

Section 1

Blood and Lymphatic Systems

Terminology

Antibodies—Substances produced by the body in response to bacteria, viruses, or other foreign substances.

Ascites—Accumulation of fluid in the peritoneal cavity containing large amounts of protein and electrolytes.

Coagulation—A complex process in which blood forms clots.

Erythremia—Abnormal increase in the number of red blood cells.

Fibrin—Stringy, insoluble protein that is the substance of a blood clot.

Globulin—A plasma protein made in the liver.

Hemostasis—Termination of bleeding by mechanical or chemical means.

Immunity—Resistance of an organism to infection or disease.

Pathogens—Disease-producing microorganisms.

Phagocytosis—The process of a cell engulfing and destroying bacteria.

Platelet—A clotting cell.

Splenomegaly—An abnormal enlargement of the spleen.

Thrombus—A clot.

Introduction

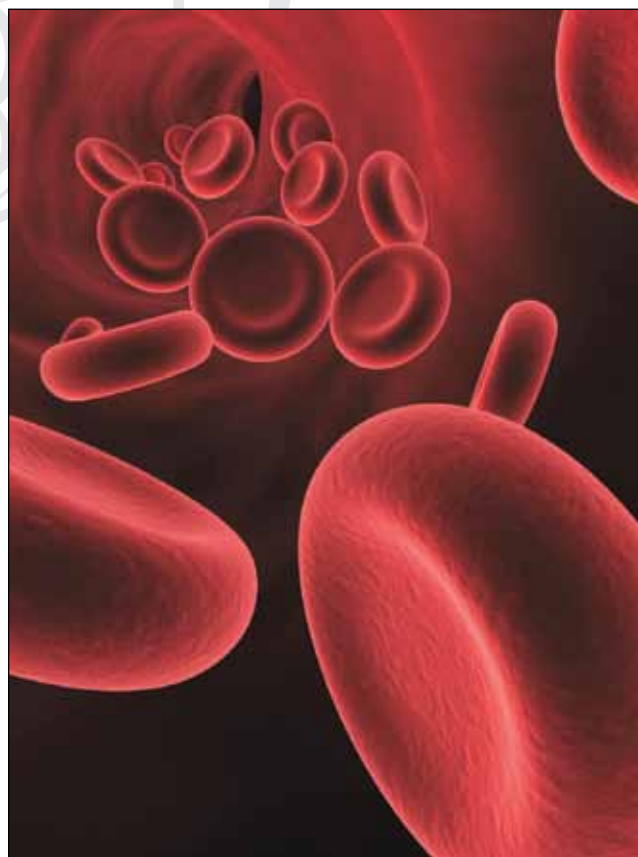
The hemic (blood) system is the system that passes nutrients (such as amino acids, electrolytes, and lymph), gases, hormones, blood cells, etc. to and from cells in the body to help fight diseases and help stabilize body temperature and pH to maintain homeostasis. It is made up of blood containing vessels such as arteries, capillaries, and veins that carry the blood through the body. The two main functions of the blood are

to transport oxygen and nutrients to the cells and to remove carbon dioxide and other waste products from the cells for elimination. Blood accounts for approximately 8 percent of the body's total weight.

Blood Cells

Blood cells are the formed elements of blood and are generally classified as follows:

- Erythrocytes
- Leukocytes
- Thrombocytes



The auricularis anterior (*attrahens aurem*) is the smallest of the three. It is thin, fan-shaped and its fibers are pale and indistinct. The auricularis superior (*attolens aurem*) is the largest of the three. It is thin and fan-shaped. The auricularis posterior (*retrahens aurem*) consists of two or three fleshy fasciculi.

Middle Ear

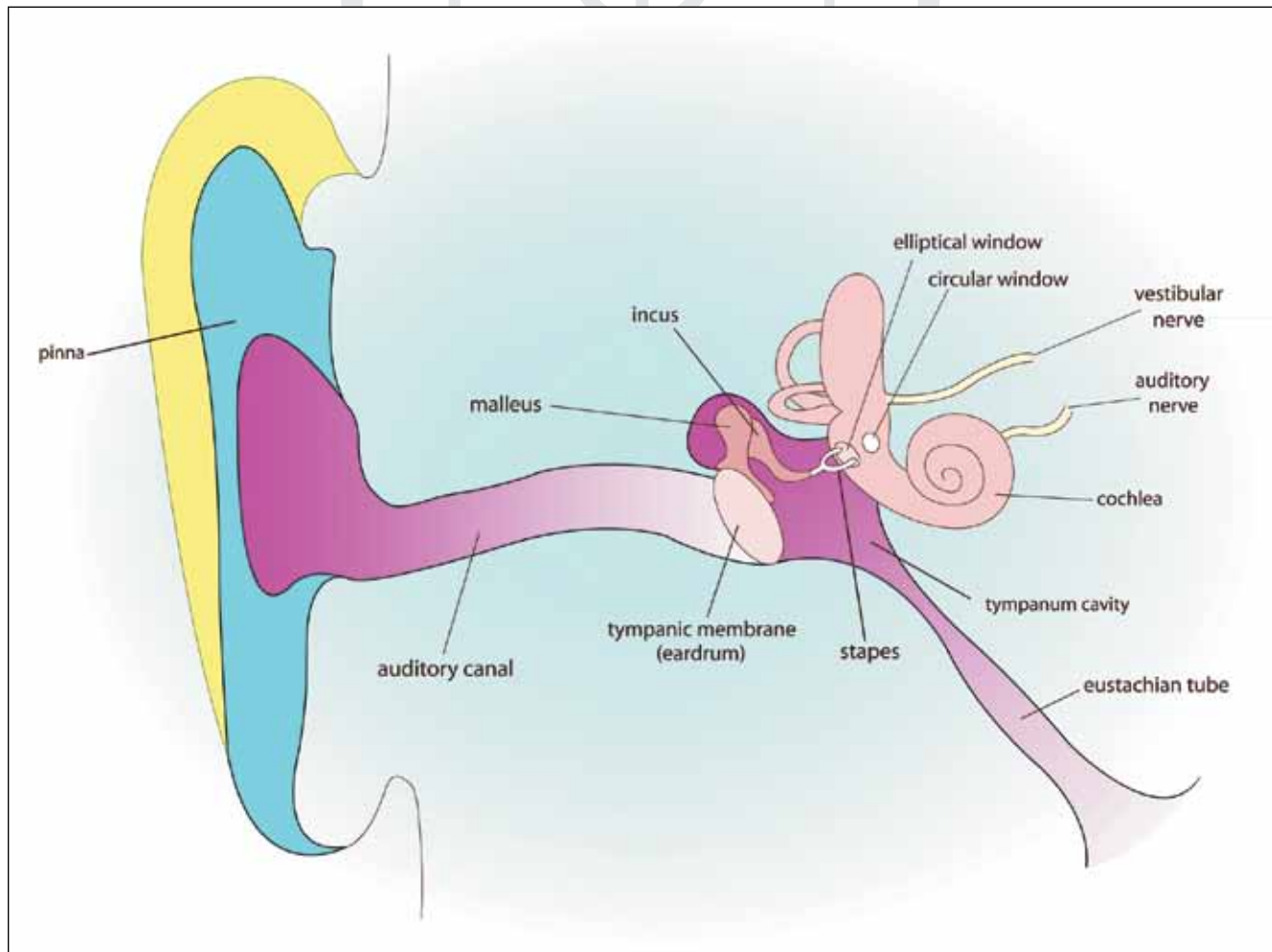
The middle ear, also called the tympanic cavity, is an irregular compressed air-filled cavity behind the tympanic membrane. It includes a chain of the three movable bones or ossicles: the malleus (or hammer), incus (or anvil), and stapes (or stirrup).

Malleus—Hammer-shaped small ossicle which connects with the incus and is attached to the inner surface of the eardrum. It consists of a head, neck, manubrium,

anterior process, and lateral process. It transmits the sound vibrations from the eardrum to the incus. It has a manubrium (or handle) that is attached to the mobile portion of the tympanum.

Incus—Anvil-shaped small ossicle in which connects the malleus to the stapes. It has two roots that differ in length and are widely separated from other. It is made up of a body and two crura. It transmits the sound vibrations from the malleus to the stapes.

Stapes—Stirrup-shaped small ossicle which transmits the sound vibrations from the incus to the membrane of the inner ear inside the fenestra ovalis. It is made up of a head, neck, two crura, and a base. The stapes is also stabilized by the stapedius muscle, which is innervated by the facial nerve. The stapes is the smallest named bone in the human body.



The ICD-10-CM code range for cleft lip and cleft palate is Q35–Q37.

To code cleft lip and cleft palate disorders in ICD-10-CM, the following is necessary:

- Extent of cleft
- Laterality

Cleft hard palate with bilateral cleft lip	Q37.0
Cleft hard palate with unilateral cleft lip	Q37.1
Cleft soft palate with bilateral cleft lip	Q37.2
Cleft soft palate with unilateral cleft lip	Q37.3
Cleft hard and soft palate with bilateral cleft lip	Q37.4
Cleft hard and soft palate with unilateral cleft lip	Q37.5
Unspecified cleft palate with bilateral cleft lip	Q37.8
Unspecified cleft palate with unilateral cleft lip	Q37.9

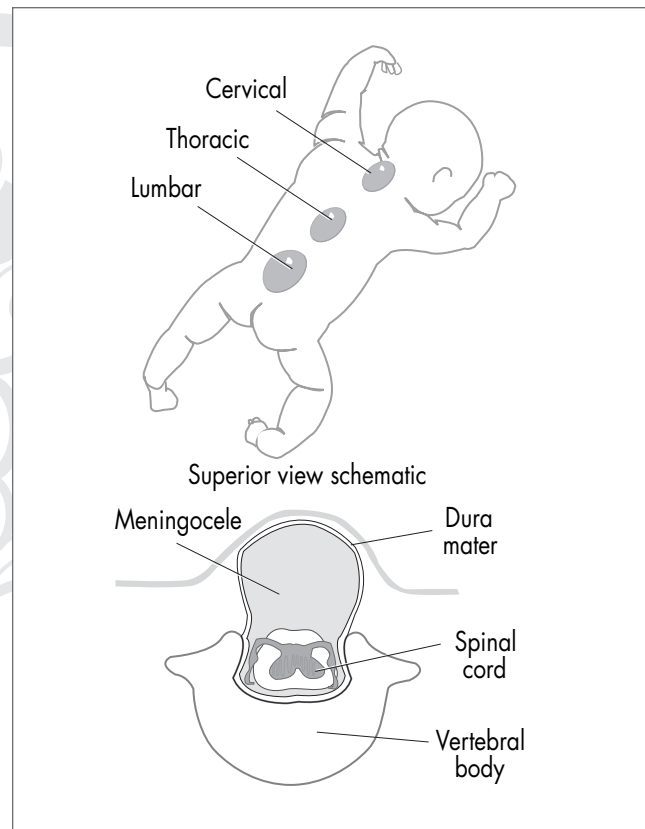
Cleft hard palate	Q35.1
Cleft soft palate	Q35.3
Cleft hard palate with cleft soft palate	Q35.5
Cleft uvula	Q35.7
Cleft palate, unspecified	Q35.9

Cleft lip, bilateral	Q36.0
Cleft lip, median	Q36.1
Cleft lip, unilateral	Q36.9

In the table above, the laterality issue and extent of the cleft is shown.

Spina Bifida

In a normal developing fetus, within the first month of pregnancy, the spine joins together to form the spinal canal to cover the spinal cord and nerves; however, in children with spina bifida, the process is incomplete. The result is that the spinal cord and meninges (spinal cord tissue) stick out of the child's back. The most common type of spina bifida is myelomeningocele.



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Many children with spina bifida also have a condition called hydrocephalus. Hydrocephalus is the buildup of fluid inside the skull that puts pressure on the brain, pushing the brain up against the skull and damaging or destroying brain tissues.

Other symptoms that may affect a child with spina bifida are loss of bladder control, partial or complete lack of sensation, partial or complete paralysis of the legs, weakness of the hips, legs, or feet of a newborn.

The code range for spina bifida in ICD-10-CM is Q05.