

ALL IC-BFM REL 2016

Intercontinental Registry Trial for children with first relapse of ALL

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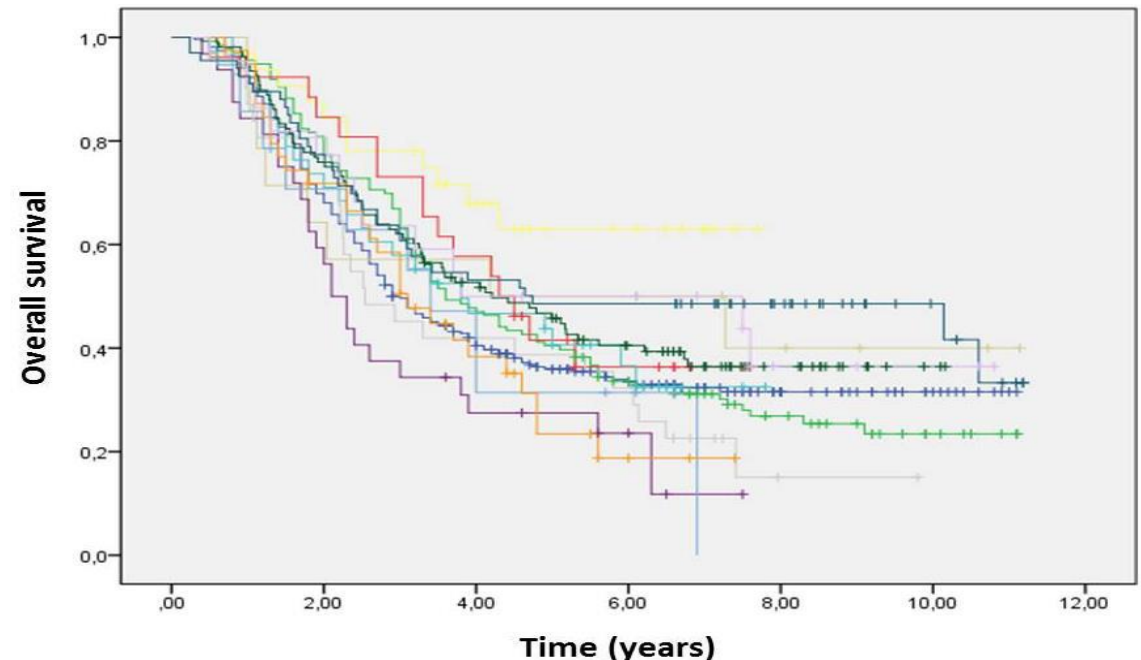
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The **Acute Lymphoblastic Leukaemia Inter-Continental (ALL-IC) Study Group** represents a model for wide, international collaboration. By standardizing therapy and involving flow cytometry based MRD in treatment stratification, frontline ALL outcomes greatly improved.



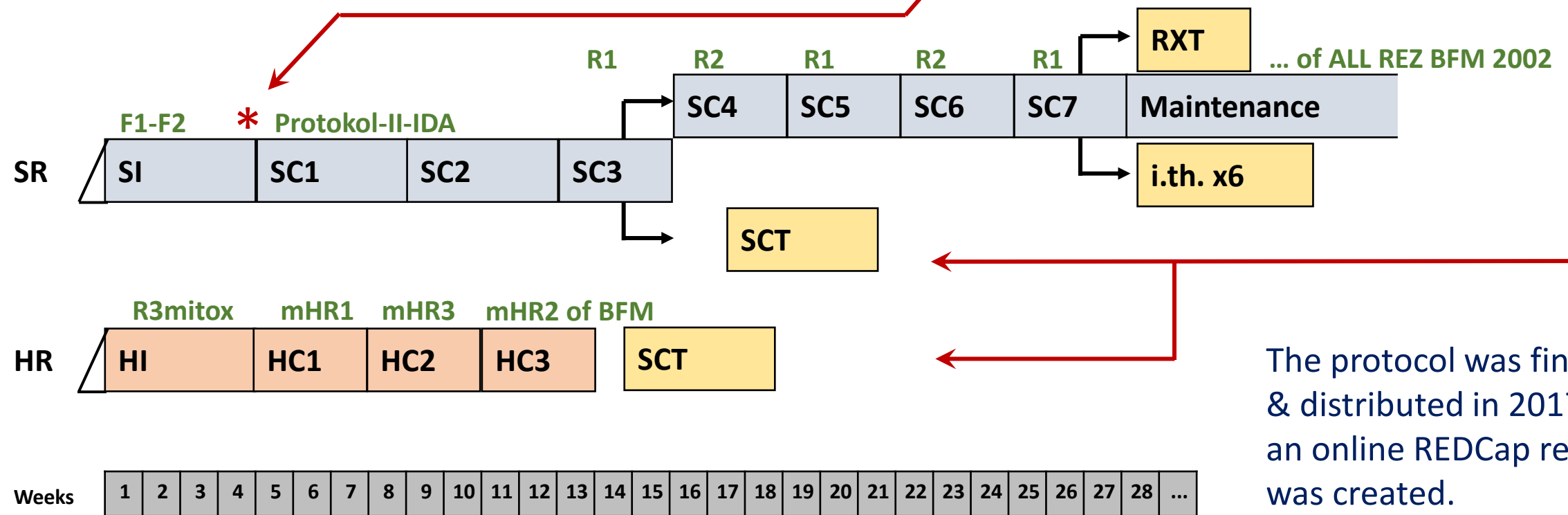
Vastly heterogenous, insufficient survival of 843 patients who relapsed on ALL IC-BFM 2002 trial, in national study groups using various relapse protocols (analysed in 2013)

ALL-IC REL 2016 protocol and REDCap registry

Risk stratification algorithms, standard arm chemotherapy backbones, SCT indications of IntReALL 2010 SR and HR study were applied with minimal changes but with flow cytometry MRD measurement.

SCT indications:

- all HR patients
- SR patients with end-induction MRD $\geq 0.1\%$ by flow cytometry*, also depending on donor type and availability



The protocol was finalised & distributed in 2017 and an online REDCap registry was created.

Inclusion criteria:

- 1st relapse of precursor ALL
- Age 0-18 years at the time of relapse
- Center has access to flow cytometry MRD measurement as per standards of the ALL IC-BFM 2009 study.

Exclusion criteria:

- Mature B-ALL
- Pregnant patient
- Lactation
- No consent

Study population:

N=188

Classic risk stratifiers:

	Non-T immunophenotype			T immunophenotype		
	Isolated extramedullary	Combined	Isolated marrow	Isolated extramedullary	Combined	Isolated marrow
Very early	HR	HR	HR	HR	HR	HR
Early	SR	SR	HR	SR	HR	HR
Late	SR	SR	SR	SR	HR	HR

Genetic stratifiers for HR:

- t(1;19) *TCF3/PBX1*
- t(17;19) *TCF3/HLF*
- *TP53* mutations or deletion
- *NT5C2* mutations
- *KMT2A* rearrangements
- iAMP21
- ≤44 chromosomes
- Phil+ or *ABL* class fusion post TKI

Patient population:

Argentina GATLA N=54*
Bulgaria N=8
Chile N=37*
Greece N=15
Hungary N=17*
Romania N=6
Slovenia N=5*
Turkey N=46

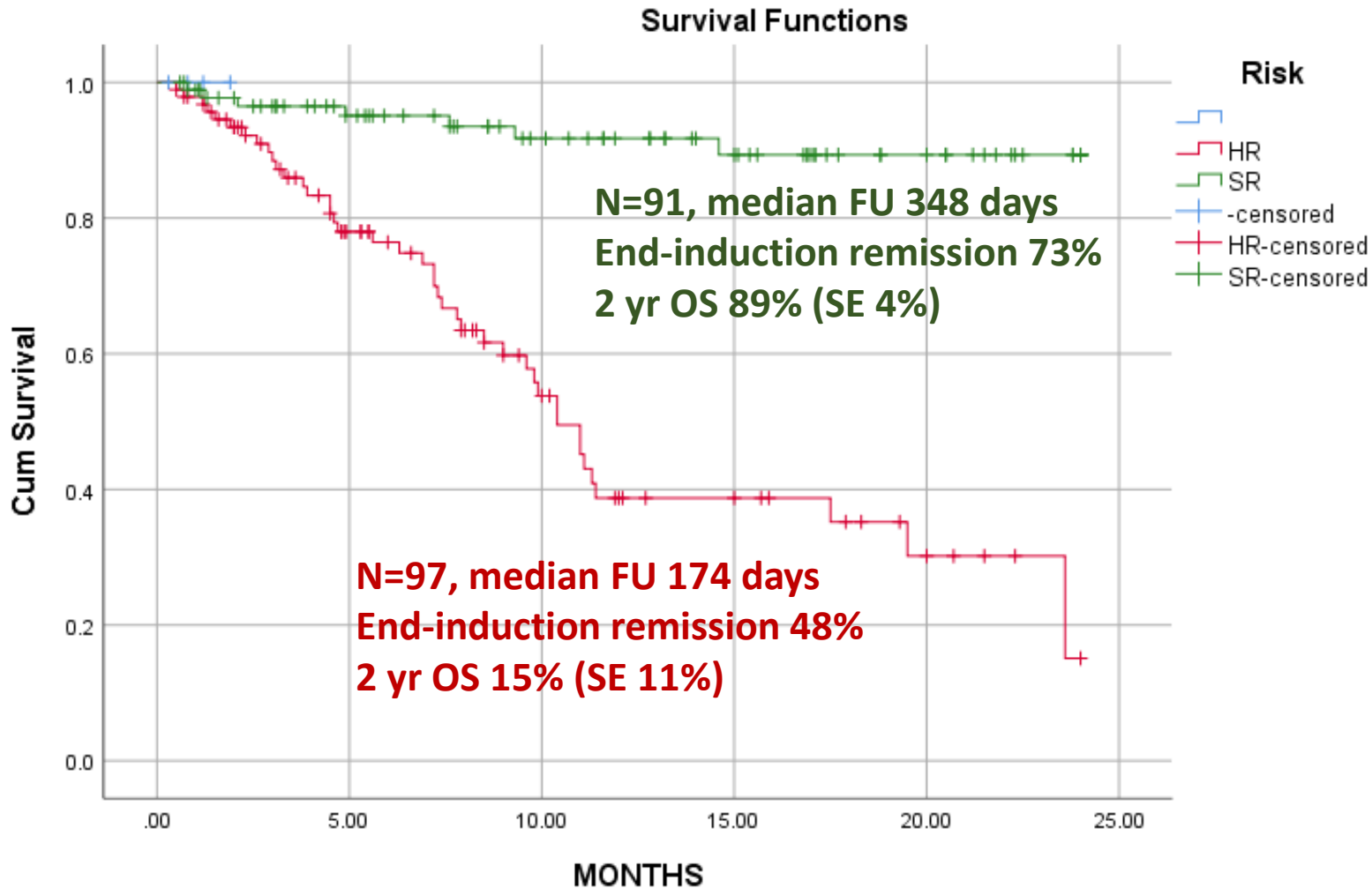
Subgroups:

T-cell: 8%
Very early: 28%
Early: 31%, Late: 41%
Isol. extramedullary: 18%
Isol. medullary: 65%
Combined: 17%
Down's sy: 2%

* full, representative population of the given group

Results as of January 2020

(analysing patients who relapsed in 2017-2019)



Conclusions

SR group outcome is better than expected

Possibly better chemosensitivity due to issues of the frontline therapy?

No need to change strategy.

HR group outcome is dismal, very few survive

Incorporation of immunotherapy in a new protocol version is mandatory!

Further countries are invited to join our group and registry, non-ALL-IC groups inclusive.