

Available biomarkers Generation R

Claudia Kruithof, 1-11-2018

			Child					
	Early pregnancy	Mid pregnancy	Late pregnancy	6 years visit	9 years visit	Birth	6 years visit	9 years visit
BLOOD Angiogenesis and fibrinolysis								
PIGF	x	X		planned		Х	planned	
sFlt	x	x				х		
PAI	×							
AMH	x			planned	planned			
Cardiology								
NT-proBNP				х			planned	
Endocrinology								
Anti-TPO	x							
HCG	Enrolment							
FT4	x					Х	х	
TSH	x					х	х	
TT4	x					х		
Glucose metabolism								
C-Peptide							x	
Insulin	x						х	х
Glucose	x			х				х
Inflammation and immunology								
Helicobacter Pylori		Х					х	
Hs-CRP	x					х	х	х
Total lymphocytes*							х	
tTglgA		х					х	
Thryoglobulin & TgAB	x							
Anti-TG2 & EMA								х
Metabolism								
ALAT							x	
ASAT							x	
Cholesterol	x			Х			х	x
HDL cholesterol	х			Х			х	x
LDL cholesterol	х			Х			х	x
АроВ				Х				
Lipoprotein(a)				Х				
Triglycerids	х			Х			х	
Nephrology								
Creatinine							х	x
Cystatin C							х	
Vitamins and nutrition								



Active vitamin B12	Х				Х	
Vitamin B12	X				х	
25 OH Vitamin D2		X			х	
25 OH Vitamin D3		Х			х	
Total 25 OH Vitamin D		X			х	
Fatty Acids		x				
Folic acid	х			planned	х	pla
Homocystein	Х				х	
Iron	Х					
Ferritin	х					
Transferrin	х					
URINE						
Endocrinology/Nephrology						
Albumin						
Creatinine	х					
Jodide	х					
Environment						
Free BPA	Х	х	х			
Total BPA**	Х	Х	х			
11-nor- Δ9-THC-9-COOH [™]	Х	Х	х			
Monomethylphthalate**	Х	х	х			
Monoethylphthalate	Х	x	x			
Mono(3-	х	x	x			
carboxypropyl)phthalate Mono-isobutylphthalate	x	x	x			
Mono-n-butylphthalate	х	х	x			
Mono-(2-ethyl-5-	Х	x	x			
carboxypentyl)phthalate ^{**} Mono-[(2- carboxymethyl)hexyl]phthalate ^{**}	х	x	x			
Mono-(2-ethyl-5-	х	х	х			
hydroxyhexyl)phthalate ** Monobenzylphthalate **	x	Х	х			
Monoisononylphthalate	x	X	X			
Monocyclohexylphthalate T	x	X	X			
Monooctylphthalate**	x	X	X			
Phthalic Acid**	X	X	X			
Mono-(8-methyl-1-	x	X	X			
nonyl)phthalate Mono-hexylphthalate						
	X	X	X			
Mono-(7 aarbayu n	X	X	X			
Mono-(7-carboxy-n- heptyl)phthalate	Х	Х	Х			
Mono-(7-carboxy-n-heptyl)phthalate	Х	Х	Х			
Mono-(2-ethyl- 5oxohexyl)phthalate**	X	x	Х			
Bisphenol A**	Х	Х	Х			
Bisphenol S	Х	Х	Х			
Bisphenol Z ^{**}	X	X	X			



Bisphenol B	x	X	x	x	
Bisphenol F**	x	X	x	x	
Bisphenol AP**	x	X	x	x	
Bisphenol AF**	x	x	x	x	
Bisphenol P	x	x	x	x	
Diethyldithiophosphate	x	x	x	x	
Diethylphosphate	x	x	x	x	
Diethylthiophosphate**	x	х	x	x	
Dimethyldithiophosphate	x	x	x	x	
Dimethylphosphate**	x	x	x	x	
Dimethylthiophosphate**	x	х	x	x	
Microbiology					
Chlamydia trachomatis	Enrolment				
HAIR					
Cortisol				x	
SALIVA					
Haemophilus influenza				x	
Haemophilus species				x	
Moraxella catarrhalis				х	
Moraxella species				x	
Staphylococcus aureus				x	
Staphylococcus species				х	
Streptococcus pneumoniae				х	
Streptococcus pyogenes				x	

11-nor- Δ9-THC-9-COOH - 11-nor- Δ9-tetrahydrocannabinol-9-COOH; ALAT - alanine aminotransferase; apoB - apolipoprotein B; ASAT - aspartate aminotransferase; BPA - bisphenol A; FT4 - free thyroxine; HCG - human chorionic gonadotropin; HDL - high density lipoprotein; Hs-CRP - high sensitive C reactive protein; LDL - low density lipoprotein; OH - hydroxy; PAI - plasminogen activator inhibitor; PLGF - placenta growth factor; sFlt - soluble fms-like tyrosine kinase; TPO - thyoid peroxidase; TSH - thyroid stimulating hormoon; TT4 - total thyroxine; tTglgA - tissue transglutaminase immunoglobuline A.

*Additional subsets of lymphocytes in a Dutch subgroup available for CD3+ T lymphocytes, CD19+ B lymphocytes, CD16-/CD56+ NK lymphocytes, CD3+/CD4+ helper T lymphocytes, CD3+/CD8+ cytotoxic T lymphocytes, CD3+/CD45RA+ naive T lymphocytes, CD3+/CD45RO+ memory T lymphocytes.

^{**} Available in subgroup