

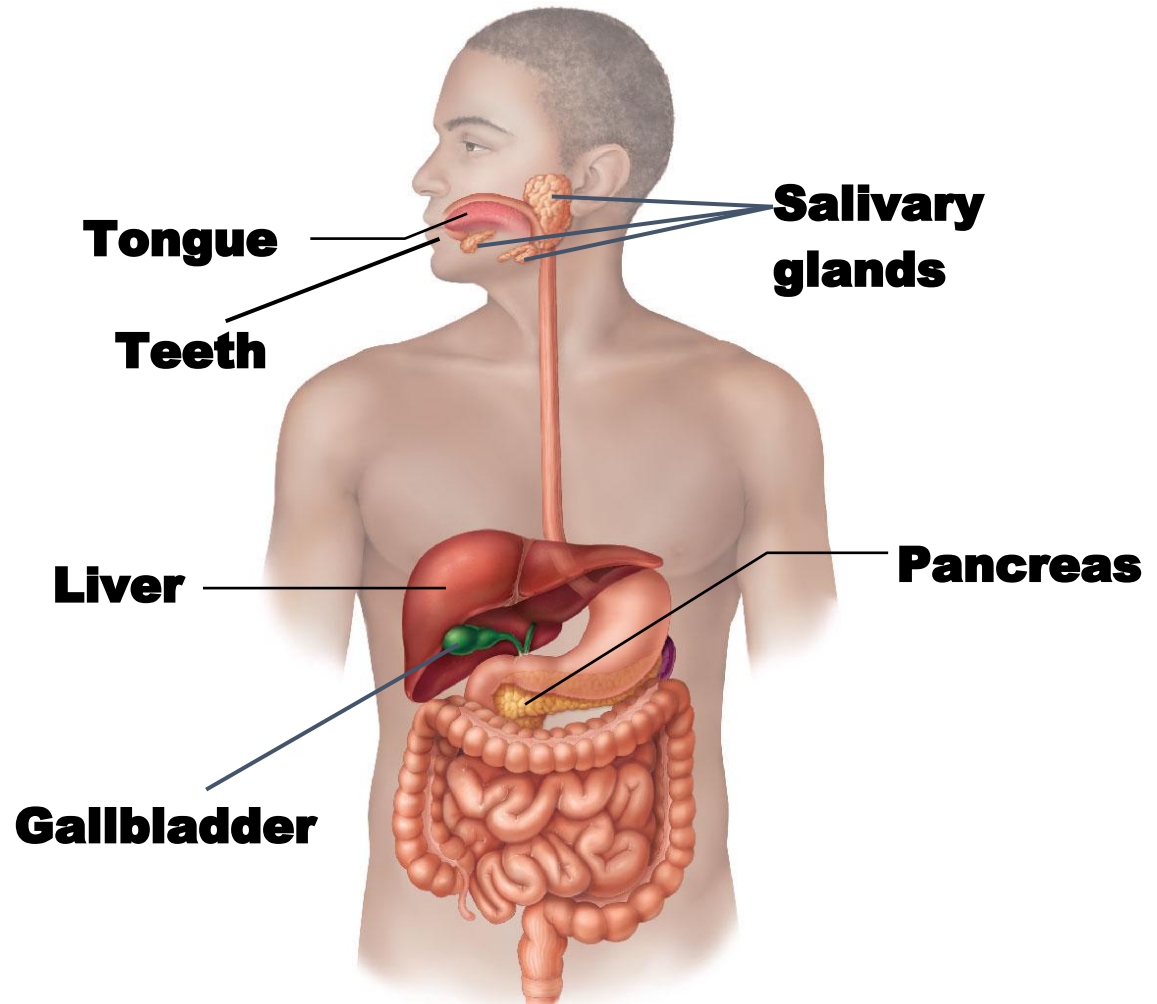
Anatomy of the Digestive System

- Two main groups of organs:
 - 1. Alimentary canal** (gastrointestinal, or GI, tract)
 - Organs ingest, digest, absorb, defecate
 - 2. Accessory digestive organs**
 - Organs assist digestion in various ways

Accessory Organs of the Digestive System

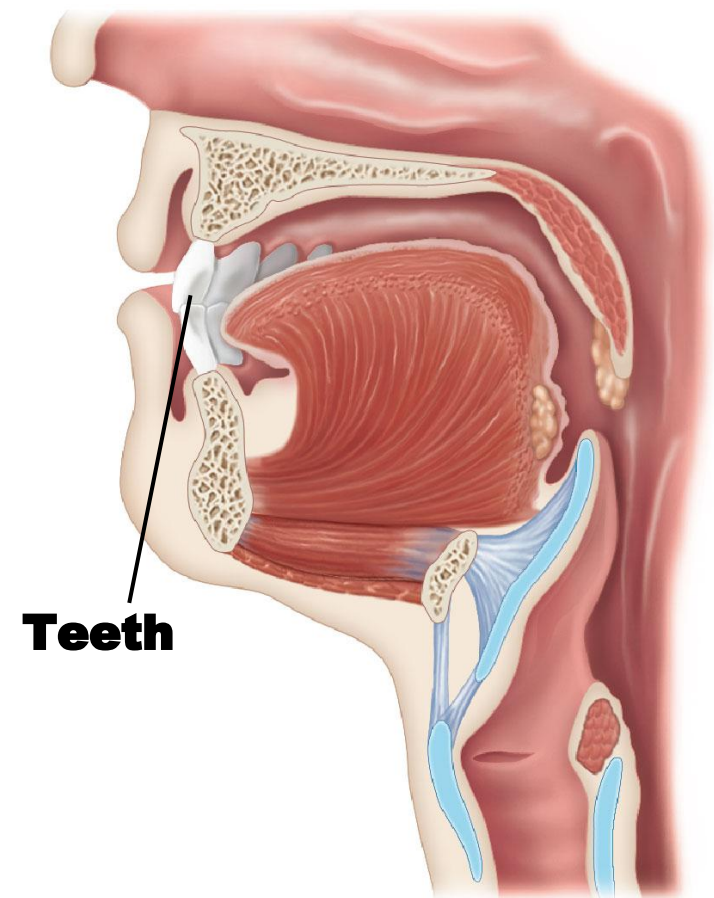
- Many organs outside of the alimentary canal **assist in digestion:**

- ✓ **Teeth**
- ✓ **Tongue**
- ✓ **Salivary Glands**
- ✓ **Pancreas**
- ✓ **Liver**
- ✓ **Gallbladder**



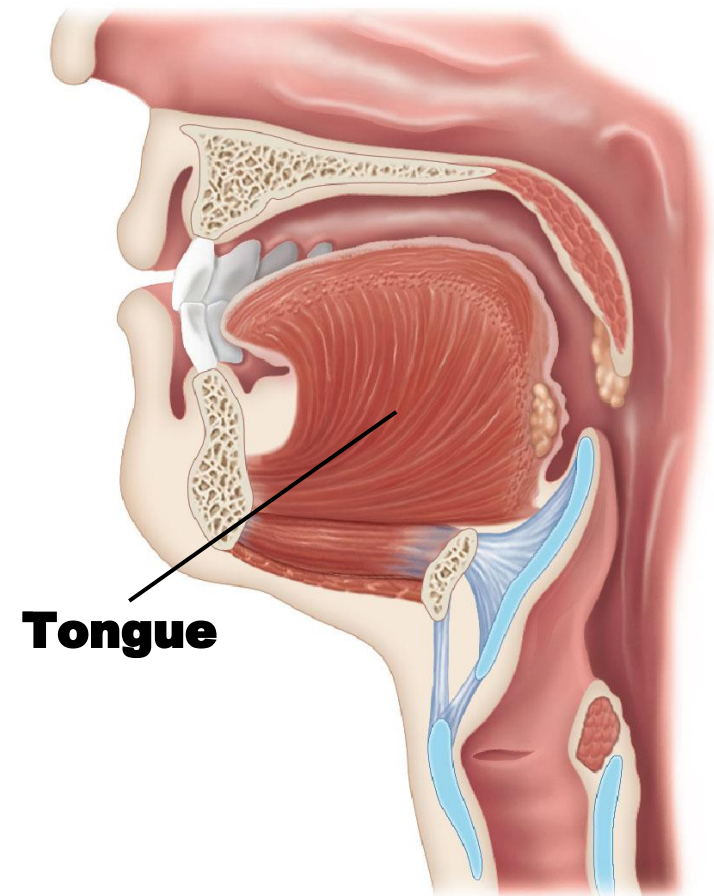
Teeth

- Structure
 - ✓ Enamel covered dentin (bonelike material) surrounding a pulp cavity containing blood vessels and nerves
- Function
 - ✓ Starts mechanical digestion of food by masticating (chewing) food into smaller pieces
 - ✓ Increases the surface area of food for chemical digestion

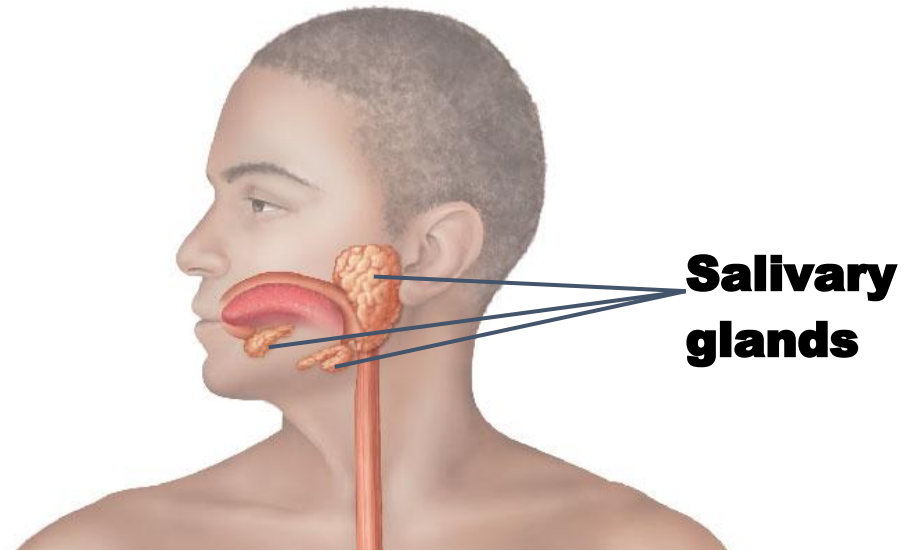


Tongue

- Structure
 - ✓ Large muscle occupying the inferior floor of the oral cavity
- Function
 - ✓ Mixes masticated food with saliva
 - ✓ Initiates swallowing
- Taste buds on the tongue **allow for taste**



Salivary Glands



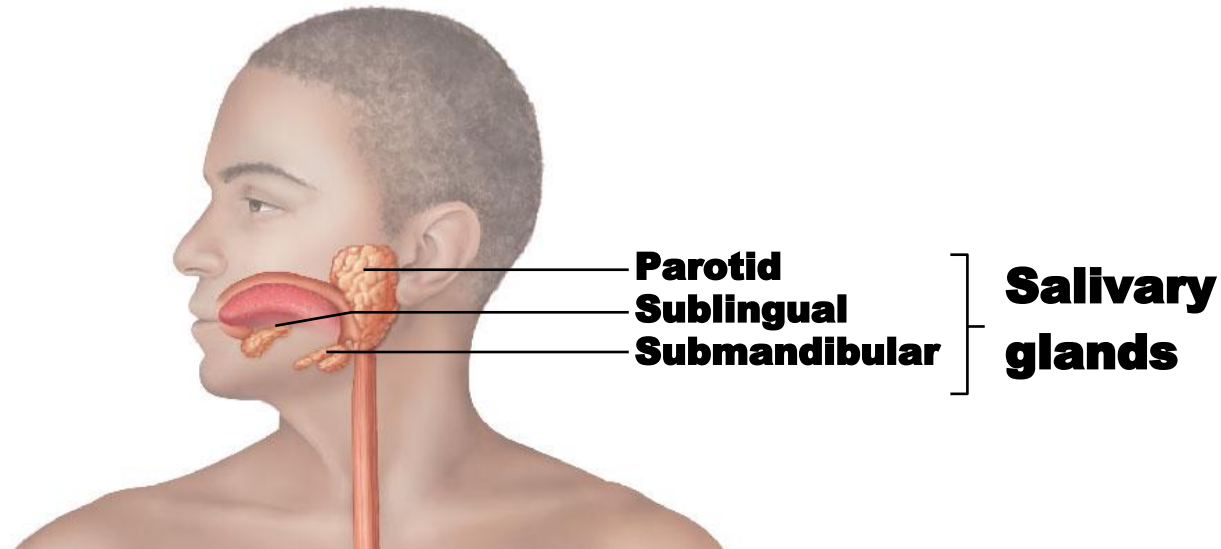
- Structure

- ✓ Secretions are a mixture of mucus and serous fluids emptied into the oral cavity

- Function

- ✓ Helps to moisten and bind food together into a bolus
- ✓ Begins starch digestion
- ✓ Dissolves chemicals so they can be tasted

Salivary Glands



- There are three pairs of salivary glands:
 1. **Parotid glands**
 - ✓ Located anterior to the ears
 2. **Submandibular glands**
 - ✓ Located in the mandible
 3. **Sublingual glands**
 - ✓ Located inferior to the tongue

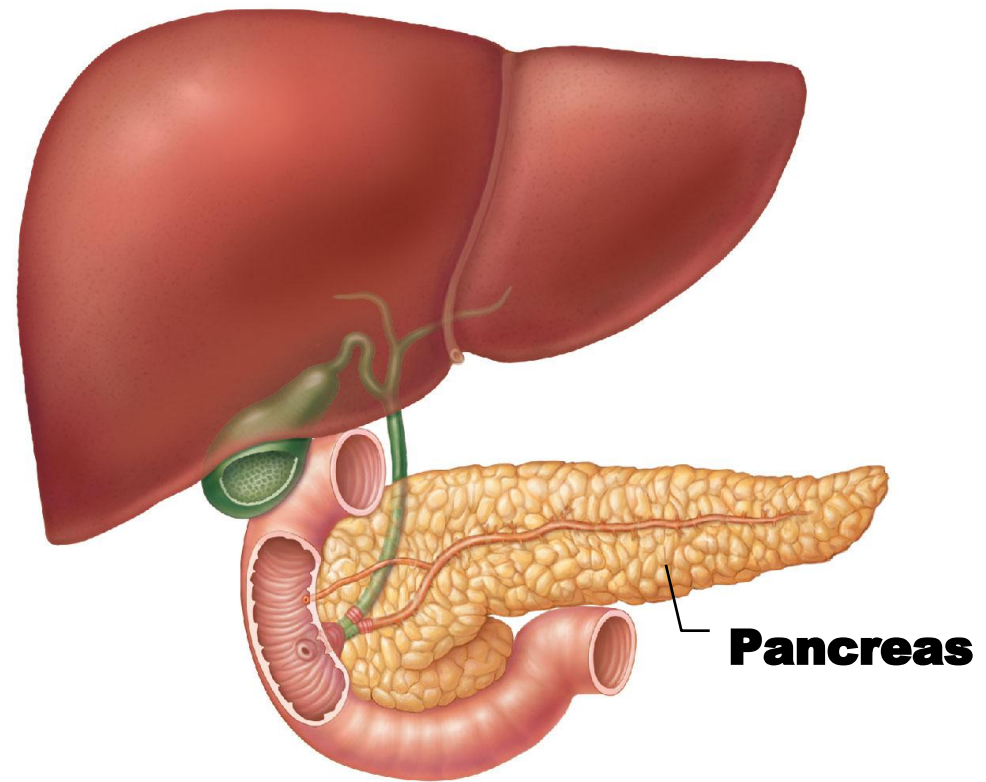
Pancreas

- Structure

- ✓ Secretions are enzymes emptied into the duodenum and hormones emptied into the bloodstream

- Function

- ✓ Neutralizes acidic chyme
- ✓ Aids in chemical digestion of lipids, proteins, and carbohydrates
- ✓ Aids in regulation of blood sugar



Liver

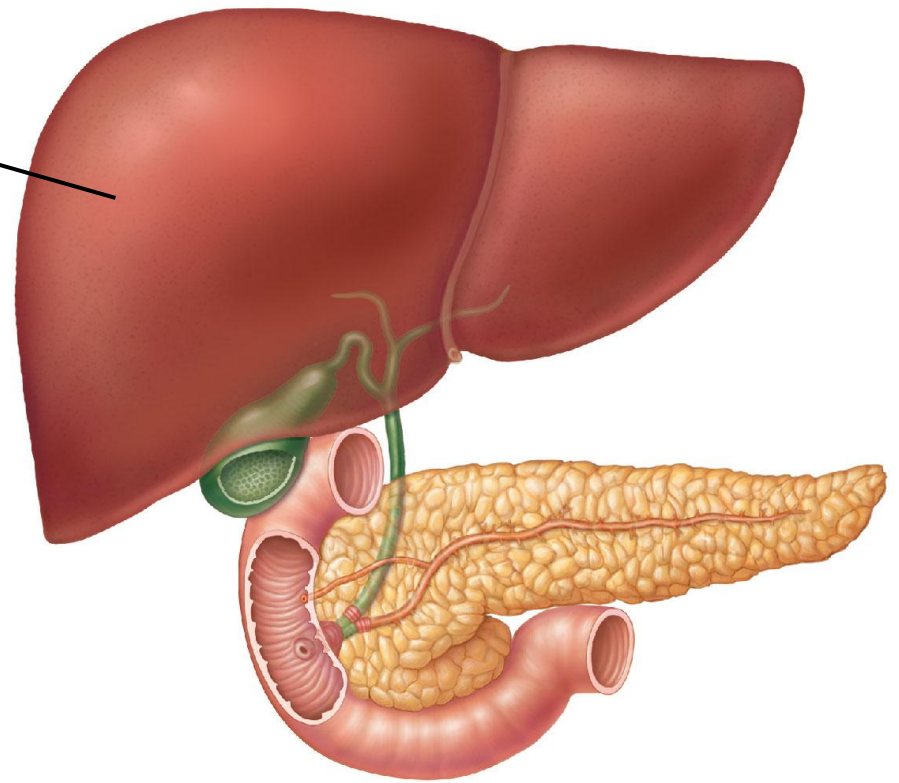
Liver

- Structure

- ✓ Largest gland in the body consisting of four lobes located on the right side of the body under the diaphragm

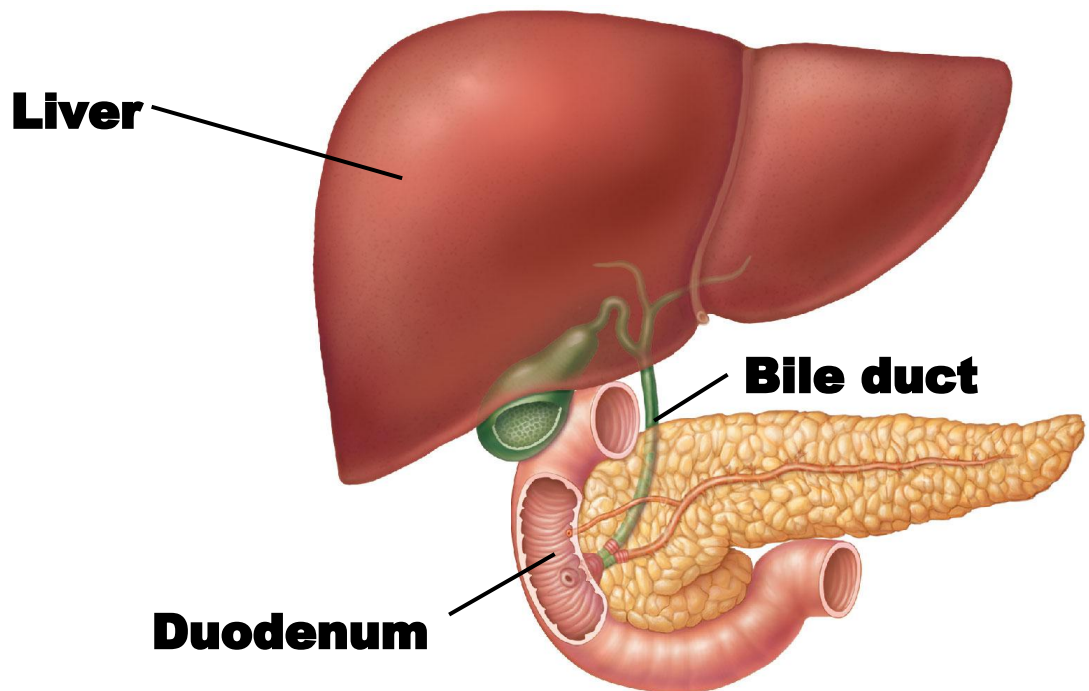
- Function

- ✓ Produces bile that emulsifies (breaks down) lipids increasing the surface area for digestion



Liver

- Bile is yellow-green, watery solution containing **bile salts** and **bile pigments**
- The liver empties bile into the **duodenum** through the **bile duct**



Gallbladder

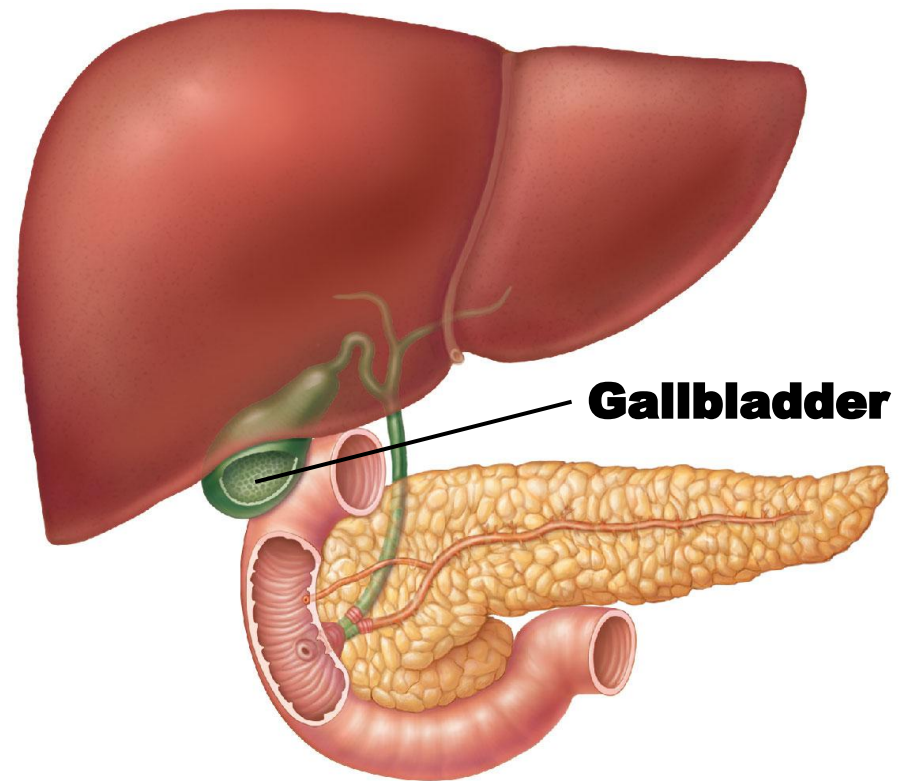
- Structure

- ✓ **Small, thin-walled green sac found inferior to the liver**

- Function

- ✓ **Stores bile**
- ✓ **Concentrates bile by the removal of water**
- ✓ **Contracts to release bile when fatty foods enter the duodenum**

- The gallbladder empties bile into the **duodenum** through the **bile duct**



Accessory Organs of the Digestive System

