

Immunotherapy could help tackle tough liver cancer

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Significant new data presented today at the International Liver Congress 2014 indicate that liver cancer (Hepatocellular Carcinoma (HCC)) may be treated by adoptive T-cell therapy.

This new therapeutic approach in the [treatment](#) of HCC could be very important as without treatment the 5 year survival rate is just 5%. Globally, HCC accounts for 746,000 deaths, and in the UK alone is responsible for over 4,000 deaths per year.

Glypican-3 (GPC3) is a tumour associated antigen expressed in up to 70% of HCC but not in healthy human tissue. Isolating GPC3-specific T-cell receptors and expressing them on patient's T-cells can help treat HCC, as these T cells can recognise and eliminate GPC3-positive HCC.

The study detected and expanded MHC-multimer-positive CD8+ T-cells specific for targeted GPC3 epitopes and grew T-cell clones. From these clones, the most specific and active T-cell receptor was isolated. When this T-cell receptor was expressed on donor T cells it conferred specificity for GPC3, the HCC-associated antigen. Thus, it enables HLA-A2+ patient's T cells to specifically kill GPC3+ HCC.

Systemic treatments for advanced stage HCC are constantly evolving and current approaches include drug treatment with sorafenib - yet the current standard of care still does not offer a strong enough prognosis for patients. Liver transplant is an option for only 10 -15% of HCC carriers diagnosed at an early stage and therefore the importance of other treatment options for patients is critical. This is a treatment gap that adoptive T-cell therapy could potentially fill.

Disclaimer: the data referenced in this alert is based on the submitted abstract. More recent data may be presented at the International Liver Congress 2014.

More information: C.Dargel et al. T-CELL RE-DIRECTION AGAINST GLYPICAN-3 FOR IMMUNOTHERAPY OF HCC. Abstract presented at the International Liver Congress 2014

Provided by European Association for the Study of the Liver

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