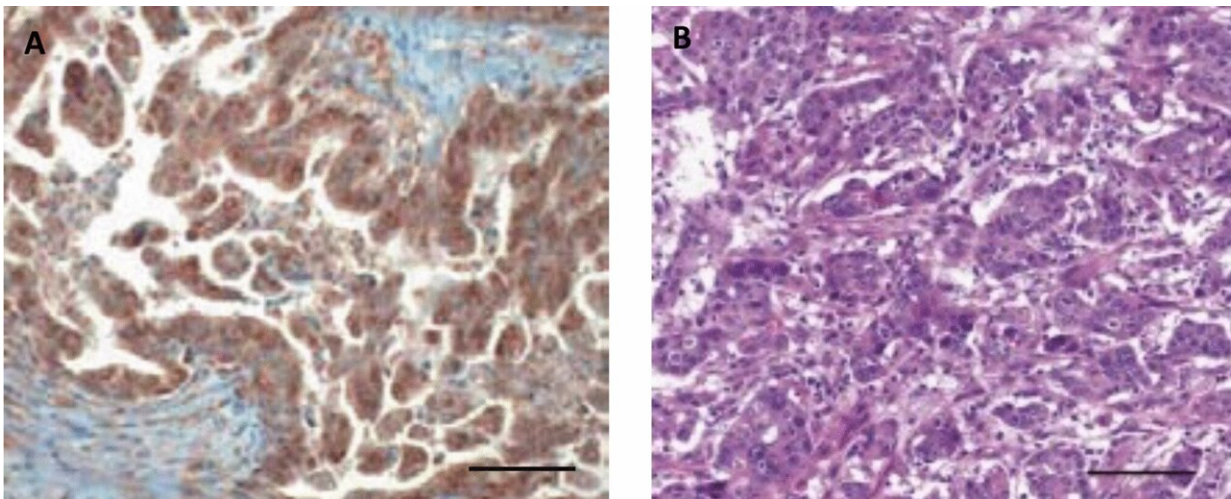


# Gastric cancer: Biomarkers identified to predict the risk of relapse

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Representative examples of immunohistochemical (IHC) staining of AF1q in gastric adenocarcinoma. Samples with (A) enhanced AF1q expression versus samples with (B) hematoxylin–eosin staining of patients that underwent surgery. Scale bar 100  $\mu\text{m}$ . Credit: *Scientific Reports* (2024). DOI: 10.1038/s41598-024-67058-x

Surgical removal of the tumor is considered the basis for curing gastric cancer. However, 40% of patients who have undergone surgery suffer a relapse within two years. A research team led by MedUni Vienna has now investigated a prognostic marker that can be used to identify patients with a high risk of tumor recurrence. The study's results, recently [published](#) in the journal *Scientific Reports*, can therefore

improve personalized treatment for stomach cancer and increase the chances of survival for those affected.

In their analyses of tumor samples from 182 patients who had undergone surgery for [gastric cancer](#) at MedUni Vienna/University Hospital Vienna, the research team led by Elisabeth Gruber (Department of General Surgery) and Lukas Kenner (Department of Pathology) focused on AF1Q. This is a gene that was discovered initially in connection with blood cancers such as leukemia and is now known in [medical research](#) for its influence on various cellular processes that contribute to the development and spread of cancer.

"The role of AF1Q in gastric cancer has been largely unexplored to date," says Gruber, describing the initial situation.

As the study shows, 178 of the 182 tumor samples examined, i.e. 97.8%, have moderately to significantly elevated AF1Q levels, associated with a higher risk of recurrence and lower chances of survival.

"This qualifies AF1Q as a promising biomarker that can be used to better assess the prognosis of patients," emphasizes Gruber. "Our results justify including AF1Q in the diagnostic process."

Specifically, the newly identified marker could be considered when examining [tissue samples](#) from the tumor to identify an increased risk of recurrence at an early stage and adapt the treatment measures individually.

## **Fourth most common cause of cancer death worldwide**

Stomach cancer is the fifth most common type of tumor and the fourth

most common cause of cancer death worldwide: In 2020 alone, it accounted for around ten million deaths. Surgical removal of the tumor is considered the basis for curing [stomach cancer](#). However, 38.8% of patients in Europe (Asia: 60%) suffer a recurrence within two years of the operation.

"Our study can help to optimize patients' follow-up care and increase their chances of survival," say Gruber and Kenner, emphasizing the relevance of the findings.

**More information:** Elisabeth S. Gruber et al, Screening for oncogenic AF1q expression predicts disease recurrence in gastric cancer patients, *Scientific Reports* (2024). [DOI: 10.1038/s41598-024-67058-x](https://doi.org/10.1038/s41598-024-67058-x)

Provided by Medical University of Vienna

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