

Improved survival of patients with Alagille Syndrome and native liver into adolescence

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Background

Alagille Syndrome (ALGS) is a rare, multisystem, genetic disorder primarily affecting the liver. ALGS typically presents in infancy but can have incomplete penetrance or milder phenotype leading to a later diagnosis. The natural history of ALGS is evolving with the availability of newer therapies, yet little is known about ALGS in adolescent patients.

Aims

To describe the ALGS in adolescents (patients aged ≥ 12 years old).

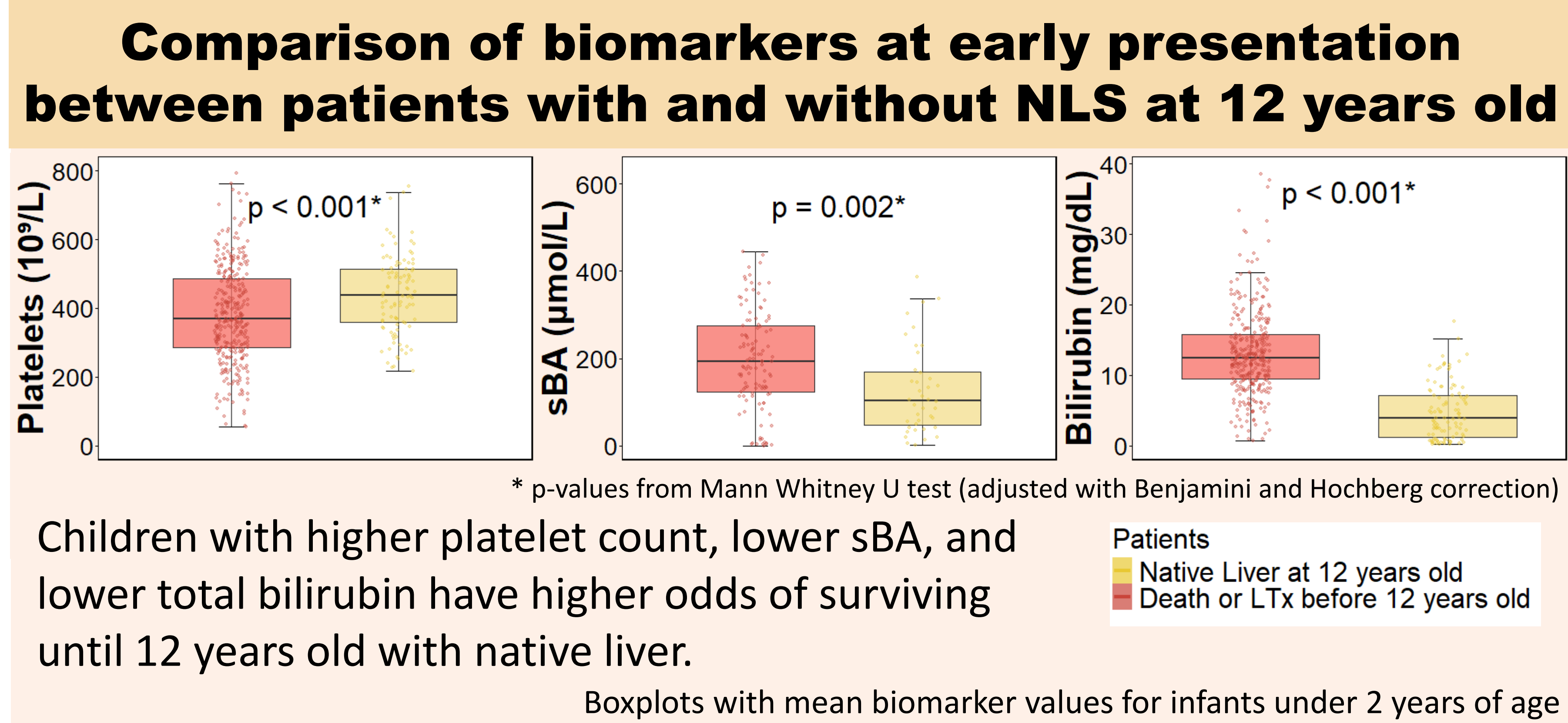
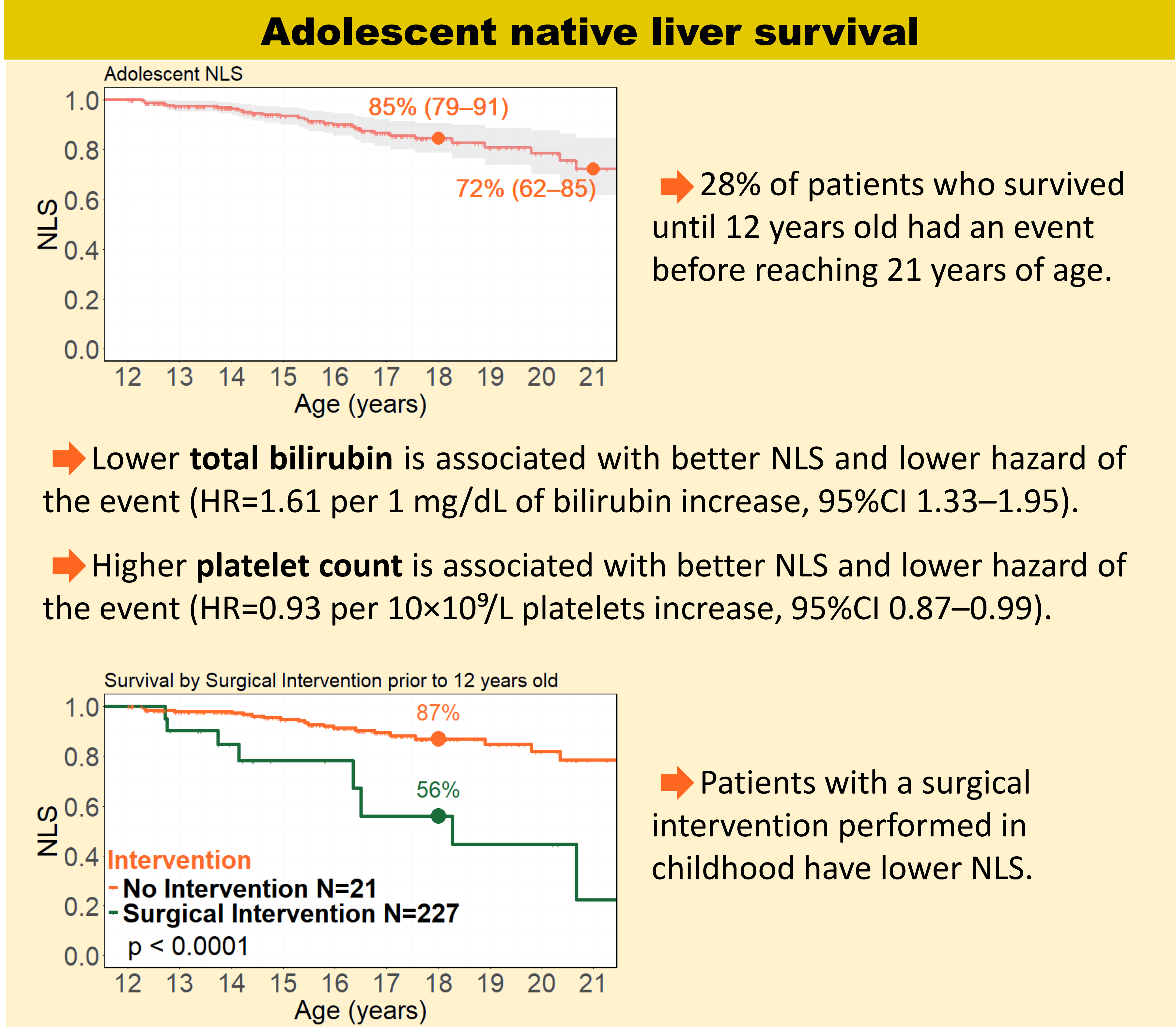
- To evaluate native liver survival (NLS) beyond 12 years of age.
- To compare **platelet count**, **serum bile acids (sBA)**, and **total bilirubin** between 12-year native liver survivors vs patients with event before 12 years old.

Methods

- Data ▶ Global ALagille Alliance study (GALA; 79 centers in 34 countries).
- Event ▶ liver transplantation or death.
- Surgical intervention ▶ biliary diversion, Kasai procedure, or esophageal gastric varices therapeutic endoscopy.
- Biomarkers ▶ total bilirubin, platelet count and sBA.
- Time-to-event analysis ▶ Kaplan–Meier curves, log-rank tests, and Cox models.
- Biomarker comparison ▶ Mann–Whitney U test.

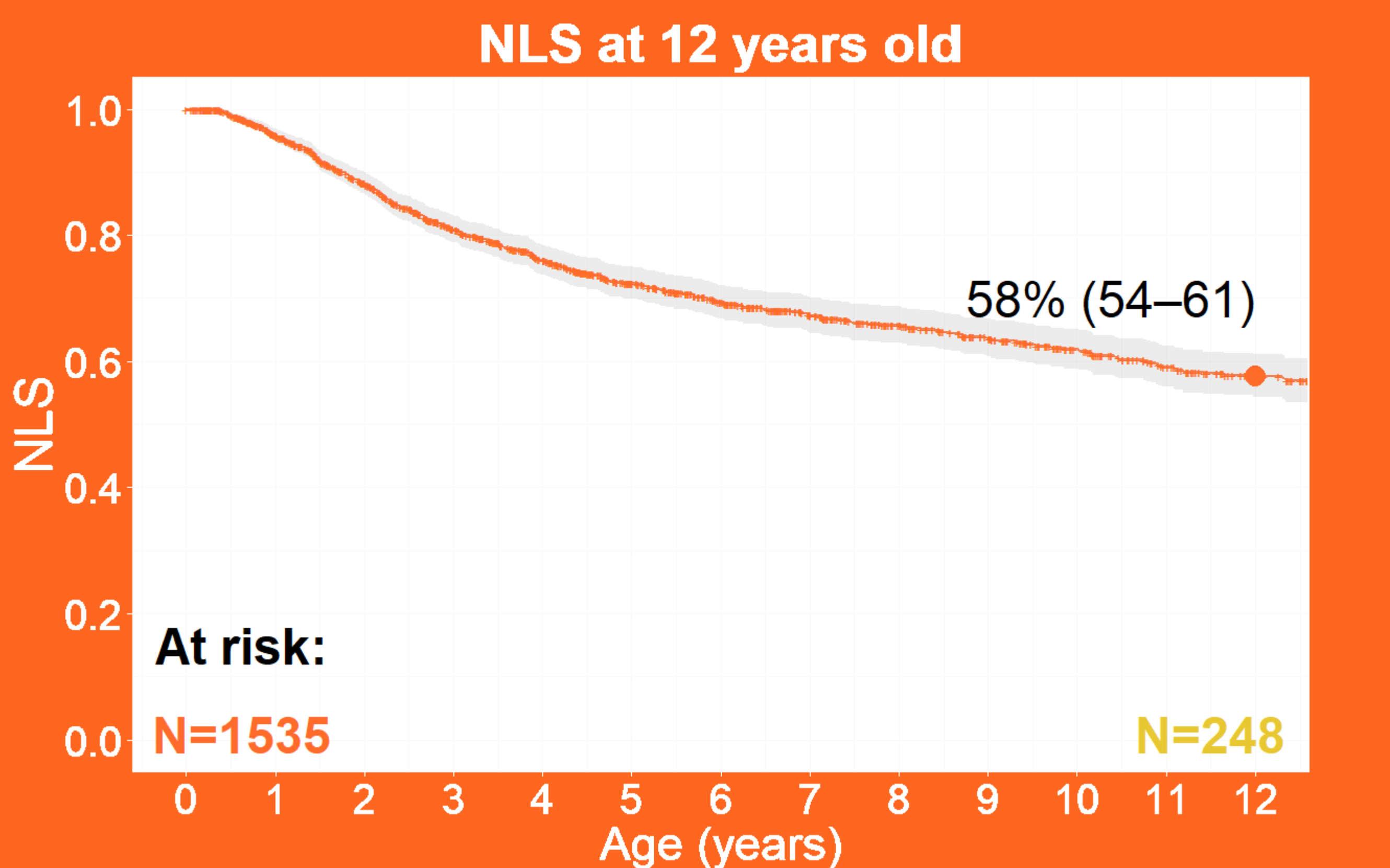
Results

Cohort	
248 patients were included in the analysis.	
Patient characteristics	Biomarker values at 12 years old
55% males	Total bilirubin (mg/dL) 1.2 (0.5–3.1)
95% <i>JAG1</i> , 5% <i>NOTCH2</i> mutation	Platelets (10 ⁹ /L) 239 (182–303)
37% Europe, 40% North America, 23% elsewhere	sBA (μmol/L) 248 (181–417)
8% surgical intervention before 12 years old	



Conclusions

In total, 58% (N=248; 95% CI: 54–61%) of children reached 12 years of age with their native liver.



Reaching adulthood with a native liver is less common in patients who underwent surgical intervention in childhood.

Total bilirubin levels and platelet count at 12 years of age are associated with NLS in adulthood.

Total bilirubin, sBA levels, and platelet count measured prior to 12 years of age are predictors of NLS at 12 years of age

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