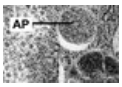
Oncogenic RAS increases Noxa and Beclin-1, induces autophagy.



Oncogenes are genes that have undergone a mutation that allows cells to survive and proliferate beyond the normal restrictions the body has in place. MYC and RAS are two oncogenes common in many types of cancer, but these genes alone are usually not enough to promote the development of cancer. This is due to the complexity of the body's signaling pathways. Scientists at the Smurfit Institute in Trinity College in Dublin have discovered that unrestricted H-Ras activity can lead to cell death via autophagy, where the body's normal processes consume the cell. This process is accomplished by H-Ras increasing the expression of Noxa and Beclin-1. These compounds are essential for Ras-induced autophagy. Without them, cancer cells are able to further proliferate. Thus, it appears that upregulating Noxa and Beclin-1 can limit the oncogenic capacity of oncogenic H-Ras.

Source
https://www.ncbi.nlm.nih.gov/pubmed/21353614
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