

1. Define:

- A. endochondral ossification: the laying down of the precursors of bone on an already existent cartilage matrix
- B. appositional growth: growth that occurs from the outside as opposed to within (i.e. progenitor cells lay down substance, not existing differentiated cells).
- C. adenocarcinoma: a cancerous growth (tumor) of a gland

2. immature bone is unorganized and has random arrangement of osteocytes. It is remodeled into mature bone which has regularly arranged lamellae & osteocytes (that make up 85% of bone in compact bone)
3. Tendon is dense, regular connective tissue that has fibroblasts arranged in lines in lacunae. Fibrocartilage is dense collagenous fibers and round chondrocytes in lacunae. The presence of fibrocytes vs. chondrocytes in lacunae should help to tell them apart (under LM).

Multiple choice and fill-in-the-blank (1 point per response):

4. A
5. C
6. ~~D~~
7. D
8. A
9. E
10. fibrocytes, differentiated
11. basic, is not
12. loose, irregular c.t.
13. Mast cell, neutrophil

14. Matching (1 point per response):

- D stratum granulosum
- L isogenous groups
- G hemidesmosome
- C sebaceous
- J apocrine
- N occluding (tight) junction
- A osteoid
- B mesenchyme
- F syncytium
- K osteon
- P endosteum

collagen arrangement

1. Define:

- A. process of bone formation from a hyaline cartilage model
- B. deposition of new tissue on top of old tissue
- C. malignant cancer of a gland
~~adenoma; gland carcinoma~~

2. immature bone has randomly arranged lacunae in spicules or trabeculae. Lamellar is highly ordered in haversian systems or osteons.

3. tendon will have flattened nuclei, no lacunae

fibrocartilage will have rounded nuclei in lacunae; a "herring bone" appearance

Multiple choice and fill-in-the-blank (1 point per response):

4. A

5. ~~E~~

6. ~~A~~

7. D

8. A

9. E

10. ~~endothelium~~ fibrocytes, differentiated

11. basic, is not

12. loose / areolar

13. mast, neutrophil

14. Matching (1 point per response):

D stratum granulosum

L isogenous groups

G hemidesmosome

C ~~sebum~~ sebaceous

J apocrine

~~N~~ OK! occluding (tight) junction

A osteoid

B mesenchyme

F syncytium

K osteon

P endosteum

2-1

1. Define:

- A. The creation of new bone by calcifying cartilage and depositing osteoid onto it. Blood vessels enter + create haversian systems
- B. Growth by creation of new layers on top of old layers which were broken down.
- C. Cancer of a gland tissue.

2. Woven bone has randomly arranged lamella + cells aren't fully formed. Mature bone is arranged in easily identifiable osteons.
3. Fibrocartilage has dark small fibroblasts arranged in lacunae in lines but a lot of collagen. Tendon has more flattened fibrocytes without lacunae between the collagen.

Multiple choice and fill-in-the-blank (1 point per response):

- 4. A
- 5. C
- 6. A
- 7. D
- 8. A
- 9. E
- 10. fibrocytes, differentiated
- 11. basic, is not
- 12. loose
- 13. mast, neutrophil

14. Matching (1 point per response):

- D stratum granulosum
- L isogenous groups
- G hemidesmosome
- C sebaceous
- J apocrine
- N occluding (tight) junction
- A osteoid
- B mesenchyme
- F syncytium
- K osteon
- P endosteum

1. Define:

- A. A type of ossification that occurs in hyaline cartilage to produce lamellar bone
- B. Appositional growth is the only way in which a bone can grow. But Appositional growth is in cartilage too. ^{off to grow by adding to outer layers.}
- C. Cancer of an adenomere

2. Immature bone was formed during fetal development from mesenchyme in which it is irregularly arranged. Lamellar bone is very organized ^{with} osteons
3. tendon contains flattened fibroblasts. Fibrocartilage contains more spherical cells arrangement of collagen?

Multiple choice and fill-in-the-blank (1 point per response):

4. ~~D~~
5. ~~F~~
6. ~~C~~ osteoprogenitor cells
7. D
8. A
9. ~~D~~
10. chondroblasts, undifferentiated
11. acidic, ~~is~~
12. areolar
13. mast cell, neutrophil

14. Matching (1 point per response):

- D stratum granulosum
- L isogenous groups
- ~~H~~ hemidesmosome ^{to cell membrane}
- C sebaceous
- O apocrine
- N occluding (tight) junction
- A osteoid
- B mesenchyme
- F syncytium
- K osteon
- P endosteum

-10

1. Define:

- A. This is the formation of bone that occurs by replacing cartilage with osteoid which then matures into secondary (lamellar, mature) bone.
- B. This occurs in both cartilage and bone. This is the only way bone can grow, not quite. It is the opposite of interstitial growth. It grows by addition of new material, not division of cells.
- C. Adeno → secretory end piece (adenoma) Carcinoma → cancer
Cancer of the secretory end pieces of the glands.

2. Immature bone is very random and has chondroblasts and chondrocytes present. In mature bone there are osteocytes and osteoclasts, lamella form a very distinct pattern around Haversian canals. Osteons are the whole system.
3. A piece of tendon is dense regular connective tissue whose chondrocytes are not in lacunae. Fibrocartilage has chondrocytes in lacunae and a rather wavy look to the fibers. Fibrocartilage is found in intervertebral discs. Tendon has a more dense concentration of fibers than does fibrocartilage.

Multiple choice and fill-in-the-blank (1 point per response):

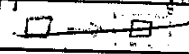
4. A
5. E
6. A
7. D
8. A
9. F
10. chondrocytes, undifferentiated
11. basic, is
12. loose or areolar
13. plasma, neutrophil

14. Matching (1 point per response):

- D stratum granulosum
- L isogenous groups
- G hemidesmosome
- C sebaceous
- J apocrine
- N occluding (tight) junction
- A osteoid
- B mesenchyme
- F syncytium
- K osteon
- P endosteum

-8

1. Define:

- A. type of bone growth which the bone grows from a center of ossification and has zones of physsis. OK, but be more specific - this is an
- B. appositional growth occurs in cartilage. The chondrocytes divide

- C. canes of the endocrine system? adeno = gland

2. In immature bone, the lacunae are randomly arranged. In mature bone the lacunae are arranged in concentric circles around a central Haversian canal.

3. Tendon would appear dense, regular, & near a bone. In fibrocartilage, there would be many joint fibers not necessarily
not a difference between these two

Multiple choice and fill-in-the-blank (1 point per response):

14. Matching (1 point per response):

- 4. A
- 5. E
- 6. A
- 7. D
- 8. A
- 9. E
- 10. fibroblasts, undifferentiated
- 11. basic, is not
- 12. loose irregular
- 13. mast, neutrophil

- D stratum granulosum
- L isogenous groups
- G hemidesmosome
- C sebaceous
- J apocrine
- H occluding (tight) junction
- A osteoid
- B mesenchyme
- N syncytium
- K osteon
- P endosteum

- 9

1. Define:

A. The formation of bone from hyaline cartilage model. The cartilage is broken down and osteoid is deposited in its place

B. The growth of bones is the form of adding to ECM of the interstitial area.

C. The abnormal growth of tissue

2. Immature bone has random osteoblasts. Mature bone has ordered + layered osteocytes in lacunae and in (distinct osteoid groups.)?

3. Fibrocartilage has lines of cells within collagen without lamellae.

Tendon has few random cells in lacunae and lots of fibrous tissue.

Multiple choice and fill-in-the-blank (1 point per response):

4. D

5. E

6. D

7. D

8. B

9. A

10. fibrocytes, differentiated

11. basic, is not

12. alveolar

13. Mast, neutrophil

14. Matching (1 point per response):

D stratum granulosum

L isogenous groups

A hemidesmosome

C sebaceous

J apocrine

N occluding (tight) junction

K osteoid

B mesenchyme

F syncytium

A osteon

P endosteum

-15

1. Define:

- A. Type of bone formation where the cartilage is present
- B. where growth is laid down on the surface
- C. cancerous tumor of a gland

2. In ~~immature bone~~ the osteon is not visible

3. Fibrocartilage has small round, dark nuclei
collagen arrangement? lacunae?

Multiple choice and fill-in-the-blank (1 point per response):

4. ~~D~~

5. ~~F~~

6. ~~A~~

7. D

8. ~~B~~

9. E

10. ~~chondrocytes~~, differentiated

11. ~~acidic~~, ~~is~~

12. loose

13. ~~plasma~~, ~~lymphocyte~~

14. Matching (1 point per response):

~~D~~ stratum granulosum

~~F~~ isogenous groups

~~N~~ hemidesmosome

C sebaceous

O apocrine

N occluding (tight) junction

A osteoid

B mesenchyme

~~J~~ syncytium

K osteon

P endosteum

AP 710 Exam I Answer Sheet
September 15, 2000

1. Define:

- A. Uses a pattern to go off of, the cartilage in the growth plate, can only grow appositionally
- B. layers, spicules are rearranged before they become bone
- C. cancerous mass of glands

2. Immature - has no regular arrangement of cells, basophilic
Mature - lamellae, ossification has taken place

3. In fibrocartilage the fibrocytes are arranged in rows with cartilage white. tendon is disorganized collagen arrangement?

Multiple choice and fill-in-the-blank (1 point per response):

14. Matching (1 point per response):

4. D

D stratum granulosum

5. E

L isogenous groups

6. D

G hemidesmosome

7. A

O sebaceous

8. A

J apocrine

9. F

N occluding (tight) junction

10. fibroblasts, differentiated

A osteoid

11. acidic, is

B mesenchyme

12. areolar

F syncytium

13. lymphocyte, neutrophil

K osteon

P endosteum

-13

Name: _____

Box no.

Low

Microscopic Anatomy, AP 710
Exam 2, Part A, 13 points
Respiratory system
October 6, 2000

(6)

Imagine that you are passing an endoscope down the trachea of a coughing dog to look for a suspected inhaled foreign body. Ahead of the endoscope you see the bifurcation of the trachea, called the trachealis muscle. You advance the endoscope into the right bronchus. You remember from gross anatomy that each lobe of the lung has its own secondary bronchus, and so you expect to see 3 (a number) lobar bronchi in this dog's right lung. You pass the endoscope into the right caudal lobar bronchus.

If you could magnify your view of the epithelial surface of the bronchus enough to see the cells, you would expect to see these cell types in the epithelium (name 3 types):

^{ciliated} (pseudostratified) columnar epithelium Clara
goblet

Instead of a foreign body in the airway, you see what looks like a mass or nodule on the bronchial wall, and you take a biopsy to send for histopathology. Finding no other abnormality, you remove the endoscope and recover the dog. While you are waiting for the histopathology report, you refresh your memory of the normal structure of the lungs by quizzing yourself:

The normal bronchial wall consist of epithelium, a connective tissue layer called the visceral pleura, and a muscle layer called the trachealis.

Bronchi do not normally contain which of the following:

- a. Clara cells
- b. glands
- c. hyaline cartilage
- d. Type I pneumocytes
- e. a and d
- f. b and d

Macrophages in the lung originate from what cell type? monocyte
Macrophages associated with alveoli can be located either in the alveolus or in the alveolar duct. OK

An important fiber type in the stroma of the alveolar walls is elastin. What cells produce these fibers? type II pneumocytes

An absence of Type II pneumocytes would most likely cause which of the following:

- a. Over-inflation of alveoli because of loss of elasticity.
- b. Collapse of alveoli because of increase in surface tension.
- c. Fusion of alveoli because of loss of basement membrane.
- d. Blockage of alveoli because of increased mucus accumulation.
- e. Blockage of alveoli because of increased foreign material accumulation.
- f. None of the above; Type II pneumocytes are aged Type I pneumocytes, and are removed by macrophages.

- 7

Name: Pa.

Box Nu. (9)

Low

Microscopic Anatomy, AP 710
Exam 2, Part A, 13 points
Respiratory system
October 6, 2000

Imagine that you are passing an endoscope down the trachea of a coughing dog to look for a suspected inhaled foreign body. Ahead of the endoscope you see the bifurcation of the trachea, called the branch. You advance the endoscope into the right bronchus. You remember from gross anatomy that each lobe of the lung has its own secondary bronchus, and so you expect to see 3 (a number) lobar bronchi in this dog's right lung. You pass the endoscope into the right caudal lobar bronchus.

If you could magnify your view of the epithelial surface of the bronchus enough to see the cells, you would expect to see these cell types in the epithelium (name 3 types):

secretory cells OK olfactory cells
basal cells

Instead of a foreign body in the airway, you see what looks like a mass or nodule on the bronchial wall, and you take a biopsy to send for histopathology. Finding no other abnormality, you remove the endoscope and recover the dog. While you are waiting for the histopathology report, you refresh your memory of the normal structure of the lungs by quizzing yourself:

The normal bronchial wall consist of epithelium, a connective tissue layer called the interstitium, and a muscle layer called the muscularis mucosa.

Bronchi do not normally contain which of the following:

- a. Clara cells
- b. glands
- c. hyaline cartilage
- d. Type I pneumocytes
- e. a and d
- f. b and d

Macrophages in the lung originate from what cell type? monocyte
Macrophages associated with alveoli can be located either in the alveolar septum or in the alveolus (alveolar cavity?) OK

An important fiber type in the stroma of the alveolar walls is elastin. What cells produce these fibers? fibroblasts

An absence of Type II pneumocytes would most likely cause which of the following:

- a. Over-inflation of alveoli because of loss of elasticity.
- b. Collapse of alveoli because of increase in surface tension.
- c. Fusion of alveoli because of loss of basement membrane.
- d. Blockage of alveoli because of increased mucus accumulation.
- e. Blockage of alveoli because of increased foreign material accumulation.
- f. None of the above; Type II pneumocytes are aged Type I pneumocytes, and are removed by macrophages.

Name: hu

Box No.

Medium

Microscopic Anatomy, AP 710
Exam 2, Part A, 13 points
Respiratory system
October 6, 2000

(10)

Imagine that you are passing an endoscope down the trachea of a coughing dog to look for a suspected inhaled foreign body. Ahead of the endoscope you see the bifurcation of the trachea, called the bronchi. You advance the endoscope into the right bronchus. You remember from gross anatomy that each lobe of the lung has its own secondary bronchus, and so you expect to see 3 (a number) lobar bronchi in this dog's right lung. You pass the endoscope into the right caudal lobar bronchus.

If you could magnify your view of the epithelial surface of the bronchus enough to see the cells, you would expect to see these cell types in the epithelium (name 3 types):

-1 (pseudostratified ciliated columnar) w/ need one more goblet cells

Instead of a foreign body in the airway, you see what looks like a mass or nodule on the bronchial wall, and you take a biopsy to send for histopathology. Finding no other abnormality, you remove the endoscope and recover the dog. While you are waiting for the histopathology report, you refresh your memory of the normal structure of the lungs by quizzing yourself:

The normal bronchial wall consists of epithelium, a connective tissue layer called the lamina propria, and a muscle layer called the lamina muscularis mucosa.

Bronchi do not normally contain which of the following:

- a. Clara cells
- b. glands
- c. hyaline cartilage
- d. Type I pneumocytes
- e. a and d
- f. b and d

Macrophages in the lung originate from what cell type? Blood Monocytes
Macrophages associated with alveoli can be located either in the lumen or in the septum.

An important fiber type in the stroma of the alveolar walls is elastin. What cells produce these fibers? fibroblasts

An absence of Type II pneumocytes would most likely cause which of the following:

- a. Over-inflation of alveoli because of loss of elasticity.
- b. Collapse of alveoli because of increase in surface tension.
- c. Fusion of alveoli because of loss of basement membrane.
- d. Blockage of alveoli because of increased mucus accumulation.
- e. Blockage of alveoli because of increased foreign material accumulation.
- f. None of the above; Type II pneumocytes are aged Type I pneumocytes, and are removed by macrophages.

Name: Ali

Box Num.

11

Medium

Microscopic Anatomy, AP 710
Exam 2, Part A, 13 points
Respiratory system
October 6, 2000

Imagine that you are passing an endoscope down the trachea of a coughing dog to look for a suspected inhaled foreign body. Ahead of the endoscope you see the bifurcation of the trachea, called the carina. You advance the endoscope into the right bronchus. You remember from gross anatomy that each lobe of the lung has its own secondary bronchus, and so you expect to see 4 (a number) lobar bronchi in this dog's right lung. You pass the endoscope into the right caudal lobar bronchus.

If you could magnify your view of the epithelial surface of the bronchus enough to see the cells, you would expect to see these cell types in the epithelium (name 3 types):

basal
sustentacular
bipolar

Instead of a foreign body in the airway, you see what looks like a mass or nodule on the bronchial wall, and you take a biopsy to send for histopathology. Finding no other abnormality, you remove the endoscope and recover the dog. While you are waiting for the histopathology report, you refresh your memory of the normal structure of the lungs by quizzing yourself:

The normal bronchial wall consist of epithelium, a connective tissue layer called the lamina propria, and a muscle layer called the muscularis mucosa

Bronchi do not normally contain which of the following:

- a. Clara cells respiratory
- b. glands -
- c. hyaline cartilage
- d. Type I pneumocytes alveol -
- e. a and d
- f. b and d

Macrophages in the lung originate from what cell type? monocytes
Macrophages associated with alveoli can be located either in the septum or in the alveolar space.

An important fiber type in the stroma of the alveolar walls is elastin. What cells produce these fibers? fibroblasts

An absence of Type II pneumocytes would most likely cause which of the following:

- a. Over-inflation of alveoli because of loss of elasticity. *N*
- b. Collapse of alveoli because of increase in surface tension. *?*
- c. Fusion of alveoli because of loss of basement membrane. *N*
- d. Blockage of alveoli because of increased mucus accumulation. *N*
- e. Blockage of alveoli because of increased foreign material accumulation. *N*
- f. None of the above; Type II pneumocytes are aged Type I pneumocytes, and are removed by macrophages.

Name: Ug

Box Num.

High

Microscopic Anatomy, AP 710
Exam 2, Part A, 13 points
Respiratory system
October 6, 2000

(12)

Imagine that you are passing an endoscope down the trachea of a coughing dog to look for a suspected inhaled foreign body. Ahead of the endoscope you see the bifurcation of the trachea, called the primary bronchi. You advance the endoscope into the right bronchus. You remember from gross anatomy that each lobe of the lung has its own secondary bronchus, and so you expect to see 4 (a number) lobar bronchi in this dog's right lung. You pass the endoscope into the right caudal lobar bronchus.

If you could magnify your view of the epithelial surface of the bronchus enough to see the cells, you would expect to see these cell types in the epithelium (name 3 types):

ciliated columnar cells goblet cells
basal cells

Instead of a foreign body in the airway, you see what looks like a mass or nodule on the bronchial wall, and you take a biopsy to send for histopathology. Finding no other abnormality, you remove the endoscope and recover the dog. While you are waiting for the histopathology report, you refresh your memory of the normal structure of the lungs by quizzing yourself:

The normal bronchial wall consist of epithelium, a connective tissue layer called the lamina propria, and a muscle layer called the muscularis mucosa

Bronchi do not normally contain which of the following:

- a. Clara cells -
- b. glands
- c. hyaline cartilage
- d. Type I pneumocytes -
- e. a and d
- f. b and d

Macrophages in the lung originate from what cell type? monocytes

Macrophages associated with alveoli can be located either in the septum or in the lumen of alveoli.

An important fiber type in the stroma of the alveolar walls is elastin. What cells produce these fibers? fibroblasts

An absence of Type II pneumocytes would most likely cause which of the following:

- a. Over-inflation of alveoli because of loss of elasticity.
- b. Collapse of alveoli because of increase in surface tension.
- c. Fusion of alveoli because of loss of basement membrane.
- d. Blockage of alveoli because of increased mucus accumulation.
- e. Blockage of alveoli because of increased foreign material accumulation.
- f. None of the above; Type II pneumocytes are aged Type I pneumocytes, and are removed by macrophages.

Name: Ker.

Box Num.

Microscopic Anatomy, AP 710
Exam 2, Part A, 13 points
Respiratory system
October 6, 2000

(13)

Imagine that you are passing an endoscope down the trachea of a coughing dog to look for a suspected inhaled foreign body. Ahead of the endoscope you see the bifurcation of the trachea, called the Carina. You advance the endoscope into the right bronchus. You remember from gross anatomy that each lobe of the lung has its own secondary bronchus, and so you expect to see 4 (a number) lobar bronchi in this dog's right lung. You pass the endoscope into the right caudal lobar bronchus.

gross anatomy

accessory
cranial
medial
caudal

If you could magnify your view of the epithelial surface of the bronchus enough to see the cells, you would expect to see these cell types in the epithelium (name 3 types):

Ciliated columnar cells (pseudo) goblet cells
neuroendocrine cells

Instead of a foreign body in the airway, you see what looks like a mass or nodule on the bronchial wall, and you take a biopsy to send for histopathology. Finding no other abnormality, you remove the endoscope and recover the dog. While you are waiting for the histopathology report, you refresh your memory of the normal structure of the lungs by quizzing yourself:

The normal bronchial wall consists of epithelium, a connective tissue layer called the lamina propria, and a muscle layer called the muscularis mucosa.

Bronchi do not normally contain which of the following:

- a. Clara cells → found in bronchioles
- b. glands yes ie bronchiolar cells
- c. hyaline cartilage yes
- d. Type I pneumocytes No
- e. a and d
- f. b and d

Macrophages in the lung originate from what cell type? Monocyte
Macrophages associated with alveoli can be located either in the alveolar lumen (or) in the alveolar septum (wall)

→ An important fiber type in the stroma of the alveolar walls is elastin. What cells produce these fibers? Fibroblast

An absence of Type II pneumocytes would most likely cause which of the following:

- a. ~~Over-inflation of alveoli because of loss of elasticity.~~
- b. Collapse of alveoli because of increase in surface tension.
- c. ~~Fusion of alveoli because of loss of basement membrane.~~
- d. ~~Blockage of alveoli because of increased mucus accumulation.~~
- e. ~~Blockage of alveoli because of increased foreign material accumulation.~~
- f. ~~None of the above; Type II pneumocytes are aged Type I pneumocytes, and are removed by macrophages.~~

High

Name: Ann

Box Num.

Microscopic Anatomy, AP 710
Exam 2, Part A, 13 points
Respiratory system
October 6, 2000

13

Imagine that you are passing an endoscope down the trachea of a coughing dog to look for a suspected inhaled foreign body. Ahead of the endoscope you see the bifurcation of the trachea, called the carina. You advance the endoscope into the right bronchus. You remember from gross anatomy that each lobe of the lung has its own secondary bronchus, and so you expect to see 4 (a number) lobar bronchi in this dog's right lung. You pass the endoscope into the right caudal lobar bronchus.

If you could magnify your view of the epithelial surface of the bronchus enough to see the cells, you would expect to see these cell types in the epithelium (name 3 types):

ciliated columnar cells goblet cells
basal cells

Instead of a foreign body in the airway, you see what looks like a mass or nodule on the bronchial wall, and you take a biopsy to send for histopathology. Finding no other abnormality, you remove the endoscope and recover the dog. While you are waiting for the histopathology report, you refresh your memory of the normal structure of the lungs by quizzing yourself:

The normal bronchial wall consist of epithelium, a connective tissue layer called the lamina propria, and a muscle layer called the muscularis mucosa

Bronchi do not normally contain which of the following:

- a. Clara cells
- b. ~~glands~~
- c. ~~hyaline cartilage~~
- d. Type I pneumocytes
- e. a and d
- f. ~~b and d~~

Macrophages in the lung originate from what cell type? monocytes
Macrophages associated with alveoli can be located either in the septum of alveoli or in the lumen of alveolia → PAMs

An important fiber type in the stroma of the alveolar walls is elastin. What cells produce these fibers? fibroblasts

An absence of Type II pneumocytes would most likely cause which of the following:

- a. Over-inflation of alveoli because of loss of elasticity.
- b. Collapse of alveoli because of increase in surface tension. ✓
- c. ~~Fusion of alveoli because of loss of basement membrane.~~
- d. ~~Blockage of alveoli because of increased mucus accumulation.~~
- e. ~~Blockage of alveoli because of increased foreign material accumulation.~~
- f. ~~None of the above; Type II pneumocytes are aged Type I pneumocytes, and are removed by macrophages.~~

#13

Name K.L.

Box Number 70

Microanatomy Final Exam, December 14, 2000

Dr. Provo-Klimek, 25 points

18/25 low

1. ~~decrease~~ in the amount of white blood cells in blood and being made
2. difference in staining/color of red blood cells

3. c.
4. a.
5. b.
6. d.
7. e.
8. e.
9. e.
10. d.
11. d.
12. b.
13. b.
14. d.
15. b.
16. e.
17. d.
18. e.
19. d.
20. d.
21. e.
22. b.
23. /

#13

Name Jim

Box Number 070

Microanatomy Final Exam, December 14, 2000

Dr. Provo-Klimek, 25 points

18/25 Low

1. ~~Loss~~ of white blood cells

2. ~~Build~~ up of RBCs

3. c

4. b

5. b

6. d

7. a

8. c

9. e

10. e

11. f

12. b

13. a

14. e

15. e

16. b

17. f

18. e

19. d

20. d

21. d

22. e

23. a

-14

Name U...

Box Number 9...

Microanatomy Final Exam, December 14, 2000
Dr. Provo-Klimek, 25 points

11/25
Low

1. Leukocytes are deficient

2. Many different abnormal shapes

-
3. d
 4. a
 5. b
 6. d
 7. e
 8. b
 9. b
 10. e
 11. a
 12. b
 13. d
 14. e
 15. d
 16. b OK
 17. a
 18. e
 19. d
 20. d
 21. e
 22. e
 23. b

-5

Name Chad

Box Number 39

Microanatomy Final Exam, December 14, 2000
Dr. Provo-Klimek, 25 points

20/25 Medium

1. ~~Decrease in production of WBC's~~

2. ~~Condition of accepting many blood stains~~

↳ what cell?

3. ~~b~~

4. a

5. ~~d~~

6. d

7. e

8. c

9. e

10. a

11. b

12. b

13. b

14. a

15. d

16. b

17. f

18. ~~b~~

19. e

20. d

21. d

22. e

23. b

6

Name Tom

Box Number 82

19/25

Microanatomy Final Exam, December 14, 2000

Dr. Provo-Klimek, 25 points

1. Leukemia: cancer affecting the blood specificity OK Medium
2. Polychromasia: refers to the RBC's staining different colors with the same stain

3. B
4. A
5. B
6. D
7. E
8. A
9. E
10. A
11. F
12. E
13. B
14. A
15. D
16. D
17. E
18. D
19. E
20. D
21. D
22. E
23. B

Name Jan

Box Number 6

9
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16/25

Medium

1. decrease of white blood cells

2. RBC's can ^{show up} ~~be~~ different shades depending on hemoglobin levels. can range from near white to dark pink

3. b

4. a

5. e

6. d

7. e

8. e

9. e

10. d

11. b

12. d

13. b

14. d

15. d

16. b

17. d

18. e

19. e

20. d

21. d

22. e

23. b

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1. a type of cancer affecting the bone marrow and lymph systems
2. more than one (different) coloration of the red blood cells (ie light pink, dark red, red, etc.)

3. c
4. a
5. b
6. d
7. e
8. c
9. e
10. a
11. b
12. b
13. b
14. a
15. e
16. b
17. f
18. d
19. e
20. d
21. d
22. e
23. b

2

Name Cyan

Box Number 30

23/25 High

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1. Leukemia is a tumor that affects white blood cells.

2. Polychromasia is a difference in staining due to the concentration of hemoglobin per unit of blood. Classified as either hypochromic, hyperchromic, or normochromic.

3. ~~B.~~

4. A.

5. B.

6. D.

7. E.

8. C.

9. e.

10. A.

11. B.

12. B.

13. B.

14. A.

15. D.

16. B.

17. F.

18. D.

19. ~~B.~~

20. D.

21. D.

22. e.

23. B.

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23/25 High

1. condition of increased circulating ~~by~~ white blood cells
in the blood, usually Lymphocytes.
2. Variation in the hemoglobin concentration of the
red blood cells.

3. c
4. a
5. b
6. a
7. e
8. c
9. e
10. a
11. b
12. b
13. b
14. a
15. d
16. b
17. a
18. d
19. e
20. d
21. d
22. e
23. b