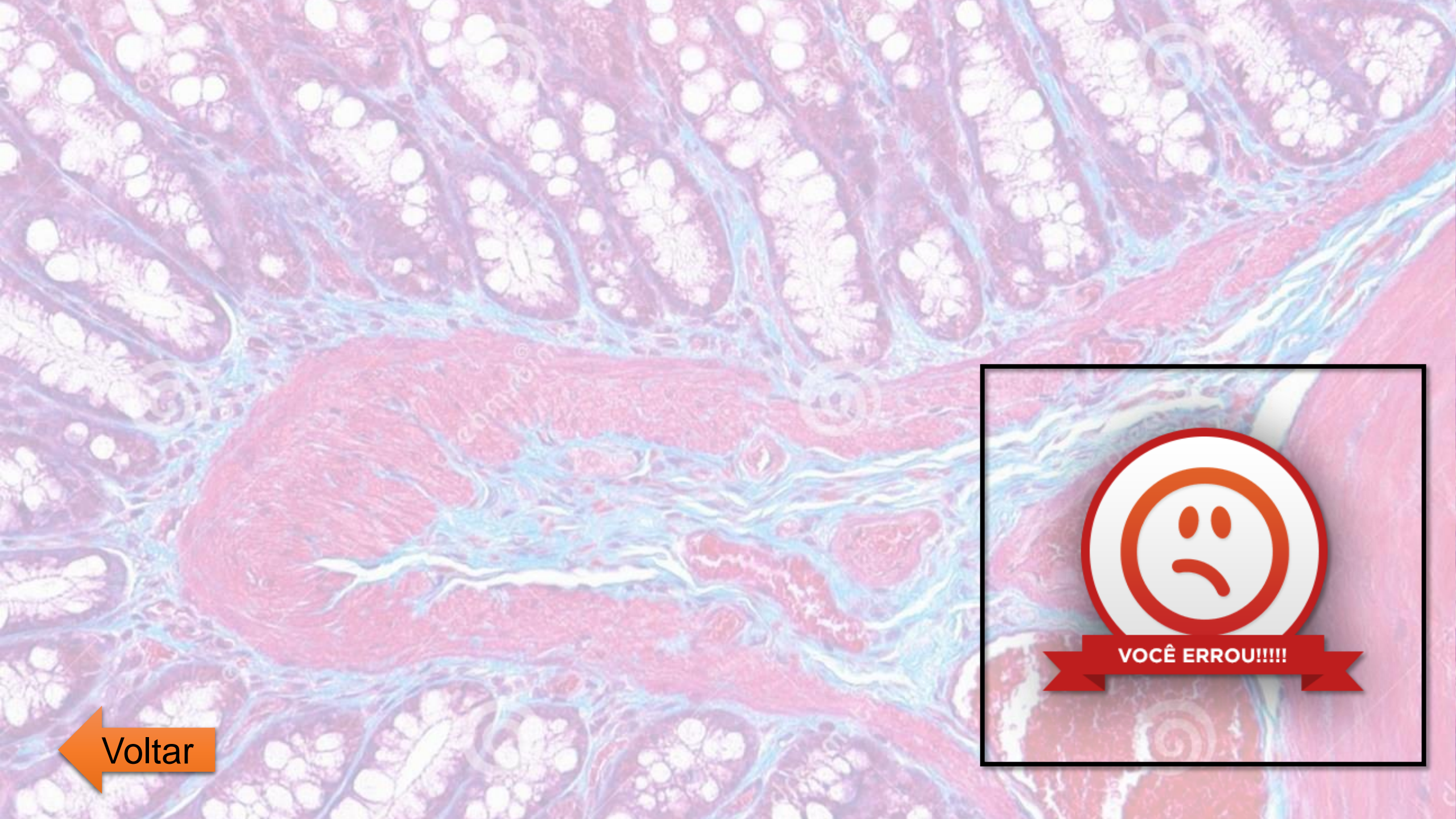


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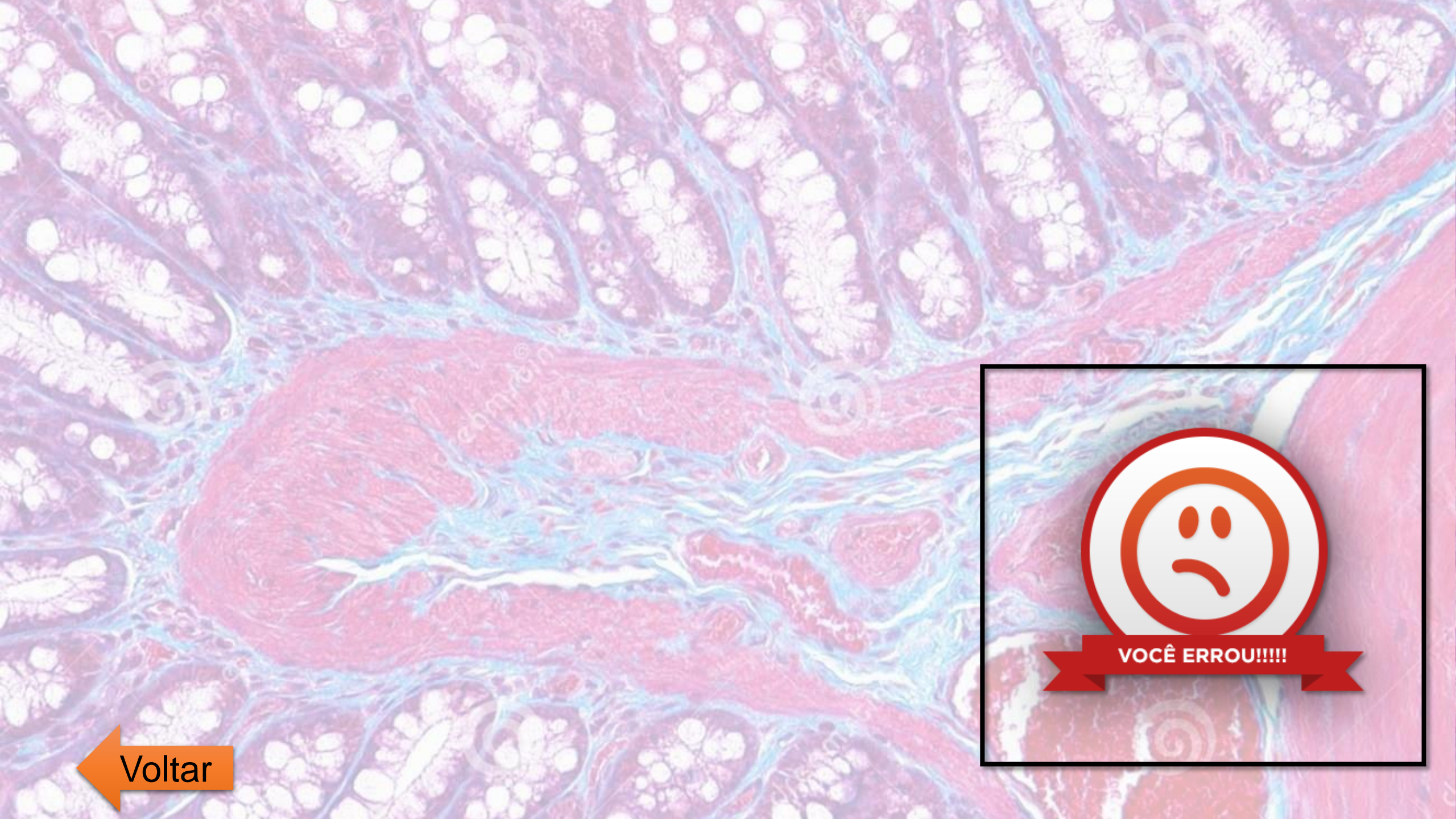
Alternativa “b”. Os adipócitos produzem leptina, uma substância que atua na homeostase energética.

Avançar

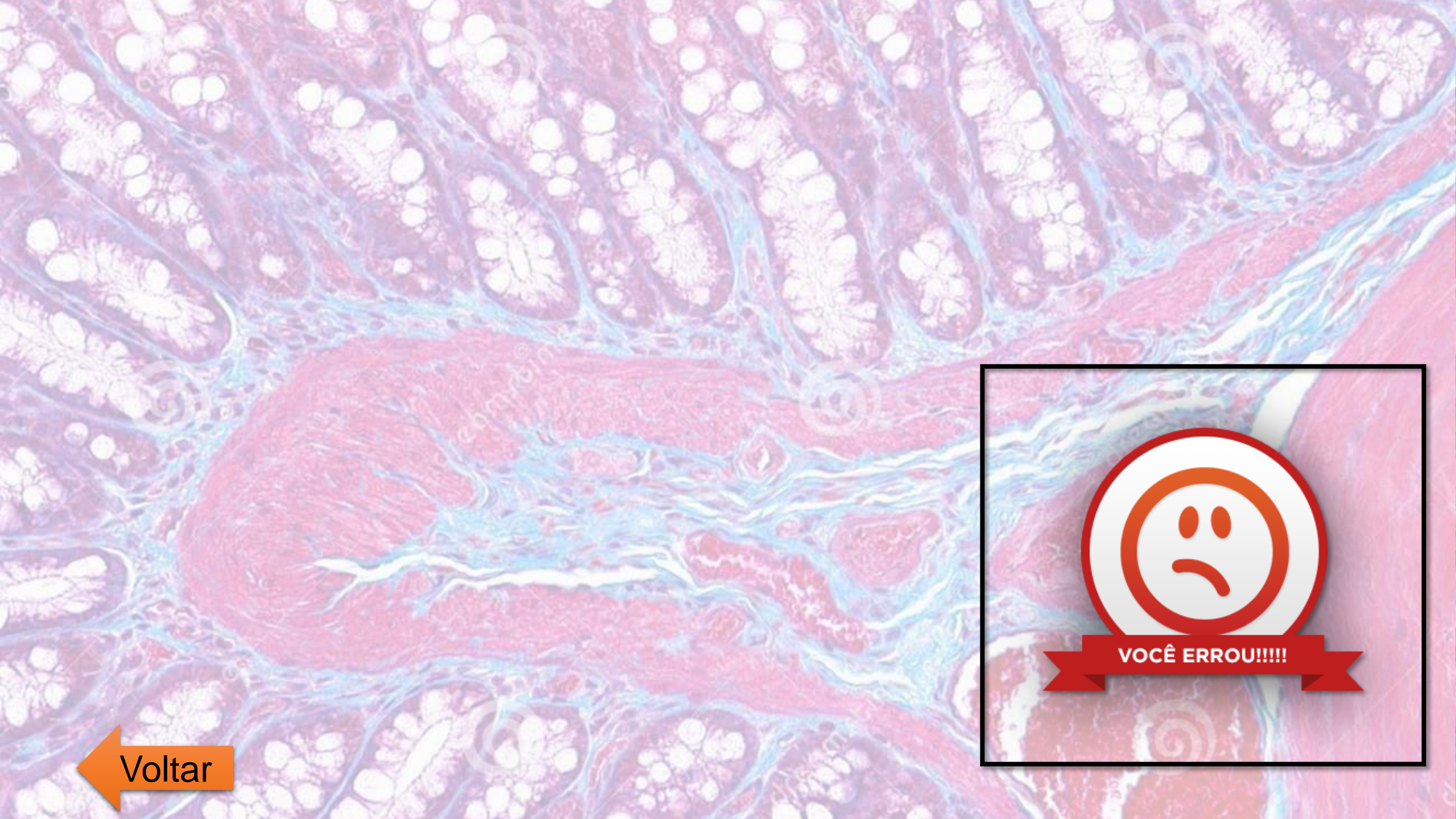




 Voltar



 Voltar



 Voltar

10. Sabemos que existem dois tipos de tecido adiposo: o unilocular e multilocular. Entre as alternativas a seguir, marque aquela que não corresponde ao tecido adiposo multilocular.

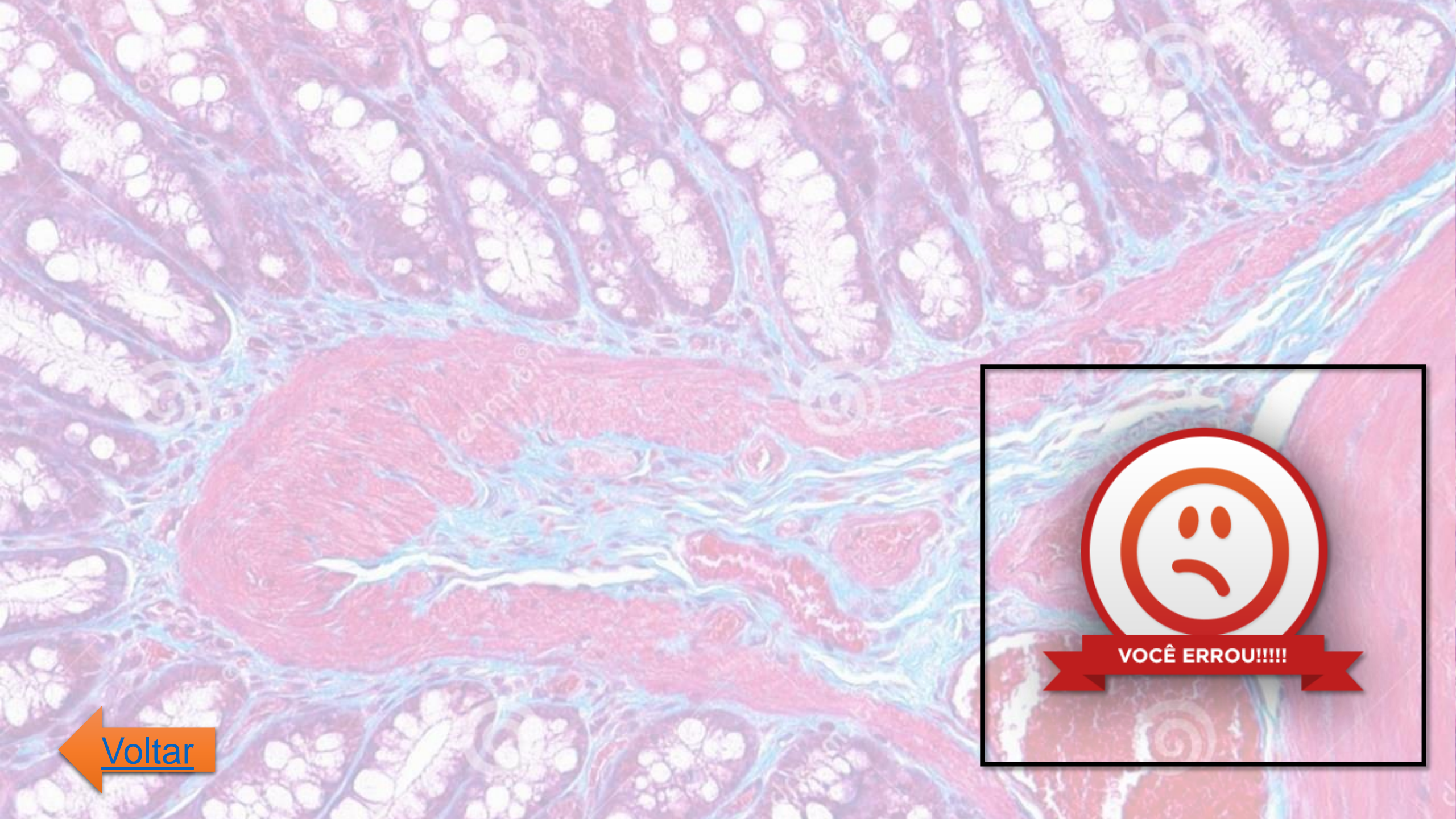
a) Possui várias gotículas de gordura no interior das células.

b) Também é conhecido como gordura marrom.

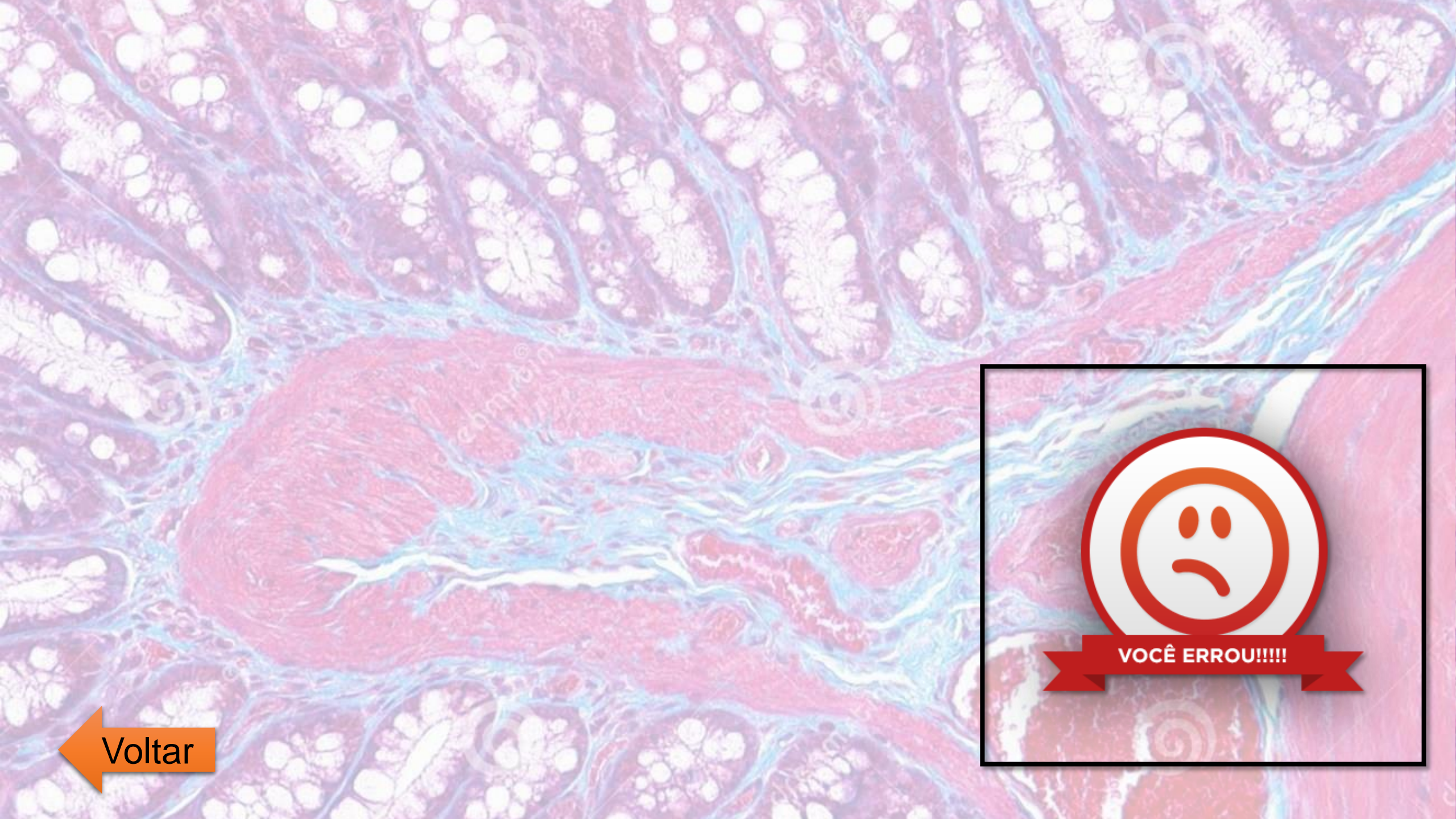
c) Esse tecido é encontrado em maior quantidade em recém-nascidos.

d) Constitui a maior reserva de energia do nosso corpo.

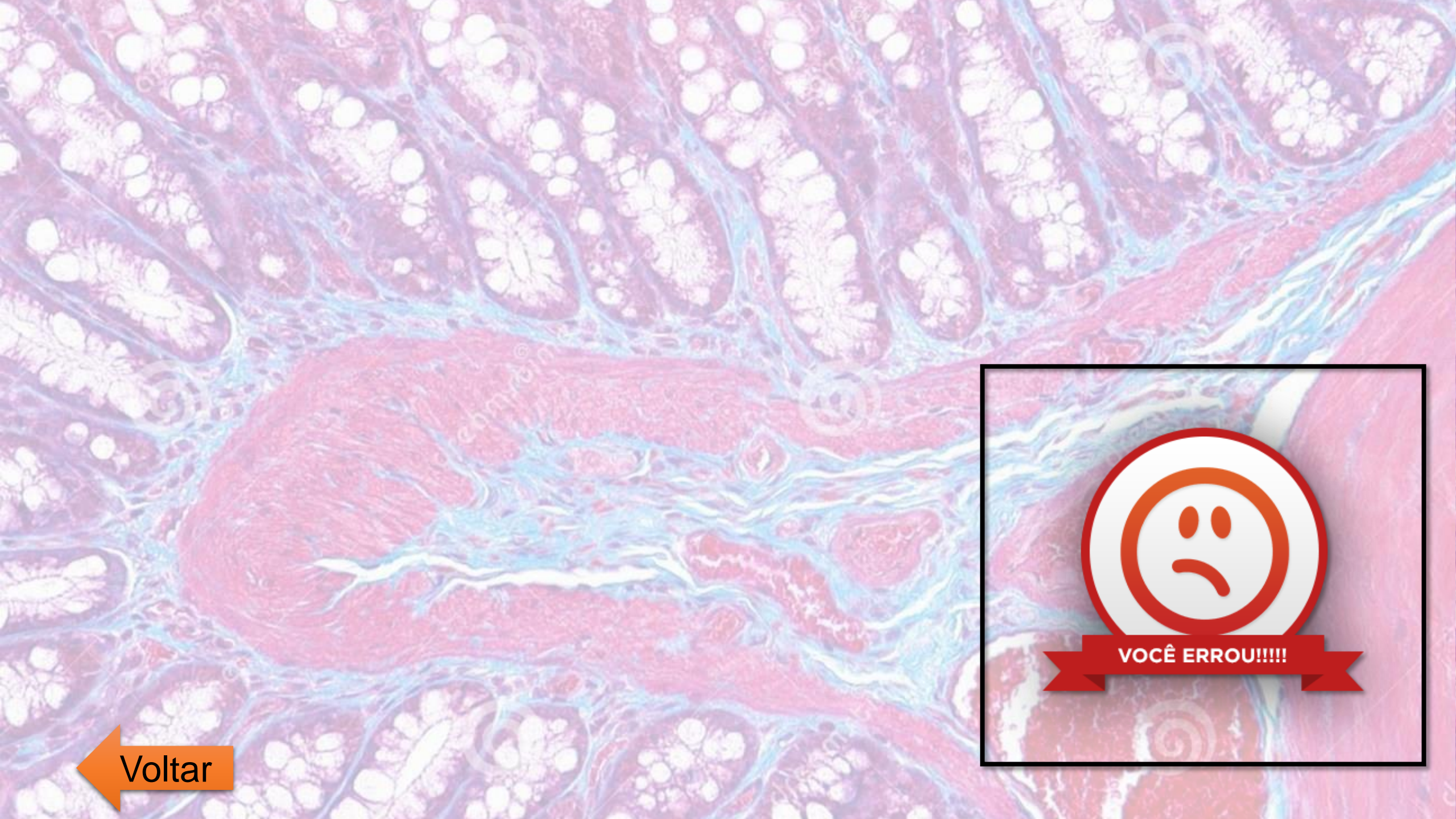
e) Sua principal função é produzir calor.



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 Voltar

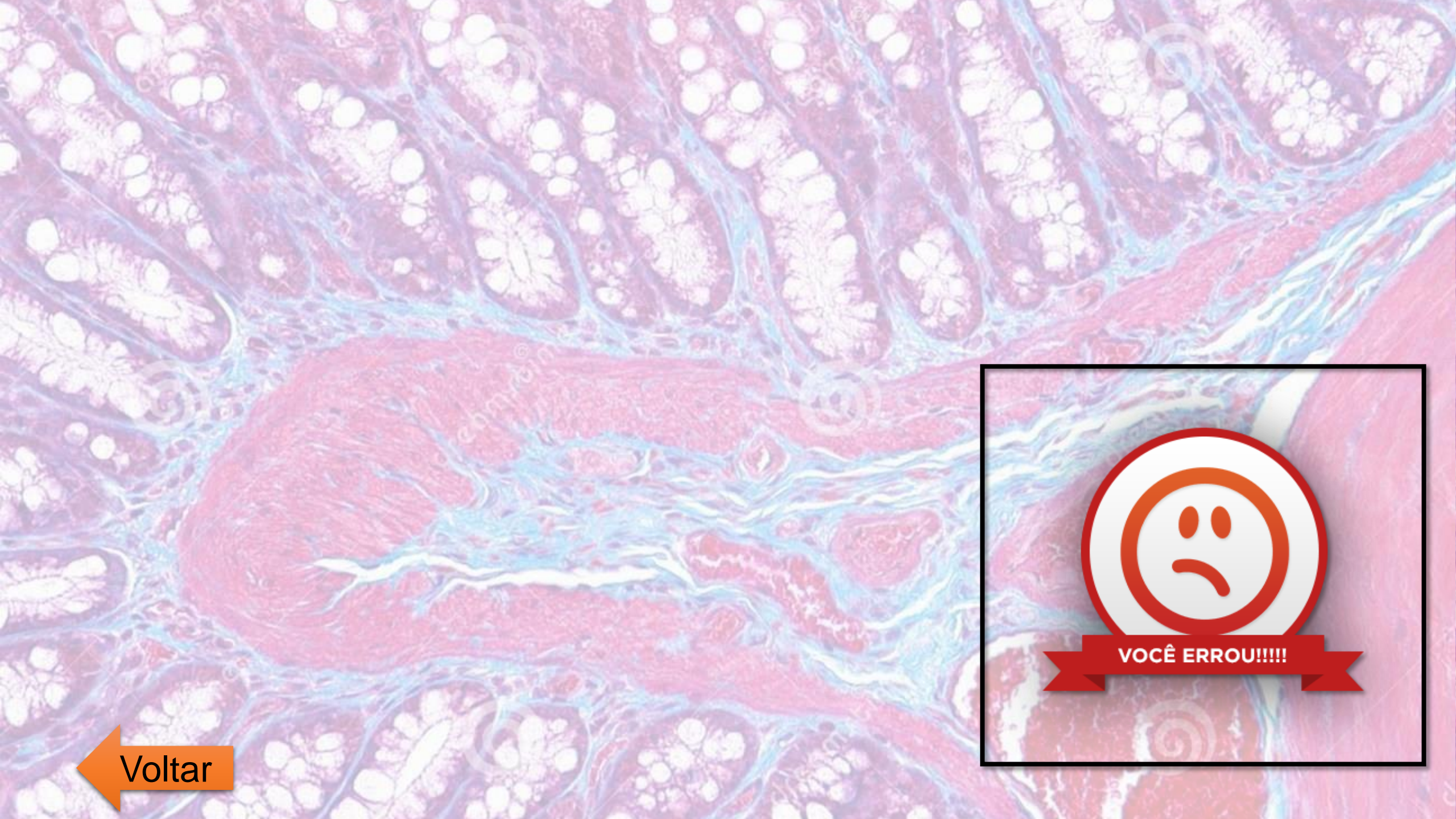


 Voltar

Alternativa “d”. A maior reserva de energia do corpo é encontrada no tecido adiposo unilocular.

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 Voltar

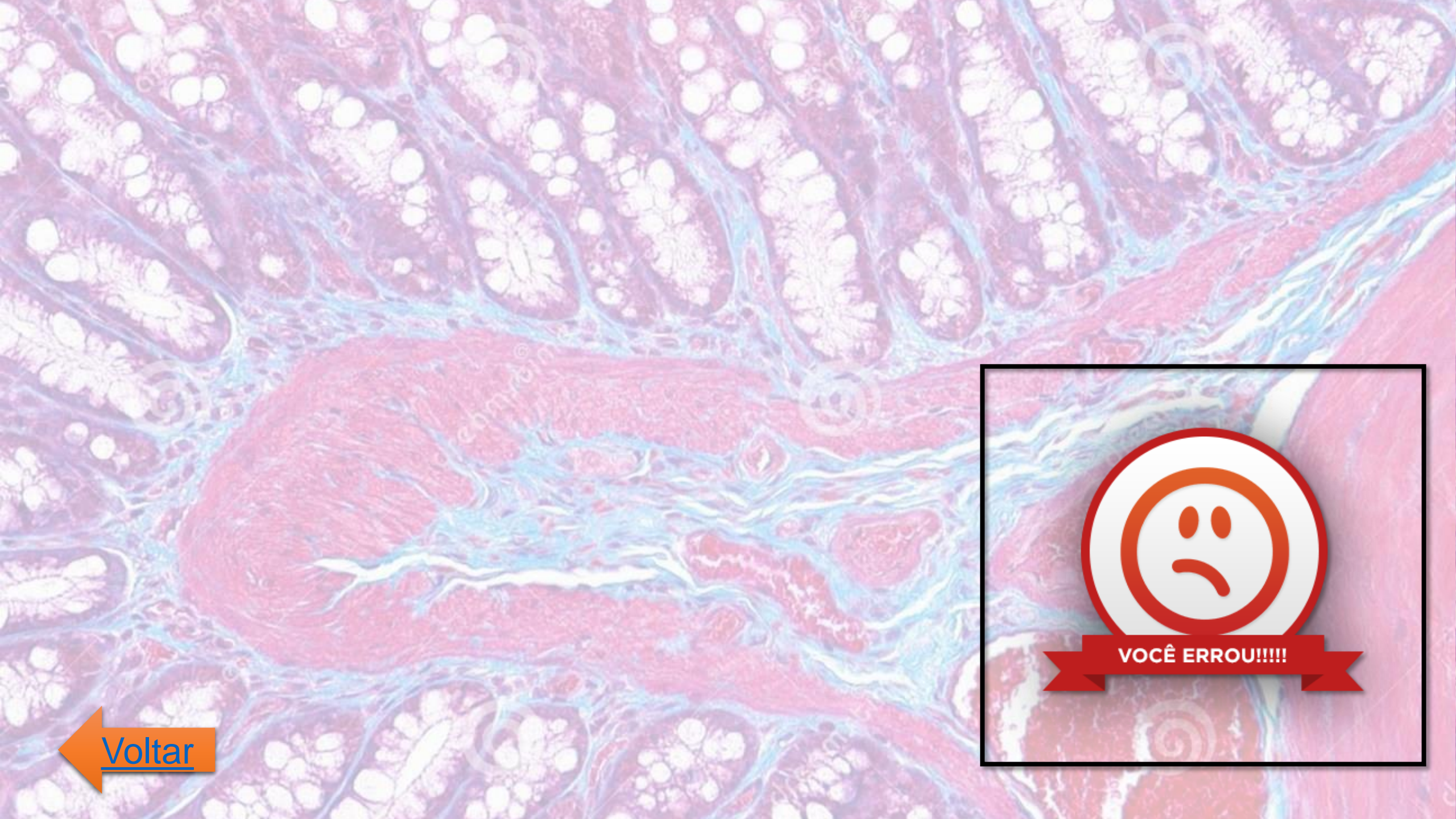
11. O corpo humano é composto por pelo menos dois tipos de gordura. A mais comum é o tecido adiposo branco, que se acumula ao redor das vísceras e debaixo da pele, podendo causar obesidade e desencadear complicações metabólicas. A outra é o tecido adiposo marrom, que regula a produção de calor e a temperatura corporal. Assinale a alternativa correta.

a) O tecido adiposo branco produz mais energia que o tecido adiposo marrom.

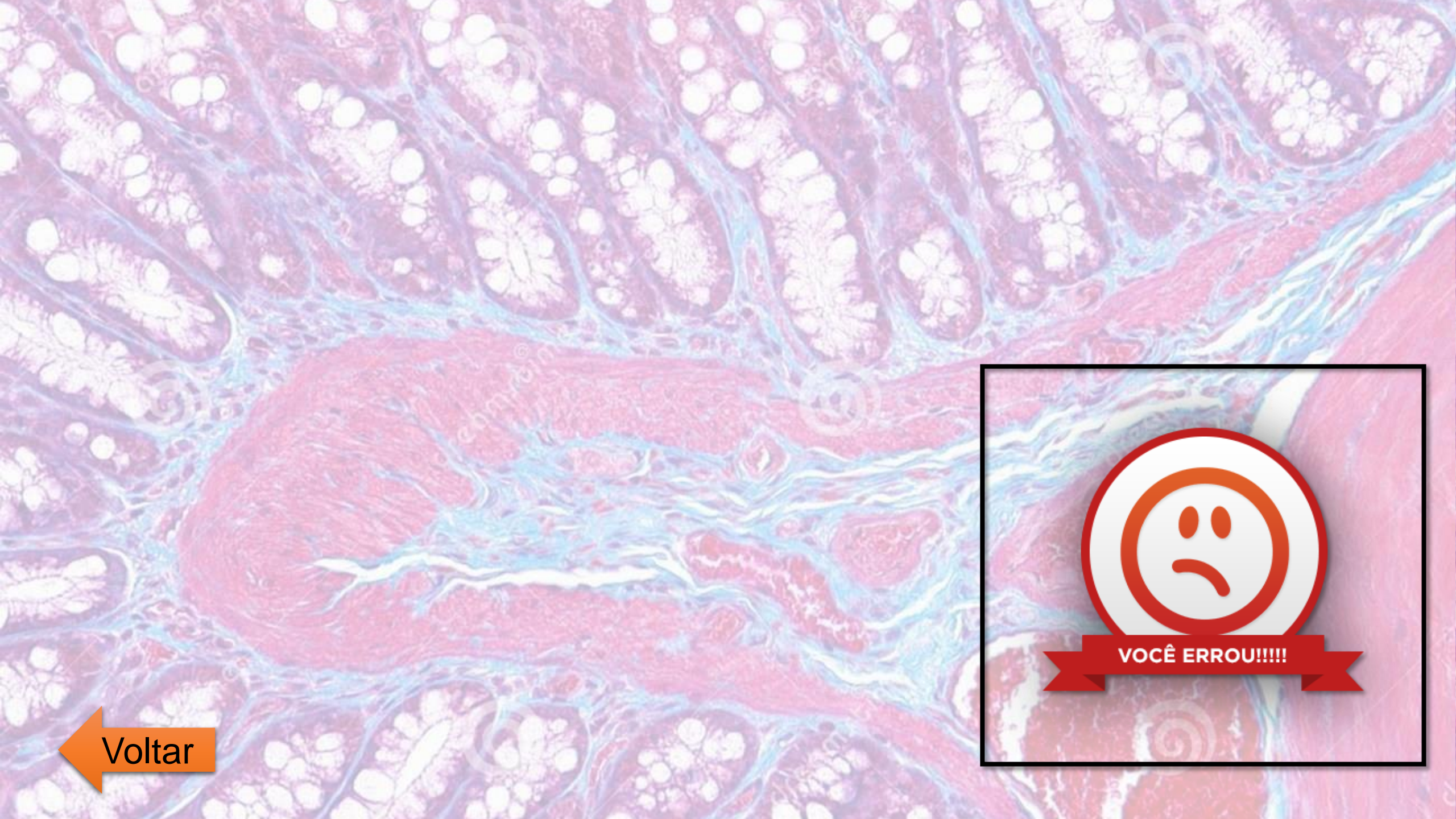
b) O tecido adiposo marrom não produz ATP, mas produz calor.

c) O tecido adiposo branco não produz ATP, mas produz calor.

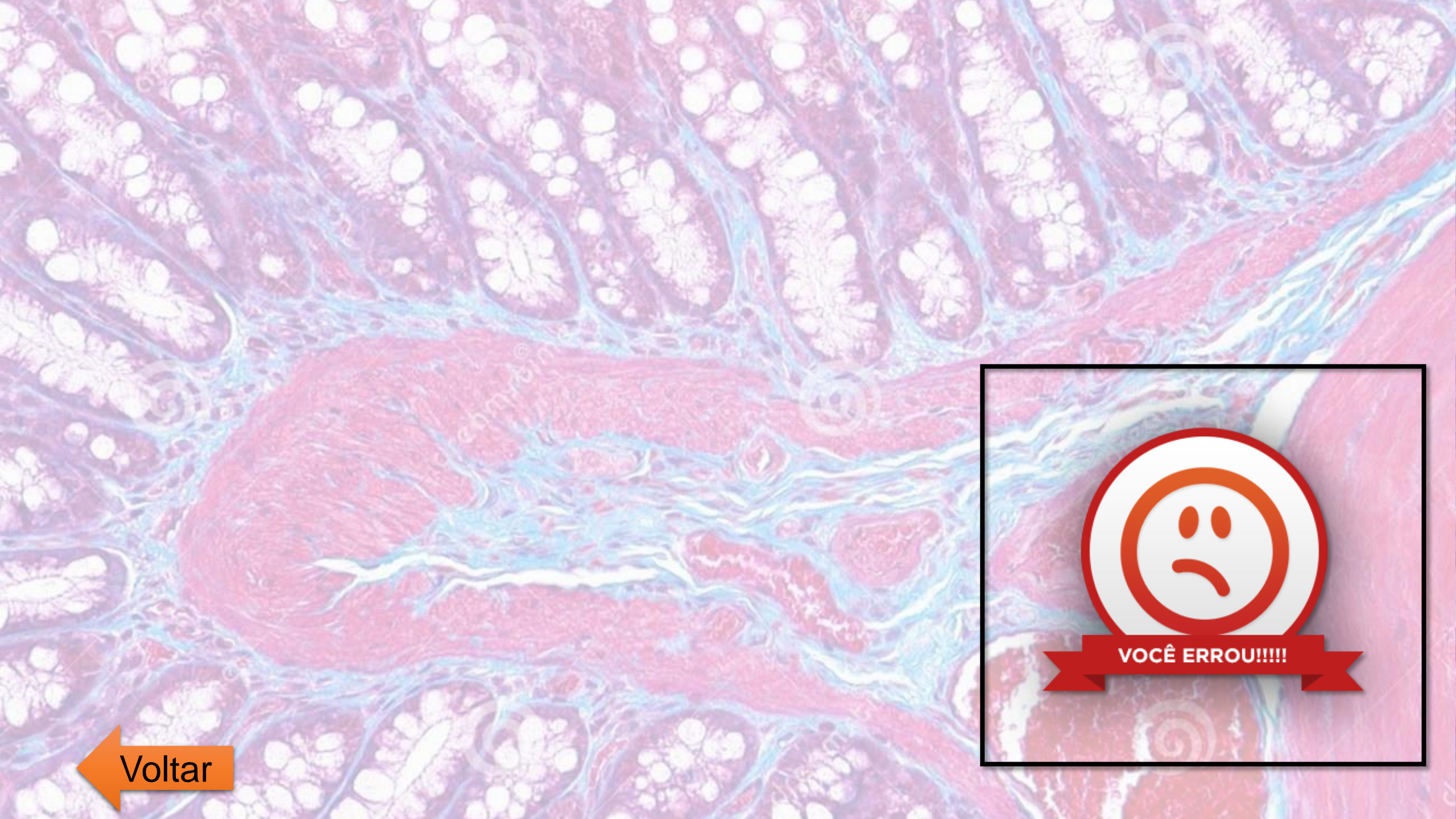
d) O tecido adiposo branco produz ATP e calor.



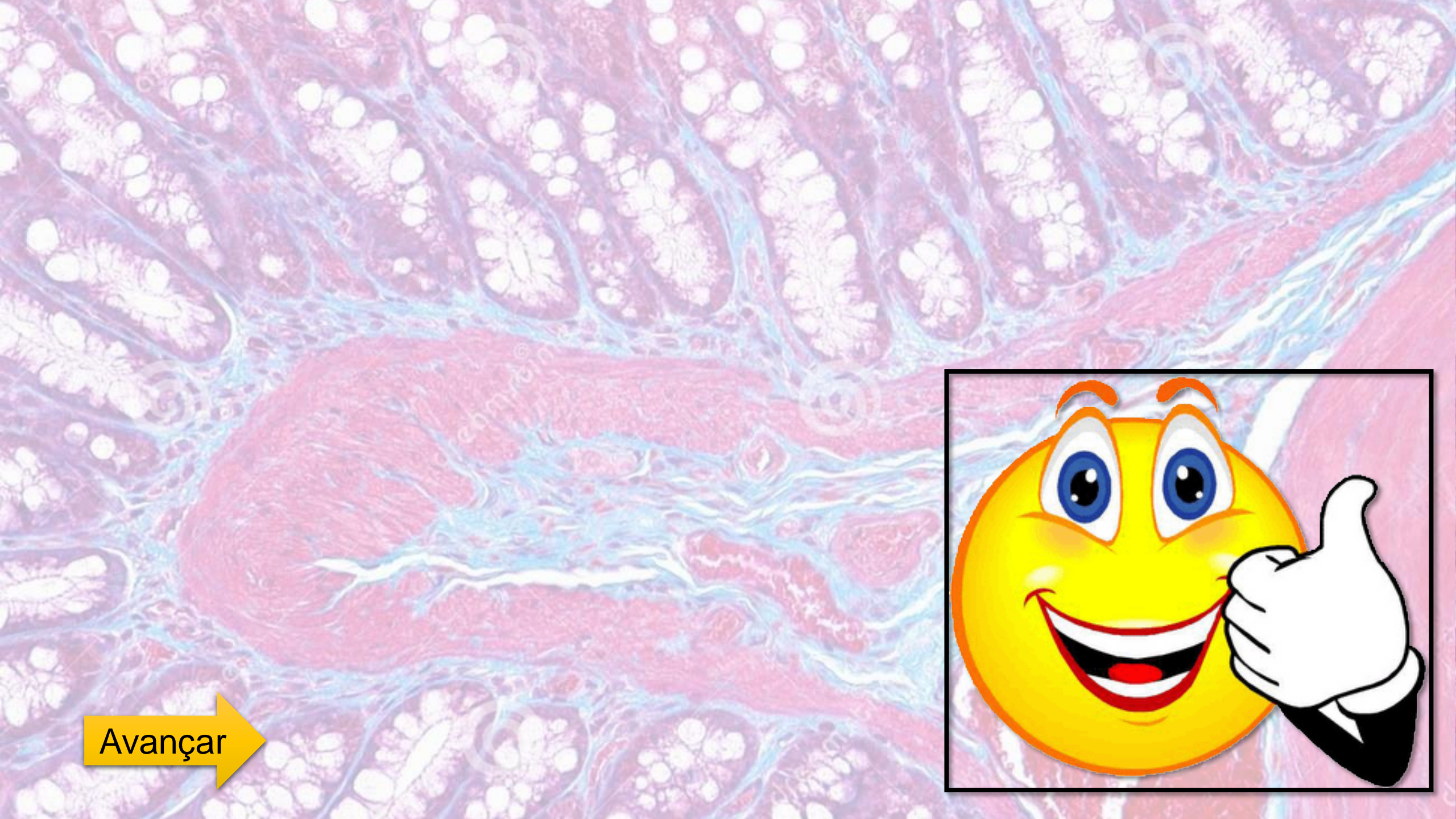
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 Voltar



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A histological micrograph showing a section of connective tissue. The tissue is stained with hematoxylin and eosin (H&E). The background is a dense network of pink-stained collagen fibers. Scattered throughout are numerous large, pale, circular cells with thin, dark nuclei, which are adipose cells. The overall appearance is that of loose connective tissue.

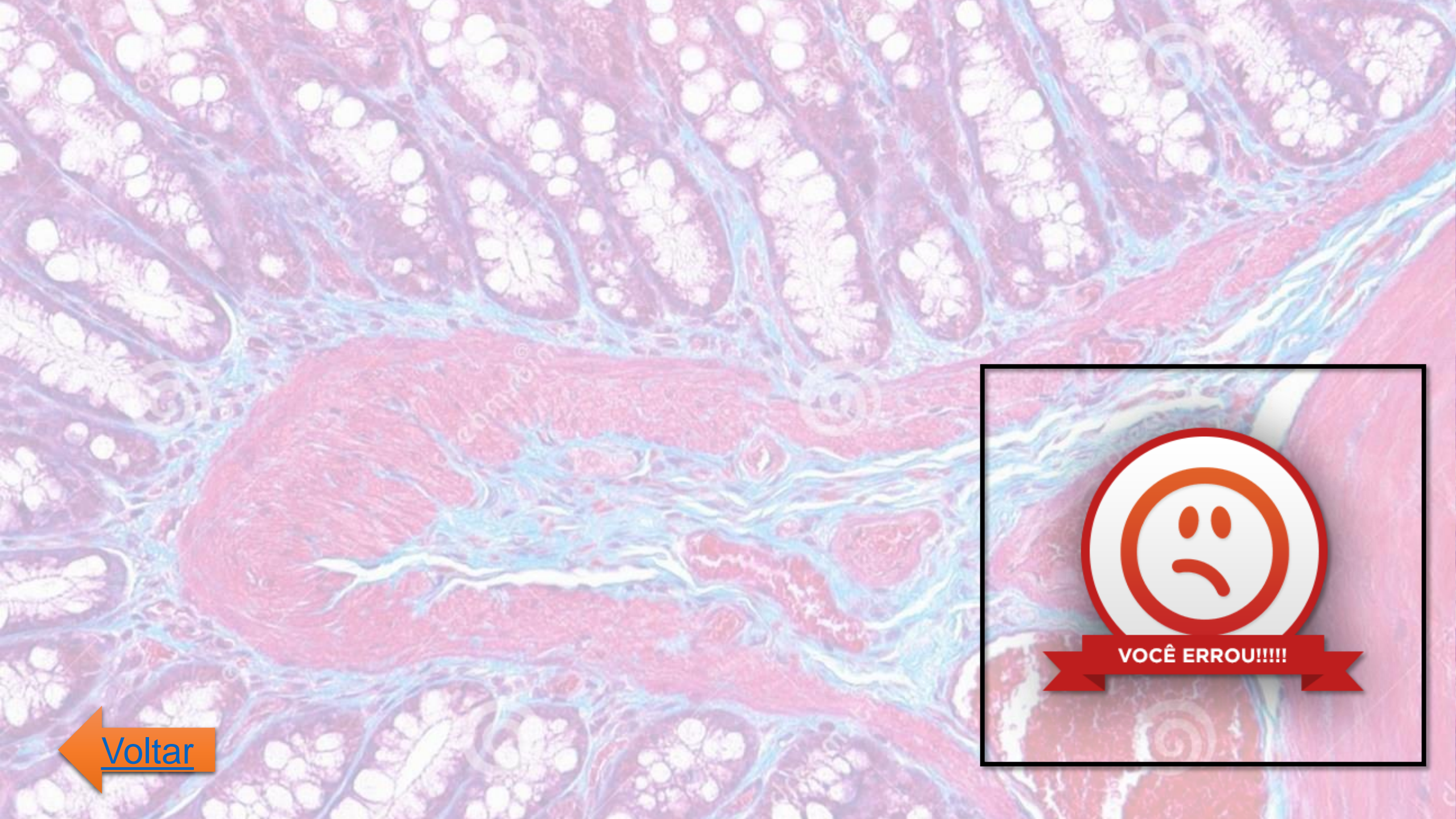
12. As células adiposas pertencem ao tecido:

a) ósseo.

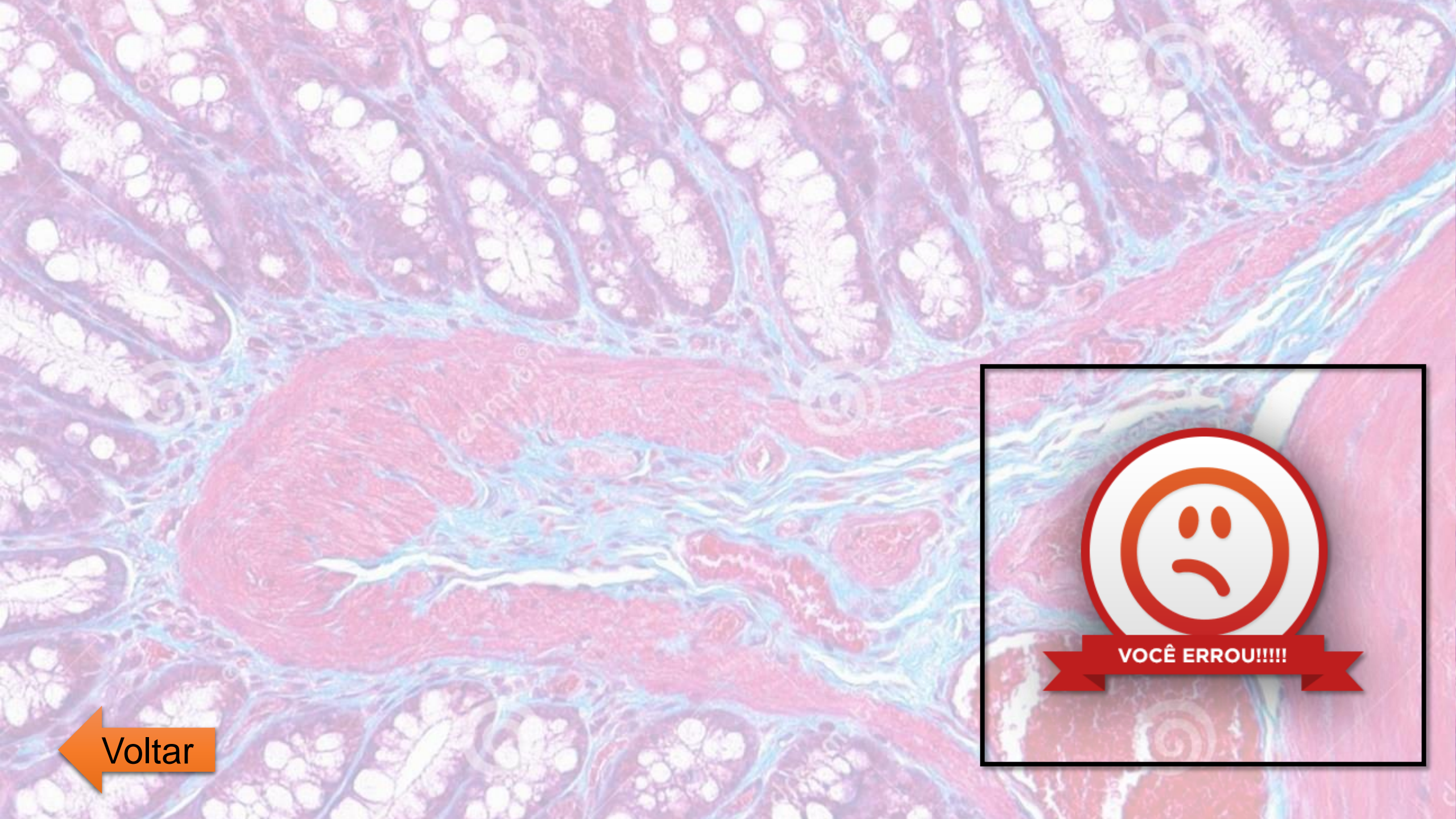
b) nervoso.

c) muscular.

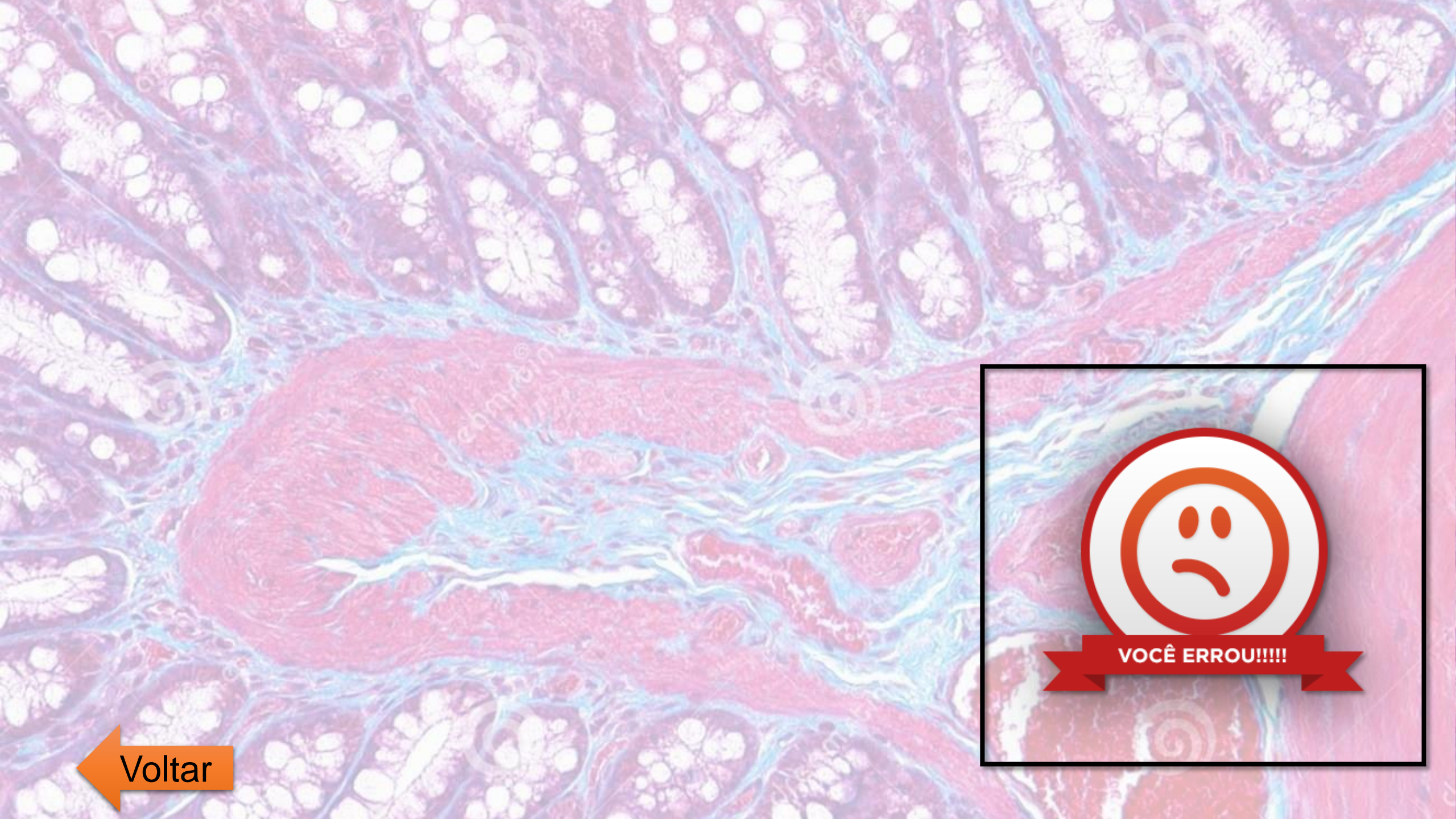
d) conjuntivo.



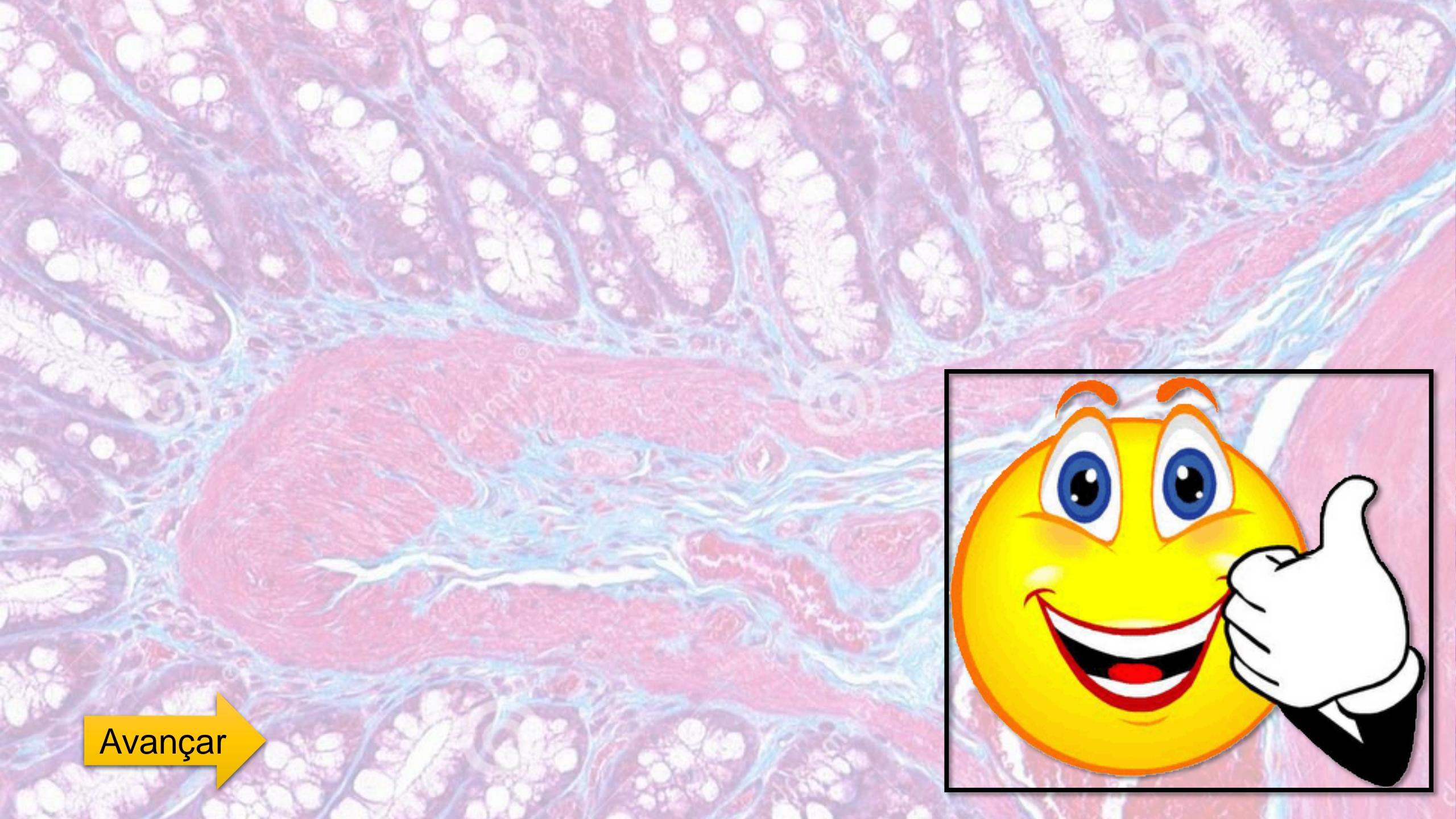
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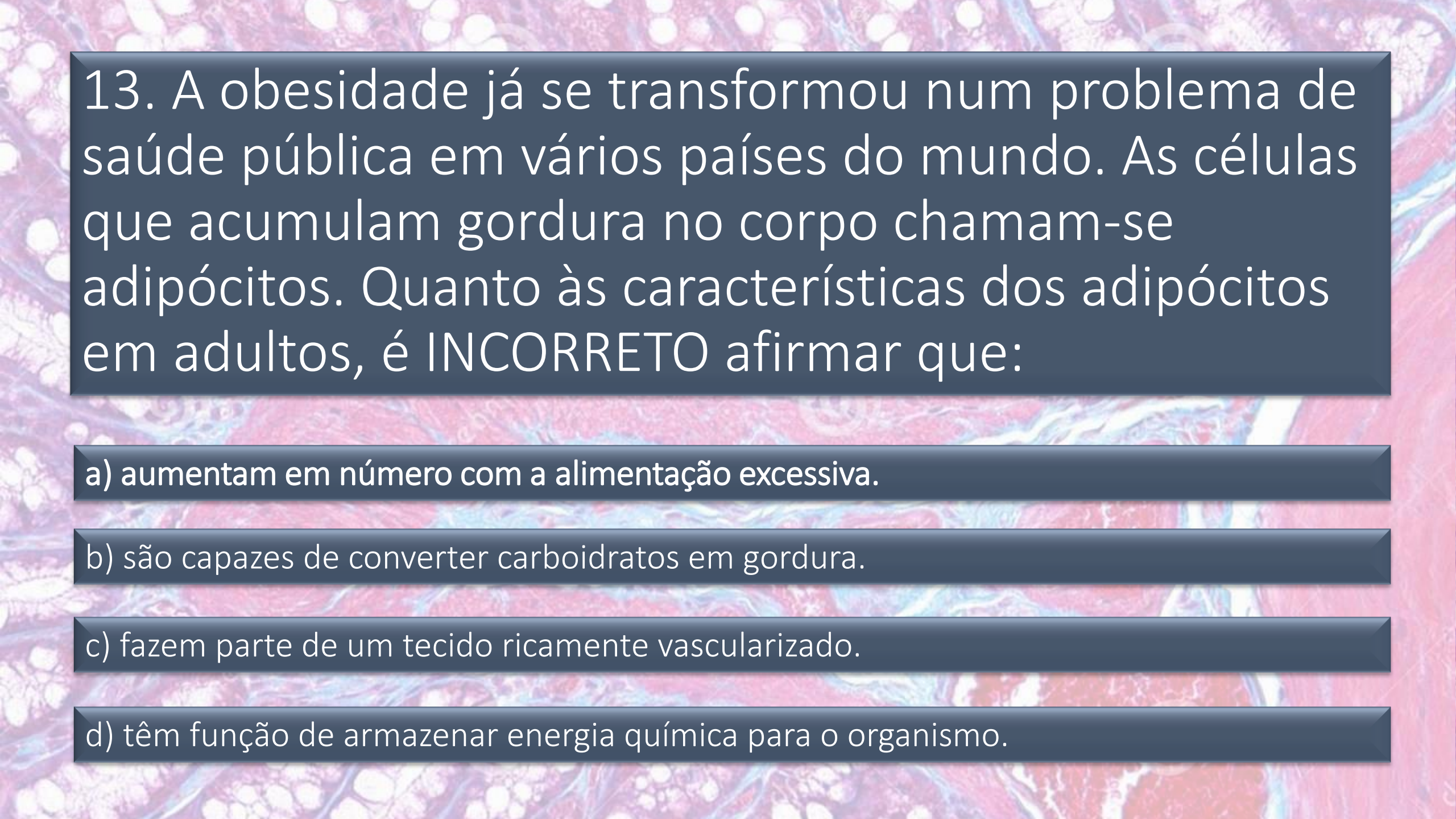
 Voltar



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The background of the slide is a microscopic image of adipose tissue, showing numerous large, clear adipocytes with thin cytoplasmic rims and nuclei pushed to the periphery. The cells are arranged in a somewhat regular pattern, with some connective tissue visible between them.

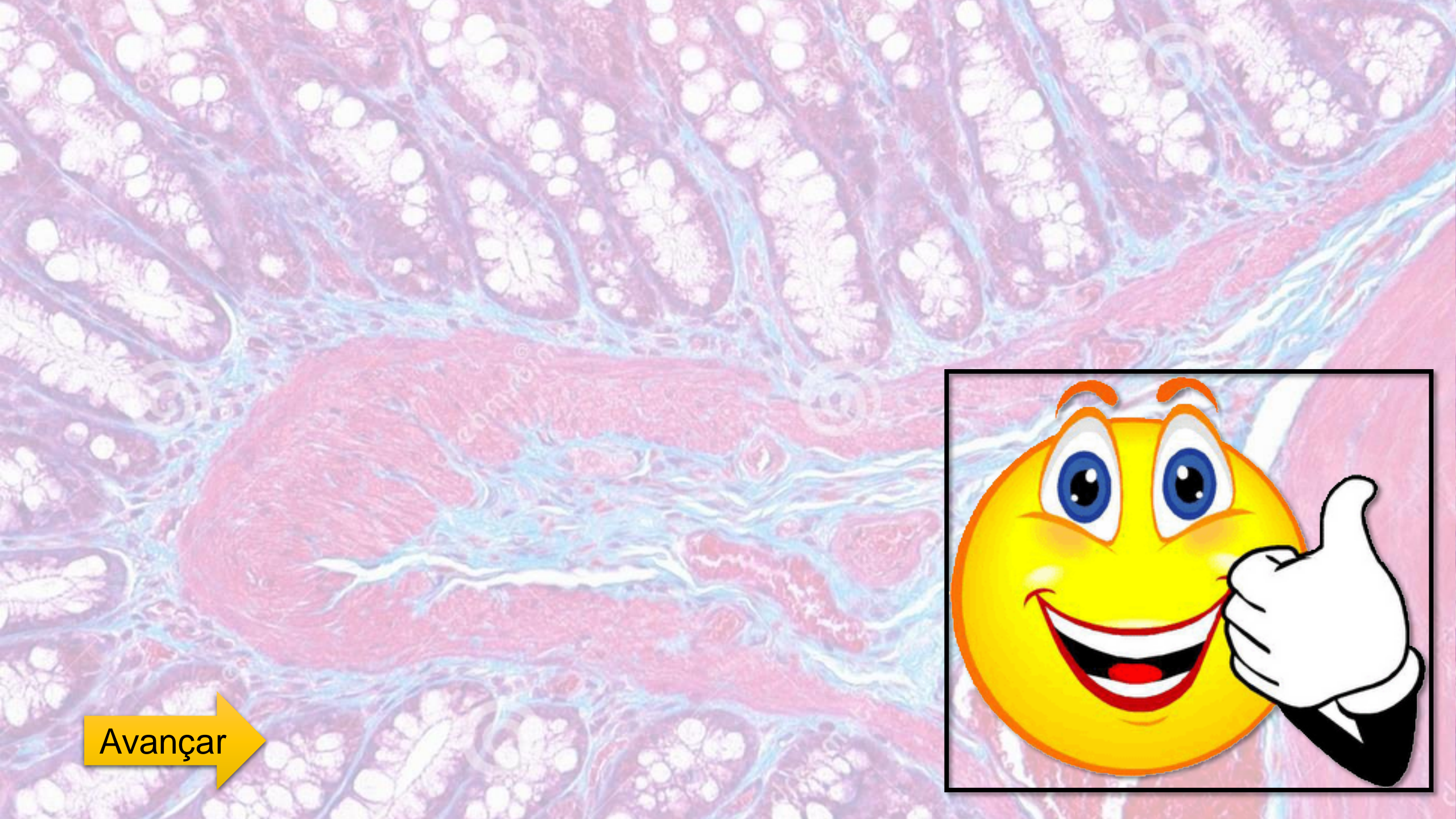
13. A obesidade já se transformou num problema de saúde pública em vários países do mundo. As células que acumulam gordura no corpo chamam-se adipócitos. Quanto às características dos adipócitos em adultos, é INCORRETO afirmar que:

a) aumentam em número com a alimentação excessiva.

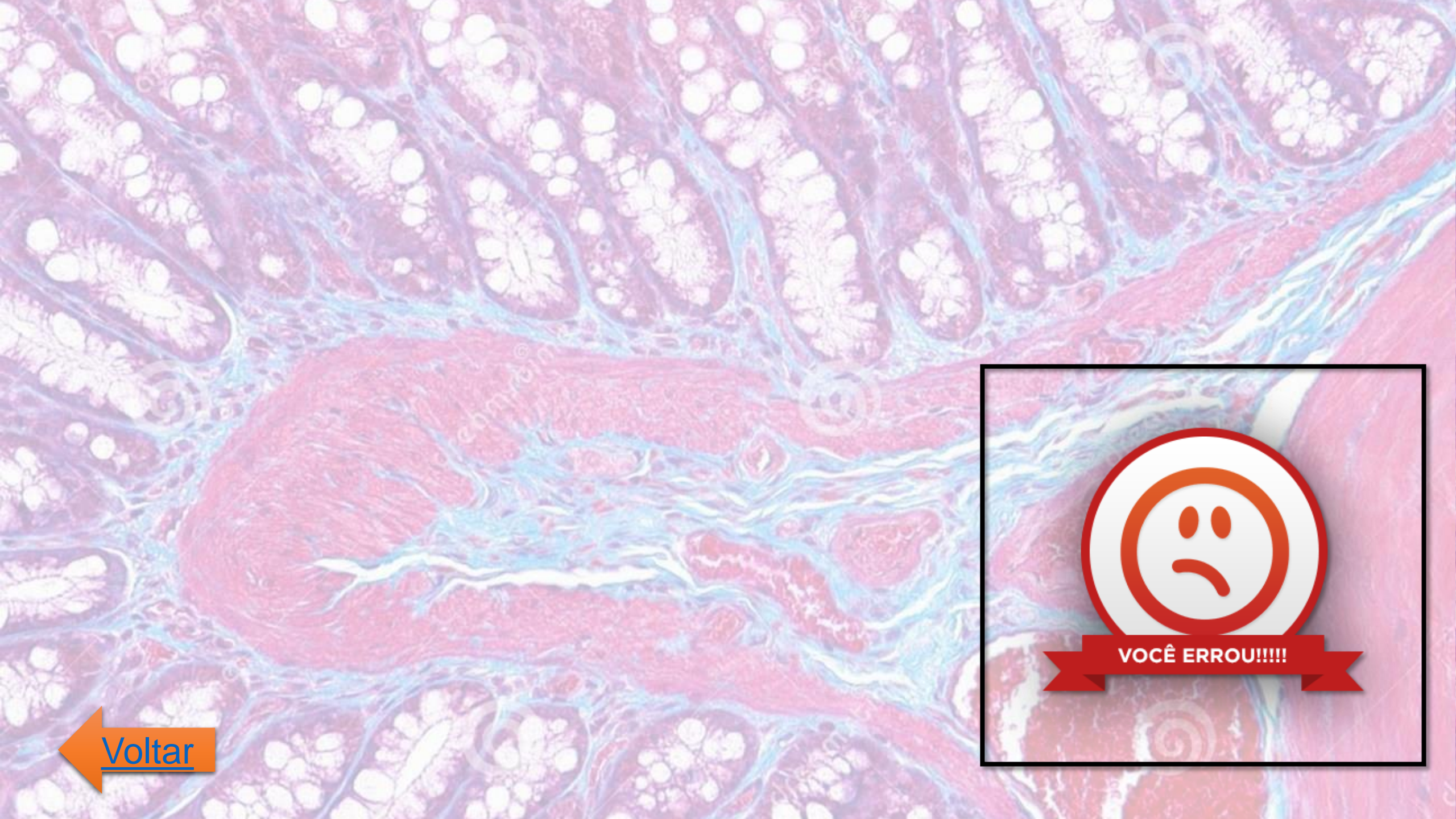
b) são capazes de converter carboidratos em gordura.

c) fazem parte de um tecido ricamente vascularizado.

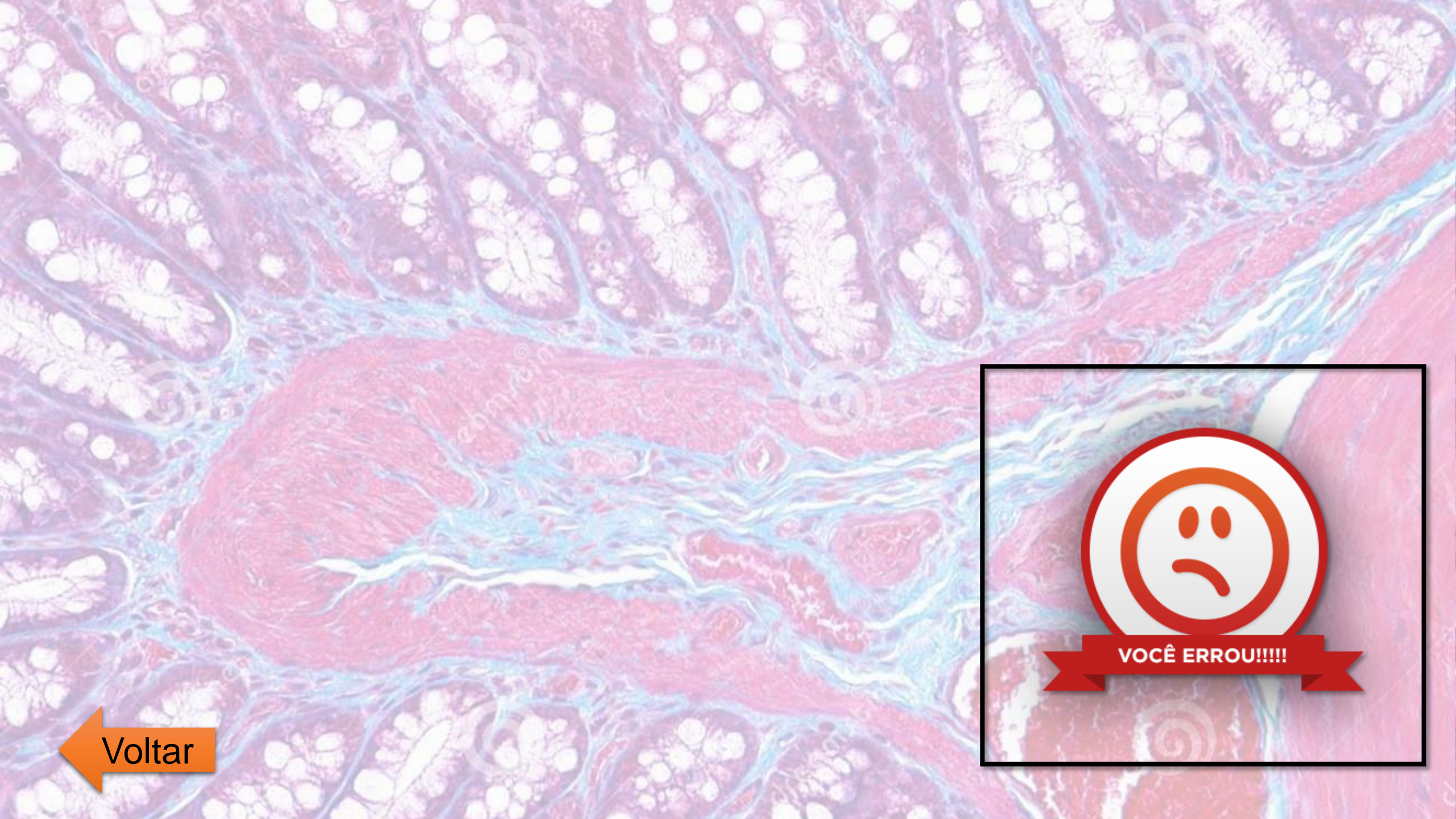
d) têm função de armazenar energia química para o organismo.



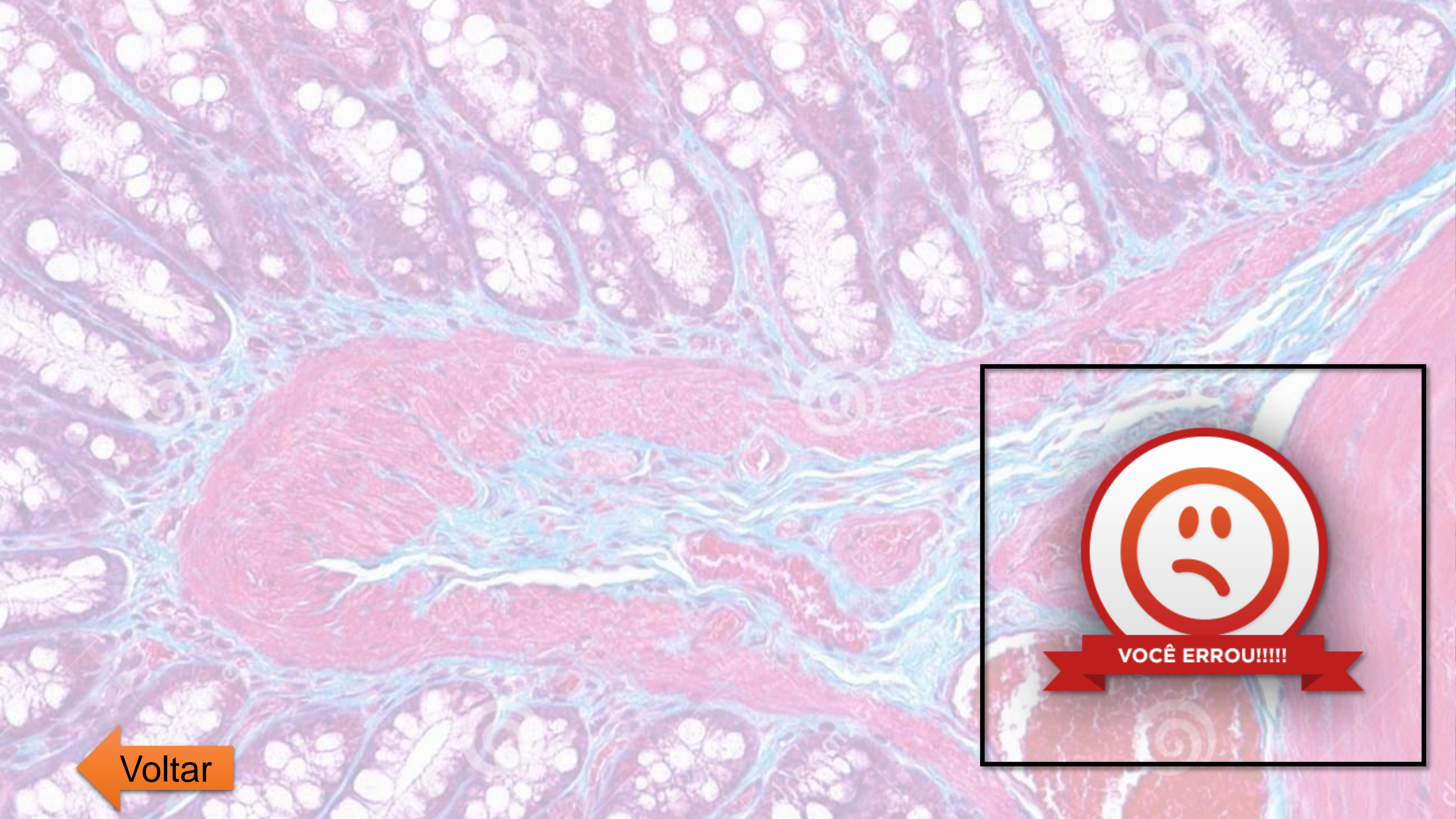
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 Voltar



 Voltar

14. Considere as afirmações abaixo sobre o tecido conjuntivo adiposo em seres humanos.

I - Ele é originado a partir de células do ectoderma do embrião.

II - Um súbito emagrecimento provoca a redução do número de adipócitos no corpo.

III - Crianças recém-nascidas são protegidas do frio pela presença de um tecido adiposo multilocular, rico em mitocôndrias.

Quais estão corretas?

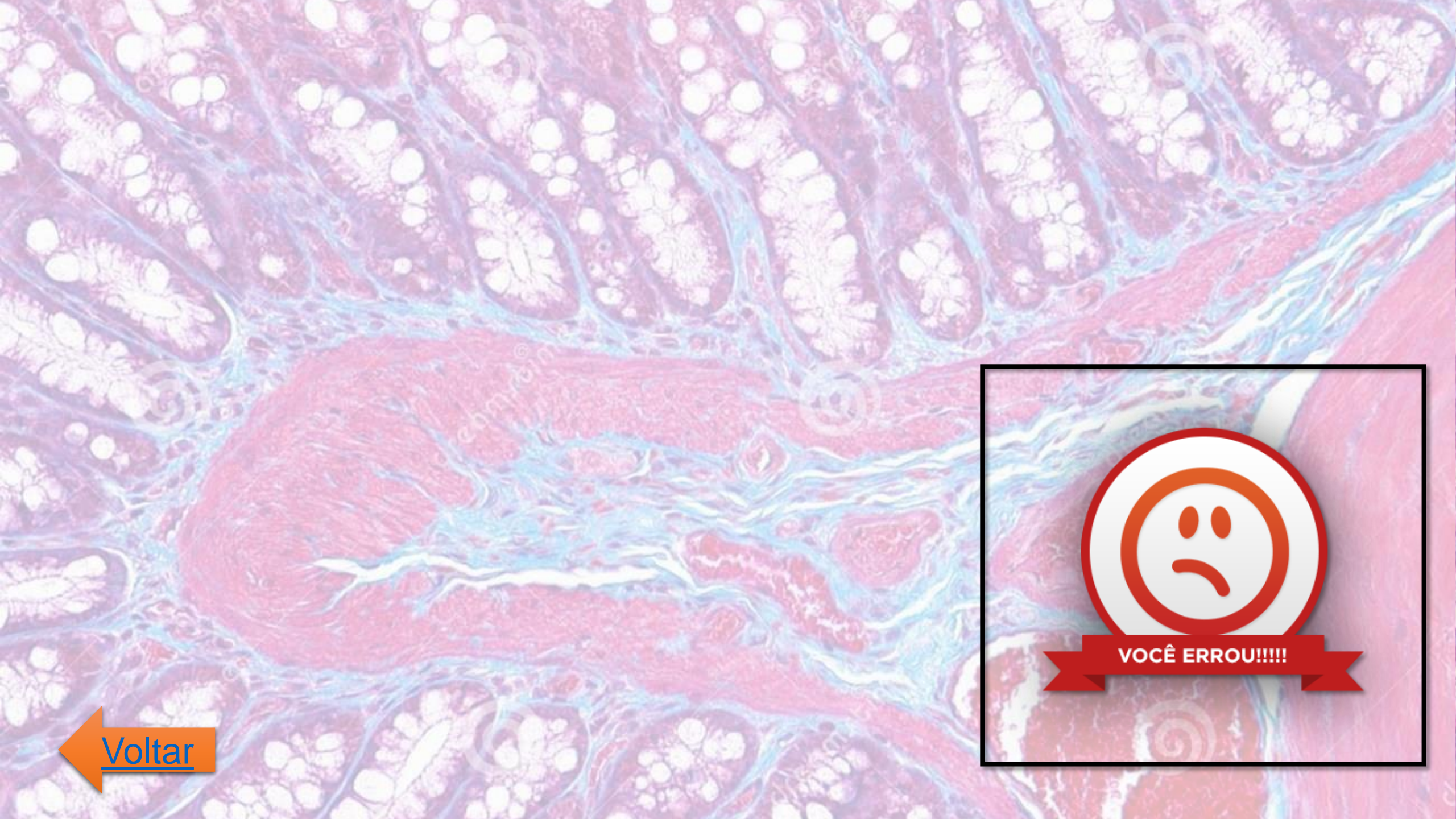
a) Apenas I.

b) Apenas II.

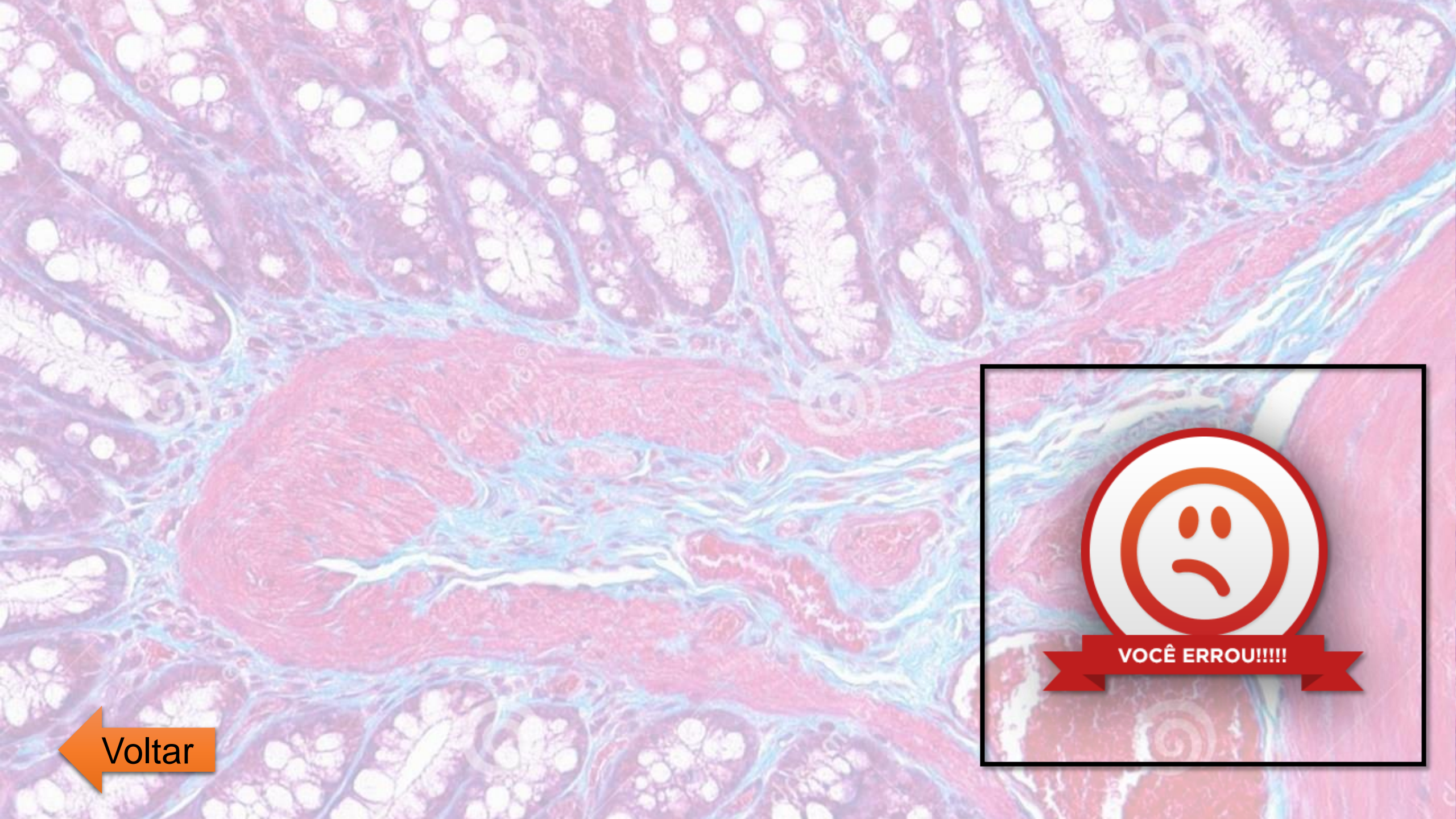
c) Apenas III.

d) Apenas I e II.

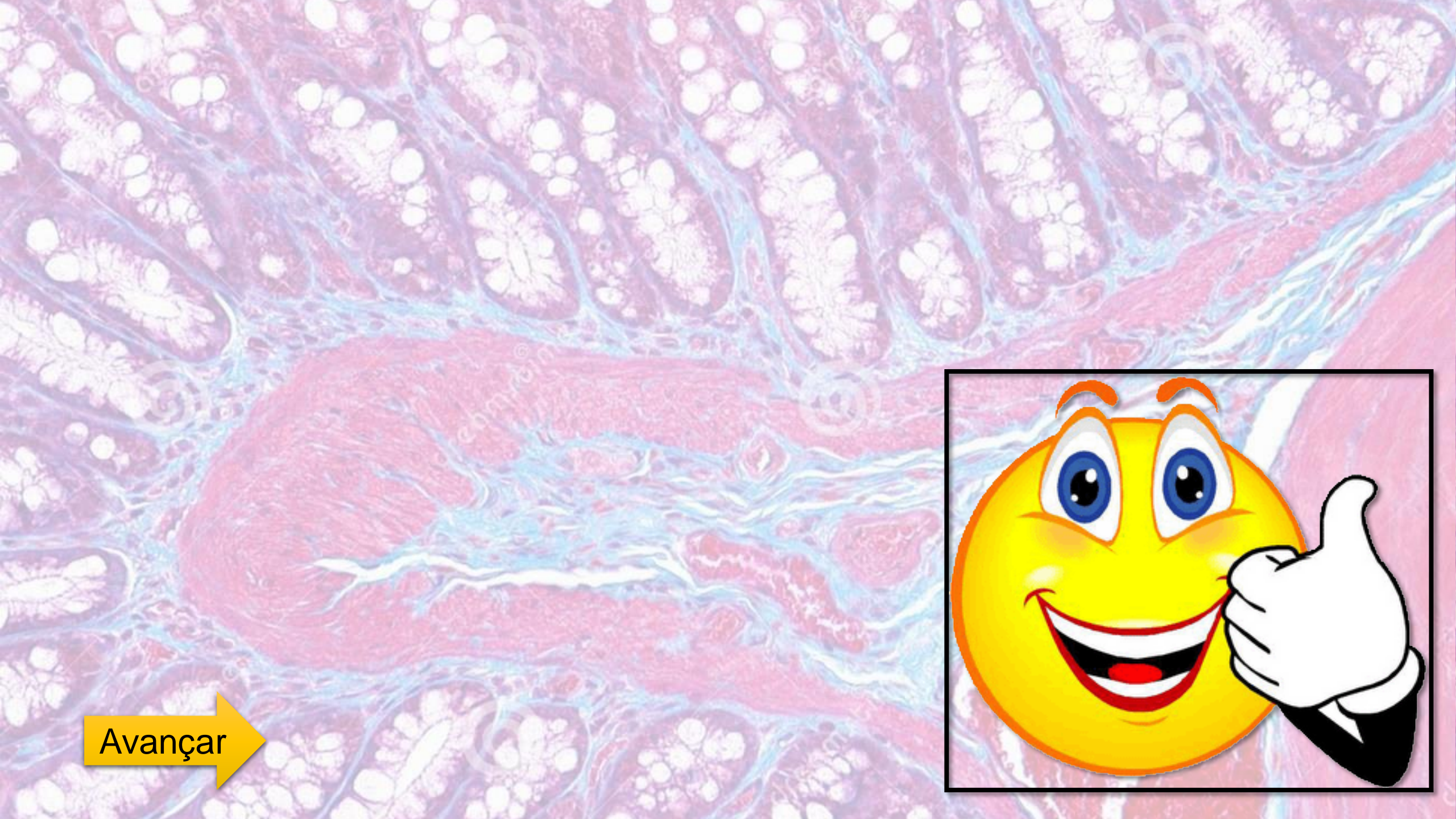
e) Apenas II e III.



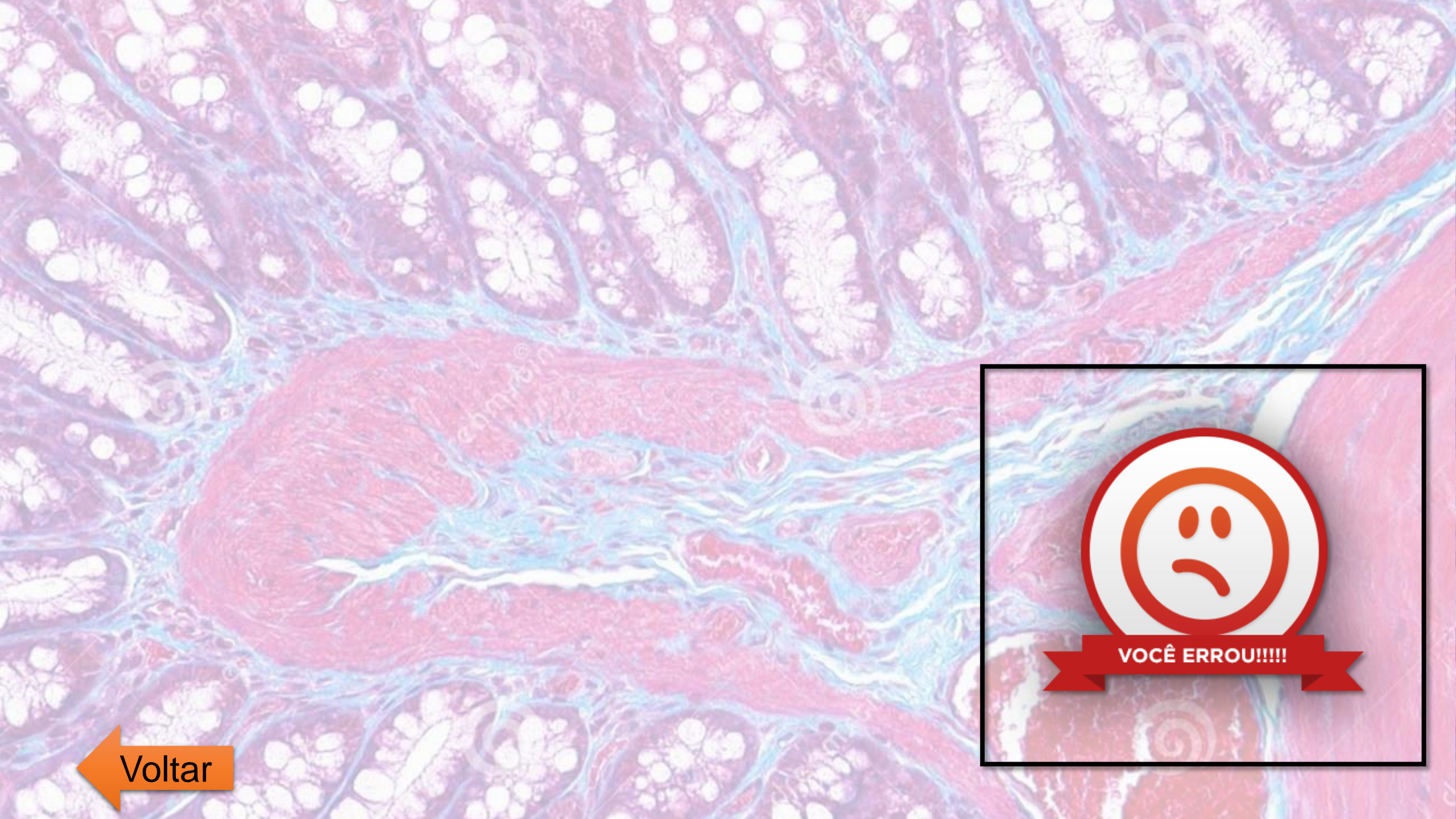
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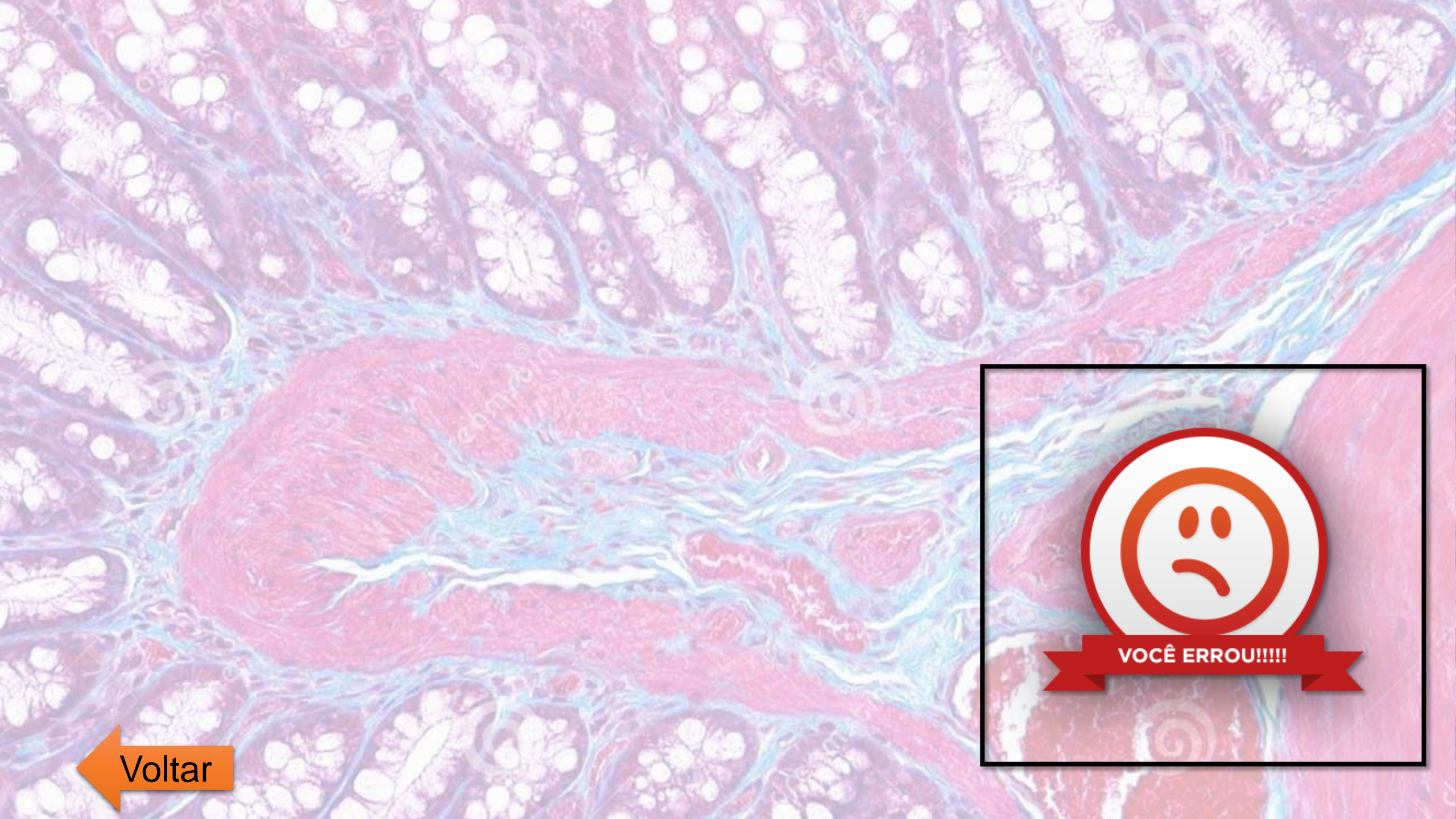
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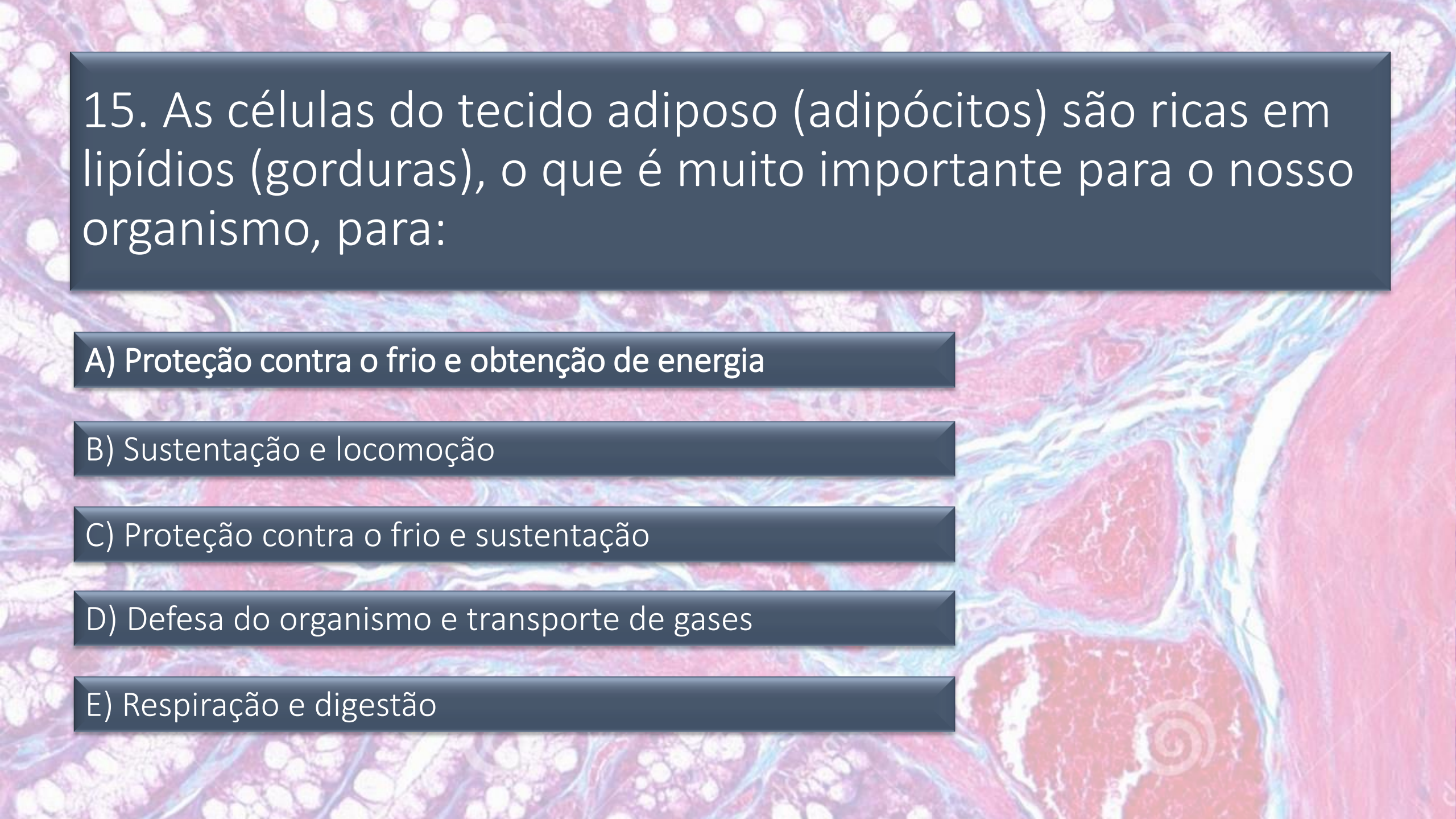
Avançar



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15. As células do tecido adiposo (adipócitos) são ricas em lipídios (gorduras), o que é muito importante para o nosso organismo, para:

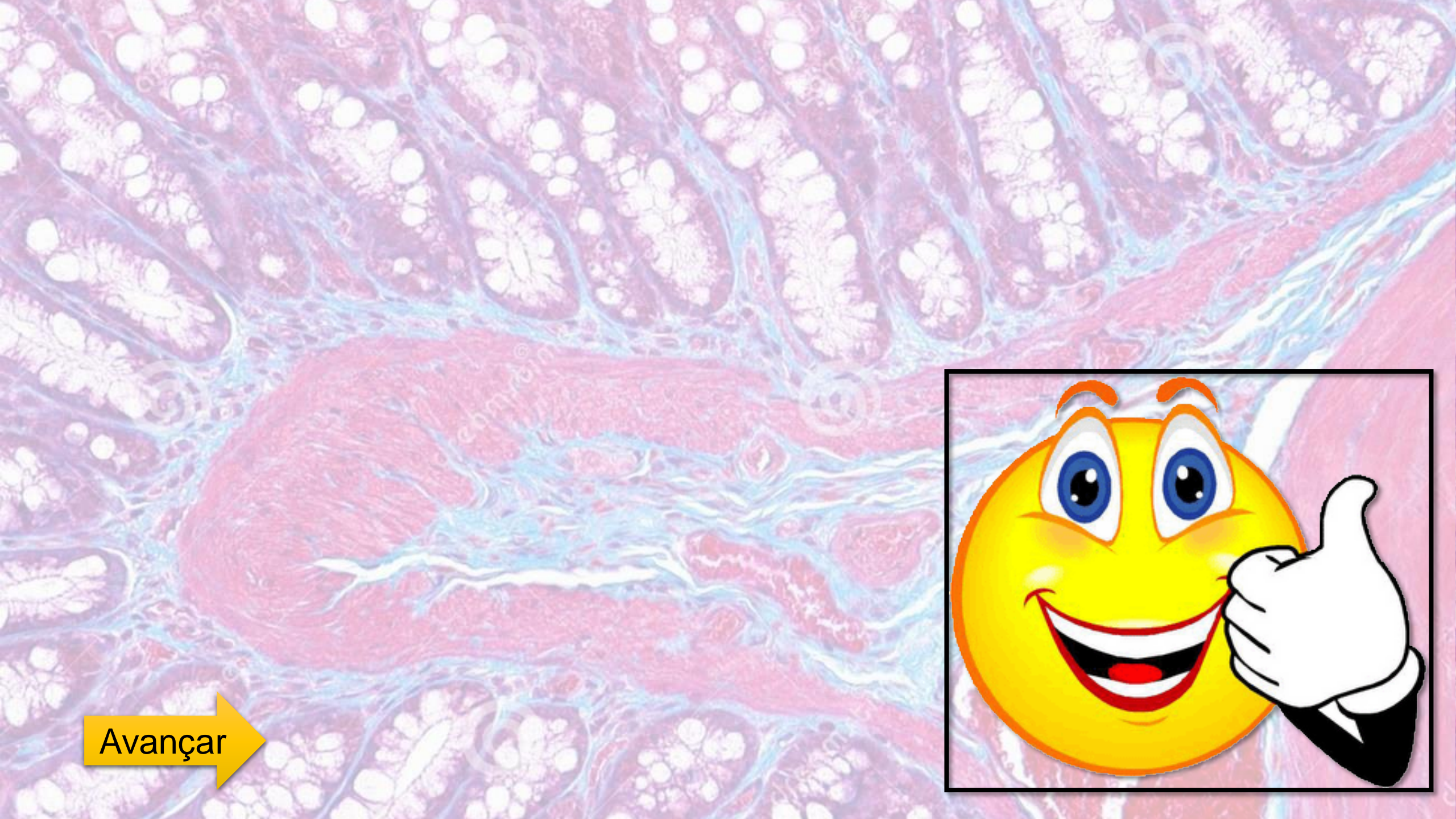
A) Proteção contra o frio e obtenção de energia

B) Sustentação e locomoção

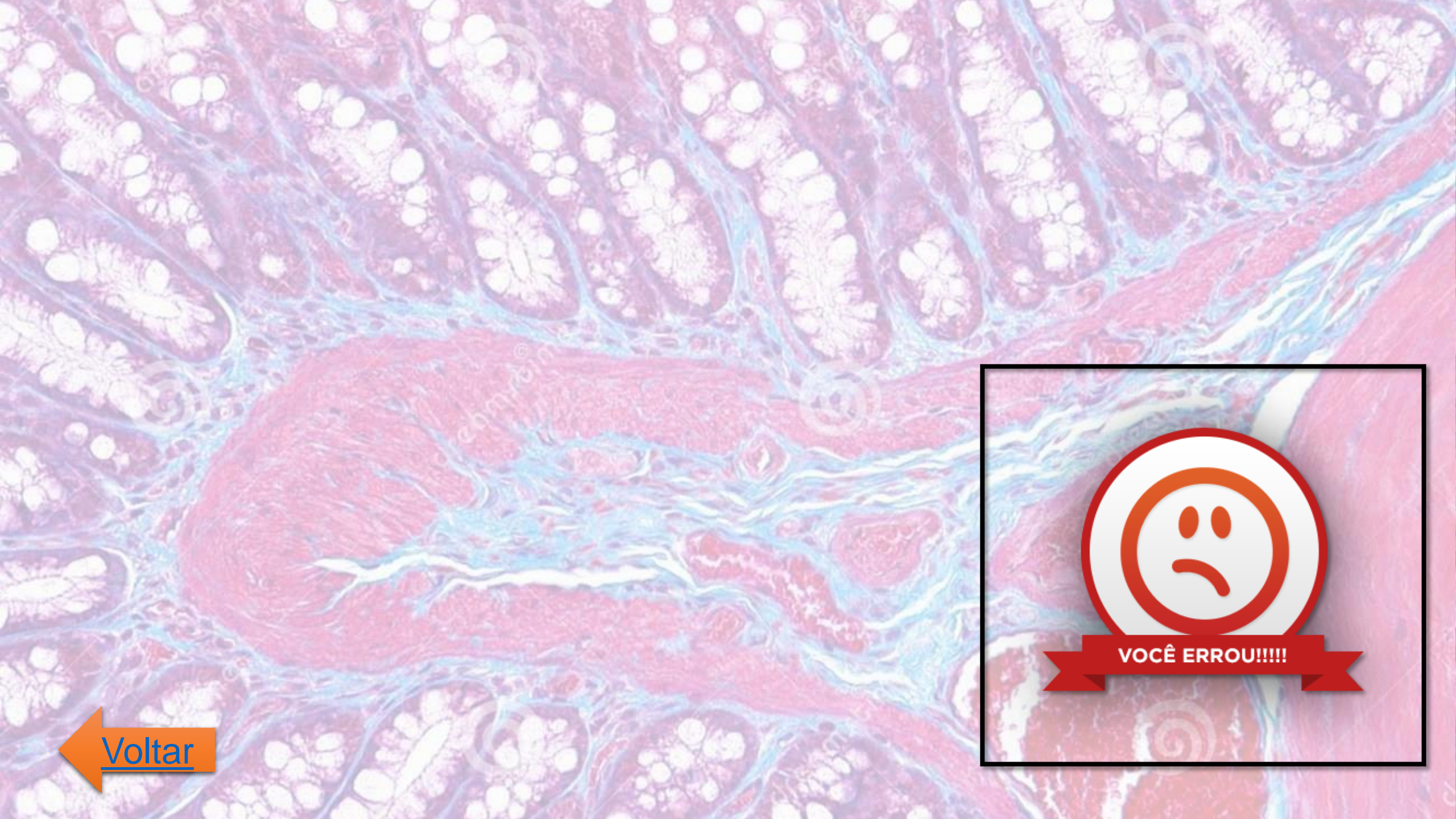
C) Proteção contra o frio e sustentação

D) Defesa do organismo e transporte de gases

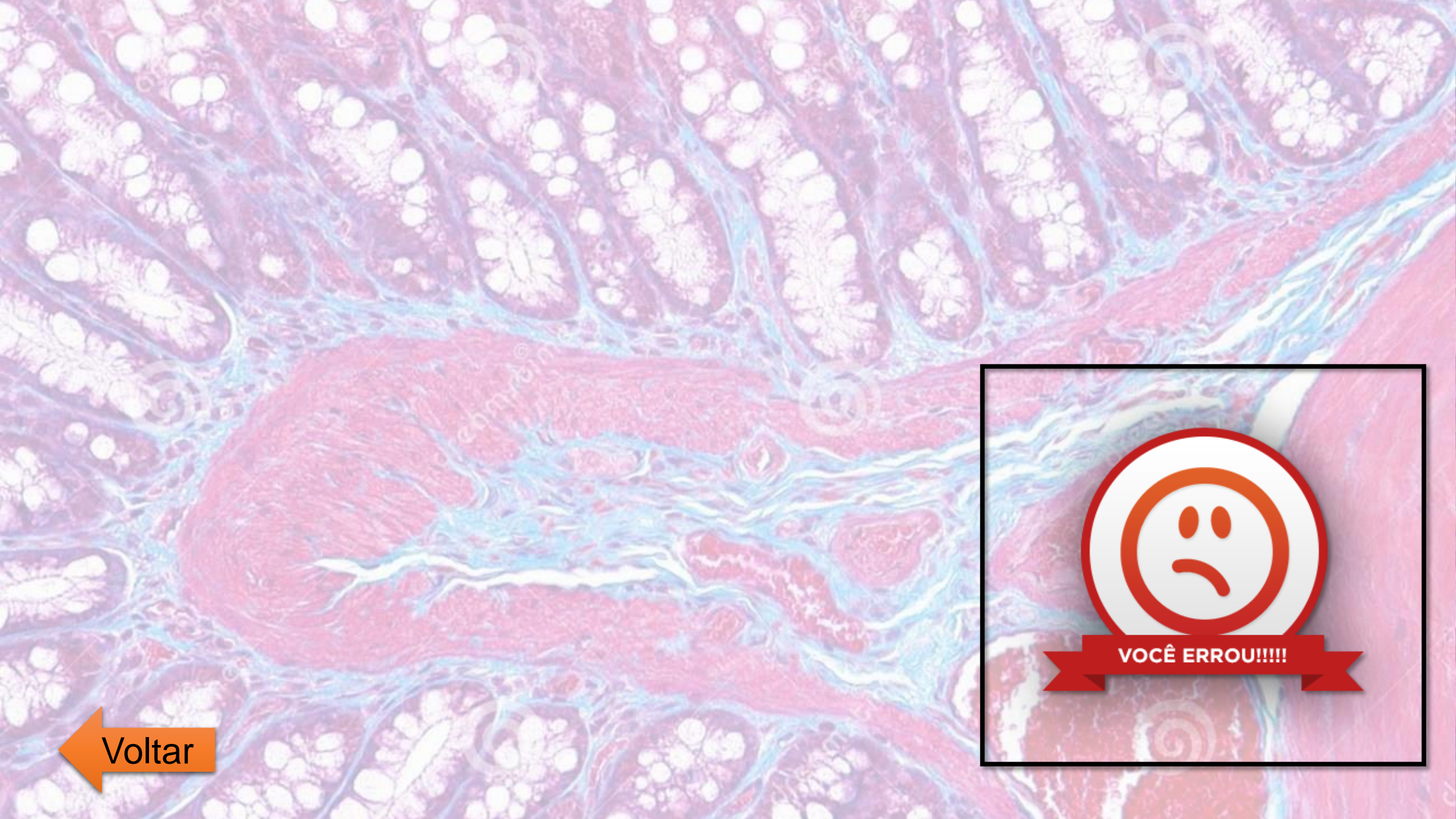
E) Respiração e digestão



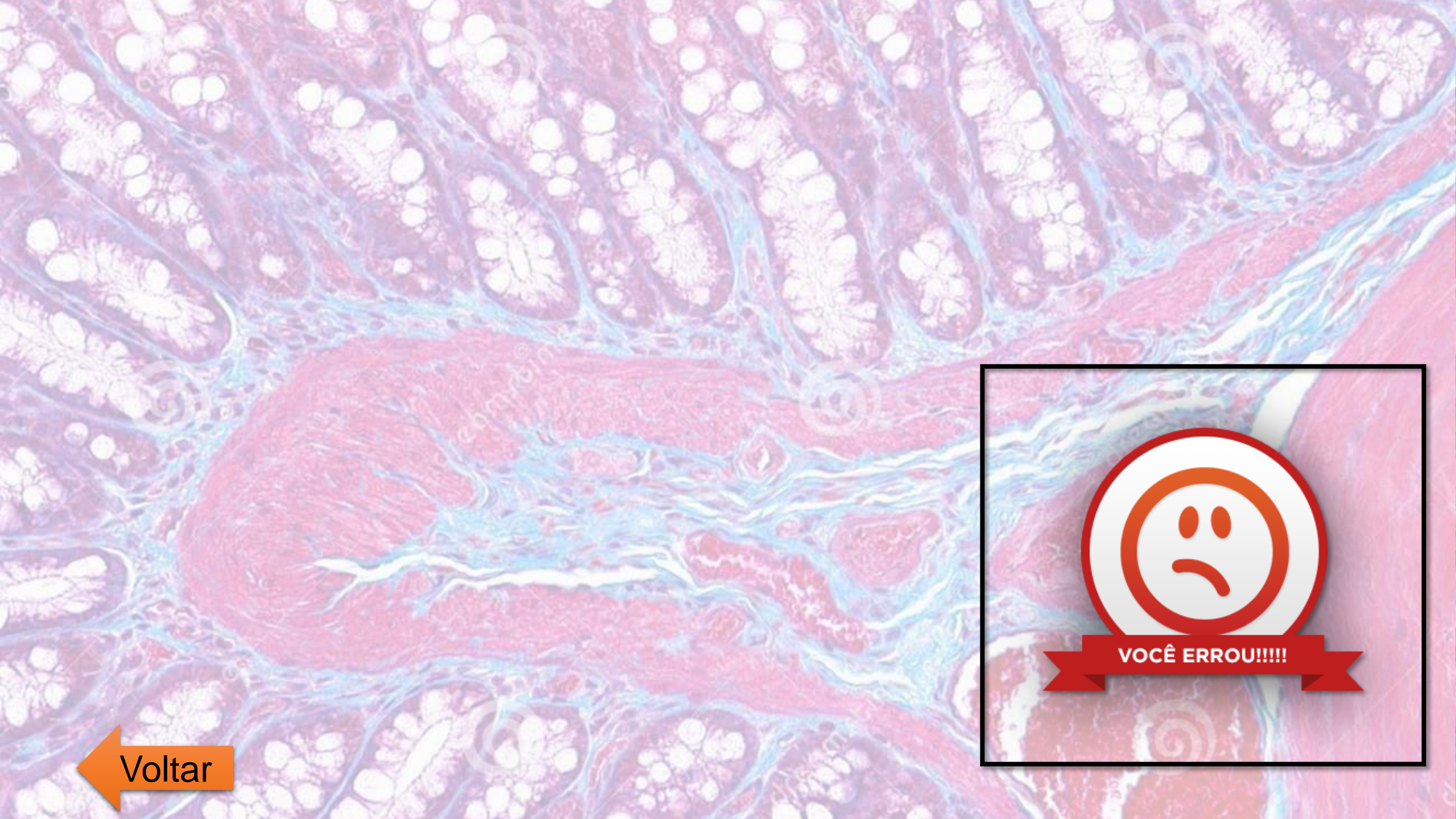
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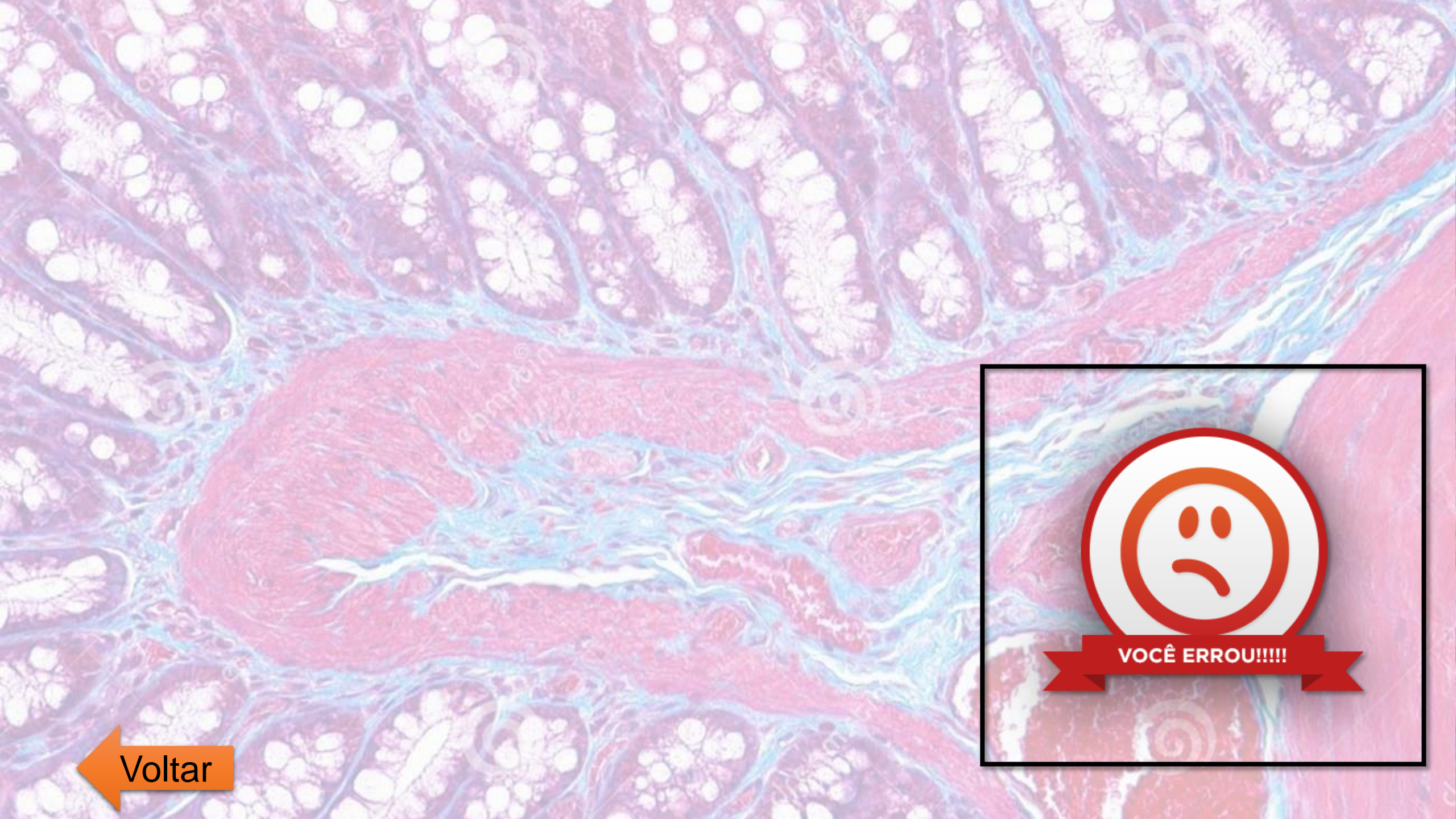
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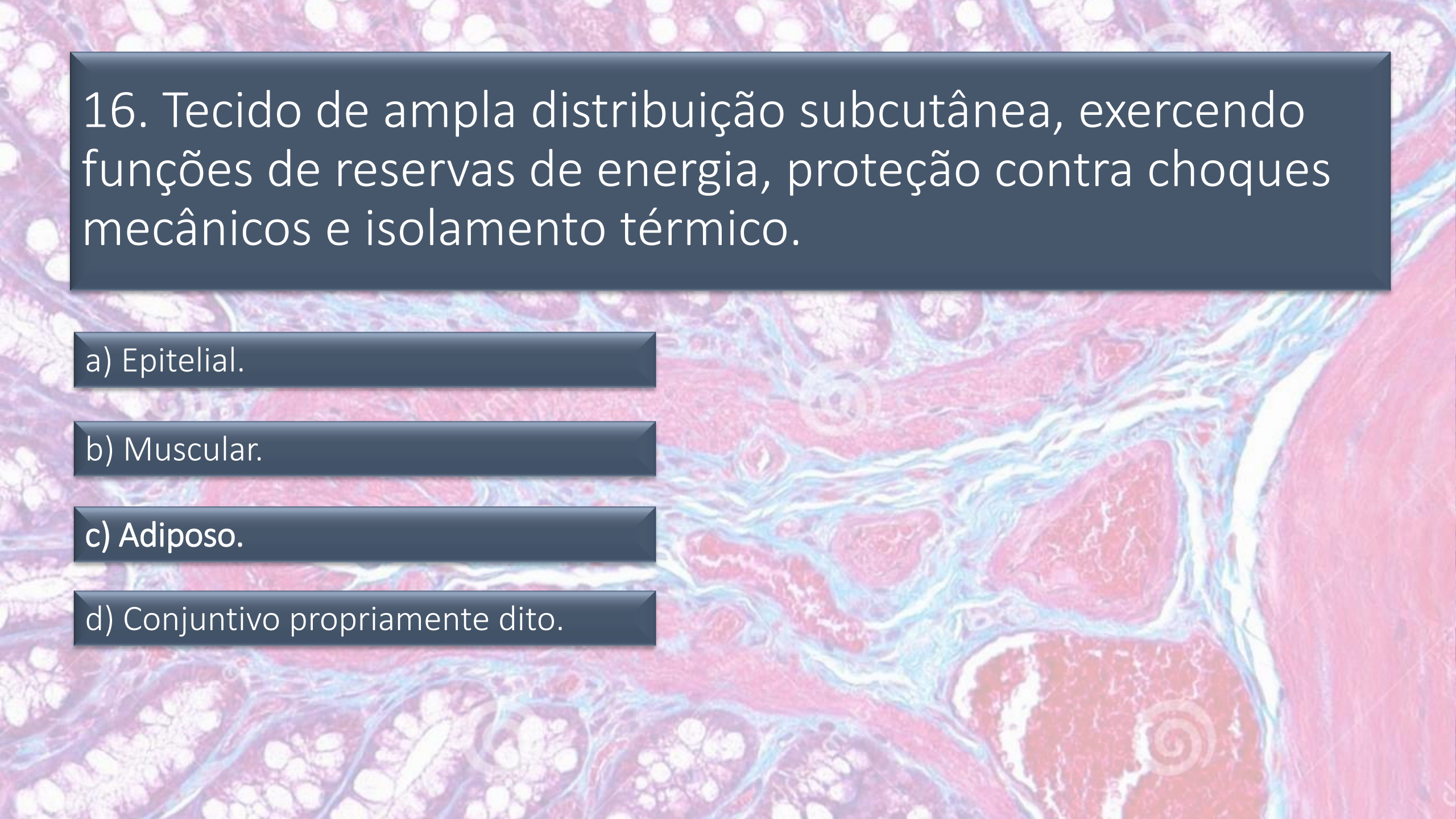
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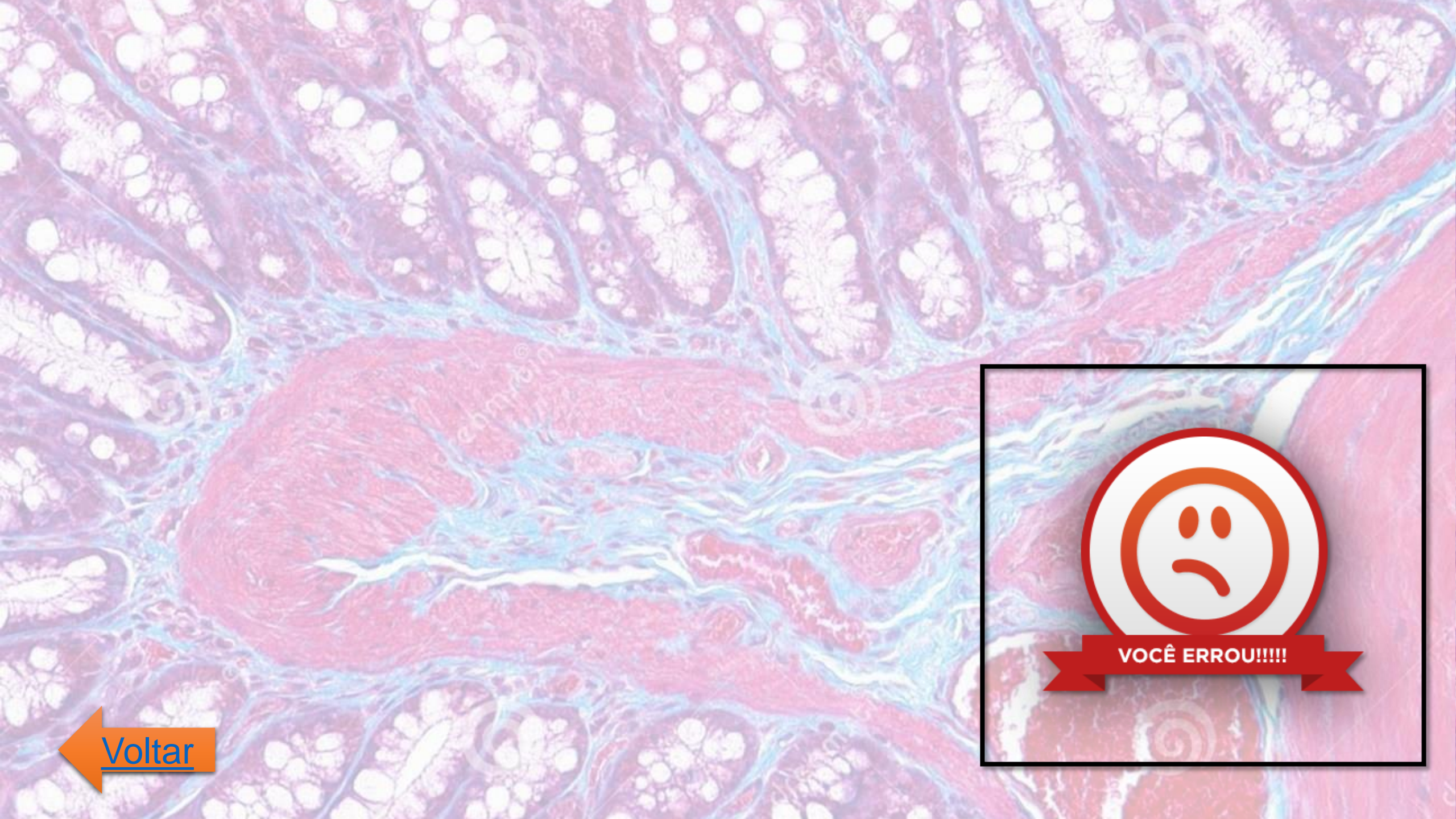
16. Tecido de ampla distribuição subcutânea, exercendo funções de reservas de energia, proteção contra choques mecânicos e isolamento térmico.

a) Epitelial.

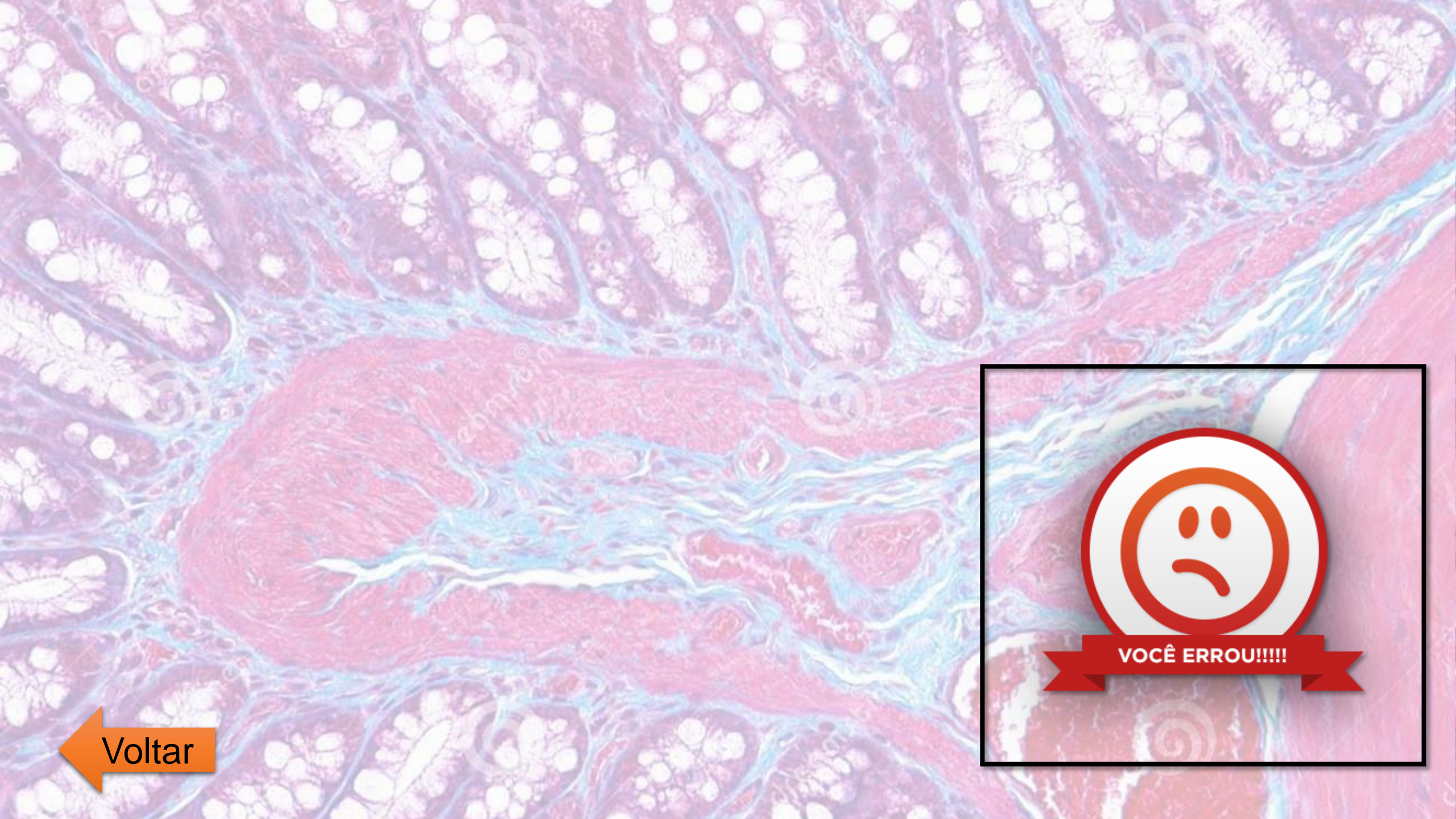
b) Muscular.

c) Adiposo.

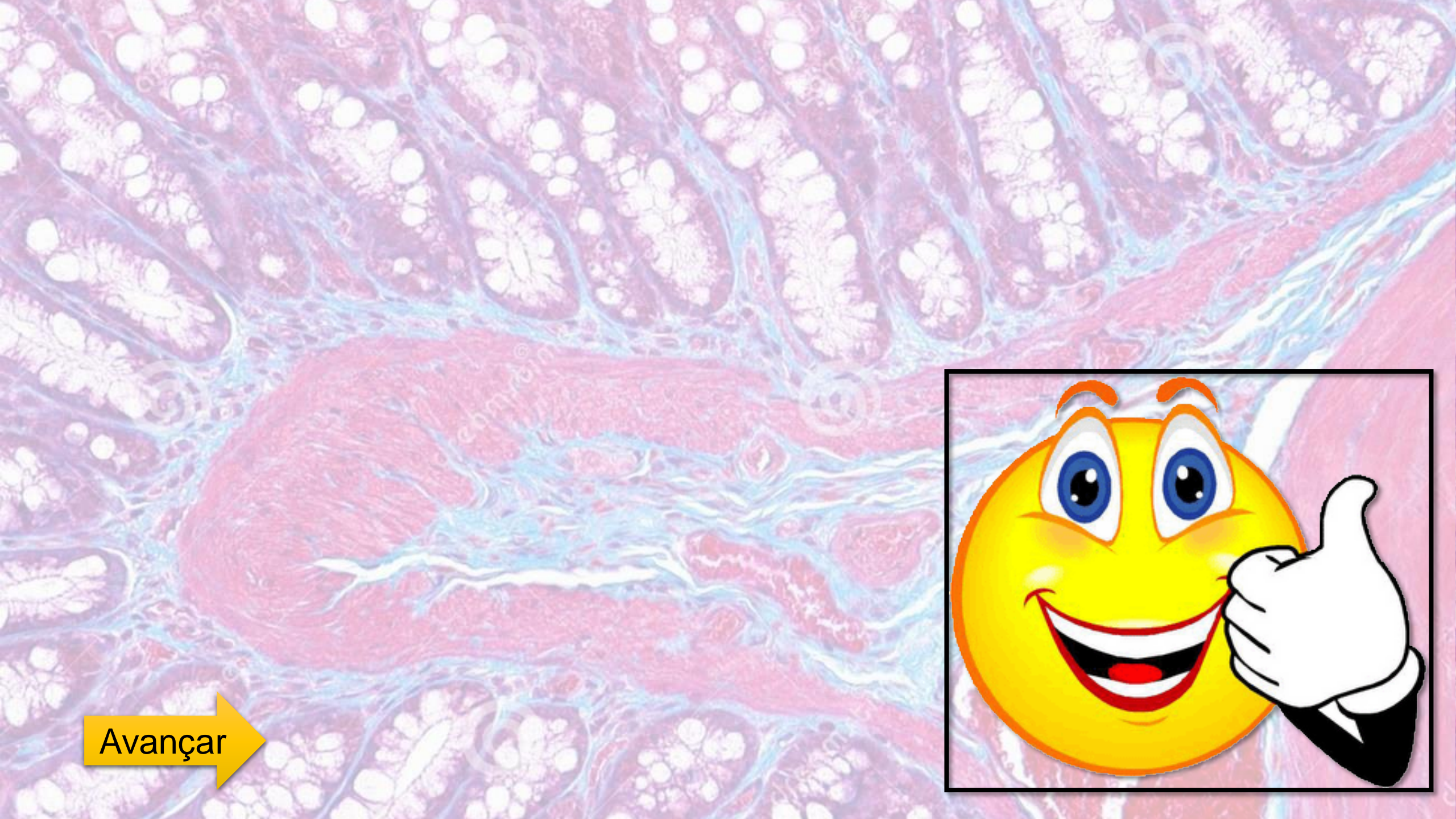
d) Conjuntivo propriamente dito.



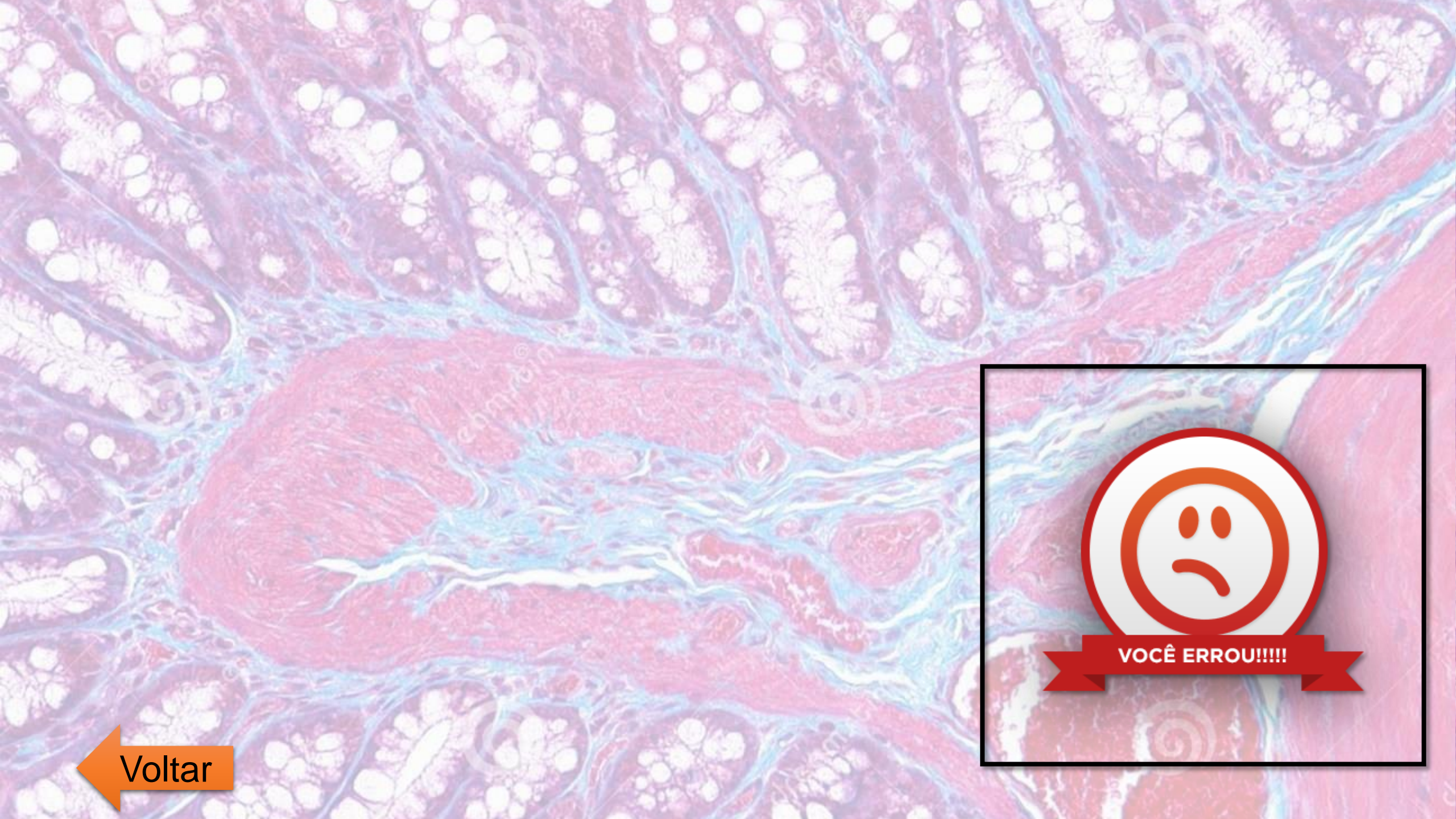
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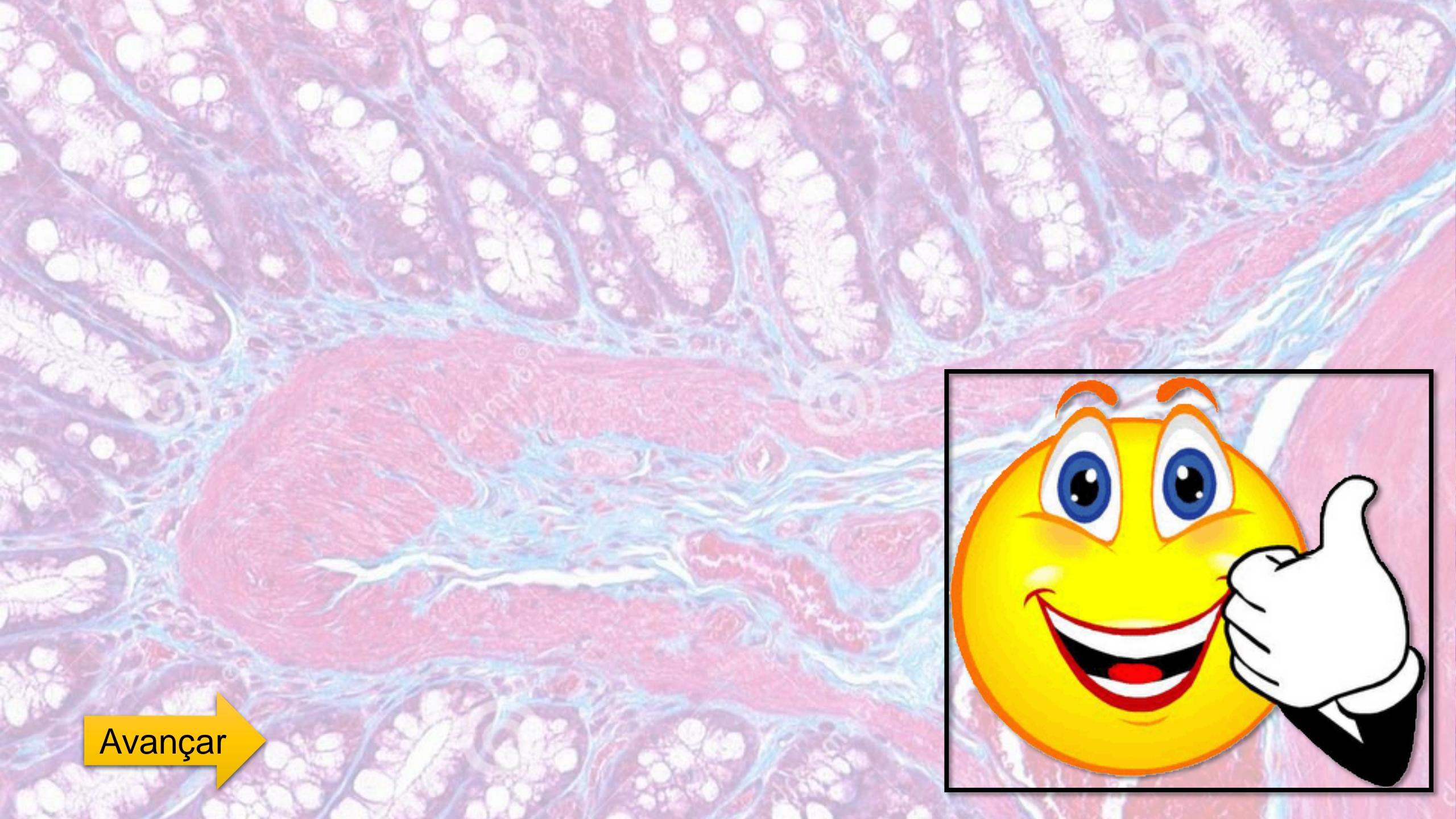
17. Sobre o tecido adiposo multilocular dizemos que:

a) é assim chamado por suas células conterem numerosas gotículas de lipídios.

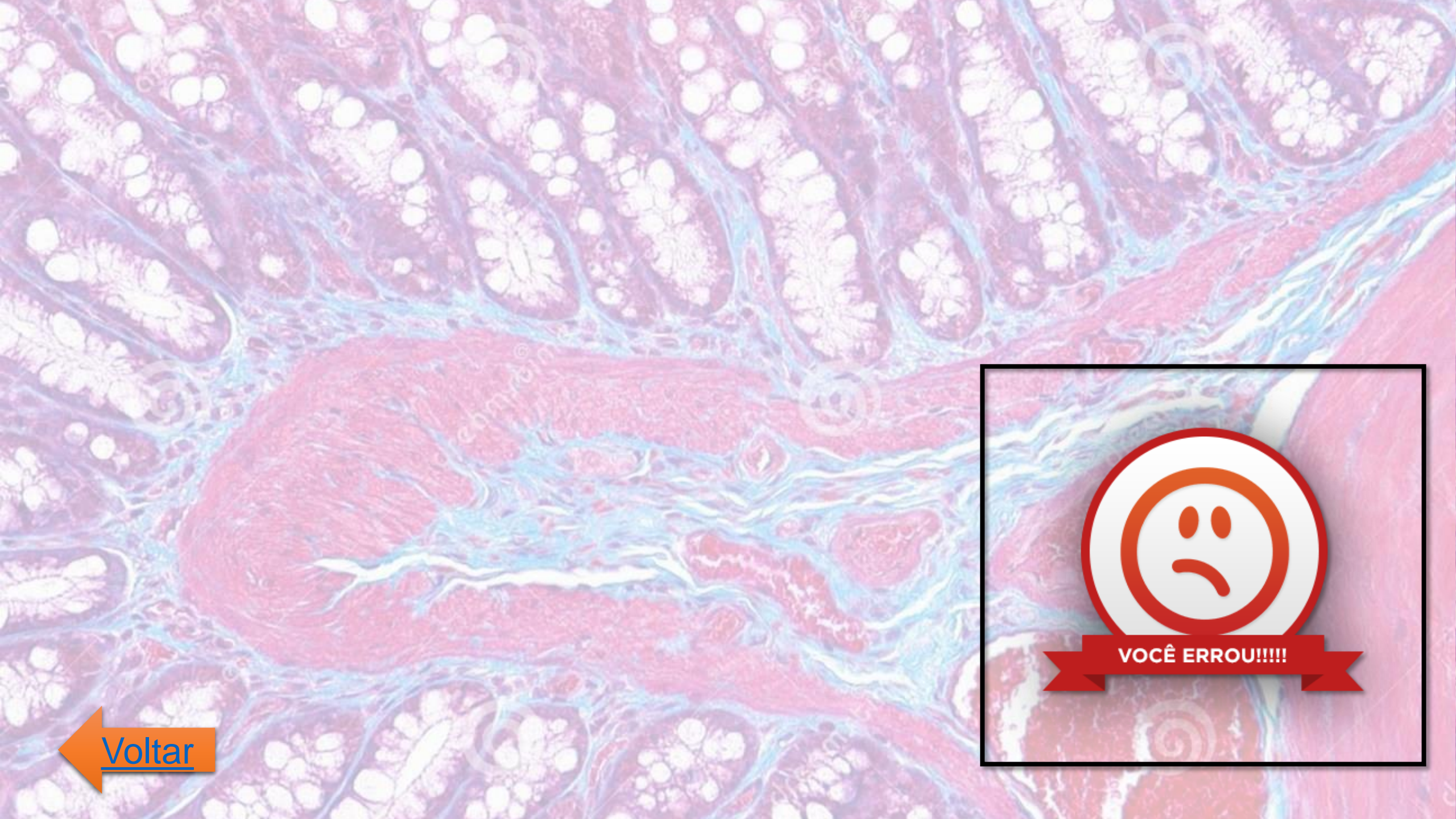
b) é mais abundante no adulto.

c) é especializado na produção de ATP.

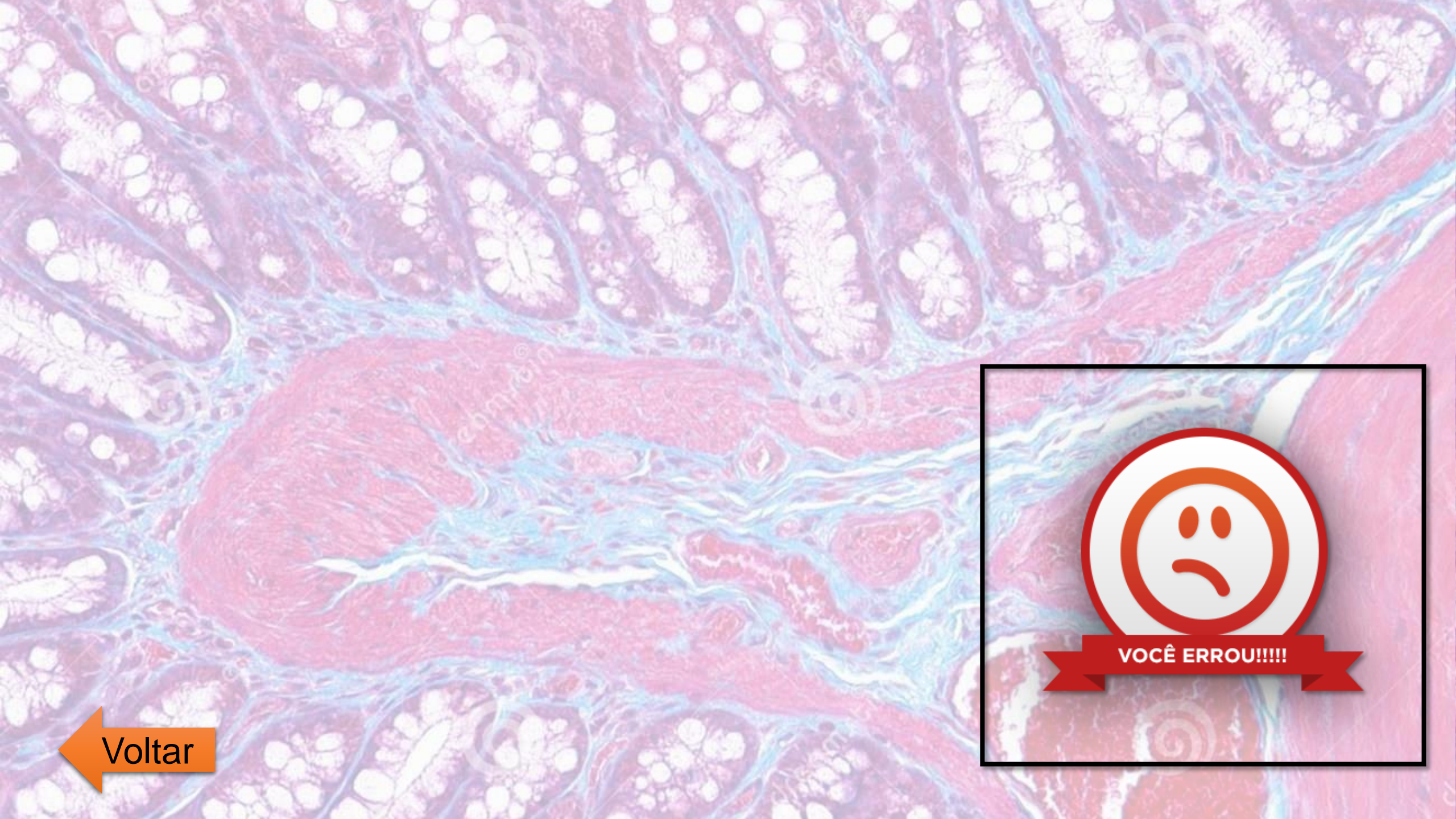
d) é também denominado tecido adiposo branco.



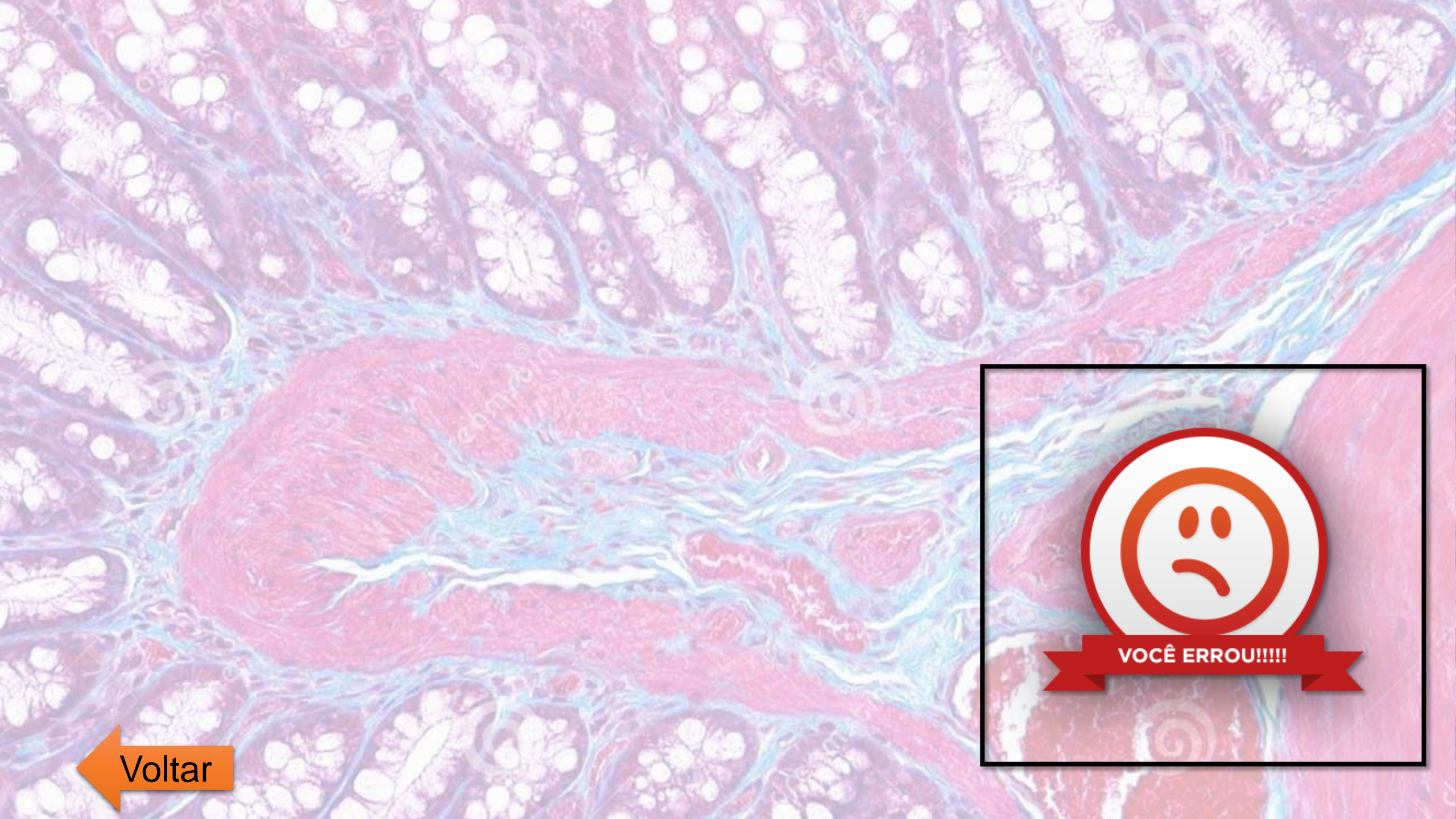
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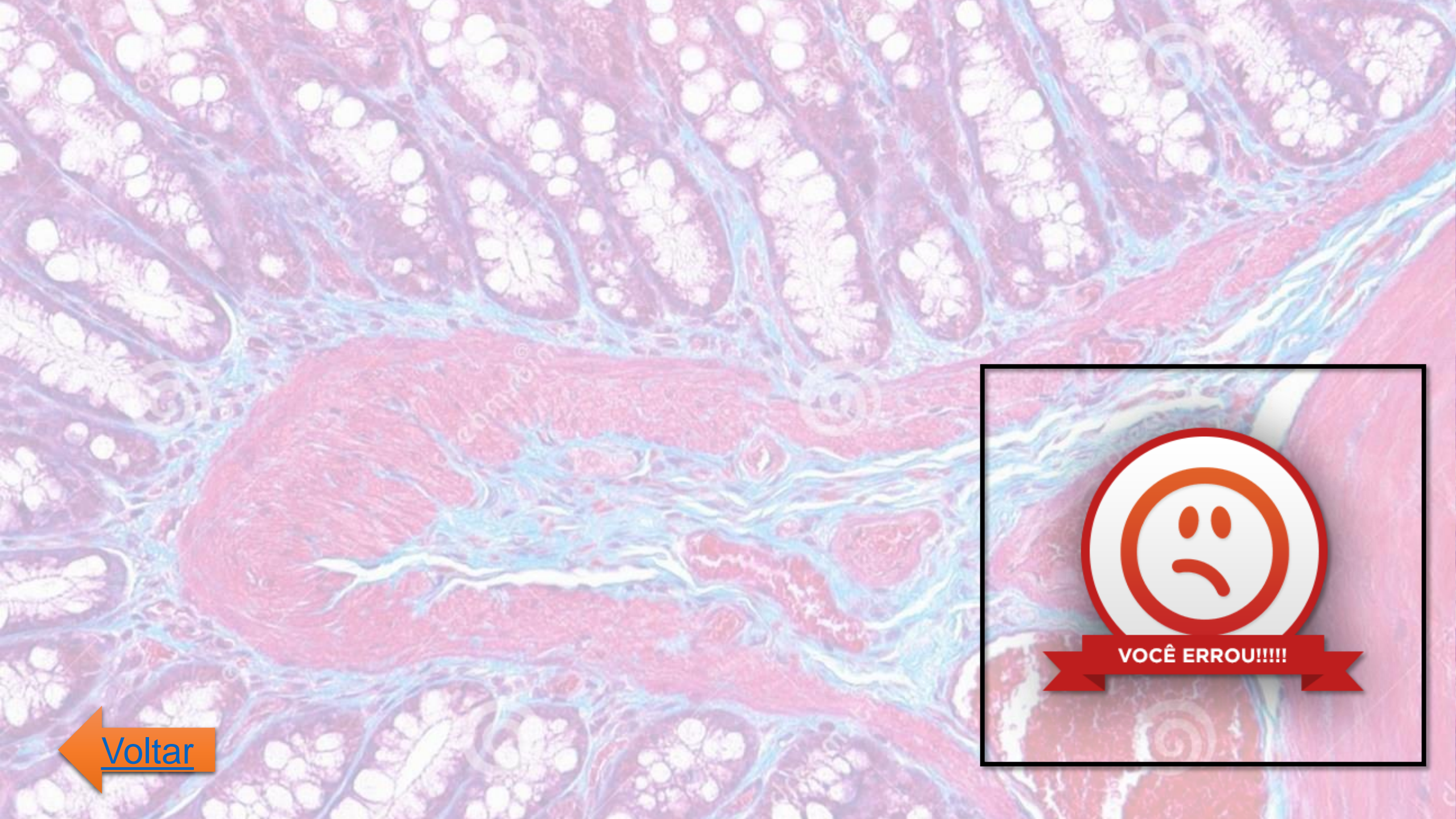
18. Nos mamíferos, as células podem organizar-se em tecidos classificados como epiteliais, conjuntivos, musculares e nervoso. Sobre esses tecidos, é INCORRETO afirmar:

a) Os tecidos adiposo, ósseo e sanguíneo, embora apresentem funções e morfologias bem distintas, têm a mesma origem.

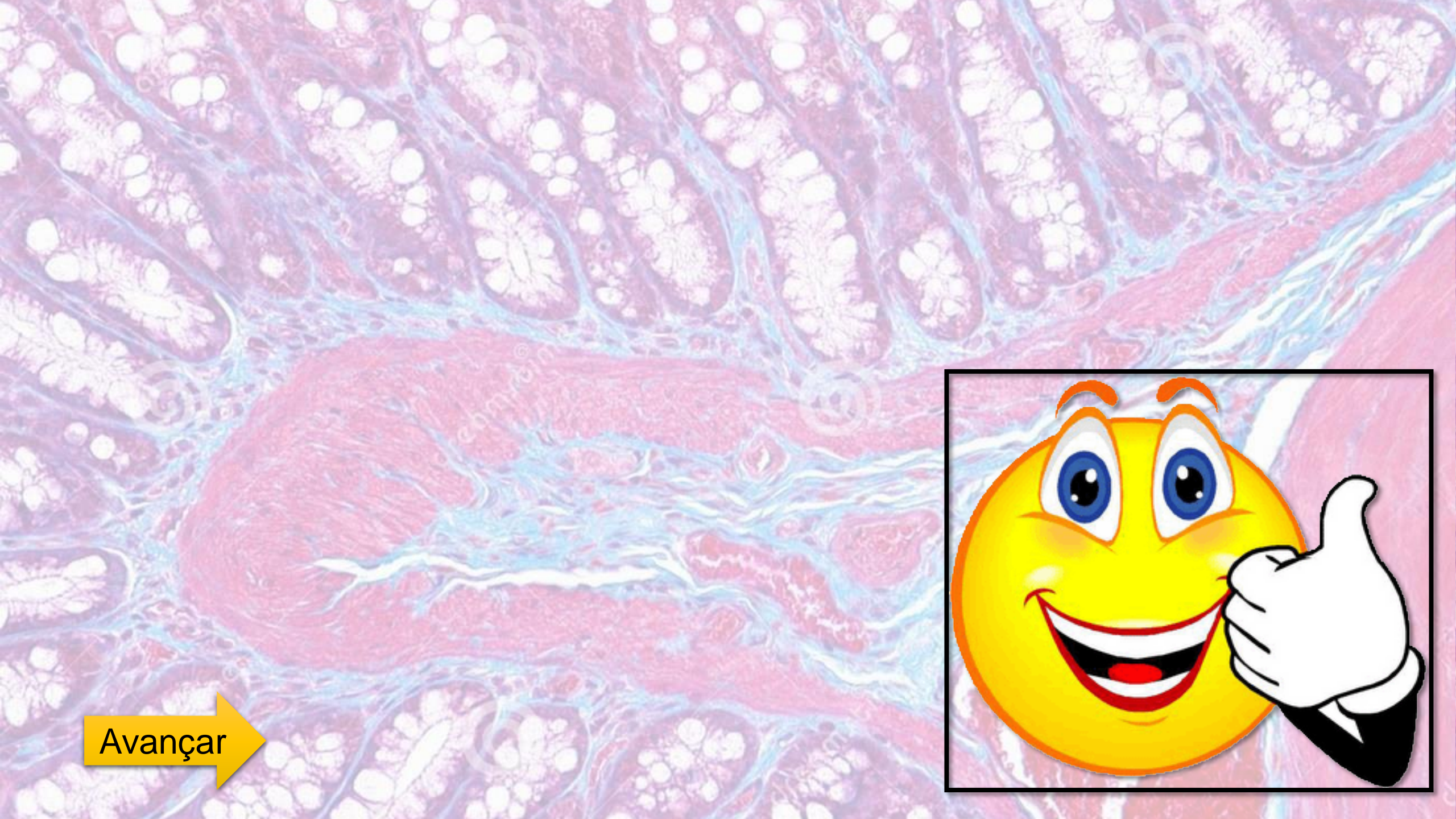
b) O tecido muscular liso é formado por células fusiformes, mononucleadas e de contração rápida e voluntária.

c) O tecido nervoso é constituído por dois tipos celulares principais: os neurônios e as células da neuroglia.

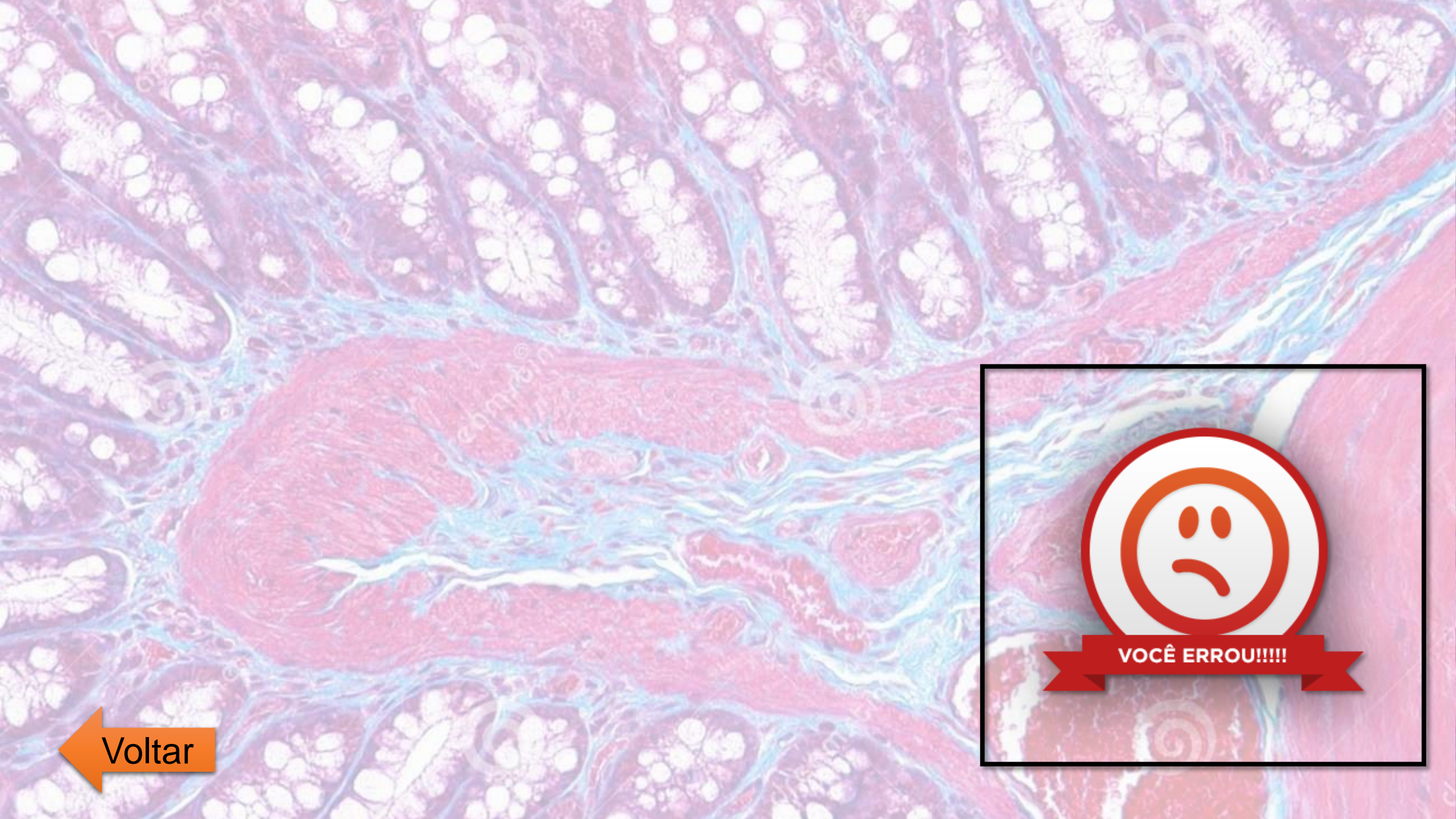
d) Os tecidos epiteliais são caracterizados pela ausência de substâncias intercelulares.



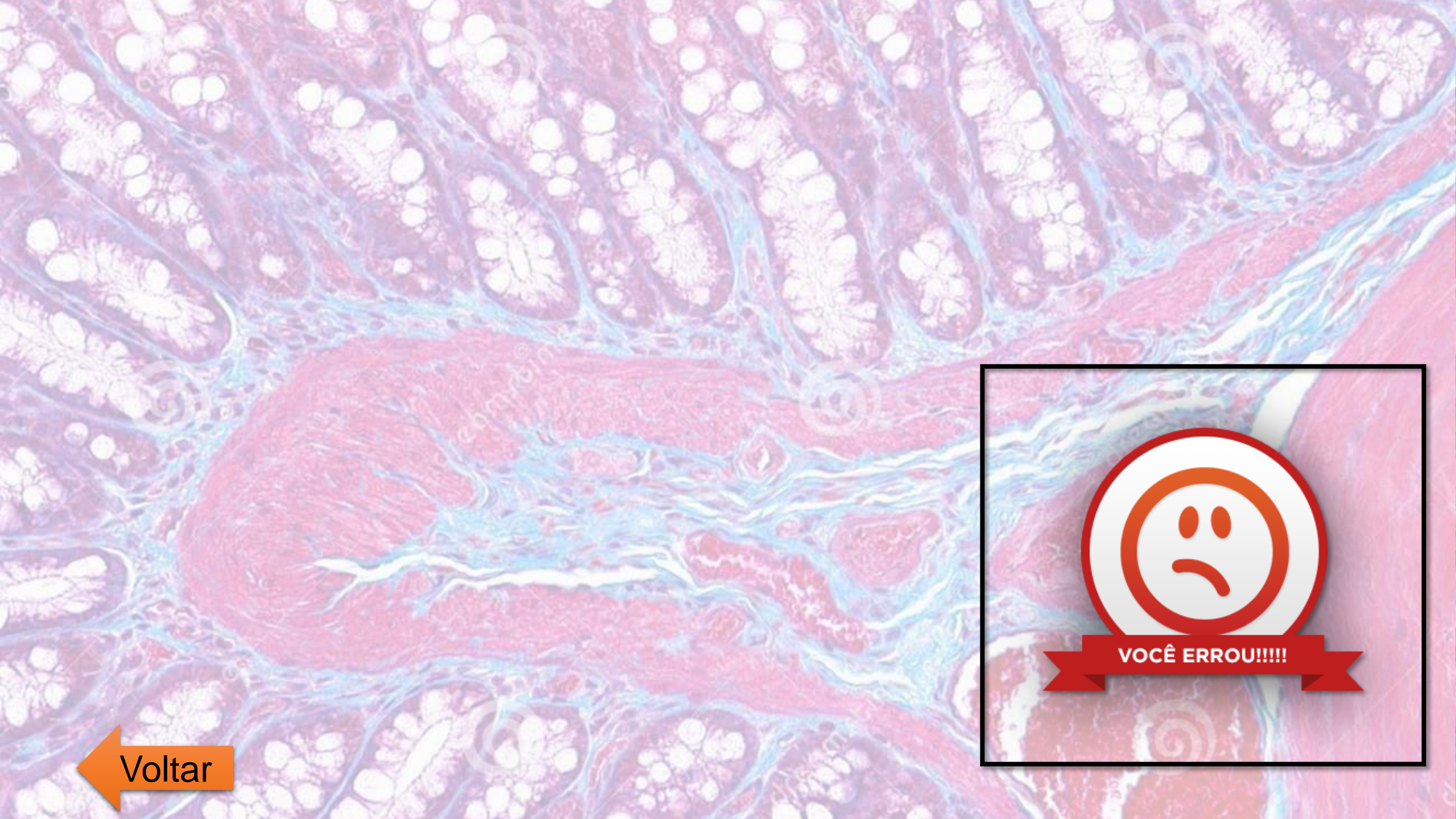
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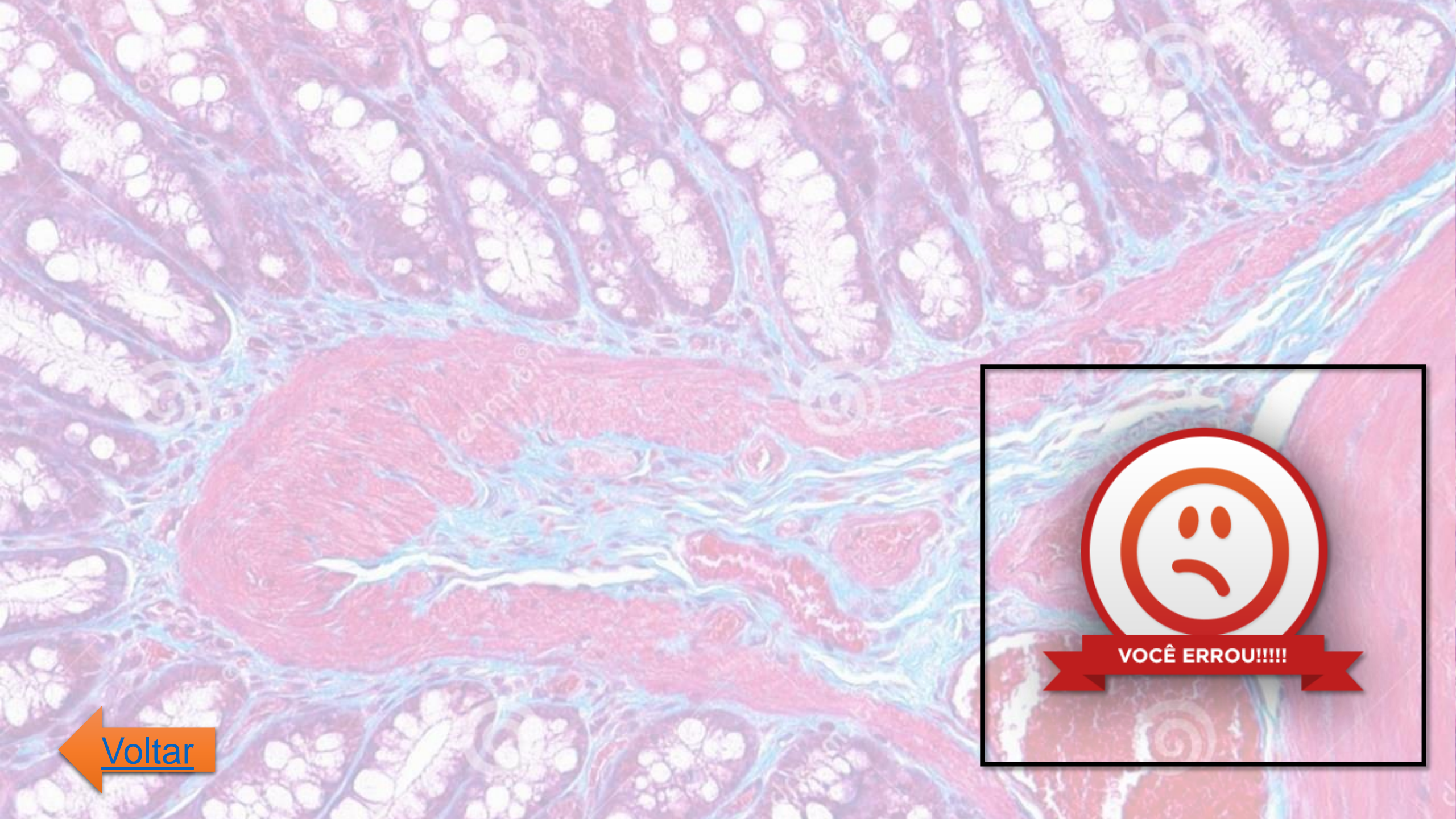
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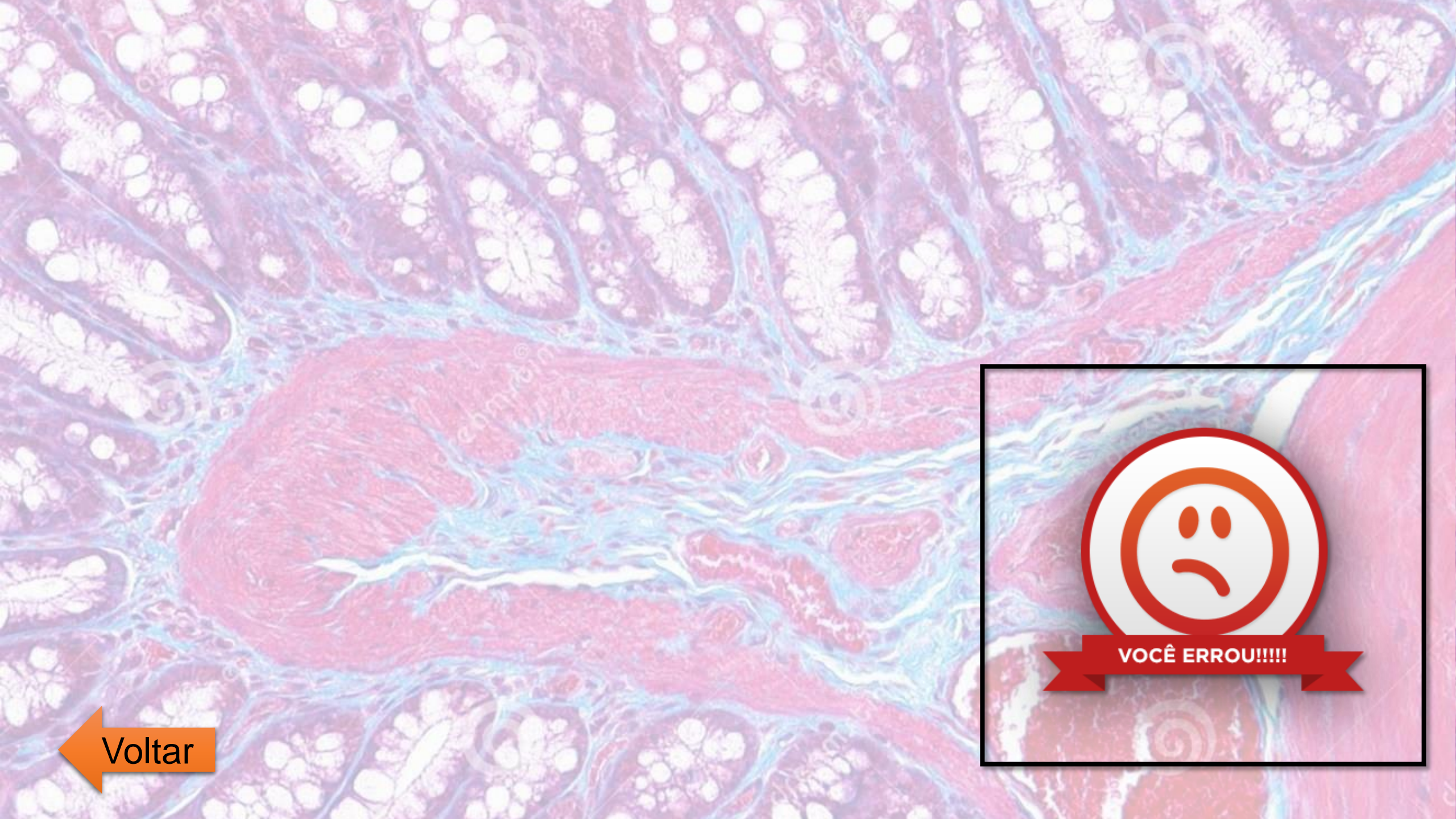
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19. Assinale a alternativa INCORRETA

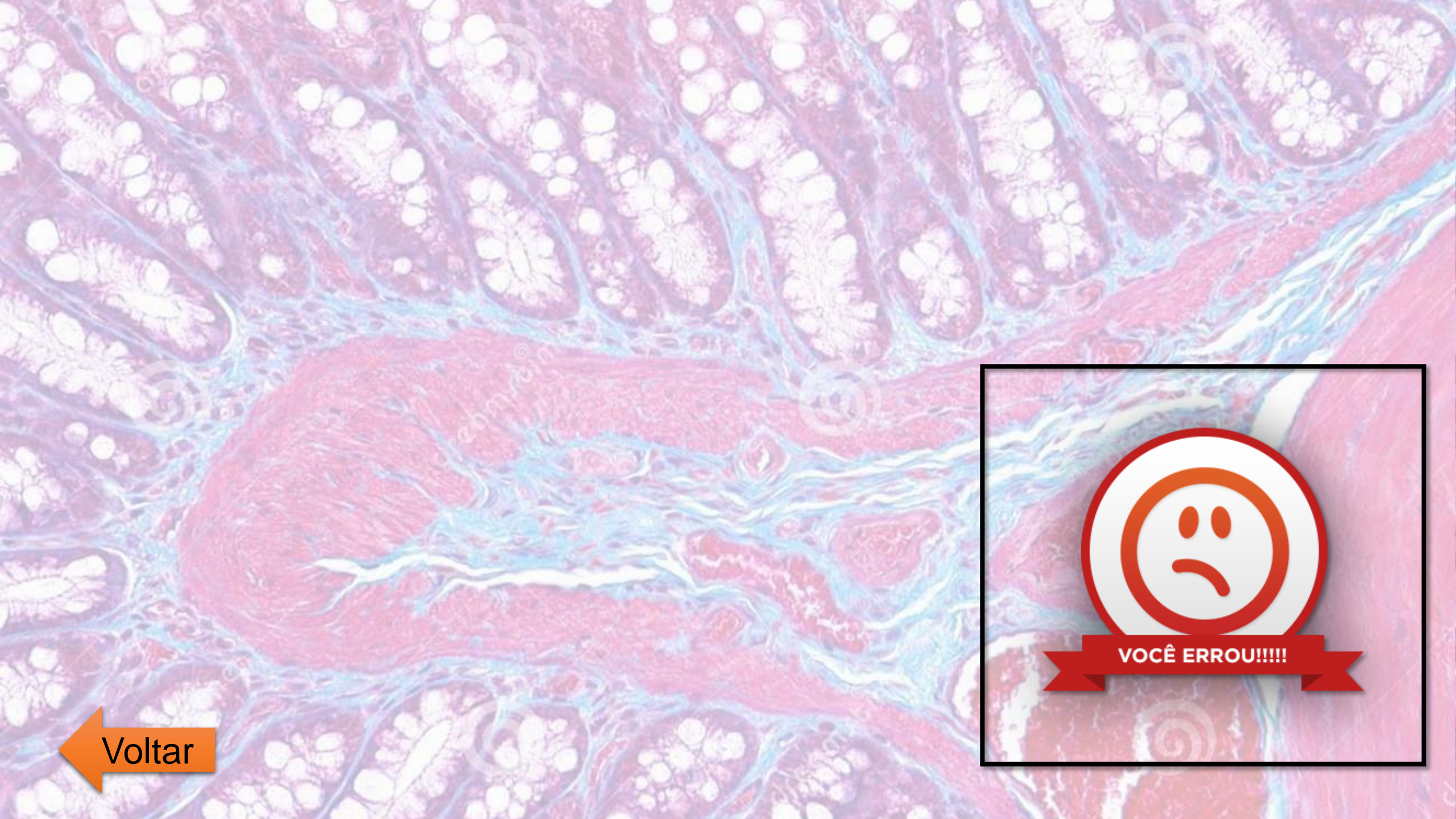
- a) A resistência e a rigidez do tecido ósseo ocorrem devido à associação entre fibras colágenas e fosfato de cálcio.
- b) O epitélio glandular pode ser responsável por secreções denominadas endócrinas.
- c) O tecido conjuntivo tem a função de preencher os espaços entre os órgãos.
- d) O tecido adiposo é um tipo de tecido epitelial, podendo ser encontrado nos contornos do corpo, para amortecimento de choques.
- e) O epitélio de revestimento recobre a superfície do corpo, a superfície dos órgãos internos e as cavidades do corpo.



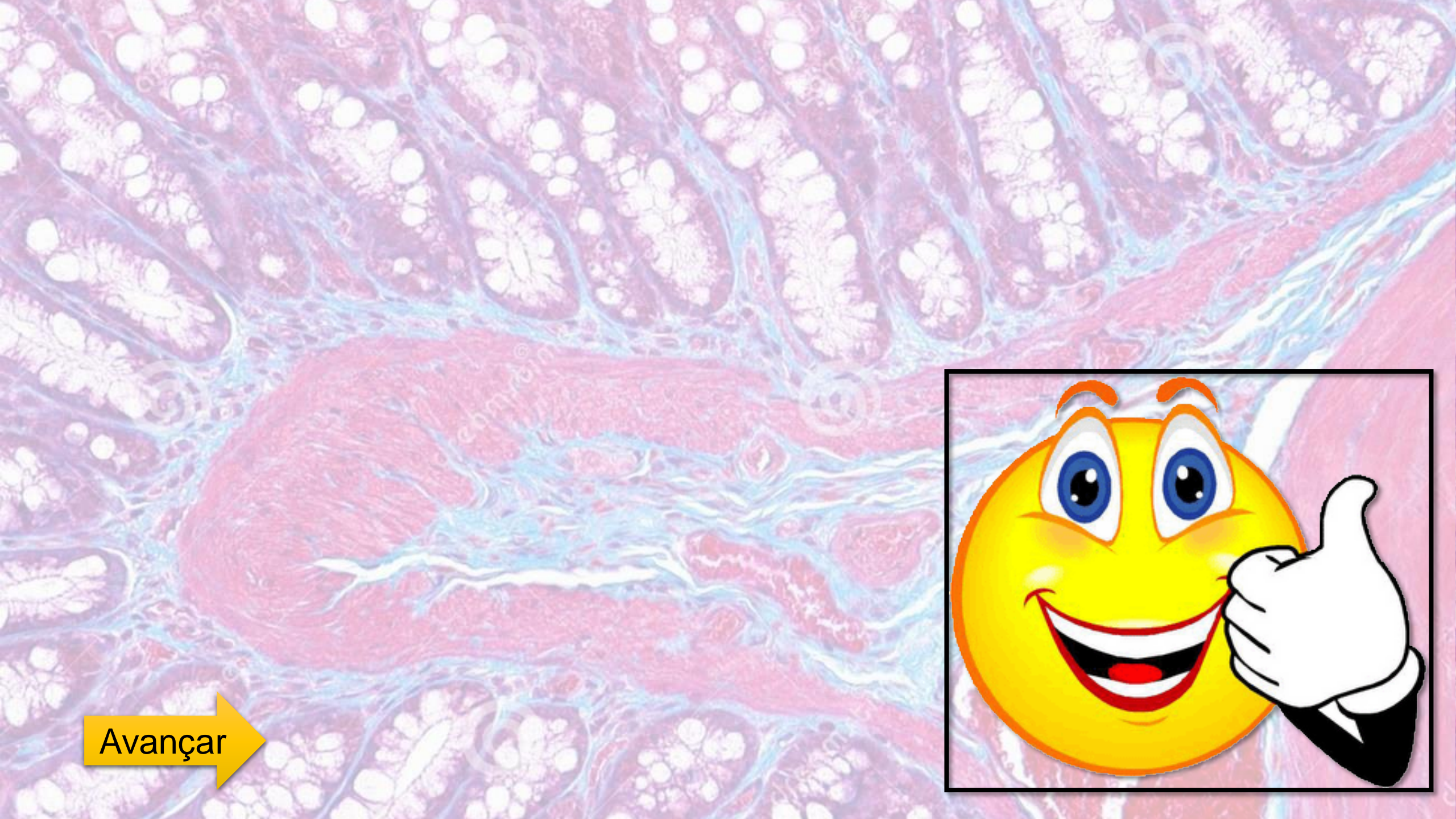
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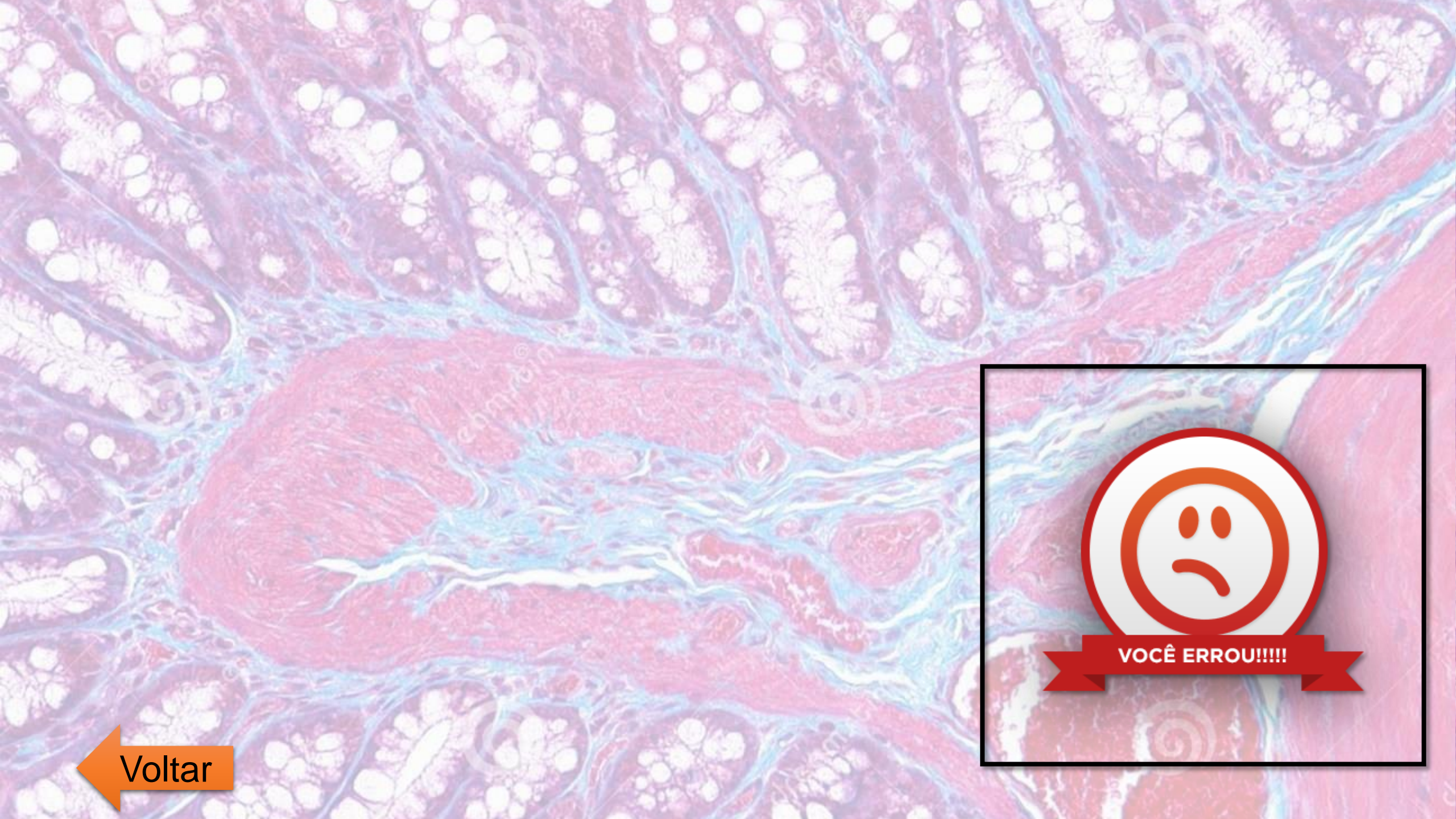
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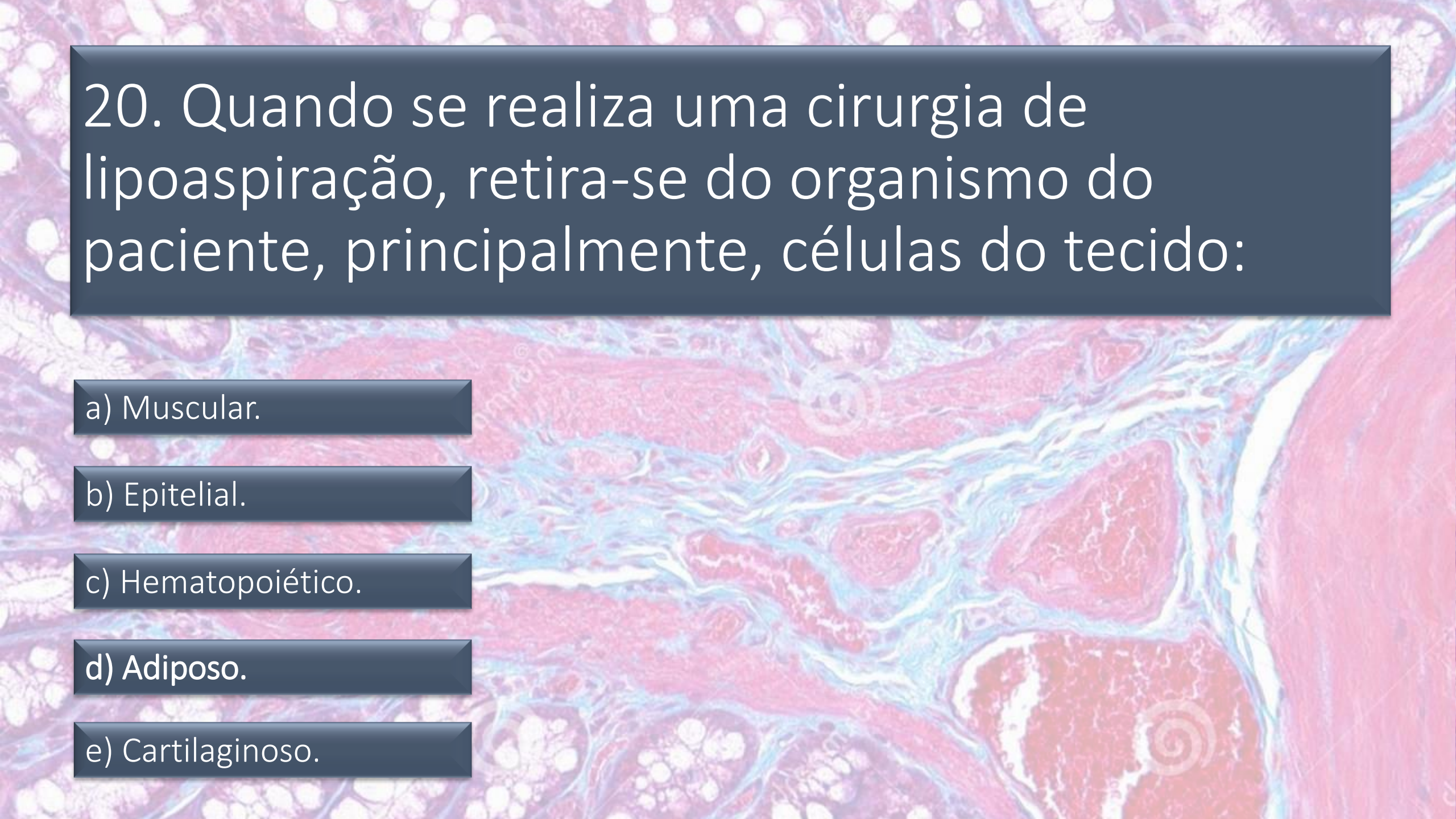
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20. Quando se realiza uma cirurgia de lipoaspiração, retira-se do organismo do paciente, principalmente, células do tecido:

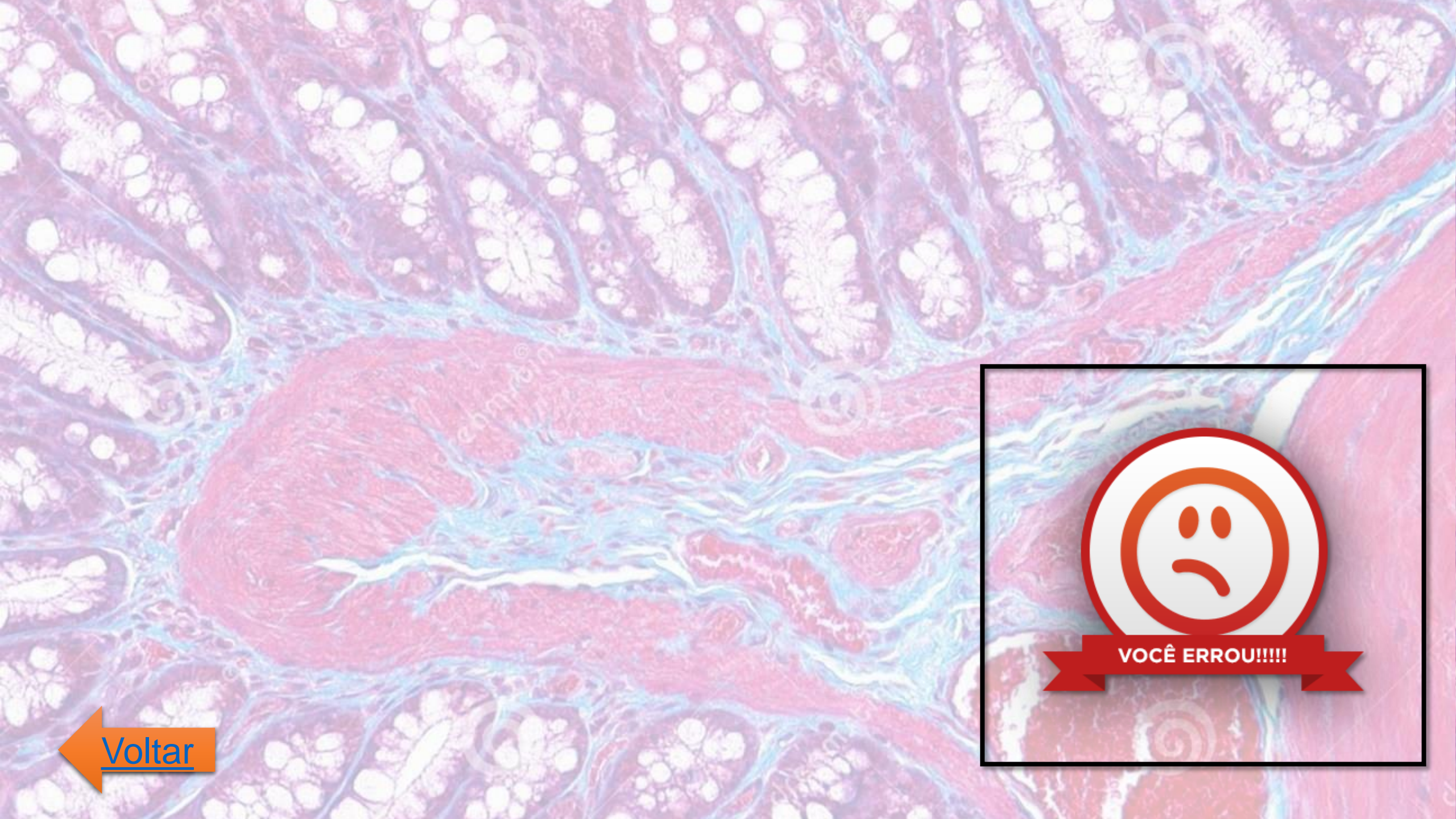
a) Muscular.

b) Epitelial.

c) Hematopoiético.

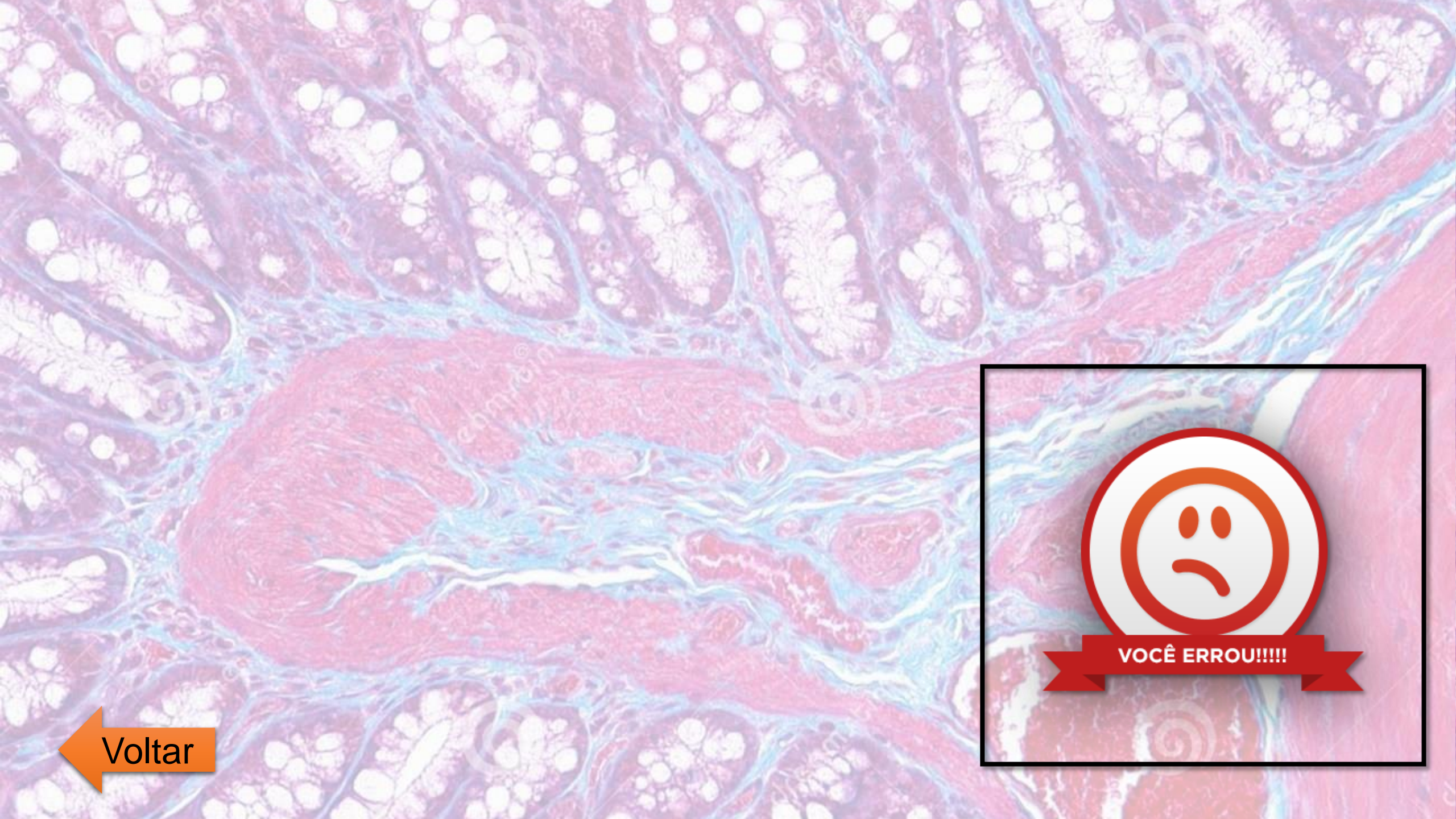
d) Adiposo.

e) Cartilaginoso.

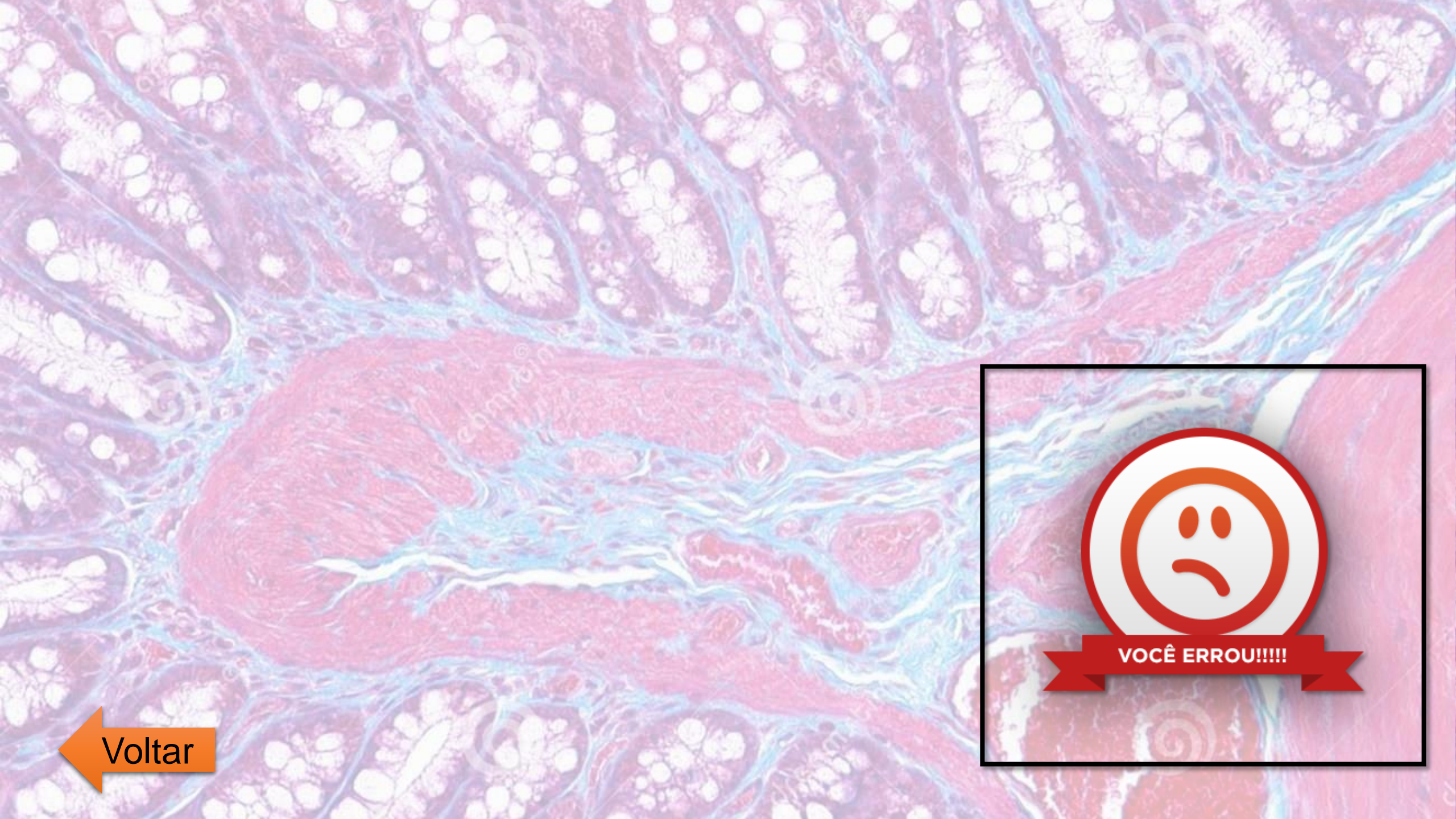


A red circular icon with a white background and a sad face (two dots for eyes and a downward-curving line for a mouth). Below the icon is a red banner with white text that reads "VOCÊ ERROU!!!!". The entire graphic is enclosed in a black rectangular border.

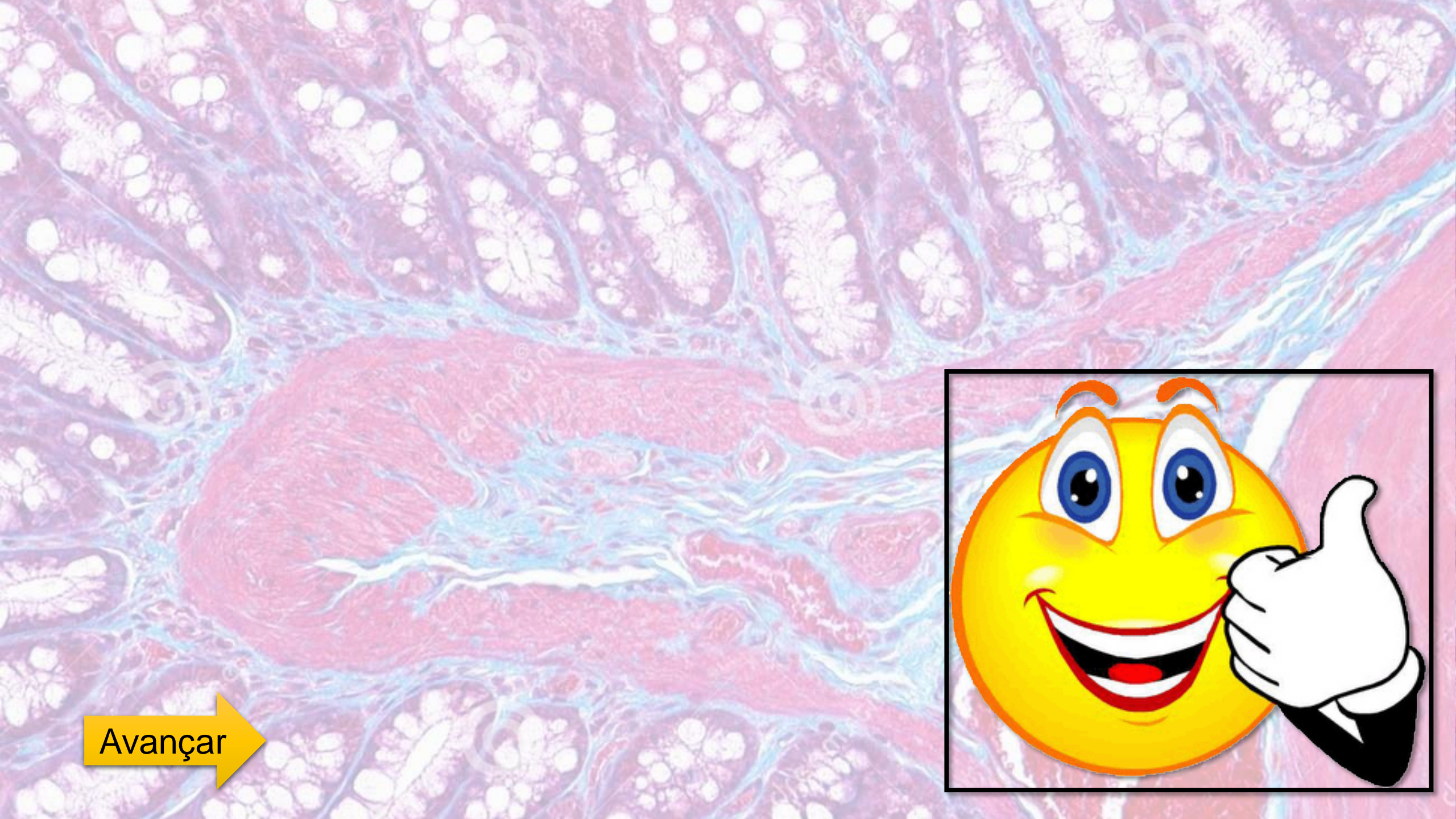
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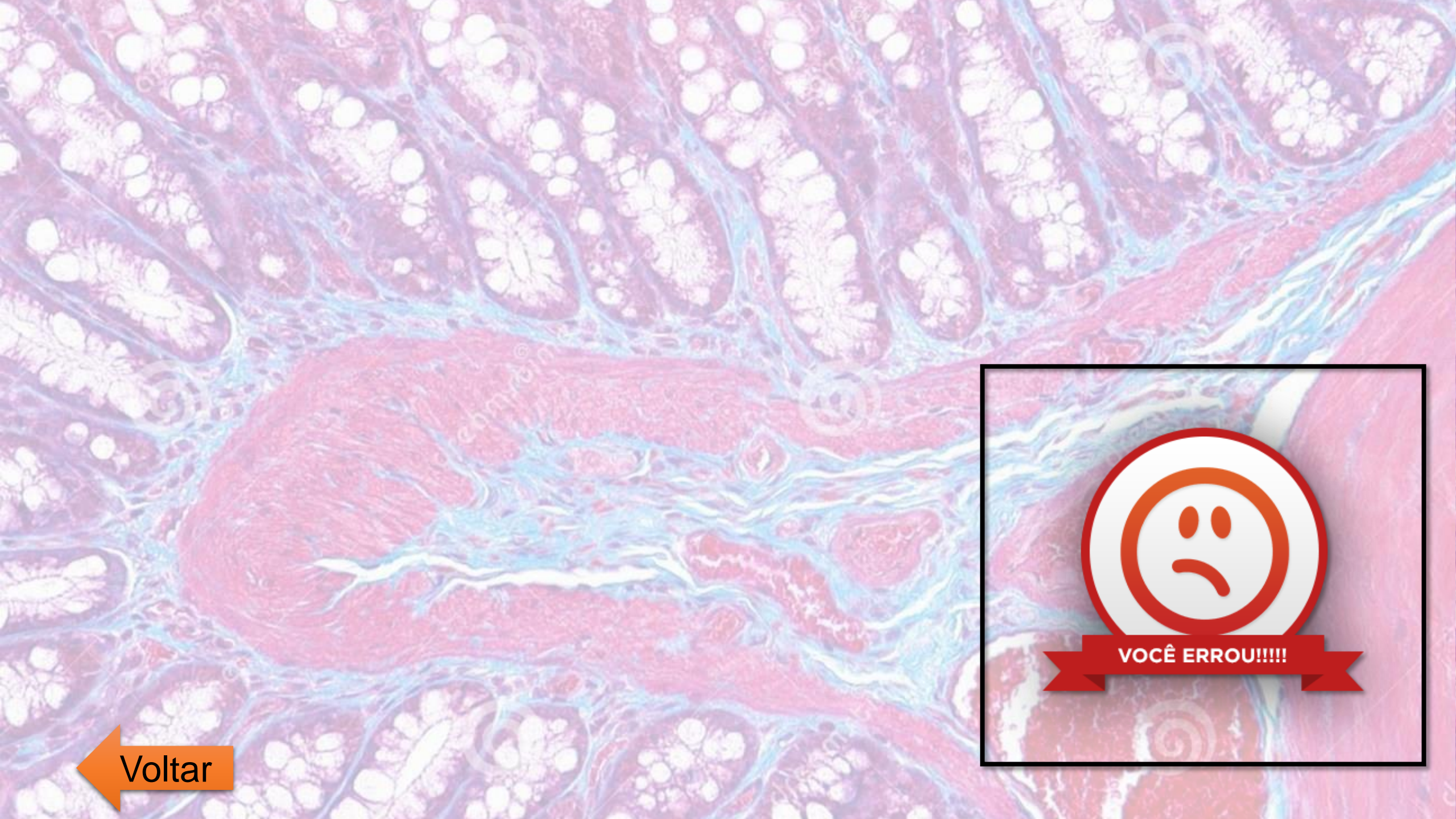
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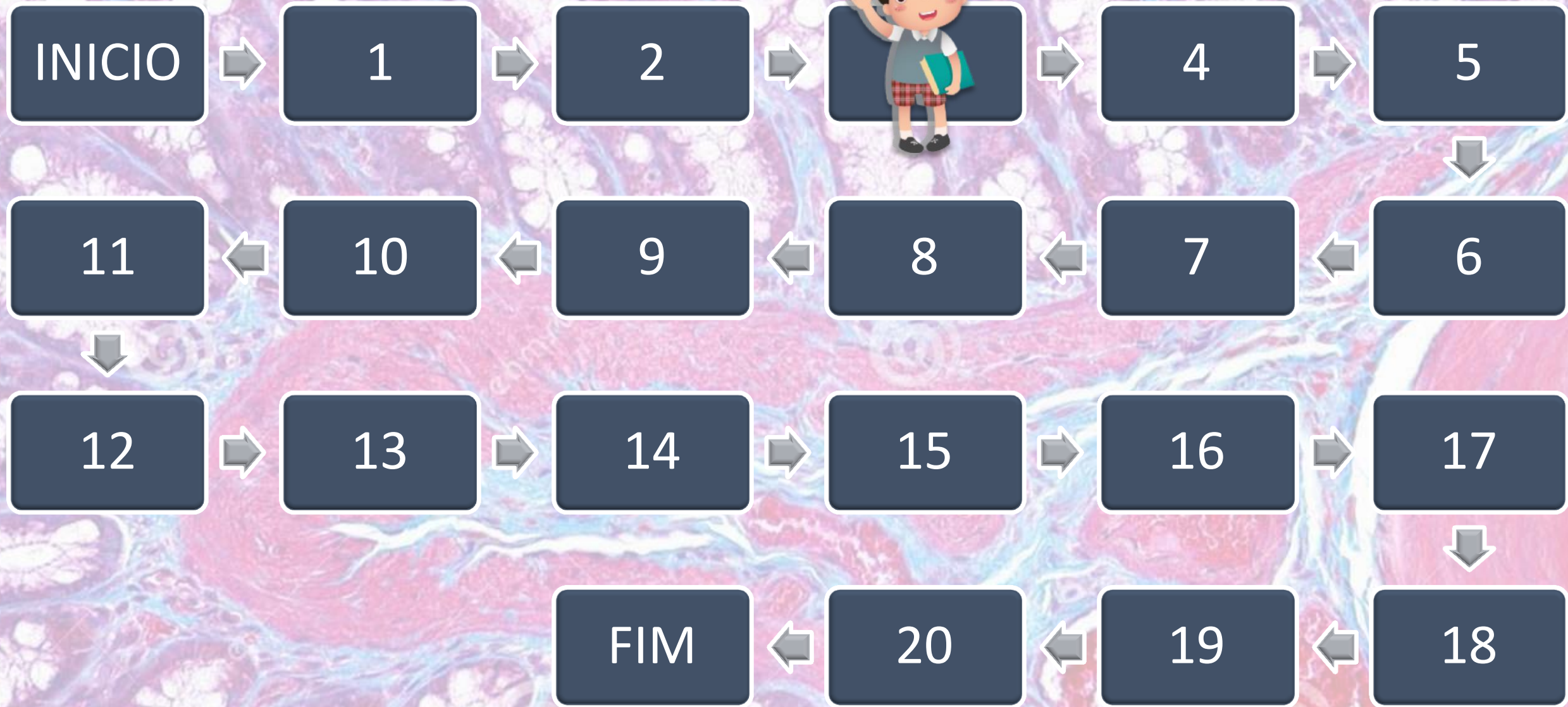
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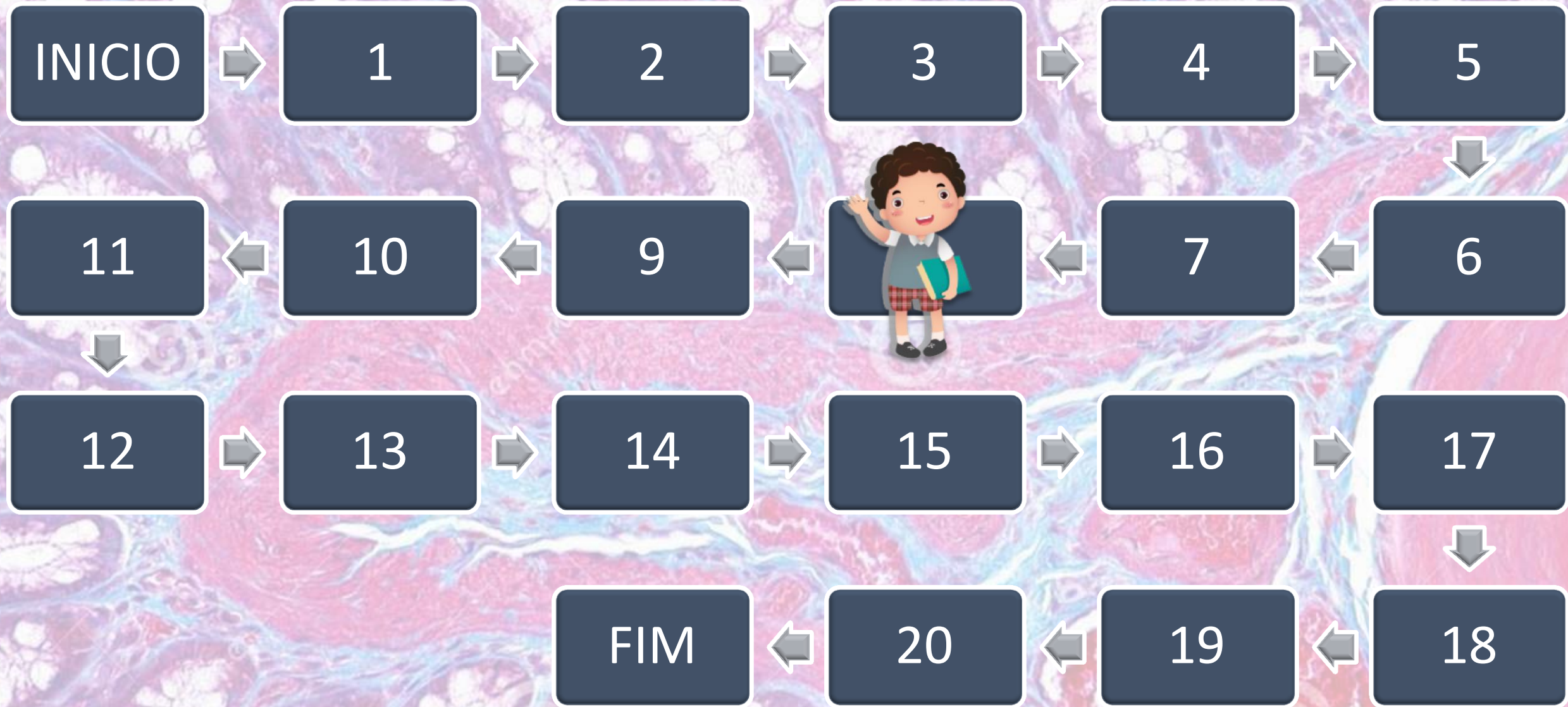
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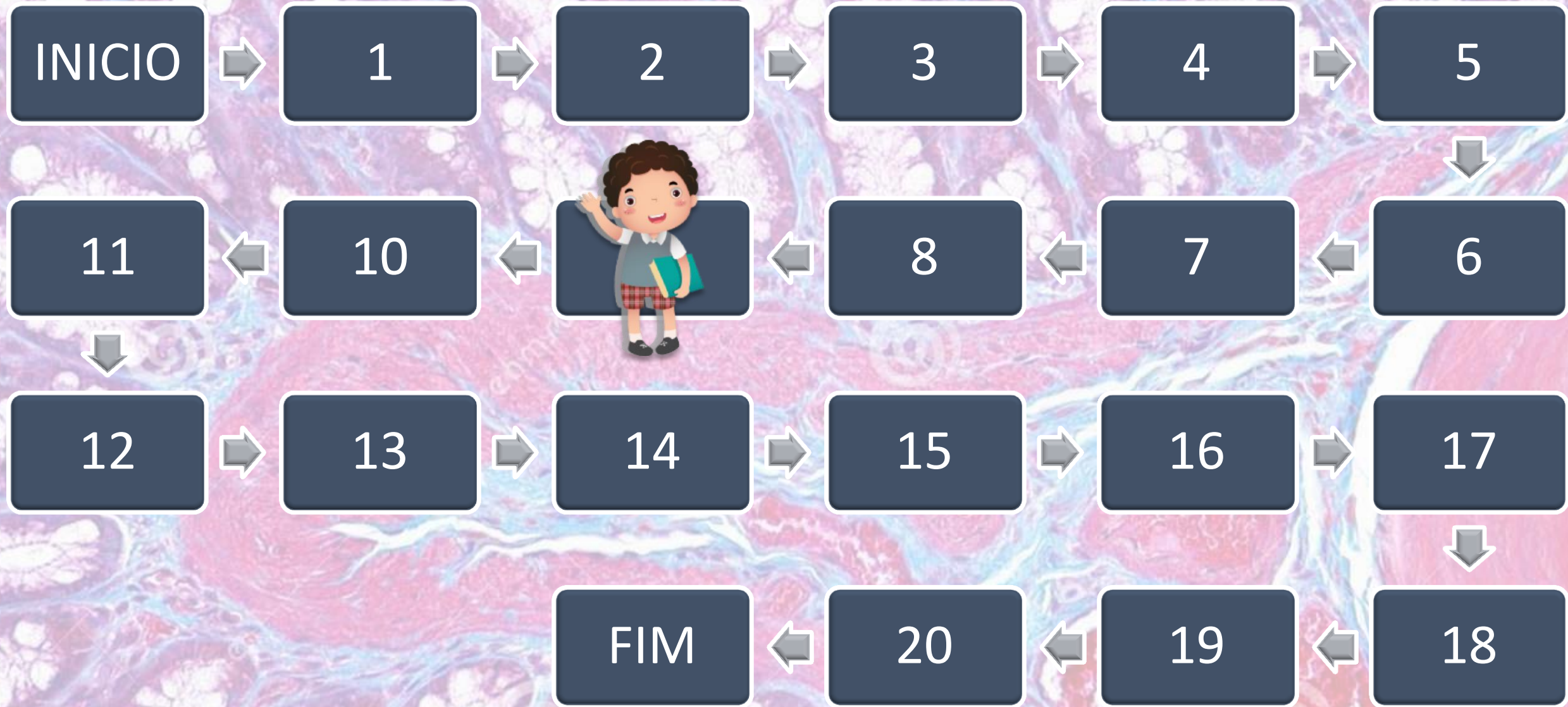
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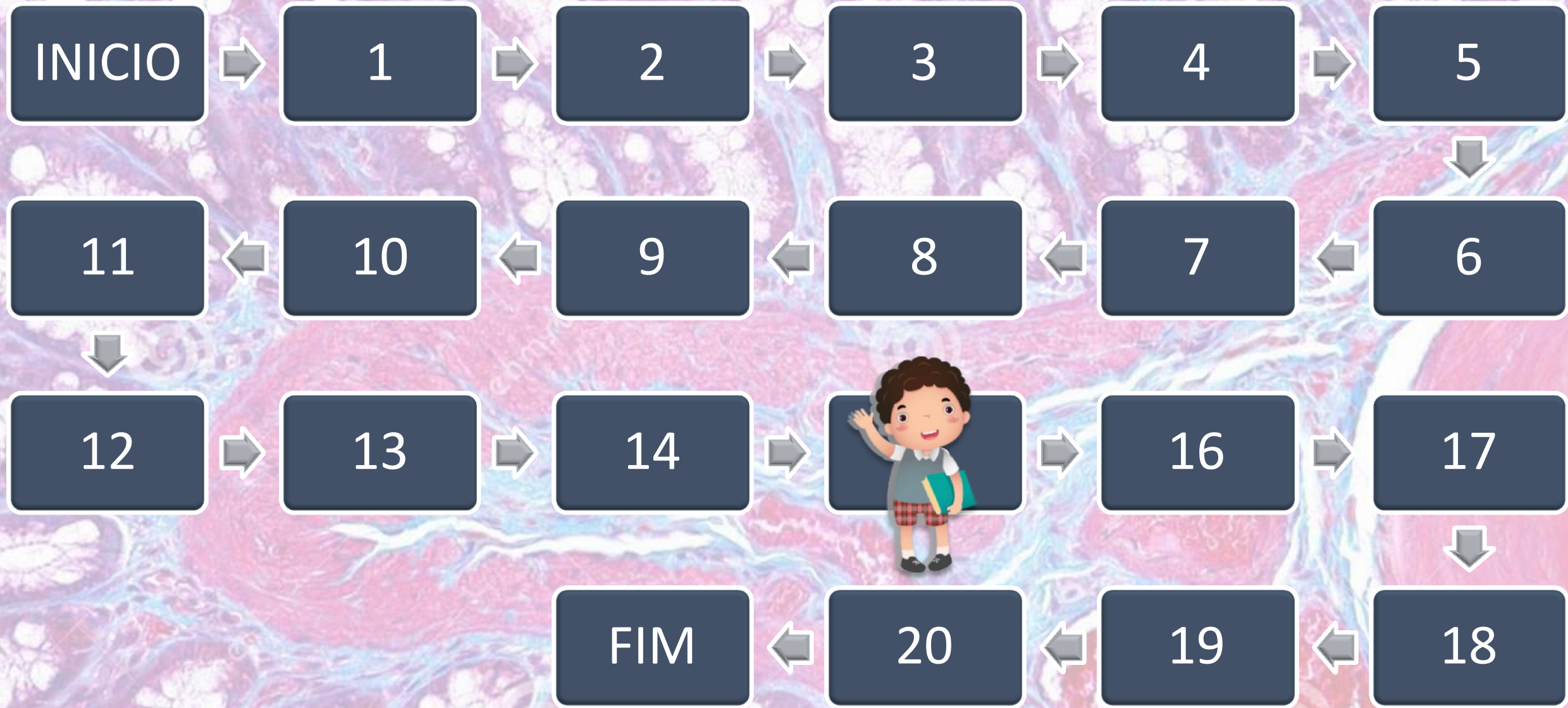
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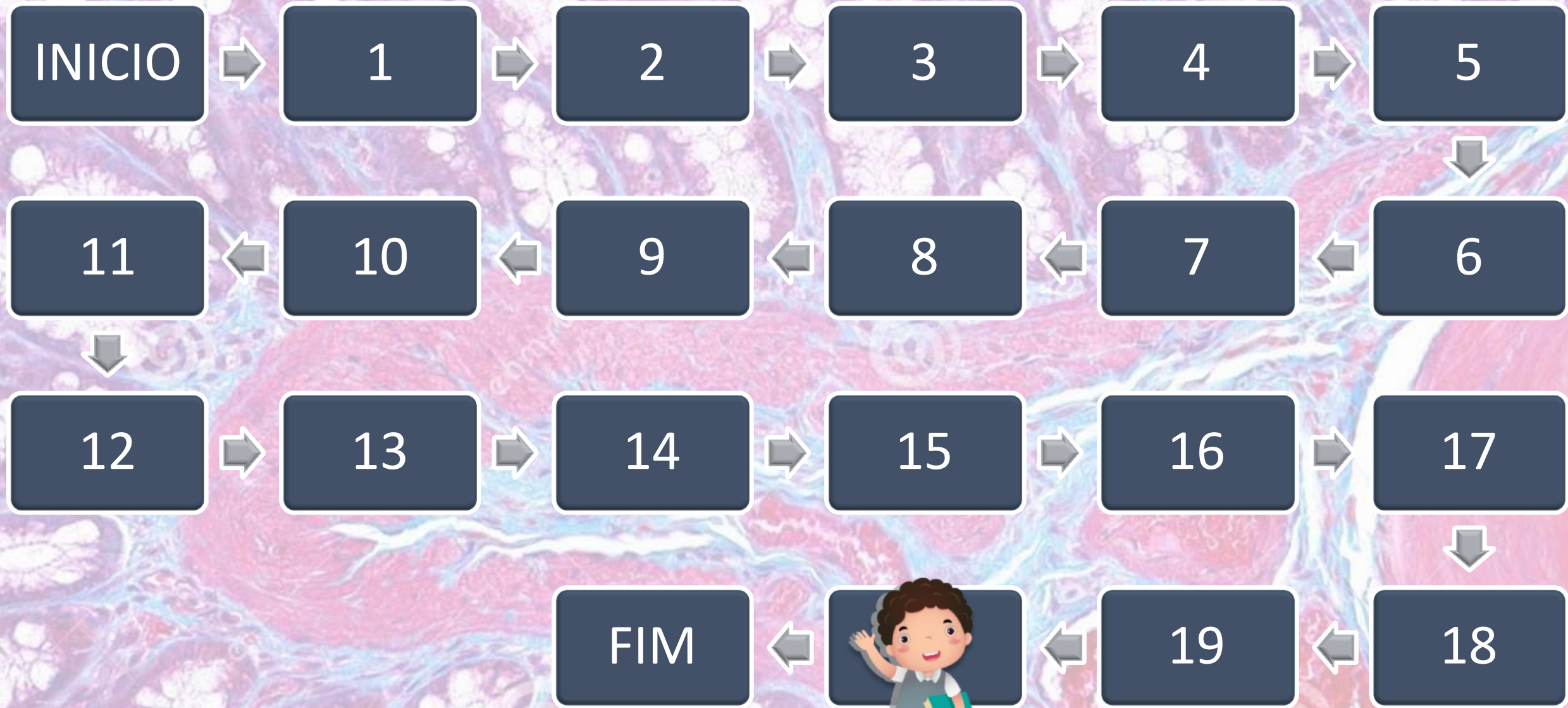


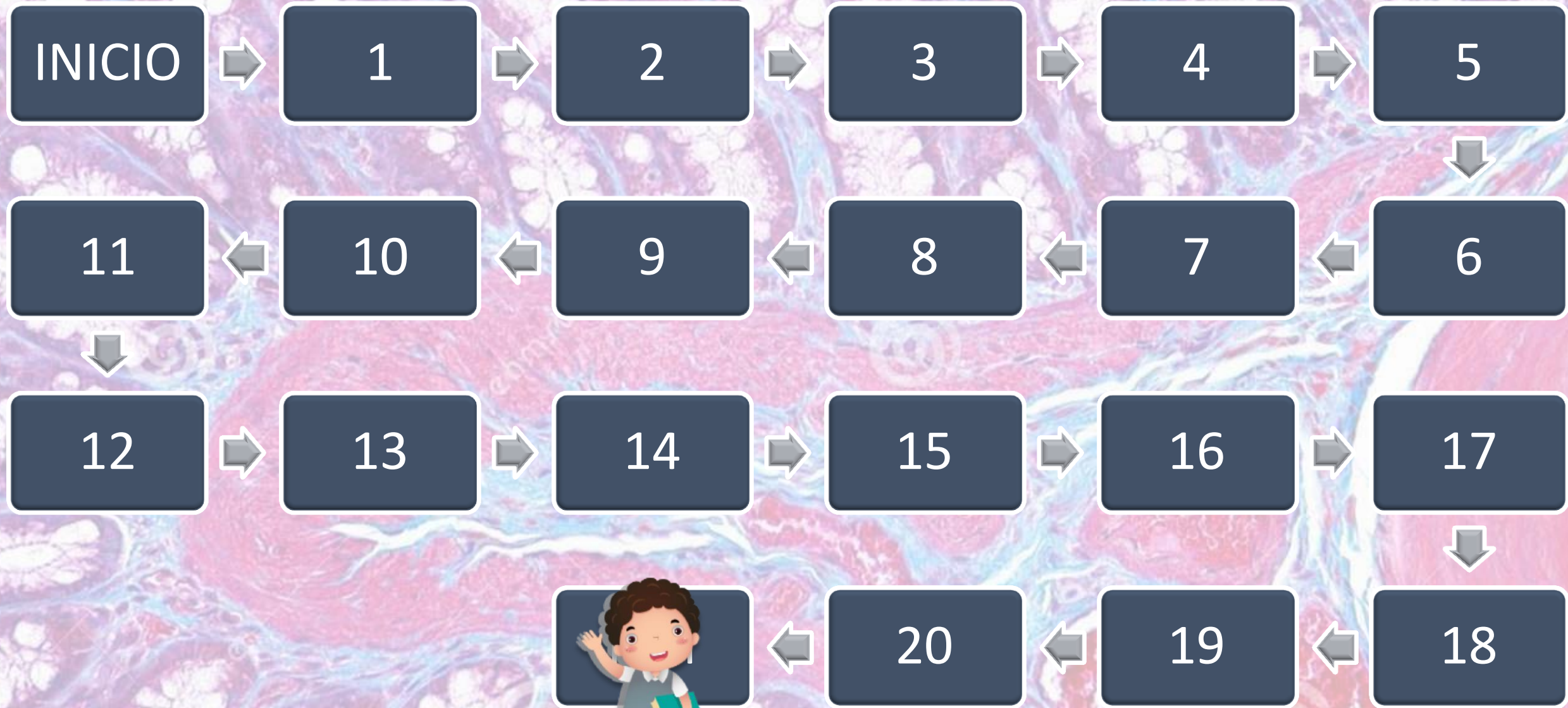












CONGRATULATIONS!!!!

You have finished this Tissue.

Now shall we continue ?!

I WANT TO LEARN MORE!!!



**THANK'S FOR
PLAYING**

**Come back whenever you
want to learn more !!!**

