<Supplementary data>

**Supplementary Figure 1. Flowchart for DMR, CMR and SFR sorting.**

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**Supplementary Figure 2. Venn diagram shows count of DMR between patient tissue and plasma.**

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**Supplementary Figure 3. Determination and calculation of CMR.** (A) Schematic diagram and definitions of regions, windows, and peaks of CMR. (B) Graph shows the peak number of 22 pairs of cancer patient samples individually. (C) and (D) Graphs show number and similarity of CMRs between tissue and plasma from each patient.