vs. 16.67%, TC-genotype - 59.72% vs. 54.17% and CC-genotype - 26.39% vs. 29.17%, that was consistent with the Hardy-Weinberg Equilibrium (p > 0.05).

Mean values of TC were higher than that of the normal ones practically in all the groups. The highest parameters were found among TC-genotype carriers, especially among men – 6.14 ± 0.34 mmol/l in the control group and 5.79 ± 0.14 mmol/l in the group of patients with EAH, though there was no reliable difference found between the groups. The level of TGs was higher among T-genotype (especially TC-genotype) carriers in comparison with the control group by 50% among men (p = 0.03) and by 25.6% among women. The HDL-C levels were higher than threshold among men-carriers of TT-genotype in both groups, while the carriers of C-allele (especially CC-genotype) had 26.4% (p = 0.01) and 40.2% (p = 0.03) higher values in comparison with TT-genotype carriers. The LDL-C levels were the highest among TC-genotype carriers, but in comparison with other genotype carriers there was no reliable difference found.

Conclusions: Thus, T allele of AGT (rs699) gene is associated with a lower HDL-C level in men and a higher level of TG in women.

COMPREHENSIVE BIOMARKER PROFILING OF HYPERTENSION IN 36,985 FINNISH INDIVIDUALS

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Objective: Previous studies on the association between metabolic biomarkers and hypertension have been limited by small sample sizes, low number of studied biomarkers and cross-sectional design. In the largest study to date, we assess the cross-sectional and longitudinal associations between high-abundance serum biomarkers and blood pressure (BP).

Design and method: We studied cross-sectional (N = 36,985; age 50.5 ± 14.2; 53.1% women) and longitudinal (N = 4,197; age 49.4 ± 11.8, 55.3% women) population samples of Finnish individuals. We included 53 serum biomarkers and other detailed lipoprotein subclass measures in our analyses. We studied the associations between serum biomarkers and BP using both conventional statistical methods and a machine learning algorithm (gradient boosting) while adjusting for clinical risk factors.

Results: Fifty-one of 53 serum biomarkers were cross-sectionally related to BP (adjusted P < 0.05 for all). Conventional linear regression modeling demonstrated that LDL cholesterol, remnant cholesterol, apolipoprotein B, and acetate were positively, and HDL particle size was negatively, associated with SBP change over time (adjusted P < 0.05 for all). Adding serum biomarkers (cross-sectional root-mean-square error: 16.27 mmHg; longitudinal: 17.61 mmHg) in the model with clinical measures (cross-sectional: 16.70 mmHg; longitudinal 18.52 mmHg) improved the machine learning model fit. Glucose, albumin, triglycerides in LDL, glycerol, VLDL particle size, and acetocoacetate had the highest importance scores in models related to current or future BP (Figure).

Conclusions: Our results suggest that serum lipids, and particularly LDL-derived and VLDL-derived cholesterol measures, and glucose metabolism abnormalities are associated with hypertension onset. Use of serum metabolite detection could improve identification of individuals at high risk of developing hypertension.

ANTIHYPERTENSIVE TREATMENT PRESCRIBING BEHAVIORS IN FRENCH GENERAL PRACTICE IN 2021

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Objective: Hypertension (HT) is the leading reason for visits to general practitioners (GPs). Due to insufficient adherence and marked therapeutic inertia, there is room for improving blood pressure control in France. The objective of this study is to describe the antihypertensive treatment prescribing behaviours in French general practice.

Design and method: Data from the IQVIA Longitudinal Patient Database (LPD) France were used. LPD France is a permanent observatory to which a nationally representative panel of physicians – including GPs (n=1200) – contribute anonymised electronic medical records (EMR). The analysis included all anti-hypertensive treatment prescriptions from July 2020 to June 2021, which were then extrapolated to the entire population. The following definitions were used to categorise the prescribing behaviours: INITIATION - for hypertensive patients already registered with the GP and who had been prescribed an antihypertensive treatment for the first time in the 24 months; RENEWAL - for hypertensive patients whose therapeutic class had not changed, apart from dosage modifications, changes of molecule within the same class and titrations; CHANGE - for hypertensive patients for whom a therapeutic class had been added, withdrawn, and/or changed.

Results: In 2021, a total of 11 557 545 hypertensive patients had received an antihypertensive treatment prescription following consultation with a GP. These were distributed as follows:

| Prescriptions | % of Patients
|----------------|------------------|
| INITIATION     | 12.66%           |
| RENEWAL        | 7.53%            |
| CHANGE         | 70.81%           |
| CHANGE         | 19.10%           |

Conclusion: These findings provide informative data on the prescribing behaviours of GPs, primarily marked by a renewal rate that does not appear to reflect the reality of blood pressure control in France. Prescription modifications are in the minority, and essentially consist of class rotations. This observation requires urgent reflection when it comes to the training of prescribers and the value placed on blood pressure control under the French public health objectives pay-for-performance scheme.

*IQVIA EMR LPD Médecins Généralistes * EMR = Electronic Medical Records, LPD = Longitudinal Patient Data

ARTERIAL HYPERTENSION (HT) IS ONE OF THE MOST PREDICTIVE RISK FACTORS FOR TYPE 2 DIABETES (DM2). THE FINDRISC IS VALIDATED FOR THE EARLY DETECTION OF SUFFERING FROM DM2

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Objective: To investigate in patients with hypertension the risk of DM 2 according to the criteria of the FINDRISC score

Design and method: Cross-sectional epidemiological study. 659 subjects between 18–65 years of age, 210 (32%) female and 449 (68%) males were selected. The parametric variables under the studio were: Age, Weight, Height, Central Abdominal Perimeter, Systolic Blood Pressure (SBP), Diastolic Blood Pressure (DBP), HDL, LDL, Total cholesterol, triglycerides, Basal blood glucose and the dichotomous variables: Sex, Diet, Exercise, antihypertensive drugs, historical hyperglycemia, family history of DM to evaluate the FINDRISC score. Two multivariate analysis model was used: linear and potential regression, together with logical tests. Excel and JMP were used for the statistical analysis.

Results: From the group studied, 71% of them were at risk of developing type 2 diabetes mellitus. Among them, 16.2% (107 subjects) presented high and very high FINDRISC score values (15–20 and greater than 20). 25.8% were hyper-