

# Supplementary Material

## SUPPLEMENTARY METHODS

Data used in the preparation of this article were obtained from the ADNI database (<http://adni.loni.usc.edu>). The ADNI was launched in 2003 by the National Institute on Aging (NIA), the National Institute of Biomedical Imaging and Bioengineering (NIBIB), the Food and Drug Administration (FDA), private pharmaceutical companies and non-profit organizations, as a \$60 million, 5-year public-private partnership. The primary goal of ADNI has been to test whether serial magnetic resonance imaging (MRI), positron emission tomography (PET), other biological markers, and clinical and neuropsychological assessment can be combined to measure the progression of MCI and early AD. Determination of sensitive and specific markers of very early AD progression is intended to aid researchers and clinicians to develop new treatments and monitor their effectiveness, as well as lessen the time and cost of clinical trials. The Principal Investigator of this initiative is Michael W. Weiner, MD, VA Medical Center and University of California – San Francisco. ADNI is the result of efforts of many co-investigators from a broad range of academic institutions and private corporations, and subjects have been recruited from over 50 sites across the U.S. and Canada. The initial goal of ADNI was to recruit 800 subjects but ADNI has been followed by ADNI-GO and ADNI-2. To date these three protocols have recruited over 1500 adults, ages 55 to 90, to participate in the research, consisting of cognitively normal older individuals, people with early or late MCI, and people with early AD. The follow up duration of each group is specified in the protocols for ADNI-1, ADNI-2 and ADNI-GO. Subjects originally recruited for ADNI-1 and ADNI-GO had the option to be followed in ADNI-2. For up-to-date information, see <http://www.adni-info.org>.

## **Standard Protocol Approvals, Registrations, and Patient Consents**

This study was approved by an ethical standards committee on human experimentation at each institution. Written informed consent was obtained from all participants or authorized representatives participating in the study.

## **Apolipoprotein E Genotypes**

Apolipoprotein E genotyping was performed at the time of participant enrollment and included in the ADNI database. The two single nucleotide polymorphisms (rs429358, rs7412) that define the epsilon 2, 3, and 4 alleles, are not on the Human610-Quad BeadChip, and therefore were genotyped using DNA extracted via blood by Cogenics from a 3 mL aliquot of ethylenediaminetetraacetic acid-containing vacutainer tubes. Polymerase chain reaction amplification was followed by HhaI restriction enzyme digestion, resolution on 4% Metaphor Gel, and visualization by ethidium bromide staining. See <http://www.adni-info.org> for details.

## **Cerebrospinal Fluid Measures**

Methods of CSF acquisition and biomarker measurement using the ADNI sample have previously been described by Shaw et al. [1]. Briefly, CSF was collected and stored at -80°C at the University of Pennsylvania ADNI Biomarker Core Laboratory. Amyloid- $\beta$  from peptides 1-42, tau phosphorylated at threonine 181, and total tau was measured using the multiplex xMAP Luminex platform (Luminex Corp, Austin, TX) with Innogenetics (INNOBIA AlzBio3, Ghent, Belgium) immunoassay kit-based reagents. See <http://www.adni-info.org> for details.

## **SUPPLEMENTARY RESULTS**

### **Performances of MCI Subtypes on ADNI's Diagnostic Measures**

#### *Conventional criteria*

On the WMS-R Logical Memory II subtest, which was used in ADNI's MCI diagnosis and thus not included in the cluster analysis, the *Amnestic* and *Dysexecutive/Mixed* groups performed similarly to each other ( $p > 0.05$ ) but worse than the *Cluster-Derived Normal* group ( $ps < 0.001$ ). A similar pattern was found on the MMSE, as the two impaired groups performed worse than the *Cluster-Derived Normal* group ( $ps < 0.001$ ). Global CDR scores were 0.5 for all cluster groups; however, *Amnestic* and *Dysexecutive/Mixed* groups scored higher on the CDR Sum of Boxes compared to the *Cluster-Derived Normal* group ( $ps < 0.001$ ).

#### *Actuarial criteria*

On the WMS-R Logical Memory II subtest, the *Amnestic* and *Dysexecutive/Mixed* and groups performed worse than the *Impaired Language* group ( $ps < 0.01$ ). On the MMSE, the *Dysexecutive/Mixed* group performed worse than the other two groups ( $ps < 0.01$ ). There was no difference between groups on CDR Sum of Boxes scores ( $p > 0.05$ ).

### **Clinical and Biomarker Characteristics of Cluster-Derived Normal Participants Who Progressed to AD**

Among the *Cluster-Derived Normal* subgroup it is notable that as a whole they demonstrated a higher APOE  $\epsilon 4$  allelic frequency (38%) than the overall sample of ADNI cognitively normal participants ( $n=407$  with genetic data available,  $\epsilon 4$  carriers = 27%;  $\chi^2(1) = 8.76$ ;  $p=0.003$ ), suggesting that this group nevertheless contained at least a subset of at-risk individuals that

might still be differentiable by other clinical, imaging, and biomarker characteristics. Follow-up analyses showed that 23 of the 246 (9.3%) of the participants in this *Cluster-Derived Normal* group did in fact progress to AD within our follow-up timeframe. Also, 11 of the 23 (48%) who progressed carried the APOE-  $\epsilon$ 4 allele, a rate similar to the other empirically-derived MCI subtypes (e.g., *Amnesic, Dysexecutive/Mixed, Impaired Language*). Moreover, those 23 participants who ultimately progressed to AD were significantly older ( $t(244) = -2.69, p < 0.01$ ) than their 223 counterparts with follow-up data who did not progress, and they showed statistically significant poorer memory recall (AVLT Recall:  $t(244) = 3.56, p < 0.001$ ) as well as qualitatively lower neuropsychological scores across the other tests administered. CSF biomarkers also differed, as those who progressed demonstrated lower  $A\beta_{1-42}$  ( $t(138) = 3.00, p = 0.003$ ) and slightly higher p-tau<sub>181p</sub>/ $A\beta_{1-42}$  values ( $t(10.4) = -2.40, p = 0.04$ ) when compared to those who did not progress to AD. The mean time point at which a dementia diagnosis was made for these 23 individuals was 34.2 months post-screening, or about 12-15 months later than for either of the other progression rates based on the conventional or actuarial criteria.

Overall, the statistical classification of MCI based on neuropsychological test scores resulted in a significant improvement in the specificity of the diagnosis, as it identified 265 participants with potentially false positive diagnoses. However, it was at a cost of some modest corresponding decline in sensitivity, as a subset of 23 individuals in the *Cluster-Derived Normal* group did progress to dementia over time. Thus their original ADNI diagnosis of MCI could be considered accurate. However, it is important to note that nearly an equal number of individuals (21 participants; 8.5%) in the *Cluster-Derived Normal* group reverted a cognitively normal classification by ADNI at follow-up, suggesting roughly equal diagnostic errors in the opposite direction. All told, our findings suggest that a very modest loss in sensitivity (i.e., 23 of the 246

participants with follow-up data) is far outweighed by the large gains in specificity (i.e., 223 of the 246 participants).

## **Reference**

- [1] Shaw LM, Vanderstichele H, Knapik-Czajka M, Clark CM, Aisen PS, Petersen RC, Blennow K, Soares H, Simon A, Lewczuk P, Dean R, Siemers E, Potter W, Lee VM, Trojanowski JQ; Alzheimer's Disease Neuroimaging Initiative (2009) Cerebrospinal fluid biomarker signature in Alzheimer's disease neuroimaging initiative subjects. *Ann Neurol* **65**, 403-413.

**Supplementary Table 1.** ADNI roster ID numbers of participants in this study.

5	96	195	301	408	502	601	695	825	915
6	97	196	303	409	505	602	697	830	917
8	98	200	307	410	507	604	698	832	919
14	101	204	312	413	511	607	702	834	920
16	102	205	314	414	513	608	708	835	921
19	103	214	315	416	514	610	709	839	922
21	107	217	319	417	516	611	711	842	923
23	108	222	324	419	518	613	715	845	924
30	111	225	325	422	519	618	718	851	925
31	112	227	326	423	520	621	721	855	926
38	116	229	327	424	522	625	722	856	928
40	120	230	331	425	525	626	723	860	930
41	125	231	336	429	526	629	725	861	931
42	126	240	337	433	531	631	726	862	932
43	128	241	339	434	533	634	727	863	934
44	130	243	344	441	534	637	729	865	941
45	135	249	351	442	538	638	731	866	945
47	138	256	352	443	539	641	734	867	947
48	141	257	354	445	544	643	741	869	950
50	142	258	359	446	545	644	746	871	951
51	150	262	361	448	546	647	748	872	952
54	155	269	362	449	549	648	750	873	954
57	158	272	363	450	551	649	751	874	957
58	159	273	369	458	552	656	752	878	958
60	160	276	376	461	553	657	767	880	961
66	161	282	377	464	557	658	768	886	963
67	168	283	378	469	559	667	769	887	967
68	169	284	382	472	563	668	770	890	969
70	172	285	384	473	566	669	771	892	973
72	173	288	386	476	567	671	782	896	976
74	176	289	388	478	568	672	783	898	978
77	177	290	389	479	572	673	792	904	981
80	178	291	390	481	575	675	800	906	982
81	179	292	393	485	576	677	802	907	984
86	182	293	394	488	578	679	810	908	987
87	184	294	397	493	579	681	813	909	989
89	186	295	401	498	588	684	818	912	994
90	187	296	406	500	590	685	821	913	997
95	188	298	407	501	598	686	824	914	1002

1004	1118	1242	1338	2036	2167	2315	4030	4121	4203
1007	1119	1243	1340	2037	2168	2316	4032	4122	4205
1010	1120	1244	1343	2042	2171	2332	4034	4127	4206
1014	1121	1245	1346	2043	2180	2333	4035	4128	4208
1015	1122	1246	1350	2045	2182	2336	4036	4131	4210
1016	1126	1247	1351	2047	2183	2347	4037	4133	4212
1023	1130	1249	1352	2052	2184	2357	4042	4134	4213
1028	1131	1250	1357	2055	2185	2360	4043	4138	4214
1030	1133	1251	1363	2057	2187	2363	4050	4143	4216
1031	1135	1255	1378	2058	2190	2367	4051	4146	4217
1032	1138	1256	1380	2060	2193	2373	4053	4148	4219
1033	1140	1260	1384	2061	2194	2374	4054	4149	4220
1034	1148	1261	1387	2063	2195	2376	4057	4150	4222
1035	1149	1265	1389	2068	2196	2378	4058	4151	4224
1038	1155	1267	1393	2070	2199	2379	4059	4155	4225
1040	1165	1268	1394	2072	2200	2380	4060	4157	4226
1043	1168	1269	1398	2073	2205	2381	4061	4158	4229
1045	1175	1271	1400	2074	2208	2389	4063	4159	4232
1046	1182	1275	1406	2077	2210	2390	4067	4160	4234
1051	1183	1276	1407	2079	2213	2391	4071	4162	4235
1054	1186	1277	1408	2083	2216	2392	4072	4164	4237
1057	1187	1279	1411	2087	2219	2394	4073	4167	4240
1066	1188	1280	1412	2093	2220	2395	4075	4168	4241
1070	1190	1282	1414	2099	2225	2396	4076	4169	4243
1072	1195	1284	1417	2100	2233	2398	4077	4170	4244
1073	1197	1286	1418	2106	2234	2403	4079	4173	4245
1074	1199	1288	1419	2109	2237	2405	4080	4175	4250
1075	1204	1292	1420	2116	2238	2407	4082	4176	4251
1077	1206	1293	1421	2119	2239	4003	4084	4177	4254
1078	1210	1294	1423	2121	2240	4004	4086	4179	4255
1080	1211	1295	1425	2123	2245	4005	4090	4184	4256
1086	1212	1299	1426	2124	2247	4007	4093	4185	4257
1088	1213	1300	1427	2125	2248	4010	4094	4186	4259
1092	1215	1301	2002	2130	2249	4012	4096	4187	4262
1097	1217	1309	2003	2133	2263	4014	4100	4188	4263
1098	1218	1311	2007	2138	2264	4015	4102	4189	4266
1099	1222	1314	2010	2142	2274	4018	4103	4194	4268
1103	1224	1315	2011	2146	2278	4020	4104	4196	4270
1104	1225	1318	2018	2148	2284	4021	4105	4197	4271
1106	1227	1321	2022	2150	2301	4022	4114	4198	4272
1114	1231	1322	2026	2151	2304	4026	4115	4199	4274
1116	1232	1326	2027	2155	2307	4028	4119	4200	4275
1117	1240	1331	2031	2164	2308	4029	4120	4202	4276

4277	4348	4396	4448	4515	4582	4635	4736	4825	4920
4278	4349	4399	4449	4516	4584	4636	4741	4832	4922
4279	4350	4400	4453	4517	4585	4637	4742	4835	4925
4281	4351	4401	4455	4520	4586	4643	4743	4838	4926
4285	4352	4402	4456	4521	4587	4644	4744	4842	4928
4287	4354	4403	4458	4522	4590	4645	4745	4844	4929
4288	4356	4404	4462	4524	4594	4646	4746	4849	4936
4290	4357	4405	4463	4530	4595	4649	4750	4852	4941
4291	4359	4406	4465	4531	4596	4653	4757	4857	4943
4292	4360	4408	4466	4536	4597	4654	4764	4858	4944
4293	4363	4414	4467	4538	4598	4659	4765	4868	4945
4294	4365	4415	4468	4539	4599	4661	4767	4869	4947
4297	4366	4417	4473	4540	4601	4668	4769	4871	4955
4300	4369	4419	4475	4542	4603	4671	4777	4873	4958
4301	4371	4420	4476	4543	4604	4674	4780	4874	4960
4302	4372	4421	4480	4545	4605	4675	4784	4876	4966
4303	4376	4422	4482	4547	4607	4678	4791	4877	4974
4309	4377	4423	4483	4548	4610	4679	4793	4883	4976
4310	4380	4426	4485	4552	4611	4680	4796	4885	4985
4311	4381	4427	4488	4553	4612	4689	4798	4888	4986
4312	4382	4428	4489	4555	4613	4694	4799	4889	4987
4313	4383	4429	4491	4556	4614	4706	4803	4891	4989
4320	4384	4430	4496	4557	4616	4708	4804	4893	5000
4324	4385	4431	4498	4558	4620	4711	4805	4896	5004
4327	4386	4432	4499	4559	4621	4712	4806	4897	5007
4328	4387	4434	4502	4560	4623	4713	4807	4898	5014
4331	4389	4438	4503	4562	4624	4714	4809	4899	5026
4332	4390	4441	4505	4565	4626	4715	4813	4902	5031
4335	4391	4442	4507	4566	4629	4720	4814	4904	5047
4337	4392	4443	4508	4571	4630	4721	4815	4907	5066
4339	4393	4444	4510	4576	4631	4722	4816	4909	5099
4343	4394	4445	4513	4578	4632	4723	4817	4917	5135
4345	4395	4447	4514	4580	4633	4729	4823	4919	5160

**Supplementary Table 2.** ADNI roster ID numbers and diagnoses based on ADNI criteria and neuropsychological criteria.

<b>RID</b>	<b>ADNI criteria</b>	<b>Neuropsychological criteria</b>			
			103	MCI	Normal
			107	MCI	Normal
5	Normal	Normal	108	MCI	MCI
6	MCI	MCI	111	MCI	MCI
8	Normal	Normal	112	MCI	Normal
14	Normal	Normal	116	MCI	Normal
16	Normal	Normal	120	Normal	Normal
19	Normal	Normal	125	Normal	Normal
21	Normal	Normal	126	MCI	Normal
23	Normal	Normal	128	MCI	MCI
30	MCI	MCI	130	Normal	Normal
31	Normal	Normal	135	MCI	Normal
38	MCI	MCI	138	MCI	Normal
40	Normal	Normal	141	MCI	MCI
41	MCI	MCI	142	MCI	Normal
42	MCI	MCI	150	MCI	Normal
43	Normal	Normal	155	MCI	Normal
44	MCI	MCI	158	MCI	Normal
45	MCI	MCI	159	Normal	Normal
47	Normal	Normal	160	MCI	MCI
48	Normal	Normal	161	MCI	MCI
50	MCI	MCI	168	MCI	Normal
51	MCI	Normal	169	MCI	Normal
54	MCI	MCI	172	Normal	Normal
57	MCI	MCI	173	Normal	Normal
58	Normal	Normal	176	MCI	MCI
60	MCI	MCI	177	Normal	Normal
66	Normal	Normal	178	MCI	Normal
67	Normal	Normal	179	MCI	MCI
68	Normal	Normal	182	MCI	MCI
70	Normal	Normal	184	Normal	Normal
72	Normal	Normal	186	Normal	Normal
74	Normal	Normal	187	MCI	MCI
77	MCI	MCI	188	MCI	MCI
80	MCI	Normal	195	MCI	Normal
81	Normal	Normal	196	Normal	Normal
86	Normal	Normal	200	MCI	Normal
87	MCI	MCI	204	MCI	MCI
89	Normal	Normal	205	MCI	Normal
90	Normal	Normal	214	MCI	MCI
95	Normal	Normal	217	MCI	Normal
96	Normal	Normal	222	MCI	MCI
97	Normal	Normal	225	MCI	Normal
98	MCI	MCI	227	MCI	Normal
101	MCI	MCI	229	Normal	Normal
102	MCI	MCI	230	Normal	Normal

231	MCI	MCI	359	Normal	Normal
240	MCI	Normal	361	MCI	MCI
241	MCI	Normal	362	MCI	Normal
243	MCI	MCI	363	Normal	Normal
249	MCI	MCI	369	Normal	Normal
256	MCI	MCI	376	MCI	Normal
257	Normal	Normal	377	MCI	Normal
258	MCI	MCI	378	MCI	Normal
262	Normal	MCI	382	Normal	Normal
269	MCI	MCI	384	MCI	Normal
272	Normal	Normal	386	Normal	Normal
273	MCI	MCI	388	MCI	MCI
276	MCI	Normal	389	MCI	Normal
282	MCI	Normal	390	MCI	Normal
283	Normal	Normal	393	MCI	Normal
284	MCI	MCI	394	MCI	MCI
285	MCI	Normal	397	MCI	Normal
288	MCI	Normal	401	MCI	Normal
289	MCI	Normal	406	MCI	MCI
290	MCI	Normal	407	MCI	Normal
291	MCI	Normal	408	MCI	MCI
292	MCI	MCI	409	MCI	MCI
293	MCI	MCI	410	MCI	Normal
294	MCI	MCI	413	Normal	Normal
295	Normal	Normal	414	MCI	MCI
296	MCI	MCI	416	Normal	Normal
298	Normal	Normal	417	MCI	MCI
301	Normal	Normal	419	Normal	Normal
303	Normal	Normal	422	MCI	Normal
307	MCI	MCI	423	MCI	MCI
312	Normal	Normal	424	MCI	Normal
314	MCI	MCI	425	Normal	Normal
315	Normal	Normal	429	MCI	MCI
319	Normal	Normal	433	Normal	Normal
324	MCI	Normal	434	MCI	MCI
325	MCI	MCI	441	Normal	Normal
326	MCI	MCI	442	MCI	Normal
327	Normal	Normal	443	MCI	Normal
331	MCI	MCI	445	MCI	MCI
336	MCI	MCI	446	MCI	Normal
337	Normal	Normal	448	MCI	Normal
339	MCI	MCI	449	MCI	Normal
344	MCI	Normal	450	MCI	Normal
351	MCI	Normal	458	MCI	MCI
352	Normal	Normal	461	MCI	MCI
354	MCI	Normal	464	MCI	Normal

469	MCI	MCI	576	Normal	Normal
472	Normal	Normal	578	Normal	Normal
473	Normal	Normal	579	MCI	Normal
476	MCI	MCI	588	MCI	MCI
478	MCI	MCI	590	MCI	MCI
479	Normal	Normal	598	MCI	Normal
481	MCI	Normal	601	Normal	Normal
485	MCI	MCI	602	Normal	Normal
488	Normal	MCI	604	MCI	Normal
493	Normal	Normal	607	MCI	Normal
498	Normal	Normal	608	MCI	MCI
500	Normal	Normal	610	Normal	Normal
501	MCI	Normal	611	MCI	Normal
502	Normal	Normal	613	MCI	Normal
505	MCI	Normal	618	Normal	Normal
507	MCI	MCI	621	MCI	Normal
511	MCI	MCI	625	MCI	MCI
513	MCI	Normal	626	MCI	Normal
514	MCI	Normal	629	MCI	MCI
516	Normal	Normal	631	MCI	MCI
518	MCI	MCI	634	MCI	Normal
519	Normal	Normal	637	Normal	Normal
520	Normal	MCI	638	MCI	MCI
522	Normal	Normal	641	MCI	MCI
525	Normal	Normal	643	Normal	Normal
526	Normal	MCI	644	MCI	MCI
531	MCI	Normal	647	Normal	Normal
533	Normal	Normal	648	Normal	Normal
534	Normal	Normal	649	MCI	Normal
538	Normal	Normal	656	MCI	MCI
539	MCI	MCI	657	Normal	Normal
544	MCI	MCI	658	MCI	MCI
545	Normal	Normal	667	MCI	MCI
546	MCI	Normal	668	MCI	Normal
549	MCI	MCI	669	MCI	Normal
551	MCI	Normal	671	MCI	MCI
552	MCI	MCI	672	Normal	Normal
553	Normal	Normal	673	MCI	MCI
557	MCI	Normal	675	MCI	Normal
559	Normal	Normal	677	Normal	Normal
563	MCI	Normal	679	MCI	Normal
566	MCI	Normal	681	Normal	Normal
567	MCI	MCI	684	Normal	Normal
568	MCI	MCI	685	Normal	Normal
572	MCI	MCI	686	Normal	Normal
575	Normal	Normal	695	MCI	MCI

697	MCI	MCI	851	MCI	MCI
698	MCI	Normal	855	MCI	Normal
702	MCI	Normal	856	MCI	MCI
708	MCI	MCI	860	MCI	MCI
709	MCI	MCI	861	MCI	Normal
711	Normal	Normal	862	Normal	Normal
715	MCI	Normal	863	Normal	Normal
718	MCI	Normal	865	MCI	MCI
721	MCI	Normal	866	Normal	Normal
722	MCI	Normal	867	MCI	Normal
723	MCI	MCI	869	MCI	MCI
725	MCI	Normal	871	MCI	MCI
726	Normal	Normal	872	MCI	MCI
727	MCI	MCI	873	MCI	MCI
729	MCI	MCI	874	MCI	MCI
731	Normal	Normal	878	MCI	MCI
734	Normal	Normal	880	MCI	MCI
741	Normal	Normal	886	Normal	Normal
746	MCI	Normal	887	MCI	MCI
748	MCI	MCI	890	MCI	MCI
750	MCI	MCI	892	MCI	Normal
751	Normal	Normal	896	Normal	Normal
752	MCI	MCI	898	Normal	Normal
767	Normal	Normal	904	MCI	MCI
768	Normal	Normal	906	MCI	MCI
769	MCI	MCI	907	Normal	Normal
770	MCI	Normal	908	MCI	MCI
771	MCI	Normal	909	MCI	MCI
782	MCI	Normal	912	MCI	MCI
783	MCI	Normal	913	MCI	MCI
792	MCI	MCI	914	MCI	MCI
800	MCI	Normal	915	MCI	MCI
802	MCI	Normal	917	MCI	MCI
810	Normal	Normal	919	MCI	Normal
813	Normal	Normal	920	Normal	Normal
818	Normal	MCI	921	MCI	MCI
821	MCI	Normal	922	MCI	MCI
824	Normal	Normal	923	Normal	Normal
825	MCI	Normal	924	MCI	MCI
830	MCI	Normal	925	MCI	MCI
832	MCI	MCI	926	Normal	Normal
834	MCI	MCI	928	MCI	Normal
835	MCI	MCI	930	MCI	MCI
839	MCI	MCI	931	Normal	Normal
842	Normal	Normal	932	MCI	MCI
845	Normal	Normal	934	Normal	Normal

941	MCI	MCI	1066	MCI	Normal
945	MCI	MCI	1070	MCI	MCI
947	MCI	Normal	1072	MCI	MCI
950	MCI	MCI	1073	MCI	MCI
951	Normal	Normal	1074	MCI	Normal
952	MCI	MCI	1075	MCI	Normal
954	MCI	MCI	1077	MCI	MCI
957	MCI	MCI	1078	MCI	MCI
958	MCI	Normal	1080	MCI	Normal
961	MCI	MCI	1086	Normal	Normal
963	Normal	Normal	1088	MCI	Normal
967	Normal	MCI	1092	MCI	MCI
969	Normal	Normal	1097	MCI	MCI
973	MCI	MCI	1098	Normal	Normal
976	MCI	MCI	1099	Normal	Normal
978	MCI	MCI	1103	MCI	MCI
981	Normal	Normal	1104	MCI	MCI
982	MCI	MCI	1106	MCI	MCI
984	Normal	Normal	1114	MCI	MCI
987	MCI	MCI	1116	MCI	Normal
989	MCI	Normal	1117	MCI	MCI
994	MCI	MCI	1118	MCI	MCI
997	MCI	MCI	1119	MCI	Normal
1002	Normal	Normal	1120	MCI	MCI
1004	MCI	MCI	1121	MCI	MCI
1007	MCI	Normal	1122	MCI	Normal
1010	MCI	Normal	1126	MCI	MCI
1014	Normal	MCI	1130	MCI	Normal
1015	MCI	MCI	1131	MCI	MCI
1016	Normal	Normal	1133	Normal	Normal
1023	Normal	Normal	1135	MCI	Normal
1028	MCI	MCI	1138	MCI	MCI
1030	MCI	MCI	1140	MCI	Normal
1031	MCI	Normal	1148	MCI	Normal
1032	MCI	Normal	1149	MCI	Normal
1033	MCI	MCI	1155	MCI	MCI
1034	MCI	MCI	1165	MCI	Normal
1035	Normal	Normal	1168	MCI	Normal
1038	MCI	Normal	1175	MCI	MCI
1040	MCI	MCI	1182	MCI	Normal
1043	MCI	Normal	1183	MCI	MCI
1045	MCI	Normal	1186	MCI	Normal
1046	MCI	Normal	1187	MCI	MCI
1051	MCI	MCI	1188	MCI	Normal
1054	MCI	MCI	1190	Normal	Normal
1057	MCI	MCI	1195	Normal	Normal

1197	Normal	Normal	1293	MCI	Normal
1199	MCI	MCI	1294	MCI	MCI
1204	MCI	MCI	1295	MCI	MCI
1206	Normal	Normal	1299	MCI	MCI
1210	MCI	Normal	1300	MCI	Normal
1211	MCI	Normal	1301	Normal	Normal
1212	Normal	Normal	1309	MCI	MCI
1213	MCI	MCI	1311	MCI	MCI
1215	MCI	Normal	1314	MCI	Normal
1217	MCI	Normal	1315	MCI	MCI
1218	MCI	Normal	1318	MCI	MCI
1222	Normal	Normal	1321	MCI	MCI
1224	MCI	Normal	1322	MCI	MCI
1225	MCI	MCI	1326	MCI	MCI
1227	MCI	Normal	1331	MCI	MCI
1231	MCI	MCI	1338	MCI	MCI
1232	Normal	Normal	1340	MCI	MCI
1240	MCI	MCI	1343	MCI	Normal
1242	Normal	Normal	1346	MCI	Normal
1243	MCI	Normal	1350	MCI	MCI
1244	MCI	MCI	1351	MCI	Normal
1245	MCI	Normal	1352	MCI	Normal
1246	MCI	MCI	1357	MCI	Normal
1247	MCI	MCI	1363	MCI	MCI
1249	Normal	Normal	1378	MCI	MCI
1250	Normal	Normal	1380	MCI	MCI
1251	Normal	Normal	1384	MCI	MCI
1255	MCI	Normal	1387	MCI	MCI
1256	Normal	Normal	1389	MCI	MCI
1260	MCI	MCI	1393	MCI	MCI
1261	Normal	Normal	1394	MCI	MCI
1265	MCI	MCI	1398	MCI	MCI
1267	Normal	Normal	1400	MCI	Normal
1268	MCI	MCI	1406	MCI	Normal
1269	MCI	Normal	1407	MCI	MCI
1271	MCI	Normal	1408	MCI	Normal
1275	MCI	Normal	1411	MCI	Normal
1276	Normal	Normal	1412	MCI	MCI
1277	MCI	MCI	1414	MCI	MCI
1279	MCI	Normal	1417	MCI	MCI
1280	Normal	Normal	1418	MCI	Normal
1282	MCI	MCI	1419	MCI	Normal
1284	MCI	MCI	1420	MCI	MCI
1286	Normal	Normal	1421	MCI	Normal
1288	Normal	Normal	1423	MCI	Normal
1292	MCI	MCI	1425	MCI	MCI

1426	MCI	Normal	2133	MCI	Normal
1427	MCI	MCI	2138	MCI	MCI
2002	MCI	Normal	2142	MCI	Normal
2003	MCI	Normal	2146	MCI	Normal
2007	MCI	Normal	2148	MCI	Normal
2010	MCI	Normal	2150	MCI	Normal
2011	MCI	Normal	2151	MCI	Normal
2018	MCI	Normal	2155	MCI	Normal
2022	MCI	Normal	2164	MCI	Normal
2026	MCI	Normal	2167	MCI	Normal
2027	MCI	Normal	2168	MCI	Normal
2031	MCI	Normal	2171	MCI	Normal
2036	MCI	Normal	2180	MCI	MCI
2037	MCI	Normal	2182	MCI	Normal
2042	MCI	MCI	2183	MCI	Normal
2043	MCI	Normal	2184	MCI	Normal
2045	MCI	Normal	2185	MCI	Normal
2047	MCI	MCI	2187	MCI	Normal
2052	MCI	Normal	2190	MCI	Normal
2055	MCI	Normal	2193	MCI	Normal
2057	MCI	Normal	2194	MCI	MCI
2058	MCI	MCI	2195	MCI	Normal
2060	MCI	Normal	2196	MCI	MCI
2061	MCI	Normal	2199	MCI	Normal
2063	MCI	MCI	2200	MCI	Normal
2068	MCI	Normal	2205	MCI	MCI
2070	MCI	MCI	2208	MCI	Normal
2072	MCI	Normal	2210	MCI	MCI
2073	MCI	Normal	2213	MCI	Normal
2074	MCI	Normal	2216	MCI	MCI
2077	MCI	Normal	2219	MCI	Normal
2079	MCI	Normal	2220	MCI	Normal
2083	MCI	Normal	2225	MCI	Normal
2087	MCI	MCI	2233	MCI	Normal
2093	MCI	Normal	2234	MCI	Normal
2099	MCI	Normal	2237	MCI	Normal
2100	MCI	Normal	2238	MCI	Normal
2106	MCI	MCI	2239	MCI	Normal
2109	MCI	MCI	2240	MCI	Normal
2116	MCI	MCI	2245	MCI	Normal
2119	MCI	Normal	2247	MCI	Normal
2121	MCI	Normal	2248	MCI	MCI
2123	MCI	Normal	2249	MCI	Normal
2124	MCI	Normal	2263	MCI	Normal
2125	MCI	Normal	2264	MCI	Normal
2130	MCI	Normal	2274	MCI	MCI

2278	MCI	Normal	4026	Normal	Normal
2284	MCI	MCI	4028	Normal	Normal
2301	MCI	Normal	4029	MCI	Normal
2304	MCI	Normal	4030	MCI	Normal
2307	MCI	Normal	4032	Normal	Normal
2308	MCI	Normal	4034	MCI	MCI
2315	MCI	Normal	4035	MCI	Normal
2316	MCI	MCI	4036	MCI	Normal
2332	MCI	Normal	4037	Normal	Normal
2333	MCI	Normal	4042	MCI	Normal
2336	MCI	Normal	4043	Normal	Normal
2347	MCI	Normal	4050	Normal	Normal
2357	MCI	Normal	4051	MCI	Normal
2360	MCI	Normal	4053	MCI	MCI
2363	MCI	MCI	4054	MCI	Normal
2367	MCI	MCI	4057	MCI	MCI
2373	MCI	Normal	4058	MCI	MCI
2374	MCI	Normal	4059	MCI	Normal
2376	MCI	Normal	4060	Normal	Normal
2378	MCI	Normal	4061	MCI	Normal
2379	MCI	MCI	4063	MCI	Normal
2380	MCI	MCI	4067	MCI	Normal
2381	MCI	Normal	4071	Normal	Normal
2389	MCI	Normal	4072	MCI	Normal
2390	MCI	Normal	4073	MCI	Normal
2391	MCI	Normal	4075	Normal	Normal
2392	MCI	MCI	4076	Normal	Normal
2394	MCI	Normal	4077	MCI	Normal
2395	MCI	Normal	4079	MCI	MCI
2396	MCI	Normal	4080	Normal	Normal
2398	MCI	Normal	4082	Normal	Normal
2403	MCI	MCI	4084	Normal	Normal
2405	MCI	Normal	4086	Normal	Normal
2407	MCI	Normal	4090	Normal	Normal
4003	Normal	Normal	4093	Normal	Normal
4004	MCI	Normal	4094	MCI	MCI
4005	MCI	MCI	4096	MCI	MCI
4007	MCI	Normal	4100	Normal	Normal
4010	Normal	Normal	4102	MCI	MCI
4012	MCI	Normal	4103	Normal	MCI
4014	Normal	Normal	4104	Normal	Normal
4015	MCI	MCI	4105	Normal	Normal
4018	Normal	Normal	4114	MCI	MCI
4020	Normal	MCI	4115	MCI	Normal
4021	Normal	Normal	4119	Normal	Normal
4022	MCI	MCI	4120	Normal	Normal

4121	Normal	Normal	4208	Normal	Normal
4122	MCI	Normal	4210	MCI	Normal
4127	MCI	Normal	4212	MCI	Normal
4128	MCI	Normal	4213	Normal	Normal
4131	MCI	MCI	4214	MCI	MCI
4133	MCI	Normal	4216	MCI	Normal
4134	MCI	Normal	4217	MCI	Normal
4138	MCI	MCI	4219	MCI	Normal
4143	MCI	MCI	4220	MCI	Normal
4146	MCI	Normal	4222	Normal	Normal
4148	Normal	Normal	4224	Normal	Normal
4149	MCI	Normal	4225	Normal	Normal
4150	Normal	Normal	4226	MCI	Normal
4151	Normal	Normal	4229	MCI	MCI
4155	Normal	Normal	4232	MCI	Normal
4157	MCI	Normal	4234	Normal	MCI
4158	Normal	Normal	4235	MCI	MCI
4159	MCI	Normal	4237	MCI	MCI
4160	MCI	MCI	4240	MCI	MCI
4162	MCI	MCI	4241	MCI	Normal
4164	Normal	Normal	4243	MCI	MCI
4167	MCI	MCI	4244	MCI	Normal
4168	MCI	Normal	4245	MCI	MCI
4169	MCI	Normal	4250	MCI	MCI
4170	MCI	Normal	4251	MCI	Normal
4173	Normal	Normal	4254	Normal	Normal
4175	MCI	MCI	4255	Normal	Normal
4176	Normal	Normal	4256	MCI	Normal
4177	Normal	Normal	4257	Normal	Normal
4179	Normal	Normal	4259	MCI	Normal
4184	MCI	Normal	4262	Normal	Normal
4185	MCI	Normal	4263	MCI	Normal
4186	MCI	MCI	4266	Normal	Normal
4187	MCI	Normal	4268	MCI	Normal
4188	MCI	MCI	4270	Normal	Normal
4189	MCI	MCI	4271	MCI	Normal
4194	MCI	Normal	4272	MCI	MCI
4196	Normal	Normal	4274	MCI	Normal
4197	MCI	Normal	4275	Normal	Normal
4198	Normal	Normal	4276	Normal	Normal
4199	MCI	Normal	4277	Normal	Normal
4200	Normal	Normal	4278	Normal	MCI
4202	MCI	MCI	4279	Normal	Normal
4203	MCI	MCI	4281	MCI	Normal
4205	MCI	Normal	4285	MCI	MCI
4206	MCI	Normal	4287	MCI	MCI

4288	Normal	Normal	4381	MCI	Normal
4290	Normal	Normal	4382	Normal	Normal
4291	Normal	Normal	4383	MCI	Normal
4292	Normal	Normal	4384	Normal	Normal
4293	MCI	MCI	4385	Normal	Normal
4294	MCI	MCI	4386	Normal	Normal
4297	MCI	MCI	4387	Normal	Normal
4300	MCI	Normal	4389	Normal	Normal
4301	MCI	MCI	4390	MCI	MCI
4302	MCI	MCI	4391	Normal	Normal
4303	MCI	Normal	4392	MCI	MCI
4309	MCI	Normal	4393	Normal	Normal
4310	MCI	Normal	4394	MCI	Normal
4311	MCI	Normal	4395	MCI	Normal
4312	MCI	Normal	4396	Normal	Normal
4313	Normal	MCI	4399	Normal	Normal
4320	Normal	Normal	4400	Normal	Normal
4324	MCI	MCI	4401	Normal	Normal
4327	MCI	Normal	4402	MCI	MCI
4328	MCI	MCI	4403	MCI	MCI
4331	MCI	Normal	4404	MCI	Normal
4332	MCI	Normal	4405	MCI	Normal
4335	Normal	Normal	4406	MCI	Normal
4337	Normal	Normal	4408	MCI	Normal
4339	Normal	Normal	4414	MCI	MCI
4343	Normal	Normal	4415	MCI	MCI
4345	Normal	Normal	4417	MCI	Normal
4348	Normal	Normal	4419	MCI	Normal
4349	Normal	Normal	4420	MCI	Normal
4350	Normal	Normal	4421	Normal	Normal
4351	MCI	Normal	4422	Normal	Normal
4352	Normal	Normal	4423	MCI	MCI
4354	MCI	MCI	4426	MCI	Normal
4356	MCI	Normal	4427	Normal	MCI
4357	Normal	Normal	4428	Normal	Normal
4359	MCI	Normal	4429	Normal	Normal
4360	MCI	Normal	4430	MCI	MCI
4363	MCI	Normal	4431	MCI	Normal
4365	Normal	MCI	4432	MCI	MCI
4366	MCI	MCI	4434	MCI	Normal
4369	Normal	Normal	4438	MCI	MCI
4371	Normal	Normal	4441	Normal	Normal
4372	Normal	Normal	4442	Normal	Normal
4376	Normal	Normal	4443	MCI	Normal
4377	MCI	Normal	4444	MCI	Normal
4380	MCI	Normal	4445	MCI	Normal

4447	MCI	Normal	4540	MCI	Normal
4448	Normal	Normal	4542	MCI	MCI
4449	Normal	Normal	4543	MCI	Normal
4453	Normal	Normal	4545	Normal	Normal
4455	MCI	MCI	4547	MCI	Normal
4456	MCI	MCI	4548	MCI	Normal
4458	MCI	MCI	4552	Normal	Normal
4462	MCI	Normal	4553	MCI	Normal
4463	MCI	Normal	4555	Normal	MCI
4465	MCI	Normal	4556	MCI	Normal
4466	Normal	Normal	4557	MCI	Normal
4467	MCI	MCI	4558	Normal	Normal
4468	MCI	Normal	4559	Normal	Normal
4473	MCI	Normal	4560	Normal	Normal
4475	MCI	MCI	4562	MCI	MCI
4476	MCI	MCI	4565	MCI	MCI
4480	MCI	MCI	4566	Normal	Normal
4482	Normal	Normal	4571	MCI	Normal
4483	Normal	Normal	4576	Normal	Normal
4485	Normal	Normal	4578	Normal	Normal
4488	Normal	Normal	4580	Normal	Normal
4489	MCI	Normal	4582	MCI	MCI
4491	Normal	Normal	4584	MCI	Normal
4496	Normal	Normal	4585	Normal	Normal
4498	MCI	MCI	4586	Normal	Normal
4499	Normal	Normal	4587	Normal	Normal
4502	MCI	MCI	4590	MCI	Normal
4503	Normal	Normal	4594	MCI	Normal
4505	Normal	Normal	4595	MCI	MCI
4507	MCI	Normal	4596	MCI	MCI
4508	Normal	Normal	4597	MCI	Normal
4510	MCI	Normal	4598	Normal	Normal
4513	MCI	Normal	4599	Normal	Normal
4514	MCI	MCI	4601	MCI	Normal
4515	MCI	MCI	4603	MCI	Normal
4516	Normal	Normal	4604	Normal	Normal
4517	MCI	MCI	4605	MCI	MCI
4520	Normal	Normal	4607	Normal	Normal
4521	MCI	MCI	4610	MCI	MCI
4522	MCI	Normal	4611	MCI	Normal
4524	MCI	MCI	4612	Normal	Normal
4530	MCI	MCI	4613	MCI	Normal
4531	MCI	MCI	4614	MCI	Normal
4536	MCI	Normal	4616	Normal	Normal
4538	MCI	MCI	4620	Normal	Normal
4539	MCI	Normal	4621	MCI	Normal

4623	MCI	MCI	4745	MCI	Normal
4624	MCI	Normal	4746	MCI	Normal
4626	MCI	Normal	4750	MCI	Normal
4629	MCI	Normal	4757	MCI	MCI
4630	MCI	Normal	4764	MCI	Normal
4631	MCI	MCI	4765	MCI	MCI
4632	Normal	Normal	4767	MCI	Normal
4633	MCI	MCI	4769	MCI	Normal
4635	MCI	Normal	4777	MCI	Normal
4636	MCI	Normal	4780	MCI	Normal
4637	Normal	Normal	4784	MCI	MCI
4643	Normal	Normal	4791	MCI	MCI
4644	Normal	Normal	4793	MCI	MCI
4645	Normal	Normal	4796	MCI	MCI
4646	MCI	MCI	4798	MCI	Normal
4649	Normal	Normal	4799	MCI	Normal
4653	MCI	Normal	4803	MCI	Normal
4654	MCI	Normal	4804	MCI	Normal
4659	MCI	Normal	4805	MCI	MCI
4661	MCI	MCI	4806	MCI	MCI
4668	MCI	MCI	4807	MCI	MCI
4671	MCI	Normal	4809	MCI	MCI
4674	MCI	MCI	4813	MCI	Normal
4675	MCI	MCI	4814	MCI	Normal
4678	MCI	Normal	4815	MCI	MCI
4679	MCI	Normal	4816	MCI	Normal
4680	MCI	MCI	4817	MCI	Normal
4689	MCI	MCI	4823	MCI	MCI
4694	MCI	Normal	4825	MCI	Normal
4706	MCI	Normal	4832	Normal	Normal
4708	MCI	MCI	4835	Normal	Normal
4711	MCI	MCI	4838	MCI	Normal
4712	MCI	Normal	4842	MCI	Normal
4713	MCI	Normal	4844	MCI	MCI
4714	MCI	MCI	4849	MCI	Normal
4715	MCI	MCI	4852	MCI	MCI
4720	MCI	MCI	4857	MCI	MCI
4721	MCI	Normal	4858	MCI	Normal
4722	MCI	Normal	4868	MCI	MCI
4723	MCI	Normal	4869	MCI	Normal
4729	MCI	Normal	4871	MCI	Normal
4736	MCI	Normal	4873	MCI	Normal
4741	MCI	Normal	4874	MCI	Normal
4742	MCI	Normal	4876	MCI	Normal
4743	MCI	MCI	4877	MCI	MCI
4744	MCI	MCI	4883	MCI	Normal

4885	MCI	MCI	4944	MCI	Normal
4888	MCI	Normal	4945	MCI	MCI
4889	MCI	MCI	4947	MCI	MCI
4891	MCI	Normal	4955	MCI	Normal
4893	MCI	Normal	4958	MCI	Normal
4896	MCI	MCI	4960	MCI	Normal
4897	MCI	Normal	4966	MCI	Normal
4898	MCI	Normal	4974	MCI	Normal
4899	MCI	Normal	4976	MCI	Normal
4902	MCI	Normal	4985	MCI	MCI
4904	MCI	Normal	4986	MCI	Normal
4907	MCI	Normal	4987	MCI	MCI
4909	MCI	MCI	4989	MCI	Normal
4917	MCI	MCI	5000	MCI	MCI
4919	MCI	Normal	5004	MCI	Normal
4920	MCI	Normal	5007	MCI	Normal
4922	MCI	MCI	5014	MCI	MCI
4925	MCI	MCI	5026	MCI	Normal
4926	MCI	MCI	5031	MCI	MCI
4928	MCI	MCI	5047	MCI	Normal
4929	MCI	MCI	5066	MCI	Normal
4936	MCI	MCI	5099	MCI	Normal
4941	MCI	Normal	5135	MCI	MCI
4943	MCI	MCI	5160	MCI	Normal