‘Cancer vaccine’ shows promise in mice; human trial next

A combination of a tiny segment of DNA and a specific antibody injected into a solid tumour has been shown to remove not only the target tumour, but also others in the body, at least in mice.

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Like several other treatments, the combination therapy, reported in the journal Science Translational Medicine, prompts the body’s own immune system to tackle tumours. However, unlike others, it functions as a one-size-fits-all strategy. To a significant extent, it seems, it is not necessary to first identify the type of cancer involved.

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The Stanford team’s strategy works by exploiting the curiously ambivalent relationship between cancer tumours and immune cells called T cells. The latter function to attack bodily invaders through detecting abnormal proteins. Initially the T cells will recognise such proteins on the surface of cancer cells and enter the developing tumour. However, as the tumour continues to grow, T cell activity drops off. In a sense, the immune system gives up. [Researcher Ronald] Levy and his colleagues found a way to reactivate the moribund T cells.

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The first trial involved 90 animals with lymphoma tumours on both sides of their bodies. In each, only one tumour was treated. The paper details that 87 out of the 90 were cured.

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An initial human trial will get underway soon, with the researchers looking to recruit about 15 patients with low-grade lymphoma.

Read full, original post: Cancer “vaccine” makes tumours vanish