问题三：

首先对所有的数据进行量纲统一化处理，

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **描述统计** | | | | | |
|  | N | 最小值 | 最大值 | 均值 | 标准 偏差 |
| RID\_1 | 1284 | 7 | 7092 | 3982.20 | 2368.936 |
| AGE\_1 | 1284 | 54.4 | 90.1 | 73.928 | 7.3609 |
| PIB\_1 | 1284 | 1.1150 | 2.9275 | 1.846588 | .0942278 |
| ABETA\_1 | 1284 | 210.90 | 1681.00 | 754.5026 | 161.23296 |
| TAU\_1 | 1284 | 100.90 | 890.00 | 303.1029 | 67.05814 |
| PTAU\_1 | 1284 | 9.23 | 103.00 | 29.8191 | 7.55976 |
| ADAS13\_1 | 1284 | .00 | 72.00 | 20.2839 | 9.03696 |
| CDRSB\_1 | 1284 | .0 | 16.0 | 2.307 | 1.9910 |
| ADAS11\_1 | 1284 | .00 | 57.00 | 12.7530 | 6.78729 |
| MMSE\_1 | 1284 | 8.0 | 30.0 | 26.032 | 3.4100 |
| LDELTOTAL\_1 | 1284 | .0 | 20.0 | 5.483 | 3.8563 |
| DIGITSCOR\_1 | 1284 | .0 | 70.0 | 36.374 | 11.8738 |
| TRABSCOR\_1 | 1284 | .0 | 300.0 | 135.034 | 78.3502 |
| 有效个案数（成列） | 1284 |  |  |  |  |

量纲化后的聚类分析

|  |  |  |  |
| --- | --- | --- | --- |
| **初始聚类中心** | | | |
|  | 聚类 | | |
| 1 | 2 | 3 |
| Zscore(RID\_1) | .43513 | .48452 | .94296 |
| Zscore(AGE\_1) | .77054 | .09128 | .39015 |
| Zscore(PIB\_1) | 11.47127 | -.03702 | -4.42108 |
| Zscore(ABETA\_1) | .07087 | -1.34776 | 2.75066 |
| Zscore(TAU\_1) | -.05611 | 8.18241 | -1.75524 |
| Zscore(PTAU\_1) | -.05809 | 9.68032 | -1.78830 |
| Zscore(ADAS13\_1) | 1.29646 | -.17859 | .33707 |
| Zscore(CDRSB\_1) | .09701 | -.65638 | .85039 |
| Zscore(ADAS11\_1) | .77306 | -.15956 | .08501 |
| Zscore(MMSE\_1) | -.30260 | -.30260 | .87042 |
| Zscore(LDELTOTAL\_1) | -1.42170 | -1.42170 | -.90307 |
| Zscore(DIGITSCOR\_1) | 1.65292 | .22119 | .47385 |
| Zscore(TRABSCOR\_1) | -.57478 | -.19189 | -.10254 |

|  |  |  |  |
| --- | --- | --- | --- |
| **最终聚类中心** | | | |
|  | 聚类 | | |
| 1 | 2 | 3 |
| RID\_1 | 1023 | 6553 | 4607 |
| AGE\_1 | 74.4 | 73.0 | 74.4 |
| PIB\_1 | 1.8423 | 1.8454 | 1.8526 |
| ABETA\_1 | 746.75 | 752.77 | 764.88 |
| TAU\_1 | 300.68 | 308.49 | 300.23 |
| PTAU\_1 | 29.58 | 30.36 | 29.53 |
| ADAS13\_1 | 19.85 | 21.20 | 19.82 |
| CDRSB\_1 | 2.1 | 2.5 | 2.3 |
| ADAS11\_1 | 12.52 | 13.28 | 12.47 |
| MMSE\_1 | 26.0 | 25.8 | 26.3 |
| LDELTOTAL\_1 | 5.4 | 5.5 | 5.6 |
| DIGITSCOR\_1 | 36.8 | 35.9 | 36.4 |
| TRABSCOR\_1 | 129.5 | 142.2 | 133.7 |

|  |  |  |
| --- | --- | --- |
| **每个聚类中的个案数目** | | |
| 聚类 | 1 | 453.000 |
| 2 | 422.000 |
| 3 | 409.000 |
| 有效 | | 1284.000 |
| 缺失 | | .000 |