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The role of the tumor immune microenvironment (TIME) in the prognosis and in the personalized target therapy of acromegaly: the ACRO-TIME study.

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The research project "The role of the tumor immune microenvironment (TIME) in the prognosis and in the personalized target therapy of acromegaly: the ACRO-TIME study" has the aim to investigate the role of the immune microenvironment in GH secreting pituitary tumors.

The TIME includes immune cells, endothelial cells, extracellular matrix and soluble factors. Until now, few studies have investigated the TIME in GH-omas. "In-vitro" studies showed that GH and IGF-I modulate the immune response and that somatostatin contributes to control the proliferation and the activity of inflammatory cells. The tumor immune microenvironment (TIME) may explain the great heterogeneity in biological behavior of GH-secreting pituitary adenoma (GH-omas). As such, the infiltration of immune cells and the other components of the TIME (such as antibodies, tumor blood vessels, cytokines and chemokines, macromolecules of the extracellular matrix and their receptors) will be carefully characterized in GH-omas to understand their real role. The ACRO-TIME study will offer the opportunity to identify new biomarkers for the development of a targeted and personalized therapy, rationalizing the use of ICIs and inhibitors of angiogenesis in aggressive and multi-treatments resistant GH-omas.