

Supplemental figures

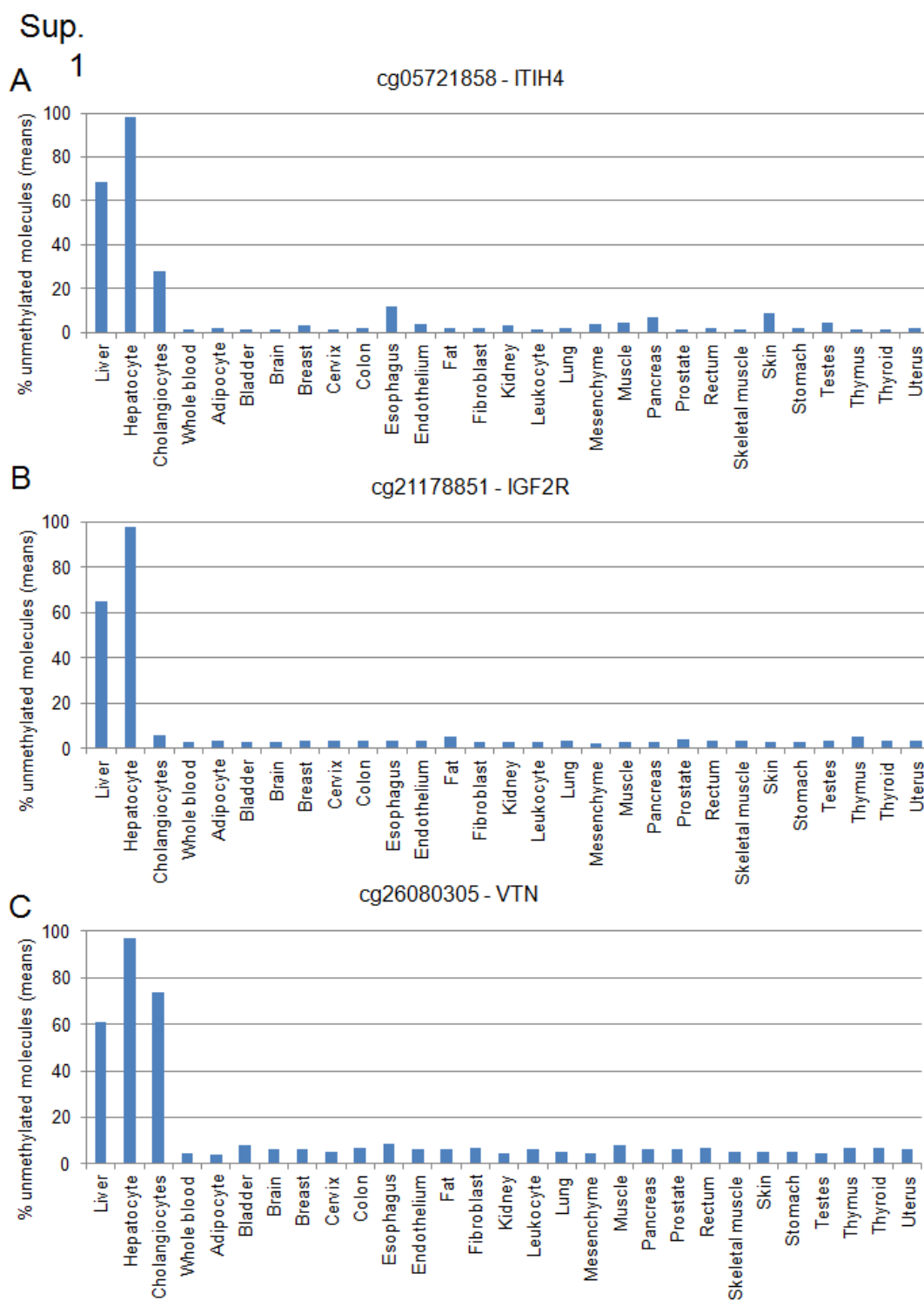


Figure S1: Identification of liver-specific DNA methylation markers using methylome datasets.

Methylation status of the individual CpG site at the ITIH4 locus (A), IGF2R locus (B) and VTN locus (C) that is captured in the Illumina 450k array.

Sup. 2

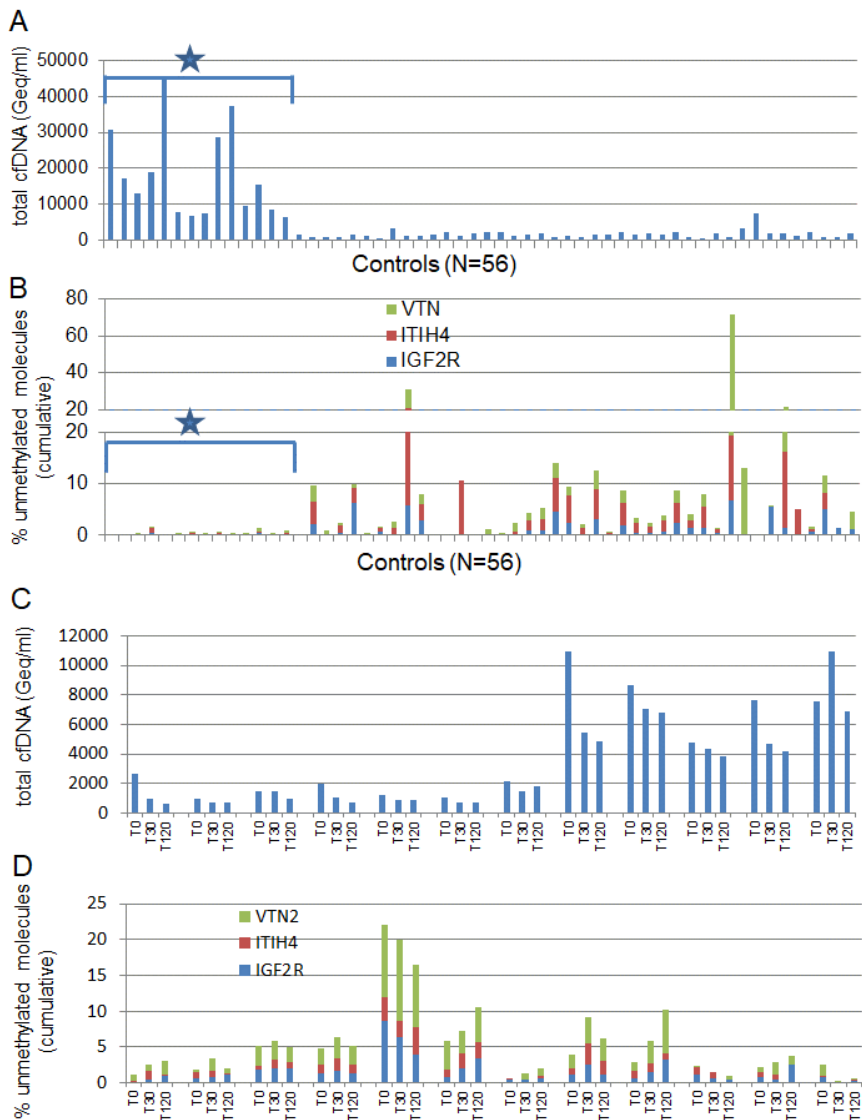


Figure S2: Liver derived cfDNA in healthy controls

A. Total cfDNA concentration measured per ml plasma. Star indicates plasma samples that were isolated after a prolonged incubation of blood at room temperature, leading to the release of DNA from lysed leukocytes and therefore increased concentration of total cfDNA.

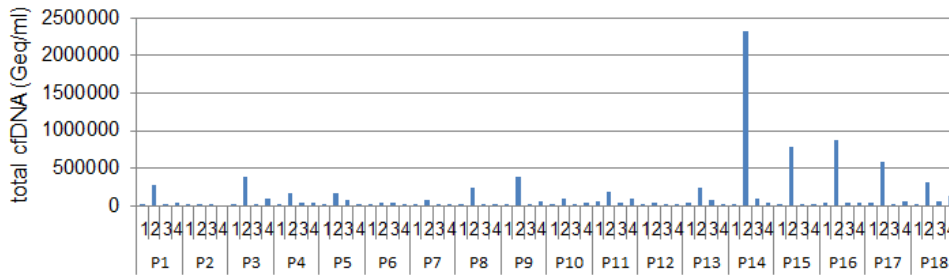
B. Percentage of hepatocyte-derived cfDNA in the plasma of healthy controls. Green, red and blue indicate percentage measured by the VTN marker, ITIH4 marker and IGF2R marker respectively. Note that individuals with higher total cfDNA had a lower proportion of hepatocyte cfDNA.

C. Total cfDNA concentration per ml plasma in healthy individuals sampled at three time points. T0 – after a twelve hour fast, T30 – 30 minutes after a meal, T120 – 2 hours after a meal.

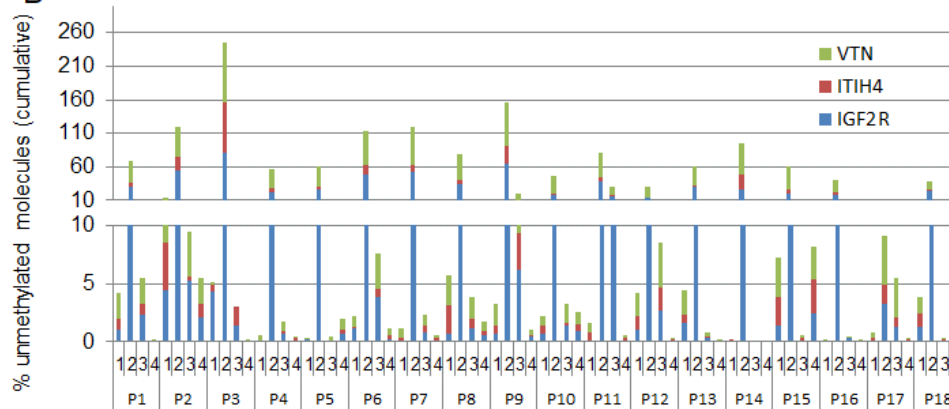
D. Percentage of hepatocyte-derived cfDNA in the plasma of healthy controls at three time points. Green, red and blue indicate percentage measured by the VTN marker, ITIH4 marker and IGF2R marker respectively.

Sup. 3

A



B



C

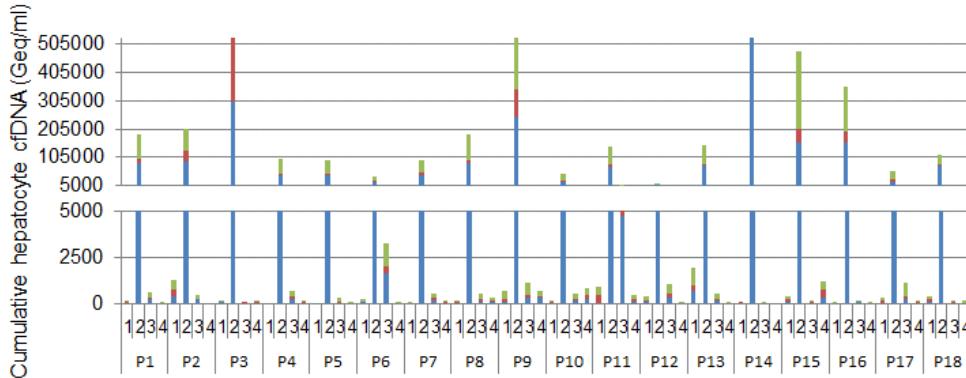


Figure S3: Percentage and concentration of hepatocyte cfDNA in liver transplantation patients.

A. Total cfDNA concentration measured in ml plasma of liver transplant recipients at the indicated time points. 1- pre transplant, 2- post reperfusion, 3- ~9 days after transplantation, 4- ~43 days after transplantation.

B. Percentage of hepatocyte-derived cfDNA in the plasma of liver transplant recipients. Green, red and blue indicate percentages measured by the VTN, ITIH4 and IGF2R markers respectively.

C. Concentration of hepatocyte-derived cfDNA, calculated by multiplying the fractional value of each marker by the total concentration of cfDNA.

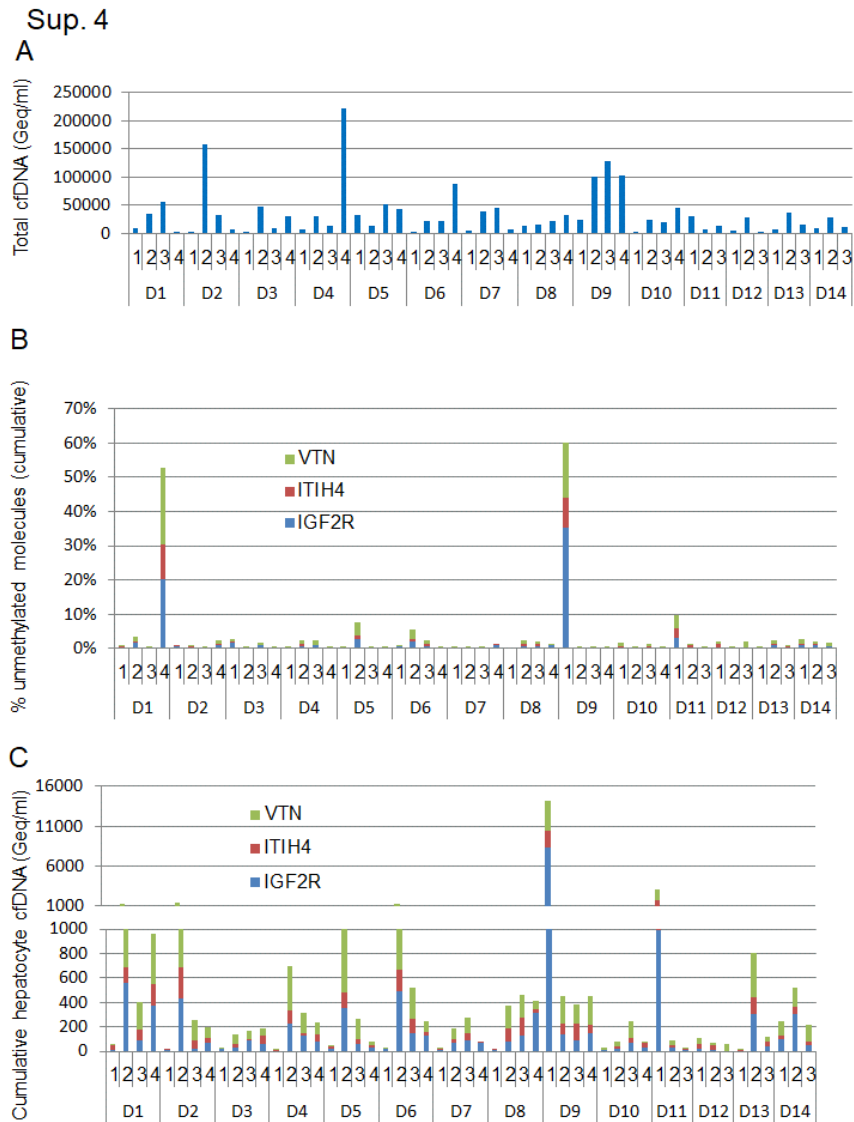


Figure S4: Percentage and concentration of liver cfDNA after partial hepatectomy.

A. Total cfDNA concentration measured per ml plasma. 1- before hepatectomy, 2- 12 days post hepatectomy, 3- 30 days post hepatectomy, 4- 95 days post hepatectomy.

B. Percentage of hepatocyte-derived cfDNA in the plasma of live donors. Green, red and blue indicating percentages measured by the VTN, ITIH4 and IGF2R markers respectively.

C. Concentration of hepatocyte-derived cfDNA, calculated by multiplying the fractional value of each marker by the total concentration of cfDNA.

Sup. 5

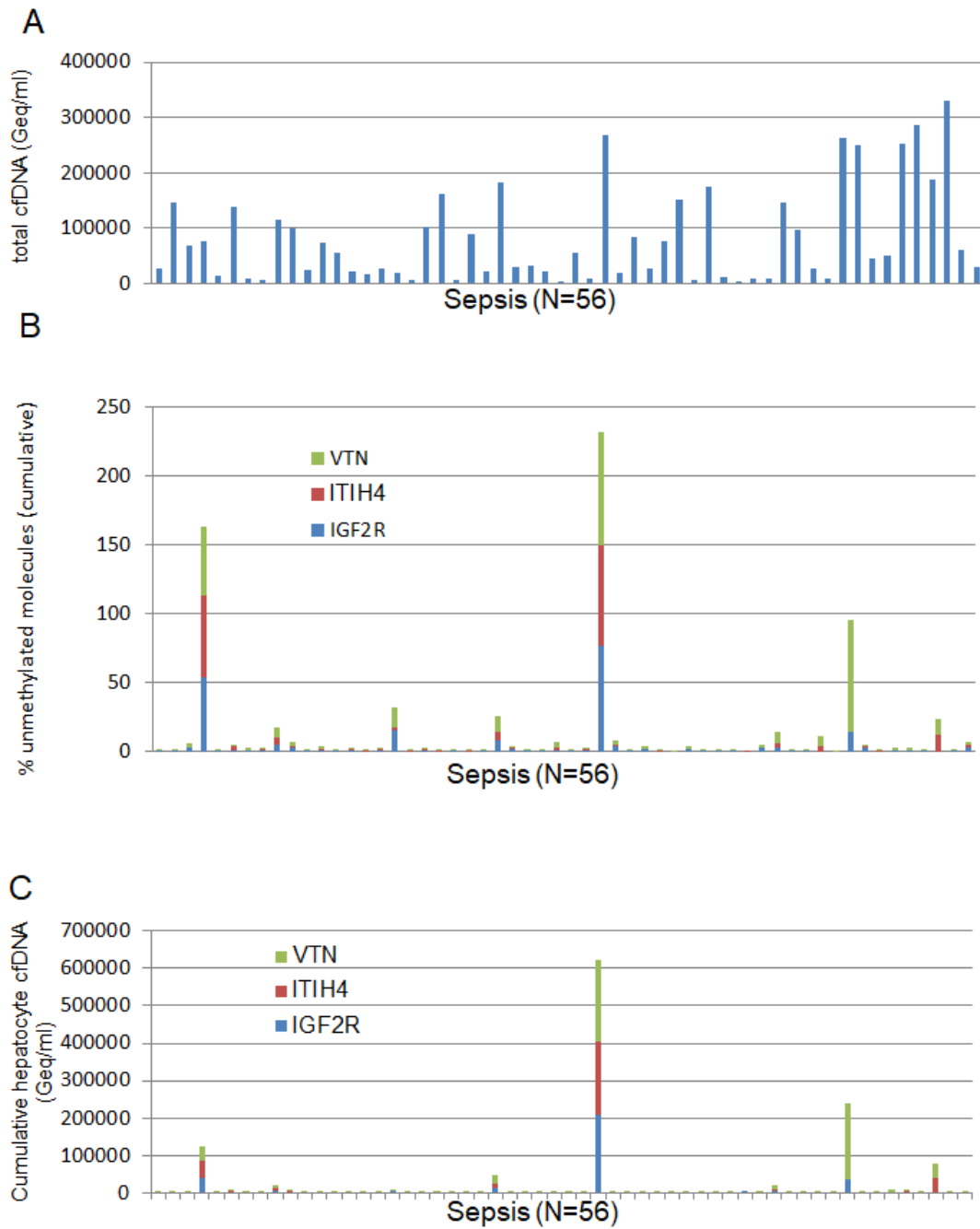


Figure S5: Percentage and concentration of liver markers in sepsis patients

A. Total cfDNA concentration per ml plasma in sepsis patients

B. Percentage of hepatocyte-derived cfDNA in sepsis patients. Green, red and blue indicate percentages measured by the VTN, ITIH4 and IGF2R marker respectively.

C. Concentration of hepatocyte-derived cfDNA, calculated by multiplying the fractional value of each marker by the total concentration of cfDNA.

Sup. 6

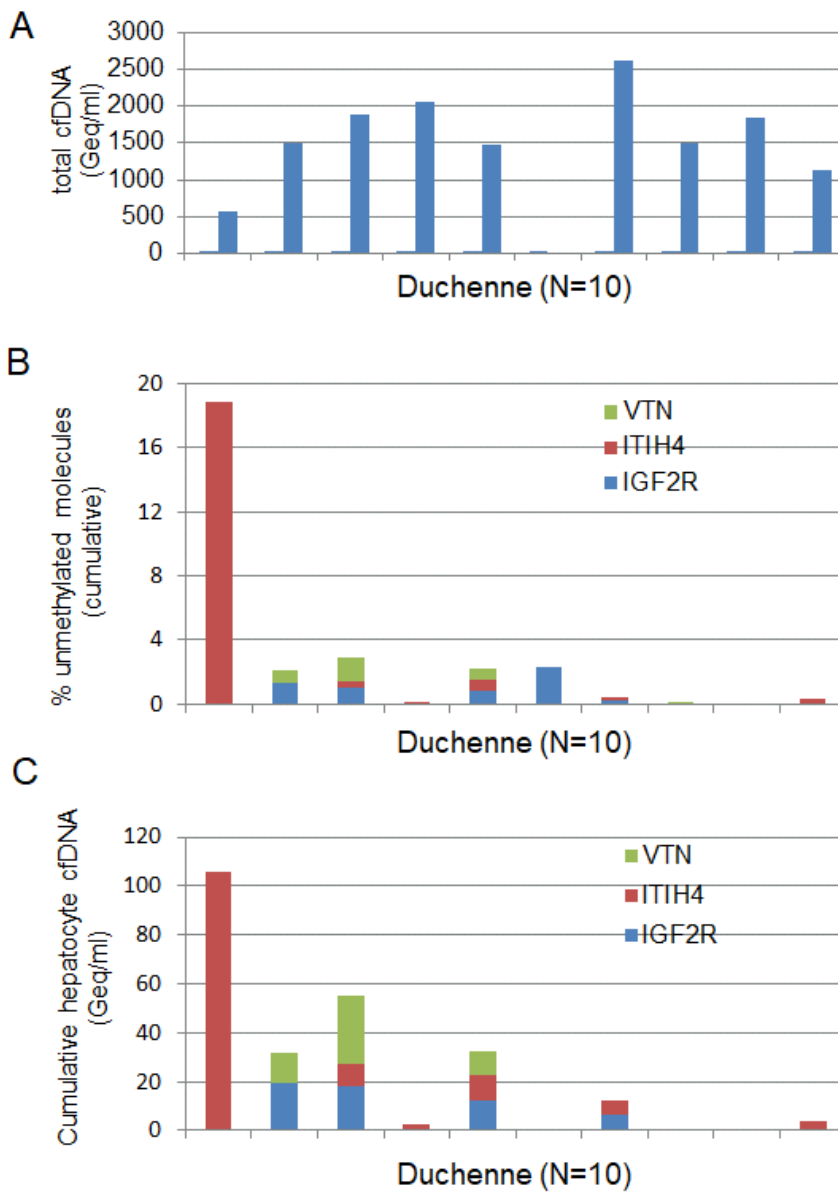


Figure S6: Percentage and concentration of liver markers in DMD patients

A. Total cfDNA concentration per ml plasma in DMD patients

B. Percentage of hepatocyte-derived cfDNA in DMD patients. Green, red and blue indicate percentages measured by the VTN, ITIH4 and IGF2R marker respectively.

C. Concentration of hepatocyte-derived cfDNA, calculated by multiplying the fractional value of each marker by the total concentration of cfDNA.