**MATRIC NUMBER**: 17/MHS06/068

**COURSE CODE**: MLS 408

**COURSE TITLE**: HISTOPATHOLOGY TECHNIQUES AND MUSEUM

**ASSIGNMENT**

**QUESTION**  
 In a tabular form only, compare and contrast sections of the gastrointestinal tract

**ANSWER**

1. **DIFFERENCES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LAYERS/SECTIONS** | | **SUPERFICIAL (SEROSA)/ ADEVENTITIA LAYER** | **MUSCULARIS EXTERNA** | **SUBMUCOSA** | **MUCOSA/ EPITHELIA LININNG** |
| **ORAL CAVITY** | | Contains an adventitia layer cause it’s not a cavity | Soft palate has a core of skeletal muscle | Numerous mucous glands, and lymphoid nodules are located here | Stratified squamous epithelium, keratinized or Non- keratinized depending on the region  Keratinized stratified squamous layer lines the Gingiva (Gum) and Hard palate  Non- keratinized stratified squamous epithelium lines the soft palate, lips, cheeks and floor of the mouth |
| **OESOPHAGUS** | **UPPER 1/3** | The only portion of the oesophagus that is in peritoneal cavity is covered by serosa and the rest is covered by a layer of connective tissue (The adventitia) | Straited muscle cells | Group of small mucos secreting glands, the oesophageal glands | Non-keratinized stratified squamous epithelium |
| **MIDDLE 1/3** | A mixture of straited and smooth muscles cells |
| **LOWER 1/3** | Smooth Muscles which is close the stomach forms the lower oesophageal sphincter |
| **STOMACH** | | Serosa containing mesothelium and a thin layer of underlying connective tissue | Made up of three layers of muscles  An inner oblique layer ,  A middle circular layer and  An outer longitudinal layer | Large blood vessles,lymph vessels and nerves are located in the submucosa which consists of loose connective tissue | Simple tall columnar epithelium lines all regions of the stomach and is thrown into longitudinal folds (Gastric folds or rugae) which disappears when the stomach is fully distended. A network of shallow grooves divides the mucosa into gastric areas and small funnel shaped depression ( Gastric pits)  Simple tubular gastric glands which opens into the bottom of the gastric pits. |
| **SMALL INTESTINE** | **DUODENUM** | Serosa/Visceral peritoneum | Circular layer of smooth muscles and longitudinal layer of smooth muscles | Gland know as Brunner’s glands | Simple columnar striated border with  and surface modifications which forms the villi with numerous microvilli’s  The mucosa between the villi is dotted with crevices that each lead to a tubular intestinal gland called crypt of Lieberkuhn  Few goblet cells |
| **JEJUNUM** | Only connective tissues and blood vessels | Simple columnar striated border with  Few goblet cells+ with lesser villi structure |
| **ILEUM** | Payer’s patches with prominent plicaes | Simple columnar striated border with  Few goblet cells++ |
| **LARGE INTESTINE** | | Serosa/Visceral peritoneum | The inner circular layer of muscle forms the usual sheath around the large intestine but the outer longitudinal muscle layer forms three flattened strands called the taenia coli | Considerable amount of fat | Simple columnar columnar epithelium with thin brush borders and numerous goblet cells surface of the mucosa is relatively smooth as there are no plicae circulares or intestinal villi. Crypts of lieberkhun are present and usually longer and straighter than those of the small intestine  Goblet cells in abundance |
| **ANAL CANAL** | | Contains an adventitia layer cause its not a cavity | Presence of circular and longitudinal smooth muscle cells | No specialized structure | Stratified squamous epithelium |

1. **COMPARISM**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LAYERS/ SECTIONS** | **SUPERFICIAL/**  **ADVENTITIA LAYER** | **MUSCULARIS EXTERNA LAYER** | **SUBMUCOSA** | **MUCOSA/ EPITHELIAL LINING** |
| **ORAL CAVITY** | Adventitia a fibrous sheath of collagen fiber attaches to the adjacent structures | Contains smooth muscles cells divided into 2 layers internal (circular) and external (longitudinal) | Dense connective tissues with many blood vessels and lymph vessels | A mucosal layer basically consisting of loose connective tissue covered by epithelium and specialized by glandular specialization  They all contain epithelial lining with lamina propria and smooth muscle cells; muscularis mucosae |
| **OESOPHAGUS** |
| **STOMACH** | Comprised of loosely arranged fibroblast and collagen, with the vessels and nerves passing through it. And is covered with mesothelium |
| **SMALL INTESTINE** |
| **LARGE INTESTINE** |
| **ANAL CANAL** | Adventitia a fibrous sheath of collagen fiber attaches to the digestive tract and adjacent structures. |