

## Método in vitro para identificar si un sujeto tratado con agentes modificadores de los huesos puede desarrollar osteonecrosis de los maxilares



Business area

*Diagnostics*

Market sector

*Dentistry, oncology*

Medical Indication

*Prevention of osteonecrosis of the jaws*

### Research goal

Medication-related osteonecrosis of the jaws (MRONJ) is a potentially serious complication that is frequently observed in patients treated with bone-modifying agents (BMAs), mainly bisphosphonates, antiangiogenics, and monoclonal antibodies such as denosumab. MRONJ is clinically similar to osteoradionecrosis although it has specific clinical and prognostic characteristics. There is a pressing need to advance in the determination of reliable predictive biomarkers that allow evaluating the risk of developing MRONJ in patients who consume BMAs, especially in order to avoid possible invasive dental procedures that may favor the appearance of MRONJ.

### Problem to solve

The treatment of patients with MRONJ varies depending on the severity of the necrosis, ranging from antibiotics and antiseptics in the initial stages, to bone resections that affect the facial bone structure and reduce the quality of life of the affected patients, limiting their function. masticatory, phonatory, social environment and quality of life. These treatments also represent a very important health expense, which is why preventive actions are necessary.

### Innovation

The team has identified a series of proteins that, determined in saliva using non-invasive techniques, allow with high efficiency to identify patients at risk of developing MRONJ. Currently there are no clinically accepted methods for this objective.

### Market opportunity

The consumption of BMAs occurs worldwide, with millions of patients at risk of developing MRONJ following dental surgery. The use of this device would prevent more than 90% of MRONJ, which would clearly be related to a drastic reduction in prevalence, medical-legal complications arising from dental procedures, an improvement in the quality of life of the patients affected and, of course, a reduction in health expenditure, avoiding the saturation of specialised treatment centres (stomatology units and maxillofacial surgery services). The device would be used mainly in public/private dental and maxillofacial centres, which are the main players in this field and therefore the market niche will be large and growing.

### Research team

The work team is made up of specialists in dentistry, maxillofacial surgery, chemistry and proteomics and pathological anatomy

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### Intellectual property

Spanish patent **P202330579** "Método in vitro para identificar si un sujeto tratado con agentes modificadores de los huesos puede desarrollar osteonecrosis de los maxilares"

### Development stage:



Available for: *Licensing, co-development*