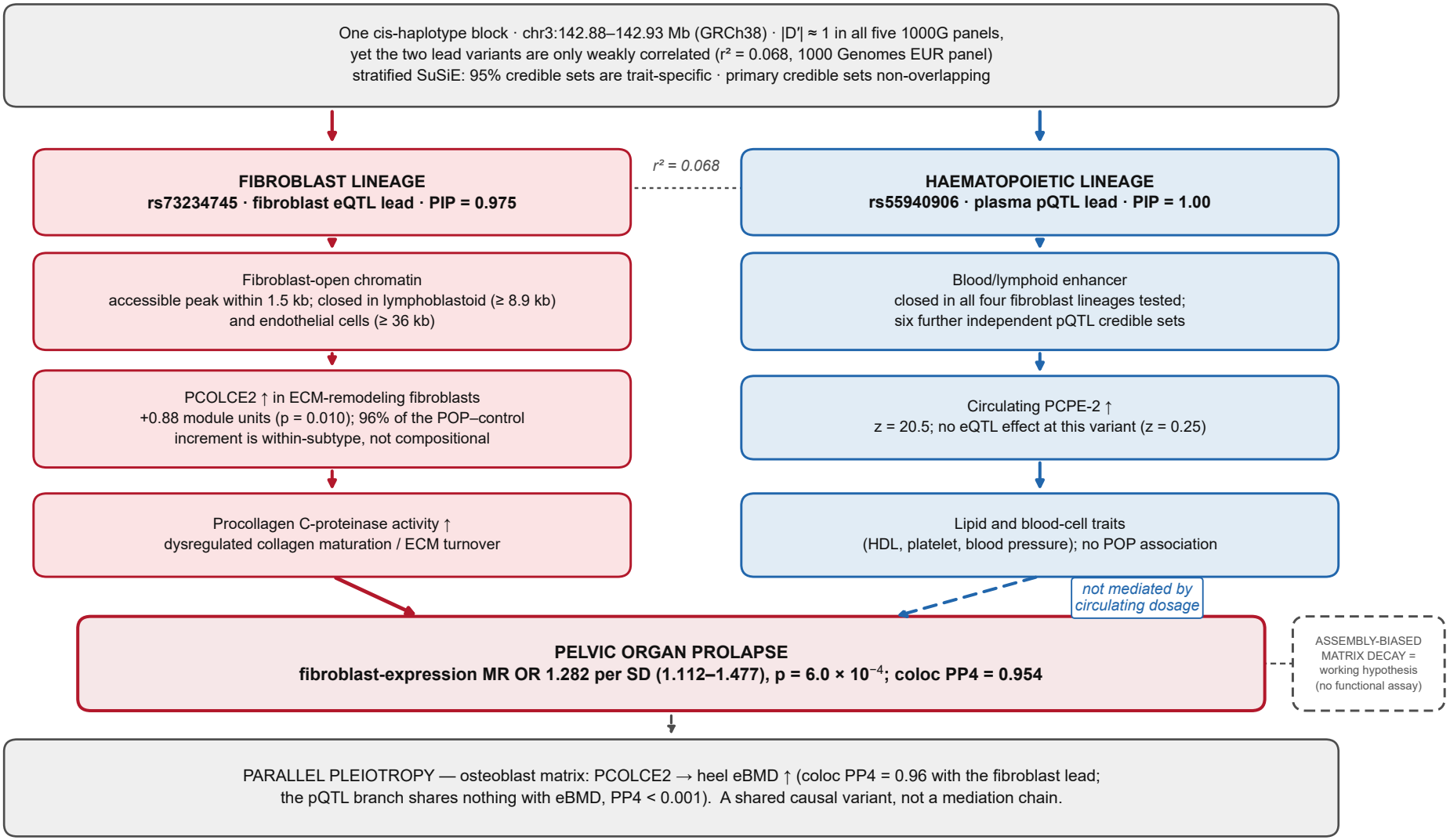
Decoupled cell-type-specific cis-regulatory signals within a single linkage disequilibrium block

One signal alters fibroblast PCOLCE2 expression and confers genetic susceptibility to pelvic organ prolapse;
a second independent signal regulates circulating PCPE2 protein levels without contributing to prolapse risk.

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All regulatory relationships represent statistical inference from fine-mapping, colocalization and MR; not directly validated by functional assays.

Evidence per link — genetic: two-sample MR, coloc, CAUSE, stratified SuSiE; chromatin: ENCODE ATAC-seq (4 fibroblast + 2 non-fibroblast references) and Roadmap states; cellular: single-cell decomposition (GSE151192, 61,962 fibroblasts).
Dashed blue arrow = tested and rejected. Dashed grey box = working hypothesis, not established by this study. No arrow is drawn from the haematopoietic branch to POP because that path is null in every analysis performed.