Medical Terminology in the Cancer World

Melissa Riddle, RHIT, CTR
Education/Training Coordinator
Arkansas Central Cancer Registry
February 12, 2008
Acknowledgements
Many medical terms are composed of several smaller, simpler words or word elements.

These three word elements are the prefix, the stem or root word, and the suffix.
Pre-Test
Pre-Test Answers

Matching

1. B
2. G
3. L
4. I
5. E
6. K
7. D
8. C
9. J
10. F
11. H
12. A
Pre-Test Answers

- Circle Correct Answer
  - 13. Root+Suffix
  - 14. Root+Root
  - 15. Prefix+Root+Suffix
  - 16. Superior
  - 17. Posterior
Pre-Test Answers

Fill in the blank:

- 18. toward or nearest
- 19. front
- 20. side to side
- 21. right and left
- 22. cancer
- 23. radiation therapy
- 24. chronic myelogenous leukemia
- 25. biopsy
Medical Terminology Intro.

- **Root Words**: usually derived from a Greek or Latin noun or verb
  - Expresses the basic meaning of the term
  - Modify by prefix or suffix

**Example:**

<table>
<thead>
<tr>
<th>Med. Term</th>
<th>Root</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonsillitis</td>
<td>tonsilla</td>
<td>tonsil</td>
</tr>
</tbody>
</table>
Root words in oncology

- **Blast** - germ, immature cell
- **Carcin** - cancer
- **Cyto** - cell
- **Derma** - skin
- **Histio** - tissue
- **Hepati** - liver
- **Malign** - bad/harmful
- **Nephro** - kidney
- **Cry/o** - cold

- **Neuro** - nerves
- **Neo** - New
- **Onco** - mass/tumor
- **Osteo** - bone/bony tissue
- **Paed** - child
- **Sarco** - tissue
- **Toxo** - poison
- **Adeno** - gland
- **Chemo** - chemical
Medical Terminology Intro.

- **Prefix**: one or two syllables placed before a word in order to modify the meaning.
  - Help describe appearance of, or location of an anatomical part
  - Prepositions or adverbs

**Example:**

<table>
<thead>
<tr>
<th>Med. Term</th>
<th>Prefix</th>
<th>Root Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemiplegia</td>
<td>hemi-</td>
<td>half</td>
</tr>
</tbody>
</table>
Common Prefixes

- **Ab**- away from
- **Ad**- to, toward, near
- **Com**- with, together
- **Con**- with, together
- **Dis**- reversal, apart from
- **Dys**- bad, difficult
- **Endo**- within
- **Exo**- outside, on outer side, outer layer
- **Hyper**- over, above, excess
- **Hypo**- under, below, deficient
- **Im, in**- in, into, not
- **Infra**- below
- **Inter**- between
- **Intra**- Within
- **Intro**- Into, within
- **Para**- beside, beyond, near to
Common Prefixes

- **Per-** through, excessive
- **Peri-** around
- **Post-** after, behind
- **Pre-** Before, in front of
- **Pro-** Before, in front of
- **Re-** Back, again, contrary
- **Semi-** half
- **Sub-** under
- **Super-** above, upper, excessive
- **Supra-** above, upper, excessive
- **Sym, Syn-** together, with
- **Trans-** Together, with
- **Ultra-** Beyond, in excess
**Suffix**: Syllable or group of syllables attached to the end of a word root to modify the meaning.
- Suffixes may modify the meaning of a word
- Or they may change its grammatical function

**Example:**

<table>
<thead>
<tr>
<th>Med Term</th>
<th>Suffix</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuboid</td>
<td>-oid</td>
<td>like, resembling</td>
</tr>
</tbody>
</table>
Common Suffixes

- **Ist, or, er**: expressing agent or person concerned or instrument
- **Al, c, ious**: expressing relationship, concern, or pertaining to
- **Oma**: meaning tumor
- **tic**: showing relationship
- **Oid, form**: expressing resemblance
- **itis**: meaning inflammation
- **Osis**: meaning condition (usually morbid)
Formation of Medical Terms

Basic forms of medical terms:

- **Root + Suffix:**
  Carcinoma: Carcin(o): crab + oma: tumor

- **Prefix + Root:**
  Neoplasm: Neo- : new + plasm: growth

- **Prefix + Root + Suffix:**
  Hypoglycemia: Hypo- : under + glyc: sugar + emia: blood

- **Root + Root:**
  Erythroblast: erythr(o): red + blast: germ cell
Remember:

- Sometimes two different word endings or root words have the same meaning.

**Example:**

- Derm = skin (Greek)
- Cutis = skin (Latin)
- Myel = spinal cord
- Myel = bone marrow
Medical Terminology

- Watch yourself!!!
  - Make sure you have the correct spelling and pronunciation.

Example:
  - Cytoscopy: Microscopic exam of cells
  - Cystoscopy: Exam of the bladder with a scope
Other Terms to Know
Directional Terms

- **Superior/Cranial**: toward the head of the body; upper
- **Inferior/Caudal**: away from the head; lower
- **Anterior/Ventral**: front
- **Posterior/Dorsal**: back
- **Medial**: toward the midline of the body
- **Lateral**: away from the midline of the body
- **Proximal**: toward or nearest the trunk or the point of origin of a part
- **Distal**: away from or farthest from the trunk or the point or origin of a part.
Planes of the Body

- **Coronal (Frontal) Plane**: Verticle plane running from side to side; divides body into anterior & posterior portions.
- **Sagittal (Lateral) Plane**: Verticle plane running from front to back; divides body into right & left sides.
- **Axial (Transverse) Plane**: Horizontal plane; divides body into upper and lower parts.
- **Median Plane**: sagittal plane through the midline of the body.

Images http://training.seer.cancer.gov
Body Cavities

- **Thoracic**: upper ventral, thoracic, or chest cavity contains the heart, lungs, trachea, esophagus, large blood vessels, and nerves.

- **Abdominal & Pelvic**: lower part ventral cavity can be further divided into two portions: abdominal & pelvic.

- **Dorsal**: smaller of the two main cavities, contains organ lying more posterior in the body.

Image from http://training.seer.cancer.gov
2 types of tumors (neoplasm):

1. **benign**: new growth composed of tissue resembling the tissue in which the tumor arises; does not spread.

2. **malignant**: new growth composed of tissue not resembling the tissue in which it arises, has potential to spread.
General Oncology Terms

- Root words are dependent on where the tumor originates (histogenesis)

**Tissue type**

- **Epithelial tissue**
  - External skin: papill/o
- **Connective tissue**
  - Bone: oste/o
- **Nervous tissue**
  - Glial cells: gli/o
General Oncology Terms

- **Tissue Type**
  - **Hematopoietic/Lymphoid**
    - Leukocytes: leuk/o
      - Lymphocytes: lymph/o
      - Granulocytes: granulo;cyt/o
    - Erythrocytes: erythr/o
Other Cancer Terms

- **In-situ**: confined to one space
- **Remission**: lessening in severity or abatement of symptoms
- **Adjuvant**: used with primary tx
- **Palliative**: done for comfort
- **Morbidity**: disease - the rate of disease or number of diseased persons in a particular population
- **Mortality**: death - death rate from a particular disease or population
Abbreviations

- CA - cancer
- Bx - biopsy
- Mets - metastasis
- XRT - radiation therapy
- Adeno - adenocarcinoma
- TNM - tumor, nodes, metastasis
- AML - acute myelogenous leukemia
- CML - chronic myelogenous leukemia
- CLL - chronic lymphocytic leukemia
Review Post-Test
Post-Test Answers

- Multiple Choice
  - 1. C
  - 2. C
  - 3. C
  - 4. A
  - 5. B
Post-Test Answers

- Fill in the blank:
  - 6. coronal (frontal) plane
  - 7. midline
  - 8. nervous tissue
  - 9. Cytoscopy
Post-Test Answers

- Multiple Choice:
  - 10. E
  - 11. I
  - 12. A
  - 13. K
  - 14. G
  - 15. C
  - 16. H
  - 17. B
  - 18. D
  - 19. F
  - 20. J
Web Help

- www.medword.com/basics.html
- www.cancerindex.org
Thank You!!

- If you need any additional help please contact:
  - Melissa Riddle, RHIT, CTR
  - Education/Training Coordinator
  - Phone: 501-661-2841
  - Email: Melissa.Riddle@arkansas.gov