

Supplementary information

Integrated multi-omic characterization of congenital heart disease

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SI Guide

Supplementary Table 1: Patient sample information. Table contains sample information, and highlights which samples were used for snRNA-seq, PCM1 ATAC-seq, NK and/or CD14 ATAC-seq, PBMC scRNA-seq, IMC and histology.

Supplementary Table 2: Table with patient clinical information and metadata.

Supplementary Table 3: Differentially expressed marker genes for cardiac snRNA-seq. Related to Fig. 1b.

Supplementary Table 4: Venn diagram results from pseudo-bulk RNA-seq analysis of cardiac snRNA-seq data. Intersections are between genes differentially expressed by CHD diagnosis versus donor. Related to Extended Data Fig. 2f.

Supplementary Table 5: Differential gene expression for cardiomyocyte subclusters. Related to Fig. 2.

Supplementary Table 6: Venn diagram results from intersection of snRNA-seq and cardiomyocyte-specific ATAC-seq. Related to Fig. 2 and Extended Data Fig. 3f.

Supplementary Table 7: Differential gene expression for cardiac fibroblast subclusters. Related to Fig. 3.

Supplementary Table 8: Differential gene expression for endothelial cell subclusters. Related to Extended Data Fig. 5.

Supplementary Table 9: Differential gene expression for cardiac immune cell subclusters. Related to Fig. 6.

Supplementary Table 10: Differential gene expression for all PBMC clusters. Related to Extended Data Fig. 8b.

Supplementary Table 11: Differential gene expression for all myeloid clusters. Related to Extended Data Fig. 8h.

Supplementary Table 12: Differential gene expression for all NK cell clusters. Related to Extended Data Fig. 8k.

Supplementary Table 13: Differential chromatin accessibility analysis comparing NK and CD14 cell populations. Related to Extended Data Fig. 9b.

Supplementary Table 14: List of all the cytokines profiled that were co-expressed in PBMCs. Related to Extended Data Fig. 9d.

Supplementary Table 15: List of all the receptors expressed in cardiac cells that can bind to profiled cytokines found in patient serum. Related to Extended Data Fig. 9e.

Supplementary Table 16: Ligand-receptor pair data for cardiac cells and cytokine profiles of CHD serum. Related to Extended Data Fig. 9f.

Supplementary Table 17: Cardiac snRNA-seq quality control data.

Supplementary Table 18: All antibodies used in this study for IMC, and immunofluorescence, as well as all of the RNAScope probes used.