
## Identificación del proyecto

Farmacogenomica de antiVEGF en pacientes con Degeneración macular asociada a la edad (EXPTE. ICI21/00025)

## Descripción del proyecto

Ranibizumab (RBZ) is a monoclonal antibody (antiVEGF) approved by EMA and FDA for age-related macular degeneration (DMAE), first cause of blindness in older than 55 years from the industrialized countries. Bevacizumab (BVZ) is a monoclonal antibody antiVEGF approved for colorectal cancer. However, there is a wide experience with the off-label use in DMAE and the cardiovascular risk associated are yet in contradiction. The efficacy was similar than RBZ in clinical trials and its use may be cost-effective for the public health system (use of BVZ across all relevant ophthalmic indications would save the NHS a estimated £539m a year).Randomized clinical trials with RBZ show 22% of patients were non responders to anti VEGF injections. Only the 45% of the 78% of responders present improvement of 15 letters. BVZ showed similar results in clinical trials with a smaller number of injections. Recent retrospective studies showed genetic factors associated to good or poor response. Balikova et al (2019), identifyies novel SNPs that are putatively associated with lack of treatment response with antiVEGF. However, there are more than 20 genetic variants associated with AMD through genome wide association studies and there are confusing or contradictory data predicting response. There are genetic variants that seem to predict response to antiVEGF treatment in some studies but not in others. The studies in pharmacogenomics and safety show different methodological and populational characteristics and, in consequence, the results are in contradiction and probably are not applicable on our Spanish population. This is the first comparative, randomized, double-masked, multicenter clinical trial with two parallel groups with ranibizumab and bevacizumab with the main objective to identify genetical markers related to clinical response to the treatment with BVZ and RBZ in 630 eyes with neovacular DMAE from Spanish population. The influence of genotype with 16 SNPs from VEGF, CFH, CTFG, ARMS2, HTRA1, OR52B4, LOC387715, LOC100287225, LEPR, SERPINF1 genes, MVAC and the anatomical changes by OCT and risks factors will be evaluated to predict the poor responders to the antiVEGF. Furthermore, a long term safety profile will be evaluated with the hypothesis that BVZ has similar safety profile than RBZ along the 3 years of follow up in a real world. Nº EUDRACT 2019-003204-1. The investigators declare non commercial interests.

## Financiación

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