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Philadelphia chromosome-like acute lymphoblastic leukemia in adults have frequent *IGH-CRLF2* and *JAK2* mutations, persistence of minimal residual disease and poor prognosis

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Contributions: T.H., K.H.M., S.S., L.H. and N.G. conceived and designed the experiments. T.H., K.H.M., M.N., L.H., B.K., K.B., N.H., I.S., E.Z. and M.B. performed experiments. T.H., M.N. V.J. and K.G.R analyzed the molecular data. N.G. analyzed the clinical data. K.H.M. performed NGS data analysis. M.N., K.G.R, V.J. and U.M. provided bioinformatics support. S.S., M.N., L.H., N.P.K., P.A.G., B.K., K.B., N.H., I.S. E.Z., S.K.B., C.D.B. and K.S. characterized patient samples; N.G. and D.H. coordinated the GMALL clinical trials. U.M., K.S., W.S., S.K.B., C.D.B., C.G.M, M.D. and N.G. supervised the project. T.H., K.H.M., M.D., C.D.B., S.K.B. and N.G. wrote the manuscript