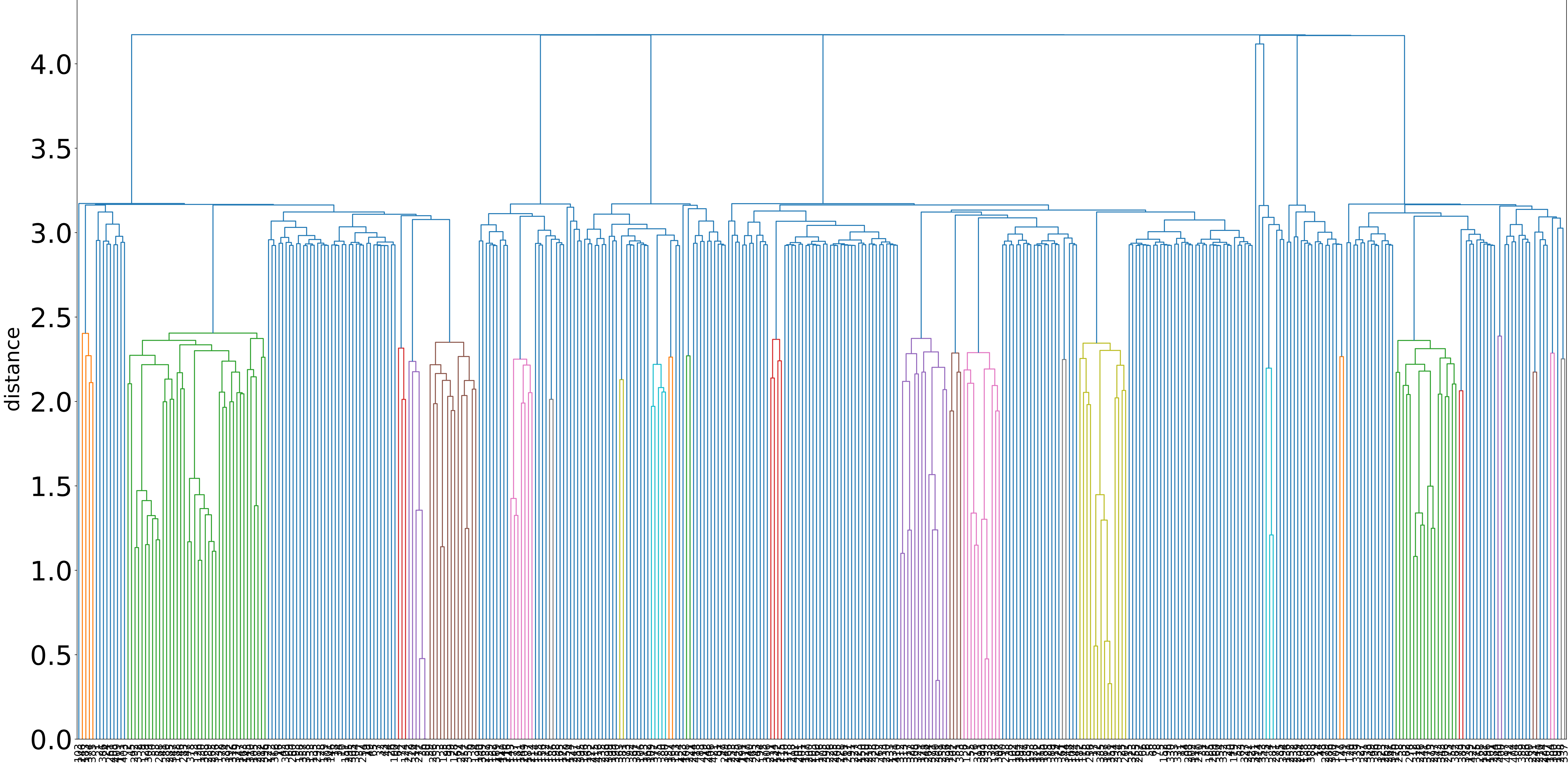


Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 0.25, complete link



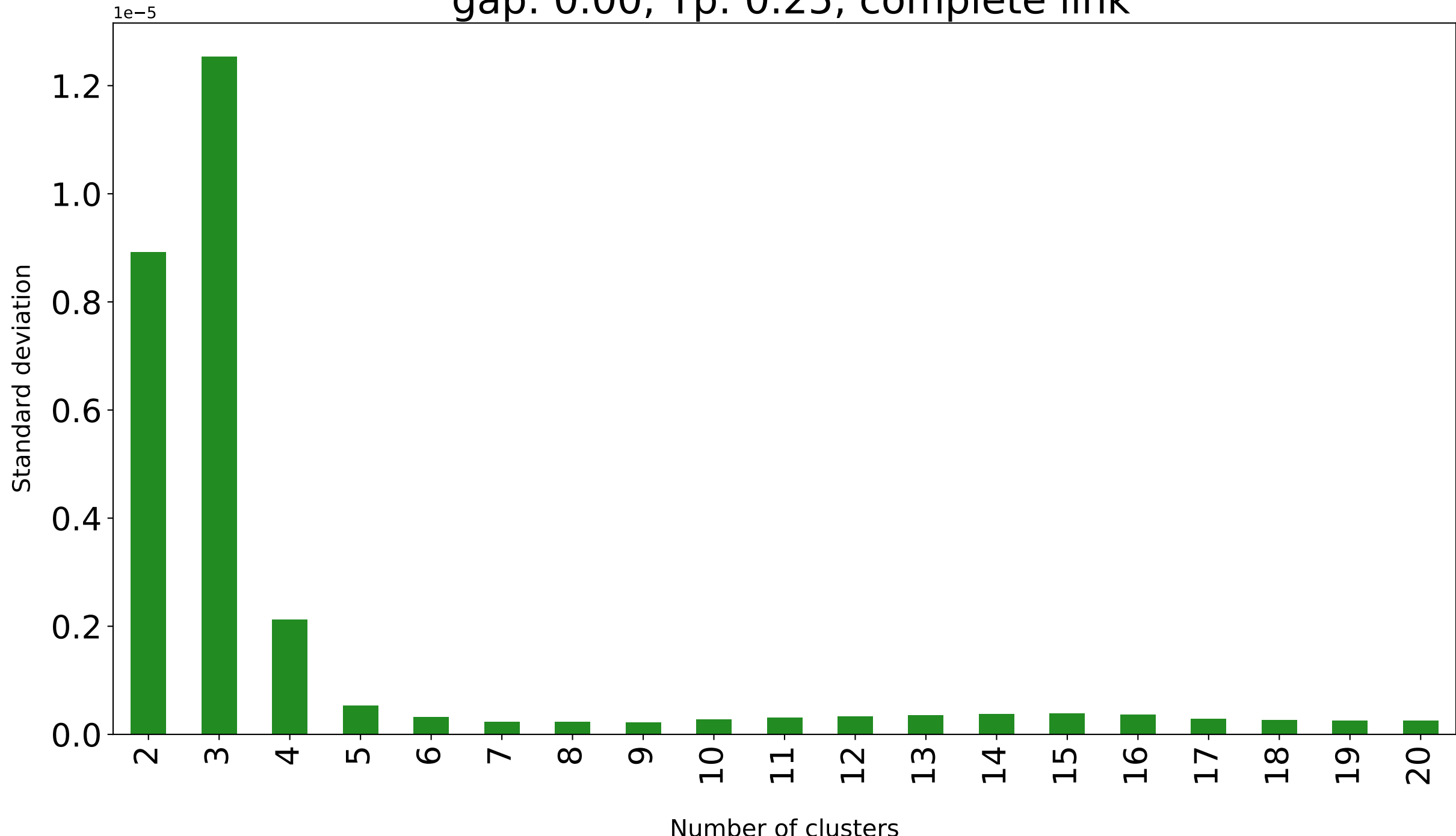
patient index

Cophenetic Correlation Coefficient: 0.7115753978445999

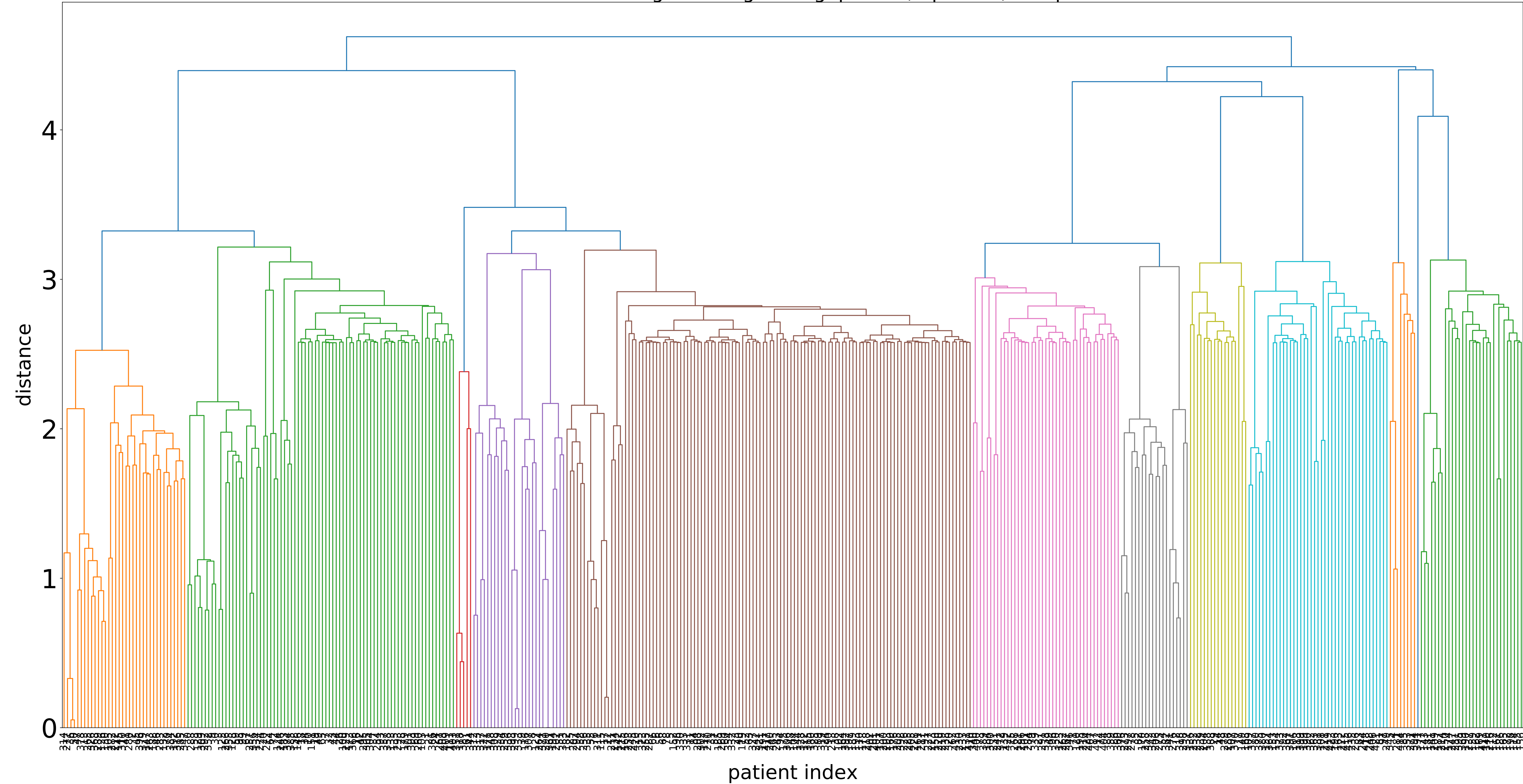
Average values of five clustering indices  
gap: 0.00, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.88443	0.82234	0.65387	0.07105	0.67487	0.88305	-0.09673	0.88581	0.00011	0.7886	0.75855	0.03226	0.1442	0.12315
3.0	1.00001	0.8969	0.83757	0.84916	0.06868	0.82169	0.89551	-0.65718	0.8983	0.00013	0.8562	0.77058	0.05634	0.13675	0.12318
4.0	1.0	0.8904	0.80892	0.92217	0.07536	0.84456	0.88589	-1.40511	0.89498	0.00016	0.87425	0.70763	0.1573	0.13938	0.12321
5.0	1.0	0.94963	0.90708	0.93866	0.03177	0.93223	0.9494	-2.65936	0.94986	0.00019	0.95015	0.83933	0.1573	0.16779	0.12325
6.0	1.0	0.95597	0.91739	0.92815	0.03358	0.94201	0.95579	-3.26067	0.95615	0.0002	0.95868	0.85342	0.44444	0.16356	0.1233
7.0	1.0	0.98082	0.96357	0.96902	0.01166	0.97512	0.98074	-4.47251	0.98089	0.00022	0.98274	0.93402	0.47059	0.17314	0.12479
8.0	1.0	0.97831	0.95844	0.9581	0.01204	0.97201	0.97807	-5.85374	0.97855	0.00022	0.98052	0.92456	2.0	0.28085	0.16196
9.0	1.0	0.96613	0.93451	0.92094	0.016	0.95681	0.96531	-7.14787	0.96695	0.00022	0.97009	0.88173	2.0	0.35056	0.16201
10.0	1.0	0.95324	0.91129	0.90368	0.02284	0.94093	0.95212	-8.54178	0.95437	0.00022	0.96043	0.84447	2.0	0.30896	0.16207
11.0	1.0	0.93985	0.88731	0.88007	0.03789	0.92469	0.93823	-9.76875	0.94149	0.00022	0.95074	0.80671	2.0	0.2702	0.16211
12.0	1.0	0.92654	0.86346	0.8508	0.04673	0.90867	0.92406	-11.19242	0.92904	0.00022	0.94103	0.77052	2.0	0.23944	0.16213
13.0	1.0	0.90658	0.82799	0.80819	0.05711	0.88479	0.90266	-12.26147	0.91054	0.00022	0.92664	0.71799	2.0	0.21857	0.16224
14.0	1.0	0.88808	0.79891	0.7925	0.06662	0.86407	0.88366	-13.23608	0.89255	0.00022	0.91879	0.68018	2.0	0.20313	0.16232
15.0	1.0	0.85201	0.74117	0.73661	0.09058	0.823	0.84552	-14.51327	0.85863	0.00022	0.89993	0.60448	2.0	0.19088	0.1624
16.0	1.0	0.82887	0.7127	0.79541	0.10081	0.80019	0.82664	-16.40836	0.83111	0.00026	0.90494	0.56737	2.0	0.18039	0.16241
17.0	1.0	0.83272	0.71612	0.85883	0.09713	0.80893	0.82987	-17.80012	0.8356	0.00029	0.91762	0.56914	2.0	0.17707	0.16243
18.0	1.0	0.84279	0.73101	0.85752	0.09086	0.82089	0.84043	-19.56483	0.84517	0.0003	0.92407	0.58671	2.0	0.17545	0.16246
19.0	1.0	0.84983	0.74224	0.85376	0.08661	0.82925	0.84784	-21.4423	0.85183	0.00031	0.92867	0.60121	2.0	0.1628	0.1625
20.0	1.0	0.85387	0.74915	0.84599	0.08433	0.83417	0.85218	-23.45435	0.85556	0.00032	0.93182	0.61077	2.0	0.20467	0.16258

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.00, Tp: 0.25, complete link



Hierarchical Clustering Dendrogram - gap: 0.10, Tp: 0.25, complete link

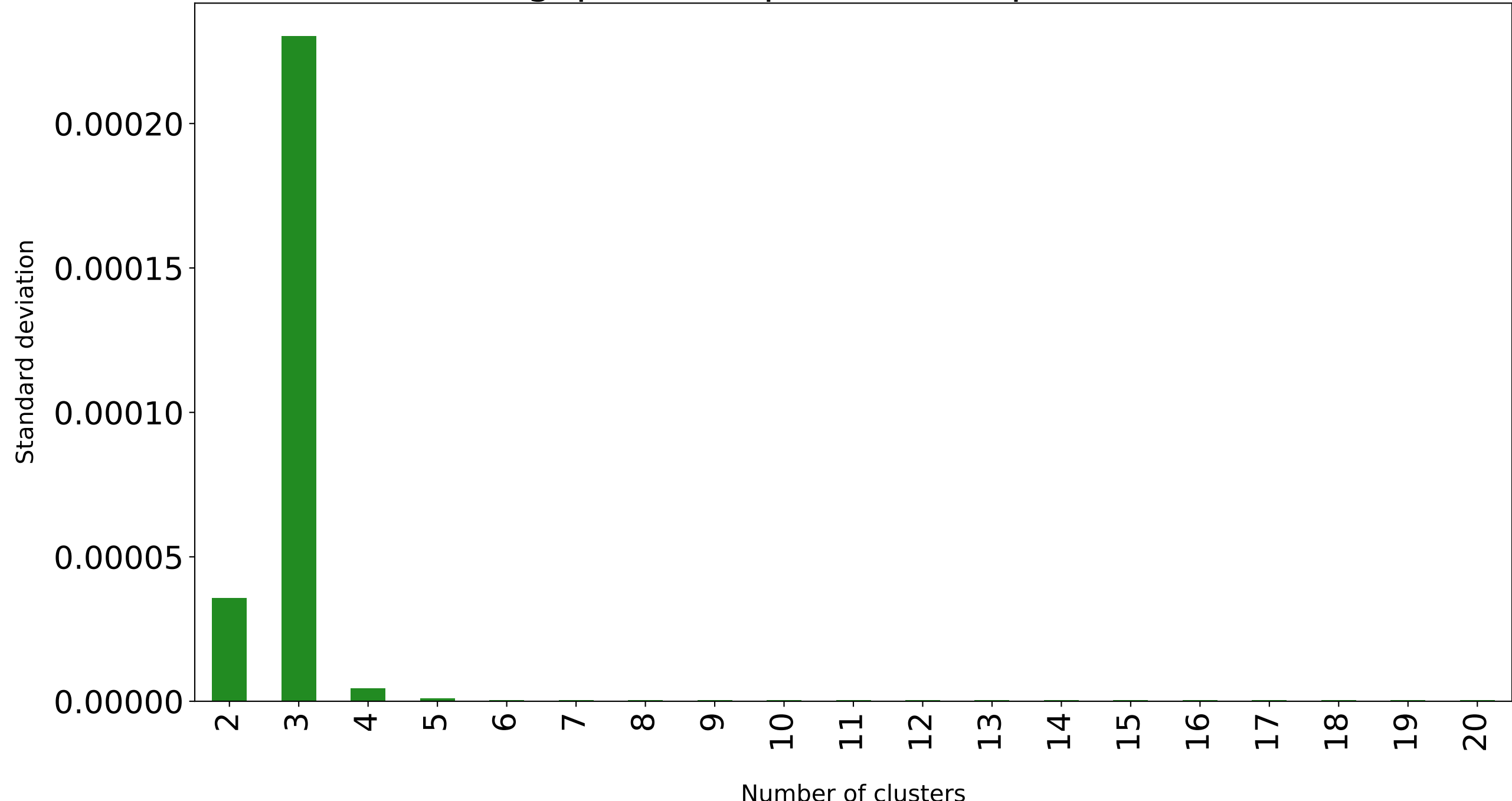


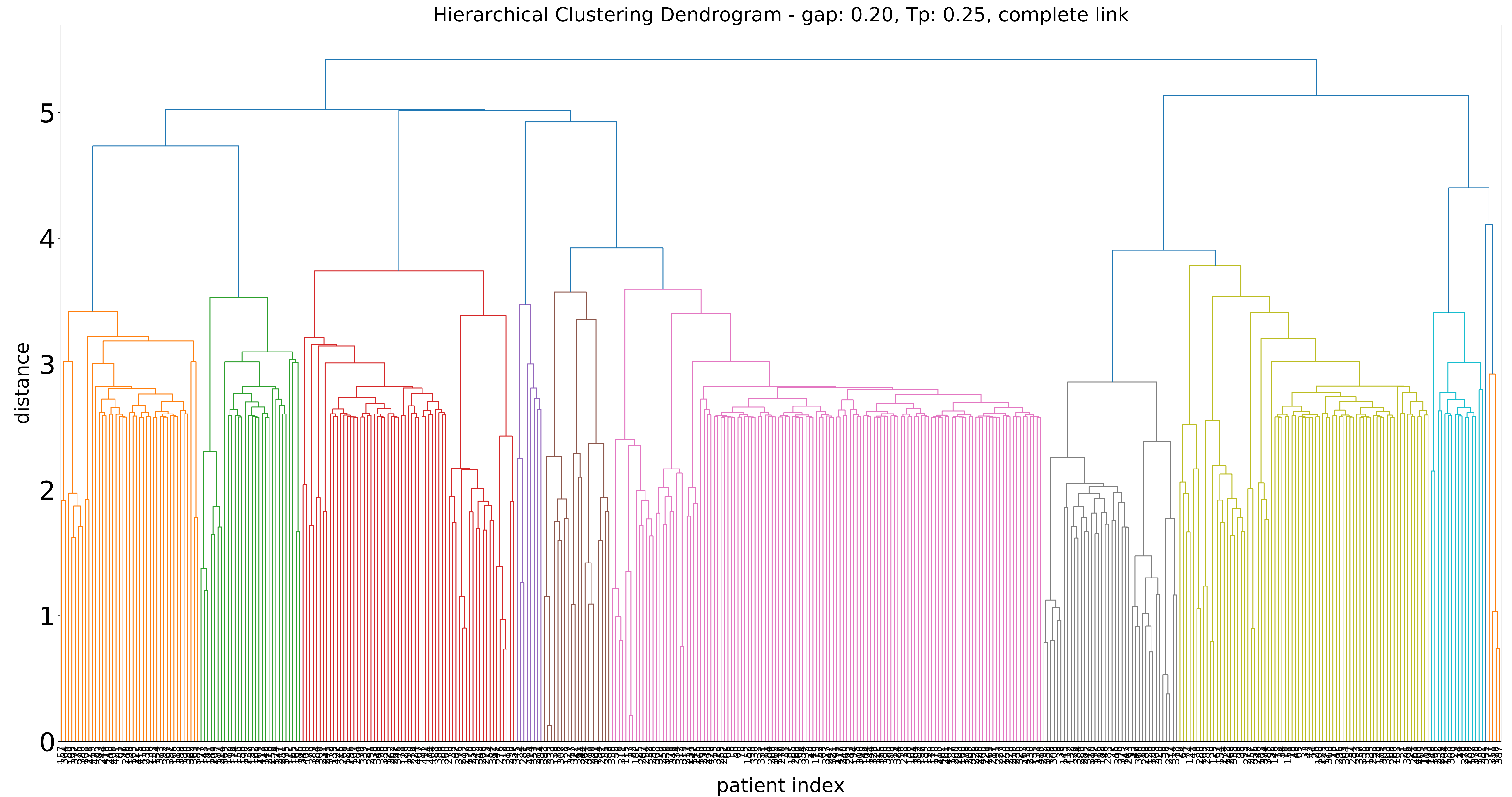
Cophenetic Correlation Coefficient: 0.7345821477507194

Average values of five clustering indices  
gap: 0.10, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99998	0.86844	0.80091	0.73155	0.09896	0.7082	0.86754	-0.00971	0.86935	0.00011	0.78531	0.72516	0.0875	0.10963	0.1054
3.0	1.0	0.77992	0.66504	0.56481	0.18203	0.61188	0.77698	-0.18378	0.7829	0.0001	0.69746	0.53905	0.09917	0.12569	0.10591
4.0	1.00001	0.73035	0.57236	0.44181	0.20709	0.58204	0.7132	-0.64463	0.74814	0.0001	0.65085	0.42705	0.09917	0.17913	0.10603
5.0	1.0	0.88216	0.78949	0.77733	0.10072	0.83982	0.88031	-1.99991	0.88402	0.00017	0.88048	0.65862	0.09917	0.19538	0.10784
6.0	1.0	0.95875	0.92221	0.93815	0.03853	0.94586	0.95862	-3.22	0.95887	0.0002	0.96166	0.86062	0.17241	0.19901	0.1104
7.0	1.0	0.97776	0.95761	0.96461	0.01566	0.97113	0.97768	-4.4123	0.97784	0.00021	0.97991	0.92263	0.35294	0.21492	0.11395
8.0	1.0	0.97183	0.94604	0.94286	0.01573	0.96383	0.97136	-5.83446	0.9723	0.00021	0.97494	0.90284	2.0	0.3121	0.1339
9.0	1.0	0.93799	0.88254	0.86841	0.03264	0.92195	0.93625	-6.91308	0.93974	0.00022	0.9479	0.79609	2.0	0.29082	0.14024
10.0	1.0	0.87225	0.7776	0.83157	0.07364	0.8435	0.87127	-7.76545	0.87324	0.00022	0.90986	0.64729	2.0	0.24913	0.14025
11.0	1.0	0.85417	0.74823	0.84536	0.08495	0.826	0.85328	-8.7796	0.85506	0.00024	0.90928	0.60533	2.0	0.23575	0.14384
12.0	1.0	0.84419	0.73271	0.82014	0.09247	0.81673	0.8436	-10.03933	0.84478	0.00025	0.91053	0.58377	2.0	0.22613	0.14495
13.0	1.0	0.84792	0.73752	0.83329	0.09394	0.82371	0.84737	-10.90719	0.84847	0.00027	0.91948	0.58834	2.0	0.21758	0.14589
14.0	1.0	0.90289	0.82399	0.93051	0.08004	0.88895	0.90176	-12.7728	0.90402	0.00032	0.95149	0.70724	2.0	0.21405	0.14694
15.0	1.0	0.91022	0.83675	0.92737	0.07936	0.89774	0.90956	-14.49236	0.91088	0.00033	0.95665	0.7255	2.0	0.20447	0.14898
16.0	1.0	0.91679	0.84794	0.92362	0.07762	0.90553	0.91636	-16.5287	0.91721	0.00034	0.96088	0.74158	2.0	0.20135	0.14946
17.0	1.0	0.92356	0.85897	0.93644	0.07608	0.91365	0.92309	-18.4297	0.92404	0.00036	0.96517	0.75721	2.0	0.18486	0.14957
18.0	1.0	0.93292	0.87491	0.94953	0.07362	0.92447	0.93246	-19.93801	0.93339	0.00037	0.9701	0.78132	2.0	0.18525	0.14985
19.0	1.0	0.93869	0.88527	0.94583	0.07069	0.93105	0.93845	-21.50816	0.93892	0.00037	0.97307	0.79739	2.0	0.18712	0.14991
20.0	1.0	0.94363	0.89398	0.94315	0.06818	0.93672	0.94349	-23.21665	0.94377	0.00038	0.97561	0.81087	2.0	0.17871	0.1511

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.10, Tp: 0.25, complete link



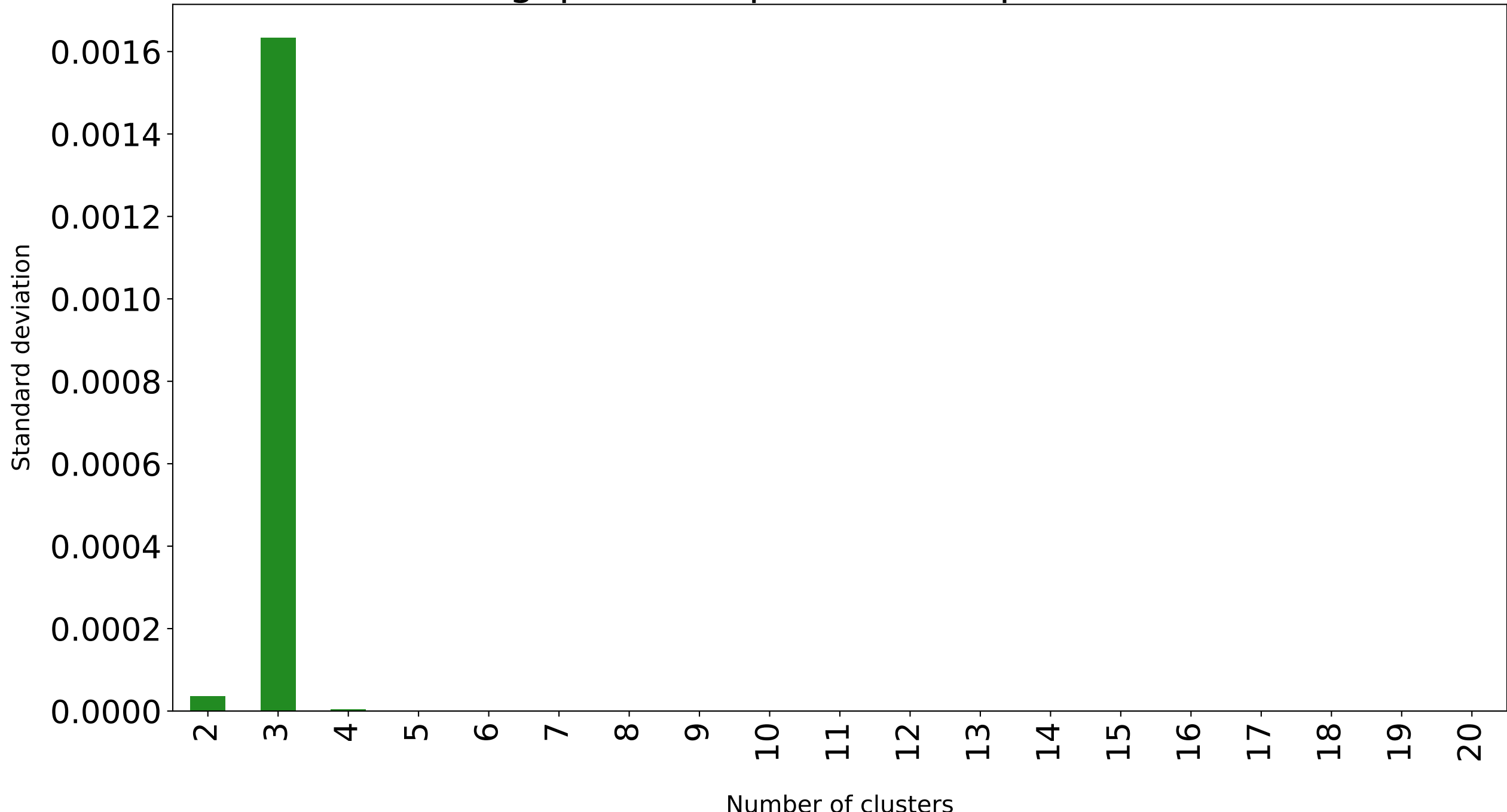


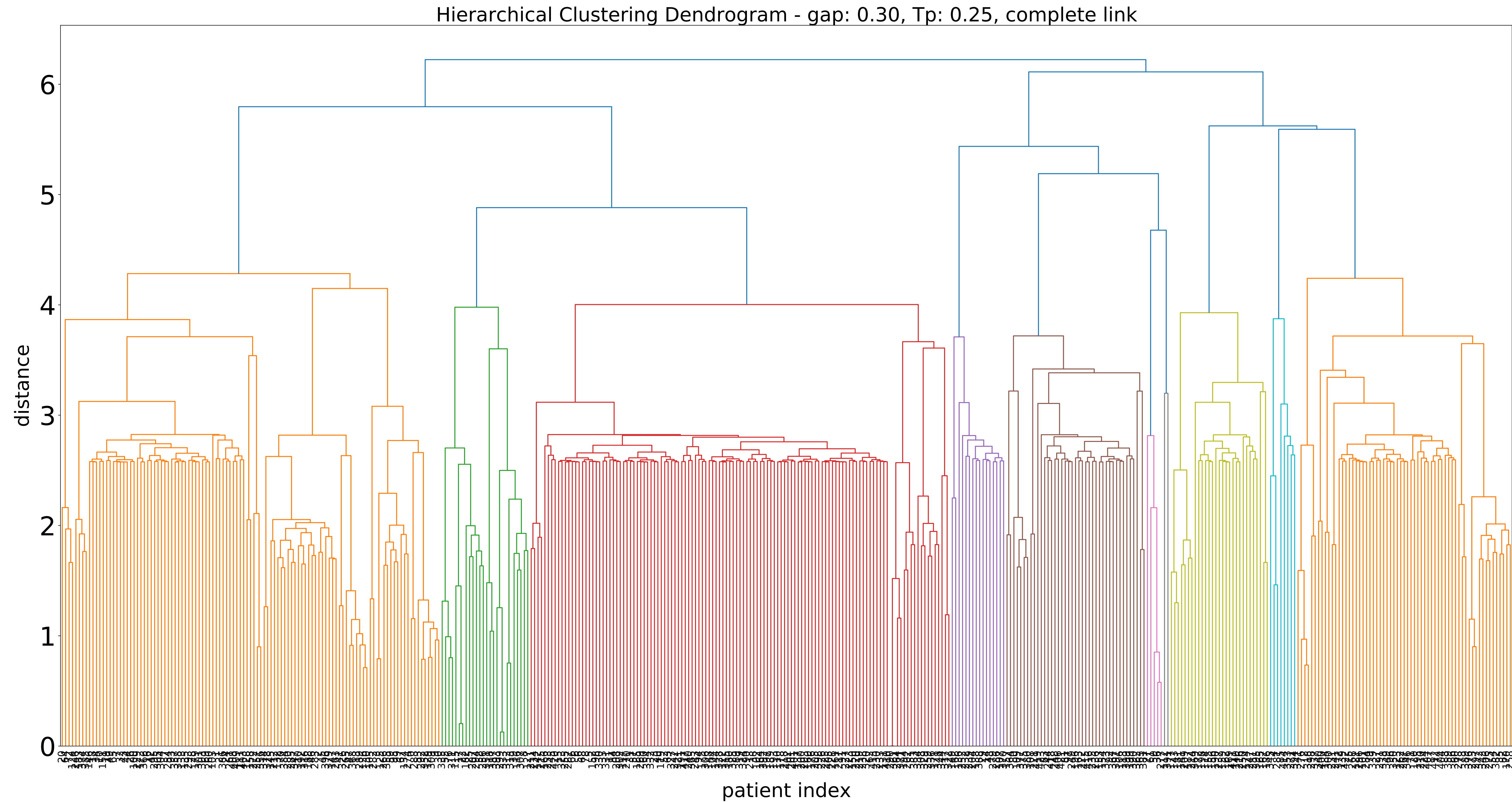
Average values of five clustering indices  
gap: 0.20, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99996	0.65184	0.50224	0.20251	0.26391	0.21048	0.65109	0.30392	0.65259	3e-05	0.46245	0.36332	0.02076	0.15661	0.14916
3.0	1.00001	0.69979	0.54015	0.33796	0.19598	0.45378	0.68858	-0.3157	0.71128	7e-05	0.56598	0.38916	0.38095	0.18137	0.15254
4.0	1.00001	0.74638	0.59532	0.52974	0.15039	0.6201	0.74003	-1.04064	0.75279	0.00011	0.70634	0.43473	0.38095	0.17676	0.15273
5.0	1.0	0.90628	0.83229	0.86329	0.06586	0.87381	0.90556	-2.34846	0.907	0.00018	0.90842	0.72204	0.38095	0.19681	0.15555
6.0	1.0	0.93331	0.87817	0.89768	0.0587	0.91231	0.93287	-2.97146	0.93375	0.0002	0.93844	0.79177	0.38095	0.20177	0.16183
7.0	1.0	0.95784	0.92097	0.94259	0.0309	0.94554	0.95765	-4.28692	0.95803	0.00021	0.96279	0.85955	0.38095	0.22098	0.17408
8.0	1.0	0.95627	0.91751	0.92456	0.02722	0.94403	0.95573	-5.39495	0.95682	0.00021	0.96202	0.85387	0.8	0.22767	0.18645
9.0	1.0	0.92524	0.85975	0.83885	0.04133	0.90614	0.92266	-6.79564	0.92785	0.00021	0.93735	0.76217	2.0	0.32936	0.19525
10.0	1.0	0.86602	0.76507	0.78852	0.07823	0.83532	0.86411	-7.60916	0.86795	0.00021	0.90285	0.6279	2.0	0.27356	0.19617
11.0	1.0	0.85317	0.74545	0.81675	0.0869	0.82397	0.85233	-8.57584	0.85402	0.00023	0.90649	0.59927	2.0	0.26207	0.2025
12.0	1.0	0.84325	0.73023	0.78441	0.09507	0.81425	0.84204	-8.92258	0.84447	0.00024	0.90566	0.5804	2.0	0.25307	0.20481
13.0	1.0	0.82852	0.70759	0.76331	0.10615	0.79924	0.82728	-10.15418	0.82977	0.00025	0.90361	0.55106	2.0	0.24889	0.21311
14.0	1.0	0.86944	0.77037	0.83847	0.09596	0.84917	0.86894	-11.85774	0.86994	0.00029	0.93188	0.63061	2.0	0.24757	0.21446
15.0	1.0	0.8737	0.77661	0.83037	0.09411	0.85464	0.87302	-13.22691	0.87437	0.00029	0.93538	0.63869	2.0	0.23819	0.21652
16.0	1.0	0.8792	0.78536	0.85161	0.09443	0.8618	0.87881	-14.21569	0.8796	0.00031	0.94072	0.64963	2.0	0.23624	0.2171
17.0	1.0	0.88567	0.79555	0.85139	0.0902	0.86964	0.88516	-16.23826	0.88618	0.00032	0.94497	0.66374	2.0	0.23251	0.22052
18.0	1.0	0.88841	0.79912	0.83977	0.08786	0.87314	0.88759	-17.77426	0.88923	0.00032	0.947	0.66799	2.0	0.23374	0.2241
19.0	1.0	0.89091	0.80285	0.83955	0.08647	0.87641	0.89002	-19.55941	0.89179	0.00033	0.94936	0.67274	2.0	0.22601	0.22471
20.0	1.0	0.89456	0.8081	0.83465	0.08499	0.88081	0.89335	-21.60558	0.89576	0.00034	0.95145	0.67977	2.0	0.22367	0.2248



Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.20, Tp: 0.25, complete link

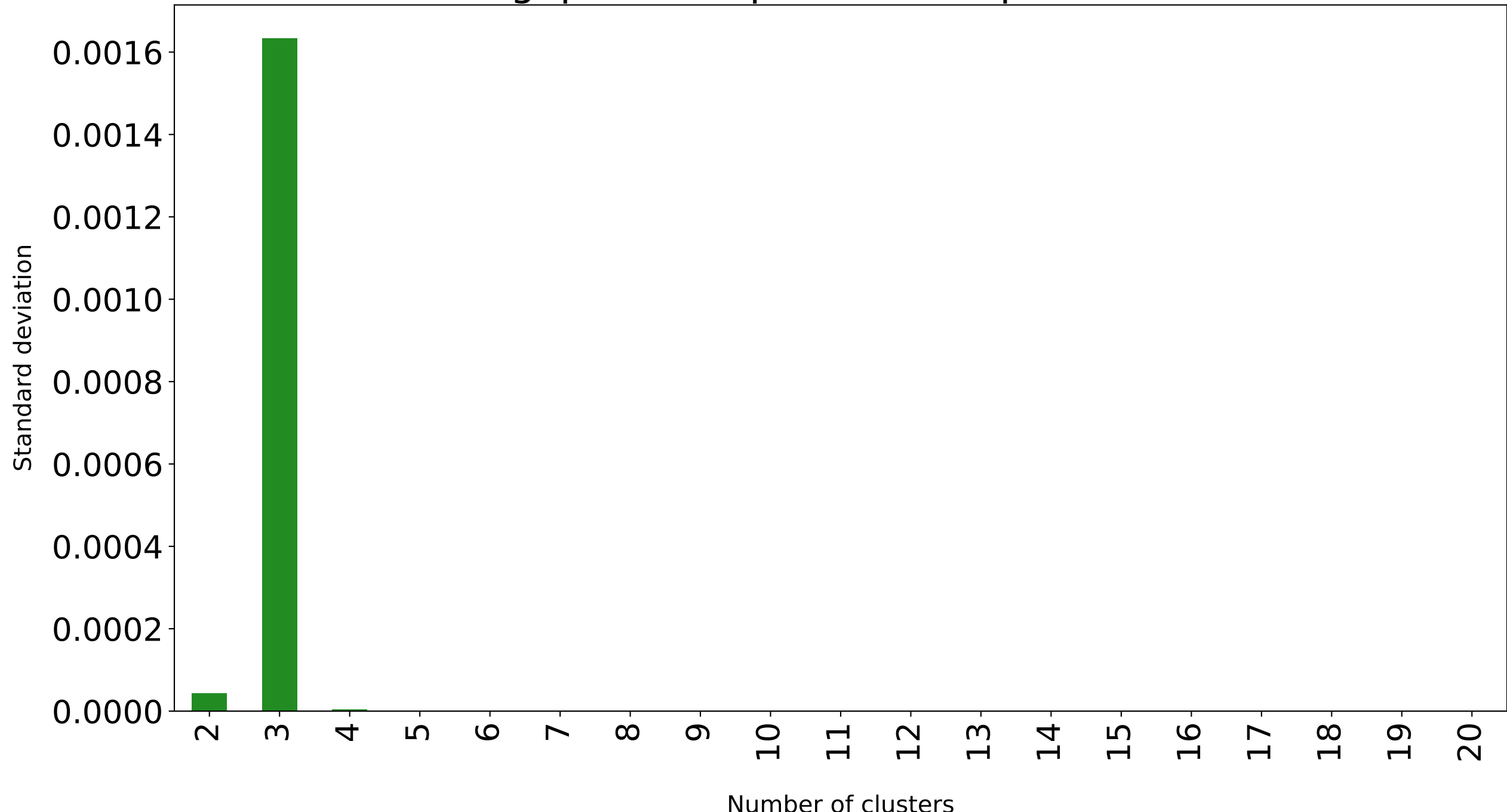




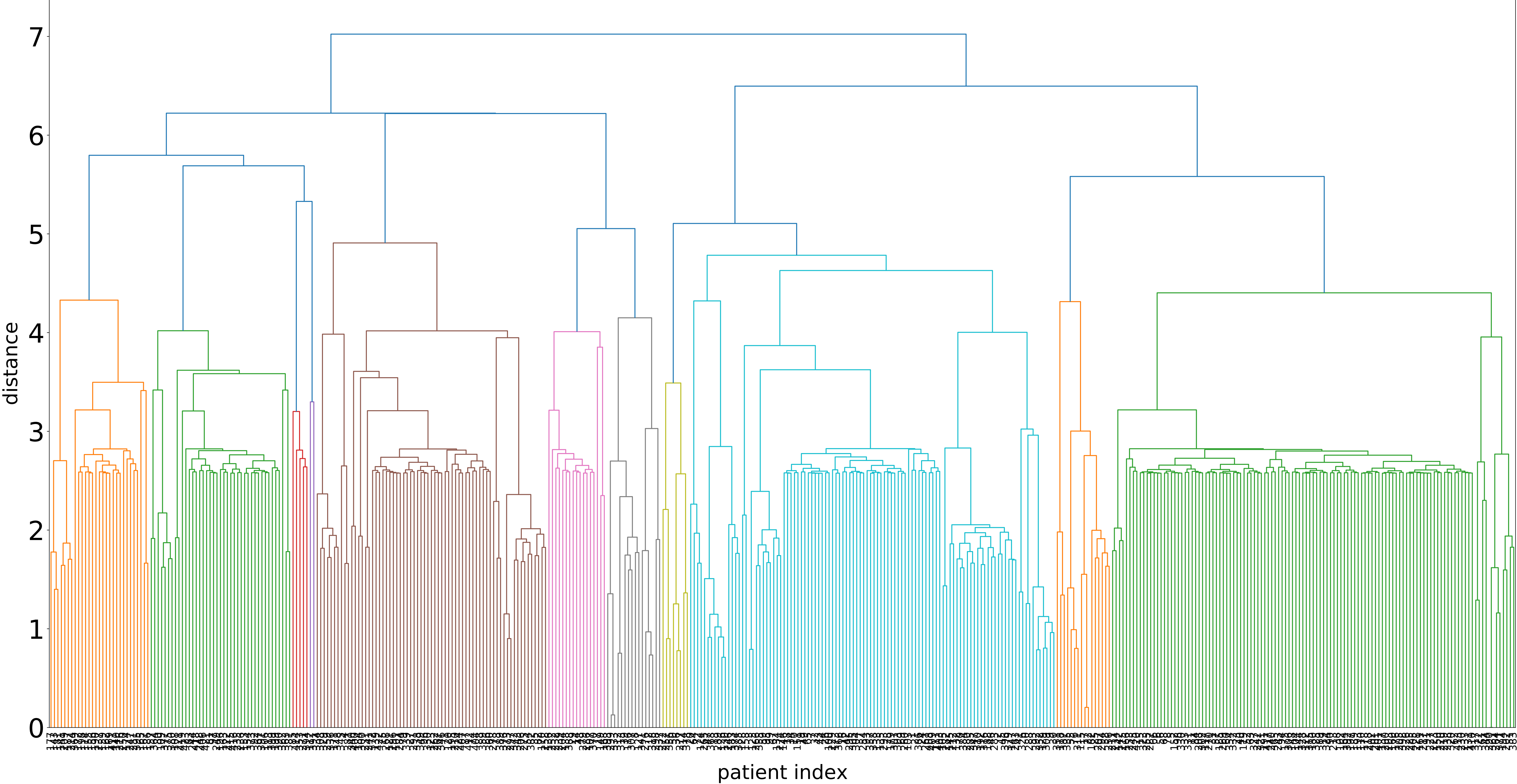
Average values of five clustering indices  
gap: 0.30, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99996	0.7871	0.6804	0.55823	0.15816	0.5419	0.78652	0.14234	0.78768	9e-05	0.6632	0.56098	0.12195	0.12059	0.19283
3.0	1.00011	0.6728	0.52179	0.39474	0.23716	0.43446	0.66965	-0.05577	0.67599	7e-05	0.57782	0.37449	0.3125	0.13552	0.18393
4.0	1.0	0.76378	0.62296	0.72909	0.17277	0.66545	0.75982	-0.98584	0.76782	0.00013	0.75413	0.46498	0.3125	0.17741	0.18962
5.0	1.0	0.84872	0.74459	0.82048	0.1123	0.79662	0.84709	-2.14754	0.8504	0.00017	0.85683	0.60861	0.3125	0.21201	0.19067
6.0	1.0	0.87859	0.78919	0.82643	0.09067	0.84079	0.8779	-2.78964	0.8793	0.00018	0.89189	0.66376	0.3125	0.22076	0.1961
7.0	1.0	0.9042	0.83069	0.85725	0.06423	0.8763	0.90369	-3.93226	0.90471	0.0002	0.91797	0.72322	0.33333	0.23512	0.20544
8.0	1.0	0.90522	0.83062	0.84016	0.05862	0.87938	0.90399	-5.0544	0.90646	0.0002	0.92121	0.7226	1.14286	0.2284	0.21841
9.0	1.0	0.88749	0.80117	0.87263	0.07382	0.86082	0.88669	-6.03955	0.88829	0.00022	0.91698	0.67762	1.14286	0.20518	0.22796
10.0	1.0	0.87138	0.77583	0.81417	0.08235	0.84246	0.87023	-7.42682	0.87253	0.00022	0.90919	0.64445	2.0	0.20708	0.2489
11.0	1.0	0.83895	0.72553	0.83281	0.10458	0.80783	0.83786	-8.23984	0.84004	0.00023	0.90016	0.57714	2.0	0.19131	0.2514
12.0	1.0	0.84753	0.73858	0.81492	0.09998	0.81991	0.84681	-9.42179	0.84826	0.00025	0.91038	0.59314	2.0	0.1821	0.25699
13.0	1.0	0.84838	0.73886	0.80696	0.10177	0.82282	0.84746	-10.16403	0.84931	0.00026	0.91562	0.59207	2.0	0.18384	0.26635
14.0	1.0	0.89102	0.8053	0.90522	0.09498	0.87472	0.89	-11.98905	0.89204	0.00031	0.94408	0.68115	2.0	0.17723	0.26796
15.0	1.0	0.90603	0.82992	0.90857	0.08848	0.89245	0.90549	-13.30826	0.90658	0.00032	0.95331	0.71502	2.0	0.18251	0.27135
16.0	1.0	0.9111	0.83807	0.90591	0.08808	0.89861	0.91076	-15.30153	0.91145	0.00033	0.95695	0.72571	2.0	0.18791	0.27518
17.0	1.0	0.91053	0.83707	0.8929	0.08853	0.89815	0.91022	-16.76094	0.91084	0.00033	0.95728	0.72394	2.0	0.19297	0.27574
18.0	1.0	0.91354	0.842	0.89391	0.08758	0.9019	0.91323	-18.12654	0.91385	0.00034	0.95964	0.73107	2.0	0.20045	0.28669
19.0	1.0	0.90877	0.83371	0.88664	0.09094	0.89687	0.90851	-19.85716	0.90904	0.00035	0.9586	0.71793	2.0	0.1928	0.28678
20.0	1.0	0.92269	0.85715	0.92323	0.08483	0.91307	0.92246	-21.70473	0.92292	0.00037	0.96621	0.75262	2.0	0.18919	0.28726

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.30, Tp: 0.25, complete link



Hierarchical Clustering Dendrogram - gap: 0.40, Tp: 0.25, complete link

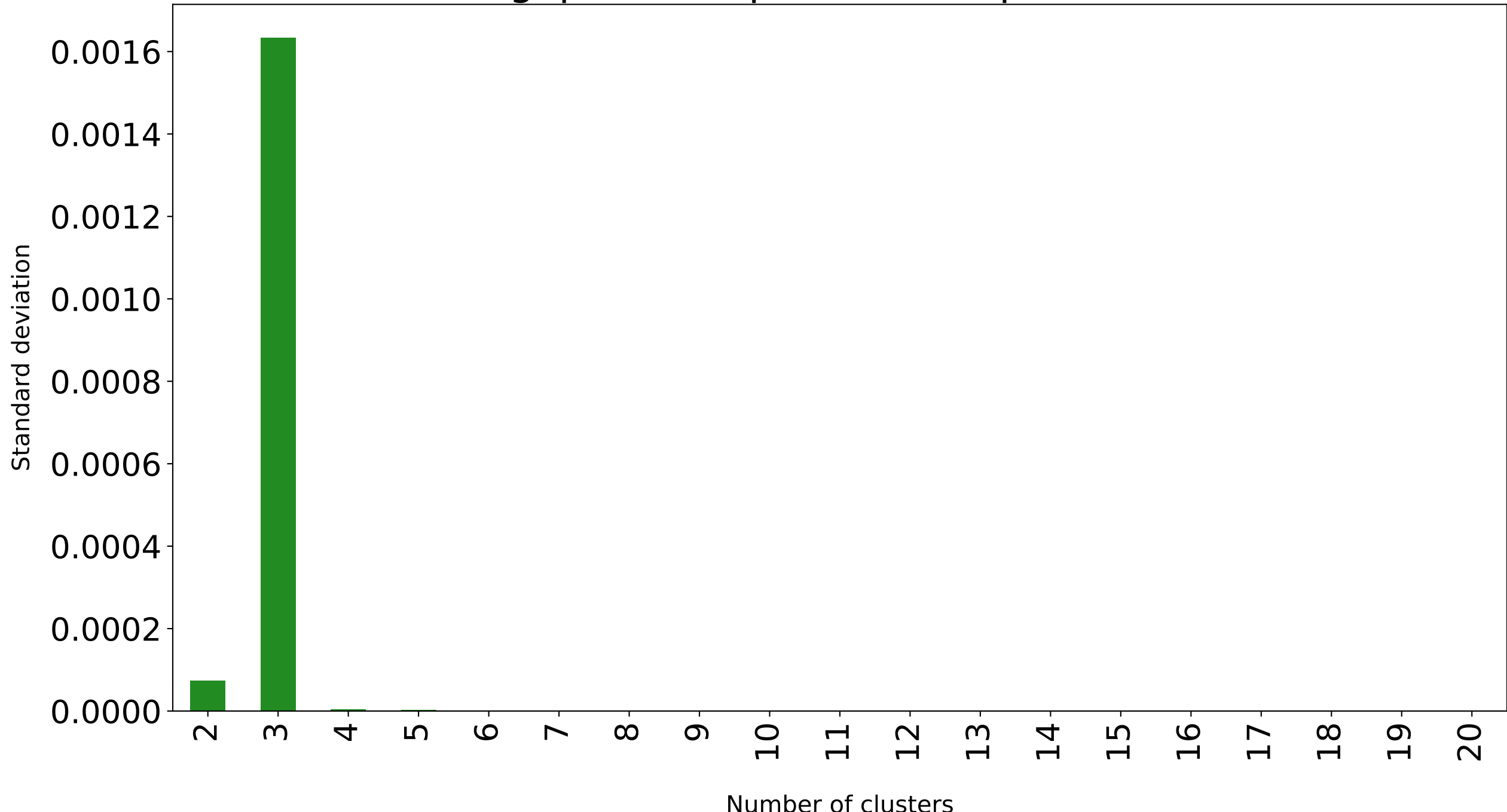


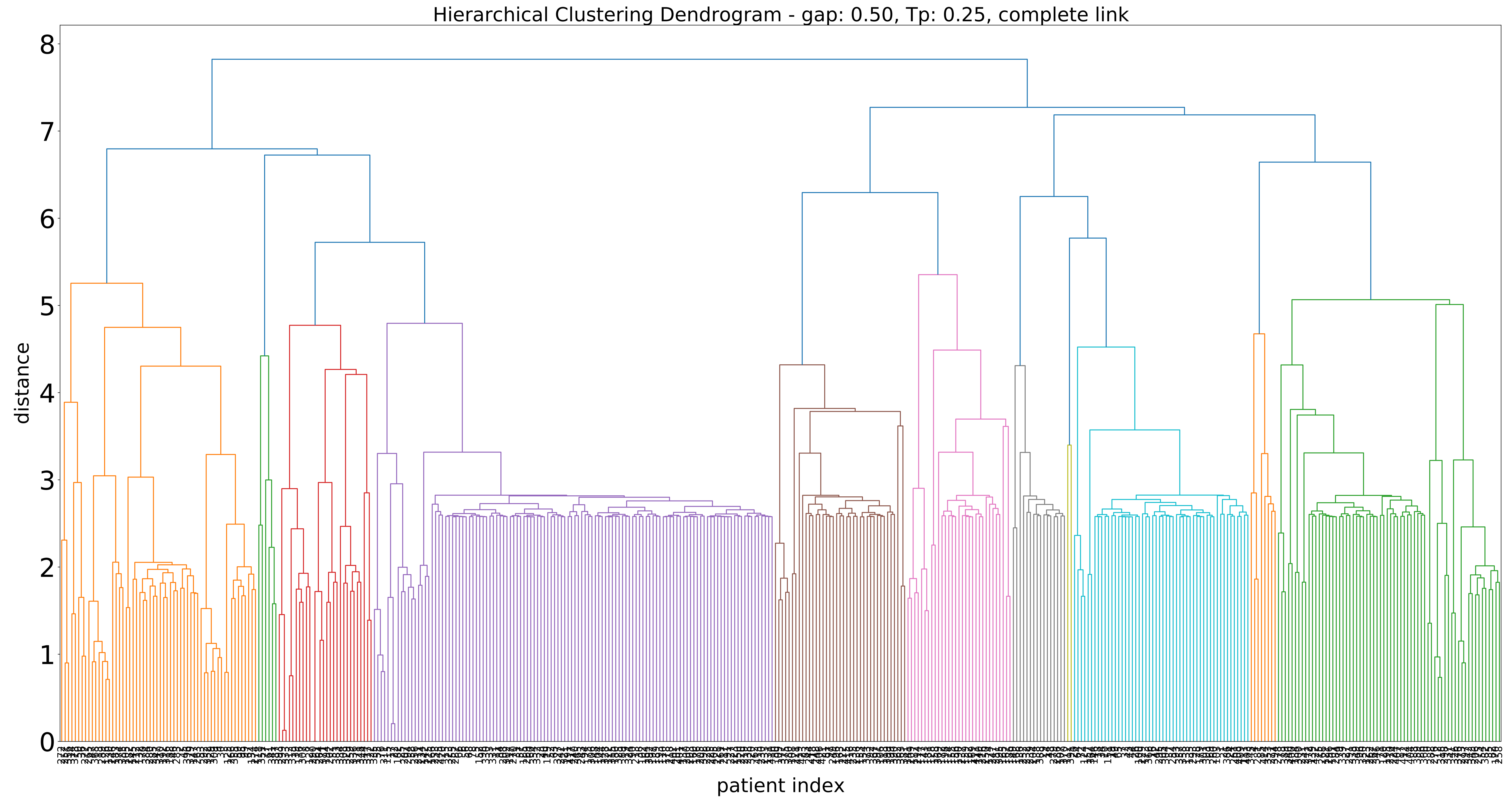
Cophenetic Correlation Coefficient: 0.6871868097142786

Average values of five clustering indices  
gap: 0.40, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99994	0.74416	0.61566	0.47415	0.189	0.44811	0.74282	0.20695	0.74552	7e-05	0.59502	0.47659	0.13559	0.12046	0.19964
3.0	1.00001	0.6877	0.53335	0.55024	0.20535	0.49883	0.68423	-0.1739	0.69122	9e-05	0.62282	0.38015	0.13559	0.19011	0.20842
4.0	1.0	0.74438	0.5974	0.72333	0.16611	0.64133	0.7393	-0.84264	0.74957	0.00013	0.73988	0.4394	0.16	0.18519	0.20854
5.0	1.0	0.80365	0.6791	0.7948	0.13609	0.73745	0.80072	-1.80831	0.80665	0.00016	0.81899	0.53005	0.24242	0.19519	0.22376
6.0	1.0	0.82392	0.70625	0.82128	0.11995	0.77121	0.82181	-2.8946	0.82607	0.00017	0.84905	0.55895	0.25	0.2183	0.22795
7.0	1.0	0.83934	0.72817	0.8132	0.10545	0.79448	0.83844	-4.07435	0.84025	0.00018	0.8692	0.58264	0.57143	0.20897	0.23237
8.0	1.0	0.84161	0.73119	0.83583	0.10359	0.80219	0.84056	-5.17312	0.84267	0.0002	0.88101	0.58651	0.57143	0.20791	0.24338
9.0	1.0	0.83825	0.7261	0.80142	0.10604	0.80002	0.83738	-6.45465	0.83913	0.0002	0.88341	0.57978	2.0	0.21469	0.25402
10.0	1.0	0.81439	0.69027	0.75753	0.12282	0.77412	0.81339	-7.48189	0.81539	0.00021	0.87538	0.53462	2.0	0.21598	0.24167
11.0	1.0	0.80698	0.67867	0.72943	0.12345	0.76716	0.80547	-8.69321	0.80849	0.00021	0.87495	0.5204	2.0	0.21643	0.24882
12.0	1.0	0.80958	0.68025	0.71818	0.12229	0.77291	0.80724	-9.37645	0.81193	0.00022	0.88183	0.52077	2.0	0.20483	0.25531
13.0	1.0	0.81356	0.68605	0.73522	0.13202	0.78082	0.8117	-10.37928	0.81543	0.00024	0.89277	0.52671	2.0	0.18613	0.25498
14.0	1.0	0.84315	0.72968	0.80327	0.12122	0.81858	0.8425	-11.7042	0.8438	0.00028	0.91804	0.57748	2.0	0.18564	0.26807
15.0	1.0	0.88409	0.79312	0.88335	0.1133	0.86743	0.88361	-13.56223	0.88456	0.00031	0.94306	0.66038	2.0	0.17937	0.27264
16.0	1.0	0.8905	0.80332	0.88171	0.11222	0.87519	0.89021	-15.54554	0.8908	0.00032	0.94748	0.67374	2.0	0.18625	0.27315
17.0	1.0	0.89395	0.80893	0.87647	0.10745	0.87932	0.89369	-16.85309	0.8942	0.00033	0.94973	0.68154	2.0	0.1963	0.2736
18.0	1.0	0.89285	0.80713	0.86683	0.10689	0.87829	0.89254	-18.68499	0.89316	0.00033	0.94982	0.67914	2.0	0.20617	0.28441
19.0	1.0	0.89177	0.80502	0.85609	0.10607	0.87735	0.89132	-19.83261	0.89222	0.00033	0.95004	0.67592	2.0	0.21262	0.29368
20.0	1.0	0.88849	0.79961	0.8514	0.10894	0.87403	0.88806	-21.55852	0.88892	0.00034	0.94977	0.6681	2.0	0.20846	0.29377

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.40, Tp: 0.25, complete link



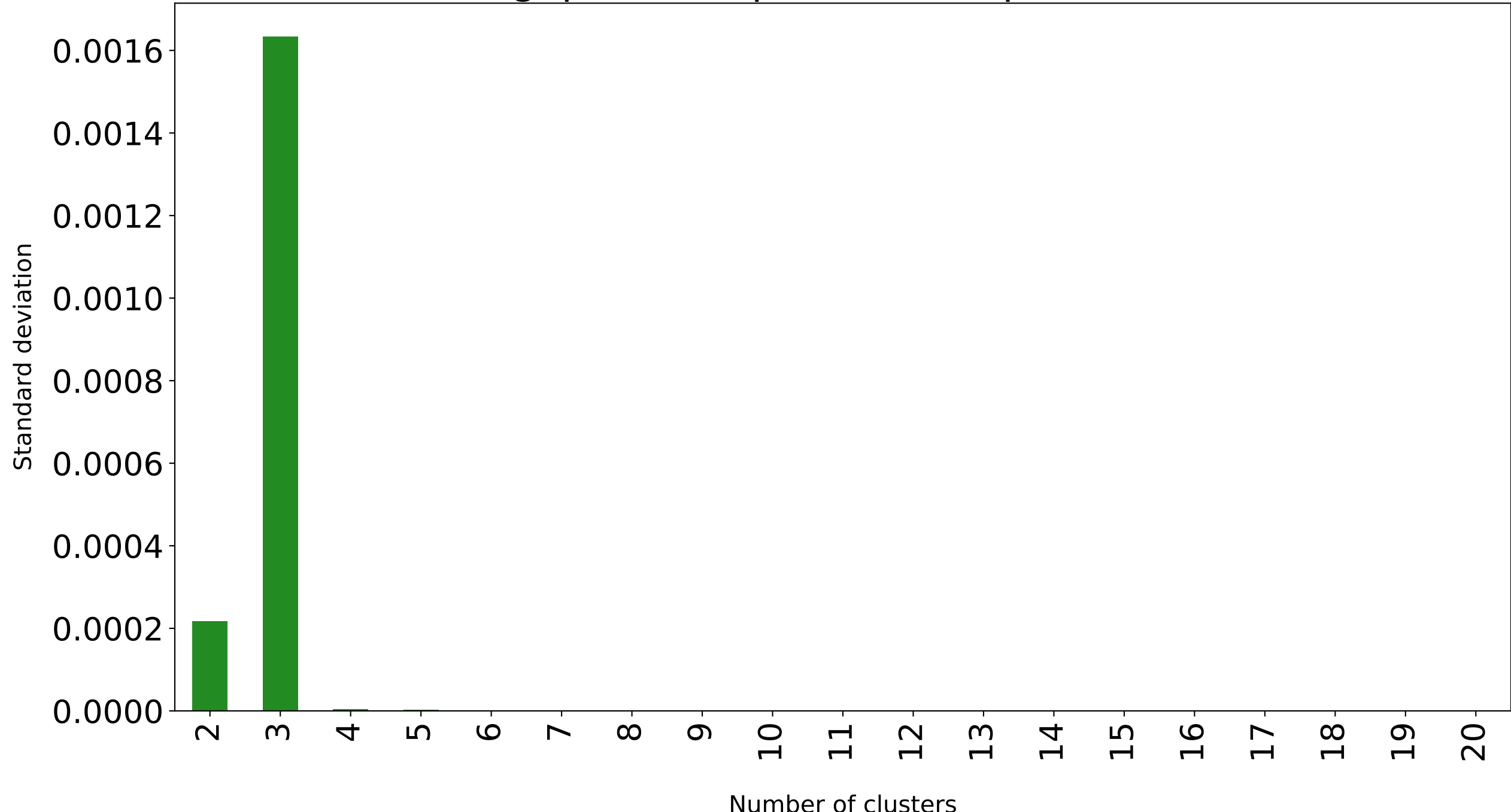




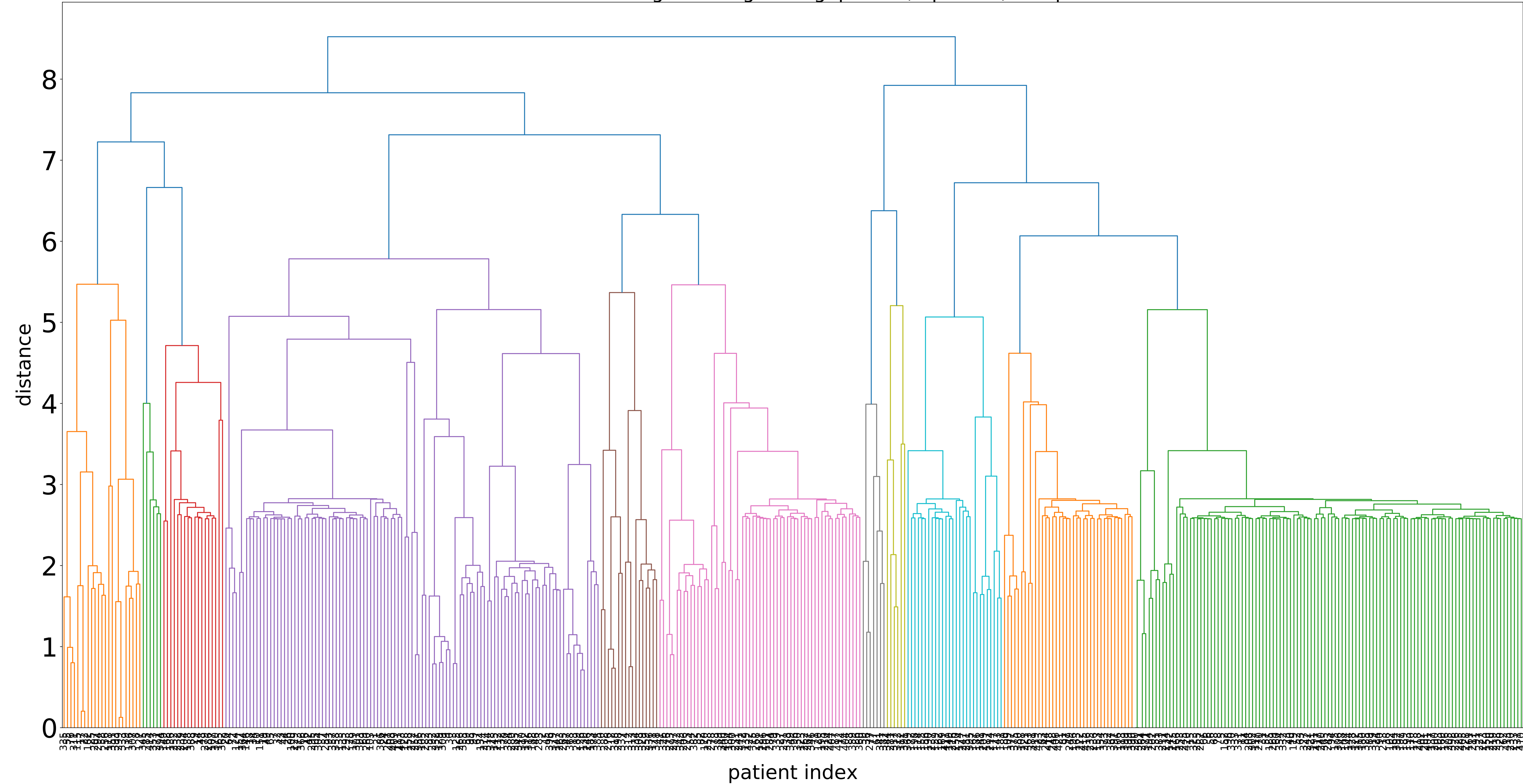
Average values of five clustering indices  
gap: 0.50, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99986	0.66928	0.50761	0.30781	0.23665	0.28441	0.66642	0.33346	0.6722	5e-05	0.48198	0.34797	0.09346	0.13752	0.17606
3.0	1.00011	0.60001	0.43278	0.34847	0.29761	0.32903	0.59731	0.26431	0.60276	5e-05	0.51467	0.28189	0.17143	0.15002	0.17818
4.0	1.00001	0.64032	0.47338	0.45702	0.24045	0.46955	0.63758	-0.35713	0.64309	9e-05	0.62353	0.31471	0.17143	0.17385	0.18839
5.0	1.0	0.73626	0.58871	0.70852	0.19249	0.64826	0.73323	-1.2222	0.73935	0.00014	0.76583	0.4279	0.17143	0.17069	0.19039
6.0	1.0	0.75016	0.60582	0.7079	0.18832	0.67506	0.74864	-2.11536	0.75171	0.00015	0.79333	0.44297	0.66667	0.20224	0.19271
7.0	1.0	0.75448	0.61052	0.69551	0.18698	0.68639	0.75371	-2.84759	0.75525	0.00016	0.80798	0.44597	0.66667	0.21272	0.2034
8.0	1.0	0.78202	0.64653	0.73675	0.15214	0.7266	0.78118	-4.12653	0.78286	0.00018	0.83783	0.48476	0.66667	0.23404	0.20486
9.0	1.0	0.807	0.68025	0.7584	0.12676	0.76181	0.80618	-5.40428	0.80782	0.0002	0.86346	0.52265	0.66667	0.2485	0.22179
10.0	1.0	0.81132	0.68497	0.73704	0.11992	0.76915	0.81005	-6.85427	0.81259	0.0002	0.87021	0.5273	2.0	0.231	0.22367
11.0	1.0	0.82291	0.70107	0.82913	0.12474	0.78937	0.82158	-8.33934	0.82425	0.00023	0.89208	0.54595	2.0	0.20083	0.23917
12.0	1.0	0.82579	0.70629	0.81144	0.12682	0.79402	0.82504	-10.06671	0.82654	0.00024	0.89766	0.55269	2.0	0.2105	0.24364
13.0	1.0	0.83117	0.714	0.80594	0.12583	0.80193	0.83054	-11.48751	0.83181	0.00025	0.9048	0.56153	2.0	0.20363	0.25272
14.0	1.0	0.82792	0.70859	0.80956	0.13066	0.80053	0.82727	-12.12471	0.82858	0.00027	0.90939	0.554	2.0	0.19883	0.25551
15.0	1.0	0.82755	0.70715	0.78421	0.12702	0.80123	0.82691	-13.3082	0.82819	0.00027	0.91224	0.5507	2.0	0.2001	0.267
16.0	1.0	0.87421	0.77749	0.87453	0.11281	0.85666	0.87368	-15.18203	0.87474	0.00031	0.93987	0.63946	2.0	0.20957	0.26826
17.0	1.0	0.88588	0.79611	0.88355	0.10397	0.87034	0.8855	-16.5466	0.88625	0.00033	0.94651	0.66451	2.0	0.20915	0.26961
18.0	1.0	0.89844	0.81645	0.90939	0.10192	0.88509	0.89788	-17.81643	0.89899	0.00034	0.9535	0.6937	2.0	0.2022	0.2739
19.0	1.0	0.9027	0.82373	0.90252	0.10003	0.89008	0.90235	-19.31512	0.90305	0.00035	0.95609	0.70397	2.0	0.20747	0.28306
20.0	1.0	0.91204	0.83927	0.91082	0.09649	0.90092	0.91176	-20.76692	0.91233	0.00036	0.96111	0.72643	2.0	0.21211	0.28525

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.50, Tp: 0.25, complete link



Hierarchical Clustering Dendrogram - gap: 0.60, Tp: 0.25, complete link

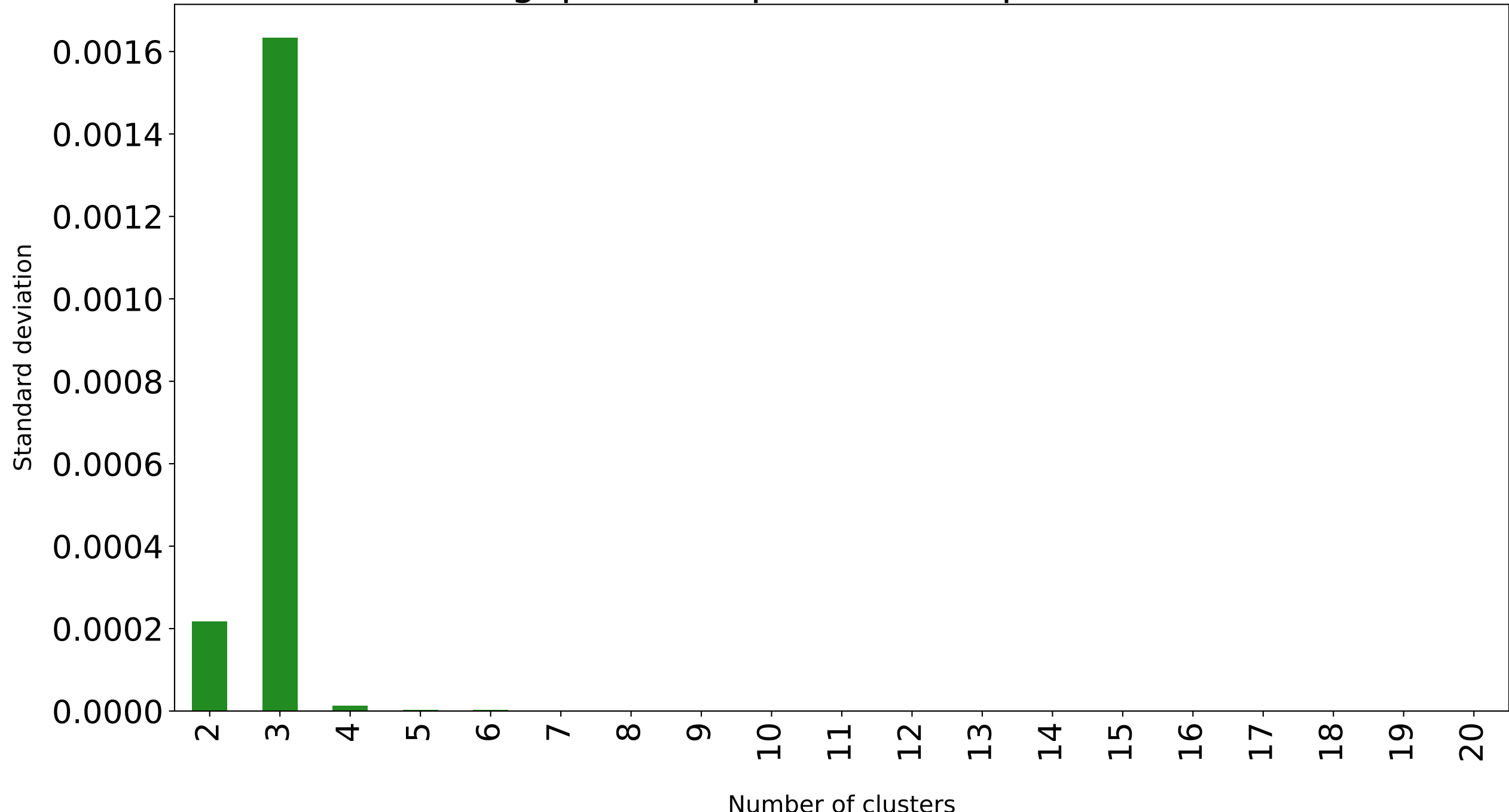


Cophenetic Correlation Coefficient: 0.6332444160071892

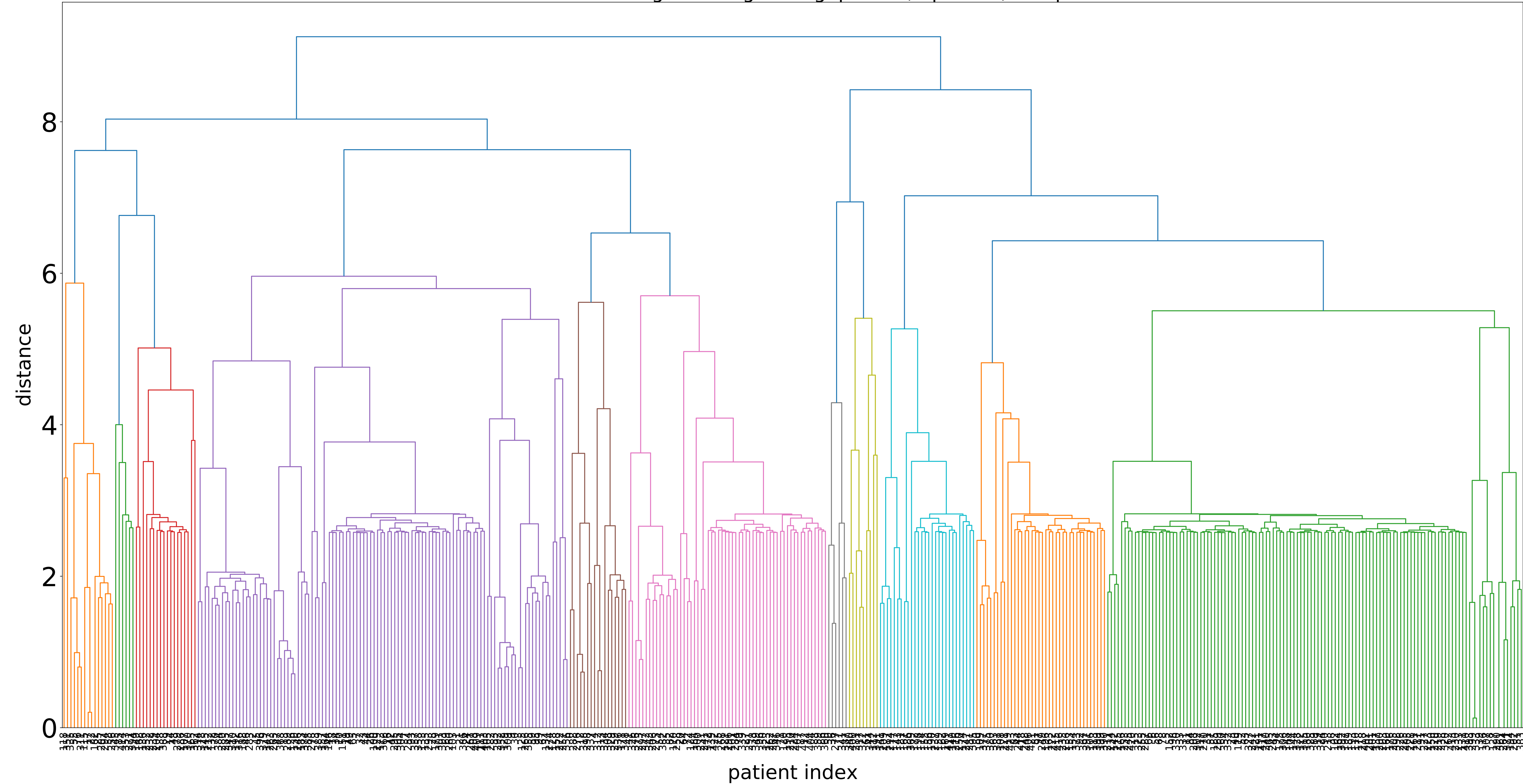
Average values of five clustering indices  
gap: 0.60, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.9999	0.61169	0.43648	0.12272	0.30002	0.10554	0.60431	0.44009	0.61934	2e-05	0.38541	0.28221	0.08621	0.12412	0.18894
3.0	0.99994	0.56165	0.39081	0.1697	0.32582	0.18003	0.5582	0.35596	0.56515	3e-05	0.42112	0.24555	0.30769	0.1626	0.19114
4.0	1.00001	0.55248	0.38459	0.26834	0.32335	0.29268	0.5498	-0.10929	0.55519	5e-05	0.50702	0.2424	0.51064	0.13558	0.20468
5.0	1.00001	0.62867	0.46409	0.47469	0.24586	0.47611	0.62675	-1.17202	0.6306	9e-05	0.6464	0.30929	0.51064	0.17589	0.19103
6.0	1.0	0.64329	0.47731	0.47369	0.22618	0.5133	0.6404	-2.07564	0.6462	0.0001	0.67901	0.31942	0.66667	0.18539	0.20534
7.0	1.0	0.70216	0.54558	0.59533	0.19327	0.61343	0.70077	-3.17607	0.70355	0.00014	0.75976	0.38187	0.66667	0.19265	0.20714
8.0	1.0	0.71098	0.55377	0.58525	0.1816	0.63005	0.70862	-4.2703	0.71336	0.00015	0.77367	0.38848	0.66667	0.22505	0.21645
9.0	1.0	0.70959	0.54859	0.5607	0.17907	0.63292	0.70522	-5.38826	0.714	0.00015	0.77838	0.38215	1.33333	0.2337	0.21799
10.0	1.0	0.71344	0.55182	0.56349	0.17893	0.64378	0.70857	-5.92106	0.71836	0.00016	0.79212	0.38426	1.33333	0.21578	0.22751
11.0	1.0	0.79089	0.65651	0.73049	0.1423	0.74837	0.79003	-7.60602	0.79177	0.00021	0.86745	0.49368	1.33333	0.2166	0.23866
12.0	1.0	0.80679	0.67618	0.82674	0.14082	0.77307	0.80493	-8.80771	0.80866	0.00024	0.88952	0.51465	1.33333	0.2042	0.25233
13.0	1.0	0.81877	0.69428	0.82204	0.13014	0.78815	0.8177	-10.10062	0.81984	0.00025	0.89956	0.53587	1.33333	0.20232	0.25266
14.0	1.0	0.82317	0.70056	0.82677	0.13181	0.79521	0.82214	-11.67944	0.82421	0.00027	0.90702	0.54321	1.33333	0.20882	0.25716
15.0	1.0	0.83689	0.72105	0.81785	0.12592	0.81196	0.83625	-12.5772	0.83753	0.00028	0.91671	0.56786	1.33333	0.21759	0.26513
16.0	1.0	0.84334	0.73014	0.80208	0.12447	0.82015	0.84273	-14.53872	0.84395	0.00029	0.92195	0.57827	2.0	0.21899	0.26763
17.0	1.0	0.85342	0.74528	0.82388	0.12429	0.83278	0.85302	-15.61961	0.85383	0.0003	0.92993	0.59673	2.0	0.21962	0.26768
18.0	1.0	0.88587	0.79598	0.88797	0.11758	0.87072	0.88543	-17.53363	0.8863	0.00033	0.94761	0.66426	2.0	0.20894	0.27201
19.0	1.0	0.89527	0.81116	0.89626	0.11394	0.88174	0.89489	-19.01629	0.89565	0.00034	0.95295	0.68521	2.0	0.21704	0.27245
20.0	1.0	0.90514	0.82736	0.90245	0.10579	0.8932	0.90486	-21.15791	0.90543	0.00035	0.95826	0.708	2.0	0.2164	0.2746

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.60, Tp: 0.25, complete link



Hierarchical Clustering Dendrogram - gap: 0.70, Tp: 0.25, complete link

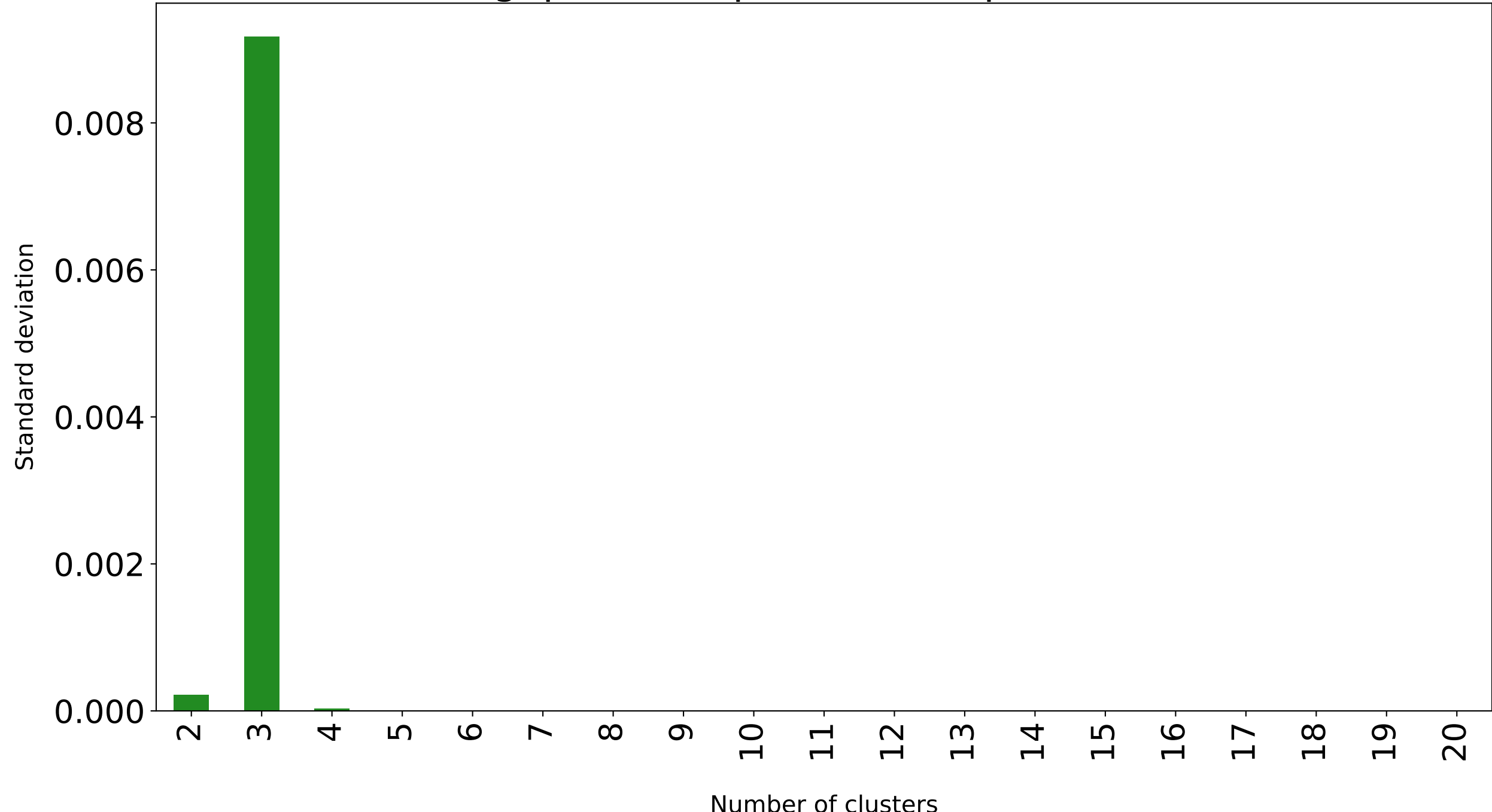


Cophenetic Correlation Coefficient: 0.6307419544840157

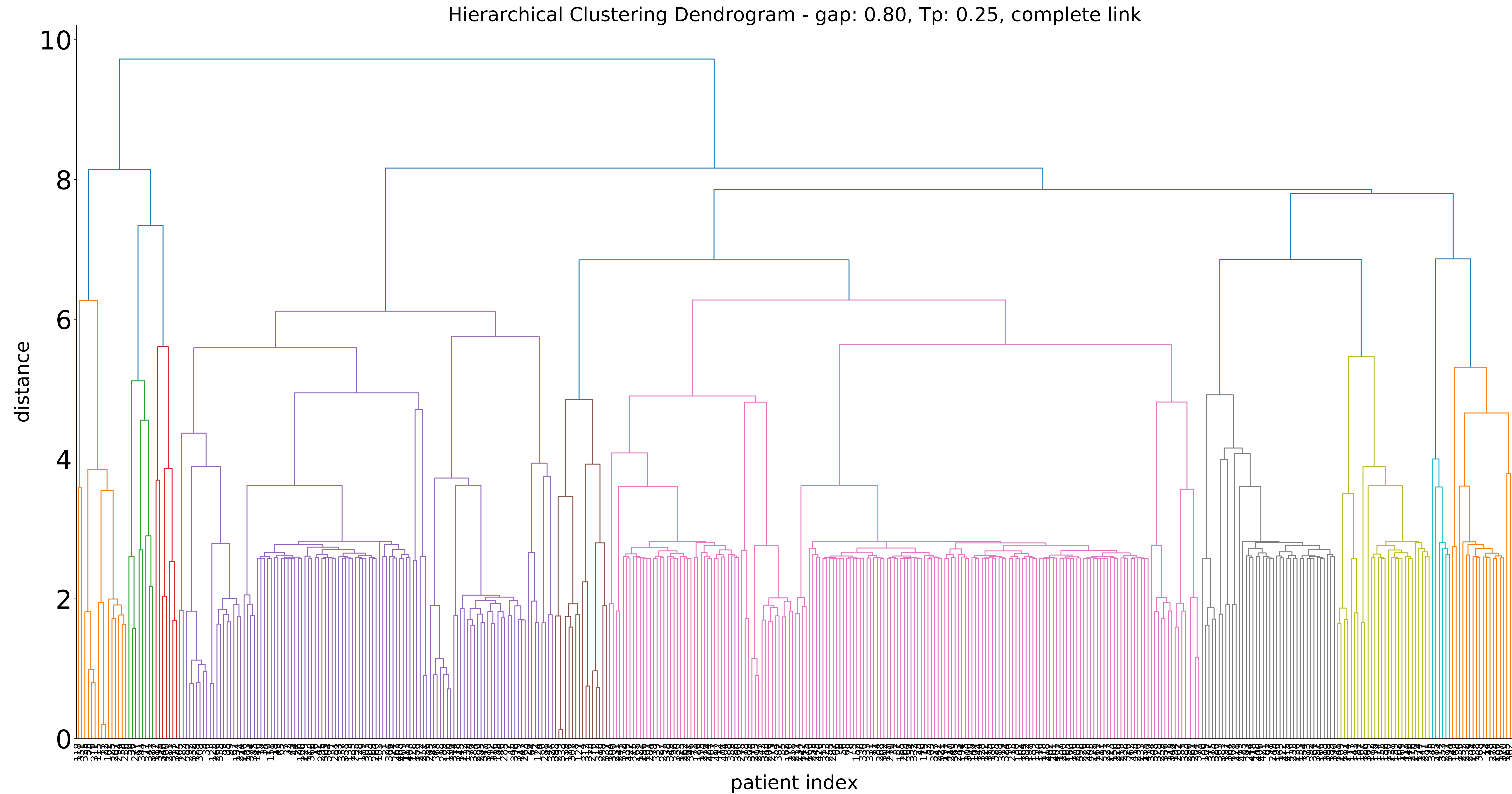
Average values of five clustering indices  
gap: 0.70, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99989	0.62584	0.4455	0.10463	0.29091	0.09014	0.61391	0.42482	0.63827	1e-05	0.37677	0.28866	0.05005	0.12552	0.18996
3.0	1.0006	0.57498	0.40465	0.19023	0.31767	0.18831	0.57225	0.36395	0.57773	3e-05	0.42525	0.25677	0.14815	0.15379	0.19912
4.0	1.00002	0.55797	0.39115	0.26829	0.32407	0.28262	0.55558	-0.01297	0.5604	5e-05	0.49663	0.24849	0.34188	0.12576	0.20966
5.0	1.00001	0.59841	0.43302	0.42736	0.27187	0.42075	0.5965	-0.86601	0.60035	8e-05	0.60748	0.28341	0.34188	0.15871	0.19423
6.0	1.00001	0.61083	0.44293	0.42458	0.24981	0.45926	0.60822	-1.73367	0.61346	9e-05	0.64157	0.28961	0.37037	0.19688	0.21077
7.0	1.0	0.65488	0.49105	0.52678	0.22427	0.54603	0.65333	-2.75418	0.65644	0.00012	0.71644	0.33096	0.37037	0.20452	0.21323
8.0	1.0	0.66817	0.50311	0.51713	0.21152	0.57128	0.66485	-3.83517	0.67152	0.00013	0.73638	0.34092	0.37037	0.22142	0.21886
9.0	1.0	0.67694	0.50947	0.50863	0.19918	0.58886	0.67128	-4.94387	0.68267	0.00014	0.74988	0.34577	0.37037	0.24736	0.22662
10.0	1.0	0.68245	0.51431	0.5142	0.19513	0.6026	0.67591	-5.50588	0.68909	0.00015	0.76526	0.34972	0.37037	0.23049	0.23025
11.0	1.0	0.76522	0.62293	0.68425	0.15352	0.71605	0.76384	-7.11494	0.76661	0.0002	0.84885	0.4585	0.37037	0.23037	0.24833
12.0	1.0	0.7784	0.63895	0.74469	0.15162	0.73788	0.77771	-8.24039	0.77909	0.00022	0.87139	0.473	0.37037	0.21569	0.25217
13.0	1.0	0.78406	0.64603	0.72793	0.14755	0.74599	0.78318	-9.96202	0.78493	0.00023	0.87783	0.48038	2.0	0.21581	0.25532
14.0	1.0	0.79846	0.66596	0.76243	0.14265	0.76581	0.79783	-11.20417	0.7991	0.00025	0.89325	0.5024	2.0	0.21147	0.25956
15.0	1.0	0.80166	0.67022	0.76476	0.1443	0.77152	0.80105	-12.80217	0.80228	0.00027	0.90022	0.50691	2.0	0.21535	0.26356
16.0	1.0	0.80989	0.68116	0.7593	0.13814	0.78181	0.80908	-13.63173	0.8107	0.00028	0.90616	0.51903	2.0	0.22614	0.26891
17.0	1.0	0.87528	0.77868	0.89419	0.12733	0.85877	0.87434	-15.67351	0.87623	0.00033	0.94256	0.6412	2.0	0.21728	0.27381
18.0	1.0	0.88131	0.7885	0.89014	0.12569	0.86581	0.88075	-17.63896	0.88187	0.00033	0.94621	0.654	2.0	0.21179	0.27455
19.0	1.0	0.89131	0.80475	0.89244	0.1213	0.87741	0.891	-19.60438	0.89162	0.00034	0.95171	0.67607	2.0	0.20014	0.28025
20.0	1.0	0.89887	0.81715	0.89334	0.11486	0.88616	0.89867	-21.21902	0.89907	0.00035	0.95573	0.69337	2.0	0.20081	0.28109

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.70, Tp: 0.25, complete link



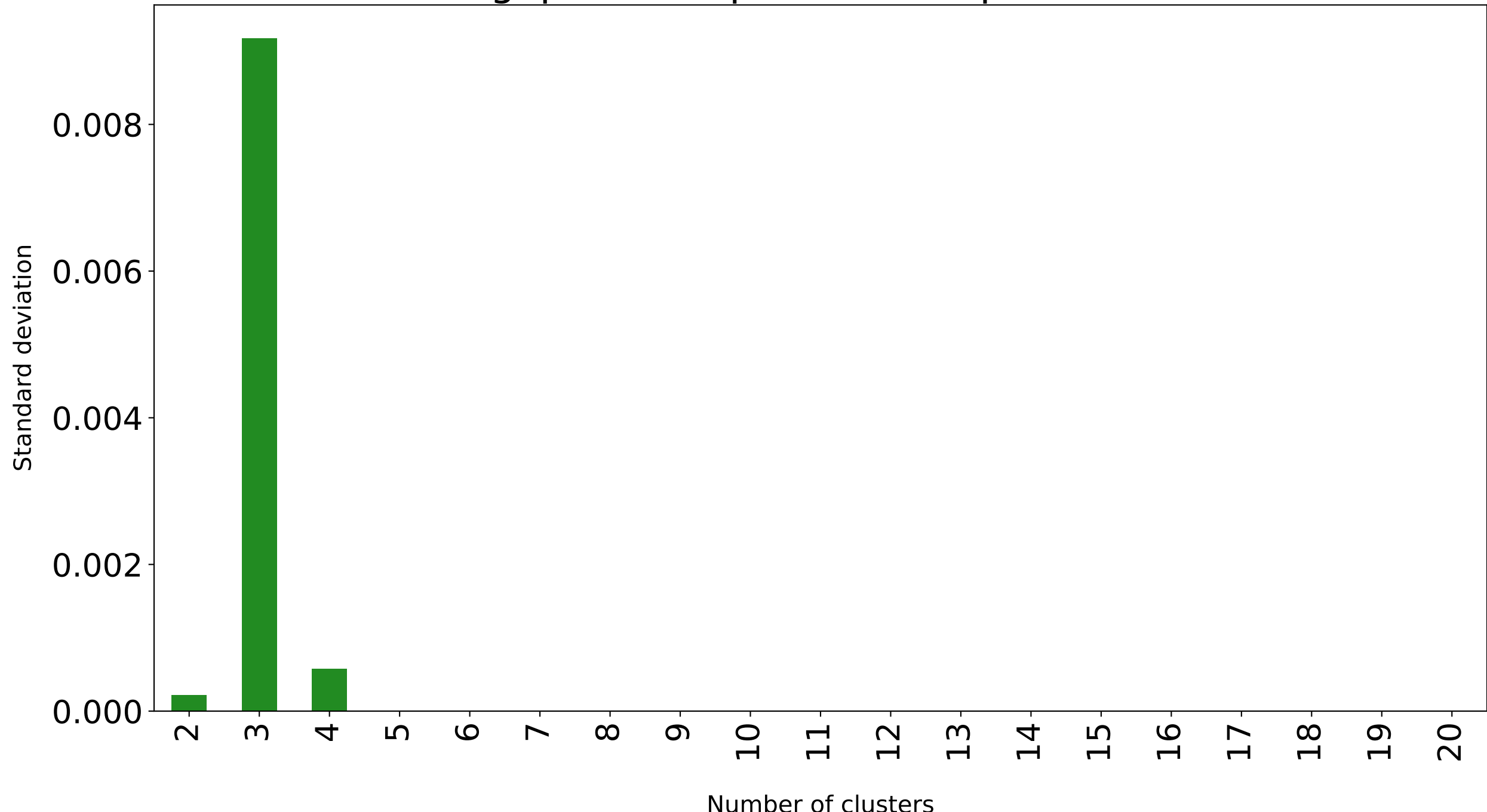




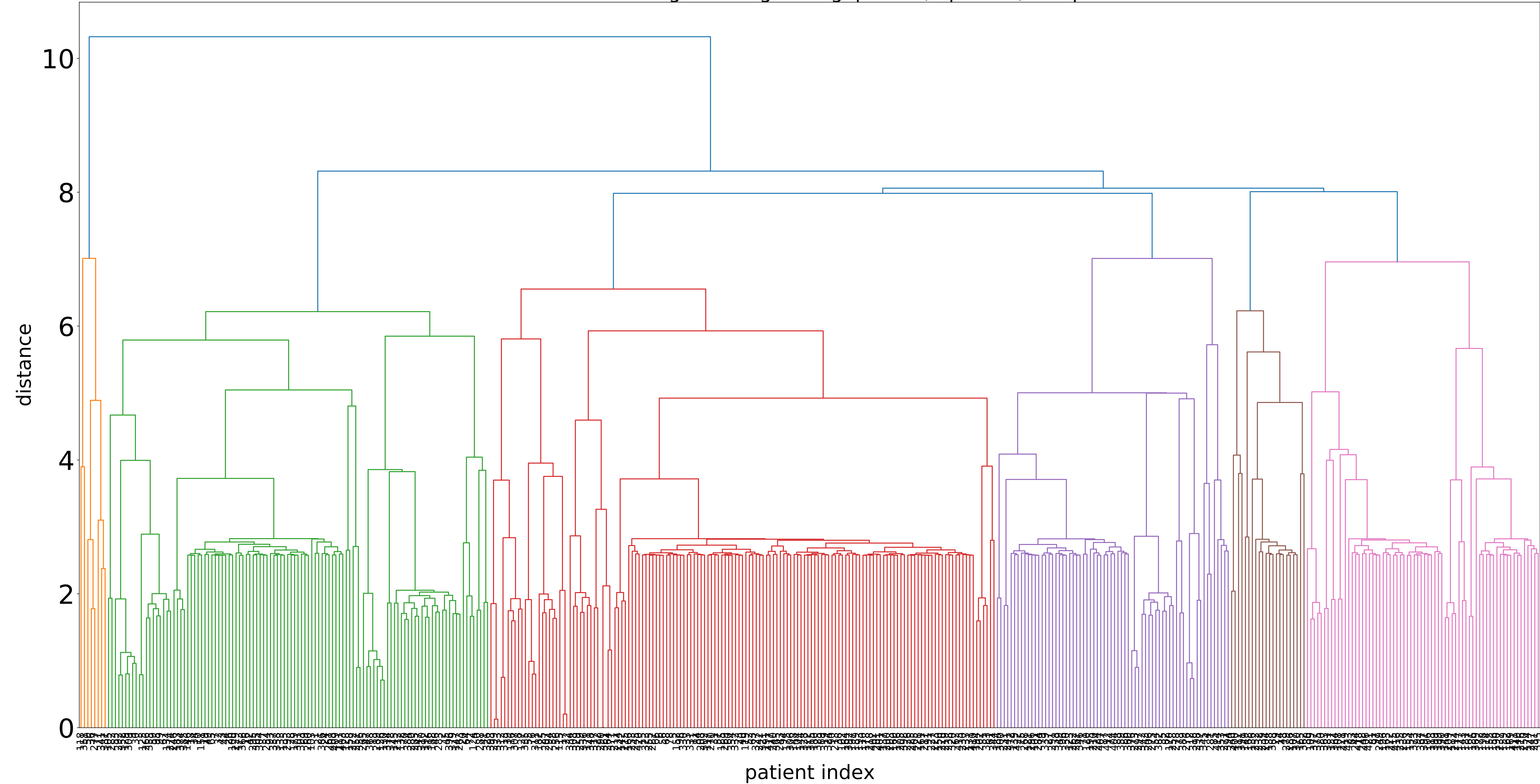
# Average values of five clustering indices gap: 0.80, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.85553	0.7556	0.47077	0.0996	0.31024	0.84875	0.20623	0.86248	0.00015	0.6531	0.63702	0.07407	0.13067	0.21284
3.0	1.00004	0.67853	0.53125	0.33456	0.22579	0.32344	0.67604	0.10592	0.68105	5e-05	0.51535	0.38691	0.07407	0.1623	0.21335
4.0	1.00005	0.62068	0.45083	0.23389	0.25114	0.31159	0.61184	-0.24481	0.62973	5e-05	0.48723	0.29987	0.2963	0.21088	0.22118
5.0	1.00001	0.66201	0.506	0.49363	0.2332	0.50283	0.65957	-1.30132	0.66449	9e-05	0.64957	0.35345	0.2963	0.19068	0.22282
6.0	1.0	0.68577	0.53227	0.51867	0.21173	0.56072	0.6825	-1.95361	0.68907	0.00011	0.69895	0.37854	0.2963	0.19613	0.23663
7.0	1.0	0.68949	0.53006	0.49547	0.20369	0.57889	0.68287	-3.02895	0.69621	0.00012	0.71368	0.3735	0.31746	0.20925	0.25314
8.0	1.0	0.68928	0.5232	0.4755	0.20052	0.58873	0.67866	-4.09784	0.70013	0.00012	0.72161	0.36495	0.37037	0.24169	0.25329
9.0	1.0	0.68464	0.51431	0.46726	0.18343	0.59067	0.67237	-5.05517	0.6972	0.00013	0.72938	0.35445	0.37037	0.25587	0.25367
10.0	1.0	0.69224	0.52468	0.49815	0.18052	0.6103	0.6822	-5.98713	0.70247	0.00014	0.75726	0.36345	0.37037	0.24084	0.27042
11.0	1.0	0.79277	0.66244	0.72112	0.12857	0.74868	0.79137	-8.01712	0.79417	0.0002	0.86409	0.5066	0.37037	0.23662	0.27064
12.0	1.0	0.79068	0.65636	0.69332	0.12601	0.74811	0.78829	-9.63839	0.79309	0.00021	0.86586	0.49687	2.0	0.23598	0.27744
13.0	1.0	0.80528	0.6775	0.7675	0.12996	0.77061	0.80454	-10.68681	0.80601	0.00024	0.88867	0.51887	2.0	0.22997	0.28979
14.0	1.0	0.81596	0.69141	0.76057	0.12438	0.78476	0.81489	-11.45384	0.81704	0.00025	0.89807	0.53413	2.0	0.23381	0.28051
15.0	1.0	0.85594	0.75069	0.83915	0.11499	0.83396	0.85522	-13.37711	0.85666	0.00029	0.92614	0.60736	2.0	0.2203	0.28188
16.0	1.0	0.86504	0.76392	0.82965	0.11234	0.84505	0.86444	-15.32514	0.86564	0.0003	0.93236	0.62302	2.0	0.21647	0.28262
17.0	1.0	0.89754	0.81586	0.89906	0.10078	0.88339	0.89706	-16.76339	0.89802	0.00033	0.95119	0.69439	2.0	0.21605	0.2891
18.0	1.0	0.90162	0.82242	0.90039	0.09814	0.88833	0.90122	-18.74354	0.90202	0.00033	0.95402	0.70331	2.0	0.22434	0.2974
19.0	1.0	0.9033	0.82516	0.89208	0.09765	0.89043	0.90298	-20.709	0.90362	0.00034	0.95543	0.70691	2.0	0.22755	0.30875
20.0	1.0	0.9032	0.82458	0.87953	0.09875	0.89054	0.90291	-22.3183	0.90349	0.00034	0.95606	0.7051	2.0	0.2254	0.3195

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.80, Tp: 0.25, complete link



Hierarchical Clustering Dendrogram - gap: 0.90, Tp: 0.25, complete link

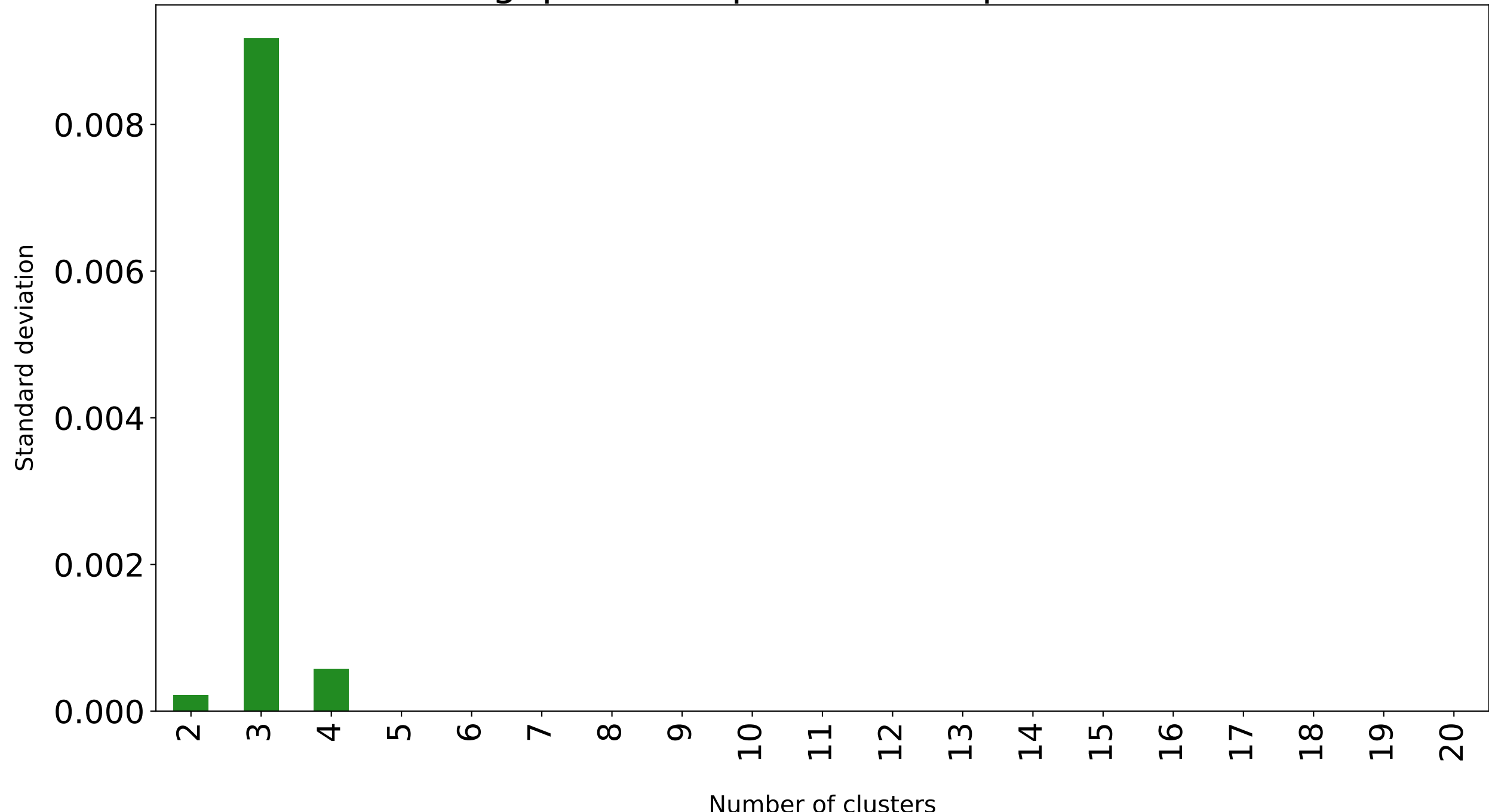


Cophenetic Correlation Coefficient: 0.7298357740390699

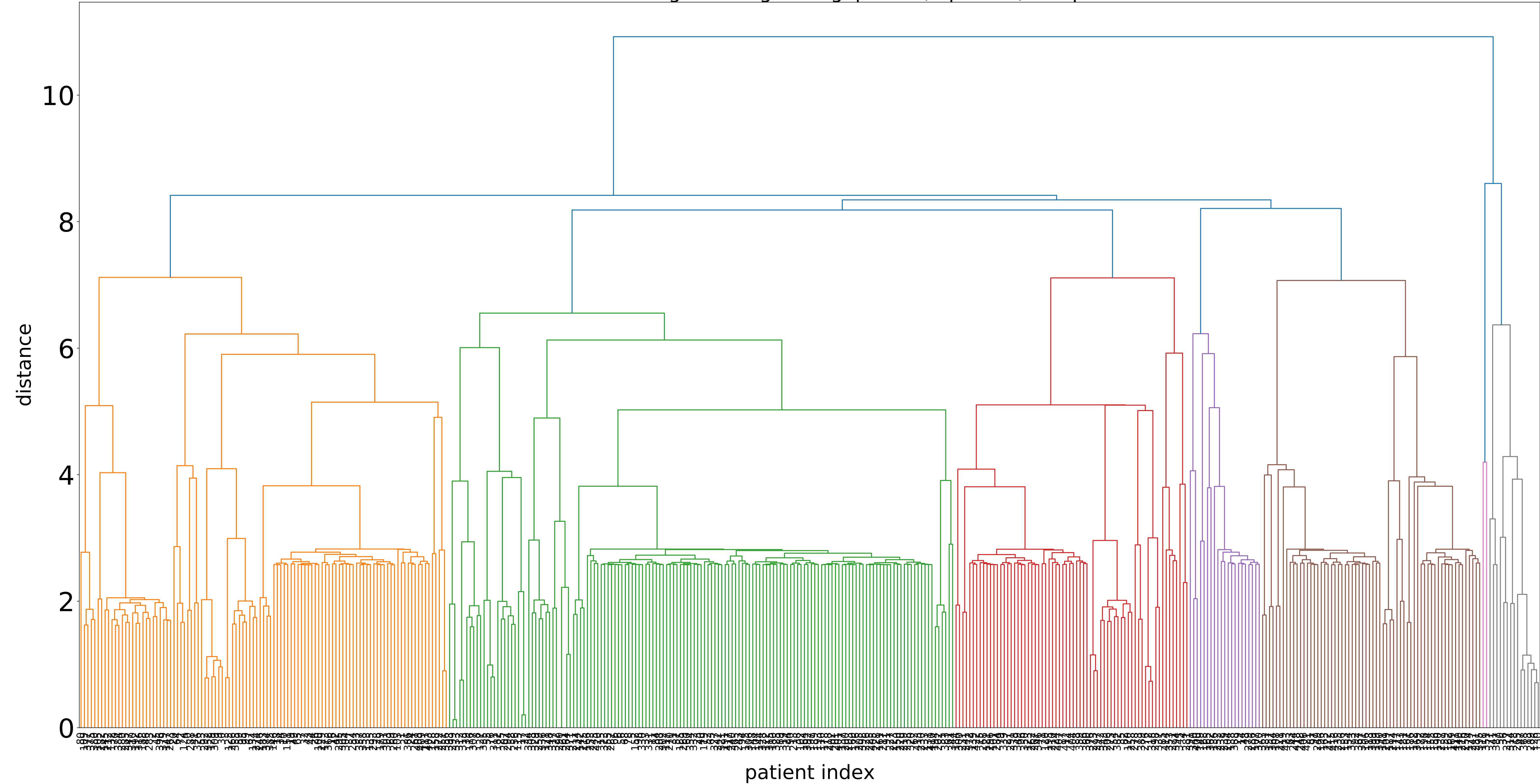
Average values of five clustering indices  
gap: 0.90, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.89131	0.80853	0.36866	0.07166	0.46054	0.8817	0.14013	0.90127	0.00044	0.7229	0.71744	0.0	0.34189	0.22096
3.0	0.99998	0.73292	0.59262	0.36936	0.18389	0.37479	0.72818	-0.00739	0.73775	6e-05	0.5495	0.44892	0.00729	0.25249	0.22795
4.0	1.00002	0.66052	0.50366	0.46352	0.22888	0.44302	0.65755	-0.51372	0.66353	7e-05	0.58829	0.35112	0.04938	0.22295	0.22944
5.0	1.00001	0.67927	0.52405	0.47199	0.20848	0.51766	0.6756	-1.15202	0.68297	9e-05	0.64987	0.36984	0.40404	0.21964	0.23015
6.0	1.0	0.7353	0.59468	0.68341	0.17318	0.64249	0.73239	-2.28355	0.73826	0.00014	0.76039	0.44523	0.40404	0.22727	0.26205
7.0	1.0	0.75836	0.62369	0.66926	0.16023	0.68069	0.75655	-3.5299	0.76018	0.00015	0.79262	0.47321	2.0	0.22751	0.26209
8.0	1.0	0.77364	0.64162	0.66923	0.15114	0.70704	0.7714	-4.29499	0.77589	0.00016	0.81454	0.49084	2.0	0.23255	0.26402
9.0	1.0	0.79275	0.66659	0.6894	0.12675	0.73718	0.79024	-5.67458	0.79528	0.00017	0.83904	0.5188	2.0	0.24831	0.28037
10.0	1.0	0.80349	0.6793	0.74096	0.12279	0.75804	0.80216	-6.9049	0.80484	0.0002	0.86288	0.52837	2.0	0.22923	0.28852
11.0	1.0	0.80967	0.68515	0.7196	0.11731	0.76821	0.80753	-8.42566	0.81183	0.00021	0.87129	0.53294	2.0	0.22703	0.28906
12.0	1.0	0.8055	0.67811	0.7683	0.12926	0.76838	0.80472	-9.25469	0.80628	0.00023	0.88252	0.52019	2.0	0.21514	0.2979
13.0	1.0	0.82649	0.70633	0.81712	0.1227	0.79652	0.82558	-10.9842	0.82741	0.00025	0.90215	0.55141	2.0	0.21448	0.30193
14.0	1.0	0.84804	0.73896	0.82111	0.11283	0.82297	0.8474	-11.78593	0.84867	0.00027	0.91727	0.59248	2.0	0.22083	0.28928
15.0	1.0	0.86149	0.75858	0.81759	0.10386	0.83951	0.86072	-13.25312	0.86226	0.00028	0.92647	0.61661	2.0	0.22936	0.29012
16.0	1.0	0.88522	0.79621	0.86982	0.09635	0.86822	0.88478	-14.50656	0.88566	0.00031	0.9423	0.66719	2.0	0.22905	0.29368
17.0	1.0	0.88914	0.80216	0.86188	0.09581	0.87304	0.88872	-15.98479	0.88957	0.00031	0.9451	0.67469	2.0	0.23673	0.29655
18.0	1.0	0.8914	0.80576	0.8614	0.09375	0.87597	0.89094	-17.84664	0.89186	0.00032	0.94713	0.67973	2.0	0.2421	0.29932
19.0	1.0	0.89094	0.80454	0.85066	0.09375	0.87573	0.89034	-19.76077	0.89155	0.00032	0.94759	0.67762	2.0	0.24425	0.33299
20.0	1.0	0.89093	0.80434	0.84889	0.09453	0.87616	0.89027	-21.60208	0.8916	0.00033	0.94881	0.67716	2.0	0.23209	0.33482

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.90, Tp: 0.25, complete link



Hierarchical Clustering Dendrogram - gap: 1.00, Tp: 0.25, complete link



Cophenetic Correlation Coefficient: 0.6886325360317476

Average values of five clustering indices  
gap: 1.00, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.92186	0.86179	0.62212	0.05475	0.48676	0.9173	0.11581	0.92656	0.00034	0.79243	0.78518	0.13072	0.27114	0.20692
3.0	0.99999	0.76274	0.59878	0.11953	0.16223	0.22588	0.73888	0.23401	0.78779	8e-05	0.46899	0.44681	2.0	0.30032	0.21155
4.0	1.00002	0.64603	0.47701	0.23159	0.2327	0.32527	0.63443	-0.30536	0.65798	5e-05	0.48793	0.32562	2.0	0.24111	0.21336
5.0	1.00001	0.65939	0.49873	0.43571	0.22423	0.48055	0.65565	-1.14425	0.66317	9e-05	0.62267	0.34393	2.0	0.2272	0.21689
6.0	1.00001	0.68461	0.51953	0.45397	0.19906	0.54597	0.67678	-2.09116	0.69257	0.0001	0.66928	0.35868	2.0	0.22974	0.21754
7.0	1.0	0.7856	0.66087	0.72383	0.14581	0.71605	0.78394	-3.63079	0.78728	0.00016	0.81371	0.51456	2.0	0.2384	0.2501
8.0	1.0	0.76731	0.63308	0.72157	0.16112	0.70204	0.76616	-4.17099	0.76847	0.00016	0.81732	0.47744	2.0	0.21442	0.25037
9.0	1.0	0.77501	0.6417	0.71754	0.15751	0.71564	0.77395	-4.94434	0.77608	0.00017	0.83	0.48498	2.0	0.21977	0.25182
10.0	1.0	0.79651	0.66985	0.73806	0.12538	0.74742	0.79527	-6.4652	0.79777	0.00019	0.8543	0.51616	2.0	0.23486	0.27165
11.0	1.0	0.79544	0.66363	0.79139	0.12958	0.75368	0.79375	-7.67883	0.79713	0.00021	0.86915	0.50442	2.0	0.22337	0.27955
12.0	1.0	0.80542	0.67744	0.77319	0.1253	0.76743	0.80447	-9.0941	0.80637	0.00022	0.88012	0.51881	2.0	0.21895	0.28584
13.0	1.0	0.81012	0.68213	0.74637	0.12208	0.77501	0.80889	-10.87346	0.81135	0.00023	0.8872	0.52206	2.0	0.21893	0.28603
14.0	1.0	0.82229	0.6986	0.75161	0.11879	0.79159	0.82073	-11.58902	0.82385	0.00025	0.89915	0.54083	2.0	0.21882	0.29049
15.0	1.0	0.8704	0.77263	0.84097	0.10664	0.84985	0.86989	-13.48676	0.87091	0.00028	0.93125	0.63511	2.0	0.21906	0.2963
16.0	1.0	0.87691	0.78239	0.83856	0.10046	0.85791	0.87632	-14.84355	0.87751	0.00029	0.93589	0.64758	2.0	0.22741	0.30065
17.0	1.0	0.87351	0.77645	0.82508	0.10265	0.85428	0.87269	-16.14676	0.87434	0.00029	0.93478	0.63911	2.0	0.23625	0.30105
18.0	1.0	0.87141	0.7725	0.81237	0.10497	0.85227	0.87032	-17.91579	0.87252	0.0003	0.93457	0.63338	2.0	0.23444	0.30162
19.0	1.0	0.89243	0.80708	0.86251	0.09823	0.87727	0.89197	-19.34024	0.89289	0.00032	0.94794	0.68103	2.0	0.23683	0.30348
20.0	1.0	0.89271	0.80727	0.8562	0.09439	0.87796	0.89213	-21.32643	0.89329	0.00032	0.94908	0.68113	2.0	0.2441	0.34595



Standard deviation of Adjusted Rand versus number of clusters  
gap: 1.00, Tp: 0.25, complete link

