

# Breast cancer: New genetic test measures risk of metastases

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Patients suffering from breast cancer in which the lymph nodes are already affected usually receive prophylactic chemotherapy which sometimes entails many side effects. Scientists at the Comprehensive Cancer Center Vienna (CCC), a joint establishment of the MedUni Vienna and the Vienna General Hospital, demonstrate in a current study that the risk of metastasis can be measured with a new multi-gene test. Patients, who are not at risk, can in future – the test is not yet carried out routinely – be spared this gruelling treatment.

In Austria every year approx. 1,500 postmenopausal [patients](#), that is, after the climacteric period, are affected by stage II [breast cancer](#). This means that in these women [tumour cells](#) have already been found in the [lymph nodes](#) and that the risk of [metastases](#) appearing in the future course of the illness is significantly increased. As in the USA but also in many other countries, in Austria too, affected patients are nearly always treated with [chemotherapy](#) to prevent the development of new metastases, which sometimes has a [plethora](#) of side effects.

## Worldwide study under Austrian leadership

A worldwide study led by Michael Gnant, Deputy Head of the University Department of Surgery and Head of the Breast Centre (bgz) of the Comprehensive Cancer Center Vienna (CCC) and the MedUni Vienna, as well as President of the Austrian Breast & Colorectal Cancer Study Group (ABCSCG) now demonstrates that, within this high risk

group, there are subgroups whose risk of developing metastases is very low, and that these subgroups can be determined by means of a multi-[gene test](#) (PAM50). In the PAM50 multi-gene test 58 genes are examined and analysed. The results are evaluated with the aid of the "Risk of Recurrence (ROR) Score", a scoring system that takes account of the different disease parameters in comparison and then evaluates the risk on an individual basis.

The results of this investigation were presented by Gnant at ASCO, the most important oncological conference worldwide. Says the expert on the results: "With this method we can identify those patients, and these are after all more than 30 percent, who have a very low 10-year risk of metastasization and spare them the gruelling chemotherapy. With the PAM50 test we can deploy the treatment even more specifically in future. Above all in countries, in which chemotherapy treatments are used widely, this could alter the basic approach to treatment strategies in the sense of making them more patient-friendly."

## **Exemplary bundling of strengths by bgz and CCC**

Another aspect, which makes this study stand out, is the large group of monitored patients. In order to obtain a meaningful sample, data from the worldwide ATAC study group was pooled with those of the ABCSG. Gnant concludes: "The worldwide study under our leadership and the honour of being able to present the results at ASCO demonstrate what scientific benefit can arise from collaboration. With this in mind, one can only support and promote the sense behind forming centres of competence as exist at the MedUni Vienna for example, in the form of the bgz and the CCC. For the benefit of everyone the strengths of existing units have to be bundled."

Provided by Medical University of Vienna

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