

Protein Aurora-A is found to be associated with survival in head and neck cancer

April 1 2012

Researchers at Fox Chase Cancer Center in Philadelphia have found that a protein associated with other cancers appears to also be important in head and neck cancer, and may consequently serve as a good target for new treatments. The findings will be reported at the AACR Annual Meeting 2012 on Sunday, April 1.

The researchers found that patients whose tumors had higher levels of the protein known as Aurora-A had a shorter survival following surgery to remove their tumors than patients whose tumors had normal levels of the protein.

"This finding suggests Aurora A does play a role in the development of head and neck cancers," says study author Christian J. Fidler, M.D., chief fellow in [medical oncology](#) at Fox Chase. "Consequently, Aurora-A represents another potential [target](#) for additional therapies."

Previous research has associated Aurora-A with other [cancer types](#), such as genitourinary, gastrointestinal, breast and lung cancers. As a result, companies have developed compounds that target this protein, now being tested in clinical trials.

To test whether head and neck cancer patients might also benefit from compounds that target Aurora-A, Fidler and his colleagues studied [cancer tissue](#) removed from 89 patients at Fox Chase.

They found that some did, in fact, contain high levels of Aurora-A,

suggesting the protein may have been helping to fuel the disease. Furthermore, after controlling for the size of the primary tumor, half of these patients lived 36 months or less, while those with normal levels of Aurora-A survived for 92 months. "In patients with high levels of Aurora-A, their survival was much worse," says Fidler.

Aurora-A is a type of kinase, a group of proteins which play an important role in cancer and other [cellular processes](#). More specifically, Aurora-A helps carry out signals from a protein on the surface of the cell called [EGFR](#), which help tell the cell to grow or divide. When that process becomes very activated, it can trigger cancer, says Fidler.

To really hit the brakes on this pathway, he says, doctors may want to test a combination of an inhibitor of Aurora-A and a drug already on the market that targets EGFR (cetuximab, Erbitux), after first identifying patients who over-express Aurora-A. "At some point, you may see a clinical trial that uses Aurora-A inhibitors in conjunction with cetuximab," he predicts.

"These findings identify another potential target for [head and neck cancer](#) therapy, which could potentially change the course of the disease," says Fidler.

Provided by Fox Chase Cancer Center

Citation: Protein Aurora-A is found to be associated with survival in head and neck cancer (2012, April 1) retrieved 29 February 2024 from <https://medicalxpress.com/news/2012-04-protein-aurora-a-survival-neck-cancer.html>

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