LETTER TO THE EDITOR

B-lineage acute lymphoblastic leukemia causes cell-autonomous defects in long-term hematopoietic stem cell function

Christina T. Jensen,[1] Josefine Åhsberg,[2] Johanna Tingvall-Gustafsson,[1] Rajesh Somasundaram,[2] Stefan Lang,[1] Jonas Ungerbäck,[1] Anna Porwit,[3] Shamit Soneji[1] and Mikael Sigvardsson[1,2]

[1]Division of Molecular Hematology, Lund University, Lund; [2]Department of Clinical and Experimental Medicine, Linköping University, Linköping; and [3]Division of Pathology, Lund University, Lund, Sweden.

Correspondence:
M. SIGVARDSSON - mikael.sigvardsson@med.lu.se

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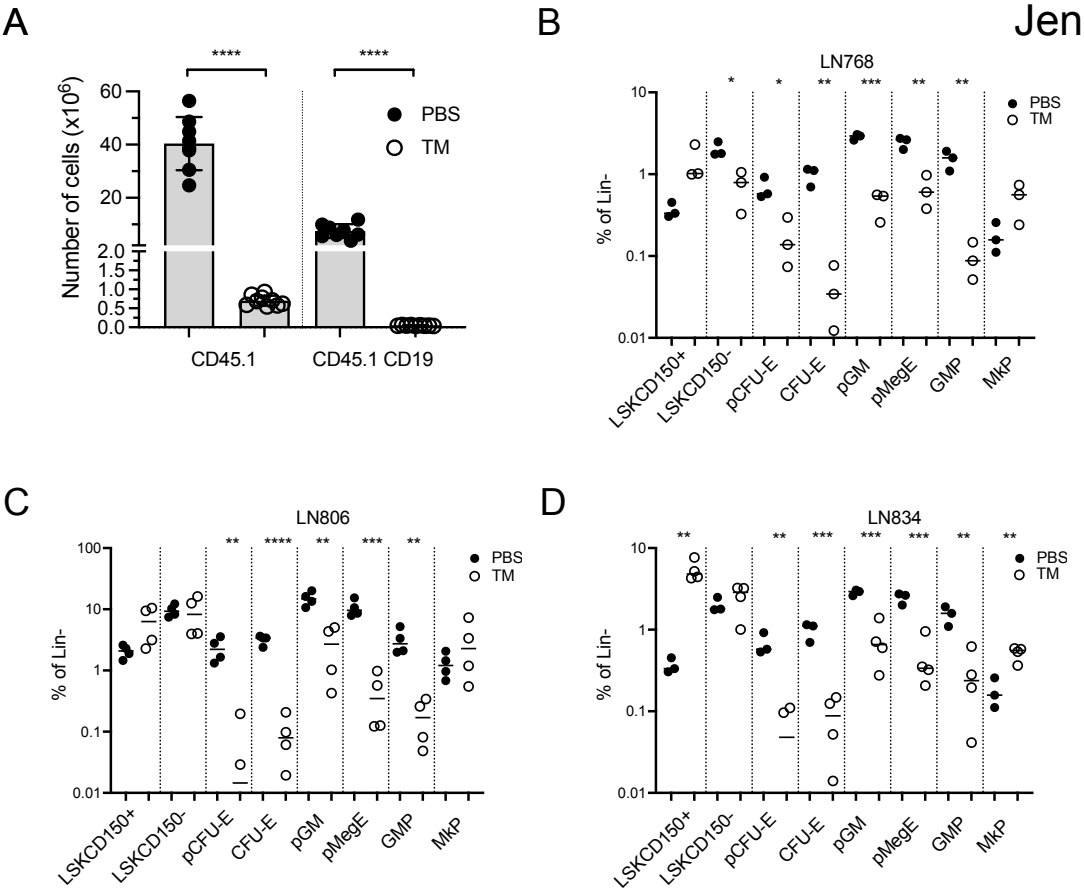

Figure S1: Leukemia causes a selective depletion of lineage restricted progenitors with a preserved HSC compartment.

(A) The graph shows the total endogenous cell contribution (CD45.1+ and CD45.1+CD19+) to the BM at 22 days in PBS or tumor transplanted (TM) CD45.1 mice. **** $p < 0.0001$ (Student's t test), from a total of 8 PBS and 9 TM samples per condition from 2 independent experiments. The graphs display the percentage of BM progenitors of Lin- cells in PBS or tumor transplanted CD45.1 mice where the tumor engraftment exceed 60% of the BM in TM samples (B) LN768, (C) LN806 and (D) LN834. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$ (Student's t test), from a total of 4 PBS (control for LN806) and 4 LN806 samples and 3 PBS (the same controls for LN768 and LN834 as done in the same experiment), 3 LN768 and 4 LN834 samples. In panels C and D, two TM mice showed undetectable numbers of pCFU-E cells.

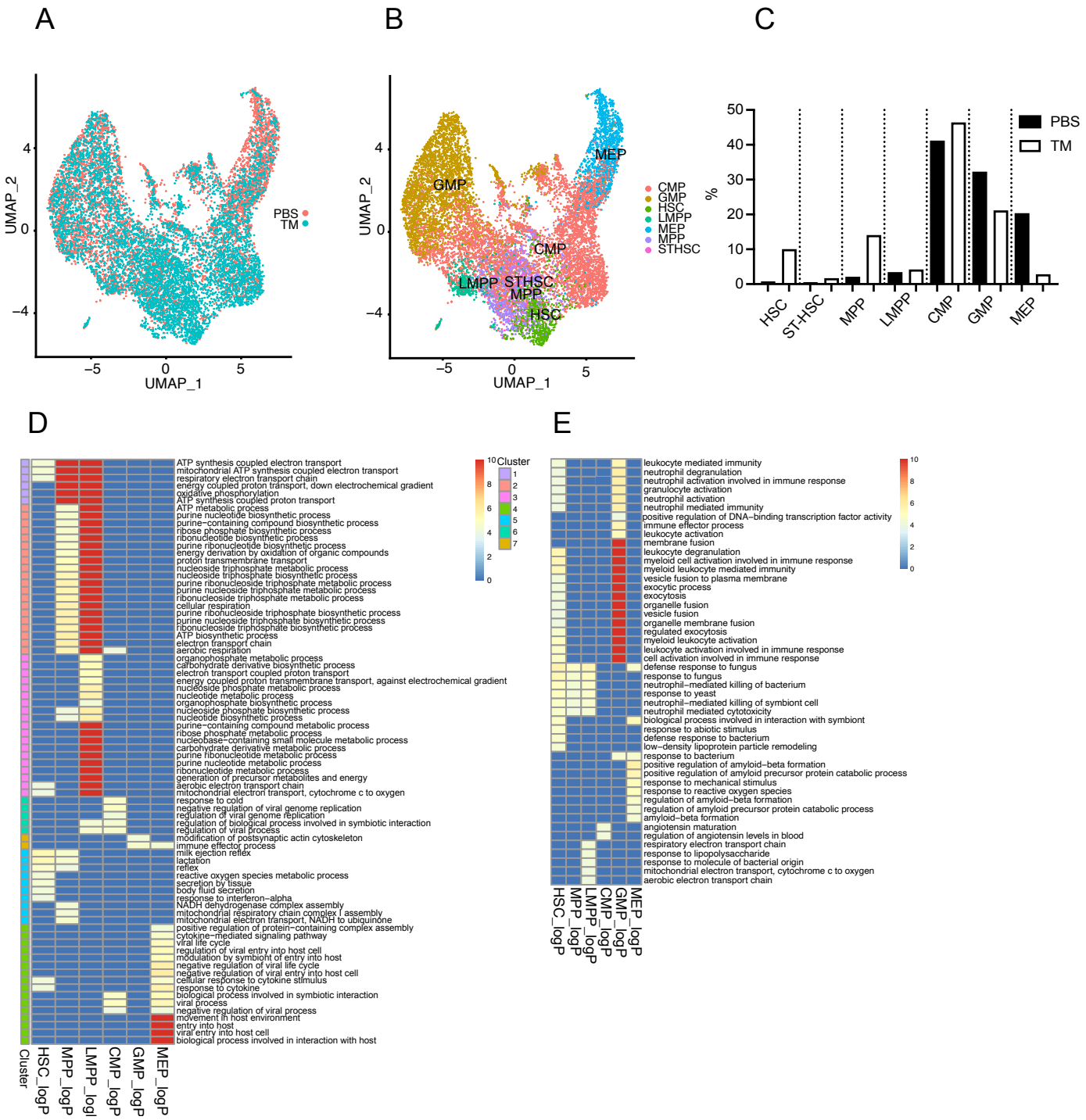

Figure S2 : Leukemia exposure impacts gene expression patterns in non-transformed progenitor compartments in the BM.

(A) UMAP with single cell RNA sequencing data of 11,764 KIT +Lin-CD45.2-CD45.1+ BM cells merged from PBS and TM injected mice.

(B) Shows a UMAP indicating specific progenitor populations according to Nesterowa et al.

(C) The frequencies of each population in leukemic and control BM.

(D) A heatmap showing enriched ontologies from differentially expressed upregulated genes in TM over PBS cells within an assigned cell type.

(E) A heatmap showing enriched ontologies from differentially expressed downregulated genes in TM over PBS cells within an assigned cell type.

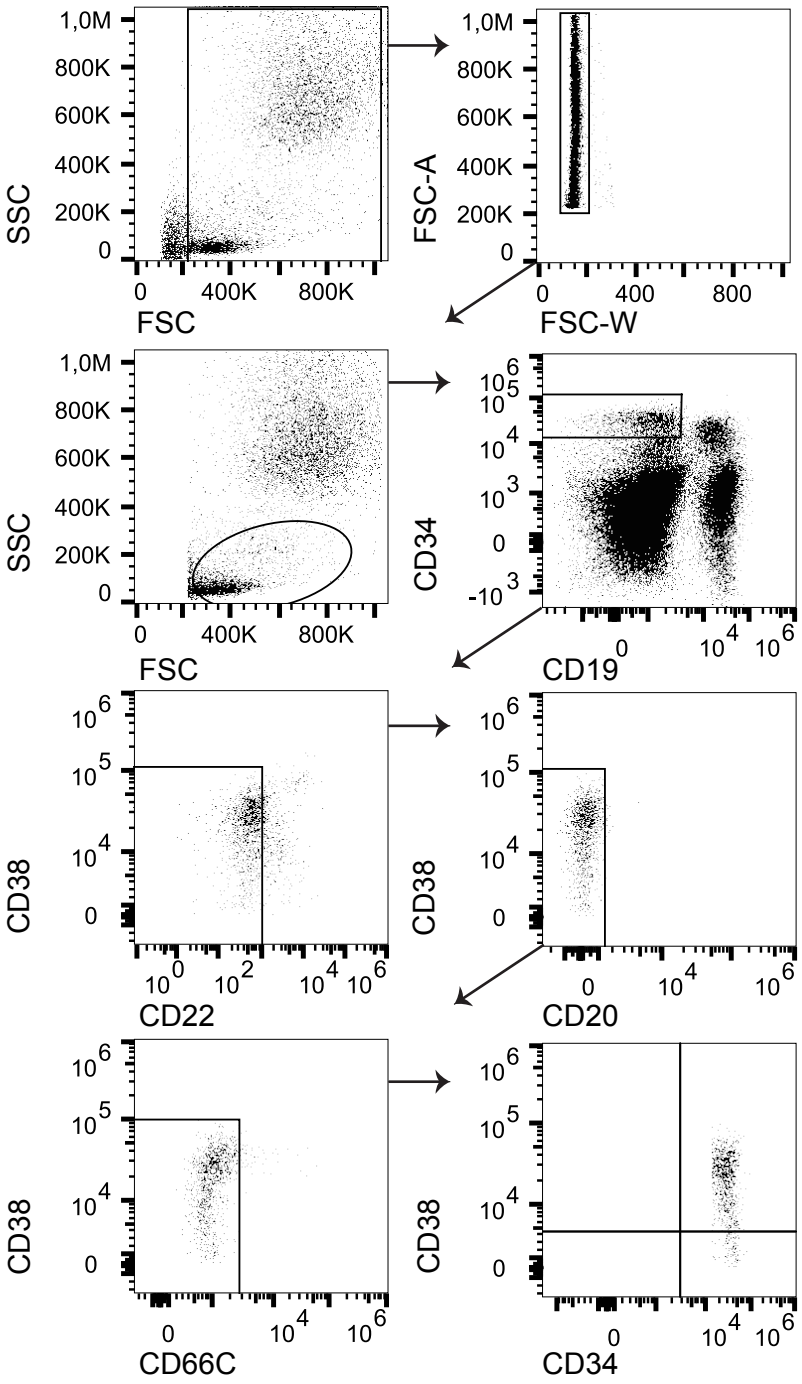

Figure S3: Reanalysis of patient data allows for the identification of endogenous progenitor cell compartments in leukemia.
Flow cytometry profiles showing the gating strategy for analyzing HSC and progenitors in patient BM applied in Figure1 and 2.