



Method to predict weight loss after bariatric surgery.

Using serum analysis of two microRNAs, it is possible to predict the response of morbidly obese patients to bariatric surgery.



Medical need

The prevalence of obesity has increased dramatically in recent decades with a clear upward trend for the coming years.

Current strategies against obesity include restricting energy intake or absorption and increasing energy expenditure through exercise which, depending on the degree of obesity, can be complemented with pharmacological treatment or bariatric surgery.

Technology

Method to predict weight loss in patients undergoing bariatric surgery, based on the study of the expression of two microRNAs.

The analysis is performed from a serum sample, being blood sampling implemented in routine clinical practice.

The method allows results to be obtained quickly and affordably by RT-PCR, a technique widely used in the health sector.

Opportunity

Prevalence



In 2016, 13% of the population was classified as obese. Bariatric surgery is the most effective therapy, but 5-20% of patients do not respond.

Market



About 580K bariatric surgeries are performed annually, costing between \$15K-23K. The cost of this prognostic test would cost about \$15.

Other solutions



Bariatric surgery is the most effective therapy; other options are intake limitation and exercise, along with the use of drugs that are less effective.

Results

A study was performed in 33 morbidly obese patients with bariatric surgery, divided into two groups: considered responders and non-responders at 5-8 years based on the %PEP criterion.

The pattern of miRNAs was analyzed and those with differential expression were selected, and then a Spearman correlation was performed to select those associated with %PEP.

Roadmap

IBIMA plataforma BIONAND is looking for a partner to further develop the technology through a co-development or licensing agreement.



Patent:

National patent application
Priority: 04/12/2023



Team:

IBIMA Plataforma BIONAND research group in Obesity, Diabetes and their Comorbidities: Prevention and Treatment.

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