

Fundus Photography in the Left Eye
Macular Degeneration

		40-49yr		50-59yr		60-69yr		70-80yr		Total	
		N	%	N	%	N	%	N	%	N	%
not recorded	Male	3	1.0	2	0.7	-	-	3	1.1	8	0.7
	Female	-	-	-	-	1	0.4	4	1.4	5	0.4
	Total	3	0.5	2	0.4	1	0.2	7	1.2	13	0.6
nothing	Male	273	93.8	256	90.8	255	90.1	223	78.8	1007	88.4
	Female	275	97.5	264	94.6	257	90.2	221	78.4	1017	90.2
	Total	548	95.6	520	92.7	512	90.1	444	78.6	2024	89.3
drusen	Male	8	2.7	9	3.2	9	3.2	14	4.9	40	3.5
	Female	2	0.7	4	1.4	5	1.8	13	4.6	24	2.1
	Total	10	1.7	13	2.3	14	2.5	27	4.8	64	2.8
atrophic change	Male	1	0.3	2	0.7	-	-	3	1.1	6	0.5
	Female	2	0.7	1	0.4	1	0.4	3	1.1	7	0.6
	Total	3	0.5	3	0.5	1	0.2	6	1.1	13	0.6
exudative change	Male	-	-	-	-	-	-	2	0.7	2	0.2
	Female	-	-	-	-	-	-	1	0.4	1	0.1
	Total	-	-	-	-	-	-	3	0.5	3	0.1
epiretinal membrane	Male	-	-	1	0.4	1	0.4	3	1.1	5	0.4
	Female	-	-	-	-	2	0.7	1	0.4	3	0.3
	Total	-	-	1	0.2	3	0.5	4	0.7	8	0.4
others	Male	-	-	-	-	-	-	1	0.4	1	0.1
	Female	1	0.4	-	-	-	-	1	0.4	2	0.2
	Total	1	0.2	-	-	-	-	2	0.4	3	0.1
invisible	Male	6	2.1	12	4.3	18	6.4	34	12.0	70	6.1
	Female	2	0.7	10	3.6	19	6.7	38	13.5	69	6.1
	Total	8	1.4	22	3.9	37	6.5	72	12.7	139	6.1

11. Cornea

Corneal thickness and endothelial cell density were obtained with the Topcon SP-2000 specular microscope.

Corneal Thickness in the Right Eye(mm)

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.522	0.034	136	0.518	0.029	130	0.516	0.032	148	0.512	0.034	140	0.517	0.032	554
Female	0.515	0.037	134	0.508	0.035	139	0.511	0.034	146	0.508	0.034	144	0.510	0.035	563
Total	0.519	0.035	270	0.513	0.033	269	0.513	0.033	294	0.510	0.034	284	0.514	0.034	1117

Corneal Thickness in the Left Eye (mm)

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.525	0.032	135	0.522	0.029	128	0.522	0.034	149	0.518	0.035	141	0.522	0.033	553
Female	0.518	0.035	136	0.512	0.034	140	0.518	0.033	146	0.512	0.034	143	0.515	0.034	565
Total	0.521	0.034	271	0.517	0.032	268	0.520	0.033	295	0.515	0.035	284	0.518	0.034	1118

Endothelial cell density of Cornea in the Right Eye (cells/mm²)

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2585.7	334.2	131	2568.7	313.0	129	2486.5	375.1	143	2545.7	374.9	139	2545.2	352.5	542
Female	2498.5	371.0	129	2515.1	387.9	130	2456.7	375.3	142	2322.4	430.4	137	2446.6	398.3	538
Total	2542.4	355.0	260	2541.8	352.9	259	2471.6	374.9	285	2434.8	417.9	276	2496.1	379.0	1080

Endothelial cell density of Cornea in the Left Eye (cells/mm²)

	40-49yr			50-59yr			60-69yr			70-80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2575.8	332.3	130	2529.2	364.4	130	2458.9	408.5	146	2532.2	402.7	139	2522.3	380.9	545
Female	2544.8	374.1	133	2452.1	359.3	134	2450.6	352.7	142	2392.2	390.1	141	2458.8	372.3	550
Total	2560.1	353.7	263	2490.1	363.2	264	2454.8	381.4	288	2461.7	401.8	280	2490.4	377.8	1095

Auditory system

1. Pure-tone audiometry (Audiometer RION AA-73A)

※ If no response occurs at the maximum output level of this audiometer, the threshold is treated as following.

Air conduction			Bone conduction		
Maximum output level			Inputed level		
500Hz	100		105	65	70
1000Hz	100		105	70	75
2000Hz	100		105	70	75
4000Hz	100		105	60	65
8000Hz	95		100		

Air conduction threshold of the right ear at 500Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	11.5	8.6	282	15.1	12.6	279	18.8	12.6	284	24.6	15.5	282	17.5	13.4	1127
Male	11.5	8.2	291	14.8	12.2	281	17.6	12.4	283	23.8	15.8	282	16.9	13.2	1137
Total	11.5	8.4	573	15.0	12.4	560	18.2	12.5	567	24.2	15.7	564	17.2	13.3	2264

Air conduction threshold of the right ear at 1000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	8.2	8.5	282	11.9	11.6	279	16.9	13.0	284	24.1	15.9	282	15.3	13.9	1127
Male	9.8	8.9	291	14.2	13.4	281	18.3	13.8	283	26.4	17.4	282	17.1	15.0	1137
Total	9.0	8.7	573	13.1	12.6	560	17.6	13.4	567	25.2	16.7	564	16.2	14.5	2264

Air conduction threshold of the right ear at 2000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	11.6	7.8	282	15.6	12.6	279	22.3	13.5	284	30.5	16.8	282	20.0	14.9	1127
Male	12.6	10.7	291	18.0	13.6	281	25.5	15.7	283	36.2	18.8	282	23.0	17.4	1137
Total	12.1	9.4	573	16.8	13.1	560	23.9	14.7	567	33.4	18.0	564	21.5	16.3	2264

Air conduction threshold of the right ear at 4000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	10.4	9.2	282	16.2	14.6	279	25.1	17.4	284	36.9	19.7	282	22.2	18.6	1127
Male	18.0	16.2	291	29.1	19.5	281	38.4	20.4	283	51.1	19.9	282	34.0	22.6	1137
Total	14.3	13.7	573	22.6	18.4	560	31.8	20.1	567	44.0	21.0	564	28.1	21.5	2264

Air conduction threshold of the right ear at 8000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	18.1	12.9	282	28.2	17.2	279	40.3	20.6	284	59.8	21.0	282	36.6	23.9	1127
Male	23.1	15.9	291	34.3	19.1	281	48.0	21.2	283	65.2	18.4	282	42.5	24.5	1137
Total	20.6	14.7	573	31.3	18.4	560	44.1	21.3	567	62.5	19.9	564	39.6	24.4	2264

Bone conduction threshold of the right ear at 500Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	26.8	11.3	17	35.5	13.6	20	31.5	12.7	40	38.0	10.4	81	34.8	12.0	158
Male	34.2	16.3	6	30.6	13.2	24	31.8	13.2	44	37.0	14.4	85	34.5	14.1	159
Total	28.7	12.8	23	32.8	13.4	44	31.7	12.9	84	37.5	12.6	166	34.7	13.1	317

Bone conduction threshold of the right ear at 1000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	29.5	14.6	10	34.0	10.8	20	35.8	12.0	36	39.5	10.1	92	37.3	11.2	158
Male	34.2	26.2	6	36.2	14.9	25	34.5	16.3	52	40.0	14.6	105	37.8	15.6	188
Total	31.3	19.0	16	35.2	13.1	45	35.1	14.6	88	39.7	12.6	197	37.6	13.8	346

Bone conduction threshold of the right ear at 2000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	31.5	10.1	13	35.2	13.3	32	37.0	9.4	72	42.0	11.7	135	39.1	11.6	252
Male	43.2	16.5	11	38.6	11.9	39	39.6	12.6	97	45.5	13.8	169	42.8	13.6	316
Total	36.9	14.4	24	37.0	12.6	71	38.5	11.4	169	43.9	13.0	304	41.2	12.9	568

Bone conduction threshold of the right ear at 4000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	38.9	11.9	9	34.6	12.8	40	38.1	10.6	96	42.5	12.4	173	40.1	12.2	318
Male	41.7	12.1	47	42.0	11.1	111	44.6	11.6	180	49.1	11.2	234	45.7	11.7	572
Total	41.3	12.0	56	40.1	12.0	151	42.3	11.6	276	46.3	12.1	407	43.7	12.2	890

Air conduction threshold of the left ear at 500Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	11.6	9.6	282	13.6	9.3	279	18.6	13.3	284	24.0	15.0	282	17.0	13.0	1127
Male	11.9	9.7	291	13.8	12.5	281	17.3	14.4	283	23.6	15.7	281	16.6	14.0	1136
Total	11.8	9.7	573	13.7	11.0	560	18.0	13.9	567	23.8	15.4	563	16.8	13.5	2263

Air conduction threshold of the left ear at 1000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	6.6	10.0	282	8.9	8.4	279	14.8	13.3	284	21.6	16.6	282	13.0	13.7	1127
Male	9.7	10.0	291	12.9	13.1	281	17.5	16.1	283	26.2	17.8	281	16.5	15.8	1136
Total	8.1	10.1	573	10.9	11.1	560	16.1	14.8	567	23.9	17.3	563	14.8	14.9	2263

Air conduction threshold of the left ear at 2000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	10.0	9.6	282	13.6	9.8	279	20.4	14.3	284	27.9	17.1	282	18.0	14.8	1127
Male	12.5	11.2	291	18.3	15.3	281	25.2	17.4	283	35.8	19.4	281	22.9	18.3	1136
Total	11.3	10.6	573	16.0	13.0	560	22.8	16.1	567	31.8	18.7	563	20.4	16.8	2263

Air conduction threshold of the left ear at 4000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	9.1	9.9	282	15.5	12.3	279	24.6	16.6	284	37.7	34.8	282	21.8	23.4	1127
Male	18.3	15.3	291	28.2	18.4	281	39.3	20.3	283	51.2	18.9	281	34.1	22.1	1136
Total	13.8	13.7	573	21.9	16.9	560	31.9	19.9	567	44.5	28.8	563	28.0	23.6	2263

Air conduction threshold of the left ear at 8000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	18.6	14.2	282	28.2	17.4	279	42.0	19.8	284	59.0	20.5	282	37.0	23.7	1127
Male	22.6	15.8	291	34.5	20.4	281	50.1	21.8	283	66.1	18.2	281	43.2	25.2	1136
Total	20.7	15.2	573	31.4	19.2	560	46.0	21.2	567	62.6	19.7	563	40.1	24.6	2263

Bone conduction threshold of the left ear at 500Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	31.5	11.3	13	28.2	7.7	19	32.2	12.6	48	36.8	11.3	80	34.0	11.7	160
Male	20.5	29.7	10	27.7	15.9	22	31.3	14.8	35	38.6	15.2	88	34.2	17.2	155
Total	26.7	21.5	23	27.9	12.6	41	31.8	13.5	83	37.7	13.5	168	34.1	14.6	315

Bone conduction threshold of the left ear at 1000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	40.0	16.0	8	35.6	10.8	8	35.9	13.2	29	41.2	11.4	73	39.4	12.3	118
Male	30.6	12.1	8	29.2	15.5	25	36.2	16.6	45	39.0	14.4	117	36.7	15.3	195
Total	35.3	14.5	16	30.8	14.6	33	36.1	15.3	74	39.8	13.3	190	37.8	14.2	313

Bone conduction threshold of the left ear at 2000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	40.0	14.7	7	36.4	8.7	21	38.2	9.2	65	43.2	11.0	123	40.9	10.7	216
Male	36.7	16.3	15	37.8	13.3	47	41.8	12.2	90	45.9	14.9	166	43.1	14.4	318
Total	37.7	15.6	22	37.4	12.0	68	40.3	11.2	155	44.8	13.4	289	42.2	13.0	534

Bone conduction threshold of the left ear at 4000Hz (dBHL)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	32.7	13.5	11	35.6	11.5	35	39.5	11.5	89	44.2	10.5	164	41.4	11.5	299
Male	39.0	11.3	56	39.9	11.0	118	45.2	11.4	181	49.3	11.6	243	45.2	12.0	598
Total	38.0	11.8	67	38.9	11.2	153	43.3	11.7	270	47.2	11.4	407	43.9	12.0	897

2. Impedance Audiometry

Tympanometric peak pressure in the single frequency tympanogram at 226Hz for the right ear (daPa)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	1.3	14.0	263	-5.9	35.9	256	-14.5	46.9	257	-11.8	43.6	246	-7.6	37.6	1022
Male	-5.1	32.0	269	-7.6	37.2	263	-9.4	44.2	242	-13.9	46.0	250	-8.9	40.1	1024
Total	-1.9	25.0	532	-6.8	36.5	519	-12.1	45.6	499	-12.9	44.8	496	-8.3	38.9	2046

Static compliance in the single frequency tympanogram at 226Hz for the right ear (ml)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	0.67	0.52	263	0.70	0.63	256	0.66	0.62	257	0.62	0.59	246	0.66	0.59	1022
Male	0.83	0.68	269	0.92	0.88	263	0.87	0.85	242	0.82	0.74	250	0.86	0.79	1024
Total	0.75	0.61	532	0.82	0.78	519	0.76	0.75	499	0.72	0.67	496	0.76	0.71	2046

Tympanometric peak pressure in the single frequency tympanogram at 226Hz for the left ear (daPa).

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	1.2	19.0	256	-3.7	33.2	257	-9.8	39.3	255	-9.7	39.4	244	-5.5	34.0	1012
Male	-3.9	28.7	267	-5.8	30.8	260	-8.2	44.7	246	-13.8	51.6	247	-7.8	39.9	1020
Total	-1.4	24.6	523	-4.8	32.0	517	-9.0	42.0	501	-11.8	46.0	491	-6.6	37.1	2032

Static compliance in the single frequency tympanogram at 226Hz for the left ear (ml)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	0.64	0.65	256	0.67	0.59	257	1.05	5.95	255	0.58	0.49	244	0.74	3.03	1012
Male	0.81	0.71	267	0.84	0.79	260	0.91	0.83	246	0.82	0.83	247	0.84	0.79	1020
Total	0.73	0.69	523	0.75	0.70	517	0.98	4.28	501	0.70	0.69	491	0.79	2.21	2032

Middle ear resonance frequency for the right ear (Hz)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	900.8	252.4	259	865.1	240.9	244	906.1	265.6	246	906.7	257.1	231	894.6	254.3	980
Male	823.2	216.9	269	799.2	229.0	261	825.5	248.8	236	851.5	274.0	240	824.3	242.5	1006
Total	861.3	237.9	528	831.1	236.9	505	866.6	260.4	482	878.6	267.0	471	859.0	250.8	1986

Middle ear resonance frequency for the left ear (Hz)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Female	898.8	563.5	252	873.0	237.1	246	905.5	255.8	246	906.3	246.1	230	895.7	356.4	974
Male	841.7	242.4	266	810.3	229.6	257	834.2	229.1	228	799.4	237.8	232	821.8	235.2	983
Total	869.5	430.3	518	841.0	235.2	503	871.2	245.6	474	852.6	247.5	462	858.6	303.8	1957

IX. Physiological Examinations

IX. Physiological Examinations

1) Cardiovascular system

- 1. Blood pressure and pulse rate**
- 2. Pulse wave**
- 3. Electrocardiography**
- 4. Ultrasonic cardiography**
- 5. Intima-media thickness of carotid artery**

2) Respiratory system

- 1. Pulmonary functions**
- 2. Blood oxygen saturation**

3) Skin sensory system

- 1. Current perception thresholds of peripheral nerves**
- 2. Skin two-point discrimination test**

1) Cardiovascular system

1. Blood pressure and pulse rate

(Automatic blood pressure analyzer, BP-204RV, Colin, Inc.,)

Systolic Blood Pressure(mmHg)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	120.2	16.1	291	124.1	17.9	282	125.1	18.5	281	125.9	20.8	283	123.8	18.5	1137
Female	115.4	17.8	282	121.4	20.5	278	126.5	19.8	283	131.0	19.8	280	123.6	20.3	1123
Total	117.8	17.1	573	122.7	19.3	560	125.8	19.2	564	128.5	20.4	563	123.7	19.4	2260

Diastolic Blood Pressure(mmHg)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	75.5	10.4	291	77.9	10.4	282	77.3	11.1	281	75.3	11.7	283	76.5	11.0	1137
Female	70.7	10.7	282	74.3	11.7	278	76.2	11.3	283	76.1	11.5	280	74.3	11.5	1123
Total	73.2	10.8	573	76.1	11.2	560	76.8	11.2	564	75.7	11.6	563	75.4	11.3	2260

Pulse Rate(/min)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	69.2	10.1	291	69.0	11.5	282	71.1	10.9	281	72.6	11.6	283	70.5	11.1	1137
Female	73.5	11.0	282	73.2	10.4	278	74.4	10.3	283	76.7	10.9	280	74.5	10.7	1123
Total	71.3	10.8	573	71.1	11.2	560	72.8	10.7	564	74.6	11.4	563	72.4	11.1	2260

2. Pulse wave

(Digital plethysmography, Omniace RT3300, NEC Corp.,)

SX (mm)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.5	0.9	291	6.7	0.9	282	6.7	1.0	281	6.6	1.0	281	6.6	1.0	1135
Female	6.5	0.8	281	6.6	0.9	279	6.6	1.0	285	6.5	0.8	281	6.5	0.9	1126
Total	6.5	0.9	572	6.6	0.9	561	6.6	1.0	566	6.6	1.0	562	6.6	0.9	2261

SS (mm)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	24.2	3.7	291	24.2	3.7	282	23.8	3.7	281	23.4	4.1	281	23.9	3.8	1135
Female	23.0	3.4	281	23.5	3.2	279	22.9	3.5	285	22.2	3.7	281	22.9	3.5	1126
Total	23.6	3.6	572	23.9	3.5	561	23.4	3.6	566	22.8	3.9	562	23.4	3.7	2261

Corrected up-stroke time (sec)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.265	0.027	291	0.271	0.025	282	0.273	0.031	281	0.275	0.030	281	0.271	0.029	1135
Female	0.270	0.026	281	0.274	0.028	279	0.277	0.028	285	0.275	0.027	281	0.274	0.027	1126
Total	0.268	0.027	572	0.273	0.027	561	0.275	0.030	566	0.275	0.029	562	0.273	0.028	2261

3. Electrocardiography

(Automatic EKG analyzer, Kartizer5500, NEC Corp.)

Heart Rate(/min)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	64.4	9.8	291	63.4	10.3	282	65.7	11.5	283	67.4	12.2	282	65.2	11.1	1138
Female	67.4	10.2	282	66.1	10.0	279	67.7	11.2	285	69.6	11.0	282	67.7	10.7	1128
Total	65.9	10.1	573	64.7	10.3	561	66.7	11.4	568	68.5	11.7	564	66.4	10.9	2266

PR-interval(msec)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	156.2	23.3	290	160.1	21.6	280	160.6	20.0	280	163.9	22.8	271	160.1	22.1	1121
Female	148.8	19.8	282	154.5	19.5	278	155.8	20.5	284	158.0	24.0	281	154.3	21.3	1125
Total	152.6	21.9	572	157.3	20.8	558	158.1	20.4	564	160.9	23.6	552	157.2	21.9	2246

QRS-width(msec)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	91.0	10.9	291	91.9	12.0	282	91.8	13.8	283	93.1	15.7	282	91.9	13.2	1138
Female	82.6	9.2	282	84.2	10.9	279	85.2	10.9	285	86.0	12.8	282	84.5	11.1	1128
Total	86.9	10.9	573	88.1	12.0	561	88.5	12.9	568	89.6	14.8	564	88.2	12.8	2266

QT-interval(msec)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	392.3	28.3	291	397.6	29.4	282	397.1	29.7	283	396.9	32.8	282	395.9	30.1	1138
Female	393.6	28.5	282	400.0	26.6	279	401.3	29.9	285	398.8	31.4	282	398.4	29.3	1128
Total	392.9	28.4	573	398.8	28.1	561	399.2	29.9	568	397.8	32.1	564	397.2	29.7	2266

QTc-interval (msec)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	403.1	20.4	291	405.1	20.6	282	411.4	22.0	283	416.3	25.1	282	408.9	22.7	1138
Female	413.5	18.6	282	416.6	21.7	279	422.4	22.3	285	425.8	22.0	282	419.6	21.7	1128
Total	408.2	20.2	573	410.8	21.9	561	416.9	22.8	568	421.0	24.1	564	414.2	22.8	2266

S(V1)-height (mV)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.911	0.409	290	-0.877	0.427	278	-0.835	0.525	279	-0.847	0.489	269	-0.868	0.465	1116
Female	-0.894	0.374	282	-0.810	0.382	277	-0.791	0.454	279	-0.782	0.480	273	-0.819	0.427	1111
Total	-0.903	0.392	572	-0.843	0.406	555	-0.813	0.491	558	-0.814	0.485	542	-0.844	0.447	2227

R(V5)-height (mV)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.601	0.509	291	1.702	0.653	282	1.721	0.682	283	1.706	0.761	282	1.682	0.658	1138
Female	1.299	0.405	282	1.429	0.443	278	1.524	0.514	285	1.636	0.623	282	1.472	0.518	1127
Total	1.452	0.484	573	1.567	0.575	560	1.622	0.611	568	1.671	0.696	564	1.578	0.601	2265

QRS-axis (degree)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	49.5	29.1	291	42.2	32.1	282	39.8	32.4	283	37.5	37.1	281	42.3	33.0	1137
Female	51.6	29.0	282	46.0	27.3	275	34.9	28.3	284	30.8	31.3	282	40.8	30.1	1123
Total	50.5	29.0	573	44.1	29.9	557	37.4	30.5	567	34.2	34.4	563	41.5	31.6	2260

P-axis (degree)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	50.5	29.4	286	51.0	25.2	276	53.4	25.8	277	55.1	28.9	265	52.5	27.4	1104
Female	51.2	23.7	280	50.9	23.9	273	49.0	25.5	282	50.7	29.5	279	50.4	25.8	1114
Total	50.8	26.7	566	50.9	24.5	549	51.2	25.8	559	52.8	29.3	544	51.4	26.6	2218

T-axis(degree)

	40 - 49yr			50 - 59yr			60 - 69yr			70 - 80yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	40.5	26.2	291	39.6	24.1	280	43.6	29.8	277	46.2	35.6	273	42.4	29.2	1121
Female	35.6	20.9	276	35.4	30.6	273	33.8	28.1	279	37.0	32.2	271	35.4	28.2	1099
Total	38.1	23.8	567	37.5	27.6	553	38.7	29.3	556	41.6	34.2	544	39.0	28.9	2220

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 80yr		Total	
		N	%	N	%	N	%	N	%	N	%
Minnesota Code 1-0-0	Male	63	21.6	47	16.7	51	18.0	39	13.8	200	17.6
	Female	59	21.0	47	16.9	42	14.7	27	9.6	175	15.6
	Total	122	21.3	94	16.8	93	16.4	66	11.7	375	16.6
Minnesota Code 1-1-1	Male	0	0	0	0	2	0.7	4	1.4	6	0.5
	Female	0	0	0	0	1	0.4	0	0	1	0.1
	Total	0	0	0	0	3	0.5	4	0.7	7	0.3
Minnesota Code 1-1-2	Male	1	0.3	0	0	0	0	0	0	1	0.1
	Female	0	0	0	0	0	0	3	1.1	3	0.3
	Total	1	0.2	0	0	0	0	3	0.5	4	0.2
Minnesota Code 1-1-3	Male	0	0	2	0.7	0	0	2	0.7	4	0.4
	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	2	0.4	0	0	2	0.4	4	0.2
Minnesota Code 1-1-4	Male	1	0.3	0	0	1	0.4	3	1.1	5	0.4
	Female	0	0	0	0	2	0.7	0	0	2	0.2
	Total	1	0.2	0	0	3	0.5	3	0.5	7	0.3
Minnesota Code 1-1-5	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	1	0.4	1	0.1
	Total	0	0	0	0	0	0	1	0.2	1	0.0
Minnesota Code 1-1-6	Male	0	0	1	0.4	0	0	2	0.7	3	0.3
	Female	0	0	0	0	2	0.7	0	0	2	0.2
	Total	0	0	1	0.2	2	0.4	2	0.4	5	0.2
Minnesota Code 1-1-7	Male	0	0	0	0	1	0.4	0	0	1	0.1
	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	1	0.2	0	0	1	0.0
Minnesota Code 1-2-1	Male	0	0	0	0	0	0	0	0	0	0

(CONTINUED)

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 80yr		Total	
		N	%	N	%	N	%	N	%	N	%
Minnesota Code 1-2-1	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
Minnesota Code 1-2-2	Male	0	0	1	0.4	0	0	0	0	1	0.1
	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	1	0.2	0	0	0	0	1	0.0
Minnesota Code 1-2-3	Male	0	0	0	0	2	0.7	1	0.4	3	0.3
	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	2	0.4	1	0.2	3	0.1
Minnesota Code 1-2-4	Male	1	0.3	3	1.1	1	0.4	2	0.7	7	0.6
	Female	0	0	1	0.4	2	0.7	2	0.7	5	0.4
	Total	1	0.2	4	0.7	3	0.5	4	0.7	12	0.5
Minnesota Code 1-2-5	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
Minnesota Code 1-2-6	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	1	0.4	1	0.1
	Total	0	0	0	0	0	0	1	0.2	1	0.0
Minnesota Code 1-2-7	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
Minnesota Code 1-2-8	Male	1	0.3	0	0	1	0.4	1	0.4	3	0.3
	Female	0	0	1	0.4	0	0	0	0	1	0.1
	Total	1	0.2	1	0.2	1	0.2	1	0.2	4	0.2
Minnesota Code 1-3-1	Male	0	0	0	0	0	0	2	0.7	2	0.2
	Female	1	0.4	0	0	1	0.4	1	0.4	3	0.3

(CONTINUED)

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 80yr		Total	
		N	%	N	%	N	%	N	%	N	%
Minnesota Code 1-3-1	Total	1	0.2	0	0	1	0.2	3	0.5	5	0.2
Minnesota Code 1-3-2	Male	2	0.7	1	0.4	1	0.4	4	1.4	8	0.7
	Female	2	0.7	1	0.4	1	0.4	4	1.4	8	0.7
	Total	4	0.7	2	0.4	2	0.4	8	1.4	16	0.7
Minnesota Code 1-3-3	Male	1	0.3	0	0	3	1.1	3	1.1	7	0.6
	Female	0	0	1	0.4	0	0	3	1.1	4	0.4
	Total	1	0.2	1	0.2	3	0.5	6	1.1	11	0.5
Minnesota Code 1-3-4	Male	3	1.0	5	1.8	3	1.1	1	0.4	12	1.1
	Female	1	0.4	6	2.2	2	0.7	2	0.7	11	1.0
	Total	4	0.7	11	2.0	5	0.9	3	0.5	23	1.0
Minnesota Code 1-3-5	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	1	0.4	1	0.4	2	0.2
	Total	0	0	0	0	1	0.2	1	0.2	2	0.1
Minnesota Code 1-3-6	Male	3	1.0	4	1.4	6	2.1	7	2.5	20	1.8
	Female	4	1.4	5	1.8	6	2.1	13	4.6	28	2.5
	Total	7	1.2	9	1.6	12	2.1	20	3.5	48	2.1
Minnesota Code 2-1	Male	3	1.0	6	2.1	7	2.5	4	1.4	20	1.8
	Female	1	0.4	1	0.4	6	2.1	5	1.8	13	1.2
	Total	4	0.7	7	1.3	13	2.3	9	1.6	33	1.5
Minnesota Code 2-2	Male	0	0	0	0	0	0	2	0.7	2	0.2
	Female	1	0.4	0	0	0	0	2	0.7	3	0.3
	Total	1	0.2	0	0	0	0	4	0.7	5	0.2
Minnesota Code 2-3	Male	5	1.7	6	2.1	1	0.4	5	1.8	17	1.5
	Female	8	2.8	4	1.4	2	0.7	1	0.4	15	1.3
	Total	13	2.3	10	1.8	3	0.5	6	1.1	32	1.4

(CONTINUED)

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 80yr		Total	
		N	%	N	%	N	%	N	%	N	%
Minnesota Code 2-4	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
Minnesota Code 2-5	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	1	0.4	1	0.4	0	0	2	0.2
	Total	0	0	1	0.2	1	0.2	0	0	2	0.1
Minnesota Code 3-1	Male	15	5.2	24	8.5	26	9.2	30	10.6	95	8.3
	Female	3	1.1	7	2.5	10	3.5	18	6.4	38	3.4
	Total	18	3.1	31	5.5	36	6.3	48	8.5	133	5.9
Minnesota Code 3-2	Male	0	0	1	0.4	0	0	1	0.4	2	0.2
	Female	0	0	0	0	1	0.4	2	0.7	3	0.3
	Total	0	0	1	0.2	1	0.2	3	0.5	5	0.2
Minnesota Code 3-3-1	Male	2	0.7	5	1.8	5	1.8	4	1.4	16	1.4
	Female	2	0.7	1	0.4	1	0.4	2	0.7	6	0.5
	Total	4	0.7	6	1.1	6	1.1	6	1.1	22	1.0
Minnesota Code 3-3-2	Male	14	4.8	13	4.6	16	5.7	9	3.2	52	4.6
	Female	7	2.5	8	2.9	8	2.8	9	3.2	32	2.8
	Total	21	3.7	21	3.8	24	4.2	18	3.2	84	3.7
Minnesota Code 3-4	Male	0	0	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0
Minnesota Code 4-1-1	Male	0	0	1	0.4	2	0.7	10	3.5	13	1.1
	Female	1	0.4	0	0	3	1.1	3	1.1	7	0.6
	Total	1	0.2	1	0.2	5	0.9	13	2.3	20	0.9
Minnesota Code 4-1-2	Male	2	0.7	4	1.4	12	4.2	14	4.9	32	2.8

(CONTINUED)

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 80yr		Total	
		N	%	N	%	N	%	N	%	N	%
Minnesota Code 4-1-2	Female	3	1.1	6	2.2	6	2.1	19	6.8	34	3.0
	Total	5	0.9	10	1.8	18	3.2	33	5.9	66	2.9
Minnesota Code 4-2	Male	3	1.0	10	3.5	17	6.0	27	9.5	57	5.0
	Female	6	2.1	12	4.3	20	7.0	24	8.5	62	5.5
	Total	9	1.6	22	3.9	37	6.5	51	9.0	119	5.3
Minnesota Code 4-3	Male	12	4.1	21	7.4	29	10.2	49	17.3	111	9.7
	Female	29	10.3	38	13.7	47	16.5	58	20.6	172	15.3
	Total	41	7.2	59	10.5	76	13.4	107	19.0	283	12.5
Minnesota Code 4-4	Male	3	1.0	2	0.7	5	1.8	6	2.1	16	1.4
	Female	3	1.1	3	1.1	5	1.8	6	2.1	17	1.5
	Total	6	1.0	5	0.9	10	1.8	12	2.1	33	1.5
Minnesota Code 5-1	Male	1	0.3	0	0	5	1.8	4	1.4	10	0.9
	Female	0	0	0	0	2	0.7	3	1.1	5	0.4
	Total	1	0.2	0	0	7	1.2	7	1.2	15	0.7
Minnesota Code 5-2	Male	7	2.4	8	2.8	14	4.9	23	8.1	52	4.6
	Female	13	4.6	17	6.1	15	5.3	22	7.8	67	6.0
	Total	20	3.5	25	4.5	29	5.1	45	8.0	119	5.3
Minnesota Code 5-3	Male	4	1.4	6	2.1	17	6.0	20	7.1	47	4.1
	Female	7	2.5	13	4.7	19	6.7	24	8.5	63	5.6
	Total	11	1.9	19	3.4	36	6.3	44	7.8	110	4.9
Minnesota Code 5-4	Male	11	3.8	11	3.9	9	3.2	11	3.9	42	3.7
	Female	9	3.2	22	7.9	20	7.0	38	13.5	89	7.9
	Total	20	3.5	33	5.9	29	5.1	49	8.7	131	5.8
Minnesota Code 5-5	Male	17	5.8	19	6.7	19	6.7	25	8.8	80	7.0
	Female	21	7.5	40	14.4	33	11.6	51	18.1	145	12.9

(CONTINUED)