

CURE A CANCER BY USING CASPASE-3 PROTEIN

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We all start life as one single cell than cell divides cell form tissues, tissues form organ and organ form a complete body system. Basically cancer is a group of diseases characterized by a abnormal cell growth. In a healthy body system cell grow and die normally in a very controlled way. Damage or change in the DNA of cell by environmentally or internal factor. Some time cells do not die and continue to multiply until a tumor or cancer develops. The most important and notable point is cancer is still the leading causes of death for people under the age of the 85. For cancer treatment usually a combination of surgery to remove a tumor and some time chemotherapy and radiation to kill any types of cancer cells. Hormone therapies, Immunotherapy and cancer drug treatment for specific types of cancer. Actually intrinsic pathway will lead to the destruction of the cell that is the function of program cell death. When cell goes any types of problem like DNA damages it try to kill itself the process is start from the mitochondria the target is mitochondria for example DNA is damage that act as a signal. There are certain molecules that are found inside the cell who sense the DNA damage some are protein like ATM protein or CHK protein. The ATM and CHK activate a P53 and P53 is not allowed the cell to pass the next level of cell cycle. P53 is start recruiting other protein like Bax protein. Basically is a protein that can create pores in mitochondria after that mitochondria allow to released a cytochrome c from mitochondria to cytosol. Now the cytochrome c bind with a protein called A-paf1 they can activate the set of protein called cascade reaction than cytochrome c and A-paf1 activated a caspase-9 and caspase-9 activated a caspase-3. The caspase-3 activated future nucleases enzyme and proteases enzyme after the activation of nucleases enzyme cell cannot be survive. If we can deliver a caspas-3 protein in cancerous cell by using different types of solute carrier the cell automatically activate nucleases enzyme nucleases find the DNA and start degrading the DNA and cell cannot survive.

- **Solute carrier and caspase-3 targeted anti-cancer Protein:**

The solute carrier transporter express in cancer cell the main role is cellular uptake of cancer drug which may step toward anti-cancer targeted drugs. The cell is surrounded by cell membrane the main point is how molecules pass in and out of the cell take the example Aspirin binding to solute carrier it transported into the cell.