

VETERINARY ANATOMY, UNIT-1

**TOPIC- A- INTRODUCTION TO ANATOMY & ITS
BRANCHES,**

B- DESCRIPTIVE TERMS USED IN ANATOMY

C-STUDY OF ANATOMICAL PLANES

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HOD, VETERINARY ANATOMY

A- INTRODUCTION TO ANATOMY & ITS BRANCHES,

- ▶ **ANATOMY**- Anatomy is the branch of biological science, which deals with the **form and structure** of the body and its parts.
- ▶ **Veterinary Anatomy** is the study of the **gross** (external & internal), **histological and embryological** structures and **all systems of animals**, including the integumentary, gastrointestinal, respiratory, cardiovascular, lymphatic, urogenital (urinary & genital), endocrine, musculoskeletal, special sense organs and nervous systems.

BRANCHES OF ANATOMY,

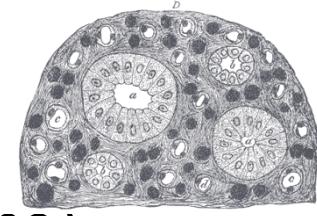
- ▶ 1. Gross anatomy / Macroscopic/ Naked Eye anatomy
- ▶ 2. Histology / Microscopic Anatomy
- ▶ 3. Developmental Anatomy / Embryology
- ▶ 4. Applied Anatomy/ Surgical Anatomy
- ▶ 5. Radiological Anatomy
- ▶ 6. Comparative Anatomy
- ▶ -**1. Gross anatomy / Macroscopic/ Naked Eye Anatomy**
- ▶ A. *Topographical /Regional Anatomy-*

All the structures, present in the **each regions or parts** of the body are studied in the order

BRANCHES OF ANATOMY, CONTD..

- ▶ **1. Gross anatomy / Macroscopic anatomy.**
- ▶ **B. Systemic Anatomy**
- ▶ The branch of anatomy deals with the **different systems** in the animal body.
 - **Osteology** (Bones)- It is the branch of systemic anatomy which deals with the study of **bones**
 - **Arthrology** (Joints)
 - **Myology** (Muscles- Skeletal, Smooth & Cardiac)
 - **Splanchnology** (Visceral organs- Internal organs-Liver, Kidney,etc)
 - **Angiology** (Cardio-vascular system- Heart & Blood Vessels)
 - **Neurology** (Nervous system- Brain & Spinal Cord)
 - **Aesthesiology** (Sense organs- Eye, Ear, Nose, Taste Bud & Skin)

BRANCHES OF ANATOMY, CONTD..

- ▶ **2. Histology / Microscopic Anatomy**
 - ▶ is the branch of biology which studies the microscopic structures of body (microscope)
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- ▶ **3. Developmental Anatomy / Embryology**
 - ▶ is the branch of biology that studies the prenatal development of gametes (sex cells), fertilization, and development of embryos and fetuses.
- ▶ **4. Applied Anatomy/ Surgical Anatomy**
 - ▶ The application of **anatomical** knowledge to the diagnosis and treatment of disease.

Branches of Anatomy, CONTD..

- ▶ **5. Radiological Anatomy-** Structure of the body are studied with the help of **X-rays, Ultrasound and C. T. Scan**

- 6. Comparative Anatomy-** Study about **analogous structure** of different species of animals on comparative basis.
Ex- **Liver ox , Liver of Horse, Liver Goat , Liver of sheep, Liver of Pig, Liver of Dog, Liver OF Bird.**

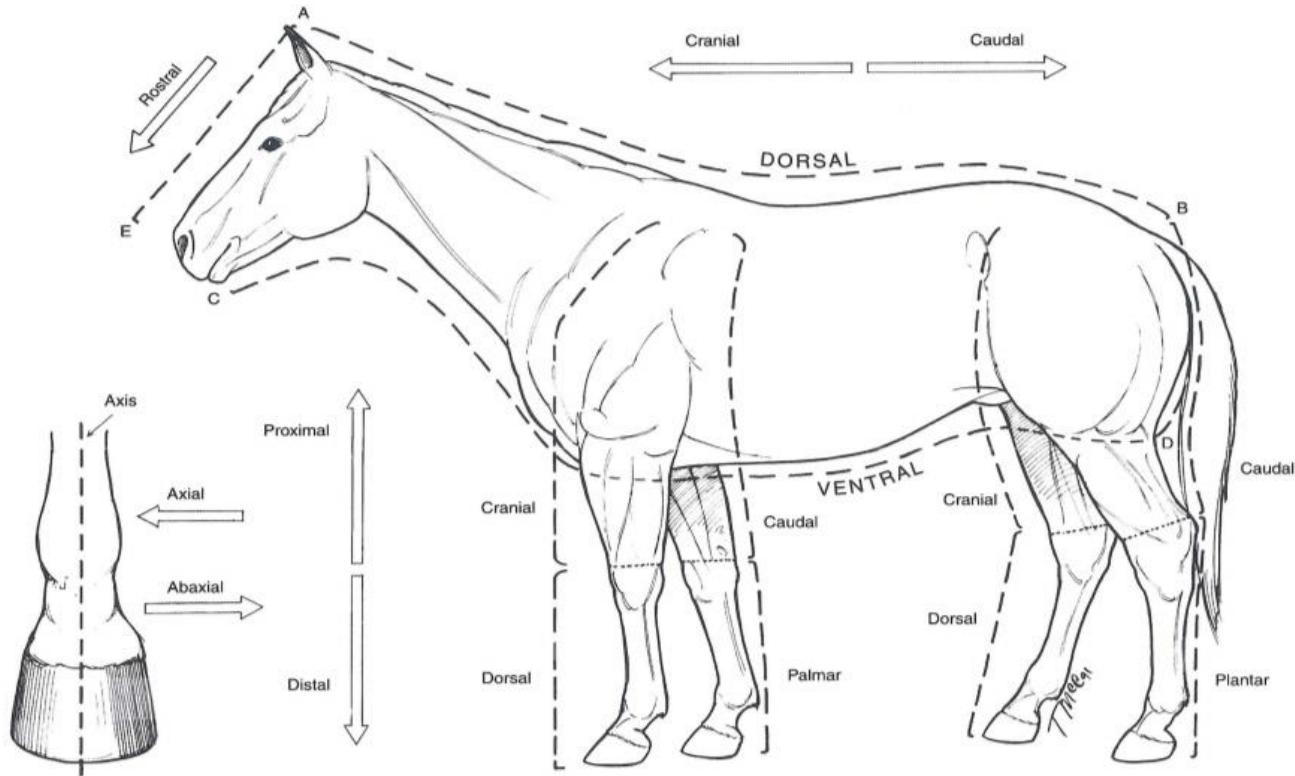
B-DESCRIPTIVE TERMS USED IN ANATOMY

- ▶ **In Standing Positions of Animals**
- ▶ **Cranial or cephalic** means direction towards the **head**.
- ▶ **Caudal** means direction towards the **tail**.
- ▶ **Anterior** means direction towards the **front**.
- ▶ **Posterior** means direction towards the **back**
- ▶ **Rostral** is a special term used only to describe positions or directions **on the head** especially towards the **tip of the nose**.
- ▶ **Dorsal** refer to “up” directions with the animal in a standing position.
- ▶ **Ventral** refer to “up and down” directions with the animal in a standing position.

Superior means towards the back (**top surface**) of a standing animal

Inferior means towards the belly (**bottom**) of a standing animal.

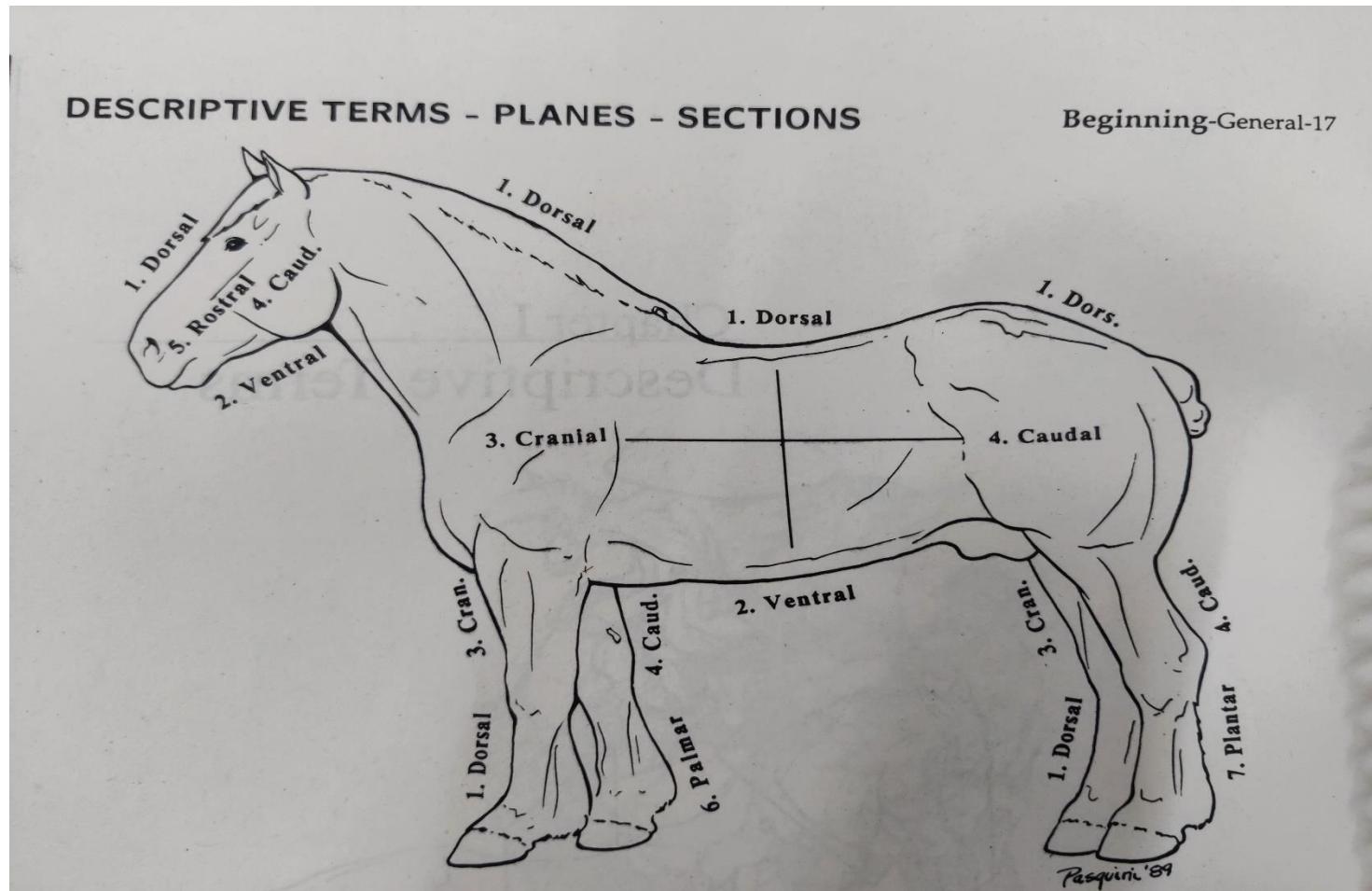
B- DESCRIPTIVE TERMS USED IN ANATOMY- CONTND..



B- DESCRIPTIVE TERMS USED IN ANATOMY- CONTND..

- ▶ **Proximal:** Upper or superior (In long bone- Femur)
- ▶ **Distal:** Lower or inferior (In Humerus, Metatarsal)
- ▶ **Superior:** It is equivalent to upper or higher i.e. above.
- ▶ **Inferior:** It is equivalent to lower or under i.e. Below.
- ▶ **Volar:** The posterior face of the distal part of the fore limb.
- ▶ ***Superficial* or **External**** means towards the outer part of the body..
- ▶ ***Deep* or **Internal**** means below the external part of body .

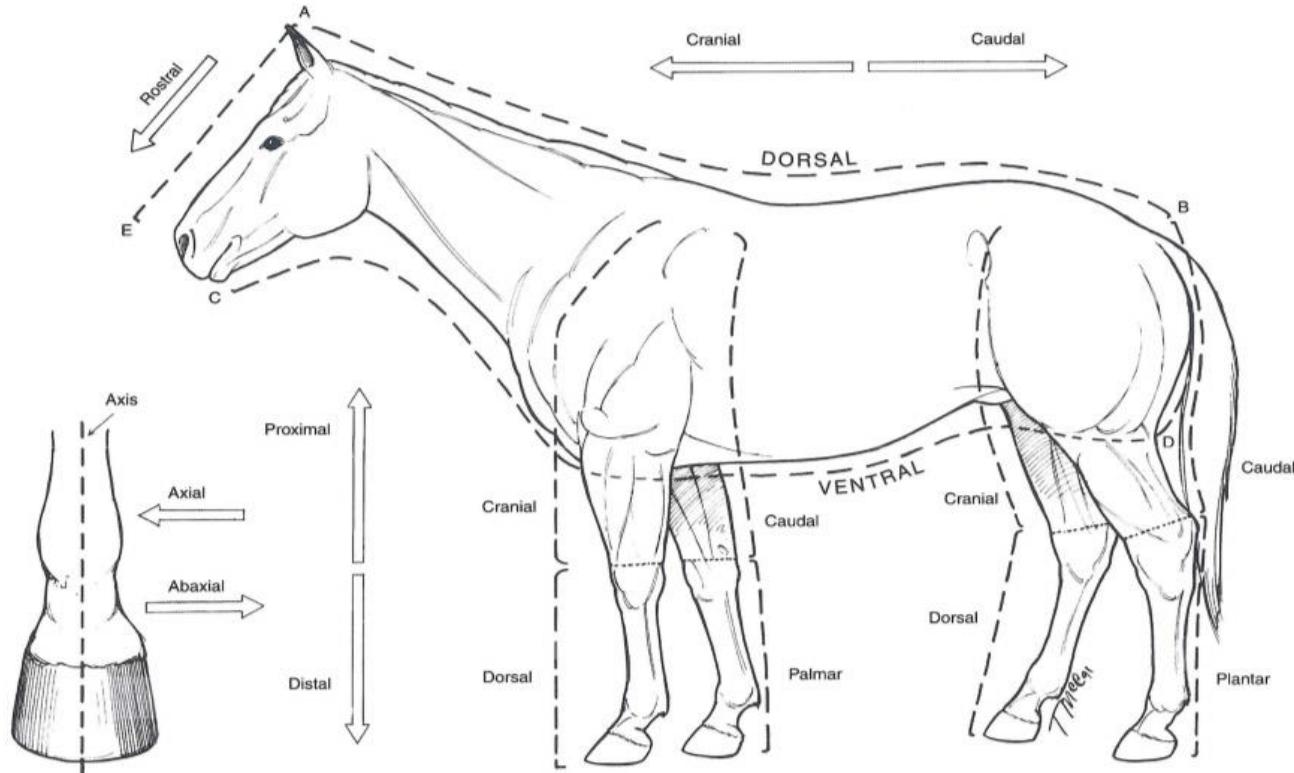
B- DESCRIPTIVE TERMS USED IN ANATOMY- CONTND..



B- DESCRIPTIVE TERMS USED IN ANATOMY- CONTND..

- ▶ **Palmar:** The surface of the **fore limb** that contacts the ground in standing condition.- Below the.....**MC Bones-?**
- ▶ **Plantar:** The contact surface of the **hind limb** in standing condition...Below the **M.T.Bones-?**
- ▶ **Axial:** Towards the central line of the body or any body part.
 - ▶ **Abaxial:** Away from the **axis**.
 - ▶ **Oral:** The structure towards the head.
 - ▶ **Aboral:** The structure away from the head.

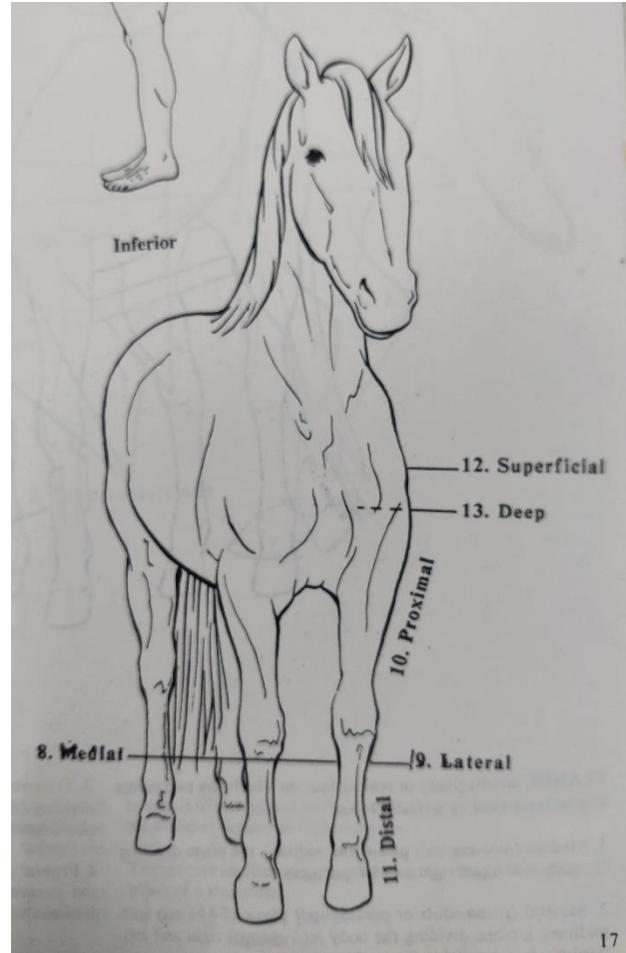
B- DESCRIPTIVE TERMS USED IN ANATOMY- CONTND..



B- DESCRIPTIVE TERMS USED IN ANATOMY- CONTND..

- ▶ **Median plane-** Which divides the body into two equal half
- ▶ **Medial-** Close to the median plane.
- ▶ **Lateral-** Away from the median plane
- ▶ **Central:** A part nearest the middle.
- ▶ **Peripheral:** A part nearest the surface.
- ▶ **Parietal:** The body wall or the wall of the cavity.
- ▶ **Visceral:** The viscera or organ in the cavity.
- ▶ **Somatic:** The part of the body other than viscera.

B- DESCRIPTIVE TERMS USED IN ANATOMY- CONTND



C-STUDY OF ANATOMICAL PLANES

- ▶ 1. **Median or Longitudinal Plane**– The plane divides the body almost into 2 equal halves.
- ▶ 2. **Paramedian or Sagittal Plane**– Any plane parallel to the median plane.
- ▶ 3. **Transverse planes**– are the cross section plane
- ▶ 4. **Frontal or Horizontal plane**–Plane that cuts the long axis of body horizontally

C-STUDY OF ANATOMICAL PLANES

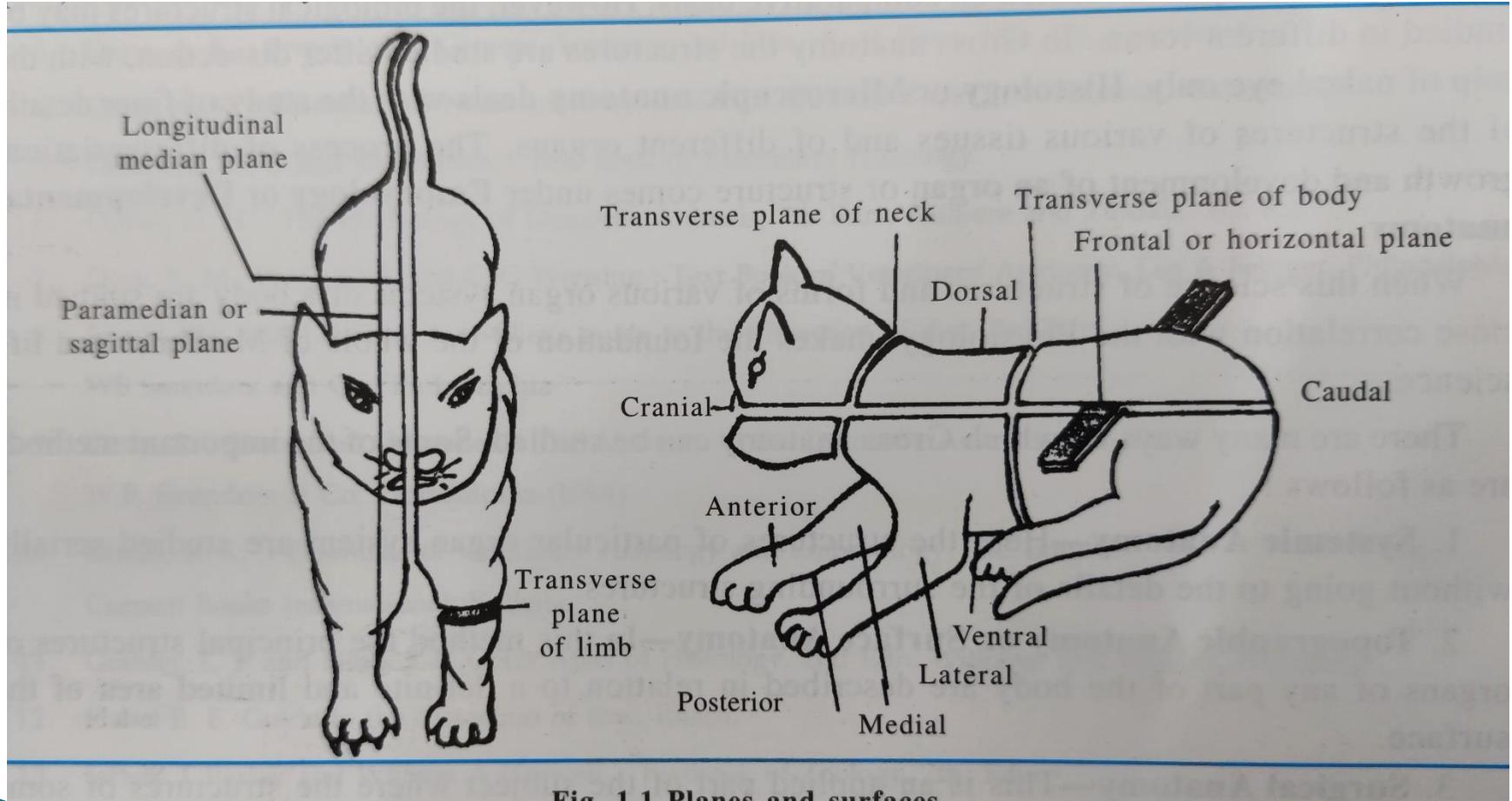


Fig. 1.1 Planes and surfaces