

THE ALSPAC STUDY

Child based Metabolomics results

**Prepared by
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Documentation summarising the data available and the variable names.

Last updated for version 3a of the RELEASE file.

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Introduction

This documentation gives a summary of the variables available from the metabolomics assays and the methods by which they were processed. Although there were slight differences in the methods used between Focus@7/TF3/TF4 and Focus@24 samples/Before Breakfast Study (BBS), the Focus@24 and BBS data are directly comparable to previous data.

Focus@7, TF3 and TF4 Methods:

Assays were performed using high-throughput proton (^1H) Nuclear magnetic resonance (NMR) on plasma samples. These assays were performed in collaboration with Professor Mika Ala-Korpela and his lab in Finland.

^1H NMR measurements were acquired for three molecular windows: lipoprotein lipids (LIPO), low molecular-weight metabolites (LMWM) and lipid extracts (LIPID). The LIPO and LMWM windows were acquired at 500 MHz on native plasma and the LIPID window was acquired at 600 MHz on lipid-extracted plasma samples. The LIPO acquisition used the Bruker noesyprsat pulse sequence with an automatically calibrated 90° pulse, mixing time of 10 ms and an irradiation field of 25 Hz to suppress the water peak. The LMWM window was acquired using a Bruker CPMG pulse sequence with water suppression, and the LIPID window with a standard 1D sequence. Full experimental details for sample preparation, NMR analysis, and data processing/quantitation are provided in the following publications.

- Soininen et al. High-throughput serum NMR metabonomics for cost-effective holistic studies on systemic metabolism. *Analyst*, 2009; 134: 1781–1785
[<http://pubs.rsc.org/en/content/articlepdf/2009/an/b910205a>]
- Inouye *et al.* Metabonomic, transcriptomic, and genomic variation of a population cohort. *Mol.Syst. Biol* 2010; 6: 401.
[<http://msb.embopress.org/content/msb/6/1/441.full.pdf>]
- Kettunen J et al. Genome-wide association study identifies multiple loci influencing human serum metabolite levels. *Nature Genetics* 2012; 44: 2012 269.
[<http://www.nature.com/ng/journal/v44/n3/full/ng.1073.html>]

Focus@24 Methods:

Over 220 quantified metabolomic measures were obtained per sample of EDTA-plasma/serum, using a 1D proton (^1H) NMR spectroscopy-based platform described previously.^{1,2,3} Briefly, 70 μL plasma and 70 μL sodium phosphate buffer (75 mM Na_2HPO_4 , 0.08% sodium 3-(trimethylsilyl)propionate-2,2,3,3- d_4 , 0.04% sodium azide in 80%/20% $\text{H}_2\text{O}/\text{D}_2\text{O}$, pH 7.4) were mixed and transferred to 3 mm NMR tubes using an 8-channel,

Varispan Janus liquid handling robot (PerkinElmer). NMR spectra were acquired using a Bruker Avance III HD 600MHz spectrometer equipped with a nitrogen-cooled triple resonance probe (CryoProbe Prodigy TCI) equipped with SampleJet auto-sampler with cooled (6°C) sample storage. Spectra were acquired using standardized parameters using two NMR experiments or 'molecular windows' to characterize lipoproteins, low molecular weight metabolites and lipids. Data pre-processing and quantification were as previously described.^{1,2,3}

- ¹ Soininen P, *et al.* High-throughput serum NMR metabonomics for cost-effective holistic studies on systemic metabolism. *Analyst*. 2009;134;1781-1785
- ² Inouye M, *et al.* Metabonomic, transcriptomic, and genomic variation of a population cohort. *Mol. Sys. Biol.* 2010;6;441
- ³ Soininen P, *et al.* Quantitative serum nuclear magnetic resonance metabolomics in cardiovascular epidemiology and genetics. *Circ. Cardiovasc. Genet.* 2015;8;192-206

Before-Breakfast Study (BBS) Methods:

The methodology for processing the BBS metabolomics data was identical to the Focus@24 methods above.

As the BBS clinic does not have a separate documentation file containing details of the clinic methodology, a brief summary is presented below.

At eight years of age, just under 1,000 ALSPAC children were invited to attend the 'Before-Breakfast Study' (BBS). In this study, two blood samples were taken from all consenting participants in the morning, following an overnight fast. The first sample was a baseline, after which children were given an oral glucose solution (1.75 g/kg, max 75g) over the space of 5 minutes, followed by another blood samples 30 minutes after the glucose solution was taken. Therefore, the BBS metabolomics data contains two sets of data: baseline and post-glucose. BBS metabolomics data is available for 640 children.

For additional details on the BBS study and sampling procedure, see: Ong, K. K., Petry, C. J., Emmett, P. M., Sandhu, M. S., Kiess, W., Hales, C. N., ... & ALSPAC Study Team. (2004). Insulin sensitivity and secretion in normal children related to size at birth, postnatal growth, and plasma insulin-like growth factor-I levels. *Diabetologia*, 47(6), 1064-1070.

Note that samples from 7 (Focus@7) were non-fasting while samples from the Before-Breakfast Study (BBS), 15 year clinic (TF3), 17 year clinic (TF4) and 24 year clinic (Focus@24) were fasting.

Data are available for 5525 children at age 7, 640 at the BBS (age 8), 3366 at age 15, 3167 at age 17 and 3270 at age 24. Table 1 provides a list of all variable names and labels which may assist users who will be making formal data requests. Distributions of variables as received from the lab (prior to ALSPAC labelling) for Focus@7, BBS (although not separated by baseline or post-glucose conditions), TF3, TF4 and Focus@24 are shown in the Appendix – Focus@7, TF3 and TF4 are grouped together, while BBS and Focus@24 results are displayed separately afterwards (To differentiate them, in the top-left corner the combined Focus@7, TF3 and TF4 samples have 'ALSPAC 7-15-17', BBS samples have 'Nightingale ALBB', while Focus@24 samples have 'Nightingale ALTW').

Version History:

1a: Created February 2014

1b: Created October 2017 – Updated variable labels from 'mmol/l' to 'mol/l' for the following variables for both TF3 and TF4 clinics, as these were previously labelled incorrectly: XXLVDLP, XLVDLP, LVDLP, MVDLP, SVLDLP, XSVLDLP, IDLP, LLDLP, MLDLP, SLDLP, XLHDLP, LHDLP, MHDLP, SHDLP.

2a: Created March 2019 – Metabolomics data from the Focus@24 clinic has been added to this file. Sphingomyelin data from Focus@7, TF3 and TF4 has also been added to this release file. Some variable labels have also been shortened to less than 80 characters or otherwise altered for clarity (e.g., replacing 'lipds' with 'lipids').

3a: Created October 2019 – Metabolomics from the Before-Breakfast Study (BBS) has been added to this file. This includes both baseline and post-glucose metabolomics profiles for 640 children (see above for additional details).

IMPORTANT NOTE FOR ALL USERS: Please note that there are approximately 10 cases in the release file where all of the Focus@24 metabolomics data has been coded as missing a value of '-99' (meaning 'consent issue'). During the cleaning process, some discrepancies regarding consents were noticed. While the decision regarding these cases is still pending, and in order for the release of this data not to be delayed, they have temporarily been coded as missing. Once a decision has been made, these cases will be altered and the data in the release file and the documentation updated accordingly.

Table 1: Variable names and labels

| Variable Name | Variable Label |
|---------------|--|
| XXLVLDLP_F7 | Conc. of chylomicrons and extremely large VLDL particles (mol/l): F7 |
| XXLVDLL_F7 | Total lipids in chylomicrons and extremely large VLDL (mmol/l): F7 |
| XXLVLDLPL_F7 | Phospholipids in chylomicrons and extremely large VLDL (mmol/l): F7 |
| XXLVLDLC_F7 | Total cholesterol in chylomicrons and extremely large VLDL (mmol/l): F7 |
| XXLVLDLCE_F7 | Cholesterol esters in chylomicrons and extremely large VLDL (mmol/l): F7 |
| XXLVLDLFC_F7 | Free cholesterol in chylomicrons and extremely large VLDL (mmol/l): F7 |
| XXLVDLTG_F7 | Triglycerides in chylomicrons and extremely large VLDL (mmol/l): F7 |
| XLVLDLP_F7 | Concentration of very large VLDL particles (mol/l): F7 |
| XLVDLL_F7 | Total lipids in very large VLDL (mmol/l): F7 |
| XLVLDLPL_F7 | Phospholipids in very large VLDL (mmol/l): F7 |
| XLVLDLC_F7 | Total cholesterol in very large VLDL (mmol/l): F7 |
| XLVLDLCE_F7 | Cholesterol esters in very large VLDL (mmol/l): F7 |
| XLVLDLFC_F7 | Free cholesterol in very large VLDL (mmol/l): F7 |
| XLVDLTG_F7 | Triglycerides in very large VLDL (mmol/l): F7 |
| LVDLP_F7 | Concentration of large VLDL particles (mol/l): F7 |
| LVDLL_F7 | Total lipids in large VLDL (mmol/l): F7 |
| LVDLPL_F7 | Phospholipids in large VLDL (mmol/l): F7 |
| LVDLC_F7 | Total cholesterol in large VLDL (mmol/l): F7 |
| LVDLCE_F7 | Cholesterol esters in large VLDL (mmol/l): F7 |
| LVDLFC_F7 | Free cholesterol in large VLDL (mmol/l): F7 |
| LVDLTG_F7 | Triglycerides in large VLDL (mmol/l): F7 |
| MVDLP_F7 | Concentration of medium VLDL particles (mol/l): F7 |
| MVDLL_F7 | Total lipids in medium VLDL (mmol/l): F7 |
| MVDLPL_F7 | Phospholipids in medium VLDL (mmol/l): F7 |
| MVDLC_F7 | Total cholesterol in medium VLDL (mmol/l): F7 |
| MVDLCE_F7 | Cholesterol esters in medium VLDL (mmol/l): F7 |
| MVDLFC_F7 | Free cholesterol in medium VLDL (mmol/l): F7 |
| MVDLTG_F7 | Triglycerides in medium VLDL (mmol/l): F7 |
| SVLDLP_F7 | Concentration of small VLDL particles (mol/l): F7 |
| SVDLL_F7 | Total lipids in small VLDL (mmol/l): F7 |
| SVLDLPL_F7 | Phospholipids in small VLDL (mmol/l): F7 |
| SVLDLC_F7 | Total cholesterol in small VLDL (mmol/l): F7 |
| SVLDLCE_F7 | Cholesterol esters in small VLDL (mmol/l): F7 |
| SVLDLFC_F7 | Free cholesterol in small VLDL (mmol/l): F7 |
| SVDLTG_F7 | Triglycerides in small VLDL (mmol/l): F7 |
| XSVLDLP_F7 | Concentration of very small VLDL particles (mol/l): F7 |
| XSVDLL_F7 | Total lipids in very small VLDL (mmol/l): F7 |
| XSVLDLPL_F7 | Phospholipids in very small VLDL (mmol/l): F7 |
| XSVLDLC_F7 | Total cholesterol in very small VLDL (mmol/l): F7 |
| XSVLDLCE_F7 | Cholesterol esters in very small VLDL (mmol/l): F7 |
| XSVLDLFC_F7 | Free cholesterol in very small VLDL (mmol/l): F7 |
| XSVDLTG_F7 | Triglycerides in very small VLDL (mmol/l): F7 |
| IDLP_F7 | Concentration of IDL particles (mol/l): F7 |
| IDLL_F7 | Total lipids in IDL (mmol/l): F7 |
| IDLPL_F7 | Phospholipids in IDL (mmol/l): F7 |
| IDLC_F7 | Total cholesterol in IDL (mmol/l): F7 |

| | |
|------------|---|
| IDLCE_F7 | Cholesterol esters in IDL (mmol/l): F7 |
| IDLFC_F7 | Free cholesterol in IDL (mmol/l): F7 |
| IDLTG_F7 | Triglycerides in IDL (mmol/l): F7 |
| LLDLP_F7 | Concentration of large LDL particles (mol/l): F7 |
| LLDLL_F7 | Total lipids in large LDL (mmol/l): F7 |
| LLDLPL_F7 | Phospholipids in large LDL (mmol/l): F7 |
| LLDLC_F7 | Total cholesterol in large LDL (mmol/l): F7 |
| LLDLCE_F7 | Cholesterol esters in large LDL (mmol/l): F7 |
| LLDLFC_F7 | Free cholesterol in large LDL (mmol/l): F7 |
| LLDLTG_F7 | Triglycerides in large LDL (mmol/l): F7 |
| MLDLP_F7 | Concentration of medium LDL particles (mol/l): F7 |
| MLDLL_F7 | Total lipids in medium LDL (mmol/l): F7 |
| MLDLPL_F7 | Phospholipids in medium LDL (mmol/l): F7 |
| MLDLC_F7 | Total cholesterol in medium LDL (mmol/l): F7 |
| MLDLCE_F7 | Cholesterol esters in medium LDL (mmol/l): F7 |
| MLDLFC_F7 | Free cholesterol in medium LDL (mmol/l): F7 |
| MLDLTG_F7 | Triglycerides in medium LDL (mmol/l): F7 |
| SLDLP_F7 | Concentration of small LDL particles (mol/l): F7 |
| SLDLL_F7 | Total lipids in small LDL (mmol/l): F7 |
| SLDLPL_F7 | Phospholipids in small LDL (mmol/l): F7 |
| SLDLC_F7 | Total cholesterol in small LDL (mmol/l): F7 |
| SLDLCE_F7 | Cholesterol esters in small LDL (mmol/l): F7 |
| SLDLFC_F7 | Free cholesterol in small LDL (mmol/l): F7 |
| SLDLTG_F7 | Triglycerides in small LDL (mmol/l): F7 |
| XLHDLPL_F7 | Concentration of very large HDL particles (mol/l): F7 |
| XLHDLPL_F7 | Total lipids in very large HDL (mmol/l): F7 |
| XLHDLPL_F7 | Phospholipids in very large HDL (mmol/l): F7 |
| XLHDLPL_F7 | Total cholesterol in very large HDL (mmol/l): F7 |
| XLHDLCE_F7 | Cholesterol esters in very large HDL (mmol/l): F7 |
| XLHDLFC_F7 | Free cholesterol in very large HDL (mmol/l): F7 |
| XLHDLTG_F7 | Triglycerides in very large HDL (mmol/l): F7 |
| LHDLP_F7 | Concentration of large HDL particles (mol/l): F7 |
| LHDLL_F7 | Total lipids in large HDL (mmol/l): F7 |
| LHDLPL_F7 | Phospholipids in large HDL (mmol/l): F7 |
| LHDLPL_F7 | Total cholesterol in large HDL (mmol/l): F7 |
| LHDLCE_F7 | Cholesterol esters in large HDL (mmol/l): F7 |
| LHDLFC_F7 | Free cholesterol in large HDL (mmol/l): F7 |
| LHDLTG_F7 | Triglycerides in large HDL (mmol/l): F7 |
| MHDLP_F7 | Concentration of medium HDL particles (mol/l): F7 |
| MHDLL_F7 | Total lipids in medium HDL (mmol/l): F7 |
| MHDLPL_F7 | Phospholipids in medium HDL (mmol/l): F7 |
| MHDLPL_F7 | Total cholesterol in medium HDL (mmol/l): F7 |
| MHDLCE_F7 | Cholesterol esters in medium HDL (mmol/l): F7 |
| MHDLFC_F7 | Free cholesterol in medium HDL (mmol/l): F7 |
| MHDLTG_F7 | Triglycerides in medium HDL (mmol/l): F7 |
| SHDLP_F7 | Concentration of small HDL particles (mol/l): F7 |
| SHDLL_F7 | Total lipids in small HDL (mmol/l): F7 |
| SHDLPL_F7 | Phospholipids in small HDL (mmol/l): F7 |

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|----------------|---|
| SHDLC_F7 | Total cholesterol in small HDL (mmol/l): F7 |
| SHDLCE_F7 | Cholesterol esters in small HDL (mmol/l): F7 |
| SHDLFC_F7 | Free cholesterol in small HDL (mmol/l): F7 |
| SHDLTG_F7 | Triglycerides in small HDL (mmol/l): F7 |
| XXLVLDLPL_P_F7 | Phospholipids to total lipids ratio in chylomicrons and XXL VLDL (%): F7 |
| XXLVLDLC_P_F7 | Total cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): F7 |
| XXLVLDLCE_P_F7 | Cholesterol esters to total lipids ratio in chylomicrons and XXL VLDL (%): F7 |
| XXLVLDLFC_P_F7 | Free cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): F7 |
| XXLVLDLTG_P_F7 | Triglycerides to total lipids ratio in chylomicrons and XXL VLDL (%): F7 |
| XLVLDLPL_P_F7 | Phospholipids to total lipids ratio in very large VLDL (%): F7 |
| XLVLDLC_P_F7 | Total cholesterol to total lipids ratio in very large VLDL (%): F7 |
| XLVLDLCE_P_F7 | Cholesterol esters to total lipids ratio in very large VLDL (%): F7 |
| XLVLDLFC_P_F7 | Free cholesterol to total lipids ratio in very large VLDL (%): F7 |
| XLVLDLTG_P_F7 | Triglycerides to total lipids ratio in very large VLDL (%): F7 |
| LVLDLPL_P_F7 | Phospholipids to total lipids ratio in large VLDL (%): F7 |
| LVLDLC_P_F7 | Total cholesterol to total lipids ratio in large VLDL (%): F7 |
| LVLDLCE_P_F7 | Cholesterol esters to total lipids ratio in large VLDL (%): F7 |
| LVLDLFC_P_F7 | Free cholesterol to total lipids ratio in large VLDL (%): F7 |
| LVLDLTG_P_F7 | Triglycerides to total lipids ratio in large VLDL (%): F7 |
| MVLDLPL_P_F7 | Phospholipids to total lipids ratio in medium VLDL (%): F7 |
| MVLDLC_P_F7 | Total cholesterol to total lipids ratio in medium VLDL (%): F7 |
| MVLDLCE_P_F7 | Cholesterol esters to total lipids ratio in medium VLDL (%): F7 |
| MVLDLFC_P_F7 | Free cholesterol to total lipids ratio in medium VLDL (%): F7 |
| MVLDLTG_P_F7 | Triglycerides to total lipids ratio in medium VLDL (%): F7 |
| SVLDLPL_P_F7 | Phospholipids to total lipids ratio in small VLDL (%): F7 |
| SVLDLC_P_F7 | Total cholesterol to total lipids ratio in small VLDL (%): F7 |
| SVLDLCE_P_F7 | Cholesterol esters to total lipids ratio in small VLDL (%): F7 |
| SVLDLFC_P_F7 | Free cholesterol to total lipids ratio in small VLDL (%): F7 |
| SVLDLTG_P_F7 | Triglycerides to total lipids ratio in small VLDL (%): F7 |
| XSVLDLPL_P_F7 | Phospholipids to total lipids ratio in very small VLDL (%): F7 |
| XSVLDLC_P_F7 | Total cholesterol to total lipids ratio in very small VLDL (%): F7 |
| XSVLDLCE_P_F7 | Cholesterol esters to total lipids ratio in very small VLDL (%): F7 |
| XSVLDLFC_P_F7 | Free cholesterol to total lipids ratio in very small VLDL (%): F7 |
| XSVLDLTG_P_F7 | Triglycerides to total lipids ratio in very small VLDL (%): F7 |
| IDLPL_P_F7 | Phospholipids to total lipids ratio in IDL (%): F7 |
| IDLC_P_F7 | Total cholesterol to total lipids ratio in IDL (%): F7 |
| IDLCE_P_F7 | Cholesterol esters to total lipids ratio in IDL (%): F7 |
| IDLFC_P_F7 | Free cholesterol to total lipids ratio in IDL (%): F7 |
| IDLTG_P_F7 | Triglycerides to total lipids ratio in IDL (%): F7 |
| LLDLPL_P_F7 | Phospholipids to total lipids ratio in large LDL (%): F7 |
| LLDLC_P_F7 | Total cholesterol to total lipids ratio in large LDL (%): F7 |
| LLDLCE_P_F7 | Cholesterol esters to total lipids ratio in large LDL (%): F7 |
| LLDLFC_P_F7 | Free cholesterol to total lipids ratio in large LDL (%): F7 |
| LLDLTG_P_F7 | Triglycerides to total lipids ratio in large LDL (%): F7 |
| MLDLPL_P_F7 | Phospholipids to total lipids ratio in medium LDL (%): F7 |
| MLDLC_P_F7 | Total cholesterol to total lipids ratio in medium LDL (%): F7 |
| MLDLCE_P_F7 | Cholesterol esters to total lipids ratio in medium LDL (%): F7 |
| MLDLFC_P_F7 | Free cholesterol to total lipids ratio in medium LDL (%): F7 |

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|--------------|--|
| MLDLTG_P_F7 | Triglycerides to total lipids ratio in medium LDL (%): F7 |
| SLDLPL_P_F7 | Phospholipids to total lipids ratio in small LDL (%): F7 |
| SLDLC_P_F7 | Total cholesterol to total lipids ratio in small LDL (%): F7 |
| SLDLCE_P_F7 | Cholesterol esters to total lipids ratio in small LDL (%): F7 |
| SLDLFC_P_F7 | Free cholesterol to total lipids ratio in small LDL (%): F7 |
| SLDLTG_P_F7 | Triglycerides to total lipids ratio in small LDL (%): F7 |
| XLHDLPL_P_F7 | Phospholipids to total lipids ratio in very large HDL (%): F7 |
| XLHDL_C_P_F7 | Total cholesterol to total lipids ratio in very large HDL (%): F7 |
| XLHDLCE_P_F7 | Cholesterol esters to total lipids ratio in very large HDL (%): F7 |
| XLHDLFC_P_F7 | Free cholesterol to total lipids ratio in very large HDL (%): F7 |
| XLHDLTG_P_F7 | Triglycerides to total lipids ratio in very large HDL (%): F7 |
| LHDLPL_P_F7 | Phospholipids to total lipids ratio in large HDL (%): F7 |
| LHDL_C_P_F7 | Total cholesterol to total lipids ratio in large HDL (%): F7 |
| LHDLCE_P_F7 | Cholesterol esters to total lipids ratio in large HDL (%): F7 |
| LHDLFC_P_F7 | Free cholesterol to total lipids ratio in large HDL (%): F7 |
| LHDLTG_P_F7 | Triglycerides to total lipids ratio in large HDL (%): F7 |
| MHDLPL_P_F7 | Phospholipids to total lipids ratio in medium HDL (%): F7 |
| MHDL_C_P_F7 | Total cholesterol to total lipids ratio in medium HDL (%): F7 |
| MHDLCE_P_F7 | Cholesterol esters to total lipids ratio in medium HDL (%): F7 |
| MHDLFC_P_F7 | Free cholesterol to total lipids ratio in medium HDL (%): F7 |
| MHDLTG_P_F7 | Triglycerides to total lipids ratio in medium HDL (%): F7 |
| SHDLPL_P_F7 | Phospholipids to total lipids ratio in small HDL (%): F7 |
| SHDL_C_P_F7 | Total cholesterol to total lipids ratio in small HDL (%): F7 |
| SHDLCE_P_F7 | Cholesterol esters to total lipids ratio in small HDL (%): F7 |
| SHDLFC_P_F7 | Free cholesterol to total lipids ratio in small HDL (%): F7 |
| SHDLTG_P_F7 | Triglycerides to total lipids ratio in small HDL (%): F7 |
| VLDLD_F7 | Mean diameter for VLDL particles (nm): F7 |
| LDLD_F7 | Mean diameter for LDL particles (nm): F7 |
| HDLD_F7 | Mean diameter for HDL particles (nm): F7 |
| SerumC_F7 | Serum total cholesterol (mmol/l): F7 |
| VLDLC_F7 | Total cholesterol in VLDL (mmol/l): F7 |
| RemnantC_F7 | Remnant cholesterol (non-HDL, non-LDL -cholesterol) (mmol/l): F7 |
| LDLC_F7 | Total cholesterol in LDL (mmol/l): F7 |
| HDLC_F7 | Total cholesterol in HDL (mmol/l): F7 |
| HDL2C_F7 | Total cholesterol in HDL2 (mmol/l): F7 |
| HDL3C_F7 | Total cholesterol in HDL3 (mmol/l): F7 |
| EstC_F7 | Esterified cholesterol (mmol/l): F7 |
| FreeC_F7 | Free cholesterol (mmol/l): F7 |
| SerumTG_F7 | Serum total triglycerides (mmol/l): F7 |
| VLDLTG_F7 | Triglycerides in VLDL (mmol/l): F7 |
| LDLTG_F7 | Triglycerides in LDL (mmol/l): F7 |
| HDLTG_F7 | Triglycerides in HDL (mmol/l): F7 |
| DAG_F7 | Diacylglycerol (mmol/l): F7 |
| DAGTG_F7 | Ratio of diacylglycerol to triglycerides: F7 |
| TotPG_F7 | Total phosphoglycerides (mmol/l): F7 |
| TGPG_F7 | Ratio of triglycerides to phosphoglycerides: F7 |
| PC_F7 | Phosphatidylcholine and other cholines (mmol/l): F7 |
| TotCho_F7 | Total cholines (mmol/l): F7 |

| | |
|------------------------|--|
| ApoA1_F7 | Apolipoprotein A-I (g/l): F7 |
| ApoB_F7 | Apolipoprotein B (g/l): F7 |
| ApoBApoA1_F7 | Ratio of apolipoprotein B to apolipoprotein A-I: F7 |
| TotFA_F7 | Total fatty acids (mmol/l): F7 |
| FALen_F7 | Estimated description of fatty acid chain length, not actual carbon number: F7 |
| UnsatDeg_F7 | Estimated degree of unsaturation: F7 |
| DHA_F7 | 22:6, docosahexaenoic acid (mmol/l): F7 |
| LA_F7 | 18:2, linoleic acid (mmol/l): F7 |
| CLA_F7 | Conjugated linoleic acid (mmol/l): F7 |
| FAw3_F7 | Omega-3 fatty acids (mmol/l): F7 |
| FAw6_F7 | Omega-6 fatty acids (mmol/l): F7 |
| PUFA_F7 | Polyunsaturated fatty acids (mmol/l): F7 |
| MUFA_F7 | Monounsaturated fatty acids; 16:1, 18:1 (mmol/l): F7 |
| SFA_F7 | Saturated fatty acids (mmol/l): F7 |
| DHAFA_F7 | Ratio of 22:6 docosahexaenoic acid to total fatty acids (%): F7 |
| LAFA_F7 | Ratio of 18:2 linoleic acid to total fatty acids (%): F7 |
| CLAFA_F7 | Ratio of conjugated linoleic acid to total fatty acids (%): F7 |
| FAw3FA_F7 | Ratio of omega-3 fatty acids to total fatty acids (%): F7 |
| FAw6FA_F7 | Ratio of omega-6 fatty acids to total fatty acids (%): F7 |
| PUFAFA_F7 | Ratio of polyunsaturated fatty acids to total fatty acids (%): F7 |
| MUFAFA_F7 | Ratio of monounsaturated fatty acids to total fatty acids (%): F7 |
| SFAFA_F7 | Ratio of saturated fatty acids to total fatty acids (%): F7 |
| Glc_F7 | Glucose (mmol/l): F7 |
| Lac_F7 | Lactate (mmol/l): F7 |
| Pyr_F7 | Pyruvate (mmol/l): F7 |
| Cit_F7 | Citrate (mmol/l): F7 |
| Ala_F7 | Alanine (mmol/l): F7 |
| Gln_F7 | Glutamine (mmol/l): F7 |
| His_F7 | Histidine (mmol/l): F7 |
| Ile_F7 | Isoleucine (mmol/l): F7 |
| Leu_F7 | Leucine (mmol/l): F7 |
| Val_F7 | Valine (mmol/l): F7 |
| Phe_F7 | Phenylalanine (mmol/l): F7 |
| Tyr_F7 | Tyrosine (mmol/l): F7 |
| Ace_F7 | Acetate (mmol/l): F7 |
| AcAce_F7 | Acetoacetate (mmol/l): F7 |
| bOHBut_F7 | 3-hydroxybutyrate (mmol/l): F7 |
| Crea_F7 | Creatinine (mmol/l): F7 |
| Alb_F7 | Albumin (signal area): F7 |
| Gp_F7 | Glycoprotein acetyls, mainly a1-acid glycoprotein (mmol/l): F7 |
| Sphingo_F7 | Sphingomyelins (mmol/l): F7 |
| XXLVLDLP_BBS_Baseline | Conc. of chylomicrons and XXL VLDL particles (mol/l): Baseline: BBS |
| XXLVLDLL_BBS_Baseline | Total lipids in chylomicrons and XXL VLDL (mmol/l): Baseline: BBS |
| XXLVLDLPL_BBS_Baseline | Phospholipids in chylomicrons and XXL VLDL (mmol/l): Baseline: BBS |
| XXLVLDLC_BBS_Baseline | Total cholesterol in chylomicrons and XXL VLDL (mmol/l): Baseline: BBS |
| XXLVLDLCE_BBS_Baseline | Cholesterol esters in chylomicrons and XXL VLDL (mmol/l): Baseline: BBS |
| XXLVLDLFC_BBS_Baseline | Free cholesterol in chylomicrons and XXL VLDL (mmol/l): Baseline: BBS |
| XXLVLDLTG_BBS_Baseline | Triglycerides in chylomicrons and XXL VLDL (mmol/l): Baseline: BBS |

| | |
|-----------------------|---|
| XLVLDLP_BBS_Baseline | Concentration of very large VLDL particles (mol/l): Baseline: BBS |
| XLVLDLL_BBS_Baseline | Total lipids in very large VLDL (mmol/l): Baseline: BBS |
| XLVLDLPL_BBS_Baseline | Phospholipids in very large VLDL (mmol/l): Baseline: BBS |
| XLVLDLC_BBS_Baseline | Total cholesterol in very large VLDL (mmol/l): Baseline: BBS |
| XLVLDLCE_BBS_Baseline | Cholesterol esters in very large VLDL (mmol/l): Baseline: BBS |
| XLVLDLFC_BBS_Baseline | Free cholesterol in very large VLDL (mmol/l): Baseline: BBS |
| XLVLDLTG_BBS_Baseline | Triglycerides in very large VLDL (mmol/l): Baseline: BBS |
| LVLDLP_BBS_Baseline | Concentration of large VLDL particles (mol/l): Baseline: BBS |
| LVLDLL_BBS_Baseline | Total lipids in large VLDL (mmol/l): Baseline: BBS |
| LVLDLPL_BBS_Baseline | Phospholipids in large VLDL (mmol/l): Baseline: BBS |
| LVLDLC_BBS_Baseline | Total cholesterol in large VLDL (mmol/l): Baseline: BBS |
| LVLDLCE_BBS_Baseline | Cholesterol esters in large VLDL (mmol/l): Baseline: BBS |
| LVLDLFC_BBS_Baseline | Free cholesterol in large VLDL (mmol/l): Baseline: BBS |
| LVLDLTG_BBS_Baseline | Triglycerides in large VLDL (mmol/l): Baseline: BBS |
| MVLDLP_BBS_Baseline | Concentration of medium VLDL particles (mol/l): Baseline: BBS |
| MVLDLL_BBS_Baseline | Total lipids in medium VLDL (mmol/l): Baseline: BBS |
| MVLDLPL_BBS_Baseline | Phospholipids in medium VLDL (mmol/l): Baseline: BBS |
| MVLDLC_BBS_Baseline | Total cholesterol in medium VLDL (mmol/l): Baseline: BBS |
| MVLDLCE_BBS_Baseline | Cholesterol esters in medium VLDL (mmol/l): Baseline: BBS |
| MVLDLFC_BBS_Baseline | Free cholesterol in medium VLDL (mmol/l): Baseline: BBS |
| MVLDLTG_BBS_Baseline | Triglycerides in medium VLDL (mmol/l): Baseline: BBS |
| SVLDLP_BBS_Baseline | Concentration of small VLDL particles (mol/l): Baseline: BBS |
| SVLDLL_BBS_Baseline | Total lipids in small VLDL (mmol/l): Baseline: BBS |
| SVLDLPL_BBS_Baseline | Phospholipids in small VLDL (mmol/l): Baseline: BBS |
| SVLDLC_BBS_Baseline | Total cholesterol in small VLDL (mmol/l): Baseline: BBS |
| SVLDLCE_BBS_Baseline | Cholesterol esters in small VLDL (mmol/l): Baseline: BBS |
| SVLDLFC_BBS_Baseline | Free cholesterol in small VLDL (mmol/l): Baseline: BBS |
| SVLDLTG_BBS_Baseline | Triglycerides in small VLDL (mmol/l): Baseline: BBS |
| XSVLDLP_BBS_Baseline | Concentration of very small VLDL particles (mol/l): Baseline: BBS |
| XSVLDLL_BBS_Baseline | Total lipids in very small VLDL (mmol/l): Baseline: BBS |
| XSVLDLPL_BBS_Baseline | Phospholipids in very small VLDL (mmol/l): Baseline: BBS |
| XSVLDLC_BBS_Baseline | Total cholesterol in very small VLDL (mmol/l): Baseline: BBS |
| XSVLDLCE_BBS_Baseline | Cholesterol esters in very small VLDL (mmol/l): Baseline: BBS |
| XSVLDLFC_BBS_Baseline | Free cholesterol in very small VLDL (mmol/l): Baseline: BBS |
| XSVLDLTG_BBS_Baseline | Triglycerides in very small VLDL (mmol/l): Baseline: BBS |
| IDLP_BBS_Baseline | Concentration of IDL particles (mol/l): Baseline: BBS |
| IDLL_BBS_Baseline | Total lipids in IDL (mmol/l): Baseline: BBS |
| IDLPL_BBS_Baseline | Phospholipids in IDL (mmol/l): Baseline: BBS |
| IDLC_BBS_Baseline | Total cholesterol in IDL (mmol/l): Baseline: BBS |
| IDLCE_BBS_Baseline | Cholesterol esters in IDL (mmol/l): Baseline: BBS |
| IDLFC_BBS_Baseline | Free cholesterol in IDL (mmol/l): Baseline: BBS |
| IDLTG_BBS_Baseline | Triglycerides in IDL (mmol/l): Baseline: BBS |
| LLDLP_BBS_Baseline | Concentration of large LDL particles (mol/l): Baseline: BBS |
| LLDLL_BBS_Baseline | Total lipids in large LDL (mmol/l): Baseline: BBS |
| LLDLPL_BBS_Baseline | Phospholipids in large LDL (mmol/l): Baseline: BBS |
| LLDLC_BBS_Baseline | Total cholesterol in large LDL (mmol/l): Baseline: BBS |
| LLDLCE_BBS_Baseline | Cholesterol esters in large LDL (mmol/l): Baseline: BBS |
| LLDLFC_BBS_Baseline | Free cholesterol in large LDL (mmol/l): Baseline: BBS |

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| LLDLTG_BBS_Baseline | Triglycerides in large LDL (mmol/l): Baseline: BBS |
| MLDLP_BBS_Baseline | Concentration of medium LDL particles (mol/l): Baseline: BBS |
| MLDLL_BBS_Baseline | Total lipids in medium LDL (mmol/l): Baseline: BBS |
| MLDLPL_BBS_Baseline | Phospholipids in medium LDL (mmol/l): Baseline: BBS |
| MLDLC_BBS_Baseline | Total cholesterol in medium LDL (mmol/l): Baseline: BBS |
| MLDLCE_BBS_Baseline | Cholesterol esters in medium LDL (mmol/l): Baseline: BBS |
| MLDLFC_BBS_Baseline | Free cholesterol in medium LDL (mmol/l): Baseline: BBS |
| MLDLTG_BBS_Baseline | Triglycerides in medium LDL (mmol/l): Baseline: BBS |
| SLDLP_BBS_Baseline | Concentration of small LDL particles (mol/l): Baseline: BBS |
| SLDLL_BBS_Baseline | Total lipids in small LDL (mmol/l): Baseline: BBS |
| SLDLPL_BBS_Baseline | Phospholipids in small LDL (mmol/l): Baseline: BBS |
| SLDLC_BBS_Baseline | Total cholesterol in small LDL (mmol/l): Baseline: BBS |
| SLDLCE_BBS_Baseline | Cholesterol esters in small LDL (mmol/l): Baseline: BBS |
| SLDLFC_BBS_Baseline | Free cholesterol in small LDL (mmol/l): Baseline: BBS |
| SLDLTG_BBS_Baseline | Triglycerides in small LDL (mmol/l): Baseline: BBS |
| XLHDL_P_BBS_Baseline | Concentration of very large HDL particles (mol/l): Baseline: BBS |
| XLHDLPL_BBS_Baseline | Total lipids in very large HDL (mmol/l): Baseline: BBS |
| XLHDL_C_BBS_Baseline | Phospholipids in very large HDL (mmol/l): Baseline: BBS |
| XLHDLCE_BBS_Baseline | Total cholesterol in very large HDL (mmol/l): Baseline: BBS |
| XLHDLFC_BBS_Baseline | Cholesterol esters in very large HDL (mmol/l): Baseline: BBS |
| XLHDLTG_BBS_Baseline | Free cholesterol in very large HDL (mmol/l): Baseline: BBS |
| LHDL_P_BBS_Baseline | Triglycerides in very large HDL (mmol/l): Baseline: BBS |
| LHDLPL_BBS_Baseline | Concentration of large HDL particles (mol/l): Baseline: BBS |
| LHDL_C_BBS_Baseline | Total lipids in large HDL (mmol/l): Baseline: BBS |
| LHDLCE_BBS_Baseline | Phospholipids in large HDL (mmol/l): Baseline: BBS |
| LHDLFC_BBS_Baseline | Total cholesterol in large HDL (mmol/l): Baseline: BBS |
| LHDLTG_BBS_Baseline | Cholesterol esters in large HDL (mmol/l): Baseline: BBS |
| MHDL_P_BBS_Baseline | Free cholesterol in large HDL (mmol/l): Baseline: BBS |
| MHDLPL_BBS_Baseline | Triglycerides in large HDL (mmol/l): Baseline: BBS |
| MHDL_C_BBS_Baseline | Concentration of medium HDL particles (mol/l): Baseline: BBS |
| MHDLCE_BBS_Baseline | Total lipids in medium HDL (mmol/l): Baseline: BBS |
| MHDLFC_BBS_Baseline | Phospholipids in medium HDL (mmol/l): Baseline: BBS |
| MHDLTG_BBS_Baseline | Total cholesterol in medium HDL (mmol/l): Baseline: BBS |
| SHDL_P_BBS_Baseline | Cholesterol esters in medium HDL (mmol/l): Baseline: BBS |
| SHDLL_BBS_Baseline | Free cholesterol in medium HDL (mmol/l): Baseline: BBS |
| SHDLPL_BBS_Baseline | Triglycerides in medium HDL (mmol/l): Baseline: BBS |
| SHDL_C_BBS_Baseline | Concentration of small HDL particles (mol/l): Baseline: BBS |
| SHDLCE_BBS_Baseline | Total lipids in small HDL (mmol/l): Baseline: BBS |
| SHDLFC_BBS_Baseline | Phospholipids in small HDL (mmol/l): Baseline: BBS |
| SHDLTG_BBS_Baseline | Total cholesterol in small HDL (mmol/l): Baseline: BBS |
| XXLVLDLPL_P_BBS_Baseline | Cholesterol esters in small HDL (mmol/l): Baseline: BBS |
| XXLVLDLC_P_BBS_Baseline | Free cholesterol in small HDL (mmol/l): Baseline: BBS |
| XXLVLDLCE_P_BBS_Baseline | Triglycerides in small HDL (mmol/l): Baseline: BBS |
| XXLVLDLFC_P_BBS_Baseline | Phospholipids/total lipids ratio chylomicrons & XXL VLDL (%): Baseline: BBS |
| XXLVLDLTG_P_BBS_Baseline | Total chol./total lipids ratio chylomicrons & XXL VLDL (%): Baseline: BBS |
| | Chol. esters/total lipids ratio chylomicrons & XXL VLDL (%): Baseline: BBS |
| | Free chol./total lipids ratio chylomicrons & XXL VLDL (%): Baseline: BBS |
| | Triglycerides/total lipids ratio chylomicrons & XXL VLDL (%): Baseline: BBS |

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| XLHDLFC_P_BBS_Baseline | Free cholesterol to total lipids ratio in very large HDL (%): Baseline: BBS |
| XLHDLTG_P_BBS_Baseline | Triglycerides to total lipids ratio in very large HDL (%): Baseline: BBS |
| LHDLPL_P_BBS_Baseline | Phospholipids to total lipids ratio in large HDL (%): Baseline: BBS |
| LHDLFC_P_BBS_Baseline | Total cholesterol to total lipids ratio in large HDL (%): Baseline: BBS |
| LHDLCE_P_BBS_Baseline | Cholesterol esters to total lipids ratio in large HDL (%): Baseline: BBS |
| LHDLTG_P_BBS_Baseline | Free cholesterol to total lipids ratio in large HDL (%): Baseline: BBS |
| MHDLPL_P_BBS_Baseline | Triglycerides to total lipids ratio in large HDL (%): Baseline: BBS |
| MHDLFC_P_BBS_Baseline | Phospholipids to total lipids ratio in medium HDL (%): Baseline: BBS |
| MHDLCE_P_BBS_Baseline | Total cholesterol to total lipids ratio in medium HDL (%): Baseline: BBS |
| MHDLTG_P_BBS_Baseline | Cholesterol esters to total lipids ratio in medium HDL (%): Baseline: BBS |
| SHDLPL_P_BBS_Baseline | Free cholesterol to total lipids ratio in medium HDL (%): Baseline: BBS |
| SHDLFC_P_BBS_Baseline | Triglycerides to total lipids ratio in medium HDL (%): Baseline: BBS |
| SHDLCE_P_BBS_Baseline | Phospholipids to total lipids ratio in small HDL (%): Baseline: BBS |
| SHDLTG_P_BBS_Baseline | Total cholesterol to total lipids ratio in small HDL (%): Baseline: BBS |
| VLDLD_BBS_Baseline | Cholesterol esters to total lipids ratio in small HDL (%): Baseline: BBS |
| LDLD_BBS_Baseline | Free cholesterol to total lipids ratio in small HDL (%): Baseline: BBS |
| HDLD_BBS_Baseline | Triglycerides to total lipids ratio in small HDL (%): Baseline: BBS |
| SerumC_BBS_Baseline | Mean diameter for VLDL particles (nm): Baseline: BBS |
| VLDLC_BBS_Baseline | Mean diameter for LDL particles (nm): Baseline: BBS |
| RemnantC_BBS_Baseline | Mean diameter for HDL particles (nm): Baseline: BBS |
| LDLC_BBS_Baseline | Serum total cholesterol (mmol/l): Baseline: BBS |
| HDLC_BBS_Baseline | Total cholesterol in VLDL (mmol/l): Baseline: BBS |
| HDL2C_BBS_Baseline | Remnant cholesterol (non-HDL & non-LDL-cholesterol) (mmol/l): Baseline: BBS |
| HDL3C_BBS_Baseline | Total cholesterol in LDL (mmol/l): Baseline: BBS |
| EstC_BBS_Baseline | Total cholesterol in HDL (mmol/l): Baseline: BBS |
| FreeC_BBS_Baseline | Total cholesterol in HDL2 (mmol/l): Baseline: BBS |
| SerumTG_BBS_Baseline | Total cholesterol in HDL3 (mmol/l): Baseline: BBS |
| VLDLTG_BBS_Baseline | Esterified cholesterol (mmol/l): Baseline: BBS |
| LDLTG_BBS_Baseline | Free cholesterol (mmol/l): Baseline: BBS |
| HDLTG_BBS_Baseline | Serum total triglycerides (mmol/l): Baseline: BBS |
| TotPG_BBS_Baseline | Triglycerides in VLDL (mmol/l): Baseline: BBS |
| TGPG_BBS_Baseline | Triglycerides in LDL (mmol/l): Baseline: BBS |
| PC_BBS_Baseline | Triglycerides in HDL (mmol/l): Baseline: BBS |
| SM_BBS_Baseline | Total phosphoglycerides (mmol/l): Baseline: BBS |
| TotCho_BBS_Baseline | Ratio of triglycerides to phosphoglycerides: Baseline: BBS |
| ApoA1_BBS_Baseline | Phosphatidylcholine and other cholines (mmol/l): Baseline: BBS |
| ApoB_BBS_Baseline | Sphingomyelins (mmol/l): Baseline: BBS |
| ApoBApoA1_BBS_Baseline | Total cholines (mmol/l): Baseline: BBS |
| TotFA_BBS_Baseline | Apolipoprotein A-I (g/l): Baseline: BBS |
| UnSat_BBS_Baseline | Apolipoprotein B (g/l): Baseline: BBS |
| DHA_BBS_Baseline | Ratio of apolipoprotein B to apolipoprotein A-I: Baseline: BBS |
| LA_BBS_Baseline | Total fatty acids (mmol/l): Baseline: BBS |
| FAw3_BBS_Baseline | Estimated degree of unsaturation: Baseline: BBS |
| FAw6_BBS_Baseline | 22:6, docosahexaenoic acid (mmol/l): Baseline: BBS |
| PUFA_BBS_Baseline | 18:2, linoleic acid (mmol/l): Baseline: BBS |
| | Omega-3 fatty acids (mmol/l): Baseline: BBS |
| | Omega-6 fatty acids (mmol/l): Baseline: BBS |
| | Polyunsaturated fatty acids (mmol/l): Baseline: BBS |

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| MUFA_BBS_Baseline | Monounsaturated fatty acids; 16:1, 18:1 (mmol/l): Baseline: BBS |
| SFA_BBS_Baseline | Saturated fatty acids (mmol/l): Baseline: BBS |
| DHAFA_BBS_Baseline | Ratio of 22:6 docosaheptaenoic acid to total fatty acids (%): Baseline: BBS |
| LAFA_BBS_Baseline | Ratio of 18:2 linoleic acid to total fatty acids (%): Baseline: BBS |
| FAw3FA_BBS_Baseline | Ratio of omega-3 fatty acids to total fatty acids (%): Baseline: BBS |
| FAw6FA_BBS_Baseline | Ratio of omega-6 fatty acids to total fatty acids (%): Baseline: BBS |
| PUFAFA_BBS_Baseline | Ratio of polyunsaturated fatty acids to total fatty acids (%): Baseline: BBS |
| MUFAFA_BBS_Baseline | Ratio of monounsaturated fatty acids to total fatty acids (%): Baseline: BBS |
| SFAFA_BBS_Baseline | Ratio of saturated fatty acids to total fatty acids (%): Baseline: BBS |
| Glc_BBS_Baseline | Glucose (mmol/l): Baseline: BBS |
| Lac_BBS_Baseline | Lactate (mmol/l): Baseline: BBS |
| Pyr_BBS_Baseline | Pyruvate (mmol/l): Baseline: BBS |
| Cit_BBS_Baseline | Citrate (mmol/l): Baseline: BBS |
| GloI_BBS_Baseline | Glycerol (mmol/l): Baseline: BBS |
| Ala_BBS_Baseline | Alanine (mmol/l): Baseline: BBS |
| Gln_BBS_Baseline | Glutamine (mmol/l): Baseline: BBS |
| Gly_BBS_Baseline | Glycine (mmol/l): Baseline: BBS |
| His_BBS_Baseline | Histidine (mmol/l): Baseline: BBS |
| Ile_BBS_Baseline | Isoleucine (mmol/l): Baseline: BBS |
| Leu_BBS_Baseline | Leucine (mmol/l): Baseline: BBS |
| Val_BBS_Baseline | Valine (mmol/l): Baseline: BBS |
| Phe_BBS_Baseline | Phenylalanine (mmol/l): Baseline: BBS |
| Tyr_BBS_Baseline | Tyrosine (mmol/l): Baseline: BBS |
| Ace_BBS_Baseline | Acetate (mmol/l): Baseline: BBS |
| bOHBut_BBS_Baseline | 3-hydroxybutyrate (mmol/l): Baseline: BBS |
| Crea_BBS_Baseline | Creatinine (mmol/l): Baseline: BBS |
| Alb_BBS_Baseline | Albumin (signal area): Baseline: BBS |
| Gp_BBS_Baseline | Glycoprotein acetyls, mainly a1-acid glycoprotein (mmol/l): Baseline: BBS |
| XXLVLDLP_BBS_PostGluc | Conc. of chylomicrons and XXL VLDL particles (mol/l): Post-glucose: BBS |
| XXLVLDLL_BBS_PostGluc | Total lipids in chylomicrons and XXL VLDL (mmol/l): Post-glucose: BBS |
| XXLVLDLPL_BBS_PostGluc | Phospholipids in chylomicrons and XXL VLDL (mmol/l): Post-glucose: BBS |
| XXLVLDLC_BBS_PostGluc | Total cholesterol in chylomicrons and XXL VLDL (mmol/l): Post-glucose: BBS |
| XXLVLDLCE_BBS_PostGluc | Cholesterol esters in chylomicrons and XXL VLDL (mmol/l): Post-glucose: BBS |
| XXLVLDLFC_BBS_PostGluc | Free cholesterol in chylomicrons and XXL VLDL (mmol/l): Post-glucose: BBS |
| XXLVLDLTG_BBS_PostGluc | Triglycerides in chylomicrons and XXL VLDL (mmol/l): Post-glucose: BBS |
| XLVLDLP_BBS_PostGluc | Concentration of very large VLDL particles (mol/l): Post-glucose: BBS |
| XLVLDLL_BBS_PostGluc | Total lipids in very large VLDL (mmol/l): Post-glucose: BBS |
| XLVLDLPL_BBS_PostGluc | Phospholipids in very large VLDL (mmol/l): Post-glucose: BBS |
| XLVLDLC_BBS_PostGluc | Total cholesterol in very large VLDL (mmol/l): Post-glucose: BBS |
| XLVLDLCE_BBS_PostGluc | Cholesterol esters in very large VLDL (mmol/l): Post-glucose: BBS |
| XLVLDLFC_BBS_PostGluc | Free cholesterol in very large VLDL (mmol/l): Post-glucose: BBS |
| XLVLDLTG_BBS_PostGluc | Triglycerides in very large VLDL (mmol/l): Post-glucose: BBS |
| LVLDP_BBS_PostGluc | Concentration of large VLDL particles (mol/l): Post-glucose: BBS |
| LVLDLL_BBS_PostGluc | Total lipids in large VLDL (mmol/l): Post-glucose: BBS |
| LVLDP_L_BBS_PostGluc | Phospholipids in large VLDL (mmol/l): Post-glucose: BBS |
| LVLDP_L_BBS_PostGluc | Total cholesterol in large VLDL (mmol/l): Post-glucose: BBS |
| LVLDP_L_BBS_PostGluc | Cholesterol esters in large VLDL (mmol/l): Post-glucose: BBS |
| LVLDP_L_BBS_PostGluc | Free cholesterol in large VLDL (mmol/l): Post-glucose: BBS |

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| LVLDLTG_BBS_PostGluc | Triglycerides in large VLDL (mmol/l): Post-glucose: BBS |
| MVLDLP_BBS_PostGluc | Concentration of medium VLDL particles (mol/l): Post-glucose: BBS |
| MVLDLL_BBS_PostGluc | Total lipids in medium VLDL (mmol/l): Post-glucose: BBS |
| MVLDLPL_BBS_PostGluc | Phospholipids in medium VLDL (mmol/l): Post-glucose: BBS |
| MVLDLC_BBS_PostGluc | Total cholesterol in medium VLDL (mmol/l): Post-glucose: BBS |
| MVLDLCE_BBS_PostGluc | Cholesterol esters in medium VLDL (mmol/l): Post-glucose: BBS |
| MVLDLFC_BBS_PostGluc | Free cholesterol in medium VLDL (mmol/l): Post-glucose: BBS |
| MVLDLTG_BBS_PostGluc | Triglycerides in medium VLDL (mmol/l): Post-glucose: BBS |
| SVLDLP_BBS_PostGluc | Concentration of small VLDL particles (mol/l): Post-glucose: BBS |
| SVLDLL_BBS_PostGluc | Total lipids in small VLDL (mmol/l): Post-glucose: BBS |
| SVLDLPL_BBS_PostGluc | Phospholipids in small VLDL (mmol/l): Post-glucose: BBS |
| SVLDLC_BBS_PostGluc | Total cholesterol in small VLDL (mmol/l): Post-glucose: BBS |
| SVLDLCE_BBS_PostGluc | Cholesterol esters in small VLDL (mmol/l): Post-glucose: BBS |
| SVLDLFC_BBS_PostGluc | Free cholesterol in small VLDL (mmol/l): Post-glucose: BBS |
| SVLDLTG_BBS_PostGluc | Triglycerides in small VLDL (mmol/l): Post-glucose: BBS |
| XSVLDLP_BBS_PostGluc | Concentration of very small VLDL particles (mol/l): Post-glucose: BBS |
| XSVLDLL_BBS_PostGluc | Total lipids in very small VLDL (mmol/l): Post-glucose: BBS |
| XSVLDLPL_BBS_PostGluc | Phospholipids in very small VLDL (mmol/l): Post-glucose: BBS |
| XSVLDLC_BBS_PostGluc | Total cholesterol in very small VLDL (mmol/l): Post-glucose: BBS |
| XSVLDLCE_BBS_PostGluc | Cholesterol esters in very small VLDL (mmol/l): Post-glucose: BBS |
| XSVLDLFC_BBS_PostGluc | Free cholesterol in very small VLDL (mmol/l): Post-glucose: BBS |
| XSVLDLTG_BBS_PostGluc | Triglycerides in very small VLDL (mmol/l): Post-glucose: BBS |
| IDLP_BBS_PostGluc | Concentration of IDL particles (mol/l): Post-glucose: BBS |
| IDLL_BBS_PostGluc | Total lipids in IDL (mmol/l): Post-glucose: BBS |
| IDLPL_BBS_PostGluc | Phospholipids in IDL (mmol/l): Post-glucose: BBS |
| IDLC_BBS_PostGluc | Total cholesterol in IDL (mmol/l): Post-glucose: BBS |
| IDLCE_BBS_PostGluc | Cholesterol esters in IDL (mmol/l): Post-glucose: BBS |
| IDLFC_BBS_PostGluc | Free cholesterol in IDL (mmol/l): Post-glucose: BBS |
| IDLTG_BBS_PostGluc | Triglycerides in IDL (mmol/l): Post-glucose: BBS |
| LLDLP_BBS_PostGluc | Concentration of large LDL particles (mol/l): Post-glucose: BBS |
| LLDLL_BBS_PostGluc | Total lipids in large LDL (mmol/l): Post-glucose: BBS |
| LLDLPL_BBS_PostGluc | Phospholipids in large LDL (mmol/l): Post-glucose: BBS |
| LLDLC_BBS_PostGluc | Total cholesterol in large LDL (mmol/l): Post-glucose: BBS |
| LLDLCE_BBS_PostGluc | Cholesterol esters in large LDL (mmol/l): Post-glucose: BBS |
| LLDLFC_BBS_PostGluc | Free cholesterol in large LDL (mmol/l): Post-glucose: BBS |
| LLDLTG_BBS_PostGluc | Triglycerides in large LDL (mmol/l): Post-glucose: BBS |
| MLDLP_BBS_PostGluc | Concentration of medium LDL particles (mol/l): Post-glucose: BBS |
| MLDLL_BBS_PostGluc | Total lipids in medium LDL (mmol/l): Post-glucose: BBS |
| MLDLPL_BBS_PostGluc | Phospholipids in medium LDL (mmol/l): Post-glucose: BBS |
| MLDLC_BBS_PostGluc | Total cholesterol in medium LDL (mmol/l): Post-glucose: BBS |
| MLDLCE_BBS_PostGluc | Cholesterol esters in medium LDL (mmol/l): Post-glucose: BBS |
| MLDLFC_BBS_PostGluc | Free cholesterol in medium LDL (mmol/l): Post-glucose: BBS |
| MLDLTG_BBS_PostGluc | Triglycerides in medium LDL (mmol/l): Post-glucose: BBS |
| SLDLP_BBS_PostGluc | Concentration of small LDL particles (mol/l): Post-glucose: BBS |
| SLDLL_BBS_PostGluc | Total lipids in small LDL (mmol/l): Post-glucose: BBS |
| SLDLPL_BBS_PostGluc | Phospholipids in small LDL (mmol/l): Post-glucose: BBS |
| SLDLC_BBS_PostGluc | Total cholesterol in small LDL (mmol/l): Post-glucose: BBS |
| SLDLCE_BBS_PostGluc | Cholesterol esters in small LDL (mmol/l): Post-glucose: BBS |

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| SLDLFC_BBS_PostGluc | Free cholesterol in small LDL (mmol/l): Post-glucose: BBS |
| SLDLTG_BBS_PostGluc | Triglycerides in small LDL (mmol/l): Post-glucose: BBS |
| XLHDLPL_BBS_PostGluc | Concentration of very large HDL particles (mol/l): Post-glucose: BBS |
| XLHDLL_BBS_PostGluc | Total lipids in very large HDL (mmol/l): Post-glucose: BBS |
| XLHDLPL_BBS_PostGluc | Phospholipids in very large HDL (mmol/l): Post-glucose: BBS |
| XLHDLCL_BBS_PostGluc | Total cholesterol in very large HDL (mmol/l): Post-glucose: BBS |
| XLHDLCE_BBS_PostGluc | Cholesterol esters in very large HDL (mmol/l): Post-glucose: BBS |
| XLHDLFC_BBS_PostGluc | Free cholesterol in very large HDL (mmol/l): Post-glucose: BBS |
| XLHDLTG_BBS_PostGluc | Triglycerides in very large HDL (mmol/l): Post-glucose: BBS |
| LHDLPL_BBS_PostGluc | Concentration of large HDL particles (mol/l): Post-glucose: BBS |
| LHDLL_BBS_PostGluc | Total lipids in large HDL (mmol/l): Post-glucose: BBS |
| LHDLPL_BBS_PostGluc | Phospholipids in large HDL (mmol/l): Post-glucose: BBS |
| LHDLCL_BBS_PostGluc | Total cholesterol in large HDL (mmol/l): Post-glucose: BBS |
| LHDLCE_BBS_PostGluc | Cholesterol esters in large HDL (mmol/l): Post-glucose: BBS |
| LHDLFC_BBS_PostGluc | Free cholesterol in large HDL (mmol/l): Post-glucose: BBS |
| LHDLTG_BBS_PostGluc | Triglycerides in large HDL (mmol/l): Post-glucose: BBS |
| MHDLPL_BBS_PostGluc | Concentration of medium HDL particles (mol/l): Post-glucose: BBS |
| MHDLL_BBS_PostGluc | Total lipids in medium HDL (mmol/l): Post-glucose: BBS |
| MHDLPL_BBS_PostGluc | Phospholipids in medium HDL (mmol/l): Post-glucose: BBS |
| MHDLCL_BBS_PostGluc | Total cholesterol in medium HDL (mmol/l): Post-glucose: BBS |
| MHDLCE_BBS_PostGluc | Cholesterol esters in medium HDL (mmol/l): Post-glucose: BBS |
| MHDLFC_BBS_PostGluc | Free cholesterol in medium HDL (mmol/l): Post-glucose: BBS |
| MHDLTG_BBS_PostGluc | Triglycerides in medium HDL (mmol/l): Post-glucose: BBS |
| SHDLPL_BBS_PostGluc | Concentration of small HDL particles (mol/l): Post-glucose: BBS |
| SHDLL_BBS_PostGluc | Total lipids in small HDL (mmol/l): Post-glucose: BBS |
| SHDLPL_BBS_PostGluc | Phospholipids in small HDL (mmol/l): Post-glucose: BBS |
| SHDLCL_BBS_PostGluc | Total cholesterol in small HDL (mmol/l): Post-glucose: BBS |
| SHDLCE_BBS_PostGluc | Cholesterol esters in small HDL (mmol/l): Post-glucose: BBS |
| SHDLFC_BBS_PostGluc | Free cholesterol in small HDL (mmol/l): Post-glucose: BBS |
| SHDLTG_BBS_PostGluc | Triglycerides in small HDL (mmol/l): Post-glucose: BBS |
| XXLVLDLPL_P_BBS_PostGluc | Phospholipids/total lipids ratio chylomicrons & XXL VLDL (%): Post-glucose: BBS |
| XXLVLDLC_P_BBS_PostGluc | Total chol./total lipids ratio chylomicrons & XXL VLDL (%): Post-glucose: BBS |
| XXLVLDLCE_P_BBS_PostGluc | Chol. esters/total lipids ratio chylomicrons & XXL VLDL (%): Post-glucose: BBS |
| XXLVLDLFC_P_BBS_PostGluc | Free chol./total lipids ratio chylomicrons & XXL VLDL (%): Post-glucose: BBS |
| XXLVLDLTG_P_BBS_PostGluc | Triglycerides/total lipids ratio chylomicrons & XXL VLDL (%): Post-glucose: BBS |
| XLVLDLPL_P_BBS_PostGluc | Phospholipids to total lipids ratio in very large VLDL (%): Post-glucose: BBS |
| XLVLDLC_P_BBS_PostGluc | Total cholesterol to total lipids ratio in v. large VLDL (%): Post-glucose: BBS |
| XLVLDLCE_P_BBS_PostGluc | Cholesterol esters to total lipids ratio in v. large VLDL (%): Post-glucose: BBS |
| XLVLDLFC_P_BBS_PostGluc | Free cholesterol to total lipids ratio in very large VLDL (%): Post-glucose: BBS |
| XLVLDLTG_P_BBS_PostGluc | Triglycerides to total lipids ratio in very large VLDL (%): Post-glucose: BBS |
| LVLDLPL_P_BBS_PostGluc | Phospholipids to total lipids ratio in large VLDL (%): Post-glucose: BBS |
| LVLDLC_P_BBS_PostGluc | Total cholesterol to total lipids ratio in large VLDL (%): Post-glucose: BBS |
| LVLDLCE_P_BBS_PostGluc | Cholesterol esters to total lipids ratio in large VLDL (%): Post-glucose: BBS |
| LVLDLFC_P_BBS_PostGluc | Free cholesterol to total lipids ratio in large VLDL (%): Post-glucose: BBS |
| LVLDLTG_P_BBS_PostGluc | Triglycerides to total lipids ratio in large VLDL (%): Post-glucose: BBS |
| MVLDLPL_P_BBS_PostGluc | Phospholipids to total lipids ratio in medium VLDL (%): Post-glucose: BBS |
| MVLDLC_P_BBS_PostGluc | Total cholesterol to total lipids ratio in medium VLDL (%): Post-glucose: BBS |
| MVLDLCE_P_BBS_PostGluc | Cholesterol esters to total lipids ratio in medium VLDL (%): Post-glucose: BBS |

[illegible]

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| SHDLC_P_BBS_PostGluc | Total cholesterol to total lipids ratio in small HDL (%): Post-glucose: BBS |
| SHDLCE_P_BBS_PostGluc | Cholesterol esters to total lipids ratio in small HDL (%): Post-glucose: BBS |
| SHDLFC_P_BBS_PostGluc | Free cholesterol to total lipids ratio in small HDL (%): Post-glucose: BBS |
| SHDLTG_P_BBS_PostGluc | Triglycerides to total lipids ratio in small HDL (%): Post-glucose: BBS |
| VLDLD_BBS_PostGluc | Mean diameter for VLDL particles (nm): Post-glucose: BBS |
| LDLD_BBS_PostGluc | Mean diameter for LDL particles (nm): Post-glucose: BBS |
| HDLD_BBS_PostGluc | Mean diameter for HDL particles (nm): Post-glucose: BBS |
| SerumC_BBS_PostGluc | Serum total cholesterol (mmol/l): Post-glucose: BBS |
| VLDLC_BBS_PostGluc | Total cholesterol in VLDL (mmol/l): Post-glucose: BBS |
| RemnantC_BBS_PostGluc | Remnant cholesterol (non-HDL & non-LDL-cholesterol) (mmol/l): Post-glucose: BBS |
| LDLC_BBS_PostGluc | Total cholesterol in LDL (mmol/l): Post-glucose: BBS |
| HDLC_BBS_PostGluc | Total cholesterol in HDL (mmol/l): Post-glucose: BBS |
| HDL2C_BBS_PostGluc | Total cholesterol in HDL2 (mmol/l): Post-glucose: BBS |
| HDL3C_BBS_PostGluc | Total cholesterol in HDL3 (mmol/l): Post-glucose: BBS |
| EstC_BBS_PostGluc | Esterified cholesterol (mmol/l): Post-glucose: BBS |
| FreeC_BBS_PostGluc | Free cholesterol (mmol/l): Post-glucose: BBS |
| SerumTG_BBS_PostGluc | Serum total triglycerides (mmol/l): Post-glucose: BBS |
| VLDLTG_BBS_PostGluc | Triglycerides in VLDL (mmol/l): Post-glucose: BBS |
| LDLTG_BBS_PostGluc | Triglycerides in LDL (mmol/l): Post-glucose: BBS |
| HDLTG_BBS_PostGluc | Triglycerides in HDL (mmol/l): Post-glucose: BBS |
| TotPG_BBS_PostGluc | Total phosphoglycerides (mmol/l): Post-glucose: BBS |
| TGPG_BBS_PostGluc | Ratio of triglycerides to phosphoglycerides: Post-glucose: BBS |
| PC_BBS_PostGluc | Phosphatidylcholine and other cholines (mmol/l): Post-glucose: BBS |
| SM_BBS_PostGluc | Sphingomyelins (mmol/l): Post-glucose: BBS |
| TotCho_BBS_PostGluc | Total cholines (mmol/l): Post-glucose: BBS |
| ApoA1_BBS_PostGluc | Apolipoprotein A-I (g/l): Post-glucose: BBS |
| ApoB_BBS_PostGluc | Apolipoprotein B (g/l): Post-glucose: BBS |
| ApoBApoA1_BBS_PostGluc | Ratio of apolipoprotein B to apolipoprotein A-I: Post-glucose: BBS |
| TotFA_BBS_PostGluc | Total fatty acids (mmol/l): Post-glucose: BBS |
| UnSat_BBS_PostGluc | Estimated degree of unsaturation: Post-glucose: BBS |
| DHA_BBS_PostGluc | 22:6, docosahexaenoic acid (mmol/l): Post-glucose: BBS |
| LA_BBS_PostGluc | 18:2, linoleic acid (mmol/l): Post-glucose: BBS |
| FAw3_BBS_PostGluc | Omega-3 fatty acids (mmol/l): Post-glucose: BBS |
| FAw6_BBS_PostGluc | Omega-6 fatty acids (mmol/l): Post-glucose: BBS |
| PUFA_BBS_PostGluc | Polyunsaturated fatty acids (mmol/l): Post-glucose: BBS |
| MUFA_BBS_PostGluc | Monounsaturated fatty acids; 16:1, 18:1 (mmol/l): Post-glucose: BBS |
| SFA_BBS_PostGluc | Saturated fatty acids (mmol/l): Post-glucose: BBS |
| DHAFA_BBS_PostGluc | Ratio of 22:6 docosahexaenoic acid to total fatty acids (%): Post-glucose: BBS |
| LAFA_BBS_PostGluc | Ratio of 18:2 linoleic acid to total fatty acids (%): Post-glucose: BBS |
| FAw3FA_BBS_PostGluc | Ratio of omega-3 fatty acids to total fatty acids (%): Post-glucose: BBS |
| FAw6FA_BBS_PostGluc | Ratio of omega-6 fatty acids to total fatty acids (%): Post-glucose: BBS |
| PUFAFA_BBS_PostGluc | Ratio of polyunsaturated fatty acids to total fatty acids (%): Post-glucose: BBS |
| MUFAFA_BBS_PostGluc | Ratio of monounsaturated fatty acids to total fatty acids (%): Post-glucose: BBS |
| SFAFA_BBS_PostGluc | Ratio of saturated fatty acids to total fatty acids (%): Post-glucose: BBS |
| Glc_BBS_PostGluc | Glucose (mmol/l): Post-glucose: BBS |
| Lac_BBS_PostGluc | Lactate (mmol/l): Post-glucose: BBS |
| Pyr_BBS_PostGluc | Pyruvate (mmol/l): Post-glucose: BBS |

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| Cit_BBS_PostGluc | Citrate (mmol/l): Post-glucose: BBS |
| GloI_BBS_PostGluc | Glycerol (mmol/l): Post-glucose: BBS |
| Ala_BBS_PostGluc | Alanine (mmol/l): Post-glucose: BBS |
| Gln_BBS_PostGluc | Glutamine (mmol/l): Post-glucose: BBS |
| Gly_BBS_PostGluc | Glycine (mmol/l): Post-glucose: BBS |
| His_BBS_PostGluc | Histidine (mmol/l): Post-glucose: BBS |
| Ile_BBS_PostGluc | Isoleucine (mmol/l): Post-glucose: BBS |
| Leu_BBS_PostGluc | Leucine (mmol/l): Post-glucose: BBS |
| Val_BBS_PostGluc | Valine (mmol/l): Post-glucose: BBS |
| Phe_BBS_PostGluc | Phenylalanine (mmol/l): Post-glucose: BBS |
| Tyr_BBS_PostGluc | Tyrosine (mmol/l): Post-glucose: BBS |
| Ace_BBS_PostGluc | Acetate (mmol/l): Post-glucose: BBS |
| bOHBut_BBS_PostGluc | 3-hydroxybutyrate (mmol/l): Post-glucose: BBS |
| Crea_BBS_PostGluc | Creatinine (mmol/l): Post-glucose: BBS |
| Alb_BBS_PostGluc | Albumin (signal area): Post-glucose: BBS |
| Gp_BBS_PostGluc | Glycoprotein acetyls, mainly a1-acid glycoprotein (mmol/l): Post-glucose: BBS |
| XXLVLDLP_TF3 | Conc. of chylomicrons and extremely large VLDL particles (mol/l): TF3 |
| XXLVLDLL_TF3 | Total lipids in chylomicrons and extremely large VLDL (mmol/l): TF3 |
| XXLVLDLPL_TF3 | Phospholipids in chylomicrons and extremely large VLDL (mmol/l): TF3 |
| XXLVLDLC_TF3 | Total cholesterol in chylomicrons and extremely large VLDL (mmol/l): TF3 |
| XXLVLDLCE_TF3 | Cholesterol esters in chylomicrons and extremely large VLDL (mmol/l): TF3 |
| XXLVLDLFC_TF3 | Free cholesterol in chylomicrons and extremely large VLDL (mmol/l): TF3 |
| XXLVLDLTG_TF3 | Triglycerides in chylomicrons and extremely large VLDL (mmol/l): TF3 |
| XLVLDLP_TF3 | Concentration of very large VLDL particles (mol/l): TF3 |
| XLVLDLL_TF3 | Total lipids in very large VLDL (mmol/l): TF3 |
| XLVLDLPL_TF3 | Phospholipids in very large VLDL (mmol/l): TF3 |
| XLVLDLC_TF3 | Total cholesterol in very large VLDL (mmol/l): TF3 |
| XLVLDLCE_TF3 | Cholesterol esters in very large VLDL (mmol/l): TF3 |
| XLVLDLFC_TF3 | Free cholesterol in very large VLDL (mmol/l): TF3 |
| XLVLDLTG_TF3 | Triglycerides in very large VLDL (mmol/l): TF3 |
| LVLDP_TF3 | Concentration of large VLDL particles (mol/l): TF3 |
| LVLDLL_TF3 | Total lipids in large VLDL (mmol/l): TF3 |
| LVLDP_L_TF3 | Phospholipids in large VLDL (mmol/l): TF3 |
| LVLDP_L_TF3 | Total cholesterol in large VLDL (mmol/l): TF3 |
| LVLDP_L_TF3 | Cholesterol esters in large VLDL (mmol/l): TF3 |
| LVLDP_L_TF3 | Free cholesterol in large VLDL (mmol/l): TF3 |
| LVLDP_L_TF3 | Triglycerides in large VLDL (mmol/l): TF3 |
| MVLDP_TF3 | Concentration of medium VLDL particles (mol/l): TF3 |
| MVLDP_L_TF3 | Total lipids in medium VLDL (mmol/l): TF3 |
| MVLDP_L_TF3 | Phospholipids in medium VLDL (mmol/l): TF3 |
| MVLDP_L_TF3 | Total cholesterol in medium VLDL (mmol/l): TF3 |
| MVLDP_L_TF3 | Cholesterol esters in medium VLDL (mmol/l): TF3 |
| MVLDP_L_TF3 | Free cholesterol in medium VLDL (mmol/l): TF3 |
| MVLDP_L_TF3 | Triglycerides in medium VLDL (mmol/l): TF3 |
| SVLDP_TF3 | Concentration of small VLDL particles (mol/l): TF3 |
| SVLDP_L_TF3 | Total lipids in small VLDL (mmol/l): TF3 |
| SVLDP_L_TF3 | Phospholipids in small VLDL (mmol/l): TF3 |
| SVLDP_L_TF3 | Total cholesterol in small VLDL (mmol/l): TF3 |

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| SVLDLCE_TF3 | Cholesterol esters in small VLDL (mmol/l): TF3 |
| SVLDLFC_TF3 | Free cholesterol in small VLDL (mmol/l): TF3 |
| SVLDLTG_TF3 | Triglycerides in small VLDL (mmol/l): TF3 |
| XSVLDLP_TF3 | Concentration of very small VLDL particles (mol/l): TF3 |
| XSVDLL_TF3 | Total lipids in very small VLDL (mmol/l): TF3 |
| XSVLDLPL_TF3 | Phospholipids in very small VLDL (mmol/l): TF3 |
| XSVLDLC_TF3 | Total cholesterol in very small VLDL (mmol/l): TF3 |
| XSVLDLCE_TF3 | Cholesterol esters in very small VLDL (mmol/l): TF3 |
| XSVLDLFC_TF3 | Free cholesterol in very small VLDL (mmol/l): TF3 |
| XSVLDLTG_TF3 | Triglycerides in very small VLDL (mmol/l): TF3 |
| IDLP_TF3 | Concentration of IDL particles (mol/l): TF3 |
| IDLL_TF3 | Total lipids in IDL (mmol/l): TF3 |
| IDLPL_TF3 | Phospholipids in IDL (mmol/l): TF3 |
| IDLC_TF3 | Total cholesterol in IDL (mmol/l): TF3 |
| IDLCE_TF3 | Cholesterol esters in IDL (mmol/l): TF3 |
| IDLFC_TF3 | Free cholesterol in IDL (mmol/l): TF3 |
| IDLTG_TF3 | Triglycerides in IDL (mmol/l): TF3 |
| LLDLP_TF3 | Concentration of large LDL particles (mol/l): TF3 |
| LLDLL_TF3 | Total lipids in large LDL (mmol/l): TF3 |
| LLDLPL_TF3 | Phospholipids in large LDL (mmol/l): TF3 |
| LLDLC_TF3 | Total cholesterol in large LDL (mmol/l): TF3 |
| LLDLCE_TF3 | Cholesterol esters in large LDL (mmol/l): TF3 |
| LLDLFC_TF3 | Free cholesterol in large LDL (mmol/l): TF3 |
| LLDLTG_TF3 | Triglycerides in large LDL (mmol/l): TF3 |
| MLDLP_TF3 | Concentration of medium LDL particles (mol/l): TF3 |
| MLDLL_TF3 | Total lipids in medium LDL (mmol/l): TF3 |
| MLDLPL_TF3 | Phospholipids in medium LDL (mmol/l): TF3 |
| MLDLC_TF3 | Total cholesterol in medium LDL (mmol/l): TF3 |
| MLDLCE_TF3 | Cholesterol esters in medium LDL (mmol/l): TF3 |
| MLDLFC_TF3 | Free cholesterol in medium LDL (mmol/l): TF3 |
| MLDLTG_TF3 | Triglycerides in medium LDL (mmol/l): TF3 |
| SLDLP_TF3 | Concentration of small LDL particles (mol/l): TF3 |
| SLDLL_TF3 | Total lipids in small LDL (mmol/l): TF3 |
| SLDLPL_TF3 | Phospholipids in small LDL (mmol/l): TF3 |
| SLDLC_TF3 | Total cholesterol in small LDL (mmol/l): TF3 |
| SLDLCE_TF3 | Cholesterol esters in small LDL (mmol/l): TF3 |
| SLDLFC_TF3 | Free cholesterol in small LDL (mmol/l): TF3 |
| SLDLTG_TF3 | Triglycerides in small LDL (mmol/l): TF3 |
| XLHDLP_TF3 | Concentration of very large HDL particles (mol/l): TF3 |
| XLHDLL_TF3 | Total lipids in very large HDL (mmol/l): TF3 |
| XLHDLPL_TF3 | Phospholipids in very large HDL (mmol/l): TF3 |
| XLHDL_C_TF3 | Total cholesterol in very large HDL (mmol/l): TF3 |
| XLHDLCE_TF3 | Cholesterol esters in very large HDL (mmol/l): TF3 |
| XLHDLFC_TF3 | Free cholesterol in very large HDL (mmol/l): TF3 |
| XLHDLTG_TF3 | Triglycerides in very large HDL (mmol/l): TF3 |
| LHDLP_TF3 | Concentration of large HDL particles (mol/l): TF3 |
| LHDLL_TF3 | Total lipids in large HDL (mmol/l): TF3 |
| LHDLPL_TF3 | Phospholipids in large HDL (mmol/l): TF3 |

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| LHDL_C_TF3 | Total cholesterol in large HDL (mmol/l): TF3 |
| LHDLCE_TF3 | Cholesterol esters in large HDL (mmol/l): TF3 |
| LHDLFC_TF3 | Free cholesterol in large HDL (mmol/l): TF3 |
| LHDLTG_TF3 | Triglycerides in large HDL (mmol/l): TF3 |
| MHDL_P_TF3 | Concentration of medium HDL particles (mol/l): TF3 |
| MHDL_TF3 | Total lipids in medium HDL (mmol/l): TF3 |
| MHDLPL_TF3 | Phospholipids in medium HDL (mmol/l): TF3 |
| MHDL_C_TF3 | Total cholesterol in medium HDL (mmol/l): TF3 |
| MHDLCE_TF3 | Cholesterol esters in medium HDL (mmol/l): TF3 |
| MHDLFC_TF3 | Free cholesterol in medium HDL (mmol/l): TF3 |
| MHDLTG_TF3 | Triglycerides in medium HDL (mmol/l): TF3 |
| SHDL_P_TF3 | Concentration of small HDL particles (mol/l): TF3 |
| SHDL_TF3 | Total lipids in small HDL (mmol/l): TF3 |
| SHDLPL_TF3 | Phospholipids in small HDL (mmol/l): TF3 |
| SHDL_C_TF3 | Total cholesterol in small HDL (mmol/l): TF3 |
| SHDLCE_TF3 | Cholesterol esters in small HDL (mmol/l): TF3 |
| SHDLFC_TF3 | Free cholesterol in small HDL (mmol/l): TF3 |
| SHDLTG_TF3 | Triglycerides in small HDL (mmol/l): TF3 |
| XXLVLDLPL_P_TF3 | Phospholipids to total lipids ratio in chylomicrons and XXL VLDL (%): TF3 |
| XXLVLDL_C_TF3 | Total cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): TF3 |
| XXLVLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in chylomicrons and XXL VLDL (%): TF3 |
| XXLVLDLFC_P_TF3 | Free cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): TF3 |
| XXLVLDLTG_P_TF3 | Triglycerides to total lipids ratio in chylomicrons and XXL VLDL (%): TF3 |
| XLVLDLPL_P_TF3 | Phospholipids to total lipids ratio in very large VLDL (%): TF3 |
| XLVLDL_C_TF3 | Total cholesterol to total lipids ratio in very large VLDL (%): TF3 |
| XLVLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in very large VLDL (%): TF3 |
| XLVLDLFC_P_TF3 | Free cholesterol to total lipids ratio in very large VLDL (%): TF3 |
| XLVLDLTG_P_TF3 | Triglycerides to total lipids ratio in very large VLDL (%): TF3 |
| LVLDLPL_P_TF3 | Phospholipids to total lipids ratio in large VLDL (%): TF3 |
| LVLDL_C_TF3 | Total cholesterol to total lipids ratio in large VLDL (%): TF3 |
| LVLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in large VLDL (%): TF3 |
| LVLDLFC_P_TF3 | Free cholesterol to total lipids ratio in large VLDL (%): TF3 |
| LVLDLTG_P_TF3 | Triglycerides to total lipids ratio in large VLDL (%): TF3 |
| MVLDLPL_P_TF3 | Phospholipids to total lipids ratio in medium VLDL (%): TF3 |
| MVLDL_C_TF3 | Total cholesterol to total lipids ratio in medium VLDL (%): TF3 |
| MVLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in medium VLDL (%): TF3 |
| MVLDLFC_P_TF3 | Free cholesterol to total lipids ratio in medium VLDL (%): TF3 |
| MVLDLTG_P_TF3 | Triglycerides to total lipids ratio in medium VLDL (%): TF3 |
| SVLDLPL_P_TF3 | Phospholipids to total lipids ratio in small VLDL (%): TF3 |
| SVLDL_C_TF3 | Total cholesterol to total lipids ratio in small VLDL (%): TF3 |
| SVLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in small VLDL (%): TF3 |
| SVLDLFC_P_TF3 | Free cholesterol to total lipids ratio in small VLDL (%): TF3 |
| SVLDLTG_P_TF3 | Triglycerides to total lipids ratio in small VLDL (%): TF3 |
| XSVLDLPL_P_TF3 | Phospholipids to total lipids ratio in very small VLDL (%): TF3 |
| XSVLDL_C_TF3 | Total cholesterol to total lipids ratio in very small VLDL (%): TF3 |
| XSVLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in very small VLDL (%): TF3 |
| XSVLDLFC_P_TF3 | Free cholesterol to total lipids ratio in very small VLDL (%): TF3 |
| XSVLDLTG_P_TF3 | Triglycerides to total lipids ratio in very small VLDL (%): TF3 |

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| IDLPL_P_TF3 | Phospholipids to total lipids ratio in IDL (%): TF3 |
| IDL_C_P_TF3 | Total cholesterol to total lipids ratio in IDL (%): TF3 |
| IDLCE_P_TF3 | Cholesterol esters to total lipids ratio in IDL (%): TF3 |
| IDLFC_P_TF3 | Free cholesterol to total lipids ratio in IDL (%): TF3 |
| IDLTG_P_TF3 | Triglycerides to total lipids ratio in IDL (%): TF3 |
| LLDLPL_P_TF3 | Phospholipids to total lipids ratio in large LDL (%): TF3 |
| LLDLC_P_TF3 | Total cholesterol to total lipids ratio in large LDL (%): TF3 |
| LLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in large LDL (%): TF3 |
| LLDLFC_P_TF3 | Free cholesterol to total lipids ratio in large LDL (%): TF3 |
| LLDLTG_P_TF3 | Triglycerides to total lipids ratio in large LDL (%): TF3 |
| MLDLPL_P_TF3 | Phospholipids to total lipids ratio in medium LDL (%): TF3 |
| MLDLC_P_TF3 | Total cholesterol to total lipids ratio in medium LDL (%): TF3 |
| MLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in medium LDL (%): TF3 |
| MLDLFC_P_TF3 | Free cholesterol to total lipids ratio in medium LDL (%): TF3 |
| MLDLTG_P_TF3 | Triglycerides to total lipids ratio in medium LDL (%): TF3 |
| SLDLPL_P_TF3 | Phospholipids to total lipids ratio in small LDL (%): TF3 |
| SLDLC_P_TF3 | Total cholesterol to total lipids ratio in small LDL (%): TF3 |
| SLDLCE_P_TF3 | Cholesterol esters to total lipids ratio in small LDL (%): TF3 |
| SLDLFC_P_TF3 | Free cholesterol to total lipids ratio in small LDL (%): TF3 |
| SLDLTG_P_TF3 | Triglycerides to total lipids ratio in small LDL (%): TF3 |
| XLHDLPL_P_TF3 | Phospholipids to total lipids ratio in very large HDL (%): TF3 |
| XLHDL_C_P_TF3 | Total cholesterol to total lipids ratio in very large HDL (%): TF3 |
| XLHDLCE_P_TF3 | Cholesterol esters to total lipids ratio in very large HDL (%): TF3 |
| XLHDLFC_P_TF3 | Free cholesterol to total lipids ratio in very large HDL (%): TF3 |
| XLHDLTG_P_TF3 | Triglycerides to total lipids ratio in very large HDL (%): TF3 |
| LHDLPL_P_TF3 | Phospholipids to total lipids ratio in large HDL (%): TF3 |
| LHDL_C_P_TF3 | Total cholesterol to total lipids ratio in large HDL (%): TF3 |
| LHDLCE_P_TF3 | Cholesterol esters to total lipids ratio in large HDL (%): TF3 |
| LHDLFC_P_TF3 | Free cholesterol to total lipids ratio in large HDL (%): TF3 |
| LHDLTG_P_TF3 | Triglycerides to total lipids ratio in large HDL (%): TF3 |
| MHDLPL_P_TF3 | Phospholipids to total lipids ratio in medium HDL (%): TF3 |
| MHDL_C_P_TF3 | Total cholesterol to total lipids ratio in medium HDL (%): TF3 |
| MHDLCE_P_TF3 | Cholesterol esters to total lipids ratio in medium HDL (%): TF3 |
| MHDLFC_P_TF3 | Free cholesterol to total lipids ratio in medium HDL (%): TF3 |
| MHDLTG_P_TF3 | Triglycerides to total lipids ratio in medium HDL (%): TF3 |
| SHDLPL_P_TF3 | Phospholipids to total lipids ratio in small HDL (%): TF3 |
| SHDLC_P_TF3 | Total cholesterol to total lipids ratio in small HDL (%): TF3 |
| SHDLCE_P_TF3 | Cholesterol esters to total lipids ratio in small HDL (%): TF3 |
| SHDLFC_P_TF3 | Free cholesterol to total lipids ratio in small HDL (%): TF3 |
| SHDLTG_P_TF3 | Triglycerides to total lipids ratio in small HDL (%): TF3 |
| VLDL_TF3 | Mean diameter for VLDL particles (nm): TF3 |
| LDL_TF3 | Mean diameter for LDL particles (nm): TF3 |
| HDL_TF3 | Mean diameter for HDL particles (nm): TF3 |
| SerumC_TF3 | Serum total cholesterol (mmol/l): TF3 |
| VLDLC_TF3 | Total cholesterol in VLDL (mmol/l): TF3 |
| RemnantC_TF3 | Remnant cholesterol (non-HDL, non-LDL -cholesterol) (mmol/l): TF3 |
| LDLC_TF3 | Total cholesterol in LDL (mmol/l): TF3 |
| HDL_C_TF3 | Total cholesterol in HDL (mmol/l): TF3 |

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| HDL2C_TF3 | Total cholesterol in HDL2 (mmol/l): TF3 |
| HDL3C_TF3 | Total cholesterol in HDL3 (mmol/l): TF3 |
| EstC_TF3 | Esterified cholesterol (mmol/l): TF3 |
| FreeC_TF3 | Free cholesterol (mmol/l): TF3 |
| SerumTG_TF3 | Serum total triglycerides (mmol/l): TF3 |
| VLDLTG_TF3 | Triglycerides in VLDL (mmol/l): TF3 |
| LDLTG_TF3 | Triglycerides in LDL (mmol/l): TF3 |
| HDLTG_TF3 | Triglycerides in HDL (mmol/l): TF3 |
| DAG_TF3 | Diacylglycerol (mmol/l): TF3 |
| DAGTG_TF3 | Ratio of diacylglycerol to triglycerides: TF3 |
| TotPG_TF3 | Total phosphoglycerides (mmol/l): TF3 |
| TGPG_TF3 | Ratio of triglycerides to phosphoglycerides: TF3 |
| PC_TF3 | Phosphatidylcholine and other cholines (mmol/l): TF3 |
| TotCho_TF3 | Total cholines (mmol/l): TF3 |
| ApoA1_TF3 | Apolipoprotein A-I (g/l): TF3 |
| ApoB_TF3 | Apolipoprotein B (g/l): TF3 |
| ApoBApoA1_TF3 | Ratio of apolipoprotein B to apolipoprotein A-I: TF3 |
| TotFA_TF3 | Total fatty acids (mmol/l): TF3 |
| FALen_TF3 | Estimated description of fatty acid chain length, not actual carbon number: TF3 |
| UnsatDeg_TF3 | Estimated degree of unsaturation: TF3 |
| DHA_TF3 | 22:6, docosahexaenoic acid (mmol/l): TF3 |
| LA_TF3 | 18:2, linoleic acid (mmol/l): TF3 |
| CLA_TF3 | Conjugated linoleic acid (mmol/l): TF3 |
| FAw3_TF3 | Omega-3 fatty acids (mmol/l): TF3 |
| FAw6_TF3 | Omega-6 fatty acids (mmol/l): TF3 |
| PUFA_TF3 | Polyunsaturated fatty acids (mmol/l): TF3 |
| MUFA_TF3 | Monounsaturated fatty acids; 16:1, 18:1 (mmol/l): TF3 |
| SFA_TF3 | Saturated fatty acids (mmol/l): TF3 |
| DHAFA_TF3 | Ratio of 22:6 docosahexaenoic acid to total fatty acids (%): TF3 |
| LAFA_TF3 | Ratio of 18:2 linoleic acid to total fatty acids (%): TF3 |
| CLAFA_TF3 | Ratio of conjugated linoleic acid to total fatty acids (%): TF3 |
| FAw3FA_TF3 | Ratio of omega-3 fatty acids to total fatty acids (%): TF3 |
| FAw6FA_TF3 | Ratio of omega-6 fatty acids to total fatty acids (%): TF3 |
| PUFAFA_TF3 | Ratio of polyunsaturated fatty acids to total fatty acids (%): TF3 |
| MUFAFA_TF3 | Ratio of monounsaturated fatty acids to total fatty acids (%): TF3 |
| SFAFA_TF3 | Ratio of saturated fatty acids to total fatty acids (%): TF3 |
| Glc_TF3 | Glucose (mmol/l): TF3 |
| Lac_TF3 | Lactate (mmol/l): TF3 |
| Pyr_TF3 | Pyruvate (mmol/l): TF3 |
| Cit_TF3 | Citrate (mmol/l): TF3 |
| Ala_TF3 | Alanine (mmol/l): TF3 |
| Gln_TF3 | Glutamine (mmol/l): TF3 |
| His_TF3 | Histidine (mmol/l): TF3 |
| Ile_TF3 | Isoleucine (mmol/l): TF3 |
| Leu_TF3 | Leucine (mmol/l): TF3 |
| Val_TF3 | Valine (mmol/l): TF3 |
| Phe_TF3 | Phenylalanine (mmol/l): TF3 |
| Tyr_TF3 | Tyrosine (mmol/l): TF3 |

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|---------------|---|
| Ace_TF3 | Acetate (mmol/l): TF3 |
| AcAce_TF3 | Acetoacetate (mmol/l): TF3 |
| bOHBut_TF3 | 3-hydroxybutyrate (mmol/l): TF3 |
| Crea_TF3 | Creatinine (mmol/l): TF3 |
| Alb_TF3 | Albumin (signal area): TF3 |
| Gp_TF3 | Glycoprotein acetyls, mainly a1-acid glycoprotein (mmol/l): TF3 |
| Sphingo_TF3 | Sphingomyelins (mmol/l): TF3 |
| XXLVLDLP_TF4 | Conc. of chylomicrons and extremely large VLDL particles (mol/l): TF4 |
| XXLVLDLL_TF4 | Total lipids in chylomicrons and extremely large VLDL (mmol/l): TF4 |
| XXLVLDLPL_TF4 | Phospholipids in chylomicrons and extremely large VLDL (mmol/l): TF4 |
| XXLVLDLC_TF4 | Total cholesterol in chylomicrons and extremely large VLDL (mmol/l): TF4 |
| XXLVLDLCE_TF4 | Cholesterol esters in chylomicrons and extremely large VLDL (mmol/l): TF4 |
| XXLVLDLFC_TF4 | Free cholesterol in chylomicrons and extremely large VLDL (mmol/l): TF4 |
| XXLVLDLTG_TF4 | Triglycerides in chylomicrons and extremely large VLDL (mmol/l): TF4 |
| XLVLDLP_TF4 | Concentration of very large VLDL particles (mol/l): TF4 |
| XLVLDLL_TF4 | Total lipids in very large VLDL (mmol/l): TF4 |
| XLVLDLPL_TF4 | Phospholipids in very large VLDL (mmol/l): TF4 |
| XLVLDLC_TF4 | Total cholesterol in very large VLDL (mmol/l): TF4 |
| XLVLDLCE_TF4 | Cholesterol esters in very large VLDL (mmol/l): TF4 |
| XLVLDLFC_TF4 | Free cholesterol in very large VLDL (mmol/l): TF4 |
| XLVLDLTG_TF4 | Triglycerides in very large VLDL (mmol/l): TF4 |
| LVLDP_TF4 | Concentration of large VLDL particles (mol/l): TF4 |
| LVLDLL_TF4 | Total lipids in large VLDL (mmol/l): TF4 |
| LVLDP_L_TF4 | Phospholipids in large VLDL (mmol/l): TF4 |
| LVLDP_L_TF4 | Total cholesterol in large VLDL (mmol/l): TF4 |
| LVLDP_L_TF4 | Cholesterol esters in large VLDL (mmol/l): TF4 |
| LVLDP_L_TF4 | Free cholesterol in large VLDL (mmol/l): TF4 |
| LVLDP_L_TF4 | Triglycerides in large VLDL (mmol/l): TF4 |
| MVLDP_TF4 | Concentration of medium VLDL particles (mol/l): TF4 |
| MVLDLL_TF4 | Total lipids in medium VLDL (mmol/l): TF4 |
| MVLDP_L_TF4 | Phospholipids in medium VLDL (mmol/l): TF4 |
| MVLDP_L_TF4 | Total cholesterol in medium VLDL (mmol/l): TF4 |
| MVLDP_L_TF4 | Cholesterol esters in medium VLDL (mmol/l): TF4 |
| MVLDP_L_TF4 | Free cholesterol in medium VLDL (mmol/l): TF4 |
| MVLDP_L_TF4 | Triglycerides in medium VLDL (mmol/l): TF4 |
| SVLDP_TF4 | Concentration of small VLDL particles (mol/l): TF4 |
| SVLDLL_TF4 | Total lipids in small VLDL (mmol/l): TF4 |
| SVLDP_L_TF4 | Phospholipids in small VLDL (mmol/l): TF4 |
| SVLDP_L_TF4 | Total cholesterol in small VLDL (mmol/l): TF4 |
| SVLDP_L_TF4 | Cholesterol esters in small VLDL (mmol/l): TF4 |
| SVLDP_L_TF4 | Free cholesterol in small VLDL (mmol/l): TF4 |
| SVLDP_L_TF4 | Triglycerides in small VLDL (mmol/l): TF4 |
| XSVLDP_TF4 | Concentration of very small VLDL particles (mol/l): TF4 |
| XSVLDLL_TF4 | Total lipids in very small VLDL (mmol/l): TF4 |
| XSVLDP_L_TF4 | Phospholipids in very small VLDL (mmol/l): TF4 |
| XSVLDP_L_TF4 | Total cholesterol in very small VLDL (mmol/l): TF4 |
| XSVLDP_L_TF4 | Cholesterol esters in very small VLDL (mmol/l): TF4 |
| XSVLDP_L_TF4 | Free cholesterol in very small VLDL (mmol/l): TF4 |

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| XSVLDTG_TF4 | Triglycerides in very small VLDL (mmol/l): TF4 |
| IDL_P_TF4 | Concentration of IDL particles (mol/l): TF4 |
| IDL_TF4 | Total lipids in IDL (mmol/l): TF4 |
| IDLPL_TF4 | Phospholipids in IDL (mmol/l): TF4 |
| IDLC_TF4 | Total cholesterol in IDL (mmol/l): TF4 |
| IDLCE_TF4 | Cholesterol esters in IDL (mmol/l): TF4 |
| IDLFC_TF4 | Free cholesterol in IDL (mmol/l): TF4 |
| IDLTG_TF4 | Triglycerides in IDL (mmol/l): TF4 |
| LLDLP_TF4 | Concentration of large LDL particles (mol/l): TF4 |
| LLDLL_TF4 | Total lipids in large LDL (mmol/l): TF4 |
| LLDLPL_TF4 | Phospholipids in large LDL (mmol/l): TF4 |
| LLDLC_TF4 | Total cholesterol in large LDL (mmol/l): TF4 |
| LLDLCE_TF4 | Cholesterol esters in large LDL (mmol/l): TF4 |
| LLDLFC_TF4 | Free cholesterol in large LDL (mmol/l): TF4 |
| LLDLTG_TF4 | Triglycerides in large LDL (mmol/l): TF4 |
| MLDLP_TF4 | Concentration of medium LDL particles (mol/l): TF4 |
| MLDLL_TF4 | Total lipids in medium LDL (mmol/l): TF4 |
| MLDLPL_TF4 | Phospholipids in medium LDL (mmol/l): TF4 |
| MLDLC_TF4 | Total cholesterol in medium LDL (mmol/l): TF4 |
| MLDLCE_TF4 | Cholesterol esters in medium LDL (mmol/l): TF4 |
| MLDLFC_TF4 | Free cholesterol in medium LDL (mmol/l): TF4 |
| MLDLTG_TF4 | Triglycerides in medium LDL (mmol/l): TF4 |
| SLDLP_TF4 | Concentration of small LDL particles (mol/l): TF4 |
| SLDLL_TF4 | Total lipids in small LDL (mmol/l): TF4 |
| SLDLPL_TF4 | Phospholipids in small LDL (mmol/l): TF4 |
| SLDLC_TF4 | Total cholesterol in small LDL (mmol/l): TF4 |
| SLDLCE_TF4 | Cholesterol esters in small LDL (mmol/l): TF4 |
| SLDLFC_TF4 | Free cholesterol in small LDL (mmol/l): TF4 |
| SLDLTG_TF4 | Triglycerides in small LDL (mmol/l): TF4 |
| XLHDL_P_TF4 | Concentration of very large HDL particles (mol/l): TF4 |
| XLHDL_TF4 | Total lipids in very large HDL (mmol/l): TF4 |
| XLHDLPL_TF4 | Phospholipids in very large HDL (mmol/l): TF4 |
| XLHDL_C_TF4 | Total cholesterol in very large HDL (mmol/l): TF4 |
| XLHDLCE_TF4 | Cholesterol esters in very large HDL (mmol/l): TF4 |
| XLHDLFC_TF4 | Free cholesterol in very large HDL (mmol/l): TF4 |
| XLHDLTG_TF4 | Triglycerides in very large HDL (mmol/l): TF4 |
| LHDL_P_TF4 | Concentration of large HDL particles (mol/l): TF4 |
| LHDL_TF4 | Total lipids in large HDL (mmol/l): TF4 |
| LHDLPL_TF4 | Phospholipids in large HDL (mmol/l): TF4 |
| LHDL_C_TF4 | Total cholesterol in large HDL (mmol/l): TF4 |
| LHDLCE_TF4 | Cholesterol esters in large HDL (mmol/l): TF4 |
| LHDLFC_TF4 | Free cholesterol in large HDL (mmol/l): TF4 |
| LHDLTG_TF4 | Triglycerides in large HDL (mmol/l): TF4 |
| MHDL_P_TF4 | Concentration of medium HDL particles (mol/l): TF4 |
| MHDL_TF4 | Total lipids in medium HDL (mmol/l): TF4 |
| MHDLPL_TF4 | Phospholipids in medium HDL (mmol/l): TF4 |
| MHDL_C_TF4 | Total cholesterol in medium HDL (mmol/l): TF4 |
| MHDLCE_TF4 | Cholesterol esters in medium HDL (mmol/l): TF4 |

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| MHDLFC_TF4 | Free cholesterol in medium HDL (mmol/l): TF4 |
| MHDLTG_TF4 | Triglycerides in medium HDL (mmol/l): TF4 |
| SHDLP_TF4 | Concentration of small HDL particles (mol/l): TF4 |
| SHDLL_TF4 | Total lipids in small HDL (mmol/l): TF4 |
| SHDLPL_TF4 | Phospholipids in small HDL (mmol/l): TF4 |
| SHDLC_TF4 | Total cholesterol in small HDL (mmol/l): TF4 |
| SHDLCE_TF4 | Cholesterol esters in small HDL (mmol/l): TF4 |
| SHDLFC_TF4 | Free cholesterol in small HDL (mmol/l): TF4 |
| SHDLTG_TF4 | Triglycerides in small HDL (mmol/l): TF4 |
| XXLVLDLPL_P_TF4 | Phospholipids to total lipids ratio in chylomicrons and XXL VLDL (%): TF4 |
| XXLVLDLC_P_TF4 | Total cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): TF4 |
| XXLVLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in chylomicrons and XXL VLDL (%): TF4 |
| XXLVLDLFC_P_TF4 | Free cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): TF4 |
| XXLVLDLTG_P_TF4 | Triglycerides to total lipids ratio in chylomicrons and XXL VLDL (%): TF4 |
| XLVLDLPL_P_TF4 | Phospholipids to total lipids ratio in very large VLDL (%): TF4 |
| XLVLDLC_P_TF4 | Total cholesterol to total lipids ratio in very large VLDL (%): TF4 |
| XLVLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in very large VLDL (%): TF4 |
| XLVLDLFC_P_TF4 | Free cholesterol to total lipids ratio in very large VLDL (%): TF4 |
| XLVLDLTG_P_TF4 | Triglycerides to total lipids ratio in very large VLDL (%): TF4 |
| LVLDLPL_P_TF4 | Phospholipids to total lipids ratio in large VLDL (%): TF4 |
| LVLDLC_P_TF4 | Total cholesterol to total lipids ratio in large VLDL (%): TF4 |
| LVLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in large VLDL (%): TF4 |
| LVLDLFC_P_TF4 | Free cholesterol to total lipids ratio in large VLDL (%): TF4 |
| LVLDLTG_P_TF4 | Triglycerides to total lipids ratio in large VLDL (%): TF4 |
| MVLDLPL_P_TF4 | Phospholipids to total lipids ratio in medium VLDL (%): TF4 |
| MVLDLC_P_TF4 | Total cholesterol to total lipids ratio in medium VLDL (%): TF4 |
| MVLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in medium VLDL (%): TF4 |
| MVLDLFC_P_TF4 | Free cholesterol to total lipids ratio in medium VLDL (%): TF4 |
| MVLDLTG_P_TF4 | Triglycerides to total lipids ratio in medium VLDL (%): TF4 |
| SVLDLPL_P_TF4 | Phospholipids to total lipids ratio in small VLDL (%): TF4 |
| SVLDLC_P_TF4 | Total cholesterol to total lipids ratio in small VLDL (%): TF4 |
| SVLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in small VLDL (%): TF4 |
| SVLDLFC_P_TF4 | Free cholesterol to total lipids ratio in small VLDL (%): TF4 |
| SVLDLTG_P_TF4 | Triglycerides to total lipids ratio in small VLDL (%): TF4 |
| XSVLDLPL_P_TF4 | Phospholipids to total lipids ratio in very small VLDL (%): TF4 |
| XSVLDLC_P_TF4 | Total cholesterol to total lipids ratio in very small VLDL (%): TF4 |
| XSVLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in very small VLDL (%): TF4 |
| XSVLDLFC_P_TF4 | Free cholesterol to total lipids ratio in very small VLDL (%): TF4 |
| XSVLDLTG_P_TF4 | Triglycerides to total lipids ratio in very small VLDL (%): TF4 |
| IDLPL_P_TF4 | Phospholipids to total lipids ratio in IDL (%): TF4 |
| IDLC_P_TF4 | Total cholesterol to total lipids ratio in IDL (%): TF4 |
| IDLCE_P_TF4 | Cholesterol esters to total lipids ratio in IDL (%): TF4 |
| IDLFC_P_TF4 | Free cholesterol to total lipids ratio in IDL (%): TF4 |
| IDLTG_P_TF4 | Triglycerides to total lipids ratio in IDL (%): TF4 |
| LLDLPL_P_TF4 | Phospholipids to total lipids ratio in large LDL (%): TF4 |
| LLDLC_P_TF4 | Total cholesterol to total lipids ratio in large LDL (%): TF4 |
| LLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in large LDL (%): TF4 |
| LLDLFC_P_TF4 | Free cholesterol to total lipids ratio in large LDL (%): TF4 |

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| LLDLTG_P_TF4 | Triglycerides to total lipids ratio in large LDL (%): TF4 |
| MLDLPL_P_TF4 | Phospholipids to total lipids ratio in medium LDL (%): TF4 |
| MLDLC_P_TF4 | Total cholesterol to total lipids ratio in medium LDL (%): TF4 |
| MLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in medium LDL (%): TF4 |
| MLDLFC_P_TF4 | Free cholesterol to total lipids ratio in medium LDL (%): TF4 |
| MLDLTG_P_TF4 | Triglycerides to total lipids ratio in medium LDL (%): TF4 |
| SLDLPL_P_TF4 | Phospholipids to total lipids ratio in small LDL (%): TF4 |
| SLDLC_P_TF4 | Total cholesterol to total lipids ratio in small LDL (%): TF4 |
| SLDLCE_P_TF4 | Cholesterol esters to total lipids ratio in small LDL (%): TF4 |
| SLDLFC_P_TF4 | Free cholesterol to total lipids ratio in small LDL (%): TF4 |
| SLDLTG_P_TF4 | Triglycerides to total lipids ratio in small LDL (%): TF4 |
| XLHDLPL_P_TF4 | Phospholipids to total lipids ratio in very large HDL (%): TF4 |
| XLHDLCL_P_TF4 | Total cholesterol to total lipids ratio in very large HDL (%): TF4 |
| XLHDLCE_P_TF4 | Cholesterol esters to total lipids ratio in very large HDL (%): TF4 |
| XLHDLFC_P_TF4 | Free cholesterol to total lipids ratio in very large HDL (%): TF4 |
| XLHDLTG_P_TF4 | Triglycerides to total lipids ratio in very large HDL (%): TF4 |
| LHDLPL_P_TF4 | Phospholipids to total lipids ratio in large HDL (%): TF4 |
| LHDLCL_P_TF4 | Total cholesterol to total lipids ratio in large HDL (%): TF4 |
| LHDLCE_P_TF4 | Cholesterol esters to total lipids ratio in large HDL (%): TF4 |
| LHDLFC_P_TF4 | Free cholesterol to total lipids ratio in large HDL (%): TF4 |
| LHDLTG_P_TF4 | Triglycerides to total lipids ratio in large HDL (%): TF4 |
| MHDLPL_P_TF4 | Phospholipids to total lipids ratio in medium HDL (%): TF4 |
| MHDLCL_P_TF4 | Total cholesterol to total lipids ratio in medium HDL (%): TF4 |
| MHDLCE_P_TF4 | Cholesterol esters to total lipids ratio in medium HDL (%): TF4 |
| MHDLFC_P_TF4 | Free cholesterol to total lipids ratio in medium HDL (%): TF4 |
| MHDLTG_P_TF4 | Triglycerides to total lipids ratio in medium HDL (%): TF4 |
| SHDLPL_P_TF4 | Phospholipids to total lipids ratio in small HDL (%): TF4 |
| SHDLCL_P_TF4 | Total cholesterol to total lipids ratio in small HDL (%): TF4 |
| SHDLCE_P_TF4 | Cholesterol esters to total lipids ratio in small HDL (%): TF4 |
| SHDLFC_P_TF4 | Free cholesterol to total lipids ratio in small HDL (%): TF4 |
| SHDLTG_P_TF4 | Triglycerides to total lipids ratio in small HDL (%): TF4 |
| VLDLD_TF4 | Mean diameter for VLDL particles (nm): TF4 |
| LDLD_TF4 | Mean diameter for LDL particles (nm): TF4 |
| HDLD_TF4 | Mean diameter for HDL particles (nm): TF4 |
| SerumC_TF4 | Serum total cholesterol (mmol/l): TF4 |
| VLDLC_TF4 | Total cholesterol in VLDL (mmol/l): TF4 |
| RemnantC_TF4 | Remnant cholesterol (non-HDL, non-LDL -cholesterol) (mmol/l): TF4 |
| LDLC_TF4 | Total cholesterol in LDL (mmol/l): TF4 |
| HDLC_TF4 | Total cholesterol in HDL (mmol/l): TF4 |
| HDL2C_TF4 | Total cholesterol in HDL2 (mmol/l): TF4 |
| HDL3C_TF4 | Total cholesterol in HDL3 (mmol/l): TF4 |
| EstC_TF4 | Esterified cholesterol (mmol/l): TF4 |
| FreeC_TF4 | Free cholesterol (mmol/l): TF4 |
| SerumTG_TF4 | Serum total triglycerides (mmol/l): TF4 |
| VLDLTG_TF4 | Triglycerides in VLDL (mmol/l): TF4 |
| LDLTG_TF4 | Triglycerides in LDL (mmol/l): TF4 |
| HDLTG_TF4 | Triglycerides in HDL (mmol/l): TF4 |
| DAG_TF4 | Diacylglycerol (mmol/l): TF4 |

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|---------------|---|
| DAGTG_TF4 | Ratio of diacylglycerol to triglycerides: TF4 |
| TotPG_TF4 | Total phosphoglycerides (mmol/l): TF4 |
| TGPG_TF4 | Ratio of triglycerides to phosphoglycerides: TF4 |
| PC_TF4 | Phosphatidylcholine and other cholines (mmol/l): TF4 |
| TotCho_TF4 | Total cholines (mmol/l): TF4 |
| ApoA1_TF4 | Apolipoprotein A-I (g/l): TF4 |
| ApoB_TF4 | Apolipoprotein B (g/l): TF4 |
| ApoBApoA1_TF4 | Ratio of apolipoprotein B to apolipoprotein A-I: TF4 |
| TotFA_TF4 | Total fatty acids (mmol/l): TF4 |
| FALen_TF4 | Estimated description of fatty acid chain length, not actual carbon number: TF4 |
| UnsatDeg_TF4 | Estimated degree of unsaturation: TF4 |
| DHA_TF4 | 22:6, docosahexaenoic acid (mmol/l): TF4 |
| LA_TF4 | 18:2, linoleic acid (mmol/l): TF4 |
| CLA_TF4 | Conjugated linoleic acid (mmol/l): TF4 |
| FAw3_TF4 | Omega-3 fatty acids (mmol/l): TF4 |
| FAw6_TF4 | Omega-6 fatty acids (mmol/l): TF4 |
| PUFA_TF4 | Polyunsaturated fatty acids (mmol/l): TF4 |
| MUFA_TF4 | Monounsaturated fatty acids; 16:1, 18:1 (mmol/l): TF4 |
| SFA_TF4 | Saturated fatty acids (mmol/l): TF4 |
| DHAFA_TF4 | Ratio of 22:6 docosahexaenoic acid to total fatty acids (%): TF4 |
| LAFA_TF4 | Ratio of 18:2 linoleic acid to total fatty acids (%): TF4 |
| CLAFA_TF4 | Ratio of conjugated linoleic acid to total fatty acids (%): TF4 |
| FAw3FA_TF4 | Ratio of omega-3 fatty acids to total fatty acids (%): TF4 |
| FAw6FA_TF4 | Ratio of omega-6 fatty acids to total fatty acids (%): TF4 |
| PUFAFA_TF4 | Ratio of polyunsaturated fatty acids to total fatty acids (%): TF4 |
| MUFAFA_TF4 | Ratio of monounsaturated fatty acids to total fatty acids (%): TF4 |
| SFAFA_TF4 | Ratio of saturated fatty acids to total fatty acids (%): TF4 |
| Glc_TF4 | Glucose (mmol/l): TF4 |
| Lac_TF4 | Lactate (mmol/l): TF4 |
| Pyr_TF4 | Pyruvate (mmol/l): TF4 |
| Cit_TF4 | Citrate (mmol/l): TF4 |
| Ala_TF4 | Alanine (mmol/l): TF4 |
| Gln_TF4 | Glutamine (mmol/l): TF4 |
| His_TF4 | Histidine (mmol/l): TF4 |
| Ile_TF4 | Isoleucine (mmol/l): TF4 |
| Leu_TF4 | Leucine (mmol/l): TF4 |
| Val_TF4 | Valine (mmol/l): TF4 |
| Phe_TF4 | Phenylalanine (mmol/l): TF4 |
| Tyr_TF4 | Tyrosine (mmol/l): TF4 |
| Ace_TF4 | Acetate (mmol/l): TF4 |
| AcAce_TF4 | Acetoacetate (mmol/l): TF4 |
| bOHBut_TF4 | 3-hydroxybutyrate (mmol/l): TF4 |
| Crea_TF4 | Creatinine (mmol/l): TF4 |
| Alb_TF4 | Albumin (signal area): TF4 |
| Gp_TF4 | Glycoprotein acetyls, mainly a1-acid glycoprotein (mmol/l): TF4 |
| Sphingo_TF4 | Sphingomyelins (mmol/l): TF4 |
| XXLVLDLP_F24 | Conc. of chylomicrons and extremely large VLDL particles (mol/l): F24 |
| XXLVLDLL_F24 | Total lipids in chylomicrons and extremely large VLDL (mmol/l): F24 |

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|---------------|---|
| XXLVLDLPL_F24 | Phospholipids in chylomicrons and extremely large VLDL (mmol/l): F24 |
| XXLVLDLC_F24 | Total cholesterol in chylomicrons and extremely large VLDL (mmol/l): F24 |
| XXLVLDLCE_F24 | Cholesterol esters in chylomicrons and extremely large VLDL (mmol/l): F24 |
| XXLVLDLFC_F24 | Free cholesterol in chylomicrons and extremely large VLDL (mmol/l): F24 |
| XXLVLDLTG_F24 | Triglycerides in chylomicrons and extremely large VLDL (mmol/l): F24 |
| XLVLDLP_F24 | Concentration of very large VLDL particles (mol/l): F24 |
| XLVLDLL_F24 | Total lipids in very large VLDL (mmol/l): F24 |
| XLVLDLPL_F24 | Phospholipids in very large VLDL (mmol/l): F24 |
| XLVLDLC_F24 | Total cholesterol in very large VLDL (mmol/l): F24 |
| XLVLDLCE_F24 | Cholesterol esters in very large VLDL (mmol/l): F24 |
| XLVLDLFC_F24 | Free cholesterol in very large VLDL (mmol/l): F24 |
| XLVLDLTG_F24 | Triglycerides in very large VLDL (mmol/l): F24 |
| LVLDLP_F24 | Concentration of large VLDL particles (mol/l): F24 |
| LVLDLL_F24 | Total lipids in large VLDL (mmol/l): F24 |
| LVLDLPL_F24 | Phospholipids in large VLDL (mmol/l): F24 |
| LVLDLC_F24 | Total cholesterol in large VLDL (mmol/l): F24 |
| LVLDLCE_F24 | Cholesterol esters in large VLDL (mmol/l): F24 |
| LVLDLFC_F24 | Free cholesterol in large VLDL (mmol/l): F24 |
| LVLDLTG_F24 | Triglycerides in large VLDL (mmol/l): F24 |
| MVLDLP_F24 | Concentration of medium VLDL particles (mol/l): F24 |
| MVLDLL_F24 | Total lipids in medium VLDL (mmol/l): F24 |
| MVLDLPL_F24 | Phospholipids in medium VLDL (mmol/l): F24 |
| MVLDLC_F24 | Total cholesterol in medium VLDL (mmol/l): F24 |
| MVLDLCE_F24 | Cholesterol esters in medium VLDL (mmol/l): F24 |
| MVLDLFC_F24 | Free cholesterol in medium VLDL (mmol/l): F24 |
| MVLDLTG_F24 | Triglycerides in medium VLDL (mmol/l): F24 |
| SVLDLP_F24 | Concentration of small VLDL particles (mol/l): F24 |
| SVLDLL_F24 | Total lipids in small VLDL (mmol/l): F24 |
| SVLDLPL_F24 | Phospholipids in small VLDL (mmol/l): F24 |
| SVLDLC_F24 | Total cholesterol in small VLDL (mmol/l): F24 |
| SVLDLCE_F24 | Cholesterol esters in small VLDL (mmol/l): F24 |
| SVLDLFC_F24 | Free cholesterol in small VLDL (mmol/l): F24 |
| SVLDLTG_F24 | Triglycerides in small VLDL (mmol/l): F24 |
| XSVLDLP_F24 | Concentration of very small VLDL particles (mol/l): F24 |
| XSVLDLL_F24 | Total lipids in very small VLDL (mmol/l): F24 |
| XSVLDLPL_F24 | Phospholipids in very small VLDL (mmol/l): F24 |
| XSVLDLC_F24 | Total cholesterol in very small VLDL (mmol/l): F24 |
| XSVLDLCE_F24 | Cholesterol esters in very small VLDL (mmol/l): F24 |
| XSVLDLFC_F24 | Free cholesterol in very small VLDL (mmol/l): F24 |
| XSVLDLTG_F24 | Triglycerides in very small VLDL (mmol/l): F24 |
| IDLP_F24 | Concentration of IDL particles (mol/l): F24 |
| IDLL_F24 | Total lipids in IDL (mmol/l): F24 |
| IDLPL_F24 | Phospholipids in IDL (mmol/l): F24 |
| IDLC_F24 | Total cholesterol in IDL (mmol/l): F24 |
| IDLCE_F24 | Cholesterol esters in IDL (mmol/l): F24 |
| IDLFC_F24 | Free cholesterol in IDL (mmol/l): F24 |
| IDLTG_F24 | Triglycerides in IDL (mmol/l): F24 |
| LLDLP_F24 | Concentration of large LDL particles (mol/l): F24 |

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| LLDLL_F24 | Total lipids in large LDL (mmol/l): F24 |
| LLDLPL_F24 | Phospholipids in large LDL (mmol/l): F24 |
| LLDLC_F24 | Total cholesterol in large LDL (mmol/l): F24 |
| LLDLCE_F24 | Cholesterol esters in large LDL (mmol/l): F24 |
| LLDLFC_F24 | Free cholesterol in large LDL (mmol/l): F24 |
| LLDLTG_F24 | Triglycerides in large LDL (mmol/l): F24 |
| MLDLP_F24 | Concentration of medium LDL particles (mol/l): F24 |
| MLDLL_F24 | Total lipids in medium LDL (mmol/l): F24 |
| MLDLPL_F24 | Phospholipids in medium LDL (mmol/l): F24 |
| MLDLC_F24 | Total cholesterol in medium LDL (mmol/l): F24 |
| MLDLCE_F24 | Cholesterol esters in medium LDL (mmol/l): F24 |
| MLDLFC_F24 | Free cholesterol in medium LDL (mmol/l): F24 |
| MLDLTG_F24 | Triglycerides in medium LDL (mmol/l): F24 |
| SLDLP_F24 | Concentration of small LDL particles (mol/l): F24 |
| SLDLL_F24 | Total lipids in small LDL (mmol/l): F24 |
| SLDLPL_F24 | Phospholipids in small LDL (mmol/l): F24 |
| SLDLC_F24 | Total cholesterol in small LDL (mmol/l): F24 |
| SLDLCE_F24 | Cholesterol esters in small LDL (mmol/l): F24 |
| SLDLFC_F24 | Free cholesterol in small LDL (mmol/l): F24 |
| SLDLTG_F24 | Triglycerides in small LDL (mmol/l): F24 |
| XLHDLF_F24 | Concentration of very large HDL particles (mol/l): F24 |
| XLHDL_F24 | Total lipids in very large HDL (mmol/l): F24 |
| XLHDLPL_F24 | Phospholipids in very large HDL (mmol/l): F24 |
| XLHDLF_F24 | Total cholesterol in very large HDL (mmol/l): F24 |
| XLHDLCE_F24 | Cholesterol esters in very large HDL (mmol/l): F24 |
| XLHDLFC_F24 | Free cholesterol in very large HDL (mmol/l): F24 |
| XLHDLTG_F24 | Triglycerides in very large HDL (mmol/l): F24 |
| LHDLF_F24 | Concentration of large HDL particles (mol/l): F24 |
| LHDL_F24 | Total lipids in large HDL (mmol/l): F24 |
| LHDLPL_F24 | Phospholipids in large HDL (mmol/l): F24 |
| LHDLF_F24 | Total cholesterol in large HDL (mmol/l): F24 |
| LHDLCE_F24 | Cholesterol esters in large HDL (mmol/l): F24 |
| LHDLFC_F24 | Free cholesterol in large HDL (mmol/l): F24 |
| LHDLTG_F24 | Triglycerides in large HDL (mmol/l): F24 |
| MHDLF_F24 | Concentration of medium HDL particles (mol/l): F24 |
| MHDL_F24 | Total lipids in medium HDL (mmol/l): F24 |
| MHDLPL_F24 | Phospholipids in medium HDL (mmol/l): F24 |
| MHDLF_F24 | Total cholesterol in medium HDL (mmol/l): F24 |
| MHDLCE_F24 | Cholesterol esters in medium HDL (mmol/l): F24 |
| MHDLFC_F24 | Free cholesterol in medium HDL (mmol/l): F24 |
| MHDLTG_F24 | Triglycerides in medium HDL (mmol/l): F24 |
| SHDLF_F24 | Concentration of small HDL particles (mol/l): F24 |
| SHDL_F24 | Total lipids in small HDL (mmol/l): F24 |
| SHDLPL_F24 | Phospholipids in small HDL (mmol/l): F24 |
| SHDLF_F24 | Total cholesterol in small HDL (mmol/l): F24 |
| SHDLCE_F24 | Cholesterol esters in small HDL (mmol/l): F24 |
| SHDLFC_F24 | Free cholesterol in small HDL (mmol/l): F24 |
| SHDLTG_F24 | Triglycerides in small HDL (mmol/l): F24 |

| | |
|-----------------|--|
| XXLVLDLPL_P_F24 | Phospholipids to total lipids ratio in chylomicrons and XXL VLDL (%): F24 |
| XXLVLDLC_P_F24 | Total cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): F24 |
| XXLVLDLCE_P_F24 | Cholesterol esters to total lipids ratio in chylomicrons and XXL VLDL (%): F24 |
| XXLVLDLFC_P_F24 | Free cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): F24 |
| XXLVLDLTG_P_F24 | Triglycerides to total lipids ratio in chylomicrons and XXL VLDL (%): F24 |
| XLVLDLPL_P_F24 | Phospholipids to total lipids ratio in very large VLDL (%): F24 |
| XLVLDLC_P_F24 | Total cholesterol to total lipids ratio in very large VLDL (%): F24 |
| XLVLDLCE_P_F24 | Cholesterol esters to total lipids ratio in very large VLDL (%): F24 |
| XLVLDLFC_P_F24 | Free cholesterol to total lipids ratio in very large VLDL (%): F24 |
| XLVLDLTG_P_F24 | Triglycerides to total lipids ratio in very large VLDL (%): F24 |
| LVLDLPL_P_F24 | Phospholipids to total lipids ratio in large VLDL (%): F24 |
| LVLDLC_P_F24 | Total cholesterol to total lipids ratio in large VLDL (%): F24 |
| LVLDLCE_P_F24 | Cholesterol esters to total lipids ratio in large VLDL (%): F24 |
| LVLDLFC_P_F24 | Free cholesterol to total lipids ratio in large VLDL (%): F24 |
| LVLDLTG_P_F24 | Triglycerides to total lipids ratio in large VLDL (%): F24 |
| MVLDLPL_P_F24 | Phospholipids to total lipids ratio in medium VLDL (%): F24 |
| MVLDLC_P_F24 | Total cholesterol to total lipids ratio in medium VLDL (%): F24 |
| MVLDLCE_P_F24 | Cholesterol esters to total lipids ratio in medium VLDL (%): F24 |
| MVLDLFC_P_F24 | Free cholesterol to total lipids ratio in medium VLDL (%): F24 |
| MVLDLTG_P_F24 | Triglycerides to total lipids ratio in medium VLDL (%): F24 |
| SVLDLPL_P_F24 | Phospholipids to total lipids ratio in small VLDL (%): F24 |
| SVLDLC_P_F24 | Total cholesterol to total lipids ratio in small VLDL (%): F24 |
| SVLDLCE_P_F24 | Cholesterol esters to total lipids ratio in small VLDL (%): F24 |
| SVLDLFC_P_F24 | Free cholesterol to total lipids ratio in small VLDL (%): F24 |
| SVLDLTG_P_F24 | Triglycerides to total lipids ratio in small VLDL (%): F24 |
| XSVLDLPL_P_F24 | Phospholipids to total lipids ratio in very small VLDL (%): F24 |
| XSVLDLC_P_F24 | Total cholesterol to total lipids ratio in very small VLDL (%): F24 |
| XSVLDLCE_P_F24 | Cholesterol esters to total lipids ratio in very small VLDL (%): F24 |
| XSVLDLFC_P_F24 | Free cholesterol to total lipids ratio in very small VLDL (%): F24 |
| XSVLDLTG_P_F24 | Triglycerides to total lipids ratio in very small VLDL (%): F24 |
| IDLPL_P_F24 | Phospholipids to total lipids ratio in IDL (%): F24 |
| IDLC_P_F24 | Total cholesterol to total lipids ratio in IDL (%): F24 |
| IDLCE_P_F24 | Cholesterol esters to total lipids ratio in IDL (%): F24 |
| IDLFC_P_F24 | Free cholesterol to total lipids ratio in IDL (%): F24 |
| IDLTG_P_F24 | Triglycerides to total lipids ratio in IDL (%): F24 |
| LLDLPL_P_F24 | Phospholipids to total lipids ratio in large LDL (%): F24 |
| LLDLC_P_F24 | Total cholesterol to total lipids ratio in large LDL (%): F24 |
| LLDLCE_P_F24 | Cholesterol esters to total lipids ratio in large LDL (%): F24 |
| LLDLFC_P_F24 | Free cholesterol to total lipids ratio in large LDL (%): F24 |
| LLDLTG_P_F24 | Triglycerides to total lipids ratio in large LDL (%): F24 |
| MLDLPL_P_F24 | Phospholipids to total lipids ratio in medium LDL (%): F24 |
| MLDLC_P_F24 | Total cholesterol to total lipids ratio in medium LDL (%): F24 |
| MLDLCE_P_F24 | Cholesterol esters to total lipids ratio in medium LDL (%): F24 |
| MLDLFC_P_F24 | Free cholesterol to total lipids ratio in medium LDL (%): F24 |
| MLDLTG_P_F24 | Triglycerides to total lipids ratio in medium LDL (%): F24 |
| SLDLPL_P_F24 | Phospholipids to total lipids ratio in small LDL (%): F24 |
| SLDLC_P_F24 | Total cholesterol to total lipids ratio in small LDL (%): F24 |
| SLDLCE_P_F24 | Cholesterol esters to total lipids ratio in small LDL (%): F24 |

| | |
|---------------|---|
| SLDLFC_P_F24 | Free cholesterol to total lipids ratio in small LDL (%): F24 |
| SLDLTG_P_F24 | Triglycerides to total lipids ratio in small LDL (%): F24 |
| XLHDLPL_P_F24 | Phospholipids to total lipids ratio in very large HDL (%): F24 |
| XLHDLCE_P_F24 | Total cholesterol to total lipids ratio in very large HDL (%): F24 |
| XLHDLFC_P_F24 | Cholesterol esters to total lipids ratio in very large HDL (%): F24 |
| XLHDLTG_P_F24 | Free cholesterol to total lipids ratio in very large HDL (%): F24 |
| LHDLPL_P_F24 | Triglycerides to total lipids ratio in very large HDL (%): F24 |
| LHDLCE_P_F24 | Phospholipids to total lipids ratio in large HDL (%): F24 |
| LHDLFC_P_F24 | Total cholesterol to total lipids ratio in large HDL (%): F24 |
| LHDLTG_P_F24 | Cholesterol esters to total lipids ratio in large HDL (%): F24 |
| MHDLPL_P_F24 | Free cholesterol to total lipids ratio in large HDL (%): F24 |
| MHDLCE_P_F24 | Triglycerides to total lipids ratio in large HDL (%): F24 |
| MHDLFC_P_F24 | Phospholipids to total lipids ratio in medium HDL (%): F24 |
| MHDLTG_P_F24 | Total cholesterol to total lipids ratio in medium HDL (%): F24 |
| SHDLPL_P_F24 | Cholesterol esters to total lipids ratio in medium HDL (%): F24 |
| SHDLCE_P_F24 | Free cholesterol to total lipids ratio in medium HDL (%): F24 |
| SHDLFC_P_F24 | Triglycerides to total lipids ratio in medium HDL (%): F24 |
| SHDLTG_P_F24 | Phospholipids to total lipids ratio in small HDL (%): F24 |
| VLDLD_F24 | Total cholesterol to total lipids ratio in small HDL (%): F24 |
| LDLD_F24 | Cholesterol esters to total lipids ratio in small HDL (%): F24 |
| HDLD_F24 | Free cholesterol to total lipids ratio in small HDL (%): F24 |
| SerumC_F24 | Triglycerides to total lipids ratio in small HDL (%): F24 |
| VLDLC_F24 | Mean diameter for VLDL particles (nm): F24 |
| RemnantC_F24 | Mean diameter for LDL particles (nm): F24 |
| LDLC_F24 | Mean diameter for HDL particles (nm): F24 |
| HDLC_F24 | Serum total cholesterol (mmol/l): F24 |
| HDL2C_F24 | Total cholesterol in VLDL (mmol/l): F24 |
| HDL3C_F24 | Remnant cholesterol (non-HDL & non-LDL-cholesterol) (mmol/l): F24 |
| EstC_F24 | Total cholesterol in LDL (mmol/l): F24 |
| FreeC_F24 | Total cholesterol in HDL (mmol/l): F24 |
| SerumTG_F24 | Total cholesterol in HDL2 (mmol/l): F24 |
| VLDLTG_F24 | Total cholesterol in HDL3 (mmol/l): F24 |
| LDLTG_F24 | Esterified cholesterol (mmol/l): F24 |
| HDLTG_F24 | Free cholesterol (mmol/l): F24 |
| TotPG_F24 | Serum total triglycerides (mmol/l): F24 |
| TGPG_F24 | Triglycerides in VLDL (mmol/l): F24 |
| PC_F24 | Triglycerides in LDL (mmol/l): F24 |
| SM_F24 | Triglycerides in HDL (mmol/l): F24 |
| TotCho_F24 | Total phosphoglycerides (mmol/l): F24 |
| ApoA1_F24 | Ratio of triglycerides to phosphoglycerides: F24 |
| ApoB_F24 | Phosphatidylcholine and other cholines (mmol/l): F24 |
| ApoBApoA1_F24 | Sphingomyelins (mmol/l): F24 |
| TotFA_F24 | Total cholines (mmol/l): F24 |
| UnSat_F24 | Apolipoprotein A-I (g/l): F24 |
| | Apolipoprotein B (g/l): F24 |
| | Ratio of apolipoprotein B to apolipoprotein A-I: F24 |
| | Total fatty acids (mmol/l): F24 |
| | Estimated degree of unsaturation: F24 |

| | |
|------------|--|
| DHA_F24 | 22:6, docosahexaenoic acid (mmol/l): F24 |
| LA_F24 | 18:2, linoleic acid (mmol/l): F24 |
| FAw3_F24 | Omega-3 fatty acids (mmol/l): F24 |
| FAw6_F24 | Omega-6 fatty acids (mmol/l): F24 |
| PUFA_F24 | Polyunsaturated fatty acids (mmol/l): F24 |
| MUFA_F24 | Monounsaturated fatty acids; 16:1, 18:1 (mmol/l): F24 |
| SFA_F24 | Saturated fatty acids (mmol/l): F24 |
| DHAFA_F24 | Ratio of 22:6 docosahexaenoic acid to total fatty acids (%): F24 |
| LAFA_F24 | Ratio of 18:2 linoleic acid to total fatty acids (%): F24 |
| FAw3FA_F24 | Ratio of omega-3 fatty acids to total fatty acids (%): F24 |
| FAw6FA_F24 | Ratio of omega-6 fatty acids to total fatty acids (%): F24 |
| PUFAFA_F24 | Ratio of polyunsaturated fatty acids to total fatty acids (%): F24 |
| MUFAFA_F24 | Ratio of monounsaturated fatty acids to total fatty acids (%): F24 |
| SFAFA_F24 | Ratio of saturated fatty acids to total fatty acids (%): F24 |
| Glc_F24 | Glucose (mmol/l): F24 |
| Lac_F24 | Lactate (mmol/l): F24 |
| Cit_F24 | Citrate (mmol/l): F24 |
| Ala_F24 | Alanine (mmol/l): F24 |
| Gln_F24 | Glutamine (mmol/l): F24 |
| His_F24 | Histidine (mmol/l): F24 |
| Ile_F24 | Isoleucine (mmol/l): F24 |
| Leu_F24 | Leucine (mmol/l): F24 |
| Val_F24 | Valine (mmol/l): F24 |
| Phe_F24 | Phenylalanine (mmol/l): F24 |
| Tyr_F24 | Tyrosine (mmol/l): F24 |
| Ace_F24 | Acetate (mmol/l): F24 |
| AcAce_F24 | Acetoacetate (mmol/l): F24 |
| bOHBut_F24 | 3-hydroxybutyrate (mmol/l): F24 |
| Crea_F24 | Creatinine (mmol/l): F24 |
| Alb_F24 | Albumin (signal area): F24 |
| Gp_F24 | Glycoprotein acetyls, mainly a1-acid glycoprotein (mmol/l): F24 |

ALSPAC 7-15-17

Metabolic measures
January 23, 2014



Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting, "nordic")



ALSPAC 7 (N=5645)



ALSPAC 15 (N=3504)



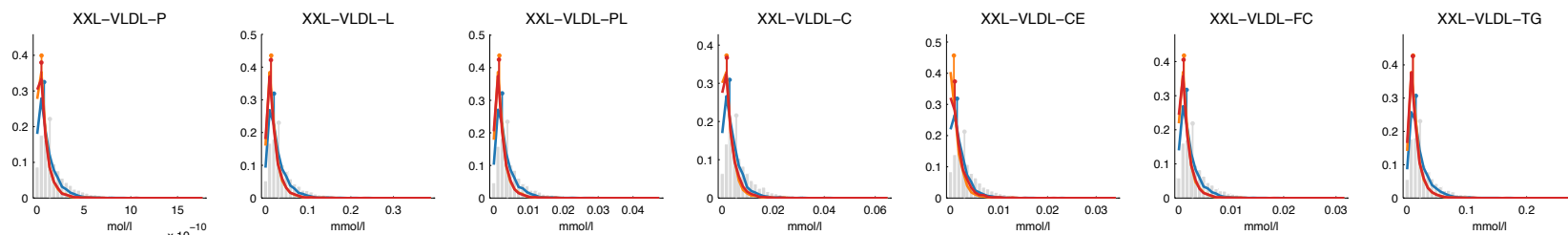
ALSPAC 17 (N=3286)

median

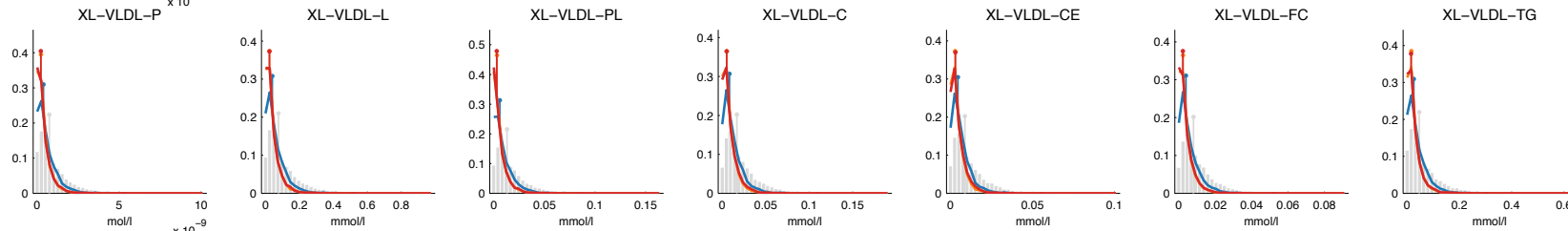
Distributions

Lipoprotein subclasses

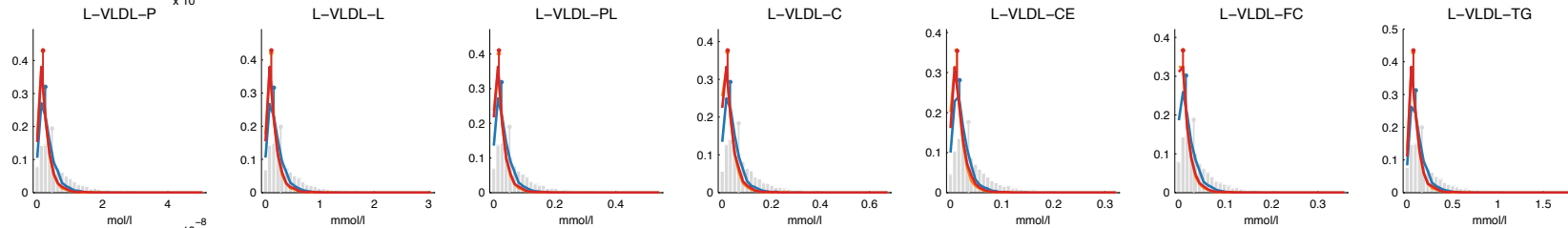
XXL-VLDL



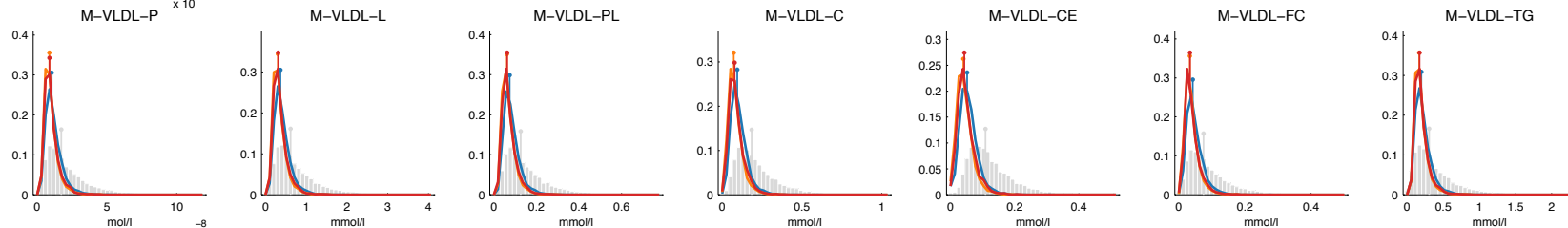
XL-VLDL



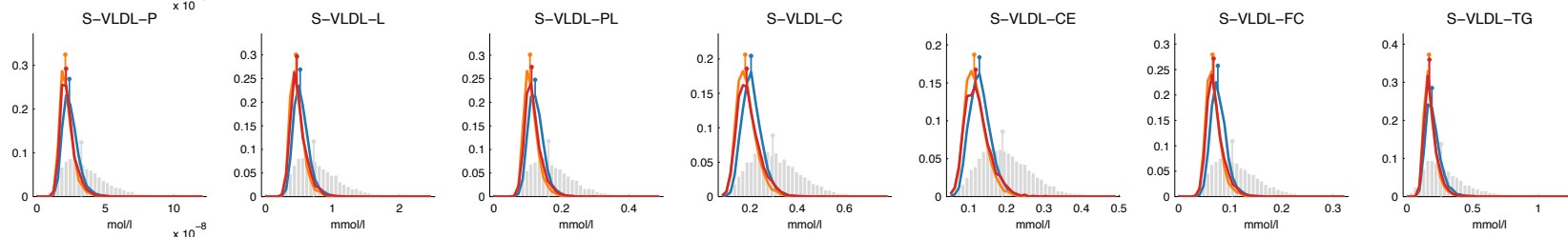
L-VLDL



M-VLDL



S-VLDL



ALSPAC 7-15-17

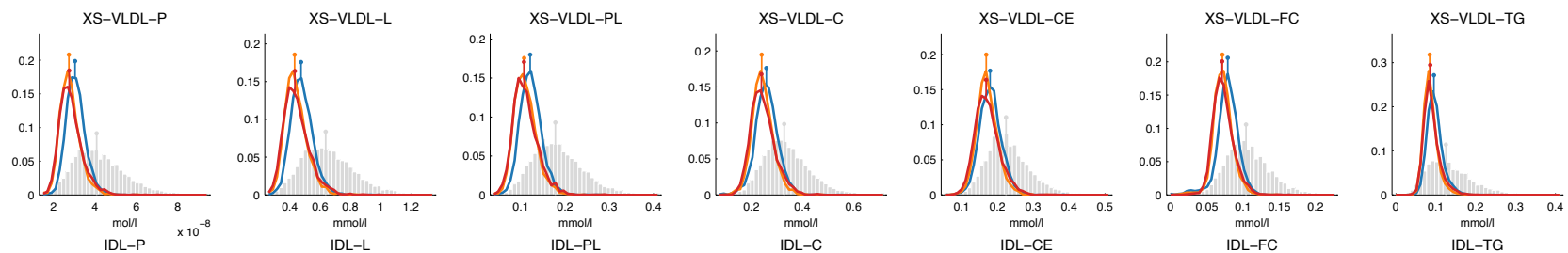
Metabolic measures
January 23, 2014

Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting, "nordic")

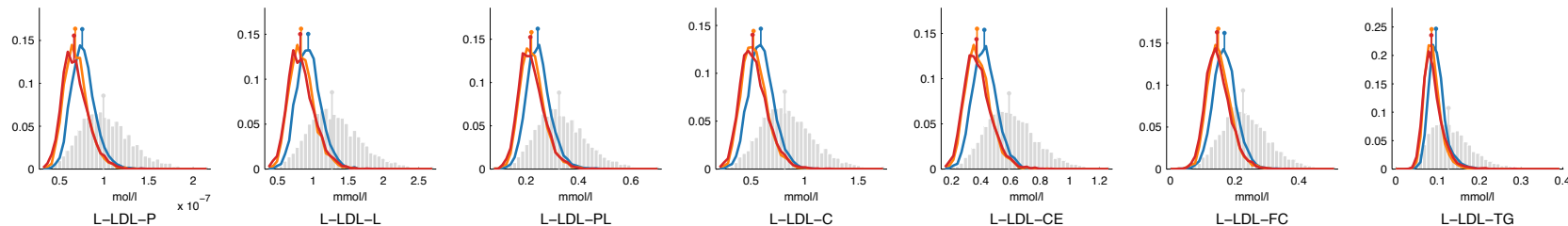
ALSPAC 7 (N=5645) ALSPAC 15 (N=3504) ALSPAC 17 (N=3286) median

Distributions

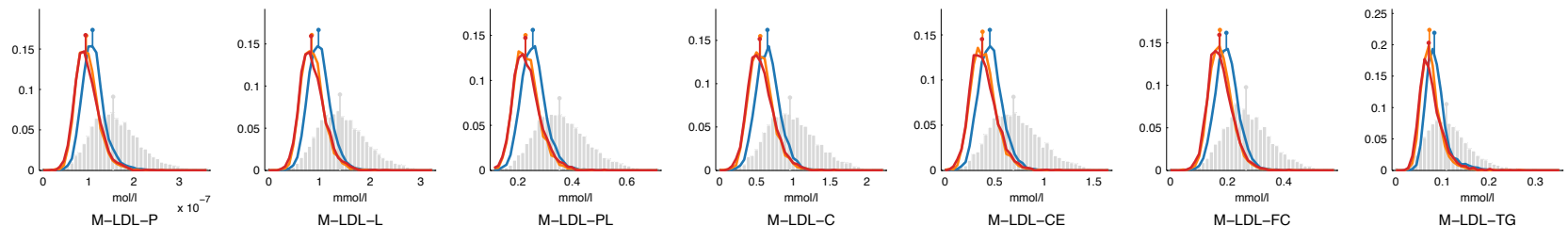
XS-VLDL



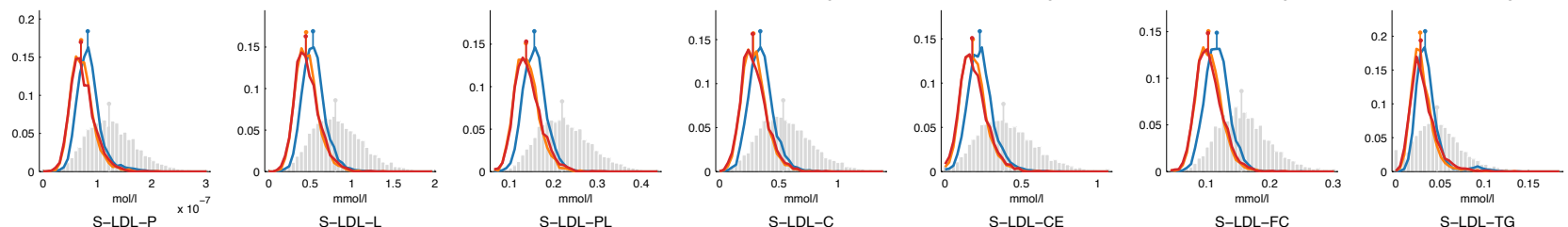
IDL



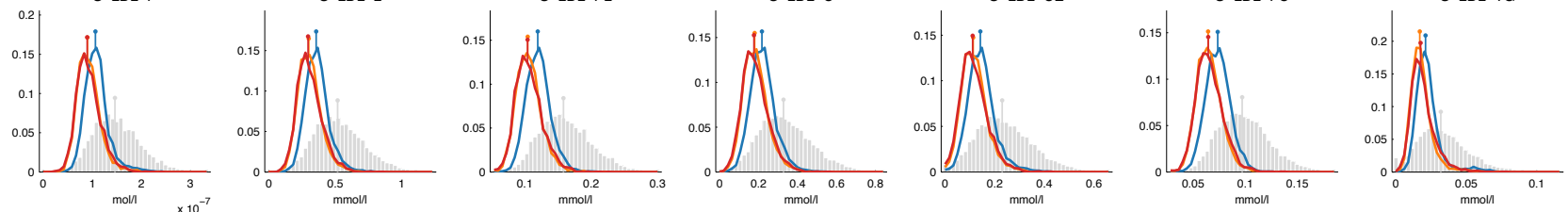
L-LDL



M-LDL



S-LDL



ALSPAC 7-15-17

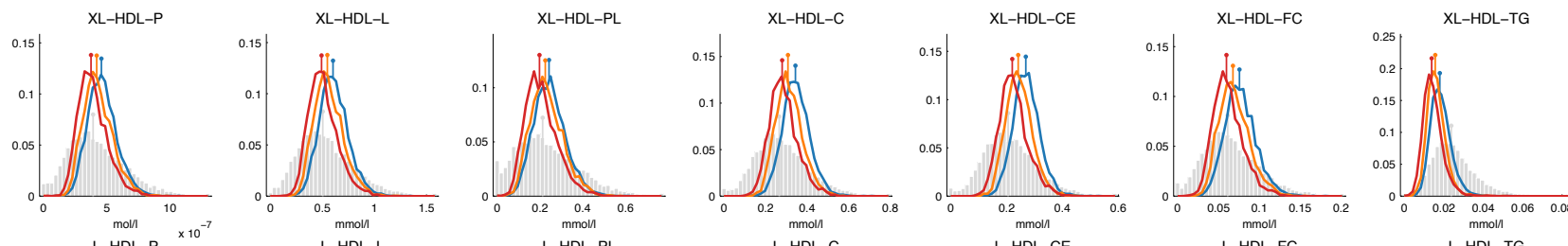
Metabolic measures
January 23, 2014

Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting, "nordic")

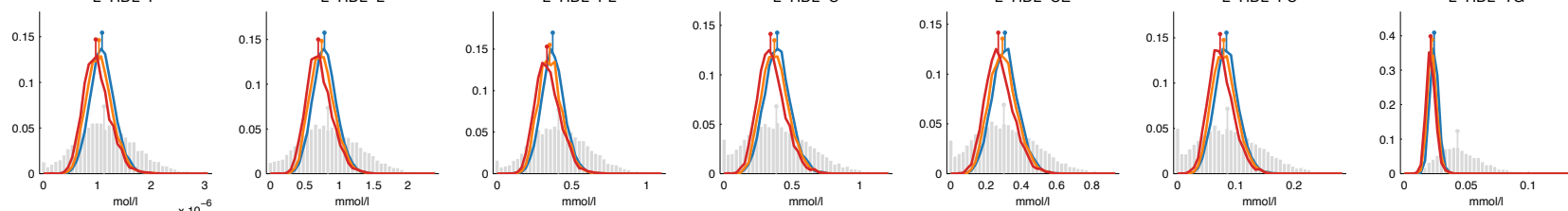
ALSPAC 7 (N=5645) ALSPAC 15 (N=3504) ALSPAC 17 (N=3286) median

Distributions

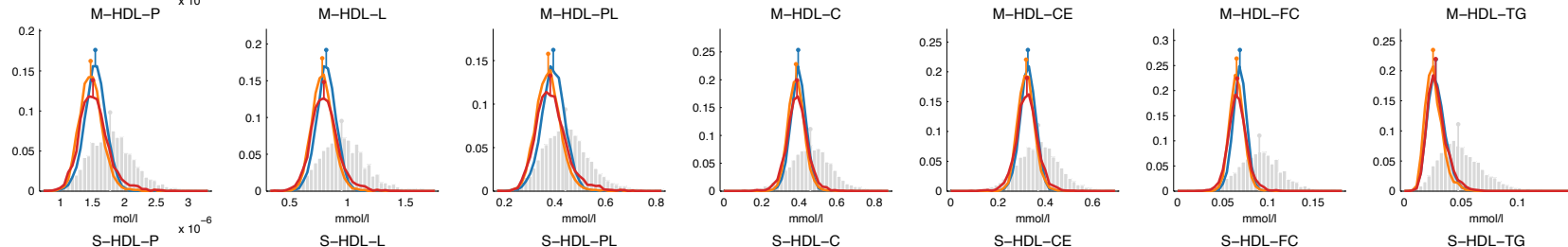
XL-HDL



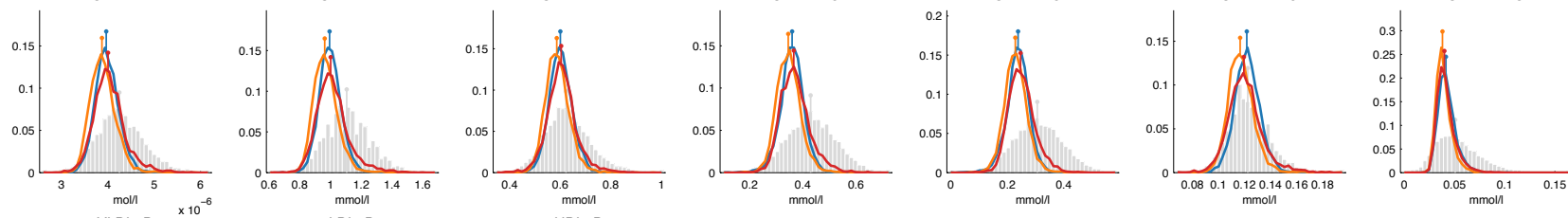
L-HDL



M-HDL



S-HDL



Lipoprotein
particle size



ALSPAC 7-15-17

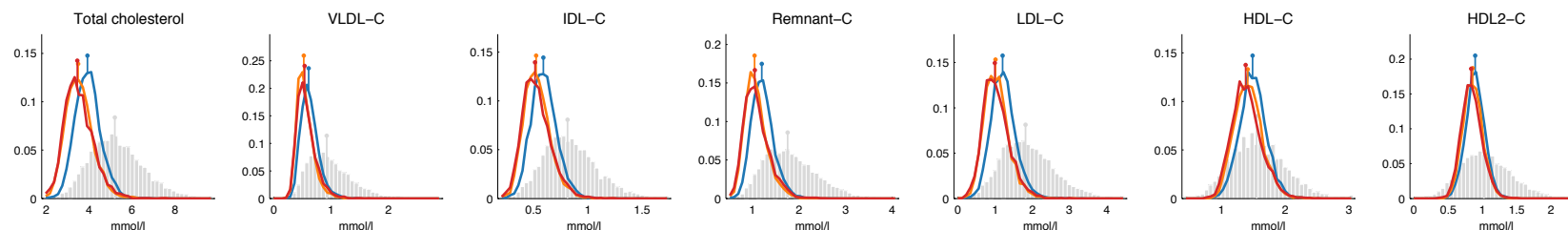
Metabolic measures
January 23, 2014

Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting, "nordic")

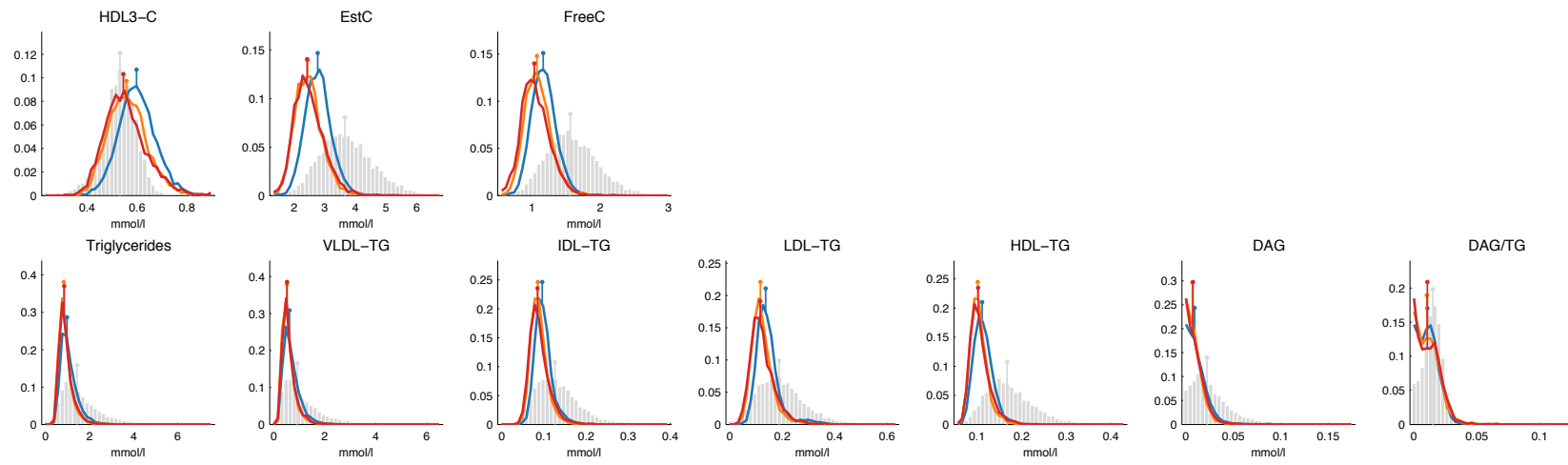
ALSPAC 7 (N=5645) ALSPAC 15 (N=3504) ALSPAC 17 (N=3286) median

Distributions

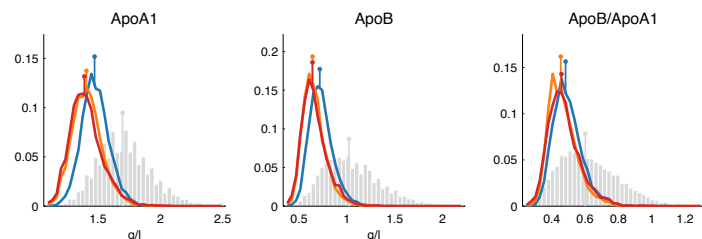
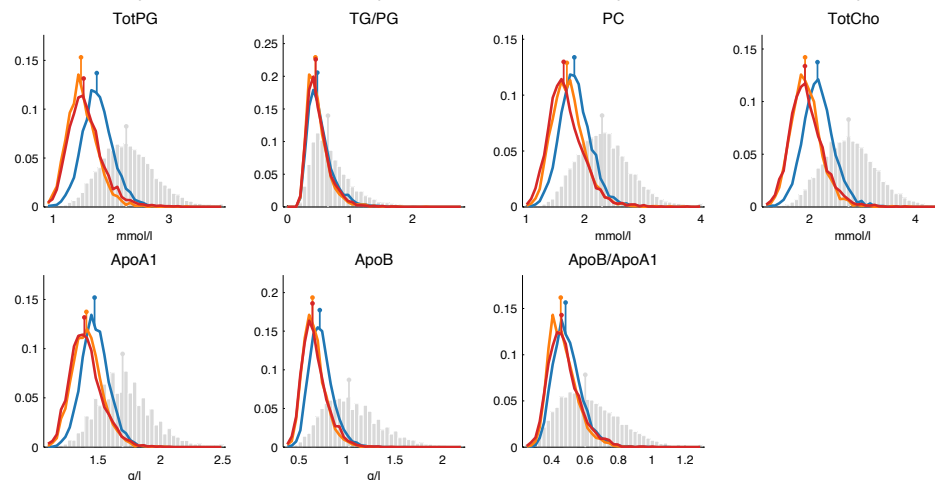
Cholesterol



Glycerides and phospholipids



Apolipoproteins



ALSPAC 7-15-17

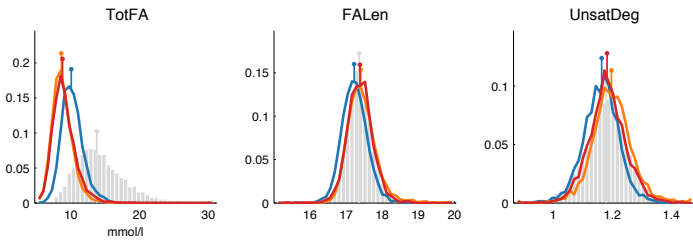
Metabolic measures
January 23, 2014

Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting, "nordic")

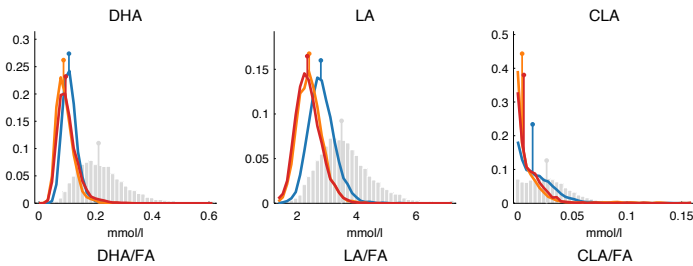
ALSPAC 7 (N=5645) ALSPAC 15 (N=3504) ALSPAC 17 (N=3286) median

Distributions

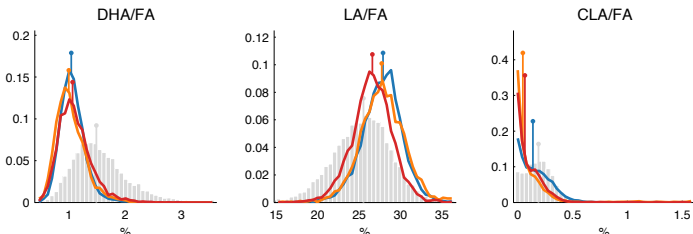
Total fatty acids
and saturation
measures



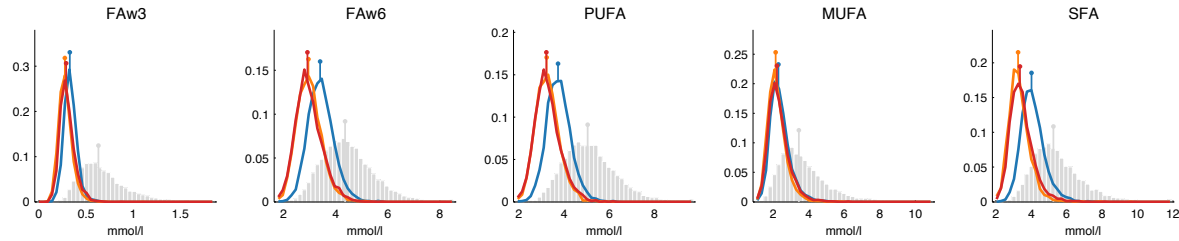
Fatty acids



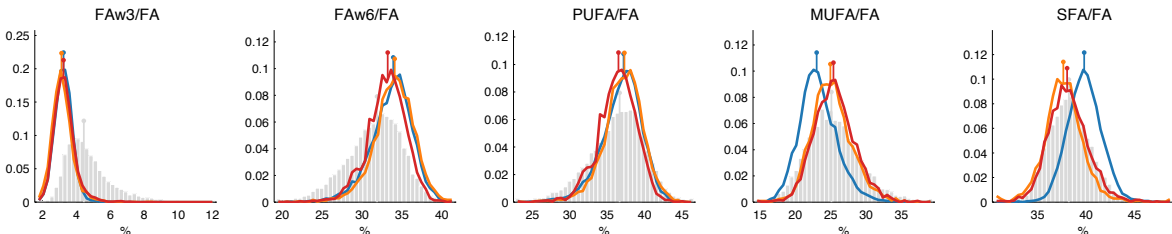
Fatty acids (%)



Fatty acids by
saturation



Fatty acids by
saturation (%)



ALSPAC 7-15-17

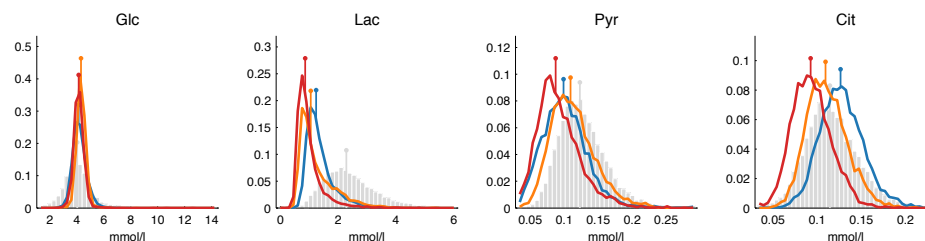
Metabolic measures
January 23, 2014

Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting, "nordic")

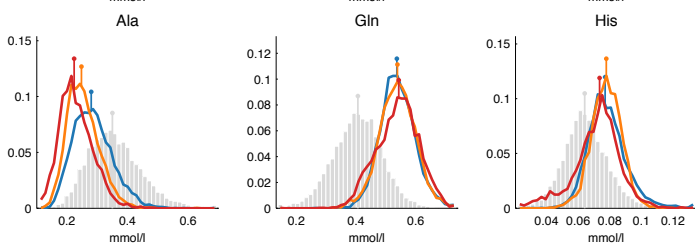
ALSPAC 7 (N=5645) ALSPAC 15 (N=3504) ALSPAC 17 (N=3286) median

Distributions

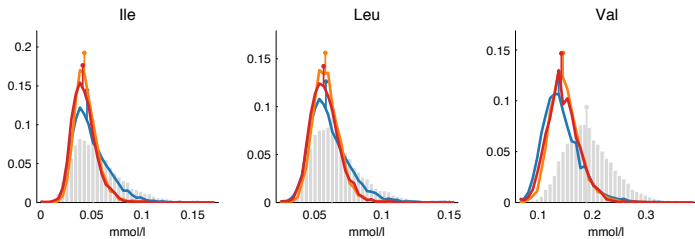
Glycolysis
related
metabolites



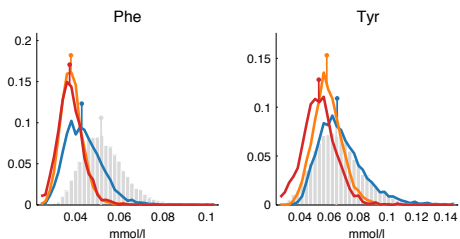
Amino acids



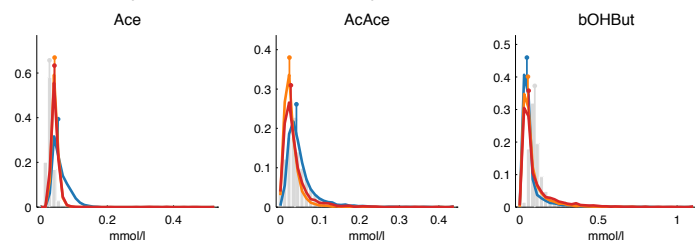
*Branched-chain
amino acids*



*Aromatic
amino acids*

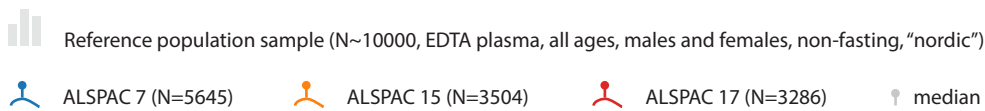


Ketone bodies



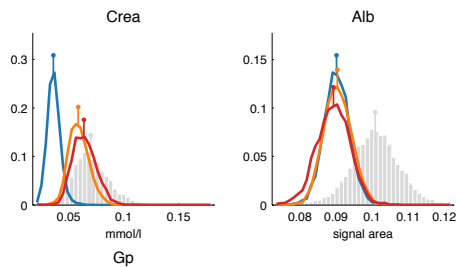
ALSPAC 7-15-17

Metabolic measures
January 23, 2014

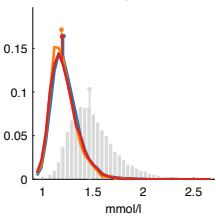


Distributions

Fluid balance



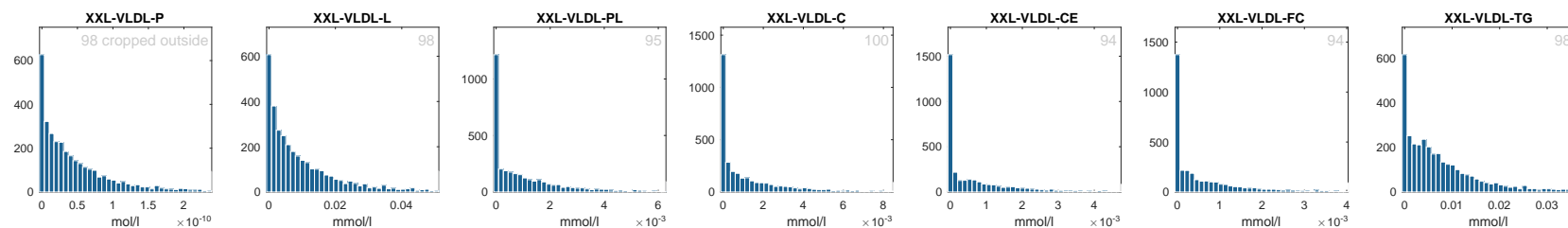
Inflammation



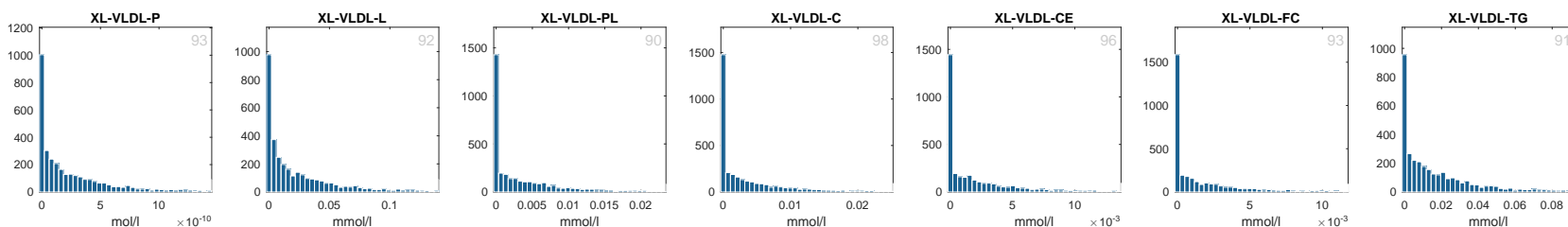
ALTW (N = 3366)

Lipoprotein
subclasses

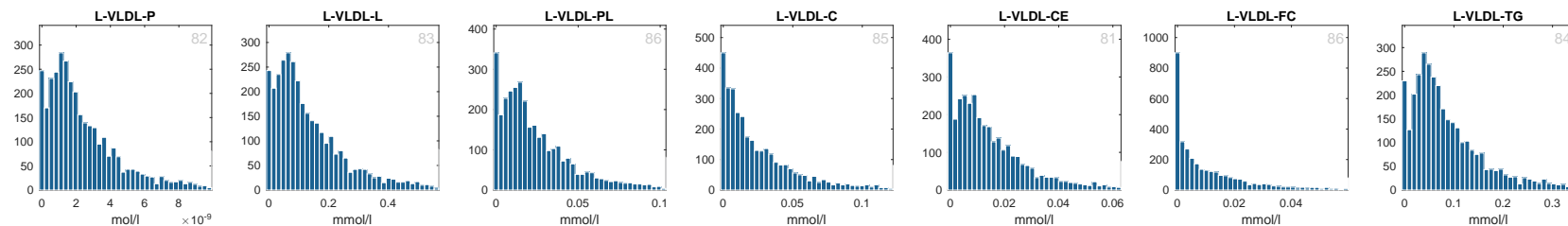
XXL-VLDL



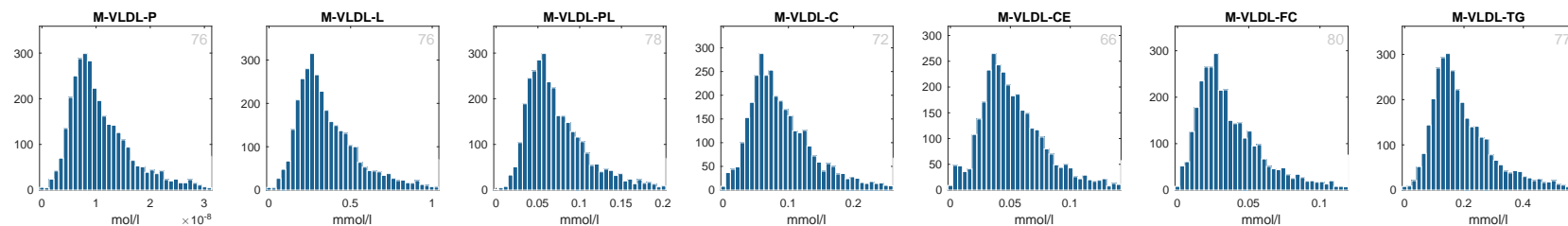
XL-VLDL



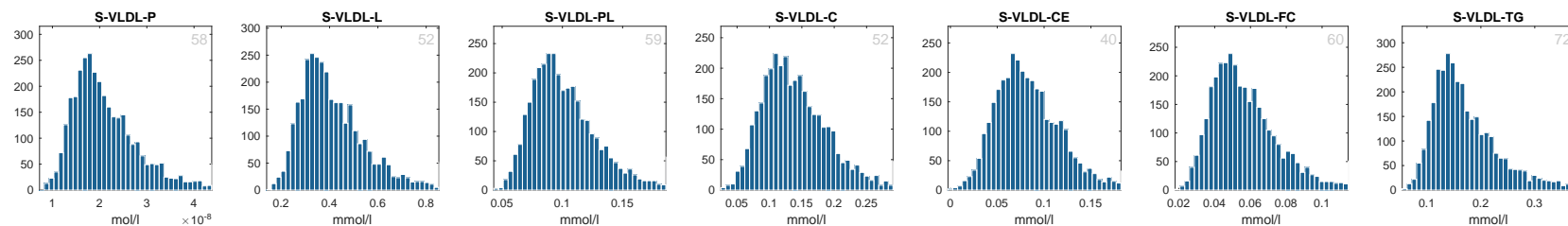
L-VLDL



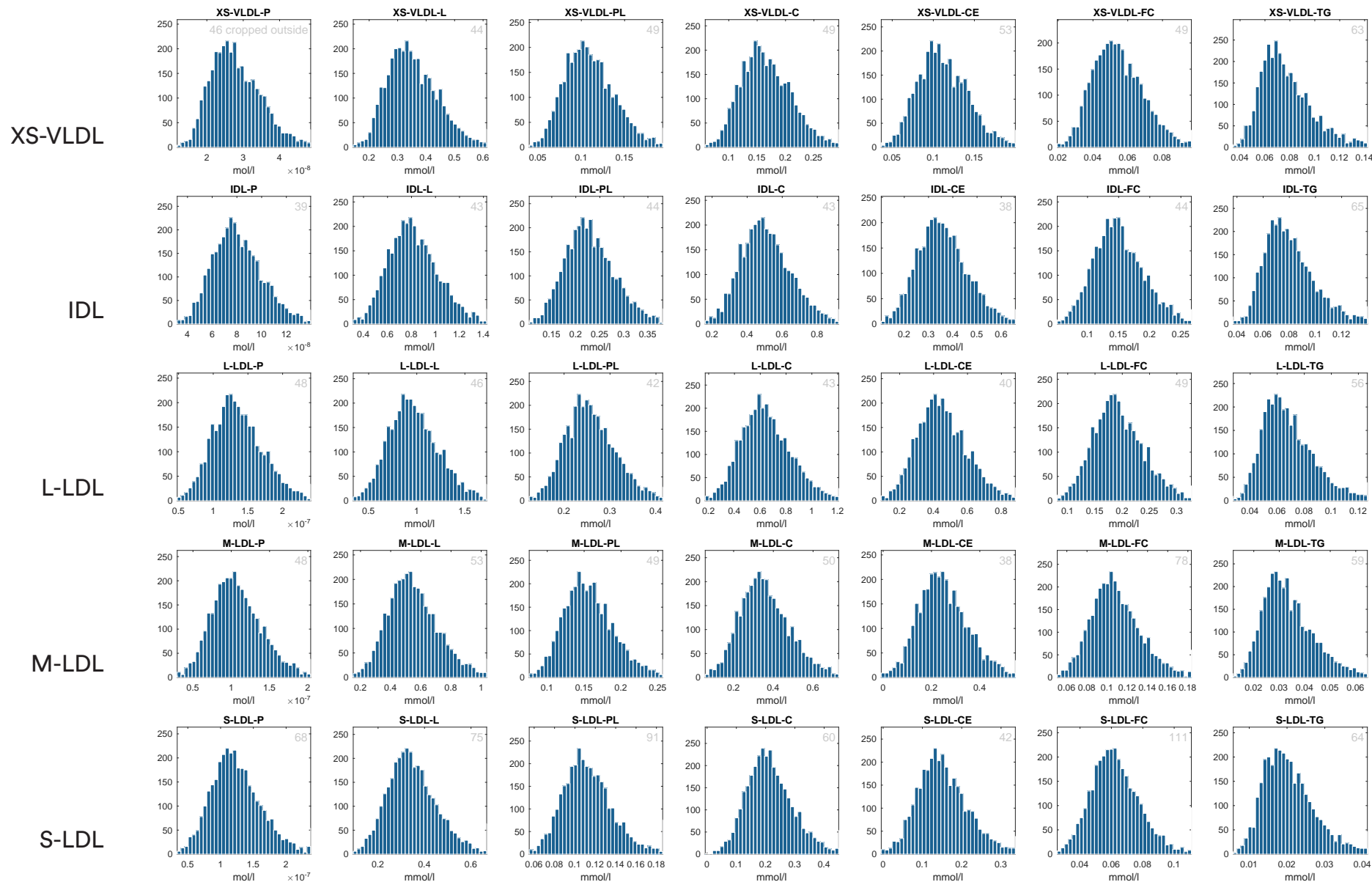
M-VLDL



S-VLDL

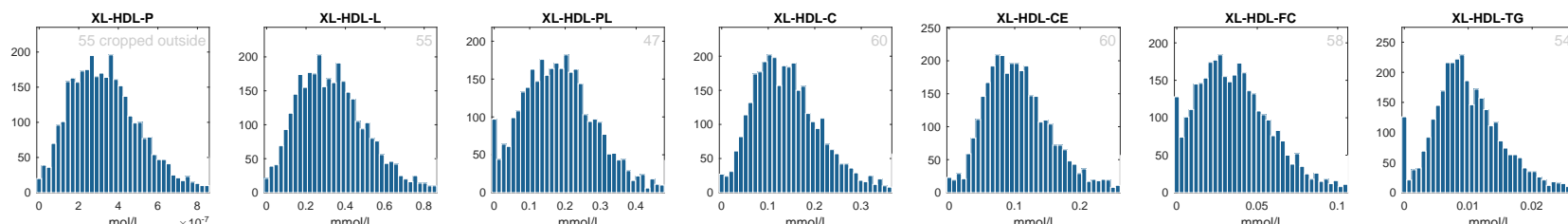


ALTW (N = 3366)

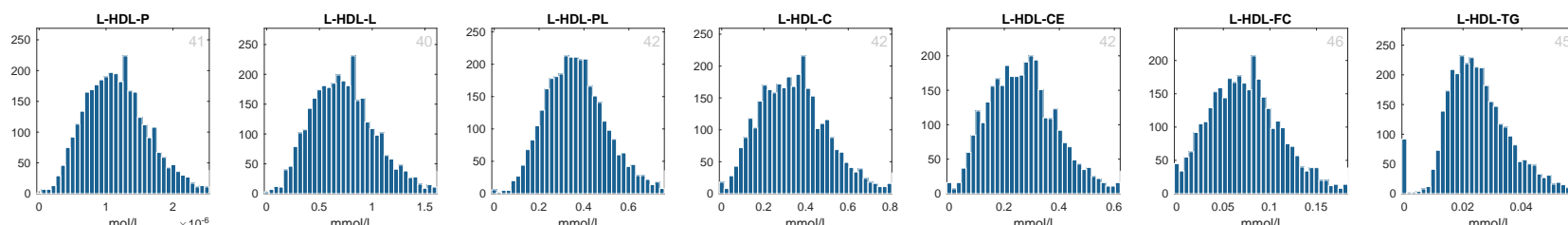


ALTW (N = 3366)

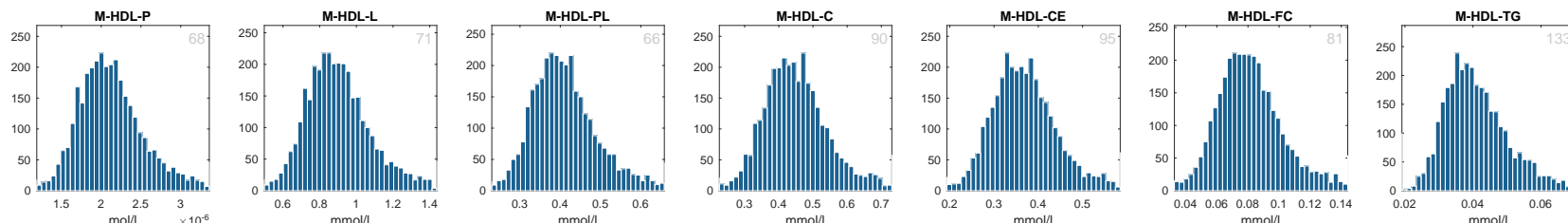
XL-HDL



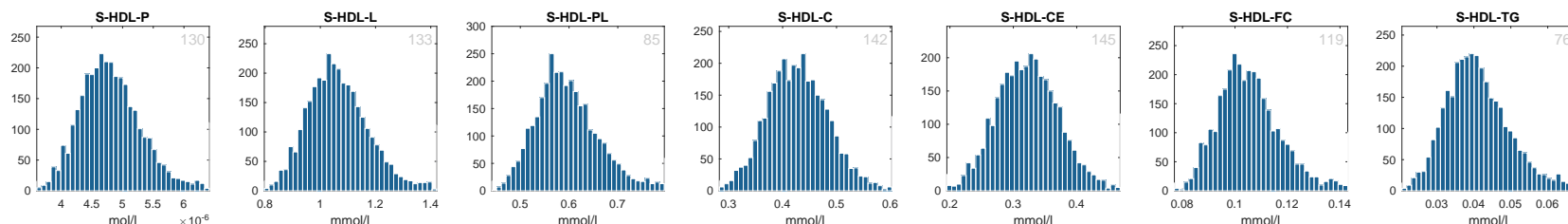
L-HDL



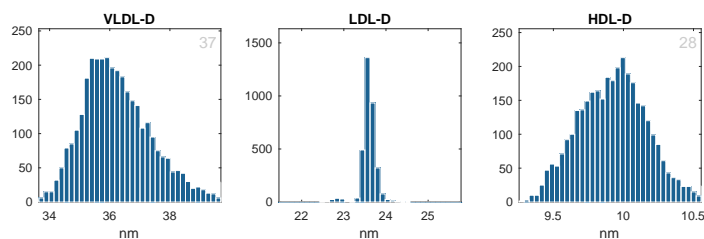
M-HDL



S-HDL

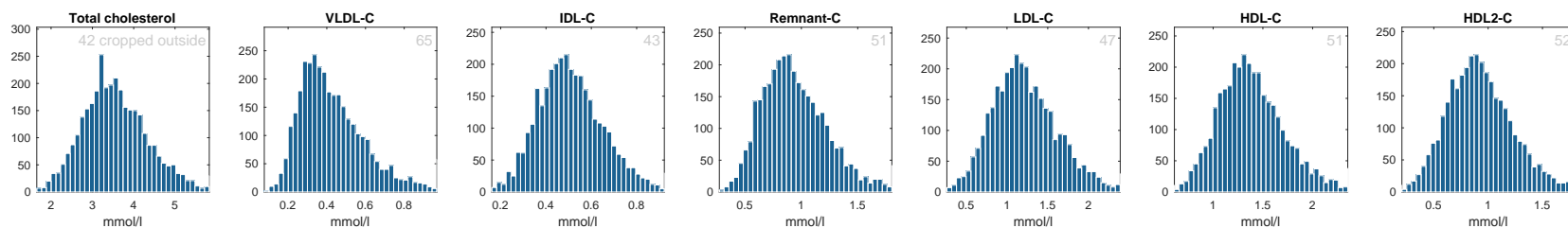


Lipoprotein particle size

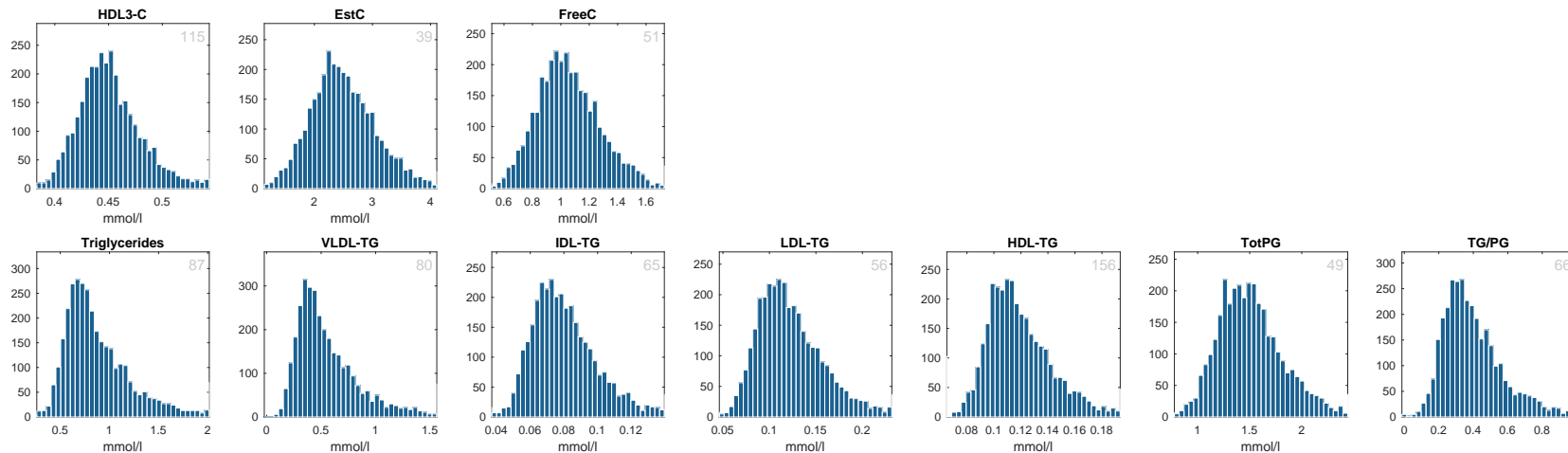


ALTW (N = 3366)

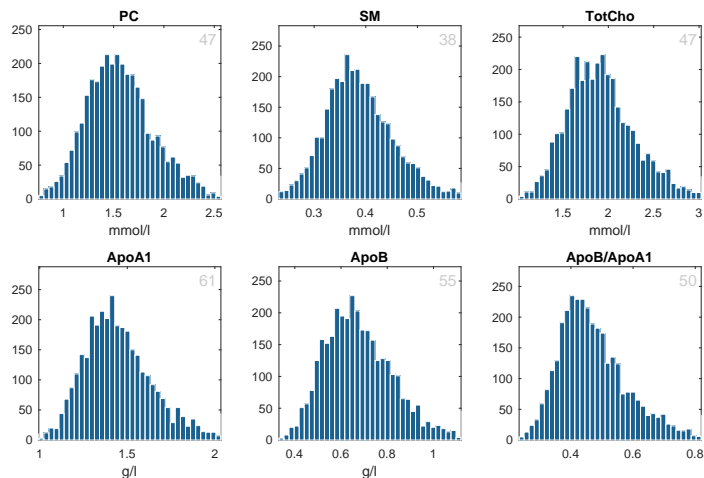
Cholesterol



Glycerides and phospholipids

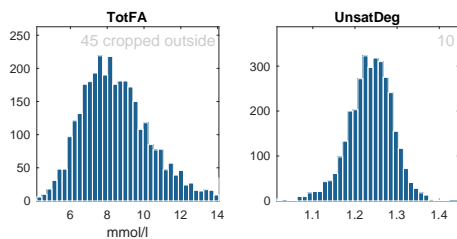


Apolipoproteins

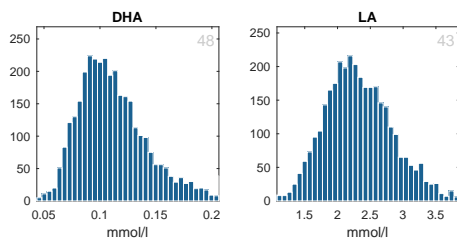


ALTW (N = 3366)

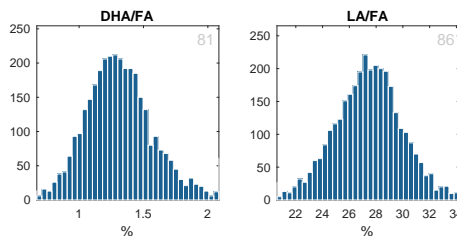
Total fatty acids
and saturation
measures



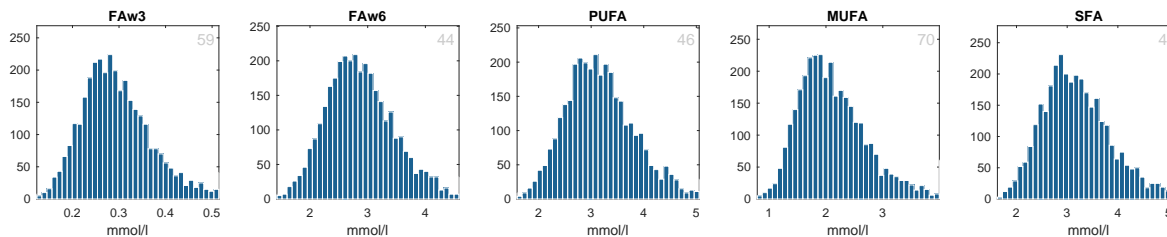
Fatty acids



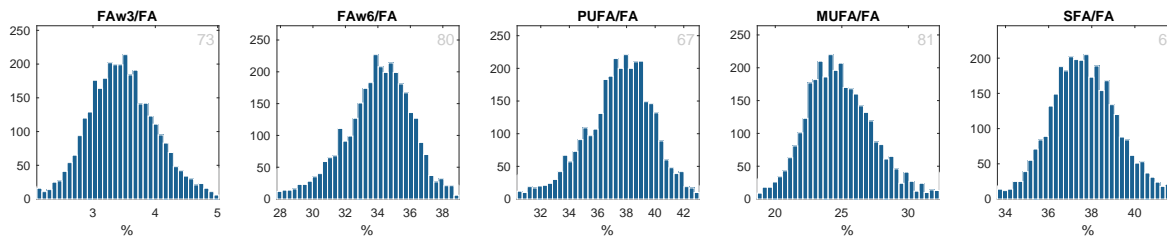
Fatty acids (%)



Fatty acids by
saturation

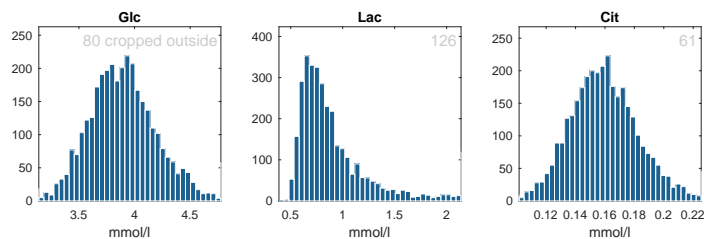


Fatty acids by
saturation (%)

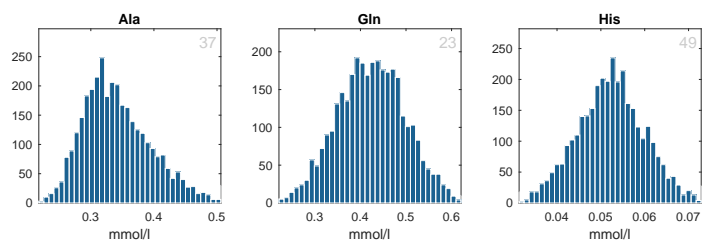


ALTW (N = 3366)

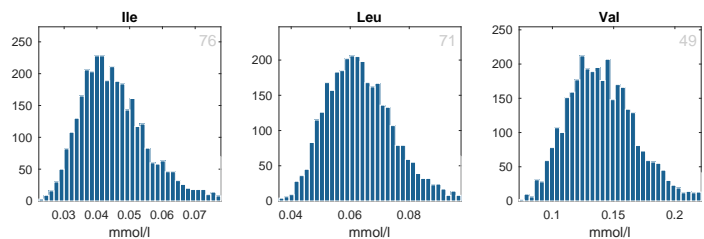
Glycolysis
related
metabolites



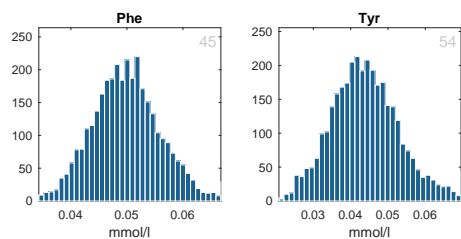
Amino acids



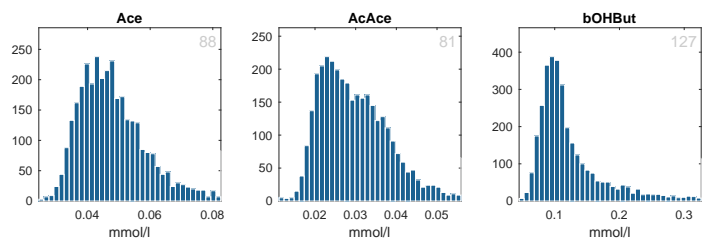
Branched-chain
amino acids



Aromatic
amino acids

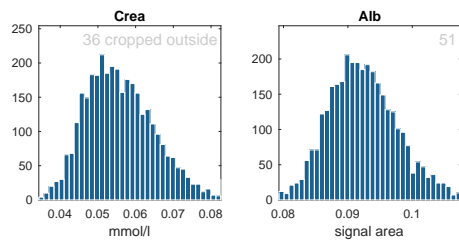


Ketone bodies

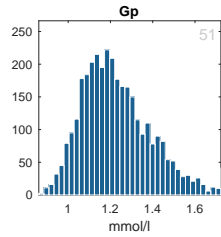


ALTW (N = 3366)

Fluid balance



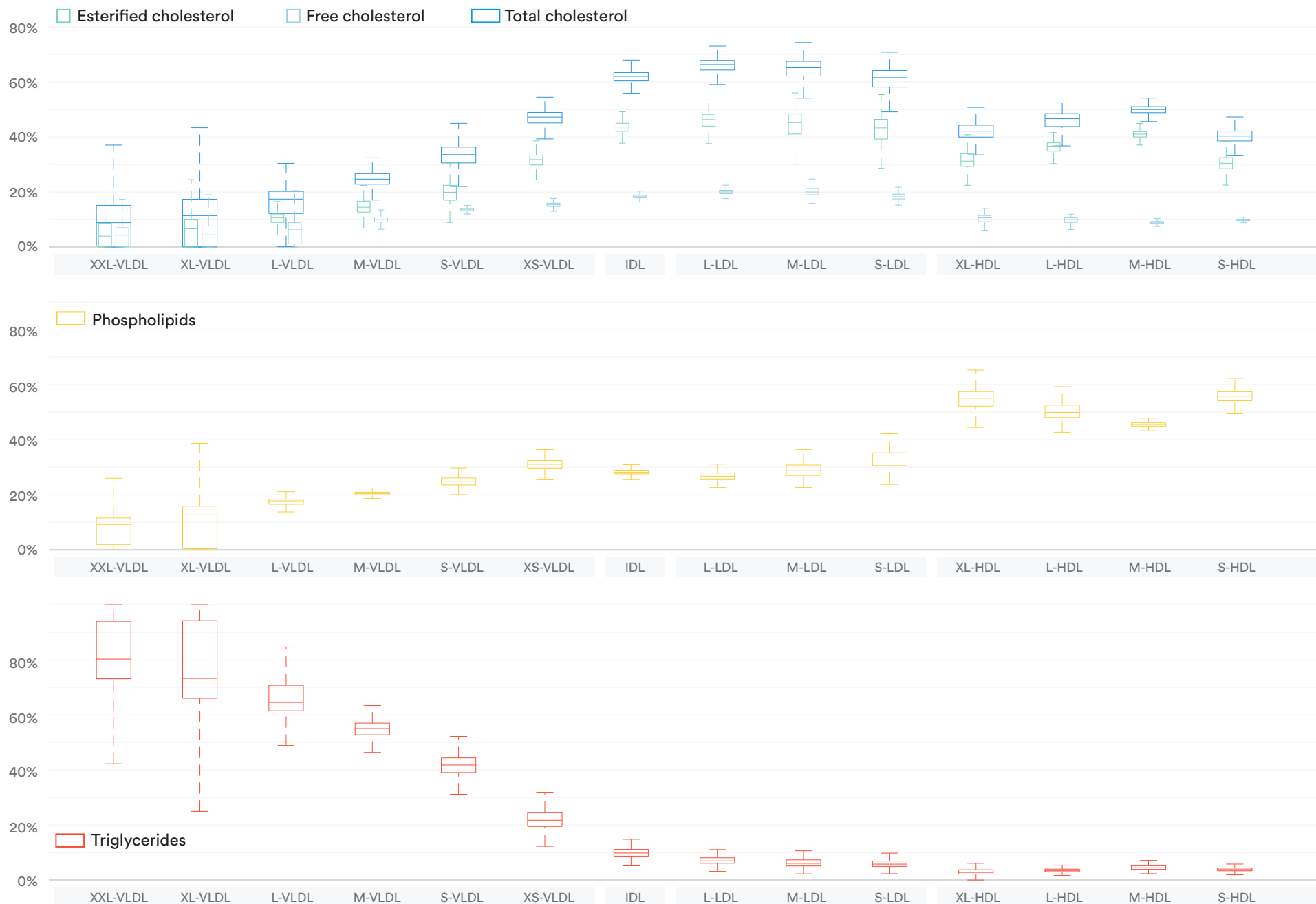
Inflammation



Lipid composition of lipoprotein subclasses

Proportions of cholesterol, phospholipids and triglycerides of the total lipid concentration of each subclass

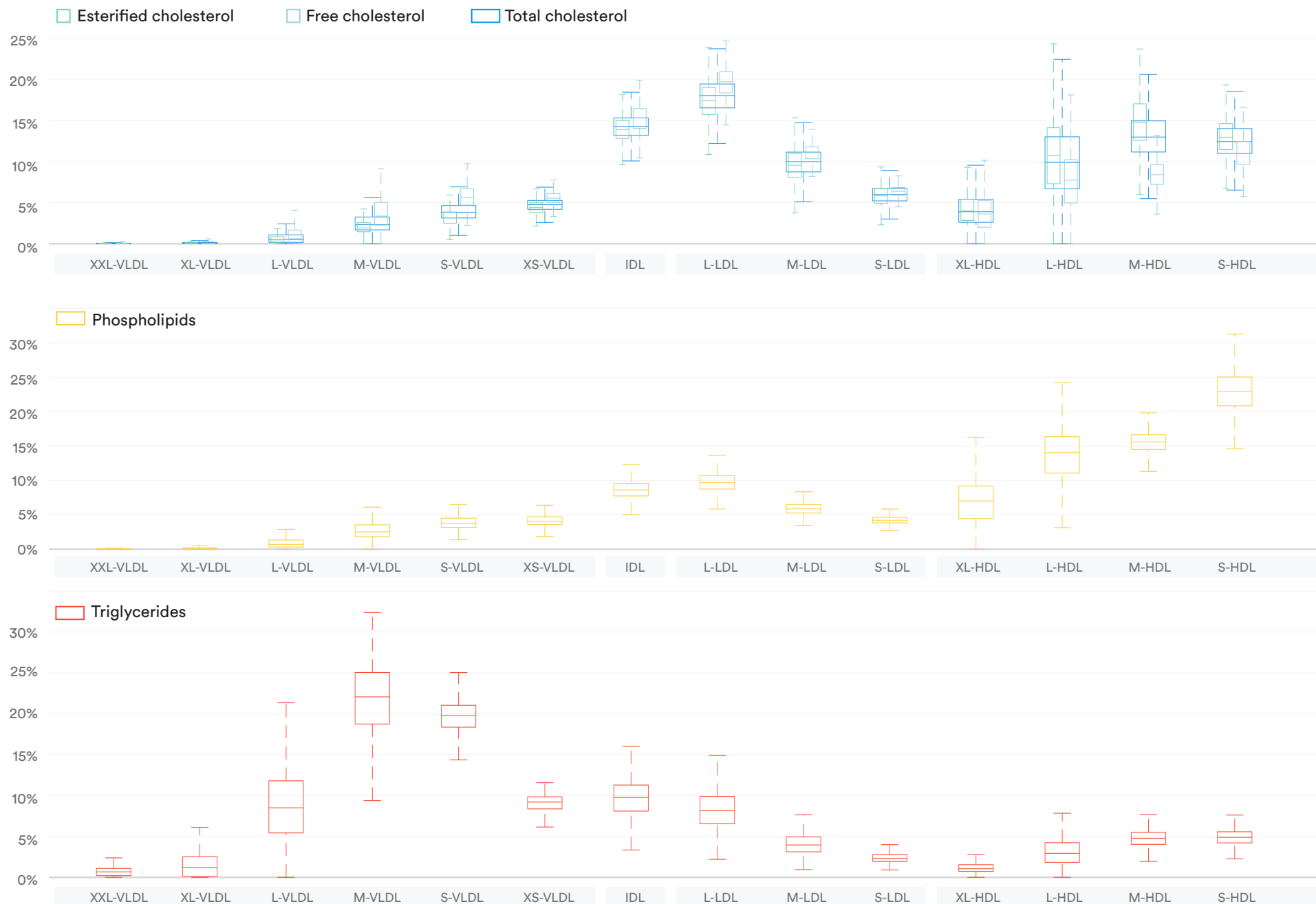
ALTW (N = 3366)



Lipid distribution along lipoprotein subclasses

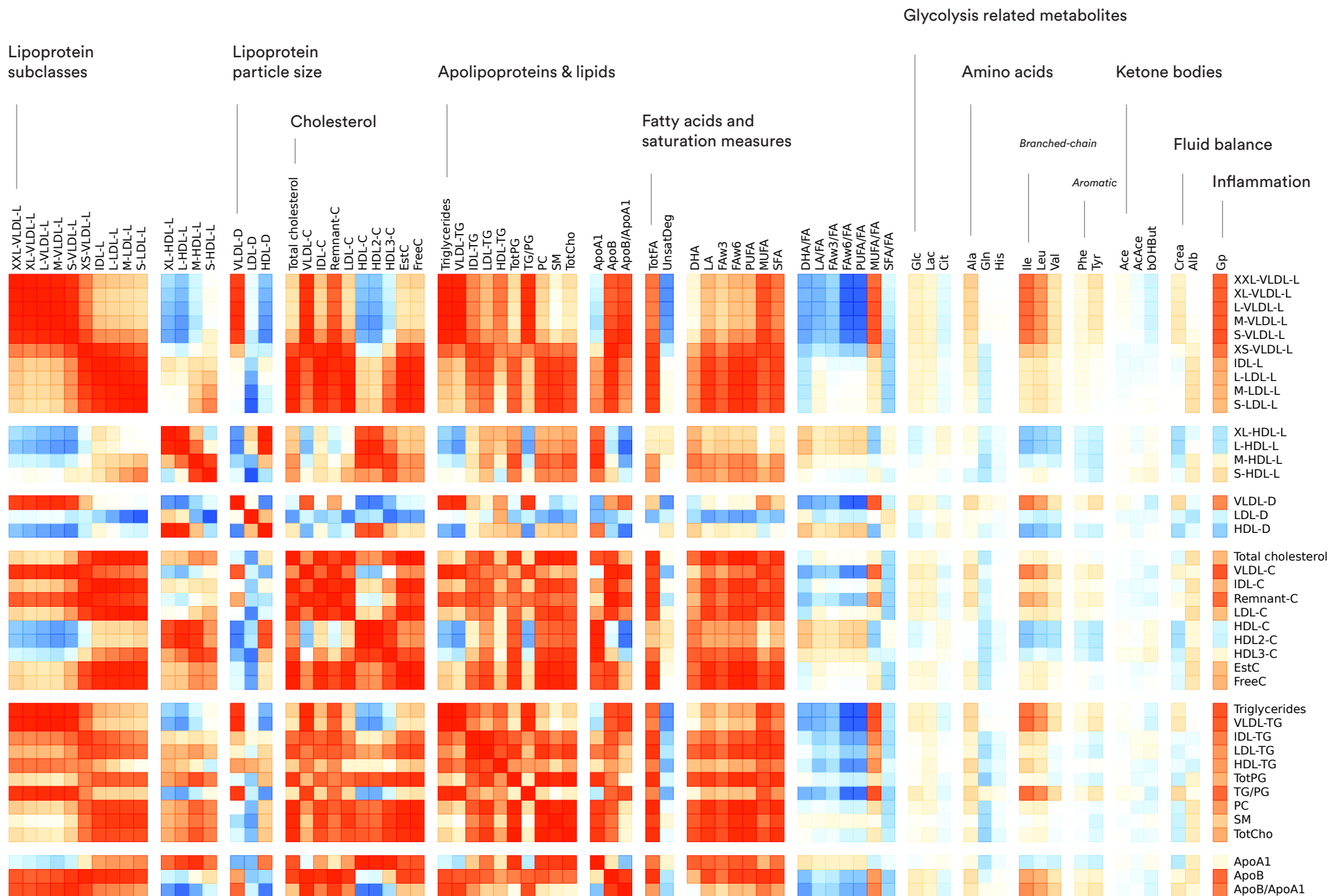
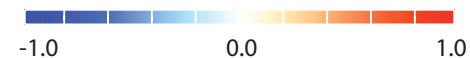
Proportions of total serum cholesterol, phospholipids and triglycerides carried by each lipoprotein subclass

ALTW (N = 3366)



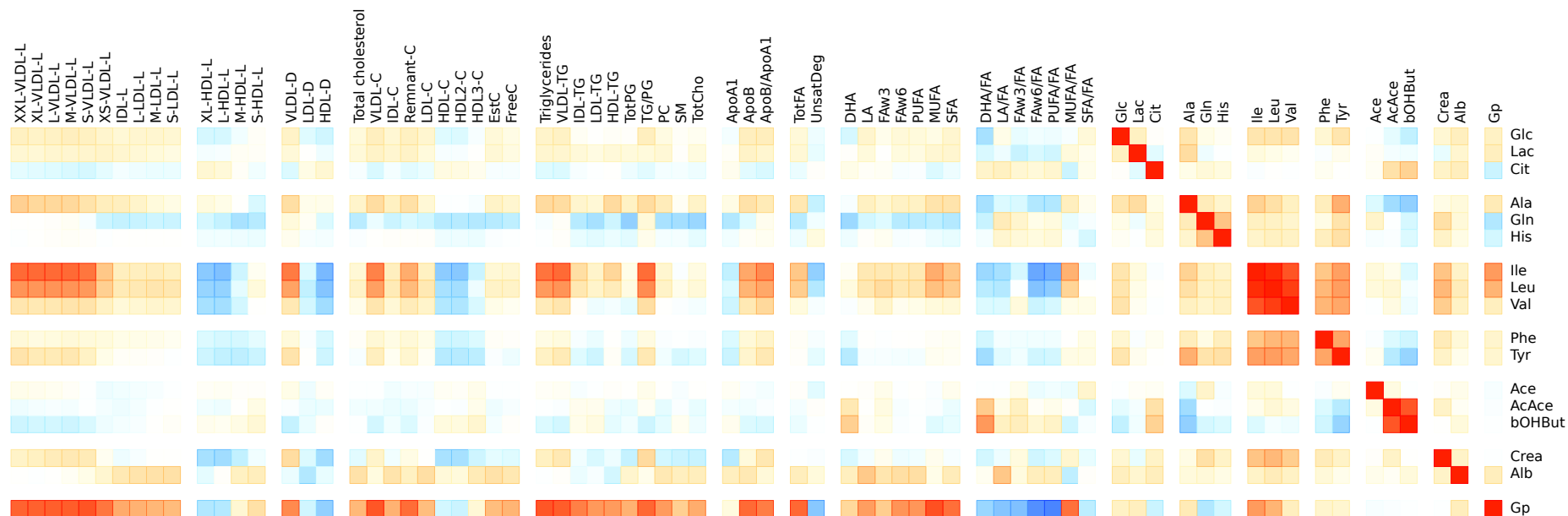
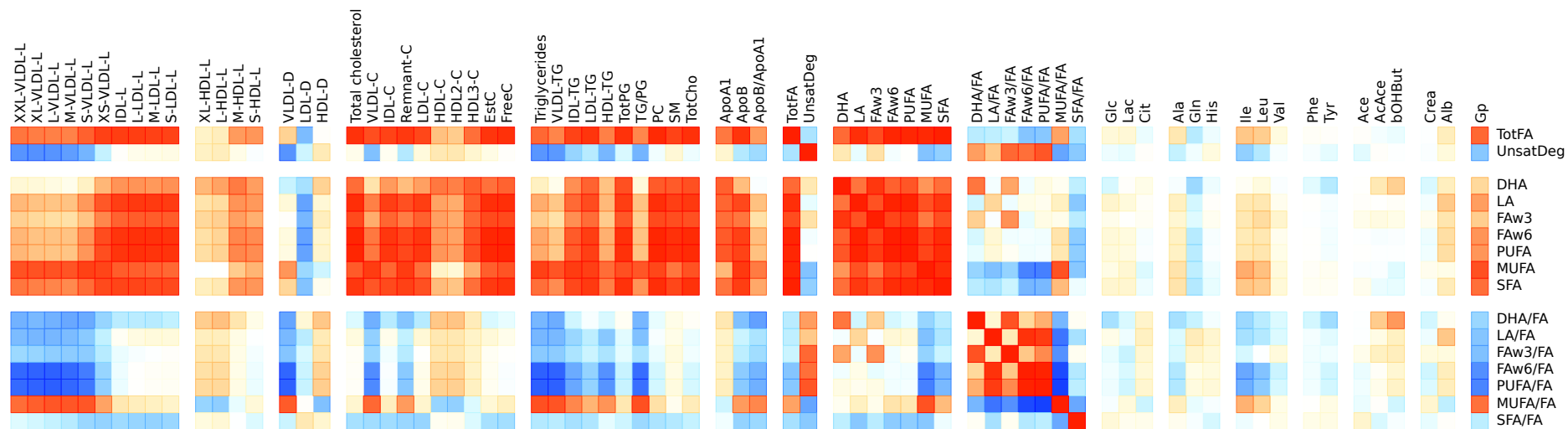
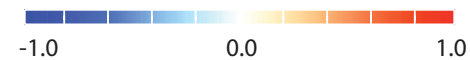
ALTW (N = 3366)

Cross-correlations



ALTW (N = 3366)

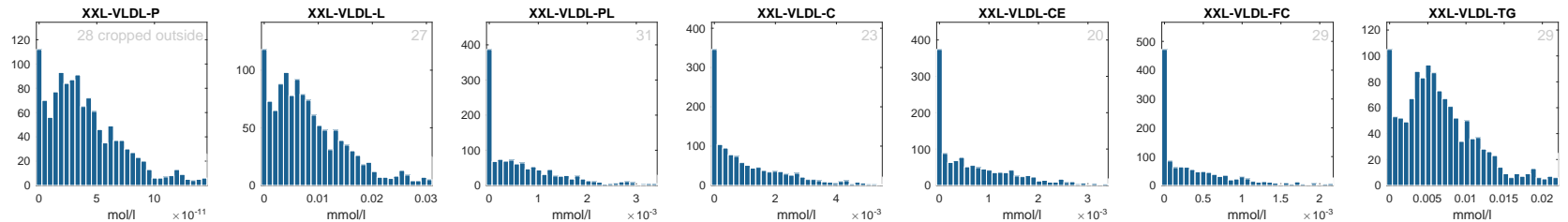
Cross-correlations



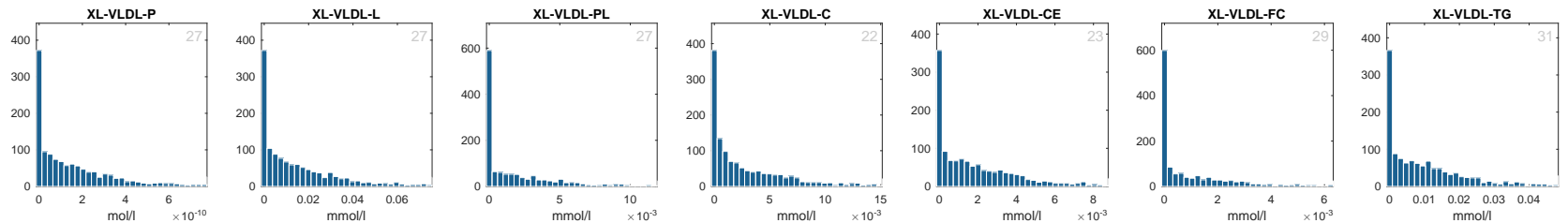
ALBB (N = 1280)

Lipoprotein
subclasses

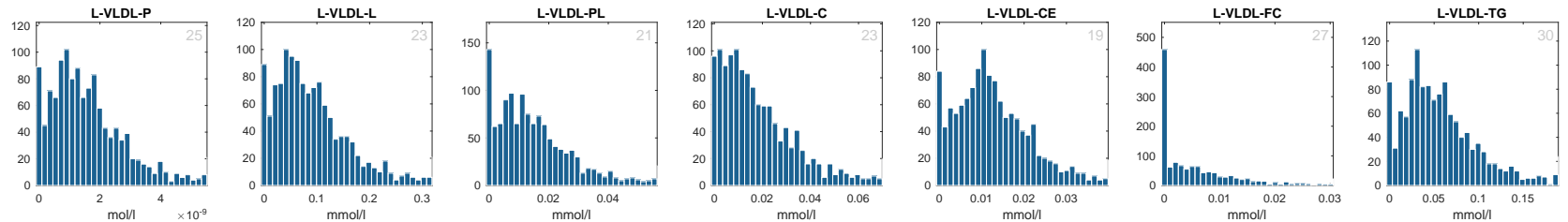
XXL-VLDL



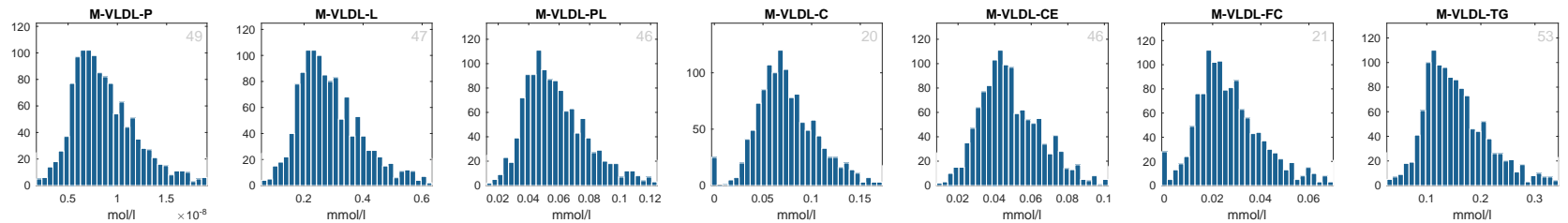
XL-VLDL



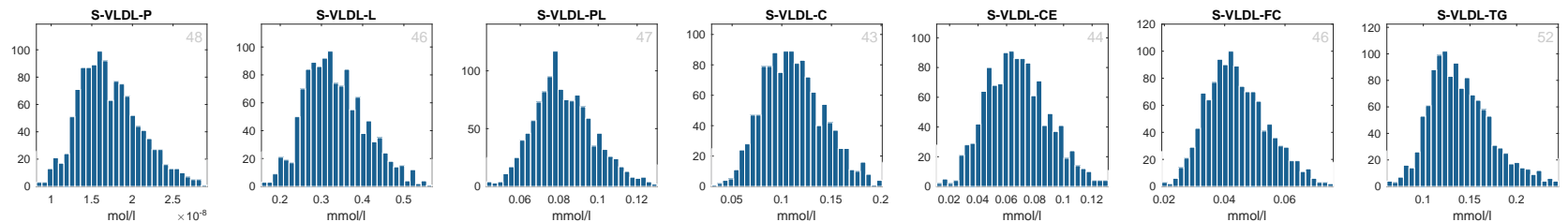
L-VLDL



M-VLDL

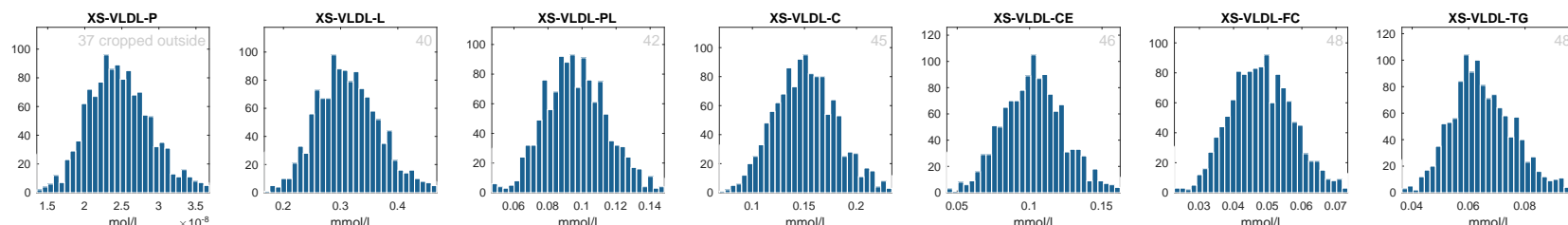


S-VLDL

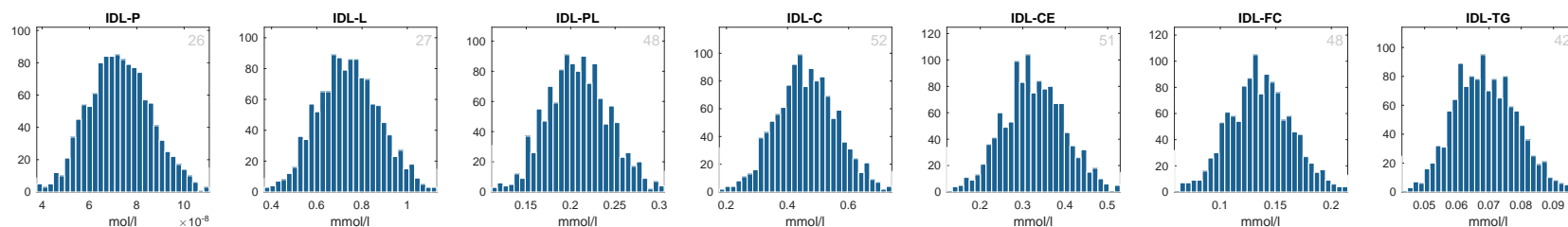


ALBB (N = 1280)

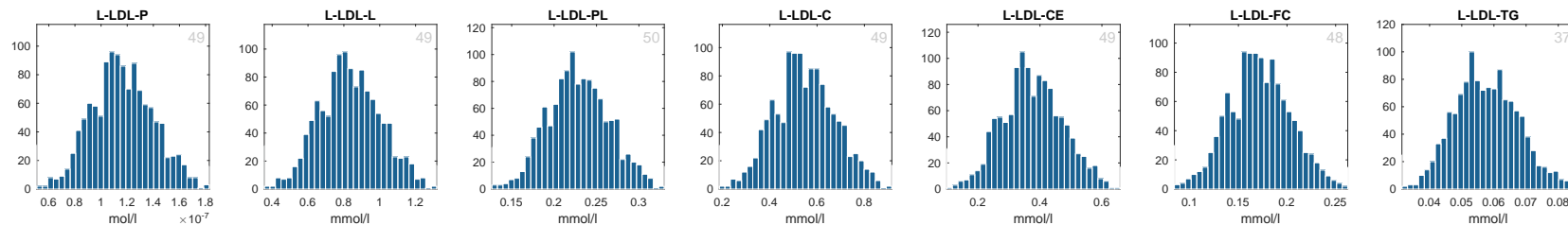
XS-VLDL



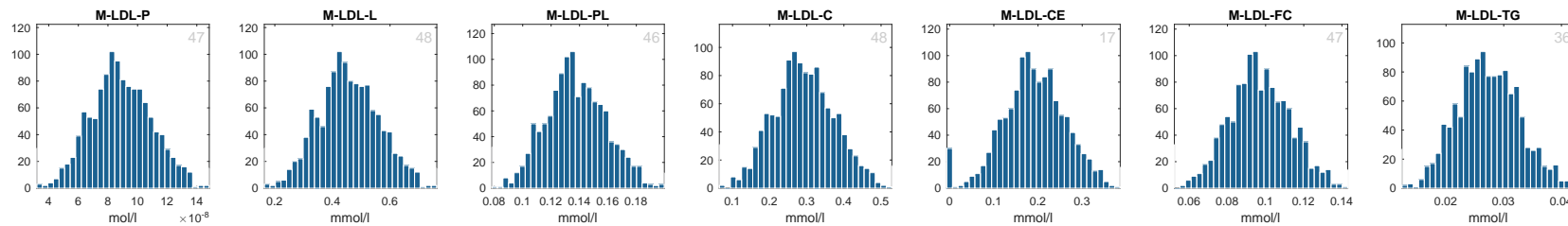
IDL



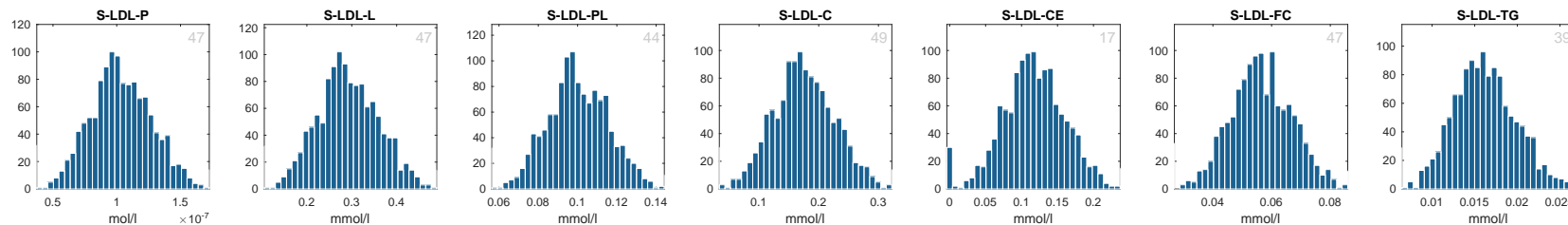
L-LDL



M-LDL

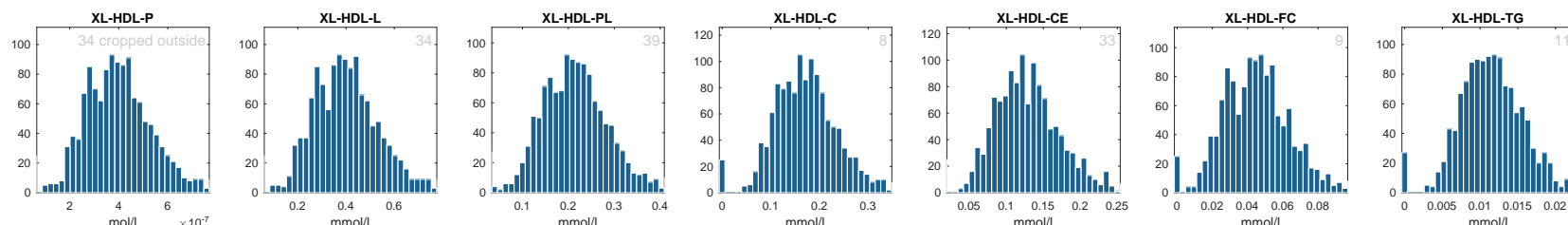


S-LDL

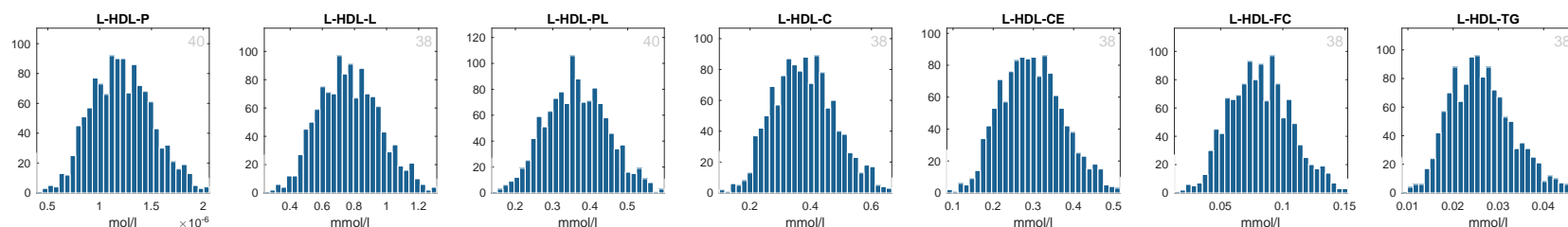


ALBB (N = 1280)

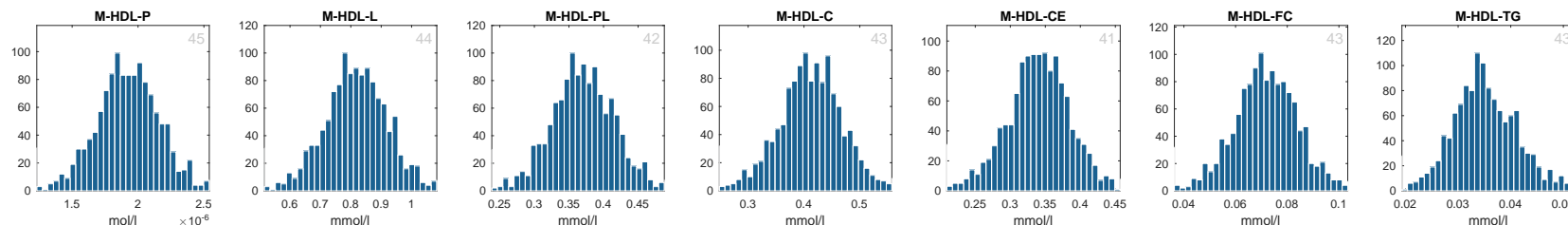
XL-HDL



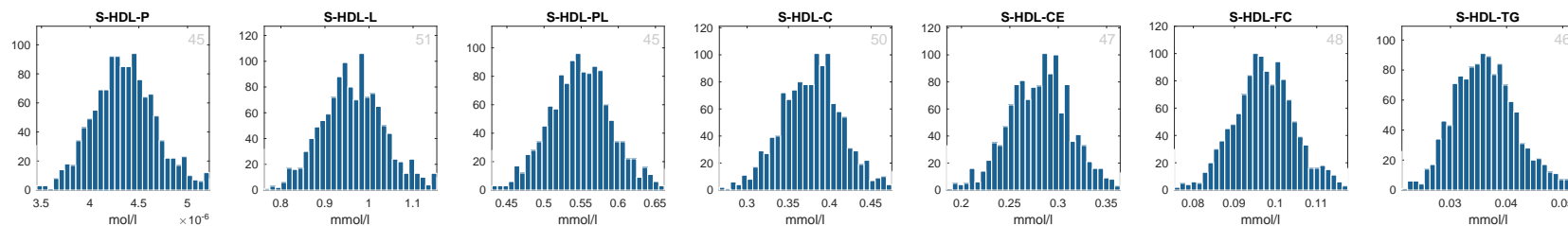
L-HDL



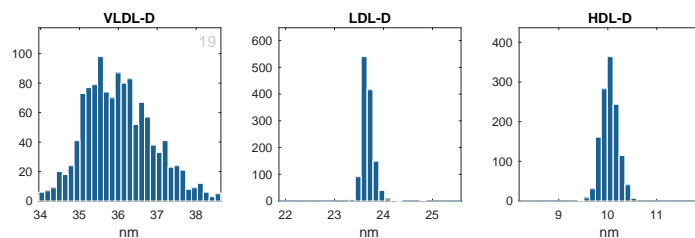
M-HDL



S-HDL

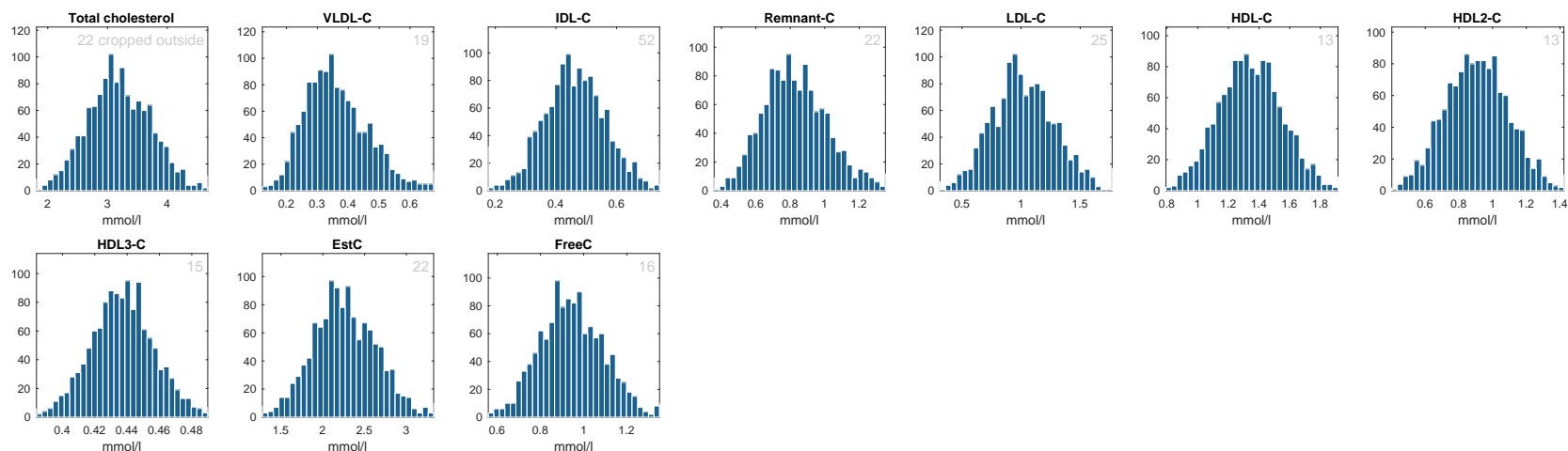


Lipoprotein particle size

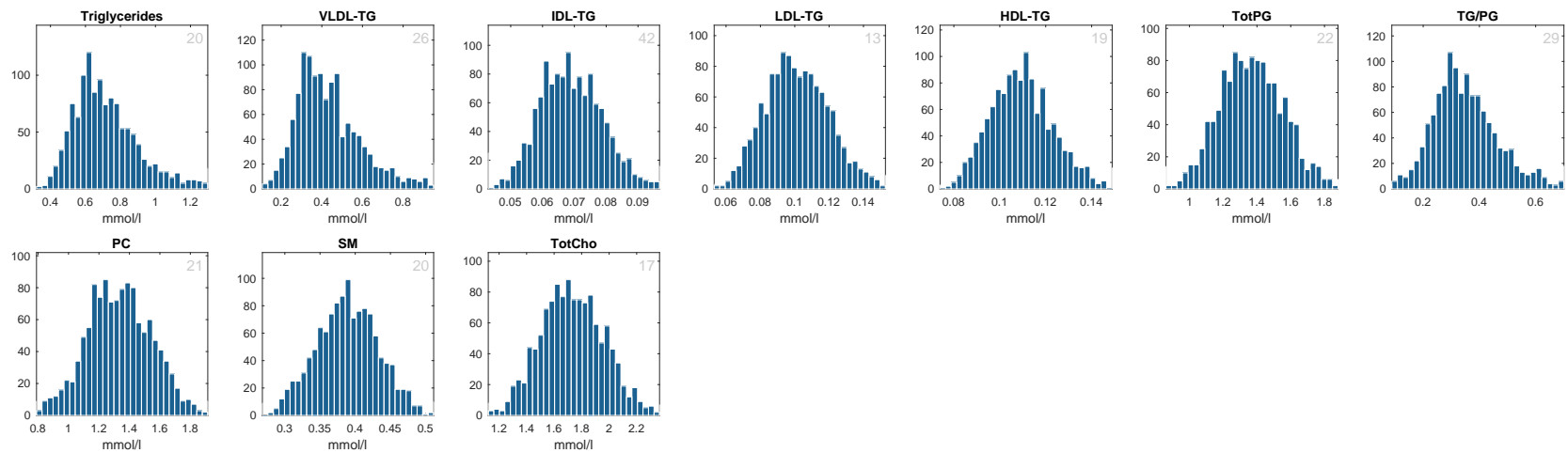


ALBB (N = 1280)

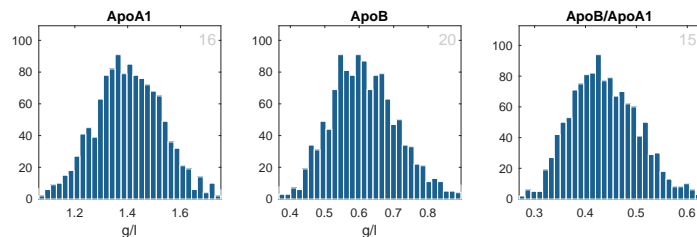
Cholesterol



Glycerides and phospholipids

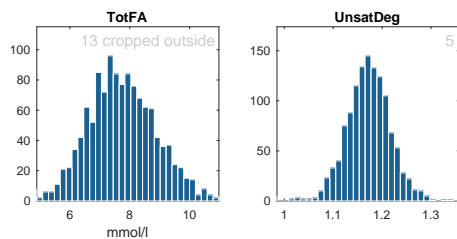


Apolipoproteins

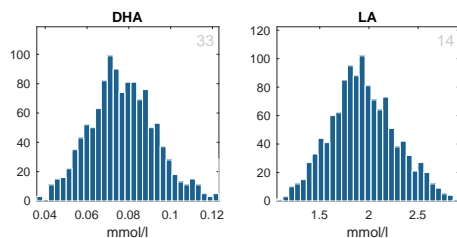


ALBB (N = 1280)

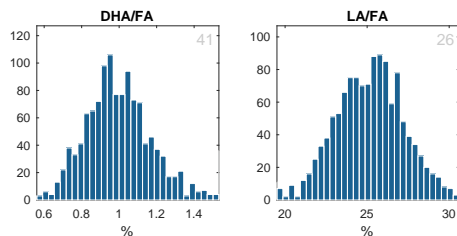
Total fatty acids
and saturation
measures



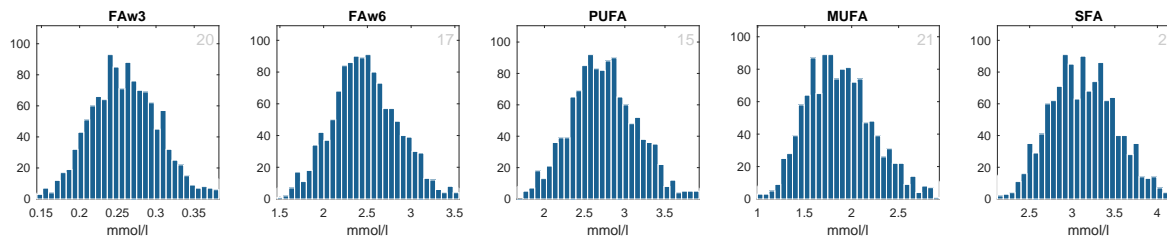
Fatty acids



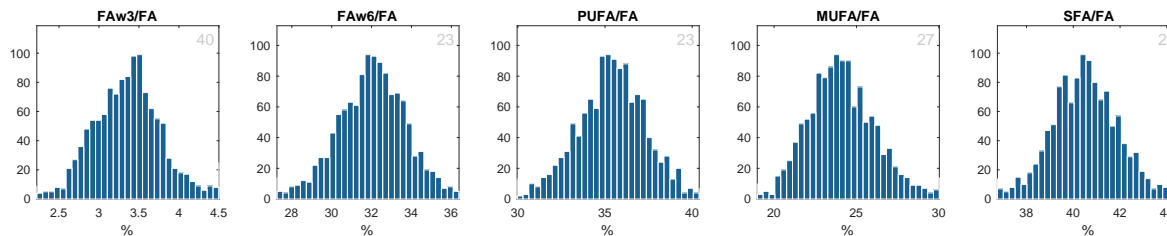
Fatty acids (%)



Fatty acids by
saturation

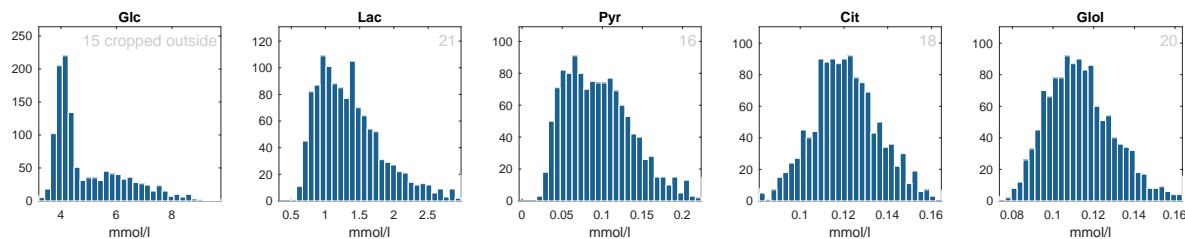


Fatty acids by
saturation (%)

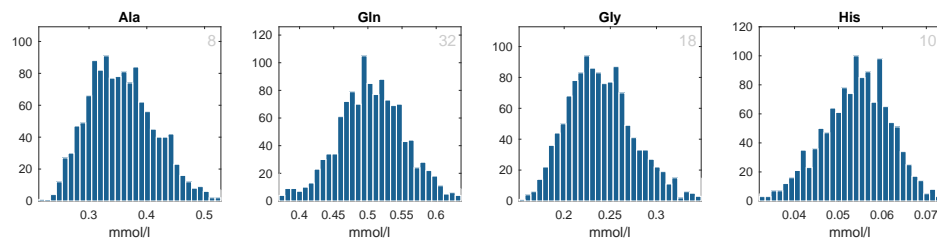


ALBB (N = 1280)

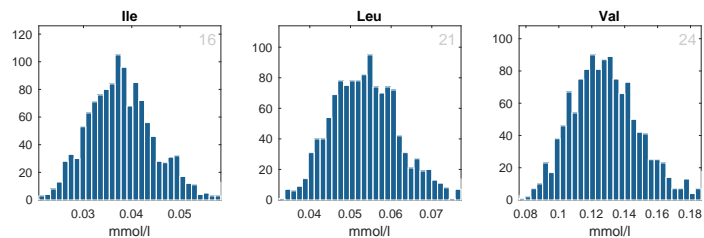
Glycolysis
related
metabolites



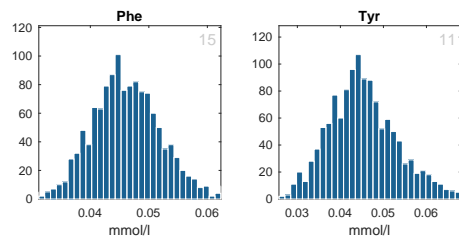
Amino acids



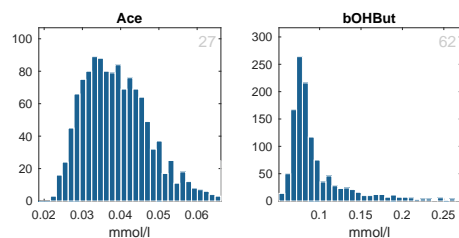
Branched-chain
amino acids



Aromatic
amino acids

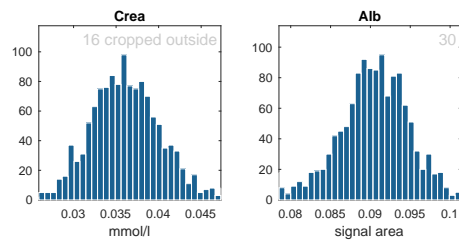


Ketone bodies

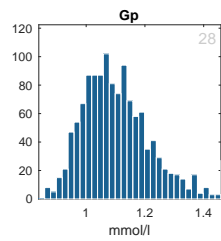


ALBB ($N = 1280$)

Fluid balance



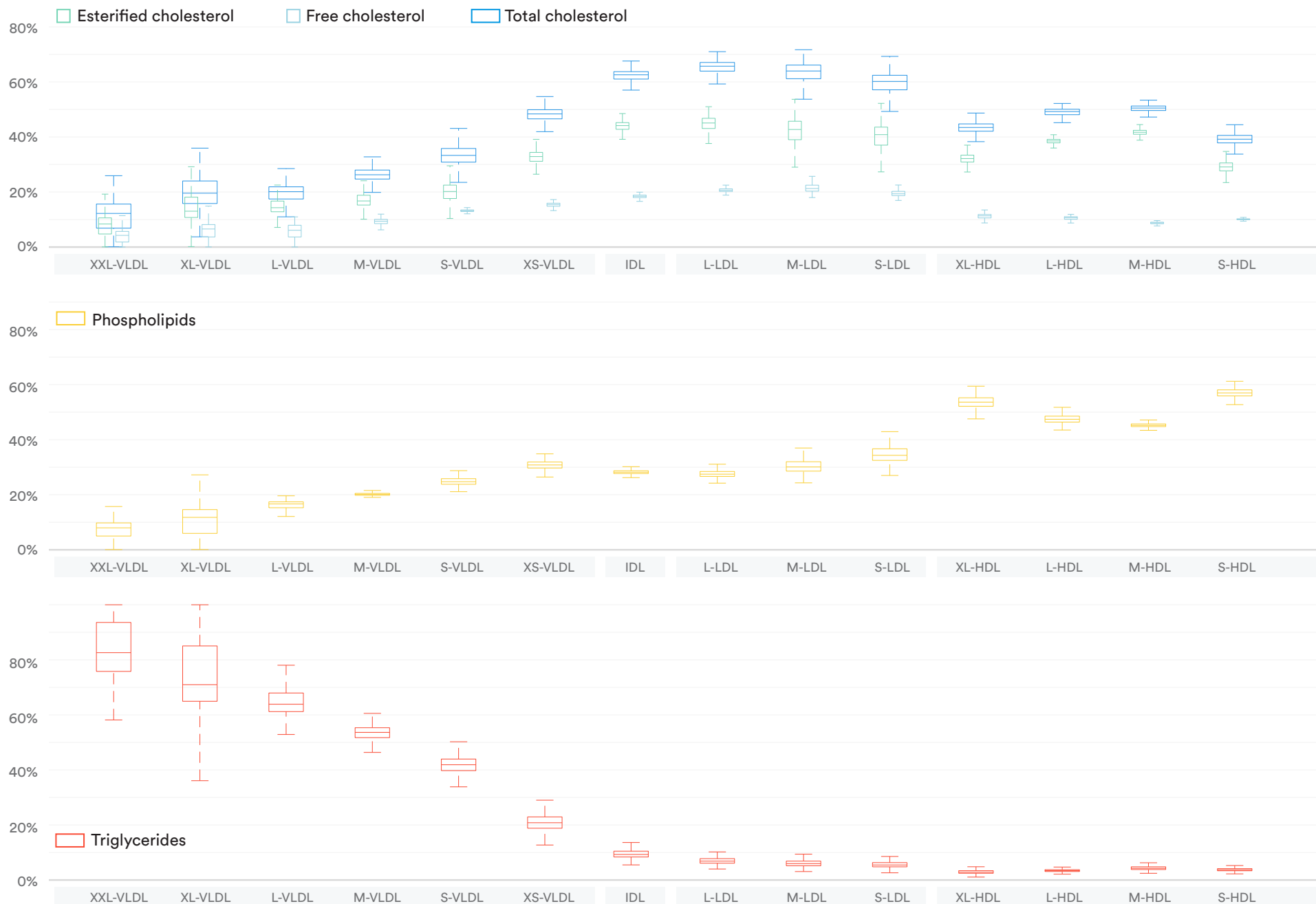
Inflammation



Lipid composition of lipoprotein subclasses

Proportions of cholesterol, phospholipids and triglycerides of the total lipid concentration of each subclass

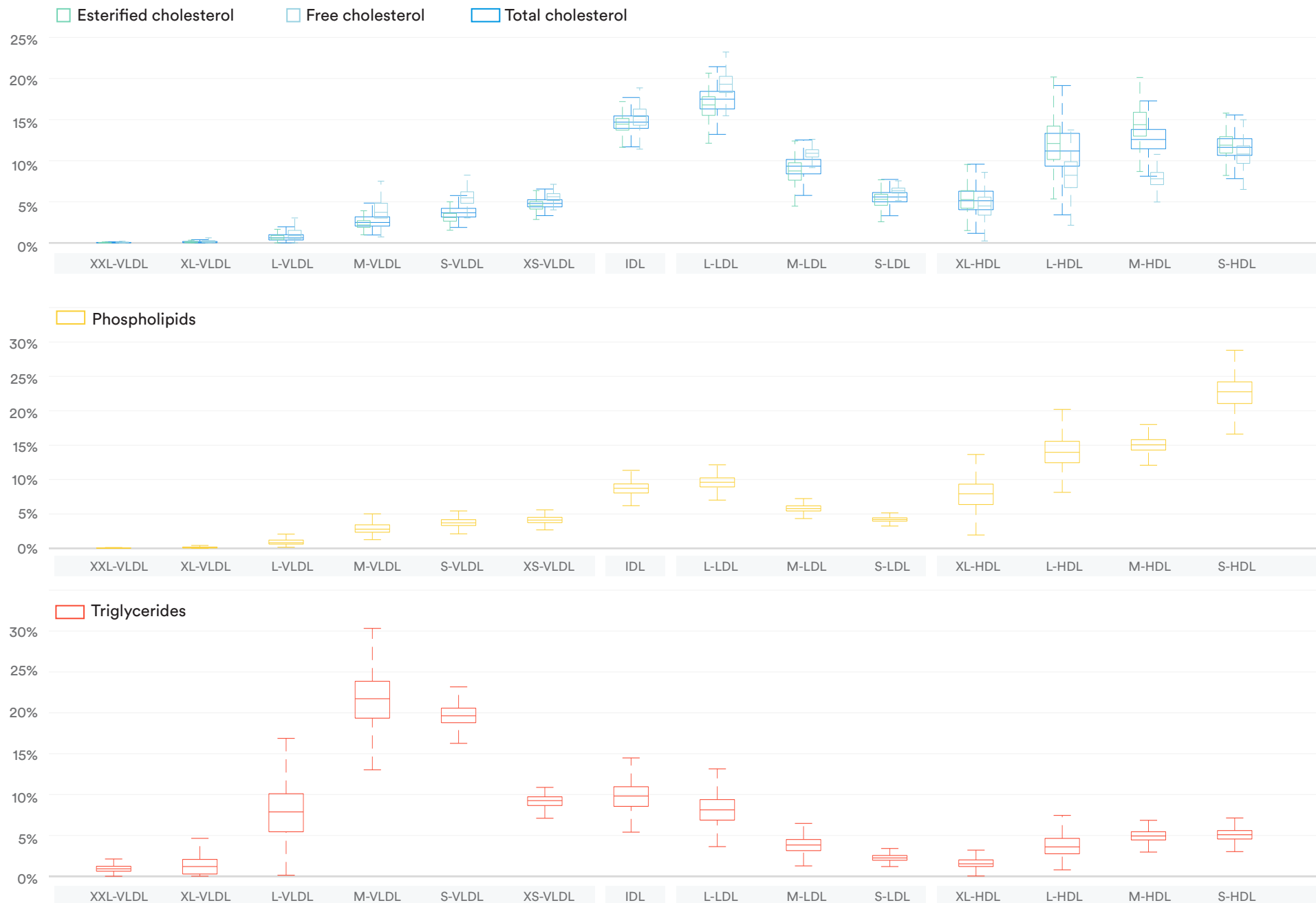
ALBB (N = 1280)



Lipid distribution along lipoprotein subclasses

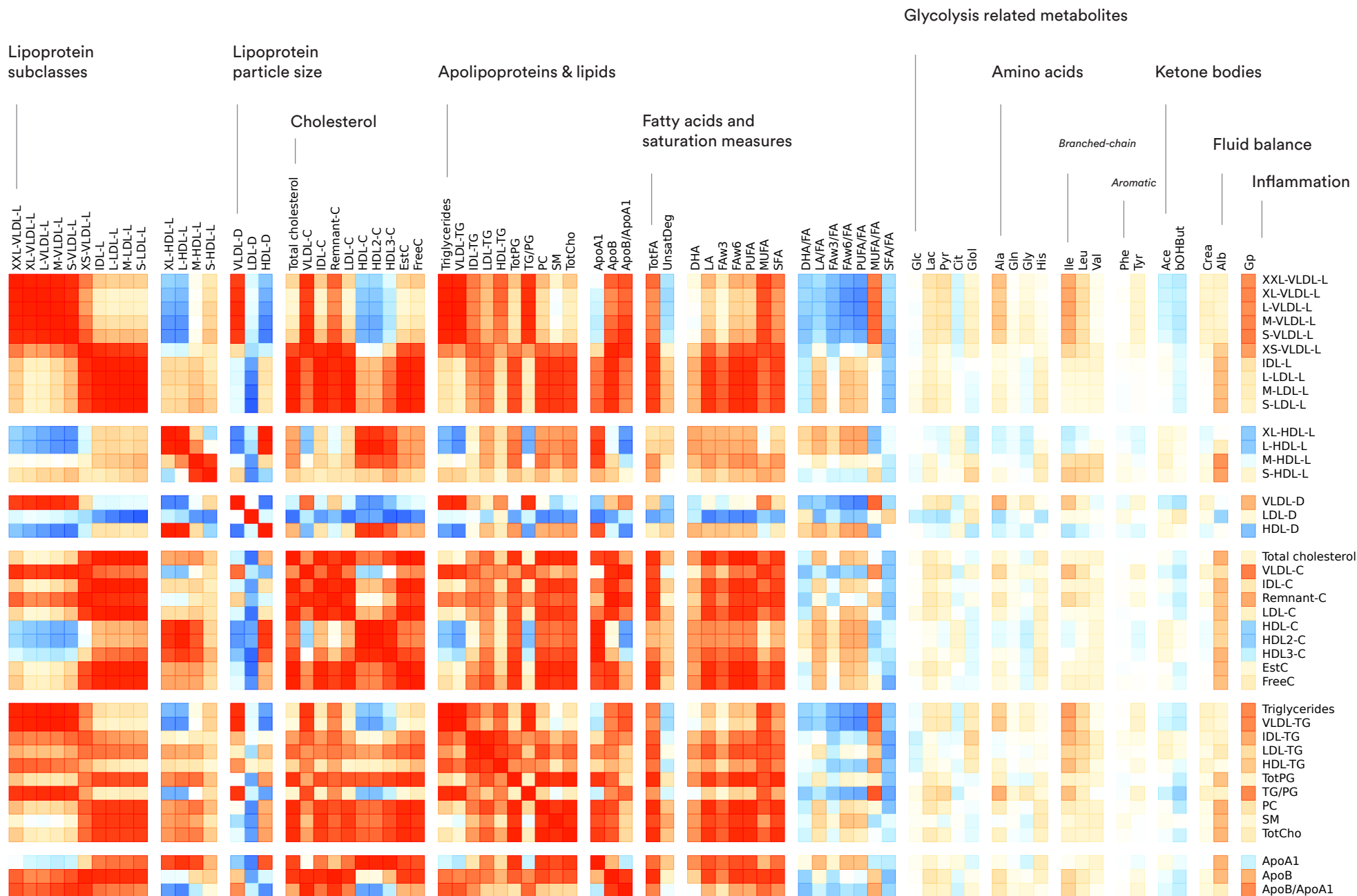
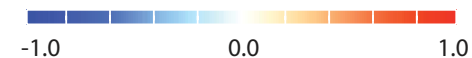
Proportions of total serum cholesterol, phospholipids and triglycerides carried by each lipoprotein subclass

ALBB (N = 1280)



ALBB (N = 1280)

Cross-correlations



ALBB (N = 1280)

Cross-correlations

