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### **Prognostic factors of breast cancer brain metastasis**

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2

#### **Abstract**

In this editorial we comment on the article by Chen YR published in the recent issue of the World Journal of Oncology.....<sup>1</sup> Brain metastasis (BM) is one of the most serious

complications of breast cancer (BC) and causes high morbidity and mortality. Brain metastases may involve the brain parenchyma and/or leptomeninges. Symptomatic brain metastases develop in 10-16% of newly recognized cases each year, and this rate increases to 30% in autopsy series. Depending on the size of the metastatic foci, it may be accompanied by extensive vasogenic edema or may occur as small tumor foci. Since brain metastases are a significant cause of morbidity and mortality, early diagnosis can have significant effects on survival and quality of life. The risk of developing brain metastases emerges progressively due to various patient and tumor characteristics. Patient variability may be particularly important in the susceptibility and distribution of brain metastases because malignant blood must cross the brain barrier and move within the brain parenchyma. Some characteristics of the tumor, such as gene expression, may increase the risk of brain metastasis. Clinical growth, tumor stage, tumor grade, growth receptor positivity, HER2 positivity, molecular subtype (such as triple negative status, luminal/nonluminal feature) increase the risk of developing breast cancer metastasis. Factors related to survival due to breast cancer brain metastasis include both tumor/patient characteristics and treatment characteristics, such as patient age, lung metastasis, surgery for brain metastasis, and HER2 positivity. If cases with a high risk of developing brain metastasis can be identified with the help

of clinical procedures and artificial intelligence, survival and quality of life can be increased with early diagnosis and treatment. At the same time, it is important to predict the formation of this group in order to develop new treatment methods in cases with low survival expectancy with brain metastases.

## **INTRODUCTION**

In this editorial we comment on the article by Chen YR published in the recent issue of the World Journal of Oncology..... Brain metastasis (BM) is one of the most serious complications of breast cancer (BC) and causes high morbidity and mortality. Brain metastases may involve the brain parenchyma and/or leptomeninges. Symptomatic brain metastases develop in 10-16% of newly recognized cases each year, and this rate increases to 30% in autopsy series. Depending on the size of the metastatic foci, it may be accompanied by extensive vasogenic edema or may occur as small tumor foci. Since brain metastases are a significant cause of morbidity and mortality, early diagnosis can have significant effects on survival and quality of life. The risk of developing brain metastases emerges progressively due to various patient and tumor characteristics. Patient variability may be particularly important in the susceptibility and distribution of brain metastases because malignant blood must cross the brain barrier and move within the brain parenchyma. Some characteristics of the tumor, such as gene expression, may increase the risk of brain metastasis. Clinical growth, tumor stage, tumor grade, growth receptor positivity, HER2 positivity, molecular subtype (such as triple negative status, luminal/nonluminal feature) increase the risk of developing breast cancer metastasis. Factors related to survival due to breast cancer brain metastasis include both tumor/patient characteristics and treatment characteristics, such as patient age, lung metastasis, surgery for brain metastasis, and HER2 positivity. If cases with a high risk of developing brain metastasis can be identified with the help of clinical procedures and artificial intelligence, survival and quality of life can be increased with early diagnosis and treatment. At the same time, it is important to

predict the formation of this group in order to develop new treatment methods in cases with low survival expectancy with brain metastases.

### **CONCLUSION**

Breast cancer is the most common cancer in women, and when autopsy series are included, the rate of brain metastasis increases up to 30%. If patients with a high risk of brain metastasis due to breast cancer can be identified, the risk of developing brain metastasis can be reduced and survival can be increased, perhaps with prophylactic brain irradiation, as in small cell lung cancer. Using artificial intelligence, the risky patient group can be predicted through studies with a larger number of patients.

In cases with a high risk of developing brain metastasis and a poor prognosis after the diagnosis of brain metastasis, more effective treatment strategies can be determined if the molecular and cellular mechanisms affecting this can be revealed.

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### PRIMARY SOURCES

- 1** Castaneda, Carlos A, Raymundo Flores, Katerin Y Rojas, Miluska Castillo, Ketty Dolores-Cerna, Claudio Flores, Carolina Belmar-Lopez, Esperanza Milla, and Henry Gomez. "Prognostic factors for patients with newly diagnosed brain metastasis from breast cancer", *CNS Oncology*, 2015. **38 words — 5%**  
Crossref
- 2** Amanda F Rose, Alan F Gilbertson, Constance Cottrell, Rajesh R Tampi. " Cognitive screening for adult psychiatric outpatients: Comparison of the Cognivue to the Montreal Cognitive Assessment ", *World Journal of Psychiatry*, 2021 **37 words — 5%**  
Crossref
- 3** Alican Tahta, Ahmet Cetinkal, Elif Calis, Cem Dinc. "Intramedullary pancreatic adenocarcinoma metastasis: The first case in literature", *Neurocirugía*, 2022 **24 words — 3%**  
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