

## 9) Future of the NLS-LSA

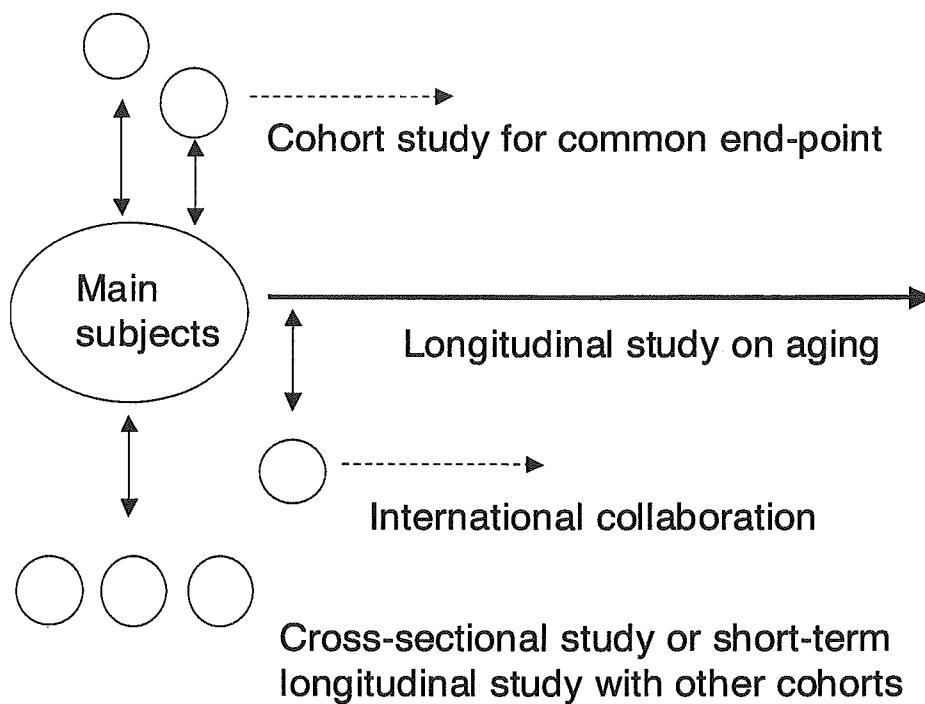
We will continue the NLS-LSA to investigate the natural course of aging and the changes that lead to disease. The third wave examination was completed in May 2004. The participants will be examined every 2 years. The cohort of the NLS-LSA is a dynamic cohort, that is, new subjects participate in the study instead of those who do not attend their next examination. Participants who move out of the area are to be followed up by telephone interview or postal questionnaire. Medical records of the participants who die during follow-up will be checked to find out the cause of death.

Extensive tests and examinations should be repeated in longitudinal studies on aging. However, it is actually impossible to repeat many tests and examinations in multiple research facilities with the same protocols and methods. Thus, there are almost no comprehensive longitudinal studies on aging that have been followed up for a long period by multi-center collaboration in the U.S. or other countries.

However, cohort studies with common end points such as dementia and disturbance of ADL are also important for aging studies. For these studies, a relatively large number of subjects and cases during follow-up will be required to get significant analysis results. We are collaborating with other research facilities in Japan and other countries as shown in Fig. 6.

Comparative studies of the aging process accounting for regional and cultural differences between northern and southern areas, or between urban and rural areas, are also important. In these comparative studies, the number of common examinations and tests should be limited. The study design should be a cross-sectional or short-term longitudinal study, considering the difficulties involved continuing and repeating the examinations in all facilities with same protocols.

We are going to make the data of this study public through the Internet. We hope that the results from this large longitudinal study of aging can serve the development of health science on aging.



**Fig. 6** Design of the longitudinal study by multi-center collaboration

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## II. Background Examinations

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### 1. Medical history

- 1) Past and present illness
- 2) Medication for hypertension and diabetes
- 3) History of surgery
- 4) Blood transfusion and hospital admission
- 5) Bone fracture
- 6) Family history

### 2. Gynecology (for only women)

### 3. Daily life and health

- 1) Health
- 2) Smoking
- 3) Outing
- 4) Difficulty in daily activity
- 5) Pain
- 6) Change in height

### 4. Dental status

### 5. Eyesight

### 6. Hearing ability

### 7. Fall

### 8. Urinary disturbance



1-1. Medical history - Past and present illness

Stroke

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	128	99.2	102	99.0	138	92.6	109	86.5	22	84.6	499	93.6
	Female	136	100.0	131	100.0	132	97.8	106	94.6	18	94.7	523	98.1
	Total	264	99.6	233	99.6	270	95.1	215	90.3	40	88.9	1022	95.9
On medication	Male	0	0.0	1	1.0	5	3.4	13	10.3	3	11.5	22	4.1
	Female	0	0.0	0	0.0	2	1.5	3	2.7	1	5.3	6	1.1
	Total	0	0.0	1	0.4	7	2.5	16	6.7	4	8.9	28	2.6
Previously medicated	Male	1	0.8	0	0.0	5	3.4	3	2.4	0	0.0	9	1.7
	Female	0	0.0	0	0.0	1	0.7	3	2.7	0	0.0	4	0.8
	Total	1	0.4	0	0.0	6	2.1	6	2.5	0	0.0	13	1.2
Not treated	Male	0	0.0	0	0.0	1	0.7	1	0.8	1	3.8	3	0.6
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	1	0.4	1	0.4	1	2.2	3	0.3

Hypertension

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	124	96.1	89	86.4	91	61.1	69	54.8	18	69.2	391	73.4
	Female	131	96.3	110	84.0	100	74.1	54	48.2	7	36.8	402	75.4
	Total	255	96.2	199	85.0	191	67.3	123	51.7	25	55.6	793	74.4
On medication	Male	2	1.6	10	9.7	46	30.9	52	41.3	8	30.8	118	22.1
	Female	2	1.5	17	13.0	27	20.0	53	47.3	12	63.2	111	20.8
	Total	4	1.5	27	11.5	73	25.7	105	44.1	20	44.4	229	21.5
Previously medicated	Male	1	0.8	3	2.9	8	5.4	3	2.4	0	0.0	15	2.8
	Female	2	1.5	1	0.8	7	5.2	5	4.5	0	0.0	15	2.8
	Total	3	1.1	4	1.7	15	5.3	8	3.4	0	0.0	30	2.8
Not treated	Male	2	1.6	1	1.0	4	2.7	2	1.6	0	0.0	9	1.7
	Female	1	0.7	3	2.3	1	0.7	0	0.0	0	0.0	5	0.9
	Total	3	1.1	4	1.7	5	1.8	2	0.8	0	0.0	14	1.3

Ischemic heart disease

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	129	100.0	102	99.0	137	91.9	119	94.4	22	84.6	509	95.5
	Female	136	100.0	127	96.9	134	99.3	103	92.0	16	84.2	516	96.8
	Total	265	100.0	229	97.9	271	95.4	222	93.3	38	84.4	1025	96.2
On medication	Male	0	0.0	1	1.0	9	6.0	6	4.8	3	11.5	19	3.6
	Female	0	0.0	0	0.0	1	0.7	5	4.5	1	5.3	7	1.3
	Total	0	0.0	1	0.4	10	3.5	11	4.6	4	8.9	26	2.4
Previously medicated	Male	0	0.0	0	0.0	2	1.3	1	0.8	1	3.8	4	0.8
	Female	0	0.0	3	2.3	0	0.0	3	2.7	1	5.3	7	1.3
	Total	0	0.0	3	1.3	2	0.7	4	1.7	2	4.4	11	1.0
Not treated	Male	0	0.0	0	0.0	1	0.7	0	0.0	0	0.0	1	0.2
	Female	0	0.0	1	0.8	0	0.0	1	0.9	1	5.3	3	0.6
	Total	0	0.0	1	0.4	1	0.4	1	0.4	1	2.2	4	0.4

Other heart disease

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	117	90.7	93	90.3	126	84.6	106	84.1	21	80.8	463	86.9
	Female	131	96.3	121	92.4	126	93.3	100	89.3	18	94.7	496	93.1
	Total	248	93.6	214	91.5	252	88.7	206	86.6	39	86.7	959	90.0
On medication	Male	1	0.8	3	2.9	3	2.0	13	10.3	3	11.5	23	4.3
	Female	0	0.0	3	2.3	2	1.5	5	4.5	0	0.0	10	1.9
	Total	1	0.4	6	2.6	5	1.8	18	7.6	3	6.7	33	3.1
Previously medicated	Male	2	1.6	1	1.0	4	2.7	1	0.8	2	7.7	10	1.9
	Female	0	0.0	2	1.5	4	3.0	2	1.8	1	5.3	9	1.7
	Total	2	0.8	3	1.3	8	2.8	3	1.3	3	6.7	19	1.8
Not treated	Male	9	7.0	6	5.8	16	10.7	6	4.8	0	0.0	37	6.9
	Female	5	3.7	5	3.8	3	2.2	5	4.5	0	0.0	18	3.4
	Total	14	5.3	11	4.7	19	6.7	11	4.6	0	0.0	55	5.2

## Hyperlipidemia

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	114	88.4	83	80.6	123	82.6	104	82.5	24	92.3	448	84.1
	Female	131	96.3	111	84.7	93	68.9	84	75.0	10	52.6	429	80.5
	Total	245	92.5	194	82.9	216	76.1	188	79.0	34	75.6	877	82.3
On medication	Male	0	0.0	8	7.8	12	8.1	14	11.1	1	3.8	35	6.6
	Female	0	0.0	7	5.3	25	18.5	18	16.1	7	36.8	57	10.7
	Total	0	0.0	15	6.4	37	13.0	32	13.4	8	17.8	92	8.6
Previously medicated	Male	1	0.8	3	2.9	4	2.7	2	1.6	0	0.0	10	1.9
	Female	0	0.0	1	0.8	3	2.2	3	2.7	0	0.0	7	1.3
	Total	1	0.4	4	1.7	7	2.5	5	2.1	0	0.0	17	1.6
Not treated	Male	14	10.9	9	8.7	10	6.7	6	4.8	1	3.8	40	7.5
	Female	5	3.7	12	9.2	14	10.4	7	6.3	2	10.5	40	7.5
	Total	19	7.2	21	9.0	24	8.5	13	5.5	3	6.7	80	7.5

## Renal disease

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	124	96.1	97	94.2	137	91.9	122	96.8	24	92.3	504	94.6
	Female	134	98.5	125	95.4	126	93.3	104	92.9	16	84.2	505	94.7
	Total	258	97.4	222	94.9	263	92.6	226	95.0	40	88.9	1009	94.7
On medication	Male	0	0.0	2	1.9	3	2.0	1	0.8	0	0.0	6	1.1
	Female	0	0.0	0	0.0	1	0.7	2	1.8	0	0.0	3	0.6
	Total	0	0.0	2	0.9	4	1.4	3	1.3	0	0.0	9	0.8
Previously medicated	Male	5	3.9	4	3.9	9	6.0	3	2.4	2	7.7	23	4.3
	Female	2	1.5	6	4.6	7	5.2	4	3.6	2	10.5	21	3.9
	Total	7	2.6	10	4.3	16	5.6	7	2.9	4	8.9	44	4.1
Not treated	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	1	0.7	2	1.8	1	5.3	4	0.8
	Total	0	0.0	0	0.0	1	0.4	2	0.8	1	2.2	4	0.4

## Liver disease

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	121	93.8	98	95.1	140	94.0	117	92.9	22	84.6	498	93.4
	Female	132	97.1	121	92.4	130	96.3	106	94.6	17	89.5	506	94.9
	Total	253	95.5	219	93.6	270	95.1	223	93.7	39	86.7	1004	94.2
On medication	Male	1	0.8	1	1.0	1	0.7	3	2.4	2	7.7	8	1.5
	Female	0	0.0	2	1.5	3	2.2	1	0.9	0	0.0	6	1.1
	Total	1	0.4	3	1.3	4	1.4	4	1.7	2	4.4	14	1.3
Previously medicated	Male	2	1.6	2	1.9	7	4.7	3	2.4	1	3.8	15	2.8
	Female	2	1.5	4	3.1	2	1.5	4	3.6	2	10.5	14	2.6
	Total	4	1.5	6	2.6	9	3.2	7	2.9	3	6.7	29	2.7
Not treated	Male	5	3.9	2	1.9	1	0.7	3	2.4	1	3.8	12	2.3
	Female	2	1.5	4	3.1	0	0.0	1	0.9	0	0.0	7	1.3
	Total	7	2.6	6	2.6	1	0.4	4	1.7	1	2.2	19	1.8

## Cholecystitis and gallstone

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	124	96.1	97	94.2	138	92.6	113	89.7	20	76.9	492	92.3
	Female	129	94.9	124	94.7	127	94.1	96	85.7	18	94.7	494	92.7
	Total	253	95.5	221	94.4	265	93.3	209	87.8	38	84.4	986	92.5
On medication	Male	0	0.0	0	0.0	1	0.7	1	0.8	0	0.0	2	0.4
	Female	0	0.0	0	0.0	2	1.5	0	0.0	0	0.0	2	0.4
	Total	0	0.0	0	0.0	3	1.1	1	0.4	0	0.0	4	0.4
Previously medicated	Male	5	3.9	4	3.9	7	4.7	11	8.7	5	19.2	32	6.0
	Female	6	4.4	6	4.6	3	2.2	13	11.6	1	5.3	29	5.4
	Total	11	4.2	10	4.3	10	3.5	24	10.1	6	13.3	61	5.7
Not treated	Male	0	0.0	2	1.9	3	2.0	1	0.8	1	3.8	7	1.3
	Female	1	0.7	1	0.8	3	2.2	3	2.7	0	0.0	8	1.5
	Total	1	0.4	3	1.3	6	2.1	4	1.7	1	2.2	15	1.4

Diabetes mellitus

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	128	99.2	96	93.2	130	87.2	114	90.5	18	69.2	486	91.2
	Female	135	99.3	124	94.7	125	92.6	106	94.6	16	84.2	506	94.9
	Total	263	99.2	220	94.0	255	89.8	220	92.4	34	75.6	992	93.1
On medication	Male	0	0.0	6	5.8	14	9.4	9	7.1	3	11.5	32	6.0
	Female	0	0.0	4	3.1	8	5.9	3	2.7	2	10.5	17	3.2
	Total	0	0.0	10	4.3	22	7.7	12	5.0	5	11.1	49	4.6
Previously medicated	Male	0	0.0	0	0.0	3	2.0	2	1.6	3	11.5	8	1.5
	Female	0	0.0	3	2.3	2	1.5	2	1.8	0	0.0	7	1.3
	Total	0	0.0	3	1.3	5	1.8	4	1.7	3	6.7	15	1.4
Not treated	Male	1	0.8	1	1.0	2	1.3	1	0.8	2	7.7	7	1.3
	Female	1	0.7	0	0.0	0	0.0	1	0.9	1	5.3	3	0.6
	Total	2	0.8	1	0.4	2	0.7	2	0.8	3	6.7	10	0.9

Peptic ulcer

		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	0	0.0	0	0.0
	Female	1	0.7	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2
	Total	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
None	Male	112	86.8	75	72.8	113	75.8	96	76.2	18	69.2	414	77.7
	Female	125	91.9	123	93.9	120	88.9	103	92.0	17	89.5	488	91.6
	Total	237	89.4	198	84.6	233	82.0	199	83.6	35	77.8	902	84.6
On medication	Male	0	0.0	4	3.9	3	2.0	5	4.0	1	3.8	13	2.4
	Female	1	0.7	2	1.5	1	0.7	1	0.9	1	5.3	6	1.1
	Total	1	0.4	6	2.6	4	1.4	6	2.5	2	4.4	19	1.8
Previously medicated	Male	13	10.1	21	20.4	29	19.5	24	19.0	7	26.9	94	17.6
	Female	7	5.1	6	4.6	13	9.6	8	7.1	1	5.3	35	6.6
	Total	20	7.5	27	11.5	42	14.8	32	13.4	8	17.8	129	12.1
Not treated	Male	4	3.1	3	2.9	4	2.7	1	0.8	0	0.0	12	2.3
	Female	2	1.5	0	0.0	1	0.7	0	0.0	0	0.0	3	0.6
	Total	6	2.3	3	1.3	5	1.8	1	0.4	0	0.0	15	1.4

Tuberculosis or plauritis

		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	0	0.0	0	0.0
	Female	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0	1	0.2
	Total	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	1	0.1
None	Male	125	96.9	101	98.1	141	94.6	100	79.4	20	76.9	487	91.4
	Female	133	97.8	126	96.2	133	98.5	101	90.2	16	84.2	509	95.5
	Total	258	97.4	227	97.0	274	96.5	201	84.5	36	80.0	996	93.4
On medication	Male	0	0.0	0	0.0	0	0.0	1	0.8	0	0.0	1	0.2
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
Previously medicated	Male	4	3.1	2	1.9	8	5.4	24	19.0	5	19.2	43	8.1
	Female	3	2.2	4	3.1	2	1.5	11	9.8	3	15.8	23	4.3
	Total	7	2.6	6	2.6	10	3.5	35	14.7	8	17.8	66	6.2
Not treated	Male	0	0.0	0	0.0	0	0.0	1	0.8	1	3.8	2	0.4
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	1	0.4	1	2.2	2	0.2

Bronchial asthma

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	121	93.8	100	97.1	146	98.0	119	94.4	25	96.2	511	95.9
	Female	133	97.8	124	94.7	131	97.0	108	96.4	19	100.0	515	96.6
	Total	254	95.8	224	95.7	277	97.5	227	95.4	44	97.8	1026	96.2
On medication	Male	4	3.1	1	1.0	1	0.7	5	4.0	0	0.0	11	2.1
	Female	0	0.0	2	1.5	2	1.5	1	0.9	0	0.0	5	0.9
	Total	4	1.5	3	1.3	3	1.1	6	2.5	0	0.0	16	1.5
Previously medicated	Male	4	3.1	2	1.9	2	1.3	2	1.6	1	3.8	11	2.1
	Female	3	2.2	5	3.8	2	1.5	2	1.8	0	0.0	12	2.3
	Total	7	2.6	7	3.0	4	1.4	4	1.7	1	2.2	23	2.2
Not treated	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	1	0.2
	Total	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1

Chronic bronchitis

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	127	98.4	98	95.1	144	96.6	119	94.4	22	84.6	510	95.7
	Female	133	97.8	127	96.9	133	98.5	106	94.6	18	94.7	517	97.0
	Total	260	98.1	225	96.2	277	97.5	225	94.5	40	88.9	1027	96.3
On medication	Male	0	0.0	1	1.0	3	2.0	1	0.8	3	11.5	8	1.5
	Female	0	0.0	0	0.0	2	1.5	2	1.8	1	5.3	5	0.9
	Total	0	0.0	1	0.4	5	1.8	3	1.3	4	8.9	13	1.2
Previously medicated	Male	2	1.6	2	1.9	2	1.3	5	4.0	0	0.0	11	2.1
	Female	3	2.2	4	3.1	0	0.0	2	1.8	0	0.0	9	1.7
	Total	5	1.9	6	2.6	2	0.7	7	2.9	0	0.0	20	1.9
Not treated	Male	0	0.0	2	1.9	0	0.0	1	0.8	1	3.8	4	0.8
	Female	0	0.0	0	0.0	0	0.0	2	1.8	0	0.0	2	0.4
	Total	0	0.0	2	0.9	0	0.0	3	1.3	1	2.2	6	0.6

Anemia

		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	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	1	0.2
	Total	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
None	Male	128	99.2	99	96.1	144	96.6	116	92.1	20	76.9	507	95.1
	Female	93	68.4	86	65.6	112	83.0	100	89.3	13	68.4	404	75.8
	Total	221	83.4	185	79.1	256	90.1	216	90.8	33	73.3	911	85.5
On medication	Male	0	0.0	0	0.0	0	0.0	1	0.8	0	0.0	1	0.2
	Female	2	1.5	1	0.8	1	0.7	1	0.9	1	5.3	6	1.1
	Total	2	0.8	1	0.4	1	0.4	2	0.8	1	2.2	7	0.7
Previously medicated	Male	0	0.0	1	1.0	3	2.0	2	1.6	2	7.7	8	1.5
	Female	33	24.3	36	27.5	15	11.1	8	7.1	3	15.8	95	17.8
	Total	33	12.5	37	15.8	18	6.3	10	4.2	5	11.1	103	9.7
Not treated	Male	1	0.8	3	2.9	2	1.3	7	5.6	4	15.4	17	3.2
	Female	8	5.9	8	6.1	7	5.2	2	1.8	2	10.5	27	5.1
	Total	9	3.4	11	4.7	9	3.2	9	3.8	6	13.3	44	4.1

Osteoporosis

		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	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	1	0.2
	Total	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
None	Male	128	99.2	103	100.0	149	100.0	124	98.4	24	92.3	528	99.1
	Female	136	100.0	121	92.4	118	87.4	88	78.6	13	68.4	476	89.3
	Total	264	99.6	224	95.7	267	94.0	212	89.1	37	82.2	1004	94.2
On medication	Male	0	0.0	0	0.0	0	0.0	1	0.8	2	7.7	3	0.6
	Female	0	0.0	7	5.3	9	6.7	12	10.7	3	15.8	31	5.8
	Total	0	0.0	7	3.0	9	3.2	13	5.5	5	11.1	34	3.2
Previously medicated	Male	0	0.0	0	0.0	0	0.0	1	0.8	0	0.0	1	0.2
	Female	0	0.0	0	0.0	2	1.5	8	7.1	2	10.5	12	2.3
	Total	0	0.0	0	0.0	2	0.7	9	3.8	2	4.4	13	1.2
Not treated	Male	1	0.8	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2
	Female	0	0.0	3	2.3	6	4.4	3	2.7	1	5.3	13	2.4
	Total	1	0.4	3	1.3	6	2.1	3	1.3	1	2.2	14	1.3

Arthritis

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Not recorded	Male	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	1	0.2
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	1	0.1
None	Male	129	100.0	100	97.1	140	94.0	115	91.3	21	80.8	505	94.7
	Female	130	95.6	118	90.1	124	91.9	95	84.8	16	84.2	483	90.6
	Total	259	97.7	218	93.2	264	93.0	210	88.2	37	82.2	988	92.7
On medication	Male	0	0.0	0	0.0	1	0.7	3	2.4	1	3.8	5	0.9
	Female	3	2.2	3	2.3	2	1.5	6	5.4	3	15.8	17	3.2
	Total	3	1.1	3	1.3	3	1.1	9	3.8	4	8.9	22	2.1
Previously medicated	Male	0	0.0	2	1.9	7	4.7	7	5.6	4	15.4	20	3.8
	Female	3	2.2	5	3.8	8	5.9	11	9.8	0	0.0	27	5.1
	Total	3	1.1	7	3.0	15	5.3	18	7.6	4	8.9	47	4.4
Not treated	Male	0	0.0	0	0.0	1	0.7	1	0.8	0	0.0	2	0.4
	Female	0	0.0	5	3.8	1	0.7	0	0.0	0	0.0	6	1.1
	Total	0	0.0	5	2.1	2	0.7	1	0.4	0	0.0	8	0.8



## Gout, hyperuricacidemia

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	120	93.0	95	92.2	140	94.0	112	88.9	25	96.2	492	92.3
	Female	135	99.3	130	99.2	132	97.8	105	93.8	19	100.0	521	97.7
	Total	255	96.2	225	96.2	272	95.8	217	91.2	44	97.8	1013	95.0
On medication	Male	2	1.6	6	5.8	2	1.3	8	6.3	1	3.8	19	3.6
	Female	0	0.0	0	0.0	1	0.7	1	0.9	0	0.0	2	0.4
	Total	2	0.8	6	2.6	3	1.1	9	3.8	1	2.2	21	2.0
Previously medicated	Male	4	3.1	1	1.0	6	4.0	5	4.0	0	0.0	16	3.0
	Female	0	0.0	1	0.8	0	0.0	3	2.7	0	0.0	4	0.8
	Total	4	1.5	2	0.9	6	2.1	8	3.4	0	0.0	20	1.9
Not treated	Male	3	2.3	1	1.0	1	0.7	1	0.8	0	0.0	6	1.1
	Female	1	0.7	0	0.0	2	1.5	3	2.7	0	0.0	6	1.1
	Total	4	1.5	1	0.4	3	1.1	4	1.7	0	0.0	12	1.1

## Thyroid disease

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	127	98.4	102	99.0	147	98.7	125	99.2	25	96.2	526	98.7
	Female	126	92.6	118	90.1	128	94.8	104	92.9	17	89.5	493	92.5
	Total	253	95.5	220	94.0	275	96.8	229	96.2	42	93.3	1019	95.6
On medication	Male	1	0.8	1	1.0	0	0.0	1	0.8	0	0.0	3	0.6
	Female	4	2.9	4	3.1	2	1.5	4	3.6	1	5.3	15	2.8
	Total	5	1.9	5	2.1	2	0.7	5	2.1	1	2.2	18	1.7
Previously medicated	Male	1	0.8	0	0.0	2	1.3	0	0.0	0	0.0	3	0.6
	Female	5	3.7	7	5.3	5	3.7	4	3.6	1	5.3	22	4.1
	Total	6	2.3	7	3.0	7	2.5	4	1.7	1	2.2	25	2.3
Not treated	Male	0	0.0	0	0.0	0	0.0	0	0.0	1	3.8	1	0.2
	Female	1	0.7	2	1.5	0	0.0	0	0.0	0	0.0	3	0.6
	Total	1	0.4	2	0.9	0	0.0	0	0.0	1	2.2	4	0.4

Parathyroid disease

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Not recorded	Male	1	0.8	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
None	Male	128	99.2	103	100.0	149	100.0	126	100.0	26	100.0	532	99.8
	Female	136	100.0	131	100.0	135	100.0	112	100.0	19	100.0	533	100.0
	Total	264	99.6	234	100.0	284	100.0	238	100.0	45	100.0	1065	99.9

Cancer

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	128	99.2	102	99.0	145	97.3	117	92.9	24	92.3	516	96.8
	Female	135	99.3	126	96.2	127	94.1	100	89.3	18	94.7	506	94.9
	Total	263	99.2	228	97.4	272	95.8	217	91.2	42	93.3	1022	95.9
On medication	Male	1	0.8	0	0.0	1	0.7	5	4.0	0	0.0	7	1.3
	Female	1	0.7	0	0.0	1	0.7	4	3.6	0	0.0	6	1.1
	Total	2	0.8	0	0.0	2	0.7	9	3.8	0	0.0	13	1.2
Previously medicated	Male	0	0.0	1	1.0	3	2.0	4	3.2	2	7.7	10	1.9
	Female	0	0.0	5	3.8	7	5.2	8	7.1	1	5.3	21	3.9
	Total	0	0.0	6	2.6	10	3.5	12	5.0	3	6.7	31	2.9

## Fracture

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	87	67.4	84	81.6	103	69.1	87	69.0	21	80.8	382	71.7
	Female	121	89.0	109	83.2	108	80.0	78	69.6	8	42.1	424	79.5
	Total	208	78.5	193	82.5	211	74.3	165	69.3	29	64.4	806	75.6
On medication	Male	2	1.6	0	0.0	2	1.3	0	0.0	0	0.0	4	0.8
	Female	0	0.0	0	0.0	1	0.7	1	0.9	1	5.3	3	0.6
	Total	2	0.8	0	0.0	3	1.1	1	0.4	1	2.2	7	0.7
Previously medicated	Male	40	31.0	18	17.5	44	29.5	39	31.0	5	19.2	146	27.4
	Female	15	11.0	22	16.8	25	18.5	33	29.5	10	52.6	105	19.7
	Total	55	20.8	40	17.1	69	24.3	72	30.3	15	33.3	251	23.5
Not treated	Male	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	1	0.2
	Female	0	0.0	0	0.0	1	0.7	0	0.0	0	0.0	1	0.2
	Total	0	0.0	1	0.4	1	0.4	0	0.0	0	0.0	2	0.2

## Benign prostate hyperplasia

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	128	99.2	102	99.0	131	87.9	96	76.2	15	57.7	472	88.6
	Female	136	100.0	131	100.0	135	100.0	112	100.0	19	100.0	533	100.0
	Total	264	99.6	233	99.6	266	93.7	208	87.4	34	75.6	1005	94.3
On medication	Male	0	0.0	0	0.0	6	4.0	8	6.3	3	11.5	17	3.2
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	6	2.1	8	3.4	3	6.7	17	1.6
Previously medicated	Male	1	0.8	0	0.0	8	5.4	15	11.9	7	26.9	31	5.8
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	1	0.4	0	0.0	8	2.8	15	6.3	7	15.6	31	2.9
Not treated	Male	0	0.0	1	1.0	4	2.7	7	5.6	1	3.8	13	2.4
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	1	0.4	4	1.4	7	2.9	1	2.2	13	1.2

## Dementia

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	129	100.0	103	100.0	149	100.0	124	98.4	24	92.3	529	99.2
	Female	136	100.0	131	100.0	135	100.0	112	100.0	19	100.0	533	100.0
	Total	265	100.0	234	100.0	284	100.0	236	99.2	43	95.6	1062	99.6
On medication	Male	0	0.0	0	0.0	0	0.0	2	1.6	1	3.8	3	0.6
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	2	0.8	1	2.2	3	0.3
Not treated	Male	0	0.0	0	0.0	0	0.0	0	0.0	1	3.8	1	0.2
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	0	0.0	1	2.2	1	0.1

## Parkinson disease

		40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
None	Male	129	100.0	103	100.0	149	100.0	125	99.2	26	100.0	532	99.8
	Female	136	100.0	131	100.0	135	100.0	112	100.0	19	100.0	533	100.0
	Total	265	100.0	234	100.0	284	100.0	237	99.6	45	100.0	1065	99.9
On medication	Male	0	0.0	0	0.0	0	0.0	1	0.8	0	0.0	1	0.2
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1