

1. **Lymph center of the abdominal viscera (organs)**

**A. Celiac lymph center:**

1. **Celiac lymph nodes:**

**Location:** they are located at the origin of the celiac artery.

**Shape:** small group of lymph nodes.

**Afferent:** stomach, spleen and liver.

**Efferent:** they are going to the celiac trunk.

2. **Gastric lymph nodes:**

**Location:** are located along the left course of the left gastric artery.

**Shape:** chain of small lymph nodes .

**Afferent:** stomach and greater omentum.

**Efferent:** they are going to celiac lymph node.

3. **Splenic lymph nodes:**

**Location:** is located along the course of splenic artery.

**Shape:** chain of small lymph nodes.

**Afferent:** spleen, stomach and greater omentum.

**Efferent:** they are going to celiac lymph node.

4. **Hepatic lymph nodes:**

**Location:** located along the course of the hepatic artery.

**Shape:** chain of small lymph nodes.

**Afferent:** liver, duodenum, pancreas, greater and lesser omentum.

**Efferent:** go to the celiac lymph node.

5. **Pancreatico-duodenal lymph nodes:**

**Location:** along the course of cranial pancreatico-duodenal artery.

**Shape:** chain of small lymph nodes.

**Afferent:** duodenum and pancreas.

**Efferent:** go to celiac lymph node.

**B. Cranial mesenteric lymph center:**

1. **cranial mesenteric lymph nodes:**

**Location:** at the origin of the cranial mesenteric artery .

**Shape:** small group of lymph nodes.

**Afferent:** duodenum, pancreas, jejunum, ileum and cecum.

**Efferent:** mesenteric trunk.

2. **Jejunal lymph nodes:**

**Location:** along the course of jejunal arteries.

**Shape:** small lymph nodes.

**Afferent:** jejunum and ileum.

**Efferent:** cranial mesenteric lymph node.

3. **Ileal lymph nodes:**

**Location:** located along the course of ileal branch of ilioceocol trunk.

**Shape:** small lymph nodes.

**Afferent:** ileum.

**Efferent:** go to the cranial mesenteric lymph node.

4. **Cecal lymph nodes:**

**Location:** located on the lateral and dorsal and medial bands.

**Shape:** about 500-700 small lymph nodes.

**Afferent:** cecum and ileum.

**Efferent:** go to the cranial mesenteric lymph node.

5. **Colic lymph nodes:**

**Location:** located between the dorsal and ventral part of the greater colon in horse and in other animals in mesocolon.

**Shape:** 3000-6000 small lymph nodes.

**Afferent:** from colon.

**Efferent:** go to cranial mesenteric lymph node.

C. **Caudal mesenteric lymph center:**

1. **Caudal mesenteric lymph nodes:**

**Location:** located at the origin of caudal mesenteric artery.

**Shape:** small group of lymph nodes.

**Afferent:** from transverse colon, small colon and rectum.

**Efferent:** go to medial iliac or to the lumbar trunk.

2. **visceral lymph node:**

**Location:** located on the lateral ligaments of urinary bladder.

**Shape:** group of small lymph nodes

**Afferent:** from urinary bladder and pelvic urethra.

**Efferent:** go to medial iliac lymph node.

## **Lymph center of pelvic limb (hind)**

### **A. Ileo-femoral lymph nodes (deep inguinal lymph center):**

**Location:** located at the (deep) internal inguinal opening.

**Shape:** elongated mass of lymph nodes (8-12) cm.

**Afferent:** skin and muscles of the thigh and superficial inguinal lymph nodes.

**Efferent:** go to medial iliac lymph nodes.

### **B. Popliteal lymph node or (lymph center):**

**Location:** located under the origin of the gastrocnemius muscle.

**Shape:** (3-12) small Lymph nodes formed amass of (3-5) cm.

**Afferent:** all the distal part of hind limb (hoof, digit, metatarsal, tarsal and it is muscles).

**Efferent:** go to deep inguinal lymph node.

## **\*\*Large lymphatic trunks or ducts.**

### **Tracheal trunk (duct):**

They are two large lymphatic vessels present along the lateral side of trachea. They are formed from the efferent of the cranial deep cervical lymph nodes and receive the efferent from middle deep cervical lymph node. They are terminated at the caudal deep cervical lymph node.

### **Lumber trunk:**

They are two large lymphatic trunk formed from the efferent of the following lymph nodes of the:

Middle ileac lymph node.

Caudal mesenteric lymph node.

Lumber aortic lymph node.

They are unit to formed one large trunk of (1 cm) in the diameter and it is located ventral of abdominal aorta, the lumber trunk terminated in the cisterna chyli.

**Cisterna chyli:** it is elongated irregular sac, like of the large lumber trunk located between the aorta and the right crura of diaphragm.

It is extending from 2nd or 3rd lumber vertebrae, to the last thoracic vertebrae. It is about (9-17) cm in the length and about 1.5 – 2 cm in diameter.

It contains (2-5) simple or paired valve. The cisternalchyli receive the efferent from the lumber, intestinal and iliac trunk.

**Thoracic duct:**

It is the direct continuation of cisternalchyli into the thoracic cavity through the aortic hiatus and passes cranioventrally to open into the dorsal surface of the origin of cranial vena cava. It is about 10-15 cm length and 1-2 cm in diameter. It contains 10-14 simple or paired valves.

**Intestinal duct:**

Large lymphatic vessels formed from the efferent of cranial and caudal mesenteric lymph nodes this terminated at the lumber trunk.

**Celiac trunk (duct:)**

Large lymphatic vessels formed from the efferent of celiac lymph center and terminated into the lumber trunk.

