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Conclusion
The study proved that the rs12255372 variant of the TCF7L2 gene was not associated but the rs290487 variant was significantly associated with the risk of T2DM in the ethnic of Malay inhabiting in South Sumatera Indonesia.

OP3-002 - EPIDEMIOGENETICS OF METABOLIC MEMORY AND VASCULAR COMPLICATIONS

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Introduction
Despite progress using GWAS approaches, it is clear that genetic factors do not entirely explain diabetes susceptibility and its progression. We hypothesize that the onset and complications of diabetes are associated with gene regulatory events that involve non-genetic events conferred by DNA methylation.

Methods
Genome-wide DNA methylation of the FinnDiane type 1 diabetes cohort using high throughput methyl-CpG-seq. Informed consent was obtained from volunteers. A total of five male diabetic patients with no complications were included in preliminary experiments and analyses. At baseline, mean age was 46 ± 13 years, duration of diabetes 23.63 ± 12 years, and HbA1c 8.0 ± 0.3%.

Results
We examined the difference in DNA methylation between primary human aortic endothelial cells (HAECs) and human peripheral blood cells (PBMCs) from the FinnDiane type 1 diabetics. Remarkably and of clinical relevance, when we compared FinnDiane T1D PBMCs with primary HAECs following chronic rather than acute hyperglycemic exposure, we observed significant overlap for differential methylated regions (DMRs), distinguishing both gene hyper- and hypo-methylation with an overlap of 53% (vs 0.3% in the acute hyperglycemia study) between PBMCs and HAECs (P value 0.001).

Conclusion
DNA methylation signature of primary HAECs exposed to chronic hyperglycemia more closely resemble DMRs identified in PBMCs derived from T1D individuals from the FinnDiane cohort than in studies of acute periods of transient hyperglycemia. These original and potentially very important findings implicate DNA methylation in WBCs derived from T1D subjects from the FinnDiane study and gene regulating epigenetic changes observed in primary HAECs.

OP3-003 - COMPARISON OF THREE TYPE 2 DIABETES MELLITUS SCREENING TOOLS IN OUTPATIENT CLINIC SETTINGS IN BINONG, TANGERANG, BANTEN

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Introduction
Early identification and management of type 2 diabetes mellitus in outpatient clinic setting can prevent further unwanted complication in diabetic patients. Several screening tools have reported their diagnostic accuracy, but the criterion validity of these tools is unknown.

Methods
We compared quick and easy screening tools; Canadian Diabetes Risk Questionnaire (CANRISK), diabetes risk score developed from Korea National Health and Nutrition Examination Survey (KNHANES) and Thailand simple diabetes risk score in one sample of 96 adult outpatient clinics in Binong, Tangerang, Banten, Indonesia. Sensitivity and specificity of 70% was set as a prerequisite for adequate performances of a screening tool.

Results
According to the acknowledged definition criteria of type 2 diabetes mellitus 38.9% of patients were diagnosed having diabetes mellitus. Sensitivity and specificity of Canadian Diabetes Risk Questionnaire (CANRISK), diabetes risk score developed from Korea National Health and Nutrition Examination Survey (KNHANES) and Thailand simple diabetes risk score respectively are 27.2% and 67.2%; 73.0% and 24.1%; 81.1% and 20.7%.

Conclusion
The quick and easy type 2 diabetes mellitus screening tool is Thailand simple diabetes risk score which is suitable for using in outpatient clinic setting. But the validity of those screening tools is needed to validate in further study.

OP3-004 - TESTOSTERONE LEVEL AND GLYCEMIC CONTROL IN TYPE 2 DIABETES MELLITUS

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Introduction
Abnormal level of testosterone is common finding in patients with type-2 diabetes mellitus (T2DM). Numerous studies have reported the association between testosterone deficiency and visceral obesity, insulin resistance and dyslipidemia. Lower level of testosterone in men is associated with increased all-cause mortality in patients with T2DM. The aim of this study was to investigate the relationship between testosterone level and glycemic control in T2DM.

Methods
This study was a cross-sectional study with 50 male subjects with T2DM from senior endocrinologist private out-patients clinic. Testosterone and A1C was measured. Statistical analysis was performed using Pearson correlation test.
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