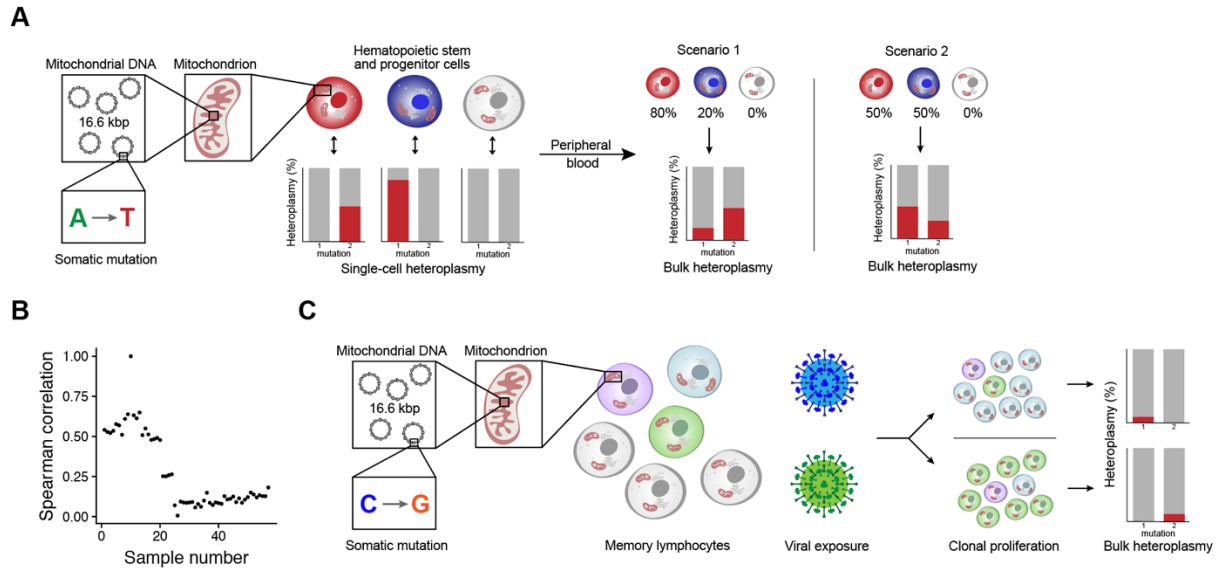
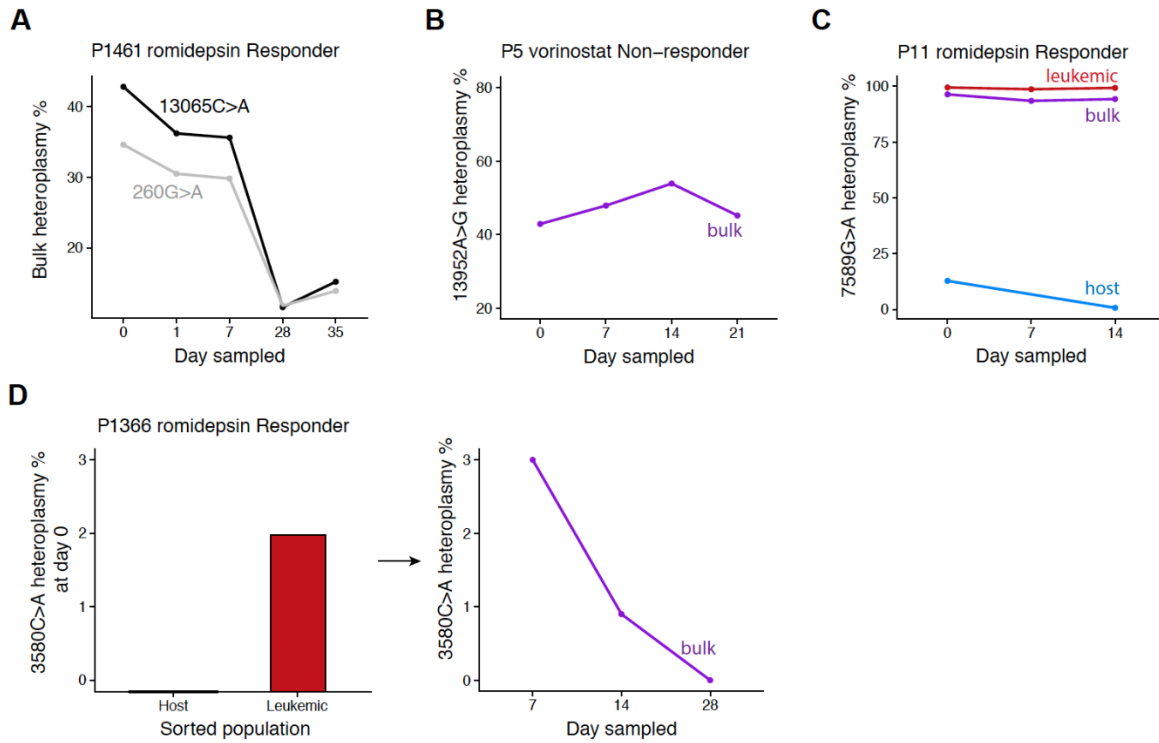


## Supplemental information for

### Longitudinal assessment of clonal mosaicism in human hematopoiesis via mitochondrial mutation tracking



**Figure S1 - Theoretical basis for heteroplasmy variation *in vivo*.** (A) Schematic illustrating how the varying contributions of progenitor cells, carrying specific somatic mtDNA mutations at indicated allele frequencies, may affect heteroplasmy levels in bulk population level measurements of peripheral blood. (B) Spearman correlation of 57 time points (ordered by relative time of sampling) across time points sampled. Correlation value is measured with the tenth sample. Compare to Fig. 1C. (C) Schematic illustrating how the clonal expansion of antigen-specific lymphocytes carrying clone-specific somatic mtDNA mutations may lead to fluctuations in heteroplasmy levels in bulk population level measurements of peripheral blood.



**Figure S2 - Supporting evidence for mtDNA mutation dynamics in response to therapeutic treatment cases of CTCL *in vivo*.** (A) Examples of two mutations losing heteroplasmy over 5 weeks of sampling from a responder treated with romidepsin. (B) Example of a heteroplasmic mutation that persists at steady states across three weeks in a non-responder to vorinostat treatment. (C) Heteroplasmy of 7586G>A mutation as measured in bulk peripheral blood and enriched leukemic or host cells over two weeks of treatment in patient P11, who responded to romidepsin therapy. Note loss of heteroplasmy in the host cells, but stable levels in the leukemic population, suggesting persistence of leukemic cells carrying the 7586G>A allele. (D) Heteroplasmy of the 3580C>A allele present in enriched leukemic cells, but absent in host cells at day 0 of treatment (left). Loss of the 3580C>A allele in bulk peripheral blood at the indicated time points following start of treatment, suggesting therapy-sensitivity of leukemic cells carrying the respective allele (right). We note that other populations (e.g. sorted after day 0) were not available.