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Experimental insulin-like growth factor receptor inhibitor reduced pancreatic cancer growth

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Researchers at Amgen are testing a fully human monoclonal antibody that inhibits the activity of insulin-like growth factors (IGF-1 and IGF-2) and appears to reduce pancreatic cancer cells in early testing, according to a report in *Molecular Cancer Therapeutics*, a journal of the American Association for Cancer Research.

Pancreatic cancer is one of the deadliest cancers, and less than 4 percent of the 200,000 patients diagnosed annually live more than five years. The only available clinical treatment is gemcitabine, but this has yet to show a survival benefit.

Scientists are testing a variety of experimental therapies to bring pancreatic cancer under control. At Amgen, Pedro J. Beltran, Ph.D., a principal scientist in oncology research, is experimenting with AMG 479, a fully human anti-IGF-1 monoclonal antibody.

"We know that insulin-like growth factors play a role in cancer development, particularly in mediating cell survival. This is the first drug that specifically targets the receptor for these growth factors without cross-reacting with the closely related insulin receptor," said Beltran.

In the in vitro study, AMG 479 bound to IGF-1R and blocked both IGF-1 and IGF-2 binding factors 1 and 2. It also completely inhibited ligand-induced activation in some growth factors, which led to a

decreased cellular viability. When Beltram and colleagues measured the effect of AMG 479 on pancreatic cancer cells in vivo, the inhibition rate was approximately 80 percent inhibition of tumor growth and receptor expression was observed.

"These data clearly show that AMG 479 is a clinical candidate for pancreatic cancer therapy, either alone or in combination with gemcitabine," he said.

Beltran said researchers are currently testing AMG 479 in nine separate phase II studies of various cancer types; he expects the effect will be seen beyond pancreatic cancer.

Source: American Association for Cancer Research (news : web)

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