

Review Questions - Musterlösung

(from texts above, and the introductory lecture)

I. **TRUE/FALSE** - Decide whether each of these statements is true or false.

- **True.** A main of neutrophils is to destroy bacteria.
- **False.** A main of macrophages is to destroy bacteria.
- **True.** Apoptosis is central to a well-functioning immune system response.

II. Which of the following statements is **INCORRECT** regarding stages of wound healing?

- The first phase is inflammatory, or reactive, phase.
- **The most important cell in the proliferative phase is the neutrophil.**
- The remodeling phase can take from 6 weeks to 1 year.
- Connective tissue regeneration involves contraction.

III. What are the 3 stages of wound healing, in order?

- Proliferative phase, substrate phase, remodeling phase
- Fibrin phase, remodeling phase, inflammatory phase
- **Inflammatory phase, Proliferative phase, Remodeling phase**
- Substrate phase, dynamic stage, neutrophil phase

IV. When does a wound have maximum tensile strength?

- 0---10 days
- 10---20 days
- 20---30 days
- 30---40 days
- **40---50 days**

V. The following are features of the inflammatory phase of wound healing **EXCEPT**:

- This phase lasts a finite length of time of approximately 4 days in primary intention healing.
- The inflammation is mediated by a number of factors that cause dilation of capillaries at the wound site and lymphatic blockade, as well as migration of leukocytes through vessel wall into the wound.
- This phase is marked by loss of function of the wounded area, as well as pain, redness, heat and swelling.
- This phase is marked by an increased rate of collagen synthesis from fibroblasts.
- In this phase, neutrophil phagocytosis aids in the removal of clot, bacteria, and other debris from the wound.

VI. Which is the smallest blood vessel?

- artery
- arteriole
- vein
- capillary

VII. Which of the following is associated with atherosclerosis?

- Including fruit and vegetables in every meal
- High cholesterol diet
- High-fiber diets
- Low-salt diets
- Increased exercise

VIII. **TRUE/FALSE** - Decide whether each of these statements is true or false.

- **True.** In the natural history of atherosclerosis, a correct order of disease progression is: clean artery => fatty streaks => fibrous plaques => clinical lesion
- **True.** The onset of atherosclerosis involves LDL Cholesterol.
- **True.** The onset of atherosclerosis involves macrophages that engulf oxidized LDL Cholesterol.

IX. The cells that aggregate at this site in the artery lumen are called:

- Leukocytes
- Platelets
- Erythrocytes
- Fibroblasts

X. Platelets release factors that result in

- Inflammation
- Oxidation
- Vasodilation
- Smooth muscle proliferation

XI. Cancer is more common in older people because

- their immune systems have degenerated.
- the supply of certain hormones declines with age.
- a change in the rate of cell replacement takes place.
- They have accumulated more mutations.
- Their bodies are unable to adjust to the changing environment.

XII. **TRUE/FALSE** – Indicate for each statement if it's true or false.

The formation of bone tissue after injury from granulation tissue depends on

- **False.** the cells found in the initial blood clot.
- **False.** the right amount of healing time.
- **True.** right amount of mechanical stress (tissue shear strain and fluid flow).
- **False.** the previous vascularization of the bone tissue.

XIII. assign the following cells to their function: neutrophils, erythrocytes, basophils, lymphocytes, monocytes, and eosinophils

- coordination of body defense by identification of foreign substances. **Lymphocytes, Monocytes**
- transport of gases from lung to the tissues. **Erythrocytes**
- helping the immune system fighting of infections by ingesting foreign cells. **Neutrophils, Basophiles, Eosinophils**

XIV. **TRUE/FALSE** – Indicate for each statement if it's true or false.

- **True.** Endothelial cells are needed for angiogenesis.
- **False.** Endothelial cells can only migrate from surrounding tissue.
- **True.** Endothelial cells are part of the endothelium.