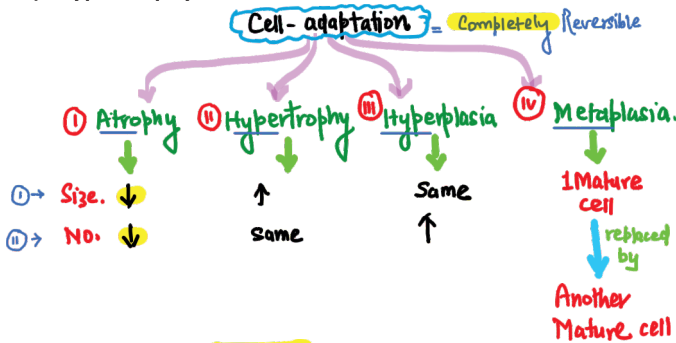
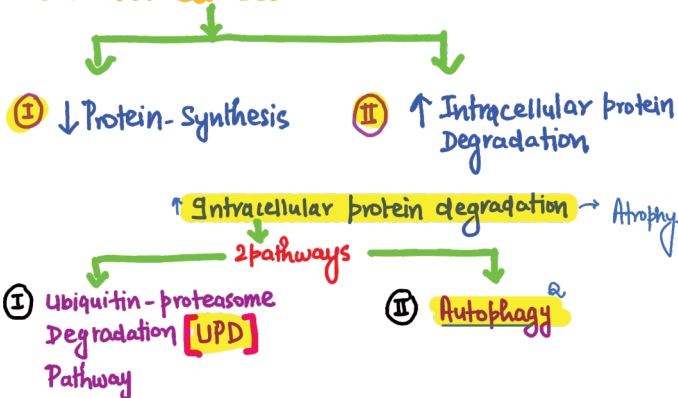


Q) Which of the following cellular adaptation is associated with Autophagy?

- a) Atrophy
- b) Metaplasia.
- c) Hyperplasia.
- d) Hypertrophy.

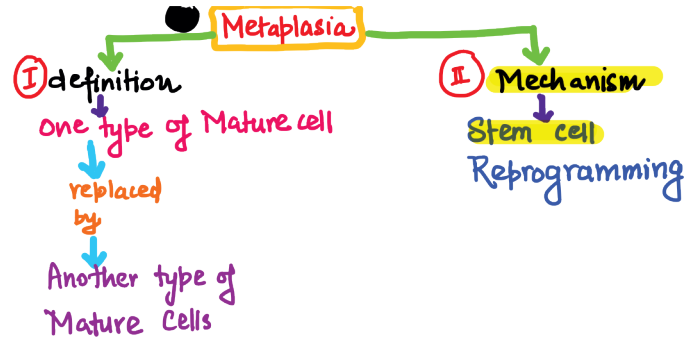
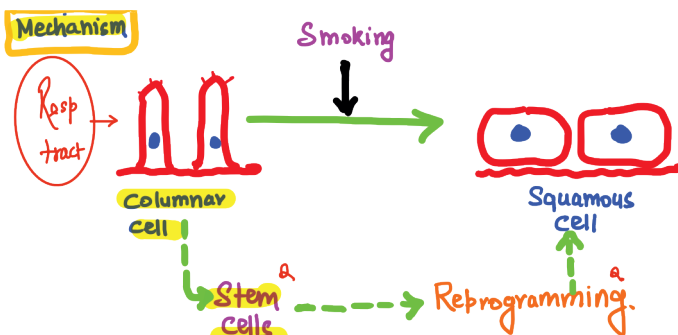
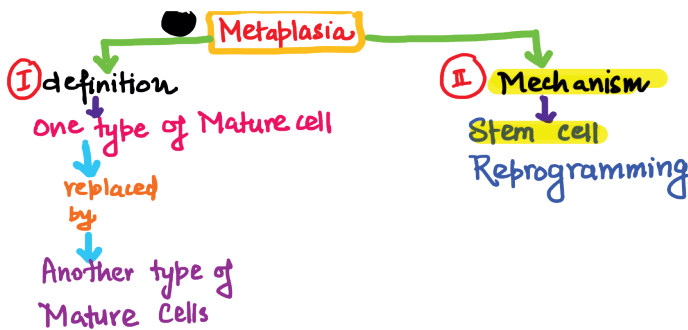


**Mechanism of Atrophy**



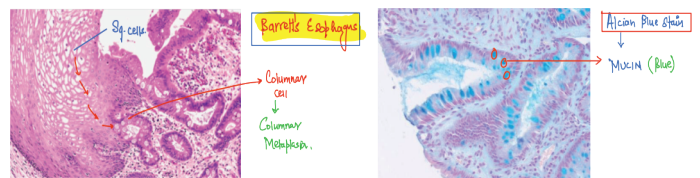
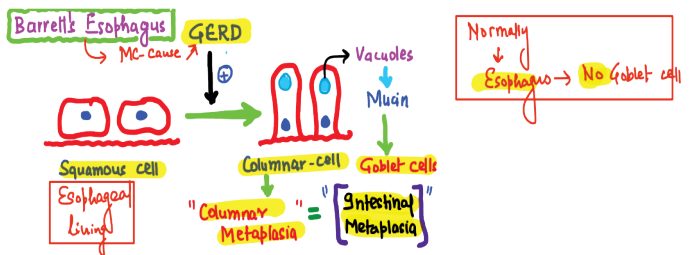
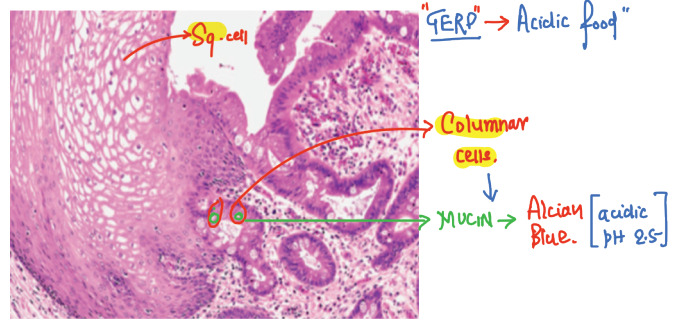
Q) True about Metaplasia is?

- a) Involves only epithelial cells. (F)
- b) Is irreversible. (F)
- c) Mechanism is reprogramming of stem cells (T) →
- d) Mechanism is reprogramming of mature Adult cell.



Q) An esophageal biopsy was taken from a patient with gastro esophageal reflux disease. Which of the following is true about this biopsy specimen?

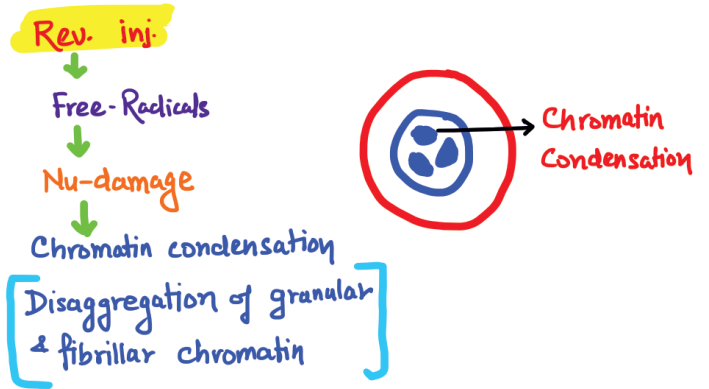
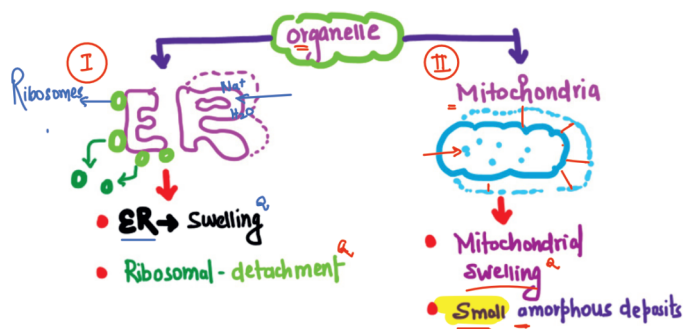
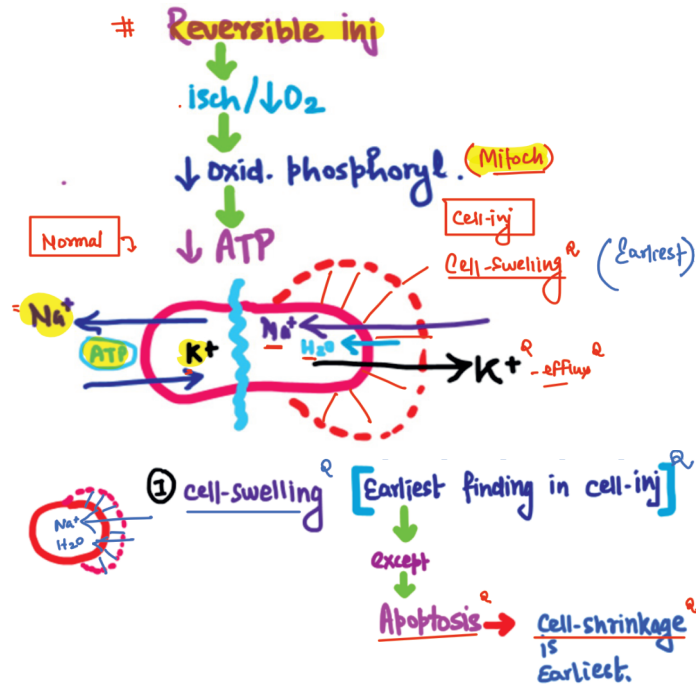
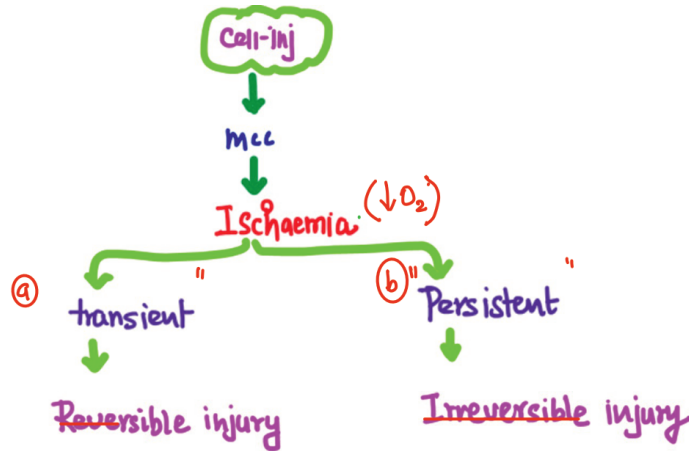
- a) Squamous metaplasia and alcian blue positive at Ph 2.5.
- b) Squamous metaplasia and alcian blue positive at Ph 7.5.
- c) Columnar metaplasia and alcian blue positive at Ph 2.5 ✓
- d) Columnar metaplasia and alcian blue positive at Ph 7.5. ✗



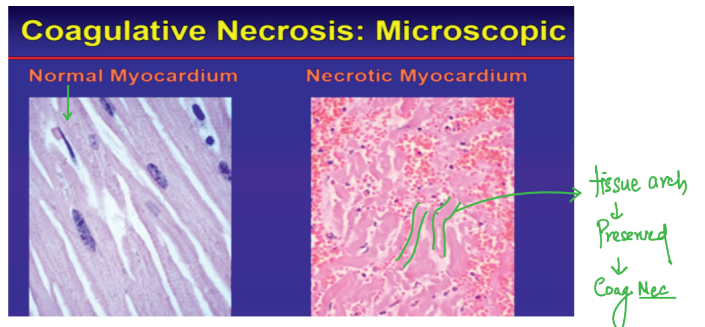
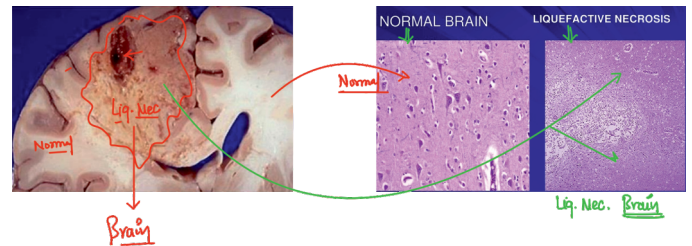
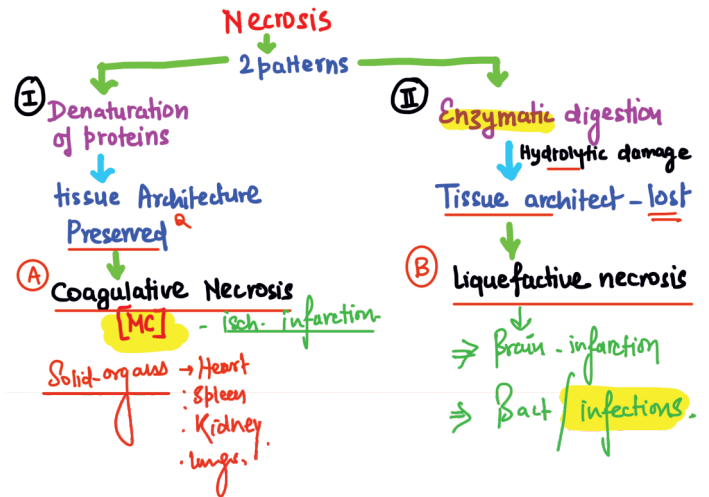
# Rapid Revision

## Cellular Adaptation and cell Injury

- Q) All of the following statements are true regarding reversible cell injury except:
- a) Formation of **large** amorphous densities in the mitochondrial matrix *Irrrev. inj.*
  - b) Nuclear chromatin clumping. ✓
  - c) Cell swelling. ✓ (*Earliest*)
  - d) Detachment of ribosomes from the rough ✓



- Q) Liquefactive necrosis is seen in:
- a) Heart ✗
  - b) Brain → ✓
  - c) Lungs ✗
  - d) Spleen ✗

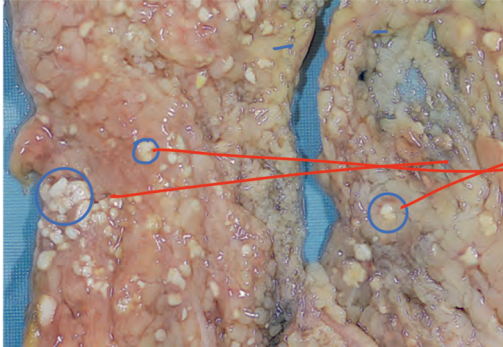


# Rapid Revision

## Cellular Adaptation and cell Injury

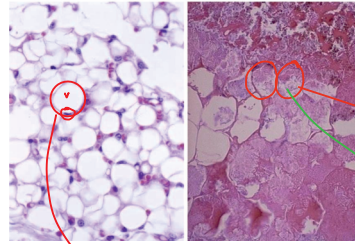
Q) Mesenteric fat of acute pancreatitis is shown below. Most likely it is:

- a) Caseous Necrosis  $\times \rightarrow$  TB  $\rightarrow$  Cheesy-Gross. I
- b) Fibrinoid Necrosis  $\rightarrow$  Pink-fibrin  $\rightarrow$  HTN-(Malign. HTN)
- c) Fat Necrosis  $\rightarrow$  Chalky-white.
- d) Gangrene  $\rightarrow$  Lower. (limbs (mo)).



fat Nec.

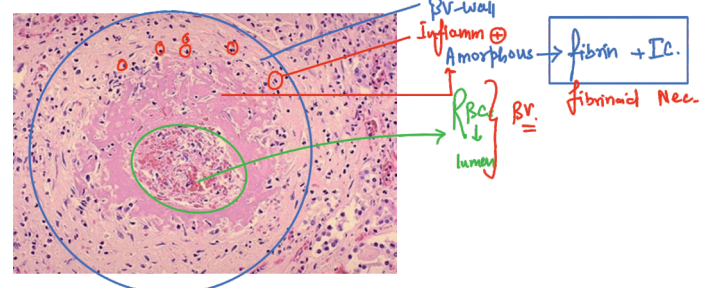
Normal Fat tissue Vs. Fat necrosis



**Fat necrosis:**  
Normal fat cells with eccentric nuclei is seen in image (a).  
Image (b) shows fat necrosis where anucleated ghost cells are seen.

Q) Biopsy from blood vessel is taken from a 30 year old male with inflamed blood vessel and image is given below. Most likely mechanism for this condition is :

- a) Liquefactive necrosis  $\times$
- b) Coagulative necrosis  $\times$
- c) Fat Necrosis  $\times$
- d) Immune complex mediated damage  $\checkmark$



### III Fat Necrosis

a) Enzymatic  
eg. Acute Pancreatitis

b) Traumatic  
eg. Breast-inj

lipase release

acts on lipid

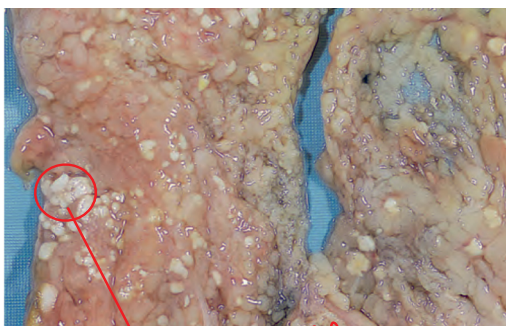
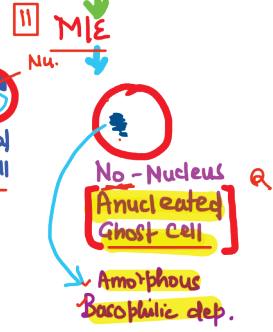
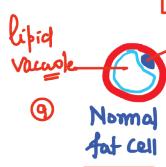
Release fatty Acid

combines  $\text{Ca}^{++}$

Chalky, white [Saponification]

### Fat Necrosis

i) Gross  
Chalky-white



fat-nec.

Chalky-white (fatty Acid +  $\text{Ca}^{++}$ )

### Fibrinoid Necrosis

Endothelial-damage

Coagulation pathway

Fibrin formation

fibrin + Immune complexes

FIBRINOID

- Fibrinoid Necrosis
- Seen-in
  - i) Vasculitis
  - ii) Malignant HTN

