# XII. Head MRI Measurements

MRI was performed on a 3.0T SIEMENS instrument (MAGNETOM Trio, A Tim System).

1) Periventricular hyperintensity

Divide into 4 classes according to Appendix 1.

2) Ventricular dilatation

Divided into 4 classes according to an appendix 2.

3) Brain atrophy

Divided into 4 classes according to an appendix 3.

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 infarction : 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.
Cerebral embolism : Include cerebral or cerebellar cortex, and which is not border zone infarction.
Cerebral thrombosis : Other than above.

Cerebral infarction was defined as all of lacuna infarction, cerebral embolism and thrombosis.

Cerebral hemorrhage

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

Cerebrovascular diseases

Cerebrovascular diseases were defined as all of cerebral infarction and cerebral hemorrhage.

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References

Stroke 1994 vol25, p318-327
Naika 1997 vol79 (4)
Nihon naika gakkaishi 1997 vol86
Medicina 1994 vol31 (8)

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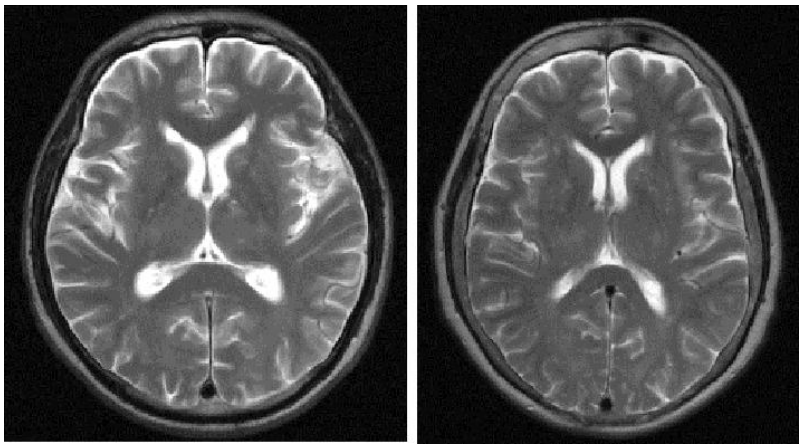
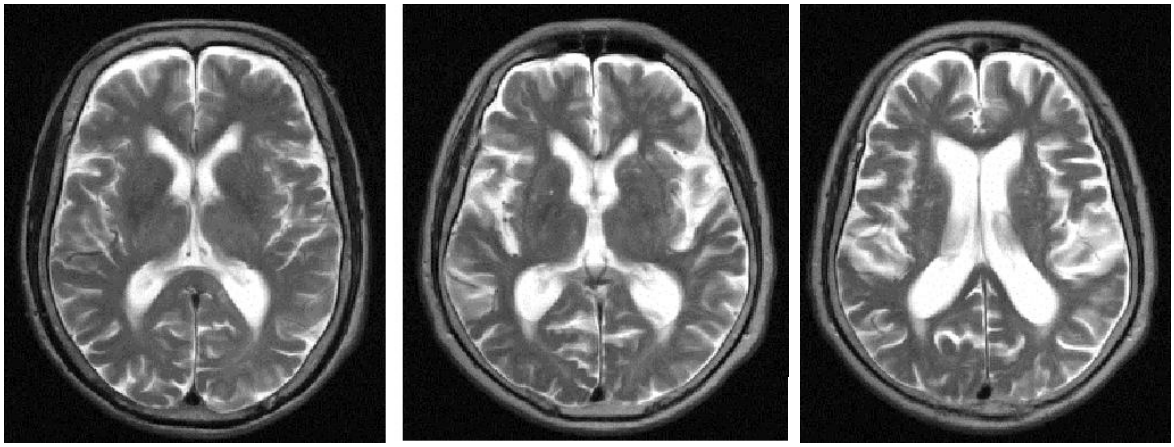
## Appendix 1: Periventricular hyperintensity

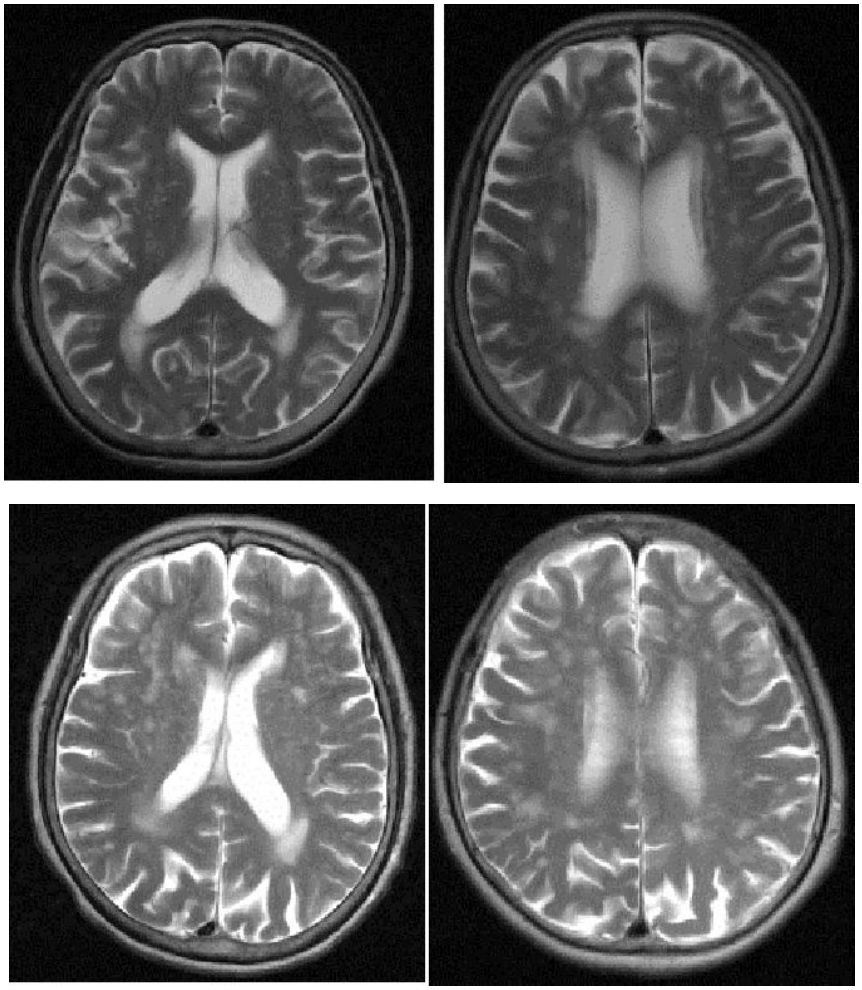
I. None: None or minimal periventricular signal hyperintensities in the form of caps only in the anterior horn of lateral ventricles.



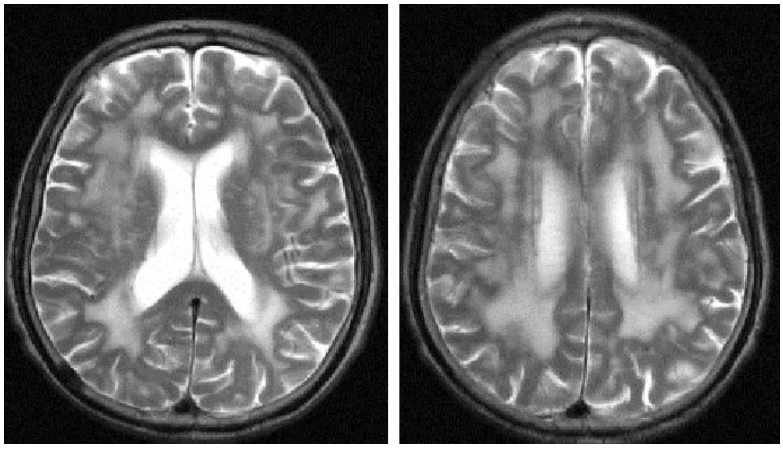
II. Moderate: Multifocal periventricular hyperintense punctuate lesions.



III. Moderate: Multifocal periventricular hyperintense punctuate lesions.

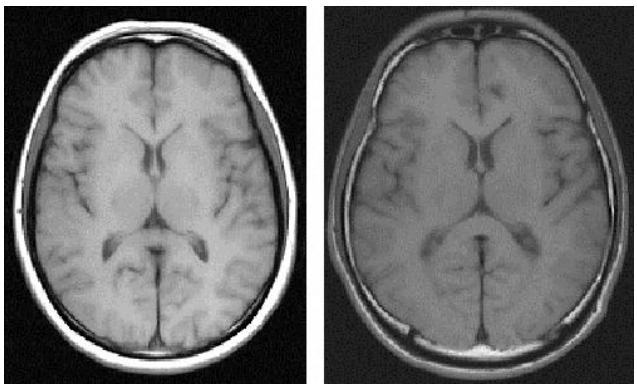


IV. Severe: Multiple high signal intensity area that reached confluency in the periventricular region and white matter.



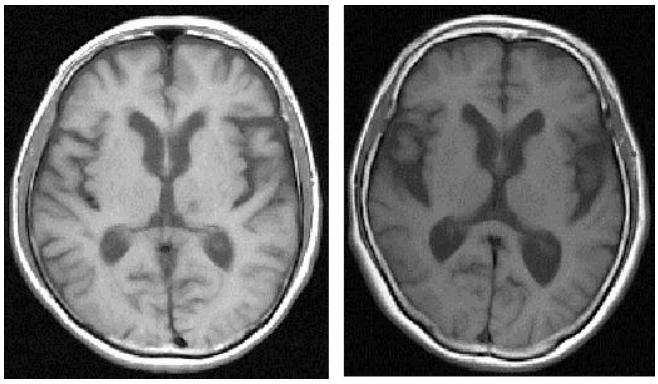
## Appendix 2: Ventricular dilatation

I. None

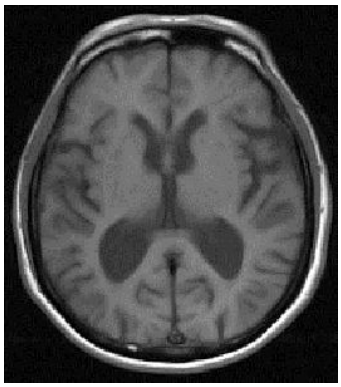


II. Mild

III. Moderate

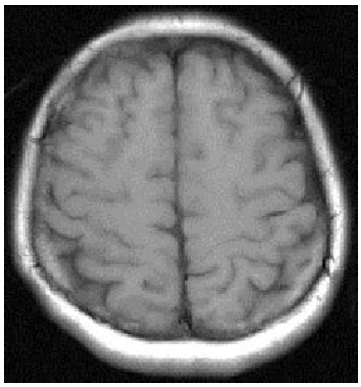


IV. Severe

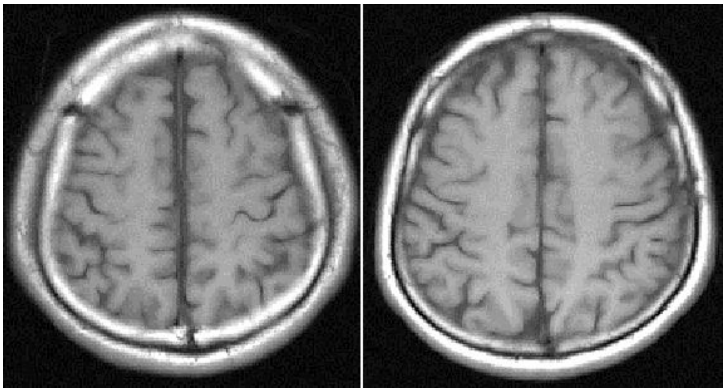


## Appendix 3: Brain atrophy

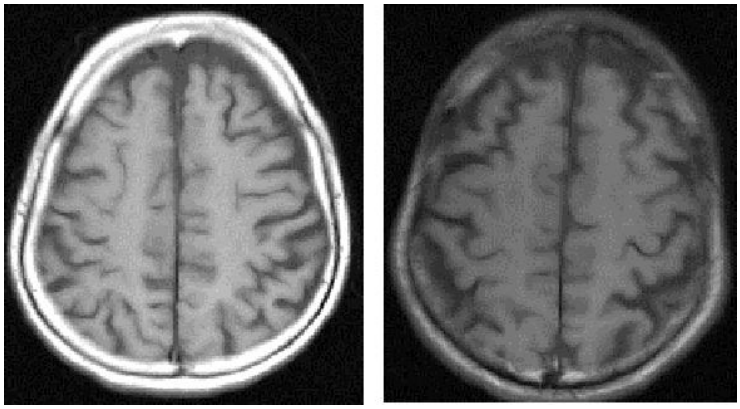
I. None



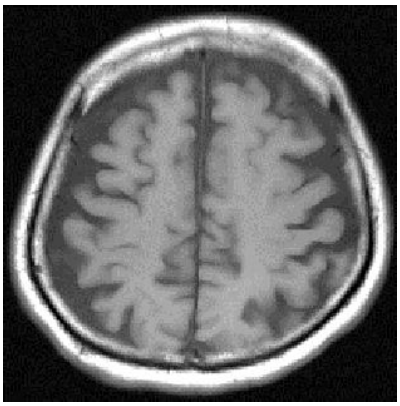
II. Mild



III. Moderate



IV. Severe



1) Periventricular hyperintensity (PVH)

Periventricular hyperintensity (PVH)

| | 40-49yr | | 50-59yr | | 60-69yr | | 70-79yr | | 80yr - | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| None | Male | 251 | 98.4 | 244 | 90.4 | 173 | 65.3 | 70 | 28.1 | 10 | 11.5 | 748 | 66.4 |
| | Female | 259 | 99.6 | 223 | 90.7 | 182 | 68.2 | 89 | 36.8 | 15 | 16.0 | 768 | 69.3 |
| | Total | 510 | 99.0 | 467 | 90.5 | 355 | 66.7 | 159 | 32.4 | 25 | 13.8 | 1516 | 67.8 |
| Mild | Male | 4 | 1.6 | 25 | 9.3 | 85 | 32.1 | 131 | 52.6 | 48 | 55.2 | 293 | 26.0 |
| | Female | 1 | 0.4 | 20 | 8.1 | 79 | 29.6 | 122 | 50.4 | 49 | 52.1 | 271 | 24.4 |
| | Total | 5 | 1.0 | 45 | 8.7 | 164 | 30.8 | 253 | 51.5 | 97 | 53.6 | 564 | 25.2 |
| Moderate | Male | 0 | 0.0 | 1 | 0.4 | 7 | 2.6 | 46 | 18.5 | 28 | 32.2 | 82 | 7.3 |
| | Female | 0 | 0.0 | 3 | 1.2 | 6 | 2.2 | 29 | 12.0 | 28 | 29.8 | 66 | 6.0 |
| | Total | 0 | 0.0 | 4 | 0.8 | 13 | 2.4 | 75 | 15.3 | 56 | 30.9 | 148 | 6.6 |
| Severe | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.8 | 1 | 1.1 | 3 | 0.3 |
| | Female | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.8 | 2 | 2.1 | 4 | 0.4 |
| | Total | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 4 | 0.8 | 3 | 1.7 | 7 | 0.3 |

2) Ventricular dilatation

Ventricular dilatation

| | | 40-49yr | | 50-59yr | | 60-69yr | | 70-79yr | | 80yr - | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| None | Male | 235 | 92.2 | 231 | 85.6 | 149 | 56.2 | 49 | 19.7 | 4 | 4.6 | 668 | 59.3 |
| | Female | 247 | 95.0 | 225 | 91.5 | 213 | 79.8 | 101 | 41.7 | 9 | 9.6 | 795 | 71.7 |
| | Total | 482 | 93.6 | 456 | 88.4 | 362 | 68.0 | 150 | 30.5 | 13 | 7.2 | 1463 | 65.5 |
| Mild | Male | 18 | 7.1 | 38 | 14.1 | 108 | 40.8 | 150 | 60.2 | 50 | 57.5 | 364 | 32.3 |
| | Female | 13 | 5.0 | 21 | 8.5 | 50 | 18.7 | 120 | 49.6 | 59 | 62.8 | 263 | 23.7 |
| | Total | 31 | 6.0 | 59 | 11.4 | 158 | 29.7 | 270 | 55.0 | 109 | 60.2 | 627 | 28.1 |
| Moderate | Male | 2 | 0.8 | 1 | 0.4 | 8 | 3.0 | 49 | 19.7 | 33 | 37.9 | 93 | 8.3 |
| | Female | 0 | 0.0 | 0 | 0.0 | 3 | 1.1 | 20 | 8.3 | 25 | 26.6 | 48 | 4.3 |
| | Total | 2 | 0.4 | 1 | 0.2 | 11 | 2.1 | 69 | 14.1 | 58 | 32.0 | 141 | 6.3 |
| Severe | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 0 | 0.0 | 1 | 0.1 |
| | Female | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 1 | 0.4 | 1 | 1.1 | 3 | 0.3 |
| | Total | 0 | 0.0 | 0 | 0.0 | 1 | 0.2 | 2 | 0.4 | 1 | 0.6 | 4 | 0.2 |

Ventricular dilatation (anterior horn)

| | | 40-49yr | | 50-59yr | | 60-69yr | | 70-79yr | | 80yr - | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| None | Male | 249 | 97.6 | 247 | 91.5 | 205 | 77.4 | 89 | 35.7 | 12 | 13.8 | 802 | 71.2 |
| | Female | 258 | 99.2 | 240 | 97.6 | 245 | 91.8 | 152 | 62.8 | 29 | 30.9 | 924 | 83.3 |
| | Total | 507 | 98.4 | 487 | 94.4 | 450 | 84.6 | 241 | 49.1 | 41 | 22.7 | 1726 | 77.2 |
| Mild | Male | 6 | 2.4 | 23 | 8.5 | 59 | 22.3 | 138 | 55.4 | 57 | 65.5 | 283 | 25.1 |
| | Female | 2 | 0.8 | 6 | 2.4 | 21 | 7.9 | 85 | 35.1 | 58 | 61.7 | 172 | 15.5 |
| | Total | 8 | 1.6 | 29 | 5.6 | 80 | 15.0 | 223 | 45.4 | 115 | 63.5 | 455 | 20.4 |
| Moderate | Male | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 22 | 8.8 | 18 | 20.7 | 41 | 3.6 |
| | Female | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 5 | 2.1 | 7 | 7.4 | 13 | 1.2 |
| | Total | 0 | 0.0 | 0 | 0.0 | 2 | 0.4 | 27 | 5.5 | 25 | 13.8 | 54 | 2.4 |
| Severe | 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 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | Total | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |

Ventricular dilatation (posterior horn)

| | | 40-49yr | | 50-59yr | | 60-69yr | | 70-79yr | | 80yr - | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| None | Male | 235 | 92.2 | 234 | 86.7 | 155 | 58.5 | 52 | 20.9 | 5 | 5.7 | 681 | 60.5 |
| | Female | 247 | 95.0 | 226 | 91.9 | 213 | 79.8 | 105 | 43.4 | 9 | 9.6 | 800 | 72.1 |
| | Total | 482 | 93.6 | 460 | 89.1 | 368 | 69.2 | 157 | 32.0 | 14 | 7.7 | 1481 | 66.3 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mild | Male | 18 | 7.1 | 35 | 13.0 | 102 | 38.5 | 147 | 59.0 | 50 | 57.5 | 352 | 31.3 |
| | Female | 13 | 5.0 | 20 | 8.1 | 50 | 18.7 | 116 | 47.9 | 59 | 62.8 | 258 | 23.3 |
| | Total | 31 | 6.0 | 55 | 10.7 | 152 | 28.6 | 263 | 53.6 | 109 | 60.2 | 610 | 27.3 |
| Moderate | Male | 2 | 0.8 | 1 | 0.4 | 8 | 3.0 | 49 | 19.7 | 32 | 36.8 | 92 | 8.2 |
| | Female | 0 | 0.0 | 0 | 0.0 | 3 | 1.1 | 20 | 8.3 | 25 | 26.6 | 48 | 4.3 |
| | Total | 2 | 0.4 | 1 | 0.2 | 11 | 2.1 | 69 | 14.1 | 57 | 31.5 | 140 | 6.3 |
| Severe | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 0 | 0.0 | 1 | 0.1 |
| | Female | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 1 | 0.4 | 1 | 1.1 | 3 | 0.3 |
| | Total | 0 | 0.0 | 0 | 0.0 | 1 | 0.2 | 2 | 0.4 | 1 | 0.6 | 4 | 0.2 |

3) Brain atrophy

Brain atrophy

| | | 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 | 1 | 0.4 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 |
| | Total | 0 | 0.0 | 0 | 0.0 | 1 | 0.2 | 0 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| None | Male | 242 | 94.9 | 239 | 88.5 | 161 | 60.8 | 36 | 14.5 | 1 | 1.1 | 679 | 60.3 |
| | Female | 256 | 98.5 | 237 | 96.3 | 214 | 80.1 | 82 | 33.9 | 7 | 7.4 | 796 | 71.8 |
| | Total | 498 | 96.7 | 476 | 92.2 | 375 | 70.5 | 118 | 24.0 | 8 | 4.4 | 1475 | 66.0 |
| Mild | Male | 13 | 5.1 | 31 | 11.5 | 104 | 39.2 | 180 | 72.3 | 48 | 55.2 | 376 | 33.4 |
| | Female | 4 | 1.5 | 8 | 3.3 | 49 | 18.4 | 148 | 61.2 | 73 | 77.7 | 282 | 25.4 |
| | Total | 17 | 3.3 | 39 | 7.6 | 153 | 28.8 | 328 | 66.8 | 121 | 66.9 | 658 | 29.4 |
| Moderate | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 31 | 12.4 | 35 | 40.2 | 66 | 5.9 |
| | Female | 0 | 0.0 | 1 | 0.4 | 3 | 1.1 | 10 | 4.1 | 14 | 14.9 | 28 | 2.5 |
| | Total | 0 | 0.0 | 1 | 0.2 | 3 | 0.6 | 41 | 8.4 | 49 | 27.1 | 94 | 4.2 |
| Severe | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.8 | 3 | 3.4 | 5 | 0.4 |
| | Female | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.8 | 0 | 0.0 | 2 | 0.2 |
| | Total | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 4 | 0.8 | 3 | 1.7 | 7 | 0.3 |

Brain atrophy (frontal lobe)

| | | 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 | 1 | 0.4 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 |
| | Total | 0 | 0.0 | 0 | 0.0 | 1 | 0.2 | 0 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| None | Male | 245 | 96.1 | 245 | 90.7 | 212 | 80.0 | 110 | 44.2 | 14 | 16.1 | 826 | 73.4 |
| | Female | 257 | 98.8 | 238 | 96.7 | 235 | 88.0 | 161 | 66.5 | 40 | 42.6 | 931 | 83.9 |
| | Total | 502 | 97.5 | 483 | 93.6 | 447 | 84.0 | 271 | 55.2 | 54 | 29.8 | 1757 | 78.6 |
| Mild | Male | 10 | 3.9 | 25 | 9.3 | 53 | 20.0 | 116 | 46.6 | 48 | 55.2 | 252 | 22.4 |
| | Female | 3 | 1.2 | 8 | 3.3 | 29 | 10.9 | 73 | 30.2 | 46 | 48.9 | 159 | 14.3 |
| | Total | 13 | 2.5 | 33 | 6.4 | 82 | 15.4 | 189 | 38.5 | 94 | 51.9 | 411 | 18.4 |
| Moderate | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 22 | 8.8 | 23 | 26.4 | 45 | 4.0 |
| | Female | 0 | 0.0 | 0 | 0.0 | 2 | 0.7 | 8 | 3.3 | 8 | 8.5 | 18 | 1.6 |
| | Total | 0 | 0.0 | 0 | 0.0 | 2 | 0.4 | 30 | 6.1 | 31 | 17.1 | 63 | 2.8 |
| Severe | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 2 | 2.3 | 3 | 0.3 |
| | 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 | 0.2 | 2 | 1.1 | 3 | 0.1 |

Brain atrophy (temporal lobe)

| | | 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 | 1 | 0.4 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 |
| | Total | 0 | 0.0 | 0 | 0.0 | 1 | 0.2 | 0 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| None | Male | 252 | 98.8 | 261 | 96.7 | 182 | 68.7 | 54 | 21.7 | 2 | 2.3 | 751 | 66.7 |
| | Female | 258 | 99.2 | 243 | 98.8 | 230 | 86.1 | 97 | 40.1 | 10 | 10.6 | 838 | 75.6 |
| | Total | 510 | 99.0 | 504 | 97.7 | 412 | 77.4 | 151 | 30.8 | 12 | 6.6 | 1589 | 71.1 |
| Mild | Male | 3 | 1.2 | 9 | 3.3 | 83 | 31.3 | 179 | 71.9 | 58 | 66.7 | 332 | 29.5 |
| | Female | 2 | 0.8 | 2 | 0.8 | 34 | 12.7 | 141 | 58.3 | 73 | 77.7 | 252 | 22.7 |
| | Total | 5 | 1.0 | 11 | 2.1 | 117 | 22.0 | 320 | 65.2 | 131 | 72.4 | 584 | 26.1 |
| Moderate | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 15 | 6.0 | 26 | 29.9 | 41 | 3.6 |
| | Female | 0 | 0.0 | 1 | 0.4 | 2 | 0.7 | 2 | 0.8 | 11 | 11.7 | 16 | 1.4 |
| | Total | 0 | 0.0 | 1 | 0.2 | 2 | 0.4 | 17 | 3.5 | 37 | 20.4 | 57 | 2.6 |
| Severe | Male | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 1 | 1.1 | 2 | 0.2 |
| | Female | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.8 | 0 | 0.0 | 2 | 0.2 |
| | Total | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 3 | 0.6 | 1 | 0.6 | 4 | 0.2 |

4) Cerebrovascular disease (CVD)

Lacuna infarction

| | | 40-49yr | | 50-59yr | | 60-69yr | | 70-79yr | | 80yr - | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| None | Male | 253 | 99.2 | 242 | 89.6 | 182 | 68.7 | 98 | 39.4 | 20 | 23.0 | 795 | 70.6 |
| | Female | 257 | 98.8 | 228 | 92.7 | 207 | 77.5 | 132 | 54.5 | 31 | 33.0 | 855 | 77.1 |
| | Total | 510 | 99.0 | 470 | 91.1 | 389 | 73.1 | 230 | 46.8 | 51 | 28.2 | 1650 | 73.8 |
| Single lacuna | Male | 1 | 0.4 | 15 | 5.6 | 31 | 11.7 | 32 | 12.9 | 8 | 9.2 | 87 | 7.7 |
| | Female | 1 | 0.4 | 10 | 4.1 | 25 | 9.4 | 25 | 10.3 | 10 | 10.6 | 71 | 6.4 |
| | Total | 2 | 0.4 | 25 | 4.8 | 56 | 10.5 | 57 | 11.6 | 18 | 9.9 | 158 | 7.1 |
| Multiple lacuna | Male | 1 | 0.4 | 13 | 4.8 | 52 | 19.6 | 119 | 47.8 | 59 | 67.8 | 244 | 21.7 |
| | Female | 2 | 0.8 | 8 | 3.3 | 35 | 13.1 | 85 | 35.1 | 53 | 56.4 | 183 | 16.5 |
| | Total | 3 | 0.6 | 21 | 4.1 | 87 | 16.4 | 204 | 41.5 | 112 | 61.9 | 427 | 19.1 |

Cerebral embolism

| | | 40-49yr | | 50-59yr | | 60-69yr | | 70-79yr | | 80yr - | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| Embolism (-) | Male | 255 | 100.0 | 269 | 99.6 | 261 | 98.5 | 224 | 90.0 | 76 | 87.4 | 1085 | 96.4 |
| | Female | 258 | 99.2 | 243 | 98.8 | 264 | 98.9 | 237 | 97.9 | 88 | 93.6 | 1090 | 98.3 |
| | Total | 513 | 99.6 | 512 | 99.2 | 525 | 98.7 | 461 | 93.9 | 164 | 90.6 | 2175 | 97.3 |
| Embolism (+) | Male | 0 | 0.0 | 1 | 0.4 | 4 | 1.5 | 25 | 10.0 | 11 | 12.6 | 41 | 3.6 |
| | Female | 2 | 0.8 | 3 | 1.2 | 3 | 1.1 | 5 | 2.1 | 6 | 6.4 | 19 | 1.7 |
| | Total | 2 | 0.4 | 4 | 0.8 | 7 | 1.3 | 30 | 6.1 | 17 | 9.4 | 60 | 2.7 |

Cerebral thrombosis

| | | 40-49yr | | 50-59yr | | 60-69yr | | 70-79yr | | 80yr - | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| Thrombosis (-) | Male | 250 | 98.0 | 269 | 99.6 | 264 | 99.6 | 243 | 97.6 | 79 | 90.8 | 1105 | 98.1 |
| | Female | 260 | 100.0 | 244 | 99.2 | 264 | 98.9 | 242 | 100.0 | 91 | 96.8 | 1101 | 99.3 |
| | Total | 510 | 99.0 | 513 | 99.4 | 528 | 99.2 | 485 | 98.8 | 170 | 93.9 | 2206 | 98.7 |
| Thrombosis (+) | Male | 5 | 2.0 | 1 | 0.4 | 1 | 0.4 | 6 | 2.4 | 8 | 9.2 | 21 | 1.9 |
| | Female | 0 | 0.0 | 2 | 0.8 | 3 | 1.1 | 0 | 0.0 | 3 | 3.2 | 8 | 0.7 |
| | Total | 5 | 1.0 | 3 | 0.6 | 4 | 0.8 | 6 | 1.2 | 11 | 6.1 | 29 | 1.3 |

Cerebral infarction

| | 40-49yr | 50-59yr | 60-69yr | 70-79yr | 80yr - | Total |
|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| None | Male | 248 | 97.3 | 240 | 88.9 | 181 | 68.3 | 92 | 36.9 | 18 | 20.7 | 779 | 69.2 |
| | Female | 255 | 98.1 | 225 | 91.5 | 204 | 76.4 | 131 | 54.1 | 27 | 28.7 | 842 | 75.9 |
| | Total | 503 | 97.7 | 465 | 90.1 | 385 | 72.4 | 223 | 45.4 | 45 | 24.9 | 1621 | 72.5 |
| Single infarction | Male | 6 | 2.4 | 16 | 5.9 | 32 | 12.1 | 35 | 14.1 | 9 | 10.3 | 98 | 8.7 |
| | Female | 2 | 0.8 | 11 | 4.5 | 27 | 10.1 | 26 | 10.7 | 13 | 13.8 | 79 | 7.1 |
| | Total | 8 | 1.6 | 27 | 5.2 | 59 | 11.1 | 61 | 12.4 | 22 | 12.2 | 177 | 7.9 |
| Multiple infarction | Male | 1 | 0.4 | 14 | 5.2 | 52 | 19.6 | 122 | 49.0 | 60 | 69.0 | 249 | 22.1 |
| | Female | 3 | 1.2 | 10 | 4.1 | 36 | 13.5 | 85 | 35.1 | 54 | 57.4 | 188 | 17.0 |
| | Total | 4 | 0.8 | 24 | 4.7 | 88 | 16.5 | 207 | 42.2 | 114 | 63.0 | 437 | 19.6 |

Cerebral hemorrhage

| | | 40-49yr | | 50-59yr | | 60-69yr | | 70-79yr | | 80yr - | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| Hemorrhage (-) | Male | 255 | 100.0 | 270 | 100.0 | 264 | 99.6 | 245 | 98.4 | 86 | 98.9 | 1120 | 99.5 |
| | Female | 260 | 100.0 | 245 | 99.6 | 265 | 99.3 | 241 | 99.6 | 93 | 98.9 | 1104 | 99.5 |
| | Total | 515 | 100.0 | 515 | 99.8 | 529 | 99.4 | 486 | 99.0 | 179 | 98.9 | 2224 | 99.5 |
| Hemorrhage (+) | Male | 0 | 0.0 | 0 | 0.0 | 1 | 0.4 | 4 | 1.6 | 1 | 1.1 | 6 | 0.5 |
| | Female | 0 | 0.0 | 1 | 0.4 | 2 | 0.7 | 1 | 0.4 | 1 | 1.1 | 5 | 0.5 |
| | Total | 0 | 0.0 | 1 | 0.2 | 3 | 0.6 | 5 | 1.0 | 2 | 1.1 | 11 | 0.5 |

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