

1. Which change is still reversible?
  - ☐ Enzymes leaking into the blood
  - ☐ Calcium flooding the mitochondria
  - ☐ Cell swelling from a failing  $\text{Na}^+/\text{K}^+$  pump
  - ☐ Ruptured cell membranes
2. Which cell dominates acute inflammation?
  - ☐ Lymphocyte
  - ☐ Plasma cell
  - ☐ Neutrophil
  - ☐ Fibroblast
3. At a capillary's arterial end, hydrostatic pressure is 32 mmHg and plasma oncotic pressure is 25 mmHg (ignore tissue pressures). What is the net outward pressure?  
\_\_\_\_\_ mmHg
4. Which feature proves a tumour is malignant?
  - ☐ Metastasis
  - ☐ A capsule
  - ☐ Large size
  - ☐ Slow growth
5. Which plaque is most likely to rupture?
  - ☐ Thin cap, large lipid core, many inflammatory cells
  - ☐ Any plaque narrowing the artery by over 70%
  - ☐ Thick cap, small core, heavily calcified
  - ☐ A fatty streak in a teenager
6. Which pair defines cirrhosis?
  - ☐ Fatty change and swelling
  - ☐ A single large tumour
  - ☐ Bridging fibrosis and regenerative nodules
  - ☐ Granulomas and caseation

8. Apoptosis causes a strong inflammatory reaction.
  - ☐ True
  - ☐ False
9. Granulation tissue is a kind of granuloma.
  - ☐ True
  - ☐ False
10. Lung infarcts are usually pale.
  - ☐ True
  - ☐ False

1. **Cell swelling from a failing  $\text{Na}^+/\text{K}^+$  pump**

Swelling and fatty change reverse when oxygen returns; membrane damage does not.

2. **Neutrophil**

Neutrophils arrive first and in the greatest numbers.

3. **7 mmHg**

$32 - 25 = 7$  mmHg pushing fluid out.

4. **Metastasis**

Only malignant tumours metastasise.

5. **Thin cap, large lipid core, many inflammatory cells**

Vulnerability depends on the cap and core, not the size.

6. **Bridging fibrosis and regenerative nodules**

Scar and nodules across the whole liver.

7. **5 %**

The interval holds the central 95%, so 2.5% on each side fall outside.

8. **False**

Apoptotic fragments are eaten quietly; it is necrosis that leaks and inflames.

9. **False**

Granulation tissue is repair tissue of fibroblasts and new vessels; a granuloma is a cluster of macrophages.

10. **False**

The lung has two blood supplies and loose tissue, so its infarcts fill with blood and are red.