Medical Terminology and Anatomy Review

Objectives

• Word elements
• Diagnostic and procedural terms
• Anatomy
Medical Terminology

PRN

pro re nata

When necessary

Word Elements

• Word Root
  – Derm/o – skin
  – Splen/o – spleen
• Compound Words
  – Cardiovascular
    • Cardi/o – heart
    • Vascul/o – vessel
  – Nephrolithiasis
    • Nephr/o – kidney
    • Lith – calculus or stone
Word Elements

• Prefix – beginning of a word
  – Tri – three
  – Cyan - blue

• Suffix – end of word
  – ectomy – excision, surgical removal
  – itis - inflammation

Anatomy & Physiology

• Anatomy – structure of the body parts and their relationship to each other

• Physiology - function of the body and how the body parts work to carry out their life-sustaining activities
Anatomy

• Organ – Multiple tissue types formed together to perform a specific function for the body.

• Organ System – A collection of body parts depending on one another to achieve a mutual objective.

Anatomy

• Integumentary
• Musculoskeletal
• Cardiovascular
• Lymphatic
• Respiratory
• Digestive
• Urinary

• Reproductive
• Nervous
• Organs of Sense (Eye, Ear)
• Endocrine
• Hematologic
• Immune
Anatomical Position

The tumor was photographed and then using a standard 24 French cutting loop the tumor was resected; the solid portion was resected from the superior portion down to the inferior portion.

Application to Documentation

Superior

Inferior

Integumentary System

- Skin
- Hair
- Nails

- CPT® - includes Breasts in the Integumentary System
Integumentary System

11042 Debridement, subcutaneous tissue  
(includes epidermis and dermis, if performed); first 20 sq cm or less

(for debridement of skin [i.e., epidermis and/or dermis only], see 97597, 97598)
Nail Unit

- Root
- Nail bed
- Nail plate
- Eponychium
- Perionychium
- Hyponychium

Musculoskeletal System

- System of
  - Bones
  - Muscles
  - Joints
  - Tendons
  - Ligaments

- Provides
  - Movement
  - Strength
  - Form
  - Protection
  - Heat
Bones

• Long (tubular) – longer than they are wide
• Short (cuboidal) – shaped like a cube
• Sesamoid – shaped like a sesame seed
• Flat – cross-section is flat
• Irregular – bones that do not fit in other categories

Cartilage and Joints

• Cartilage
  – Flexible connective tissue
  – Matrix made of chondrocytes, collagen, and cells
• Joints (articulating surfaces)
  – Provide connection between two or more parts of the skeleton
Human Skeleton

• Axial Skeleton
  – Skull
  – Spine
  – Ribs
  – Sternum
  – Sacrum

• Appendicular Skeleton
  – Shoulder girdle
  – Pelvic girdle
  – Extremities

Muscles

• Function
  – Contractility
  – Form
  – Heat

• Types
  – Skeletal
  – Cardiac
  – Smooth
Cardiovascular System

• Heart
  – Epicardium
  – Myocardium
  – Endocardium

• Blood Vessels
  – Arteries
  – Veins
  – Capillaries

Lymphatic System

• Lymph vessels and nodes
• Collects excess fluid and returns it to the heart
• Valves ensure fluid travels in one direction
• Lymphoid organs:
  – Spleen
  – Thymus
  – Tonsils
  – Peyer’s Patches
Digestive System

- Feeding tube begins in the mouth, ends at the anus
- Mechanically and chemically breaks down food into minuscule or molecular size
Stomach

- Cardiac orifice – opening to the stomach
- Fundus – rounded upper portion
- Body – main portion
- Pyloric antrum – lower portion

Small Intestine

- Duodenum
- Jejunum
- Ileum
Large Intestine

- Cecum
- Colon
  - Ascending
  - Transverse
  - Descending
  - Sigmoid
- Rectum
- Anal Canal

Large Intestine

- Endoscopy
  - Proctosigmoidoscopy – rectum, sigmoid colon
  - Sigmoidoscopy – rectum, sigmoid colon, a portion of the descending colon
  - Colonoscopy – entire colon from rectum to the cecum
Urinary System

• Urine production
  – Excrete metabolic waste
  – Fluid and electrolyte balance

• Structures
  – Kidneys
  – Ureters
  – Urinary bladder
  – Urethra

Reproductive Systems

• Female Genitalia
  – External
    • Vulva
    • Labia majora and minora
    • Clitoris
    • Introitus Opening of the urethra or urinary meatus
    • Skene’s glands
    • Bartholin’s glands
  – Internal
    • Vagina
    • Uterus
    • Fallopian tubes
    • Ovaries

• Male Genitalia
  – External
    • Testes
    • Epididymis
    • Scrotum
    • Penis
  – Internal
    • Prostate gland, seminal vesicles, and Cowper’s glands
    • Vas Deferens, ejaculatory duct, and urethra
Nervous System

• Central Nervous System (CNS)
  – Brain
  – Spinal Cord

• Peripheral Nervous System (PNS)
  – Cranial nerves
  – Spinal nerves

Nervous System

• Functions as central operator and central intelligence for the body
  – Regulates body function
  – Provides for an internal method of communication
  – Regulates subconscious body functions (respiratory rate, body temperature, peristalsis of intestines)
  – Sends signals when hot, cold, or sharp objects are encountered
Sensory Organs - Eye

• Sense organ of sight
• Layers
  – Retina (nervous)
  – Choroid (vascular)
  – Sclera (fibrous)

Sensory Organs - Eye

• Two segments divided by Crystalline Lens
• Anterior segment
  – Filled with aqueous humor
  – Responsible for intraocular pressure
• Posterior segment
  – Filled with vitreous humor
  – Prevents the eyeball from collapsing
Sensory Organs - Ear

• Senses
  – Hearing
  – Equilibrium

• Divisions
  – Outer ear (external ear)
  – Middle ear (tympanic cavity)
  – Inner ear (labyrinth)

Sensory Organs - Ear

• Eustachian tube – connects each middle ear to the throat.

• Otology
  – Audiology Services
  – Surgical Services
Endocrine System

- Comprised of glands
- Glands
  - Group of cells that secrete or excrete hormones
  - Can be found in a variety of locations
  - Each gland and its associated hormone has a cause and effect that is unique.

Hemic System

- Red Cells (erythrocytes)
- White Cells (leukocytes)
- Platelets (thrombocytes)
Immune System

• Classified as a separate system from the hematologic system - most immune cells have their origin in the hematologic system

• Human immune system - body’s defense against invading microorganisms, harmful chemicals, and foreign bodies

Immune System

• Two kinds of immune cells (lymphocytes)
  – B-cells
  – T-cells

• Protection cells
  – Neutrophils, lymphocytes, monocytes, eosinophils, basophils
Immune System

• Antigens
  – Elicit an immune response in the body
  – Types of antigens
    • Inhaled macromolecules
    • Ingested macromolecules
    • Molecules introduced beneath the skin

• Antibodies
  – Immune system-related proteins called immunoglobins

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