

**Body as a Whole (Ch. 1)**  
Human Anatomy

**I. Ways to study the body**

- A. Anatomy – study of structures & their relationships  
“upward” ← → “cut”
- gross anatomy—visible to naked eye
  - systemic anatomy
  - regional anatomy
  - pathological anatomy – changes due to disease
- “disease” ←
- microscopic anatomy
    - histology – “study of tissues”
    - cytology – “study of cells”

We’ll take a gross systemic approach

B. Physiology – the study of function

C. **RULE #1: Structure is related to Function**, or (from an architect)  
“Form ever follows function”

- **functional morphology** emphasizes this  
“form” ←

NRF “Methods of study...”

**II. Variation in human structure**

**RULE #2: Anatomical variation is the rule, not the exception**  
or, more poetically and more authoritatively:

**Variability is the law of life**  
-- Sir William Osler, 19<sup>th</sup> c physician

or, even more historically:

The human features and countenance, although composed of some ten parts or a little more, are so fashioned that among so many thousands of men there are no two in existence who cannot be distinguished from one another

-- Pliny the Elder, AD 23-79

-- See Insight & Fig. 1.5

**III. Levels of structural organization**

- A. **Know** Fig 1.6 → Define & give example for each level

## IV. Language of anatomy

“These words are just too much.” – overheard from a former anatomy student  
-- every test will include word roots

1. eponyms vs. medical terms  
“after” ← “name”

Ex: Eustachian tube vs. auditory tube  
--medical terms typically include a prefix, root, & suffix

pericardial  
“around” ← ↓ → pertaining to  
heart

2. precision is important  
ilium vs. ileum

3. Anatomical position → Fig. 1.8  
-- standard reference

4. Anatomical planes & sections  
imaginary ← → real

→ **Know Fig 1.10 & 1.11**, including alternate names  
\*\*Add “parasagittal”: divides body into unequal left/right portions  
“alongside” or “near” ←

5. Directional terms  
→ **Know Table 1.1**

6. Regional terms: Fig. 1.12  
→ learn only **axial** terms for now (use Glossary if necessary)

cranial = top of head	sternal = midline chest	umbilical = navel
cephalic = head	pectoral = either side midline	abdominal
facial	interscapular	inguinal = groin
cervical = neck	vertebral	pubic
nuchal = back of neck	lumbar = loin	
thoracic = chest	sacral = between hips	

7. Abdominopelvic **quadrants** → **Know: Fig. 1.13**  
-- **umbilicus** is intersecting point of planes  
-- know names and abbreviations (RUQ, etc.)

8. Abdominopelvic **regions (9)** → **Know Fig. 1.13** (NRF dividing planes)  
-- Note that not all regions are of equal size  
-- Don’t worry about “contents”  
-- Practical value doubtful  
→ great variation among individuals/age  
→ different practitioners use different planes

**V. Body Cavities → Know Table 1.2, Fig. 1.14**

A. Dorsal (now officially obsolete)

1. cranial
2. vertebral

B. Ventral (now officially obsolete)

1. thoracic

- pericardial → surrounds heart, contains fluid
- pleural → surrounds lungs, contains fluid
- mediastinum → not a cavity, but a partition/region between pleural cavities which includes the heart, pericardial cavity, & other structures

----- separated by diaphragm -----

2. abdominopelvic, separated by an imaginary plane into abdominal & pelvic

- peritoneal → surrounds organs, contains fluid