

## Tumour markers help detect cancer

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Article

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Cancer is said to be the second leading cause of deaths in Malaysia and it is estimated that 40,000 cases are diagnosed yearly. Some of the common cancers are lung cancer, breast cancer and skin cancer. Because of this, early detection is important.

And to raise cancer awareness and the importance of early detection, the National Cancer Society of Malaysia released 15,000 balloons over Kuala Lumpur last Sunday in the Yellow Balloons Race; yellow being the international colour for cancer.

Cancer, also called tumour is usually marked by swelling or enlargements of abnormal cells within a tissue or organ. Tumour which have the ability to invade normal cells (malignant) and spread throughout the body, can be life threatening. Otherwise they are known as benign tumours, though they too can become malignant.

Recently, to a limited extent, serum tumour markers have been used to screen for cancer and diagnosis, though the question of reliability is still a controversial one. Markers are substances in the blood related to the presence of progress of a tumour.

There are four main groups of tumour markers including secretion or enzymes, cell markers (may be in the genes), molecules found on the cell surface (such as CA 19-9, CA 15-3, CA125) and those which are products of cell turnover. Allegedly, the real value of such tumour markers is in monitoring of responses to treatment.

Dr Leland H. Hartwell, a 2001 Nobel Prize in Physiology or Medicine recently delivered a lecture at the University Sains Malaysia on a similar topic entitled "Understanding Cancer and its Treatment".

Hartwell is known for his groundbreaking discovery of genes that control the cell division cycle, together with R. Timothy Hunt and Sir Paul M. Nurse of Britain.

He reportedly used a simple, one-cell organism, baker's yeast (*Saccharomyces cerevisiae*), as a model system for his discovery.

His work has led to an explosion of knowledge on how cells precisely manage a process that is crucial to life.

The discovery gave some insights as to what goes wrong when cells become cancerous and begin to reproduce unchecked.

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