Some apoptosis notes

- Necrosis
- Causes swelling of cell
- Causes inflammation
- Rupture of cell
- > Apoptosis is neat, no inflammatory response, no rupture of cell.
- > Autophagy- recycling of cell contents by the lysosomal pathway

Know the hallmarks of apoptosis- on the slide

Importance of calcium in apoptosis:

- It is a trigger; intracellular calcium increases the pro-apoptotic factor increase from the mitochondria, thus encouraging apoptosis
- > For example cytochrome c is a pro-apoptotic factor

Apoptosis involves a family of proteins called caspases. In apoptosis a cascade of caspases is activated.

Once an imitator is activated, many executioner caspases can be activated by the chaving of predomains which are then discarded.

BCL2 proteins are responsible for the intracellular activation of apoptosis. E.g. bax, bac

Note that the BCL2 family consists or 10 noto-apoptotic factors as well as anti-apoptotic factors—it is the balance between these hat determine whether apoptosis will occur or not.

IAPs, B122 furning and survival factors regulate apoptosis.

Survival factors work in 3 ways to increase survival/ supress apoptosis:

- 1. Increase the production of anti-apoptotic BCL2 protein
- 2. Inactivate pro-apoptotic protein
- 3. Inactivate anti-IAPs