

species and individual organs and tissues. For example, (2) cancer of the breast before puberty is practically unknown.

Senescence, constitutional or circumscribed, is an endogenous predisposing factor. It is closely associated with its origin, but it is not necessary to its continuance. That is, the origin and the growth of cancer are separate phenomena.

Cancer is more prevalent in domesticated animals, because, on account of good care, etc., they reach the cancer age.

Exogenous causes:

1. Chronic irritations have nothing in common except causing prolonged attempts at repair. Hence, tissues subjected to such conditions are really primarily old, so to speak, or perhaps immature in some cases, and so are liable to cancer if they have reached the cancer age. Many examples of this are known; for instance, radiant cancer, or actinic cancer of the lip from smoking a short pipe, or from X-rays.

Again, distinct innate relations seem to exist between cancer of the same organ in different species and the connective tissues. For example, in the human breast it is scirrhus, in a dog breast cartilage, in the mouse angioma.

It is important to bear in mind that cancer may:

1. Arise locally in a circumscribed area.
2. Any part of the normal covering of the body may acquire cancerous properties.
3. And that more than one focus of origin in a circumscribed area may exist, or have origin of different ages; that is, extension by apposition.

Hence, one may assume an acquired local or constitutional predisposition. That is, an indirect etiological significance to chronic irritation, causing anaphylaxis.

Again, as to the morphology of cancer, it is to be borne in mind that there is an immense variety of carcinoma cells, all descended from normal cells, some of which pass into one another, whilst others do not, and are able to maintain their characteristics for a considerable period. Hence, apparently benign growths become malignant; for example, adenoma. Also by transplanting cells from individual to individual, and so maintaining them in the continuous or intermittent state of regeneration, it seems possible to perpetuate varieties of cells more capable of growth. Hence the origin of sarcoma.

Again, there are normal types of cells which are the proto-types of malignant cells; for example:

1. Bladder epithelium and carcinoma.