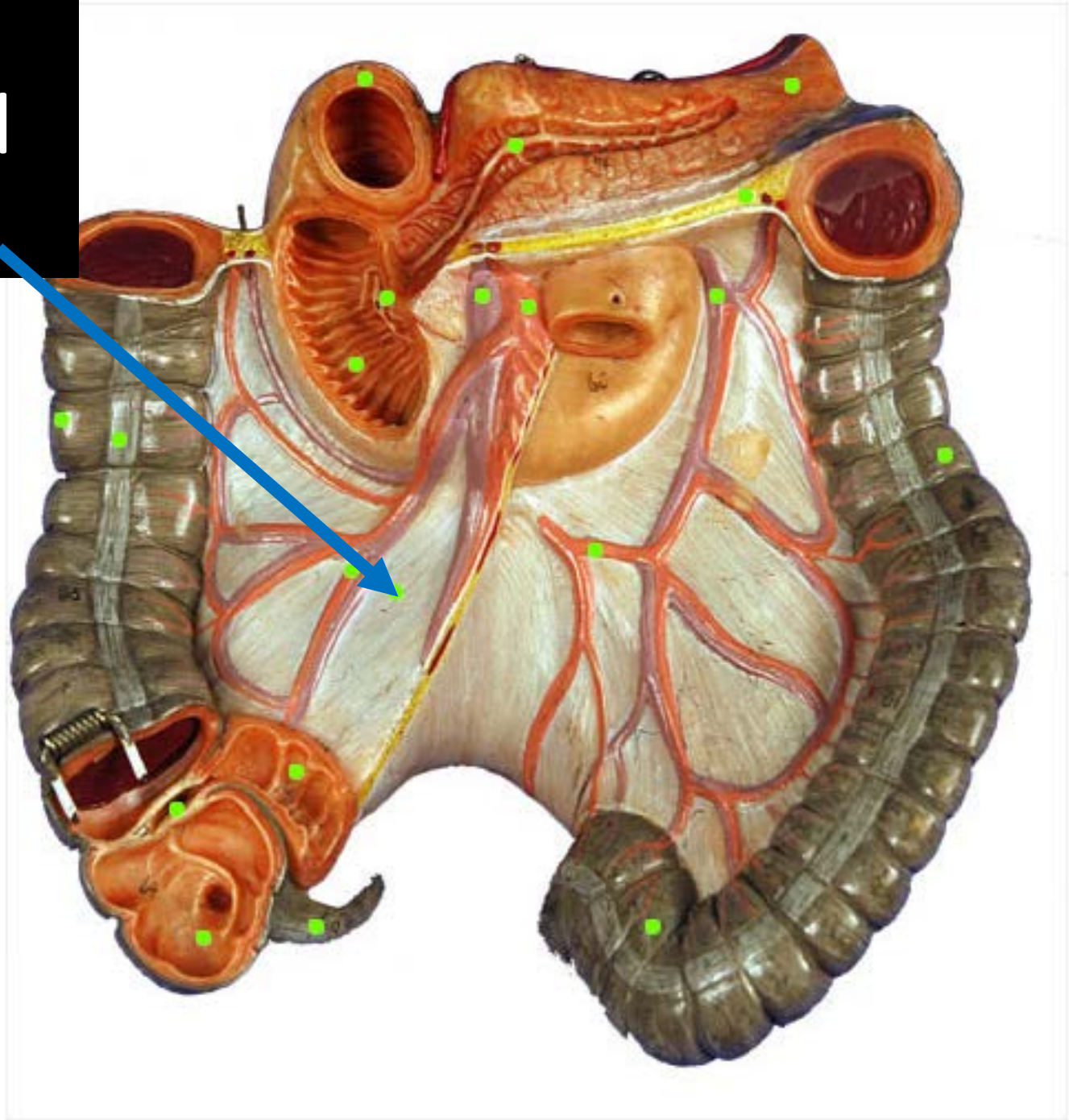
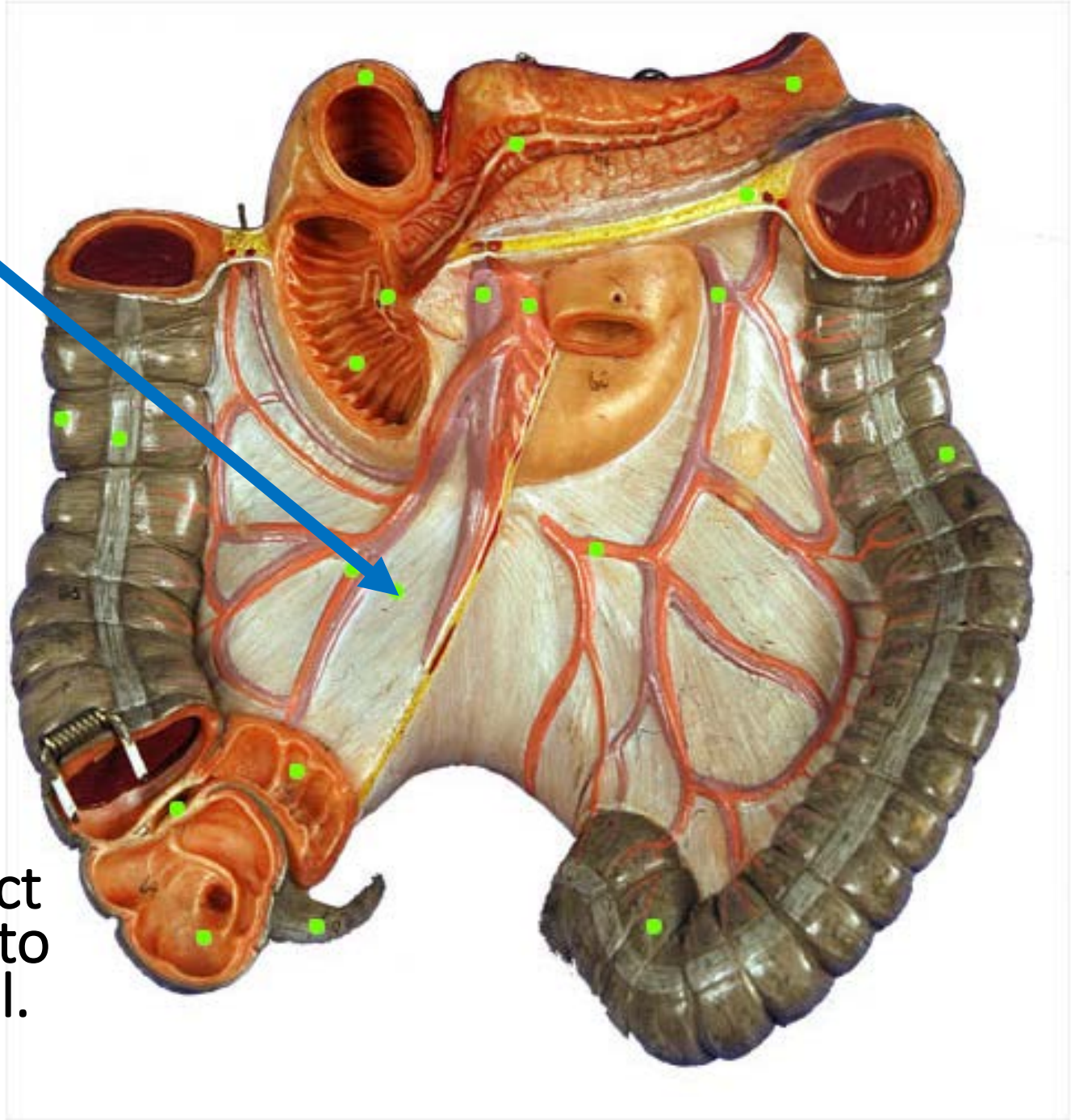
The Digestive System

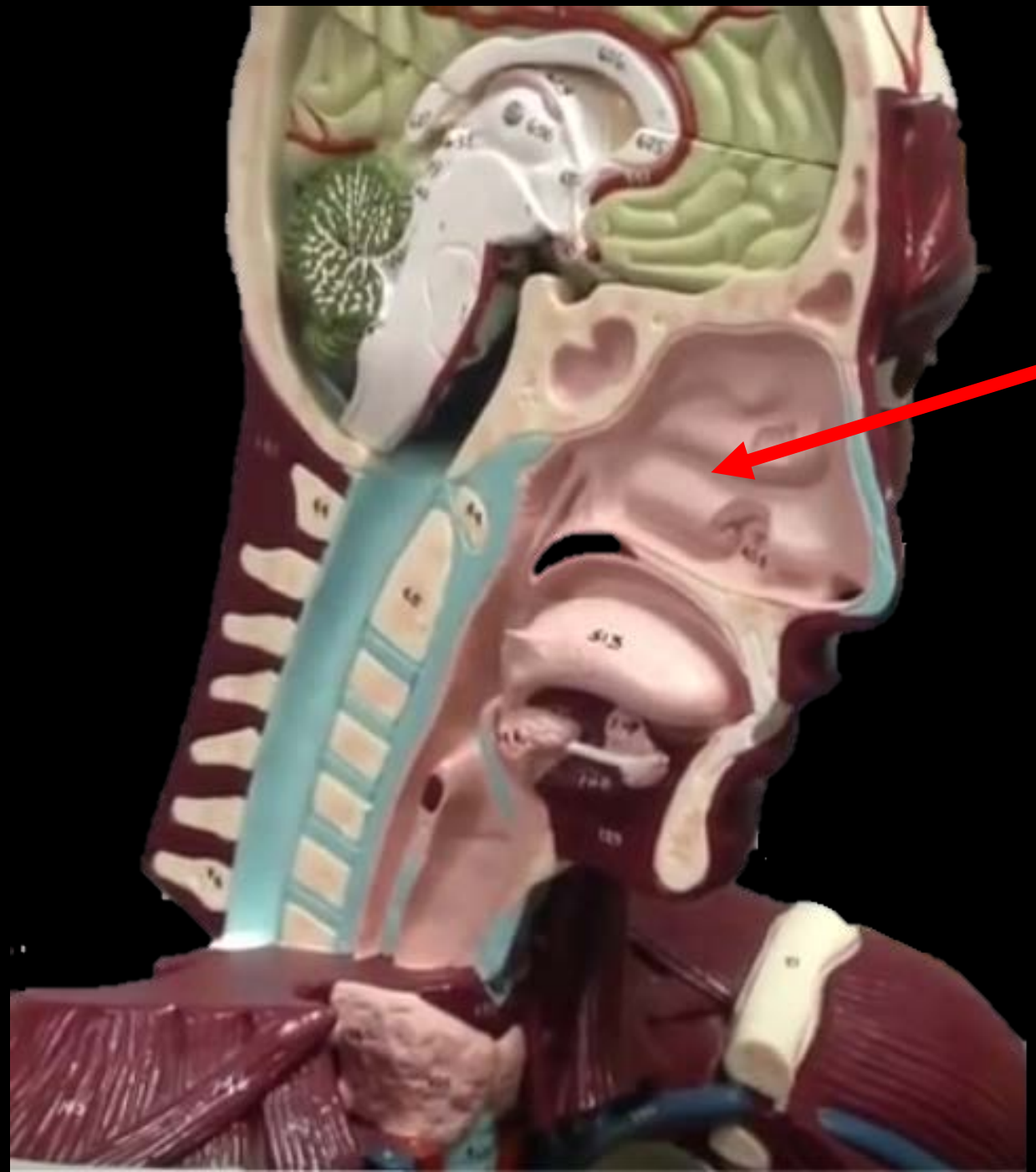
Identify the Structure and Function.



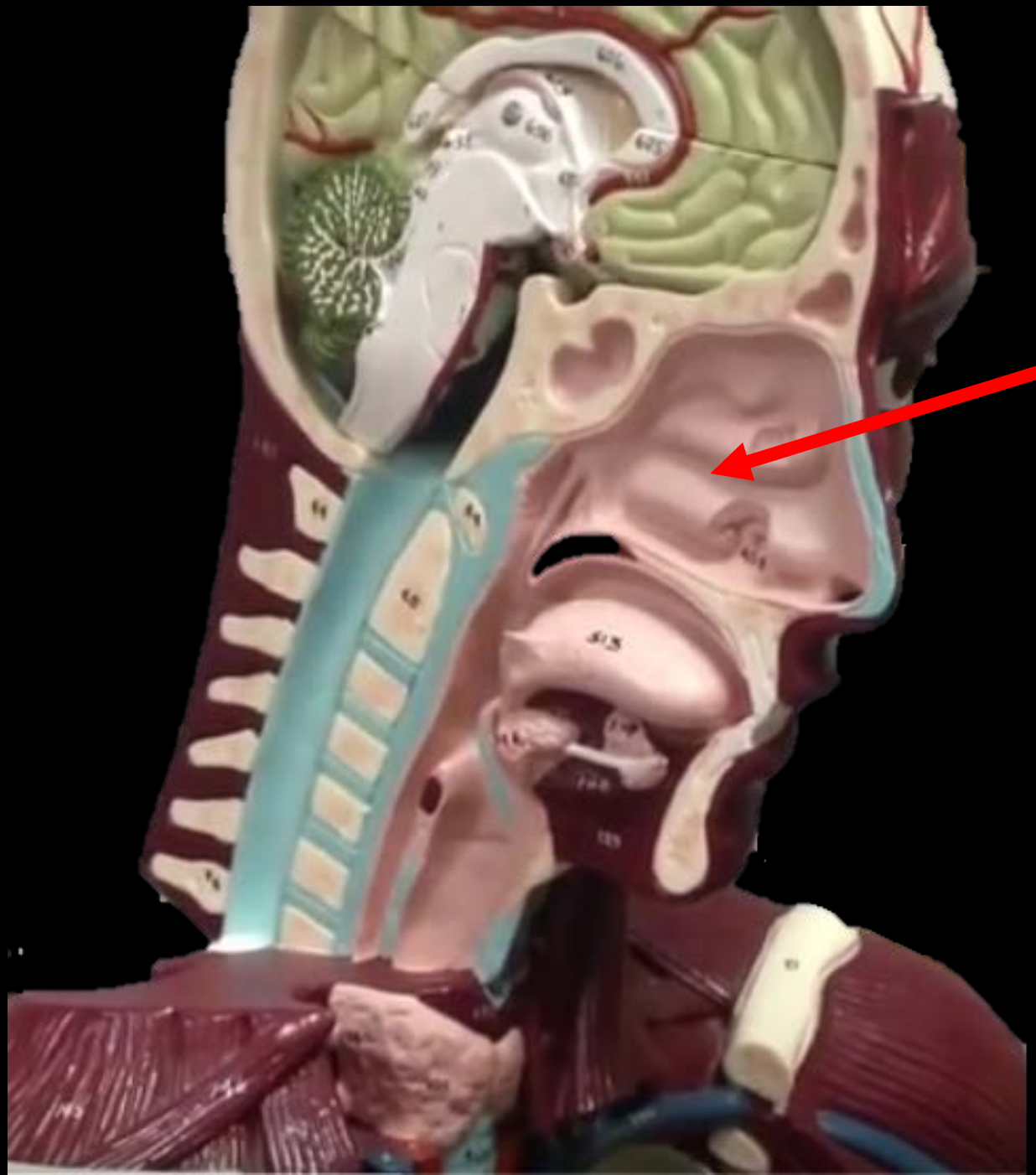
Mesentery of the Large Intestine



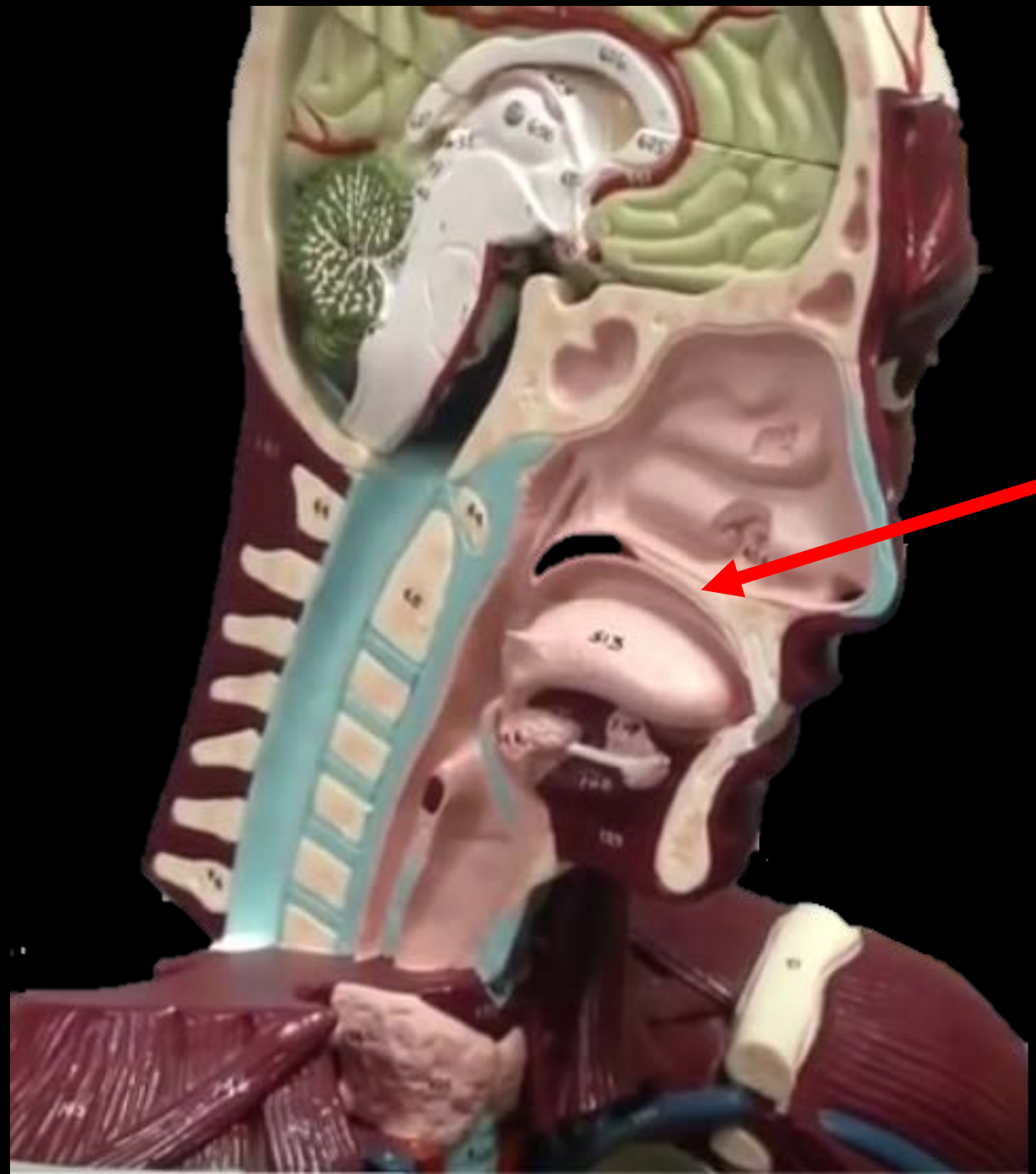
The mesentery functions to connect the visceral organs to the abdominal wall.



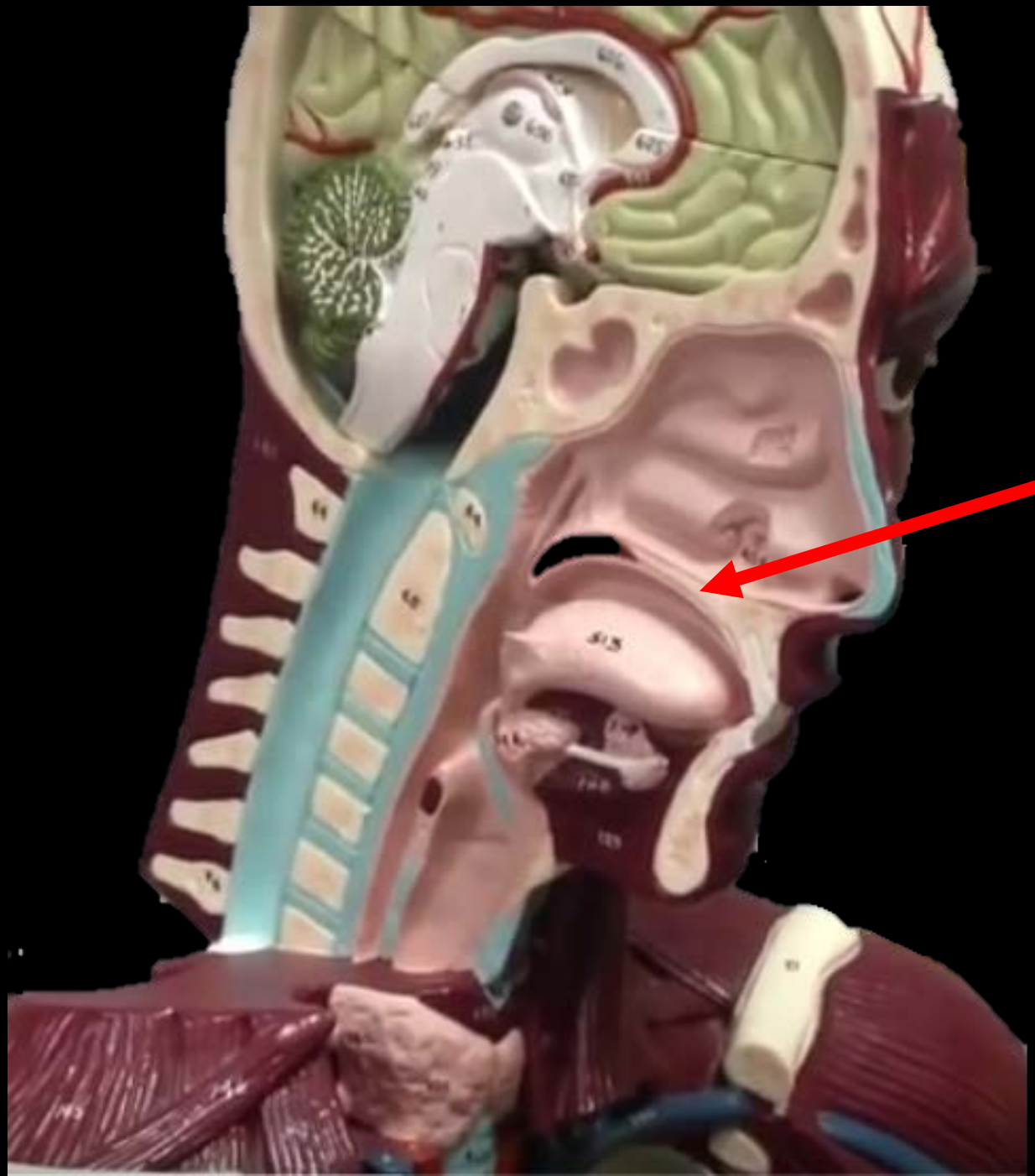
Identify the Structure.

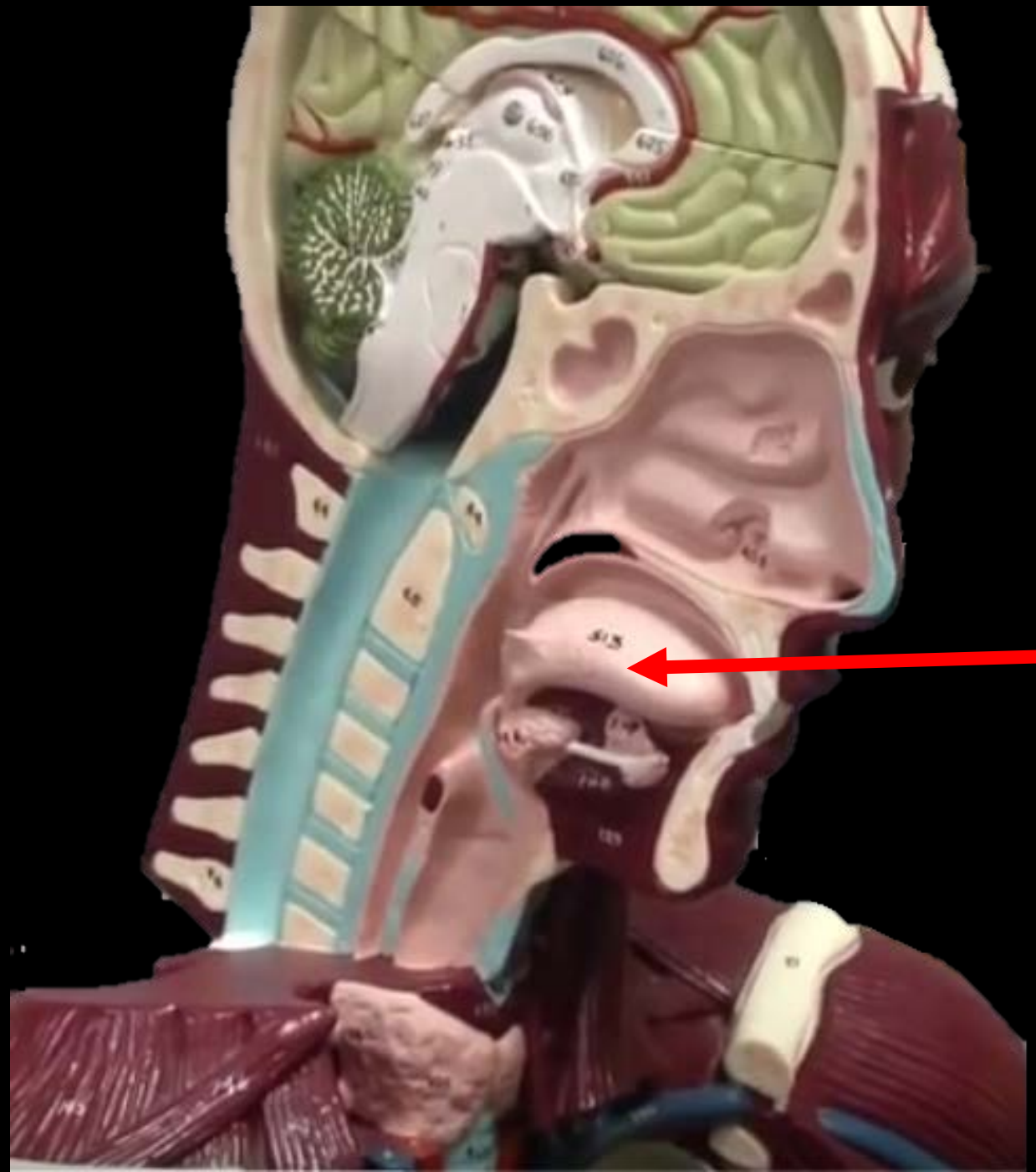


Nasal Cavity

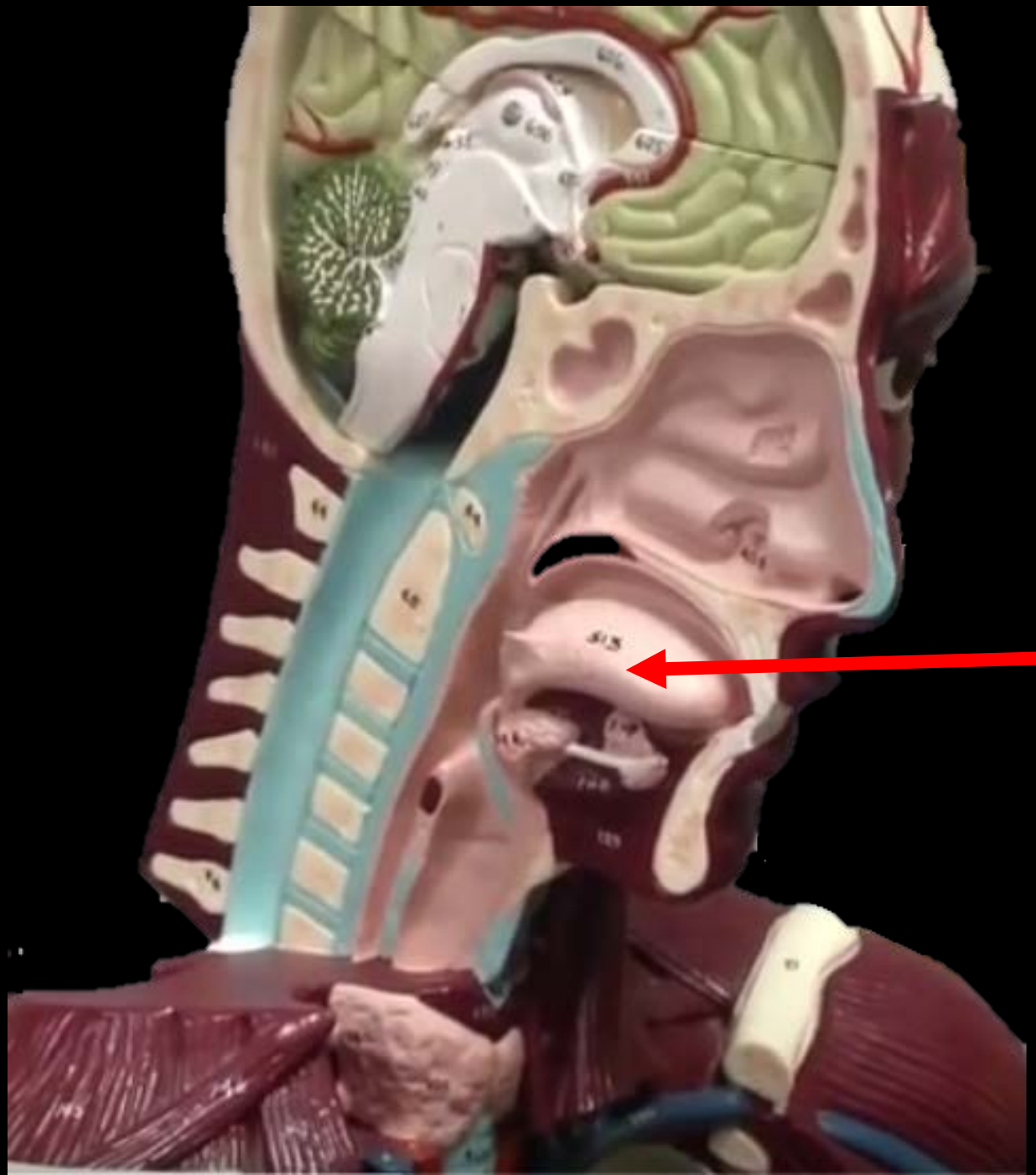


Identify the Structure.

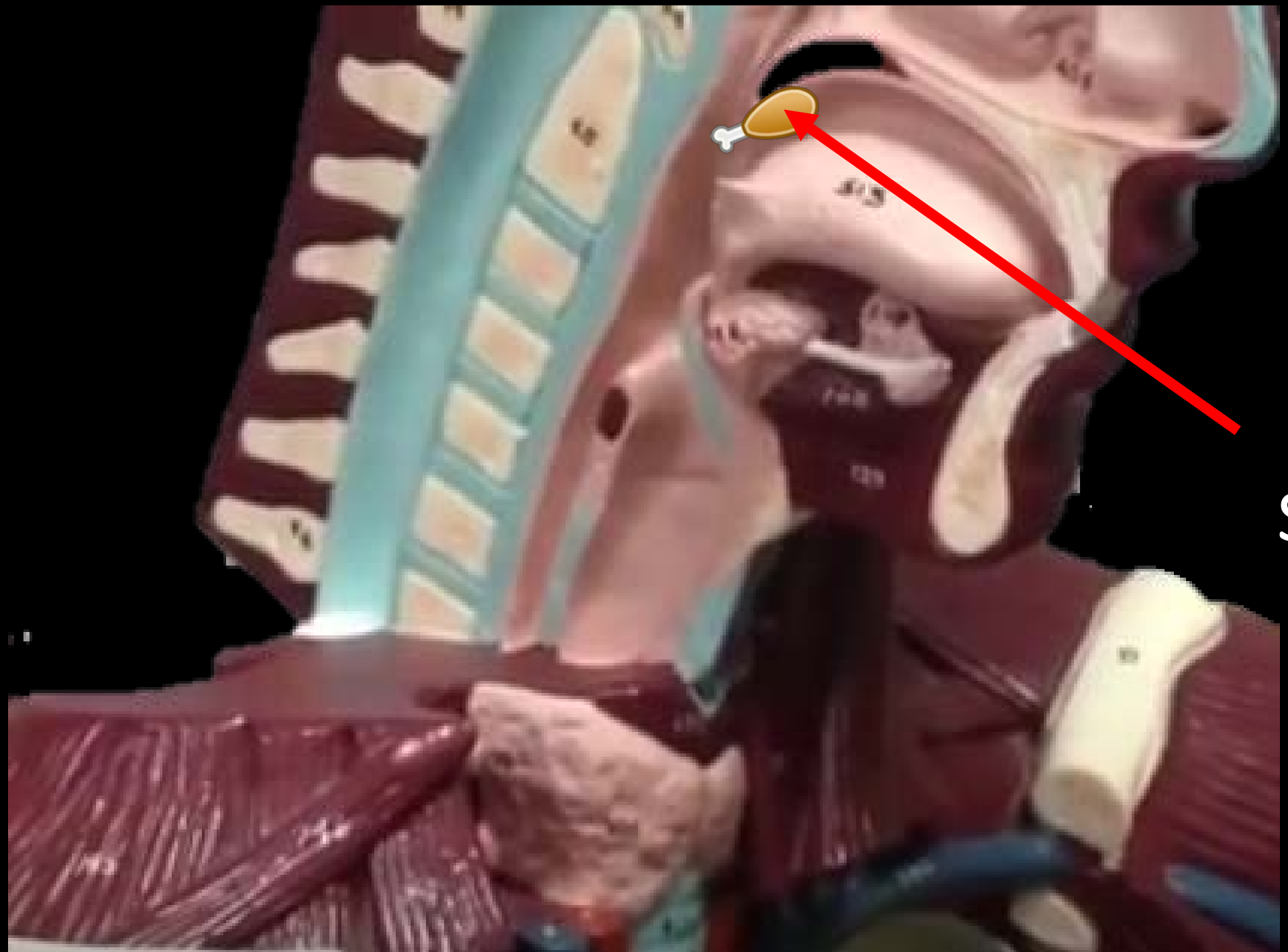

Palate



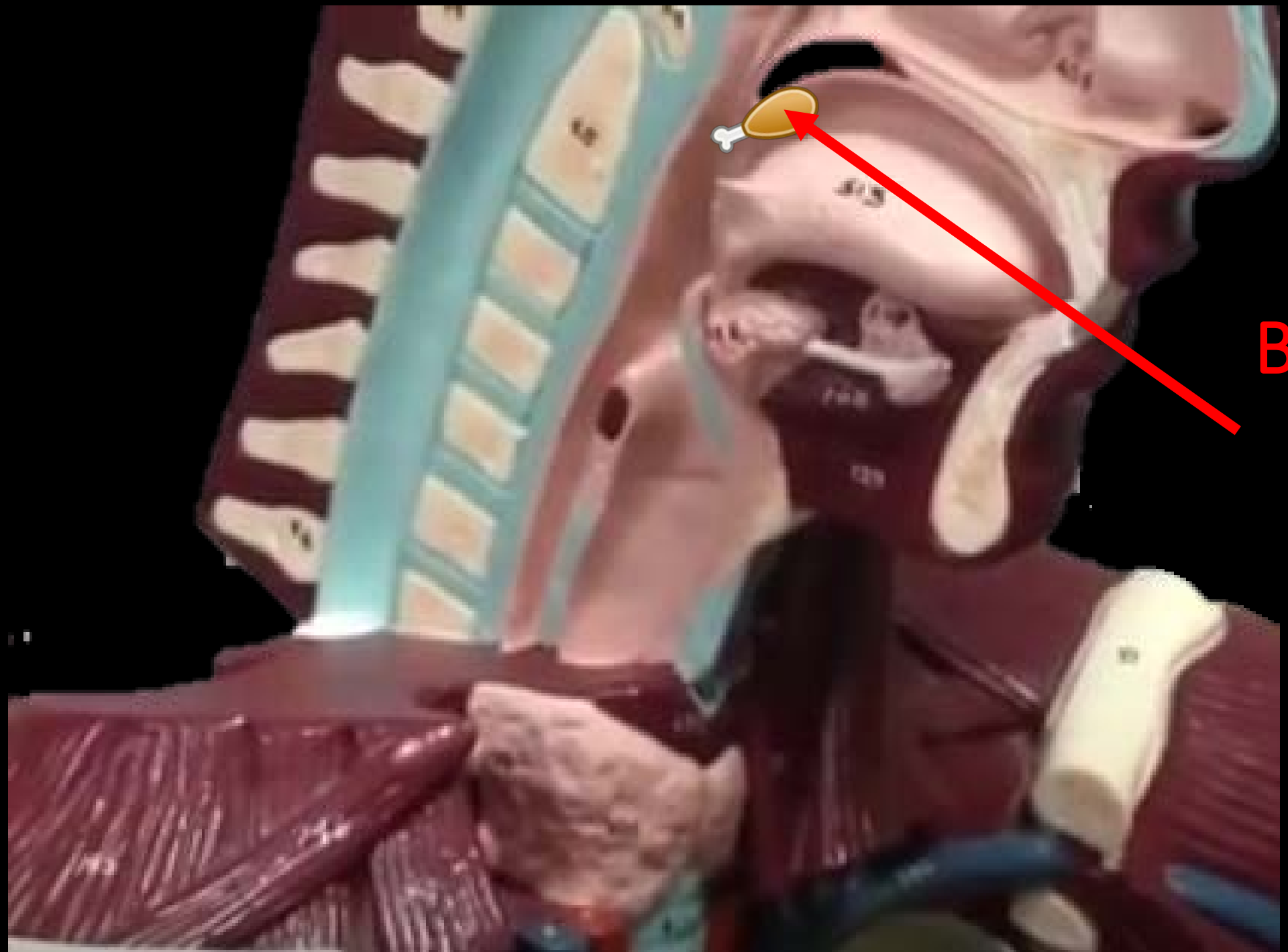
Identify the Structure.



Tongue

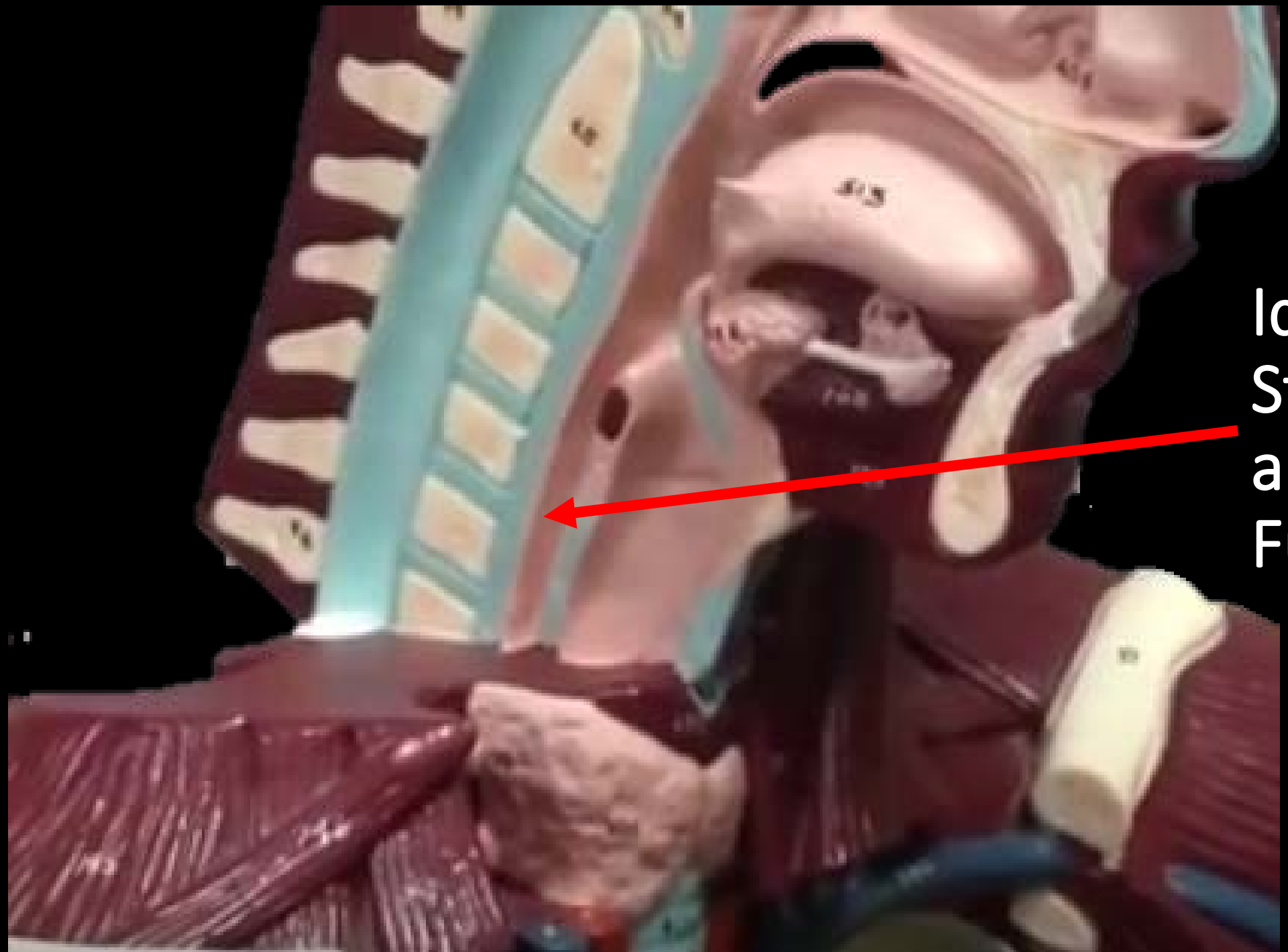


Identify the Structure.

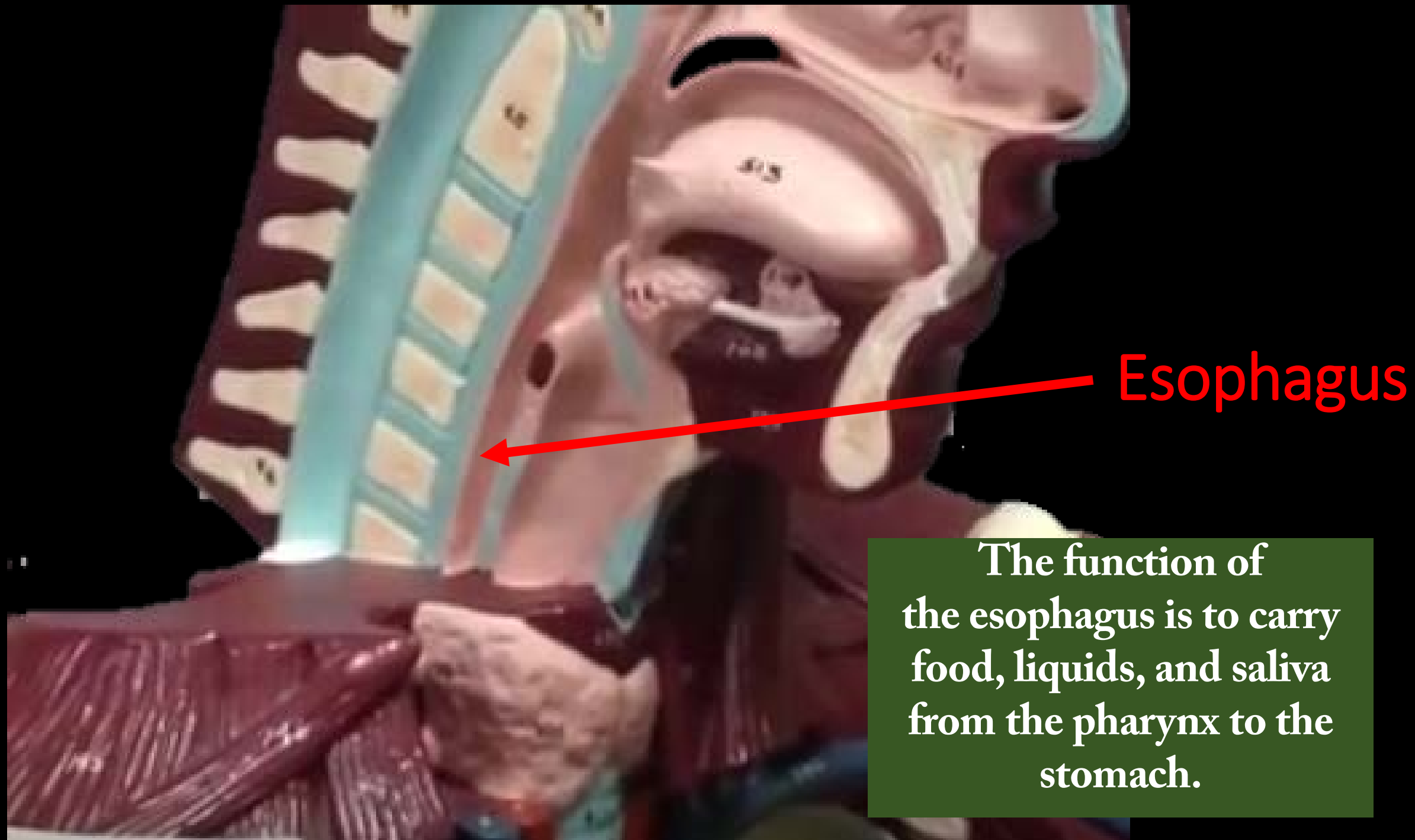

Bolus of
Food

Identify the Structure.

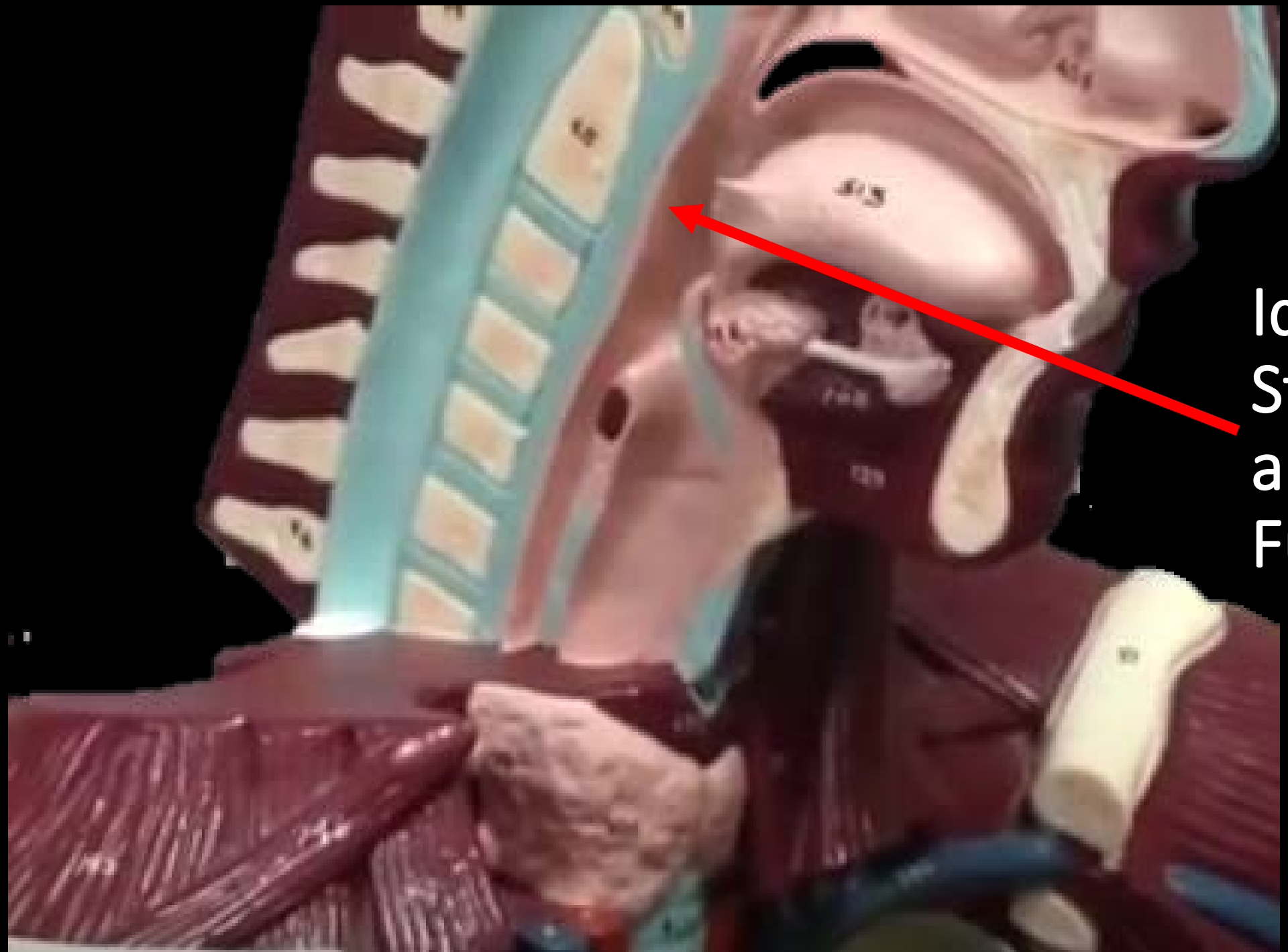

Tongue



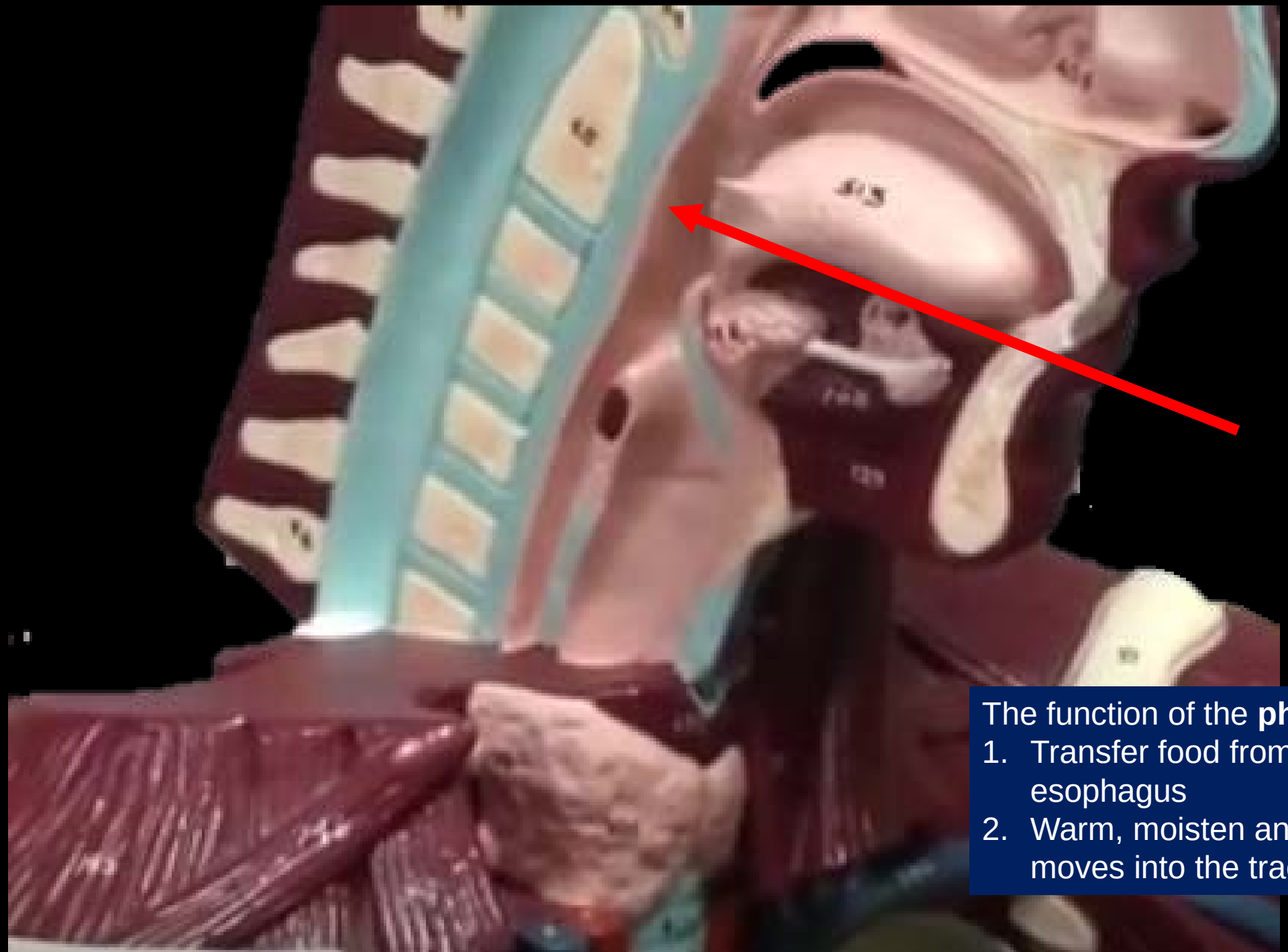
Identify the Structure and Function.



The function of the esophagus is to carry food, liquids, and saliva from the pharynx to the stomach.

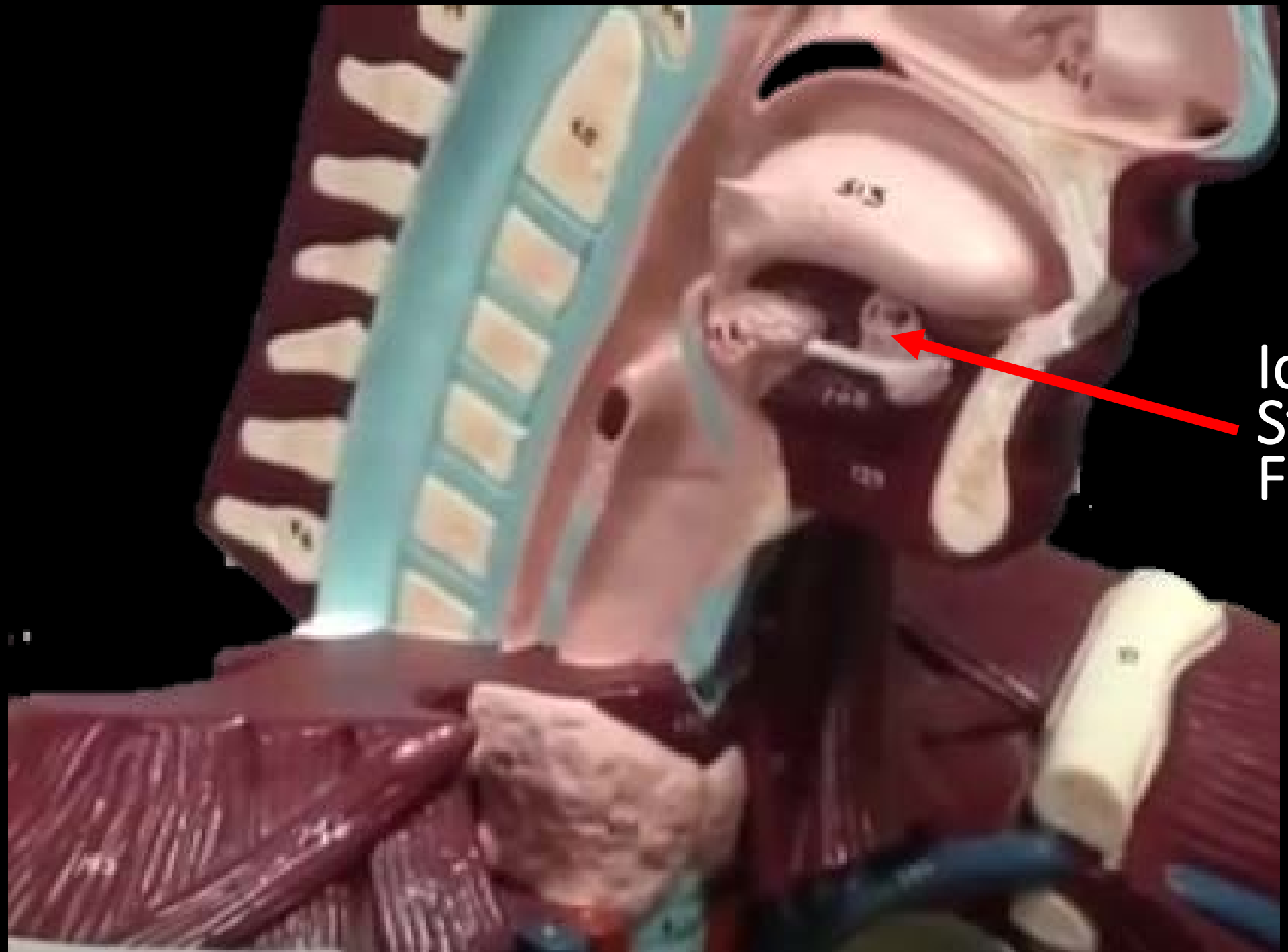


Identify the Structure and Function.



The function of the **pharynx** is to

1. Transfer food from the mouth to the esophagus
2. Warm, moisten and filter air before it moves into the trachea

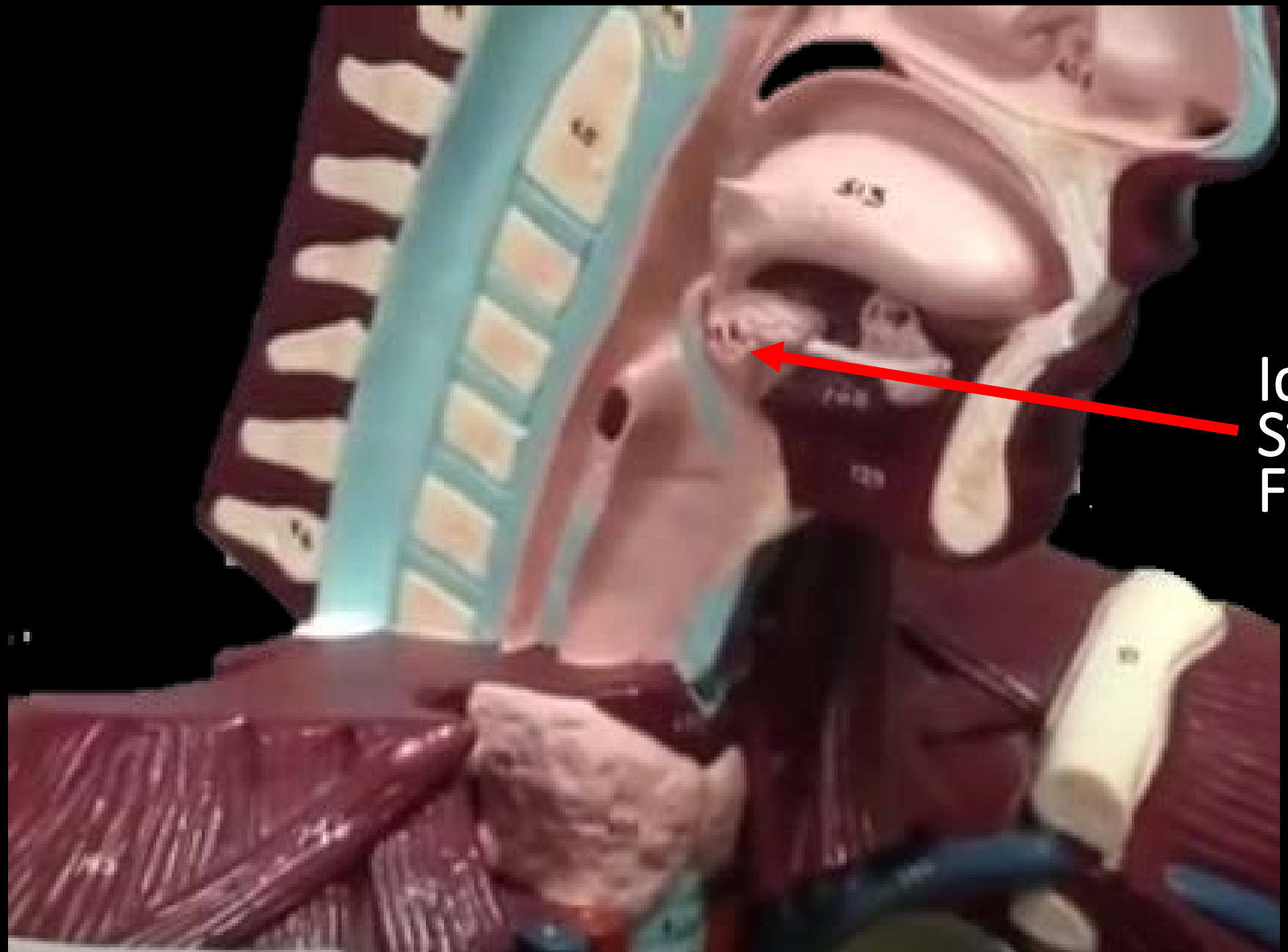


Identify the Structure and Function.

SALIVARY GLANDS

Sublingual Gland

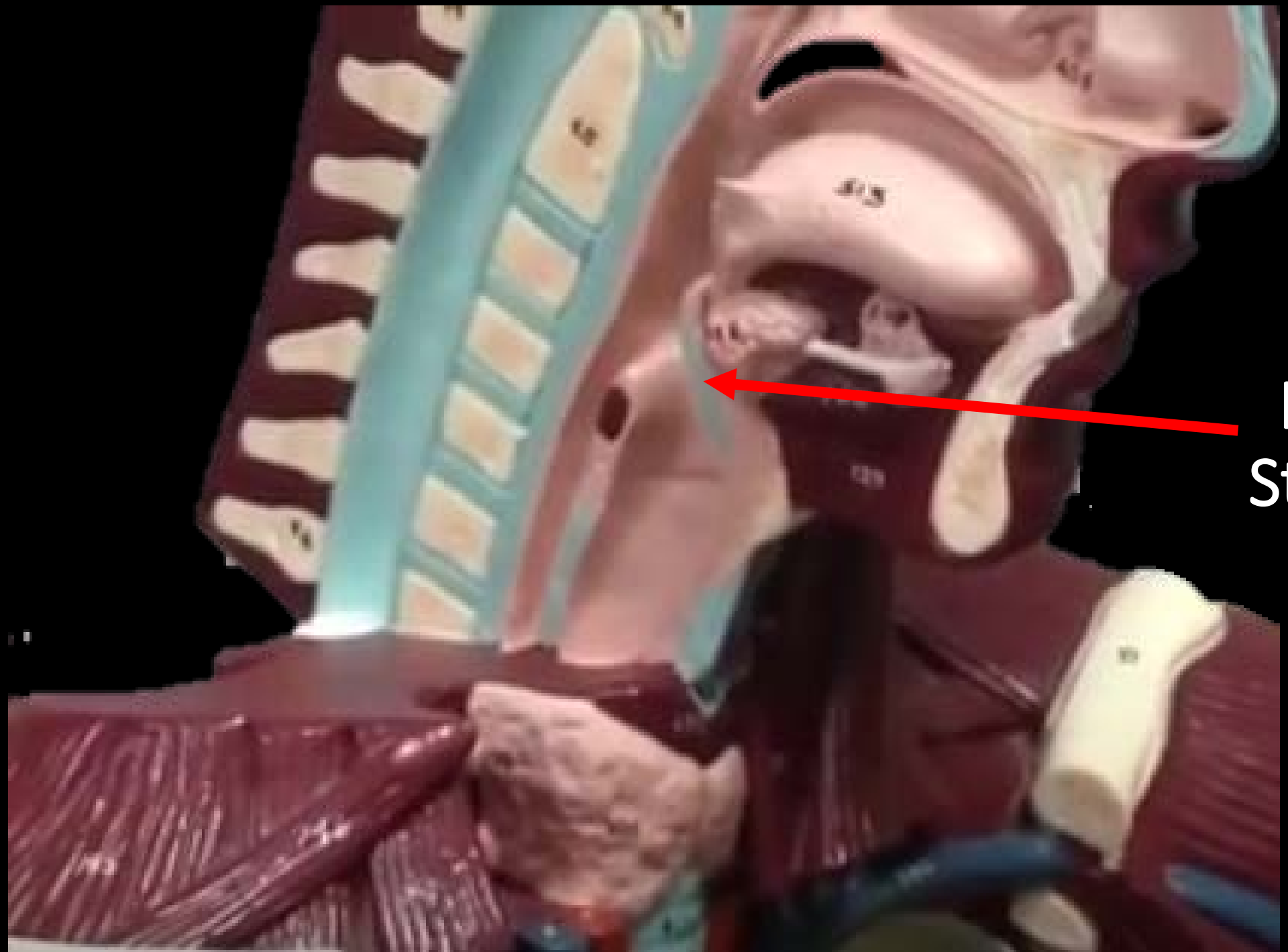
The salivary glands produce saliva. Saliva is necessary to moisten food to create a bolus (moist ball of food that can be swallowed).



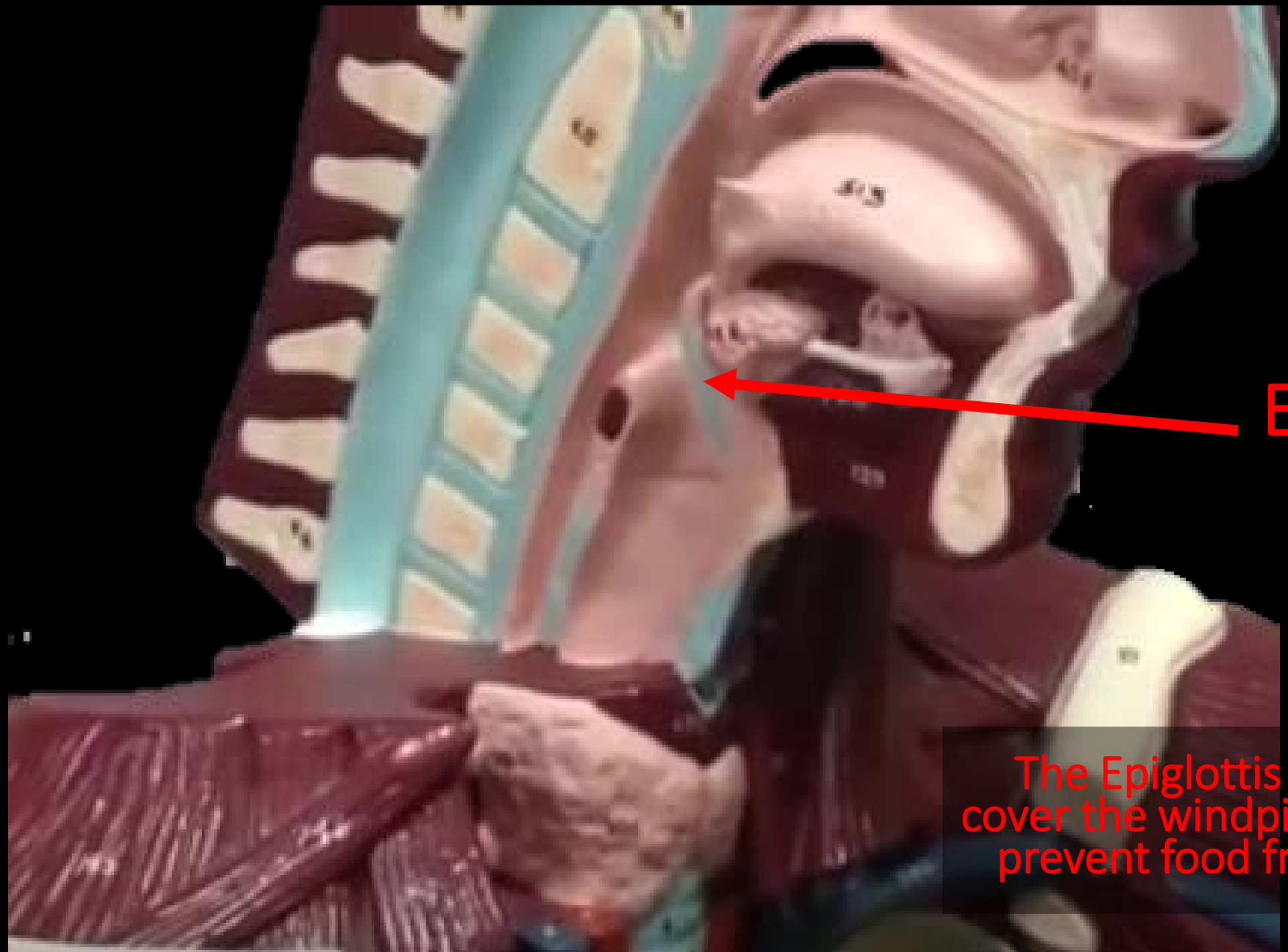
Identify the Structure and Function.

SALIVARY GLANDS

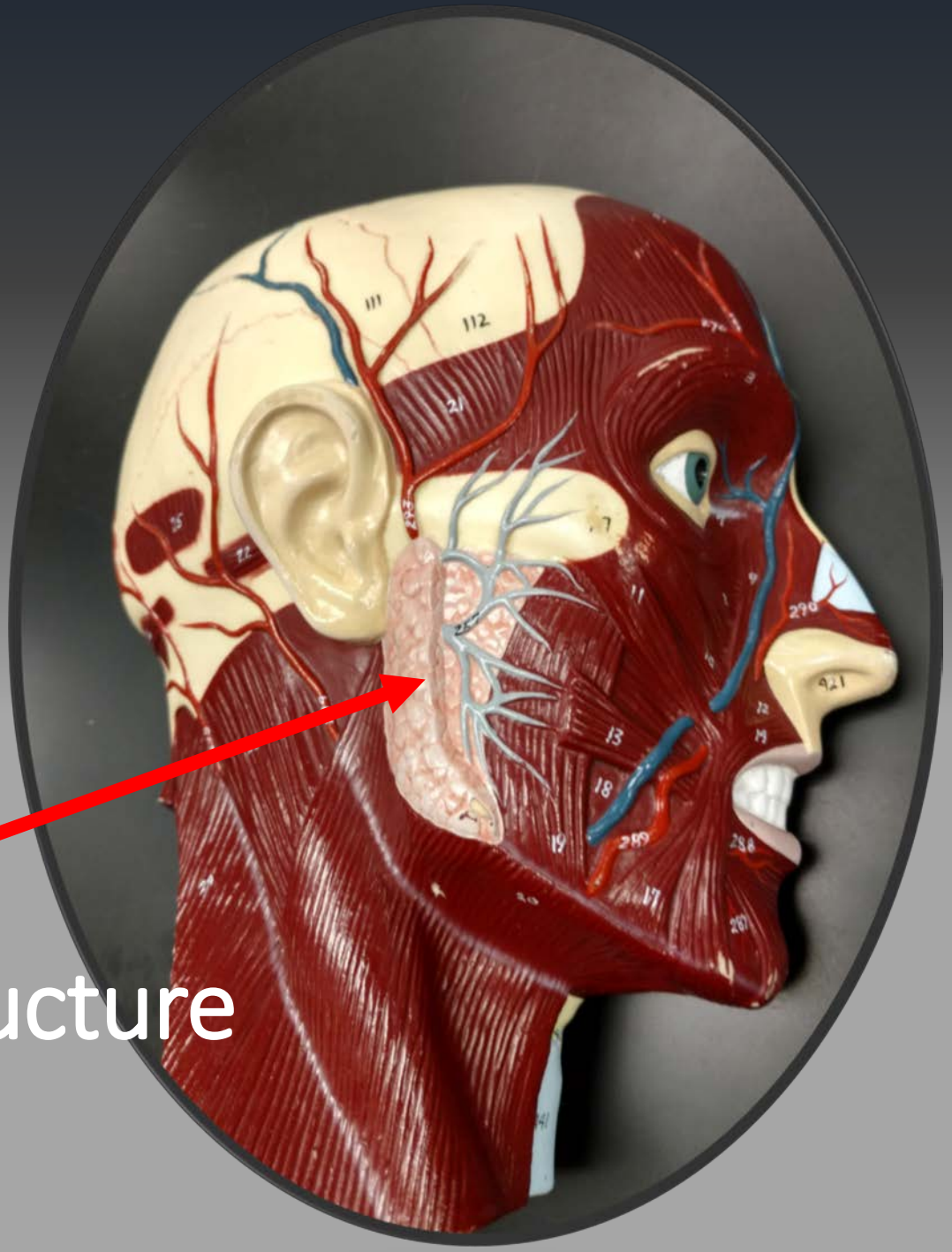
The salivary glands produce saliva. Saliva is necessary to moisten food to create a bolus (moist ball of food that can be swallowed).



Identify the Structure and function.

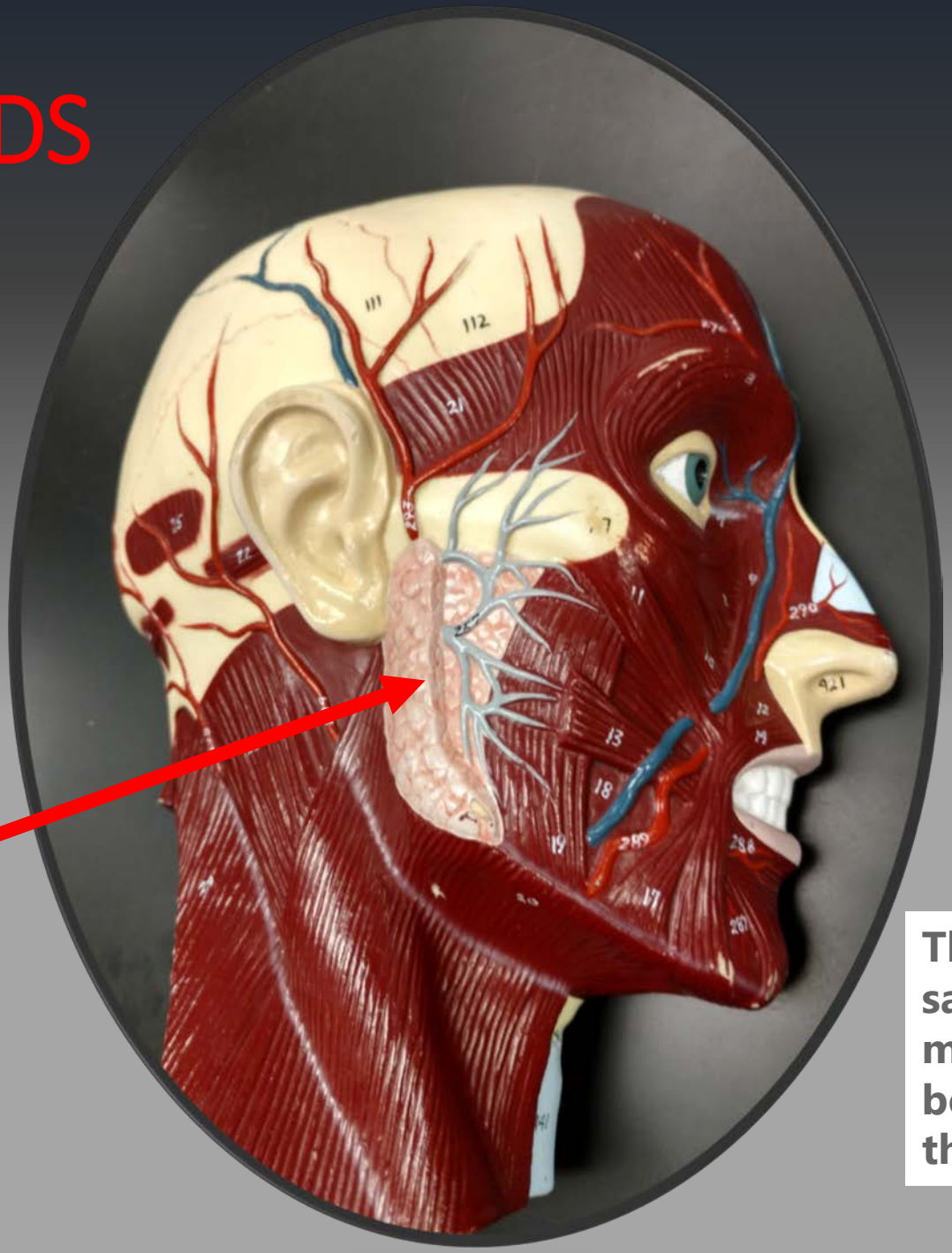


The Epiglottis functions to cover the windpipe (trachea) to prevent food from entering.



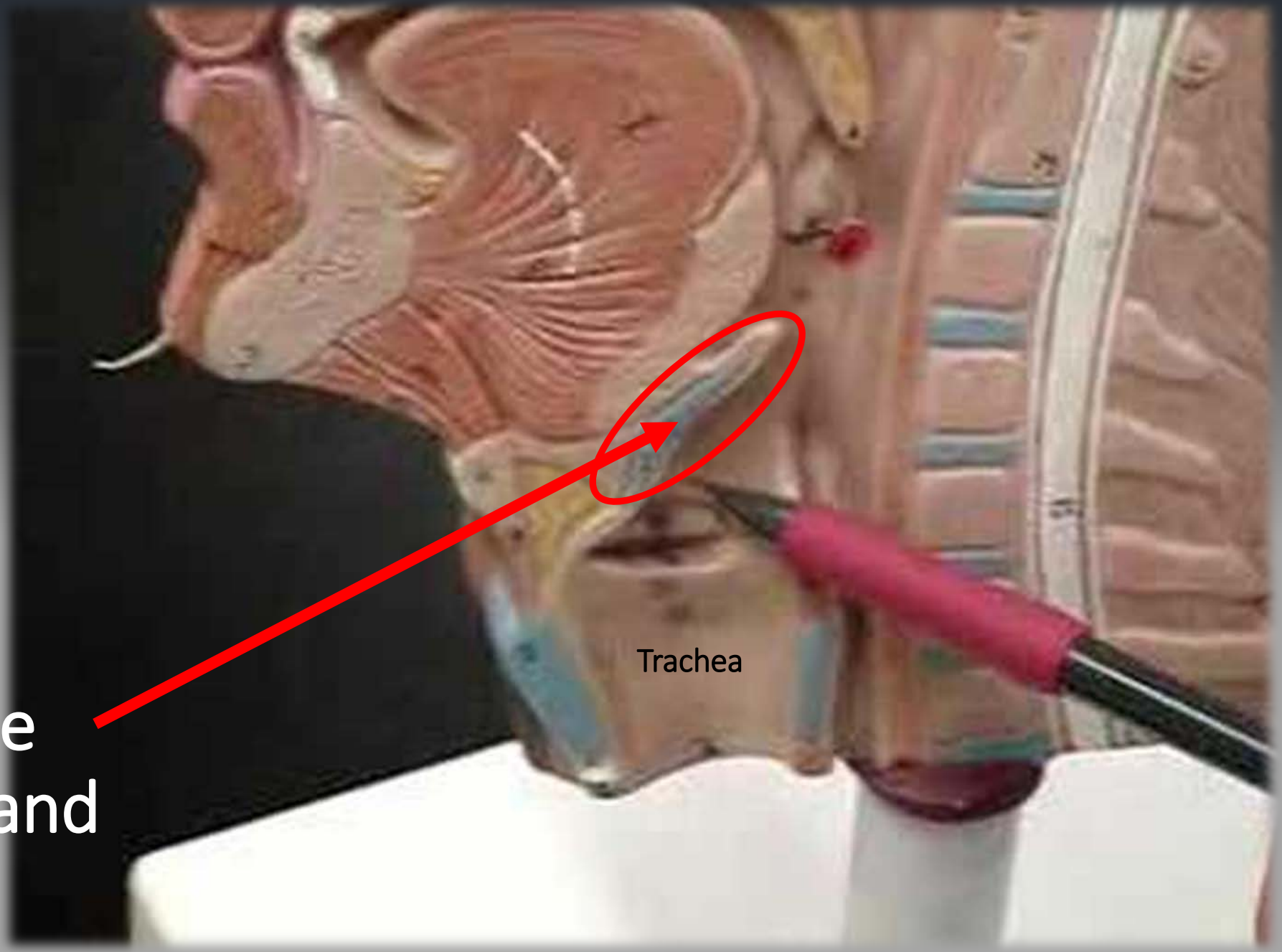
Identify the Structure and Function.

SALIVARY GLANDS



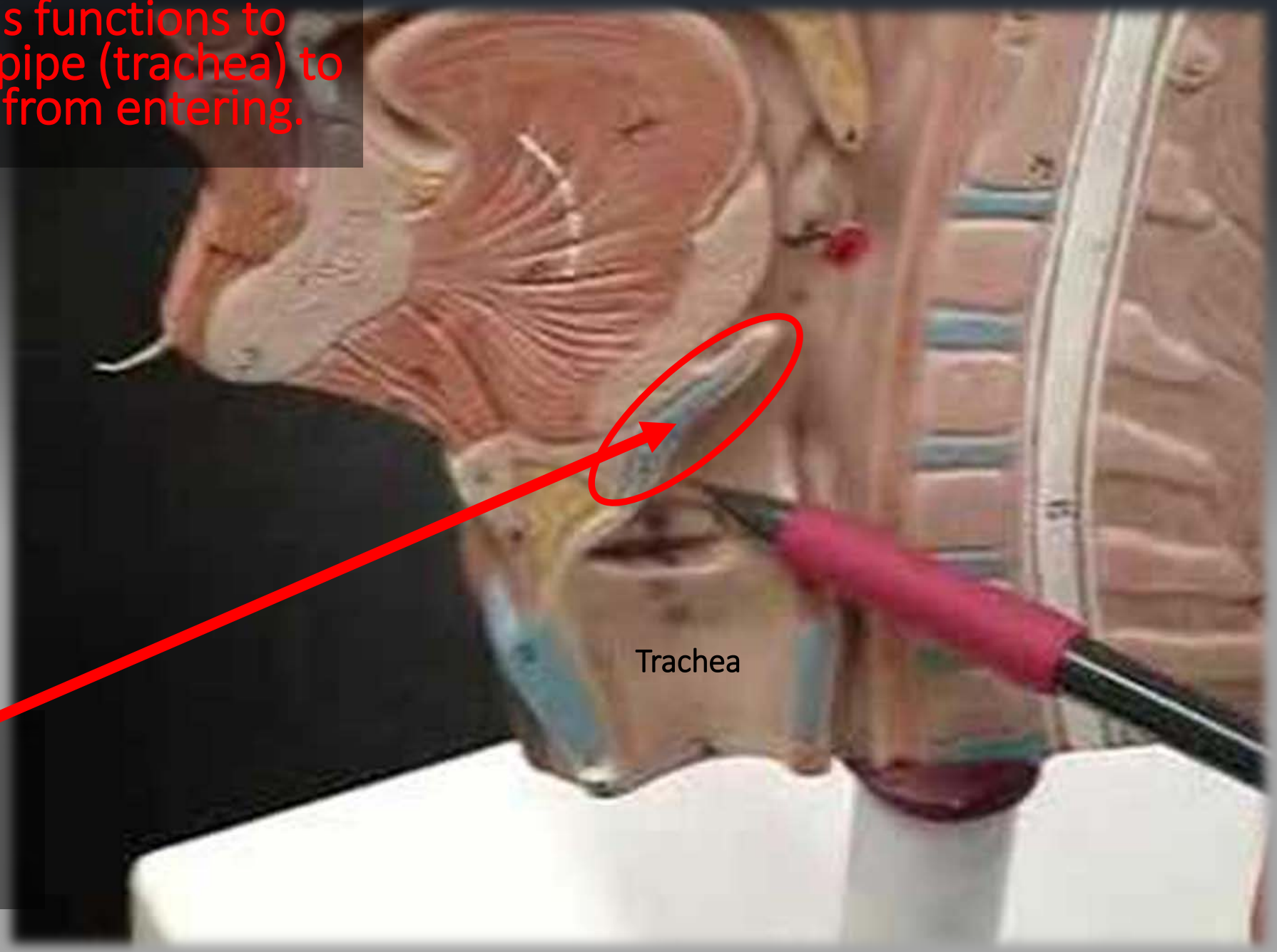
Parotid Gland

The salivary glands produce saliva. Saliva is necessary to moisten food to create a bolus (moist ball of food that can be swallowed).



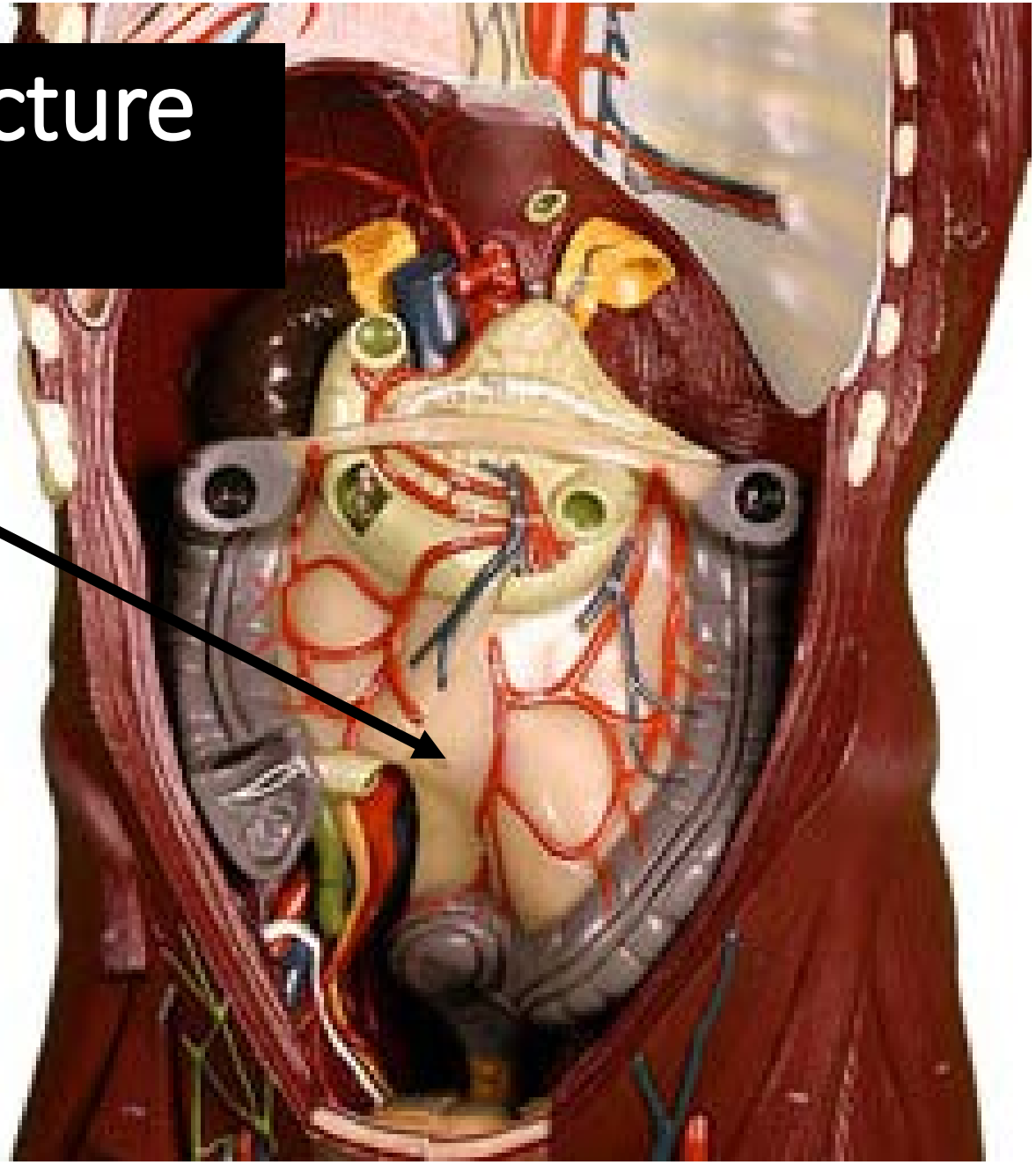
Identify the Structure and function.

The Epiglottis functions to cover the windpipe (trachea) to prevent food from entering.

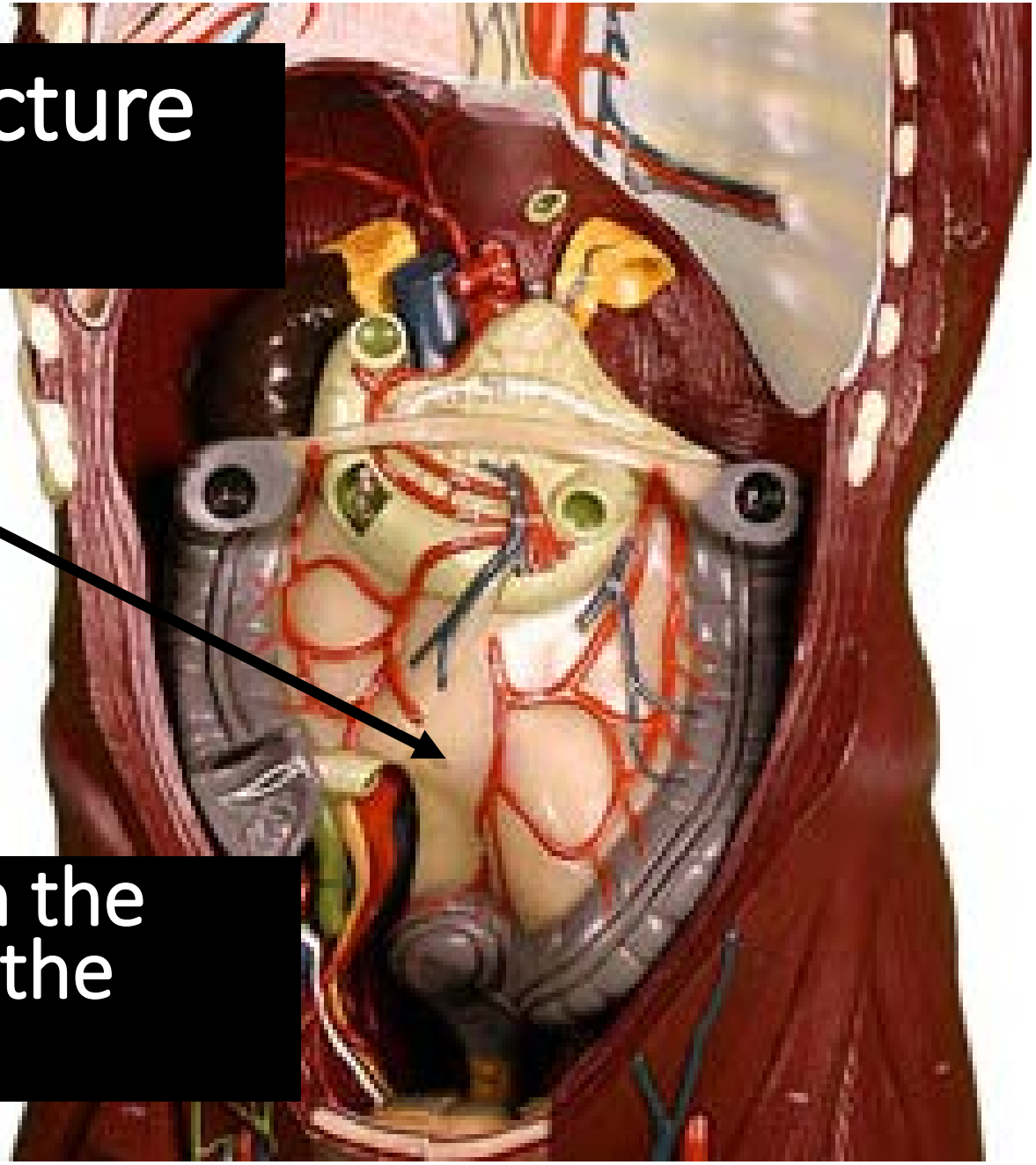


Epiglottis

Identify the Structure and Function.

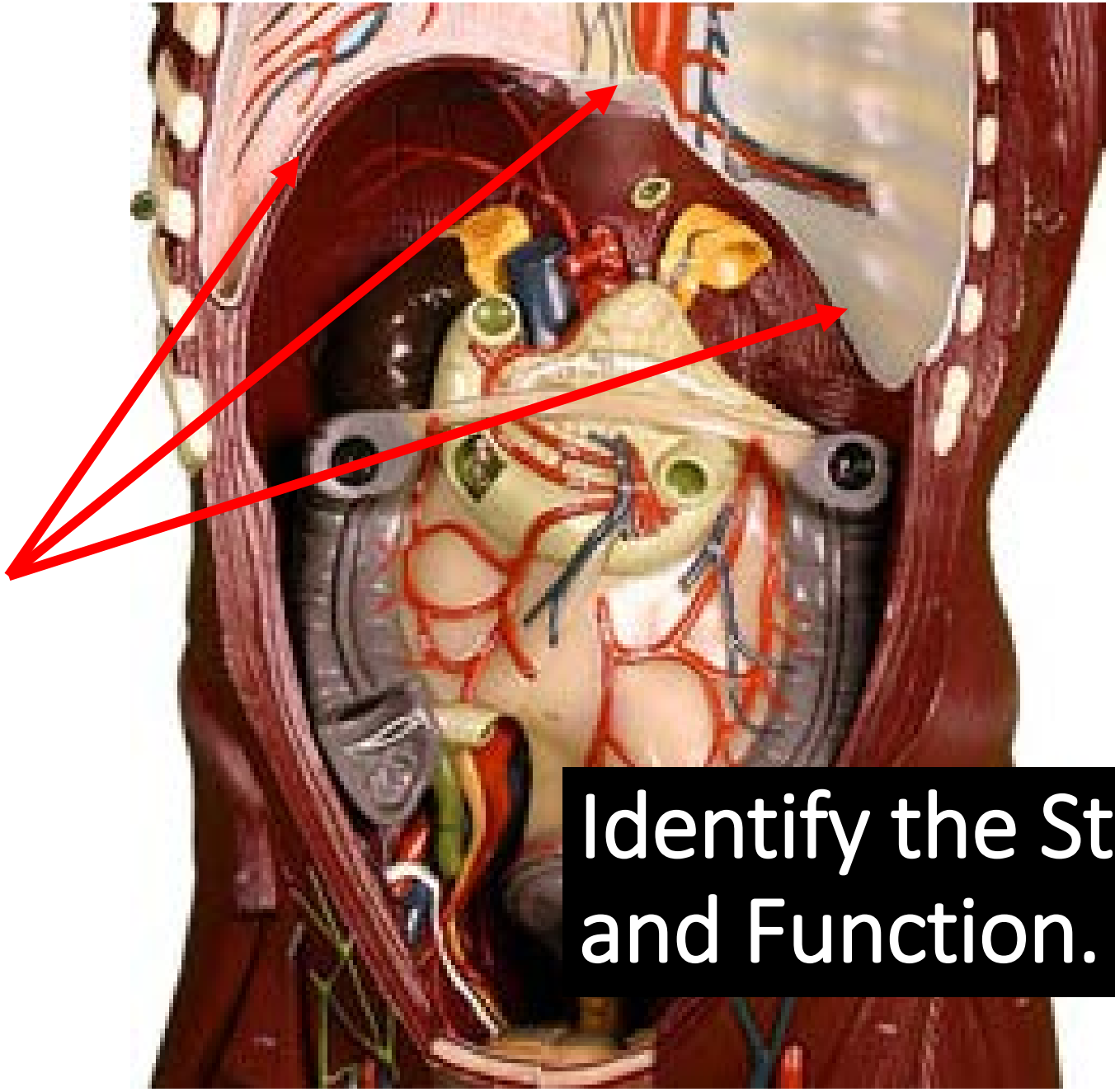


Identify the Structure and Function.



Mesentery – Attach the digestive organs to the abdominal wall.

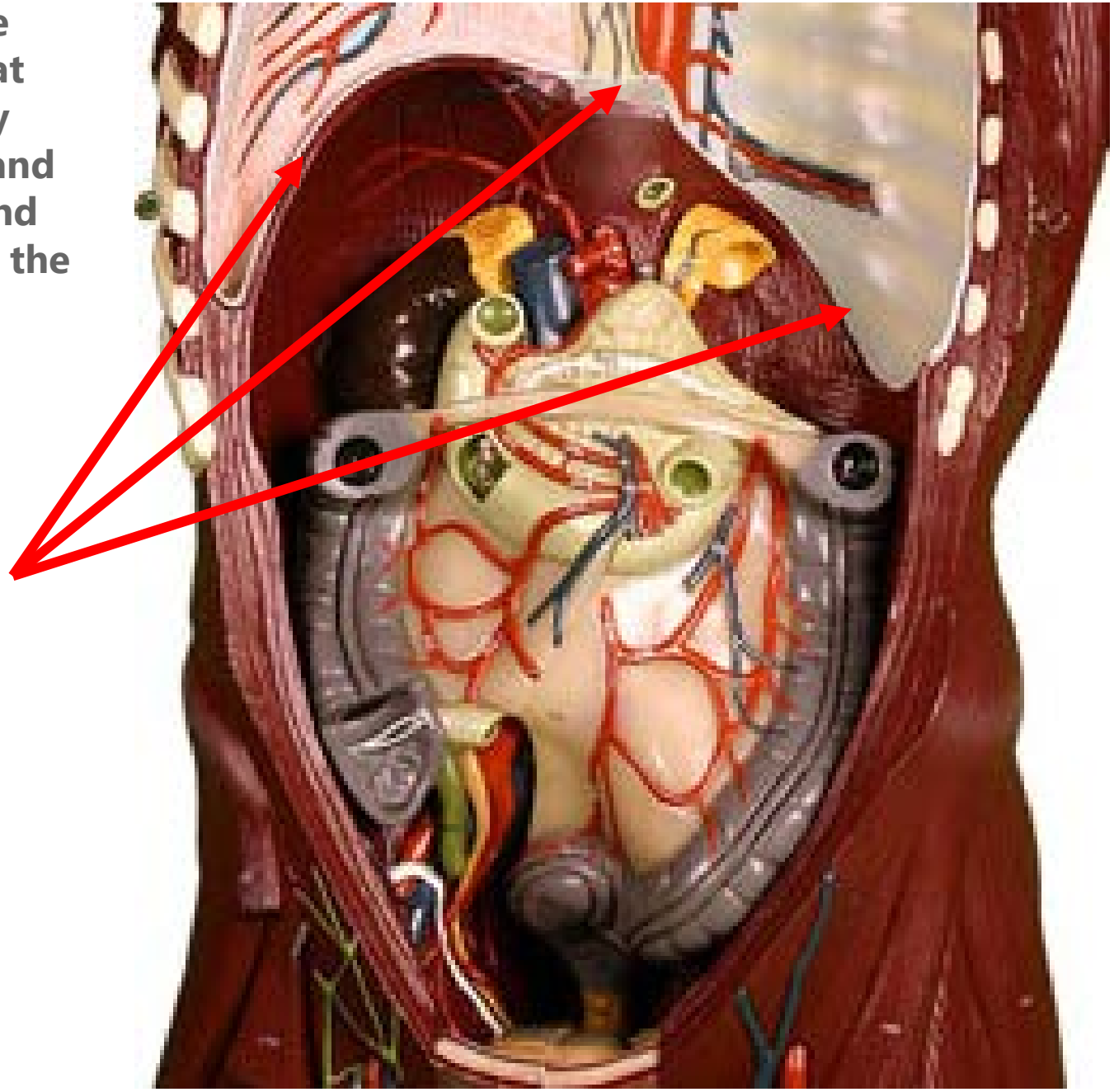
Diaphragm



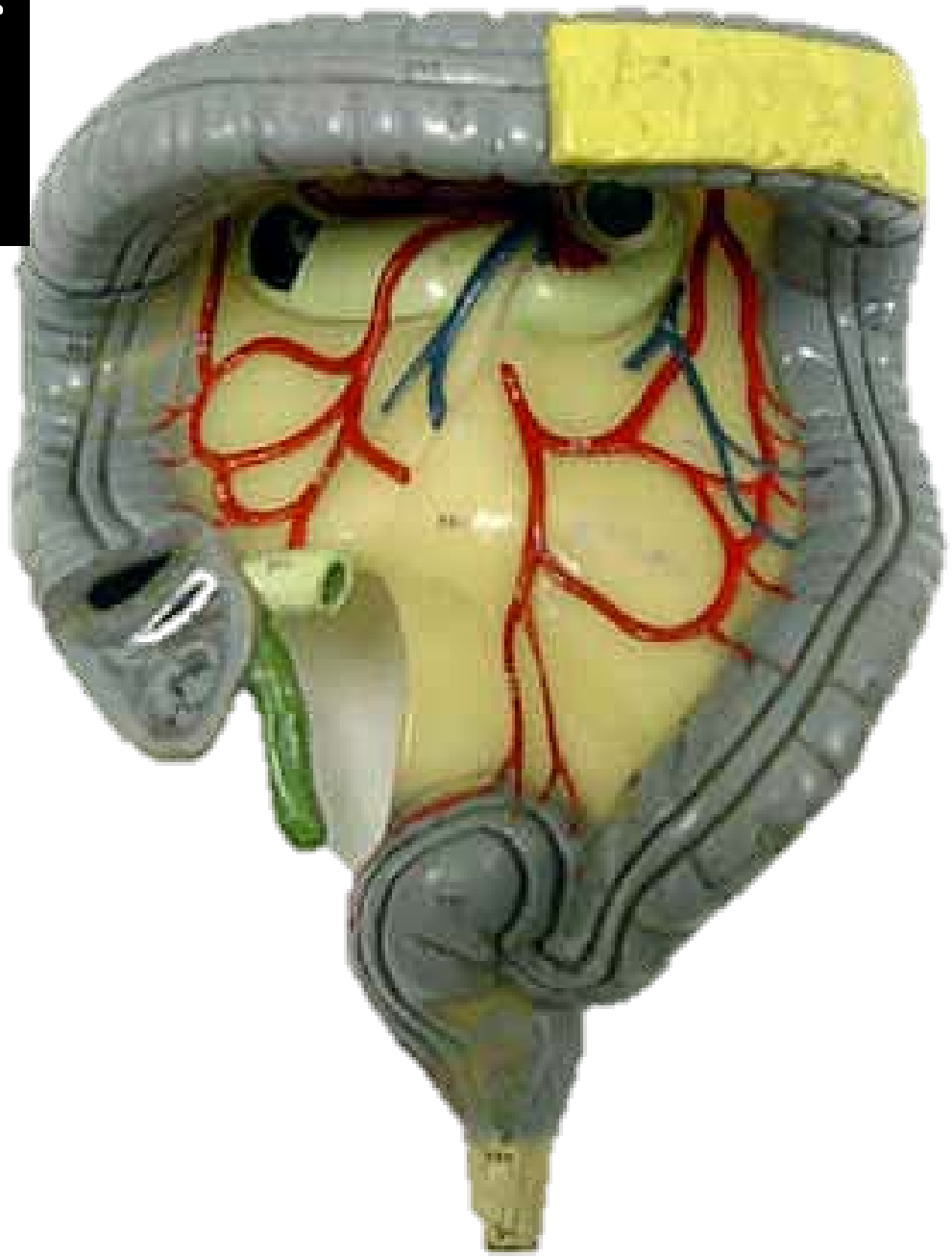
Identify the Structure and Function.

The diaphragm is a muscle that lies below the lungs that separates the thoracic cavity from the abdominal cavity and functions to force air into and out of the lungs, along with the intercostal muscles.

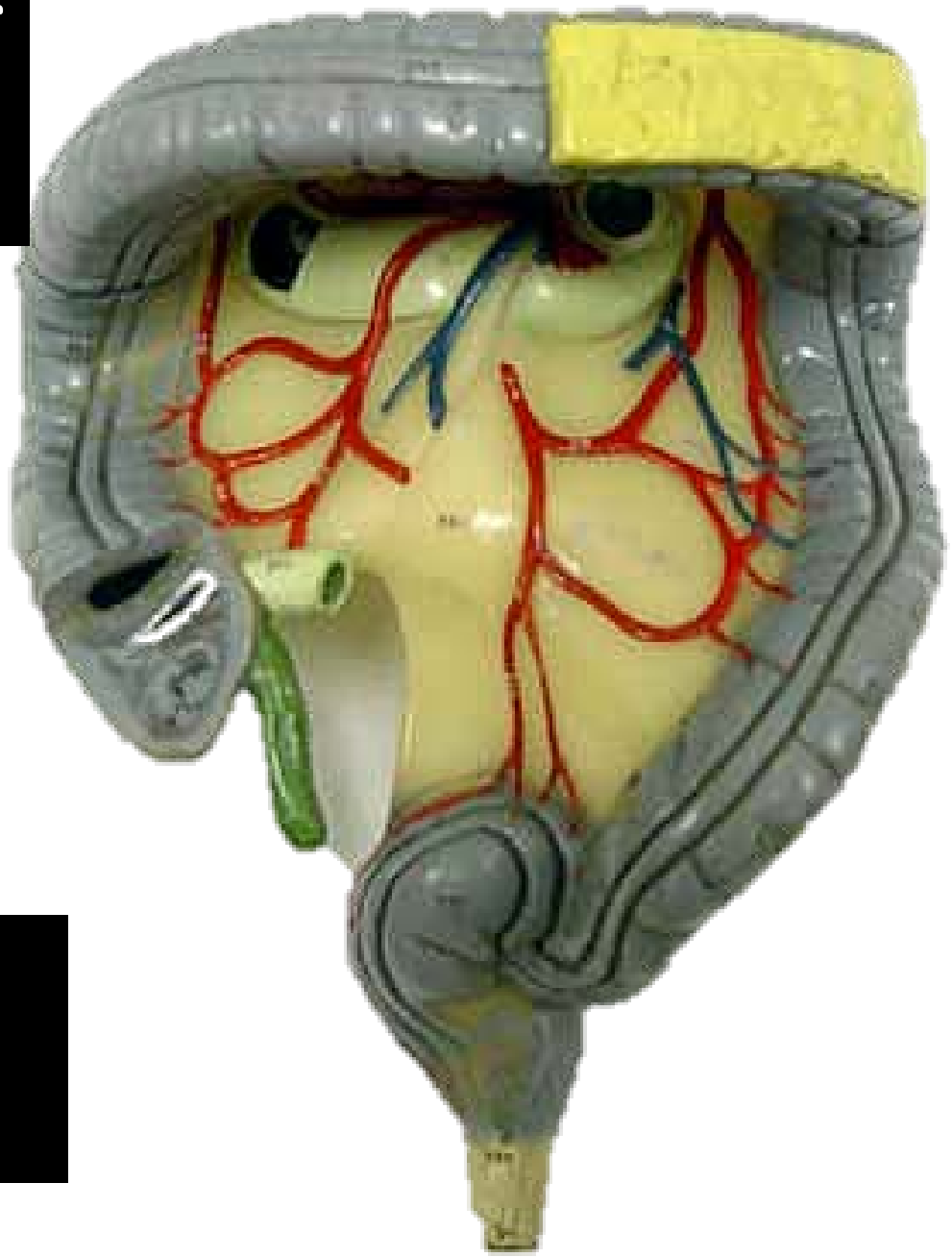
Diaphragm



What is the function of the large intestine?

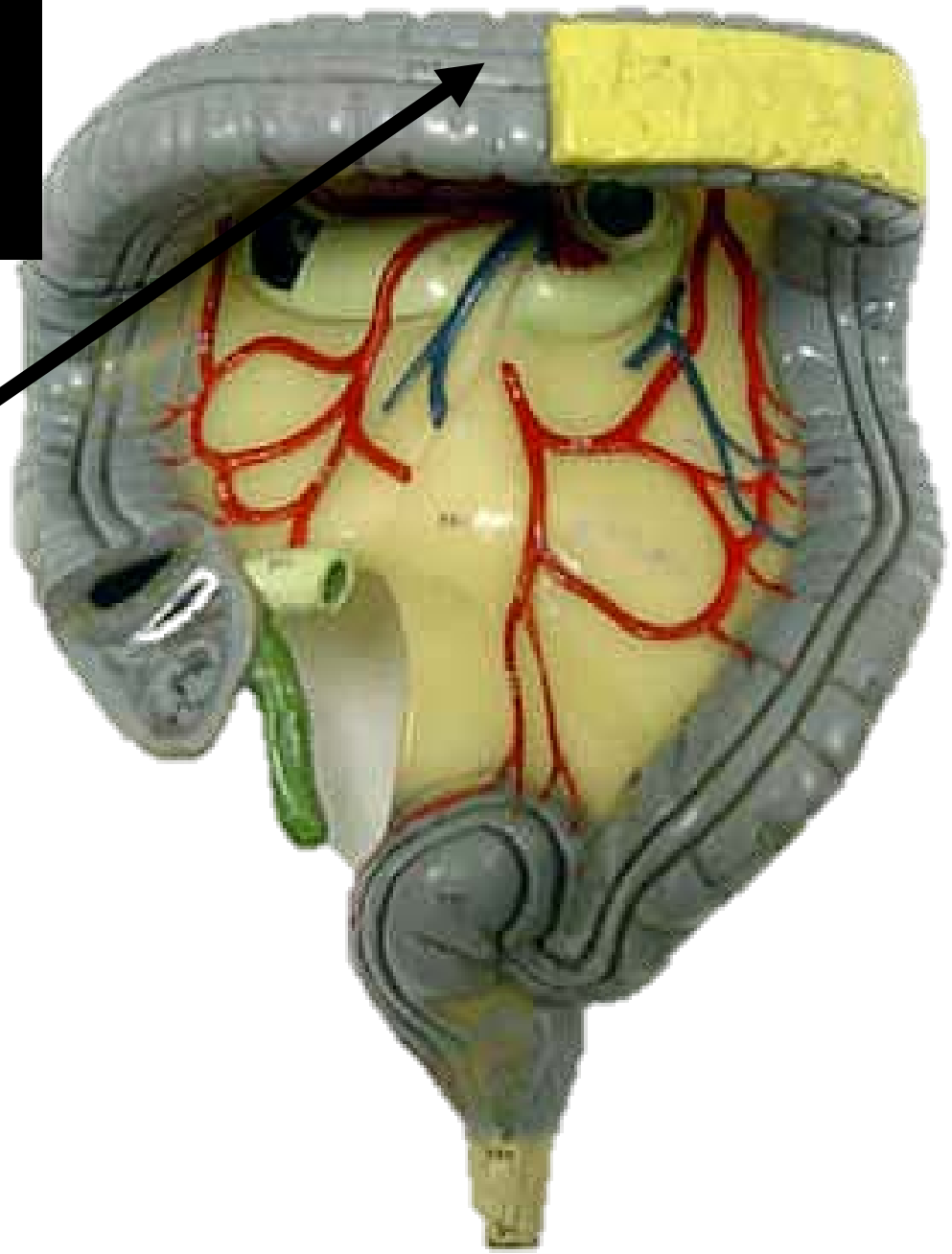


What is the function of the large intestine?

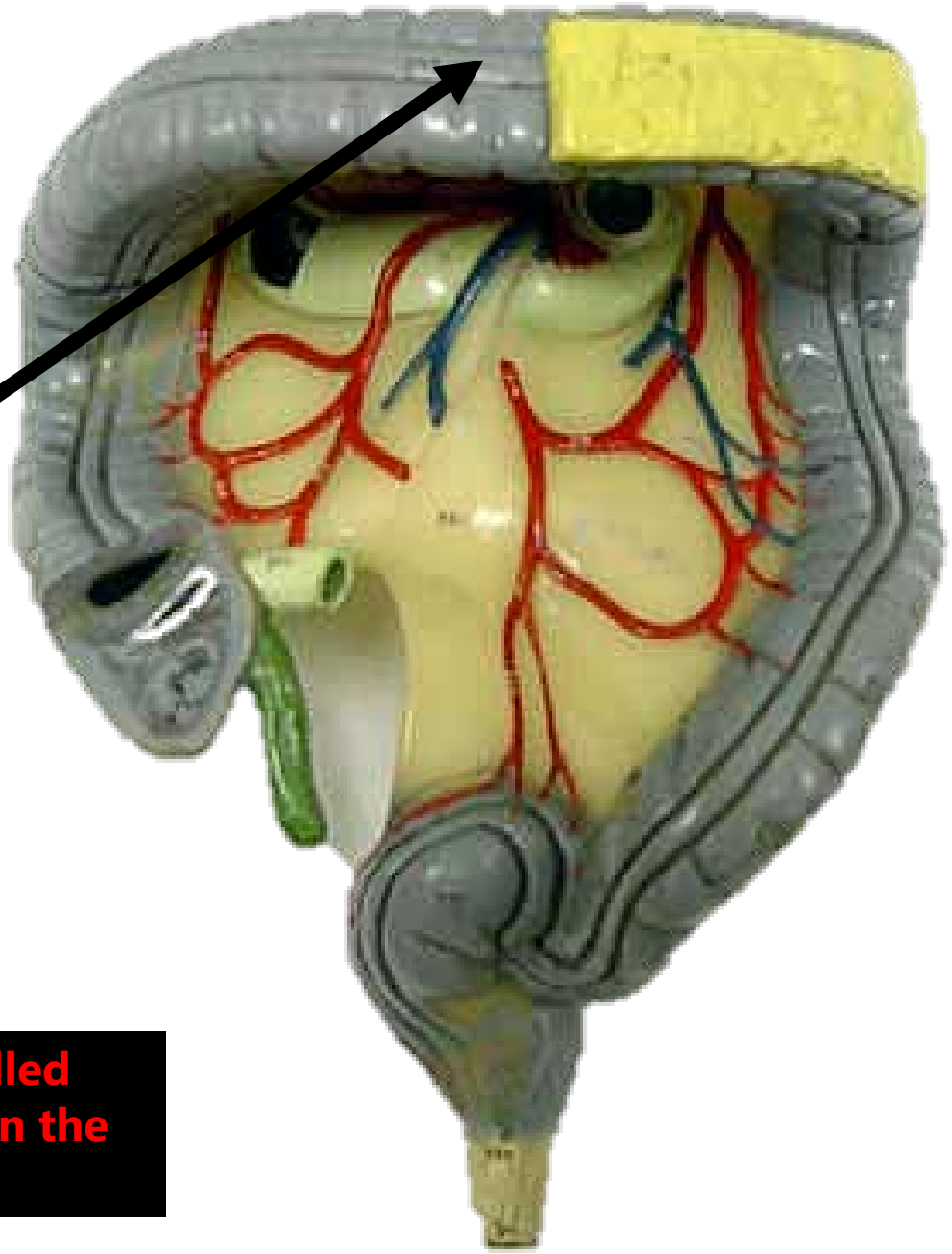


To concentrate and eliminate waste.

Identify the Structure and Function.



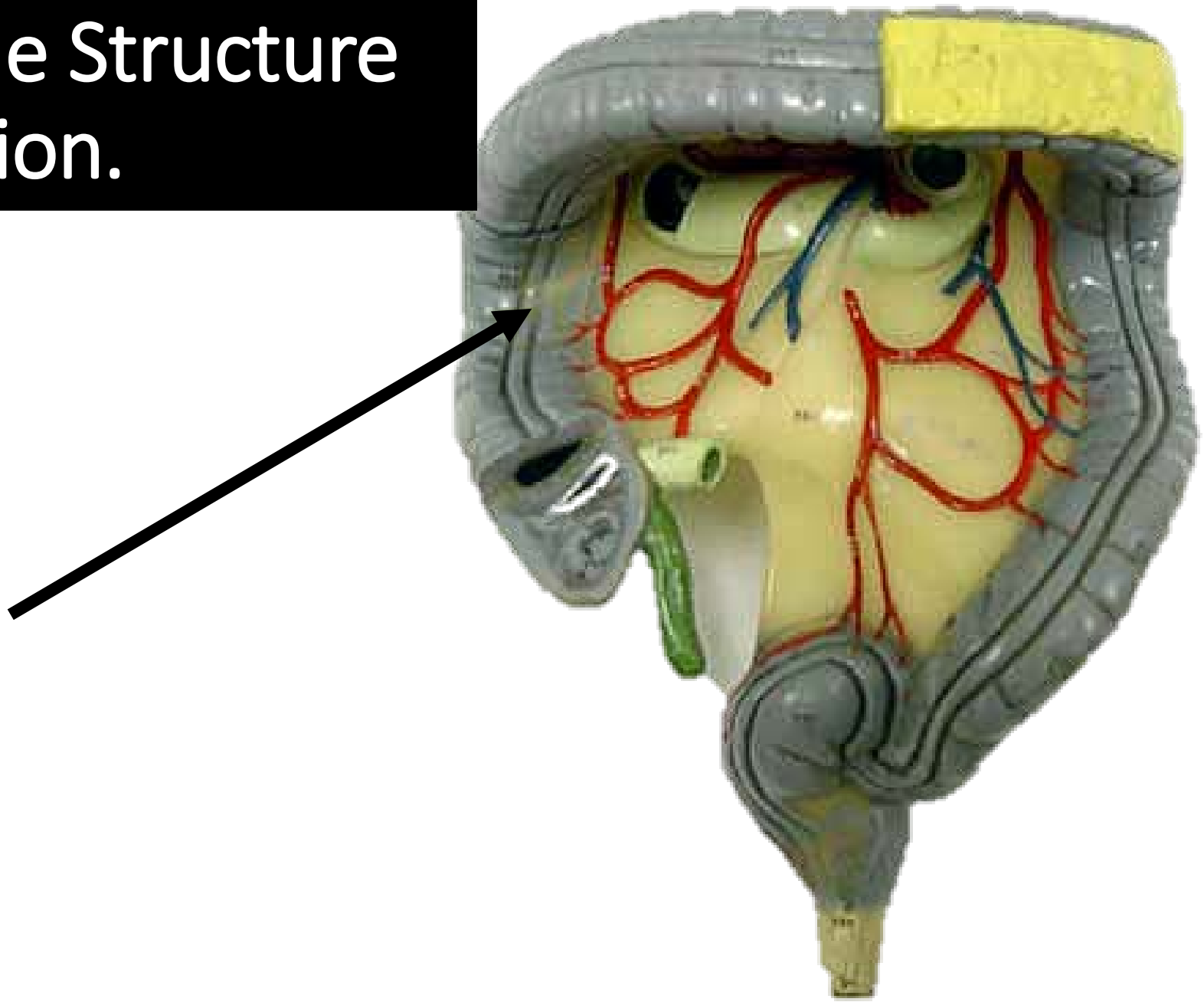
Parts of the Large Intestine



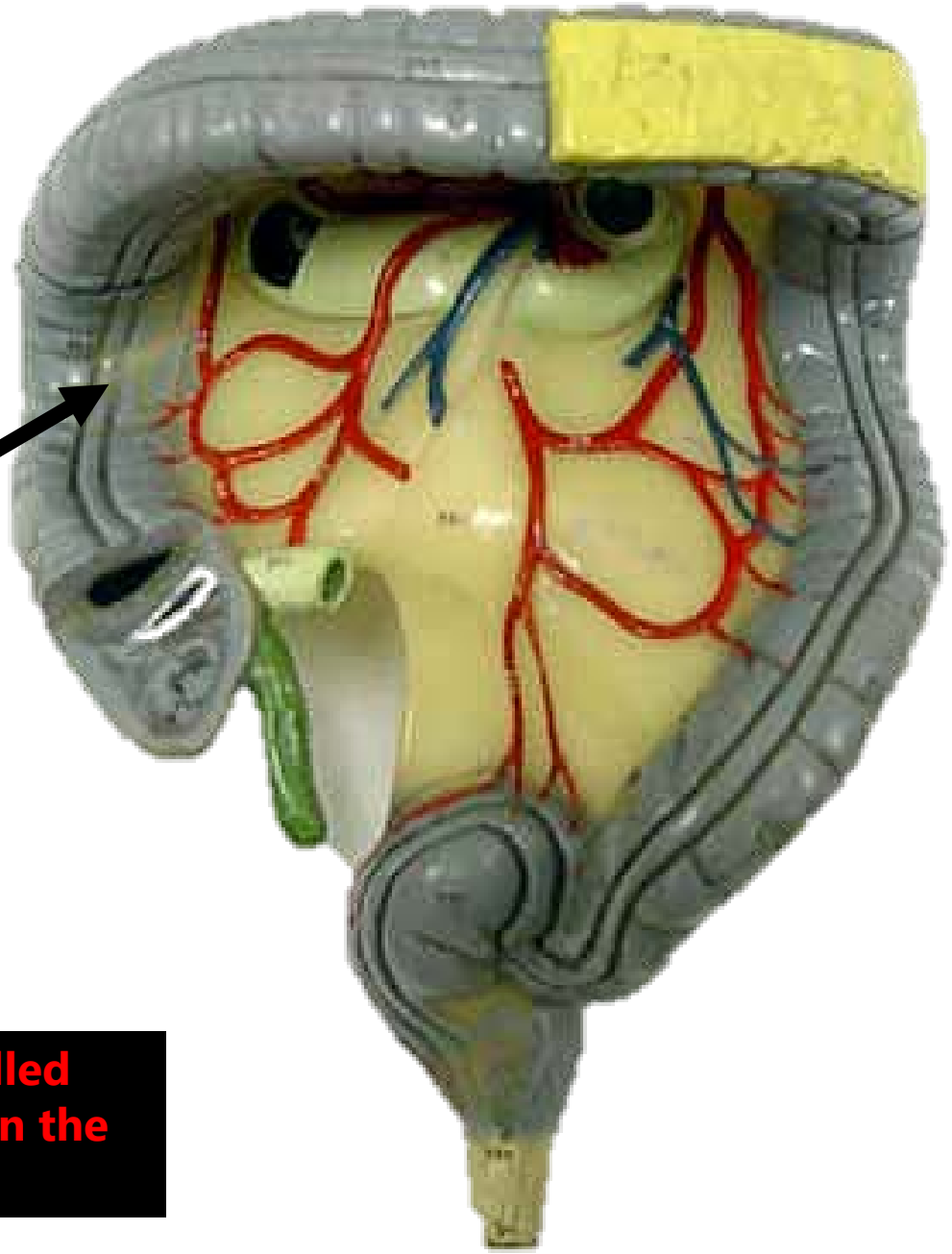
Transverse Colon

The main function of the large intestine (also called the colon) is to concentrate and produce waste in the form of feces.

Identify the Structure and Function.



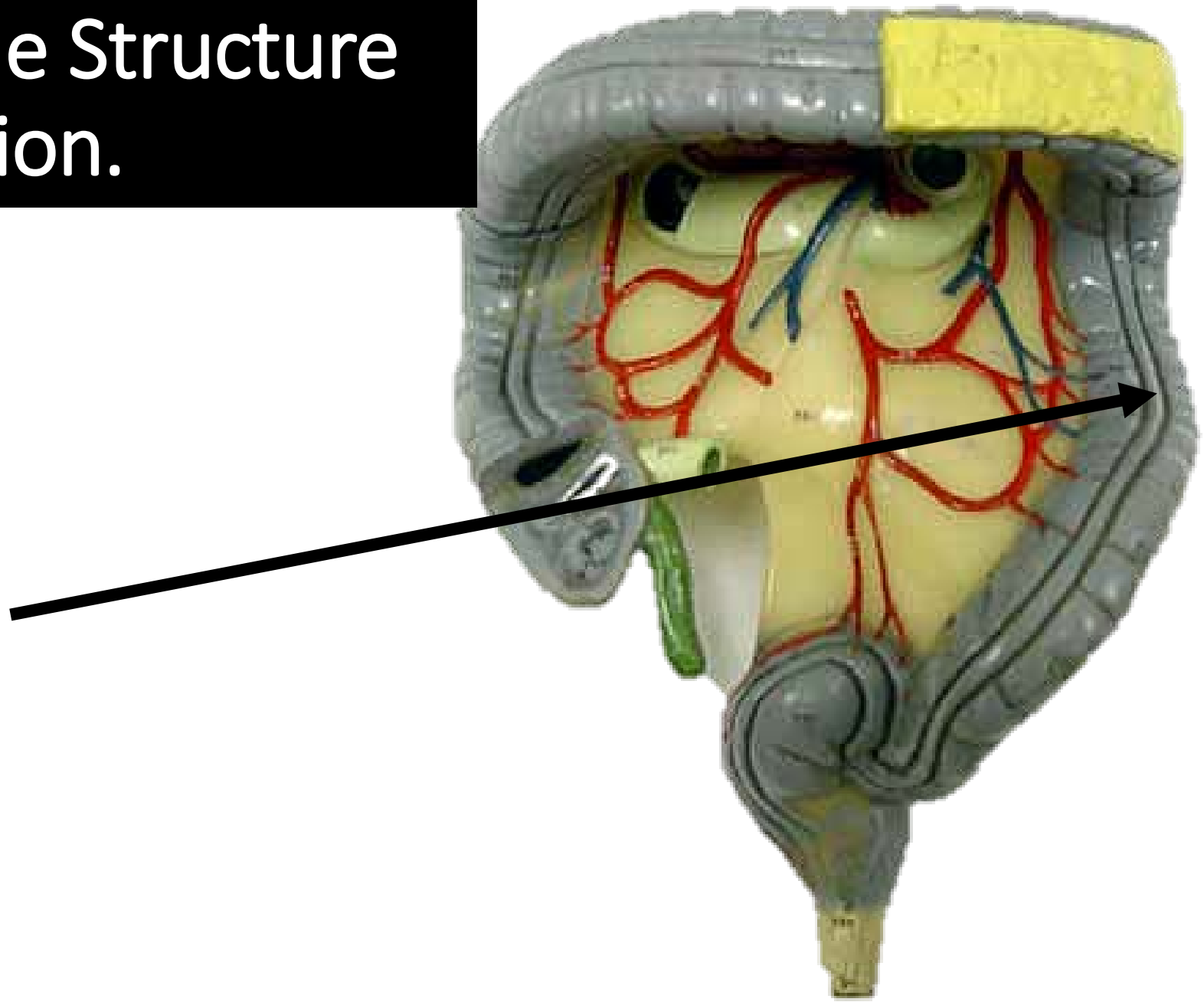
Parts of the Large Intestine



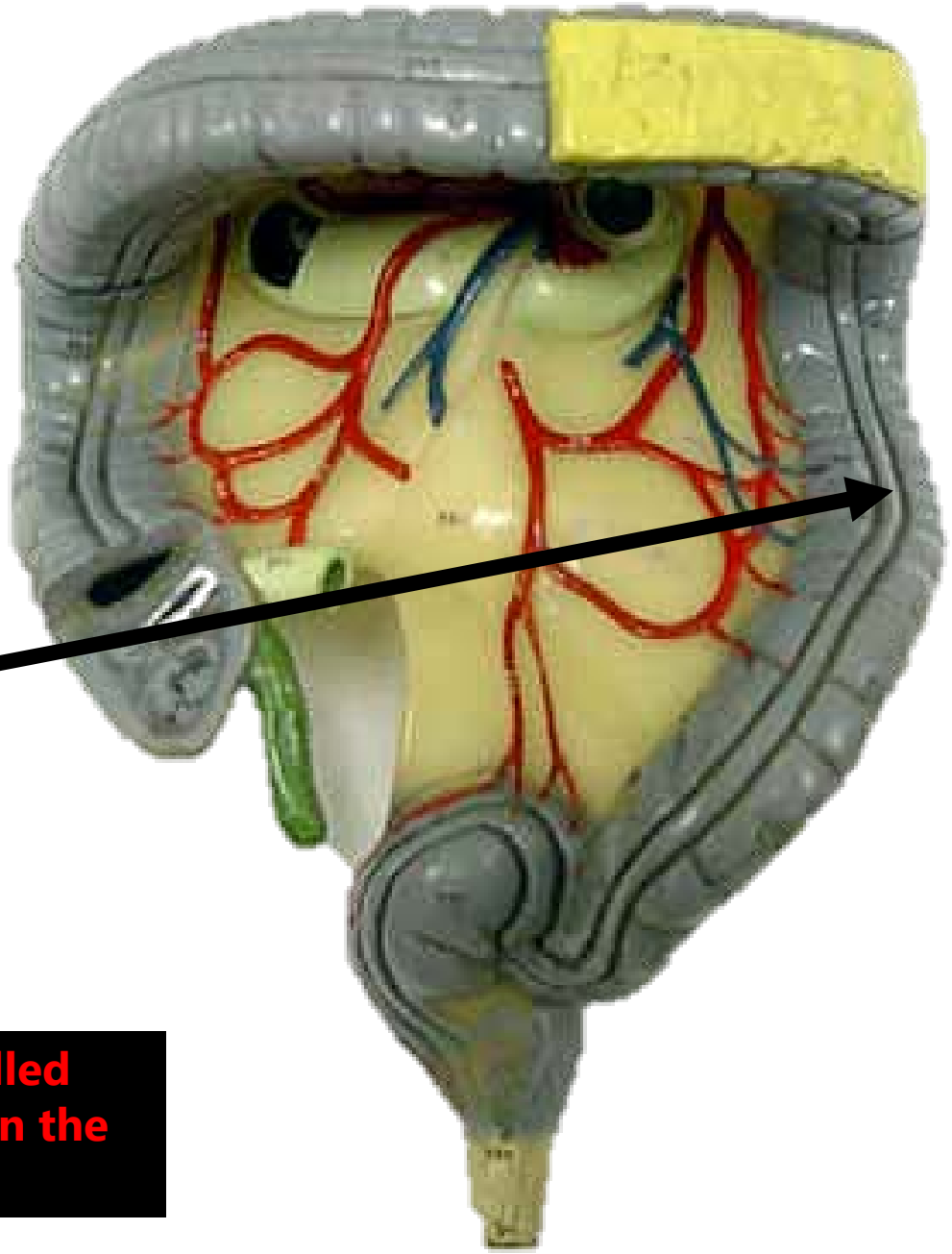
Ascending Colon

The main function of the large intestine (also called the colon) is to concentrate and produce waste in the form of feces.

Identify the Structure and Function.



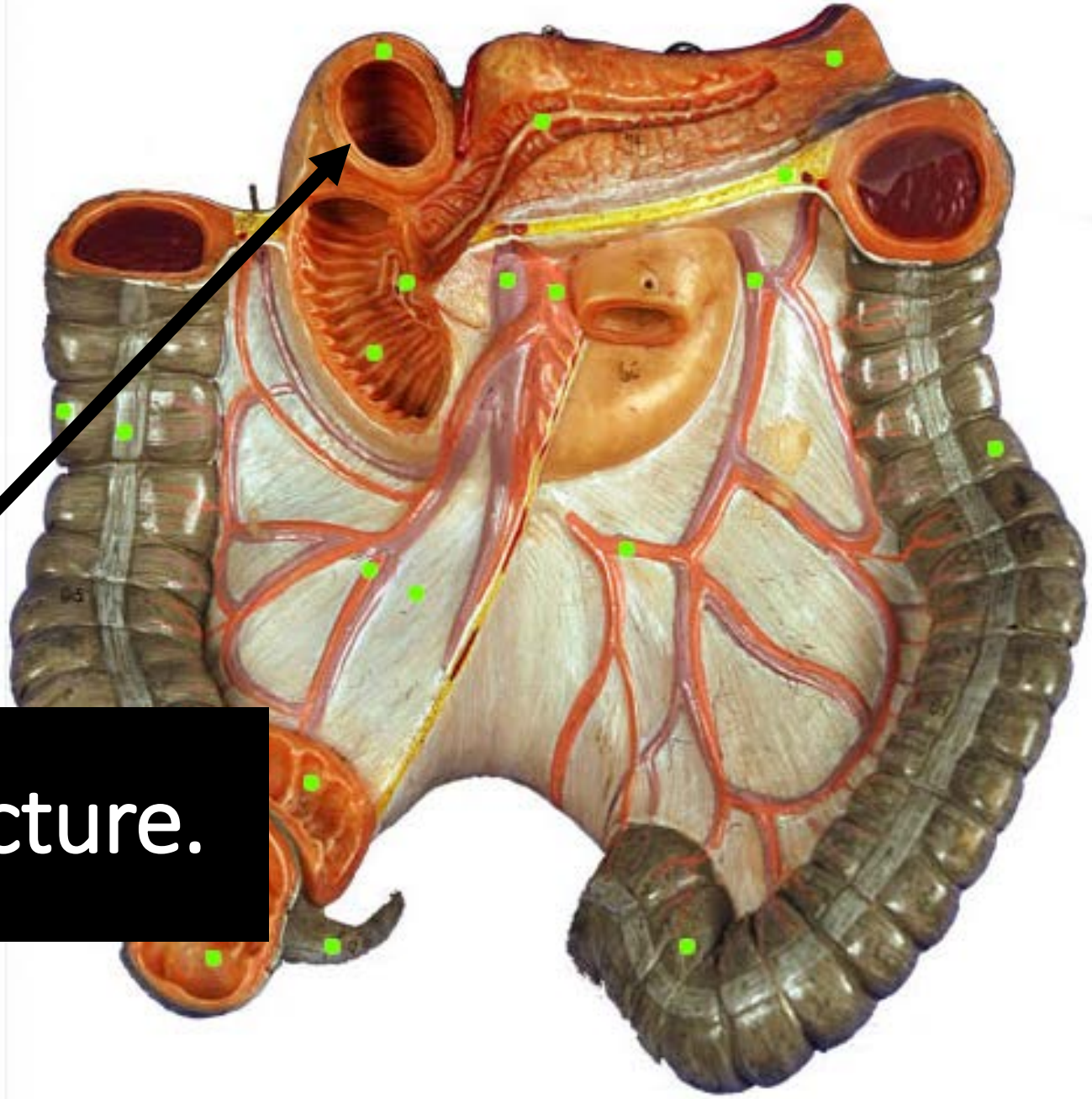
Parts of the Large Intestine



Descending Colon

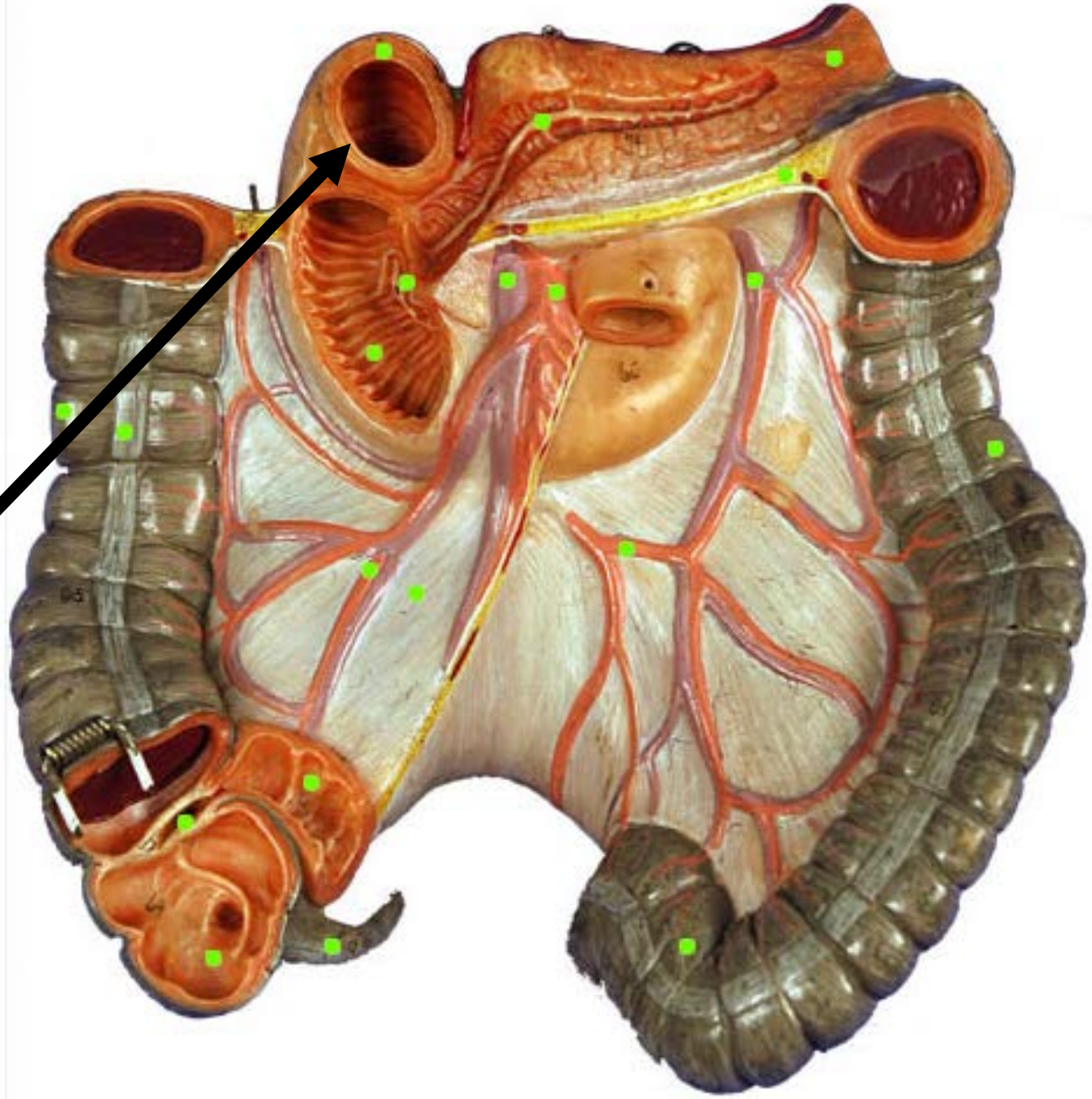
The main function of the large intestine (also called the colon) is to concentrate and produce waste in the form of feces.

**Transverse Colon Removed*



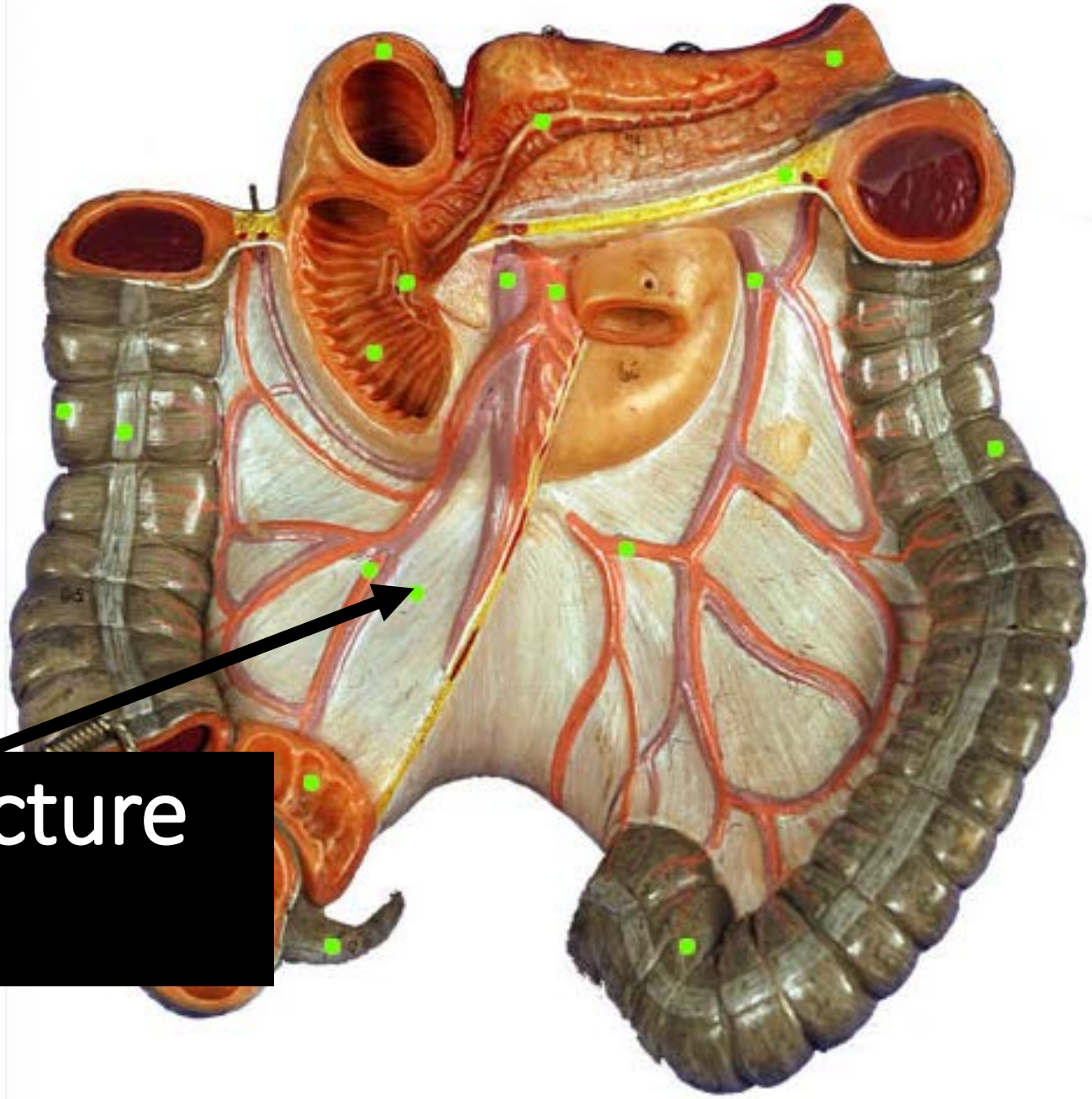
Identify the Structure.

**Transverse Colon Removed*



Pyloric Sphincter

**Transverse Colon Removed*

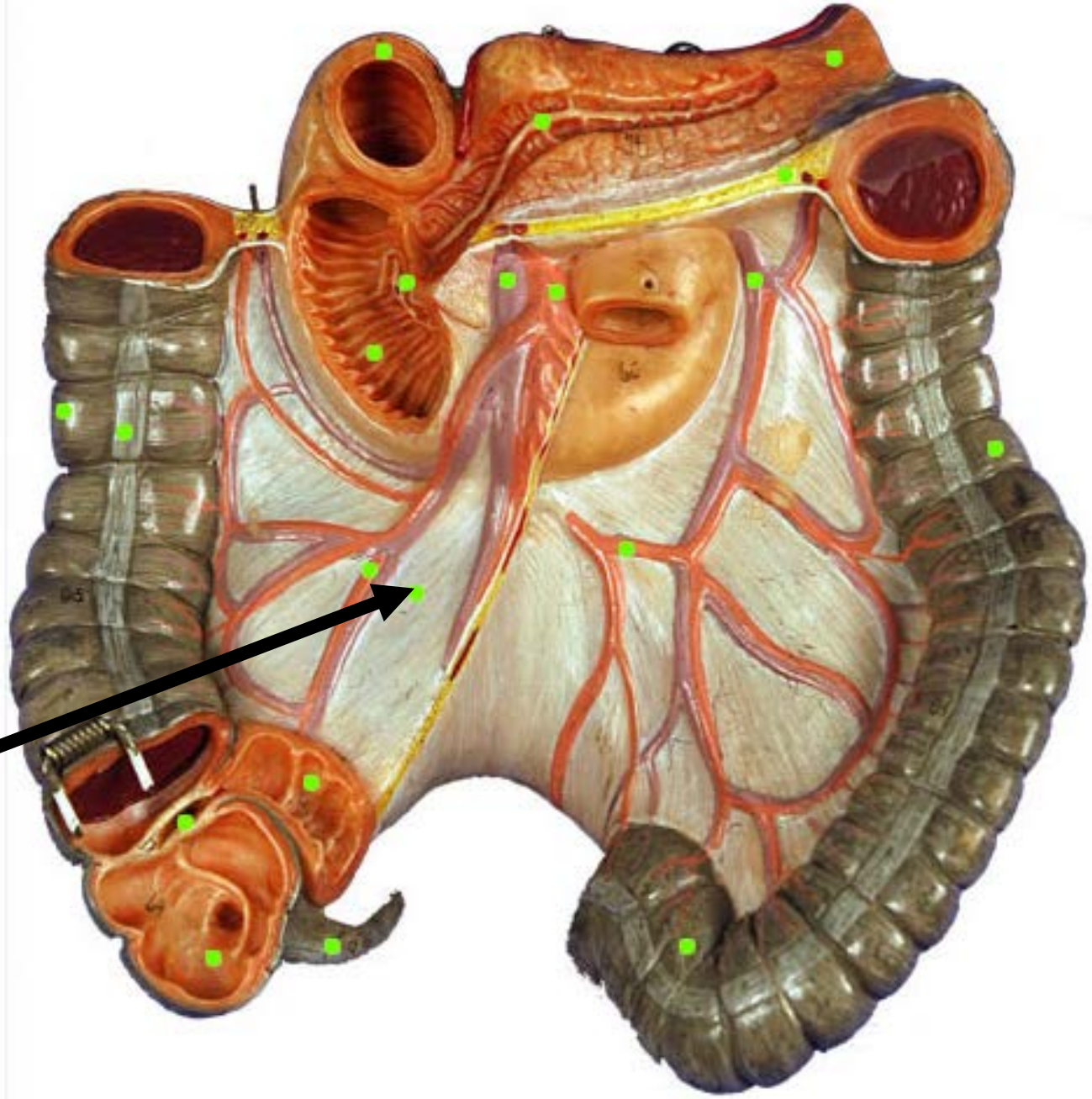


Identify the Structure and function.

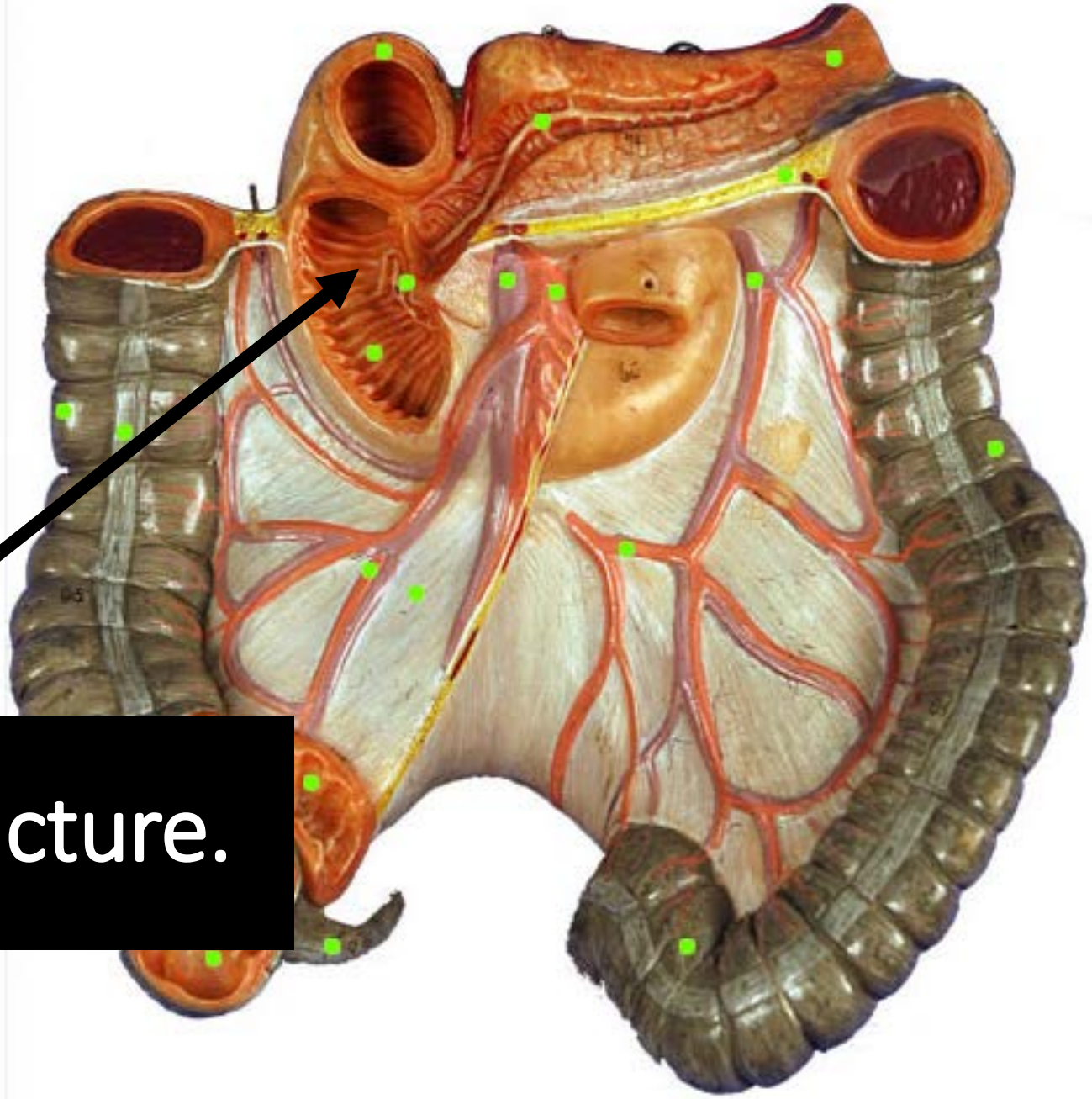
**Transverse Colon Removed*

The mesentery functions to connect the visceral organs to the abdominal wall.

Mesentery

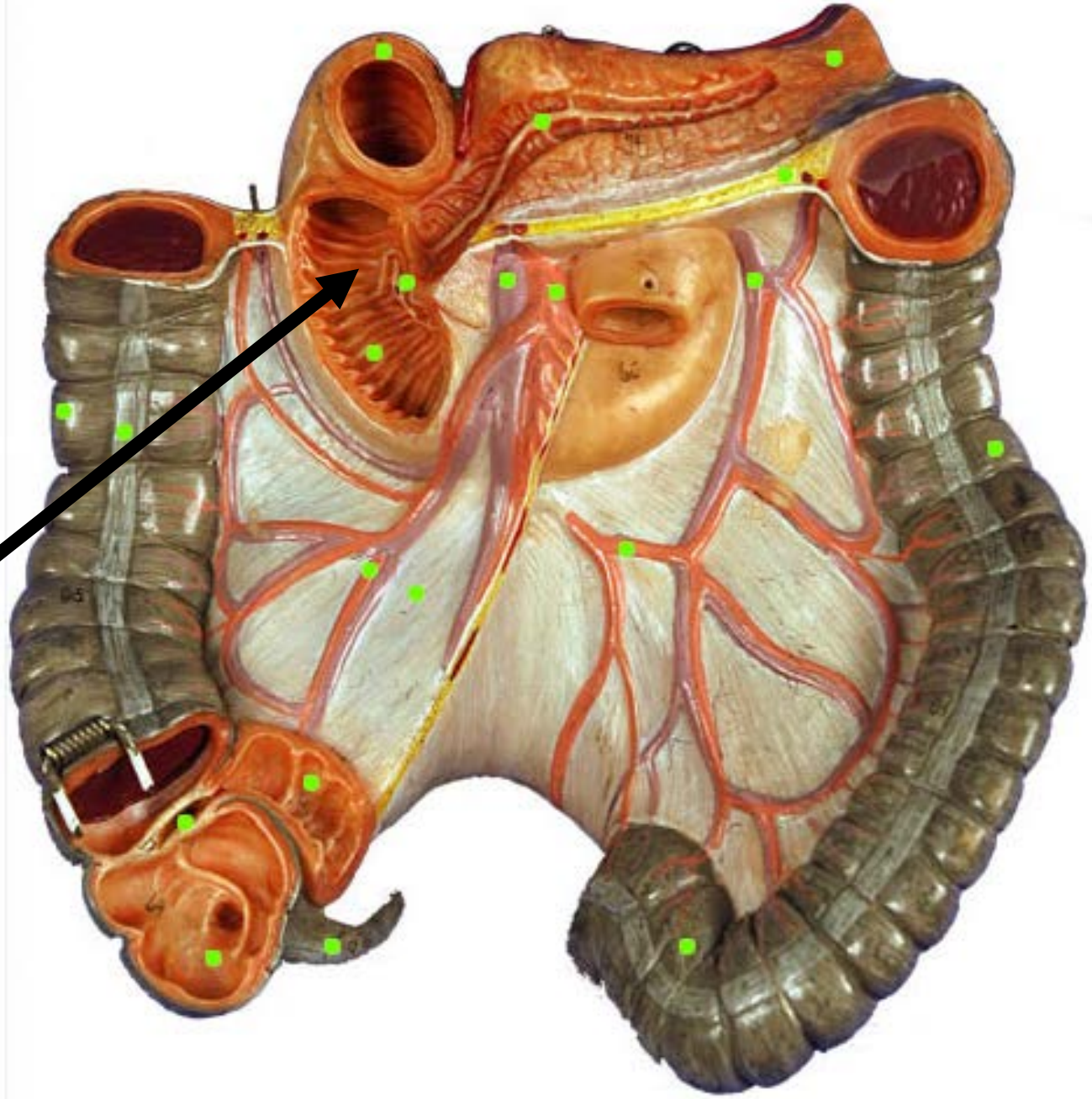


**Transverse Colon Removed*

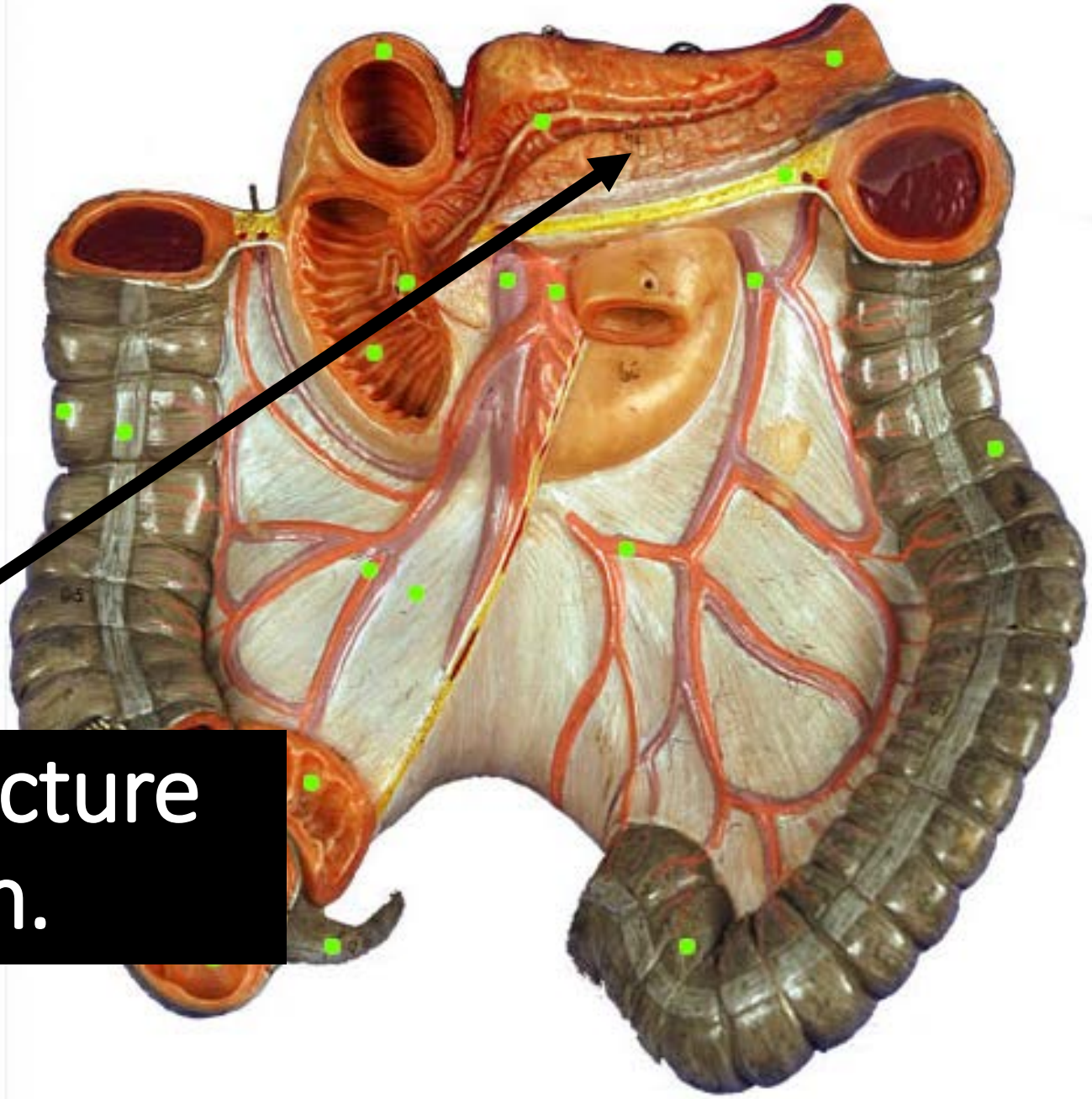


Identify the Structure.

**Transverse Colon Removed*



Duodenum

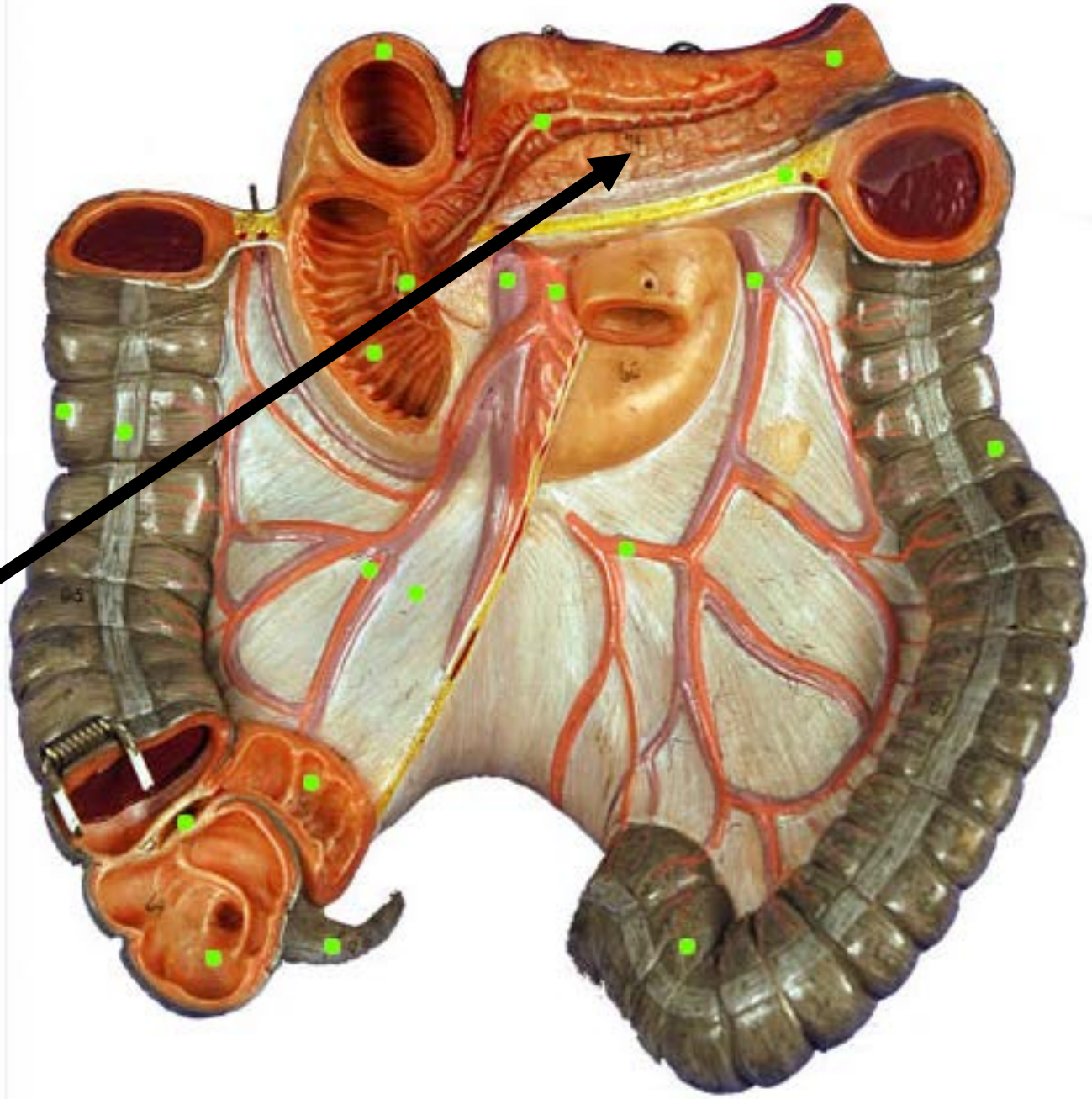


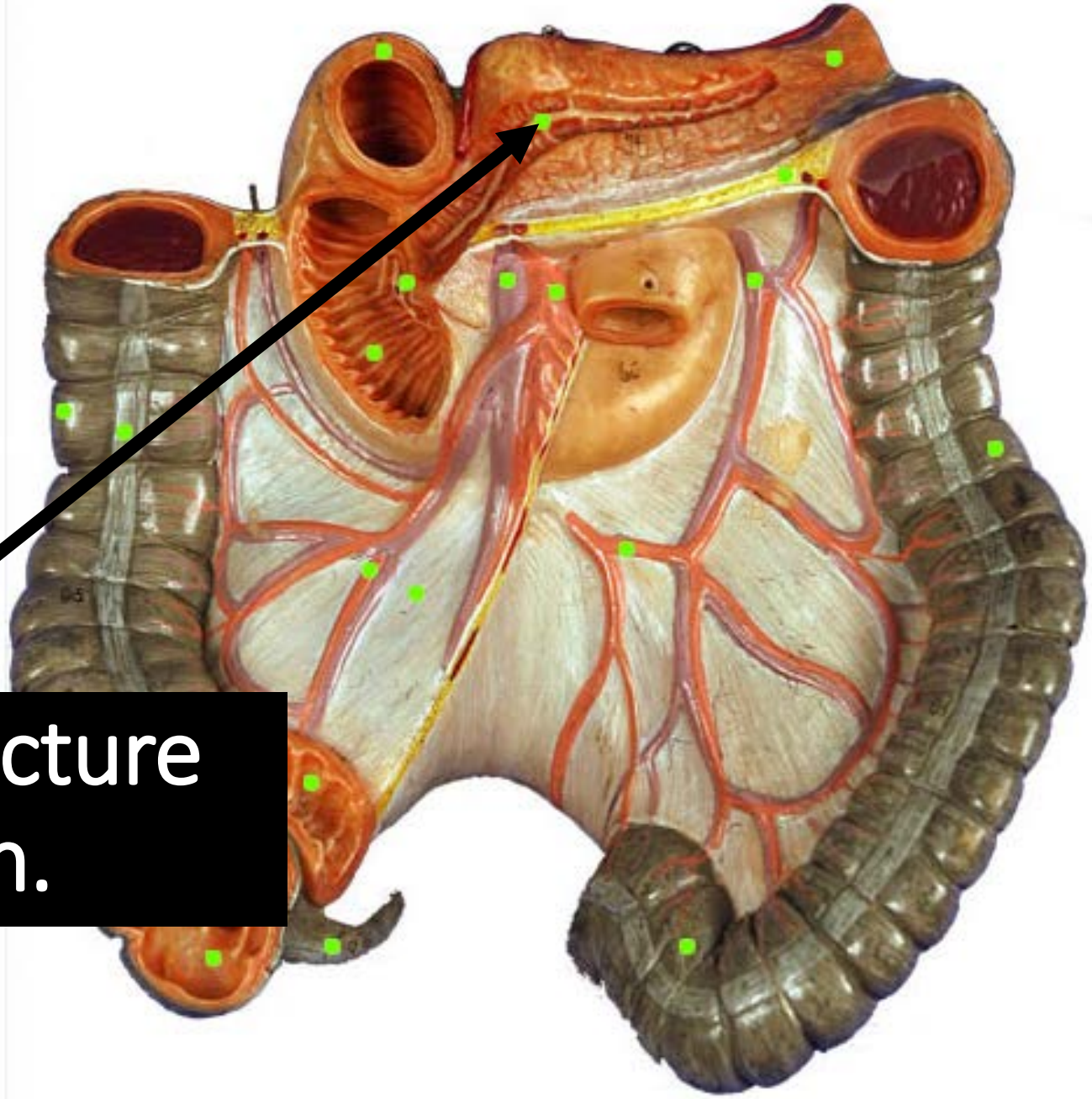
Identify the Structure and the Function.

The PANCREAS functions **produce digestive enzymes** that are secreted into the small intestine to further break down food after it has left the stomach.

FYI: The pancreas is also an endocrine gland because it produces the hormone insulin and secretes it into the bloodstream in order to regulate the body's glucose or sugar level

Pancreas



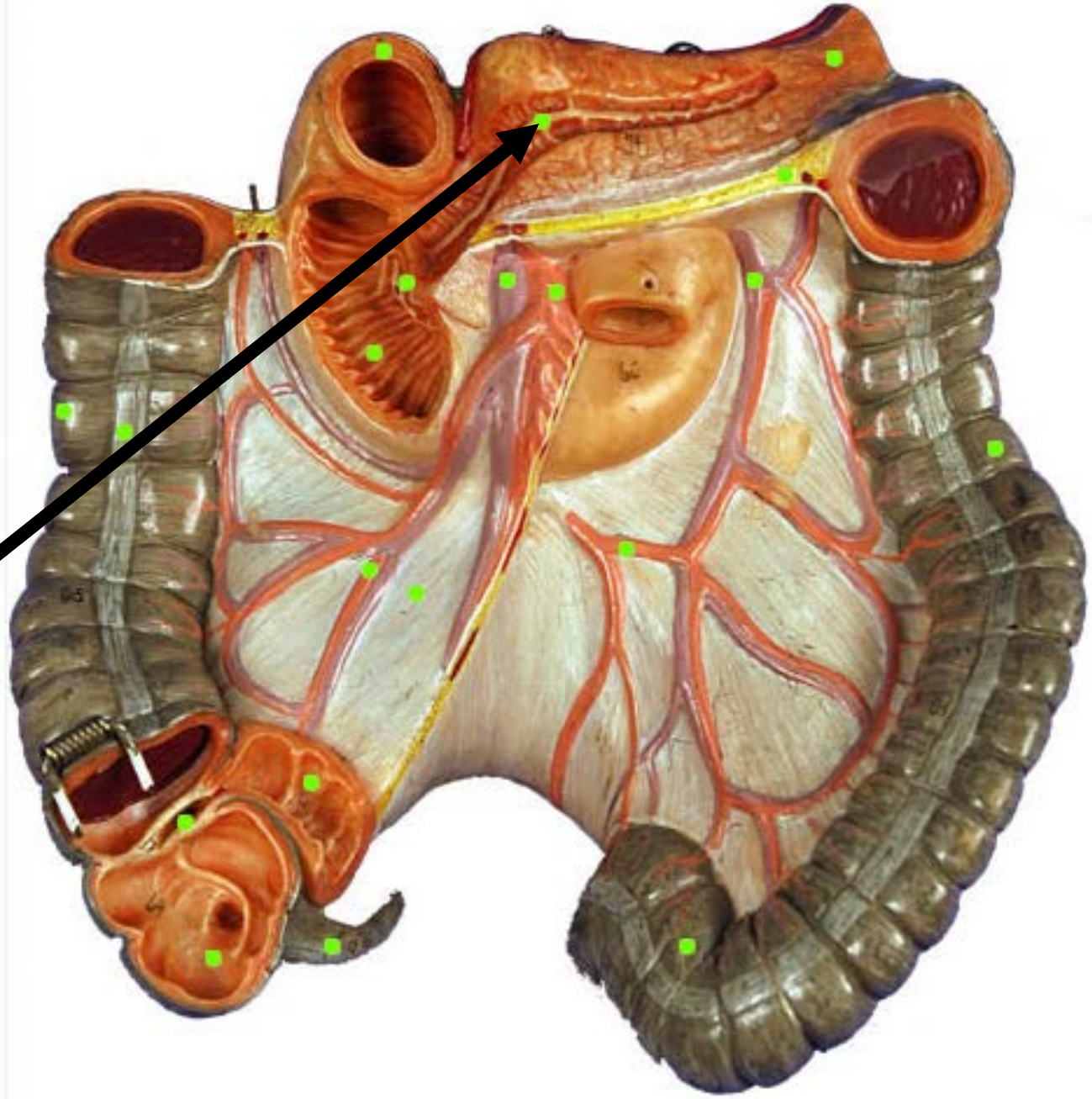


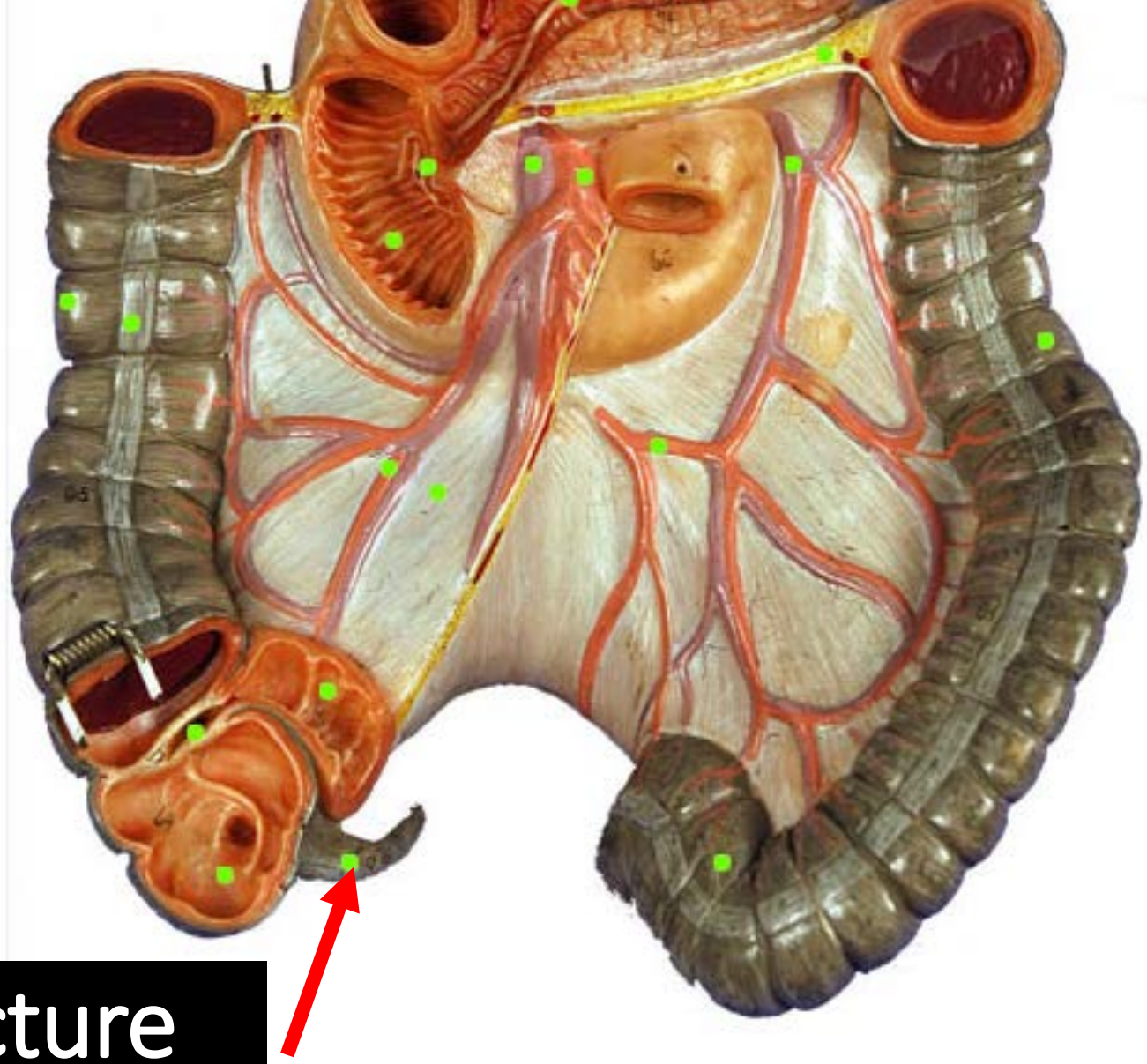
Identify the Structure and the Function.

The PANCREATIC DUCT functions to **deliver the digestive enzymes** from the pancreas (where they are produced) to the duodenum of the small intestine. *These enzyme act to further break down food after it has left the stomach.*

FYI: The pancreas is also an endocrine gland because it produces the hormone insulin that is secreted into the bloodstream to regulate glucose levels in the body.

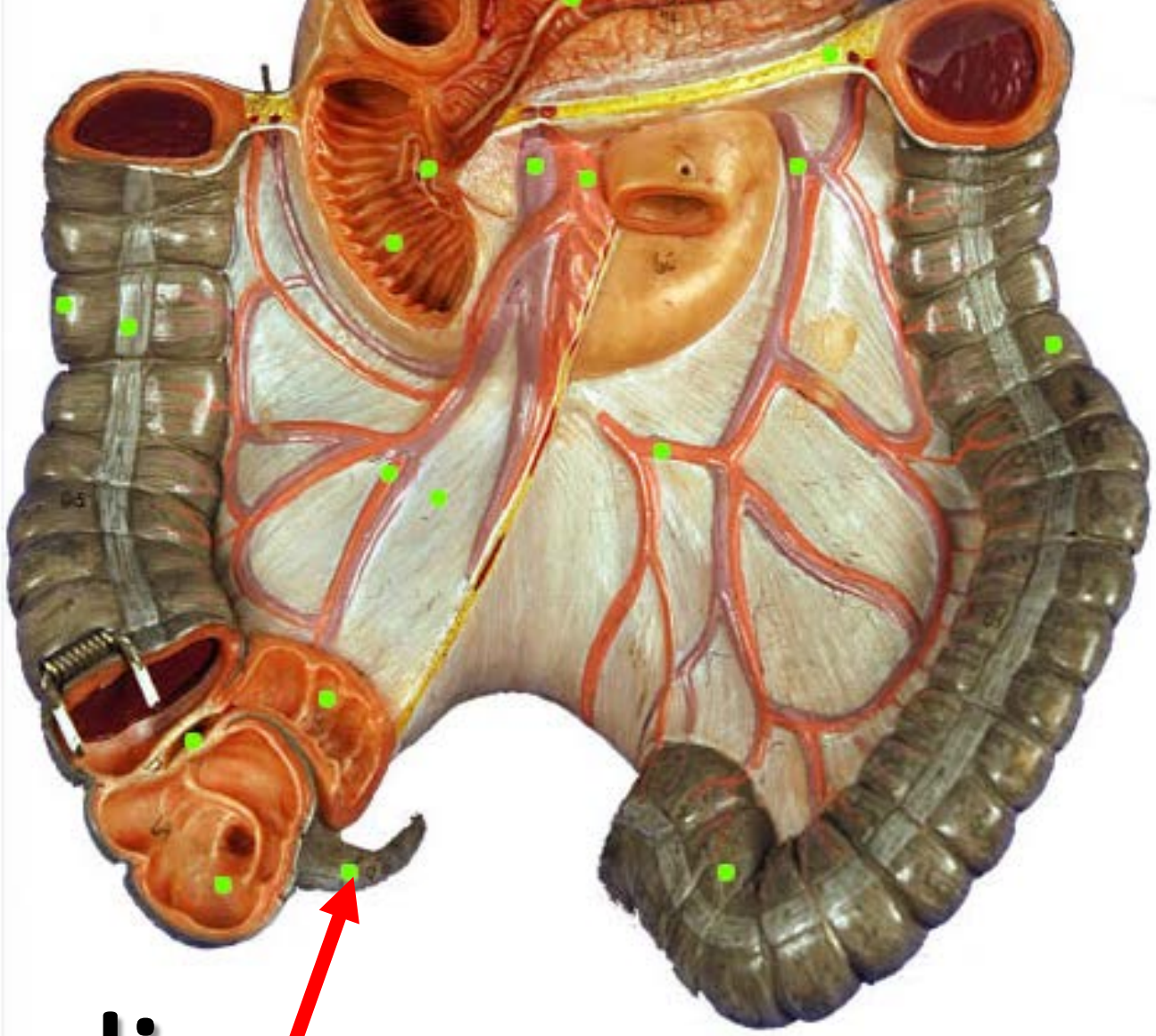
Pancreatic Duct



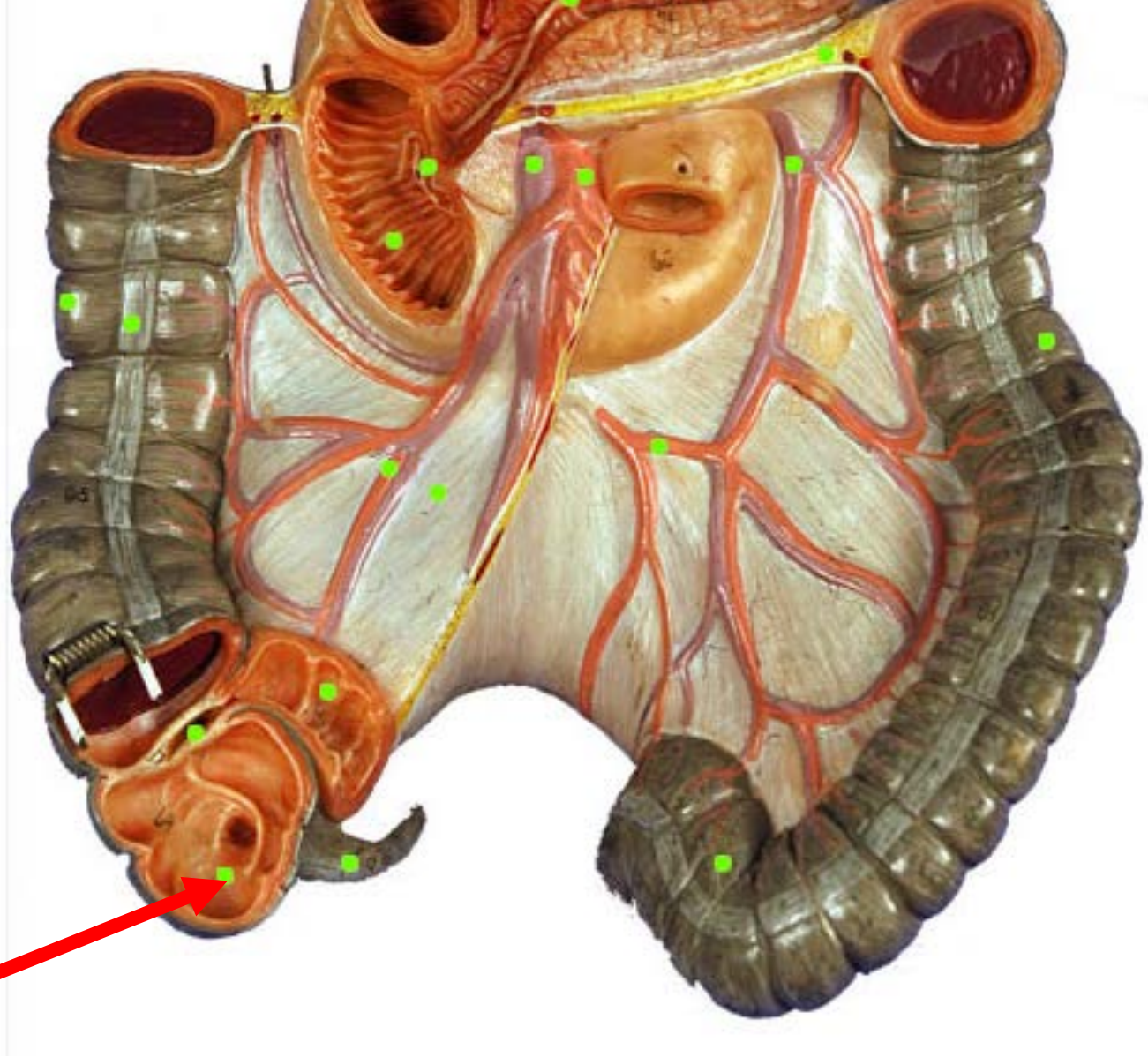


Identify the Structure and Function.

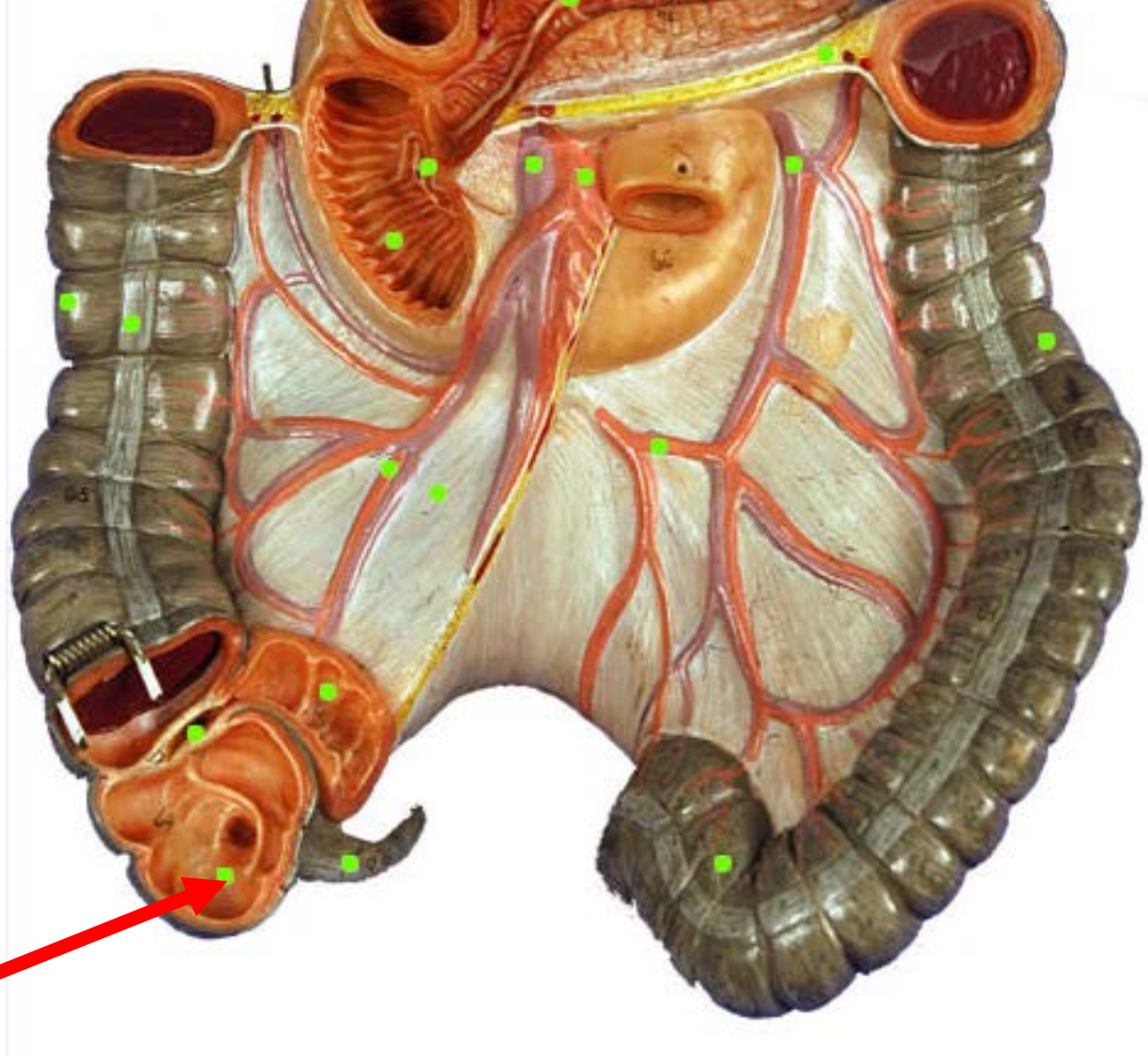
Has immune function to house and release lymphocytes.



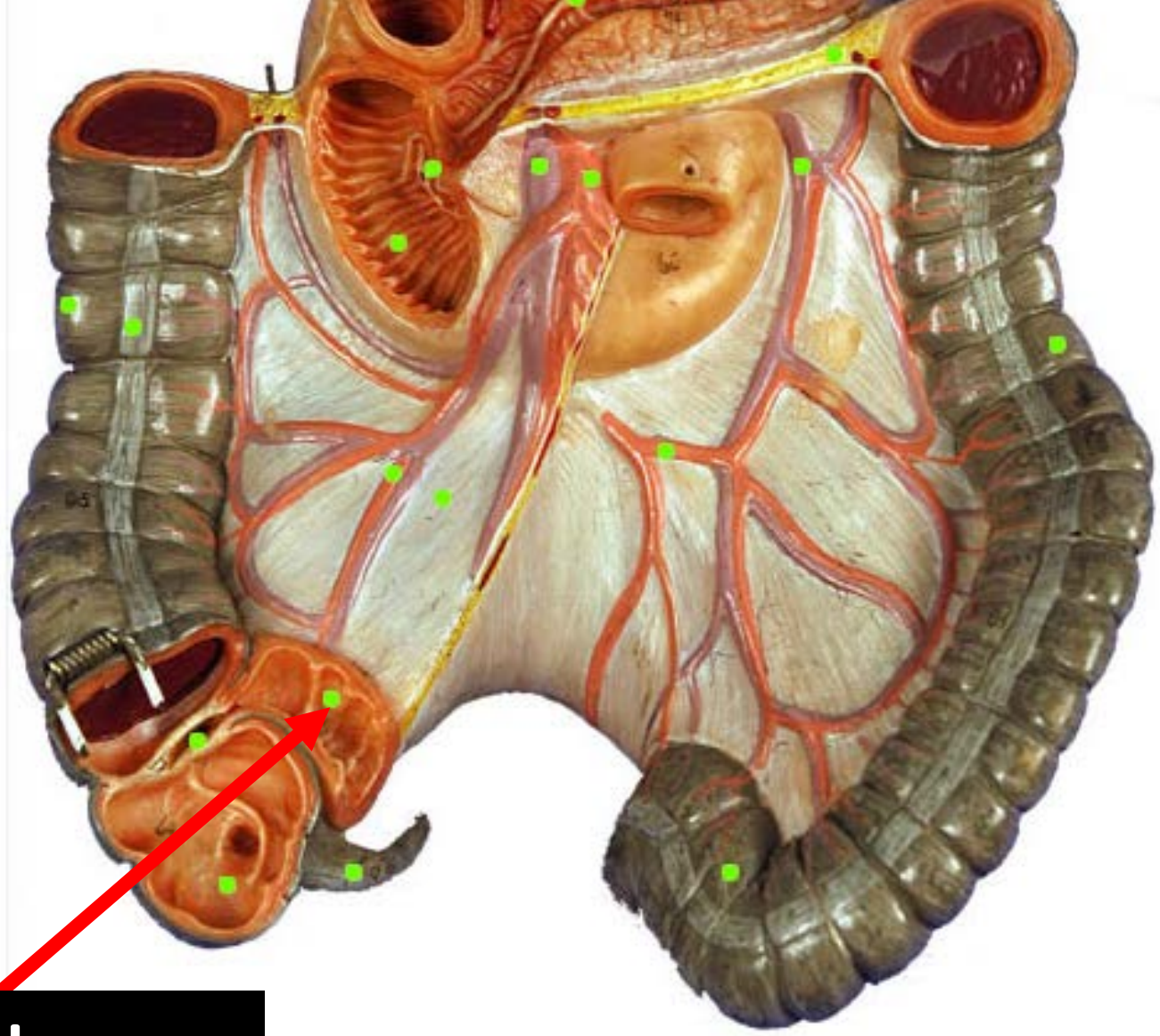
Appendix



Identify the Structure.

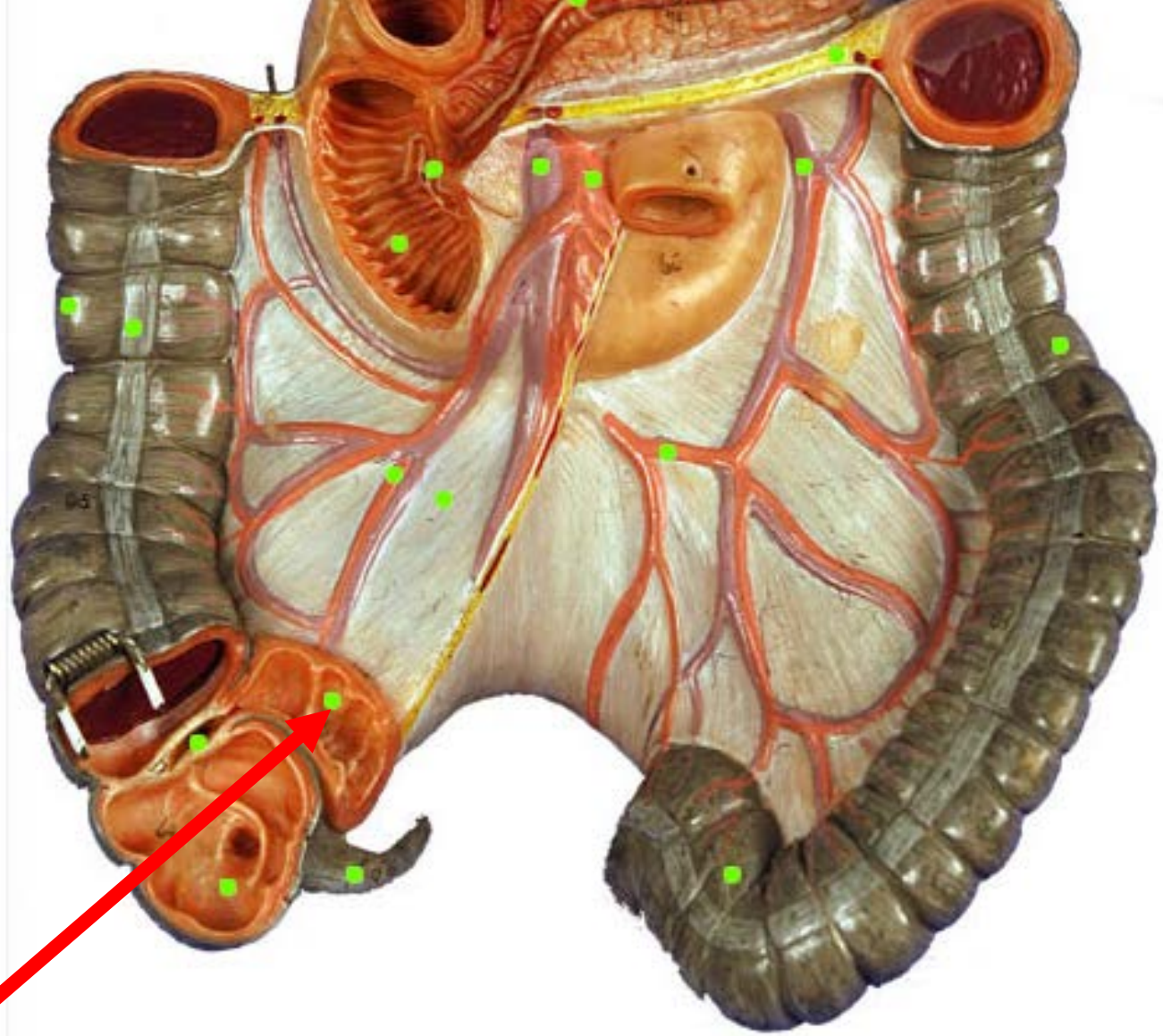


Cecum

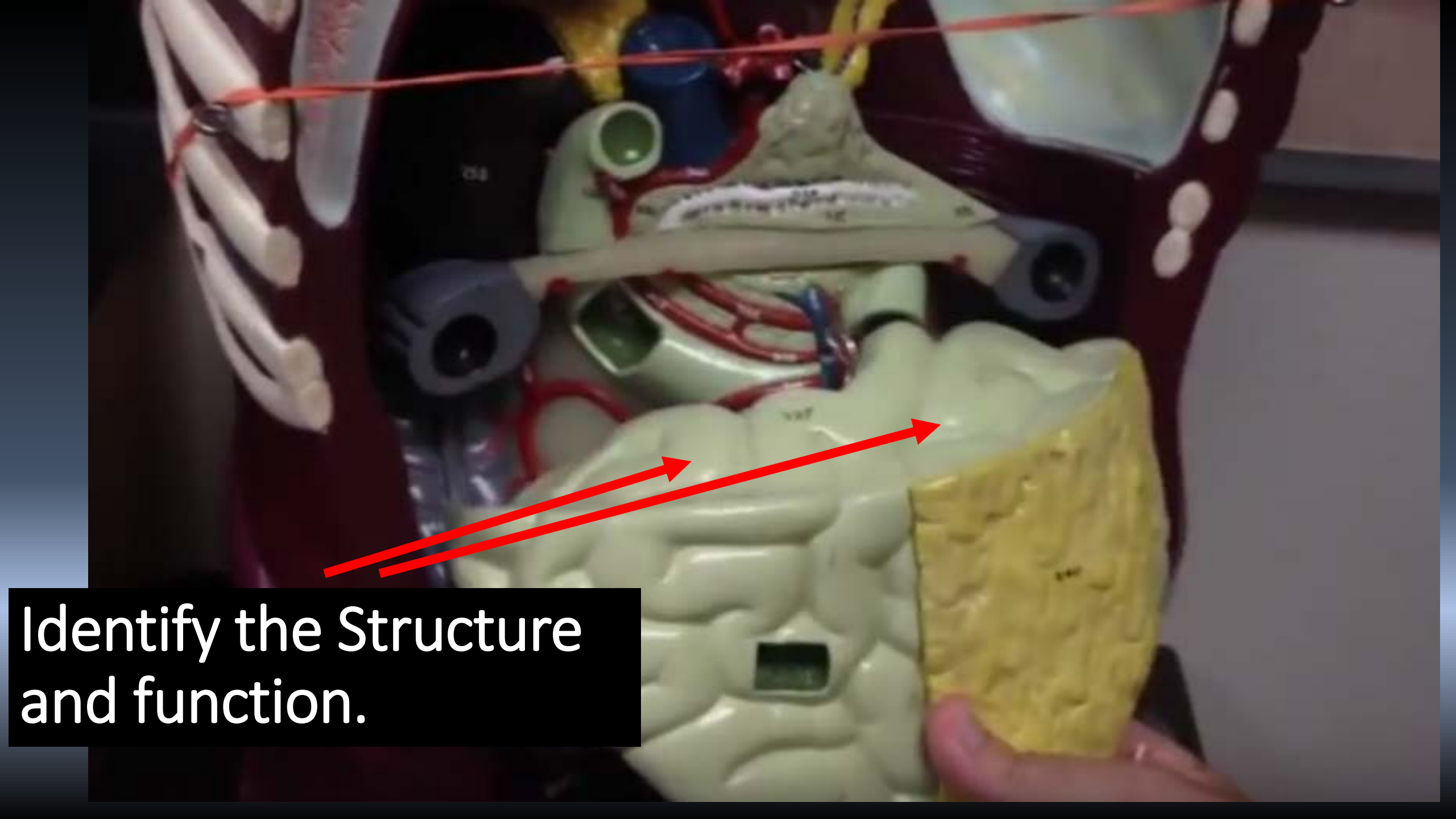


Identify the Structure and function.

The ileocecal valve functions to prevent substances flowing back into the ileum once they have reached the cecum.

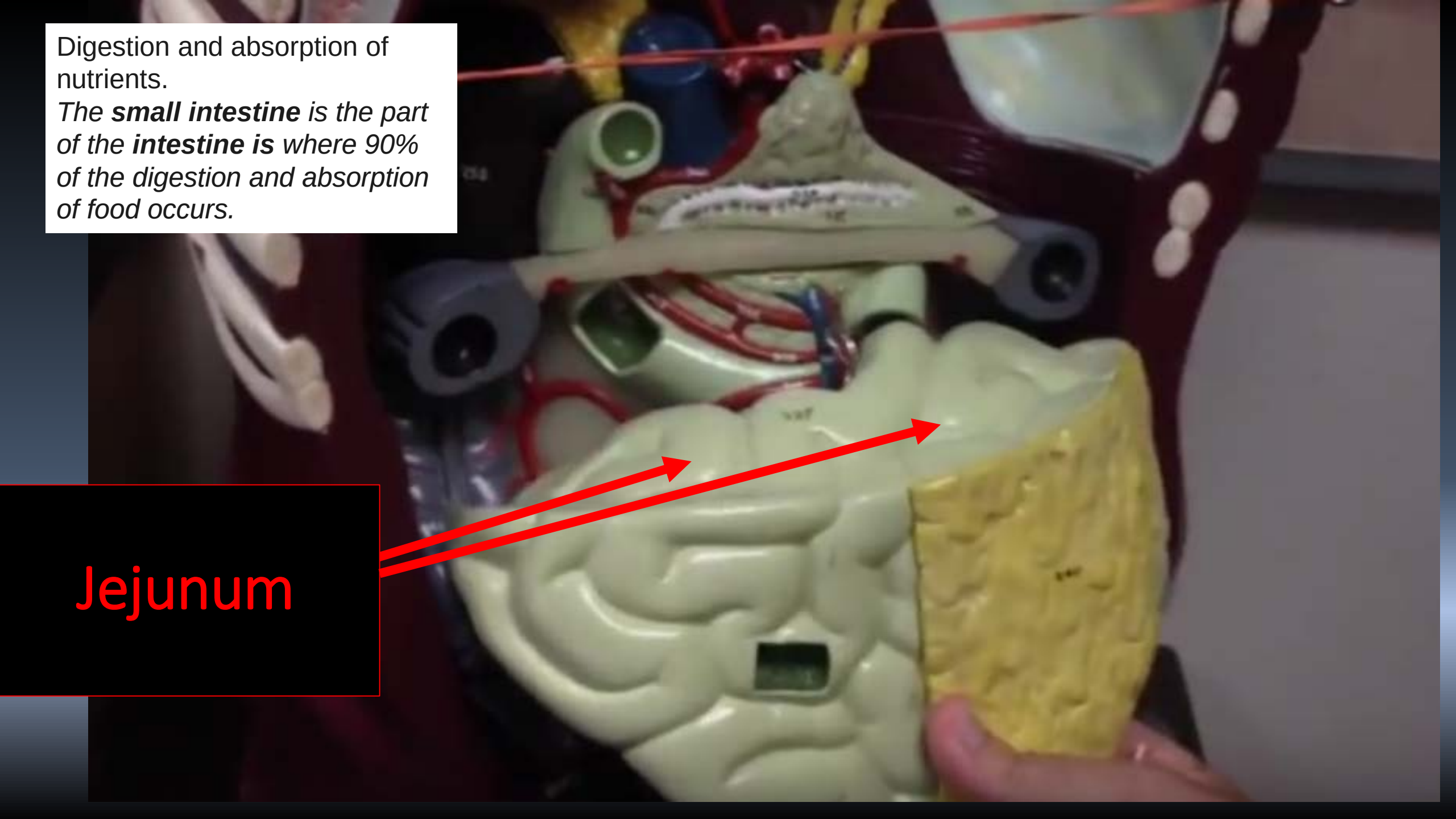


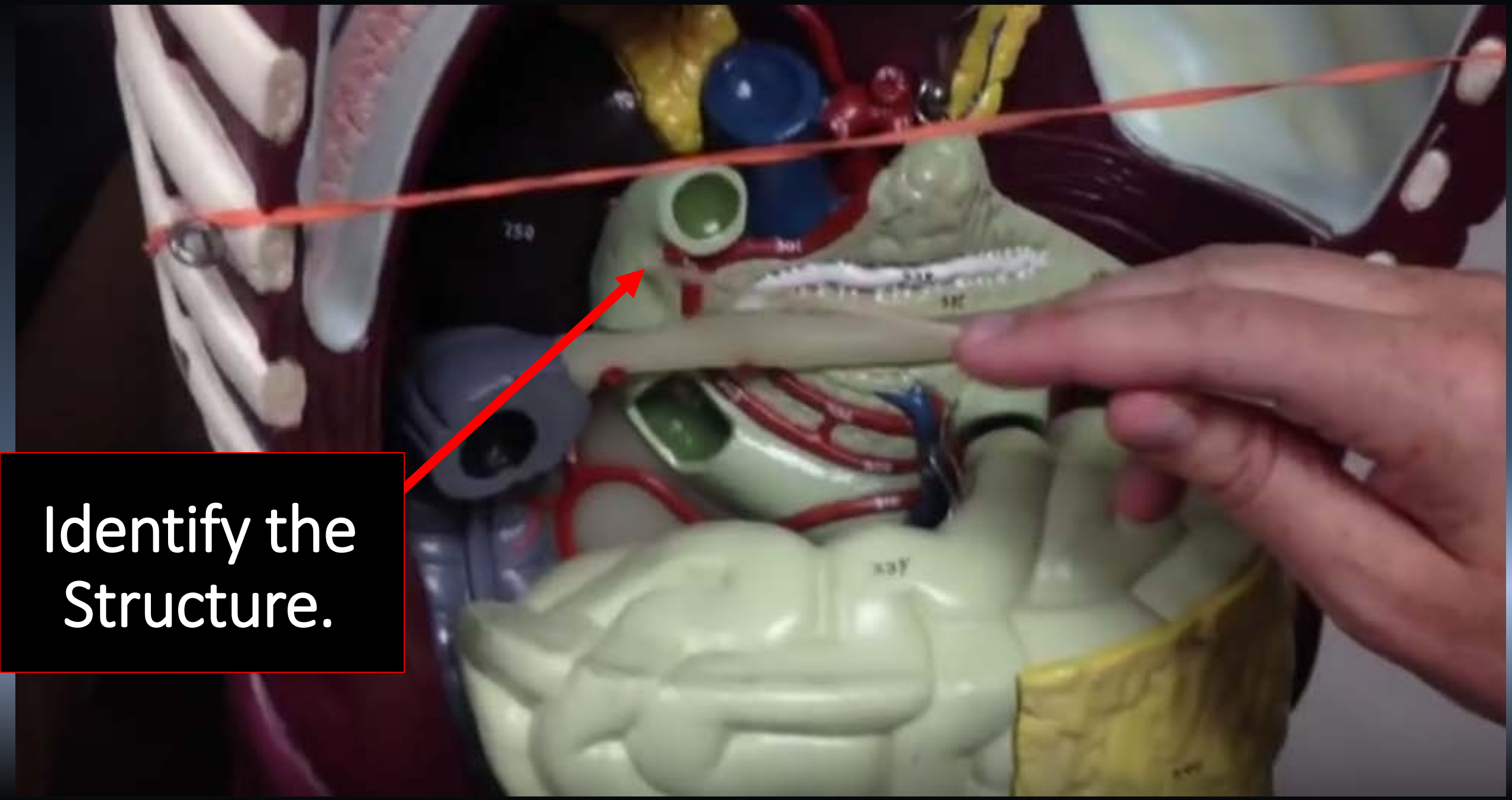
Ileocecal Valve


Identify the Structure
and function.

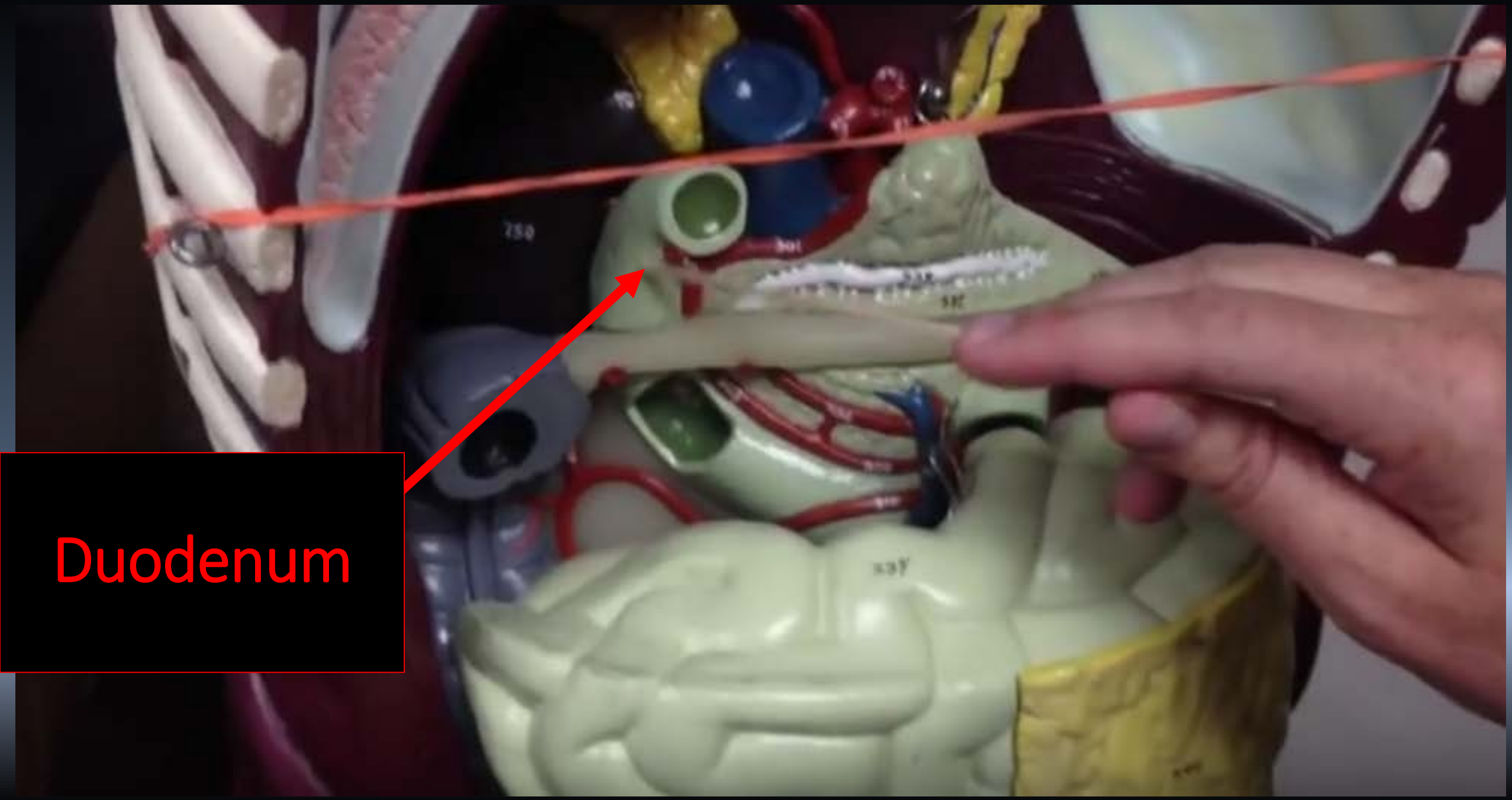
Digestion and absorption of nutrients.

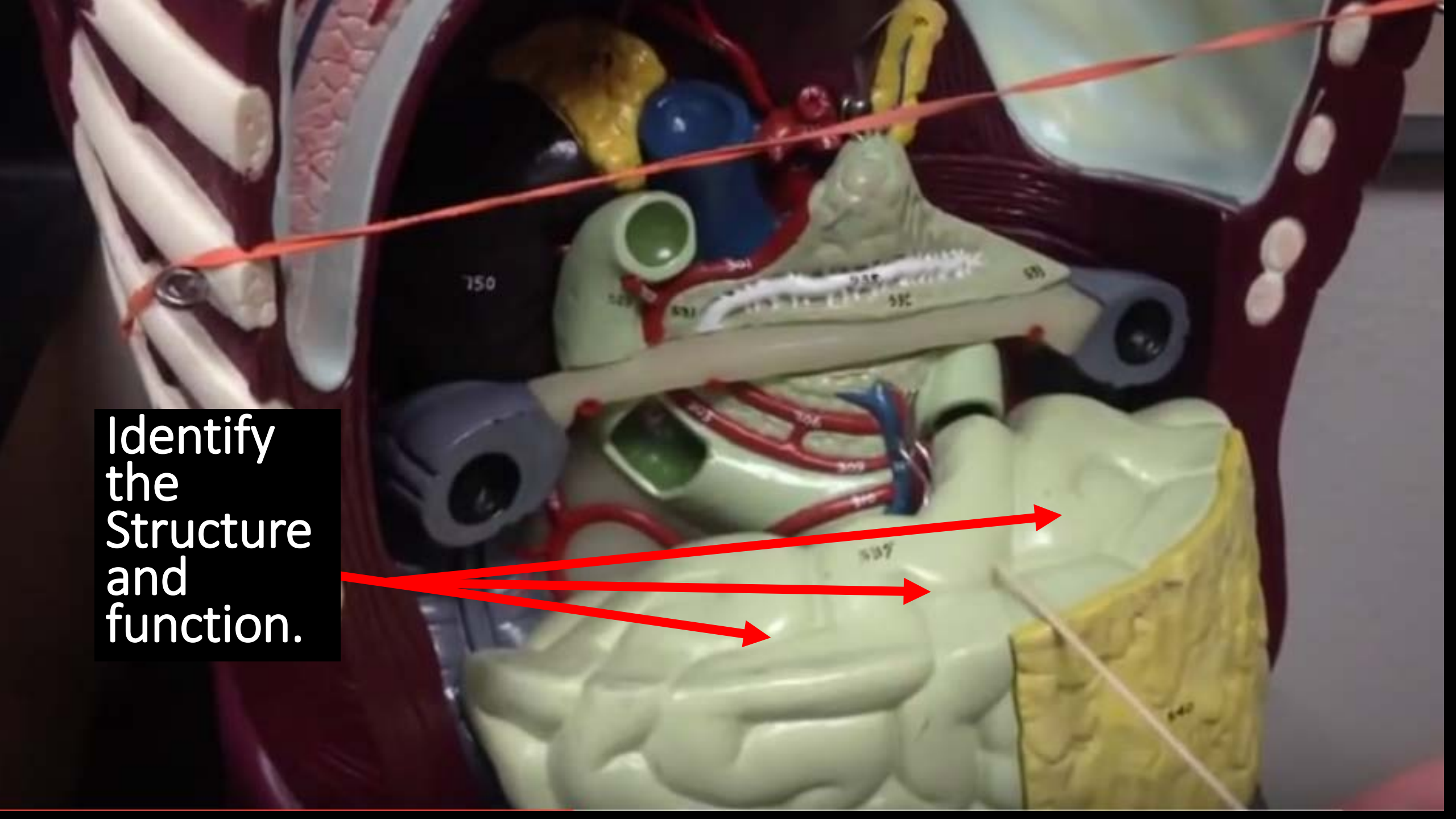
*The **small intestine** is the part of the **intestine is** where 90% of the digestion and absorption of food occurs.*





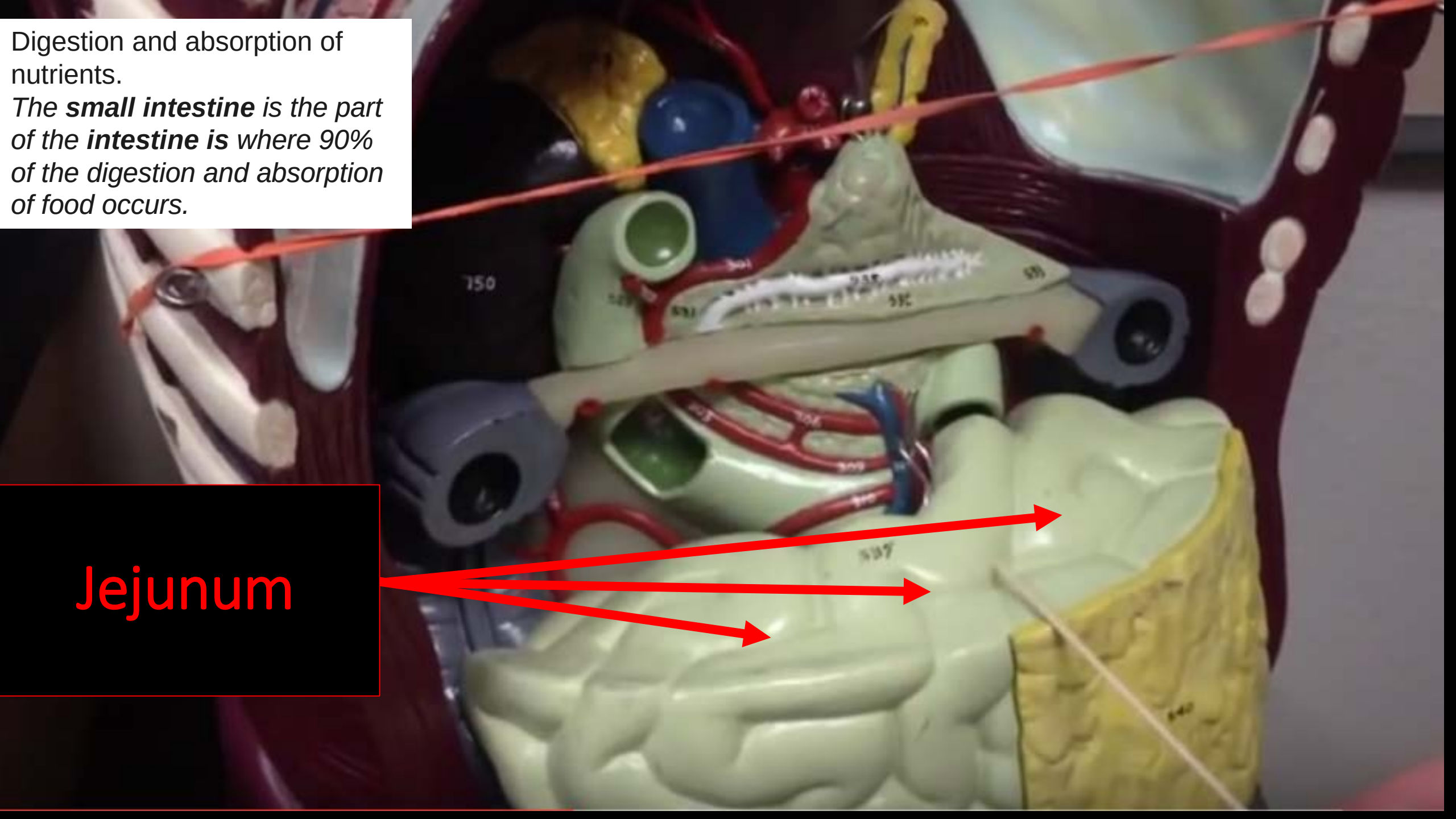
Identify the Structure.


Duodenum

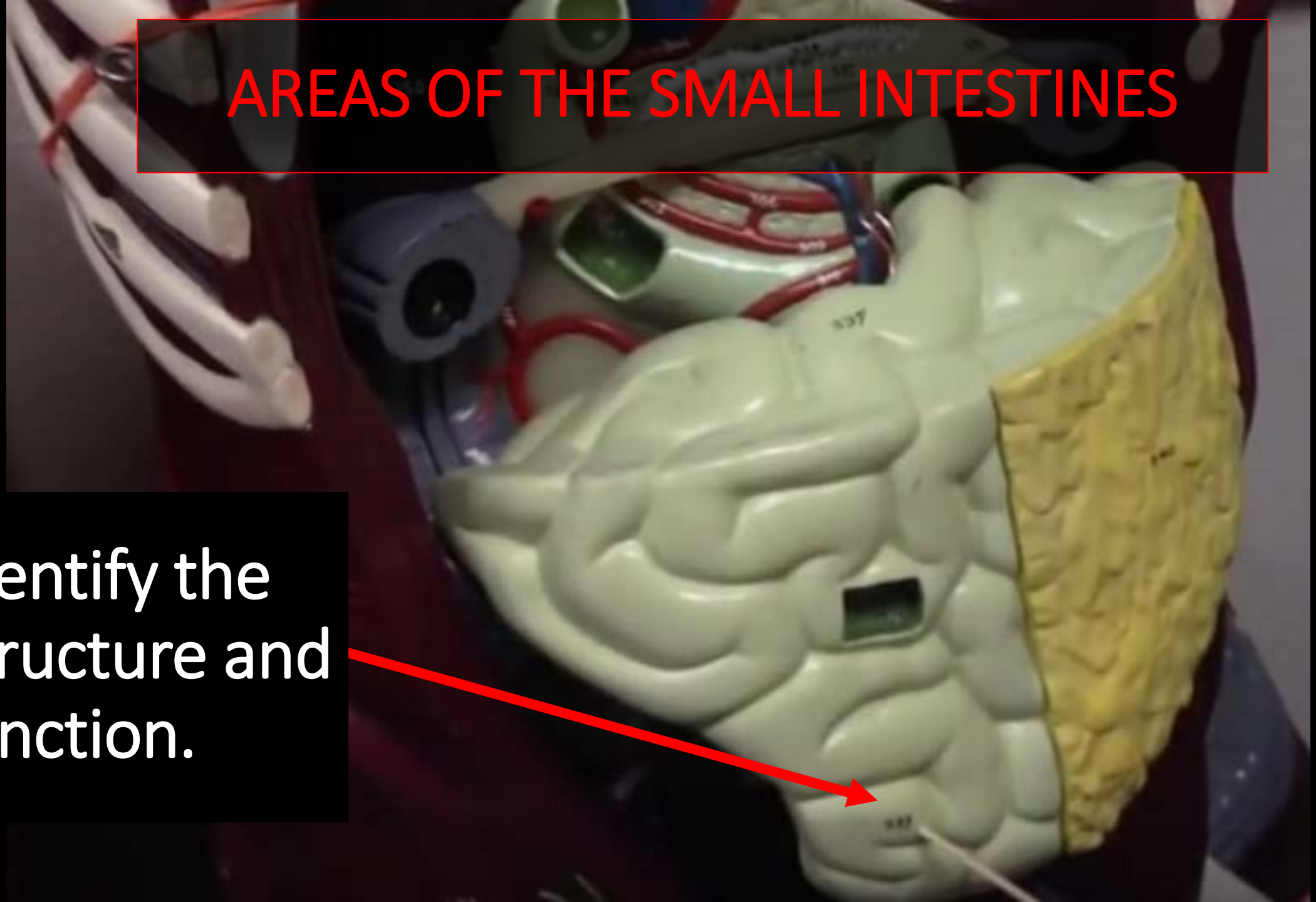

Identify the Structure and function.

Digestion and absorption of nutrients.

*The **small intestine** is the part of the **intestine is** where 90% of the digestion and absorption of food occurs.*

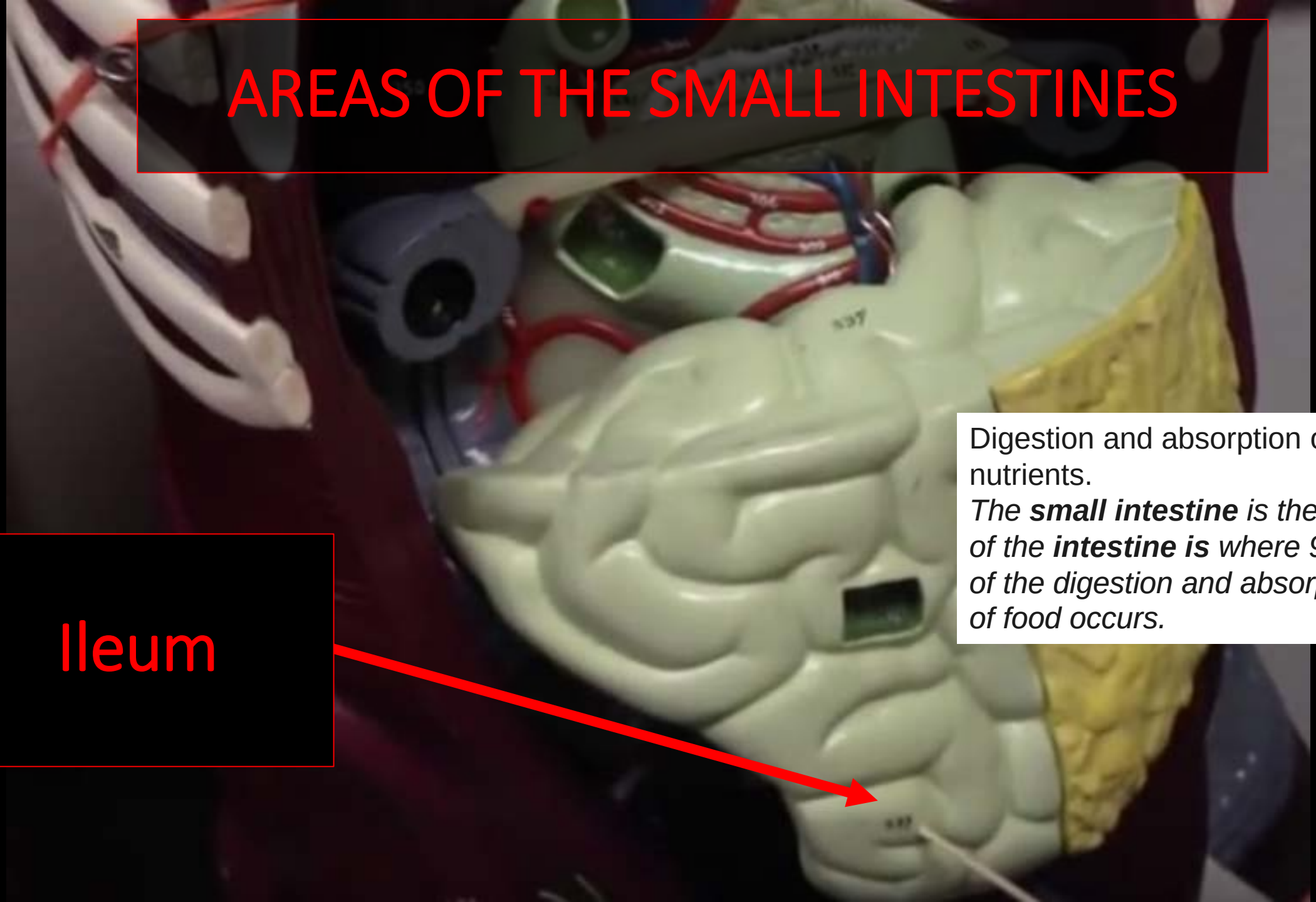


AREAS OF THE SMALL INTESTINES



Identify the Structure and function.

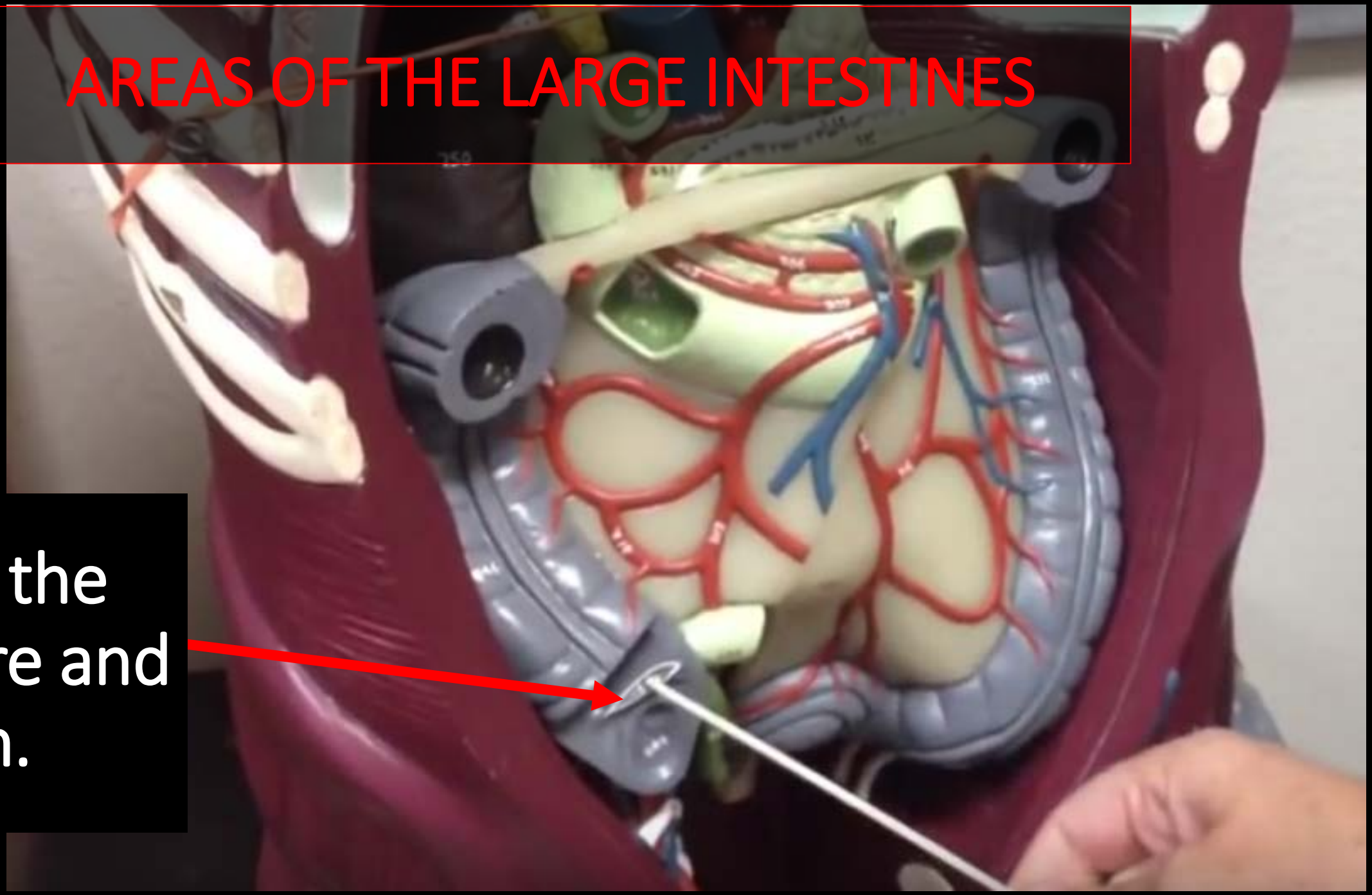
AREAS OF THE SMALL INTESTINES



Ileum

Digestion and absorption of nutrients.
*The **small intestine** is the part of the **intestine is** where 90% of the digestion and absorption of food occurs.*

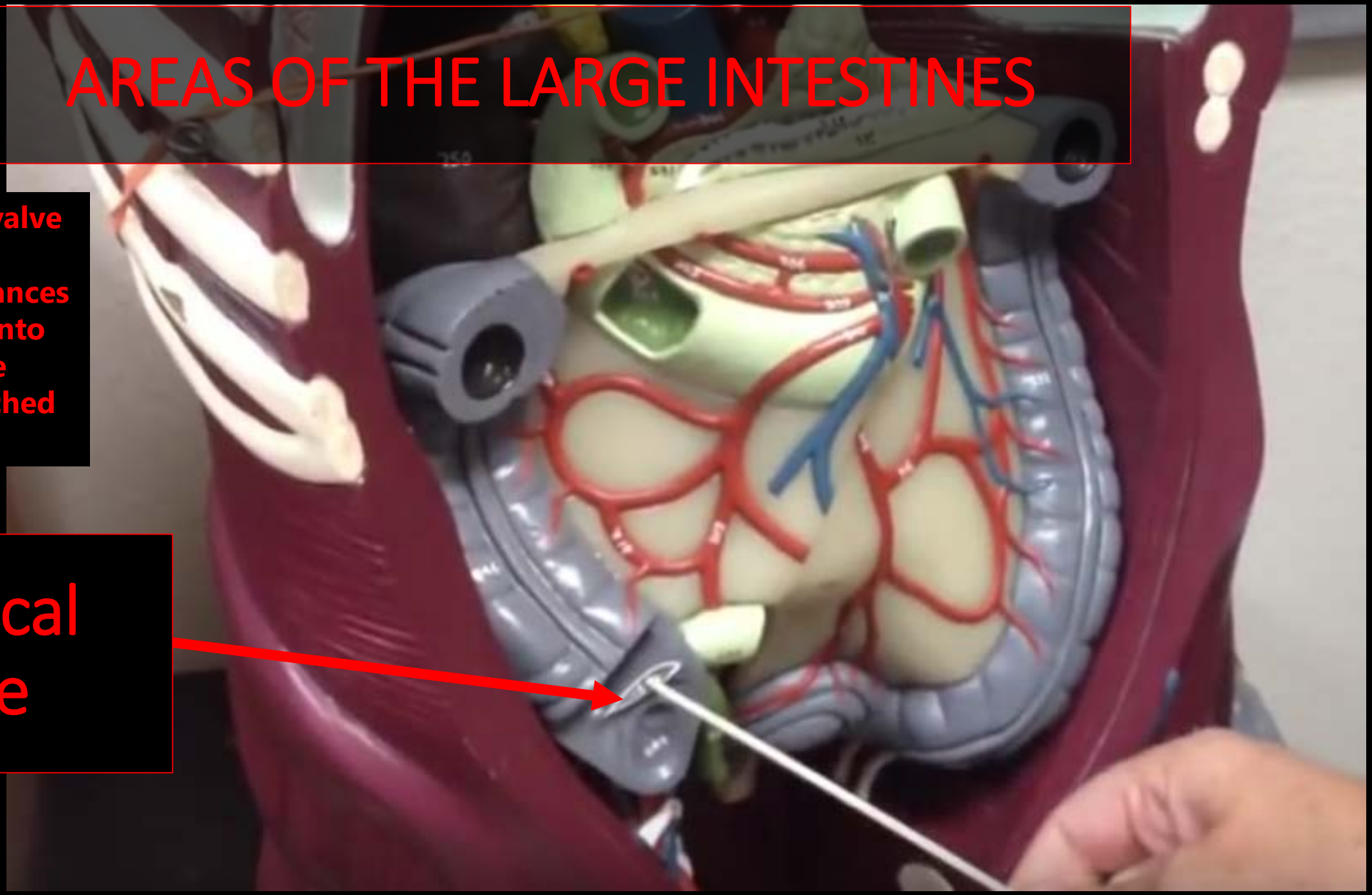
AREAS OF THE LARGE INTESTINES



Identify the Structure and function.

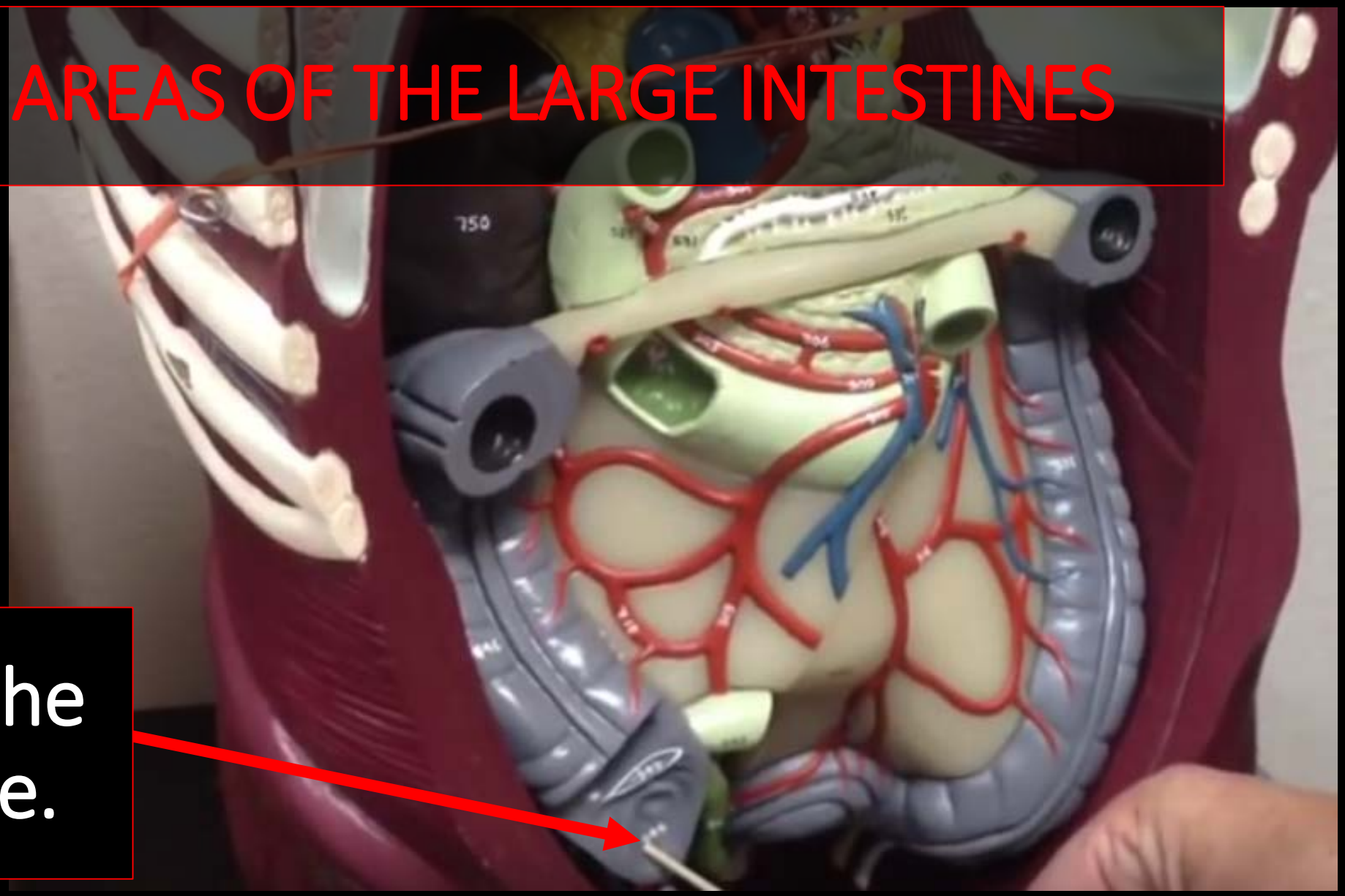
AREAS OF THE LARGE INTESTINES

The ileocecal valve functions to prevent substances flowing back into the ileum once they have reached the cecum.



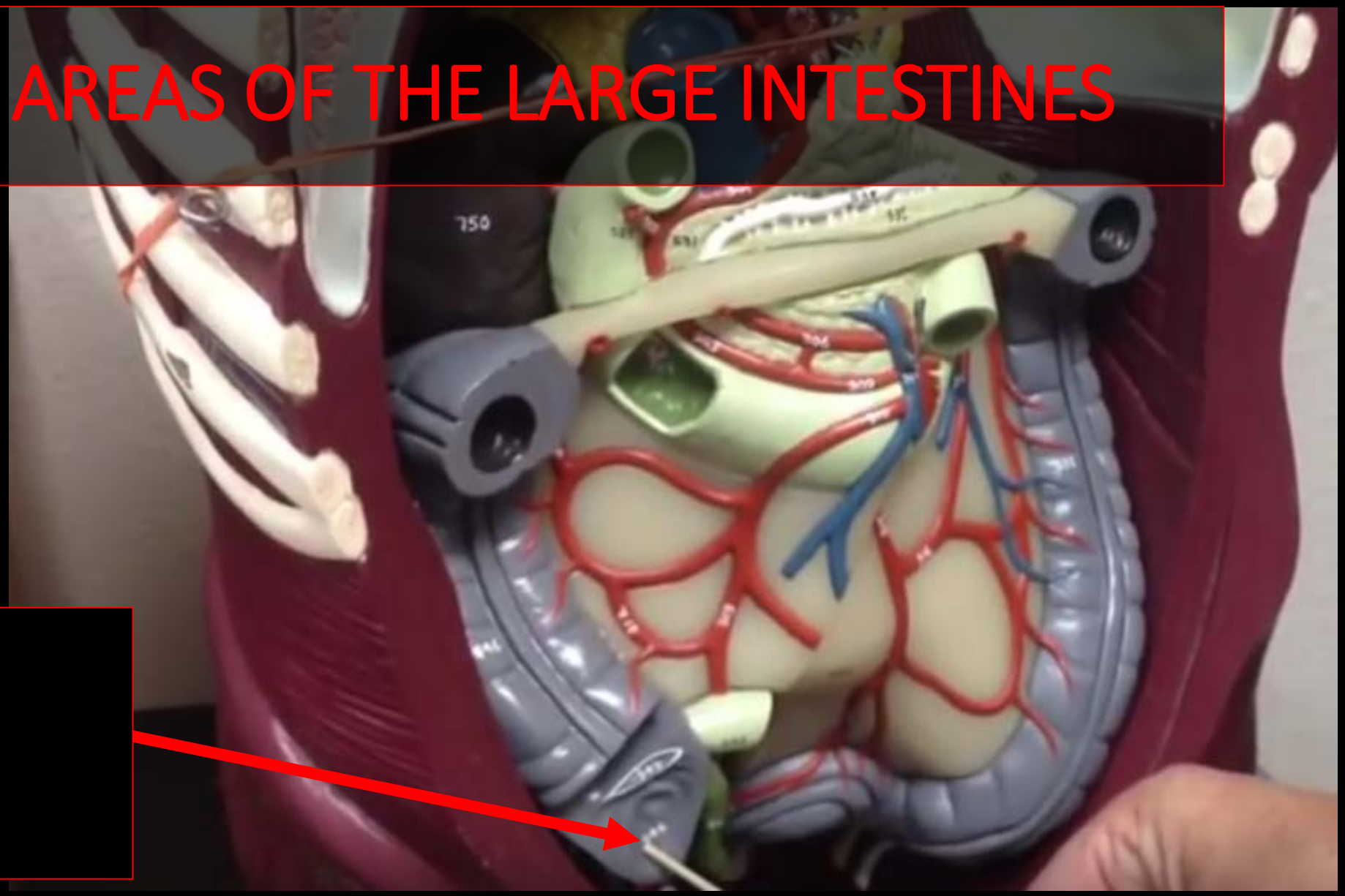
Ileocecal Valve

AREAS OF THE LARGE INTESTINES

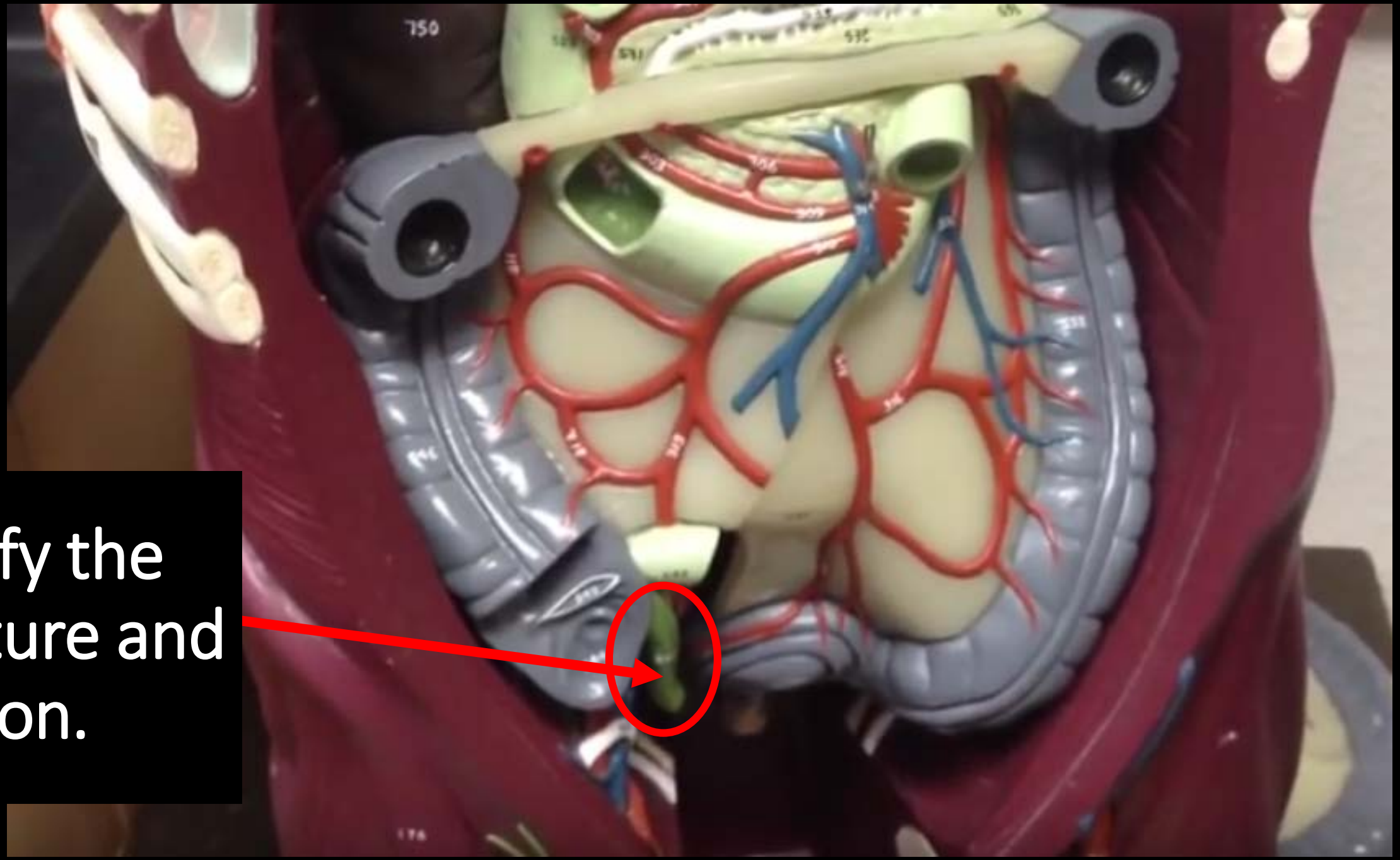


Identify the Structure.

AREAS OF THE LARGE INTESTINES

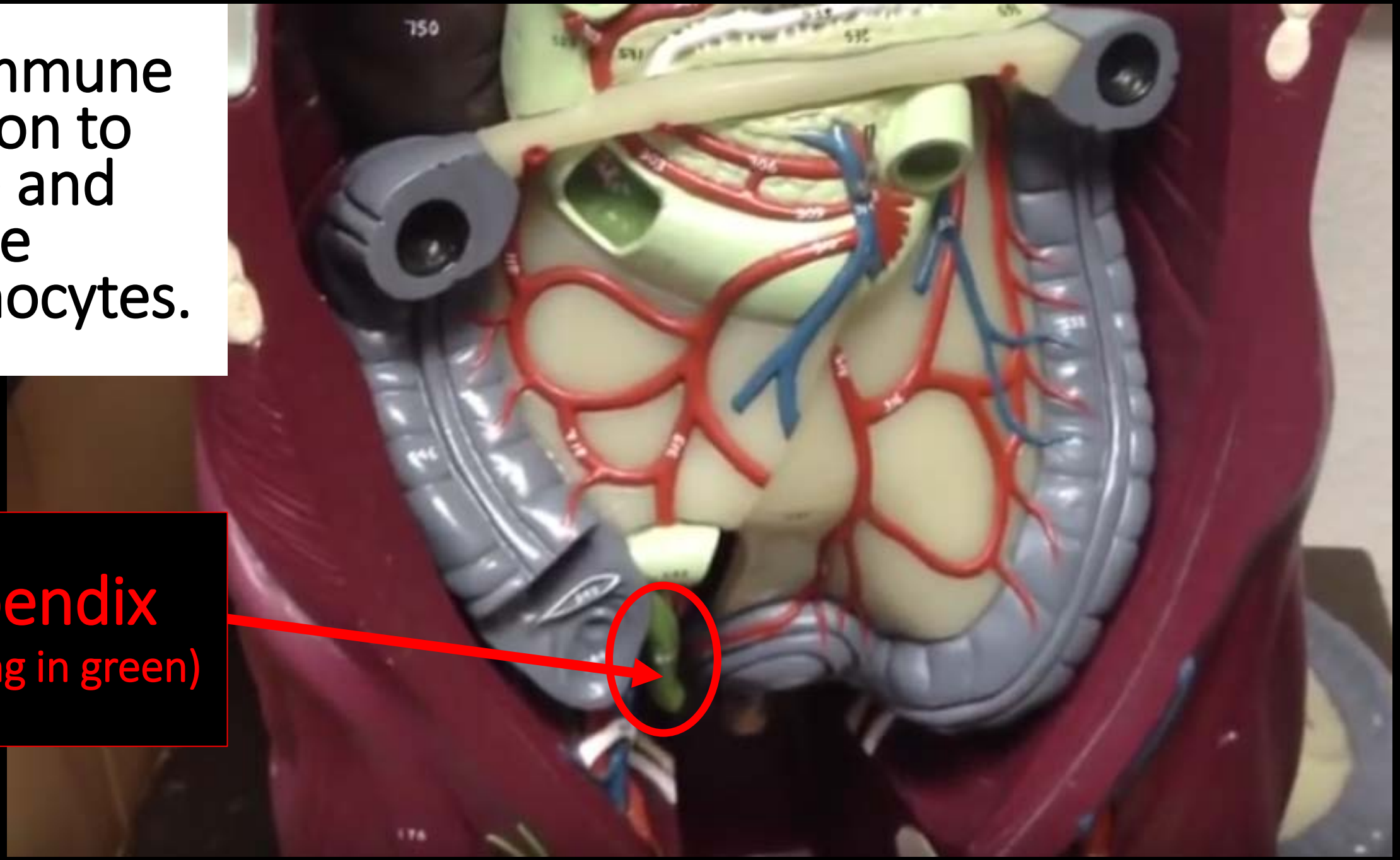


Cecum



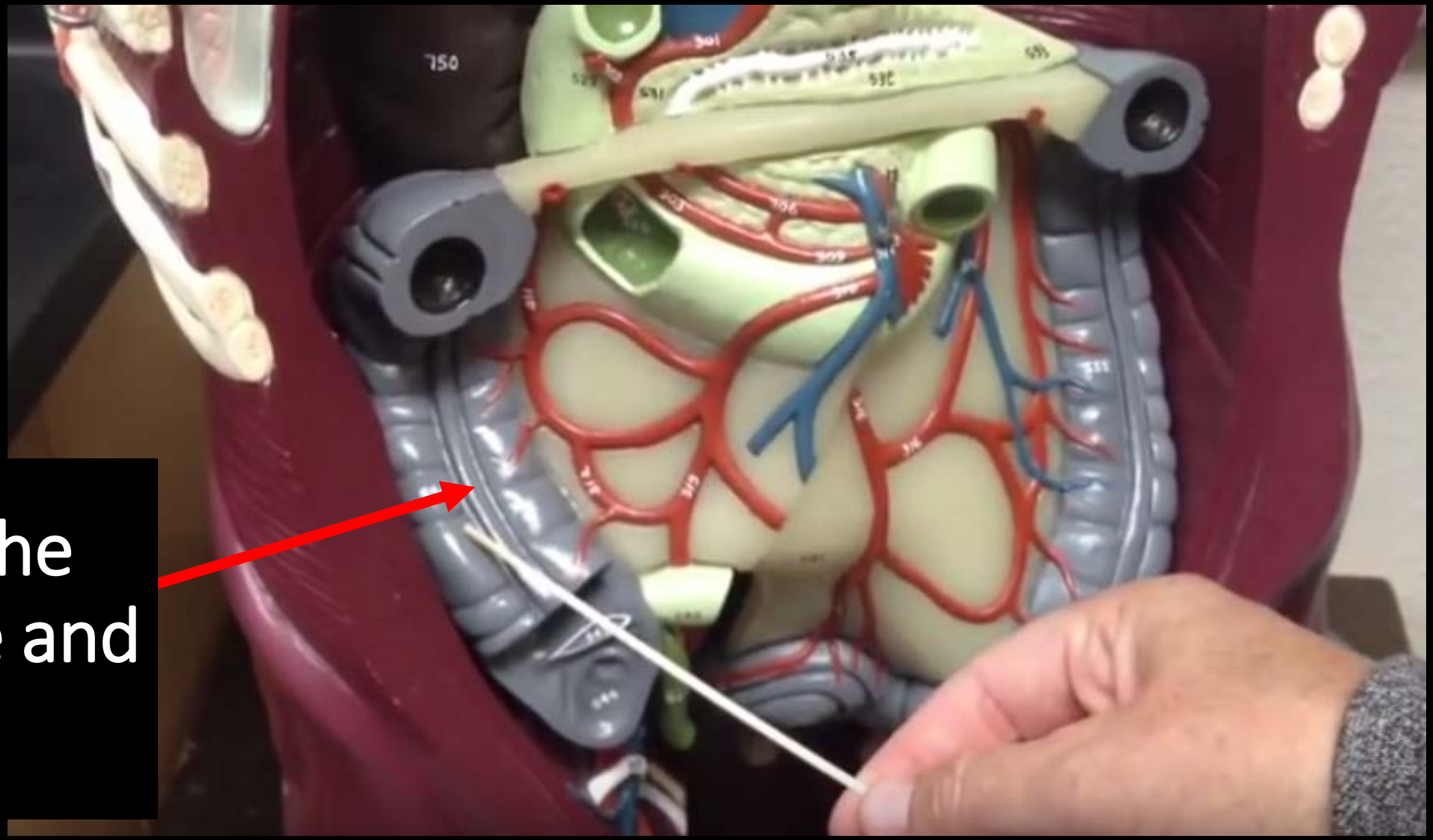
Identify the Structure and function.

Has immune function to house and release lymphocytes.



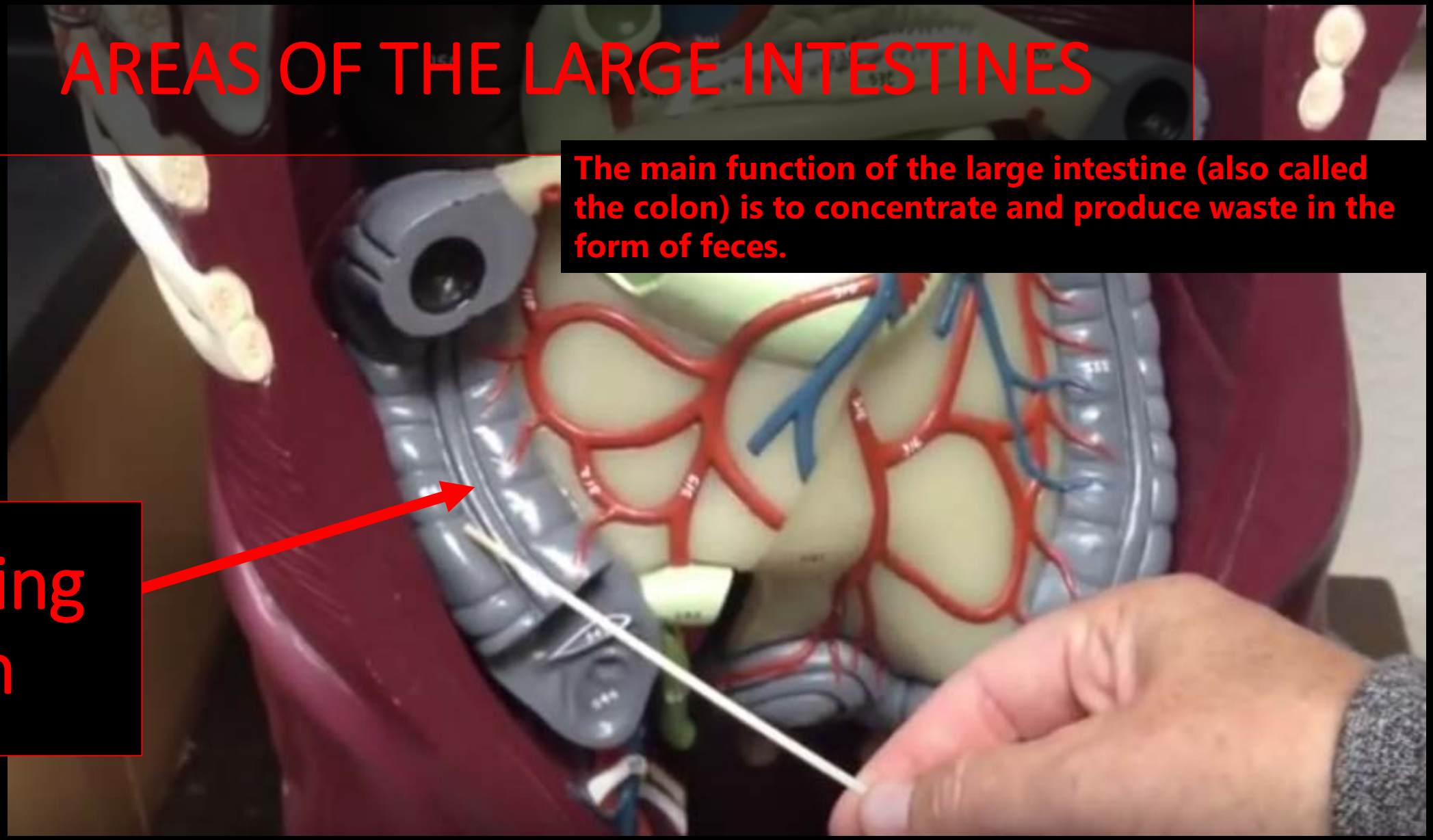
Appendix
(the thing in green)

Identify the Structure and function.



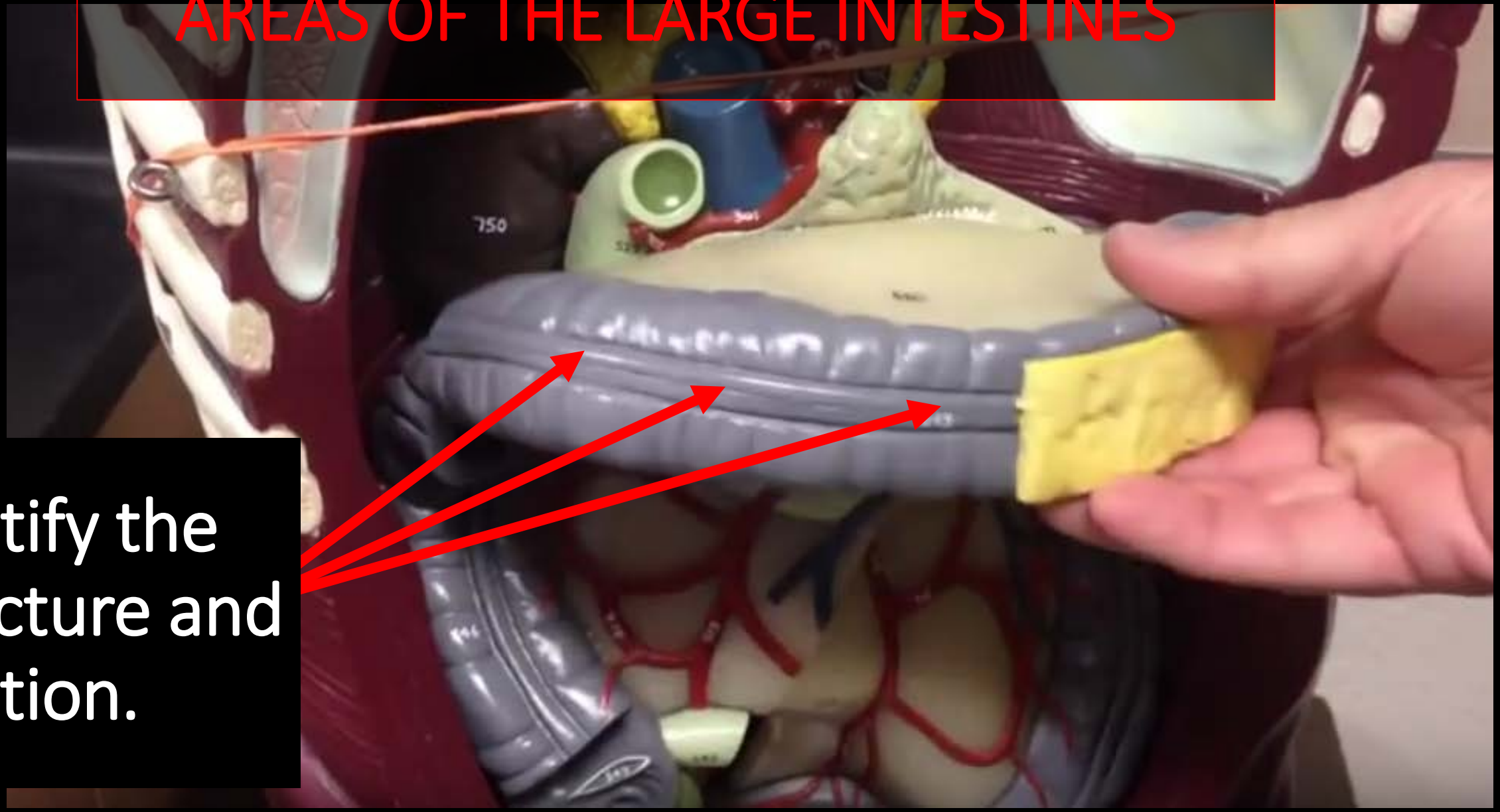
AREAS OF THE LARGE INTESTINES

The main function of the large intestine (also called the colon) is to concentrate and produce waste in the form of feces.



Ascending Colon

AREAS OF THE LARGE INTESTINES



Identify the Structure and function.

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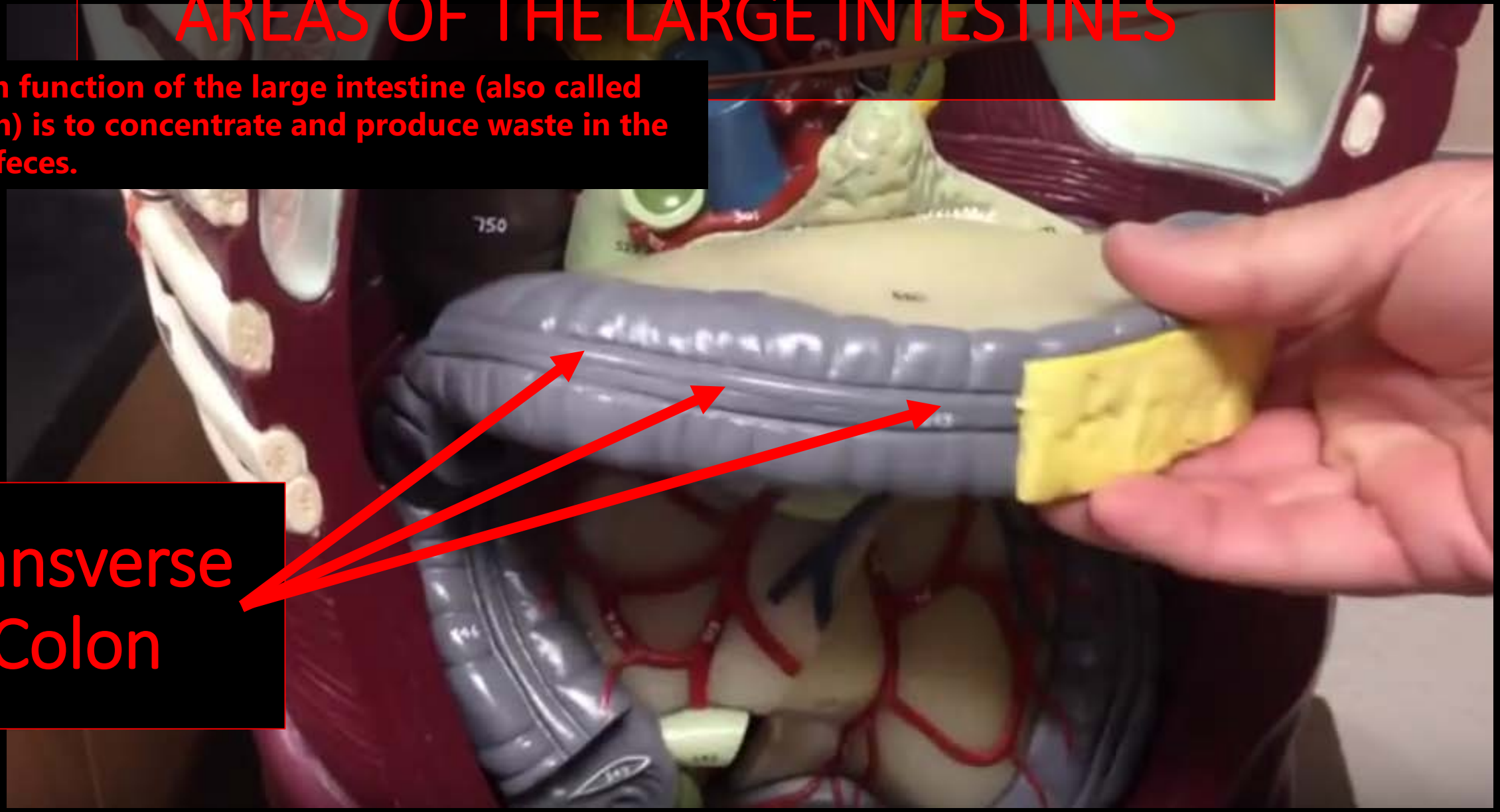

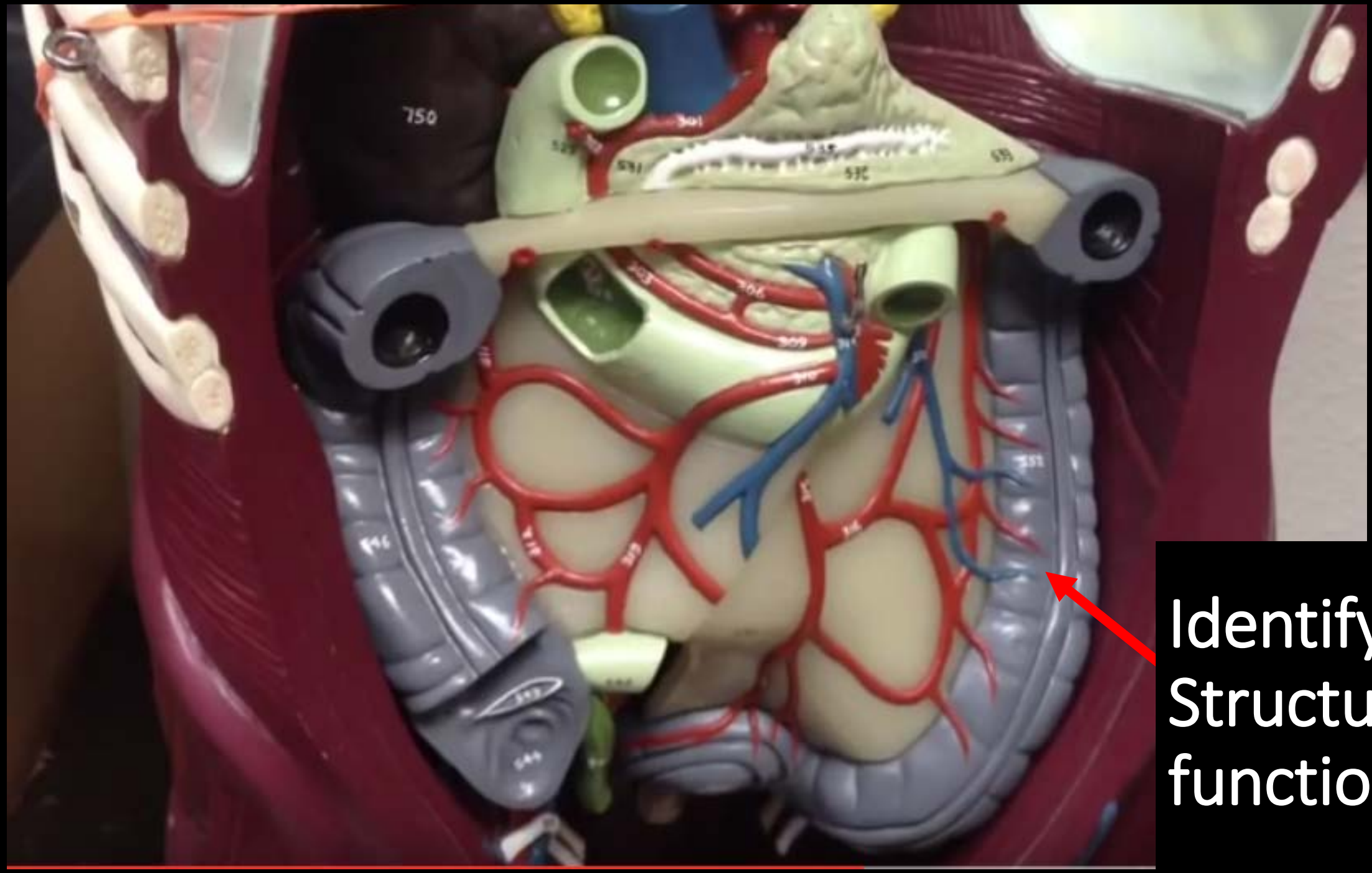

Identify the Structure and function.

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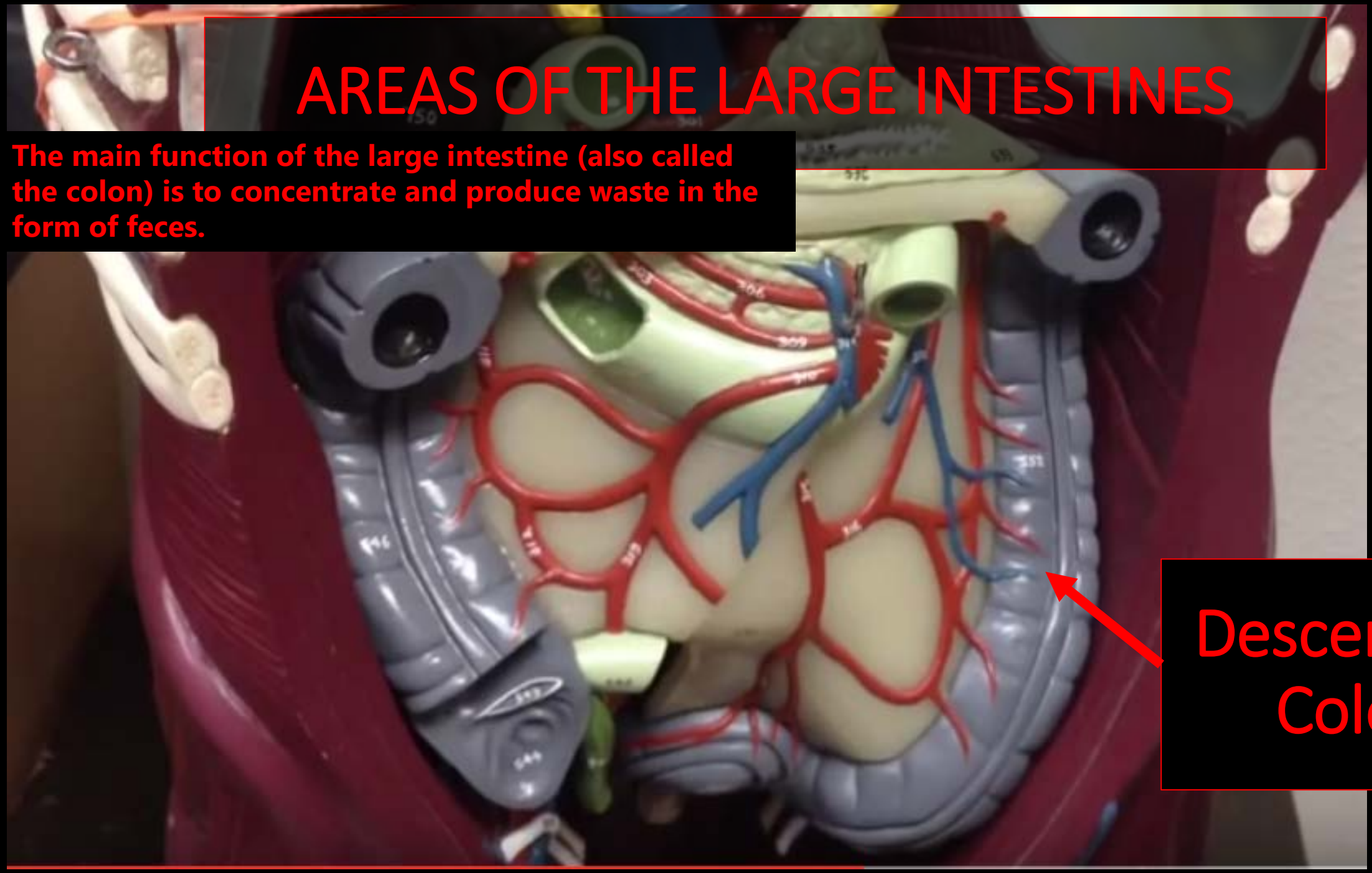
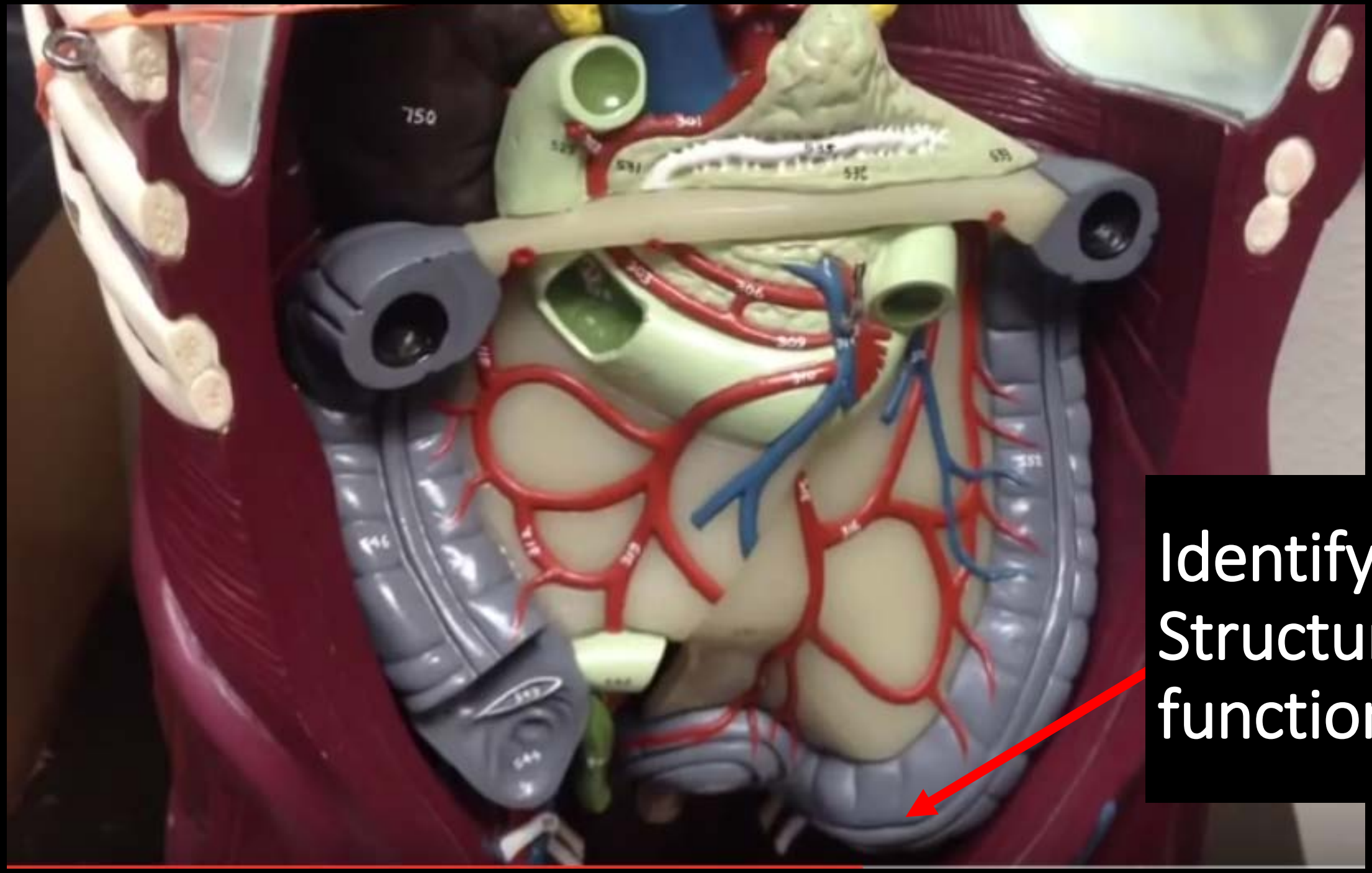
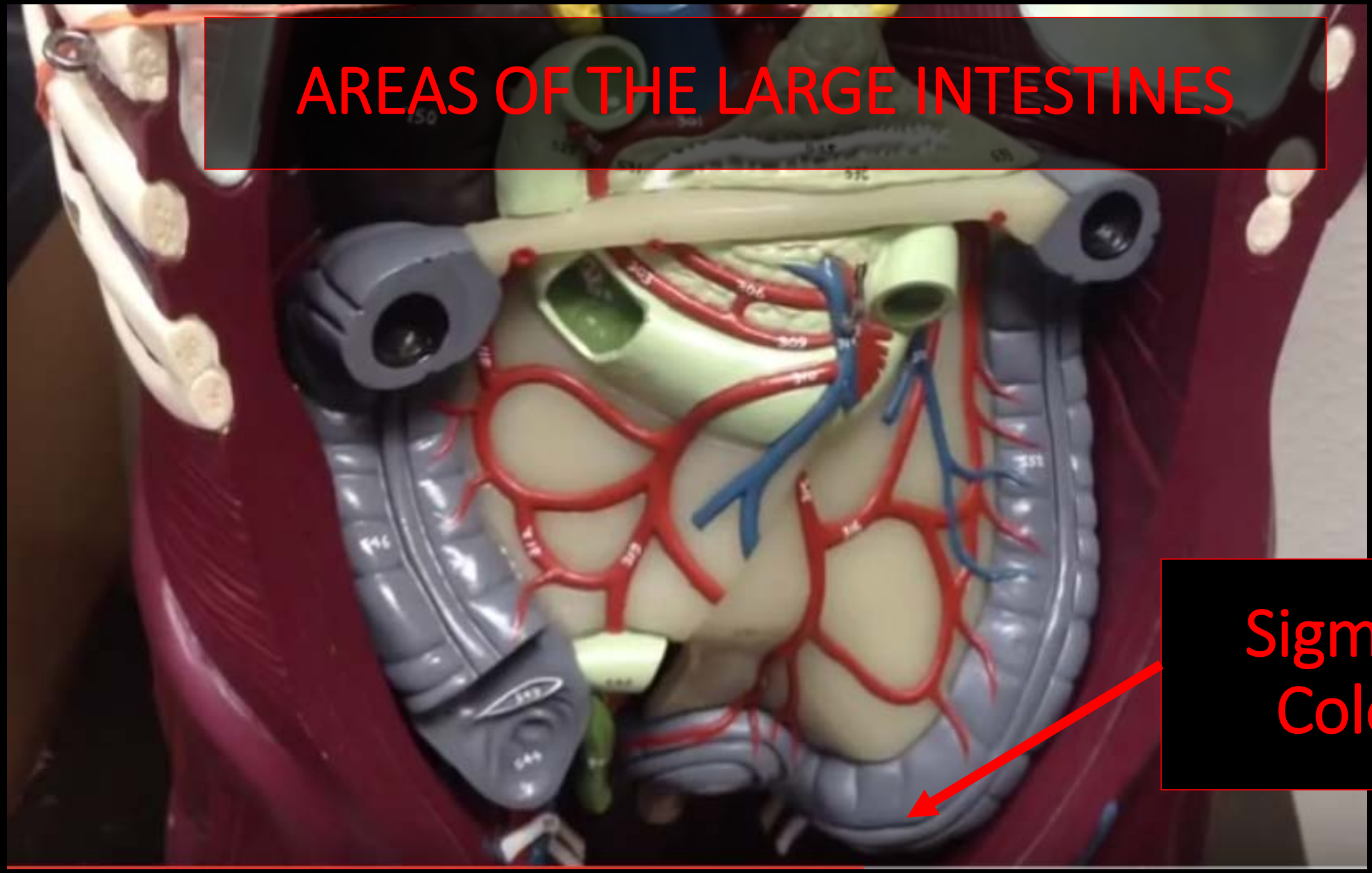


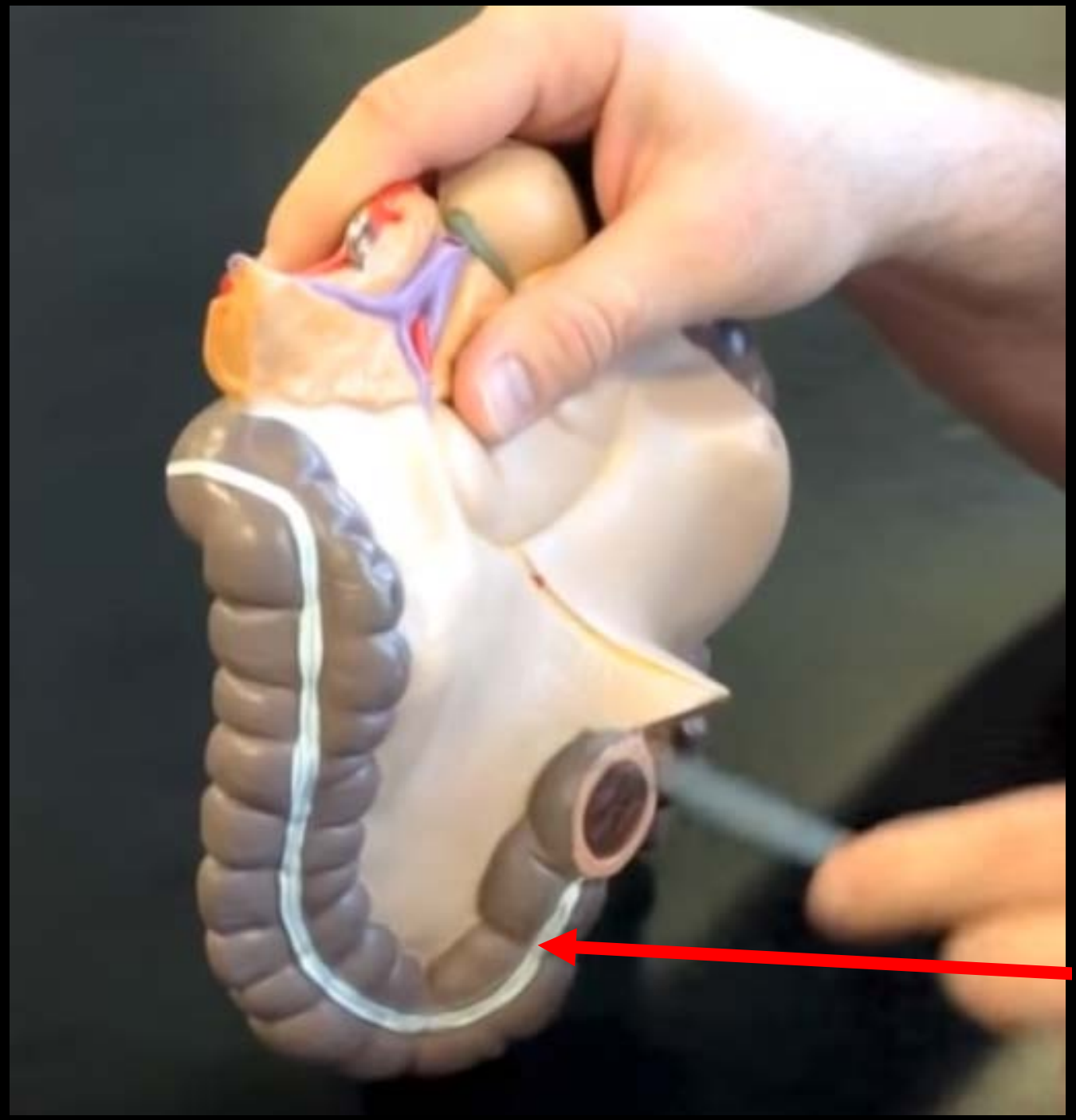


Identify the Structure and function.

AREAS OF THE LARGE INTESTINES



Sigmoid Colon



Identify the Structure and function.

AREAS OF THE LARGE INTESTINES

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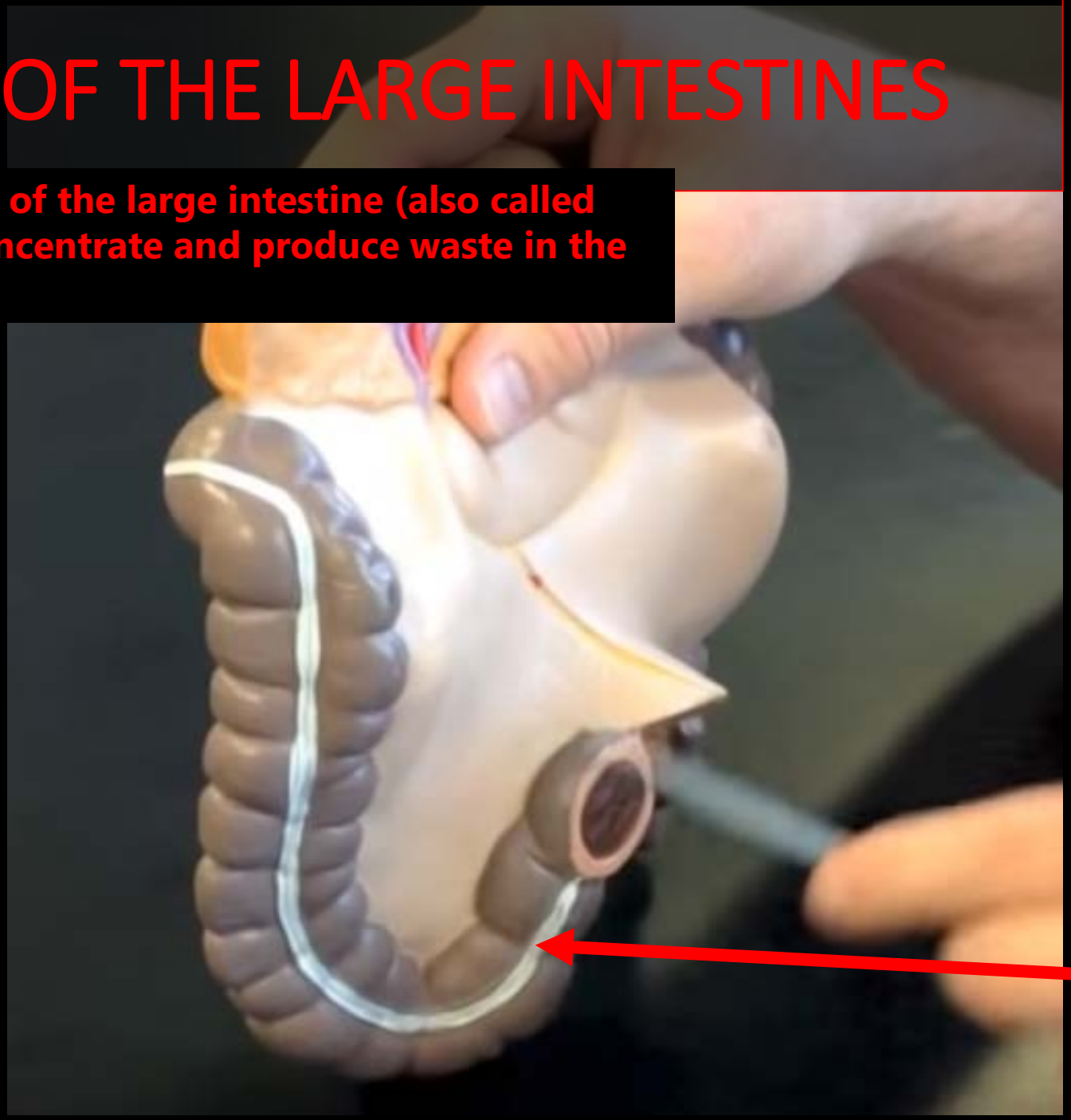
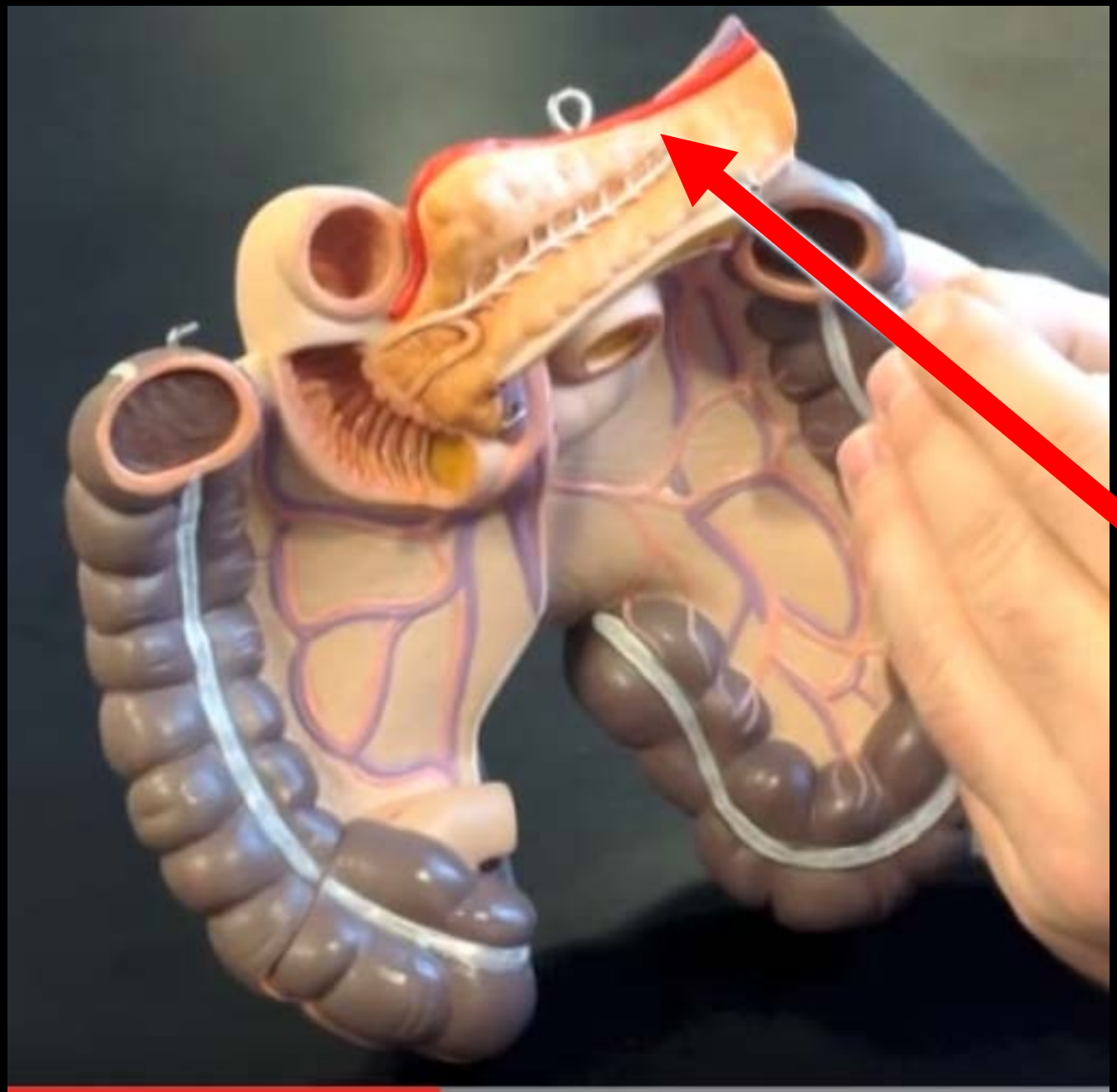


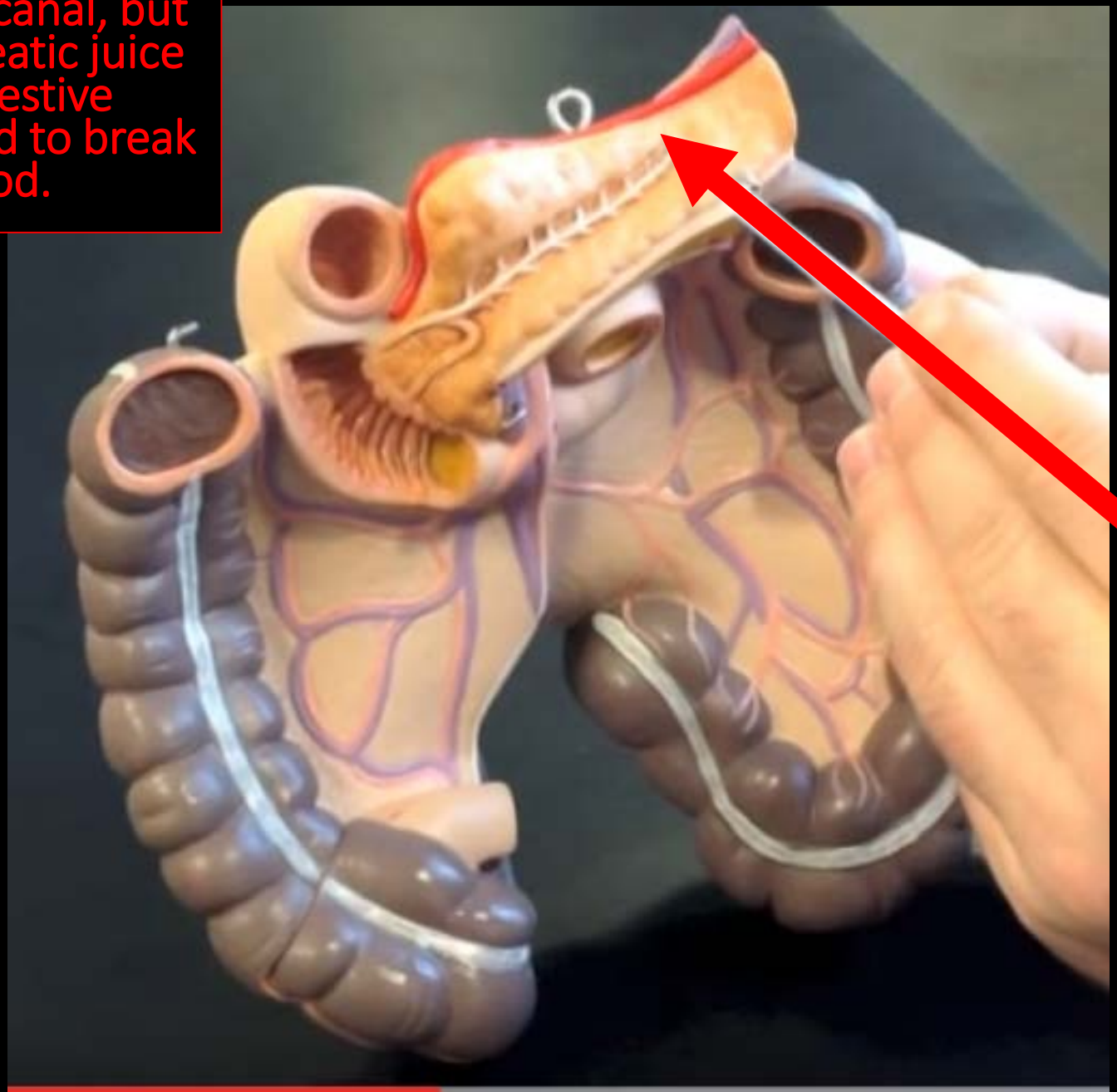
**The sigmoid colon starts at the bottom of the descending colon and wraps around back.*

Sigmoid Colon

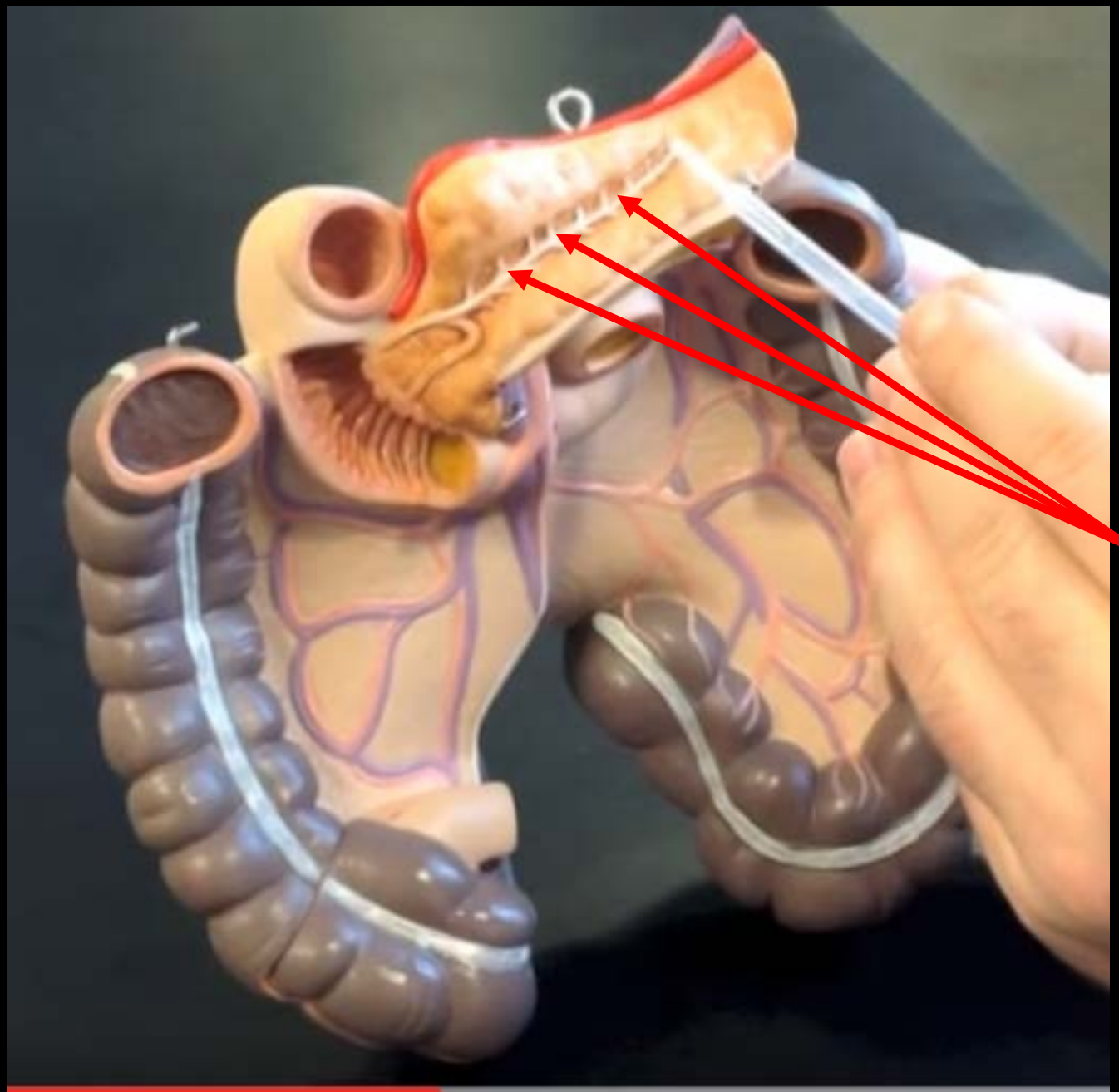


Identify the Structure and Function.

The pancreas is not part of the alimentary canal, but it makes pancreatic juice that has digestive enzymes needed to break down food.

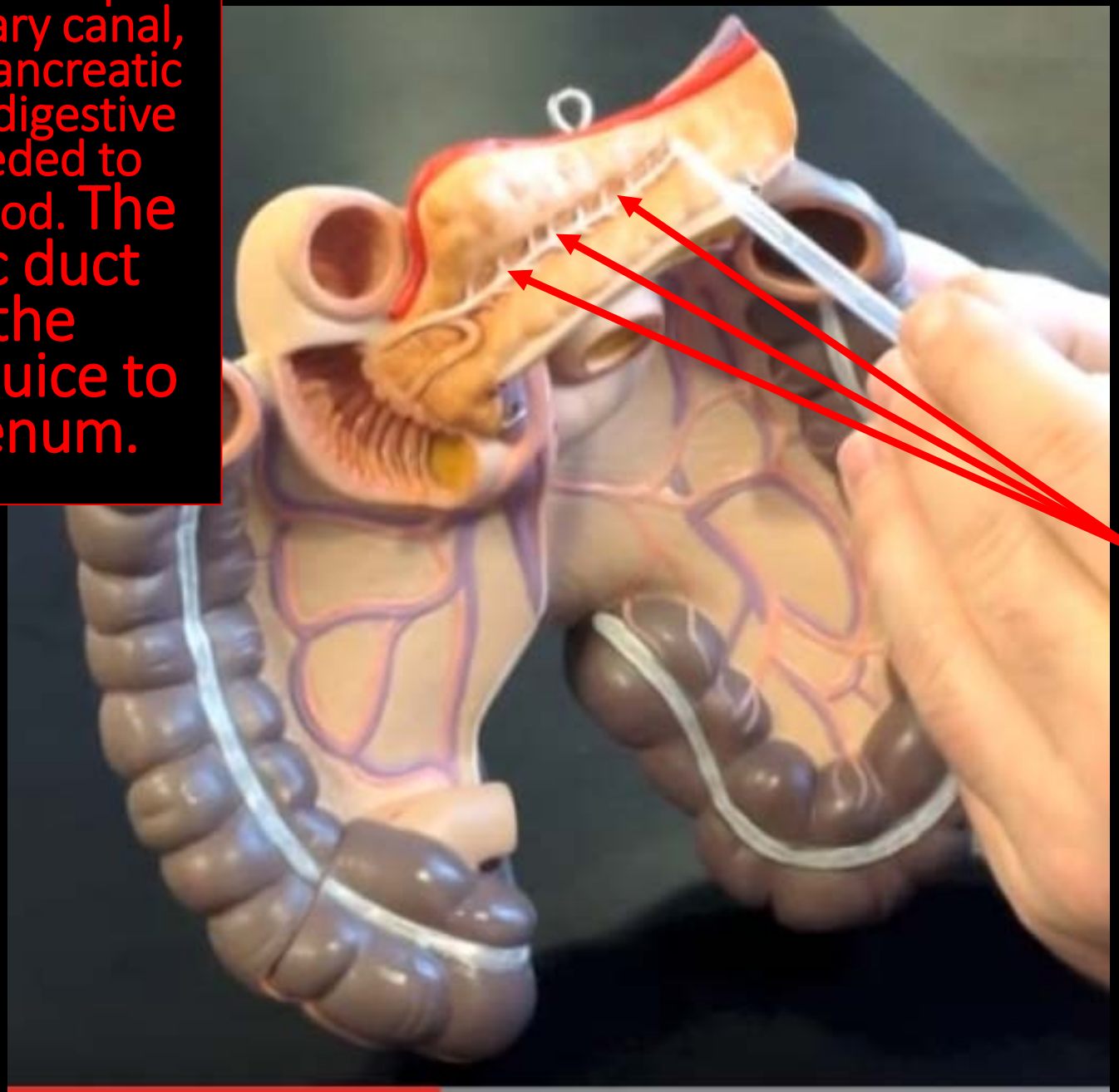


Pancreas

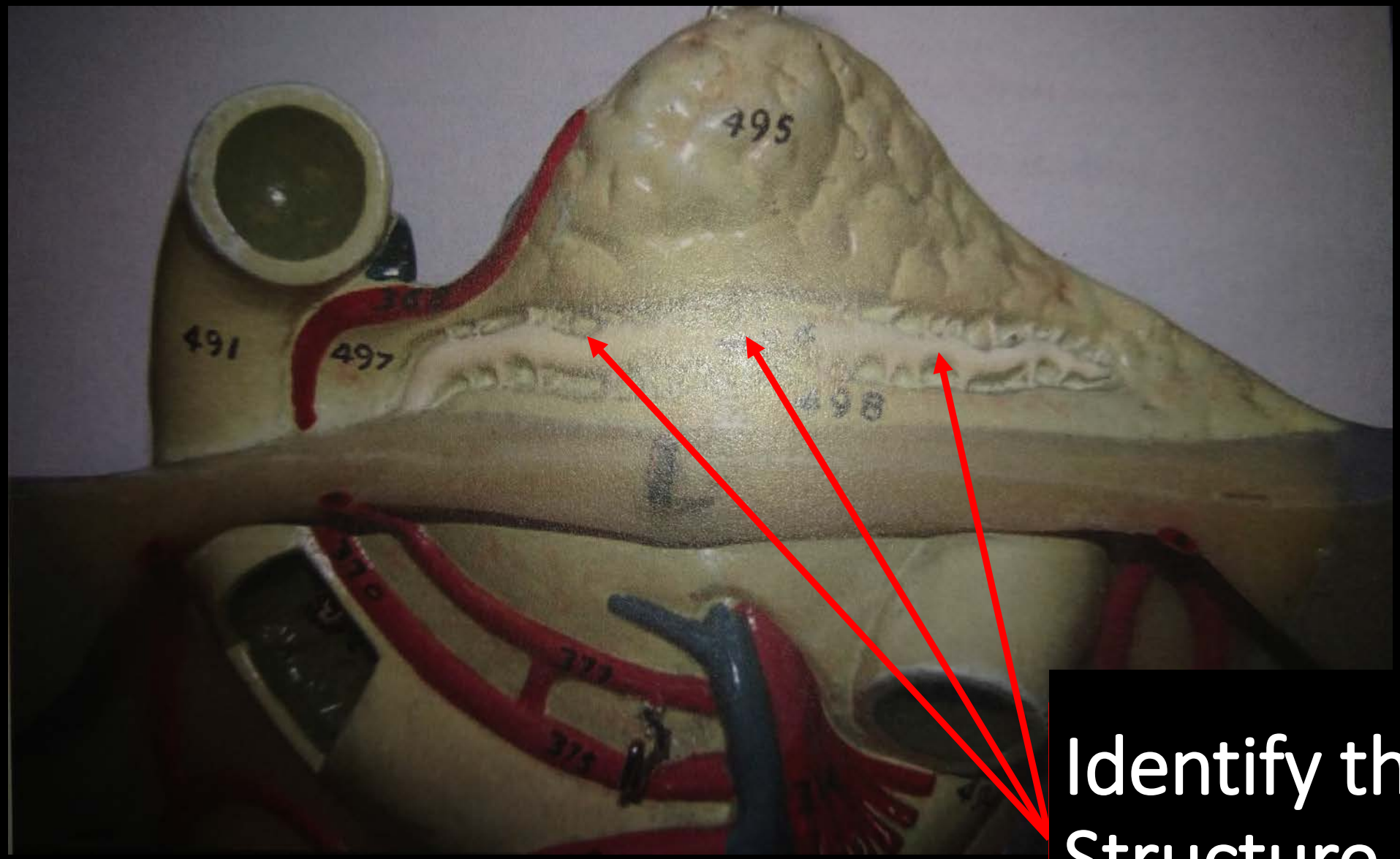


Identify the Structure and Function.

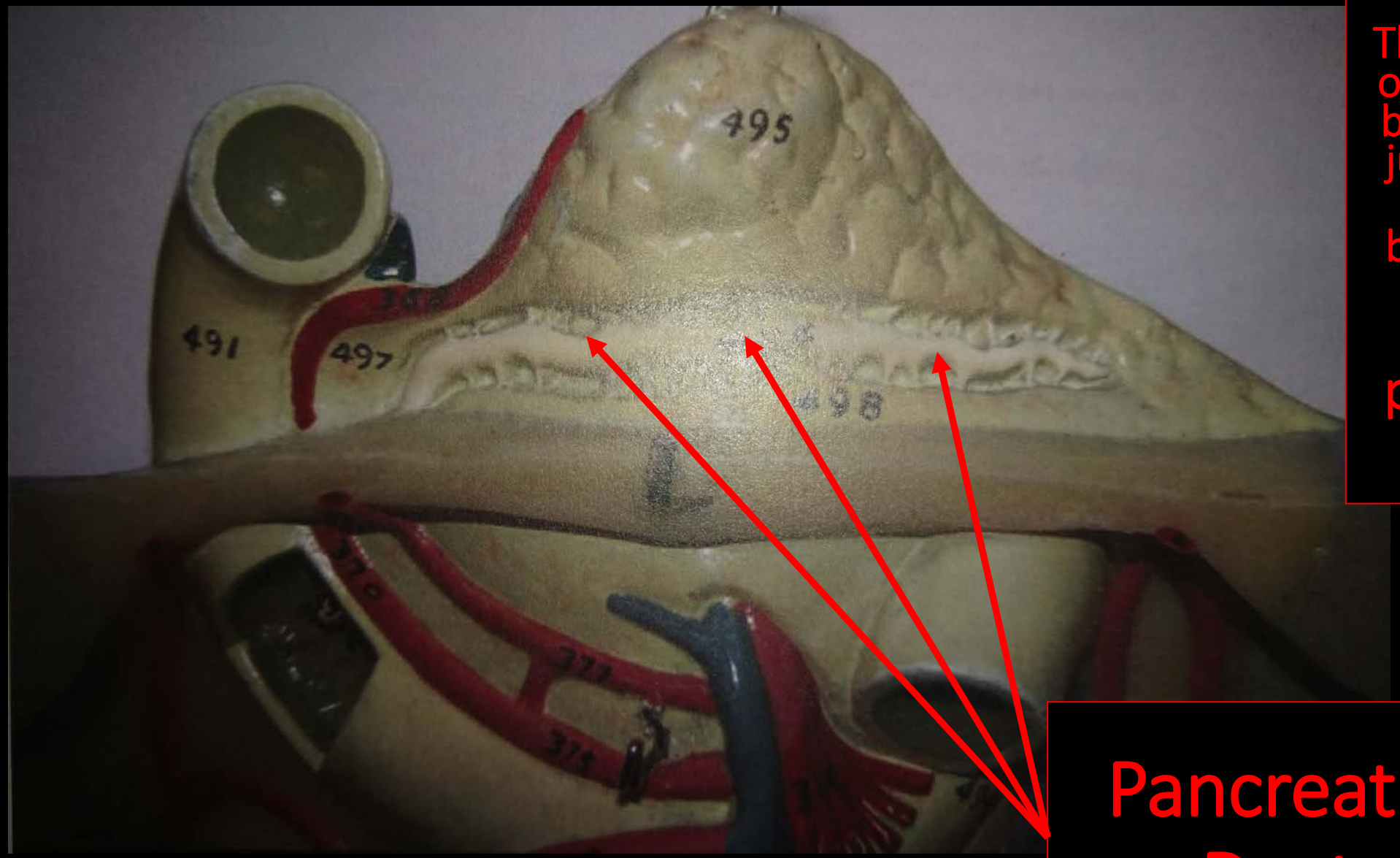
The pancreas is not part of the alimentary canal, but it makes pancreatic juice that has digestive enzymes needed to break down food. The pancreatic duct carries the pancreatic juice to the duodenum.



Pancreatic Duct



Identify the Structure and function.



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Pancreatic Duct

Identify the Structure and Function.

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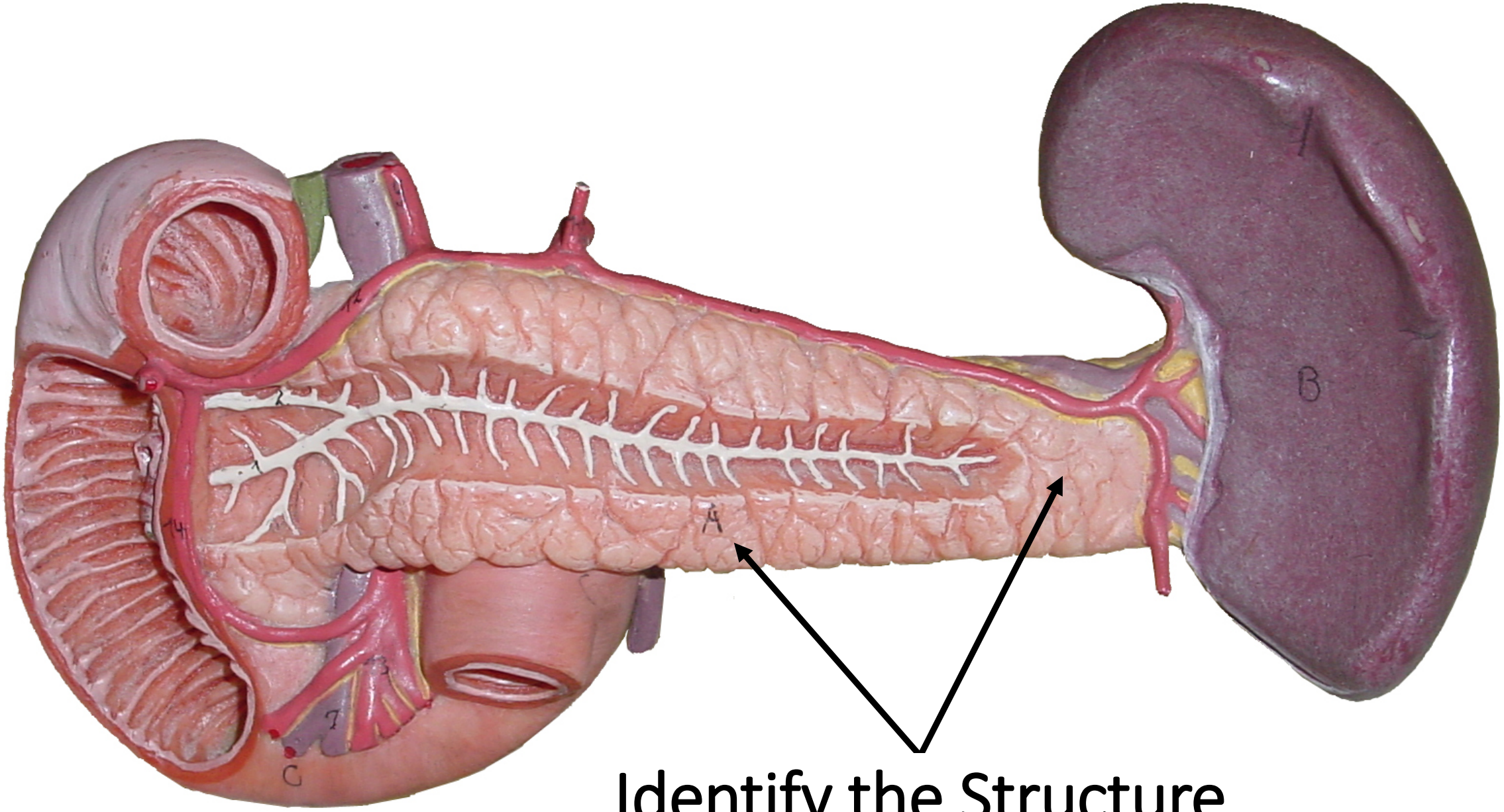
Pancreas



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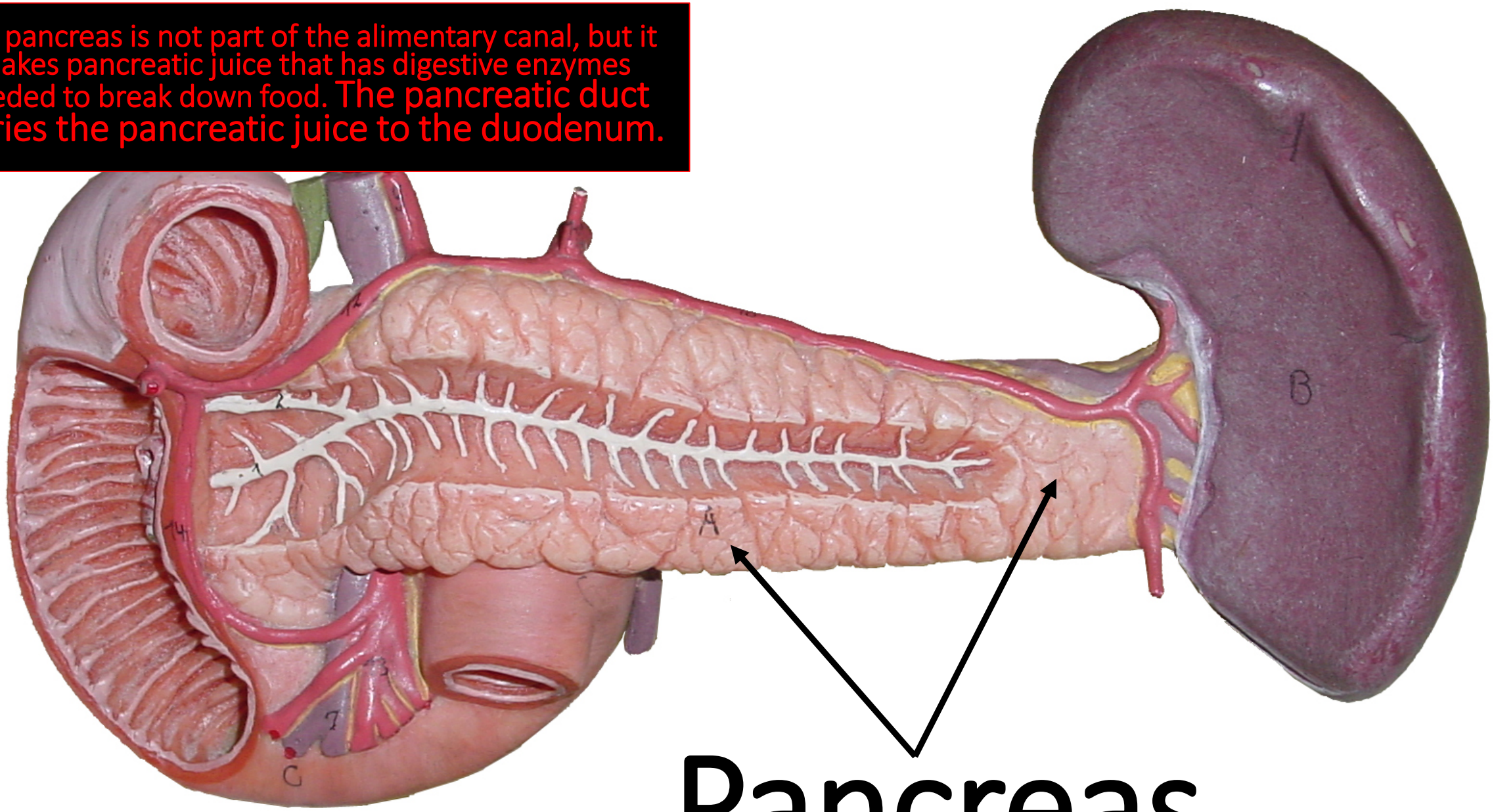
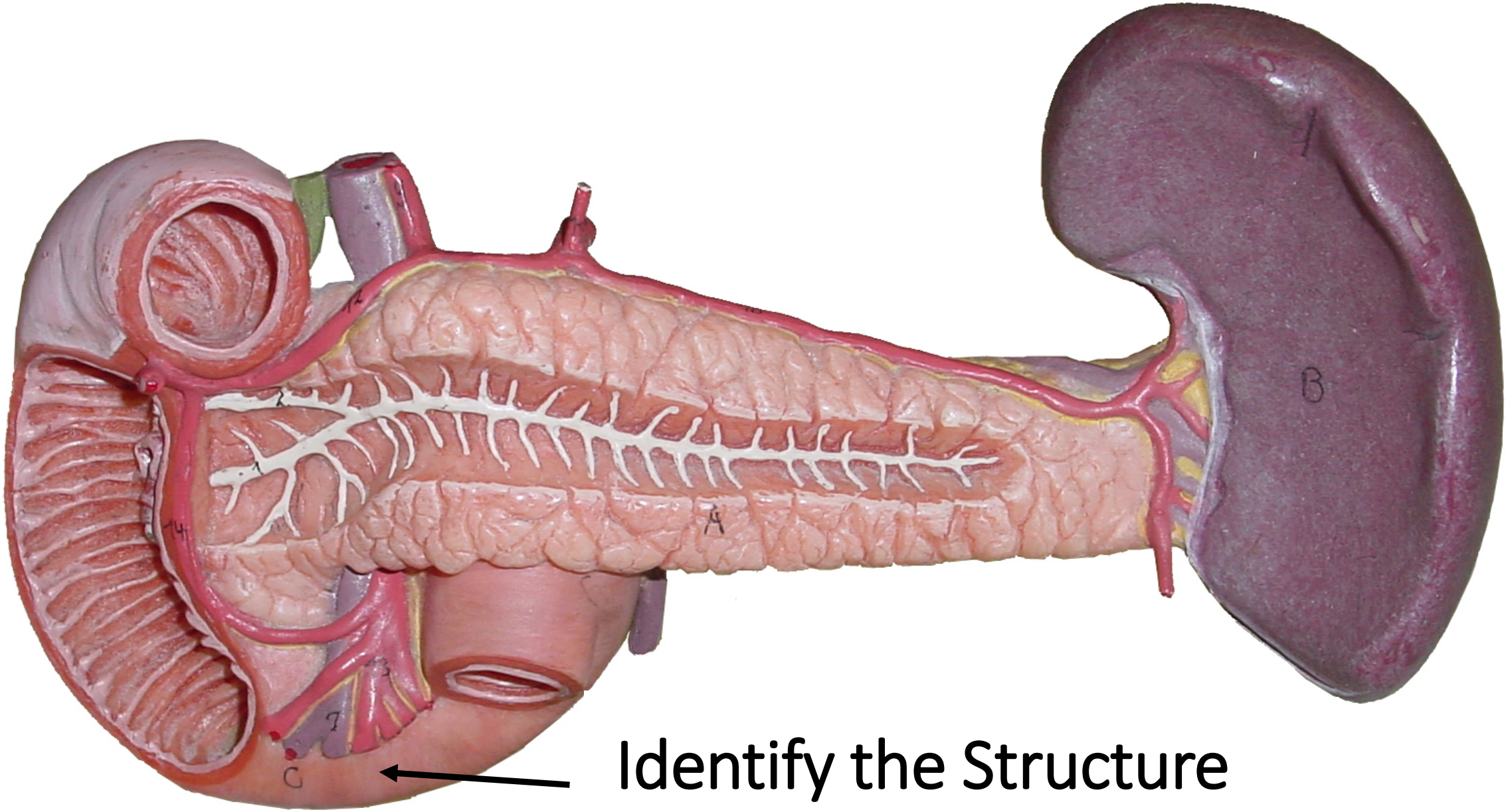
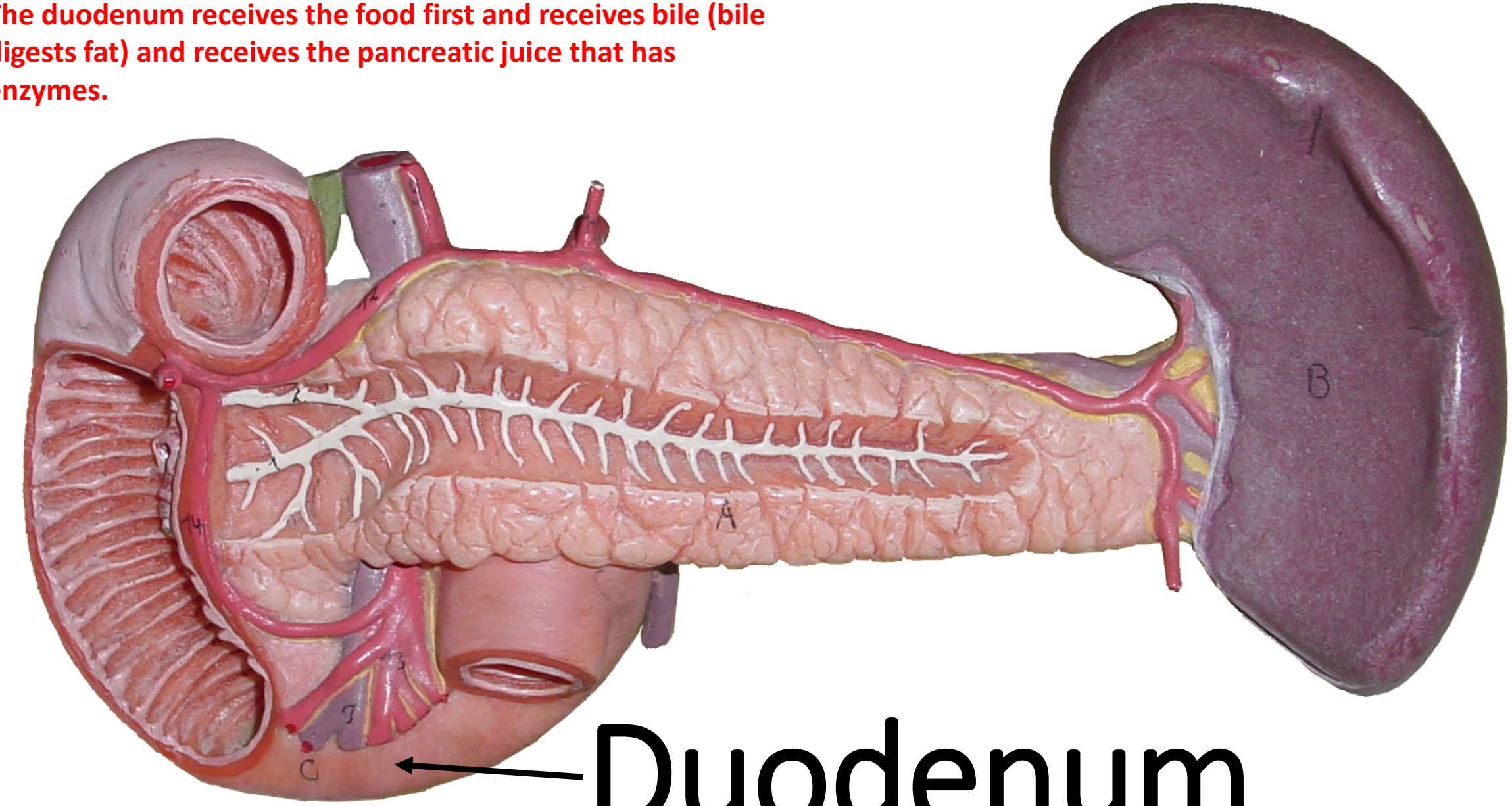


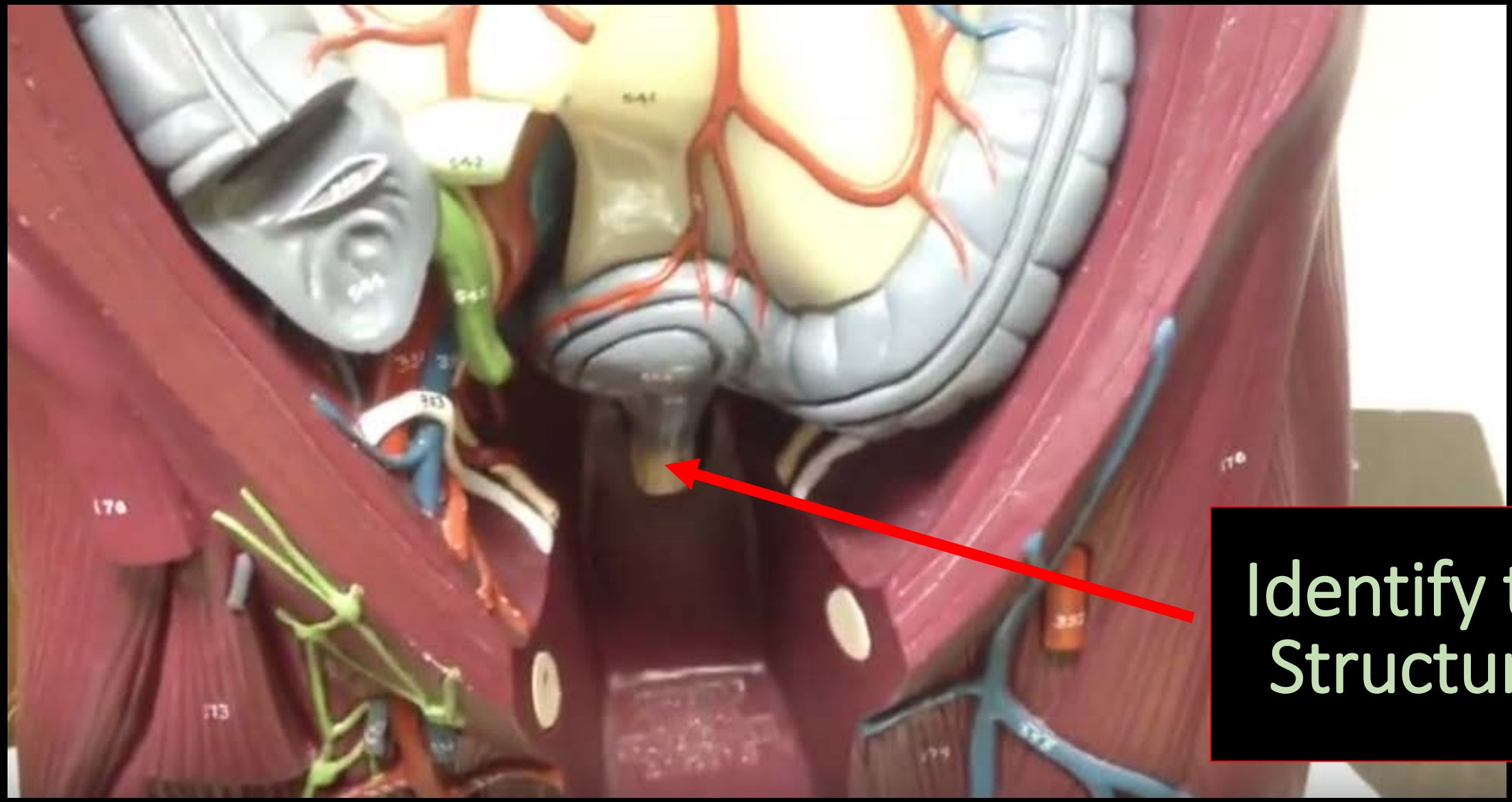
Pancreas



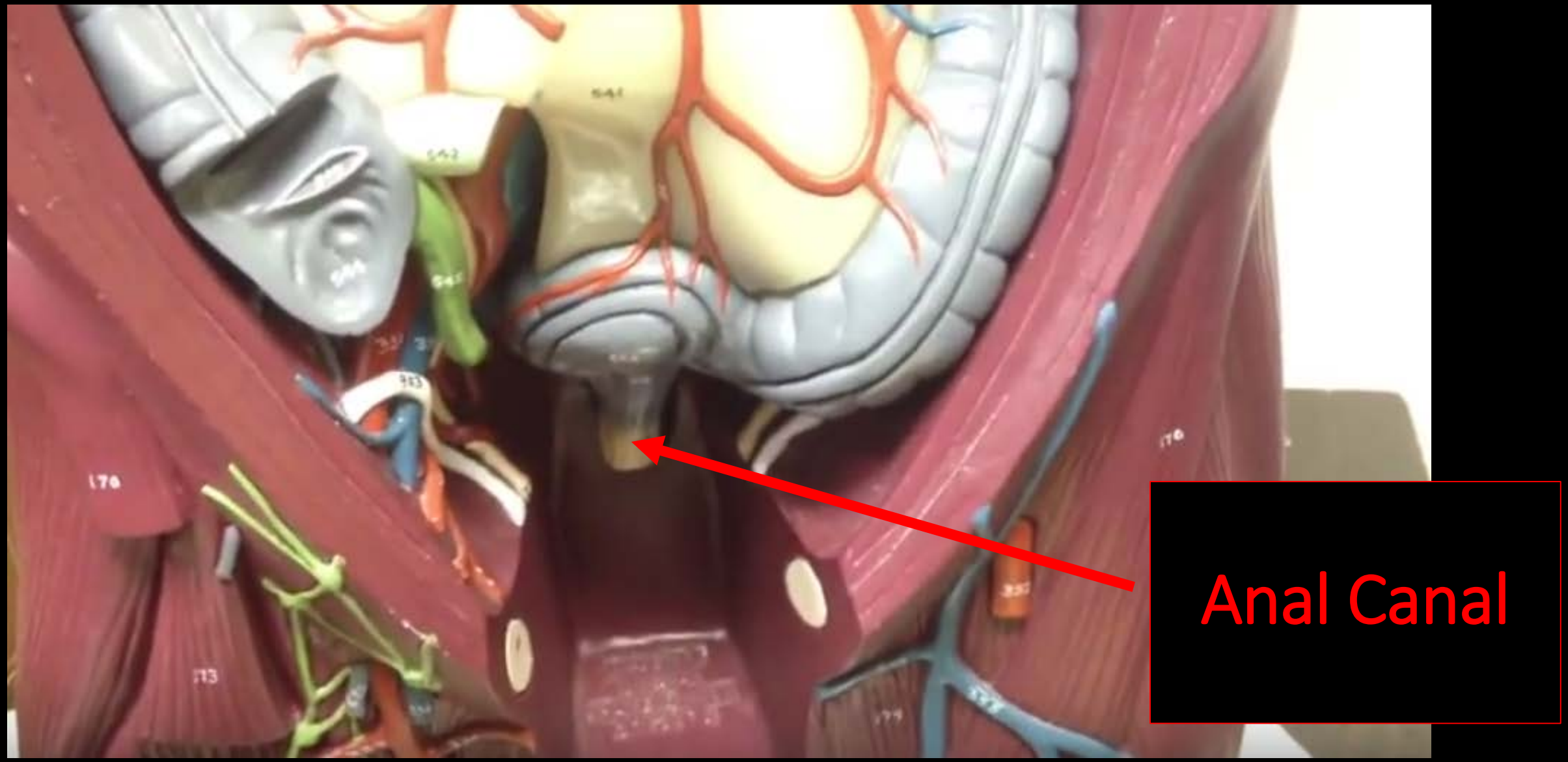
Identify the Structure and Function.

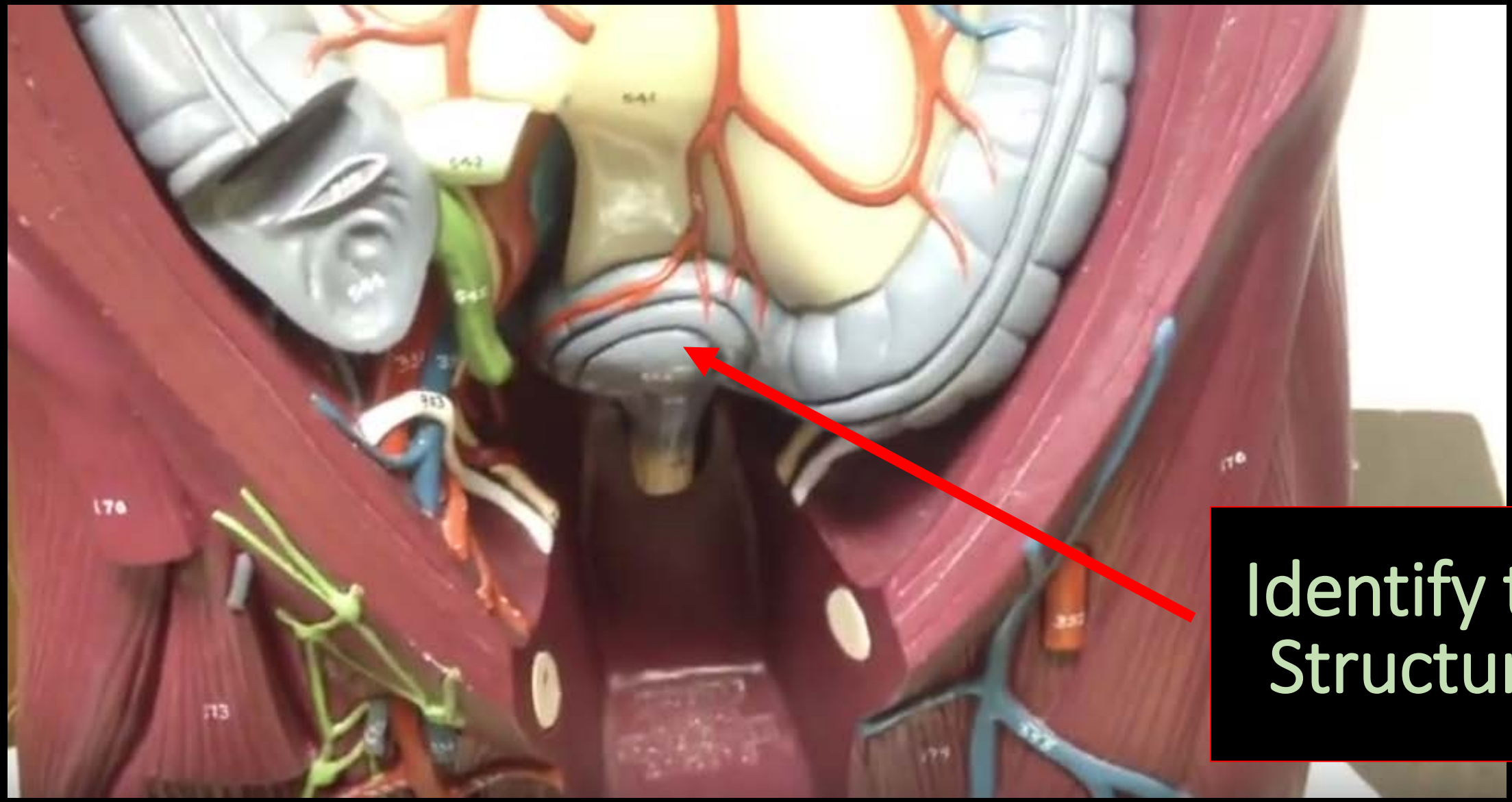
The duodenum receives the food first and receives bile (bile digests fat) and receives the pancreatic juice that has enzymes.



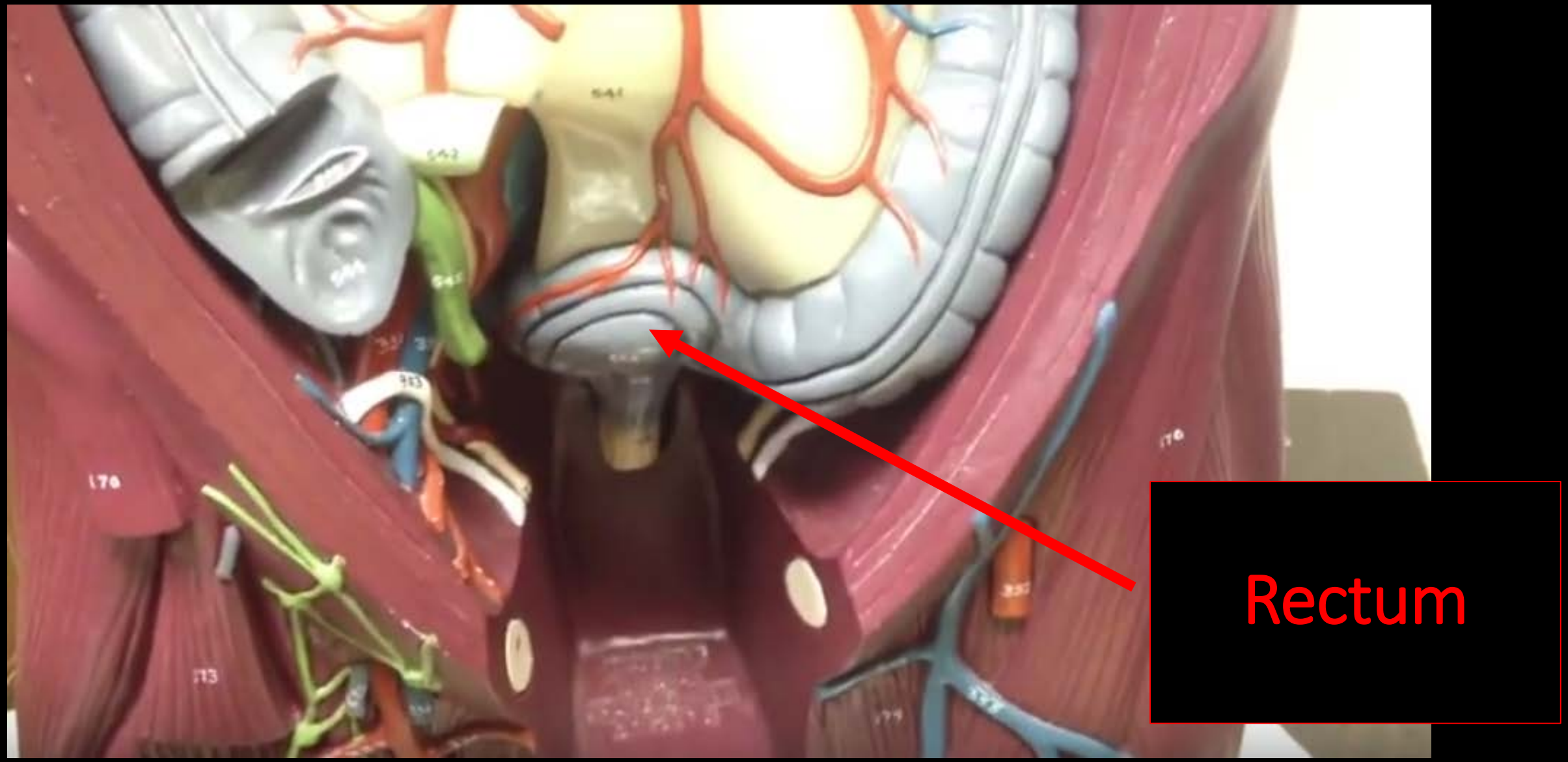


Identify the Structure.

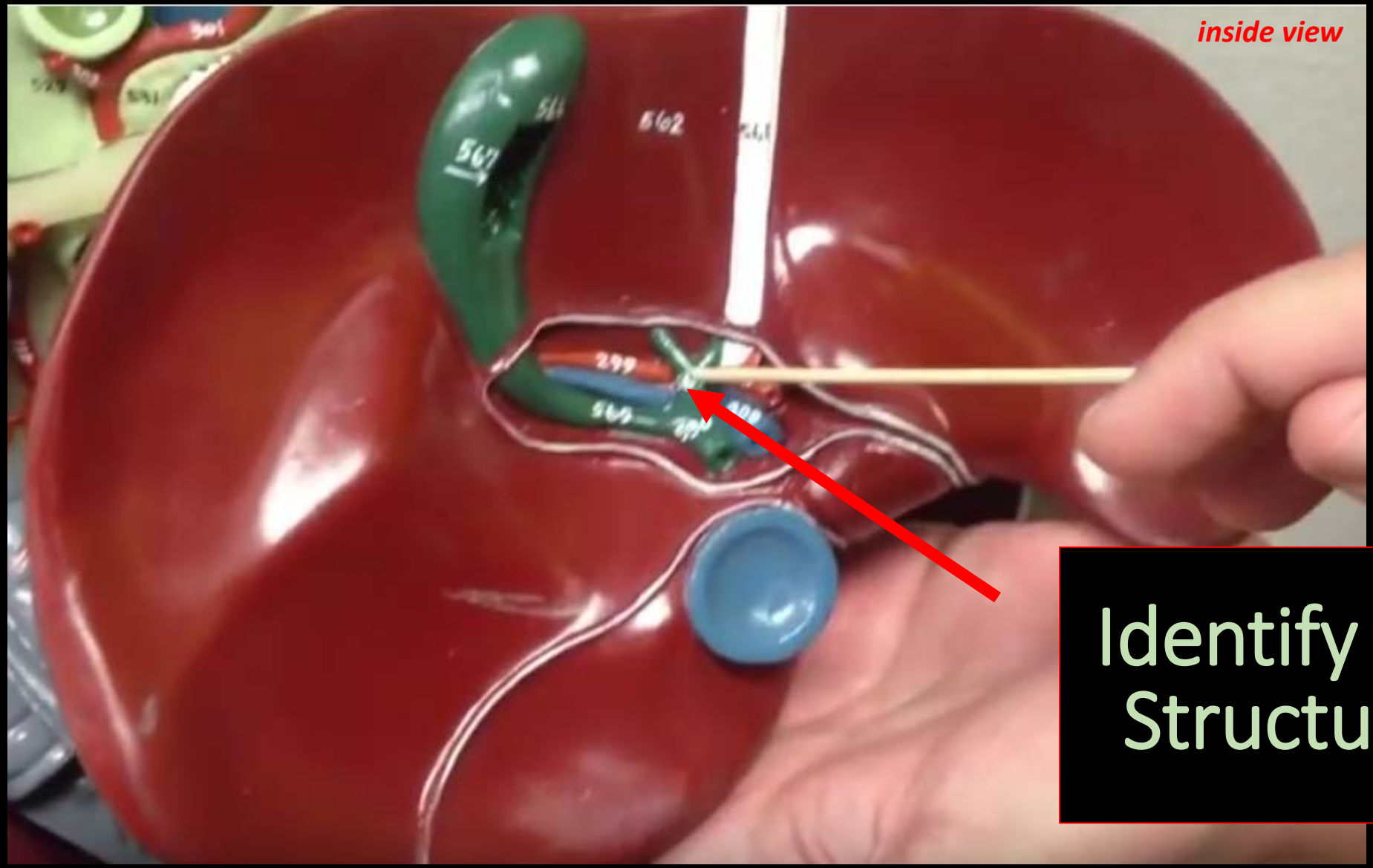

Anal Canal



Identify the Structure.

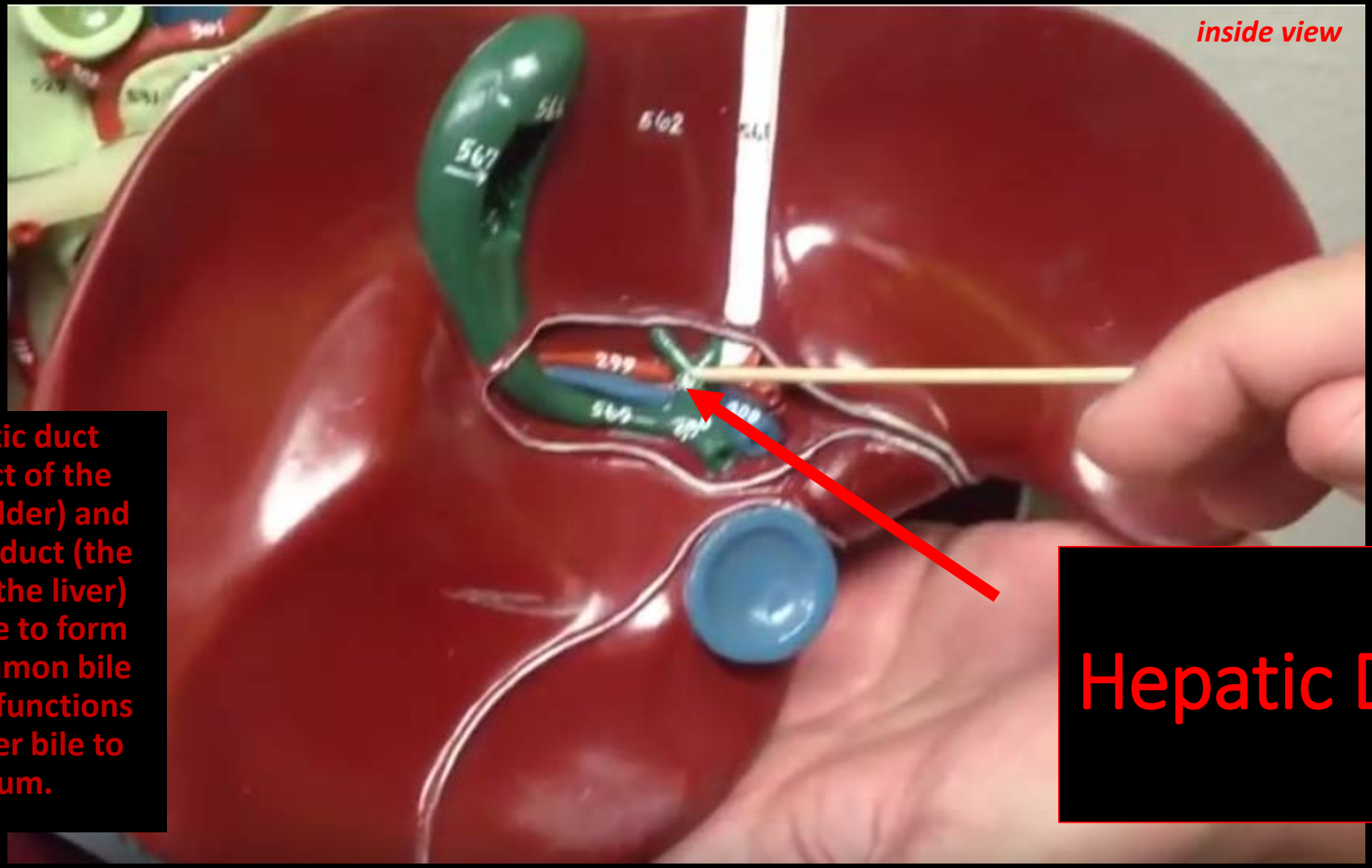

Rectum

LIVER



Identify the Structure.

LIVER

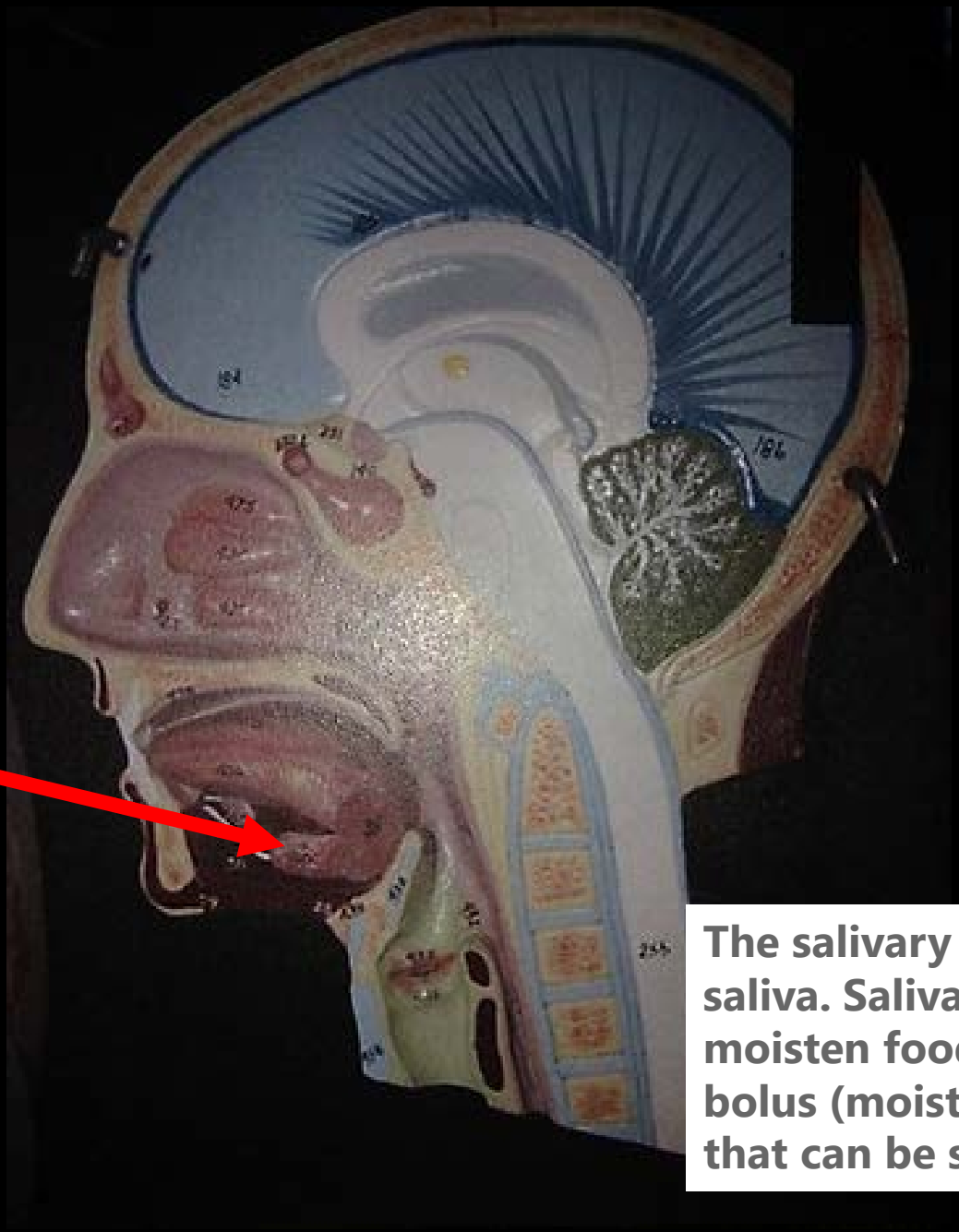


The cystic duct (the duct of the gall bladder) and hepatic duct (the duct of the liver) combine to form the common bile duct. It functions to deliver bile to duodenum.

Hepatic Duct

Identify the Structure and Function.

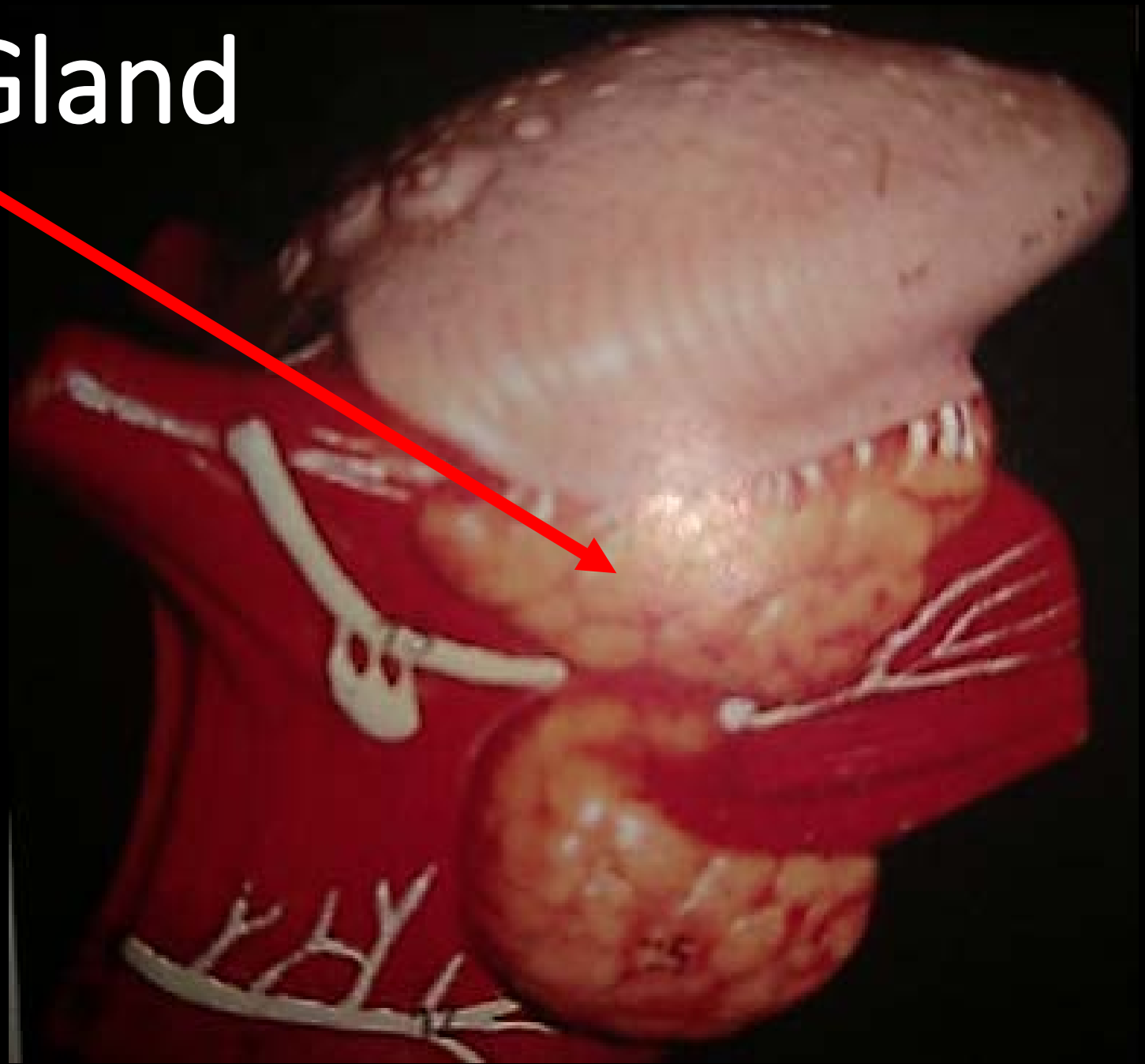
Sublingual Gland



The salivary glands produce saliva. Saliva is necessary to moisten food to create a bolus (moist ball of food that can be swallowed).

Identify the Structure and function.

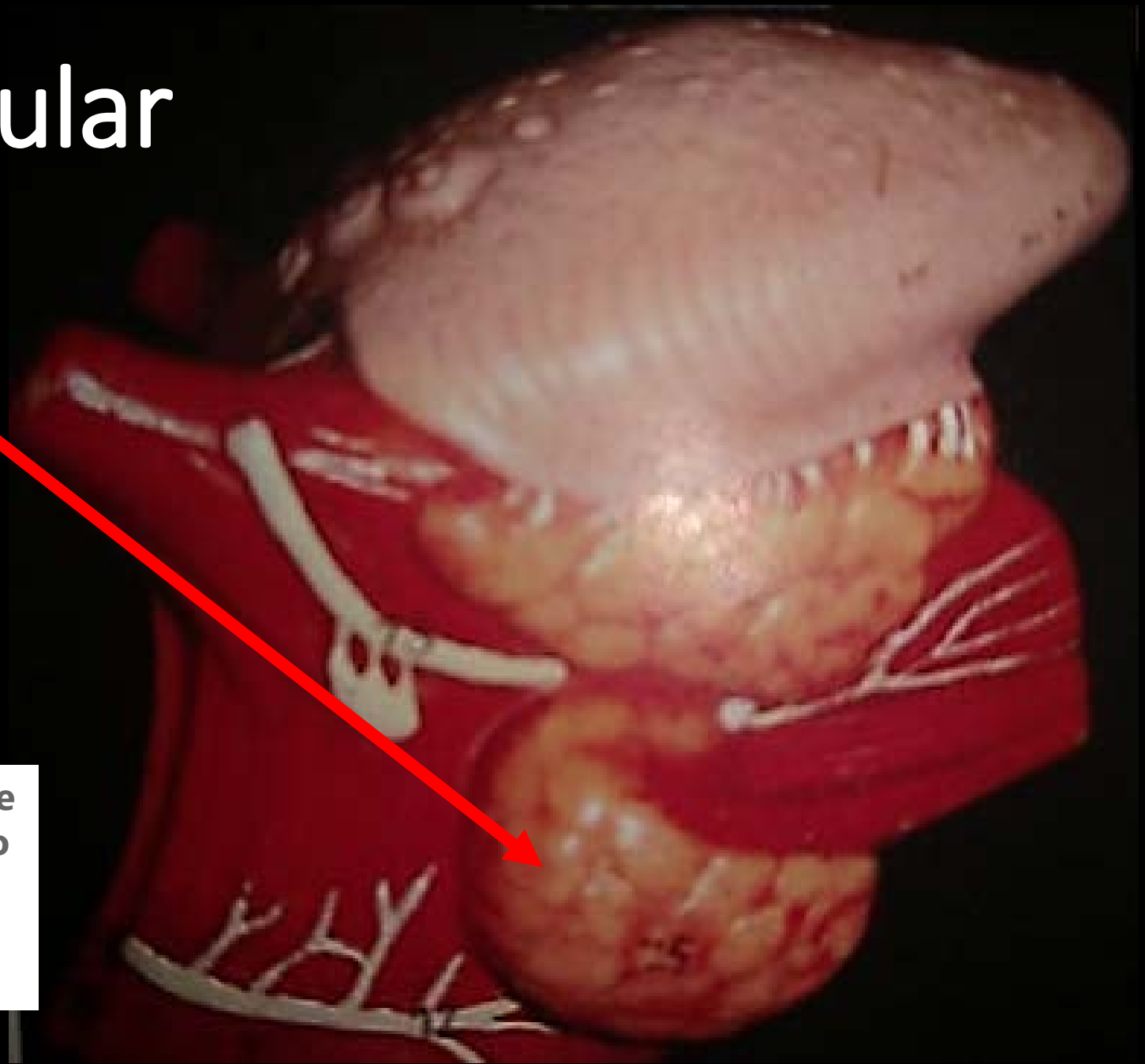
Sublingual Gland



The salivary glands produce saliva. Saliva is necessary to moisten food to create a bolus (moist ball of food that can be swallowed).

Identify the Structure and function.

Submandibular Gland



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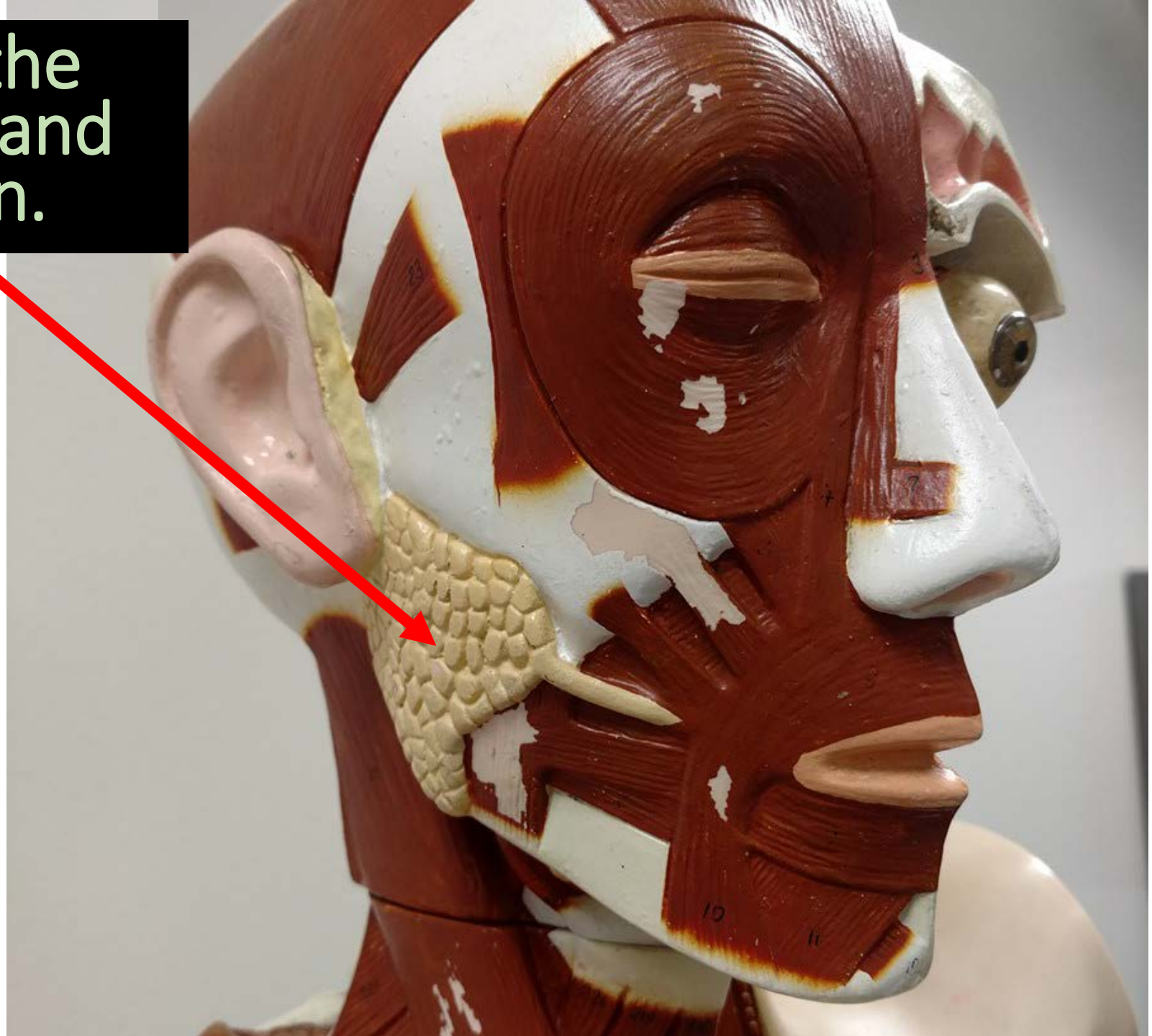
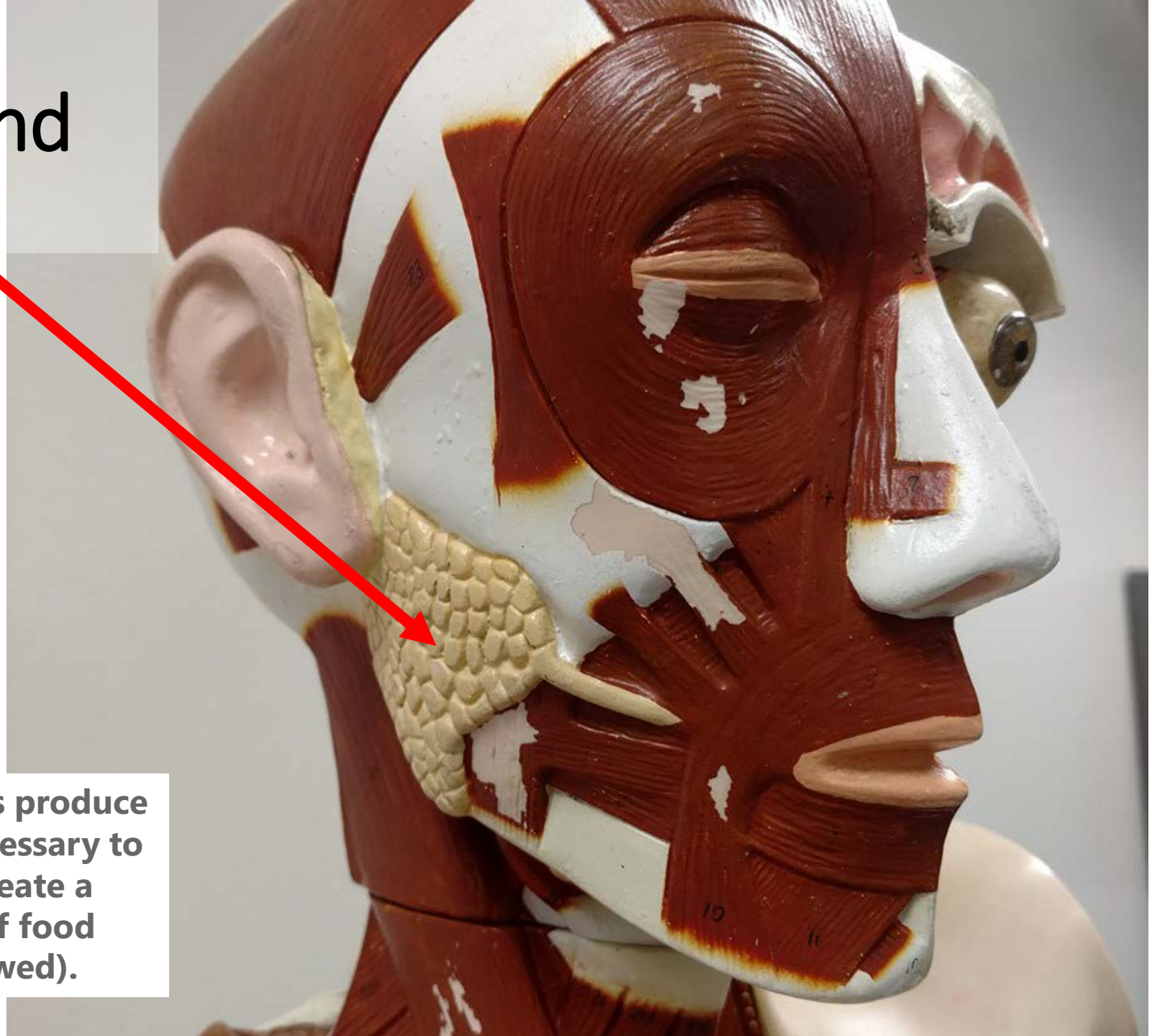
Identify the Structure and Function.



Parotid Gland



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Identify the Structure and Function.

Submandibular Gland

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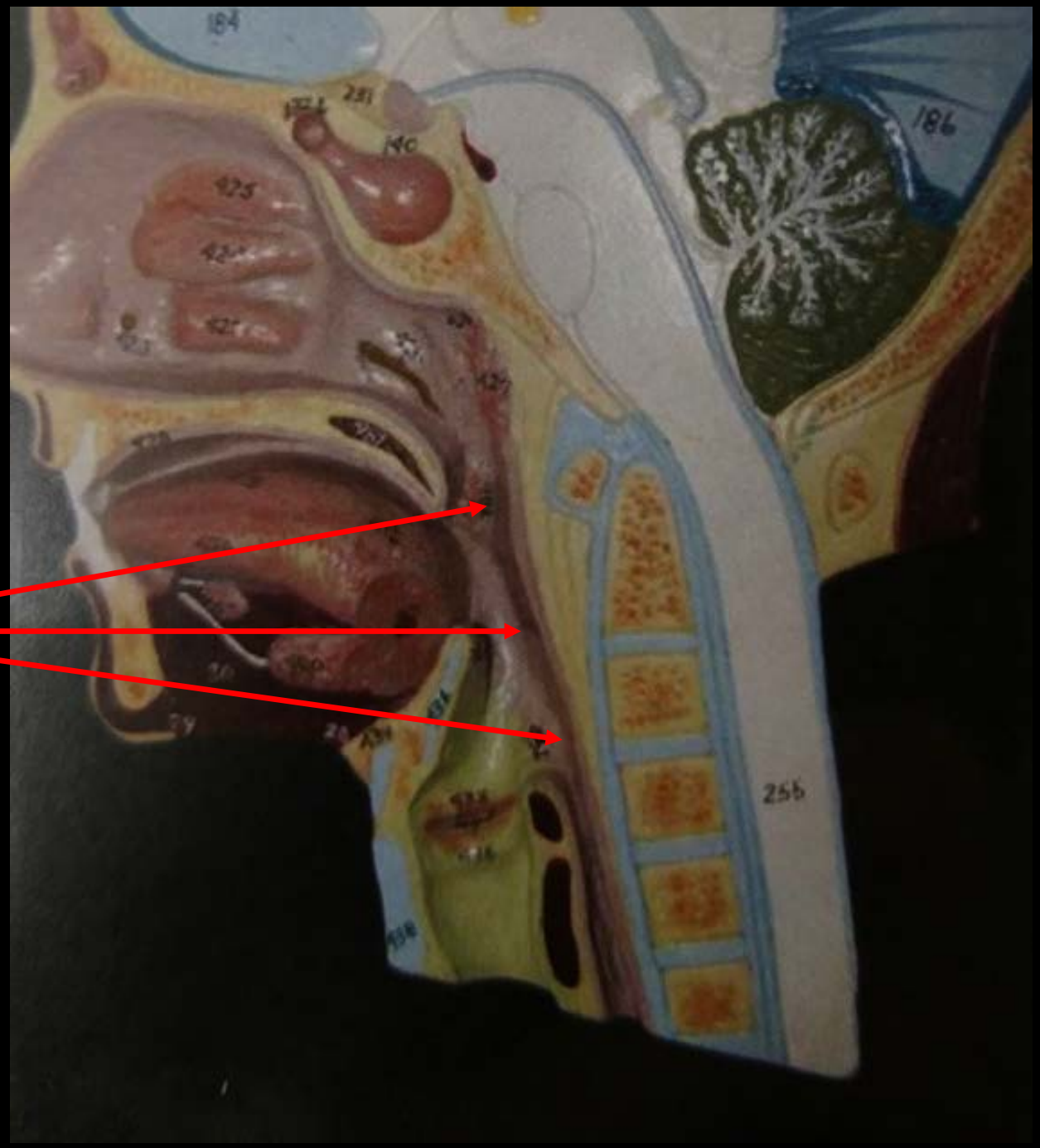
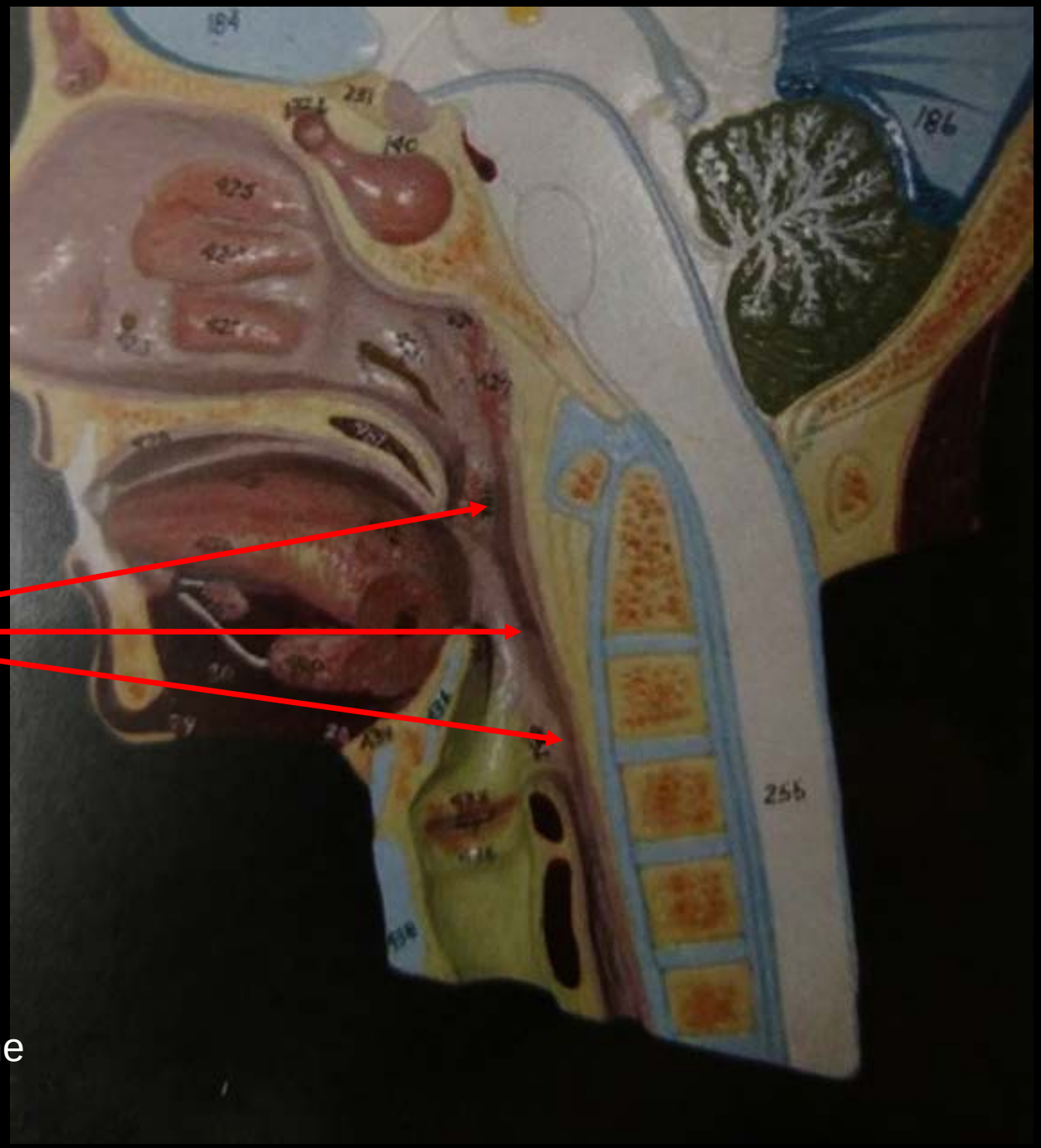
Identify the Structure and Function.



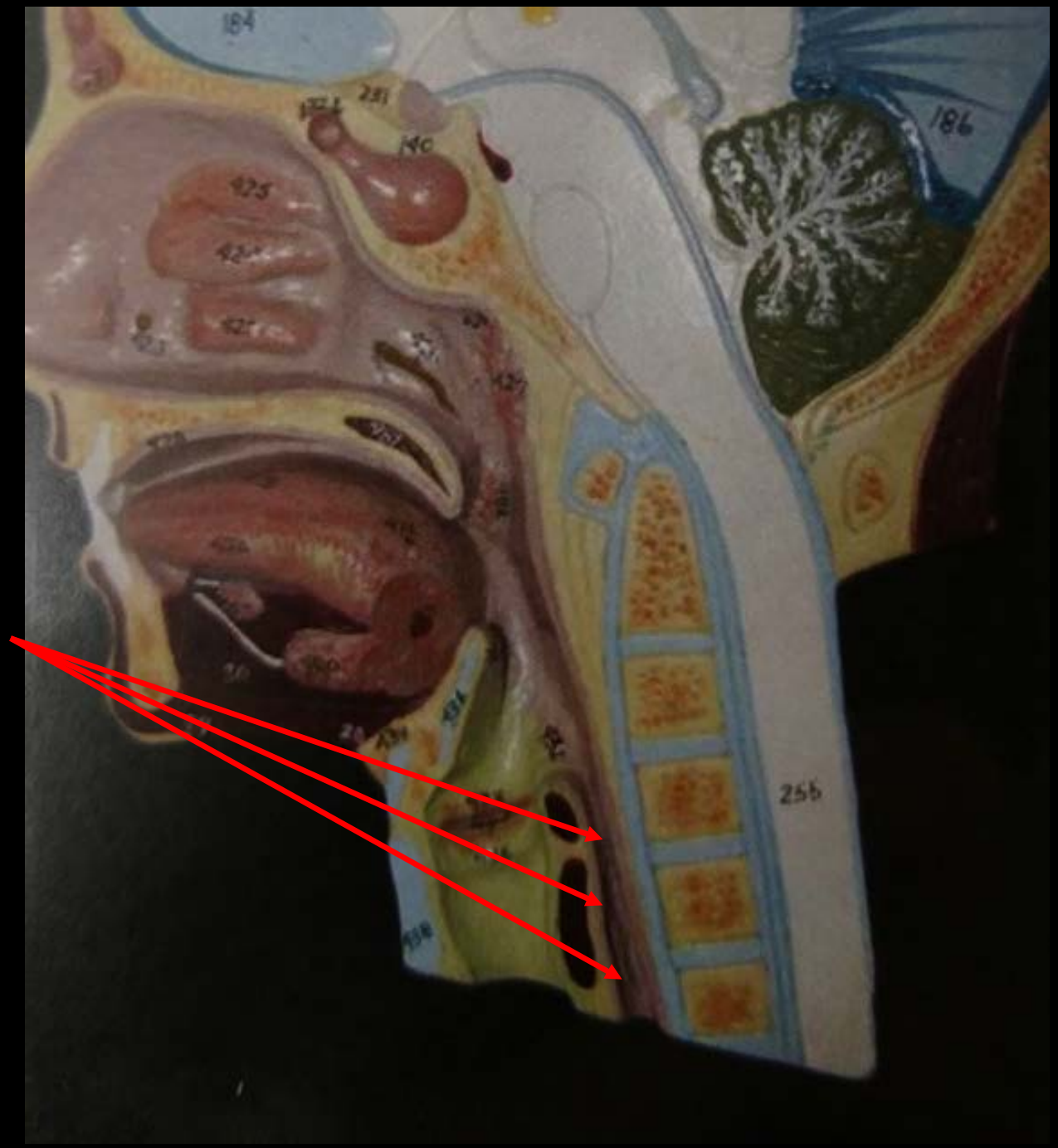
Pharynx (Throat)



The function of the **pharynx** is to

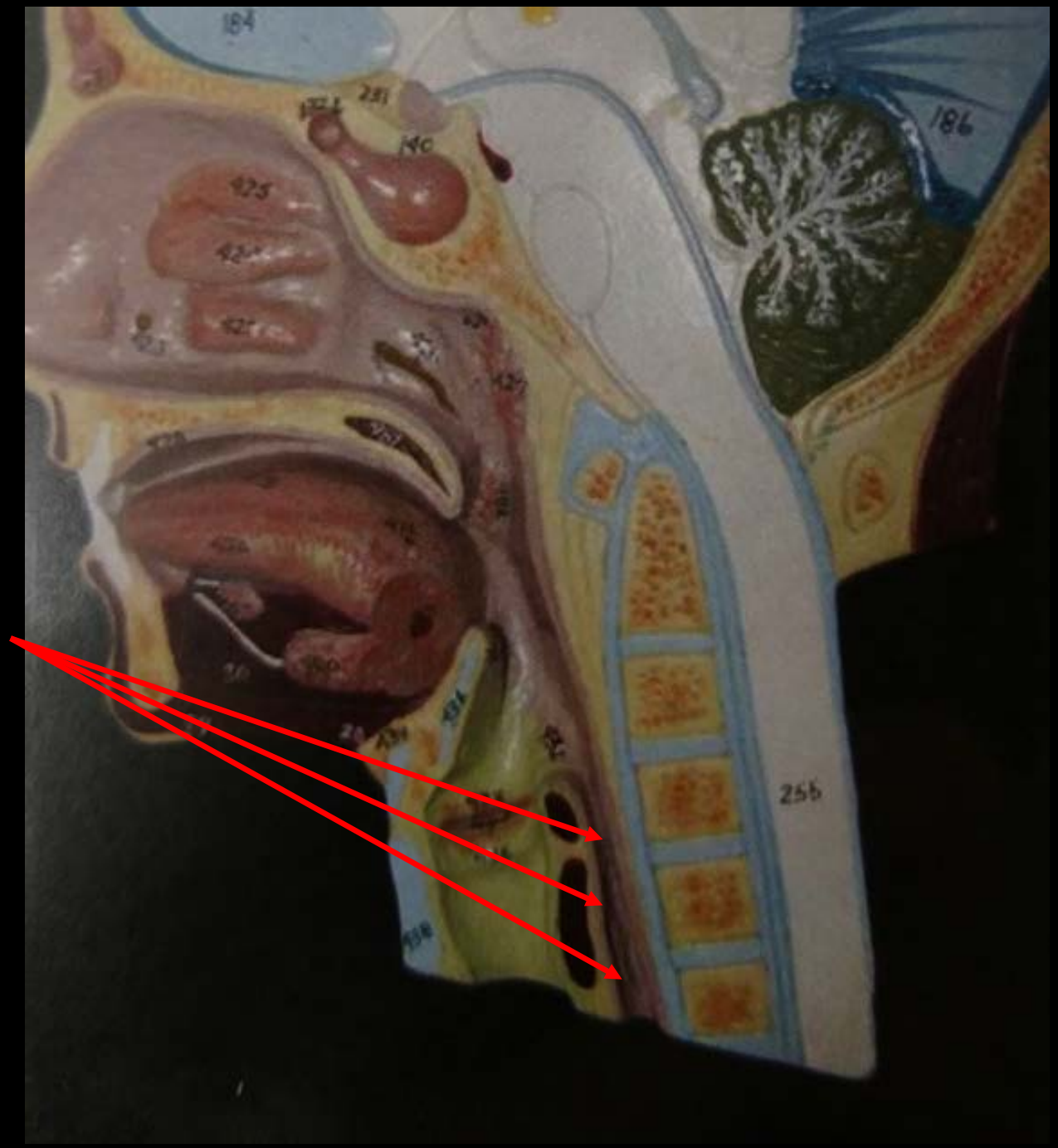
1. Transfer food from the mouth to the esophagus
2. Warm, moisten and filter air before it moves into the trachea

Identify the Structure and Function.

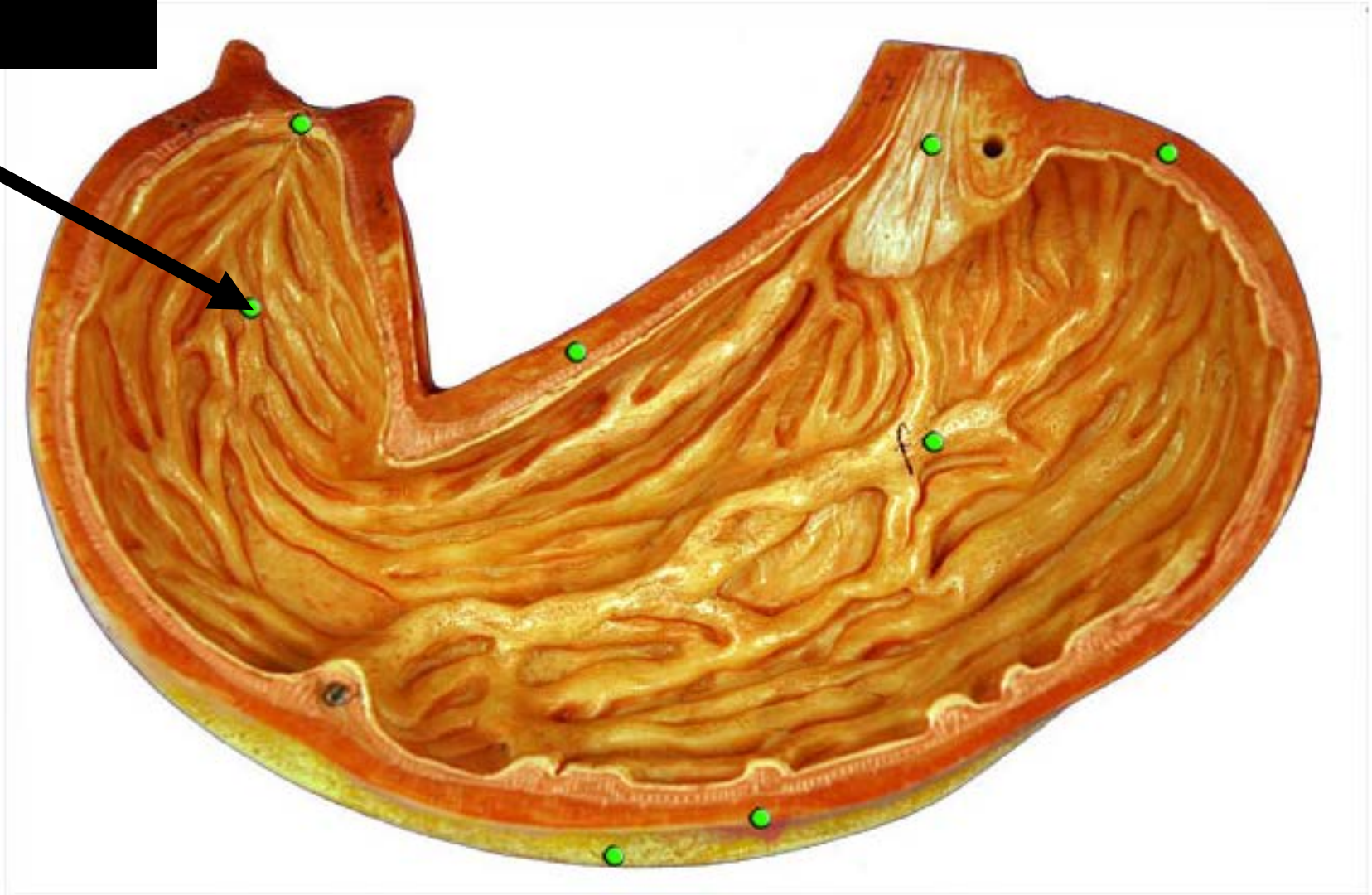


Esophagus

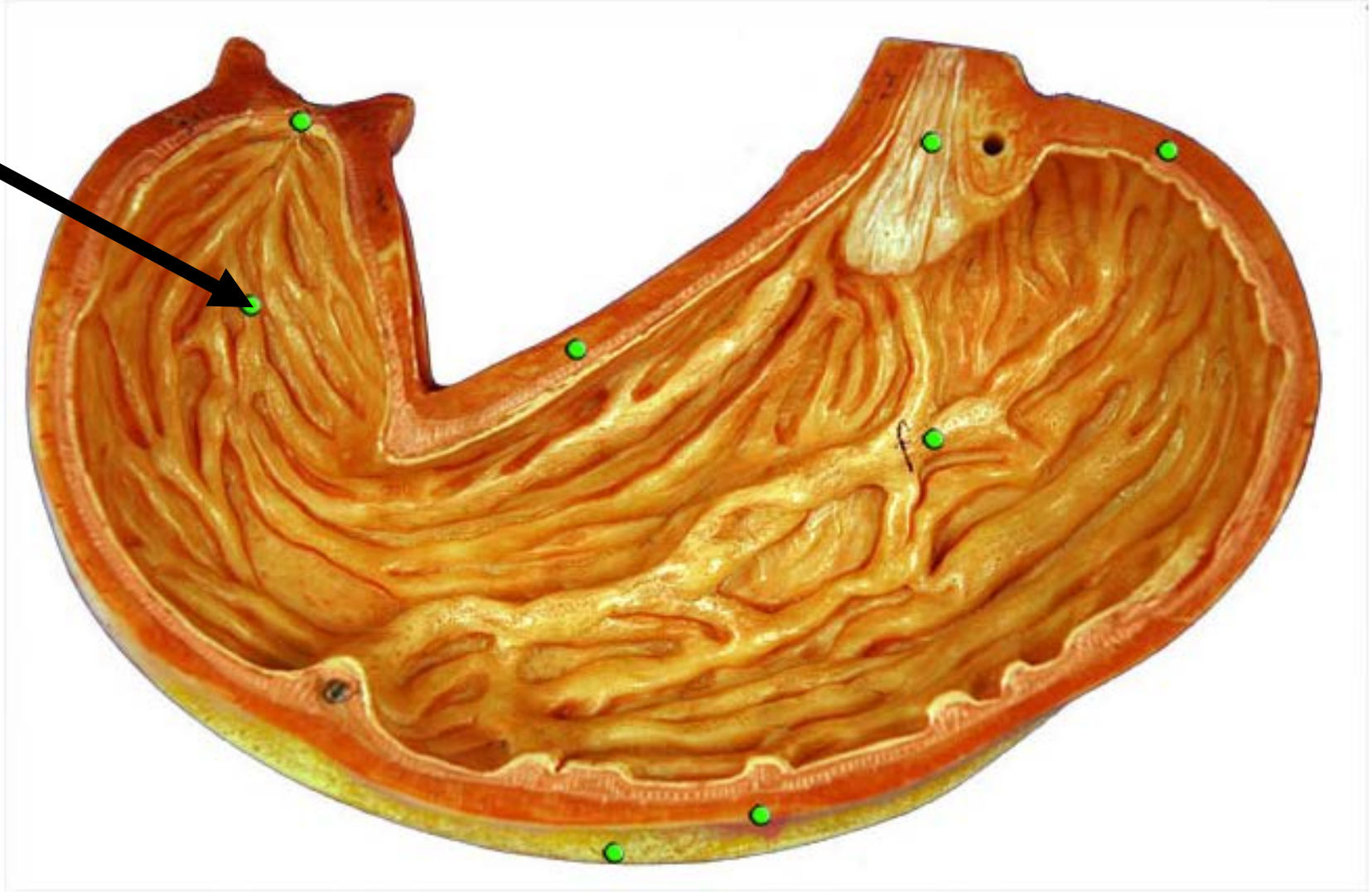
The function of
the esophagus is to carry
food, liquids, and saliva
from the pharynx to the
stomach.



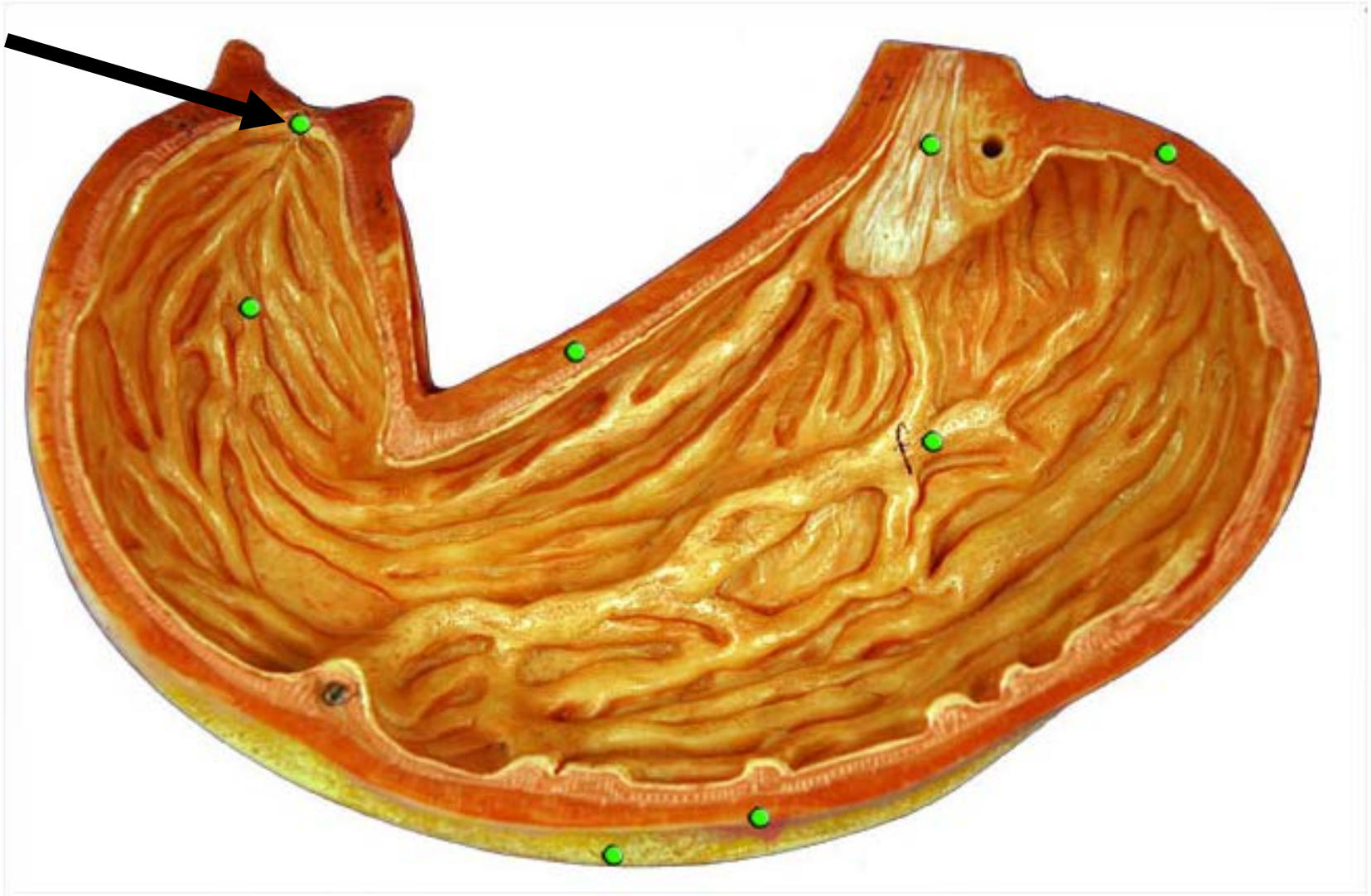
Identify the Structure.



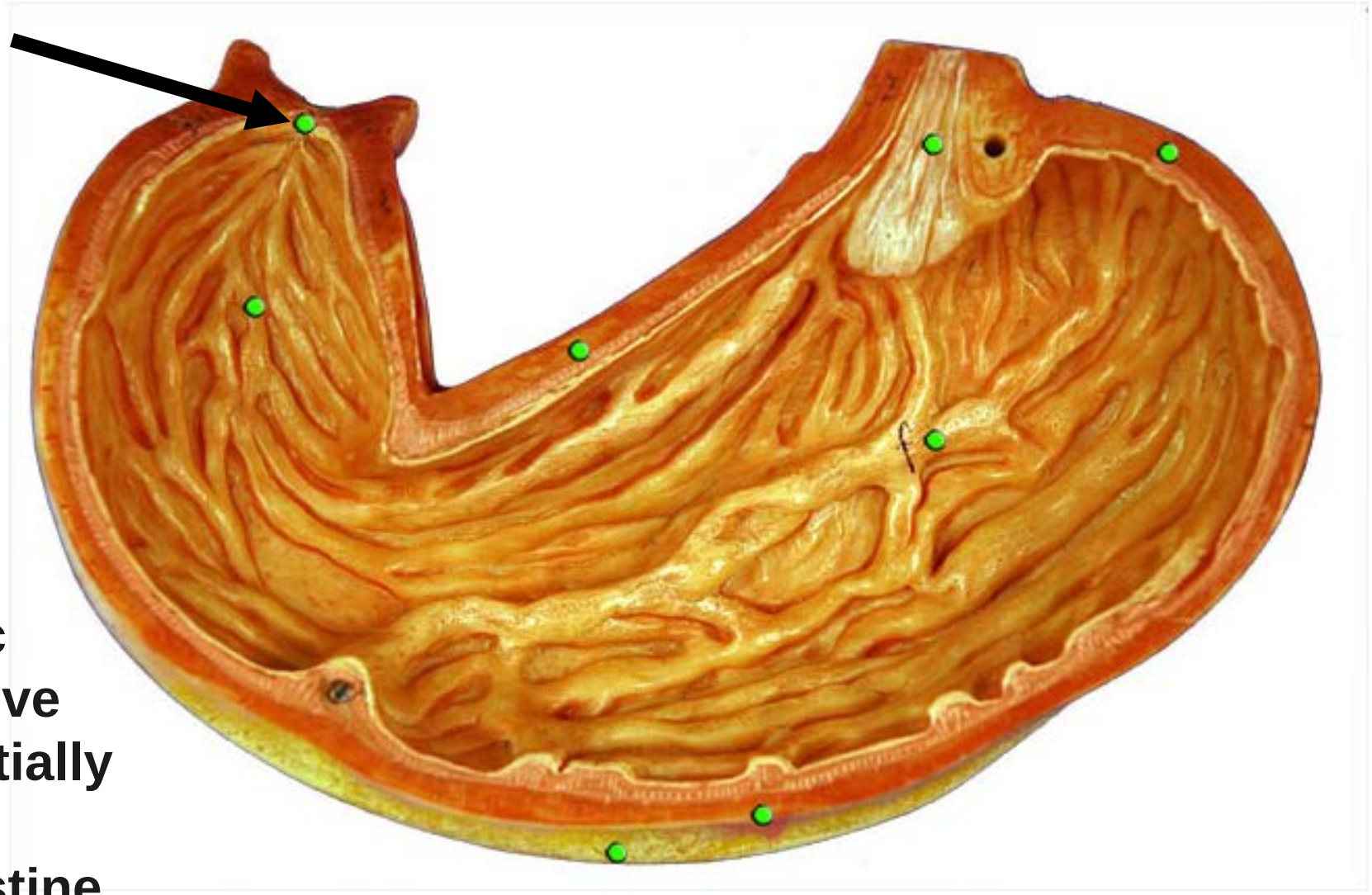
Pyloric Region



Identify the Structure and Function.

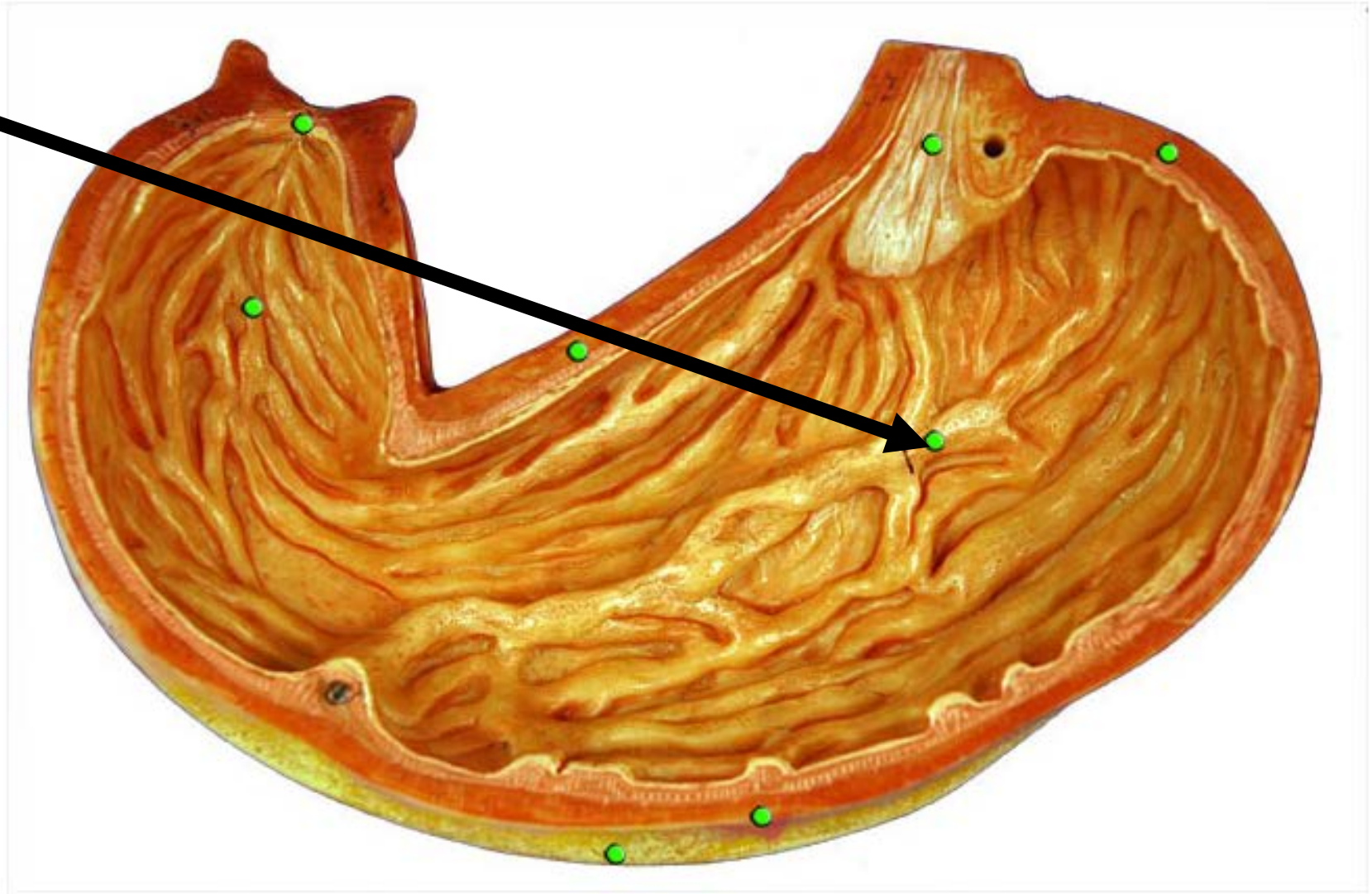


Pyloric Sphincter



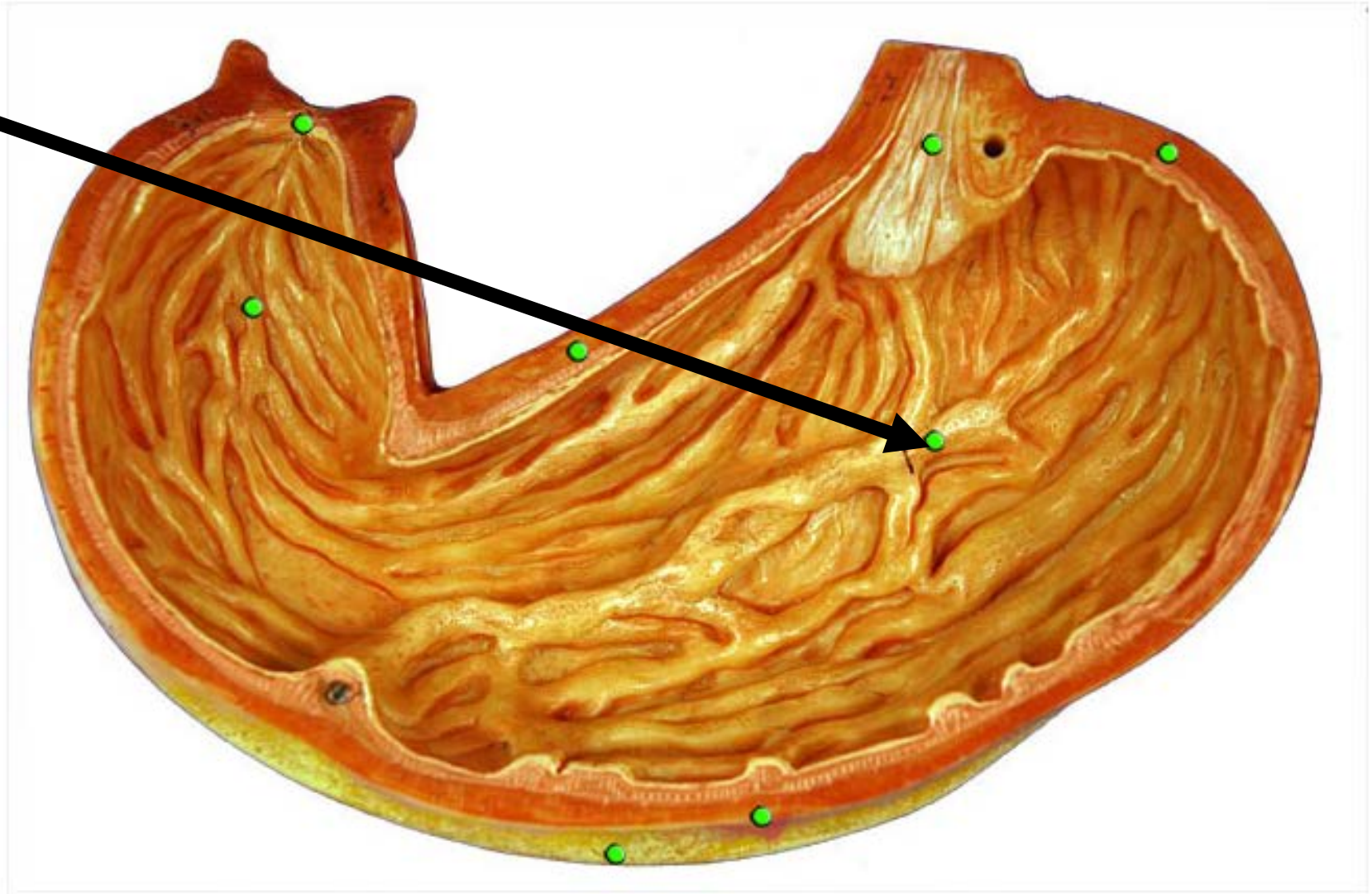
The function of the pyloric sphincter is to act as a valve to controls the flow of partially digested food from the stomach to the small intestine.

Identify the Structure.
(large folds)

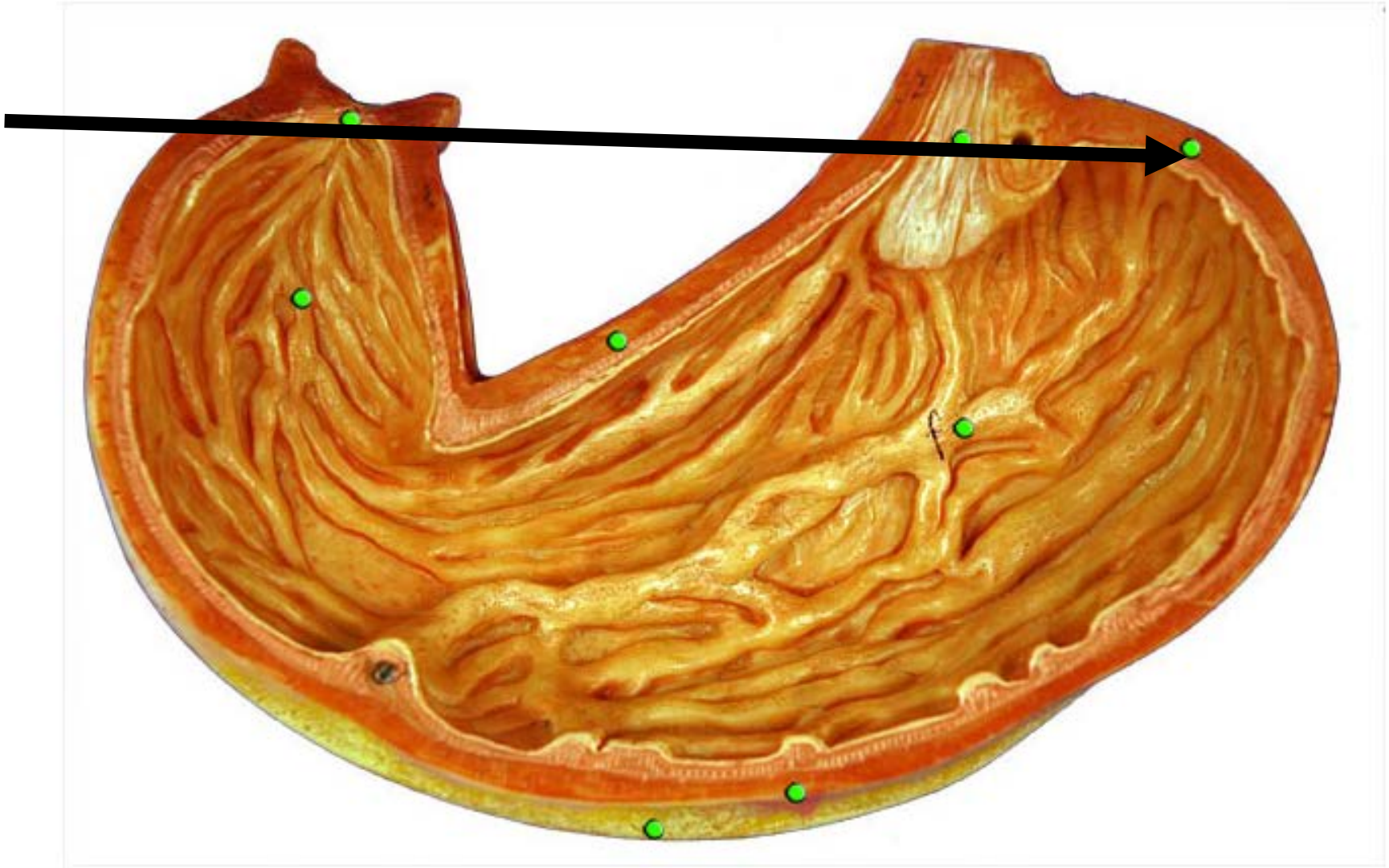


Muscles that Allow Churning of the Stomach

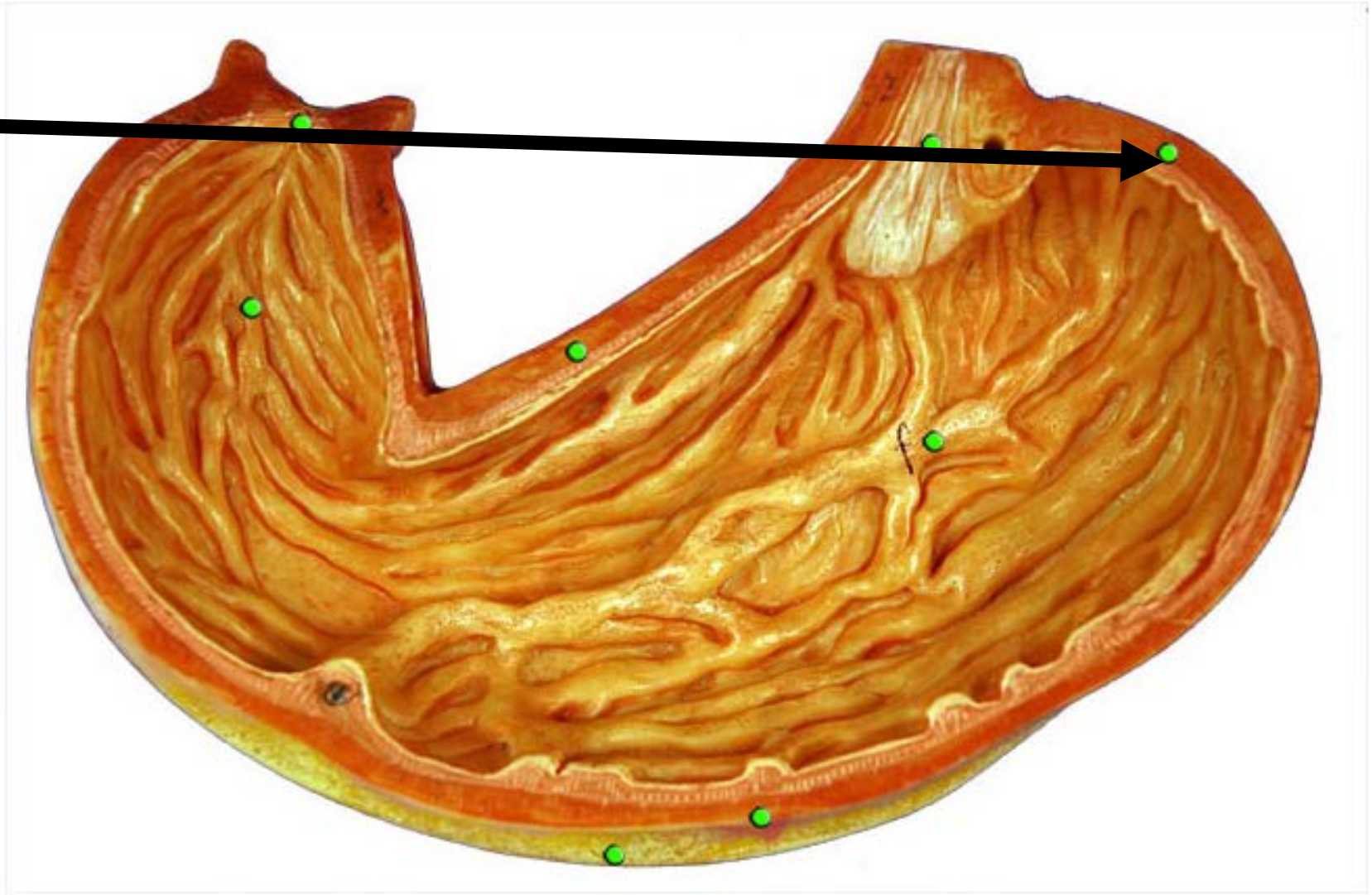
Rugae
(large folds)



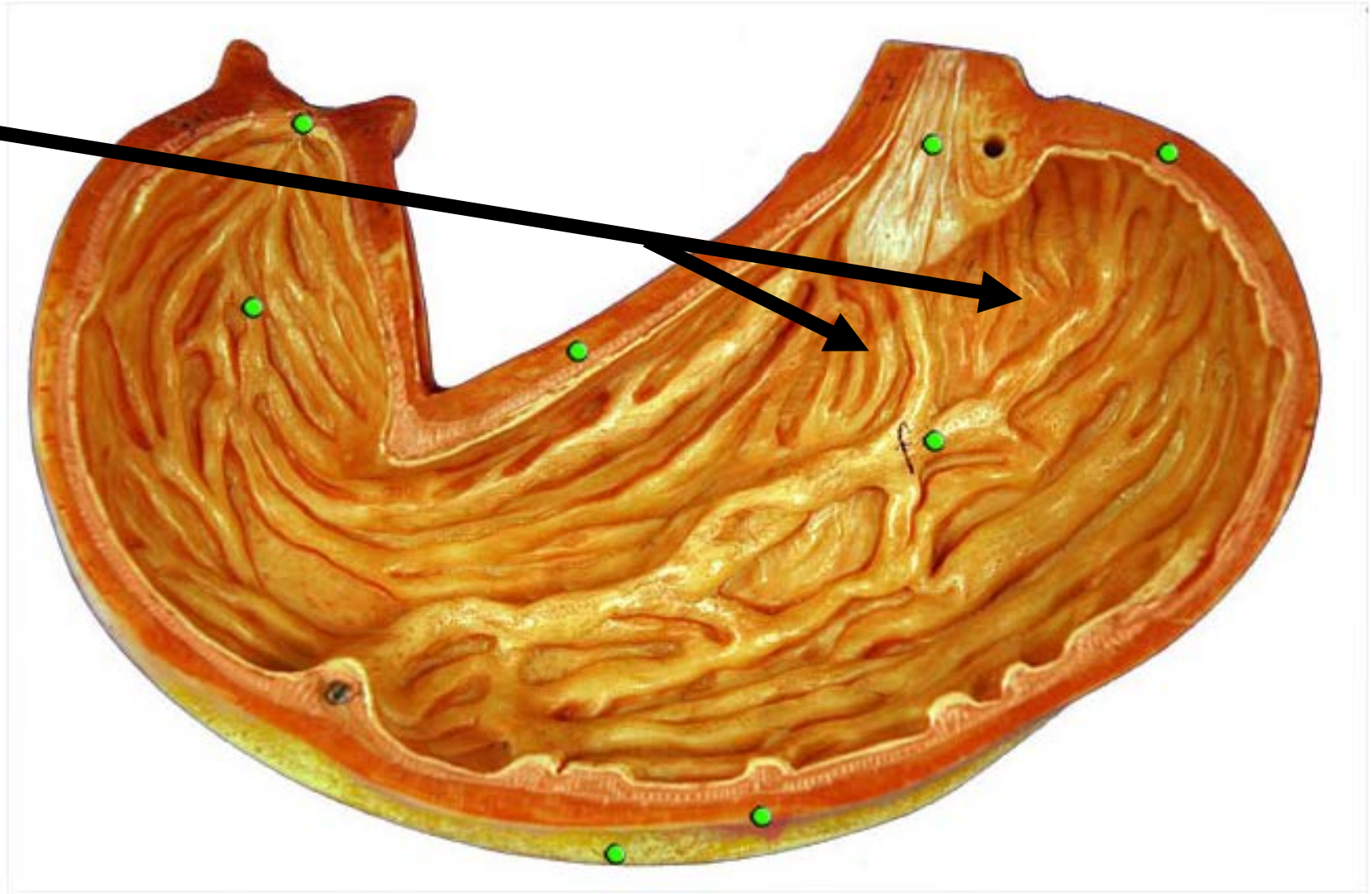
Identify the Structure.



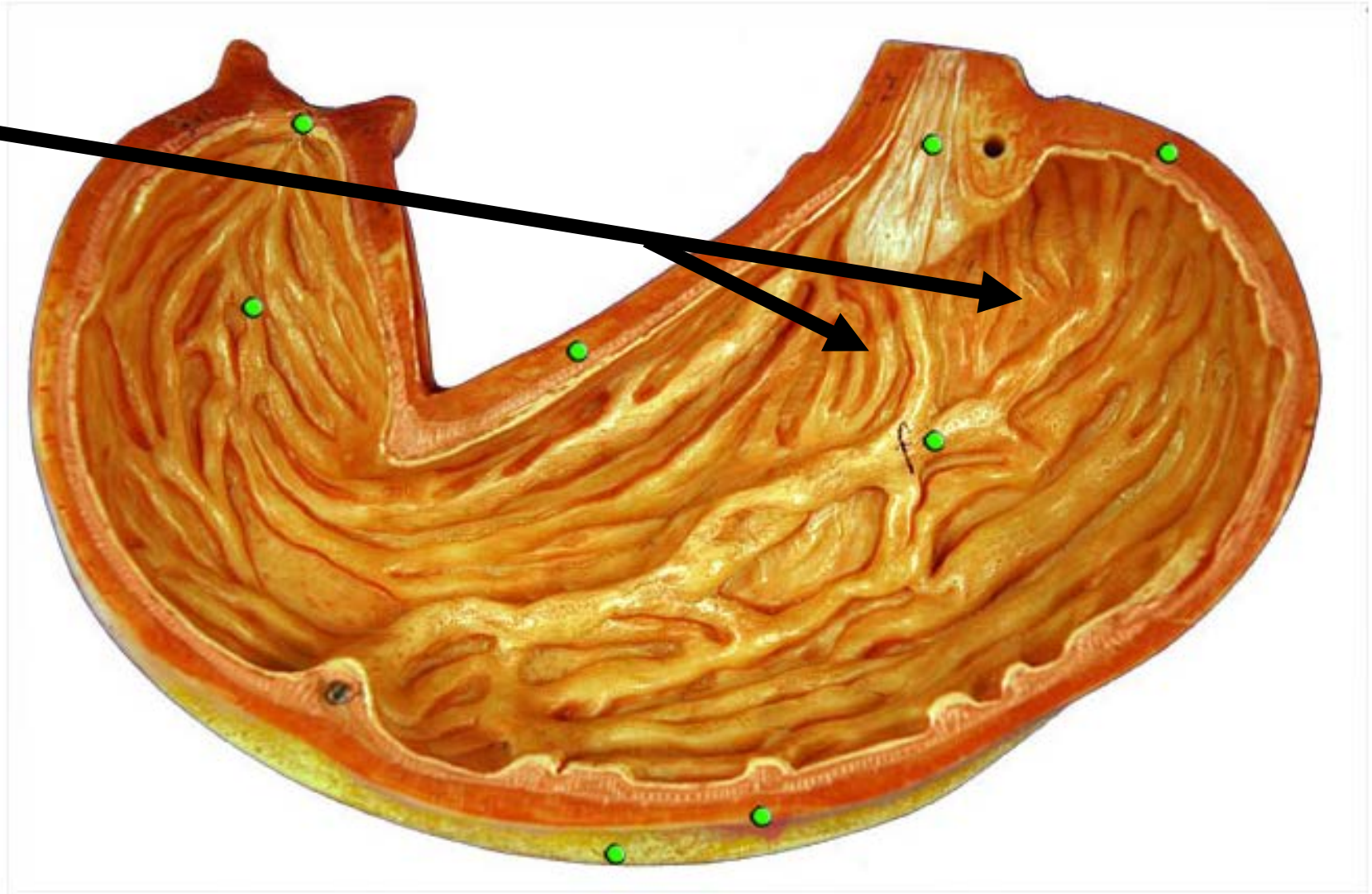
Fundus (aka)
Fundic
Region



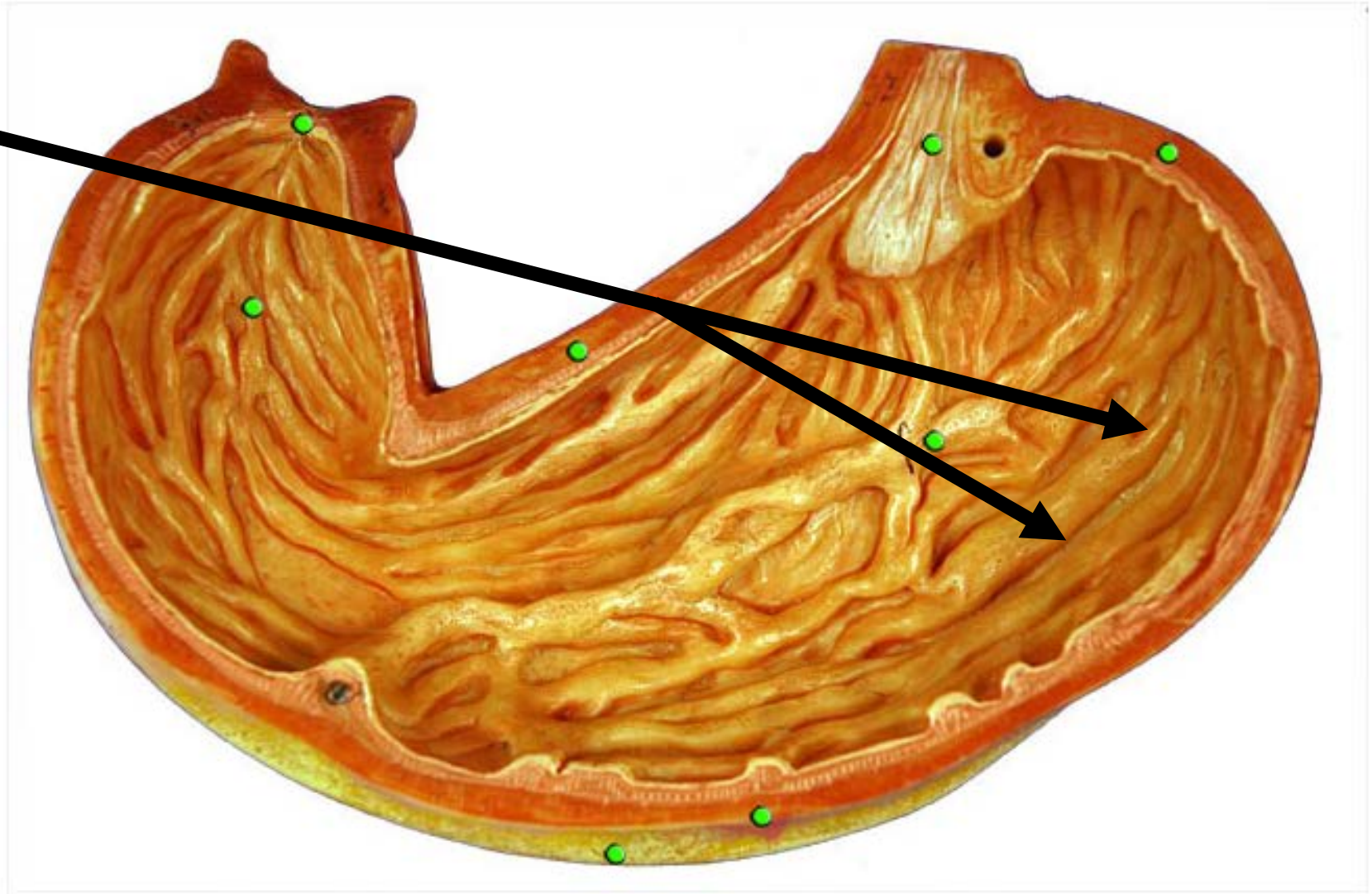
Identify the Structure.



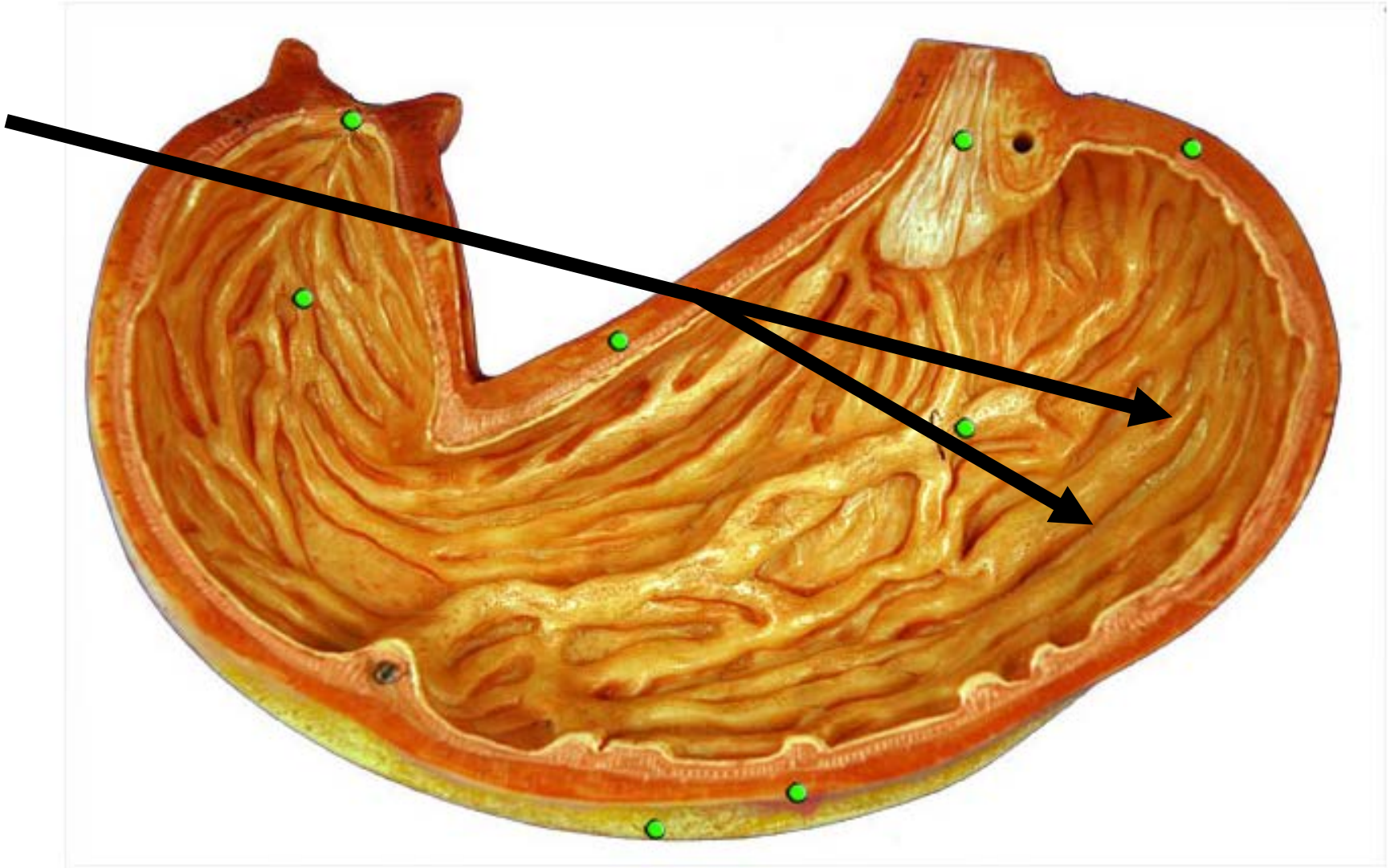
Cardiac Region



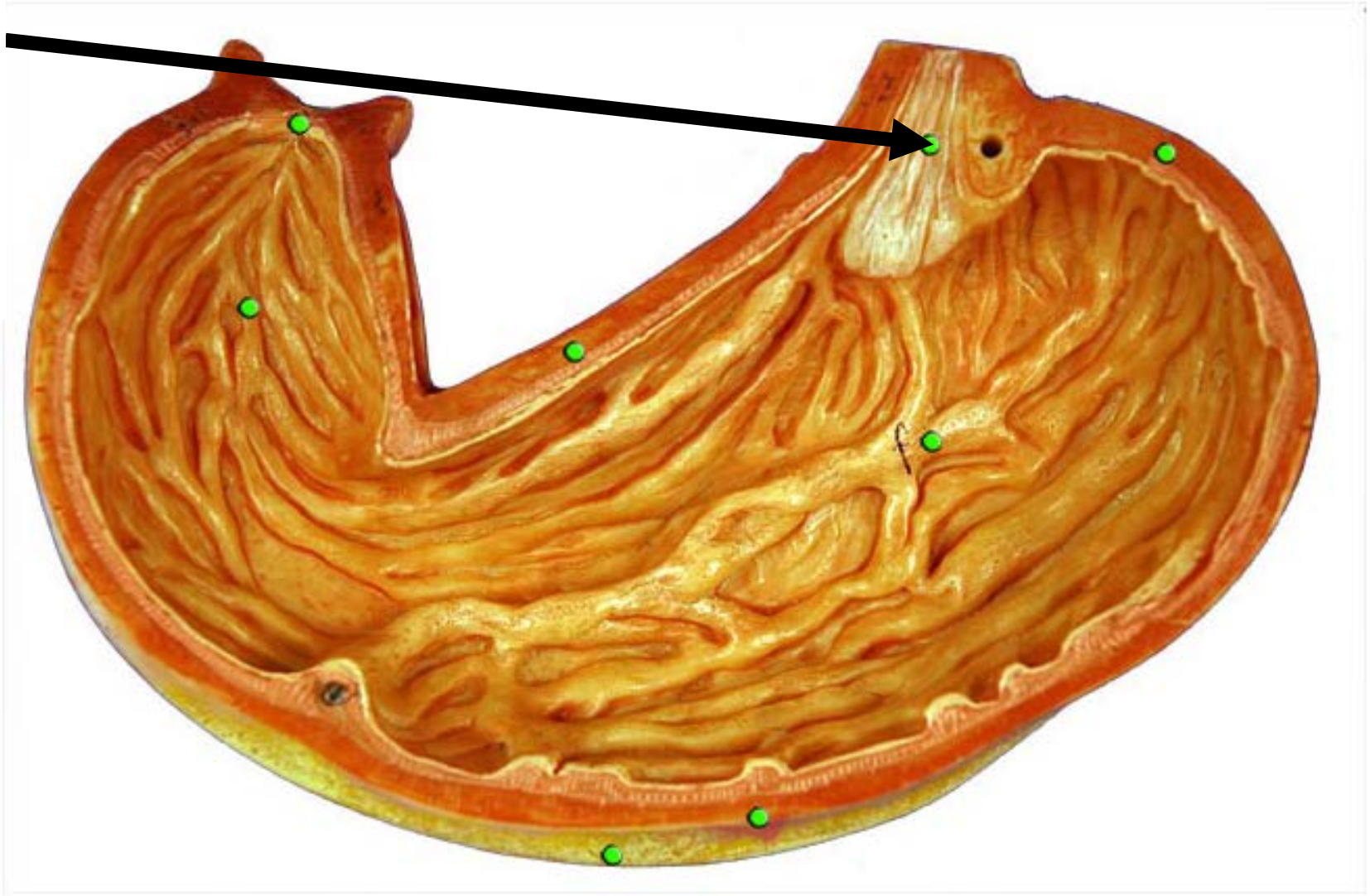
Identify the Structure.



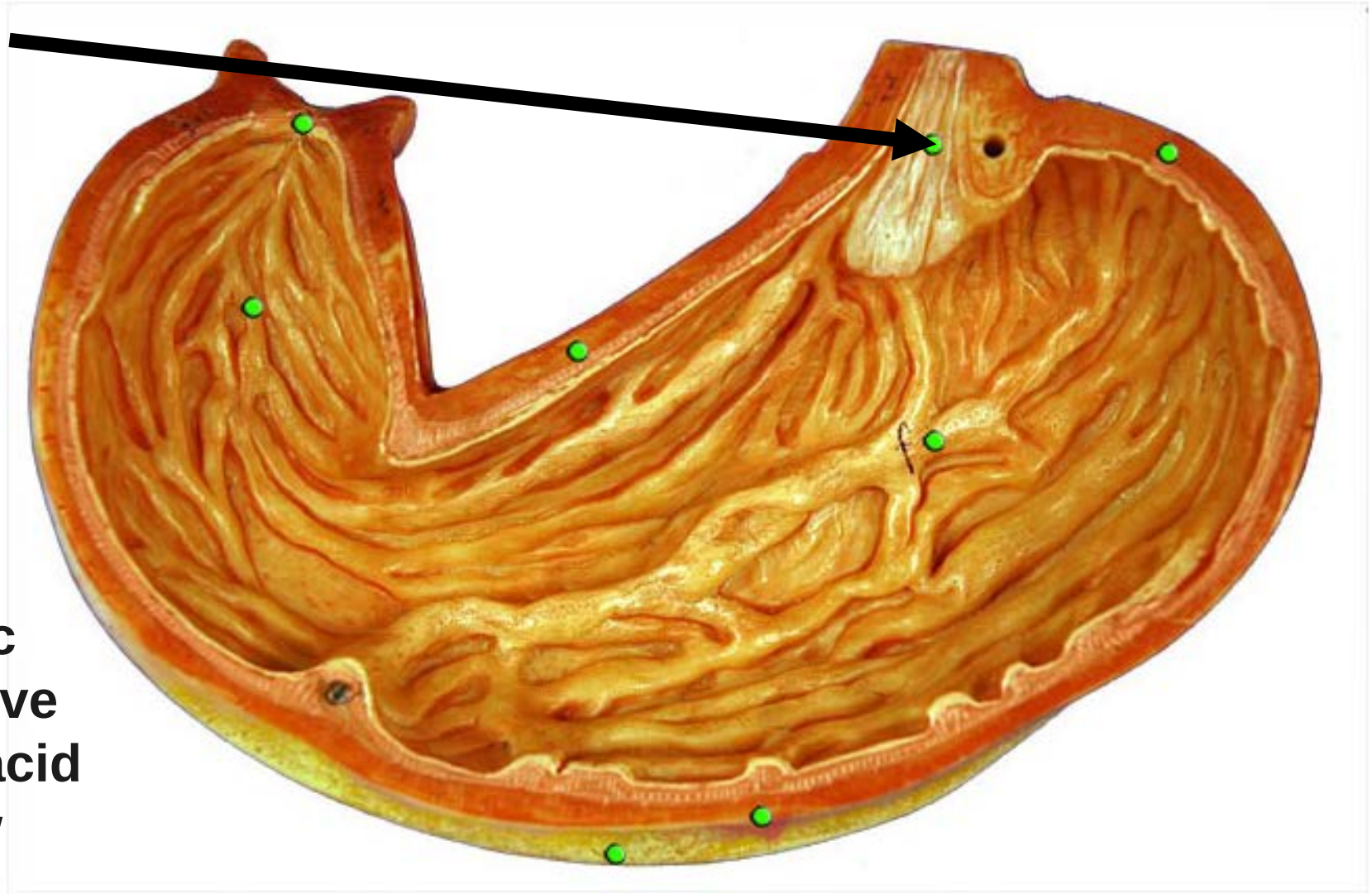
Body Region



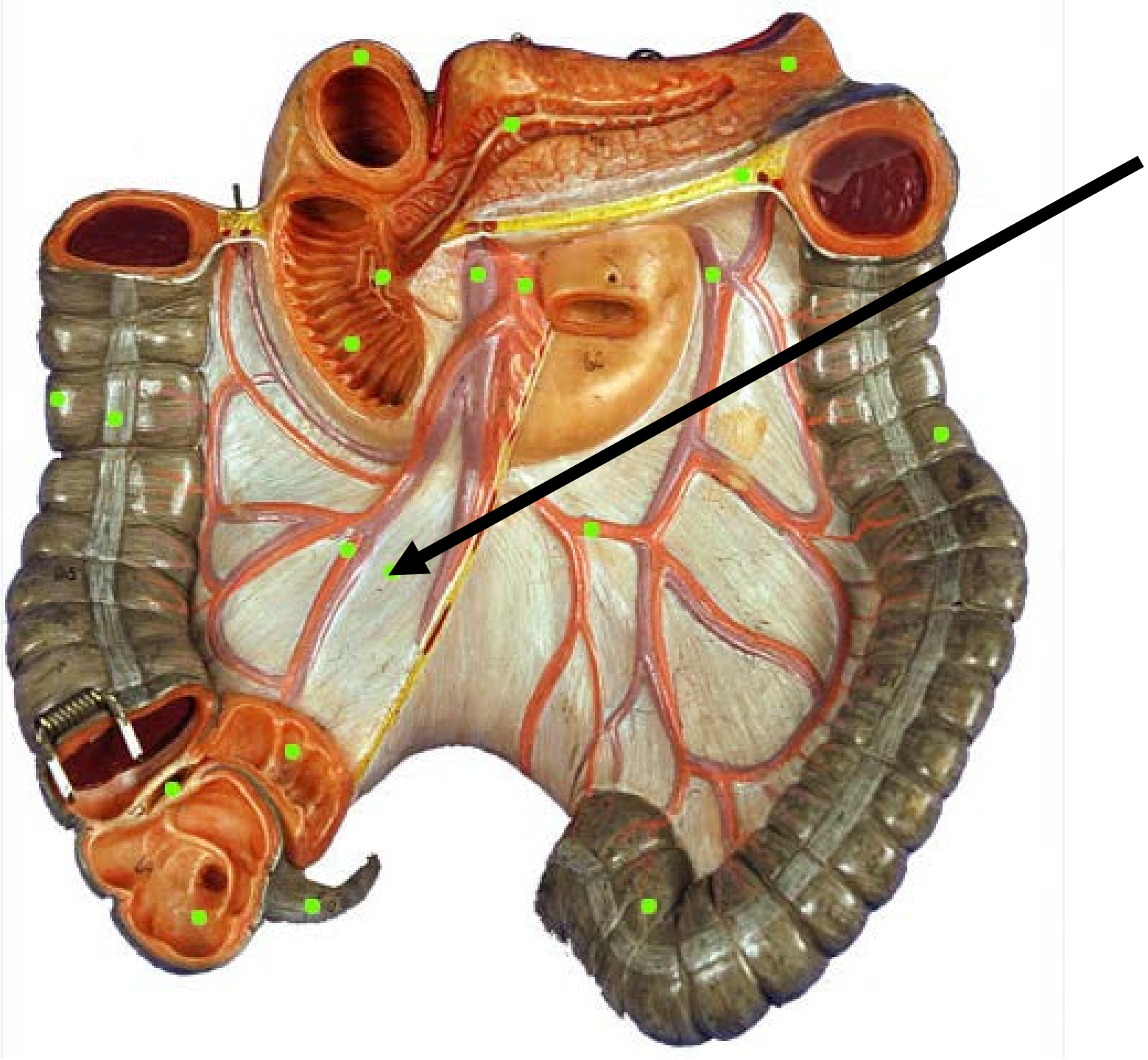
Identify the Structure and Function.



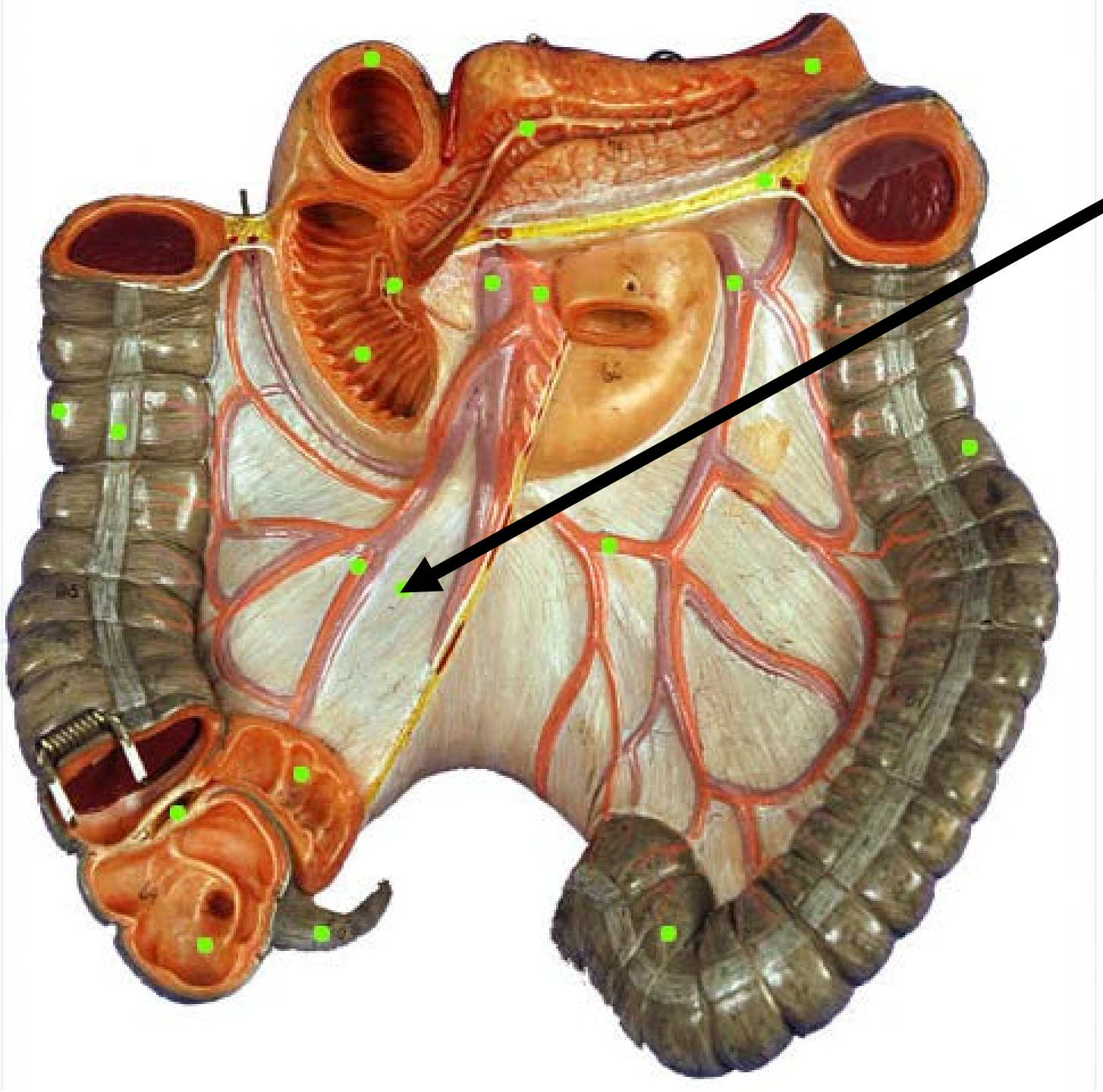
Cardiac Sphincter



The function of the cardiac sphincter is to act as a valve that contracts to prevent acid reflux and relaxes to allow food to pass.

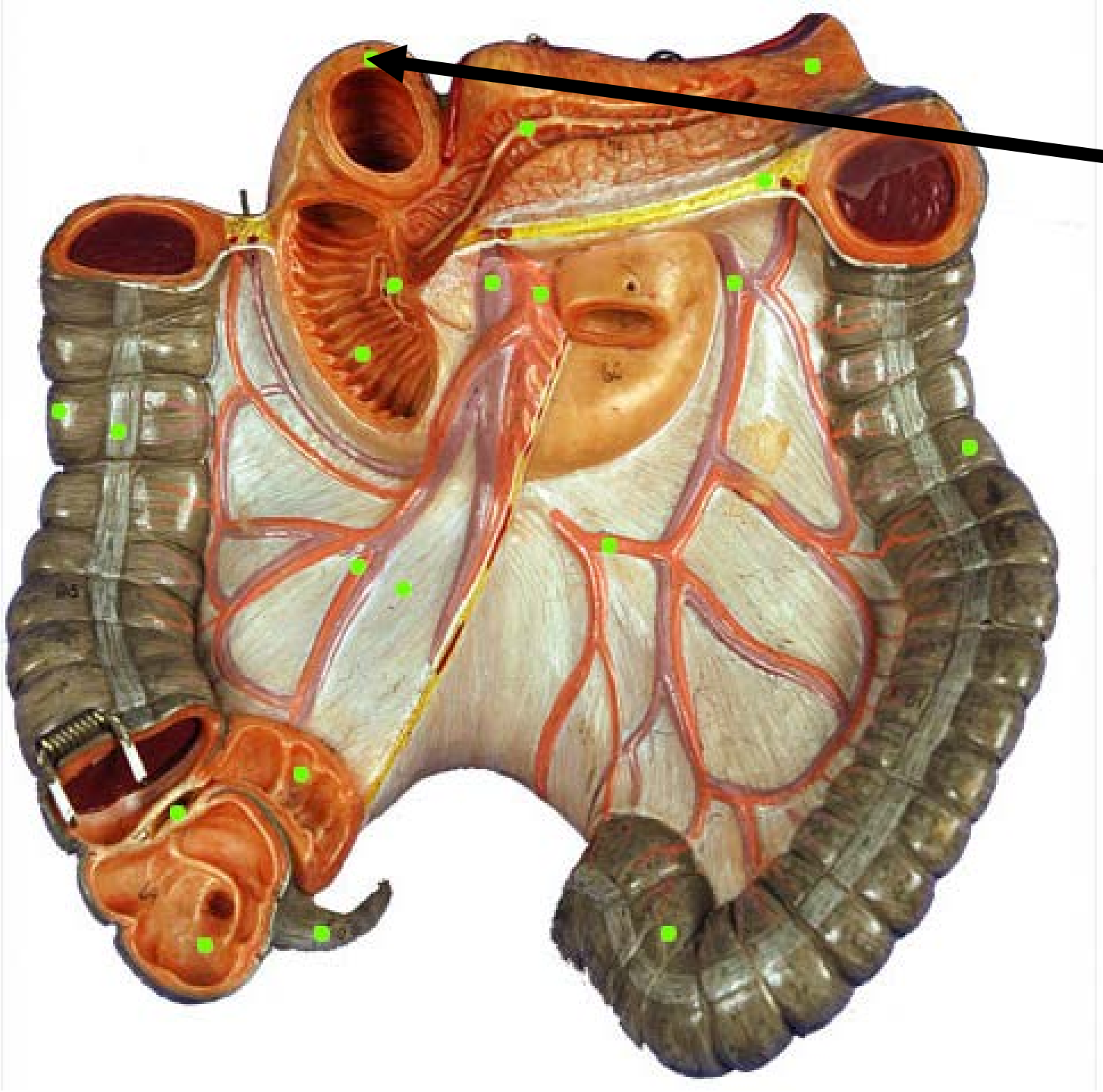


Identify the Structure.

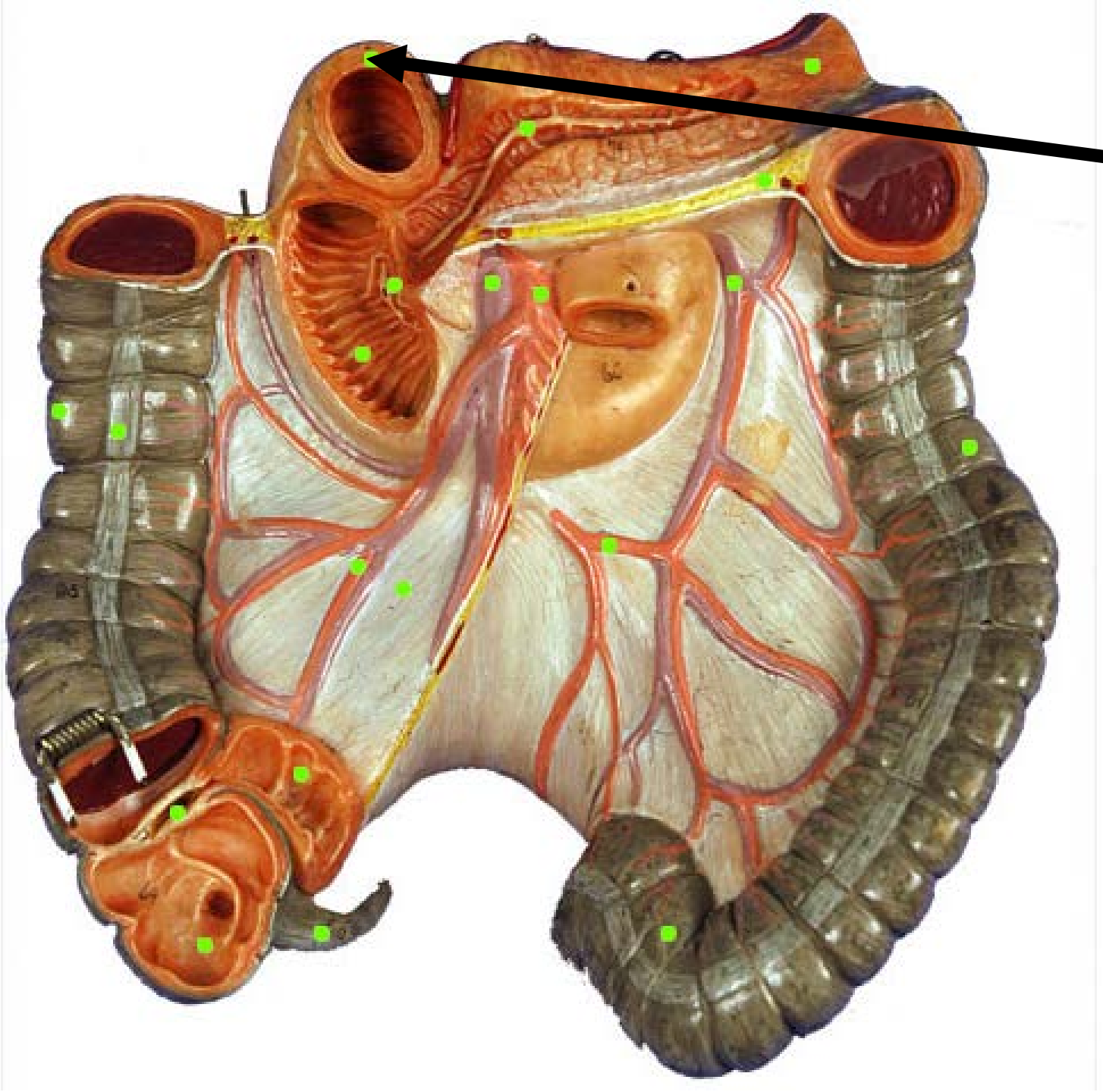


Mesentery

Attaches the small intestine to the abdominal wall and covers visceral organs.

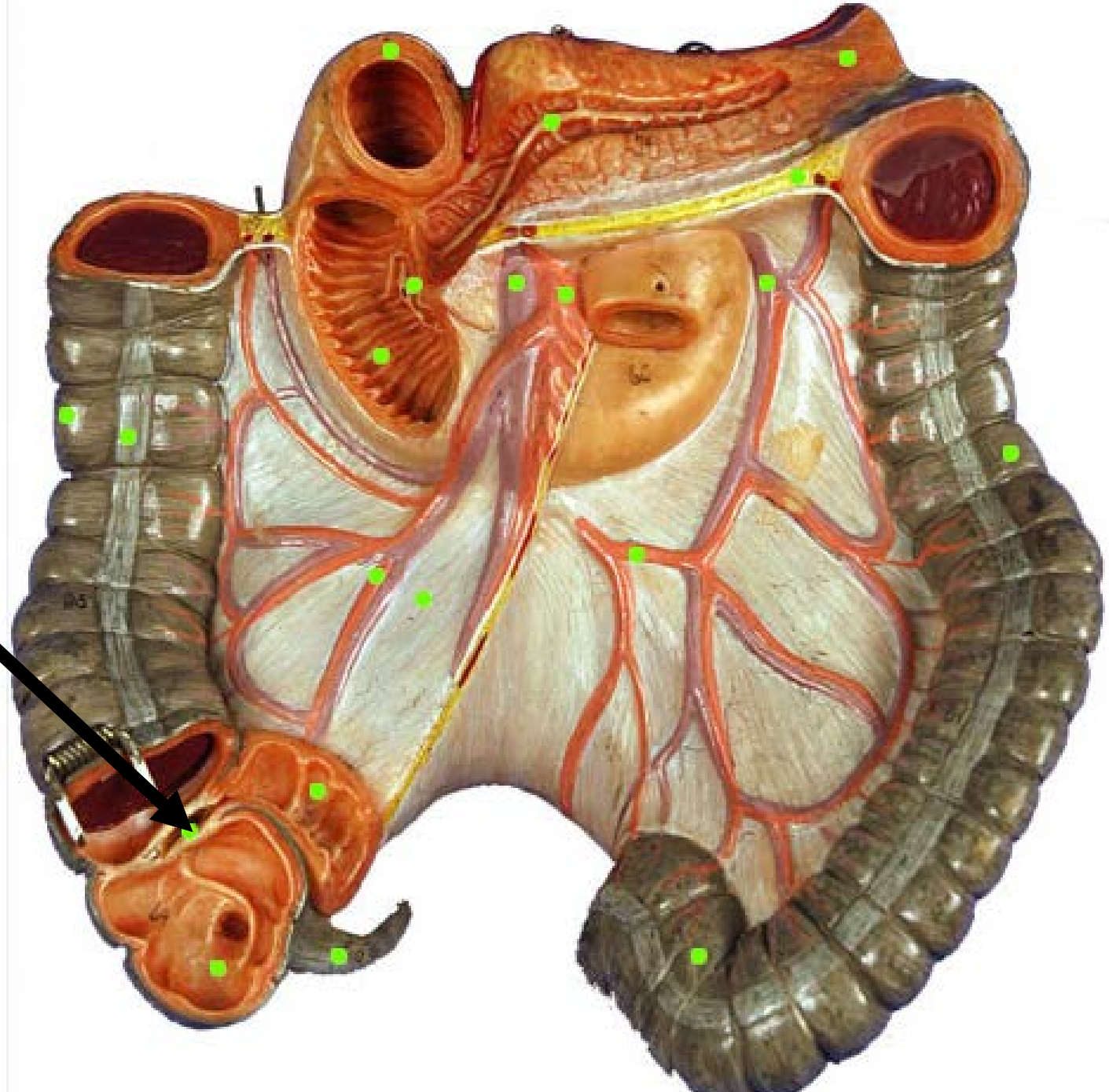


Identify the Structure (be specific).

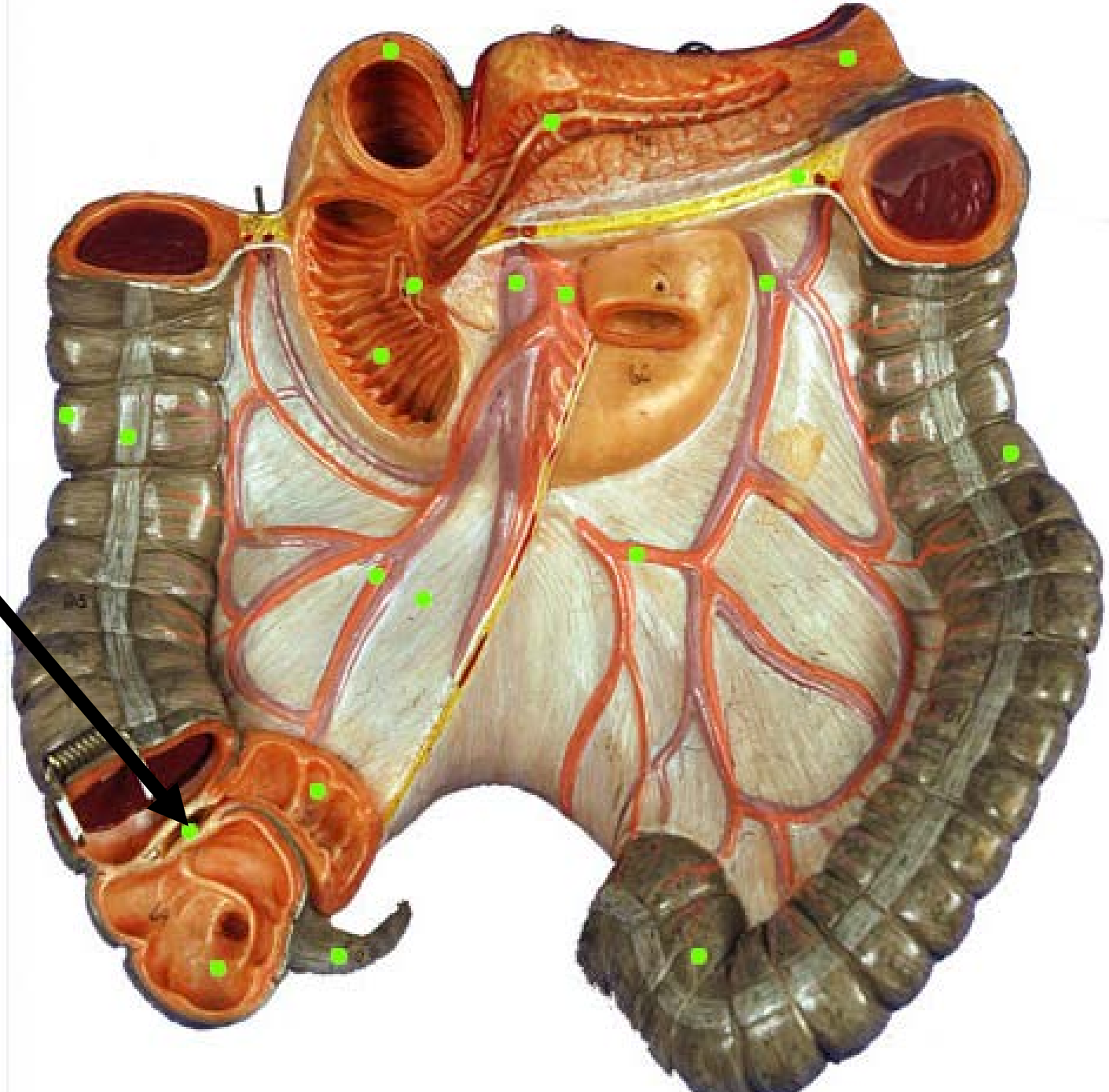


Pyloric Valve

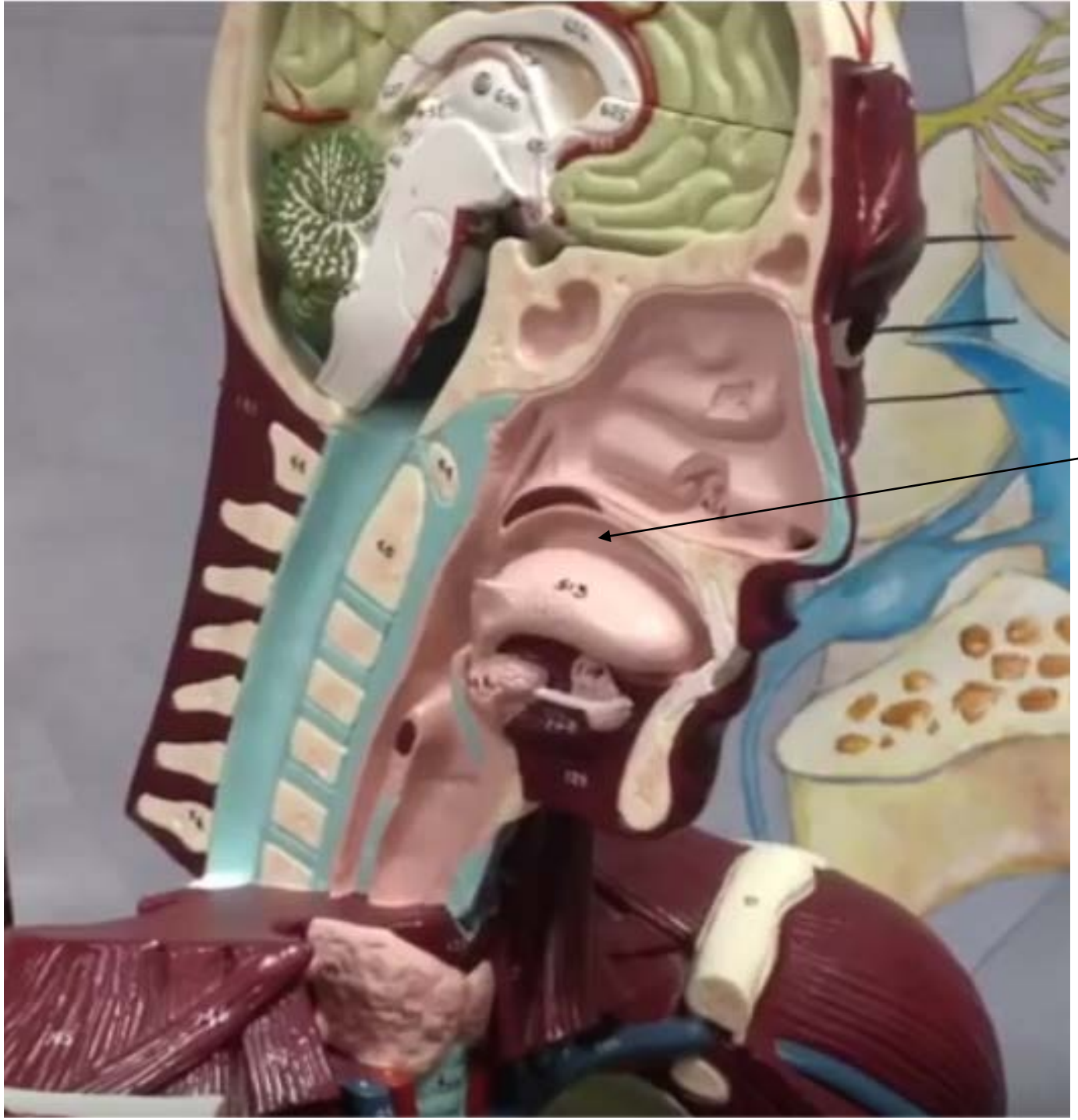
Identify the Structure.



Ileocecal Valve



The ileocecal valve functions to prevent substances flowing back into the ileum once they have reached the cecum.



Identify the Structure and Function.

Oral Cavity

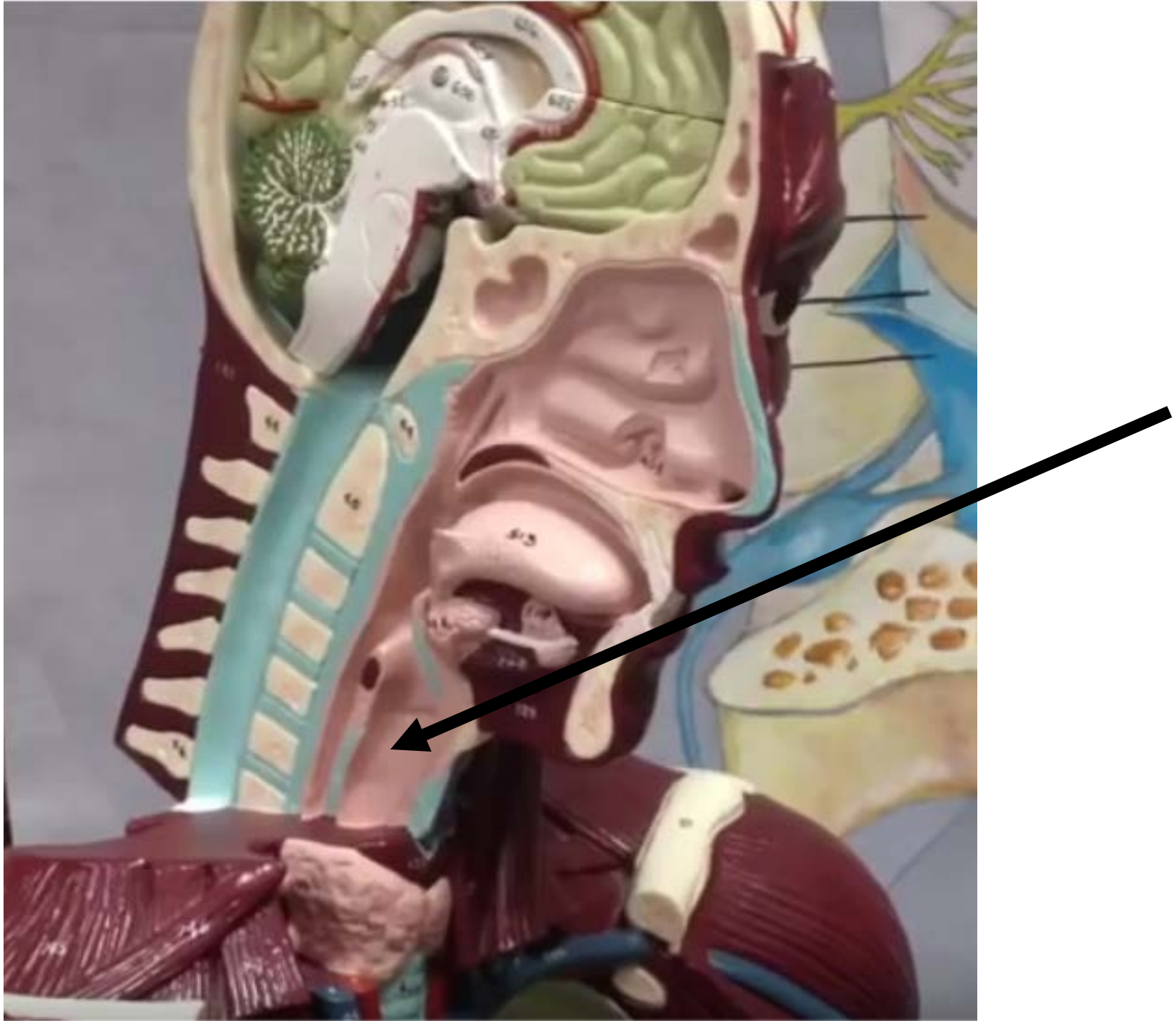
The mouth functions to take in food and to contain structures needed for mastication (chewing).

Identify the General Structure and Function.

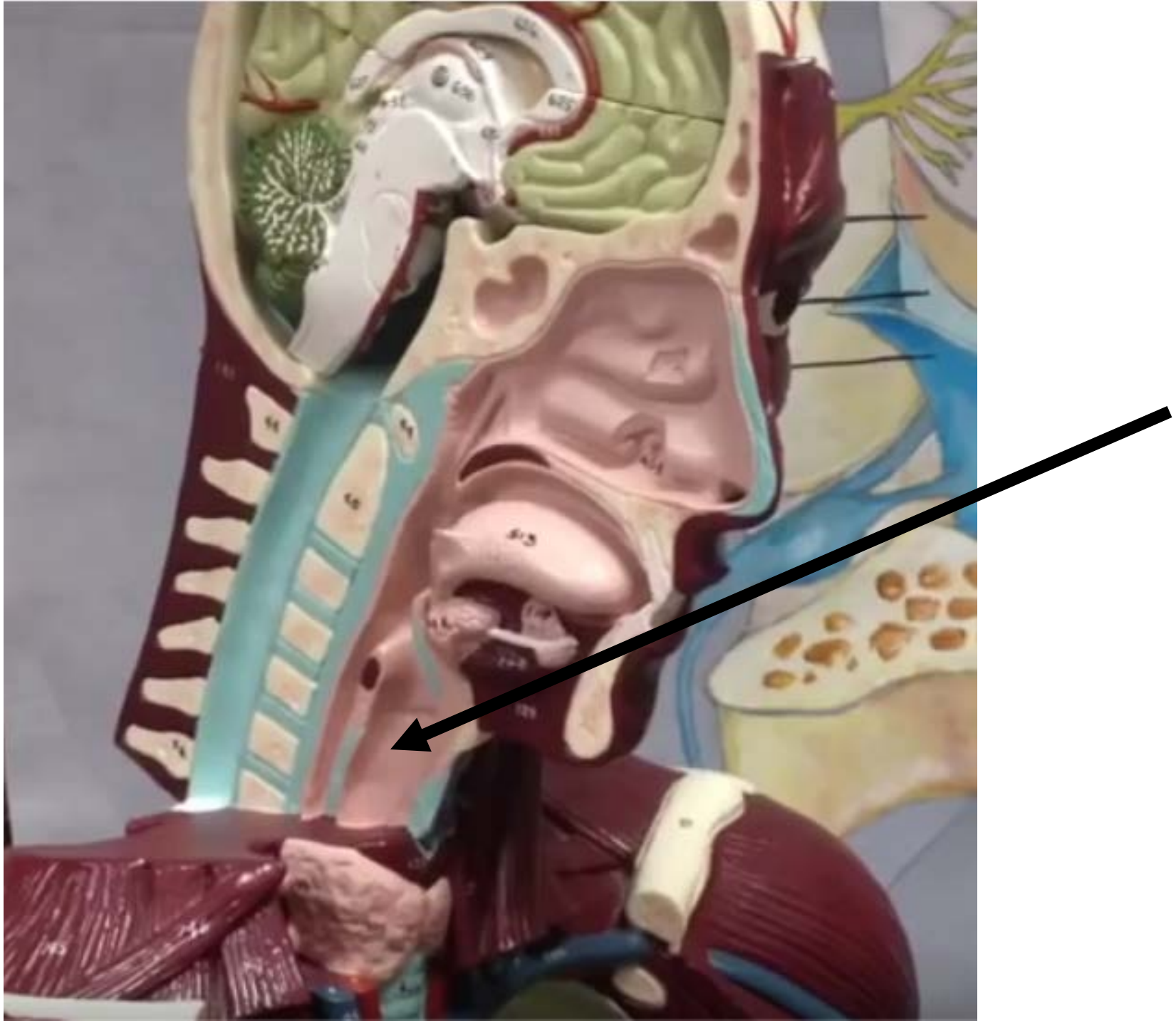
Pharynx
(throat)

The function of the **pharynx** is to

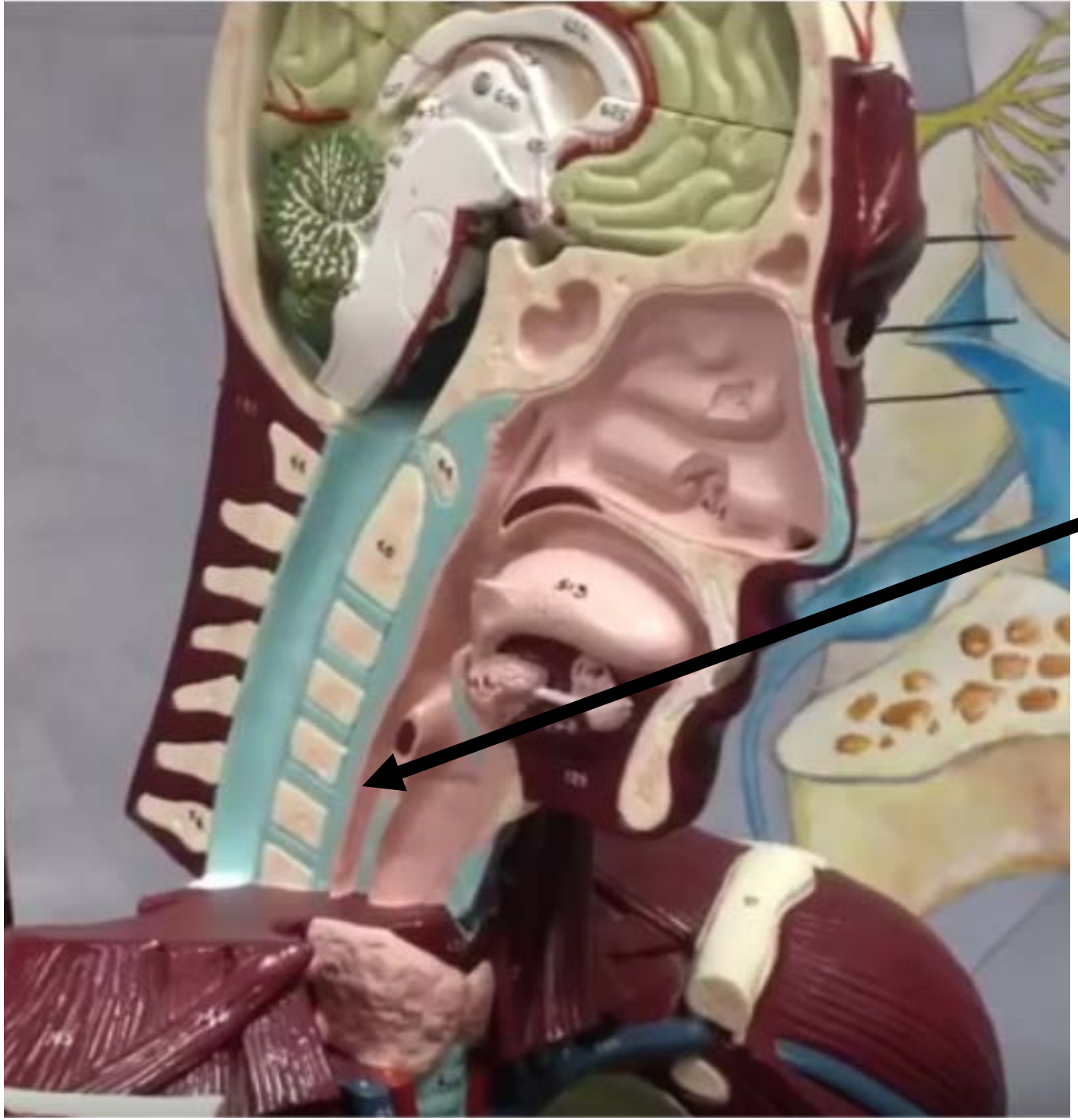
1. Transfer food from the mouth to the esophagus
2. Warm, moisten and filter air before it moves into the trachea



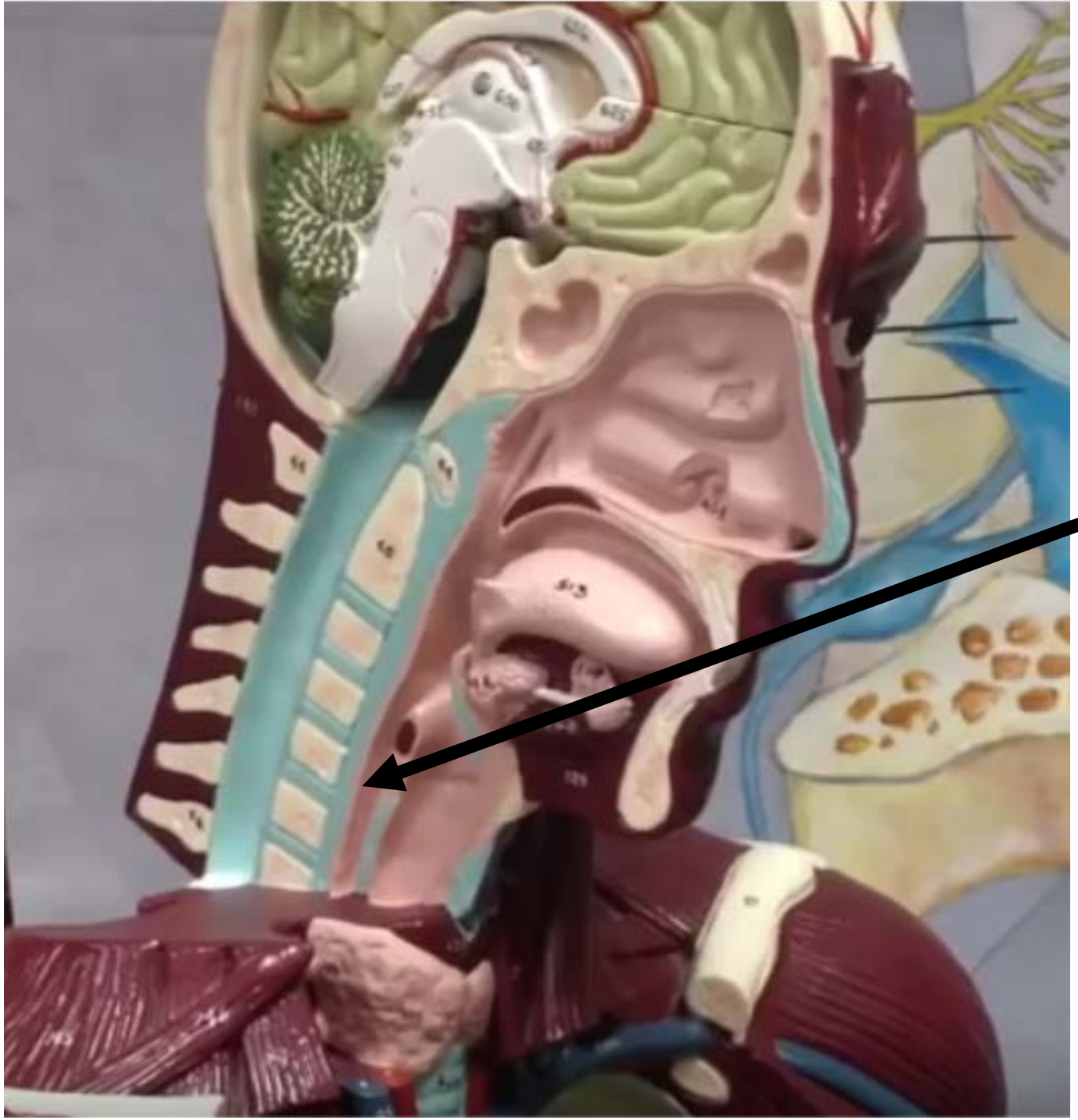
Identify the Structure.



Trachea
(wind pipe)

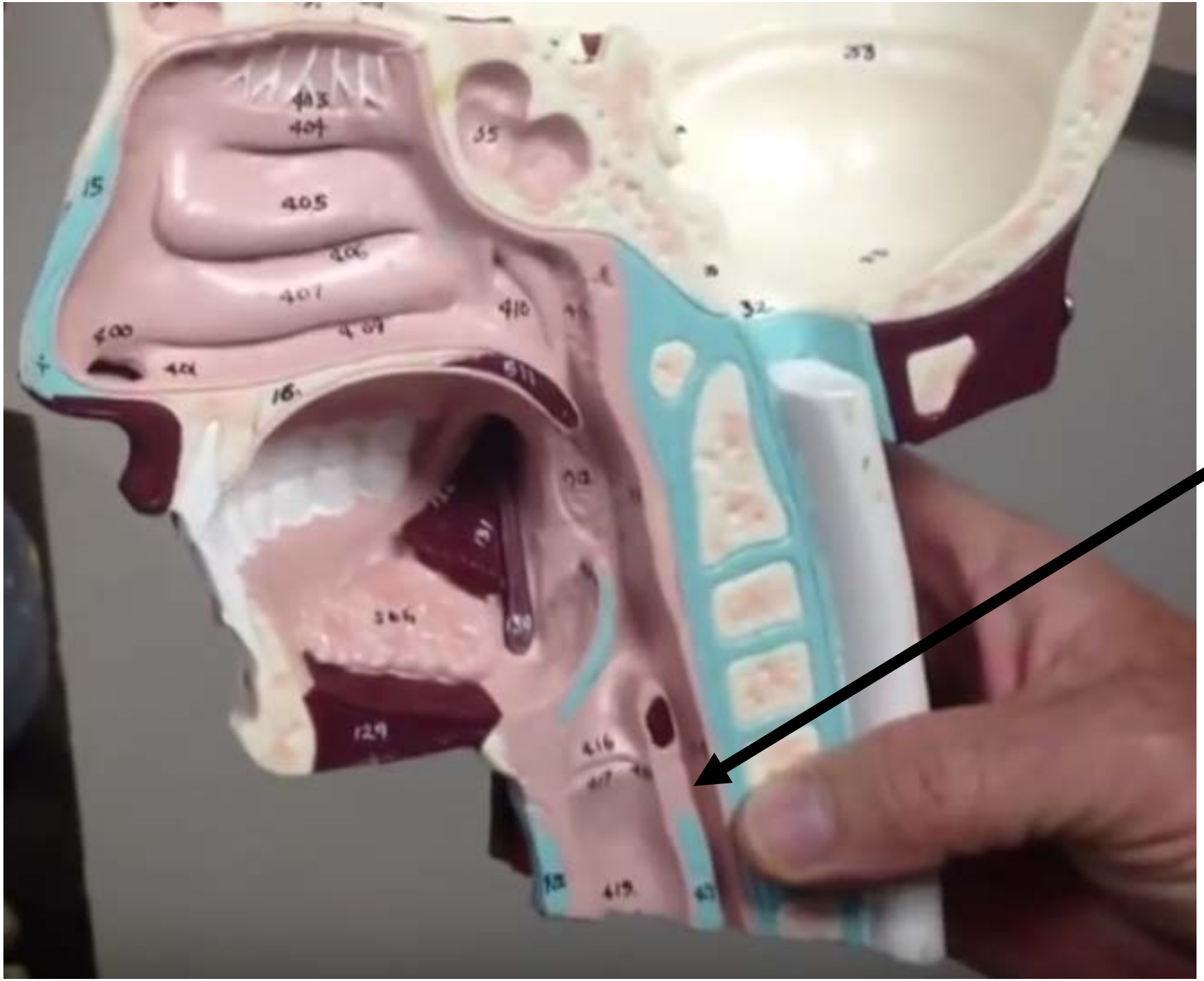


Identify the Structure.

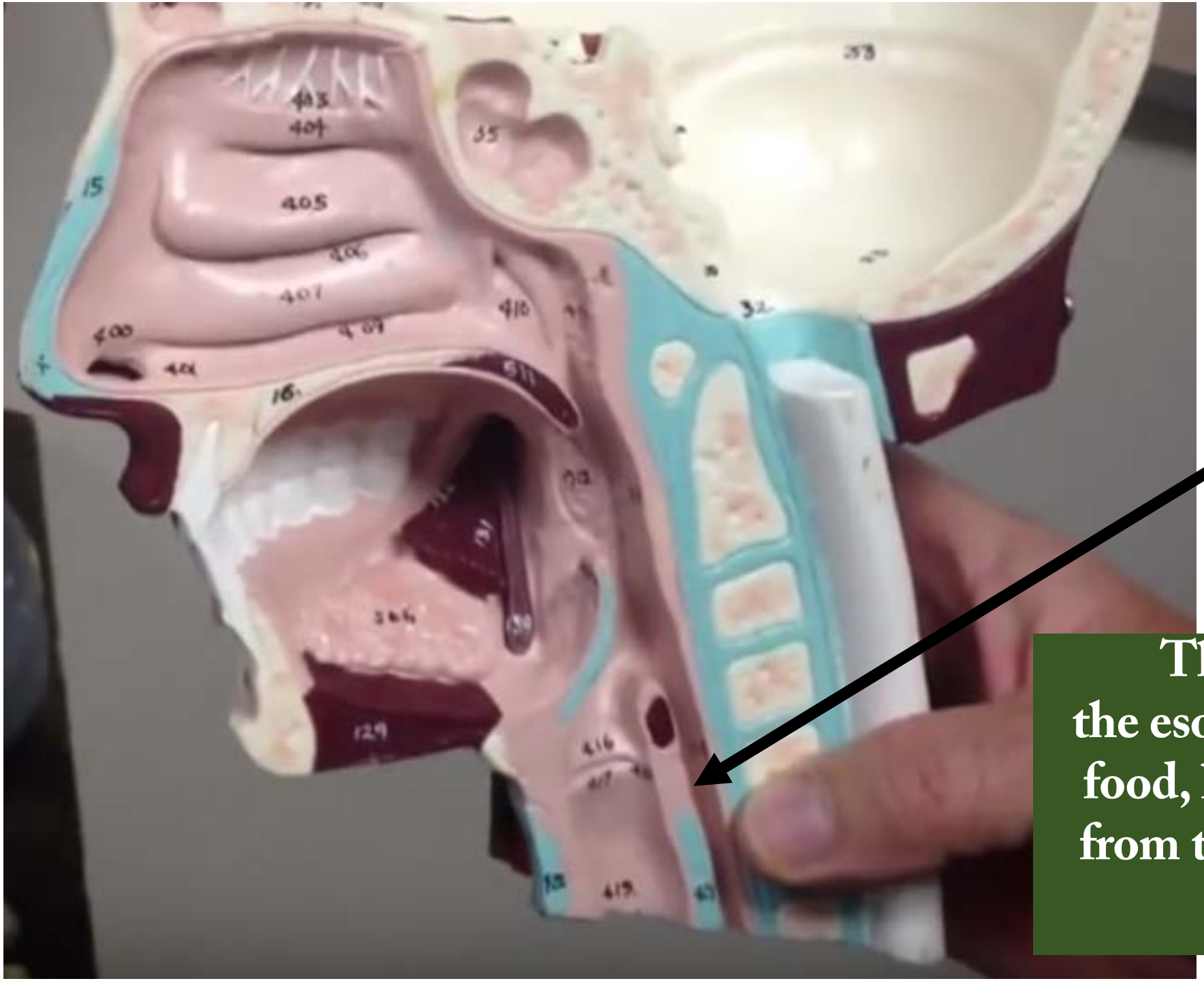


Esophagus

The function of the esophagus is to carry food, liquids, and saliva from the pharynx to the stomach.



Identify the Structure.



Esophagus

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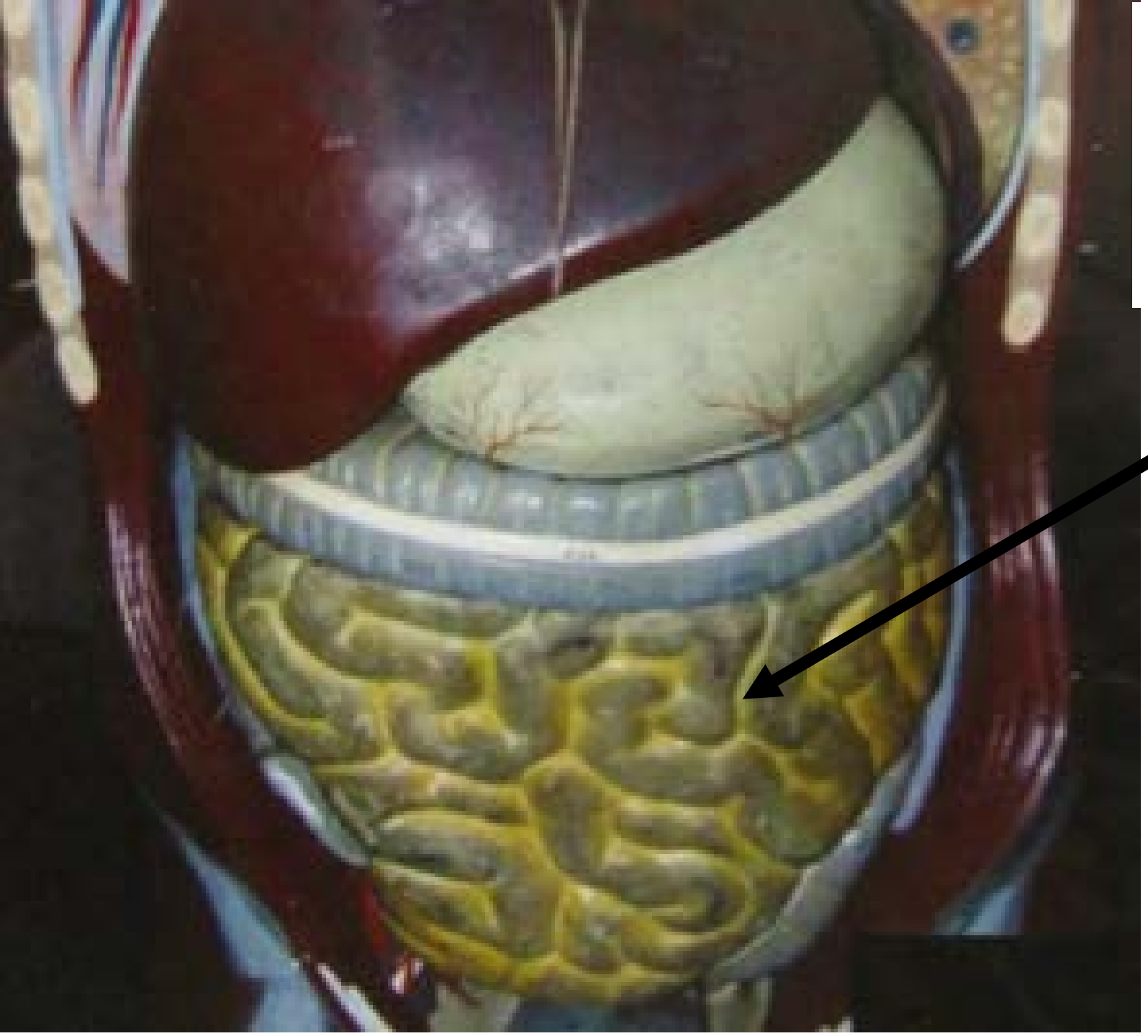
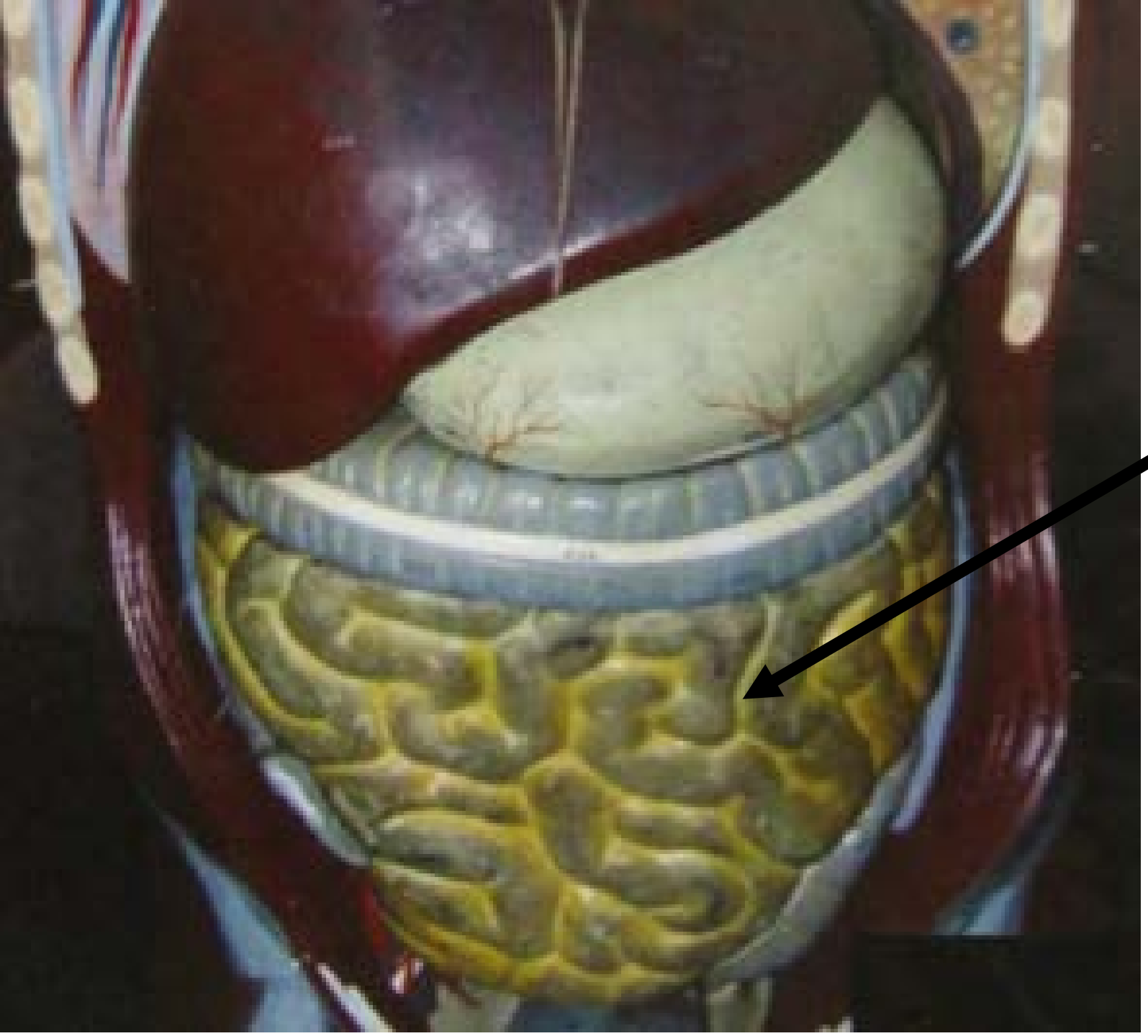


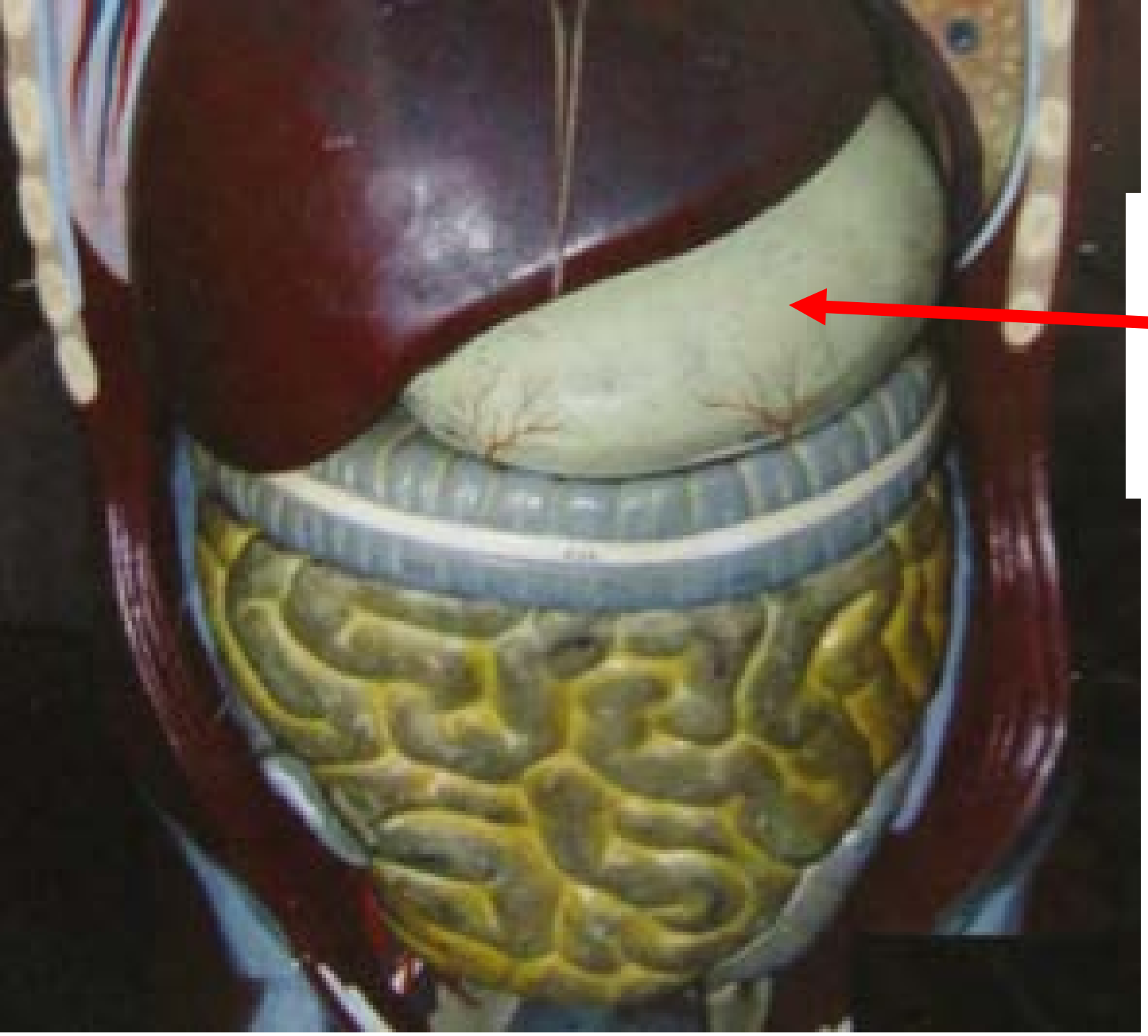
Identify the Structure and Function.



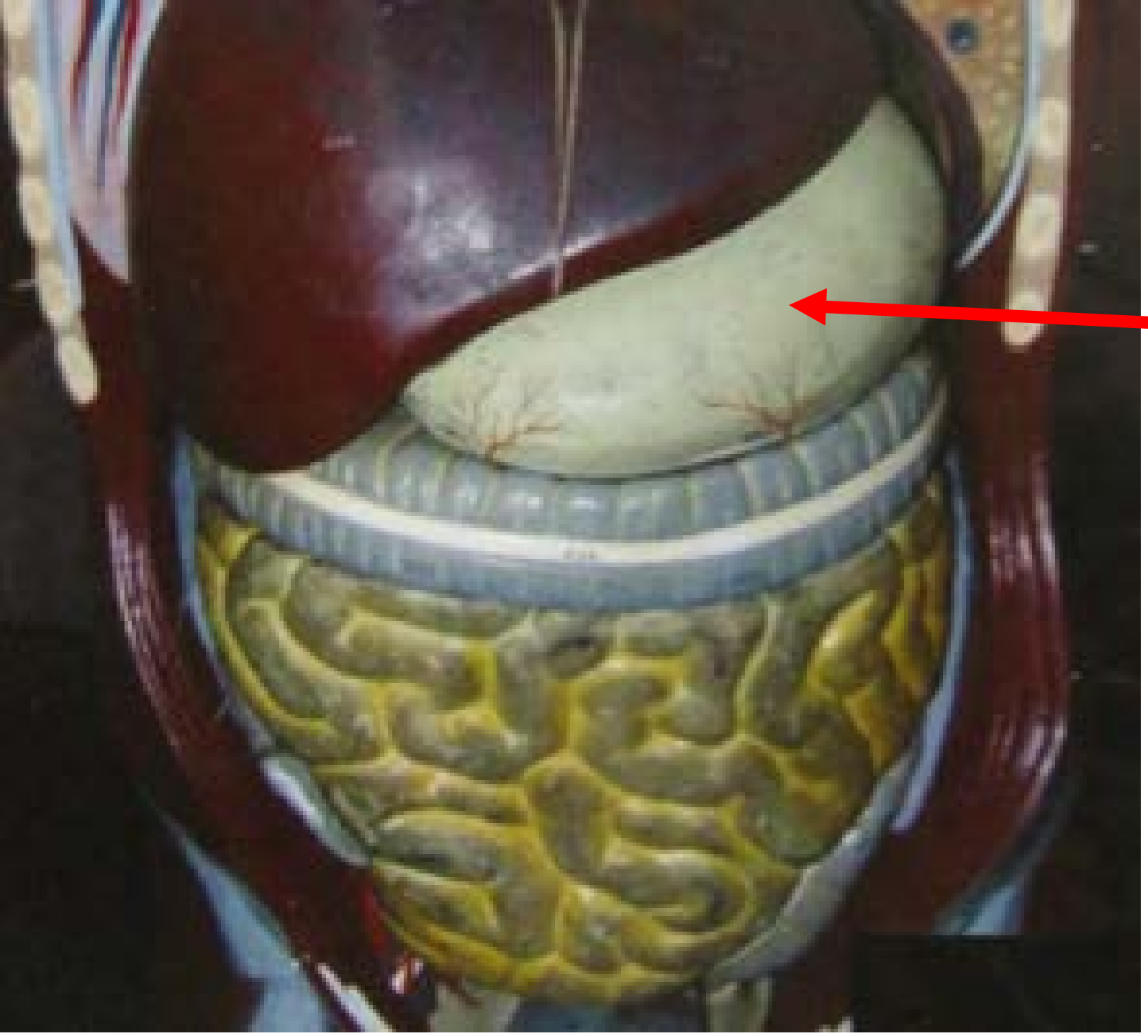
Small Intestines (Jejunum)

Digestion and absorption of nutrients.

*The **small intestine** is the part of the **intestine is** where 90% of the digestion and absorption of food occurs.*

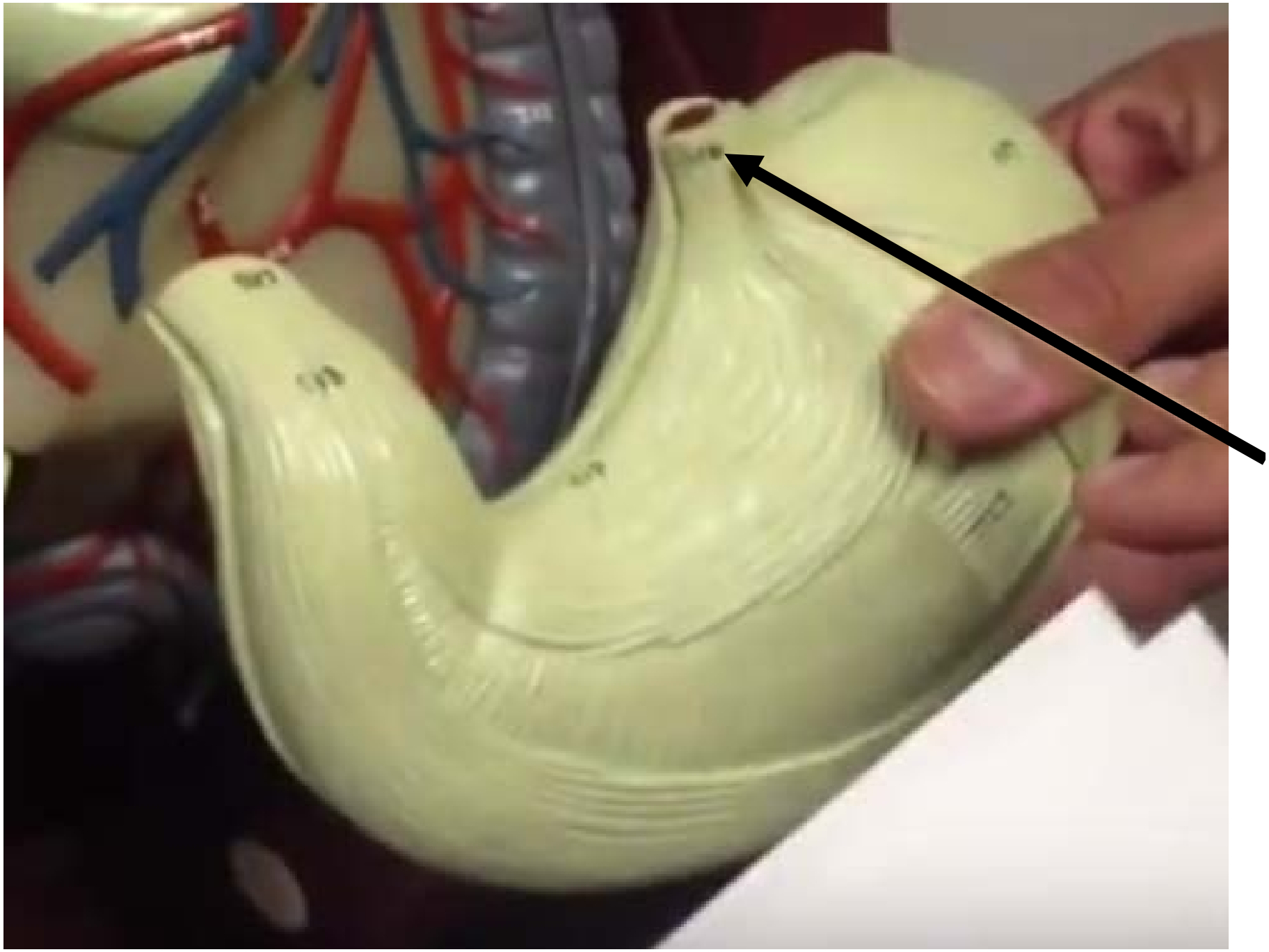


Identify the Structure.

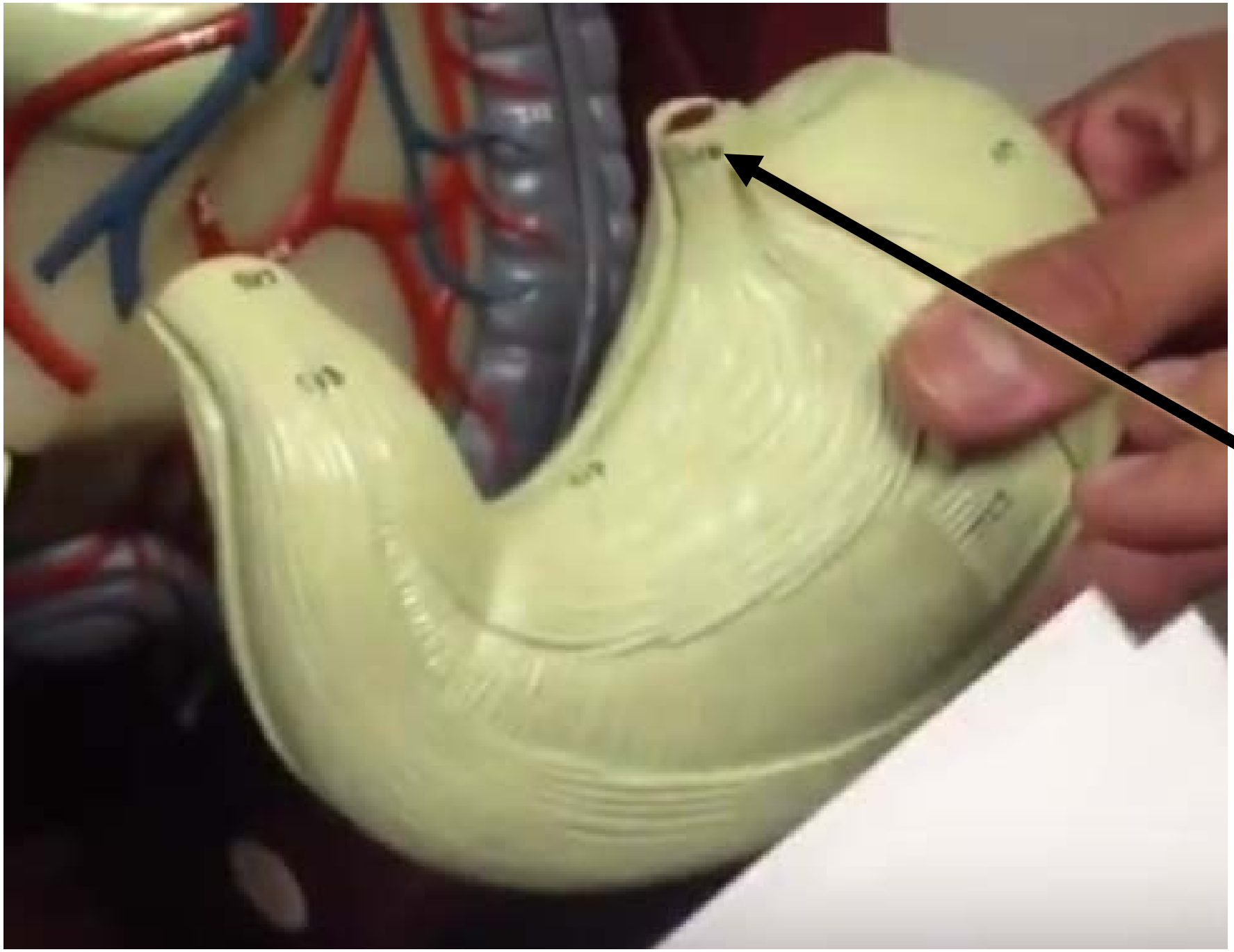


Stomach

Storage,
Churning
and Secretes
Enzymes.

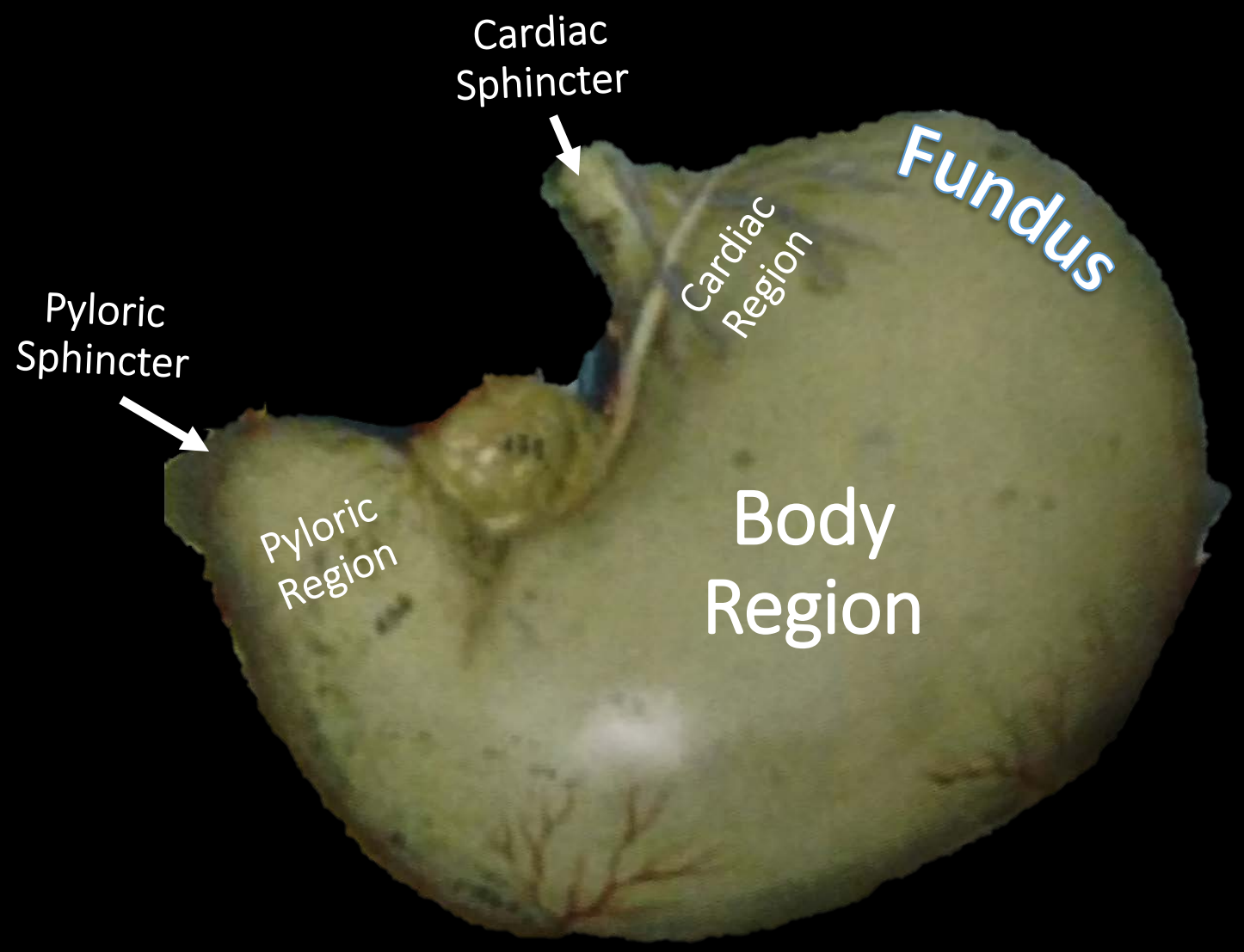


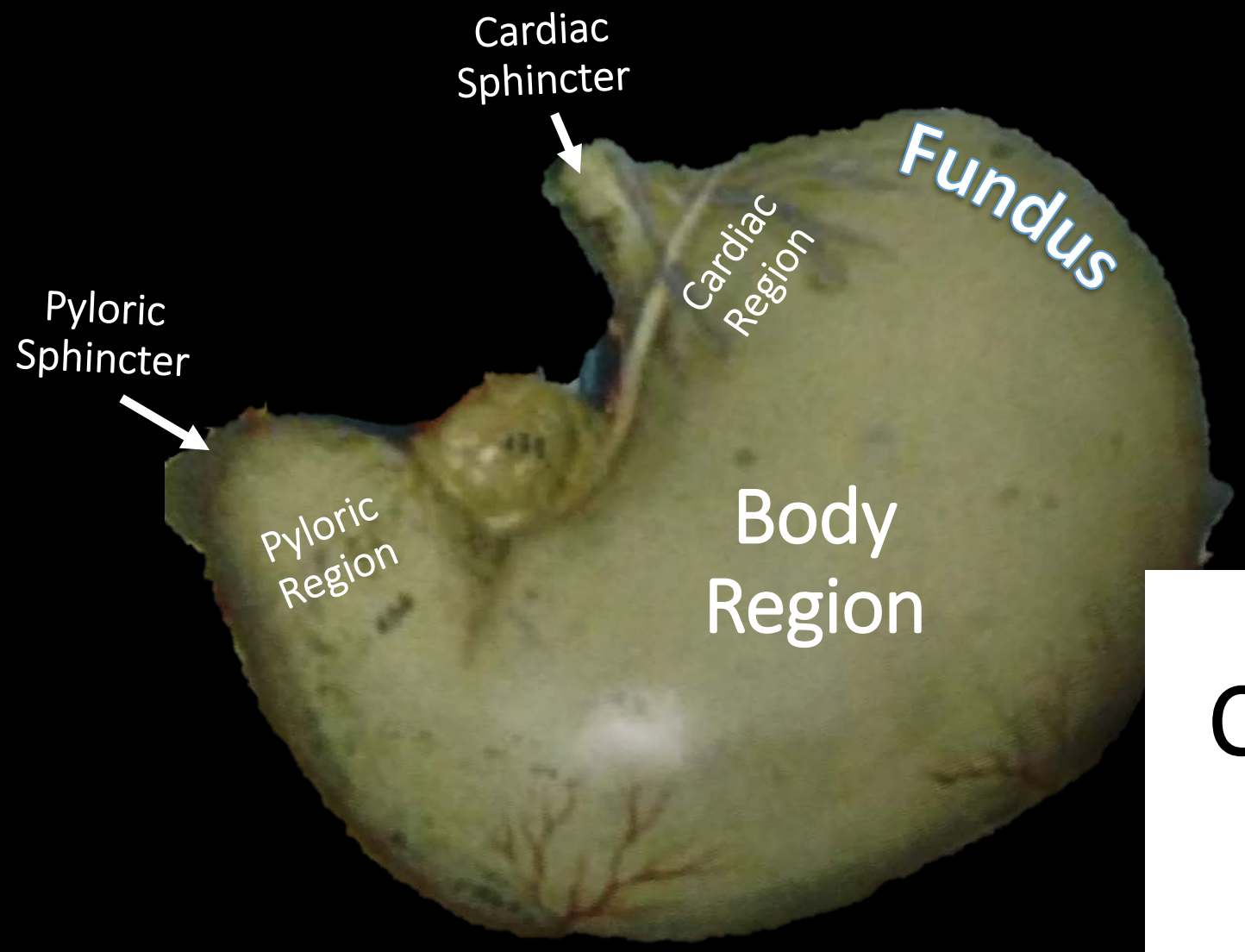
Identify the Structure.



Cardiac Region

What is the FUNCTION of the stomach?

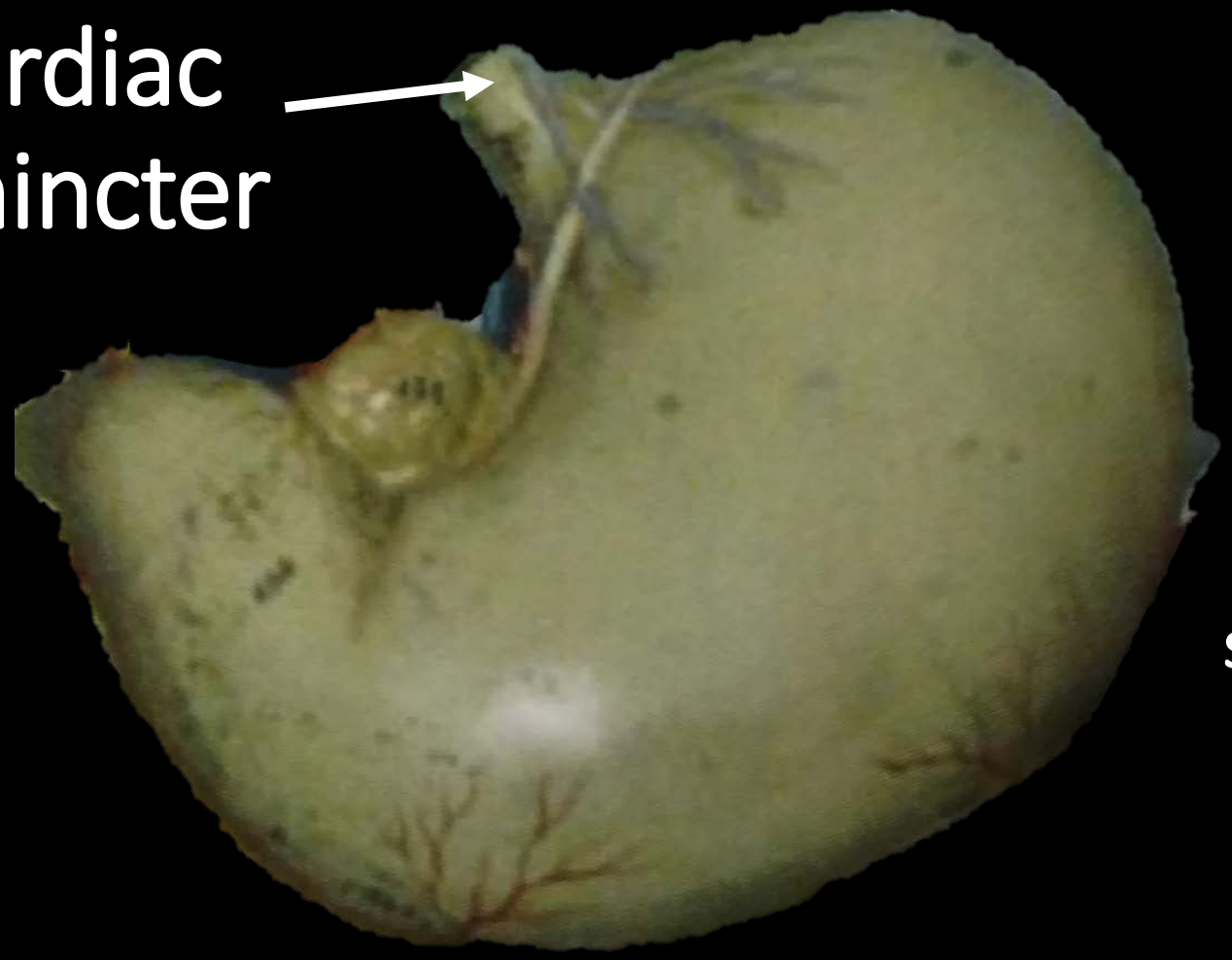




Storage, Churning and Secretes Enzymes.

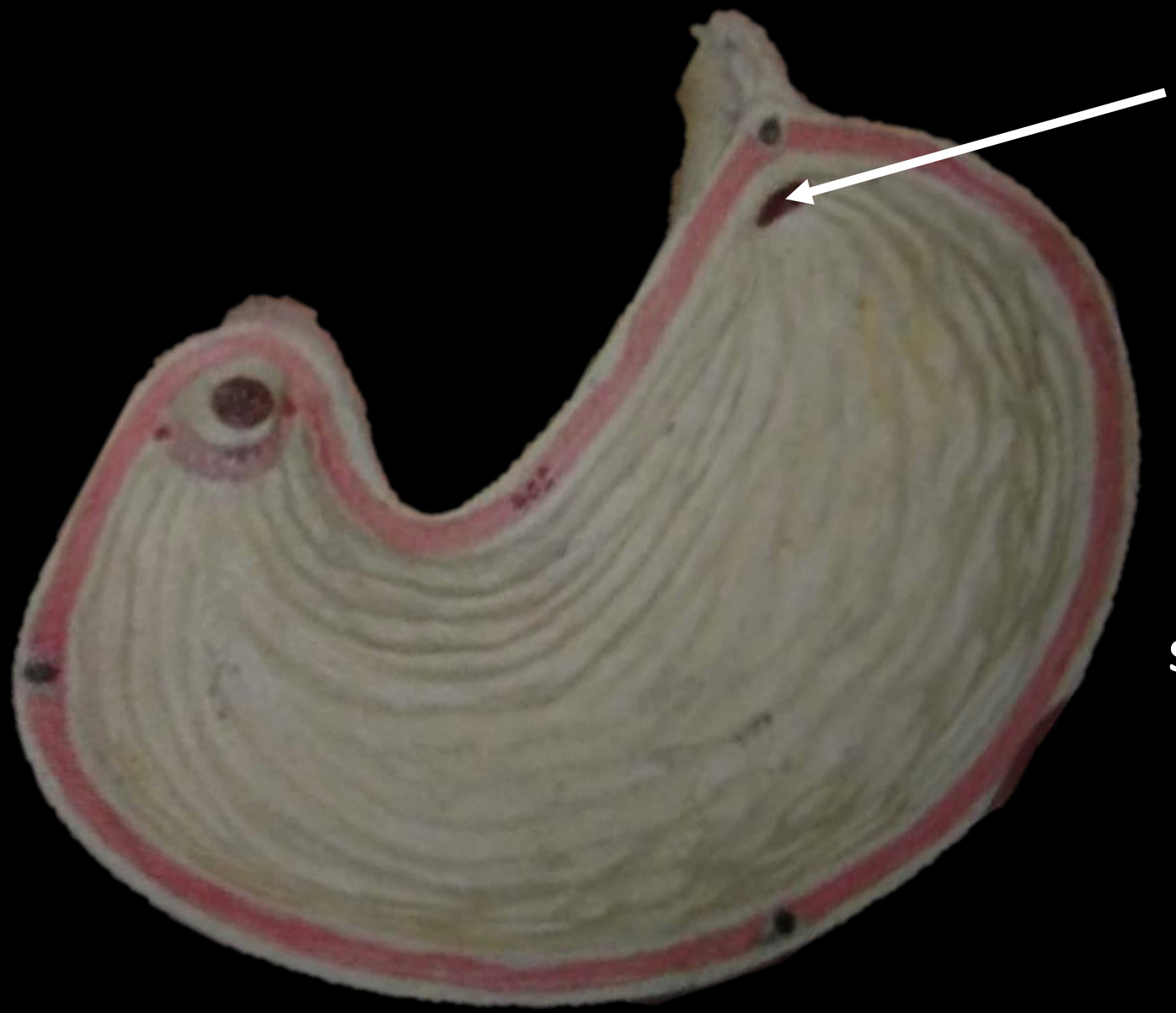
Identify the Structure and Function.

Identify the Structure and Function.



The cardiac sphincter prevents the acidic contents of the stomach from moving upward into the esophagus and allows food to pass into stomach when relaxed.

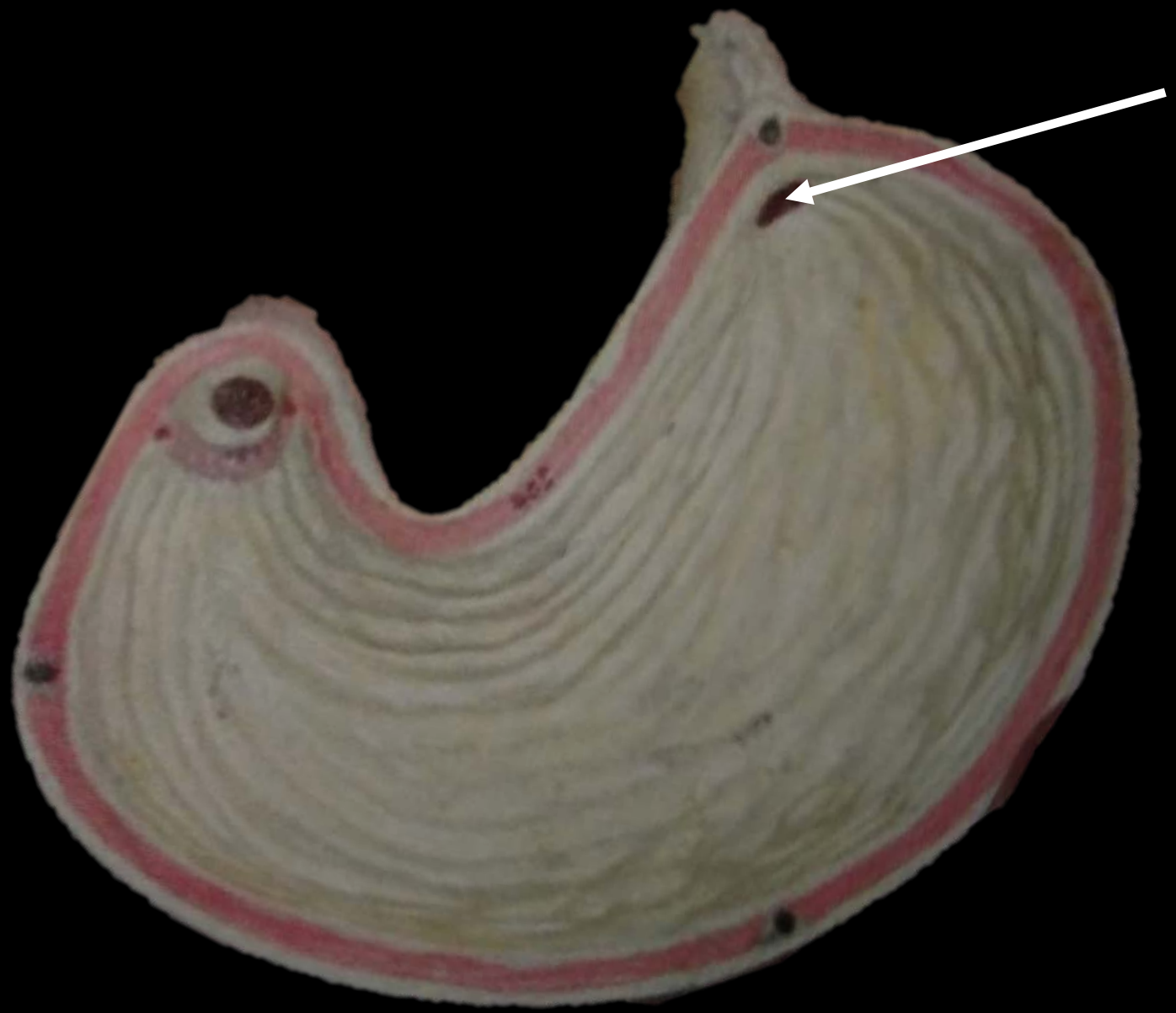
Anatomy of the Stomach Model



Cardiac Sphincter

The cardiac sphincter prevents the acidic contents of the stomach from moving upward into the esophagus and allows food to pass into stomach when relaxed.

Identify the Structure and Function.



Identify the Structure and Function.

Identify the Structure and Function.

Pyloric Sphincter

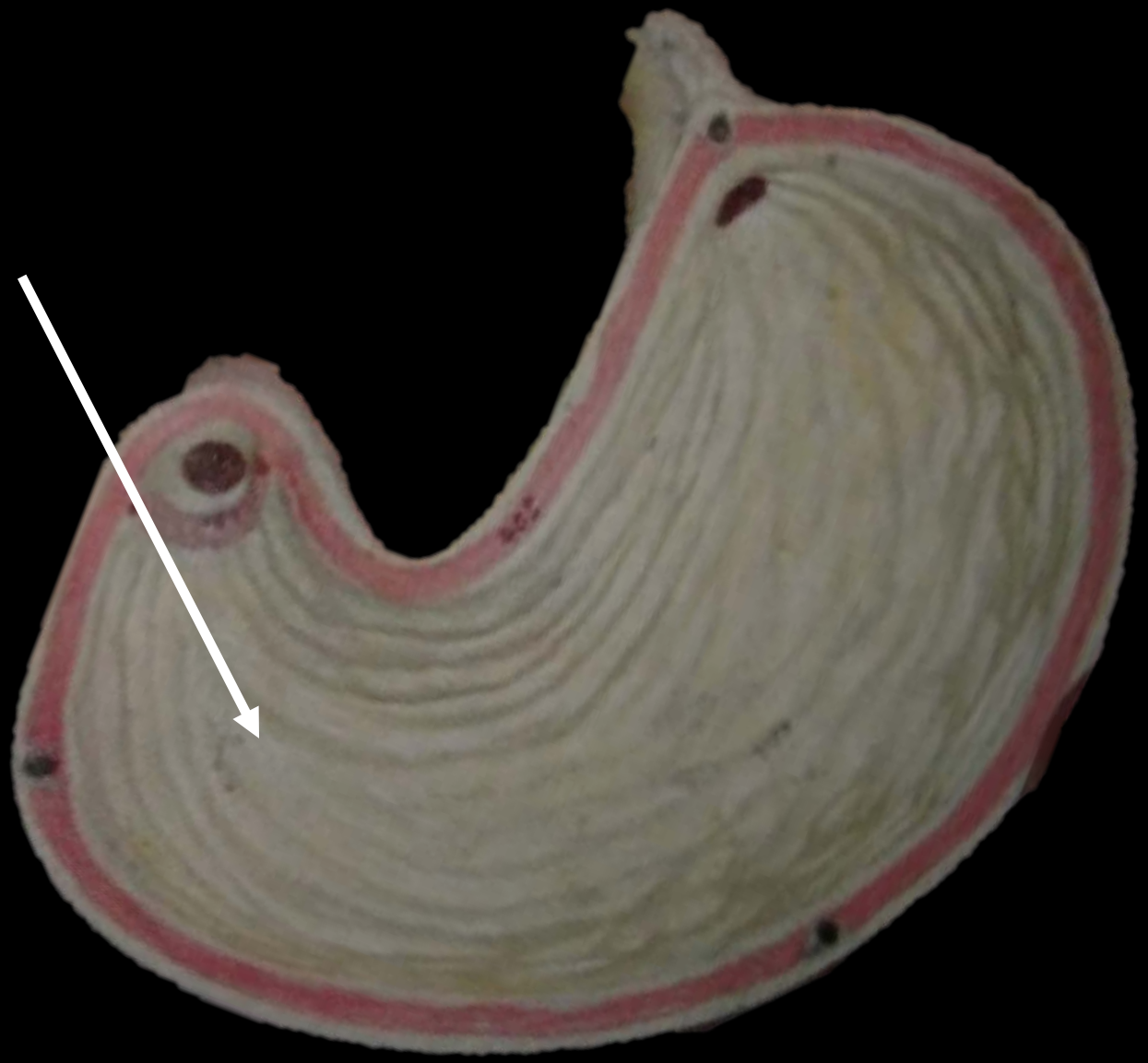
The pyloric sphincter acts as a valve to controls the flow of partially digested food from the stomach to the small intestine.

Identify the Structure and Function.

Identify the Structure and Function.

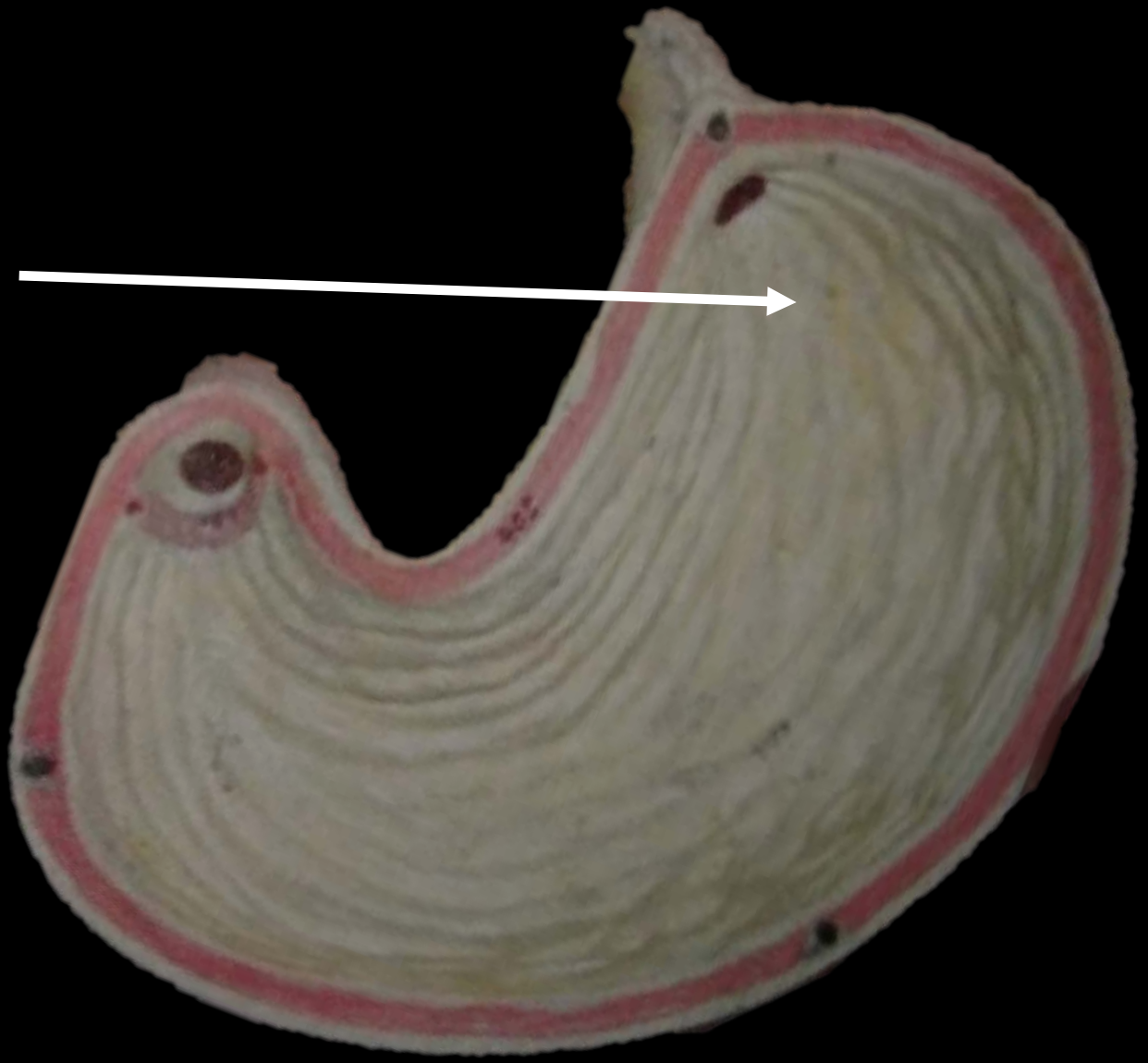
The pyloric sphincter acts as a valve to controls the flow of partially digested food from the stomach to the small intestine.

Identify the Structure.



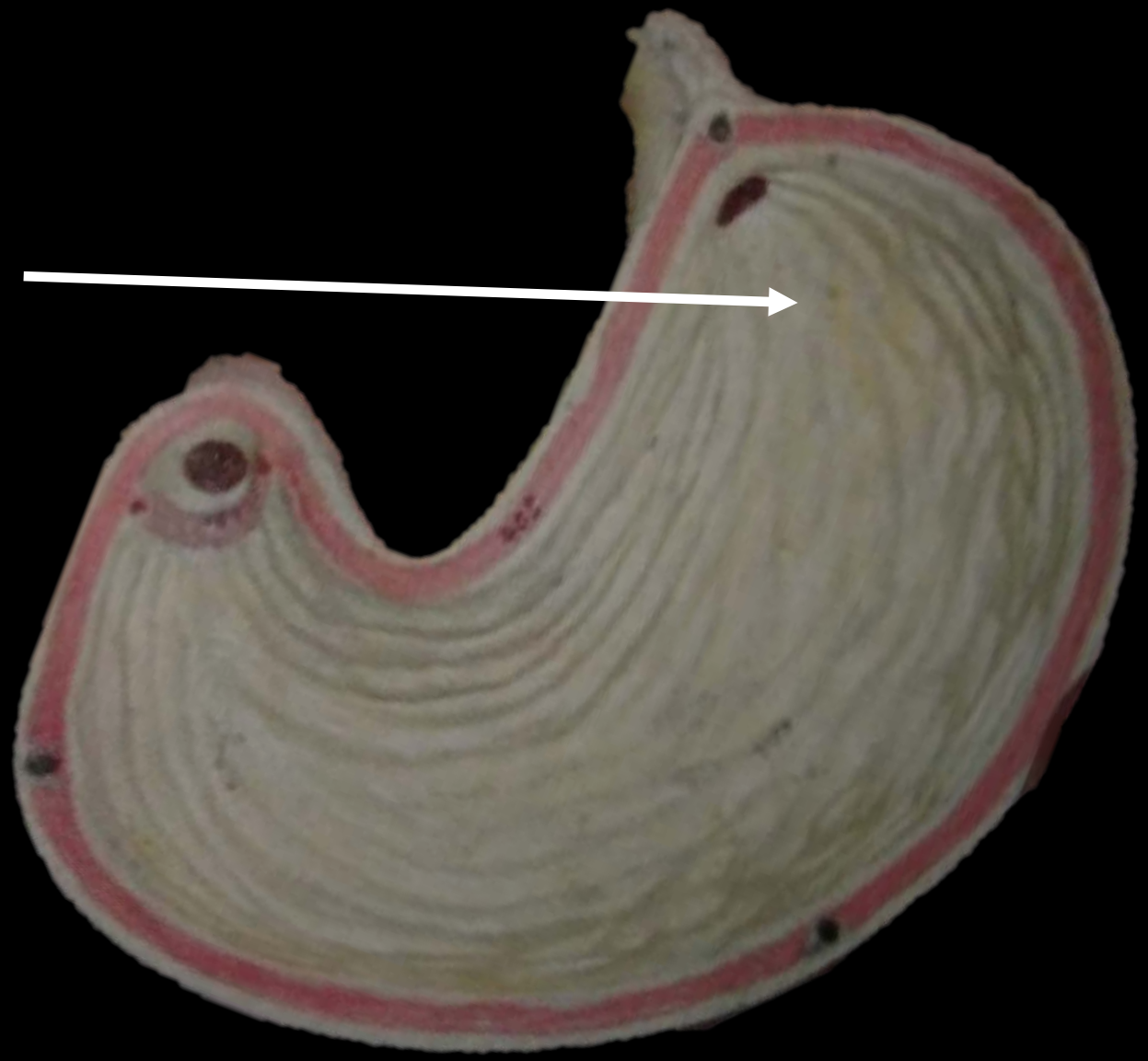
Identify the Structure.

Identify the Structure.

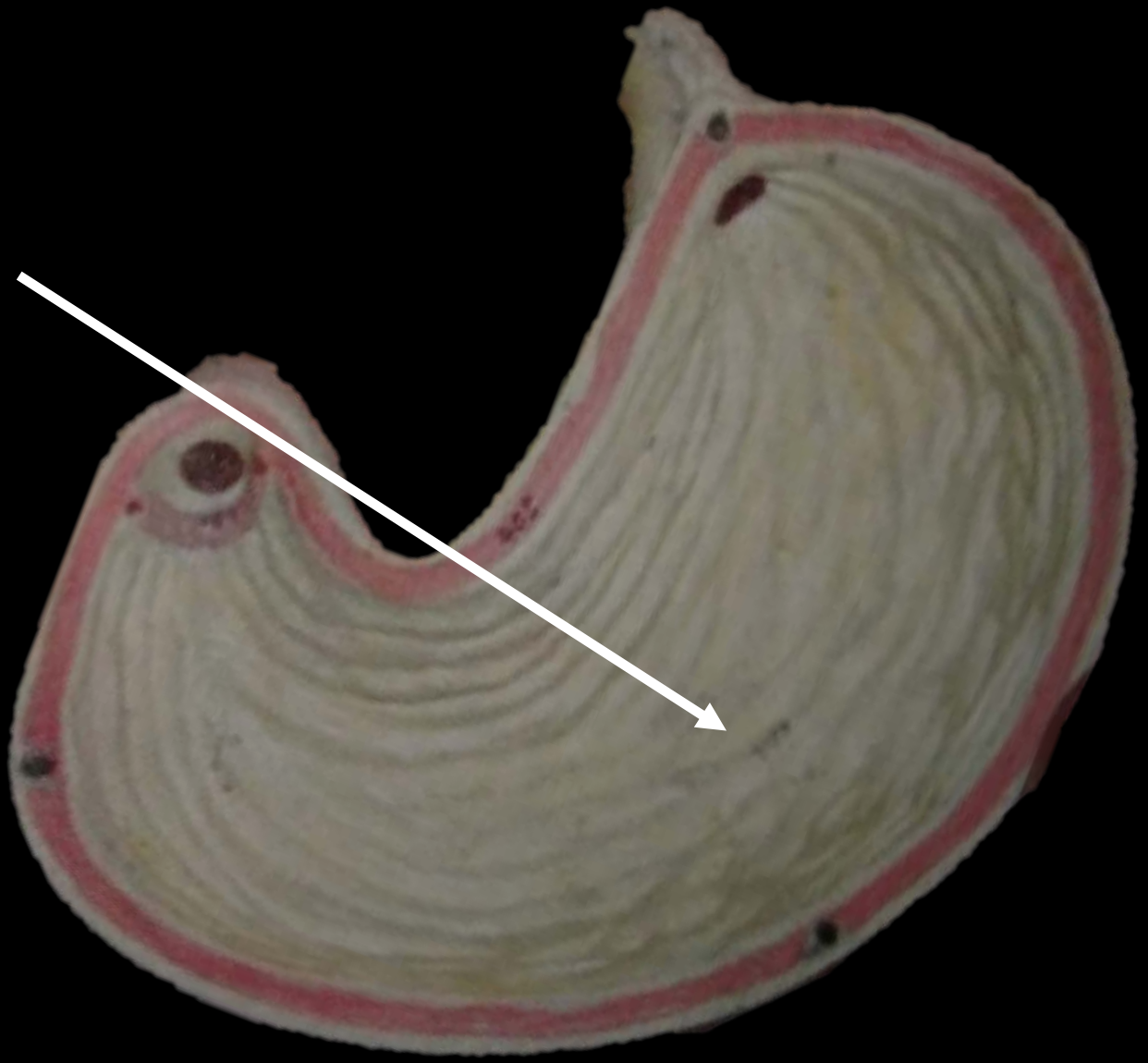


Identify the Structure.

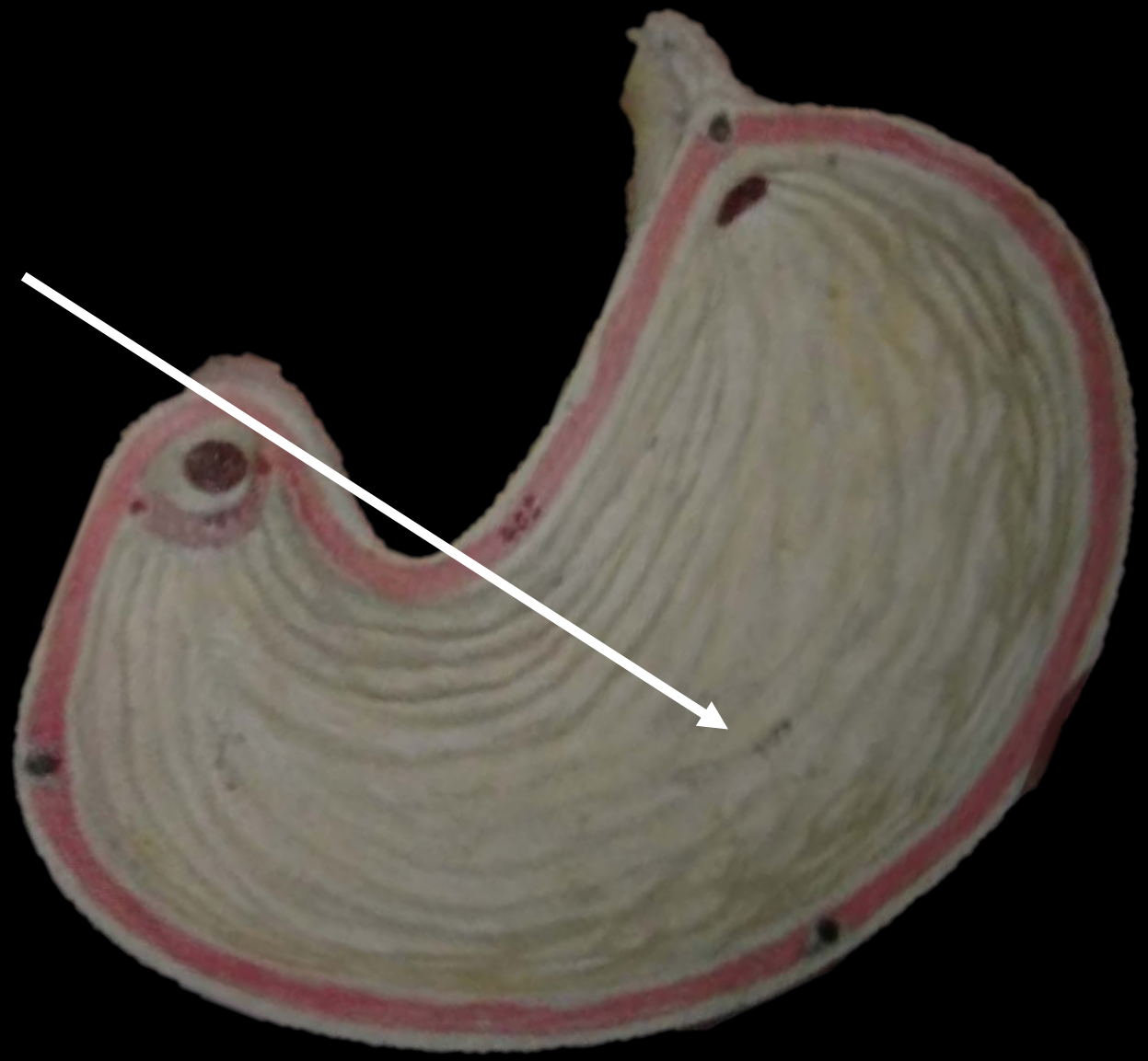
Cardiac Region



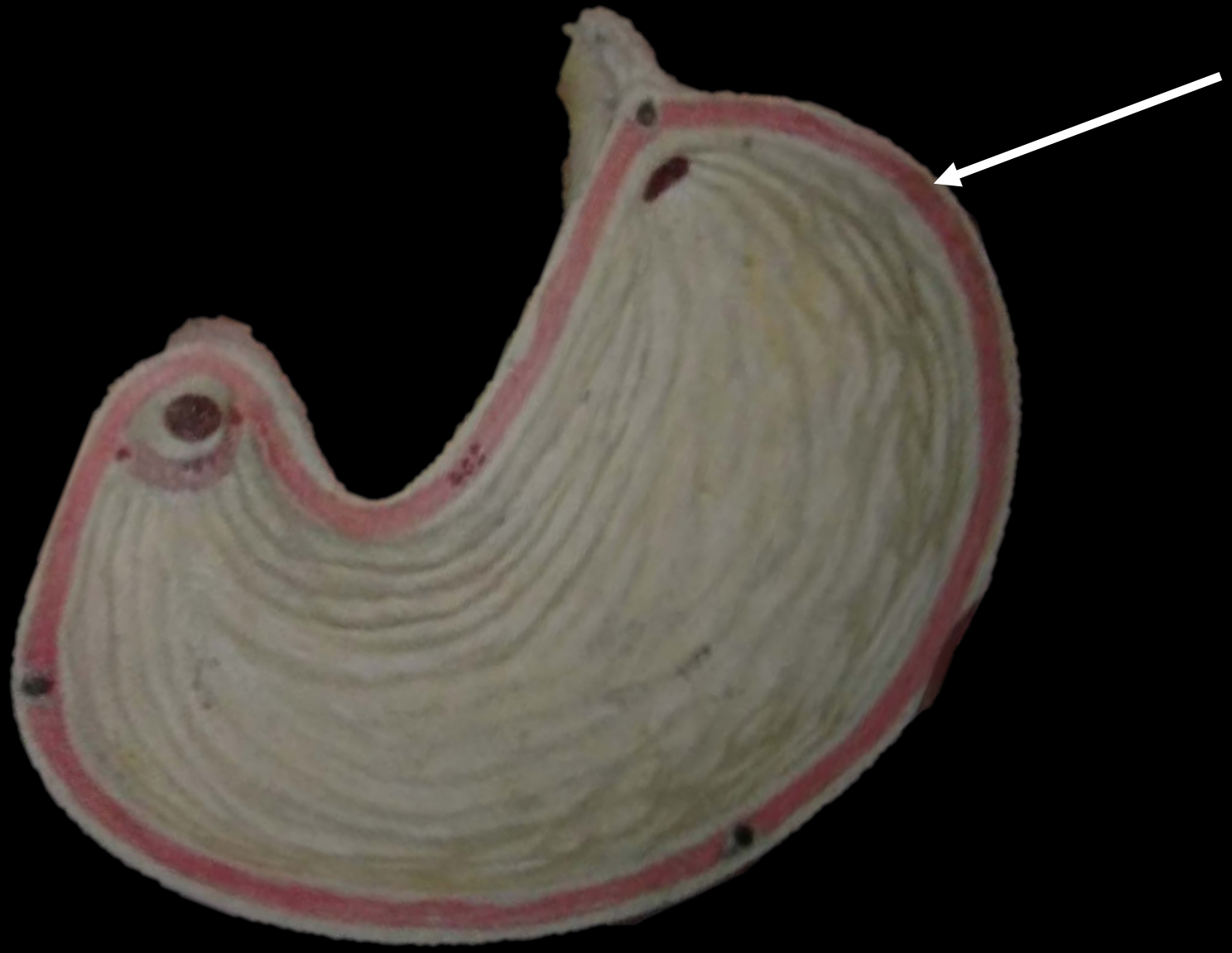
Identify the Structure.



Identify the Structure.

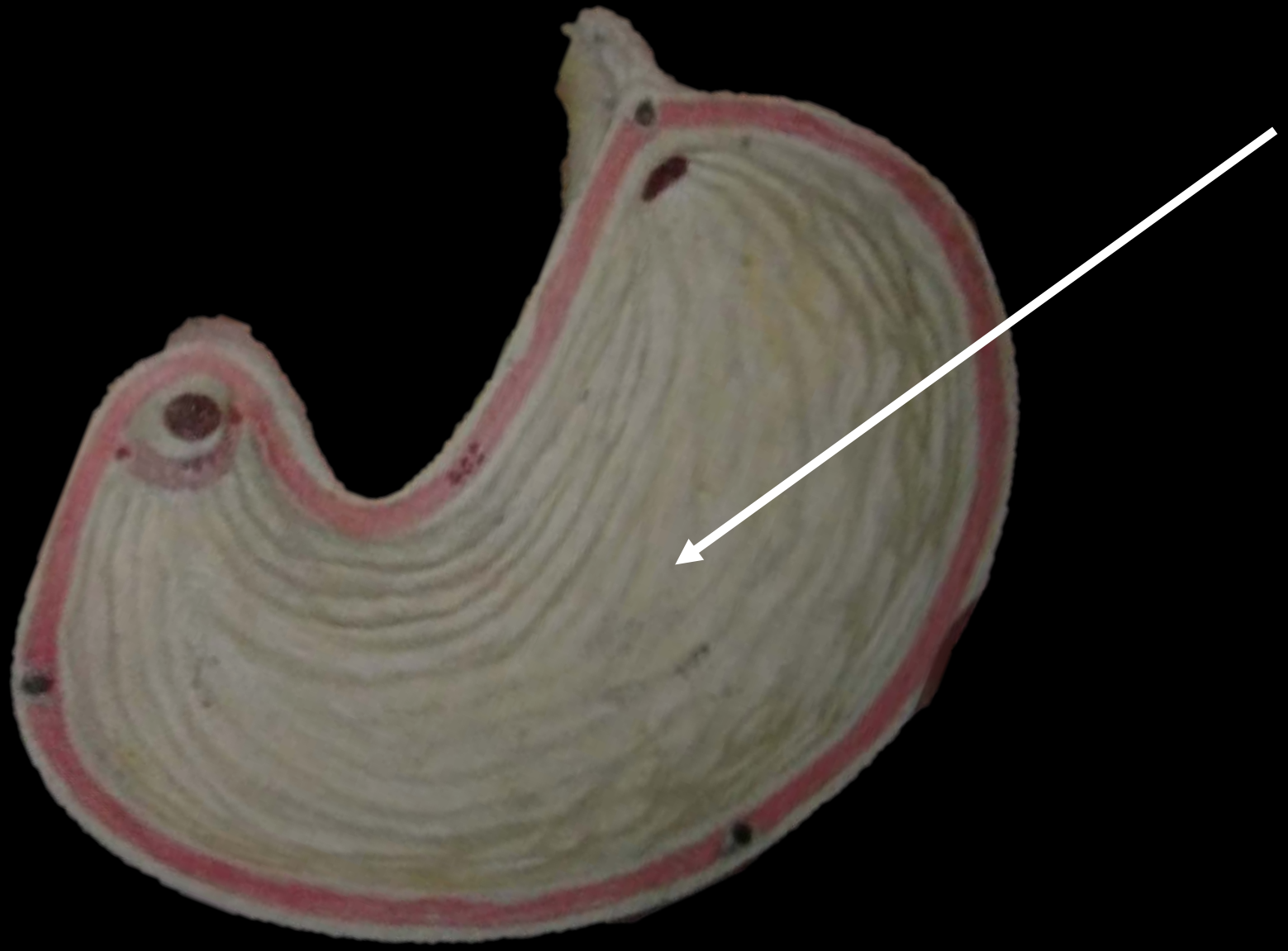


Identify the Structure.

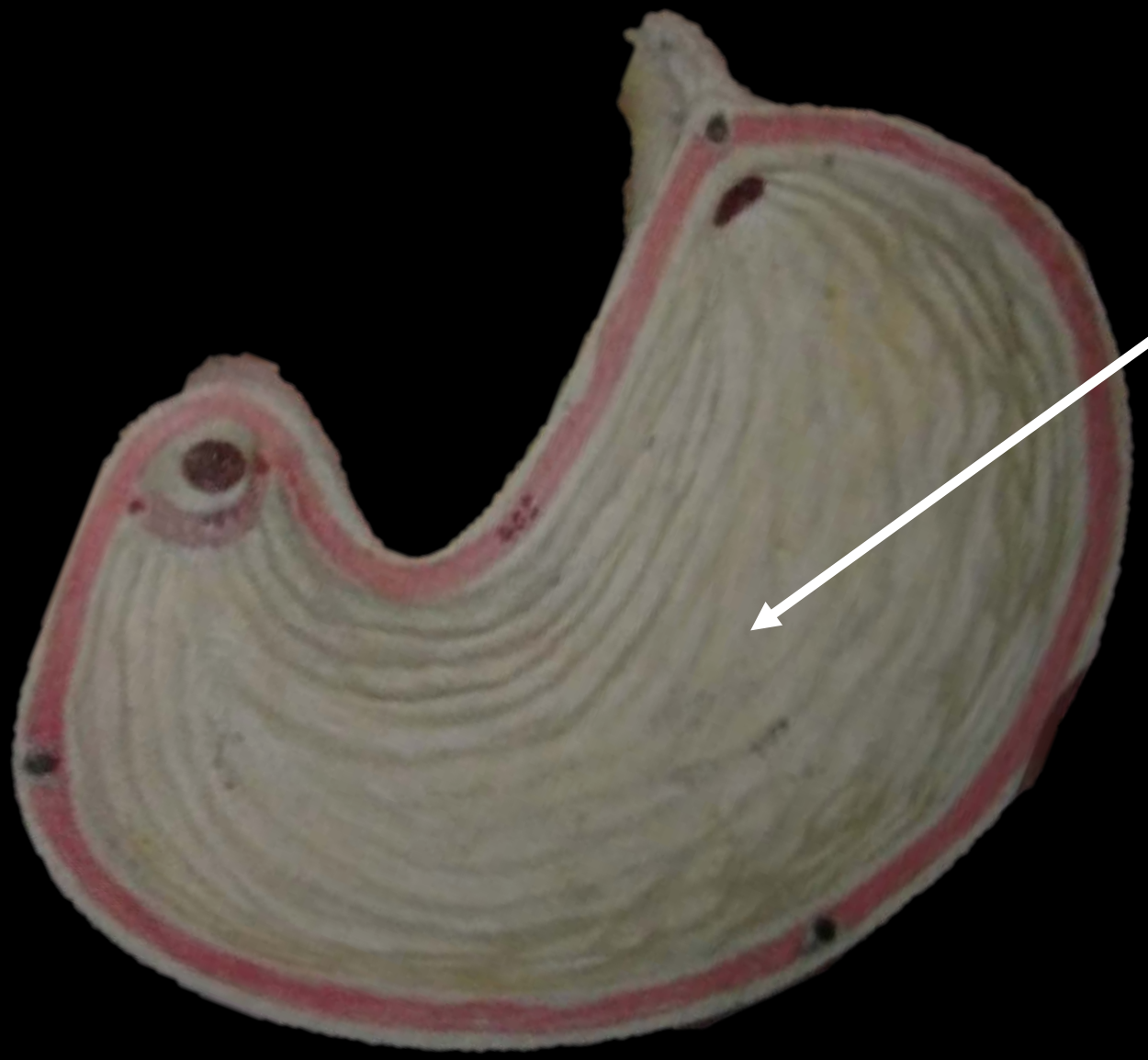


Identify the Structure.

Identify the Structure.



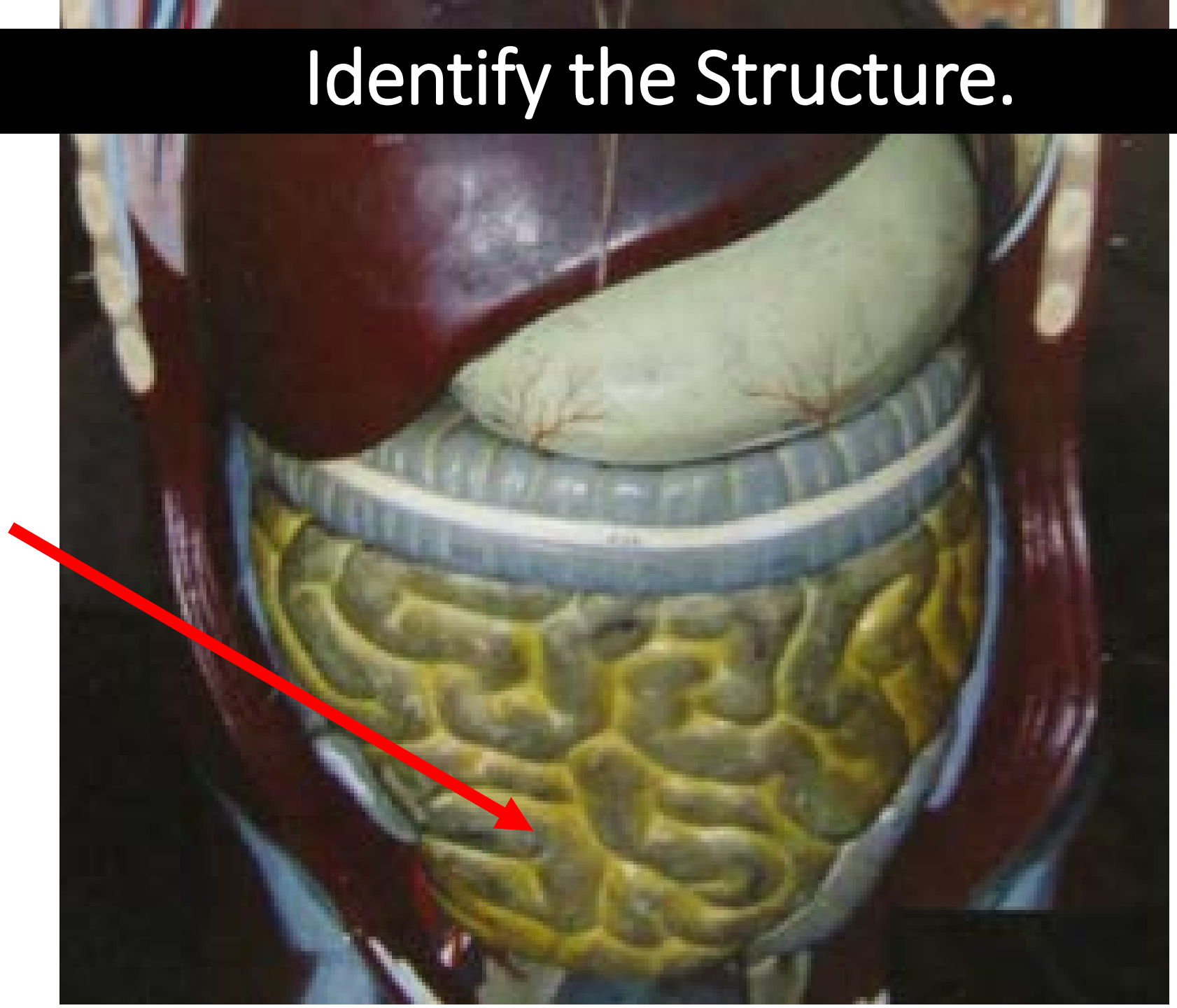
Identify the Structure.



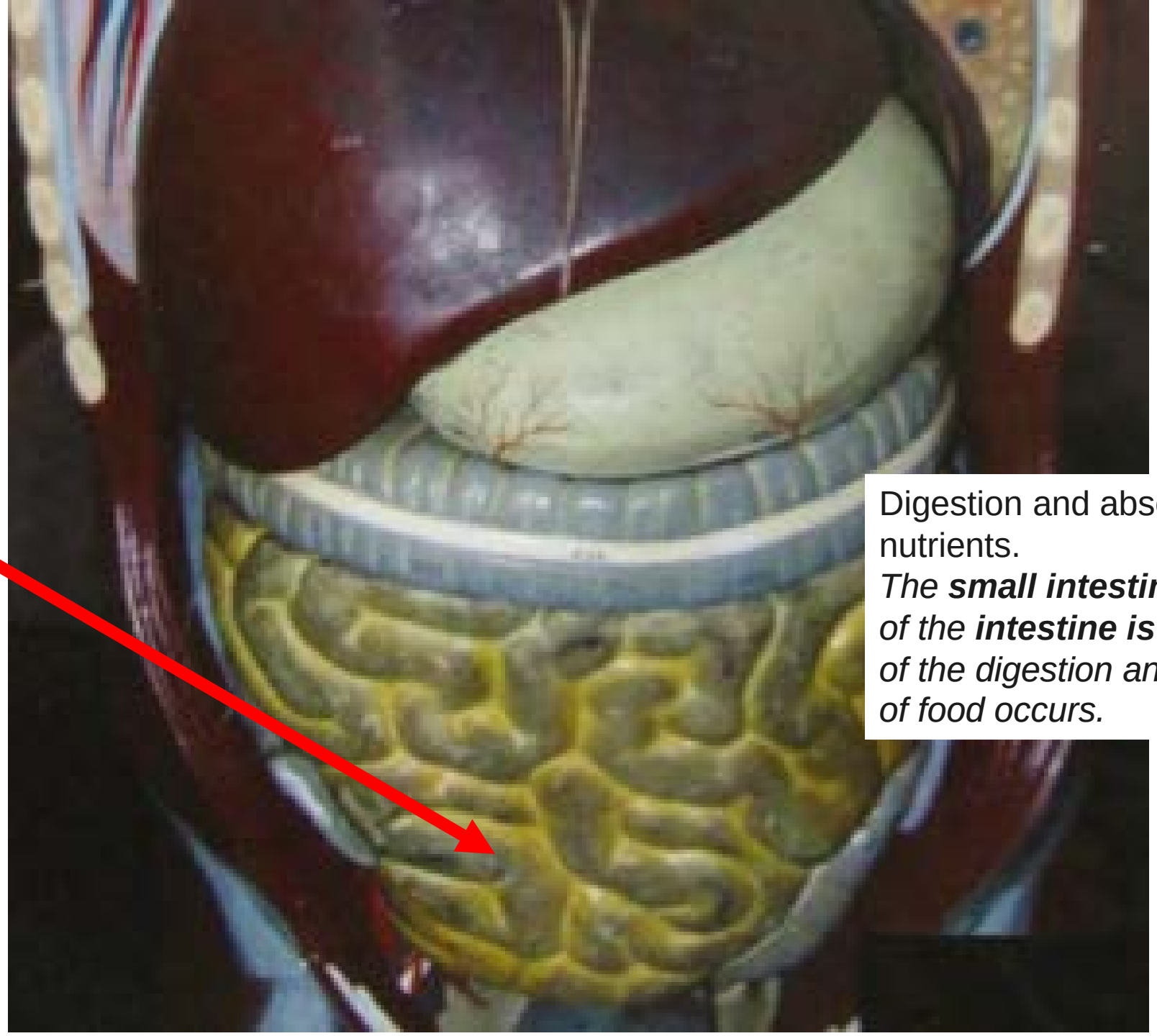
Rugae
(deep ridges)

Muscles that Allow Churning of the Stomach

Identify the Structure.

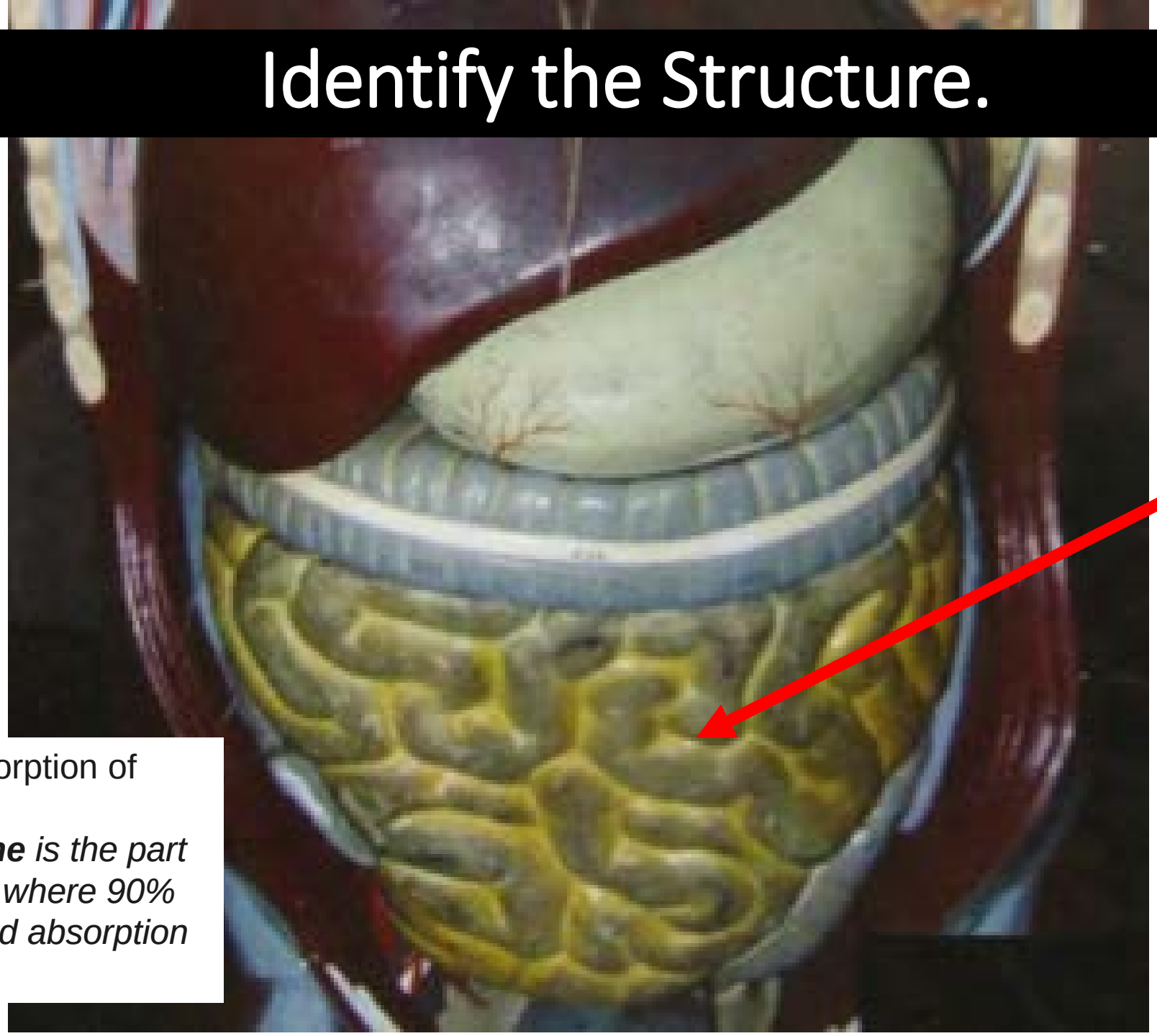


Ileum



Digestion and absorption of nutrients.
*The **small intestine** is the part of the **intestine is** where 90% of the digestion and absorption of food occurs.*

Identify the Structure.



Jejunum

Digestion and absorption of nutrients.
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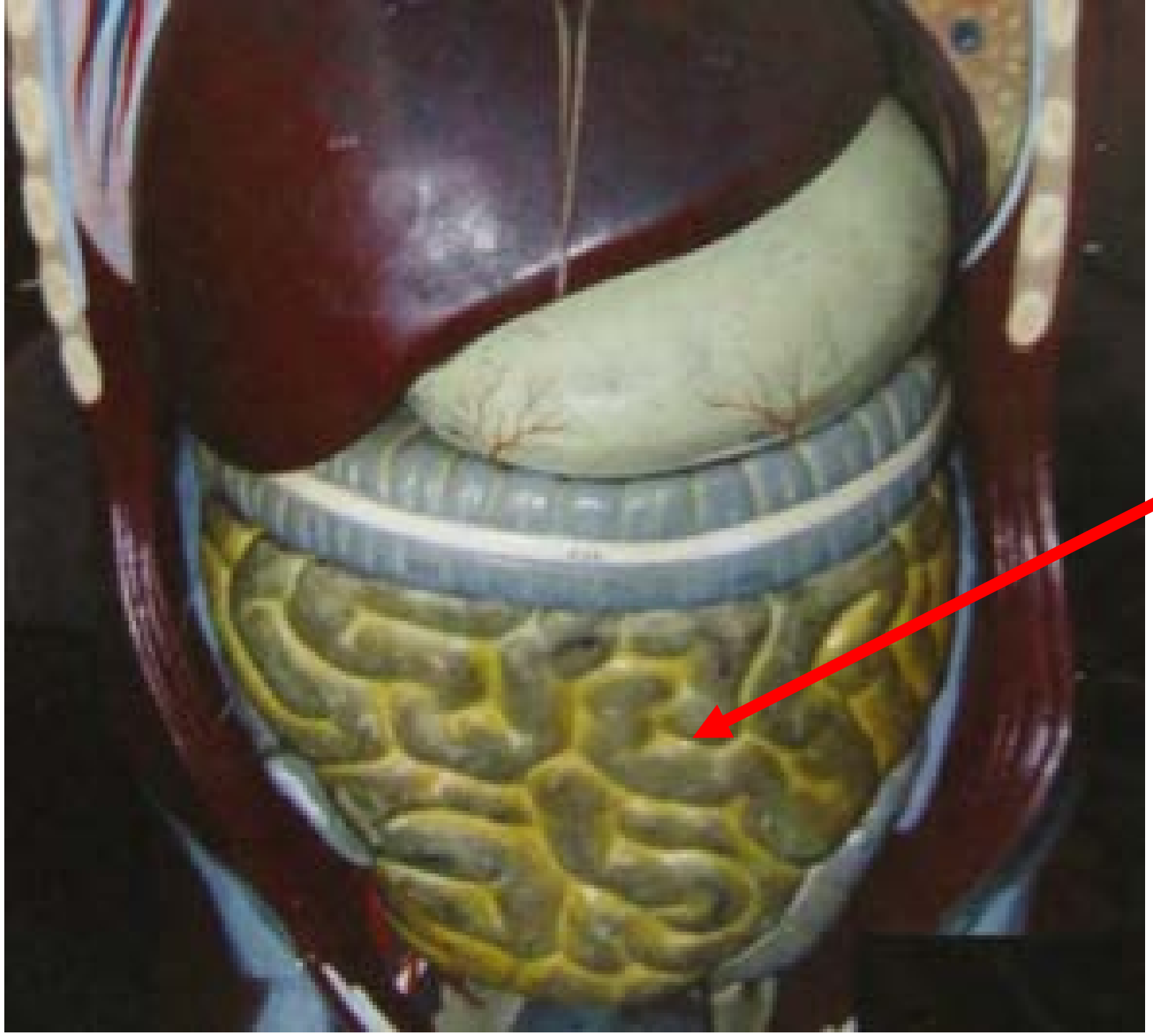
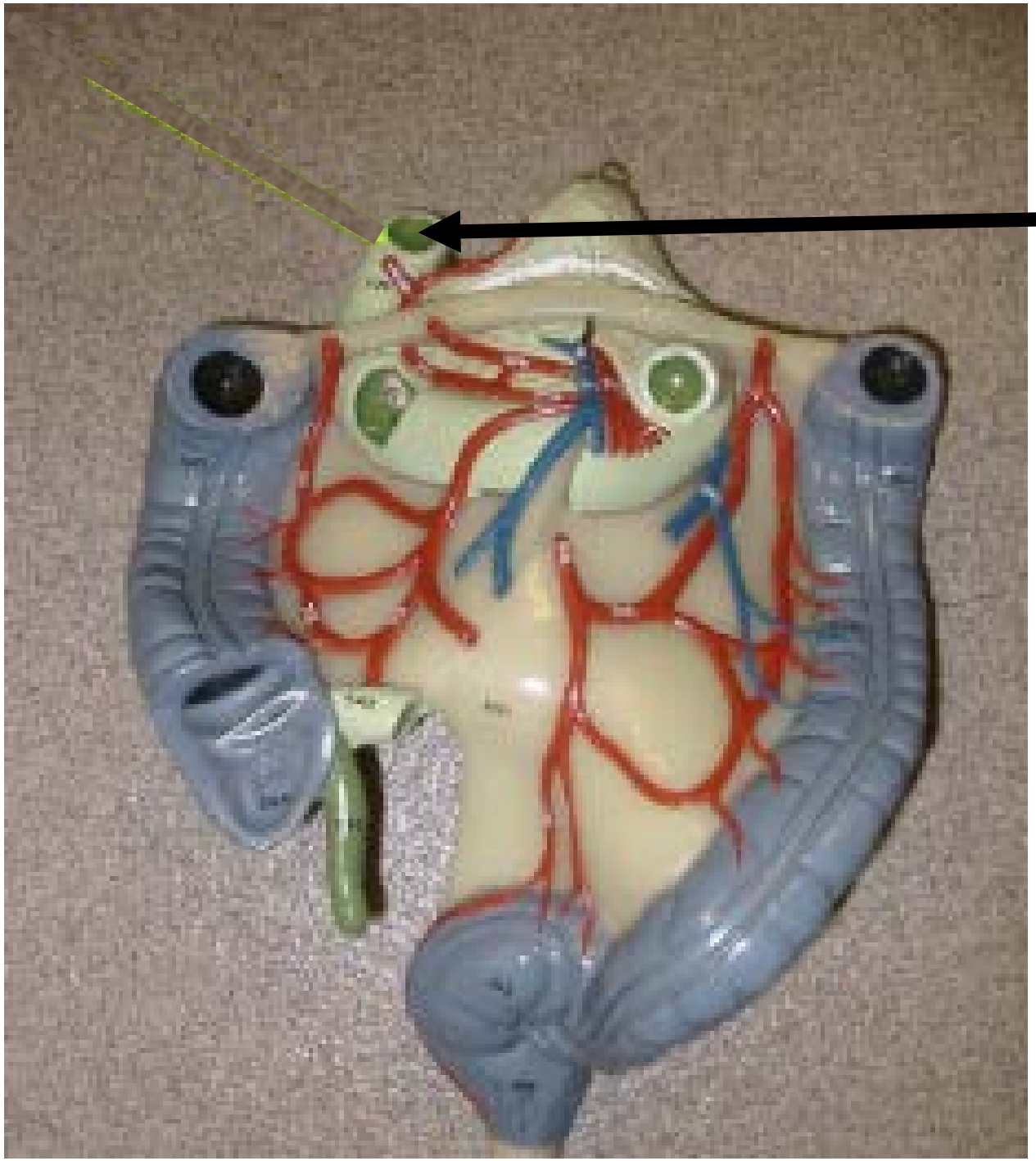
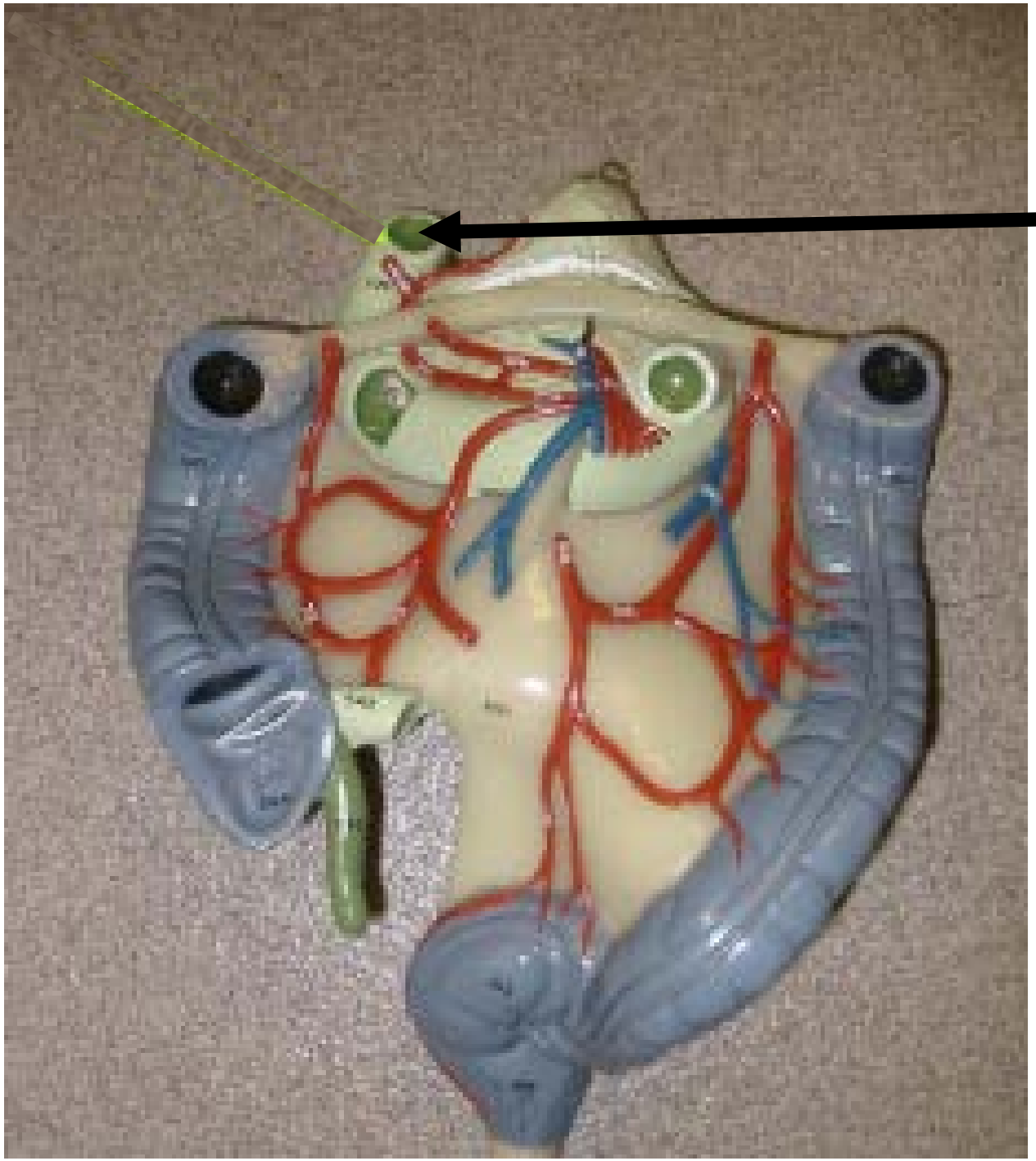
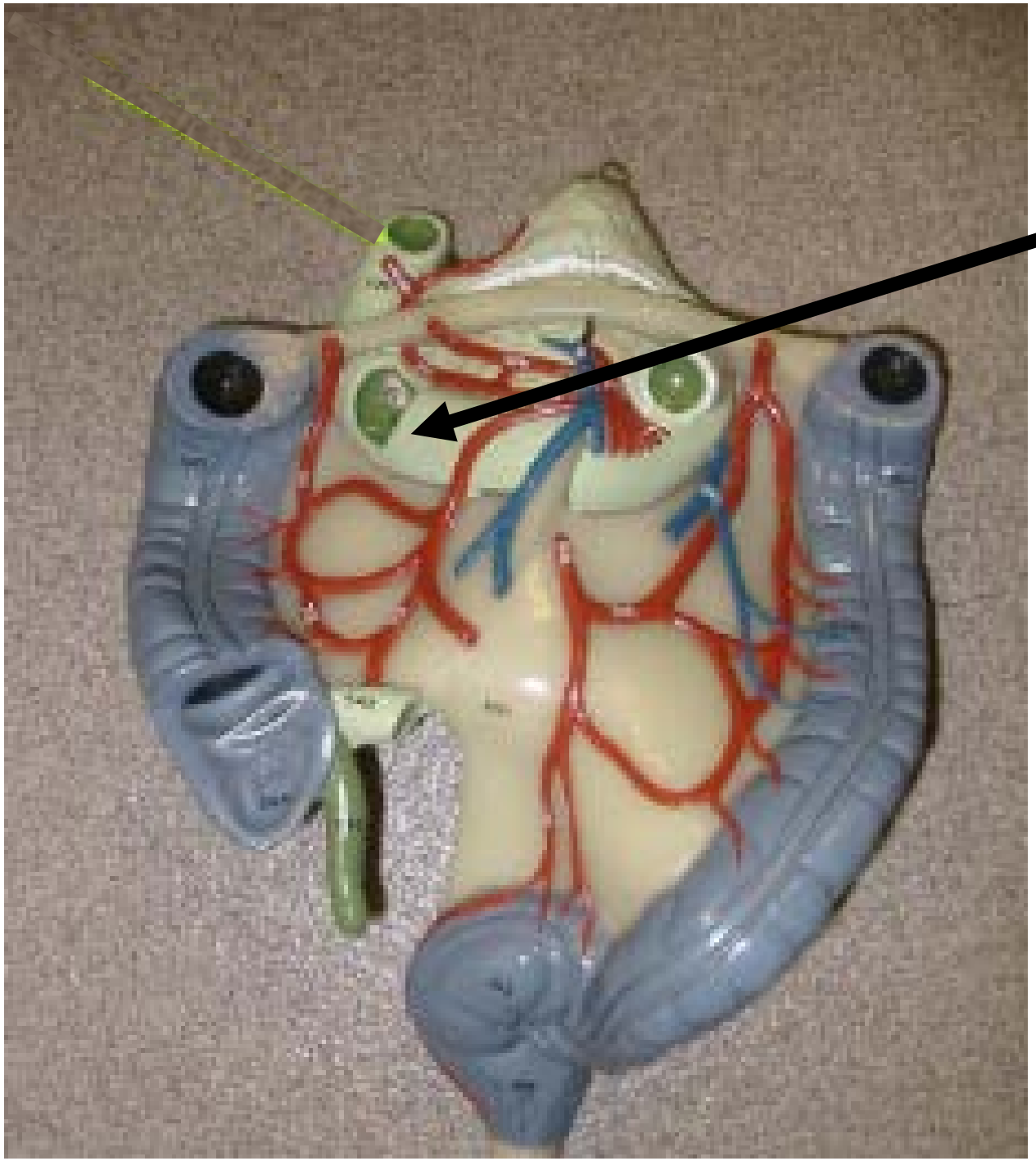

Jejunum



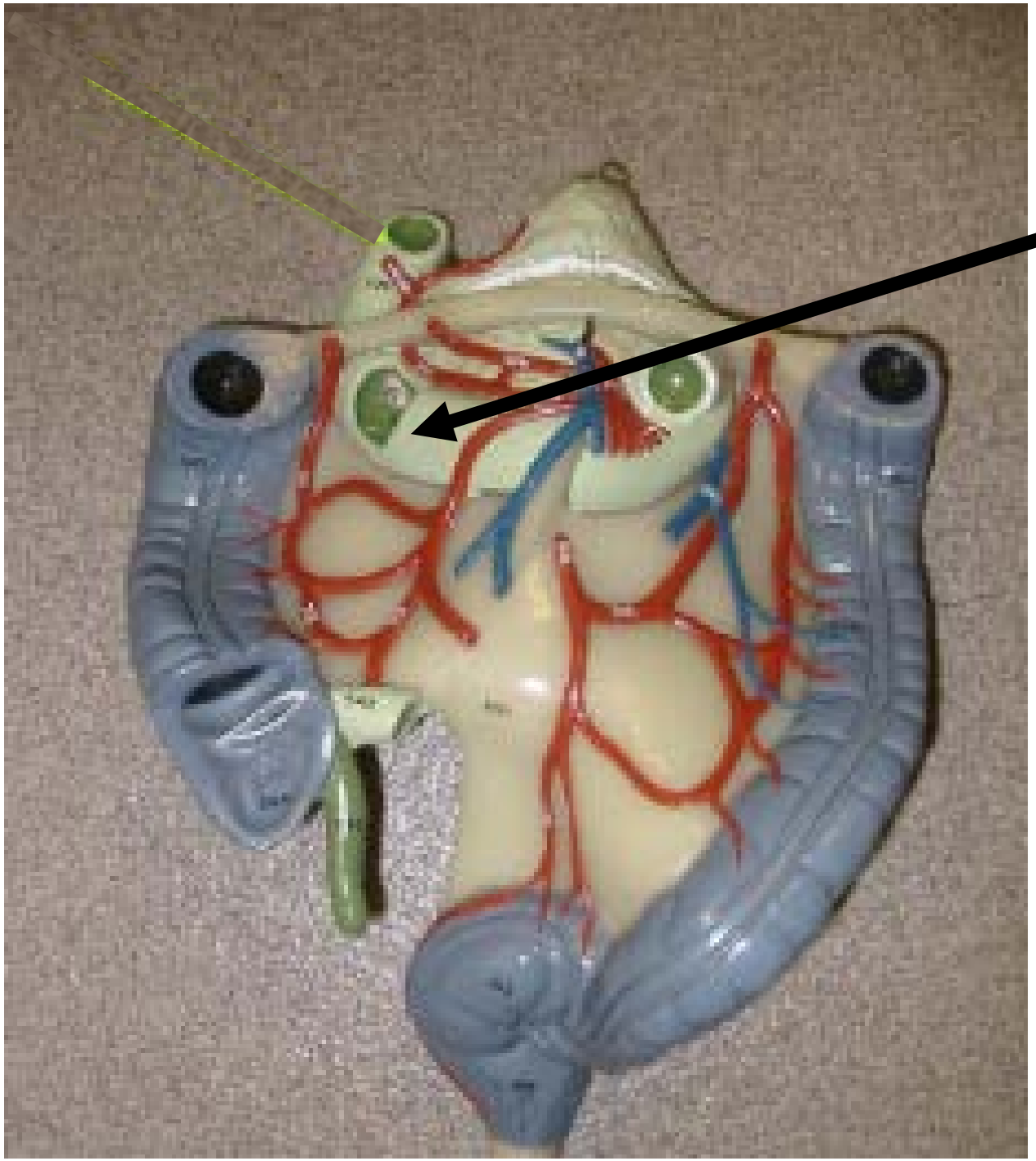
Identify the Structure.



Pyloric Valve

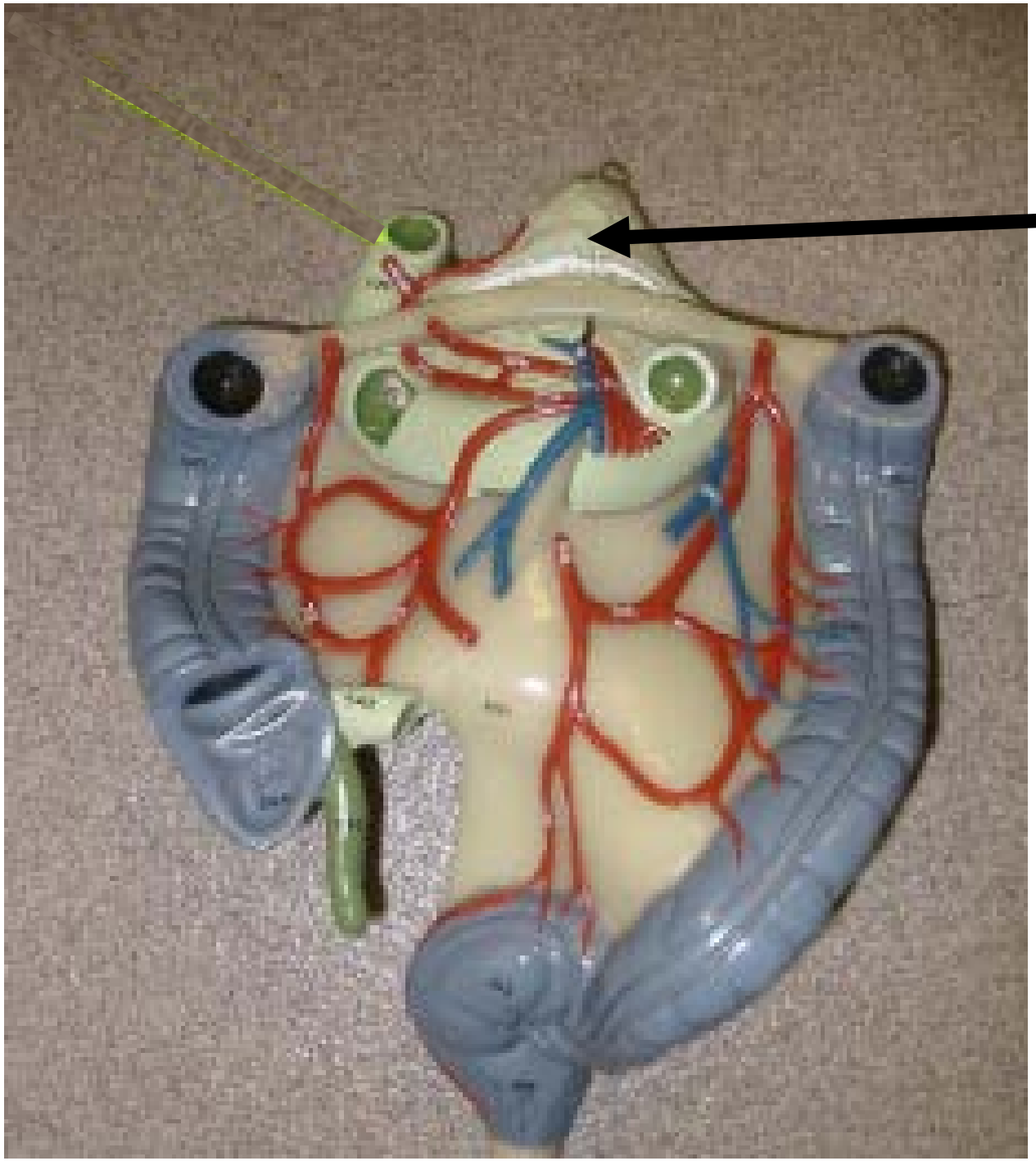


Identify the Structure.

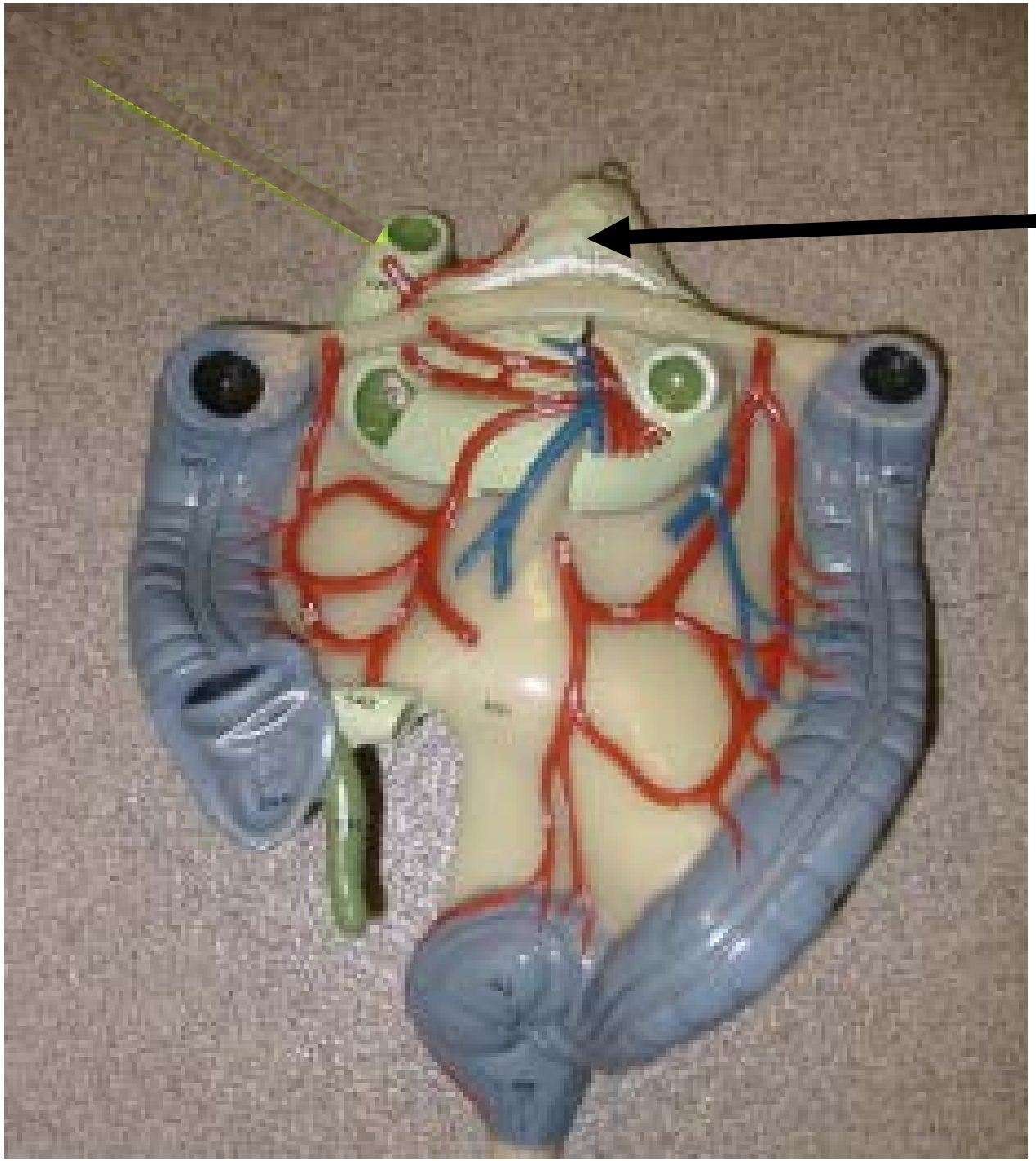


Duodenum

The duodenum receives the food first and receives bile (bile digests fat) and receives the pancreatic juice that has enzymes.



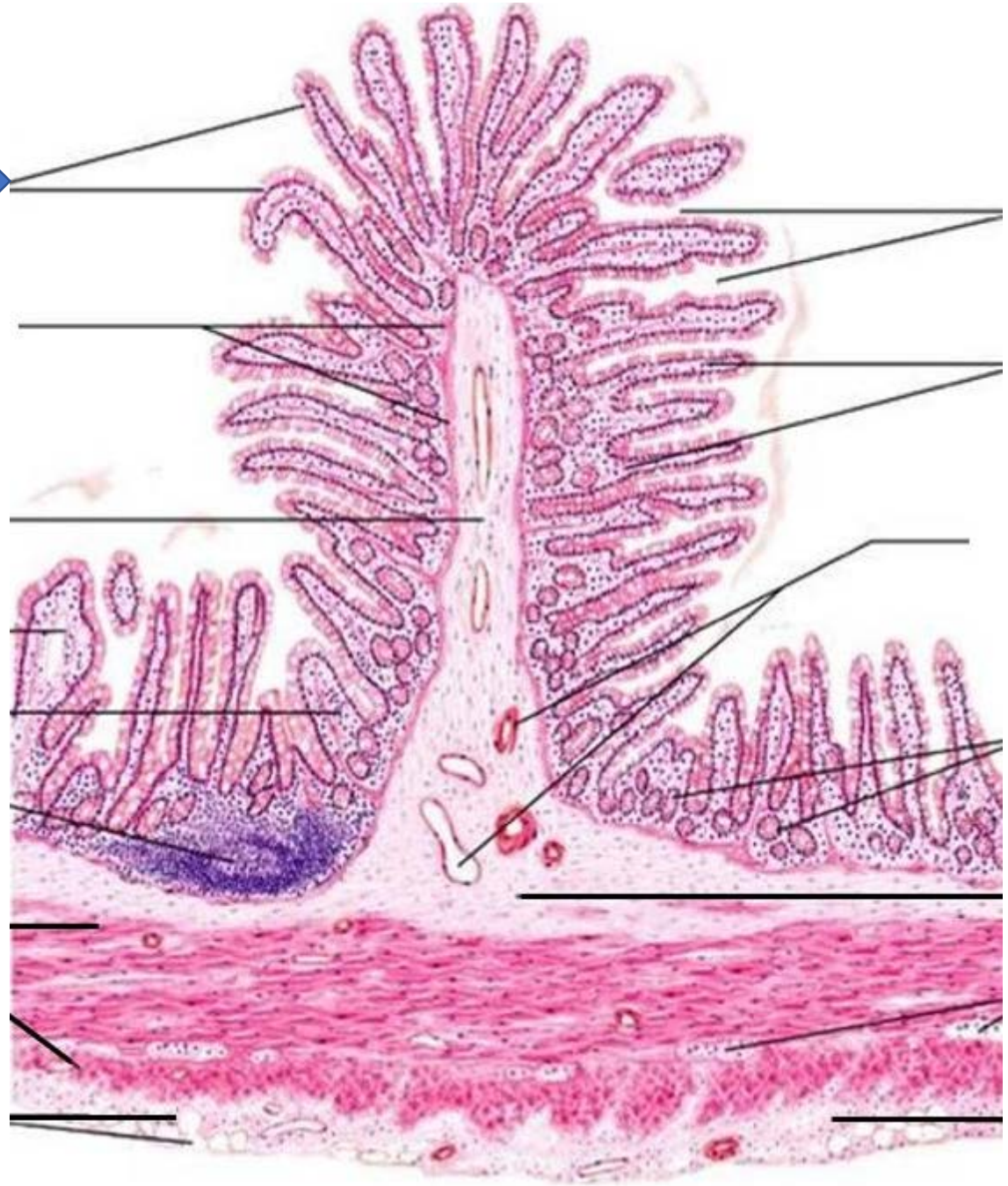
Identify the Structure and Function.



Pancreas

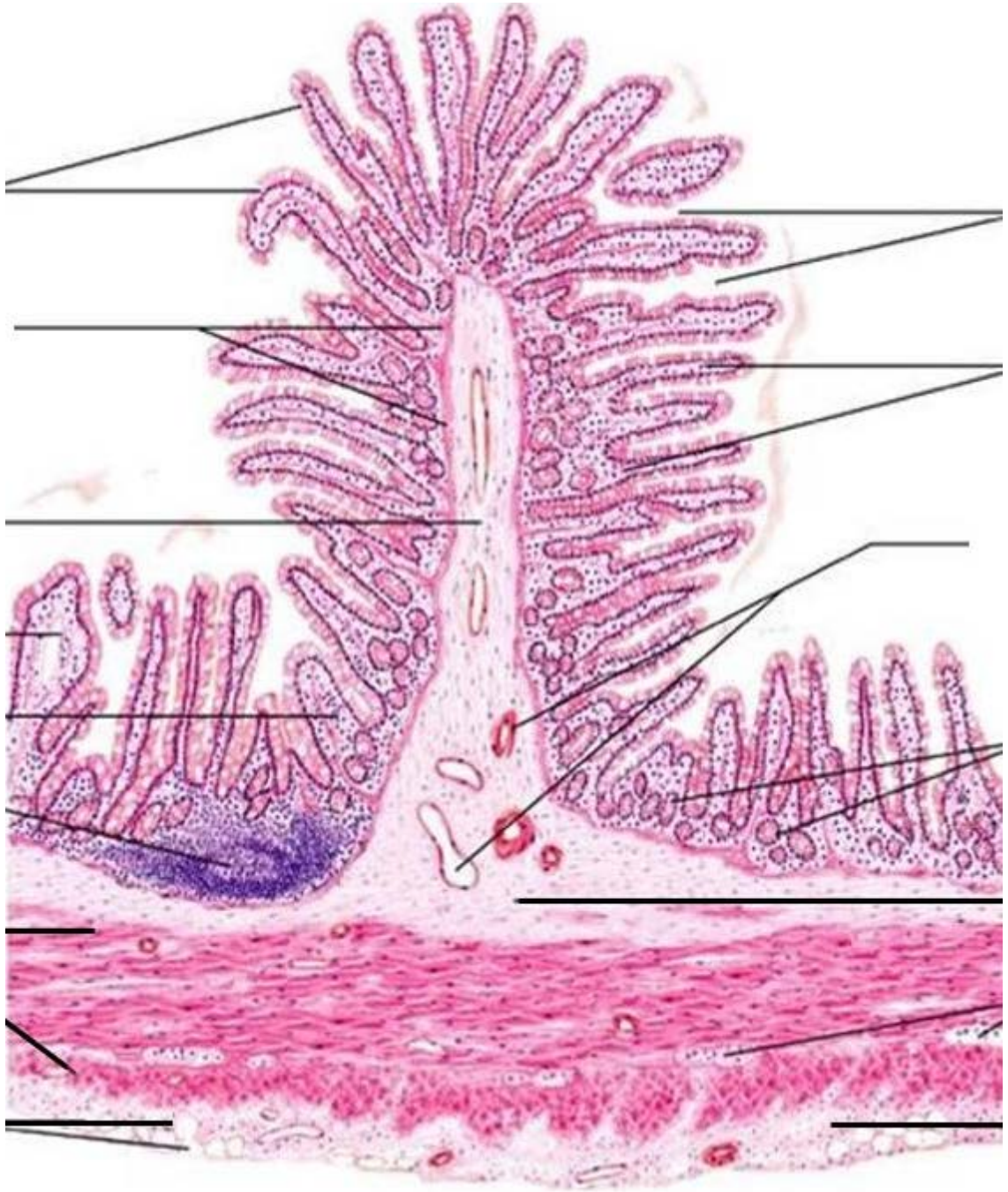
The pancreas is not part of the alimentary canal, but it makes pancreatic juice that has digestive enzymes needed to break down food. The pancreatic duct carries the pancreatic juice to the duodenum.

Identify the cell type.

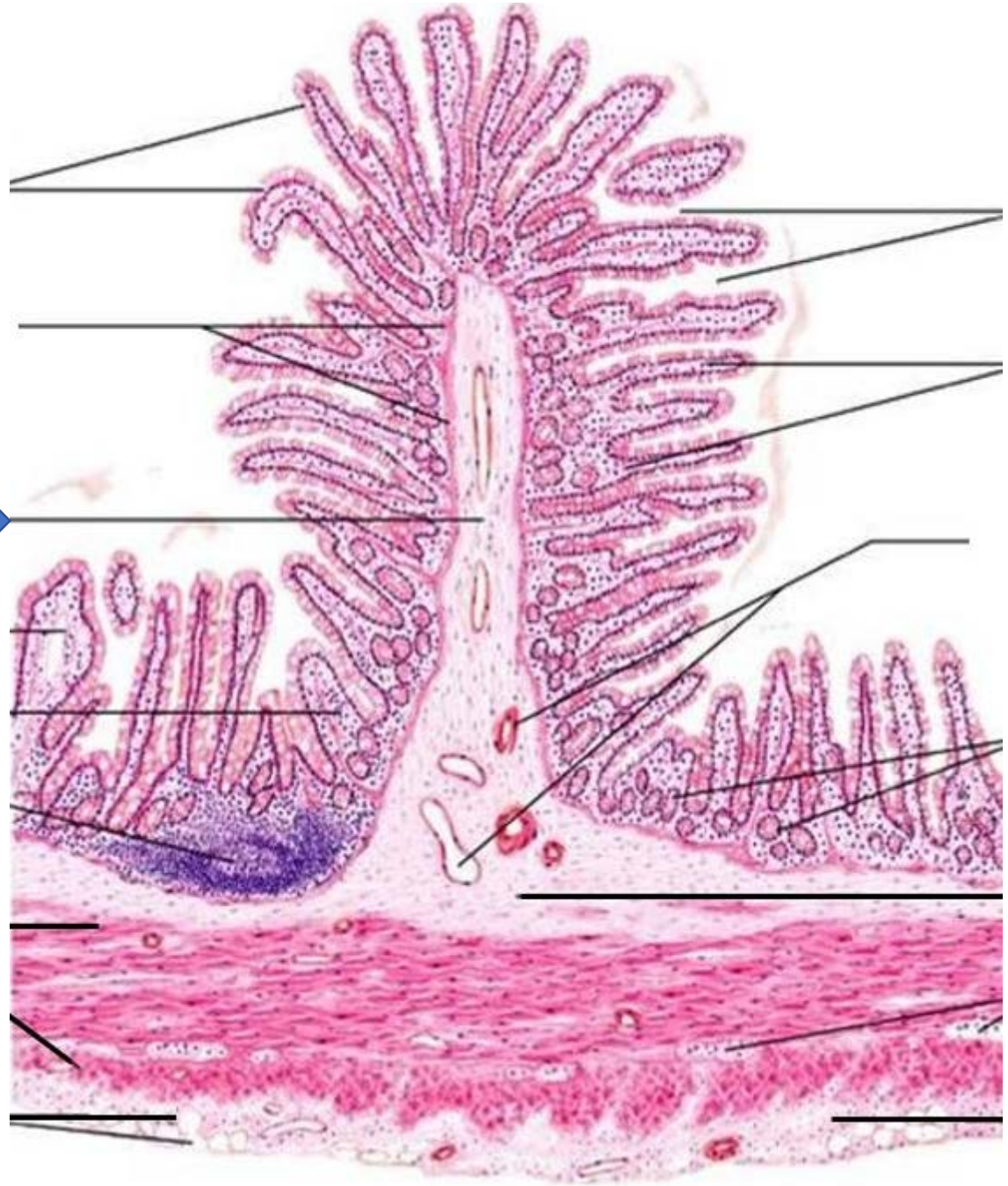


Identify the cell type.

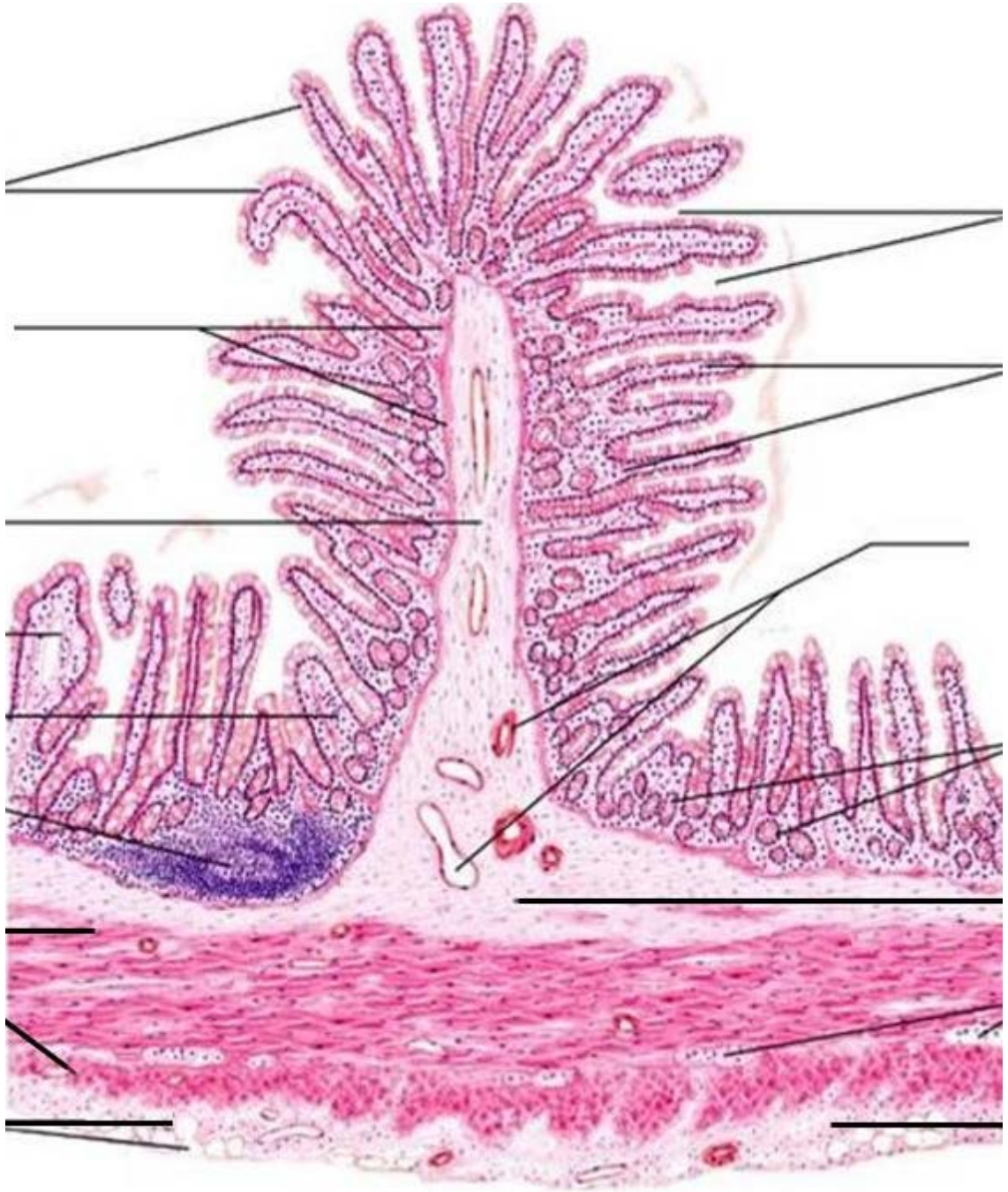
Columnar Epithelial Cells



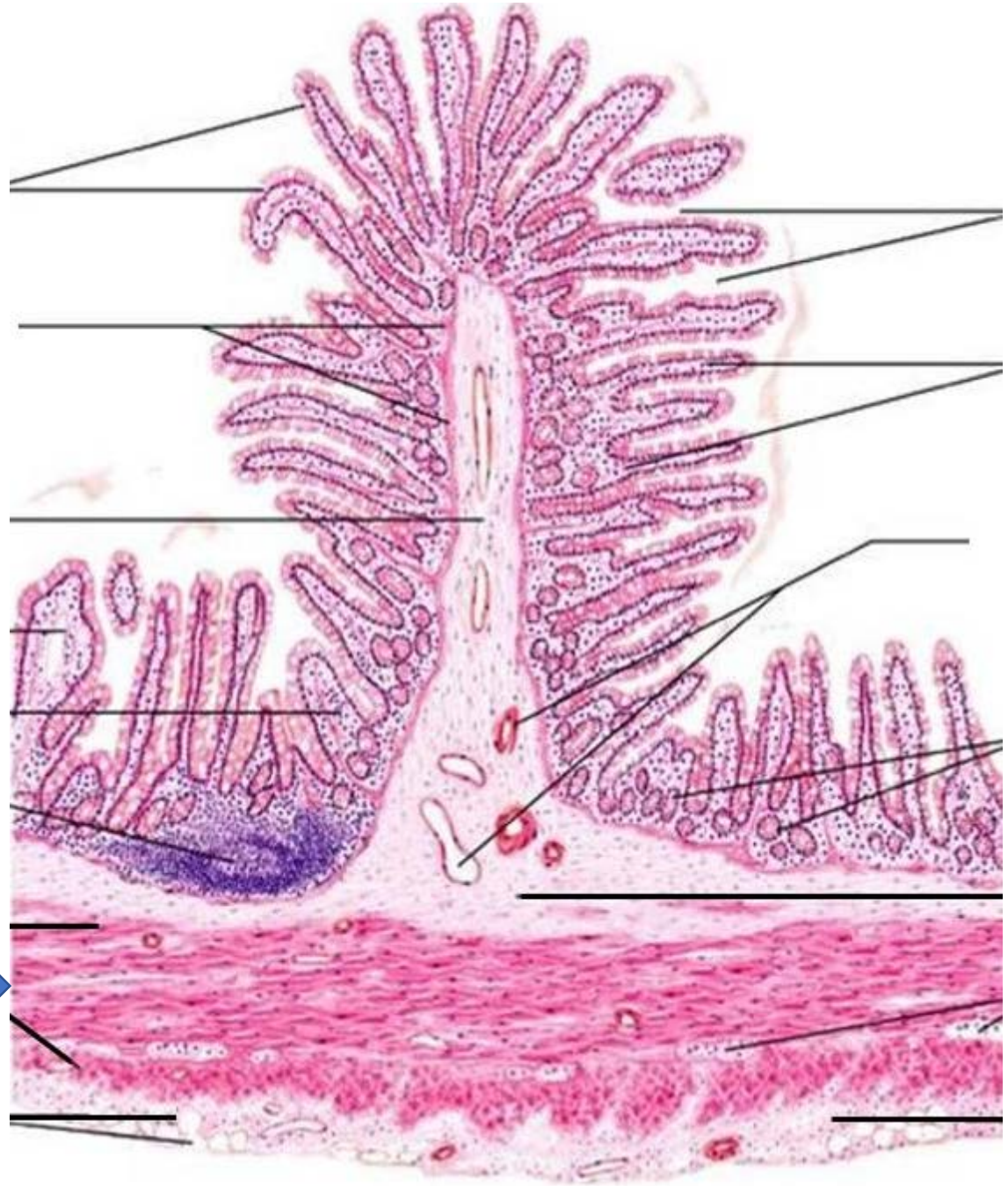
Identify this Layer



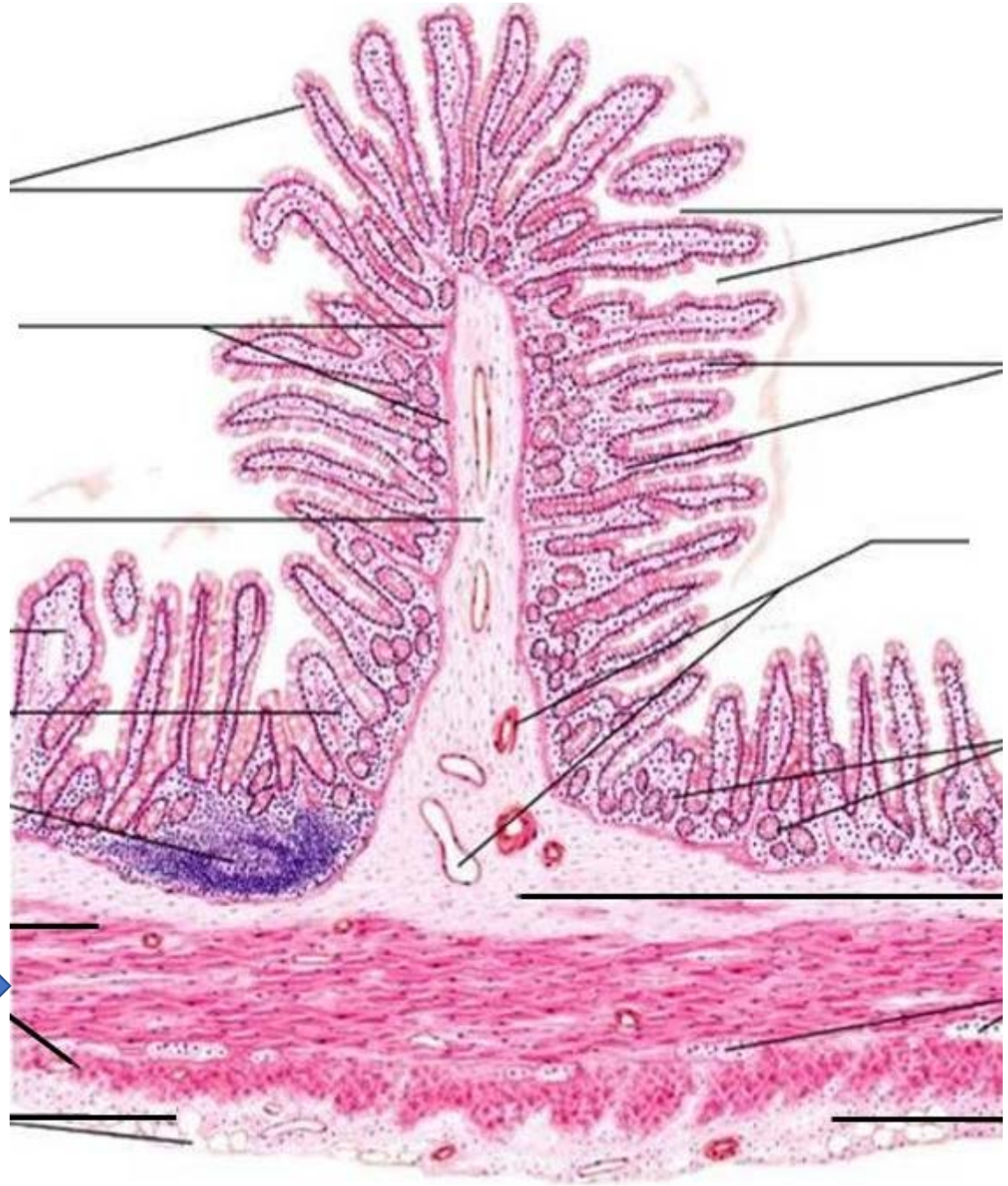
Submucosal Layer



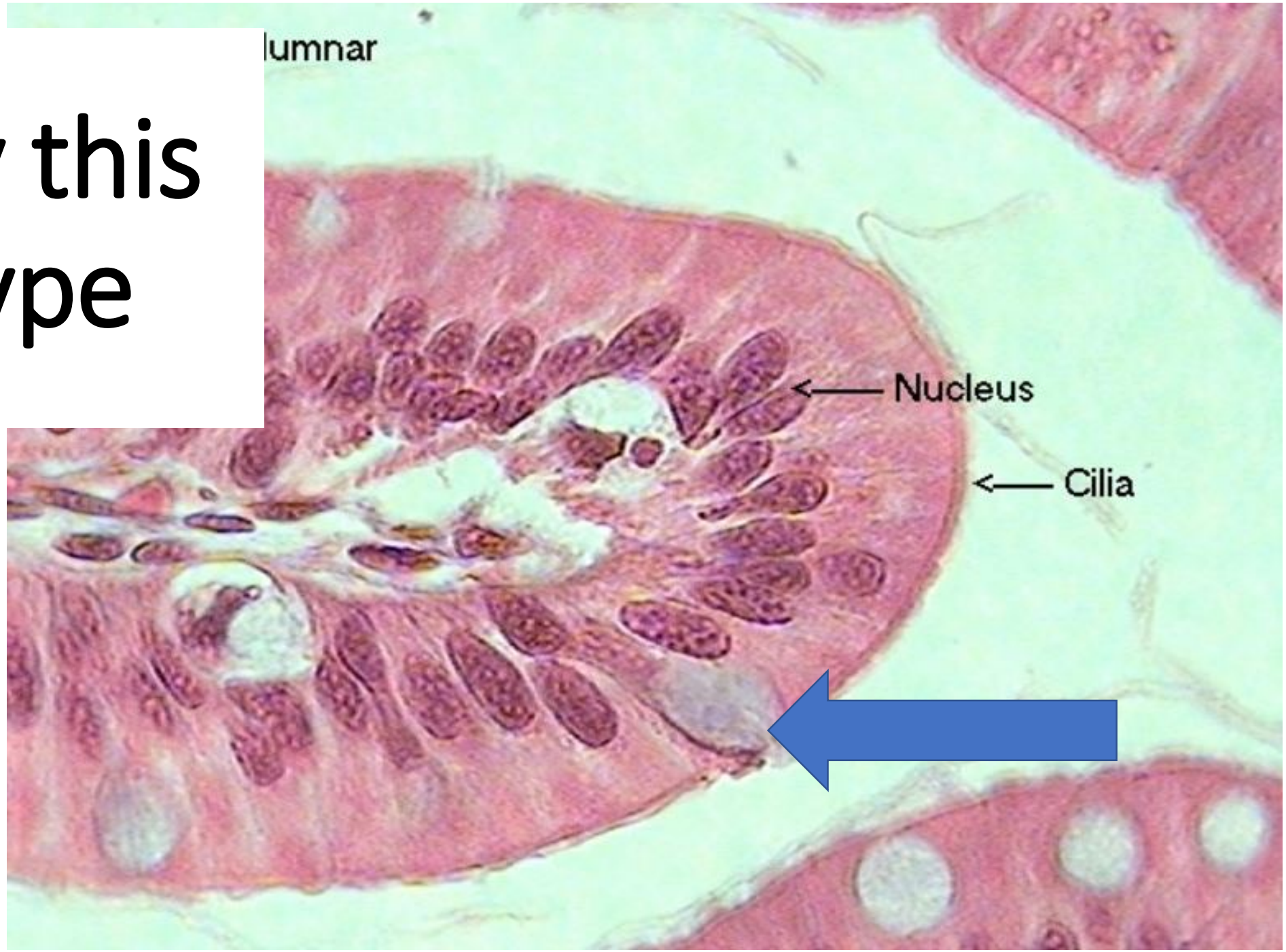
Identify this Layer



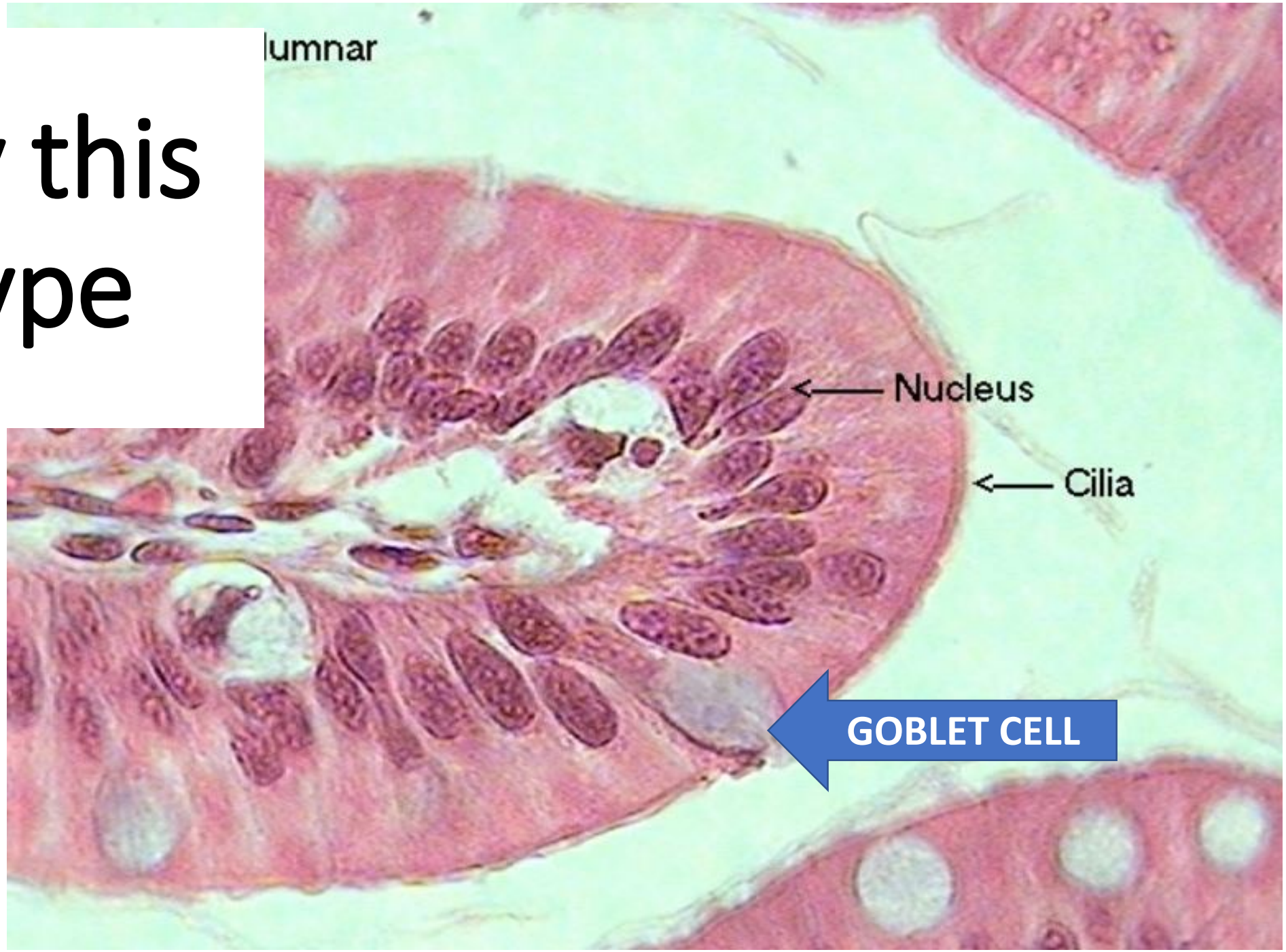
Muscular Layers



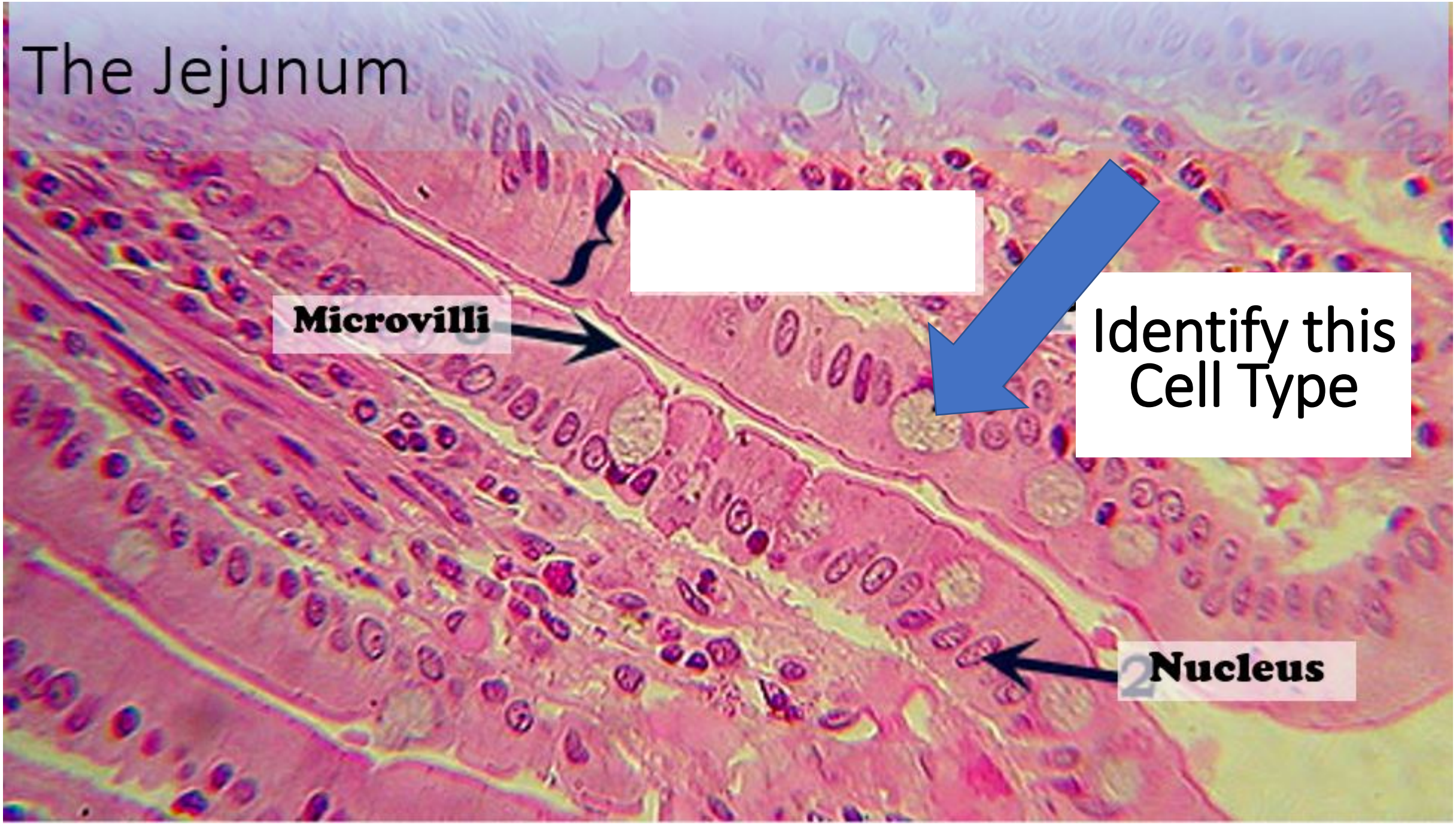
Identify this Cell Type



Identify this Cell Type

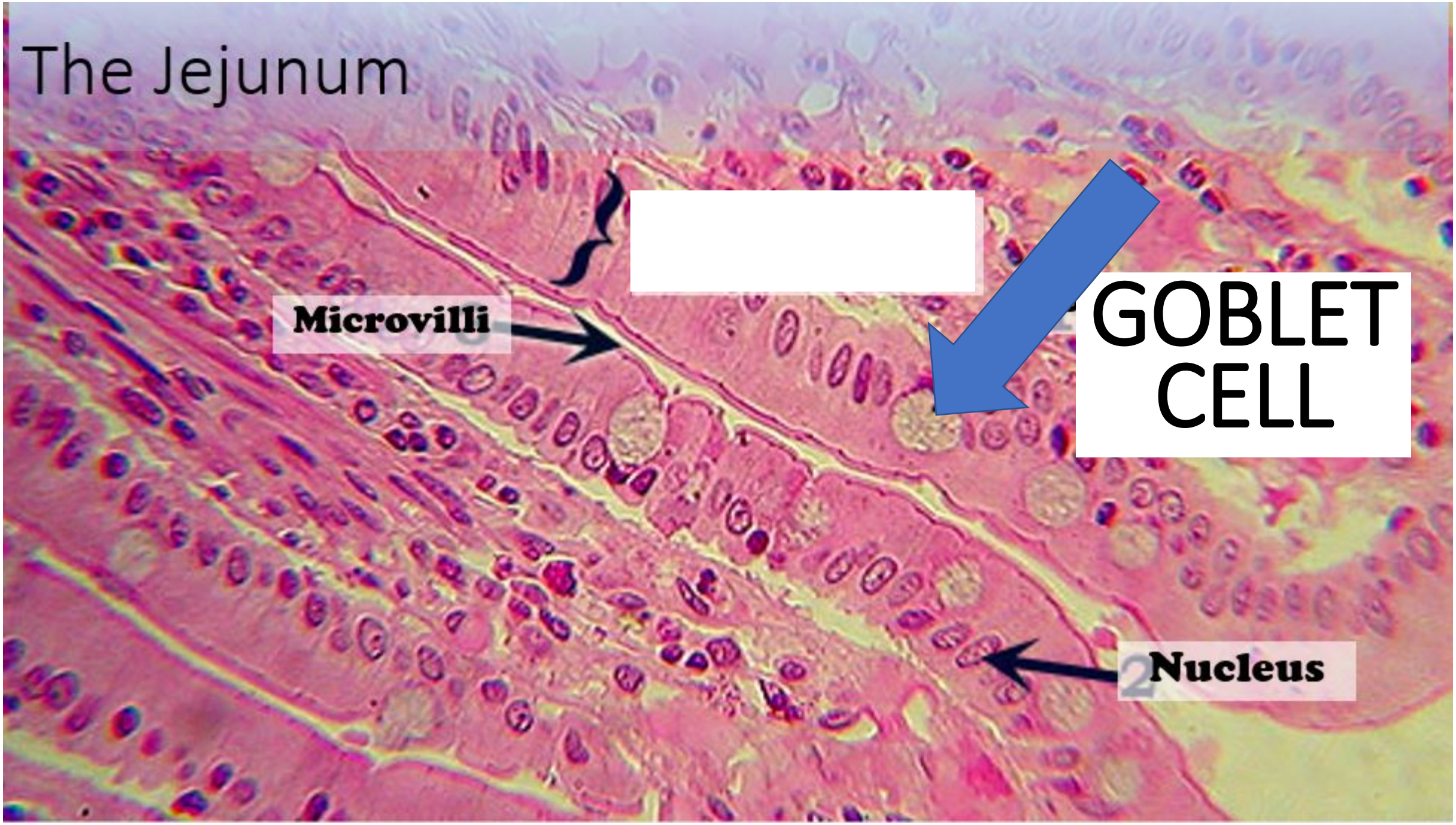


The Jejunum

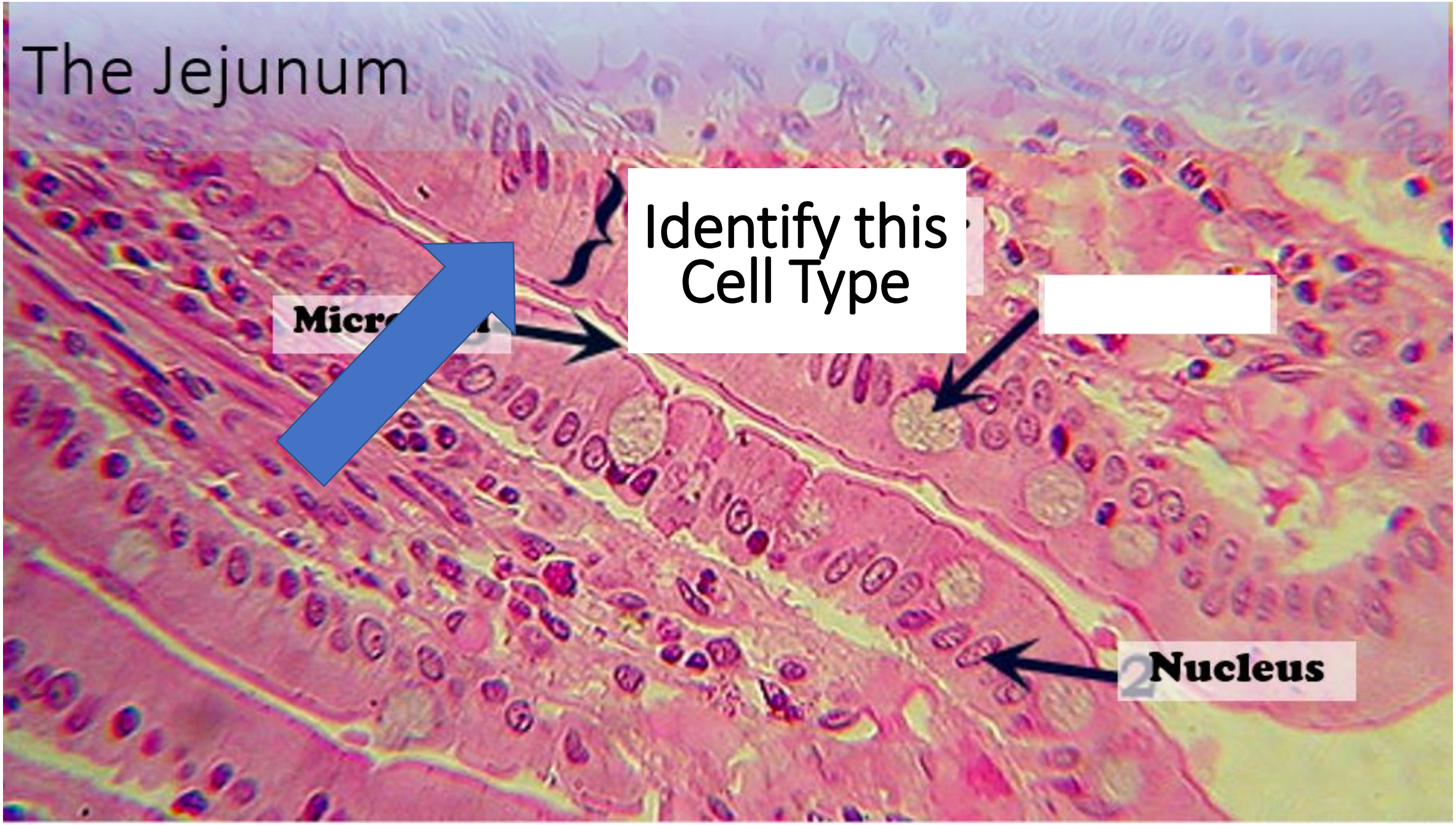


Identify this Cell Type

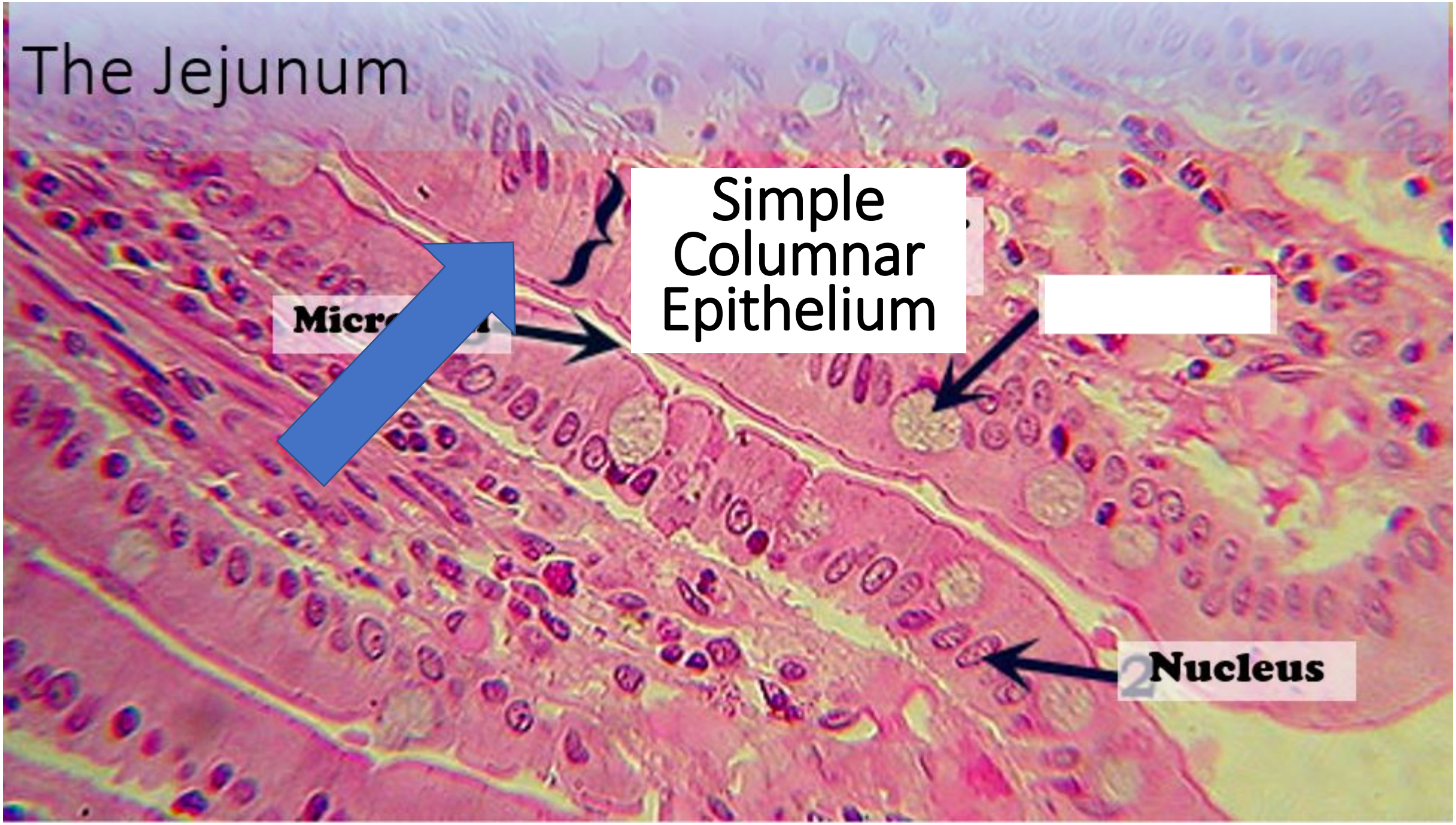
The Jejunum

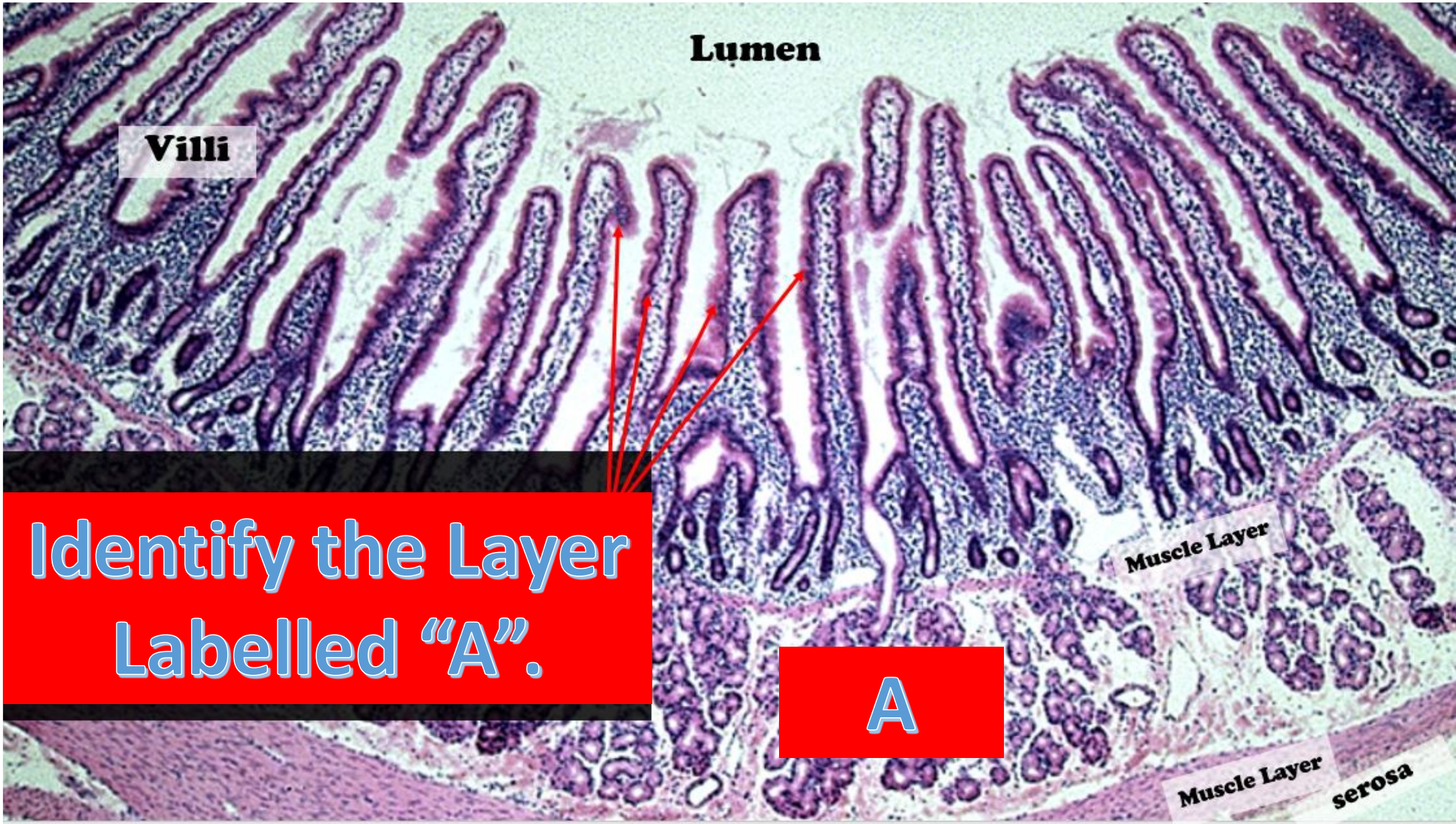


The Jejunum



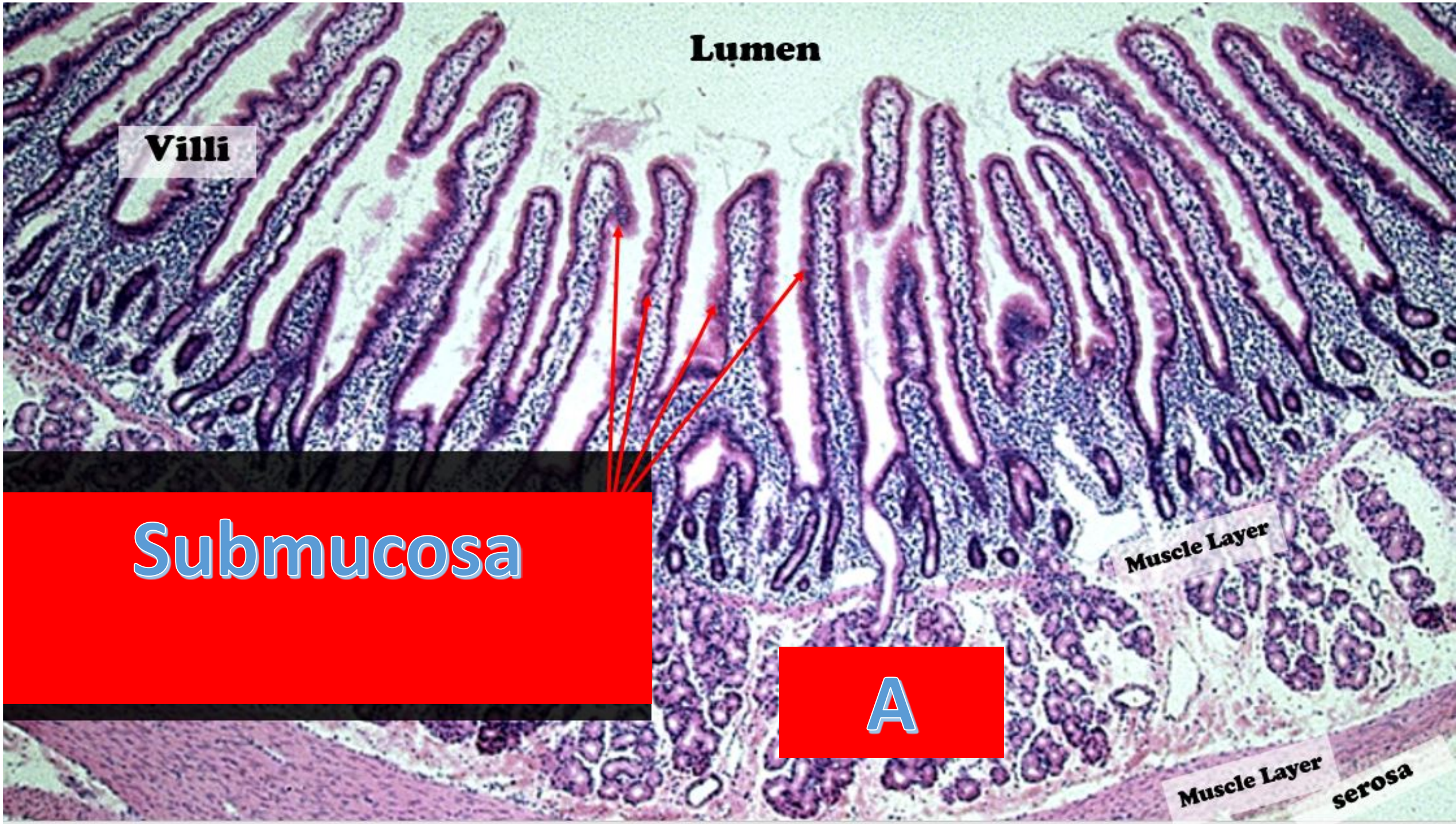
The Jejunum

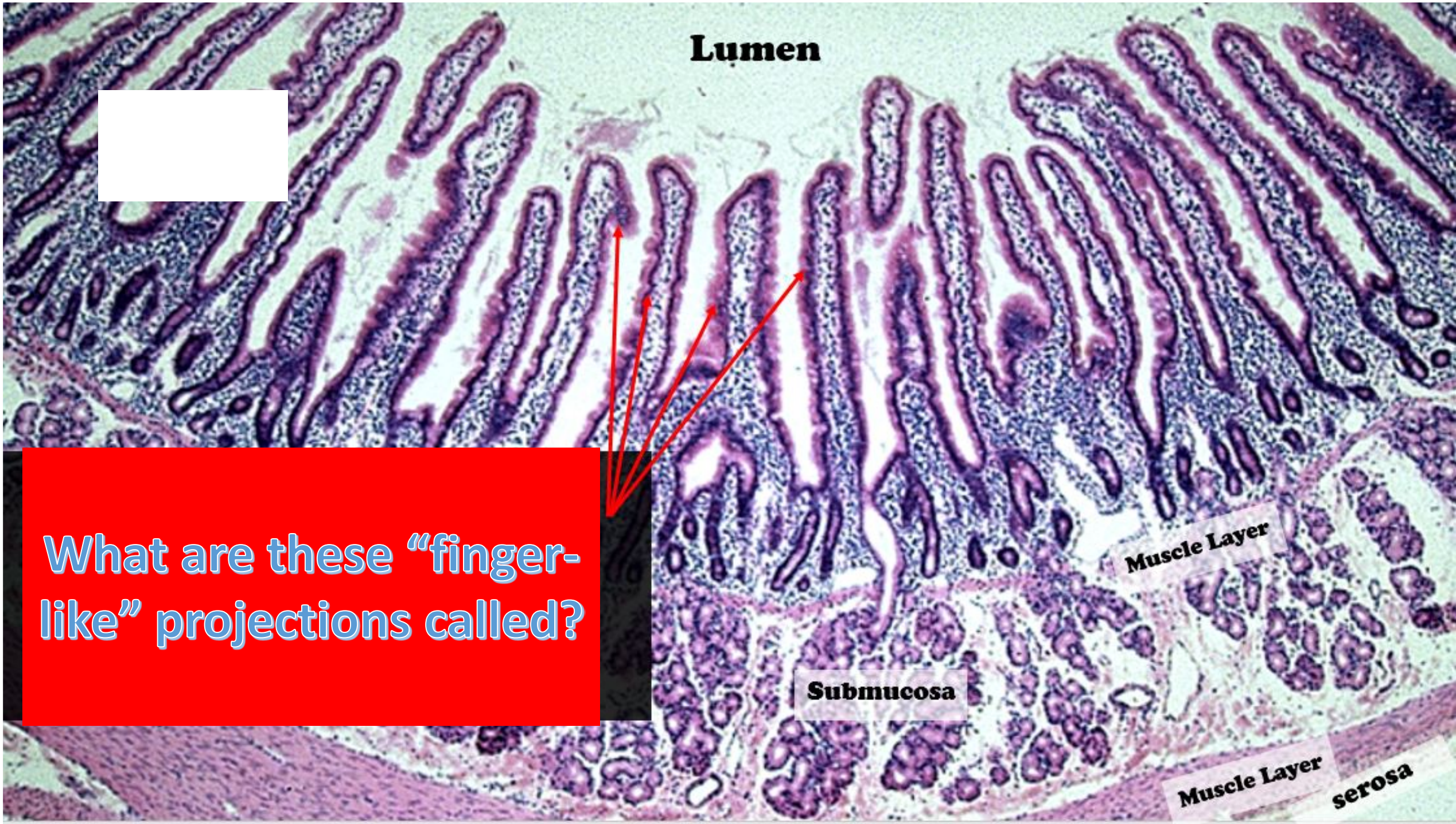




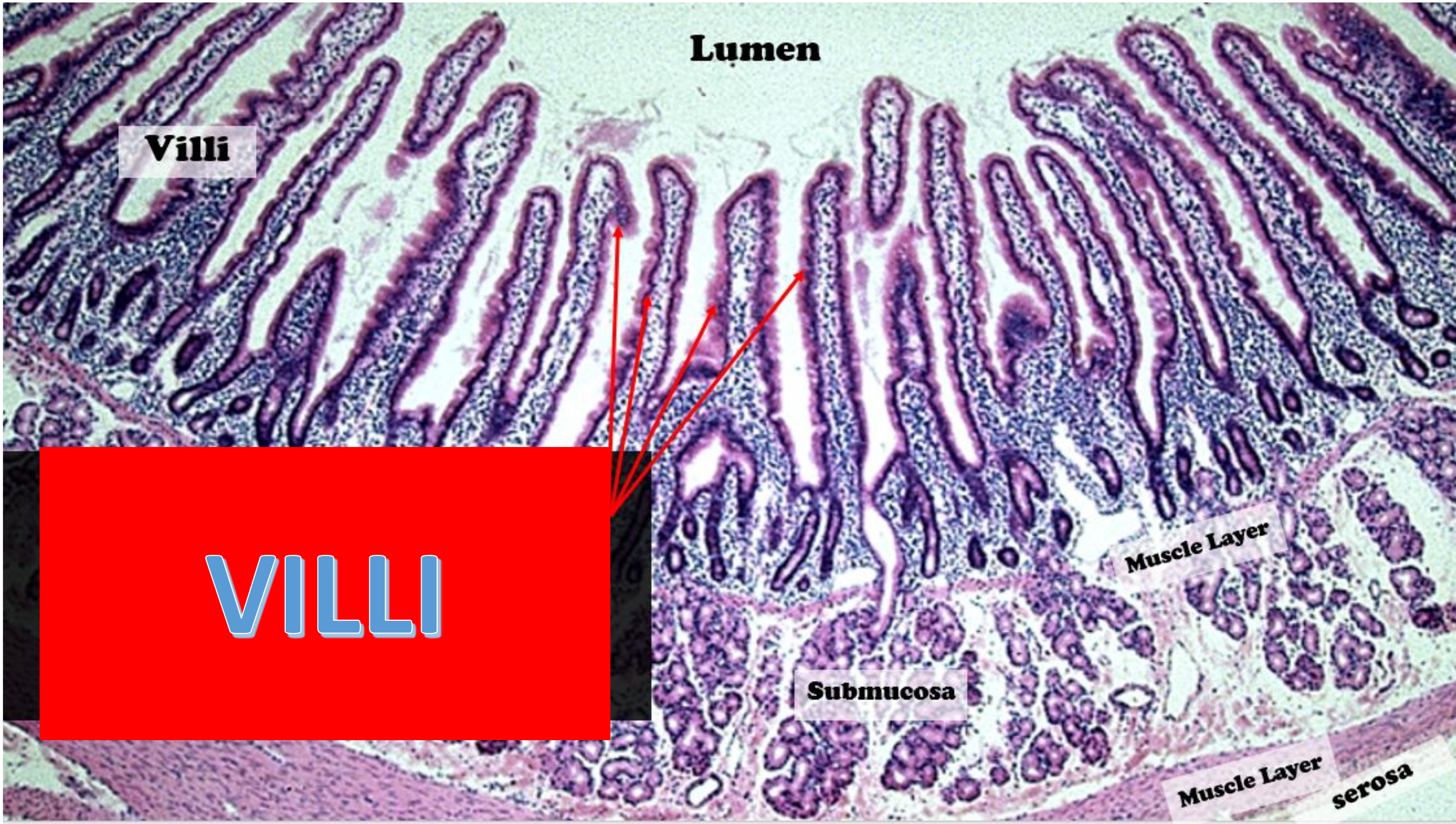
Identify the Layer Labelled "A".

A

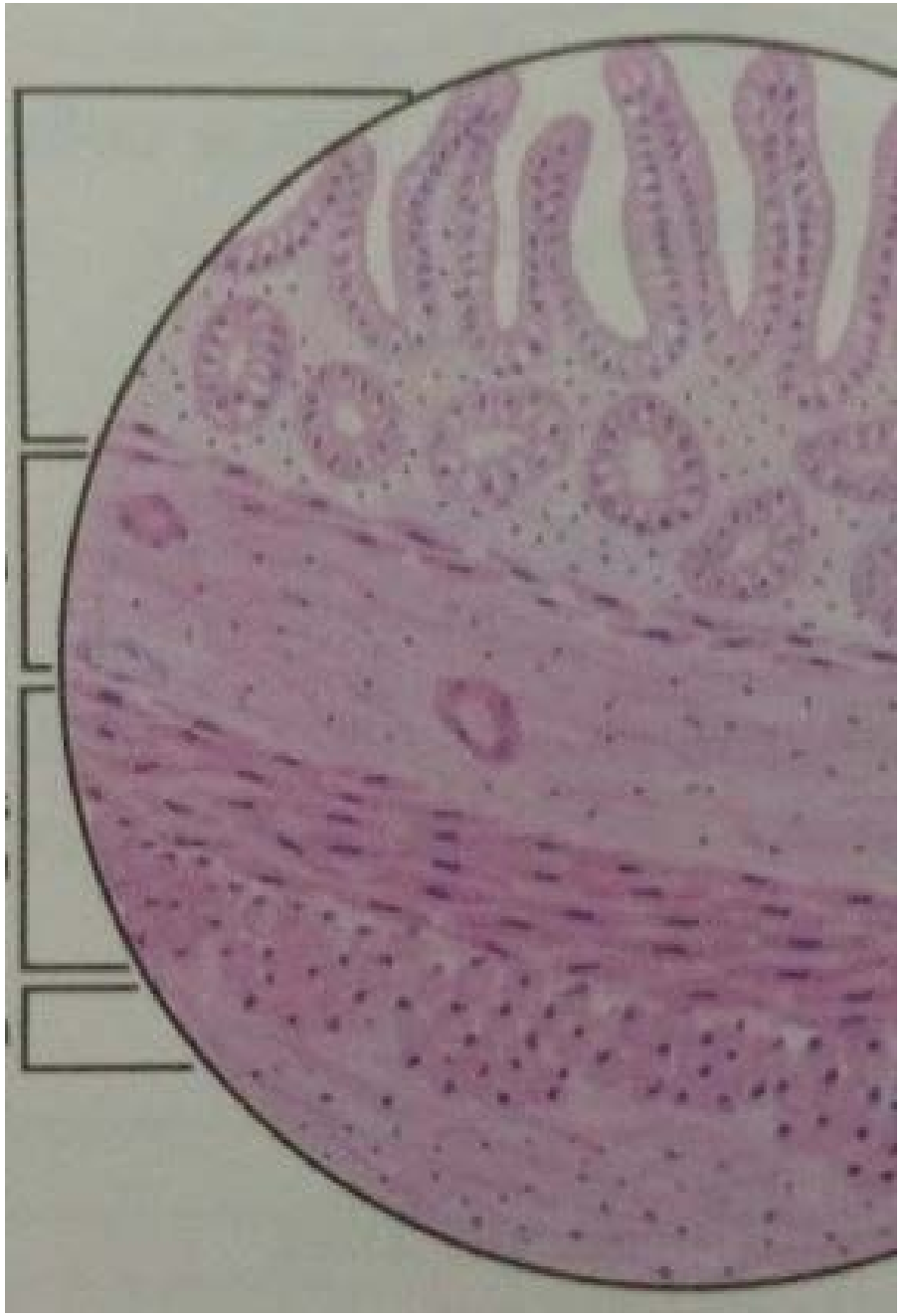

Lumen
Villi
Submucosa
Muscle Layer
A
Muscle Layer
serosa



What are these “finger-like” projections called?

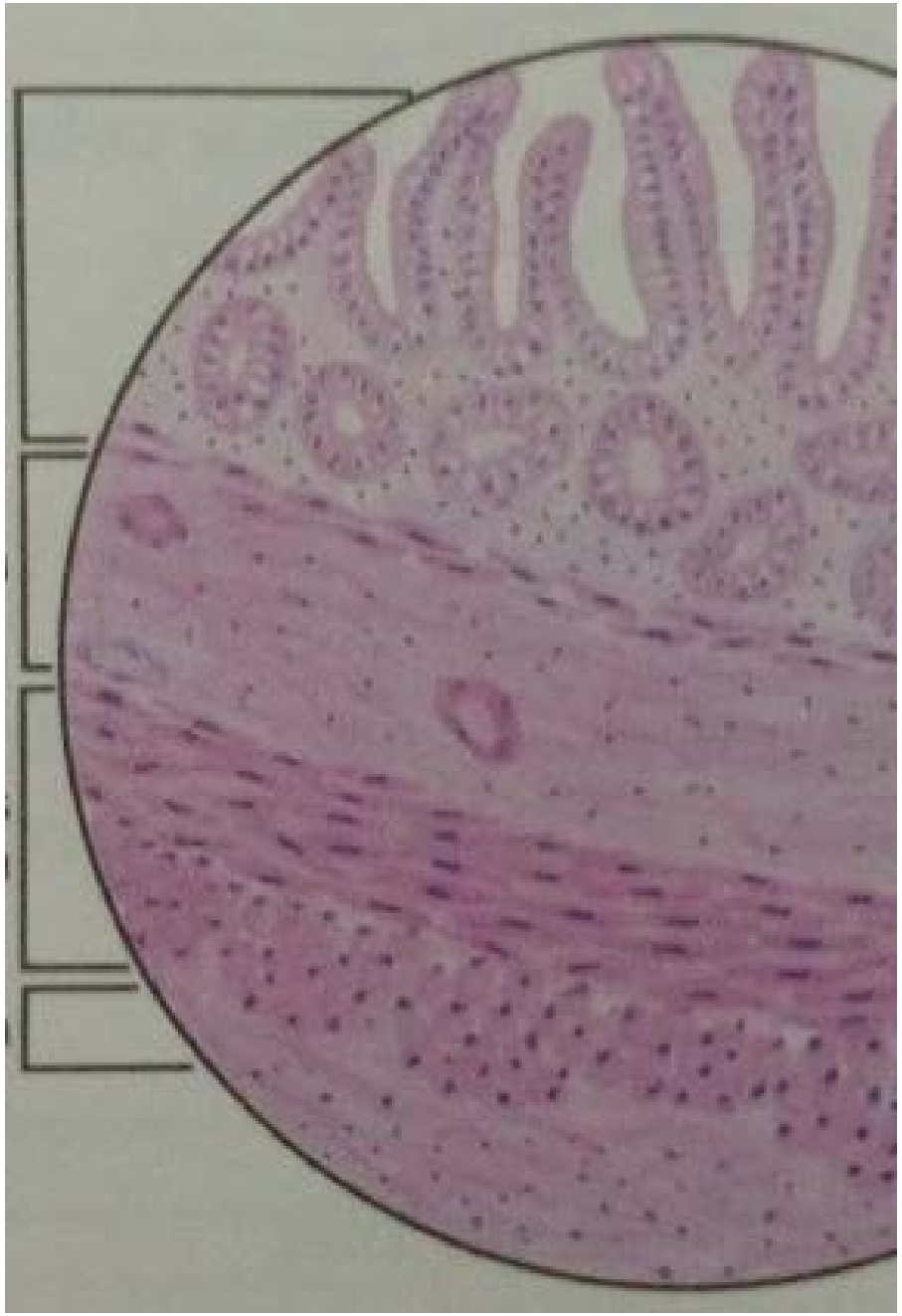

Lumen
Villi
VILLI
Muscle Layer
Submucosa
Muscle Layer
serosa

Identify the structure.

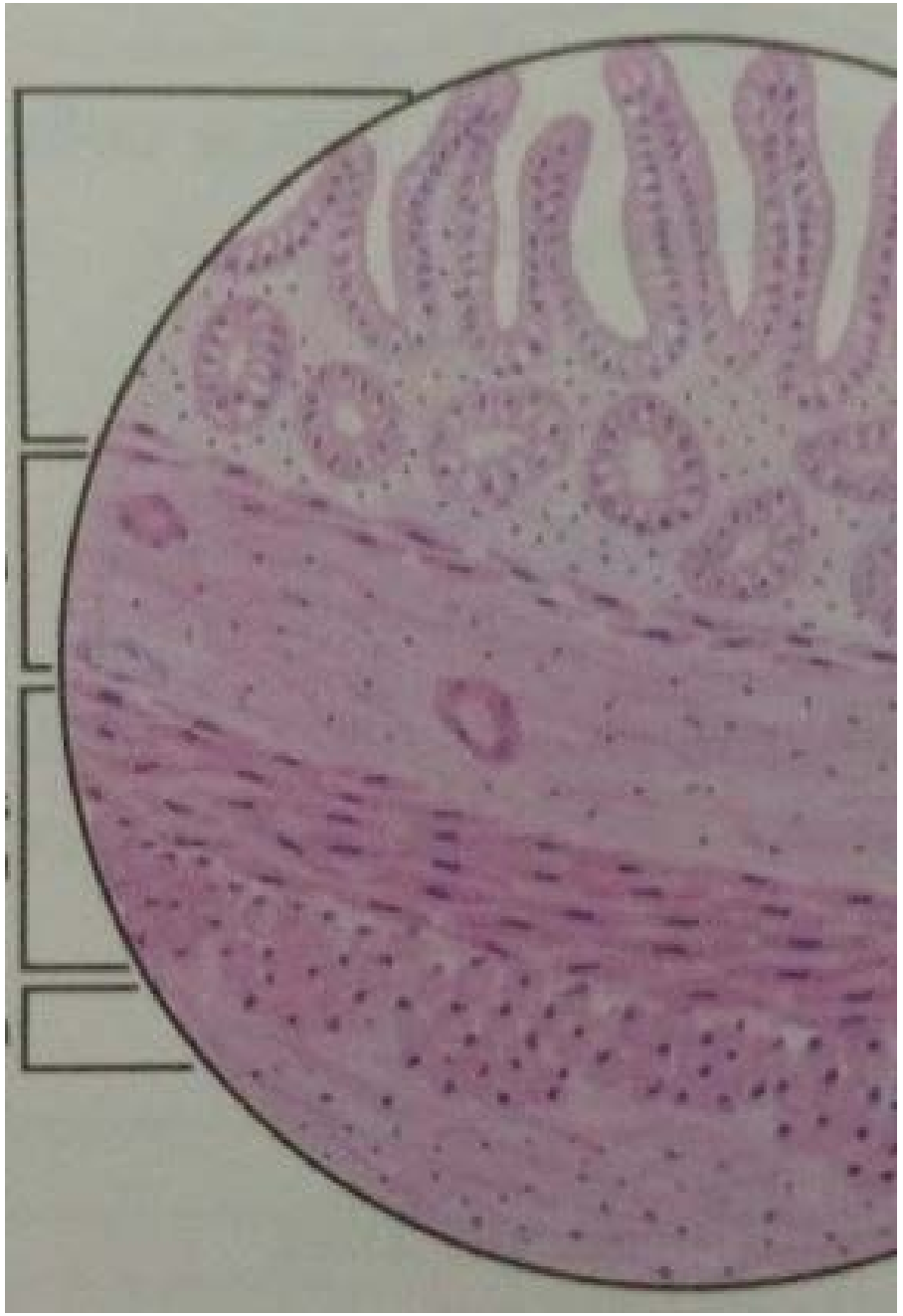


Identify the structure.

MUCOSA

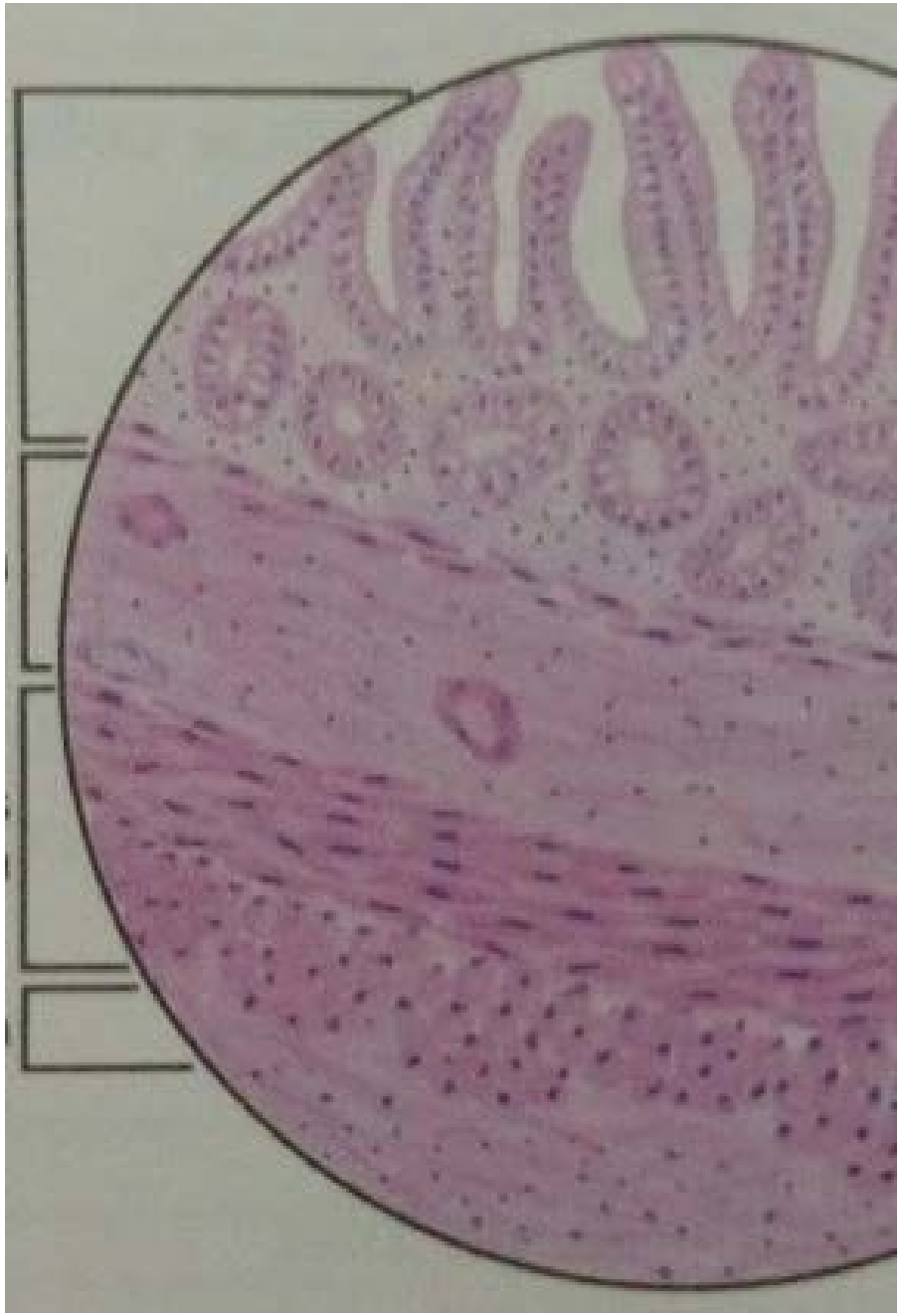


Identify the structure.

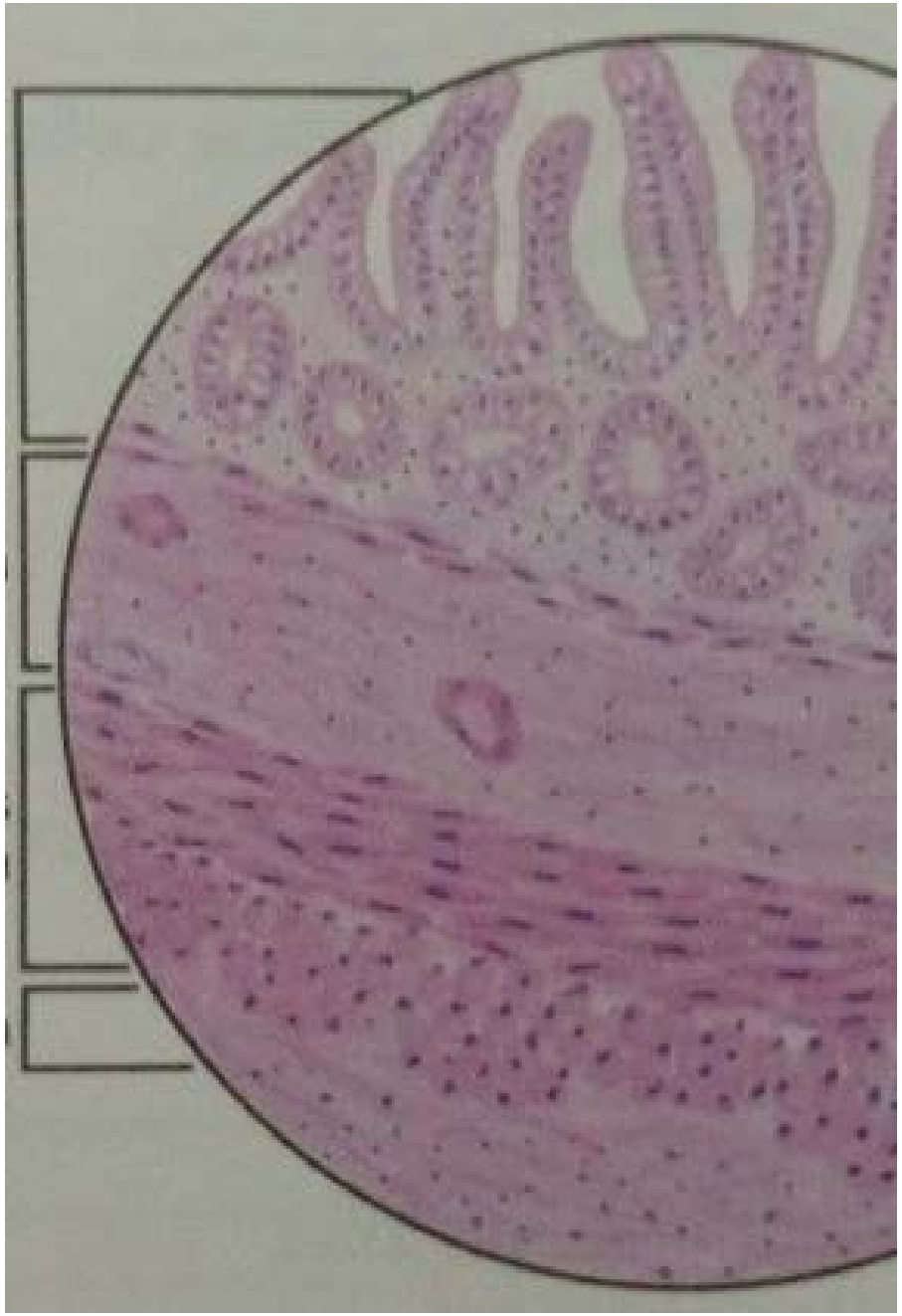


Identify the structure.

SUBMUCOSA

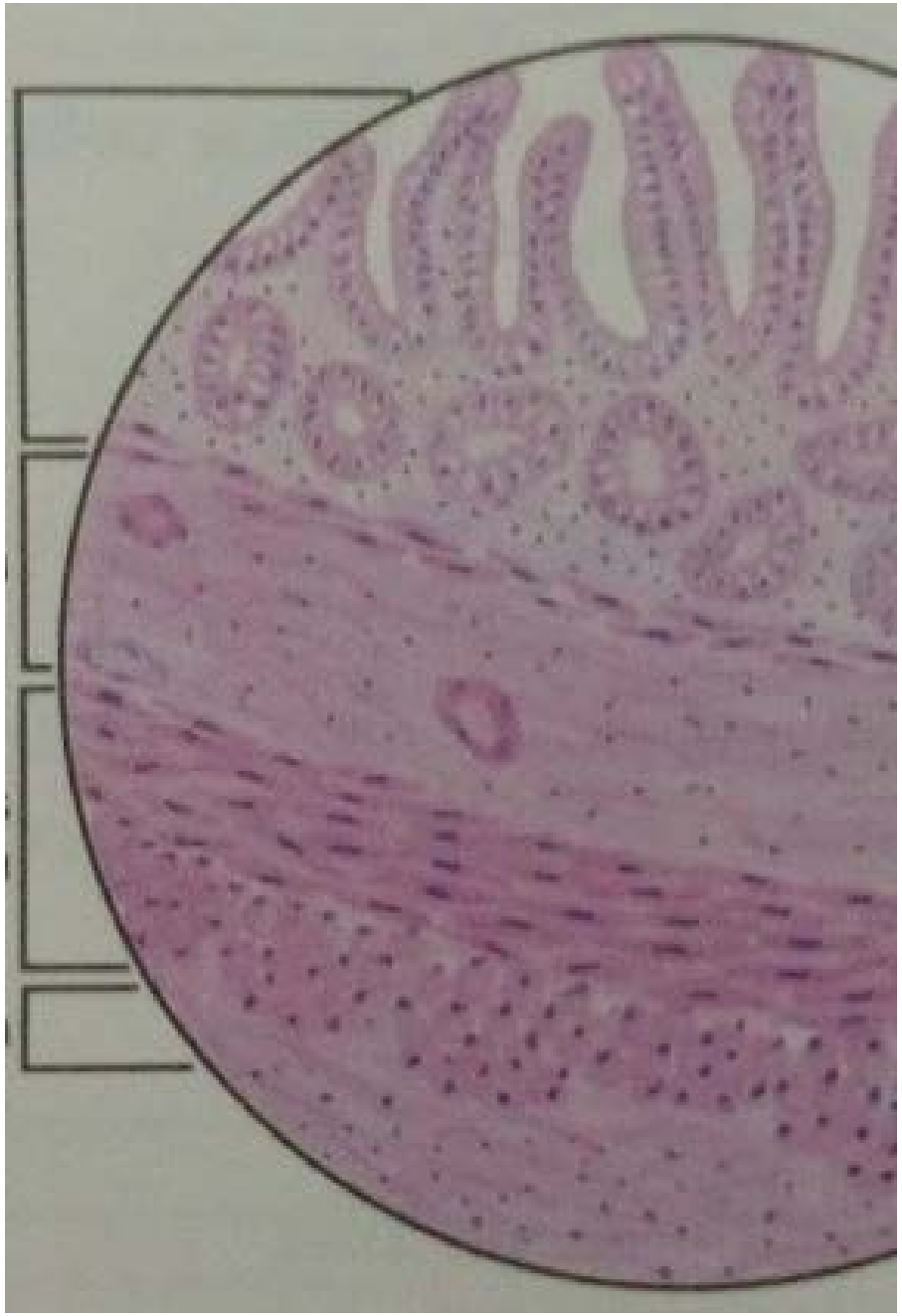


Identify the structure.

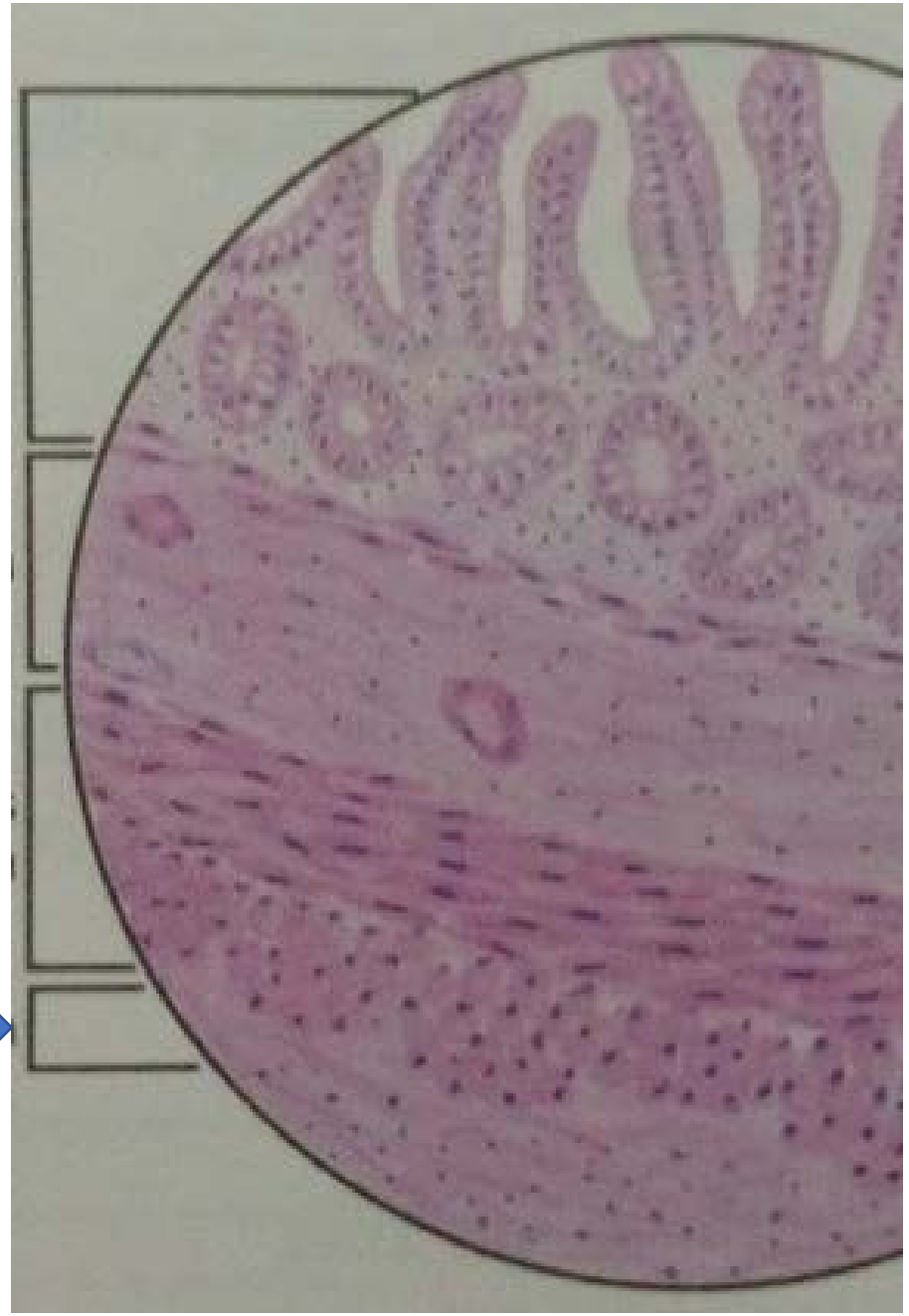


Identify the structure.

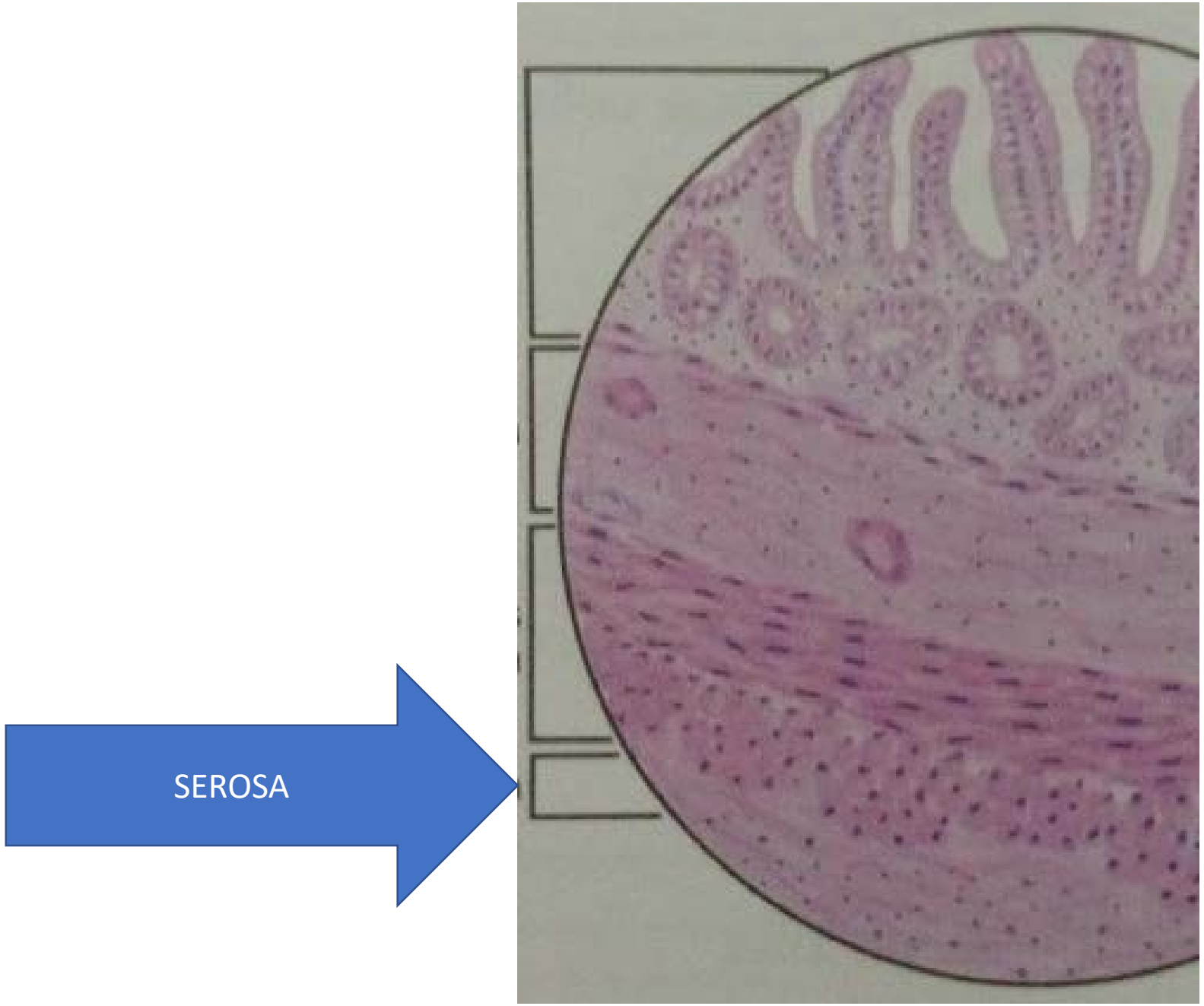
MUSCLE LAYER



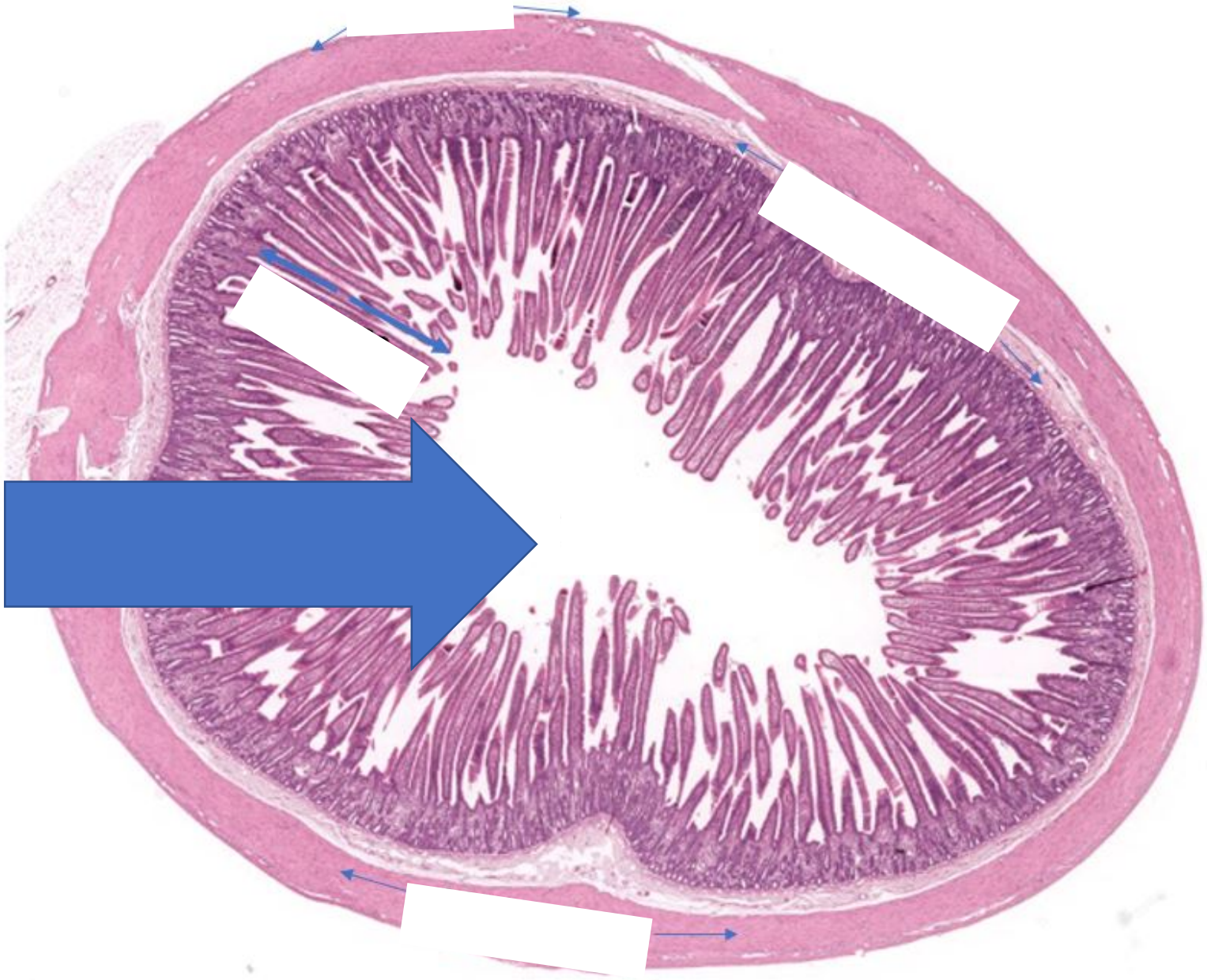
Identify the structure.



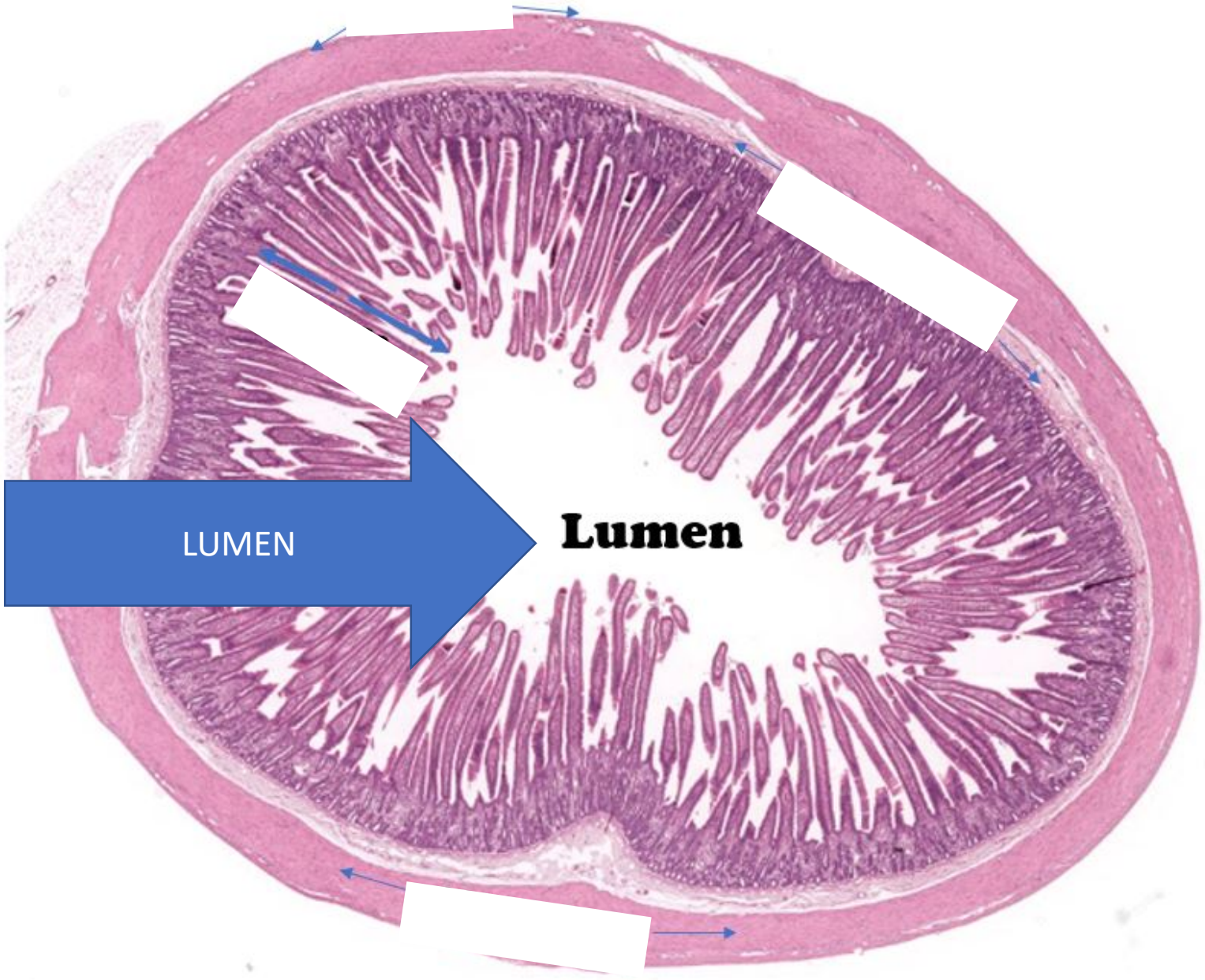
Identify the structure.



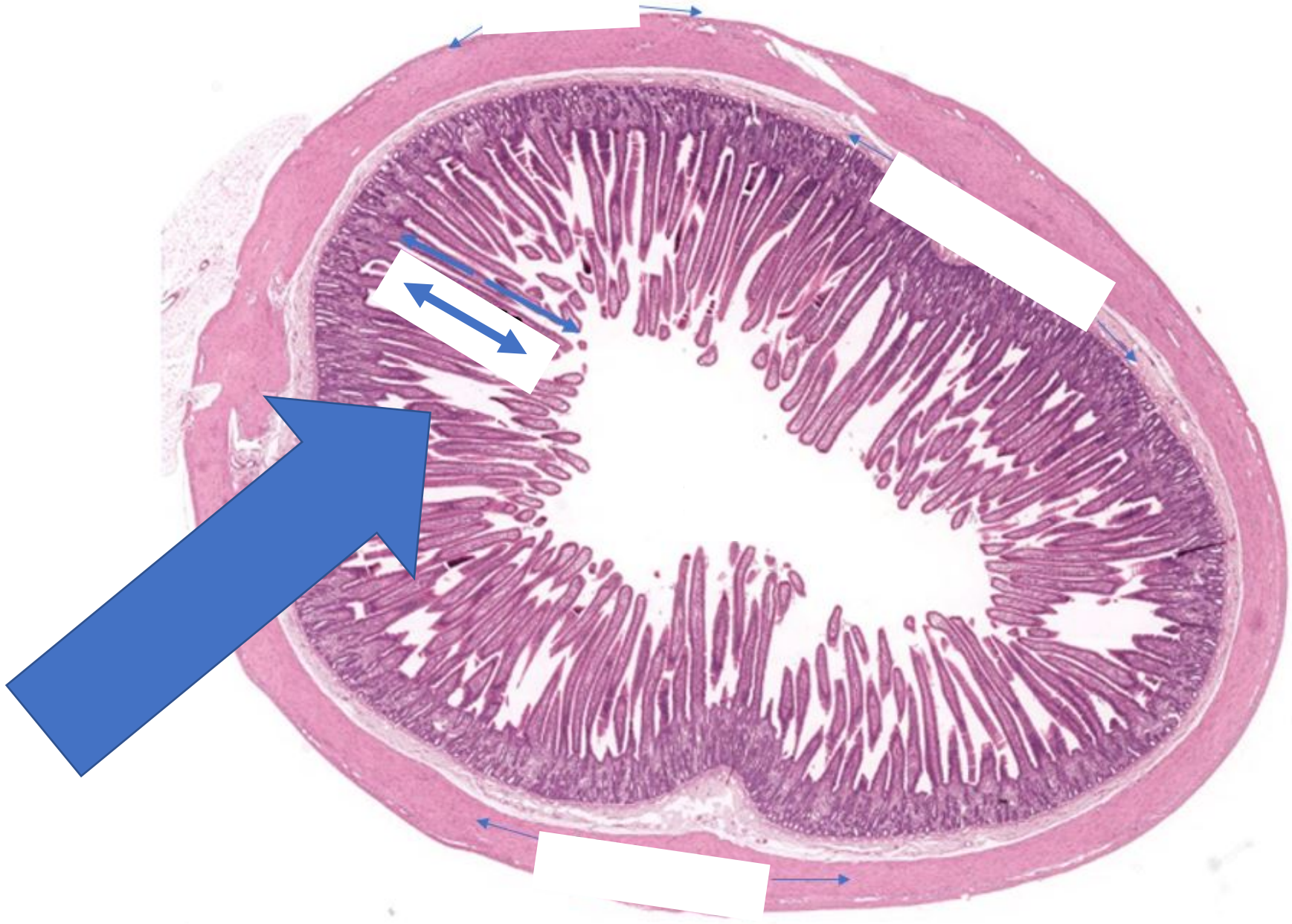
Identify the structure.



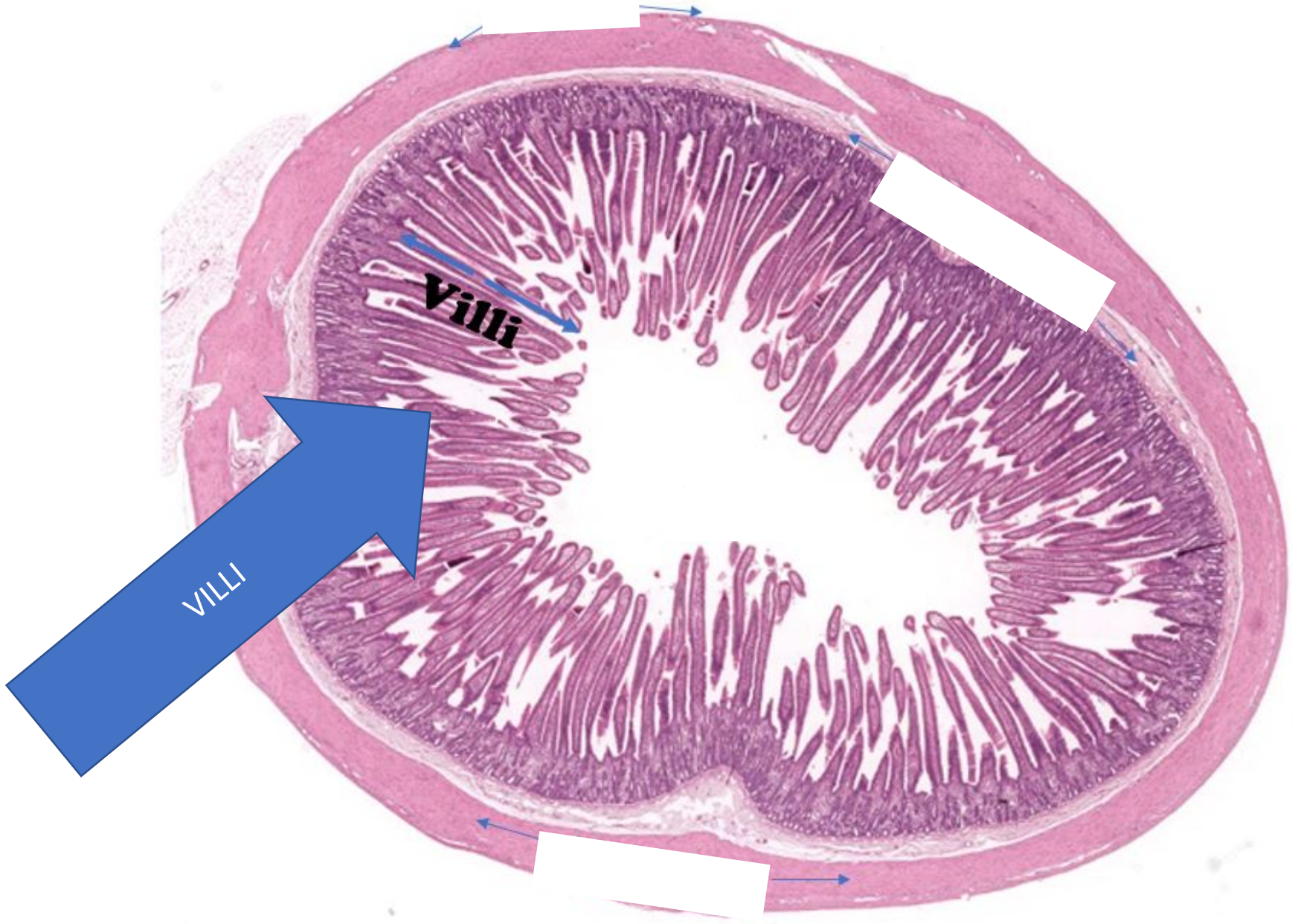
Identify the structure.



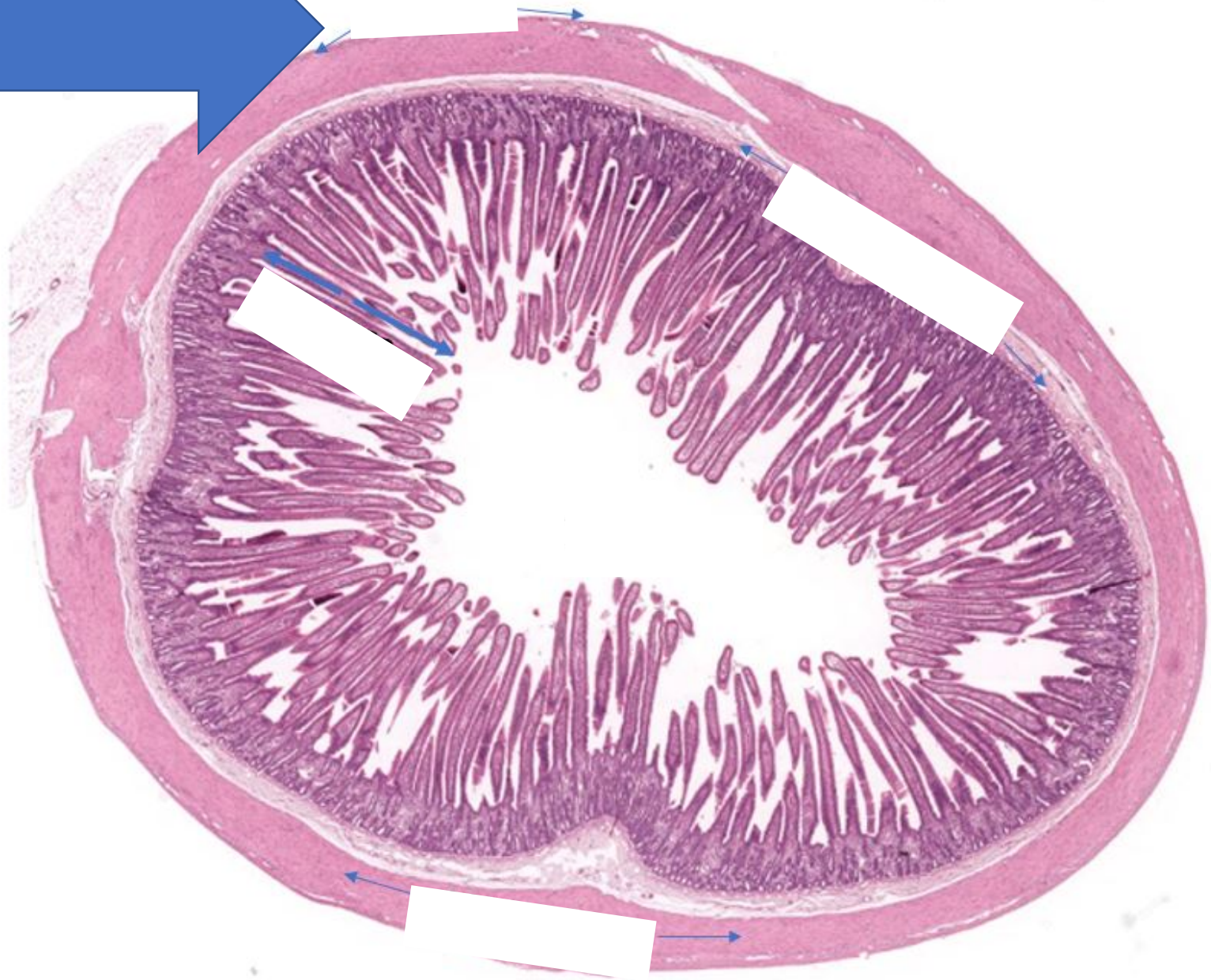
Identify the structure.



Identify the structure.

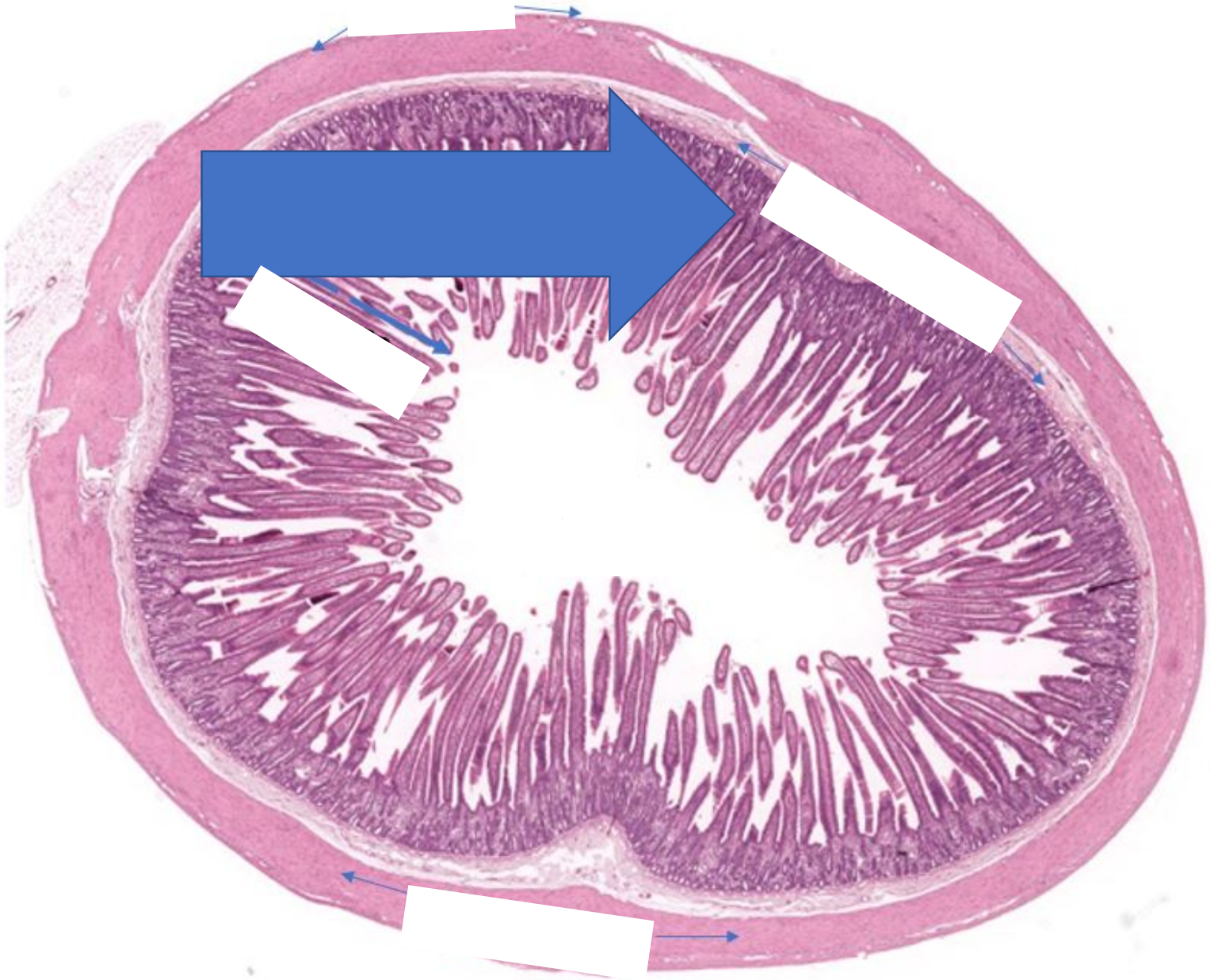


Identify the structure.

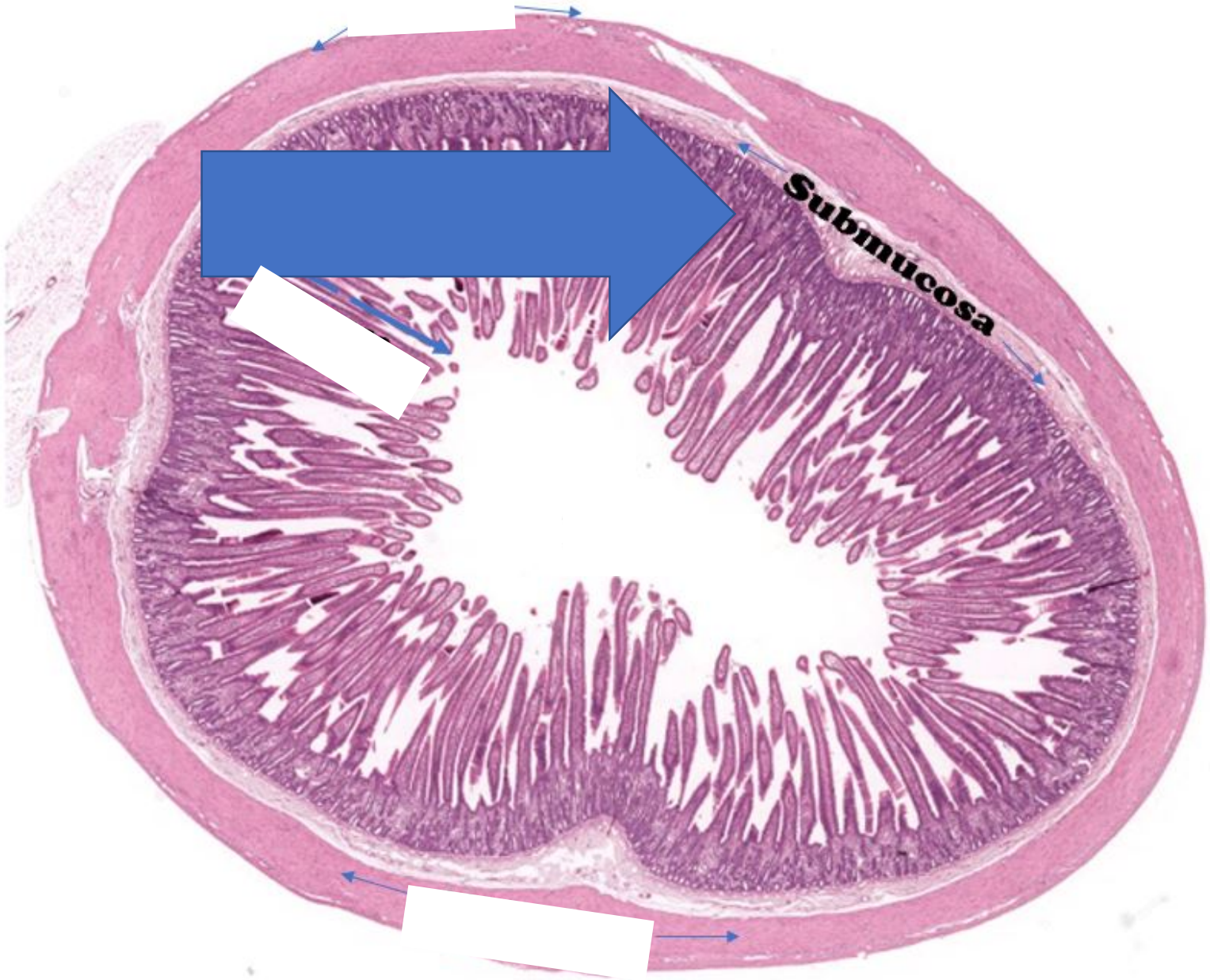


Identify the structure.

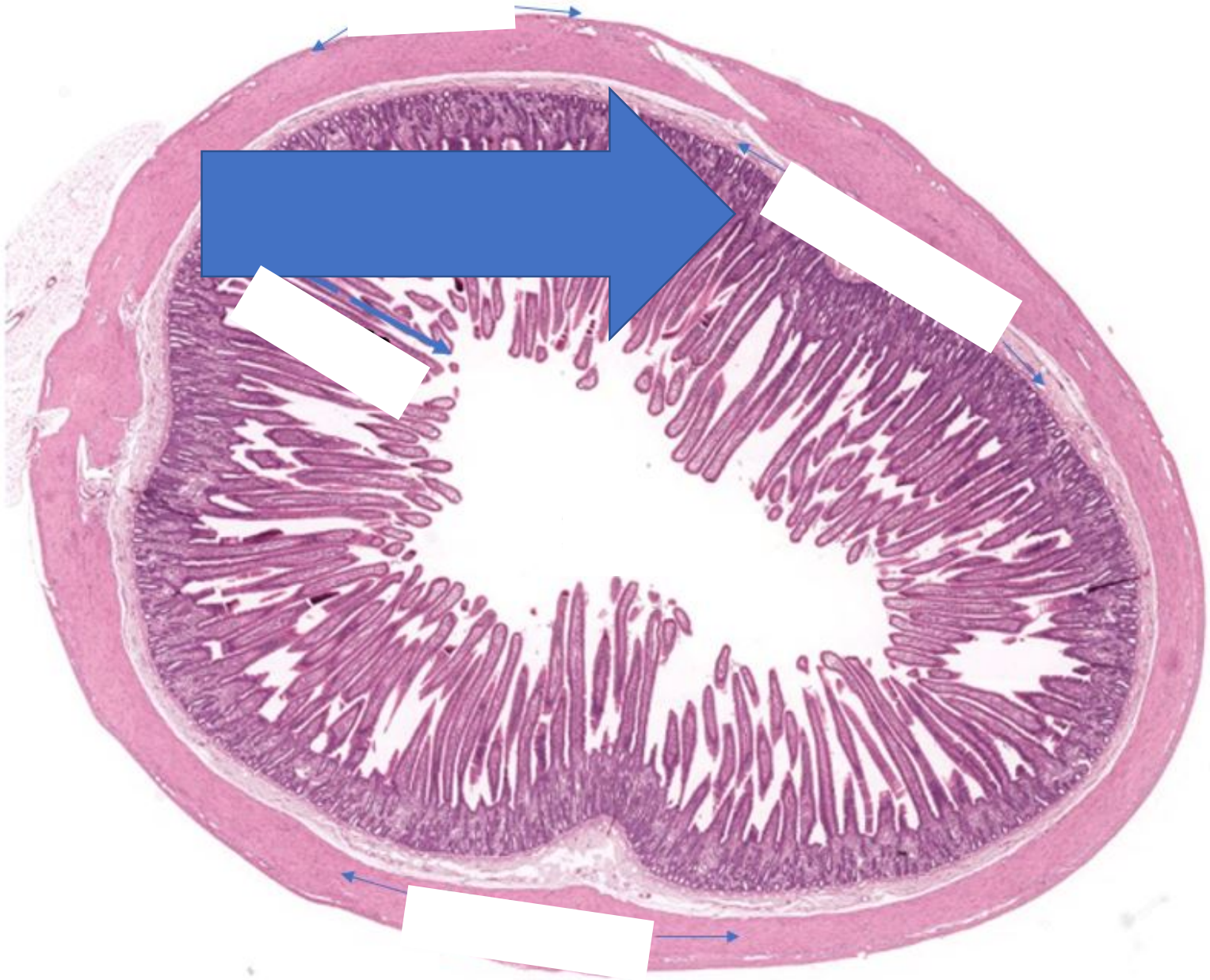
Identify the structure.



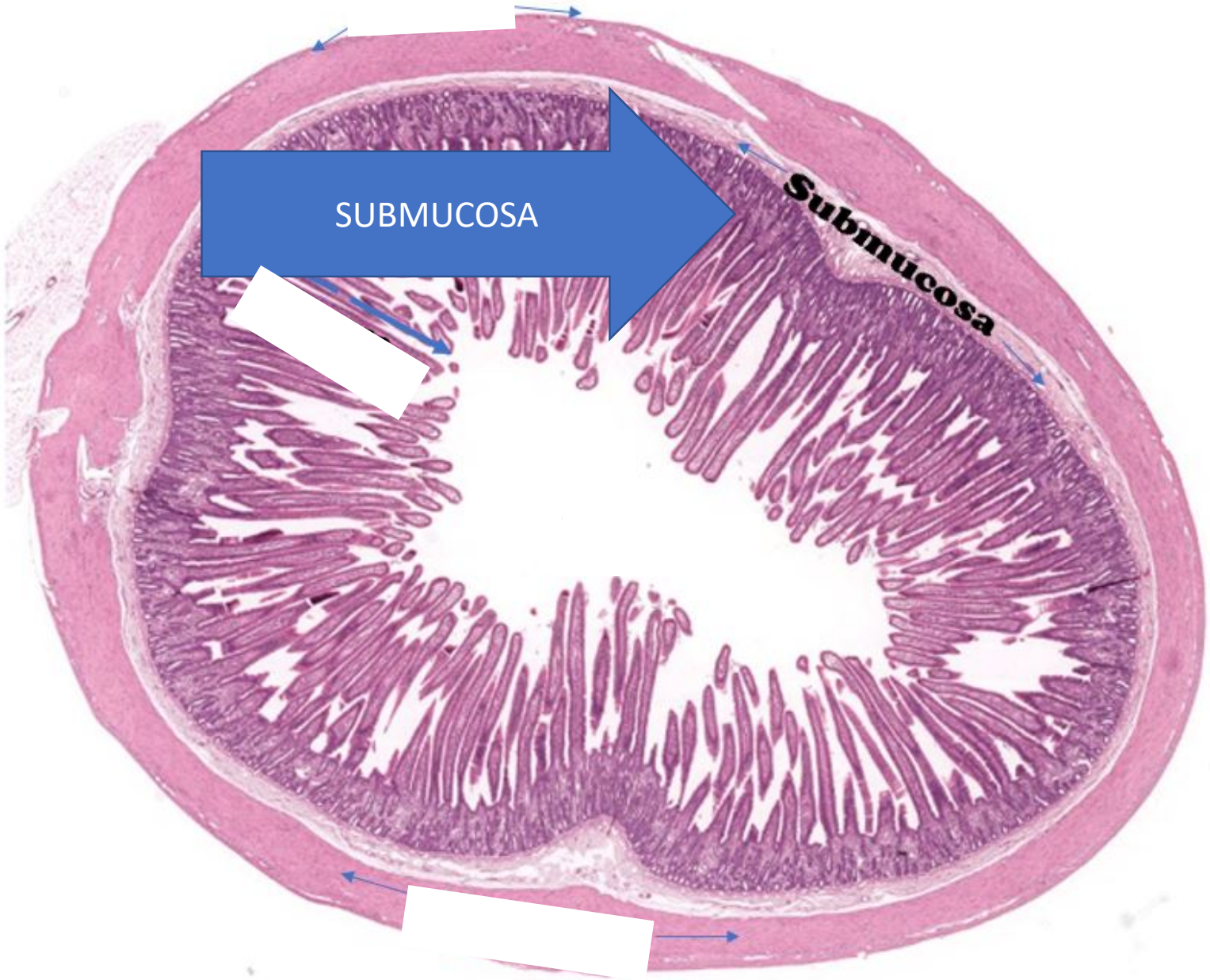
Identify the structure.



Identify the structure.

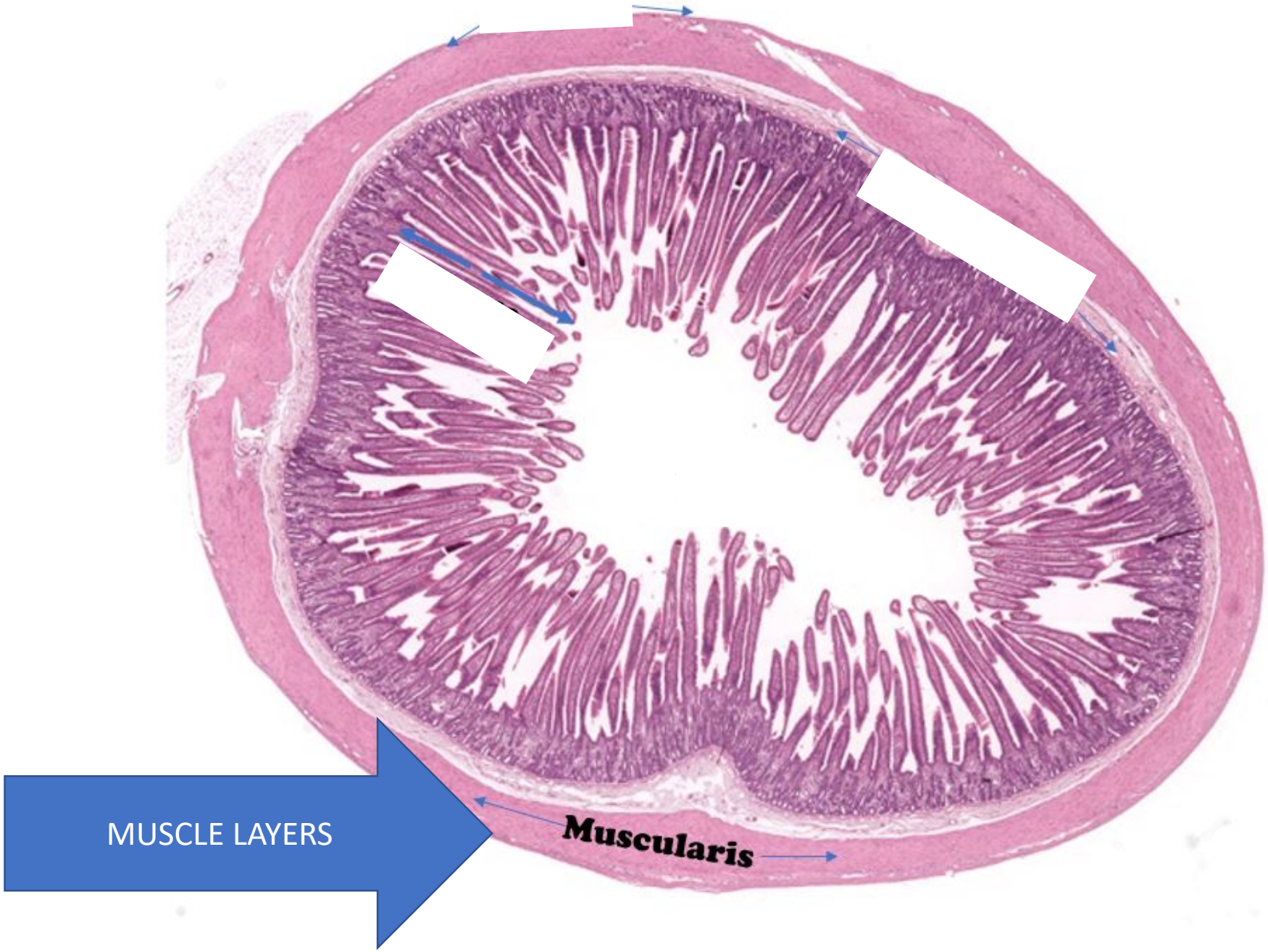


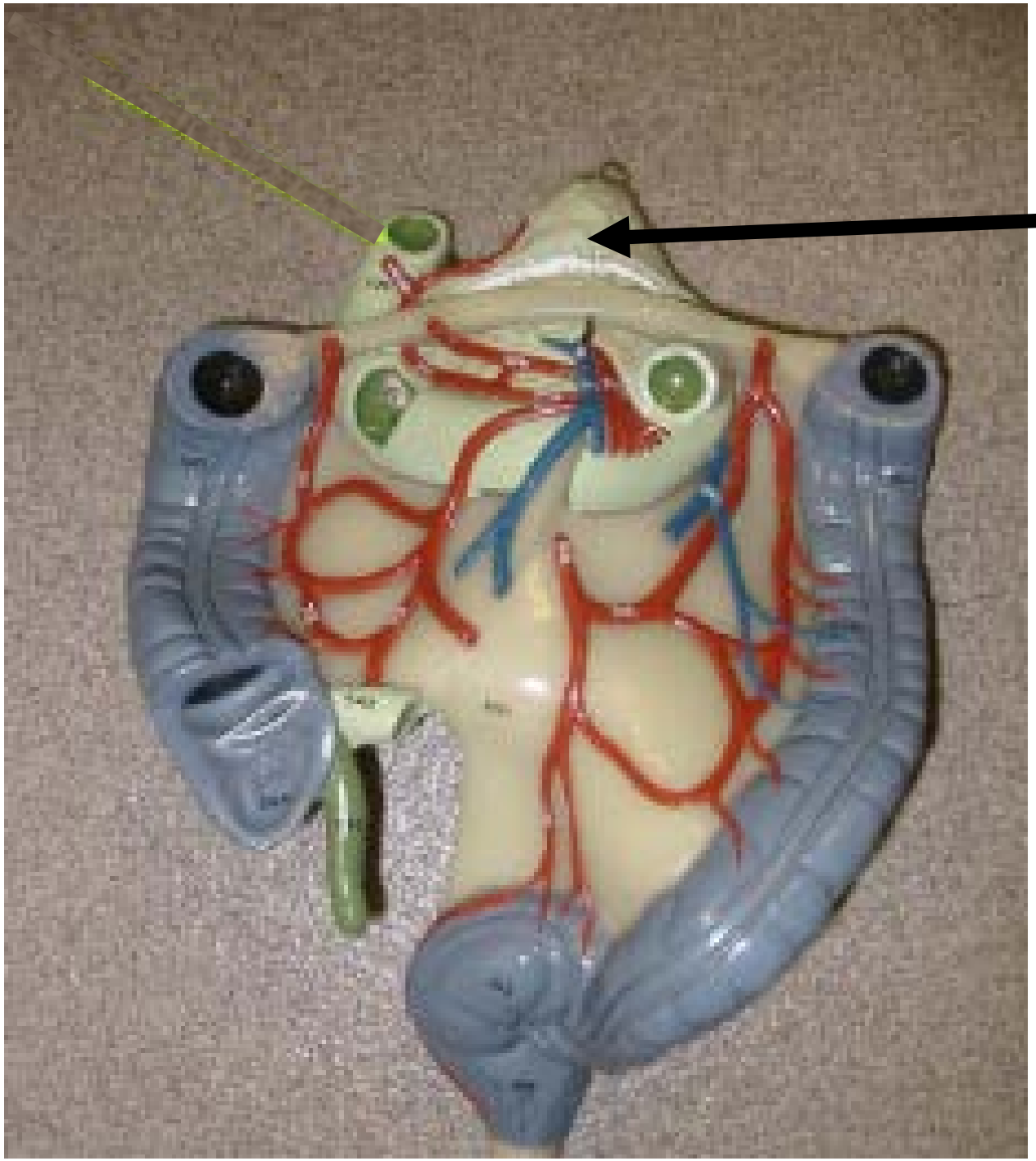
Identify the structure.



Identify the structure.

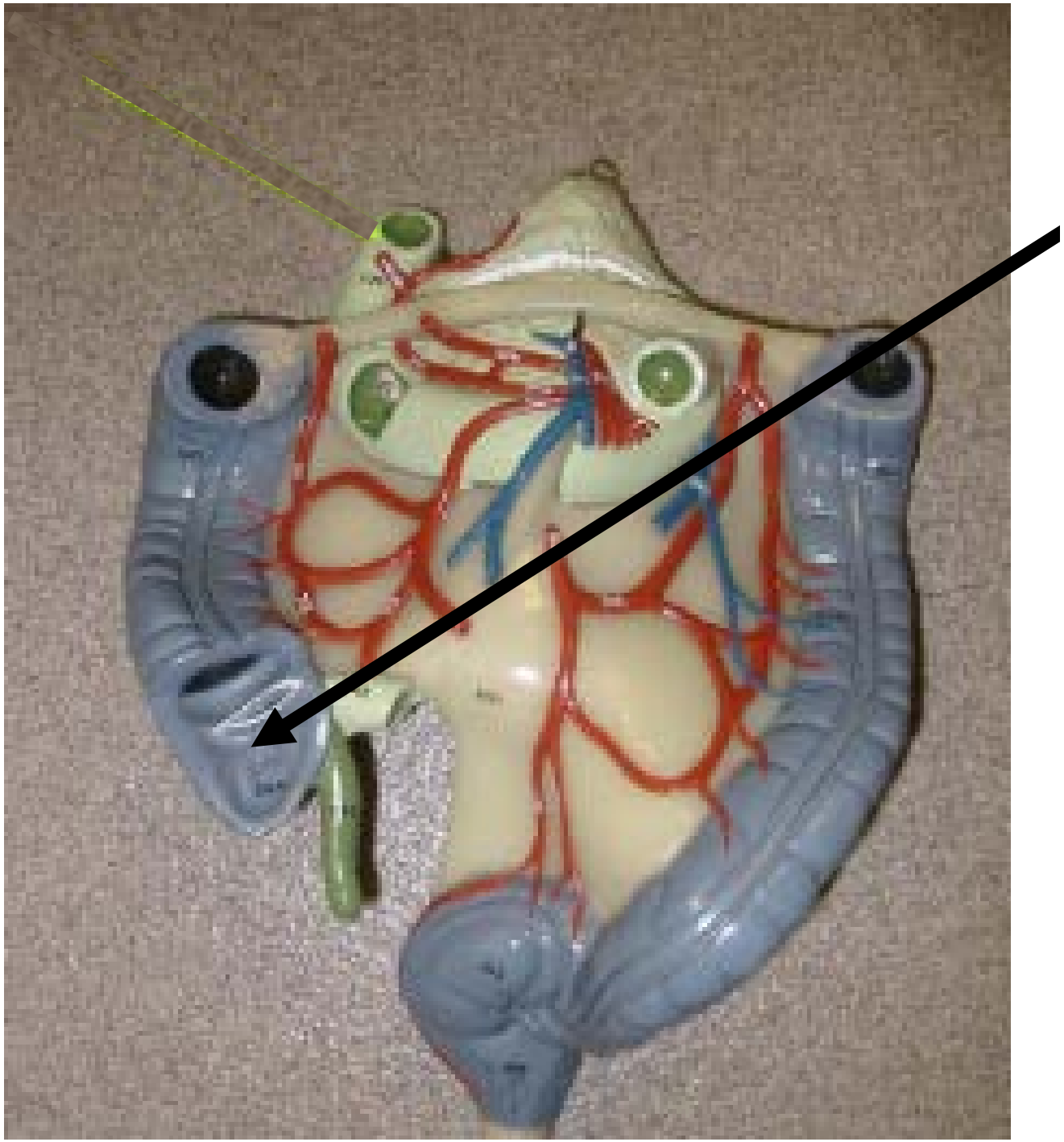
Identify the structure.



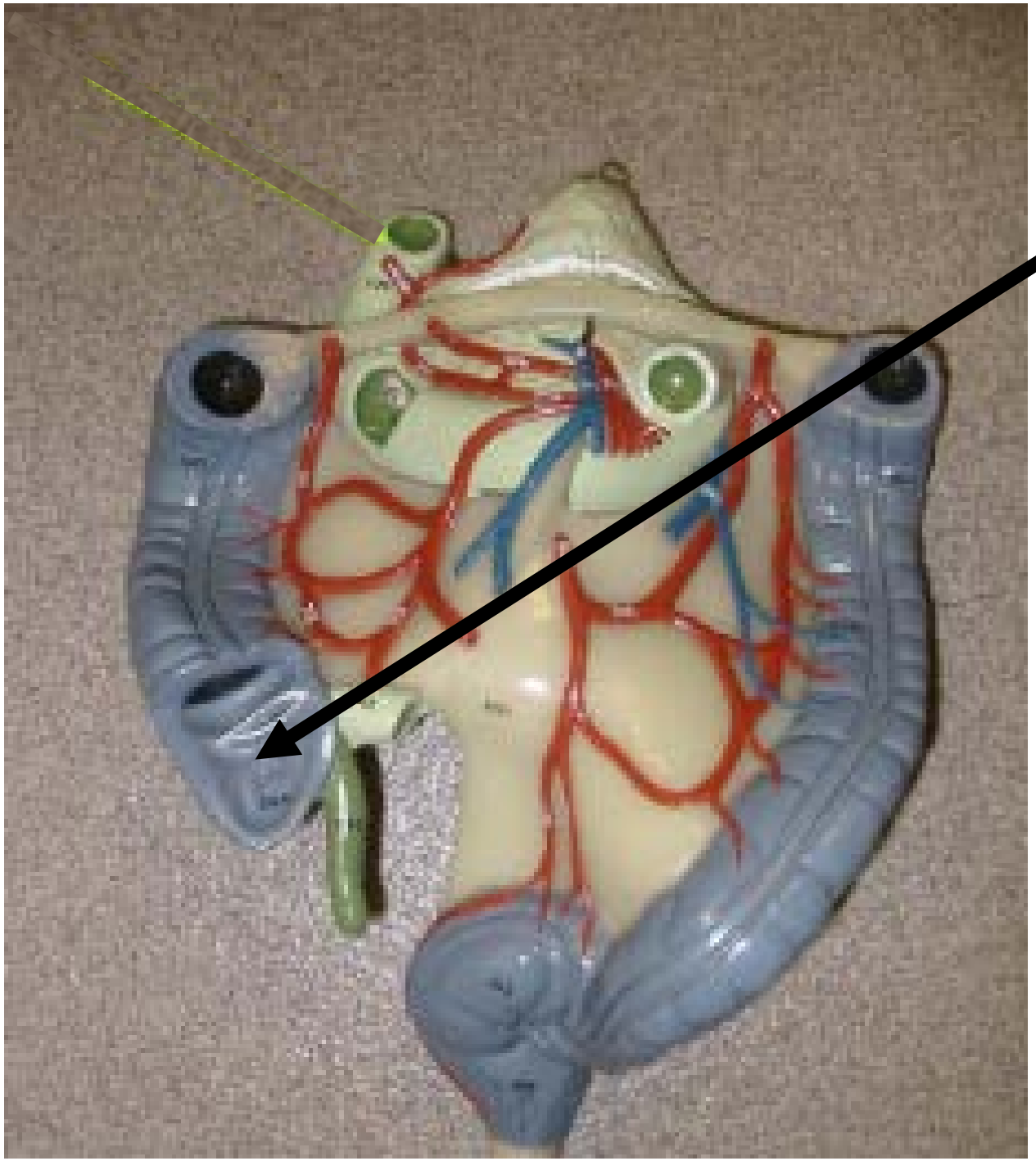


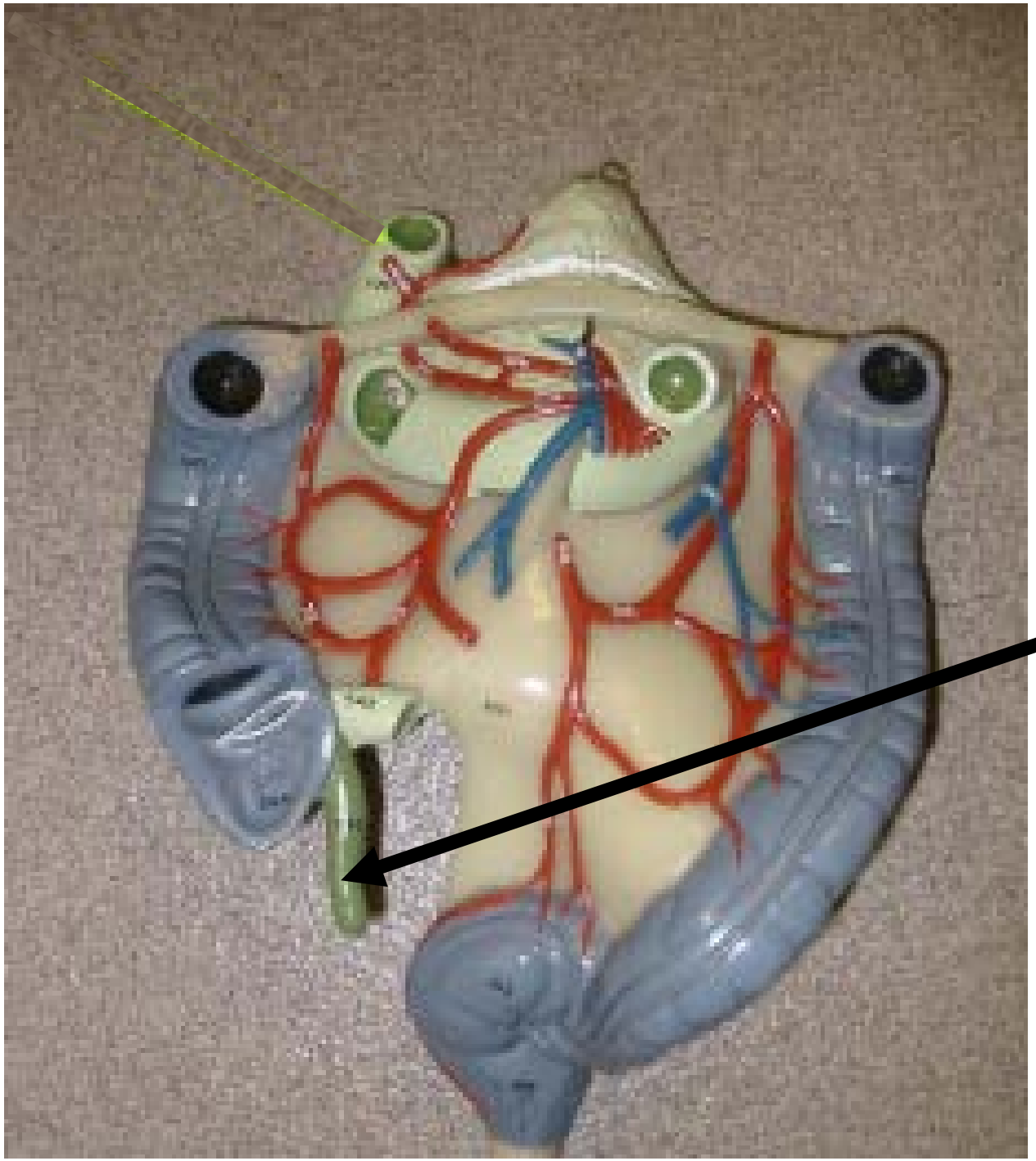
Pancreas

The pancreas is not part of the alimentary canal, but it makes pancreatic juice that has digestive enzymes needed to break down food. The pancreatic duct carries the pancreatic juice to the duodenum.

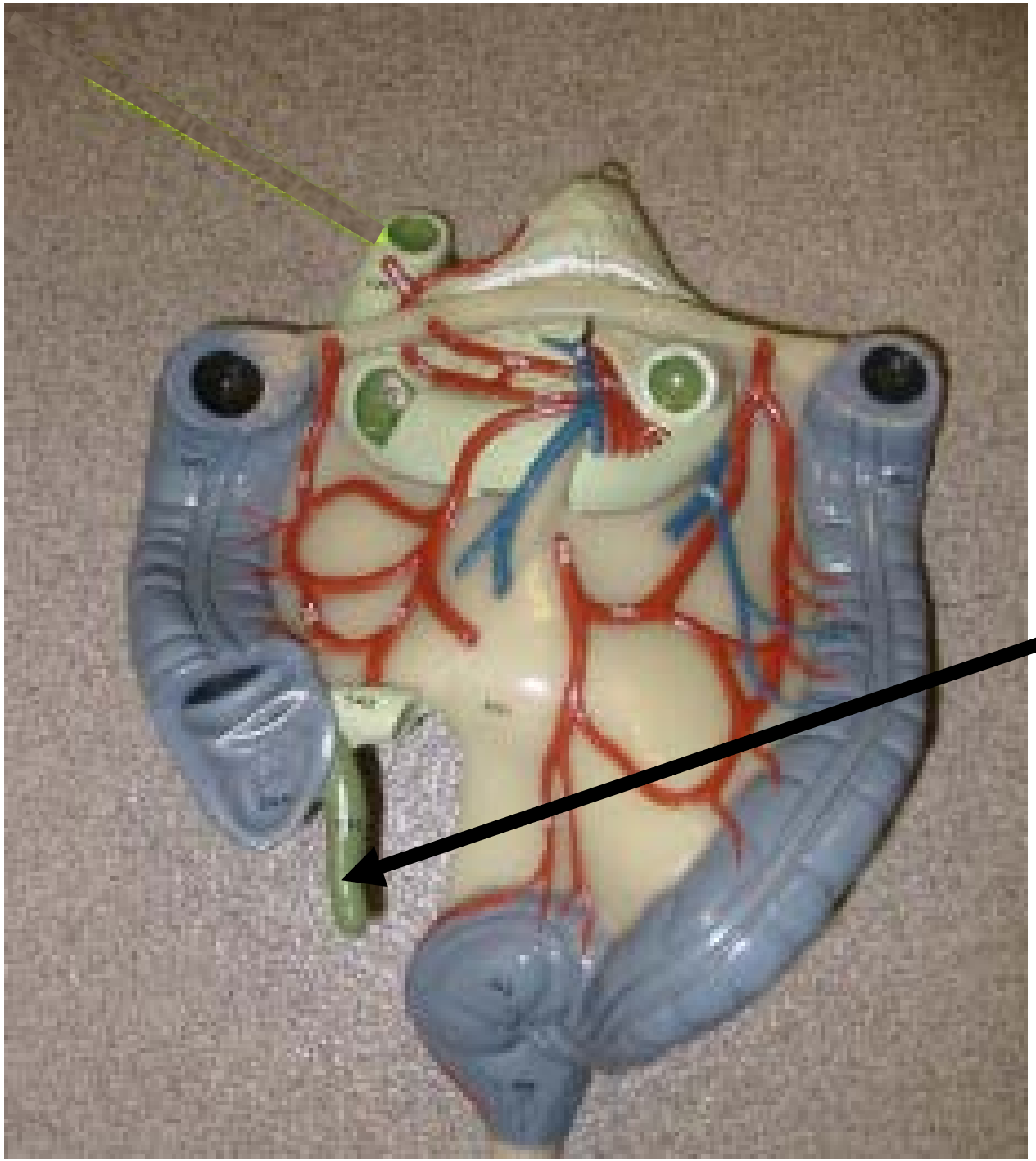


Identify the Structure.


Cecum



Identify the Structure.

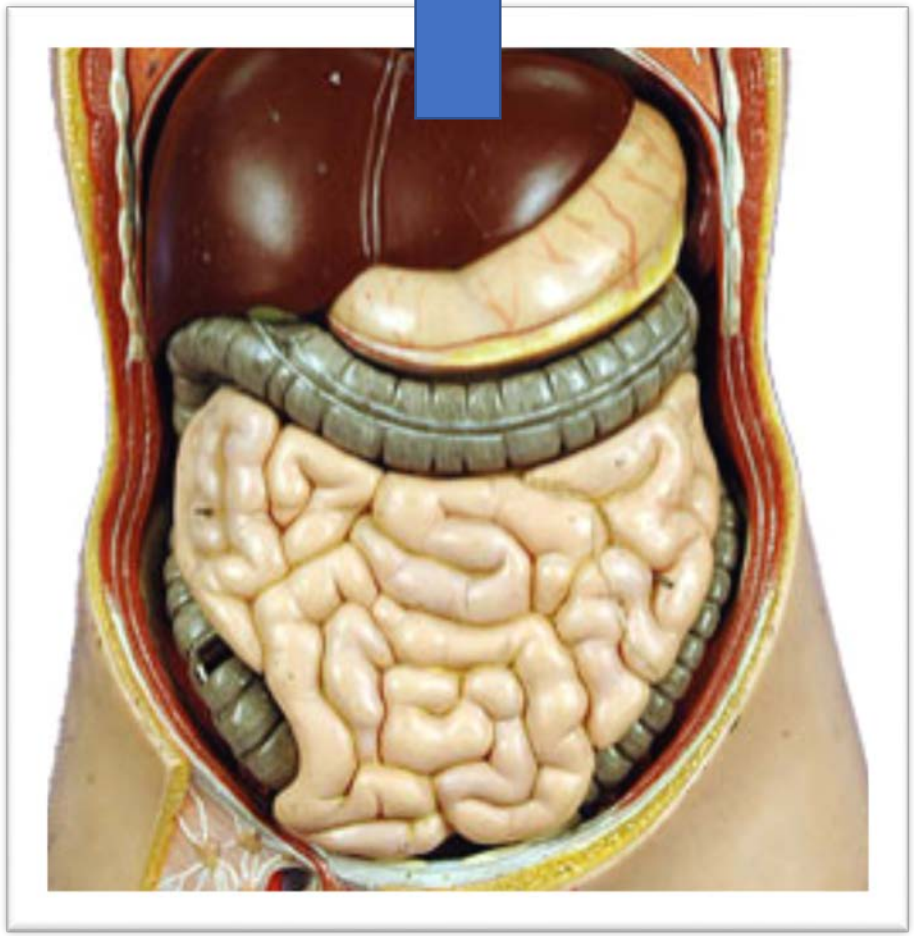


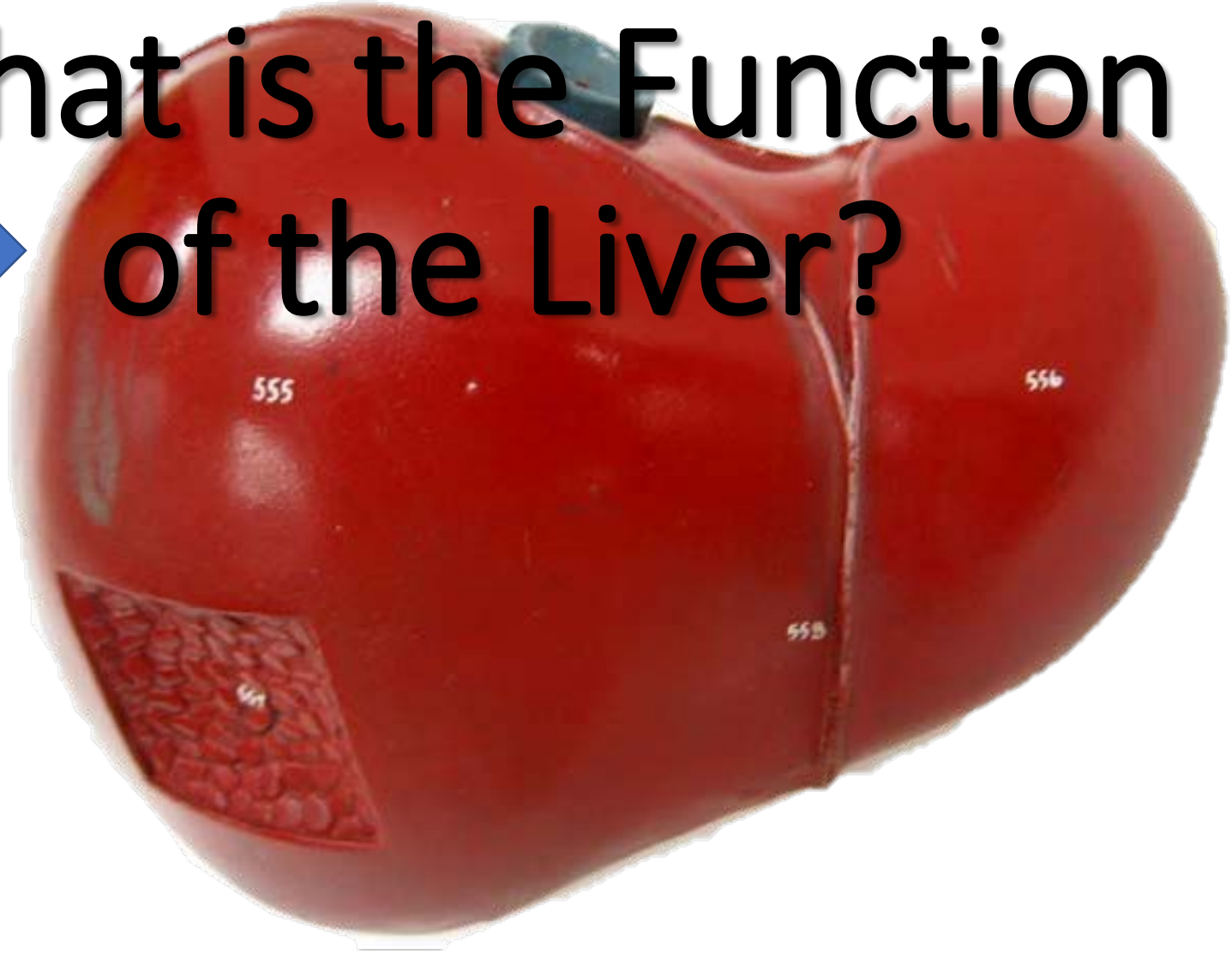
Appendix

Has immune function to house and release lymphocytes.

What is the Function of the Liver?

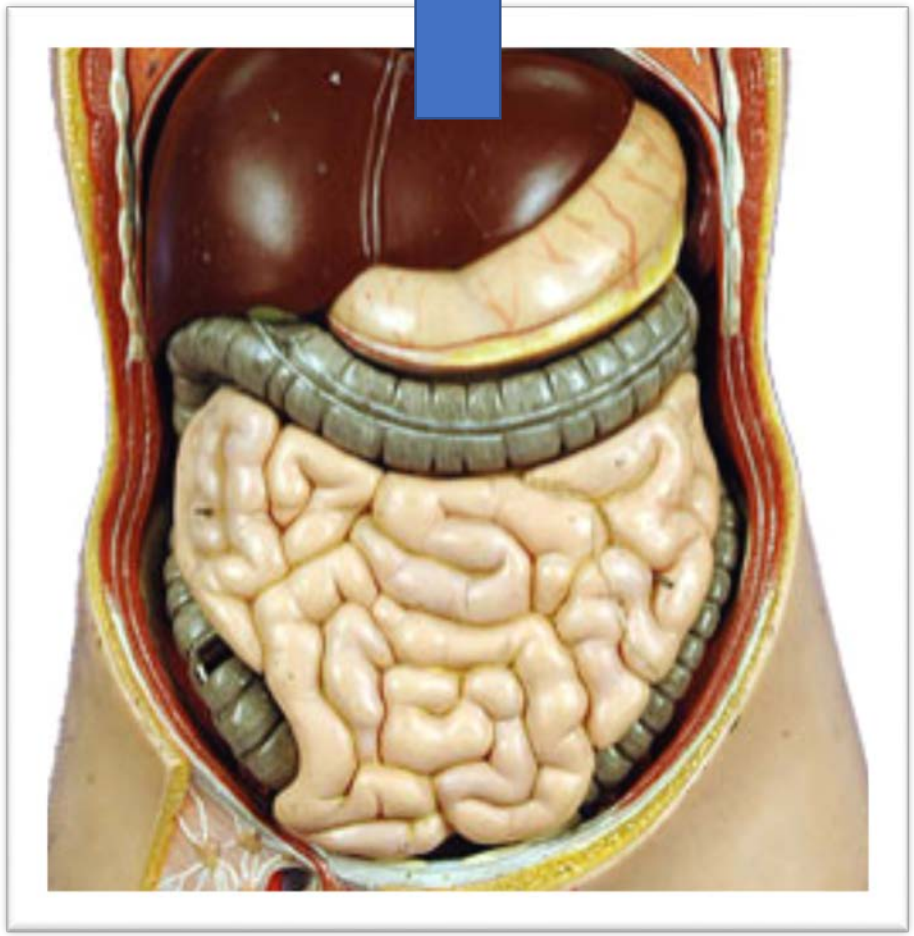
- SUPERIOR VIEW

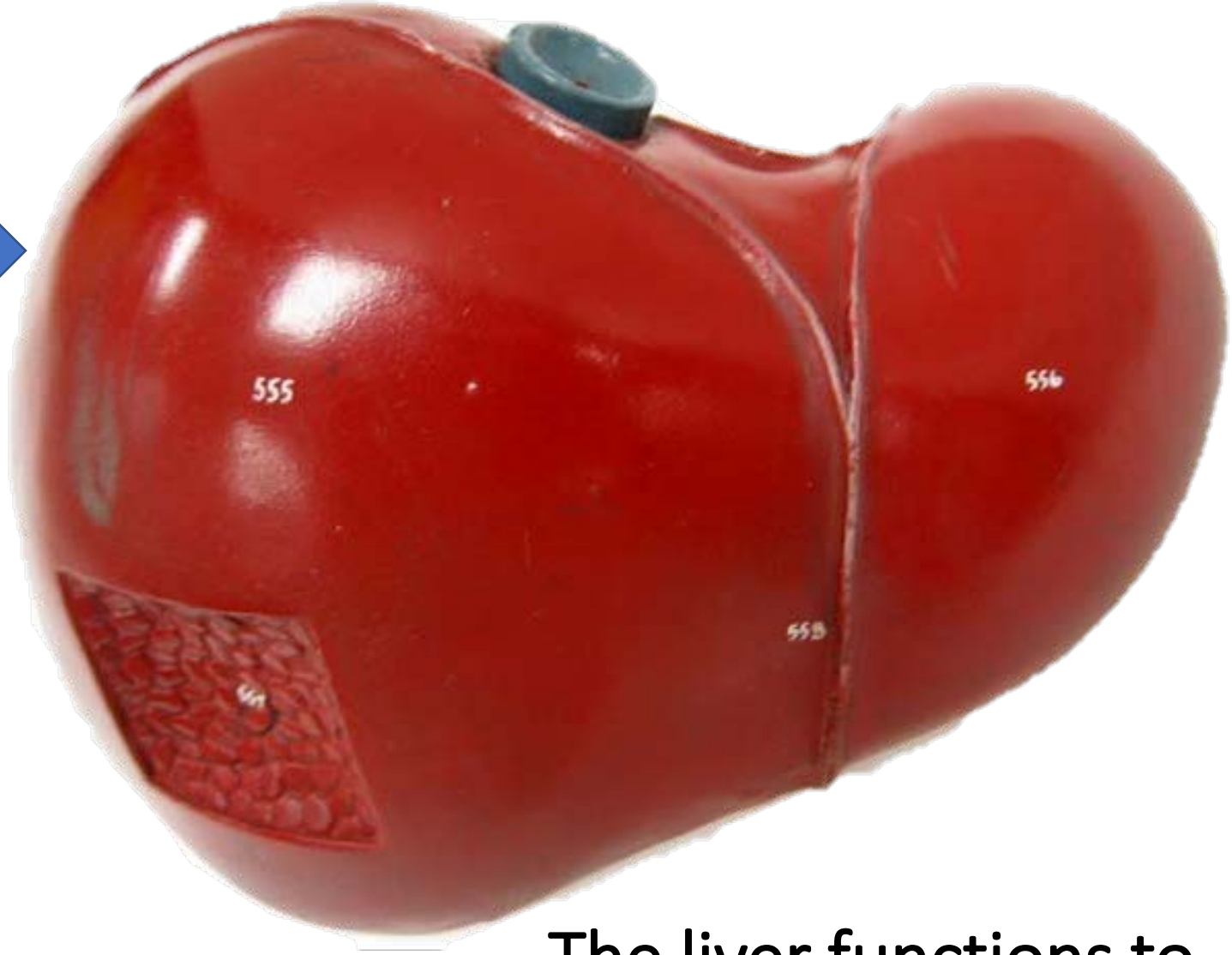




LIVER

- SUPERIOR VIEW



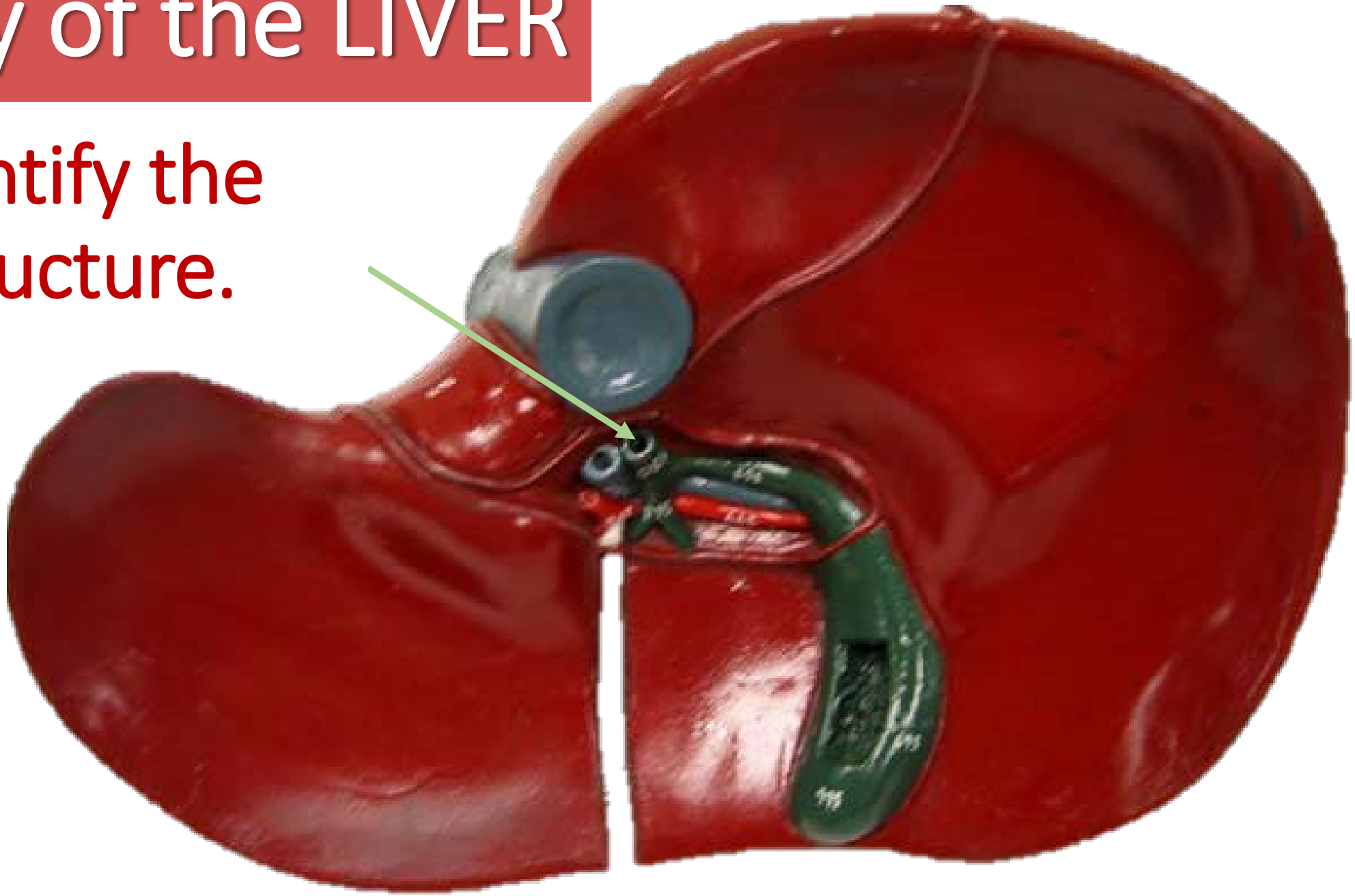


The liver functions to secrete the digestive enzyme bile, for aiding in the digestion of fats.

Anatomy of the LIVER

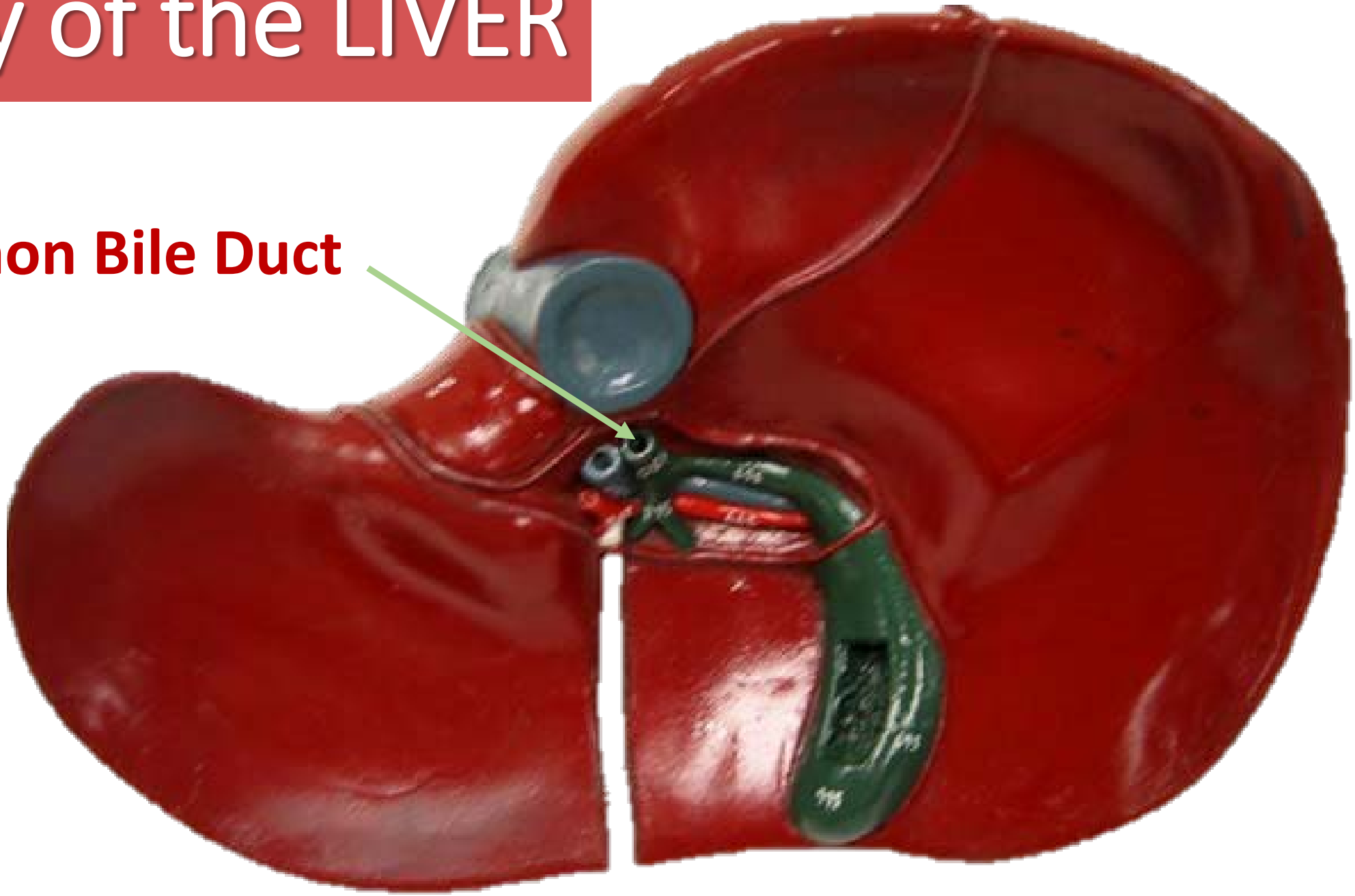
- *INFERIOR VIEW*

Identify the Structure.



Anatomy of the LIVER

- *INFERIOR VIEW*



The cystic duct (the duct of the gall bladder) and hepatic duct (the duct of the liver) combine to form the common bile duct. It functions to deliver bile to duodenum.

Anatomy of the LIVER

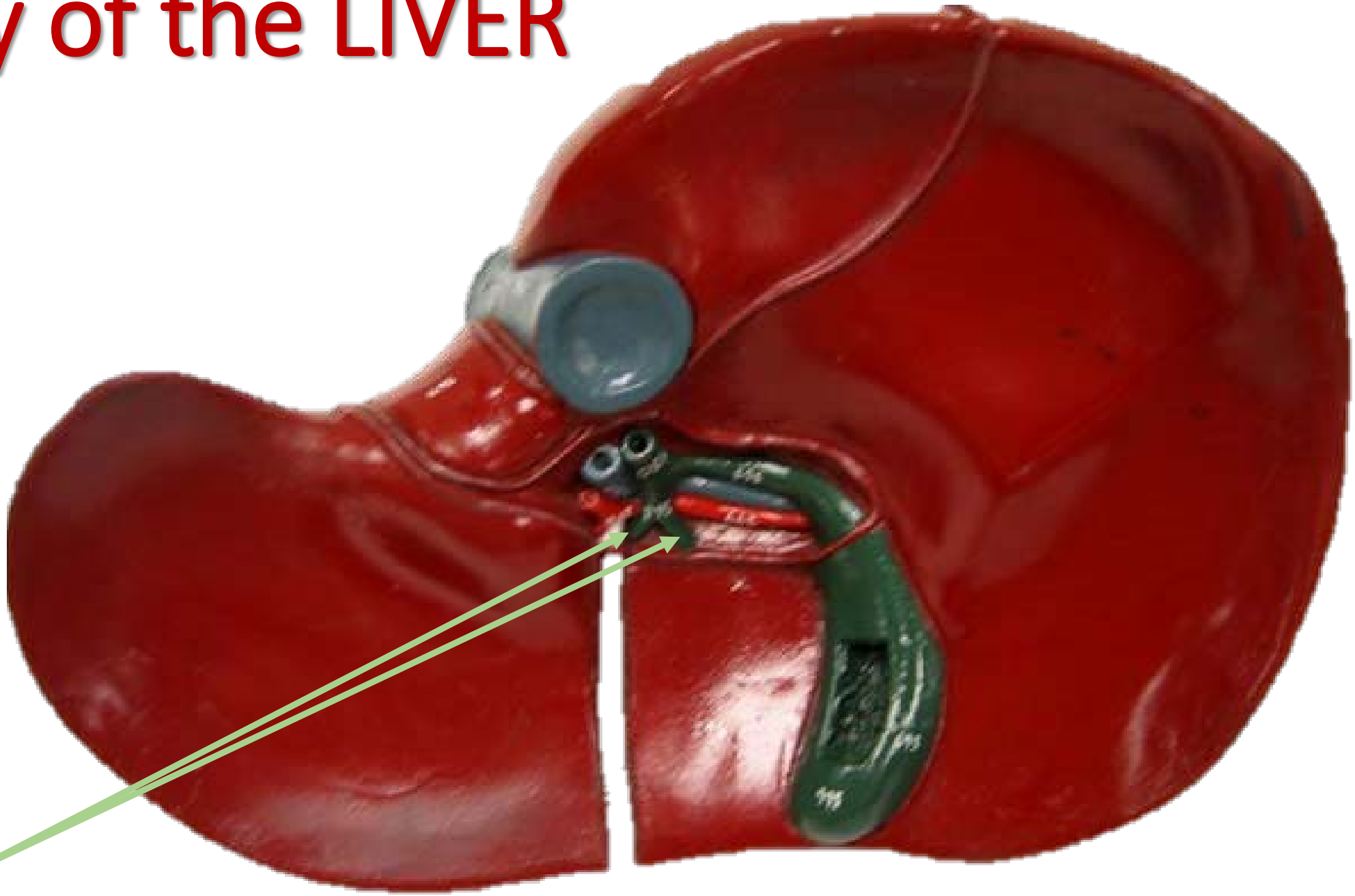
- *INFERIOR VIEW*

Identify the Structure.

Anatomy of the LIVER

- *INFERIOR VIEW*

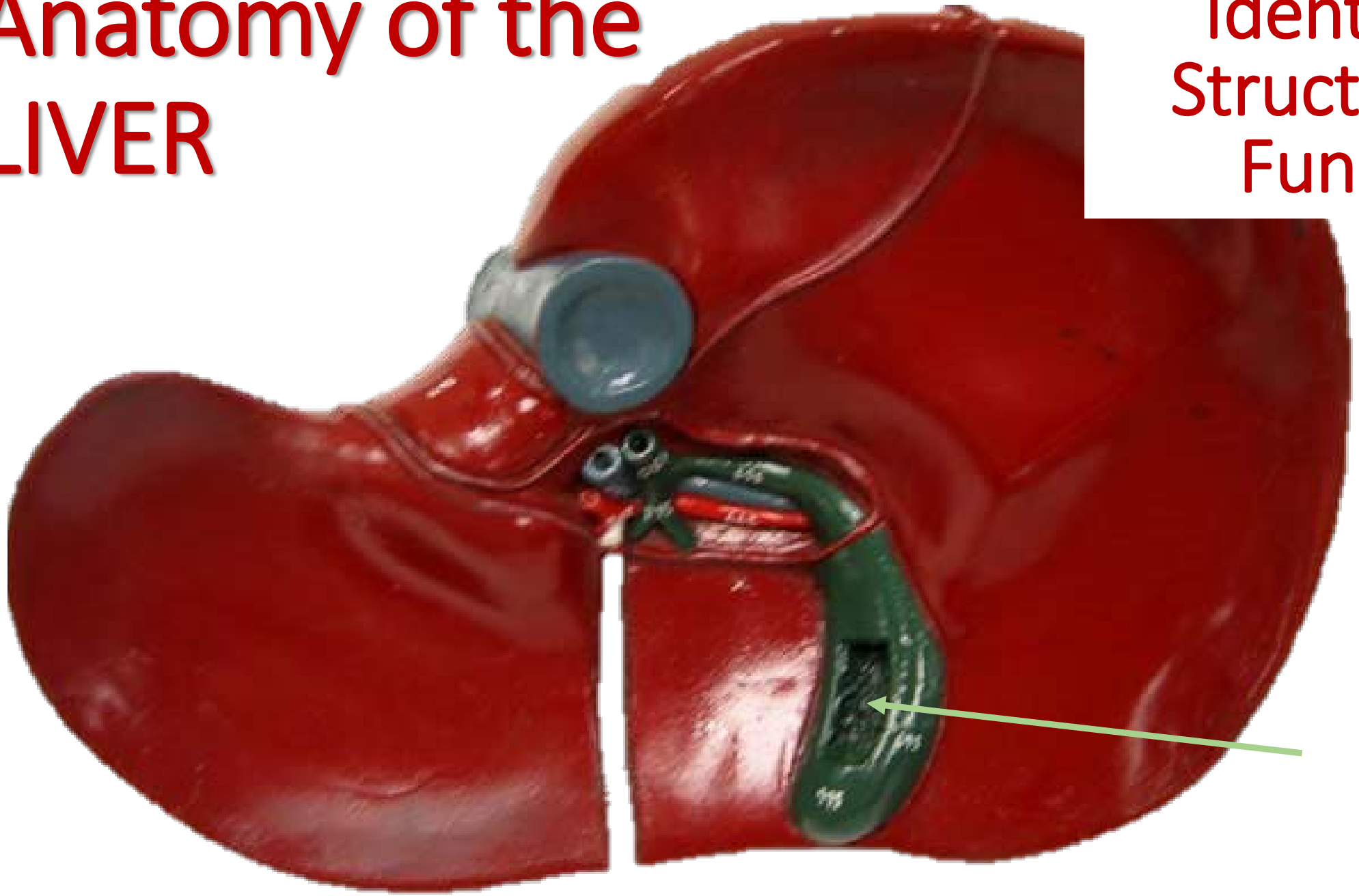
The cystic duct (the duct of the gall bladder) and hepatic duct (the duct of the liver) combine to form the common bile duct. It functions to deliver bile to duodenum.



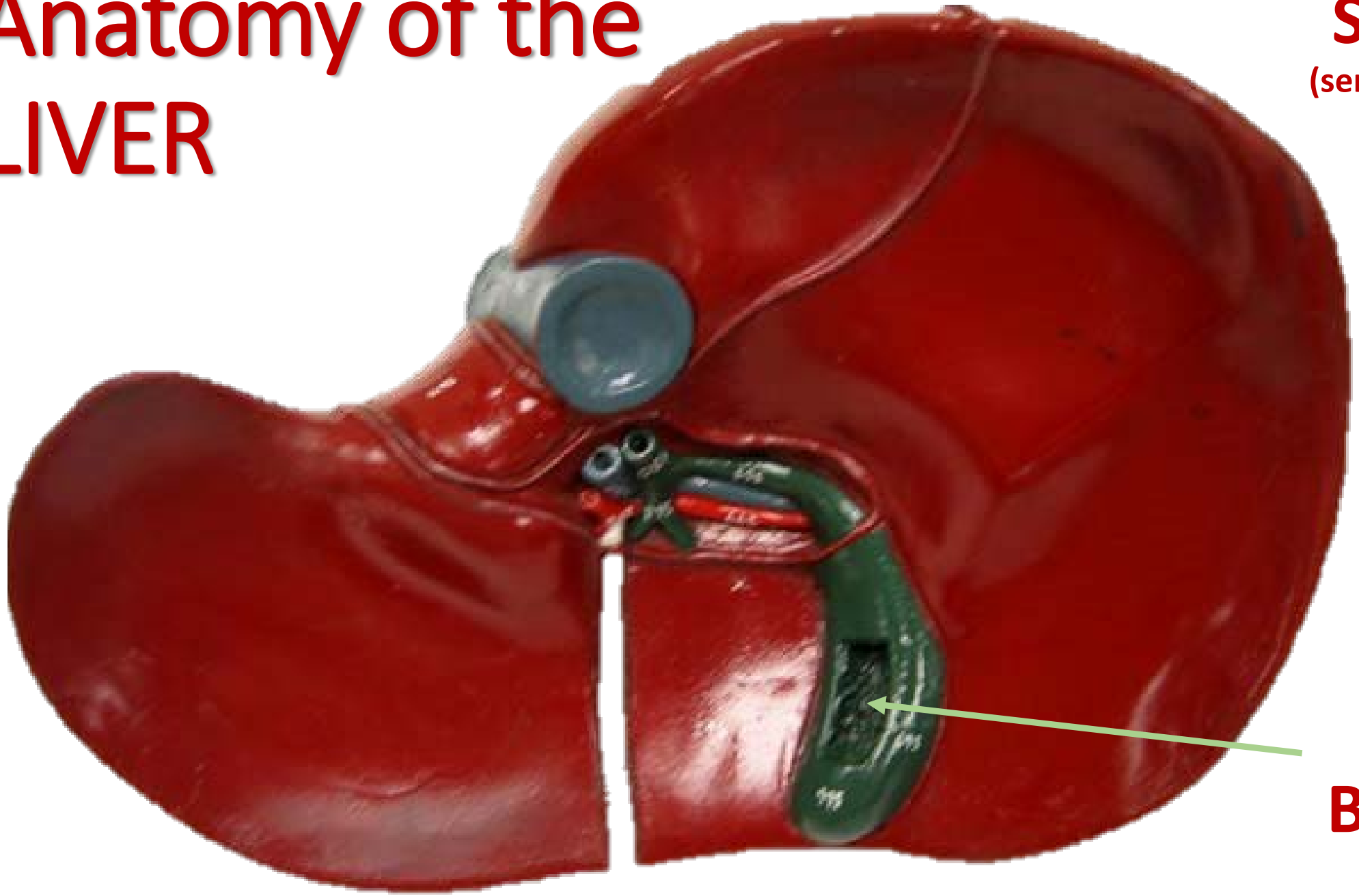
Hepatic Ducts

Anatomy of the LIVER

Identify the Structure and Function.



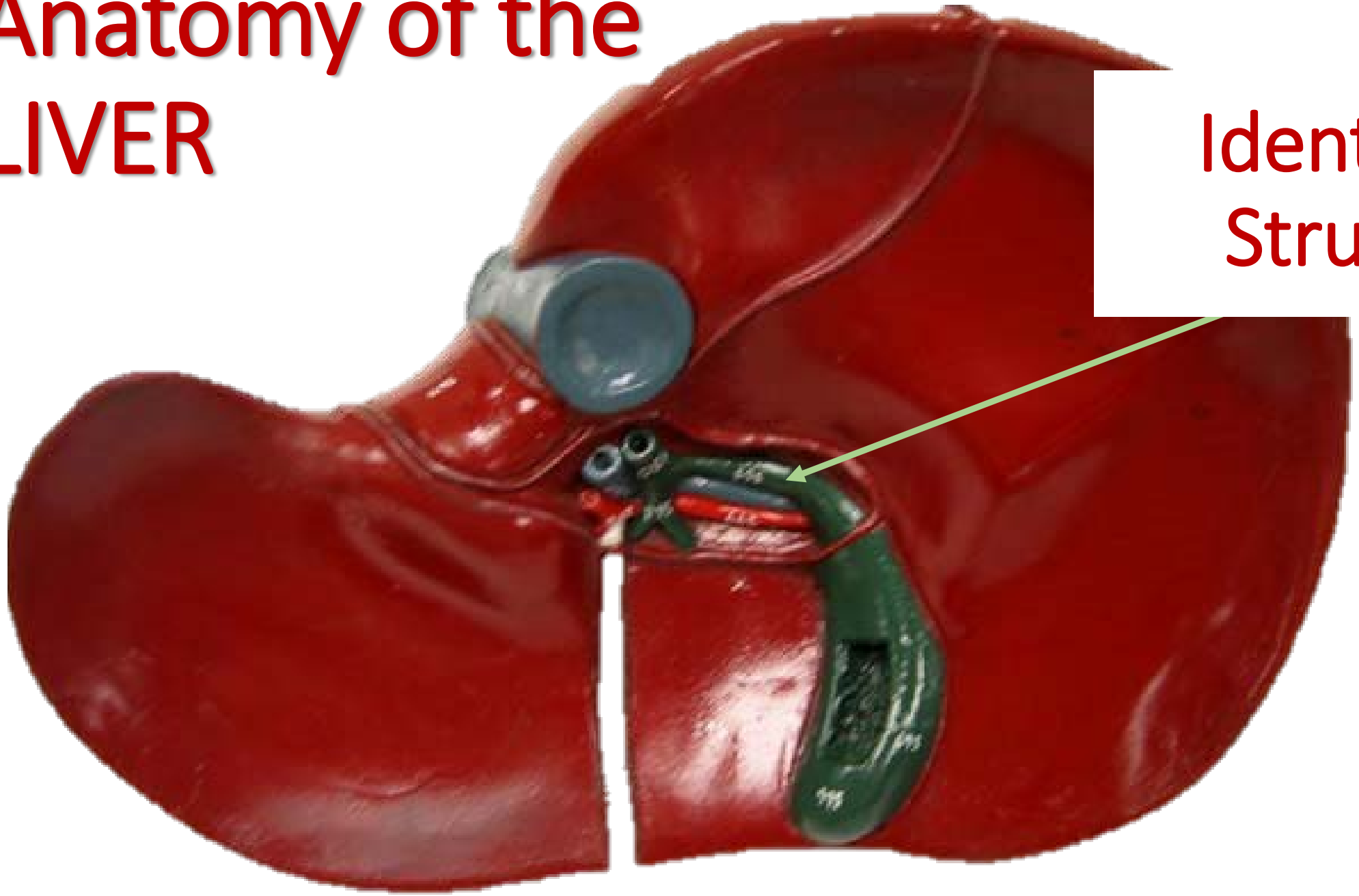
Anatomy of the LIVER



Stores bile
(sends it to duodenum).

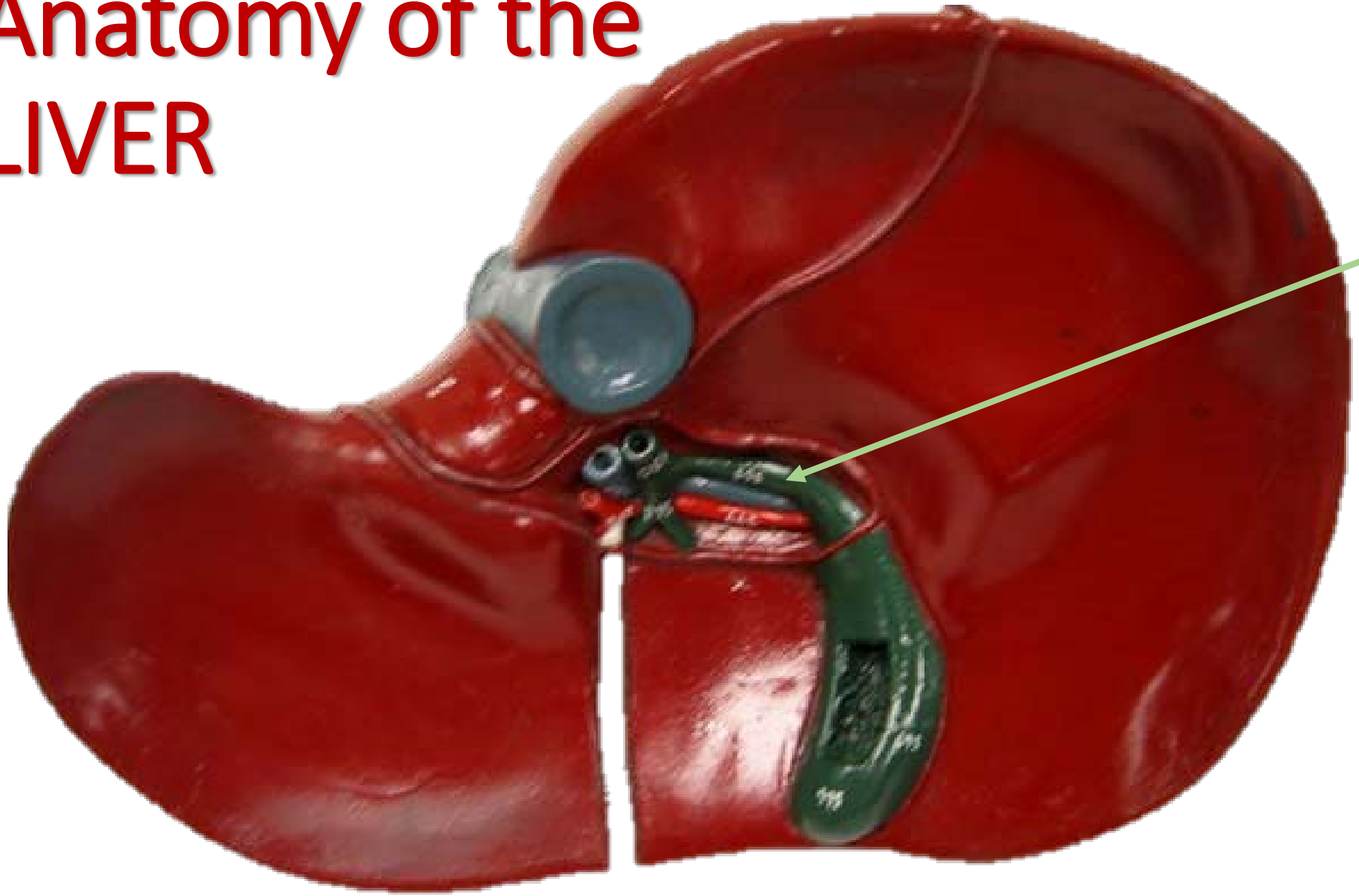
Gall Bladder

Anatomy of the LIVER



Identify the Structure.

Anatomy of the LIVER



Cystic Duct

The cystic duct (the duct of the gall bladder) and hepatic duct (the duct of the liver) combine to form the common bile duct. It functions to deliver bile to duodenum.

Anatomy of the LIVER

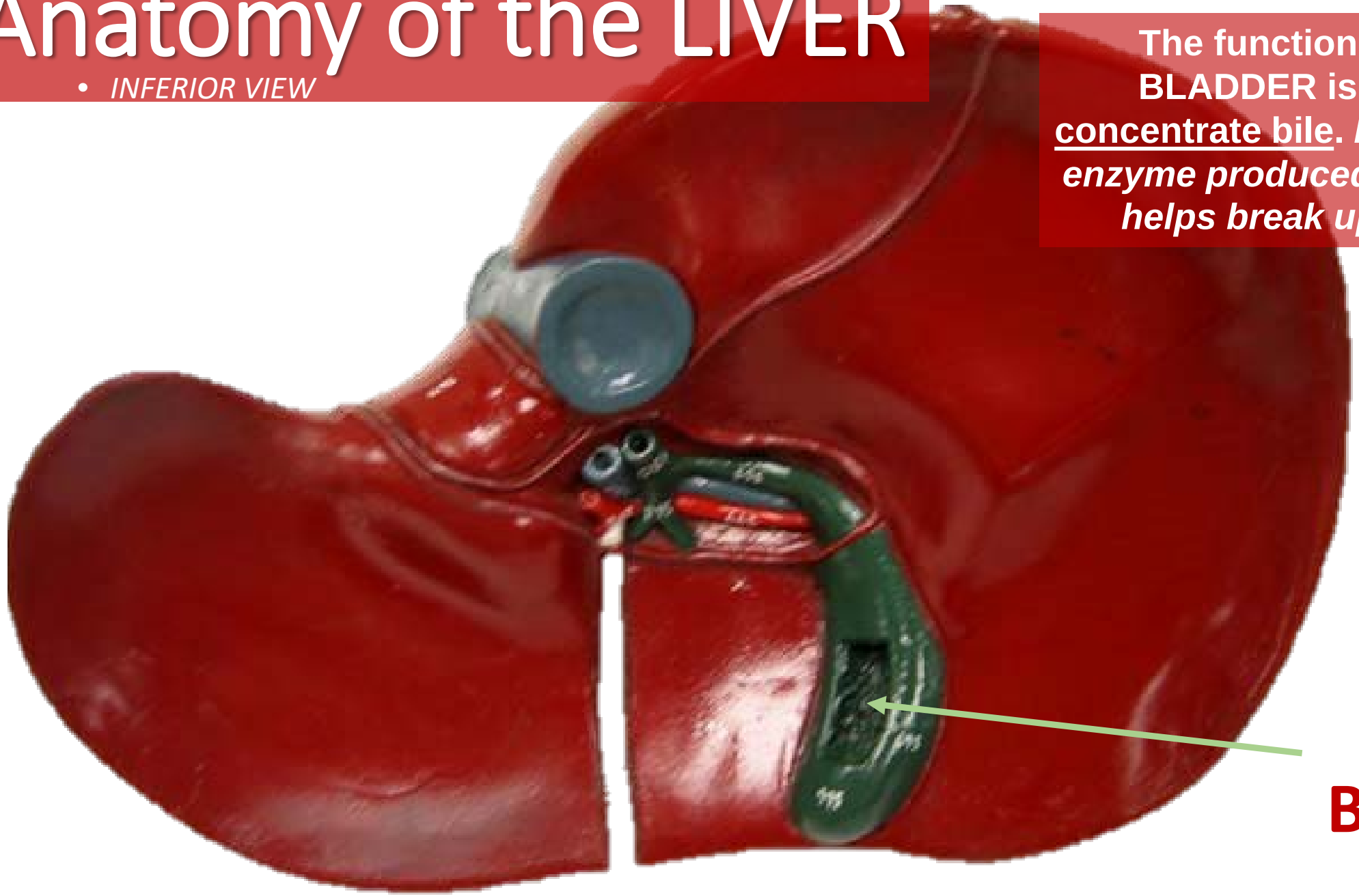
- *INFERIOR VIEW*

Identify the Structure and Function.

Anatomy of the LIVER

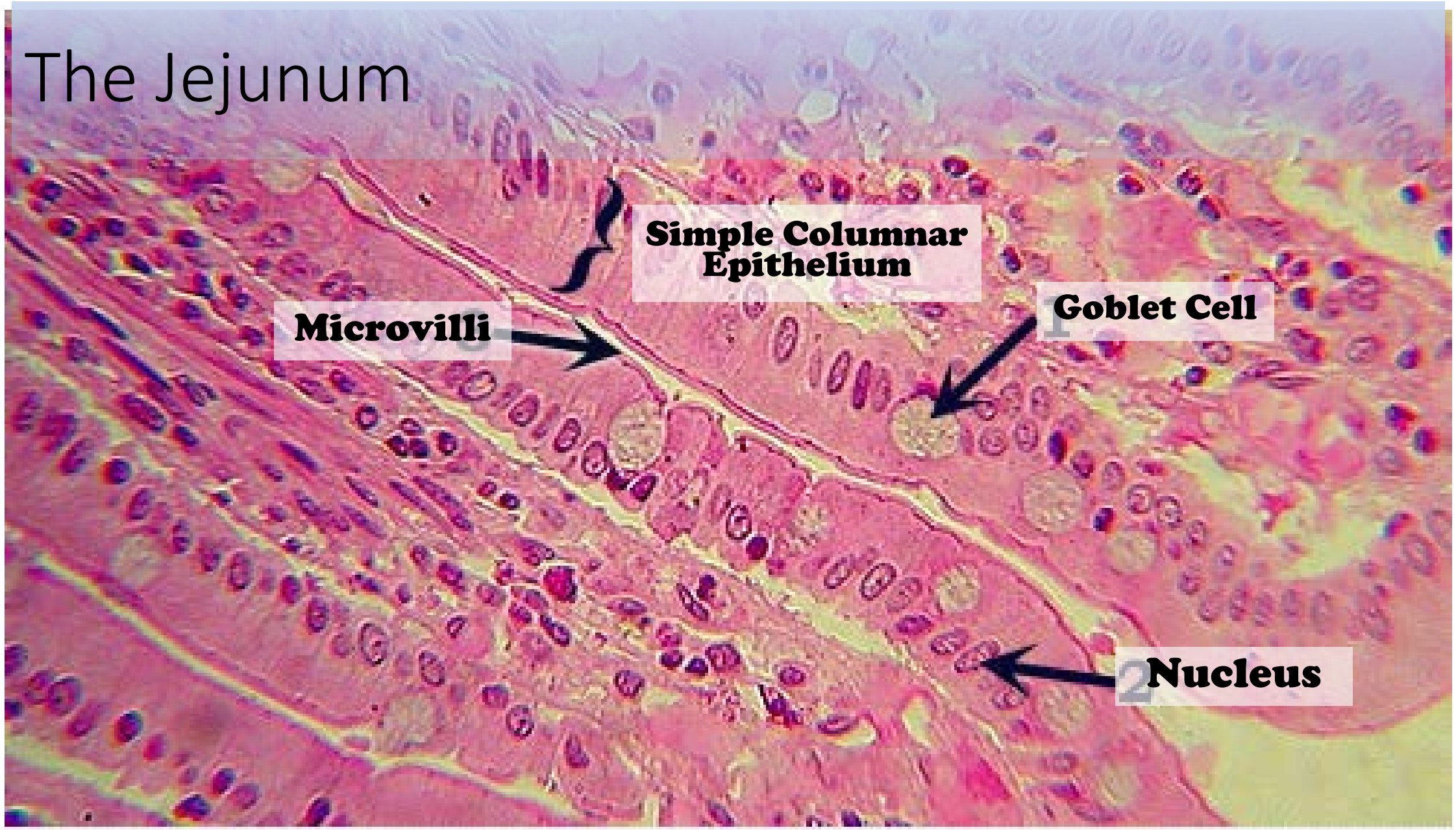
- *INFERIOR VIEW*

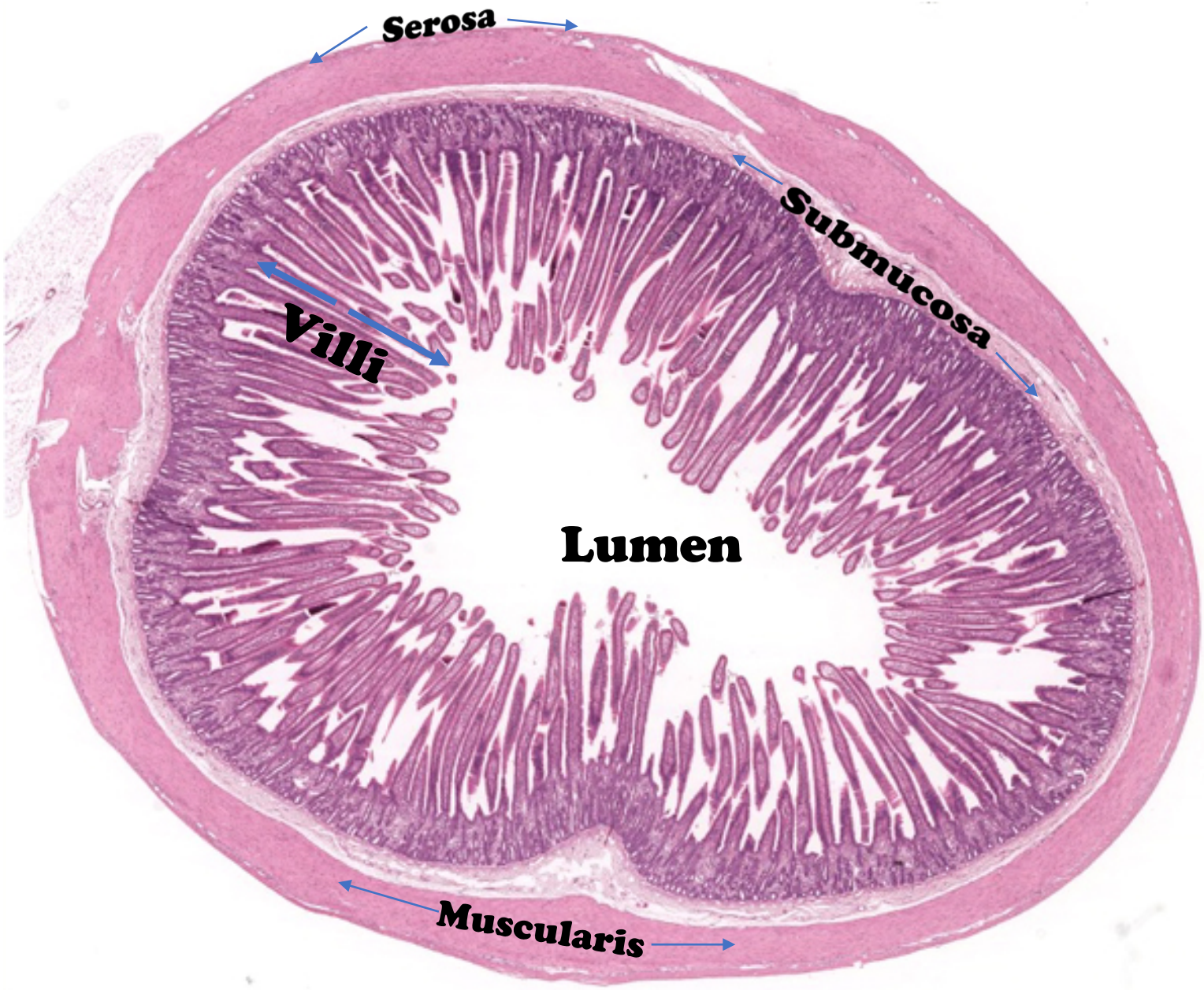
The function of the GALL BLADDER is to <u>store and concentrate bile</u>. *Bile is a digestive enzyme produced by the liver that helps break up fats (lipids).*

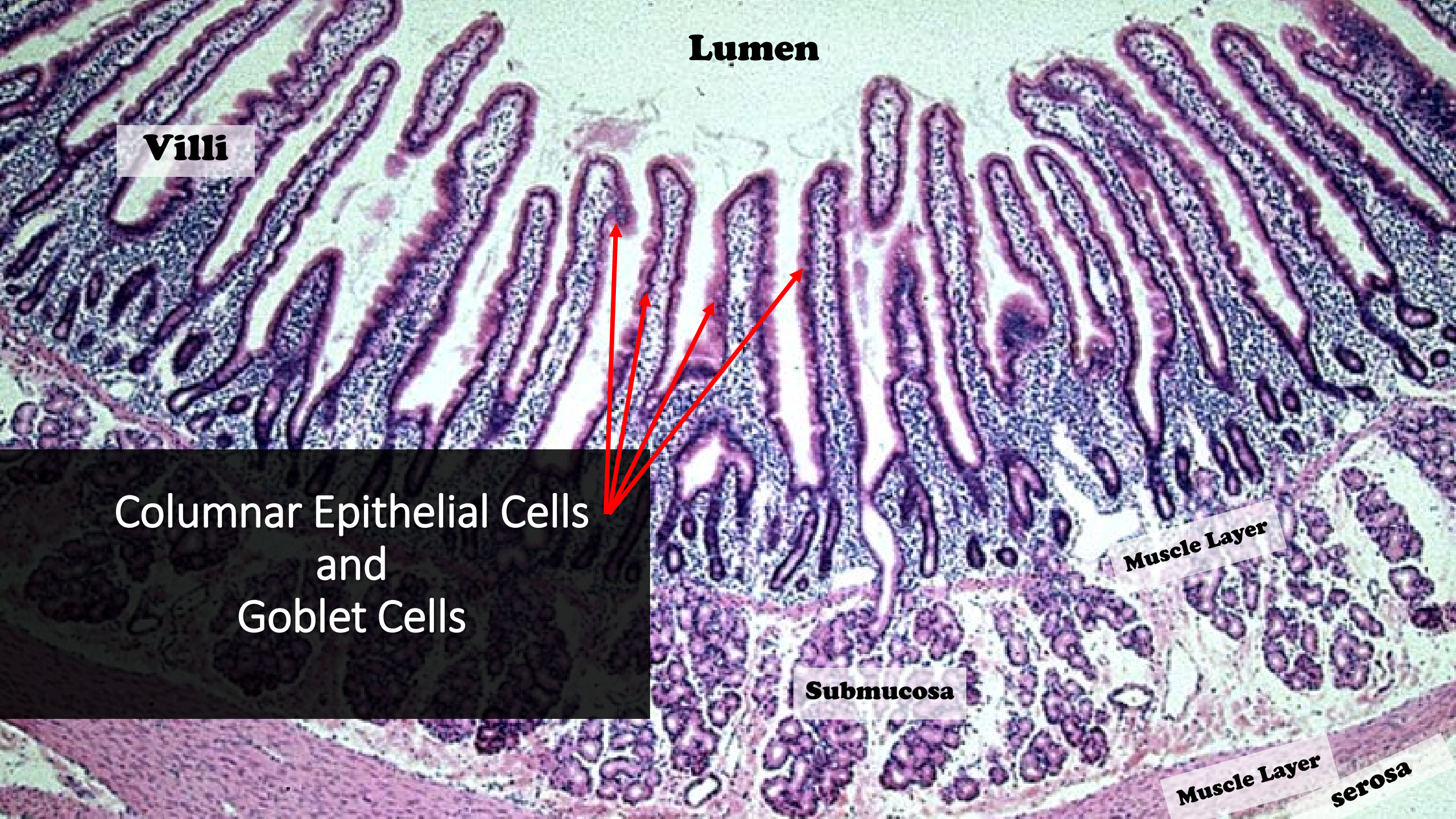


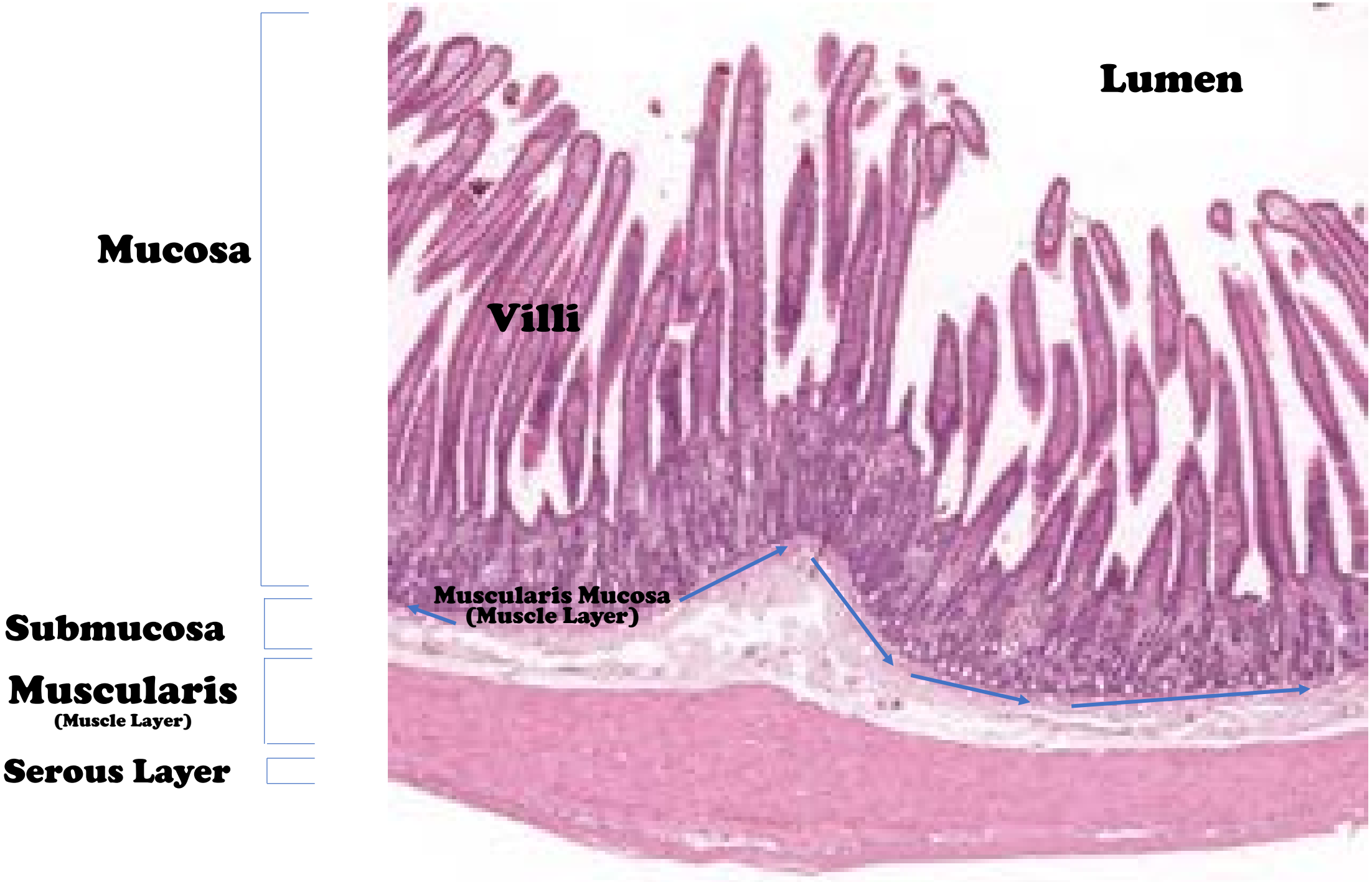
Gall Bladder

The Jejunum

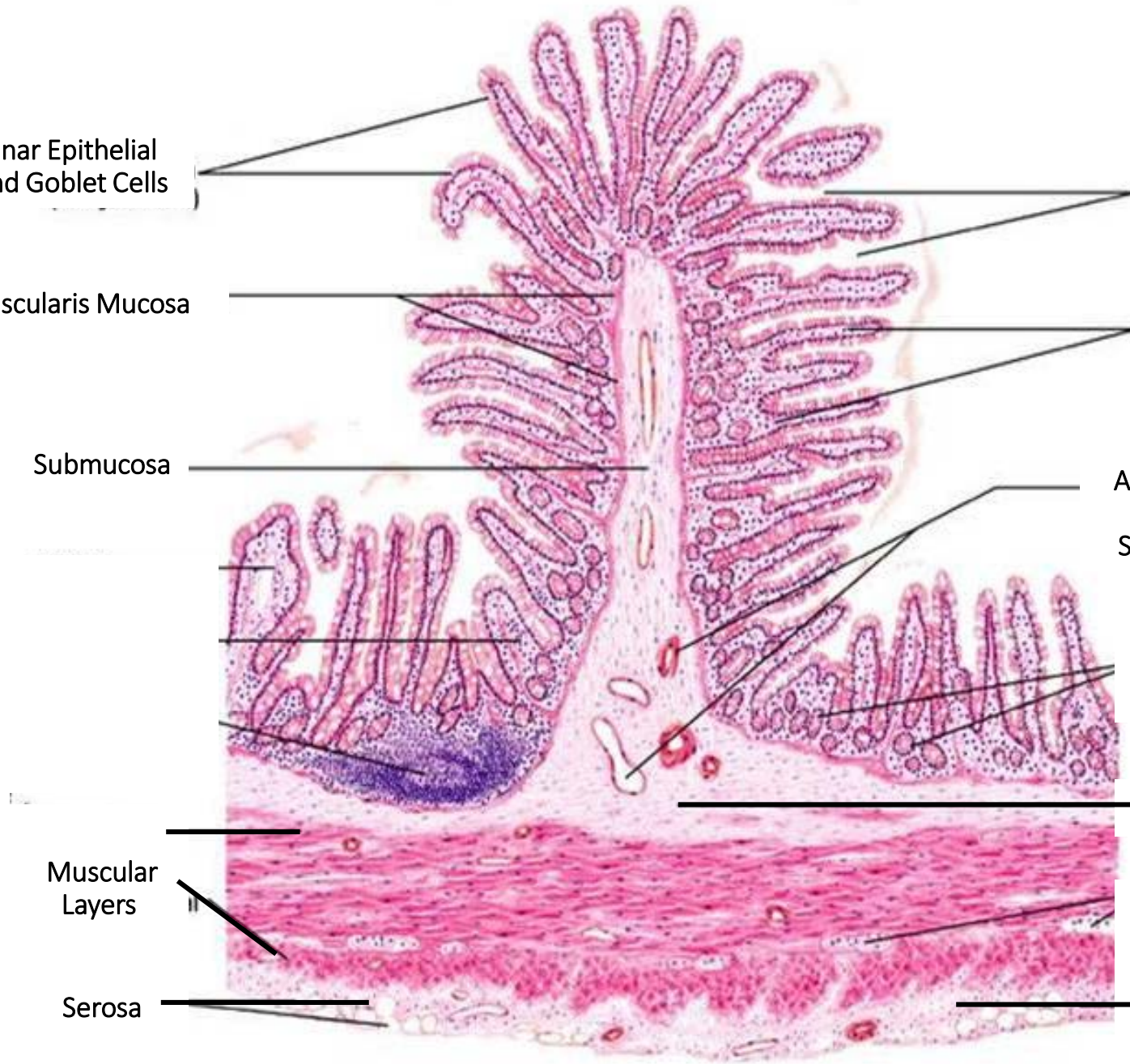

Simple Columnar Epithelium
Microvilli
Goblet Cell
Nucleus


Serosa
Submucosa
Villi
Lumen
Muscularis


Lumen
Villi
Columnar Epithelial Cells
and
Goblet Cells
Muscle Layer
Submucosa
Muscle Layer
serosa


Lumen
Villi
Mucosa
Muscularis Mucosa
(Muscle Layer)
Submucosa
Muscularis
(Muscle Layer)
Serous Layer

Villi


Columnar Epithelial Cells and Goblet Cells
Muscularis Mucosa
Submucosa
Muscular Layers
Serosa
Lumen
Villi
Arteries and Veins in Submucosa
Submucosa
Serosa