

HKU Research Findings Help Developing Targeted Therapy for Liver Cancer

Hepatitis B viral infection is the most common risk factor leading to liver cancer in Hong Kong and Southeast Asia because it may cause chronic hepatitis and cirrhosis. In Hong Kong, there are about 10% of the population are Hepatitis B virus carriers.

“Targeted Cancer Therapy” is a recent breakthrough in cancer therapy. Other than the traditional chemotherapy and radiotherapy, it kills only the targeted cancer cells that show particular molecular characteristics while not affecting the healthy normal cells.

In 2000 and 2003 respectively, the Department of Pathology, Faculty of Medicine, the University of Hong Kong has discovered that loss of the DLC-1 (Deleted in Liver Cancer 1) and DLC-2 (Deleted in Liver Cancer 1) genes is commonly found in liver cancer cells. These genes are able to fight against liver cancer. If therapy can be developed to supplement these genes, it will boost patients’ self defense mechanism towards cancer.

The other study also reveals that genetic instability is commonly found in liver cancer cells and there is a frequent abnormality in the mitotic checkpoint during cell division. There are a number of genes and proteins with regulatory functions at the mitotic checkpoint. If medicine can be developed to target these genes and proteins, the cancer cells will not be able to duplicate but will die massively.