

Thickness of subcutaneous fat at posterior calf (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	4.7	1.2	132	4.4	1.4	103	4.0	1.2	150	4.1	1.4	126	3.6	1.1	26	4.2	1.3	537
Female	7.0	1.5	137	6.4	1.7	131	5.6	1.9	135	5.4	1.8	112	4.8	1.4	20	6.1	1.8	535
Total	5.9	1.8	269	5.5	1.9	234	4.7	1.8	285	4.7	1.7	238	4.1	1.4	46	5.1	1.9	1072

Thickness of musculus gastrocnemius and soleus (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	59.0	5.9	132	56.9	5.5	103	55.4	6.1	150	53.4	6.1	126	51.3	6.0	26	55.9	6.3	537
Female	52.7	6.7	137	50.2	5.1	131	50.1	5.9	135	48.9	5.3	111	49.4	6.4	20	50.5	6.0	534
Total	55.8	7.1	269	53.1	6.2	234	52.9	6.5	285	51.3	6.2	237	50.5	6.2	46	53.2	6.7	1071

4) Abdominal fat distribution

Intra-abdominal fat area at umbilicus by CT (cm²)

	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	72.7	32.3	132	87.8	48.2	102	101.6	50.8	151	100.1	48.7	124	81.9	52.3	26	90.5	47.3	535
Female	35.9	23.3	137	53.8	34.3	130	65.8	35.6	135	83.6	40.9	112	84.0	34.2	20	59.7	37.9	534
Total	54.0	33.5	269	68.8	44.3	232	84.7	47.7	286	92.3	45.8	236	82.8	44.9	46	75.1	45.5	1069

Subcutaneous fat area at umbilicus by CT (cm²)

	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	116.9	52.0	132	112.8	52.3	102	110.9	43.5	151	111.1	44.0	124	84.3	30.9	26	111.5	47.4	535
Female	134.4	72.9	137	157.1	60.4	130	166.1	66.9	135	167.2	67.9	112	149.2	56.0	20	155.4	67.9	534
Total	125.8	64.0	269	137.6	61.0	232	137.0	62.1	286	137.7	63.1	236	112.5	54.0	46	133.4	62.5	1069

Waist circumference at umbilicus by CT (cm)

	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	84.5	7.7	132	85.7	8.7	102	86.5	8.0	151	85.9	8.1	124	81.7	7.8	26	85.5	8.1	535
Female	79.2	9.6	137	83.2	8.7	130	85.7	9.7	135	87.6	10.1	112	86.1	7.1	20	83.8	9.9	534
Total	81.8	9.1	269	84.3	8.7	232	86.1	8.9	286	86.7	9.1	236	83.6	7.7	46	84.7	9.1	1069

XII. Head MRI Measurements

XII. Head MRI Measurements

MRI was performed on a 1.5T Toshiba instrument (VISART). The scanning protocol included a series of axial T1-(TR500, TE15) and T2-weighted(TR4000, TE120) scans angled parallel to the anterior-posterior commissure line .

1) Brain atrophy

Divided into 4 classes according to an appendix1.

2) Ventricular dilatation

Divided into 4 classes according to an appendix2.

3) Periventricular hyperintensity

Divide into 4 classes according to an appendix3.

4) Cerebrovascular disease

Cerebral infarction

Border zone

Include cerebral cortex

White matter

Basal ganglia, thalamus, internal capsule, midbrain, pons, medulla oblongata

Cerebellar white matter, cerebellar cortex

Decided as following,

Lacuna : The lesions of white matter, basal ganglia, thalamus, internal capsule, midbrain, pons, medulla oblongata and whose size are larger than or equal to 3mm and smaller than or equal to 15mm.

Embolism : Include cerebral or cerebellar cortex, and which is not border zone infarction.

Thrombosis : Other than above.

Cerebral hemorrhage

On T2 weighted image(WI), hyperintensity inside the lesion and no signal around the lesion. Or on T2WI no signal slit lesion.

References

Stroke 1994 vol25, p318-327

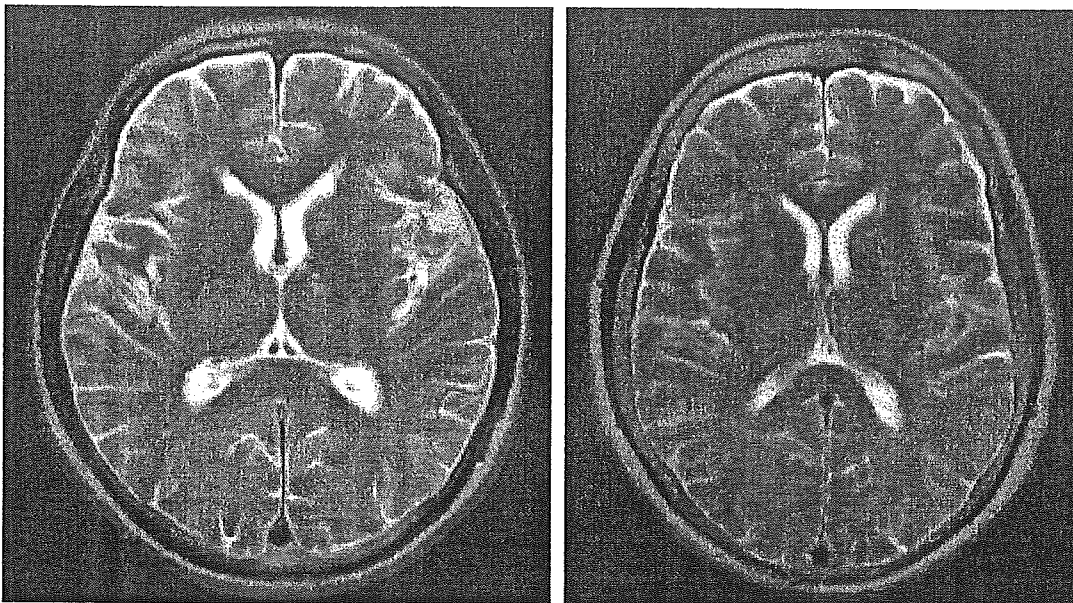
Naika 1997 vol79 (4)

Nihon naika gakkaiishi 1997 vol86

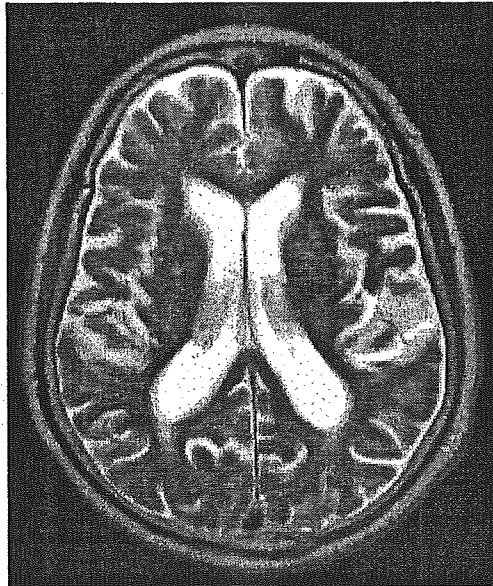
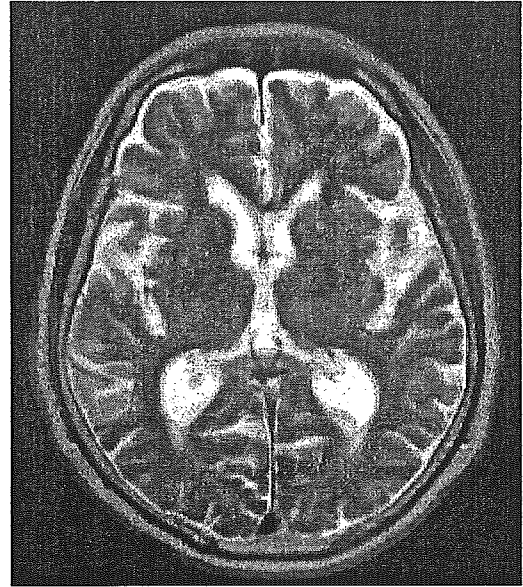
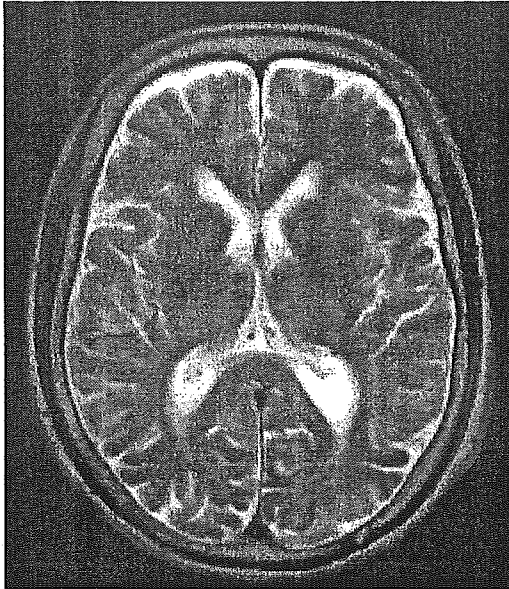
Medicina 1994 vol31 (8)

Periventricular hyperintensity

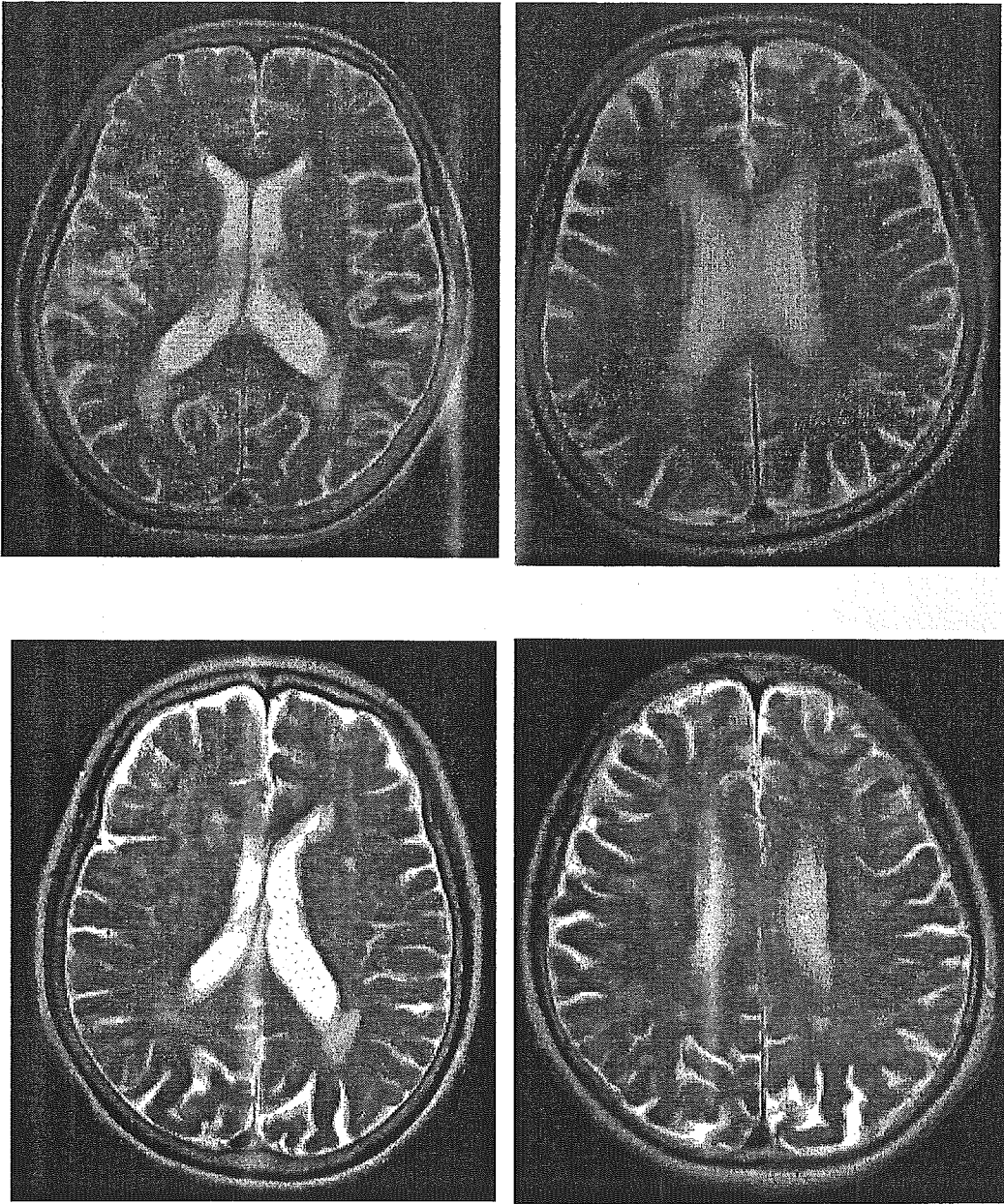
I. None or minimal periventricular signal hyperintensities in the form of caps only in the anterior horn of lateral ventricles.



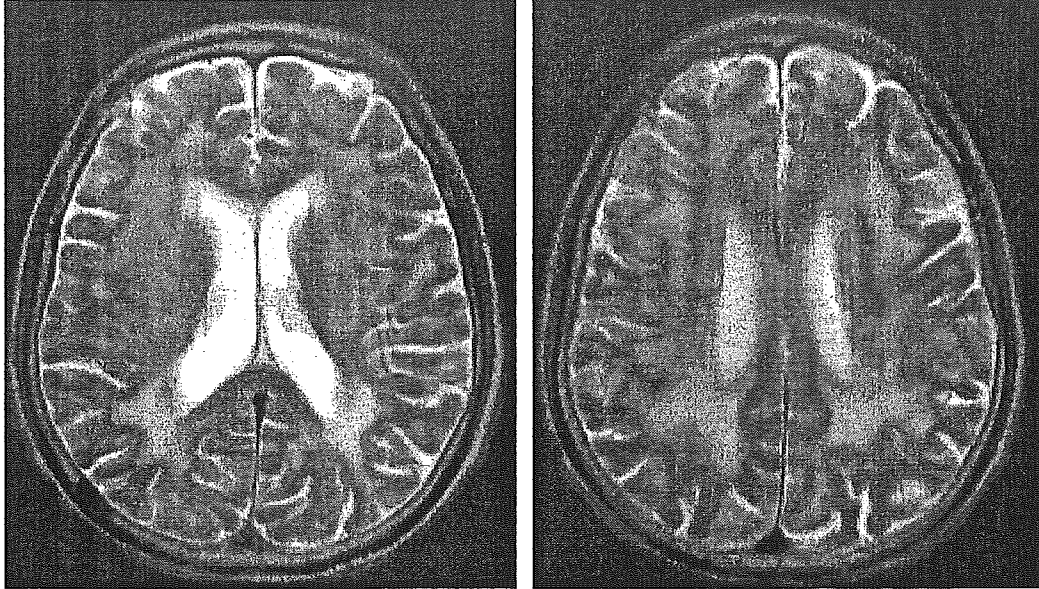
II. Caps in both anterior and posterior horns of lateral ventricles.



III. multifocal periventricular hyperintense punctuate lesions.

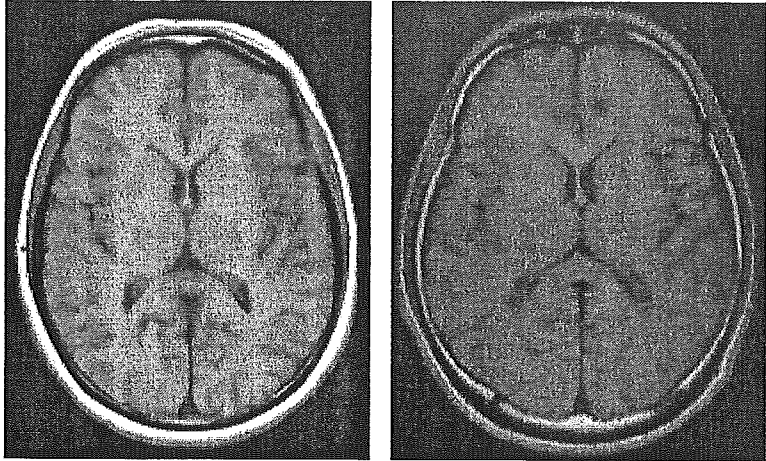


IV. Multiple high signal intensity area that reached confluency in the periventricular region and white matter.

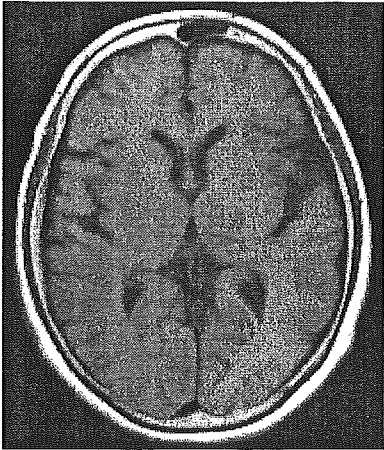


Ventricular dilatation

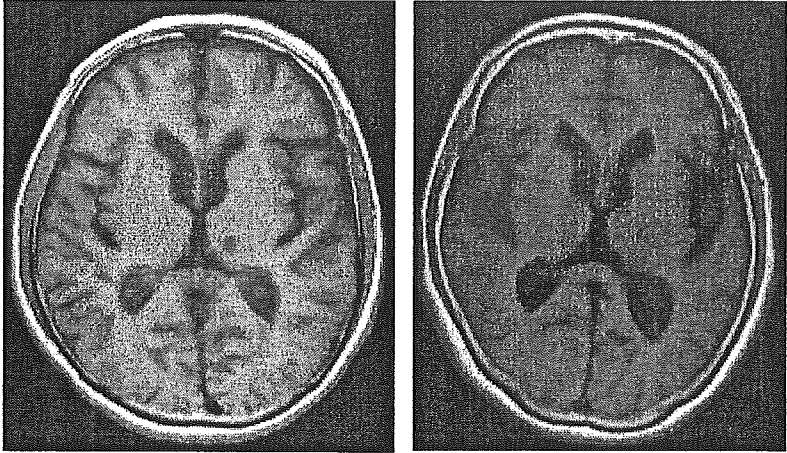
I. none



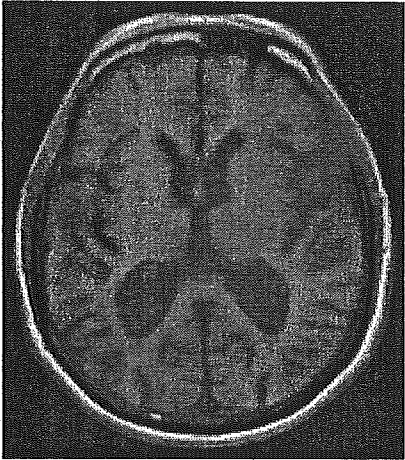
II.mild



III. moderate



IV. severe

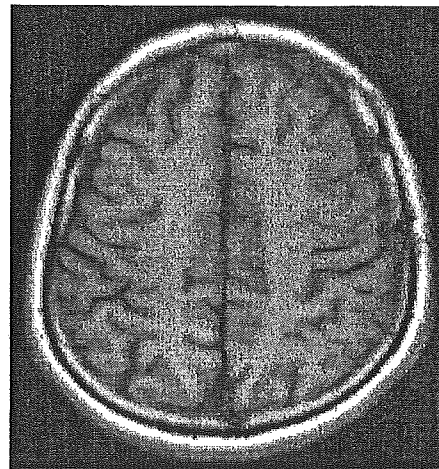


Brain atrophy

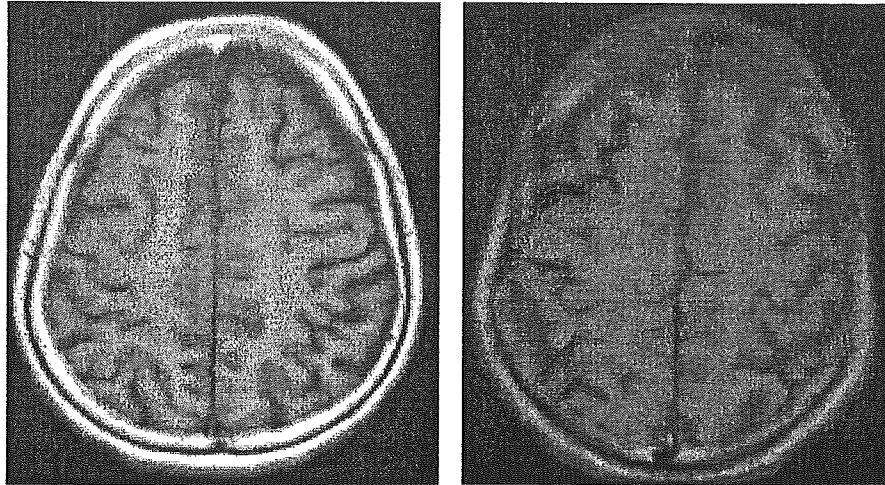
I. none



II. mild



III. Moderate



IV. severe

1) Brain Atrophy

		40-49yr		50-59yr		60-69yr		70-79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
normal	Male	120	94.5	90	90.0	98	70.5	40	33.6	5	19.2	353	69.1
	Female	130	98.5	125	96.9	116	89.9	70	67.3	11	57.9	452	88.1
	Total	250	96.5	215	93.9	214	79.9	110	49.3	16	35.6	805	78.6
mild	Male	7	5.5	10	10.0	40	28.8	70	58.8	17	65.4	144	28.2
	Female	2	1.5	4	3.1	13	10.1	34	32.7	8	42.1	61	11.9
	Total	9	3.5	14	6.1	53	19.8	104	46.6	25	55.6	205	20.0
moderate	Male	0	0.0	0	0.0	1	0.7	9	7.6	4	15.4	14	2.7
	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	9	4.0	4	8.9	14	1.4
Total	Male	127	100.0	100	100.0	139	100.0	119	100.0	26	100.0	511	100.0
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	223	100.0	45	100.0	1024	100.0

2) Ventricular Dilatation

		40-49yr		50-59yr		60-69yr		70-79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Normal	Male	103	81.1	69	69.0	59	42.4	18	15.1	0	0.0	249	48.7
	Female	121	91.7	113	87.6	90	69.8	37	35.6	3	15.8	364	71.0
	Total	224	86.5	182	79.5	149	55.6	55	24.7	3	6.7	613	59.9
Mild	Male	20	15.7	31	31.0	76	54.7	65	54.6	12	46.2	204	39.9
	Female	10	7.6	15	11.6	38	29.5	53	51.0	12	63.2	128	25.0
	Total	30	11.6	46	20.1	114	42.5	118	52.9	24	53.3	332	32.4
Moderate	Male	4	3.1	0	0.0	4	2.9	31	26.1	12	46.2	51	10.0
	Female	1	0.8	1	0.8	1	0.8	14	13.5	4	21.1	21	4.1
	Total	5	1.9	1	0.4	5	1.9	45	20.2	16	35.6	72	7.0
Severe	Male	0	0.0	0	0.0	0	0.0	5	4.2	2	7.7	7	1.4
	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	5	2.2	2	4.4	7	0.7
Total	Male	127	100.0	100	100.0	139	100.0	119	100.0	26	100.0	511	100.0
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	223	100.0	45	100.0	1024	100.0

3) Periventricular hyperintensity (PVH)

		40-49yr		50-59yr		60-69yr		70-79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
not examined	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	1.0	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
no PVH	Male	126	99.2	94	94.0	92	66.2	43	36.1	5	19.2	360	70.5
	Female	132	100.0	122	94.6	98	76.0	40	38.5	2	10.5	394	76.8
	Total	258	99.6	216	94.3	190	70.9	83	37.2	7	15.6	754	73.6
mild PVH	Male	1	0.8	4	4.0	36	25.9	46	38.7	6	23.1	93	18.2
	Female	0	0.0	6	4.7	21	16.3	35	33.7	6	31.6	68	13.3
	Total	1	0.4	10	4.4	57	21.3	81	36.3	12	26.7	161	15.7
moderate PVH	Male	0	0.0	2	2.0	9	6.5	27	22.7	13	50.0	51	10.0
	Female	0	0.0	1	0.8	10	7.8	23	22.1	8	42.1	42	8.2
	Total	0	0.0	3	1.3	19	7.1	50	22.4	21	46.7	93	9.1
severe PVH	Male	0	0.0	0	0.0	2	1.4	3	2.5	2	7.7	7	1.4
	Female	0	0.0	0	0.0	0	0.0	5	4.8	3	15.8	8	1.6
	Total	0	0.0	0	0.0	2	0.7	8	3.6	5	11.1	15	1.5
Total	Male	127	100.0	100	100.0	139	100.0	119	100.0	26	100.0	511	100.0
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	223	100.0	45	100.0	1024	100.0

4) Cerebrovasucular Disease (CVD)

Cerebrovasucular Disease (CVD)

		40-49yr		50-59yr		60-69yr		70-79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
no cvd	Male	124	97.6	96	96.0	106	76.3	70	58.8	13	50.0	409	80.0
	Female	129	97.7	122	94.6	115	89.1	81	77.9	13	68.4	460	89.7
	Total	253	97.7	218	95.2	221	82.5	151	67.7	26	57.8	869	84.9
cvd	Male	3	2.4	4	4.0	33	23.7	49	41.2	13	50.0	102	20.0
	Female	3	2.3	7	5.4	14	10.9	23	22.1	6	31.6	53	10.3
	Total	6	2.3	11	4.8	47	17.5	72	32.3	19	42.2	155	15.1
Total	Male	127	100.0	100	100.0	139	100.0	119	100.0	26	100.0	511	100.0
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	223	100.0	45	100.0	1024	100.0

Lacuna

		40-49yr		50-59yr		60-69yr		70-79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
no lacuna	Male	126	99.2	97	97.0	110	79.1	80	67.2	18	69.2	431	84.3
	Female	130	98.5	124	96.1	118	91.5	86	82.7	16	84.2	474	92.4
	Total	256	98.8	221	96.5	228	85.1	166	74.4	34	75.6	905	88.4
one lacuna	Male	1	0.8	2	2.0	16	11.5	20	16.8	3	11.5	42	8.2
	Female	2	1.5	5	3.9	9	7.0	11	10.6	2	10.5	29	5.7
	Total	3	1.2	7	3.1	25	9.3	31	13.9	5	11.1	71	6.9
multiple lacune	Male	0	0.0	1	1.0	13	9.4	19	16.0	5	19.2	38	7.4
	Female	0	0.0	0	0.0	2	1.6	7	6.7	1	5.3	10	1.9
	Total	0	0.0	1	0.4	15	5.6	26	11.7	6	13.3	48	4.7
Total	Male	127	100.0	100	100.0	139	100.0	119	100.0	26	100.0	511	100.0
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	223	100.0	45	100.0	1024	100.0

Thrombosis

		40-49yr		50-59yr		60-69yr		70-79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
no thrombosis	Male	126	99.2	100	100.0	136	97.8	115	96.6	25	96.2	502	98.2
	Female	131	99.2	129	100.0	128	99.2	102	98.1	17	89.5	507	98.8
	Total	257	99.2	229	100.0	264	98.5	217	97.3	42	93.3	1009	98.5
thrombosis	Male	1	0.8	0	0.0	3	2.2	4	3.4	1	3.8	9	1.8
	Female	1	0.8	0	0.0	1	0.8	2	1.9	2	10.5	6	1.2
	Total	2	0.8	0	0.0	4	1.5	6	2.7	3	6.7	15	1.5
Total	Male	127	100.0	100	100.0	139	100.0	119	100.0	26	100.0	511	100.0
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	223	100.0	45	100.0	1024	100.0

Cerebral Embolism

		40-49yr		50-59yr		60-69yr		70-79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
no embolism	Male	125	98.4	99	99.0	124	89.2	98	82.4	16	61.5	462	90.4
	Female	132	100.0	127	98.4	125	96.9	92	88.5	14	73.7	490	95.5
	Total	257	99.2	226	98.7	249	92.9	190	85.2	30	66.7	952	93.0
embolism	Male	2	1.6	1	1.0	15	10.8	21	17.6	10	38.5	49	9.6
	Female	0	0.0	2	1.6	4	3.1	12	11.5	5	26.3	23	4.5
	Total	2	0.8	3	1.3	19	7.1	33	14.8	15	33.3	72	7.0
Total	Male	127	100.0	100	100.0	139	100.0	119	100.0	26	100.0	511	100.0
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	223	100.0	45	100.0	1024	100.0

Cerebral Bleeding

		40-49yr		50-59yr		60-69yr		70-79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
no bleeding	Male	127	100.0	100	100.0	139	100.0	117	98.3	26	100.0	509	99.6
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	221	99.1	45	100.0	1022	99.8
cerebral bleeding	Male	0	0.0	0	0.0	0	0.0	2	1.7	0	0.0	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	2	0.9	0	0.0	2	0.2
Total	Male	127	100.0	100	100.0	139	100.0	119	100.0	26	100.0	511	100.0
	Female	132	100.0	129	100.0	129	100.0	104	100.0	19	100.0	513	100.0
	Total	259	100.0	229	100.0	268	100.0	223	100.0	45	100.0	1024	100.0

XIII. Oral examinations