

Immunology:

Lecture1: Introduction to immunology

Lecture 2: Cells and tissues of the immune system 1



1. B and T cells are produced by stem cells that are in:

- a. Bone marrow**
- b. The liver**
- c. The circulatory system**
- d. The spleen**
- e. The lymph nodes**

2. Which of the following BEST describes cytokines?

- A. Membrane receptors that detect the presence of soluble messengers in the environment**
- B. Proteins that recruit specific cells to an area**
- C. Chemical messengers that induce cell differentiation**
- D. Transcription factors that induce the expression of genes involved in cell adhesion**
- E. Adhesion molecules that bind to the inside of blood vessels**

3. Monocytes move from the systemic circulatory system into general connective tissues, where they differentiate into what phagocytic cell type?

A. Macrophage

B. B Cell

C. T Cell

D. Neutrophil

4. Which immune cell is responsible for the quickest release of histamine that causes the red itchy welts associated with allergies?

A. Mast cell

B. lymphocyte

C. eosinophil

D. basophil

6. Macrophages serve as antigen presenting cells and activate _____:

A. Natural killer cells

B. T lymphocytes

C. B lymphocytes

D. Neutrophils

7. Activation of macrophages is best achieved by which cytokine?

A. Interferon gamma (IFN- γ)

B. Granulocyte monocyte colony-stimulating factor (GM-CSF)

C. Interleukin-1

D. Macrophage chemotactic protein (MCP)

E. Transforming growth factor beta (TGF- β)

8. A 4-year-old child has atopic dermatitis due to severe allergies to dust, animal dander, and many kinds of pollens. Mediators released from which cell type are responsible for the clinical manifestations immediately following exposure to these substances?

A. B cells

B. Macrophages

C. Mast cells

D. Th1 cells

E. Th2 cells

9. A 36-year-old woman with severe allergy to yellow jackets was stung multiple times at a soccer game. Within minutes she developed respiratory distress and became unconscious. Which mediator is primarily responsible for this reaction?

- A. Complement**
- B. IgG**
- C. Histamine**
- D. TNF**
- E. Norepinephrine**

10. Which one of the following leukocytes is considered a “granulocyte”?

- A) Macrophage**
- B) Neutrophil**
- C) Dendritic cell**
- D) Natural killer cell**
- E) Natural killer T cell**

11. A 45-year-old female presents with anorexia and some abdominal pain. Fecal smears reveal the presence of Taenia eggs, products of a parasitic tapeworm infection. Which one

of the following cells would be most effective in defense against this parasite?

- A. Platelets**
- B. Erythrocytes**
- C. Neutrophils**
- D. Eosinophils**
- E. Monocytes**

12. The difference between tolerance and immunity depends upon the maturation status of the antigen presenting dendritic cells. What is the T-cell outcome of an antigen presentation event by a mature dendritic cell?

- A. Anergy**
- B. Apoptosis**
- C. Activation**
- D. Ignorance**
- E. Suppression**

1	2	3	4		6	7	8	9	10
A	B	A	A		B	A	C	C	B

11	12								
D	C								