

VI. Blood Analysis

Venous blood sample and urine were obtained after an overnight fast.

1) Blood chemistry

Total protein (g/dL)
 Triglyceride (mg/dL)
 Total cholesterol (mg/dL)
 HDL-cholesterol (mg/dL)
 Uric acid (mg/dL)
 Creatinine (mg/dL)
 Calcium (mg/dL)
 Phosphorus (mg/dL)
 Glutamate oxaloacetate transaminase, GOT (U/L)
 Glutamate pyruvate transaminase, GPT (U/L)
 Gamma-glutamyltransferase (U/L)
 Cholinesterase (U/L)
 Magnesium (mg/dL)
 Iron (micro g/dL)
 Fasting insulin (micro IU/mL)
 Sialic acid (mg/dL)
 Fasting glucose (mg/dL)
 Hemoglobin A1c (%)
 Albumin (g/dL) direct method
 High sensitive CRP (ng/mL)
 Testosterone (ng/mL)
 Free testosterone (pg/mL)

2) Complete blood cell count

White blood cell count (/micro L)
 Red blood cell count (x10000/micro L)
 Hemoglobin (g/dL)
 Hematocrit (%)
 MCV (fL)
 MCH (pg)
 MCHC (%)
 Platelet count (x10000/micro L)

1) Blood chemistry

Total protein (g/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	7.3	0.4	279	7.3	0.4	288	7.4	0.4	274	7.5	0.5	284	7.5	0.5	74	7.4	0.4	1199
Female	7.4	0.4	295	7.5	0.4	277	7.4	0.4	281	7.5	0.4	278	7.5	0.5	88	7.4	0.4	1219
Total	7.4	0.4	574	7.4	0.4	565	7.4	0.4	555	7.5	0.4	562	7.5	0.5	162	7.4	0.4	2418

Triglyceride (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	125.5	81.3	275	138.4	101.2	285	123.4	77.1	269	114.8	58.4	269	100.3	43.2	71	124.2	80.0	1169
Female	75.0	38.2	291	93.8	50.1	275	110.6	93.1	276	114.9	61.8	269	104.8	39.9	85	98.6	64.3	1196
Total	99.6	67.7	566	116.5	83.3	560	116.9	85.7	545	114.9	60.1	538	102.8	41.4	156	111.3	73.6	2365

Total cholesterol (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	209.9	32.9	279	212.6	32.5	288	207.2	33.1	274	204.4	33.6	284	198.4	33.7	74	207.9	33.2	1199
Female	204.6	29.1	295	227.8	36.5	277	227.5	31.0	281	222.2	29.5	278	214.9	38.4	88	219.9	33.4	1219
Total	207.2	31.1	574	220.1	35.3	565	217.5	33.6	555	213.2	32.8	562	207.4	37.1	162	214.0	33.9	2418

HDL-cholesterol (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	57.7	14.1	279	57.6	14.6	288	57.2	14.7	274	55.8	14.4	284	57.3	15.6	74	57.1	14.5	1199
Female	71.0	15.2	295	70.5	15.8	277	64.9	14.3	281	62.5	14.7	278	61.5	16.6	88	66.9	15.6	1219
Total	64.5	16.1	574	63.9	16.5	565	61.1	15.0	555	59.1	15.0	562	59.6	16.2	162	62.0	15.8	2418

Uric acid (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.0	1.2	279	6.0	1.2	288	5.7	1.3	274	5.8	1.3	284	5.7	1.4	74	5.9	1.3	1199
Female	4.1	0.9	295	4.5	1.0	277	4.5	1.0	281	4.8	1.1	278	4.9	1.2	88	4.5	1.1	1219
Total	5.0	1.4	574	5.2	1.4	565	5.1	1.3	555	5.3	1.3	562	5.3	1.4	162	5.2	1.3	2418

Creatinine (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.8	0.3	279	0.8	0.1	288	0.8	0.2	274	0.9	0.3	284	0.9	0.2	74	0.8	0.2	1199
Female	0.6	0.1	295	0.6	0.1	277	0.6	0.4	281	0.6	0.1	278	0.7	0.1	88	0.6	0.2	1219
Total	0.7	0.3	574	0.7	0.2	565	0.7	0.3	555	0.8	0.3	562	0.8	0.2	162	0.7	0.3	2418

Calcium (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.3	0.3	279	9.3	0.3	288	9.2	0.3	274	9.2	0.4	284	9.1	0.4	74	9.2	0.4	1199
Female	9.1	0.3	295	9.4	0.4	277	9.3	0.3	281	9.3	0.3	278	9.2	0.4	88	9.3	0.4	1219
Total	9.2	0.3	574	9.3	0.4	565	9.3	0.3	555	9.2	0.3	562	9.2	0.4	162	9.3	0.4	2418

Phosphorus (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.3	0.4	279	3.2	0.4	288	3.1	0.4	274	3.2	0.4	284	3.2	0.4	74	3.2	0.4	1199
Female	3.5	0.4	295	3.8	0.4	277	3.7	0.4	281	3.7	0.4	278	3.6	0.4	88	3.7	0.4	1219
Total	3.4	0.4	574	3.5	0.5	565	3.4	0.5	555	3.4	0.5	562	3.4	0.4	162	3.4	0.5	2418

Glutamate oxaloacetate transaminase, GOT (U/L)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	23.7	10.5	279	23.2	9.2	288	22.6	6.3	274	25.0	8.7	284	26.4	12.7	74	23.8	9.1	1199
Female	19.2	7.1	295	21.8	8.4	277	23.8	9.2	281	23.8	7.3	278	24.2	11.8	88	22.3	8.6	1219
Total	21.4	9.2	574	22.5	8.8	565	23.2	7.9	555	24.4	8.1	562	25.2	12.2	162	23.0	8.9	2418

Glutamate pyruvate transaminase, GPT (U/L)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	29.0	19.8	279	25.7	17.6	288	21.4	9.8	274	21.2	11.6	284	19.6	11.9	74	24.1	15.4	1199
Female	16.7	10.8	295	20.0	12.6	277	21.0	11.1	281	18.5	8.8	278	16.3	10.6	88	18.8	11.0	1219
Total	22.7	17.0	574	22.9	15.6	565	21.2	10.4	555	19.9	10.4	562	17.8	11.3	162	21.4	13.6	2418

Gamma-glutamyltransferase (U/L)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	45.1	36.1	279	52.2	52.7	288	47.2	44.0	274	40.1	34.3	284	41.7	72.2	74	45.9	45.0	1199
Female	20.1	13.9	295	28.7	28.0	277	27.7	23.7	281	23.6	18.8	278	22.9	18.2	88	24.8	21.7	1219
Total	32.2	29.8	574	40.7	44.0	565	37.3	36.5	555	31.9	28.9	562	31.5	51.3	162	35.3	36.8	2418

Cholinesterase (U/L)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	370.7	76.0	279	359.1	76.0	288	344.6	94.0	274	323.8	82.0	284	303.9	68.5	74	346.7	83.8	1199
Female	313.3	75.4	295	349.9	88.8	277	359.4	103.0	281	342.4	74.4	278	314.6	56.4	88	339.0	86.1	1219
Total	341.2	80.8	574	354.6	82.6	565	352.1	98.8	555	333.0	78.8	562	309.7	62.2	162	342.8	85.0	2418

Magnesium (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.4	0.1	279	2.3	0.2	288	2.3	0.2	274	2.3	0.2	284	2.3	0.2	74	2.3	0.2	1199
Female	2.3	0.2	295	2.3	0.1	277	2.3	0.2	281	2.4	0.2	278	2.3	0.2	88	2.3	0.2	1219
Total	2.3	0.2	574	2.3	0.2	565	2.3	0.2	555	2.3	0.2	562	2.3	0.2	162	2.3	0.2	2418

Iron (micro g/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	128.2	42.9	279	119.5	42.5	288	112.7	36.9	274	116.5	39.3	284	118.2	36.0	74	119.2	40.5	1199
Female	106.4	53.7	295	107.0	37.8	277	110.2	32.4	281	102.8	31.3	278	92.9	31.8	88	105.6	39.7	1219
Total	117.0	49.9	574	113.4	40.7	565	111.4	34.6	555	109.7	36.2	562	104.5	36.0	162	112.3	40.7	2418

Fasting insulin (micro IU/mL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	7.2	4.6	275	6.4	3.6	285	6.1	8.6	269	6.5	4.5	269	5.8	3.9	71	6.5	5.5	1169
Female	6.5	4.5	291	5.9	3.3	275	7.0	9.3	276	7.0	4.1	269	6.4	3.8	85	6.6	5.7	1196
Total	6.8	4.6	566	6.1	3.5	560	6.6	9.0	545	6.8	4.3	538	6.1	3.8	156	6.6	5.6	2365

Sialic acid (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	58.6	6.2	279	59.9	6.3	288	61.9	8.0	274	63.6	8.7	284	62.6	7.2	74	61.1	7.6	1199
Female	57.4	6.5	295	61.2	7.9	277	61.5	7.3	281	64.1	7.4	278	64.3	7.9	88	61.2	7.8	1219
Total	58.0	6.4	574	60.5	7.2	565	61.7	7.7	555	63.9	8.1	562	63.5	7.6	162	61.2	7.7	2418

Fasting glucose (mg/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	97.7	11.4	275	103.5	15.8	286	106.8	20.1	269	107.1	22.1	269	105.0	19.4	71	103.8	18.2	1170
Female	93.7	15.3	291	96.4	15.5	275	100.4	20.3	276	103.2	18.9	269	99.6	13.6	85	98.4	17.7	1196
Total	95.7	13.7	566	100.0	16.0	561	103.6	20.4	545	105.1	20.6	538	102.1	16.7	156	101.1	18.1	2366

Hemoglobin A1c (%)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	5.1	0.5	279	5.4	0.5	289	5.5	0.7	274	5.5	0.7	284	5.5	0.8	74	5.4	0.6	1200
Female	5.1	0.6	295	5.3	0.5	277	5.5	0.7	281	5.5	0.6	278	5.4	0.6	88	5.3	0.6	1219
Total	5.1	0.6	574	5.3	0.5	566	5.5	0.7	555	5.5	0.6	562	5.5	0.7	162	5.4	0.6	2419

Albumin (g/dL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	4836.7	333.0	279	4670.8	345.5	288	4575.0	332.1	274	4571.9	378.6	284	4441.6	364.1	74	4649.9	367.5	1199
Female	4667.2	330.1	295	4599.6	334.5	277	4563.6	312.4	281	4512.7	325.8	278	4404.8	370.2	88	4573.8	336.5	1219
Total	4749.6	341.9	574	4635.9	341.7	565	4569.2	322.0	555	4542.6	354.4	562	4421.6	366.7	162	4611.5	354.2	2418

High sensitive CRP (ng/mL)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	866.0	2787.1	279	864.9	2343.0	288	2090.5	12319	274	2762.1	14190	284	1130.3	1584.3	74	1611.0	9277.0	1199

Male	31.7	1.5	279	31.9	1.6	289	32.0	1.6	274	32.2	2.0	284	32.0	2.0	74	32.0	1.7	1200
Female	29.9	2.8	295	30.6	2.1	277	31.0	1.4	281	31.2	1.4	278	30.8	2.0	88	30.7	2.1	1219
Total	30.8	2.4	574	31.2	2.0	566	31.5	1.6	555	31.7	1.8	562	31.4	2.1	162	31.3	2.0	2419

MCHC (%)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	33.6	0.9	279	33.3	1.0	289	33.3	0.9	274	33.3	1.1	284	33.1	1.1	74	33.4	1.0	1200
Female	32.7	1.3	295	32.8	1.2	277	32.8	0.9	281	32.7	1.0	278	32.6	0.9	88	32.7	1.1	1219
Total	33.1	1.2	574	33.0	1.1	566	33.0	0.9	555	33.0	1.1	562	32.8	1.0	162	33.0	1.1	2419

Platelet count (x10000/micro L)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	22.5	4.9	279	22.5	5.1	287	20.9	5.7	271	20.3	5.5	282	18.3	5.3	74	21.3	5.4	1193
Female	24.5	7.2	292	22.6	5.5	276	21.9	5.3	277	21.7	5.2	274	21.9	6.6	88	22.6	6.0	1207
Total	23.5	6.2	571	22.5	5.3	563	21.4	5.5	548	21.0	5.4	556	20.3	6.3	162	22.0	5.8	2400