

NEW METHOD FOR THE PROGNOSIS OF BREAST CANCER RECURRENCE

Description:

Cancer recurrence occurs when the disease returns after its treatment. It can be of two types: local or distant (metastasis) and, in turn, recurrence can be early (iatrogenic effect derived from surgical removal of the primary tumor) or late (natural history of the disease). After tumor resection, the risk of relapse (recurrence) is not constant over time. The prediction of early recurrence in breast cancer represents a great challenge in clinical practice, since this recurrence is associated with a more aggressive tumor, fewer therapeutic options and a poor prognosis. MicroRNAs (miRNAs) negatively regulate gene expression by inhibiting the translation of their target mRNAs and causing gene silencing. However, to date it has not been documented which specific miRNAs could be associated with early recurrence (<2 years after treatment) of a particular tumor. Due to this and the need to identify biomarkers that allow predicting the risk of recurrence in breast cancer after surgery or a specific treatment, the research group has developed a method and its specific kit to determine said risk of recurrence. The kit is based on measuring the expression levels of a set of 5 specific miRNAs to determine the low or high risk of developing new breast cancer. The results show that the signature of the set of miRNAs has a very strong predictive value when it comes to discriminating the tumors of patients that will develop early recurrence from those that are disease-free. This value is reflected in obtaining an area under the curve (AUC) of 0.993. Clinical validation studies are currently being conducted in different cohorts of patients.

Keywords:

[Health](#), [Cancer](#), [Forecast](#), [MicroRNA](#), [Relapse](#)

Sectors:

[Health](#), [Biotechnology](#)

Areas:

[Health Sciences](#), [Diagnosis](#), [Biotechnology](#)



Advantages:

It reliably determines the risk of recurrence in patients treated for breast cancer. It allows the establishment of groups of patients according to risk. It would help in choosing the appropriate therapy. It would allow adequate follow-up of the treated patients.

Uses and Applications:

Breast cancer clinic. Diagnosis of breast cancer recurrence.

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Applicants: Universidad De Málaga, Junta De Andalucía. Consejería De Salud. Servicio Andaluz De Salud., Fundación Fimabis. Fundación Pública Andaluza Para La Investigación En Biomedicina Y Salud.

Inventors: Jose Lozano Castro, Emilio Alba Conejo, Luís Gustavo Pérez Rivas, Jose Manuel Jerez Aragonés, Nuria Ribelles Entrena

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