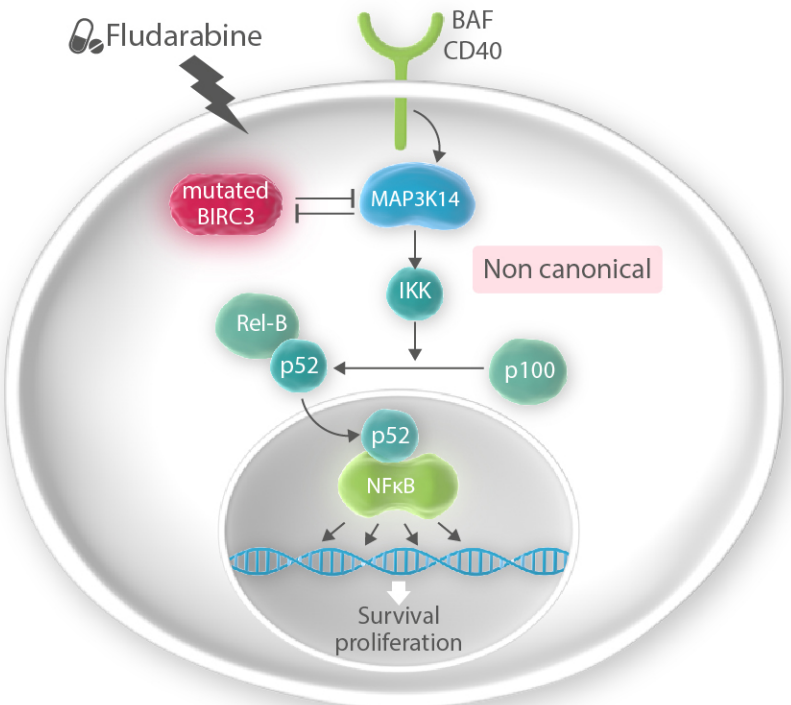
Prognostic impact of *BIRC3* mutations in a chronic lymphocytic leukemia cohort homogeneously treated with first line fludarabine, cyclophosphamide, and rituximab

In vitro study



BIRC3 mutated primary chronic lymphocytic leukemia (CLL) cells showed a delayed fludarabine-induced cell death

Clinical study

287 Untreated patients with CLL

First-line fludarabine, cyclophosphamide, and rituximab (FCR)

Targeted next generation sequencing of 24 recurrently mutated genes in CLL

Median follow-up 6.8 years

Median progression free survival (PFS)	4.6 years
Median overall survival (OS)	11.7 years

3.1% patients with *BIRC3* mutations

	BIRC3 mut	*BIRC3* wt	
Median PFS	2.2 years		
CR after FCR	22.2%	76.7%	p=0.001

BIRC3 mutations may be used as a new molecular predictor to select high-risk patients for novel frontline therapeutic approaches

Diop *et al.*, Haematologica, 2020