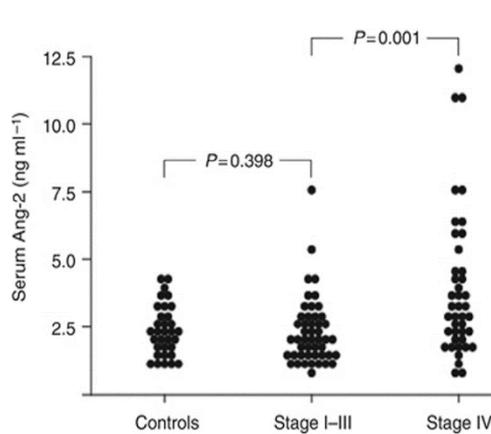


Ang-2

Angiopoietin-2 predicts the efficacy of an angiogenesis inhibitor in colorectal cancer therapy

Invention

Over the last couple of years the overall survival time of patients with metastatic colorectal cancer (mCRC) has increased significantly due to the development of novel therapeutic strategies. In this



Serum levels of angiopoietin-2 in colorectal cancer
Image taken from Goede et al. 2010

respect, angiogenesis inhibitors targeting Vascular Endothelial Growth Factor (VEGF) in combination with chemotherapy represent a clinical standard of care. Recently, novel compounds targeting alternative angiogenic pathways like the Angiopoietin-2/Tie2 axis have been developed or are currently in late clinical development. Despite extensive efforts biomarkers predicting the outcome of angiogenesis targeting therapy are still lacking. The invention provides a novel predictive biomarker to help identify the patient population with the most favorable clinical outcome to angiogenesis-targeted treatment in mCRC patients. Experiments revealed that patients with low pretherapeutic Ang-2 serum levels receiving a bevacizumab-containing treatment were associated with a better response rate compared to patients with high pretherapeutic Ang-2 levels. Additionally to a reduced risk of death (>90%) patients with low pretherapeutic Ang-2 levels showed a significant increase in progression-free survival (up to five months). Furthermore, Ang-2 expression levels were elevated in the stromal tissue of CRC patients compared to healthy controls. Thus, Ang-2 represents a candidate predictive biomarker for angiogenesis-targeted mCRC therapy with respect to anti-VEGF antibodies or fusion constructs. Additionally, based on the biological background it might have a role in the prediction of efficacy of Ang-2/Tie2 targeting compounds.

Commercial Opportunities

On behalf of the University of Cologne, PROvendis offers access to rights for commercial use as well as the opportunity for further co-development and evaluation.

Current Status

The strong diagnostic potential of the predictive biomarker has been demonstrated in pretherapeutic blood samples from colorectal cancer patients vs. healthy controls. In case of interest, we are pleased to inform you about the current status of the patent.

Relevant Publications

Goede, V et al. (2010) Identification of serum angiopoietin-2 as a biomarker for clinical outcome of colorectal cancer patients treated with bevacizumab-containing therapy. *Br J Cancer*, 103(9): 1407–1414.

An invention of the University of Cologne.

Competitive Advantages

- Ang-2 level as predictive biomarker for angiogenesis-targeted therapeutical approaches of CRC
- Low pretherapeutic serum Ang-2 levels are associated with
 - ▶ reduced risk of death
 - ▶ increased progression-free survival

Technology Readiness Level

12345678

Technology validated in lab

Industries

- Diagnostics Industry

Ref. No.

2262

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