

図 2. 年齢群別角膜乱視頻度

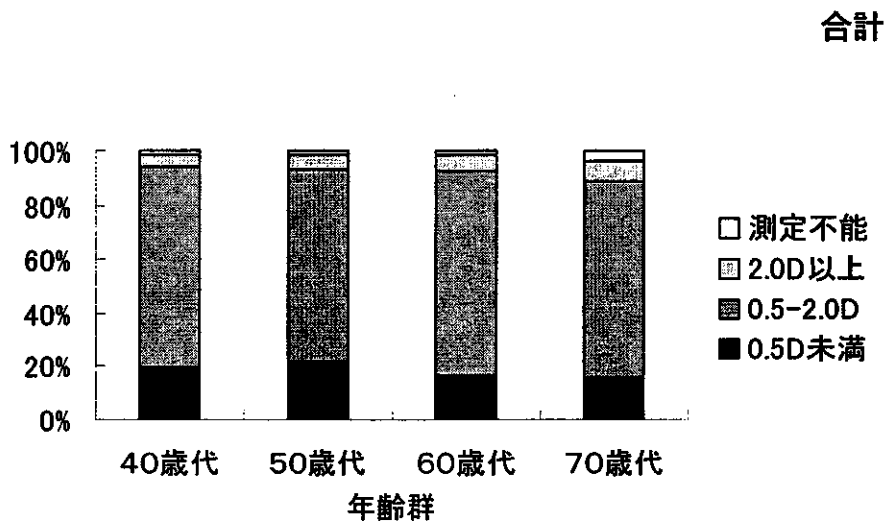
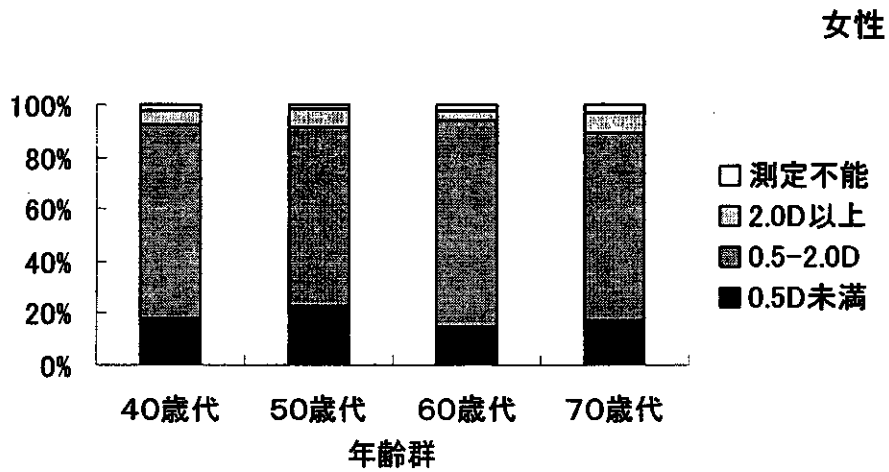
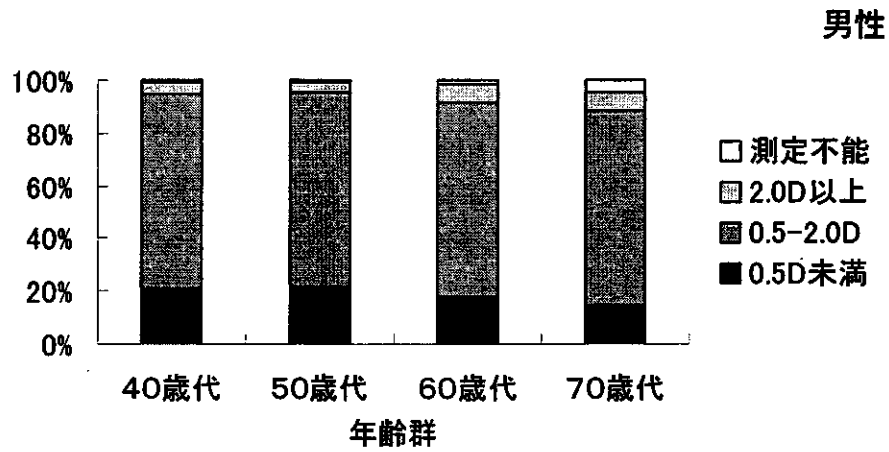


图 3. 年齡群別全乱視平均值

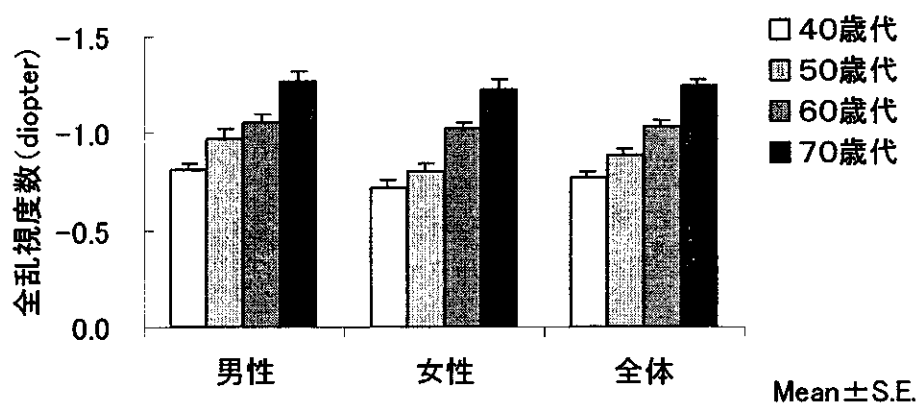


图 4. 年齡群別角膜乱視平均值

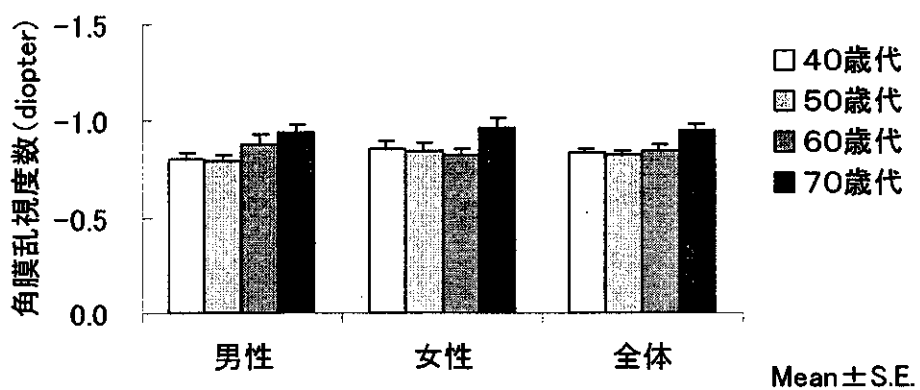


図 5. 全乱視軸と年齢との関係

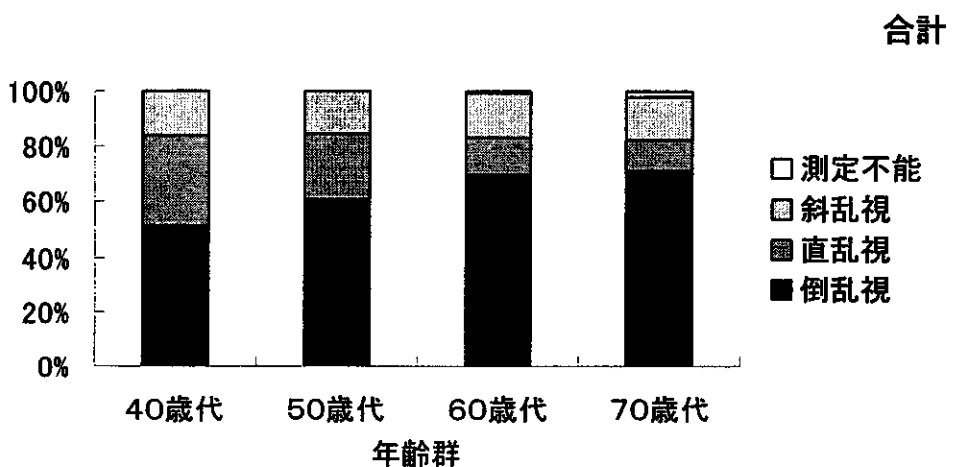
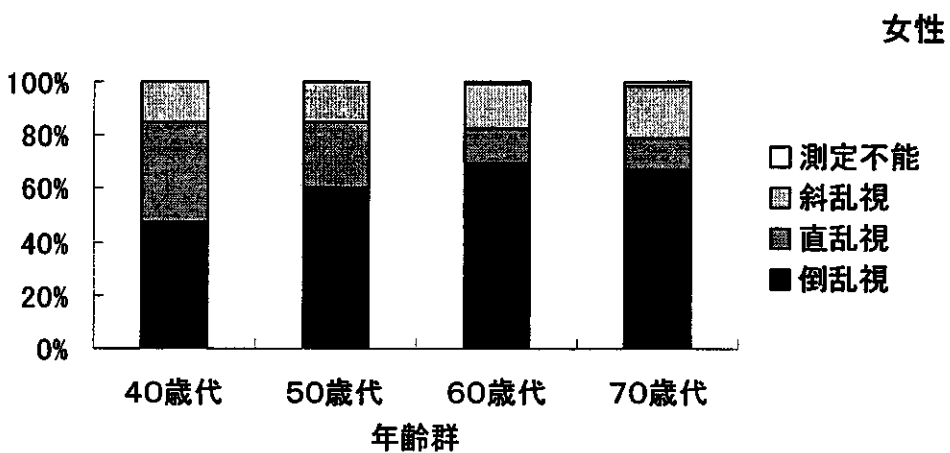
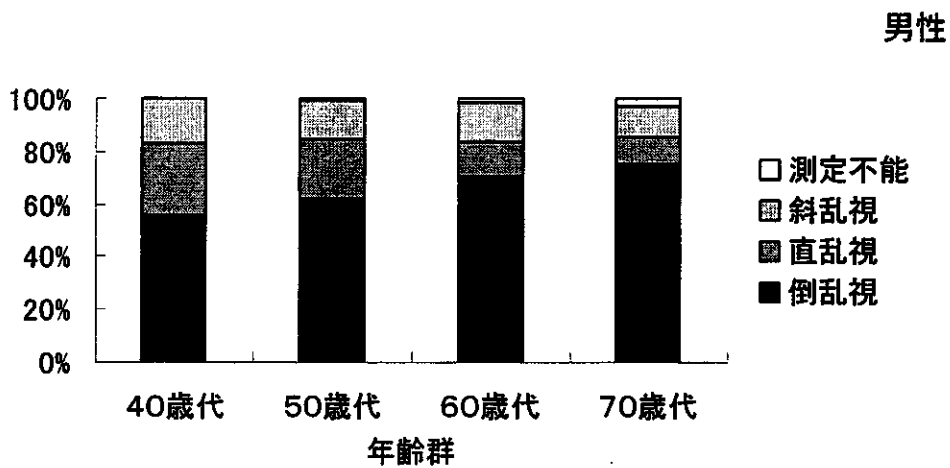


図 6. 角膜乱視軸と年齢との関係

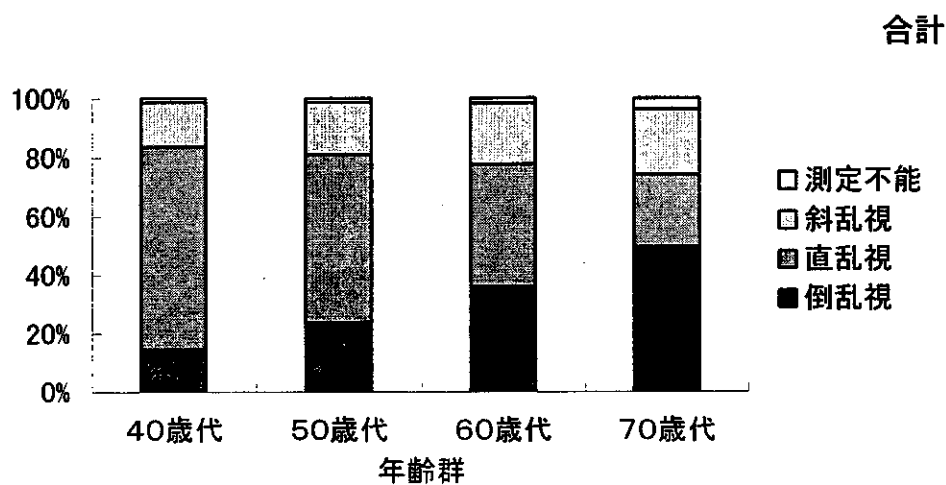
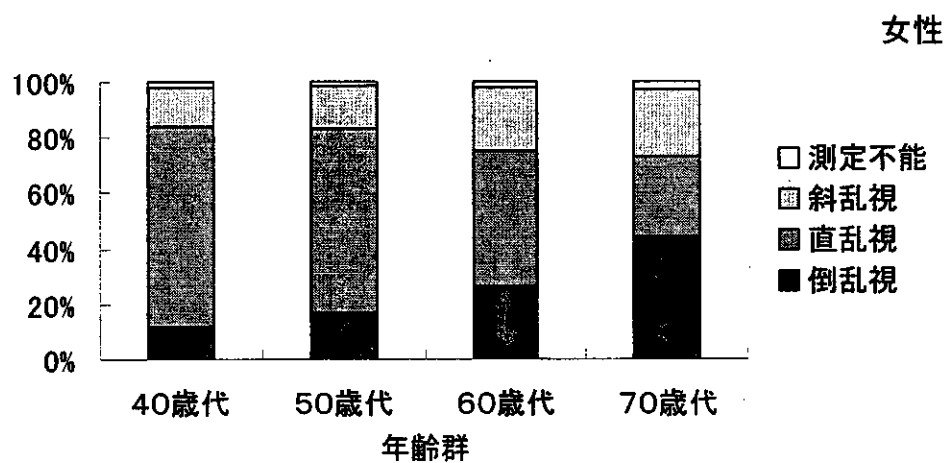
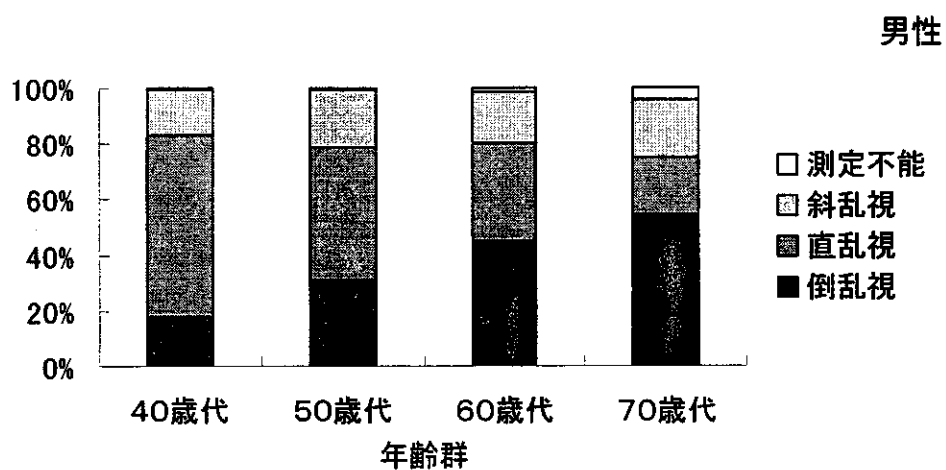
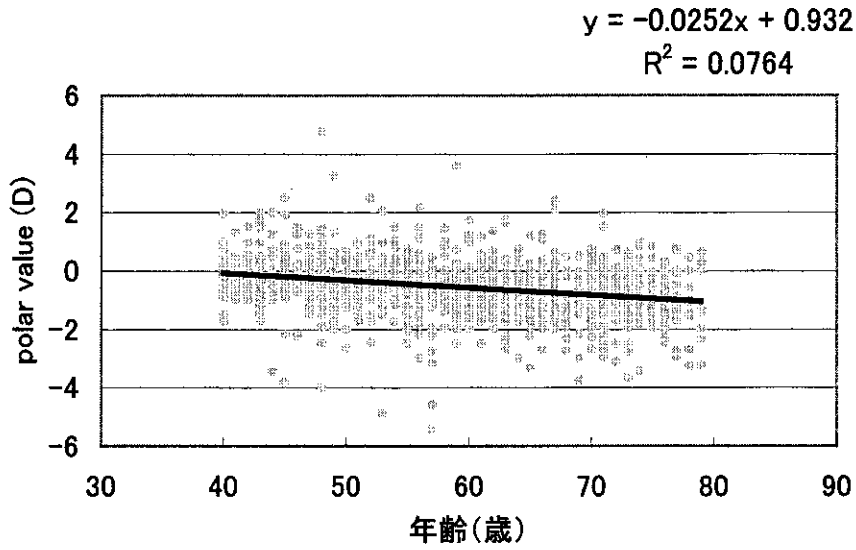


図 7. 全乱視 Polar Value と年齢との関係

男性



女性

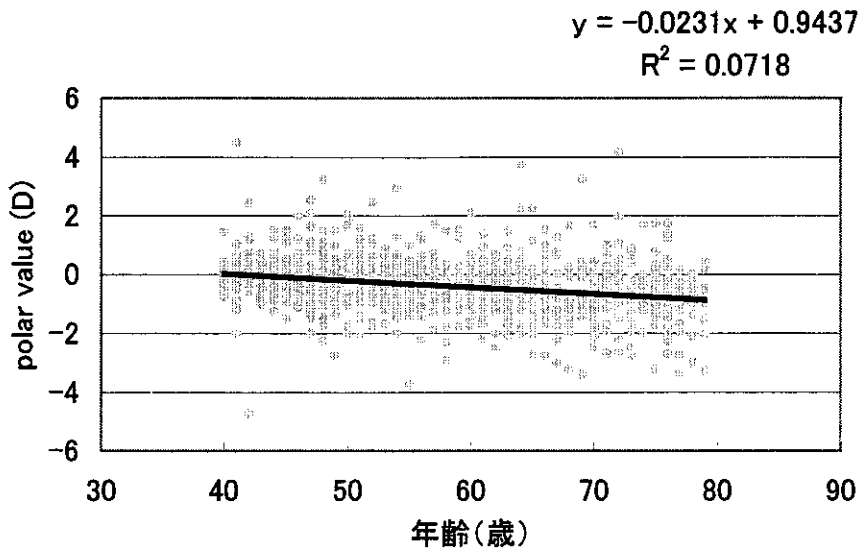
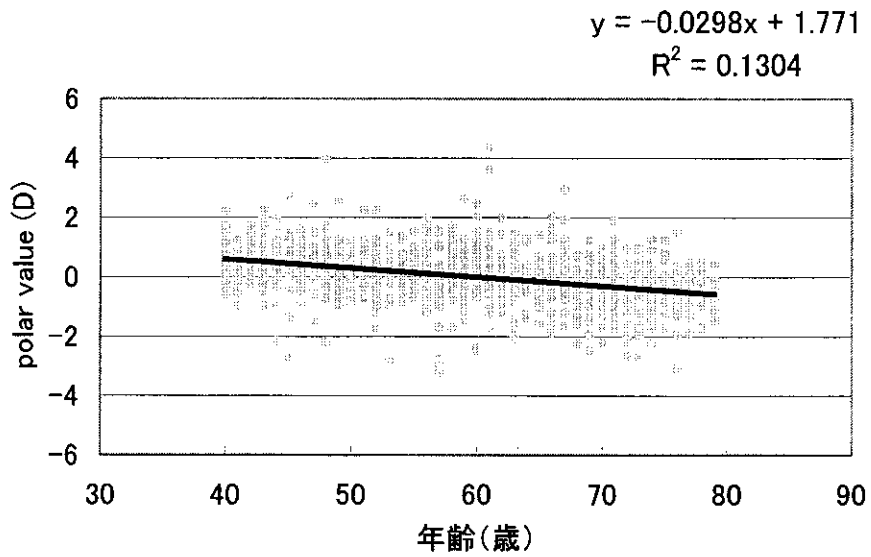
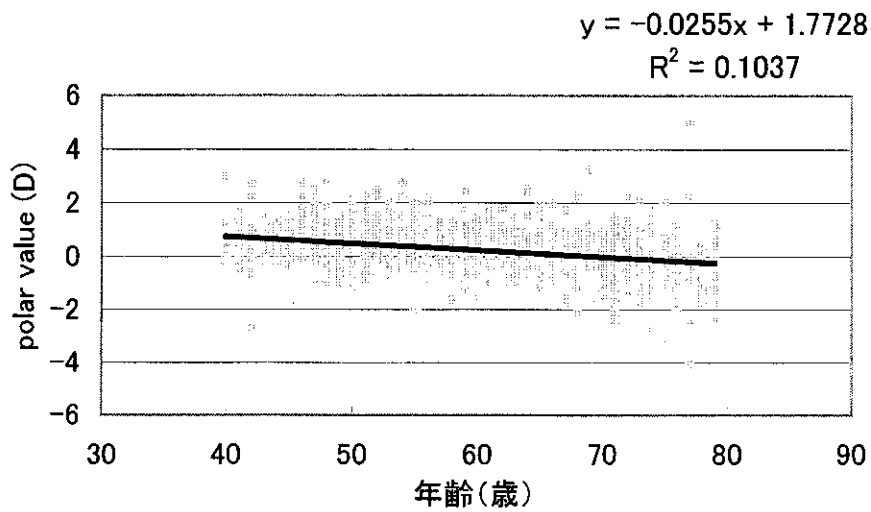


図 8. 角膜乱視 Polar Value と年齢との関係

男性



女性



Ⅲ. 研究成果の刊行に 関する一覧表

雑誌

発表者氏名	論文タイトル名	発表誌名	巻数	ページ	出版年
下方浩史	長寿者になるための生理学的条件	日本老年医学会誌	38	174-176	2001
下方浩史、安藤富士子	高齢者の基準	老年消化器病	13(1)	3-8	2001
安藤富士子、下方浩史	老化の疫学研究	現代医療	34(2)	382-388	2001
野村秀樹、田辺直樹、新野直明、安藤富士子、下方浩史、三宅養三	一般住民における角膜中心厚と年齢との関係	臨床眼科	55(3)	300-302	2001
野村秀樹、安藤富士子、下方浩史、三宅養三	縦断的眼圧変動に影響する諸要因についての検討	あたらしい眼科	18	241-246	2001
野村秀樹、安藤富士子、下方浩史	日本人における眼圧の加齢変化と世代間格差-若年者における眼圧上昇	日本医事新報	4041	1-6	2001
内田育恵、安江穂、朝日清光、植田広海、中島務	大学病院補聴器外来受診者200名の検討	日耳鼻会報	104	1071-1077	2001
Nakamura M, Aoki N, Nakashima T, Hoshino T, Yokoyama T, Morioka S, Kawamura T, Tanaka H, Hashimoto T, Ohno Y, Whitlock G	Smoking, alcohol, sleep and risk of idiopathic sudden deafness :a case-control study using pooled controls.	Journal of Epidemiology	11	81-86	2001
Itoh A, Nakashima T, Arao H, Wakai K, Tamakoshi A, Kawamura T, Ohno Y	Smoking and drinking habits as risk factors for hearing loss in the elderly:epidemiological study of subjects undergoing routine health checks in Aichi, Japan.	Public Health	115	192-196	2001
Nakamura M, Whitlock G, Aoki N, Nakashima T, Hoshino T, Yokoyama T, Morioka S, Kawamura T, Tanaka H, Hashimoto T, Ohno Y	Japanese and western diet and risk of idiopathic sudden deafness: a case-control study using pooled controls	International Journal of Epidemiology	30	608-615	2001

IV. 研究成果の 刊行物・別刷

20010755

以降 P.124 までは雑誌/図書等に掲載された論文となりますので
「Ⅲ.研究成果の刊行に関する一覧表」をご参照ください。

V. 添付資料

添付資料1

第1回調査結果

平成9年11月～平成12年4月

感覚器機能

添付資料2

第2回調査結果

平成12年4月～平成13年9月

感覚器機能

1) Visual system

1. Refraction

Spherical equivalent of refractive error in the right eye (Diopter)

Spherical equivalent of refractive error in the left eye (Diopter)

2. Visual acuity: near vision (33 cm), distant vision (5 m)

Presenting visual acuity - right eye

Presenting visual acuity - left eye

Best-corrected visual acuity - right eye

Best-corrected visual acuity - left eye

Presenting near vision - right eye

Presenting near vision - left eye

3. Kinetic visual acuity

Static visual acuity

Kinetic visual acuity

4. Stereoscopic vision

Stereo acuity - Titmus stereo test

Stereo acuity - TNO stereo test

5. Color perception

Correct answer in blue-yellow discrimination test (%)

Correct answer in red-green discrimination test (%)

6. Contrast sensitivity

Contrast sensitivity 1.5 (cycles/degree)

Contrast sensitivity 3 (cycles/degree)

Contrast sensitivity 6 (cycles/degree)

Contrast sensitivity 12 (cycles/degree)

Contrast sensitivity 18 (cycles/degree)

7. Visual field

Central threshold in visual field in the right eye (dB)

Central threshold in visual field in the left eye (dB)

Mean sensitivity in visual field in the right eye (dB)

Mean Sensitivity in visual field in the left eye (dB)

Visual field in the right eye

Visual field in the left eye

8. Intraocular pressure

Intraocular pressure in the right eye (mmHg)

Intraocular pressure in the left eye (mmHg)

9. Quantitative test of lens opacity

Anterior subcapsular opacification in the right eye (scattering intensity) (cct)

Anterior subcapsular opacification in the left eye (scattering intensity) (cct)

Nuclear opacification in the right eye (scattering intensity) (cct)

Nuclear opacification in the left eye (scattering intensity) (cct)

10. Retinal camera

Cup-disc ratio of optic disc in the right eye

Cup-disc ratio of optic disc in the left eye

Fundus photography in the right eye - diabetic retinopathy

Fundus photography in the right eye - arteriosclerosis (Keith-Wagener grading)

Fundus photography in the right eye - macular degeneration

Fundus photography in the left eye - diabetic retinopathy

Fundus photography in the left eye - arteriosclerosis (Keith-Wagener grading)

Fundus photography in the left eye - macular degeneration

11. Cornea

Corneal thickness - right eye

Corneal thickness - left eye

Endothelial cell density of cornea - right eye

Endothelial cell density of cornea - left eye

2) Auditory system

1. Pure-tone audiometry

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

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

2. Impedance audiometry

Single frequency tympanometry

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

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

Multifrequency tympanometry

Middle ear resonance frequency (Hz)

3) Stabilometry

With eye opened

With eye closed

1. Refraction

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

Spherical Equivalent of Refractive Error in the Right Eye (Diopter)

	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	-1.33	1.43	291	-1.00	1.46	281	-0.21	1.18	279	-0.18	1.29	271	-0.69	1.43	1122
Female	-1.18	1.41	282	-0.67	1.33	279	-0.11	1.38	284	-0.06	1.35	275	-0.50	1.44	1120
Total	-1.25	1.42	573	-0.83	1.40	560	-0.16	1.29	563	-0.12	1.32	546	-0.60	1.44	2242

Spherical Equivalent of Refractive Error in the Left Eye (Diopter)

	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	-1.29	1.40	290	-0.91	1.43	279	-0.13	1.01	282	-0.11	1.25	273	-0.62	1.38	1124
Female	-1.26	1.46	282	-0.73	1.45	278	-0.07	1.27	282	0.02	1.22	272	-0.51	1.45	1114
Total	-1.28	1.43	572	-0.82	1.44	557	-0.10	1.15	564	-0.05	1.24	545	-0.57	1.42	2238

2. Visual acuity: near vision (33 cm), distant vision (5 m)

Distant visual acuity was measured for each eye with a Landolt broken ring 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 autorefraction and subjective refinement.

Presenting near vision was measured with the participant's current near correction for each eye with a Landolt broken ring designed for use at 33 cm; when near correction was not used, the unaided near vision was measured.

Log VA in the Right Eye with own Habitual Glasses

	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	-0.04	0.24	291	-0.05	0.26	282	-0.13	0.27	282	-0.21	0.28	282	-0.11	0.27	1137
Female	-0.07	0.30	282	-0.10	0.26	279	-0.20	0.33	285	-0.28	0.35	278	-0.16	0.33	1124
Total	-0.05	0.27	573	-0.08	0.27	561	-0.17	0.31	567	-0.24	0.32	560	-0.13	0.30	2261

Log VA in the Left Eye with own Habitual Glasses

	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	-0.02	0.21	290	-0.05	0.27	282	-0.09	0.21	283	-0.22	0.31	282	-0.10	0.27	1137
Female	-0.09	0.30	281	-0.12	0.29	279	-0.17	0.29	284	-0.29	0.37	281	-0.17	0.32	1125
Total	-0.05	0.26	571	-0.08	0.28	561	-0.13	0.26	567	-0.26	0.34	563	-0.13	0.30	2262

Log Best-corrected VA in the Right Eye

	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	0.06	0.13	291	0.04	0.15	281	-0.03	0.19	282	-0.11	0.22	282	-0.01	0.19	1136
Female	0.05	0.19	282	0.04	0.11	279	-0.06	0.22	285	-0.16	0.27	278	-0.03	0.22	1124
Total	0.06	0.16	573	0.04	0.13	560	-0.04	0.21	567	-0.13	0.25	560	-0.02	0.21	2260

Log Best-corrected VA in the Left Eye

	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	0.07	0.10	290	0.03	0.18	281	-0.01	0.17	283	-0.12	0.26	282	-0.01	0.20	1136
Female	0.05	0.16	282	0.02	0.18	279	-0.06	0.24	285	-0.16	0.28	280	-0.04	0.24	1126
Total	0.06	0.14	572	0.03	0.18	560	-0.04	0.21	568	-0.14	0.27	562	-0.02	0.22	2262

Log Near Vision in the Right Eye with own Habitual Glasses

	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	-0.13	0.20	289	-0.25	0.25	280	-0.27	0.24	282	-0.34	0.25	280	-0.25	0.25	1131
Female	-0.16	0.21	280	-0.25	0.22	279	-0.33	0.28	281	-0.35	0.29	275	-0.27	0.26	1115
Total	-0.14	0.21	569	-0.25	0.23	559	-0.30	0.26	563	-0.35	0.27	555	-0.26	0.26	2246

Log Near Vision in the Left Eye with own Habitual Glasses

	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	-0.11	0.18	288	-0.24	0.28	280	-0.25	0.24	283	-0.33	0.28	281	-0.23	0.26	1132
Female	-0.15	0.26	282	-0.23	0.23	279	-0.30	0.23	280	-0.34	0.30	280	-0.25	0.27	1121
Total	-0.13	0.22	570	-0.23	0.25	559	-0.28	0.24	563	-0.33	0.29	561	-0.24	0.26	2253

Log Best-corrected Near Vision in the Right Eye

	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	-0.06	0.10	254	-0.09	0.11	248	-0.13	0.16	228	-0.18	0.18	239	-0.11	0.15	969
Female	-0.06	0.08	240	-0.08	0.09	232	-0.13	0.16	233	-0.18	0.18	230	-0.11	0.14	935
Total	-0.06	0.09	494	-0.08	0.10	480	-0.13	0.16	461	-0.18	0.18	469	-0.11	0.14	1904

Log Best-corrected Near Vision in the Left Eye

	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	-0.05	0.08	253	-0.09	0.17	248	-0.11	0.12	229	-0.17	0.18	241	-0.10	0.15	971
Female	-0.06	0.13	241	-0.08	0.13	232	-0.11	0.16	232	-0.20	0.26	232	-0.11	0.19	937
Total	-0.05	0.11	494	-0.08	0.15	480	-0.11	0.14	461	-0.18	0.22	473	-0.11	0.17	1908

Visual Acuity with own Habitual Glasses
Right Eye

		40-49yr		50-59yr		60-69yr		70-80yr		Total	
		N	%	N	%	N	%	N	%	N	%
not recorded	Male	-	-	-	-	-	-	1	0.4	1	0.1
	Female	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	1	0.2	1	0.0
0.3 or less	Male	12	4.1	10	3.5	15	5.3	17	6.0	54	4.7
	Female	15	5.3	14	5.0	21	7.4	43	15.2	93	8.2
	Total	27	4.7	24	4.3	36	6.3	60	10.6	147	6.5
0.3-0.6	Male	37	12.7	44	15.6	67	23.7	104	36.7	252	22.1
	Female	44	15.6	56	20.1	91	31.9	97	34.4	288	25.5
	Total	81	14.1	100	17.8	158	27.8	201	35.6	540	23.8
0.7 or more	Male	242	83.2	228	80.9	201	71.0	161	56.9	832	73.0
	Female	223	79.1	209	74.9	173	60.7	142	50.4	747	66.2
	Total	465	81.2	437	77.9	374	65.8	303	53.6	1579	69.7

Visual Acuity with own Habitual Glasses
Left Eye

		40-49yr		50-59yr		60-69yr		70-80yr		Total	
		N	%	N	%	N	%	N	%	N	%
not recorded	Male	1	0.3	-	-	-	-	1	0.4	2	0.2
	Female	-	-	-	-	-	-	-	-	-	-
	Total	1	0.2	-	-	-	-	1	0.2	2	0.1
0.3 or less	Male	7	2.4	10	3.5	8	2.8	23	8.1	48	4.2
	Female	21	7.4	20	7.2	13	4.6	39	13.8	93	8.2
	Total	28	4.9	30	5.3	21	3.7	62	11.0	141	6.2
0.3-0.6	Male	36	12.4	35	12.4	60	21.2	101	35.7	232	20.4
	Female	39	13.8	54	19.4	91	31.9	103	36.5	287	25.4
	Total	75	13.1	89	15.9	151	26.6	204	36.1	519	22.9
0.7 or more	Male	247	84.9	237	84.0	215	76.0	158	55.8	857	75.2
	Female	222	78.7	205	73.5	181	63.5	140	49.6	748	66.3
	Total	469	81.8	442	78.8	396	69.7	298	52.7	1605	70.8