# RELB AS A NOVEL PROGNOSTIC BIOMARKER FOR DIFFUSE LARGE B-CELL LYMPHOMA (DLBCL)

**Use of the NF-κB subunit RelB as a biomarker to define a new subgroup of poor prognosis among DLBCL patients**

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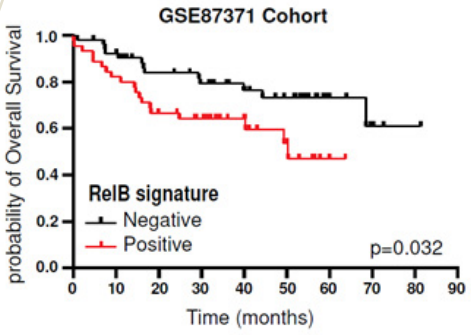
## PRESENTATION

Diffuse Large B-cell Lymphoma (DLBCL) is the most common lymphoma in adults. Even though cure rates have significantly improved in the last few years since the introduction of new immunochemotherapy treatments, refractory/relapse cases reach up to 40%. DLBCL is a highly heterogeneous disease and new biomarkers are highly awaited for better DLBCL stratification, prognosis and tailored therapies. We have shown that the transcription factor RelB is frequently activated in a large cohort of DLBCL patients and cell lines independently of their known subtypes, and that RelB activity defines a new subset of DLBCL patients with a peculiar gene expression profile and mutational pattern. Additionally, the newly defined RelB-positive subgroup exhibits a dismal outcome following immunochemotherapy. This new RelB signature then contributes to better DLBCL patient's stratification and prognosis and paves the way toward new therapeutic approaches based on RelB activation status.




Diffuse large B-cell lymphoma (DLBCL) - RelB
NF-κB signaling - Prognosis - Biomarker
Patient stratification - Transcription factor

## APPLICATIONS

- DLBCL patient's stratification and prognosis
- B cell lymphomas

## COMPETITIVE ADVANTAGES

- Definition of a new subset of DLBCL patients with poor outcome and peculiar gene expression and mutation profile.
- New stratification independent of the currently known ABC or GCB subtypes
- Prediction of treatment response

## DEVELOPMENT PHASE

- ☑ Pilot study on a cohort of 66 Patients and mutational signature validation on a cohort of 221 patients
- ☑ Functional studies showing that RelB confers DLBCL cell resistance to DNA damage-induced apoptosis and defining a specific gene expression and mutational profile.
- ☑ Technological implementation for the detection of RelB DNA binding activation from frozen samples of DLBCL patients.

## PUBLICATIONS

Eluard et al., Blood 2020

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## INTELLECTUAL PROPERTY

Priority Patent Application filed in 06/2020