



Faculty of Applied Science
Medical Technical Radiology
Radiographic and Medical
Terminology I
(MTR109)

Lecture. 1

ROOT WORDS IN RADIOGRAPHIC MEDICAL TERMINOLOGY

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Outline

- What Are Word Roots?
- Structure of Medical Terms
- Characteristics of Word Roots
- Why Word Roots Are Important in Radiology
- Body Parts and Organs
- Class activity
- Reference
- Next lecture
-

Learning outcome

- By the end of this session, students will be able to:
 1. Define what a **root word** is in medical terminology
 2. Identify **common radiographic root words**
 - 3.. Understand the **meaning of root words related to imaging and body systems**
 4. Break down simple radiographic terms into **root + suffix/prefix**
 5. Correctly interpret basic radiology terms used in clinical practice

What Are Word Roots?

- A **word root** is the **core part of a medical term** that carries its **main meaning**.

In medical and radiographic terminology, word roots usually indicate:

- A **body part** (bone, lung, heart)
- An **organ system**
- A **tissue**
- An **imaging or diagnostic concept**

Structure of Medical Terms

- Most medical terms are built from **three parts**:
- **Prefix + Root Word + Suffix**
- **Root word** → main meaning
 - Prefix** → modifies meaning (location, number, time)
 - Suffix** → procedure, condition, or disease
- **Example:**
- **Radiography**
 - radi/o = X-ray (root)
 - -graphy = process of recording (suffix)

Characteristics of Word Roots

- **1. Usually Derived from Greek or Latin**

- Greek → imaging, diagnosis (radi/o, tom/o)
- Latin → anatomy, structures (cost/o, pulmon/o)

- **2. Cannot Stand Alone**

- A root word **needs a suffix or prefix**
- Example:
 - cardi/o + -logy = cardiology

3. Combine with a Vowel (Combining Form)

- A **combining vowel** (usually “o”) is added for pronunciation

- **Example:**

- oste + o + graphy → osteography

Why Word Roots Are Important in Radiology



Understand imaging requests



Read radiology reports



Communicate with doctors



Reduce memorization



Improve clinical confidence

Common Student Mistakes



Memorizing full words only
Ignoring root meanings
Confusing root with suffix



Correct approach:
Break the word → Understand
each part → Combine
meaning

Combining Forms

- A **combining form** = **root word** + **combining vowel**

Root	Combining Form	Meaning
radi	radi/o	X-ray
cardi	cardi/o	heart
oste	oste/o	bone
gastr	gastr/o	stomach
neur	neur/o	nerve

The most common combining vowel is “o”

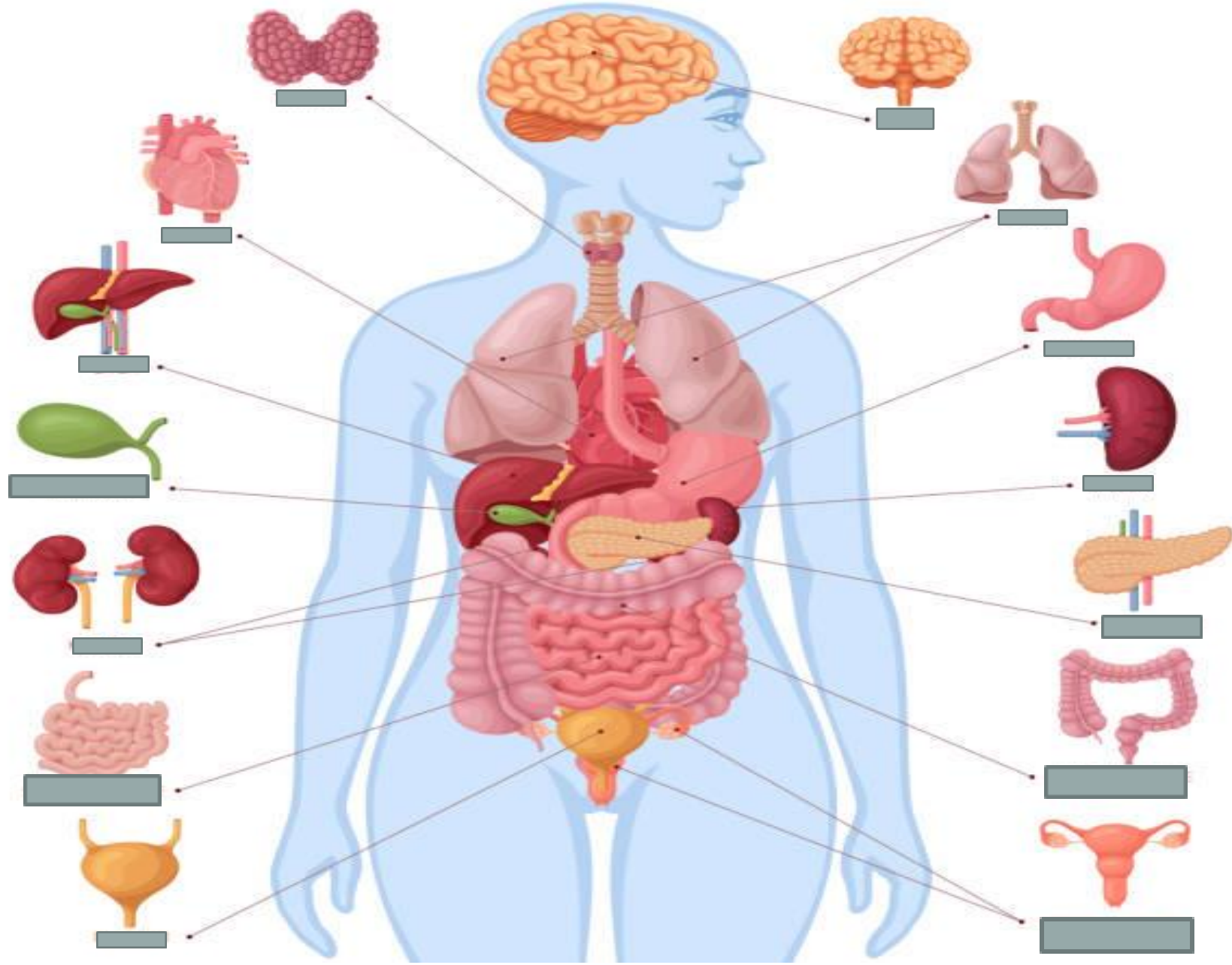
Body Parts and Organs

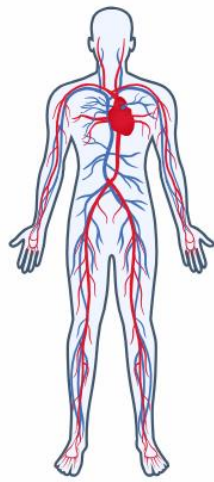
Word Root	Meaning	Example
Cardi /o	heart	cardiology
Pulmon /o	lung	pulmonary
oste/ o	bone	osteitis
Arthr /o	joint	arthritis
My /o	muscle	myopathy
Neur /o	nerve	neurology
Crani /o	skull	craniotomy
Cephal /o	head	cephalic
Gastr /o	stomach	gastritis

Body Parts & Organs

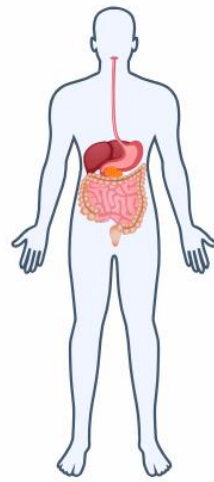
enter/o	intestine	enteritis
Hepat /o	liver	hepatitis
Splen /o	spleen	splenomegaly
Nephr /o, ren /o	kidney	nephritis
Cyst /o	bladder	cystoscopy
Urethr /o	urethra	urethritis
Uter /o, hyster /o	uterus	hysterectomy
Salping /o	fallopian tube	salpingitis
Mamm /o	breast	mammography
Prostat /o	prostate	prostatitis

Class activity

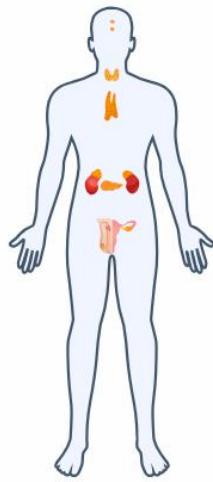




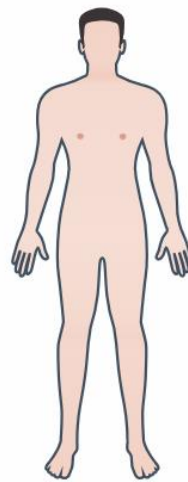
Cardiovascular



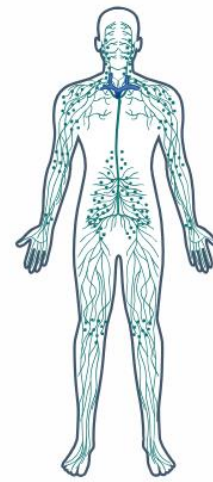
Digestive



Endocrine



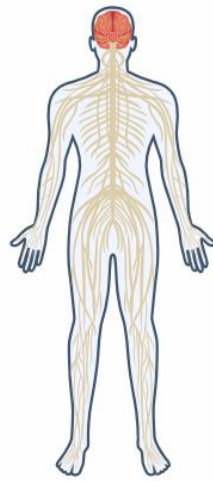
Integumentary



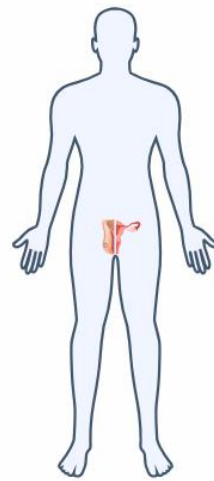
Lymphatic



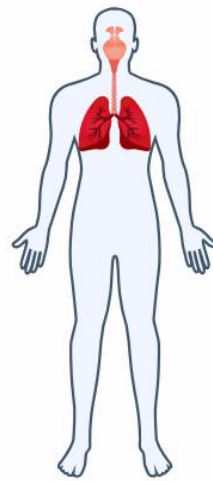
Muscular



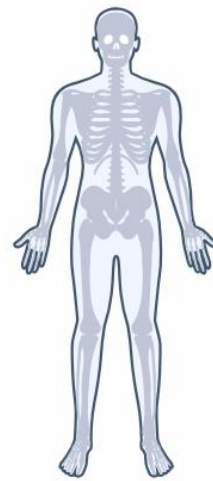
Nervous



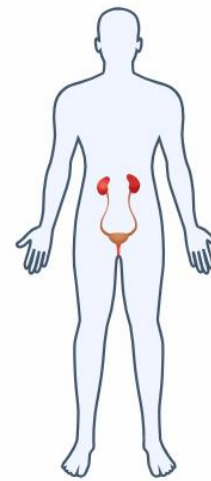
Reproductive



Respiratory



Skeletal



Urinary

Next lecture

Group presentation on the human system terminology

Group 1: Digestive System

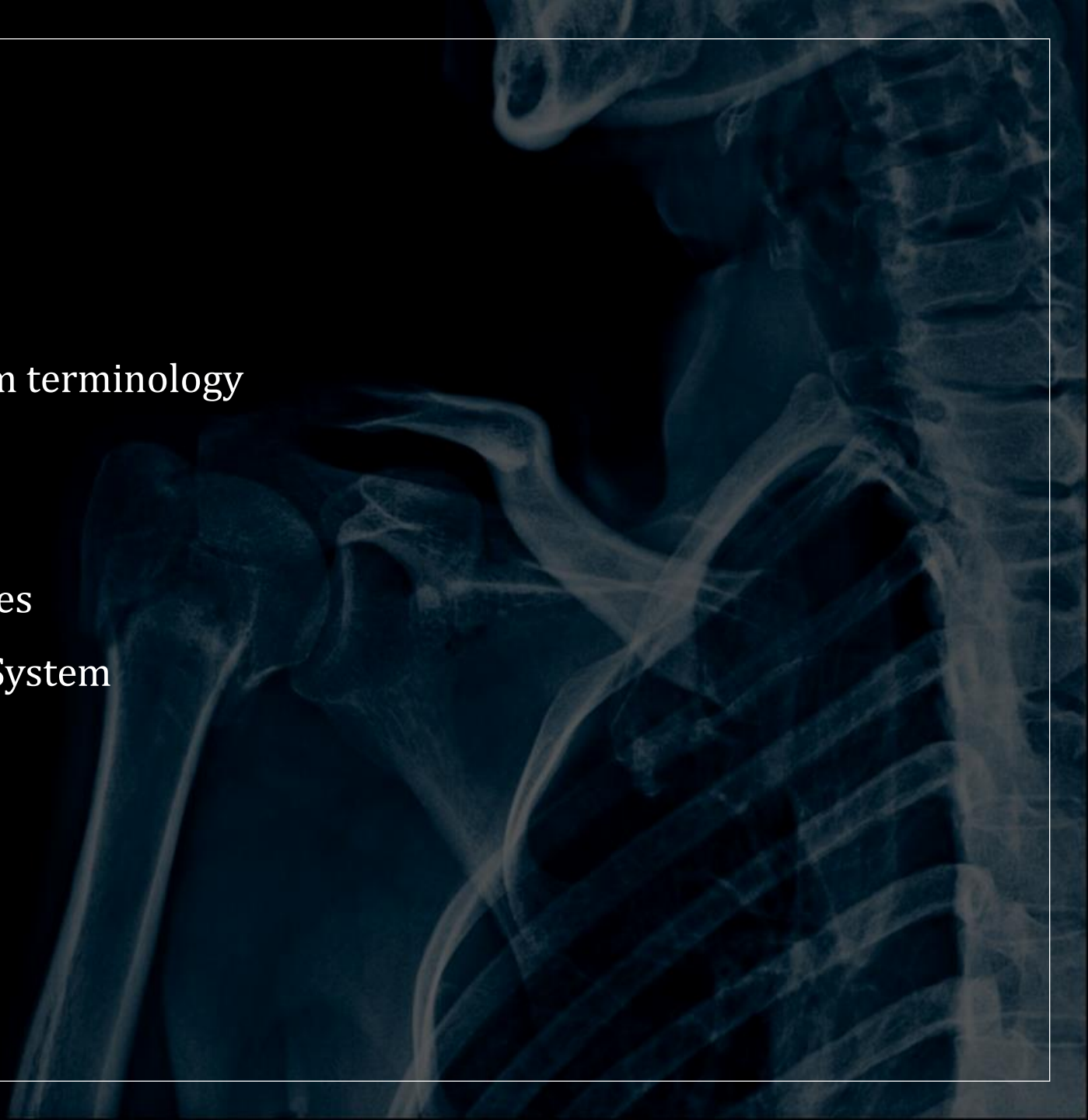
Group 2: Skeletal & Muscular System

Group 3: Nervous System & Special Senses

Group 4: Cardiovascular & Respiratory System

Date: 28-1-2026

Time : 10:00 am



References

- Chabner, D. E. (2020). *Medical terminology: A short course* (8th ed.). Elsevier.
- Gylys, B. A., & Wedding, M. E. (2021). *Medical terminology systems: A body systems approach* (9th ed.). F.A. Davis.
- Bontrager, K. L., & Lampignano, J. P. (2020). *Textbook of radiographic positioning and related anatomy* (9th ed.). Elsevier.