UTILIZATION OF A SIGNATURE BASED ON THE ABUNDANCE OF THE MICROBIOTA AND THE EXPRESSION OF INTRATUMORAL MICRORNAS FOR THE PREDICTION OF METASTASIS DEVELOPMENT IN PATIENTS WITH ENDOMETRIAL CANCER

Research groups from CIBER, Servicio Andaluz de Salud and Universidad de Málaga, have patented a microbiota and miRNA signature to predict metastasis in endometrial cancer.

The Need

Endometrial cancer (EC) is a gynecological cancer commonly diagnosed in developed countries, representing approximately 7% of new cancer cases and 4% of cancer-related deaths in women. Most women diagnosed at an early stage experience prolonged survival; however, those with high-risk histopathology or advanced stages face a poor prognosis.

Early diagnosis, reasonable prognosis assessment, and timely intervention are crucial. Currently, the development of metastasis is identified through imaging analysis once the dissemination of the primary tumor has occurred.

The Solution

The inventors have discovered a unique method for the diagnosis and/or prognosis of endometrial cancer, its severity, and the development of metastasis in patients with endometrial cancer.

Innovative Aspects

For the first time, the inventors have demonstrated the **existence of a relationship between intratumoral microbiota, intratumoral miRNAs, and endometrial cancer**, and, moreover, have developed the following:

- A signature based in the composition of the initial intratumoral microbiota allows differentiation between healthy controls and patients with endometrial cancer, endometrioid and non-endometrioid patients, and patients with metastasis and those without.
- A signature based on endometrial microbiota and the expression profiles of certain miRNAs expression allows the early prediction of which endometrial cancer patients will develop metastasis and will not have a complete pathological response to treatment.

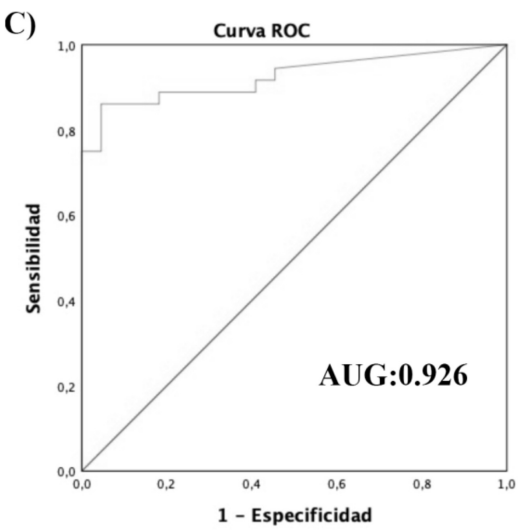

Figure 1. Random Forest analysis to distinguish between patients with endometrial cancer who develop metastasis based on intratumoral microbiota and miRNA profiles.

Intellectual Property:

- Priority european patent application filed (May 3rd, 2023)

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

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