

New therapeutic target for lung cancer

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A new therapeutic target for lung cancer has been discovered by researchers at Seoul National University. It was found that a variant of the protein AIMP2 is highly expressed in lung cancer cells and also that patients demonstrating high expression of this variant show lower survival. The study is published on March 31 in the open-access journal *PLoS Genetics*.

Lung cancer is one of the world's most common cancers and a leading cause of death resulting from cancer. Despite treatment with a combination of surgery, radiation and drugs, the survival rate for patients has not drastically improved over the past few decades. It had previously been shown that the protein AIMP2 acted as a tumor-suppressor by interacting with another oncosuppressor, [p53](#). However, whether AIMP2 was indeed pathologically linked to human cancer had not been definitively proved. This investigation discovered that a variant of AIMP2 is highly expressed in human lung cancer cells. AIMP2-DX2 compromises the tumor-suppressing activity of AIMP2 by competitively binding to p53. It was also shown that suppression of AIMP2-DX2 slowed [tumor growth](#), suggesting that this could be an exciting new therapeutic target.

New innovative therapies are important not only because of the high mortality rate associated with [lung cancer](#), but because the majority of the drugs are cytotoxic, causing many adverse effects. These findings could create an opportunity to develop new innovative [cancer drugs](#), as well as presenting a new target that could also be applied to other cancers.

More information: Choi JW, Kim DG, Lee A-E, Kim HR, Lee JY, et al. (2011) Cancer-Associated Splicing Variant of Tumor Suppressor AIMP2/p38: Pathological Implication in Tumorigenesis. PLoS Genet 7(3): e1001351. [doi:10.1371/journal.pgen.1001351](https://doi.org/10.1371/journal.pgen.1001351)

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