**Conclusions:** Almost 10% of patients with poor performance status were on lipid lowering therapy as primary prevention. Lipid-lowering therapy as primary prevention should be individualized in elderly individuals based on the general performance status, life expectancy and the increased risk of polypharmacy-related side effects.

# EP336 / #985, TOPIC: ASA03 - DYSLIPIDEMIA AND RISK FACTORS / ASA03-02 EPIDEMIOLOGY OF DYSLIPIDEMIAS, POSTER VIEWING SESSION.

#### GENETICALLY CONFIRMED FH CASES DISTRIBUTION BY AGE AND GENDER IN VILNIUS UNIVERSITY HOSPITAL SANTAROS KLINIKOS IN 2019-2021

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**Background and Aims :** Familial hypercholesterolemia (FH) is one of the main causes of atherosclerotic cardiovascular diseases. Due to lack of research and systematic patient search, exact prevalence of FH in Lithuania is unknown. There are also no recommendations for pediatric or familial screening in Lithuania. By the end of 2019 families at high risk for FH were invited for genetic screening in Vilnius University Hospital Santaros Klinikos. The aim of this study was to review the distribution of screened FH patients by age and gender.

**Methods:** Patients with suspected diagnosis of FH who were referred to Vilnius University Hospital Santaros Klinikos were invited to participate in the genetic screening for FH. Those who agreed had their blood sample taken on a dried blood spot card which was then sent to a genetics laboratory. Next generation sequencing was used to identify FH causing mutations (LDLR, APOB, PCSK9, LDLRAP1).

**Results:** A total of 126 patients have been screened for FH: 71 female (aged 2-69 years; median 48 years) and 55 male (age 2-79 years; median 35 years). 50 (39,7%) have had FH diagnosis confirmed genetically (26 female, 24 male). Median age of FH patients at the time of genetic screening was 37 years (2-79 years). Median age of female patients was 46 years (6-68 years) and of male patients 22 years (2-79 years).

**Conclusions:** Results of this study show that screening of families at high risk for FH may confirm diagnosis for patients of various ages. Screening also helps to find family members, not at risk for FH.

#### EP337 / #708, TOPIC: ASA03 - DYSLIPIDEMIA AND RISK FACTORS / ASA03-02 EPIDEMIOLOGY OF DYSLIPIDEMIAS, POSTER VIEWING SESSION.

## LIPID PROFILES AND THE PREVALENCE OF DYSLIPIDEMIA IN PREGNANCY

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**Background and Aims :** Physiological changes in the lipid metabolism (elevated low-density lipoprotein cholesterol (LDL-C), triglycerides (TG) and lipoprotein(a) Lp(a)) occur during pregnancy. However, dyslipiemia is associated with gestational diabetes, hypertension, preeclampsia and preterm birth. High level of total cholesterol due to greater concentrations of LDL-C and reduced level of high-density lipoprotein cholesterol (HDL-C) promote atherosclerosis. Moreover, severe hypertriglyceridemia (SHTG) is a potent risk factor for development of acute pancreatitis. The aim of this study was to evaluate serum lipid profiles and the prevalence of dyslipidemia among middle aged pregnant females without established cardiovascular diseases.

**Methods:** We retrospectively analyzed the medical records of 147 middleaged women during pregnancy and 24-months after delivery. Fasting blood samples were assayed for total cholesterol, LDL-C, TG, HDL-C, apolipoprotein A1 (Apo A1) and Apo B concentrations during the first, second, third trimesters and 24-months after delivery. The atherogenic index of plasma (AIP) was calculated as log (TG/HDL-C). Free T4, T3 and TSH were measured for detecting subclinical hypothyroidism.

**Results:** The prevalence of dyslipidemia was observed in 37%. Moreover, 29% of them had subclinical hypothyroidism. Current knowledge on the relationship between lipids and both thyroid hormones and THS is insufficient. The prevalence of dyslipidemia was significantly higher in pregnant females aged 42 years and older (TC, OR=2.5; HDL-C less than 1, OR=1.8; LDL-C greater than 3,9, OR=1.7). The TG, LDL-C, Apo A1 and Apo B levels raised significantly between 19 to 37 weeks and maintained high during next 16 months.

**Conclusions:** Dyslipidemia is associated with advanced age of pregnant female and subclinical hypothyroidism.

### EP338 / #370, TOPIC: ASA03 - DYSLIPIDEMIA AND RISK FACTORS / ASA03-02 EPIDEMIOLOGY OF DYSLIPIDEMIAS, POSTER VIEWING SESSION.

VERIFICATION OF SECONDARY DYSLIPIDEMIA AMONG "PSEUDO-POSSIBLE" FAMILIAL HYPERCHOLESTEROLEMIA

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**Background and Aims :** Secondary dyslipidemia (SD) may appear as a high-grade or "borderline" hypercholesterolemia (LDL-cholesterol $\geq$ 5 mmmol/l) and mimic a possible familial hypercholesterolemia (FH). The aim was to investigate the heterogeneity of "borderline" patients.

**Methods:** 75 patients with SD caused by type 2 diabetes, hypothyroidism and grade II-III obesity were divided into 3 groups. Patients with non-HDL $\geq$ 5.8 mmol/l revealed in each goup formed the subgroups, called "borderline". Methods: clinical, laboratory, statistical: t-test, correlation analyses

**Results:** Patients in diabetes group had hypertriglyceridemia, increased LDL and non-HDL. Correlations between glycemic and lipid profiles: a positive relationship between glucose/HbA1c and TG /non-HDL levels. In "borderline" subgroup the level of LDL-cholesterol was 44% higher compared to general diabetes group. Greater atherogenic profile correlated with destabilization of diabetes (significantly higher glucose, HbA1c levels). Characteristics of dyslipidemia in hypothyroidism group: increased levels of TC, LDL, non-HDL. There was a positive correlation between TSH and cholesterol, LDL and non-HDL. In the "borderline" subgroup, the level of LDL was 24% higher than in general group with hypothyroidism in combination with significantly higher TSH level. In group with obesity combined dyslipidemia and metabolic syndrome were observed. Prediabetes detected in 63%. In the "borderline" subgroup, the level of LDL was 25% higher compared to general group with obesity.



**Conclusions:** It's necessary to distinguish the "borderline" group among patients with SD with lipid profile that imitates "possible" FH. The final