An exploration of the effects of diet on cancer and angiogenesis.

BMED085

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To what extent does diet positively or negatively contribute to the process of angiogenesis and subsequent cancer?

Angiogenesis is the process by which blood vessels grow in the body. They are what allow cancers to be so deadly.
I wanted to find out how diet, the leading cause for cancer, could prevent angiogenesis from feeding cancers.

Some foods can have a negative impact on angiogenesis.

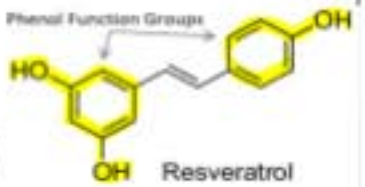
High saturated fat and sugar diets increase angiogenesis from fat stored with high energy density. This increases overall angiogenesis in the body and increases cancer risk.

This correlates with data from the US. Higher obesity also saw higher cancer rates.

Genistein, ellagic acid, and resveratrol were researched for their effects towards angiogenesis.

Their molecules have phenol functional groups, which reduces PKG-1 Kinases, augments MM-2,-9 secretion and activity and inhibits VEGFR-2 pathway signalling.

This all helps to inhibit angiogenesis!



Resveratrol

Conclusions found both positive and negative effects of diet on angiogenesis and subsequent cancer.

Data suggested diet has a more negative impact but there is not enough data in the field presently to draw accurate conclusions.
This opens up to a whole field of epigenetics and gene expression with endless future work.