

Gardening

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Rarely	Male	129	77.2	117	54.9	95	41.9	80	40.6	15	44.1	436	52.0
	Female	116	60.4	100	53.2	96	49.0	83	42.3	11	45.8	406	51.0
	Total	245	68.2	217	54.1	191	45.2	163	41.5	26	44.8	842	51.5
Several times a year	Male	21	12.6	39	18.3	29	12.8	19	9.6	4	11.8	112	13.4
	Female	36	18.8	21	11.2	16	8.2	9	4.6	0	0.0	82	10.3
	Total	57	15.9	60	15.0	45	10.6	28	7.1	4	6.9	194	11.9
2 or 3 times a month	Male	14	8.4	19	8.9	21	9.3	20	10.2	3	8.8	77	9.2
	Female	19	9.9	21	11.2	14	7.1	14	7.1	2	8.3	70	8.8
	Total	33	9.2	40	10.0	35	8.3	34	8.7	5	8.6	147	9.0
Once a week	Male	3	1.8	38	17.8	82	36.1	78	39.6	12	35.3	213	25.4
	Female	21	10.9	46	24.5	70	35.7	90	45.9	11	45.8	238	29.9
	Total	24	6.7	84	20.9	152	35.9	168	42.7	23	39.7	451	27.6

Home maintenance

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Rarely	Male	40	24.0	40	18.8	34	15.0	33	16.8	9	26.5	156	18.6
	Female	100	51.8	107	56.9	125	63.8	143	73.0	16	66.7	491	61.6
	Total	140	38.9	147	36.7	159	37.6	176	44.8	25	43.1	647	39.6
Several times a year	Male	103	61.7	115	54.0	108	47.6	93	47.2	16	47.1	435	51.9
	Female	80	41.5	62	33.0	55	28.1	41	20.9	8	33.3	246	30.9
	Total	183	50.8	177	44.1	163	38.5	134	34.1	24	41.4	681	41.7
2 or 3 times a month	Male	21	12.6	45	21.1	58	25.6	39	19.8	4	11.8	167	19.9
	Female	13	6.7	15	8.0	11	5.6	10	5.1	0	0.0	49	6.1
	Total	34	9.4	60	15.0	69	16.3	49	12.5	4	6.9	216	13.2
Once a week	Male	3	1.8	13	6.1	27	11.9	32	16.2	5	14.7	80	9.5
	Female	0	0.0	4	2.1	5	2.6	2	1.0	0	0.0	11	1.4
	Total	3	0.8	17	4.2	32	7.6	34	8.7	5	8.6	91	5.6

Participation in hobby groups

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Rarely	Male	65	38.9	83	39.0	88	38.9	91	46.4	15	44.1	342	40.9
	Female	94	49.0	84	44.9	68	34.7	83	43.0	11	47.8	340	43.0
	Total	159	44.3	167	41.8	156	37.0	174	44.7	26	45.6	682	41.9
Several times a year	Male	36	21.6	55	25.8	39	17.3	25	12.8	5	14.7	160	19.1
	Female	20	10.4	7	3.7	8	4.1	8	4.1	1	4.3	44	5.6
	Total	56	15.6	62	15.5	47	11.1	33	8.5	6	10.5	204	12.5
2 or 3 times a month	Male	26	15.6	36	16.9	47	20.8	24	12.2	4	11.8	137	16.4
	Female	33	17.2	26	13.9	36	18.4	32	16.6	3	13.0	130	16.4
	Total	59	16.4	62	15.5	83	19.7	56	14.4	7	12.3	267	16.4
Once a week	Male	40	24.0	39	18.3	52	23.0	56	28.6	10	29.4	197	23.6
	Female	45	23.4	70	37.4	84	42.9	70	36.3	8	34.8	277	35.0
	Total	85	23.7	109	27.3	136	32.2	126	32.4	18	31.6	474	29.1

Participation in block clubs

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Rarely	Male	119	71.7	155	73.1	141	62.1	103	52.3	16	47.1	534	63.9
	Female	112	58.0	117	62.2	129	65.8	119	61.3	12	50.0	489	61.5
	Total	231	64.3	272	68.0	270	63.8	222	56.8	28	48.3	1023	62.7
Several times a year	Male	35	21.1	43	20.3	47	20.7	42	21.3	10	29.4	177	21.2
	Female	53	27.5	49	26.1	41	20.9	41	21.1	9	37.5	193	24.3
	Total	88	24.5	92	23.0	88	20.8	83	21.2	19	32.8	370	22.7
2 or 3 times a month	Male	10	6.0	10	4.7	27	11.9	29	14.7	1	2.9	77	9.2
	Female	24	12.4	10	5.3	21	10.7	28	14.4	2	8.3	85	10.7
	Total	34	9.5	20	5.0	48	11.3	57	14.6	3	5.2	162	9.9
Once a week	Male	2	1.2	4	1.9	12	5.3	23	11.7	7	20.6	48	5.7
	Female	4	2.1	12	6.4	5	2.6	6	3.1	1	4.2	28	3.5
	Total	6	1.7	16	4.0	17	4.0	29	7.4	8	13.8	76	4.7

# VIII. Visual and Auditory Examinations

## VIII. Visual and Auditory Examinations

### 1) Visual system

#### 1. Refraction

Autorefractometry was obtained with the NIDEK-ARK700A. Refractive errors, in spherical equivalent, were assessed.

#### 2. Visual acuity (5 m)

Distant visual acuity was measured for each eye with a Landolt C letter at 5m. Presenting visual acuity was measured with the participant's current distance correction; when distance correction was not used, the unaided distant visual acuity was measured. Subsequently, best-corrected visual acuity for each eye was determined after objective autorefractometry and subjective refinement.

#### 3. Contrast sensitivity

Contrast sensitivity was measured at 1.5, 3, 6, 12, 18 cycles per degree with Vistech VCTS-6500.

#### 4. Intraocular pressure

Intraocular pressure was measured three times for each eye with a noncontact tomometer (NIDEK NT-3000) between 9 and 12 AM. The mean value of the three measurements was used for analysis.

#### 5. Retinal fundus camera

Fundus photographs were taken with Topcon fundus camera (TRC-NW5S) at 20 and 45 degree angles for each eye without pupil dilatation. Diabetic retinopathy, arteriosclerosis, and macular degeneration were assessed on the photograph at 45 degree angles. Vertical cup to disc ratio was measured on the photograph at 20 degree angles.

#### 6. Specular microscope

Corneal thickness was obtained with the Topcon SP-2000 specular microscope.

#### 7. Heidelberg Retina Tomograph II

The Heidelberg Retina Tomograph is a confocal laser scanning microscope for

acquisition and analysis of three-dimensional images of the posterior segment. It enables the quantitative assessment of the retinal topography and precise follow-up of topographic changes. In the NLS-LSA, the topographic description of the optic nerve head was assessed.

## 2) Auditory system

### 1. Pure-tone audiometry

Air conduction thresholds at 125,250,500,1000,2000,4000,8000Hz(dBHL)

Bone conduction thresholds at 250,500,1000,2000,4000Hz(dBHL)

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	Input level	Maximum output level	Input level
125Hz	70	75	-	-
250Hz	85	90	55	60
500Hz	100	105	65	70
1000Hz	100	105	70	75
2000Hz	100	105	70	75
4000Hz	100	105	60	65
8000Hz	95	100	-	-

### 2. Impedance audiometry

#### (1) Single frequency tympanometry

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

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

#### (2) Multifrequency tympanometry

Middle ear resonance frequency(Hz)

I. Refraction

Autorefracton was obtained with the NIDEK-ARK700A. Refractive errors, in spherical equivalent, were assessed.

Spherical Equivalent of Refractive Error - Right Eye (Diopters)

	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	-1.62	1.60	172	-1.15	1.48	214	-0.49	1.37	224	-0.30	1.09	191	-0.29	0.91	31	-0.84	1.47	832
Female	-1.32	1.45	194	-1.10	1.60	189	-0.14	1.16	195	-0.08	1.38	191	-0.74	1.00	23	-0.66	1.50	792
Total	-1.46	1.53	366	-1.13	1.54	403	-0.32	1.29	419	-0.19	1.25	382	-0.48	0.97	54	-0.75	1.49	1624

Spherical Equivalent of Refractive Error - Leftt Eye (Diopters)

	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	-1.58	1.60	172	-1.07	1.38	214	-0.42	1.21	224	-0.26	1.13	185	-0.44	0.96	29	-0.80	1.41	824
Female	-1.29	1.42	195	-1.12	1.57	189	-0.16	1.15	192	-0.06	1.10	195	-0.53	0.75	22	-0.65	1.42	793
Total	-1.43	1.51	367	-1.09	1.47	403	-0.30	1.19	416	-0.15	1.12	380	-0.48	0.87	51	-0.73	1.42	1617

2. Visual acuity: distant vision (5 m)

Distant visual acuity was measured for each eye with a Landolt C letter at 5m. Presenting visual acuity was measured with the participant's current distance correction; when distance correction was not used, the unaided distant visual acuity was measured. Subsequently, best-corrected visual acuity for each eye was determined after objective autorefractometry and subjective refinement.

Presenting Visual Acuity - Right Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	-	0.0	1	0.4	-	0.0	-	0.0	1	0.1
	Female	-	0.0	-	0.0	-	0.0	1	0.5	1	4.2	2	0.2
	Total	-	0.0	-	0.0	1	0.2	1	0.2	1	1.7	3	0.2
0.3 or worse	Male	1	0.6	10	4.6	4	1.8	8	4.0	1	2.9	24	2.8
	Female	2	1.0	2	1.1	6	3.0	10	5.0	3	12.5	23	2.9
	Total	3	0.8	12	3.0	10	2.4	18	4.5	4	6.8	47	2.8
0.3-0.6	Male	14	8.1	22	10.2	33	14.5	62	31.0	19	54.3	150	17.6
	Female	25	12.8	24	12.7	37	18.8	74	36.6	12	50.0	172	21.3
	Total	39	10.6	46	11.4	70	16.5	136	33.8	31	52.5	322	19.4
0.7 or better	Male	157	91.3	184	85.2	189	83.3	130	65.0	15	42.9	675	79.4
	Female	168	86.2	163	86.2	154	78.2	117	57.9	8	33.3	610	75.6
	Total	325	88.6	347	85.7	343	80.9	247	61.4	23	39.0	1285	77.5

Presenting Visual Acuity - Left Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0
	Female	-	0.0	-	0.0	1	0.5	-	0.0	-	0.0	1	0.1
	Total	-	0.0	-	0.0	1	0.2	-	0.0	-	0.0	1	0.1
0.3 or worse	Male	1	0.6	3	1.4	10	4.4	11	5.5	3	8.6	28	3.3
	Female	4	2.1	7	3.7	5	2.5	16	7.9	6	25.0	38	4.7
	Total	5	1.4	10	2.5	15	3.5	27	6.7	9	15.3	66	4.0
0.3-0.6	Male	11	6.4	22	10.2	28	12.3	55	27.5	15	42.9	131	15.4
	Female	13	6.7	21	11.1	36	18.3	69	34.2	8	33.3	147	18.2
	Total	24	6.5	43	10.6	64	15.1	124	30.8	23	39.0	278	16.8
0.7 or better	Male	160	93.0	191	88.4	189	83.3	134	67.0	17	48.6	691	81.3
	Female	178	91.3	161	85.2	155	78.7	117	57.9	10	41.7	621	77.0
	Total	338	92.1	352	86.9	344	81.1	251	62.4	27	45.8	1312	79.2



Best-corrected Visual Acuity - Right Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	-	0.0	1	0.4	-	0.0	-	0.0	1	0.1
	Female	-	0.0	-	0.0	-	0.0	1	0.5	1	4.2	2	0.2
	Total	-	0.0	-	0.0	1	0.2	1	0.2	1	1.7	3	0.2
0.3 or worse	Male	-	0.0	3	1.4	1	0.4	2	1.0	1	2.9	7	0.8
	Female	-	0.0	-	0.0	-	0.0	4	2.0	2	8.3	6	0.7
	Total	-	0.0	3	0.7	1	0.2	6	1.5	3	5.1	13	0.8
0.3-0.6	Male	1	0.6	7	3.2	10	4.4	30	15.0	7	20.0	55	6.5
	Female	1	0.5	3	1.6	11	5.6	33	16.3	7	29.2	55	6.8
	Total	2	0.5	10	2.5	21	5.0	63	15.7	14	23.7	110	6.6
0.7 or better	Male	171	99.4	206	95.4	215	94.7	168	84.0	27	77.1	787	92.6
	Female	194	99.5	186	98.4	186	94.4	164	81.2	14	58.3	744	92.2
	Total	365	99.5	392	96.8	401	94.6	332	82.6	41	69.5	1531	92.4

Best-corrected Visual Acuity - Left Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0
	Female	-	0.0	-	0.0	1	0.5	-	0.0	-	0.0	1	0.1
	Total	-	0.0	-	0.0	1	0.2	-	0.0	-	0.0	1	0.1
0.3 or worse	Male	-	0.0	1	0.5	4	1.8	6	3.0	2	5.7	13	1.5
	Female	1	0.5	-	0.0	-	0.0	5	2.5	4	16.7	10	1.2
	Total	1	0.3	1	0.2	4	0.9	11	2.7	6	10.2	23	1.4
0.3-0.6	Male	-	0.0	4	1.9	12	5.3	33	16.5	7	20.0	56	6.6
	Female	1	0.5	4	2.1	14	7.1	26	12.9	7	29.2	52	6.4
	Total	1	0.3	8	2.0	26	6.1	59	14.7	14	23.7	108	6.5
0.7 or better	Male	172	100.0	211	97.7	211	93.0	161	80.5	26	74.3	781	91.9
	Female	193	99.0	185	97.9	182	92.4	171	84.7	13	54.2	744	92.2
	Total	365	99.5	396	97.8	393	92.7	332	82.6	39	66.1	1525	92.0

### 3. Contrast sensitivity

Contrast sensitivity was measured at 1.5, 3, 6, 12, 18 cycles per degree with Vistech VCTS-6500.

#### Contrast Sensitivity at 1.5 cycles/degree

	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	46.5	18.9	172	42.7	18.9	215	39.1	18.3	226	32.5	14.7	199	30.8	14.5	34	39.6	18.4	846
Female	43.8	19.5	195	41.3	19.3	189	36.5	16.3	197	30.2	11.3	197	28.4	11.9	22	37.6	17.6	800
Total	45.0	19.2	367	42.0	19.0	404	37.9	17.4	423	31.4	13.2	396	29.9	13.5	56	38.7	18.0	1646

#### Contrast Sensitivity at 3 cycles/degree

	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	96.6	38.3	172	82.2	32.9	215	76.9	34.2	226	62.4	29.7	199	51.9	19.5	34	77.9	35.5	846
Female	91.6	38.9	195	82.1	33.1	189	68.5	28.8	197	58.9	29.0	197	54.3	19.7	22	74.6	34.8	800
Total	94.0	38.7	367	82.2	33.0	404	73.0	32.0	423	60.7	29.4	396	52.8	19.4	56	76.3	35.2	1646

#### Contrast Sensitivity at 6 cycles/degree

	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	95.4	40.7	172	85.2	44.0	215	78.7	45.5	226	49.5	29.9	199	42.1	27.0	34	75.4	43.9	846
Female	97.5	46.2	195	89.6	42.5	189	70.5	41.8	197	48.4	29.4	197	34.6	14.5	22	75.1	44.6	800
Total	96.5	43.7	367	87.3	43.3	404	74.9	43.9	423	48.9	29.6	396	39.2	23.1	56	75.3	44.2	1646

#### Contrast Sensitivity at 12 cycles/degree

	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	56.1	34.4	172	46.3	33.4	215	39.0	33.8	226	18.4	20.3	199	14.9	14.4	34	38.5	33.6	846
Female	51.5	34.6	195	48.1	32.7	189	35.8	30.6	197	17.5	18.4	197	7.9	5.8	22	37.3	32.4	800
Total	53.7	34.5	367	47.2	33.0	404	37.5	32.3	423	17.9	19.4	396	12.1	12.2	56	37.9	33.0	1646

Contrast Sensitivity at 18 cycles/degree

	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	15.7	10.8	172	13.7	10.9	215	11.4	10.3	226	5.0	5.9	199	2.7	4.3	34	11.0	10.4	846
Female	16.2	11.6	195	15.0	11.3	189	10.9	10.7	197	4.9	5.1	197	3.2	3.7	22	11.5	10.9	800
Total	16.0	11.2	367	14.3	11.1	404	11.2	10.5	423	5.0	5.5	396	2.9	4.0	56	11.2	10.6	1646

#### 4. Intraocular pressure

Intraocular pressure was measured three times for each eye with a noncontact tomometer (NIDEK NT-3000) between 9 and 12 AM. The mean value of the three measurements was used for analysis.

##### Intraocular Pressure - Right Eye (mmHg)

	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	13.68	2.47	172	13.33	2.55	216	12.76	2.68	226	12.47	2.35	200	12.11	3.05	35	13.00	2.59	849
Female	12.45	2.37	195	12.77	2.49	189	12.63	2.32	197	12.29	2.30	201	12.01	3.48	23	12.52	2.41	805
Total	13.02	2.49	367	13.07	2.53	405	12.70	2.52	423	12.38	2.33	401	12.07	3.20	58	12.76	2.51	1654

##### Intraocular Pressure - Left Eye (mmHg)

	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	13.64	2.41	172	13.24	2.63	216	12.84	2.86	227	12.82	2.68	200	12.44	2.60	34	13.08	2.68	849
Female	12.49	2.37	195	12.87	2.57	189	12.74	2.39	196	12.49	2.52	202	12.15	2.85	24	12.63	2.48	806
Total	13.03	2.45	367	13.07	2.60	405	12.79	2.65	423	12.65	2.60	402	12.32	2.69	58	12.86	2.59	1655

5. Retinal fundus camera

Fundus photographs were taken with Topcon fundus camera (TRC-NW5S) at 20 and 45 degree angles for each eye without pupil dilatation.

Diabetic retinopathy, Arteriosclerosis, and macular degeneration were assessed on the photograph at 55 degree angles.

Vertical cup to disc ratio was measured on the photograph at 20 degree angles.

Cup-Disc Ratio of Optic Disc - Right Eye

	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	0.42	0.13	172	0.43	0.12	215	0.43	0.13	225	0.45	0.15	194	0.43	0.14	30	0.43	0.13	836
Female	0.41	0.12	195	0.41	0.12	188	0.42	0.15	193	0.41	0.13	195	0.47	0.12	22	0.41	0.13	793
Total	0.42	0.13	367	0.42	0.12	403	0.42	0.14	418	0.43	0.14	389	0.44	0.13	52	0.42	0.13	1629

Cup-Disc Ratio of Optic Disc - Left Eye

	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	0.42	0.12	172	0.43	0.13	214	0.42	0.13	225	0.45	0.14	192	0.42	0.13	31	0.43	0.13	834
Female	0.41	0.12	194	0.41	0.13	188	0.42	0.14	195	0.43	0.13	195	0.49	0.13	22	0.42	0.13	794
Total	0.42	0.12	366	0.42	0.13	402	0.42	0.14	420	0.44	0.13	387	0.45	0.13	53	0.42	0.13	1628

Diabetic Retinopathy - Right Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	-	0.0	1	0.4	-	0.0	1	2.9	2	0.2
	Female	-	0.0	-	0.0	-	0.0	2	1.0	2	8.3	4	0.5
	Total	-	0.0	-	0.0	1	0.2	2	0.5	3	5.1	6	0.4
nothing	Male	172	100.0	215	99.5	221	97.4	191	95.5	29	82.9	828	97.4
	Female	195	100.0	188	99.5	193	98.0	191	94.6	22	91.7	789	97.8
	Total	367	100.0	403	99.5	414	97.6	382	95.0	51	86.4	1617	97.6
simple	Male	-	0.0	-	0.0	1	0.4	1	0.5	-	0.0	2	0.2
	Female	-	0.0	-	0.0	1	0.5	-	0.0	-	0.0	1	0.1
	Total	-	0.0	-	0.0	2	0.5	1	0.2	-	0.0	3	0.2
preproliferative	Male	-	0.0	-	0.0	2	0.9	-	0.0	-	0.0	2	0.2
	Female	-	0.0	-	0.0	-	0.0	1	0.5	-	0.0	1	0.1
	Total	-	0.0	-	0.0	2	0.5	1	0.2	-	0.0	3	0.2
invisible	Male	-	0.0	1	0.5	2	0.9	8	4.0	5	14.3	16	1.9
	Female	-	0.0	1	0.5	3	1.5	8	4.0	-	0.0	12	1.5
	Total	-	0.0	2	0.5	5	1.2	16	4.0	5	8.5	28	1.7

Diabetic Retinopathy - Left Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	1	0.5	-	0.0	2	1.0	1	2.9	4	0.5
	Female	-	0.0	-	0.0	1	0.5	1	0.5	1	4.2	3	0.4
	Total	-	0.0	1	0.2	1	0.2	3	0.7	2	3.4	7	0.4
nothing	Male	171	99.4	214	99.1	221	97.4	185	92.5	31	88.6	822	96.7
	Female	194	99.5	188	99.5	193	98.0	189	93.6	23	95.8	787	97.5
	Total	365	99.5	402	99.3	414	97.6	374	93.0	54	91.5	1609	97.1
simple	Male	-	0.0	-	0.0	2	0.9	1	0.5	-	0.0	3	0.4
	Female	-	0.0	-	0.0	1	0.5	-	0.0	-	0.0	1	0.1
	Total	-	0.0	-	0.0	3	0.7	1	0.2	-	0.0	4	0.2
preproliferative	Male	-	0.0	-	0.0	-	0.0	1	0.5	-	0.0	1	0.1
	Female	1	0.5	-	0.0	-	0.0	1	0.5	-	0.0	2	0.2
	Total	1	0.3	-	0.0	-	0.0	2	0.5	-	0.0	3	0.2
invisible	Male	1	0.6	1	0.5	4	1.8	11	5.5	3	8.6	20	2.4
	Female	-	0.0	1	0.5	2	1.0	11	5.4	-	0.0	14	1.7
	Total	1	0.3	2	0.5	6	1.4	22	5.5	3	5.1	34	2.1

Arteriosclerosis (Keith-Wagener) - Right Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	-	0.0	1	0.4	-	0.0	1	2.9	2	0.2
	Female	-	0.0	-	0.0	-	0.0	2	1.0	2	8.3	4	0.5
	Total	-	0.0	-	0.0	1	0.2	2	0.5	3	5.1	6	0.4
nothing	Male	60	34.9	44	20.4	18	7.9	3	1.5	-	0.0	125	14.7
	Female	88	45.1	57	30.2	23	11.7	4	2.0	-	0.0	172	21.3
	Total	148	40.3	101	24.9	41	9.7	7	1.7	-	0.0	297	17.9
K-W I	Male	101	58.7	130	60.2	141	62.1	88	44.0	16	45.7	476	56.0
	Female	98	50.3	105	55.6	132	67.0	93	46.0	12	50.0	440	54.5
	Total	199	54.2	235	58.0	273	64.4	181	45.0	28	47.5	916	55.3
K-W IIa	Male	11	6.4	38	17.6	59	26.0	85	42.5	13	37.1	206	24.2
	Female	9	4.6	24	12.7	31	15.7	81	40.1	6	25.0	151	18.7
	Total	20	5.4	62	15.3	90	21.2	166	41.3	19	32.2	357	21.5
K-W IIb	Male	-	0.0	2	0.9	6	2.6	13	6.5	-	0.0	21	2.5
	Female	-	0.0	2	1.1	9	4.6	11	5.4	2	8.3	24	3.0
	Total	-	0.0	4	1.0	15	3.5	24	6.0	2	3.4	45	2.7
K-W III	Male	-	0.0	-	0.0	-	0.0	1	0.5	-	0.0	1	0.1
	Female	-	0.0	-	0.0	-	0.0	1	0.5	1	4.2	2	0.2
	Total	-	0.0	-	0.0	-	0.0	2	0.5	1	1.7	3	0.2
invisible	Male	-	0.0	2	0.9	2	0.9	10	5.0	5	14.3	19	2.2
	Female	-	0.0	1	0.5	2	1.0	10	5.0	1	4.2	14	1.7
	Total	-	0.0	3	0.7	4	0.9	20	5.0	6	10.2	33	2.0

Arteriosclerosis (Keith-Wagener) - Left Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	1	0.5	-	0.0	2	1.0	1	2.9	4	0.5
	Female	-	0.0	-	0.0	1	0.5	1	0.5	1	4.2	3	0.4
	Total	-	0.0	1	0.2	1	0.2	3	0.7	2	3.4	7	0.4
nothing	Male	56	32.6	42	19.4	17	7.5	2	1.0	-	0.0	117	13.8
	Female	90	46.2	52	27.5	23	11.7	3	1.5	-	0.0	168	20.8
	Total	146	39.8	94	23.2	40	9.4	5	1.2	-	0.0	285	17.2
K-W I	Male	101	58.7	132	61.1	134	59.0	83	41.5	13	37.1	463	54.5
	Female	97	49.7	113	59.8	123	62.4	94	46.5	11	45.8	438	54.3
	Total	198	54.0	245	60.5	257	60.6	177	44.0	24	40.7	901	54.4
K-W II a	Male	14	8.1	37	17.1	66	29.1	88	44.0	16	45.7	221	26.0
	Female	8	4.1	22	11.6	43	21.8	83	41.1	8	33.3	164	20.3
	Total	22	6.0	59	14.6	109	25.7	171	42.5	24	40.7	385	23.2
K-W II b	Male	-	0.0	3	1.4	6	2.6	13	6.5	2	5.7	24	2.8
	Female	-	0.0	1	0.5	5	2.5	8	4.0	3	12.5	17	2.1
	Total	-	0.0	4	1.0	11	2.6	21	5.2	5	8.5	41	2.5
K-W III	Male	-	0.0	-	0.0	-	0.0	1	0.5	-	0.0	1	0.1
	Female	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0
	Total	-	0.0	-	0.0	-	0.0	1	0.2	-	0.0	1	0.1
invisible	Male	1	0.6	1	0.5	4	1.8	11	5.5	3	8.6	20	2.4
	Female	-	0.0	1	0.5	2	1.0	13	6.4	1	4.2	17	2.1
	Total	1	0.3	2	0.5	6	1.4	24	6.0	4	6.8	37	2.2



Macular Degeneration - Right Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	-	0.0	1	0.4	-	0.0	1	2.9	2	0.2
	Female	1	0.5	-	0.0	-	0.0	2	1.0	2	8.3	5	0.6
	Total	1	0.3	-	0.0	1	0.2	2	0.5	3	5.1	7	0.4
nothing	Male	169	98.3	209	96.8	194	85.5	159	79.5	29	82.9	760	89.4
	Female	188	96.4	182	96.3	172	87.3	155	76.7	18	75.0	715	88.6
	Total	357	97.3	391	96.5	366	86.3	314	78.1	47	79.7	1475	89.0
drusen	Male	1	0.6	2	0.9	15	6.6	9	4.5	-	0.0	27	3.2
	Female	4	2.1	2	1.1	4	2.0	11	5.4	1	4.2	22	2.7
	Total	5	1.4	4	1.0	19	4.5	20	5.0	1	1.7	49	3.0
atrophic change	Male	-	0.0	1	0.5	1	0.4	1	0.5	-	0.0	3	0.4
	Female	-	0.0	1	0.5	2	1.0	3	1.5	1	4.2	7	0.9
	Total	-	0.0	2	0.5	3	0.7	4	1.0	1	1.7	10	0.6
exudative change	Male	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0
	Female	-	0.0	1	0.5	-	0.0	1	0.5	-	0.0	2	0.2
	Total	-	0.0	1	0.2	-	0.0	1	0.2	-	0.0	2	0.1
epiretinal membrane	Male	-	0.0	-	0.0	6	2.6	6	3.0	-	0.0	12	1.4
	Female	1	0.5	1	0.5	6	3.0	5	2.5	-	0.0	13	1.6
	Total	1	0.3	1	0.2	12	2.8	11	2.7	-	0.0	25	1.5
others	Male	-	0.0	-	0.0	-	0.0	1	0.5	-	0.0	1	0.1
	Female	-	0.0	-	0.0	-	0.0	2	1.0	-	0.0	2	0.2
	Total	-	0.0	-	0.0	-	0.0	3	0.7	-	0.0	3	0.2
invisible	Male	2	1.2	4	1.9	10	4.4	24	12.0	5	14.3	45	5.3
	Female	1	0.5	2	1.1	13	6.6	23	11.4	2	8.3	41	5.1
	Total	3	0.8	6	1.5	23	5.4	47	11.7	7	11.9	86	5.2

Macular Degeneration - Left Eye

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	0.0	1	0.5	-	0.0	2	1.0	1	2.9	4	0.5
	Female	-	0.0	-	0.0	1	0.5	1	0.5	1	4.2	3	0.4
	Total	-	0.0	1	0.2	1	0.2	3	0.7	2	3.4	7	0.4
nothing	Male	167	97.1	202	93.5	193	85.0	154	77.0	23	65.7	739	86.9
	Female	190	97.4	180	95.2	168	85.3	160	79.2	18	75.0	716	88.7
	Total	357	97.3	382	94.3	361	85.1	314	78.1	41	69.5	1455	87.8
drusen	Male	2	1.2	4	1.9	12	5.3	9	4.5	-	0.0	27	3.2
	Female	4	2.1	3	1.6	6	3.0	5	2.5	2	8.3	20	2.5
	Total	6	1.6	7	1.7	18	4.2	14	3.5	2	3.4	47	2.8
atrophic change	Male	-	0.0	-	0.0	2	0.9	1	0.5	1	2.9	4	0.5
	Female	-	0.0	-	0.0	-	0.0	1	0.5	1	4.2	2	0.2
	Total	-	0.0	-	0.0	2	0.5	2	0.5	2	3.4	6	0.4
exudative change	Male	-	0.0	1	0.5	1	0.4	1	0.5	-	0.0	3	0.4
	Female	-	0.0	1	0.5	-	0.0	1	0.5	-	0.0	2	0.2
	Total	-	0.0	2	0.5	1	0.2	2	0.5	-	0.0	5	0.3
epiretinal membrane	Male	-	0.0	1	0.5	6	2.6	4	2.0	1	2.9	12	1.4
	Female	-	0.0	1	0.5	3	1.5	4	2.0	-	0.0	8	1.0
	Total	-	0.0	2	0.5	9	2.1	8	2.0	1	1.7	20	1.2
others	Male	-	0.0	-	0.0	1	0.4	-	0.0	1	2.9	2	0.2
	Female	-	0.0	-	0.0	-	0.0	1	0.5	-	0.0	1	0.1
	Total	-	0.0	-	0.0	1	0.2	1	0.2	1	1.7	3	0.2
invisible	Male	3	1.7	7	3.2	12	5.3	29	14.5	8	22.9	59	6.9
	Female	1	0.5	4	2.1	19	9.6	29	14.4	2	8.3	55	6.8
	Total	4	1.1	11	2.7	31	7.3	58	14.4	10	16.9	114	6.9

6. Specular microscope

Corneal thickness was obtained with the Topcon SP-2000 specular microscope.

Central Corneal Thickness - Right Eye (mm)

	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	0.519	0.030	172	0.521	0.035	216	0.516	0.033	226	0.514	0.033	200	0.515	0.038	35	0.517	0.033	849
Female	0.510	0.030	194	0.509	0.036	189	0.515	0.032	197	0.513	0.031	198	0.506	0.033	22	0.511	0.032	800
Total	0.514	0.030	366	0.516	0.036	405	0.516	0.032	423	0.513	0.032	398	0.511	0.036	57	0.515	0.033	1649

Central Corneal Thickness - Left Eye (mm)

	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	0.522	0.030	172	0.525	0.035	215	0.522	0.031	226	0.518	0.033	199	0.521	0.038	34	0.522	0.033	846
Female	0.513	0.030	195	0.513	0.037	189	0.519	0.032	197	0.518	0.032	200	0.508	0.035	24	0.516	0.033	805
Total	0.517	0.030	367	0.519	0.036	404	0.521	0.032	423	0.518	0.033	399	0.516	0.037	58	0.519	0.033	1651

### 7. Heidelberg Retina Tomograph II

The Heidelberg Retina Tomograph is a confocal laser scanning microscope for acquisition and analysis of three-dimensional images of the posterior segment. It enables the quantitative assessment of the retinal topography and precise follow-up of topographic changes. In the NLS-LSA, the topographic description of the optic nerve head was assessed.

#### HRT cup/disc area ratio - Right Eye

	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	0.20	0.12	172	0.21	0.12	212	0.20	0.12	214	0.24	0.14	184	0.20	0.13	24	0.21	0.13	806
Female	0.18	0.11	195	0.19	0.12	188	0.21	0.14	192	0.20	0.13	173	0.20	0.13	19	0.20	0.13	767
Total	0.19	0.12	367	0.20	0.12	400	0.20	0.13	406	0.22	0.14	357	0.20	0.13	43	0.20	0.13	1573

#### HRT cup/disc area ratio - Left Eye

	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	0.20	0.11	171	0.22	0.13	210	0.22	0.14	215	0.25	0.15	166	0.29	0.20	25	0.22	0.14	787
Female	0.19	0.11	193	0.21	0.12	187	0.21	0.13	187	0.22	0.13	177	0.27	0.16	18	0.21	0.12	762
Total	0.19	0.11	364	0.22	0.13	397	0.21	0.13	402	0.23	0.14	343	0.28	0.18	43	0.22	0.13	1549

#### HRT mean cup depth - Right Eye (mm)

	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	0.19	0.07	172	0.19	0.08	212	0.18	0.08	214	0.19	0.08	184	0.17	0.06	24	0.19	0.08	806
Female	0.19	0.08	195	0.18	0.07	188	0.17	0.08	192	0.17	0.07	173	0.18	0.06	19	0.18	0.08	767
Total	0.19	0.08	367	0.19	0.07	400	0.18	0.08	406	0.18	0.08	357	0.18	0.06	43	0.18	0.08	1573

#### HRT mean cup depth - Left Eye (mm)

	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	0.19	0.08	171	0.20	0.08	210	0.18	0.08	215	0.18	0.07	166	0.18	0.07	25	0.19	0.08	787
Female	0.19	0.07	193	0.19	0.07	187	0.18	0.08	187	0.18	0.07	177	0.20	0.08	18	0.19	0.07	762
Total	0.19	0.07	364	0.19	0.08	397	0.18	0.08	402	0.18	0.07	343	0.19	0.08	43	0.19	0.08	1549