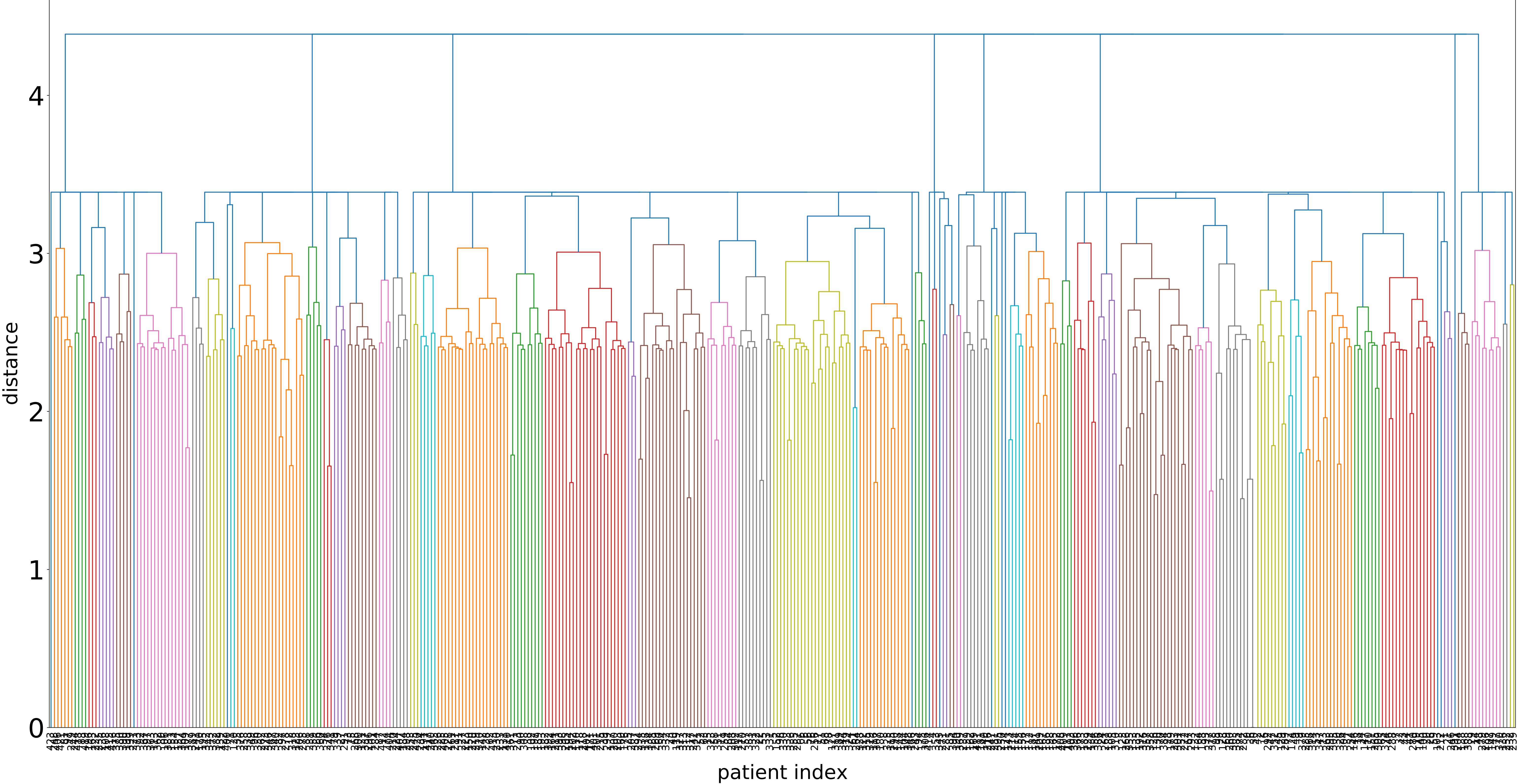


Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 2.00, complete link



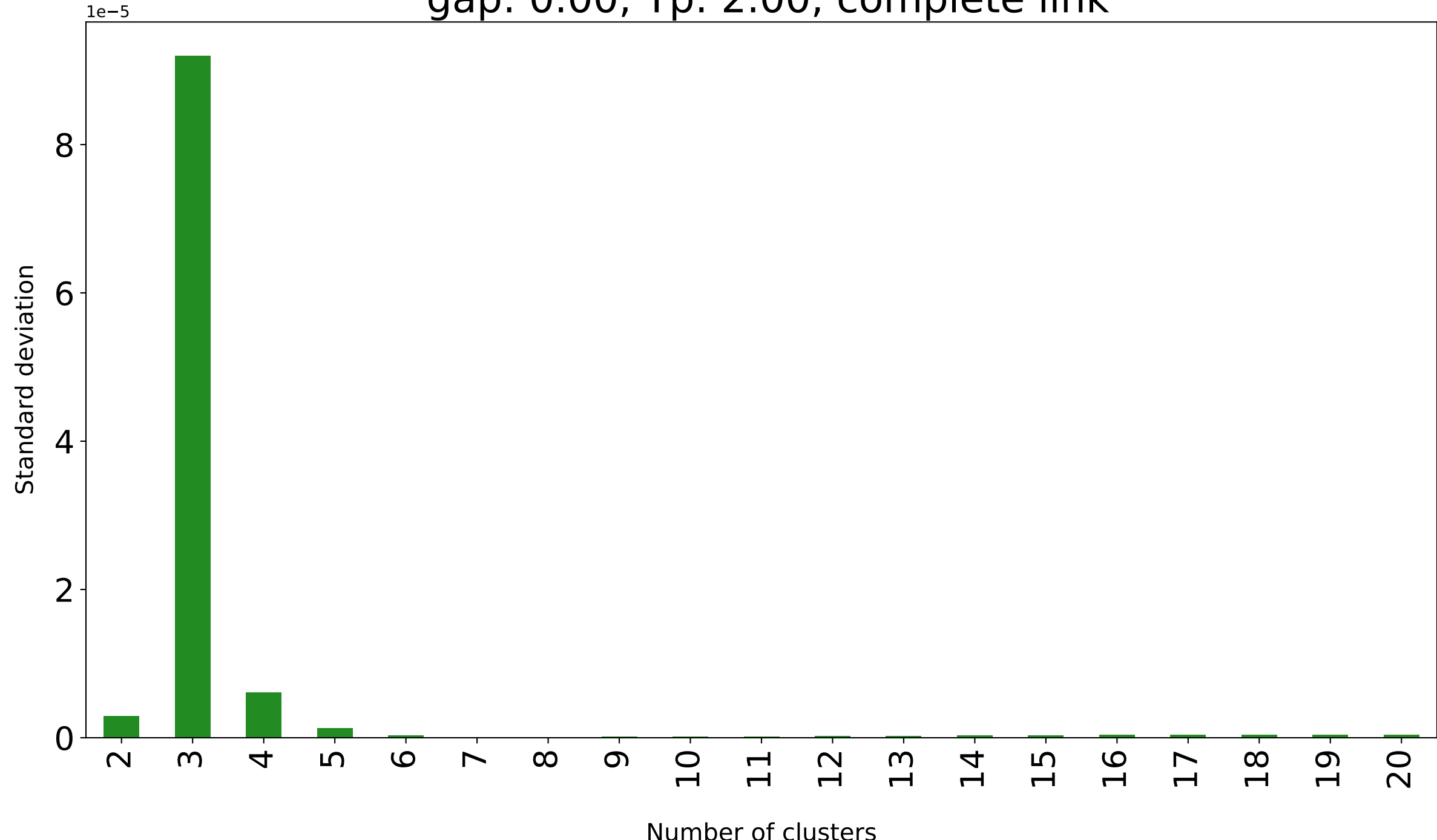
Cophenetic Correlation Coefficient: 0.8392124984053085

Average values of five clustering indices
gap: 0.00, Tp: 2.00, complete link

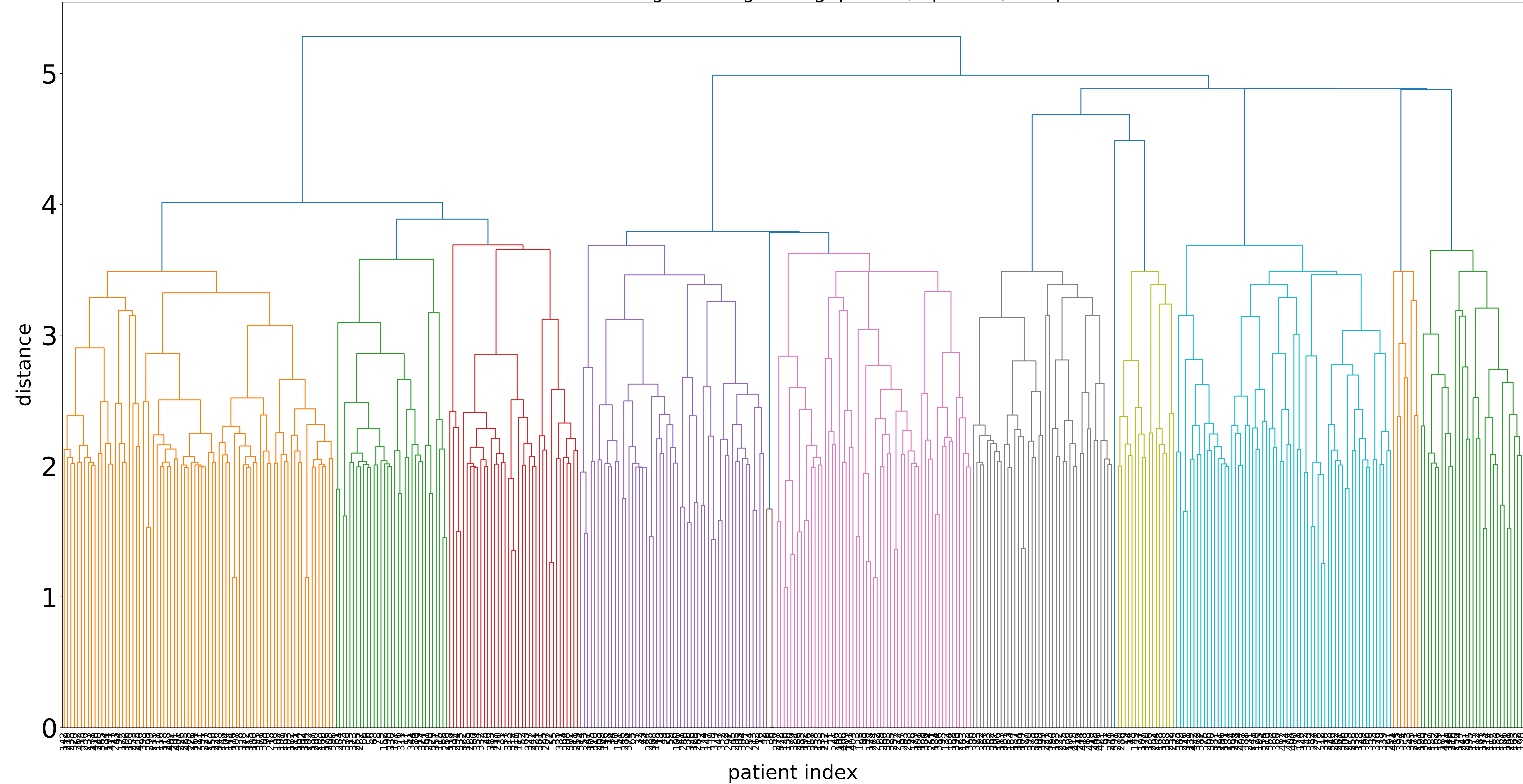
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.94581	0.91238	0.76004	0.02876	0.75524	0.9454	0.00696	0.94623	0.00021	0.87707	0.87423	0.0	0.16172	0.6355
3.0	0.99997	0.90709	0.86233	0.79726	0.06045	0.81068	0.90491	-0.43387	0.9093	0.00013	0.85824	0.82235	0.0	0.18613	0.44813
4.0	1.0	0.94858	0.91061	0.97385	0.02769	0.91993	0.9455	-1.6238	0.95175	0.00017	0.92851	0.86725	0.01176	0.2049	0.44813
5.0	1.0	0.96133	0.9306	0.93076	0.02009	0.9454	0.96052	-2.21811	0.96215	0.00018	0.95682	0.88695	0.35	0.2078	0.44813
6.0	1.0	0.97304	0.94824	0.94258	0.01783	0.96429	0.97268	-3.35051	0.9734	0.0002	0.97357	0.90627	0.35	0.21974	0.44813
7.0	1.0	0.99852	0.99705	0.99784	0.0021	0.99807	0.99852	-4.58451	0.99852	0.00022	0.99862	0.9942	0.35	0.22331	0.44813
8.0	1.0	0.99758	0.9952	0.99411	0.00248	0.99686	0.99757	-5.98969	0.9976	0.00022	0.99777	0.99061	2.0	0.30844	0.58042
9.0	1.0	0.99254	0.98528	0.98135	0.00681	0.99038	0.99243	-7.39902	0.99264	0.00022	0.99321	0.972	2.0	0.36881	0.58042
10.0	1.0	0.97972	0.9605	0.96626	0.0226	0.97389	0.97962	-8.40359	0.97982	0.00022	0.98197	0.92534	2.0	0.32406	0.58042
11.0	1.0	0.97478	0.9512	0.95576	0.02577	0.96772	0.97458	-9.71825	0.97497	0.00022	0.978	0.90926	2.0	0.31175	0.58042
12.0	1.0	0.96817	0.93922	0.94607	0.02988	0.95966	0.96779	-11.2025	0.96855	0.00022	0.9732	0.88983	2.0	0.29106	0.58042
13.0	1.0	0.95883	0.92196	0.92023	0.03485	0.94813	0.95813	-12.62083	0.95953	0.00022	0.96589	0.86127	2.0	0.29116	0.58042
14.0	1.0	0.95125	0.90894	0.91334	0.04714	0.93891	0.9505	-13.89432	0.95199	0.00022	0.96078	0.84118	2.0	0.2732	0.58042
15.0	1.0	0.94139	0.89108	0.89027	0.05124	0.92712	0.94003	-15.25052	0.94276	0.00022	0.95374	0.81381	2.0	0.26363	0.58042
16.0	1.0	0.91981	0.8526	0.84153	0.0604	0.90122	0.91704	-16.72266	0.92262	0.00022	0.93813	0.75584	2.0	0.30285	0.58042
17.0	1.0	0.90687	0.83066	0.82045	0.06928	0.88641	0.90363	-18.31561	0.91013	0.00022	0.93136	0.72447	2.0	0.2961	0.58042
18.0	1.0	0.89629	0.81274	0.79979	0.07731	0.87401	0.89245	-19.43143	0.90016	0.00022	0.92475	0.6992	2.0	0.28586	0.58042
19.0	1.0	0.88876	0.79987	0.78459	0.07809	0.86559	0.8841	-20.89285	0.89349	0.00023	0.92062	0.68218	2.0	0.2787	0.58042
20.0	1.0	0.86769	0.76445	0.74493	0.08516	0.84145	0.86105	-22.50641	0.87446	0.00022	0.90809	0.63464	2.0	0.27099	0.58042

Standard deviation of Adjusted Rand versus number of clusters

gap: 0.00, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 0.10, Tp: 2.00, complete link



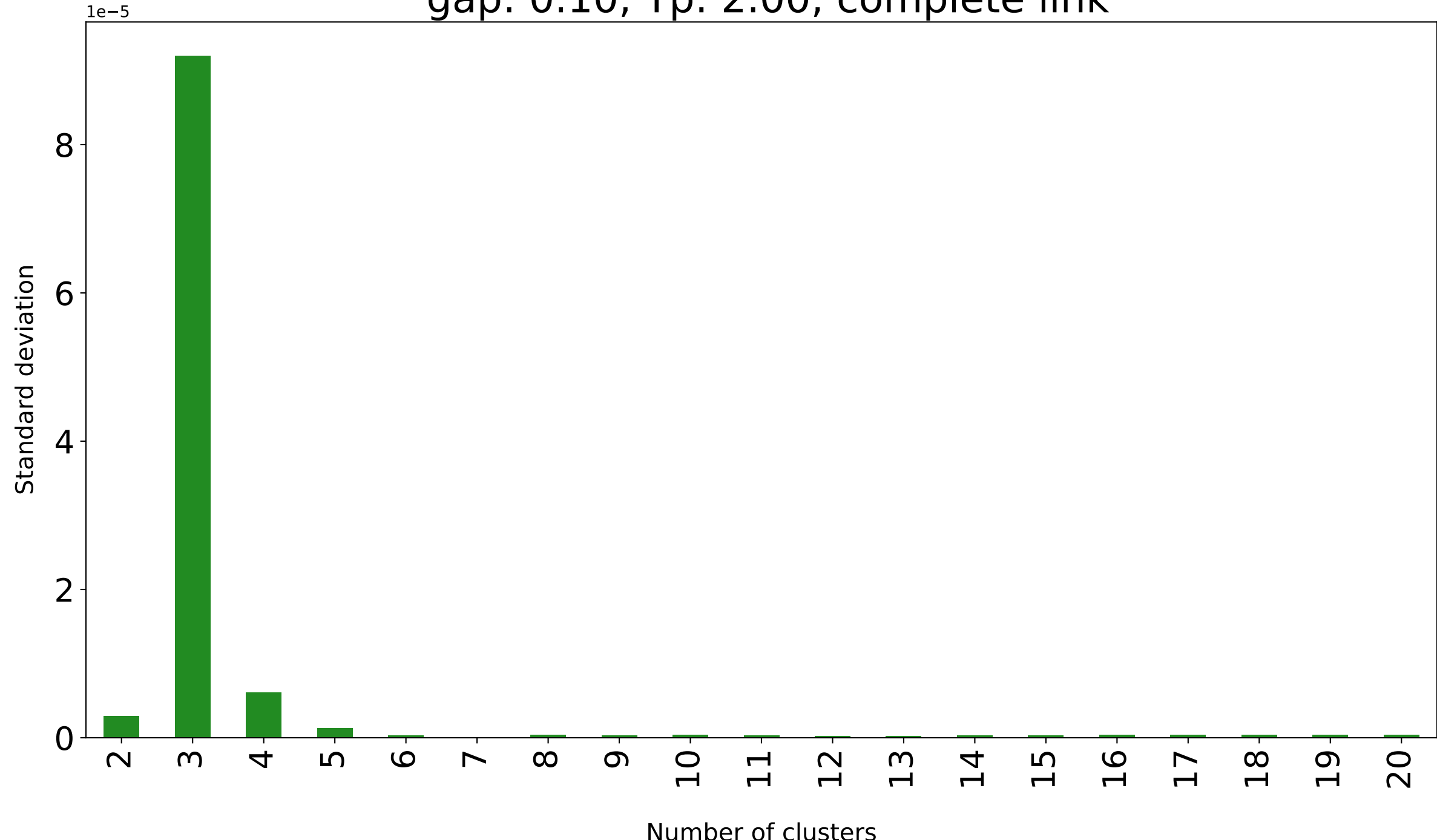
Cophenetic Correlation Coefficient: 0.7997330997661032

Average values of five clustering indices
gap: 0.10, Tp: 2.00, complete link

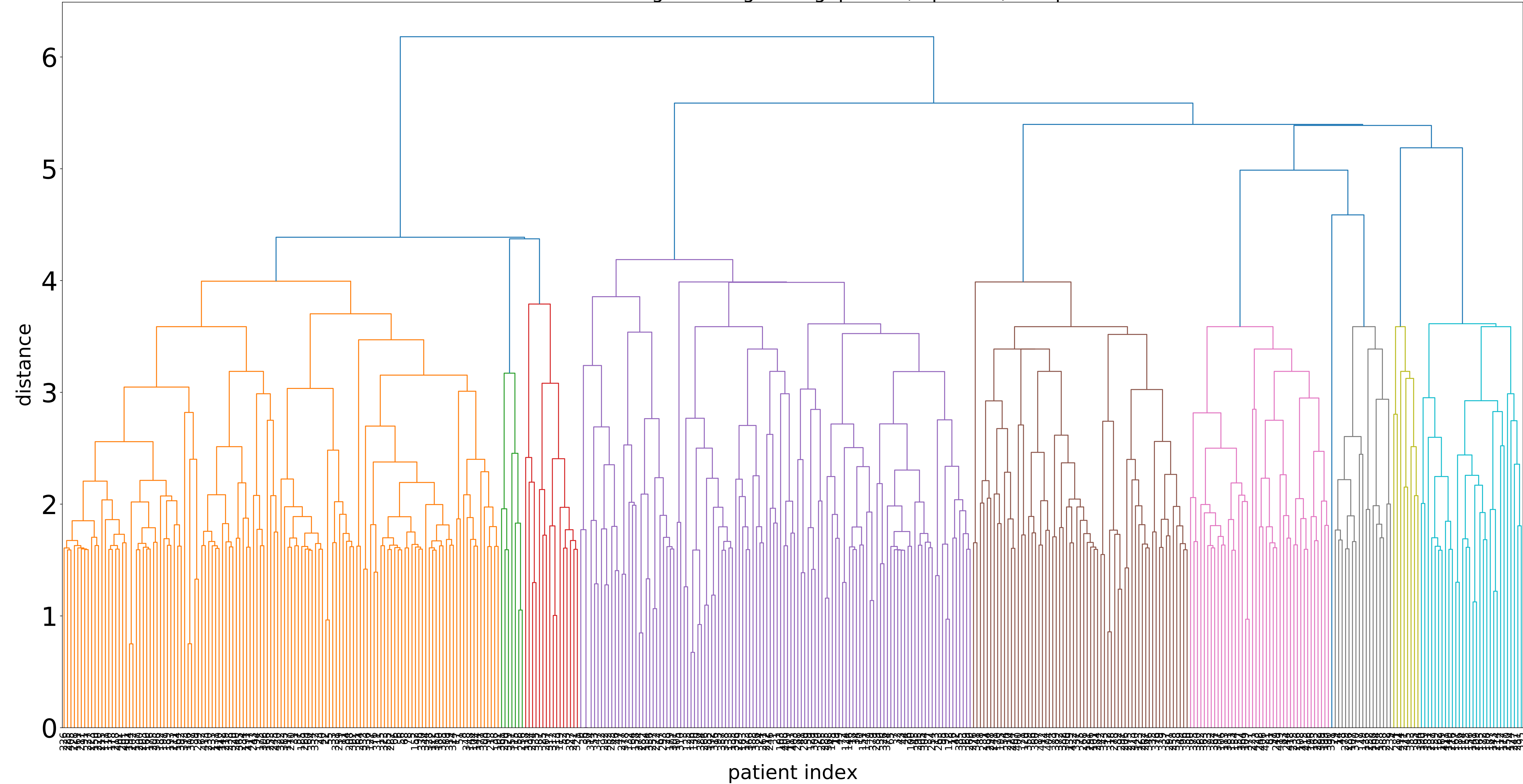
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99947	0.99895	0.99885	0.00029	0.99884	0.99947	-0.24338	0.99947	0.00016	0.99886	0.99795	0.0073	0.18292	0.3969
3.0	1.0	0.98862	0.98084	0.98487	0.00778	0.98244	0.9885	-0.89807	0.98874	0.00017	0.98569	0.97086	0.0125	0.21456	0.36136
4.0	1.0	0.9256	0.86525	0.91051	0.06614	0.89718	0.92526	-1.61078	0.92595	0.00018	0.92172	0.7744	0.03168	0.2114	0.36136
5.0	1.0	0.96277	0.92906	0.98671	0.03688	0.95006	0.9619	-2.51622	0.96364	0.0002	0.96174	0.87486	0.05263	0.23203	0.36203
6.0	1.0	0.99239	0.98536	0.99226	0.00852	0.98989	0.99232	-3.44209	0.99246	0.00021	0.99251	0.97313	0.25	0.25231	0.37678
7.0	1.0	0.99808	0.99622	0.99807	0.00257	0.99748	0.99807	-4.58688	0.99808	0.00022	0.99819	0.99271	0.25	0.26655	0.39357
8.0	1.0	0.97313	0.94956	0.93848	0.01346	0.96666	0.97149	-5.97818	0.97478	0.00022	0.97749	0.91776	2.0	0.34224	0.43997
9.0	1.0	0.87708	0.78374	0.87598	0.0787	0.85111	0.8757	-6.7977	0.87848	0.00023	0.91648	0.65453	2.0	0.29991	0.45432
10.0	1.0	0.84682	0.74139	0.8216	0.08941	0.81848	0.84542	-7.76263	0.84823	0.00024	0.90825	0.60569	2.0	0.27169	0.46583
11.0	1.0	0.78685	0.64909	0.81531	0.12431	0.75521	0.78367	-8.4469	0.79006	0.00026	0.89253	0.48749	2.0	0.25014	0.35851
12.0	1.0	0.79448	0.66173	0.78954	0.12213	0.76566	0.79277	-8.8922	0.7962	0.00028	0.90249	0.50201	2.0	0.27202	0.36799
13.0	1.0	0.79598	0.66415	0.76016	0.12145	0.76898	0.79463	-10.79225	0.79733	0.00029	0.90817	0.50436	2.0	0.25844	0.36823
14.0	1.0	0.78238	0.64485	0.72546	0.13059	0.75531	0.78064	-12.25566	0.78412	0.0003	0.907	0.48236	2.0	0.24846	0.36823
15.0	1.0	0.7753	0.63581	0.72307	0.13402	0.7495	0.77381	-13.80425	0.77679	0.00032	0.91062	0.47264	2.0	0.23433	0.37173
16.0	1.0	0.77028	0.62807	0.70267	0.13928	0.7454	0.76827	-15.16704	0.77231	0.00033	0.91272	0.46368	2.0	0.21955	0.3724
17.0	1.0	0.76397	0.61798	0.67955	0.14011	0.73978	0.76097	-17.17557	0.767	0.00034	0.9138	0.45222	2.0	0.21083	0.37456
18.0	1.0	0.74879	0.59873	0.67136	0.15554	0.72464	0.74634	-18.28518	0.75125	0.00035	0.91398	0.43153	2.0	0.20229	0.3795
19.0	1.0	0.72761	0.57044	0.63656	0.16803	0.7027	0.72404	-19.6717	0.73121	0.00036	0.91027	0.4025	2.0	0.19599	0.38935
20.0	1.0	0.73815	0.5875	0.69493	0.16917	0.71654	0.73724	-21.20226	0.73905	0.0004	0.92281	0.4204	2.0	0.18921	0.38935

Standard deviation of Adjusted Rand versus number of clusters

gap: 0.10, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 0.20, Tp: 2.00, complete link

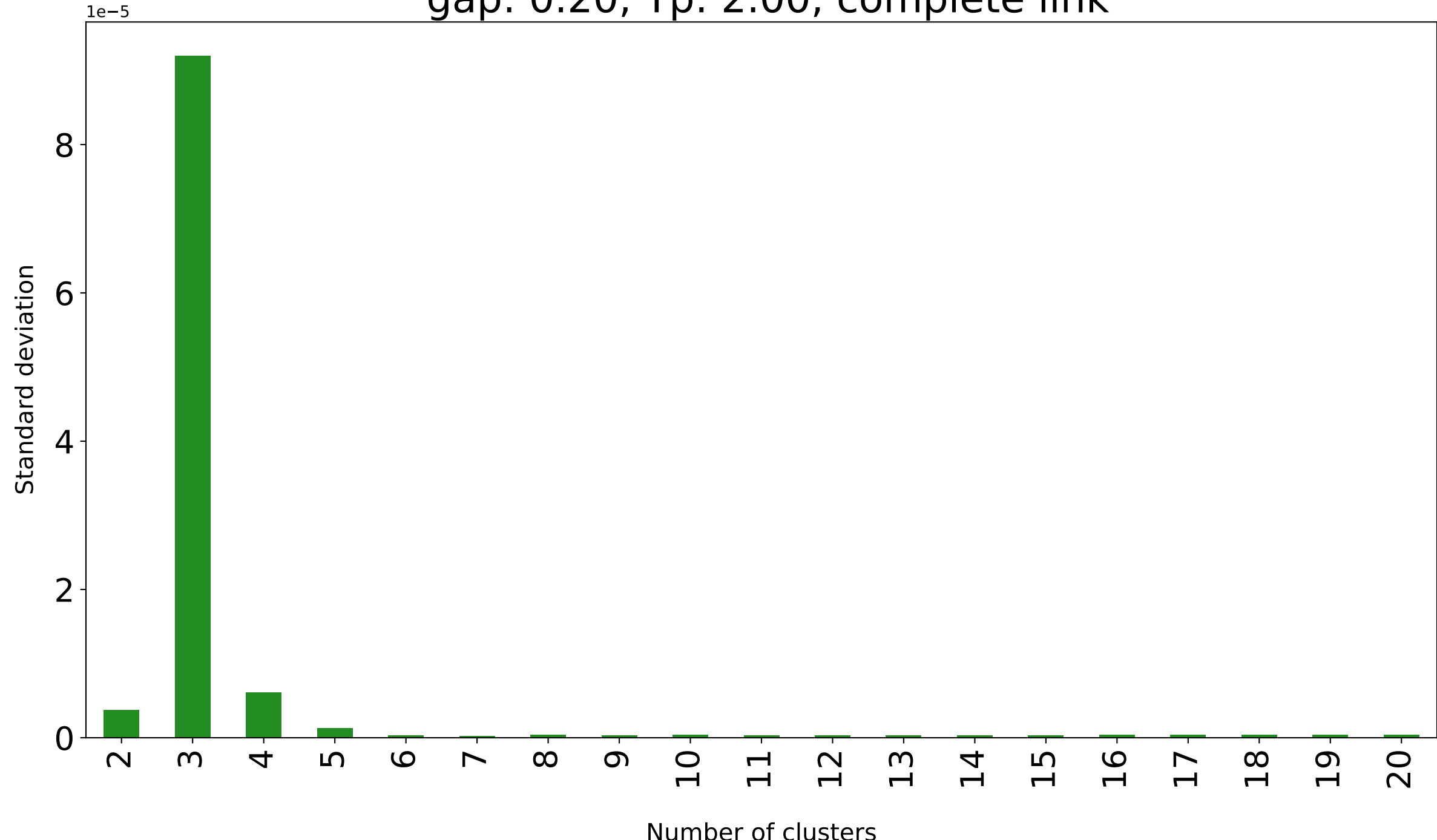


Cophenetic Correlation Coefficient: 0.7601018895336953

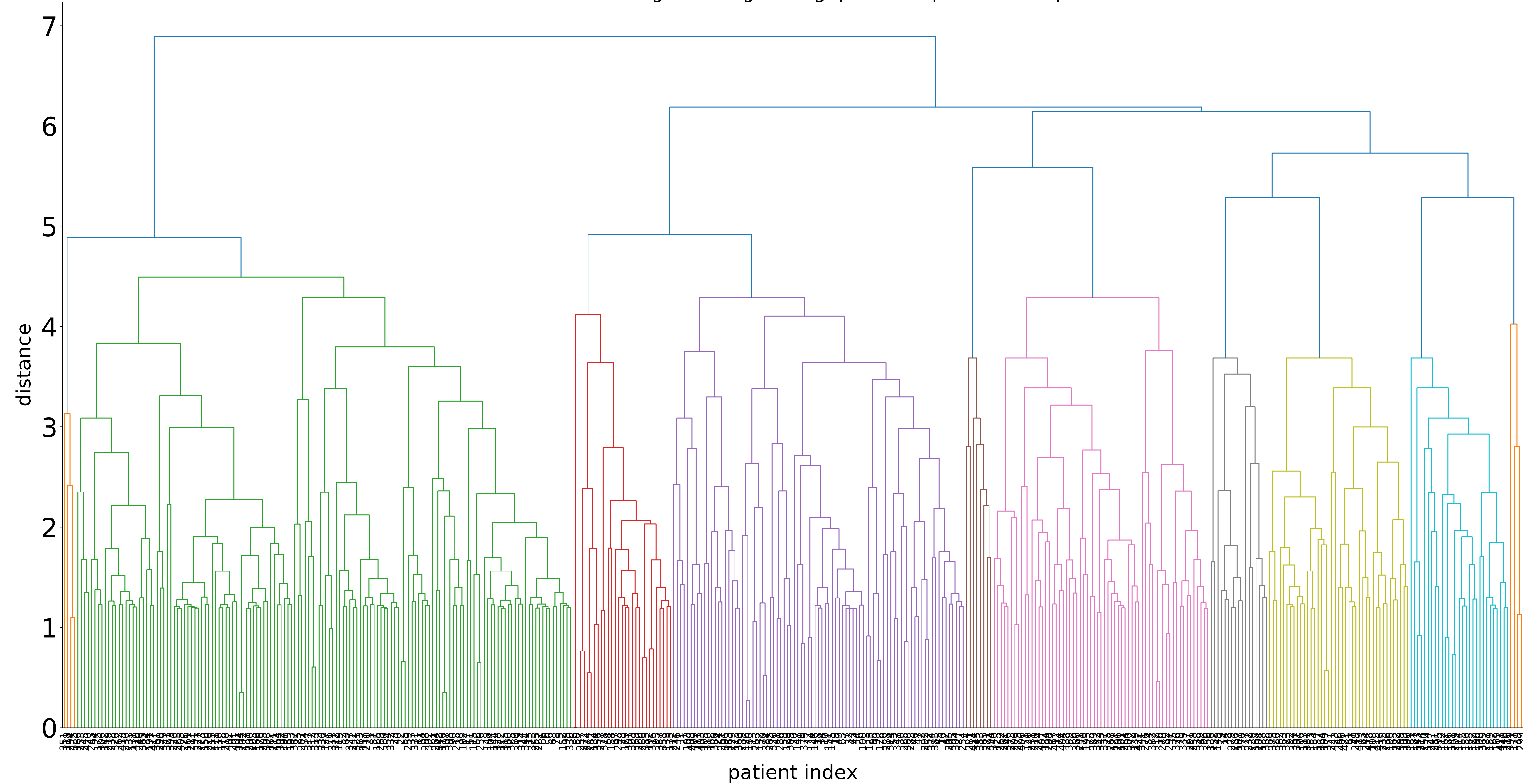
Average values of five clustering indices
gap: 0.20, Tp: 2.00, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99061	0.98358	0.98192	0.0061	0.97665	0.99039	-0.22646	0.99084	0.00015	0.98103	0.97424	0.00584	0.21356	0.35428
3.0	1.0	0.96493	0.94436	0.95155	0.02359	0.94574	0.96471	-0.8412	0.96516	0.00017	0.95786	0.92099	0.0125	0.25015	0.2902
4.0	1.0	0.93923	0.89359	0.93076	0.05208	0.91599	0.93881	-1.64238	0.93965	0.00018	0.93708	0.82979	0.02062	0.27054	0.2907
5.0	1.0	0.96443	0.93396	0.97506	0.03292	0.95272	0.96379	-2.54967	0.96507	0.0002	0.96509	0.88673	0.05263	0.27074	0.30191
6.0	1.0	0.97742	0.95773	0.96874	0.02116	0.97046	0.97721	-3.3828	0.97764	0.00021	0.97908	0.92533	0.25	0.29526	0.31402
7.0	1.0	0.99148	0.98427	0.98516	0.00574	0.9892	0.99127	-4.56569	0.99168	0.00022	0.99279	0.97348	0.25	0.31245	0.3414
8.0	1.0	0.95556	0.91563	0.89614	0.01981	0.9443	0.95343	-5.94994	0.95772	0.00021	0.96195	0.85717	2.0	0.37898	0.35696
9.0	1.0	0.92503	0.86304	0.89954	0.04293	0.90724	0.92395	-7.00113	0.9261	0.00022	0.94318	0.76948	2.0	0.32596	0.35812
10.0	1.0	0.89915	0.81886	0.83578	0.05381	0.87661	0.8969	-8.15589	0.90142	0.00022	0.92662	0.70577	2.0	0.31736	0.37401
11.0	1.0	0.82606	0.70674	0.76907	0.10058	0.79213	0.82393	-8.40438	0.82821	0.00022	0.89059	0.55659	2.0	0.27617	0.32687
12.0	1.0	0.7643	0.61992	0.7801	0.14065	0.72751	0.76134	-9.3066	0.76729	0.00024	0.87754	0.4562	2.0	0.25204	0.32743
13.0	1.0	0.75049	0.60302	0.73031	0.14885	0.71344	0.74855	-10.96435	0.75244	0.00025	0.8773	0.43772	2.0	0.25245	0.32743
14.0	1.0	0.74552	0.5967	0.69612	0.1537	0.70997	0.74365	-12.54579	0.74741	0.00026	0.8813	0.43099	2.0	0.26302	0.32773
15.0	1.0	0.7686	0.6273	0.75388	0.15038	0.74051	0.7672	-13.71935	0.77001	0.0003	0.90367	0.46336	2.0	0.24705	0.33862
16.0	1.0	0.77367	0.63399	0.73711	0.15023	0.74771	0.77259	-14.8479	0.77476	0.00032	0.91043	0.46995	2.0	0.23679	0.3445
17.0	1.0	0.76808	0.625	0.70732	0.15465	0.74267	0.76636	-16.68999	0.76981	0.00033	0.9113	0.45931	2.0	0.23763	0.35262
18.0	1.0	0.75425	0.60854	0.71466	0.16619	0.72959	0.75319	-17.84001	0.75532	0.00034	0.91362	0.44285	2.0	0.22127	0.36127
19.0	1.0	0.7334	0.5816	0.6809	0.17626	0.70788	0.73196	-19.73417	0.73486	0.00035	0.91014	0.41502	2.0	0.21427	0.36138
20.0	1.0	0.70647	0.54821	0.6489	0.1918	0.67992	0.70472	-20.89059	0.70822	0.00035	0.90611	0.38197	2.0	0.20512	0.36393

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.20, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 0.30, Tp: 2.00, complete link

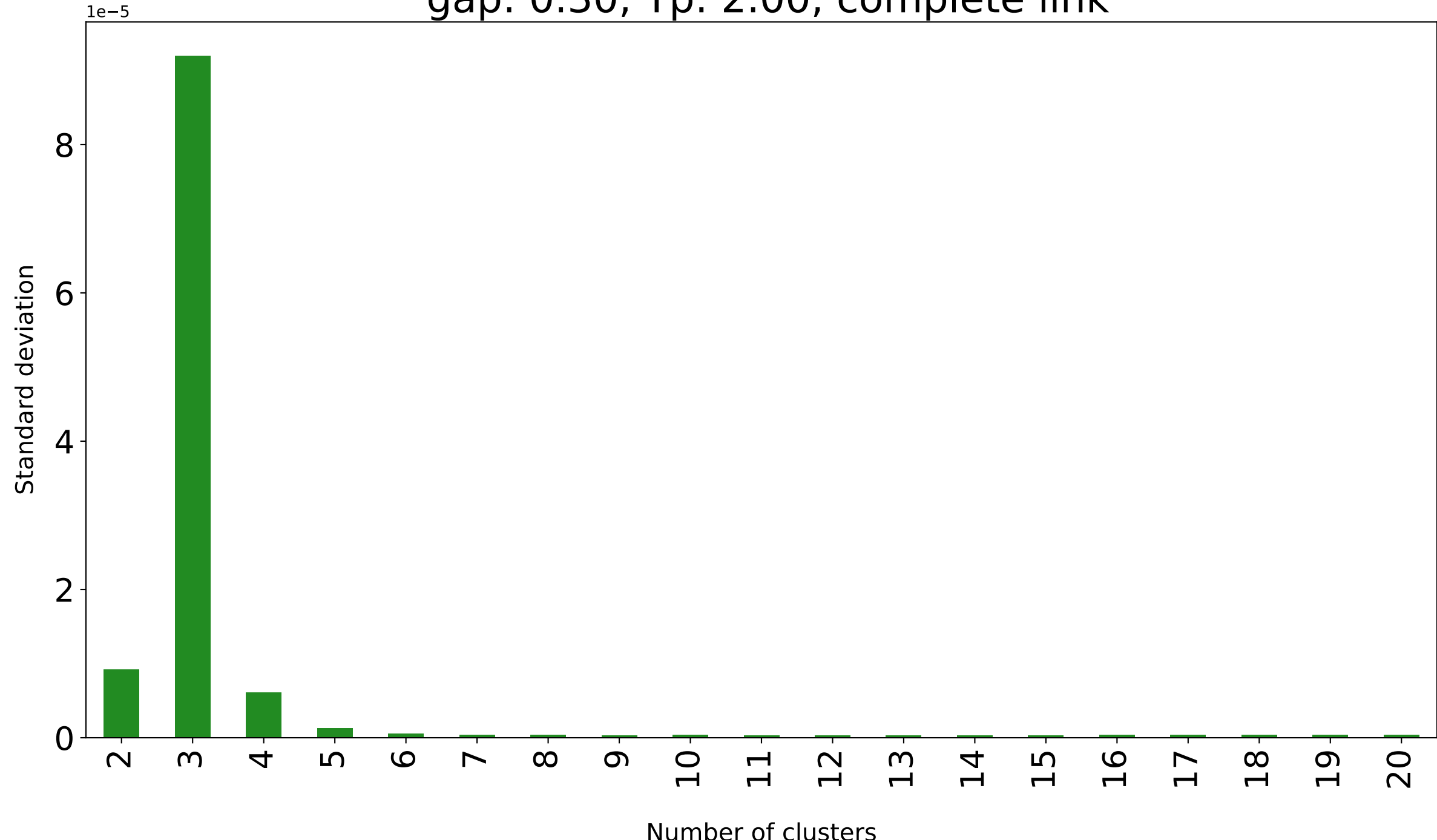


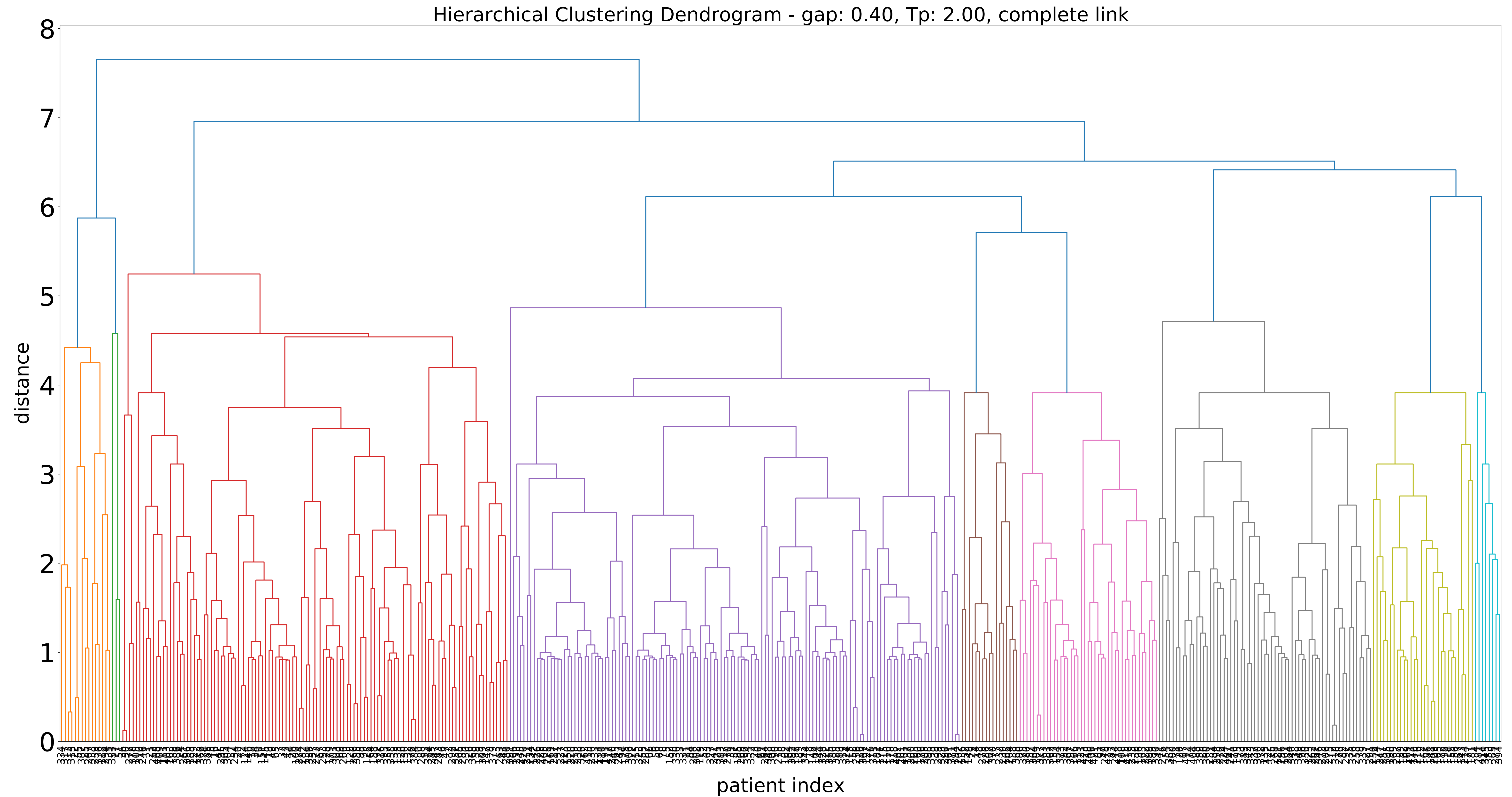
Cophenetic Correlation Coefficient: 0.7340551016438562

Average values of five clustering indices
gap: 0.30, Tp: 2.00, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.95717	0.92839	0.90929	0.02926	0.89497	0.95626	-0.14941	0.95809	0.00014	0.91782	0.89179	0.00725	0.24318	0.24357
3.0	1.0	0.92656	0.87967	0.90989	0.04796	0.88375	0.9252	-0.74978	0.92794	0.00015	0.90547	0.82322	0.01235	0.28496	0.22241
4.0	1.0	0.90091	0.83083	0.89165	0.07531	0.862	0.89965	-1.44754	0.90219	0.00017	0.89697	0.73572	0.02817	0.29379	0.23843
5.0	1.0	0.9258	0.86926	0.92398	0.05819	0.90086	0.92479	-2.56124	0.92682	0.00019	0.92879	0.78715	0.02817	0.30889	0.2445
6.0	1.0	0.95461	0.9185	0.94323	0.03535	0.94078	0.95408	-3.3124	0.95514	0.0002	0.95909	0.86384	0.25	0.32721	0.25838
7.0	1.0	0.95809	0.9219	0.92338	0.03532	0.9462	0.95722	-4.5366	0.95896	0.00021	0.96297	0.86462	1.0	0.27903	0.25838
8.0	1.0	0.9548	0.91494	0.90733	0.02492	0.94296	0.9534	-5.59043	0.95621	0.00021	0.9616	0.85369	1.0	0.31092	0.27767
9.0	1.0	0.87054	0.77391	0.83659	0.06994	0.83917	0.86919	-6.20179	0.8719	0.00021	0.90273	0.64046	1.0	0.256	0.16961
10.0	1.0	0.84634	0.73674	0.7885	0.08526	0.81181	0.84412	-7.57639	0.84858	0.00021	0.89111	0.59359	1.0	0.25147	0.18446
11.0	1.0	0.76237	0.61249	0.80691	0.13304	0.71987	0.75707	-8.23711	0.76774	0.00022	0.85926	0.44597	1.0	0.23011	0.19317
12.0	1.0	0.75789	0.60889	0.78028	0.13842	0.71759	0.75393	-9.30393	0.76189	0.00023	0.86653	0.44267	1.0	0.21942	0.19334
13.0	1.0	0.74462	0.59199	0.77784	0.14998	0.70688	0.74011	-10.02477	0.74919	0.00025	0.87205	0.42611	1.0	0.21622	0.19334
14.0	1.0	0.71817	0.55943	0.74667	0.16677	0.68027	0.71385	-10.55304	0.72257	0.00026	0.87057	0.3933	1.0	0.19599	0.20105
15.0	1.0	0.71788	0.56128	0.71543	0.16748	0.68157	0.71541	-11.7215	0.72038	0.00027	0.87707	0.39504	1.0	0.24536	0.20194
16.0	1.0	0.7173	0.56128	0.71606	0.17617	0.68411	0.71509	-12.56772	0.71954	0.00029	0.88618	0.39547	1.0	0.23333	0.20597
17.0	1.0	0.71559	0.55987	0.69327	0.17742	0.68322	0.71399	-14.45486	0.71721	0.00029	0.8891	0.39392	2.0	0.28572	0.21625
18.0	1.0	0.67333	0.50918	0.6691	0.19765	0.63928	0.67145	-15.86524	0.67524	0.0003	0.88252	0.34512	2.0	0.26832	0.21837
19.0	1.0	0.66484	0.49559	0.70611	0.20752	0.6338	0.66044	-17.02456	0.6693	0.00032	0.88915	0.3317	2.0	0.24774	0.22031
20.0	1.0	0.65811	0.48917	0.68795	0.21061	0.62718	0.6546	-18.16859	0.66166	0.00032	0.89007	0.32607	2.0	0.24611	0.22083

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.30, Tp: 2.00, complete link



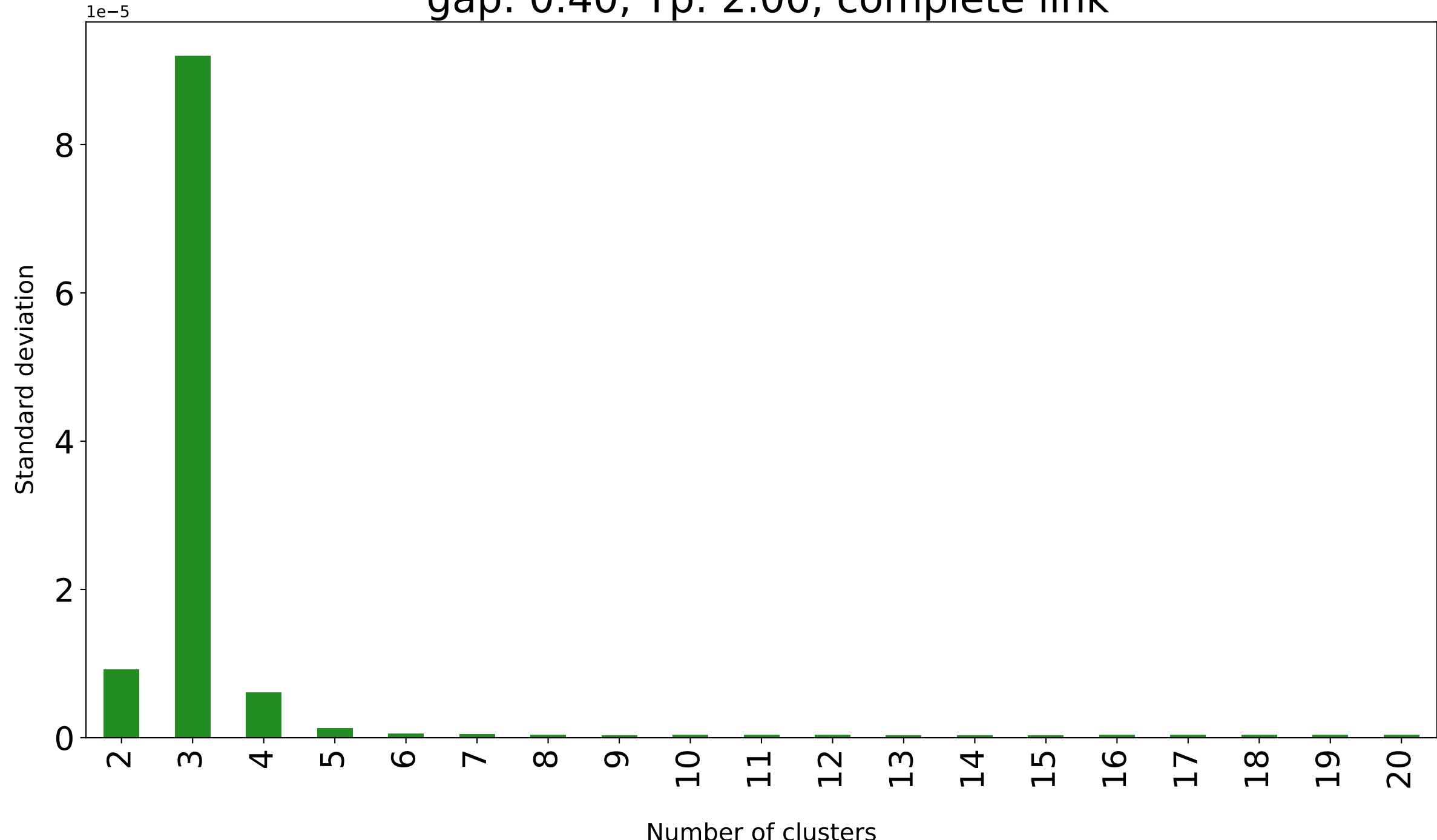


Average values of five clustering indices
gap: 0.40, Tp: 2.00, complete link

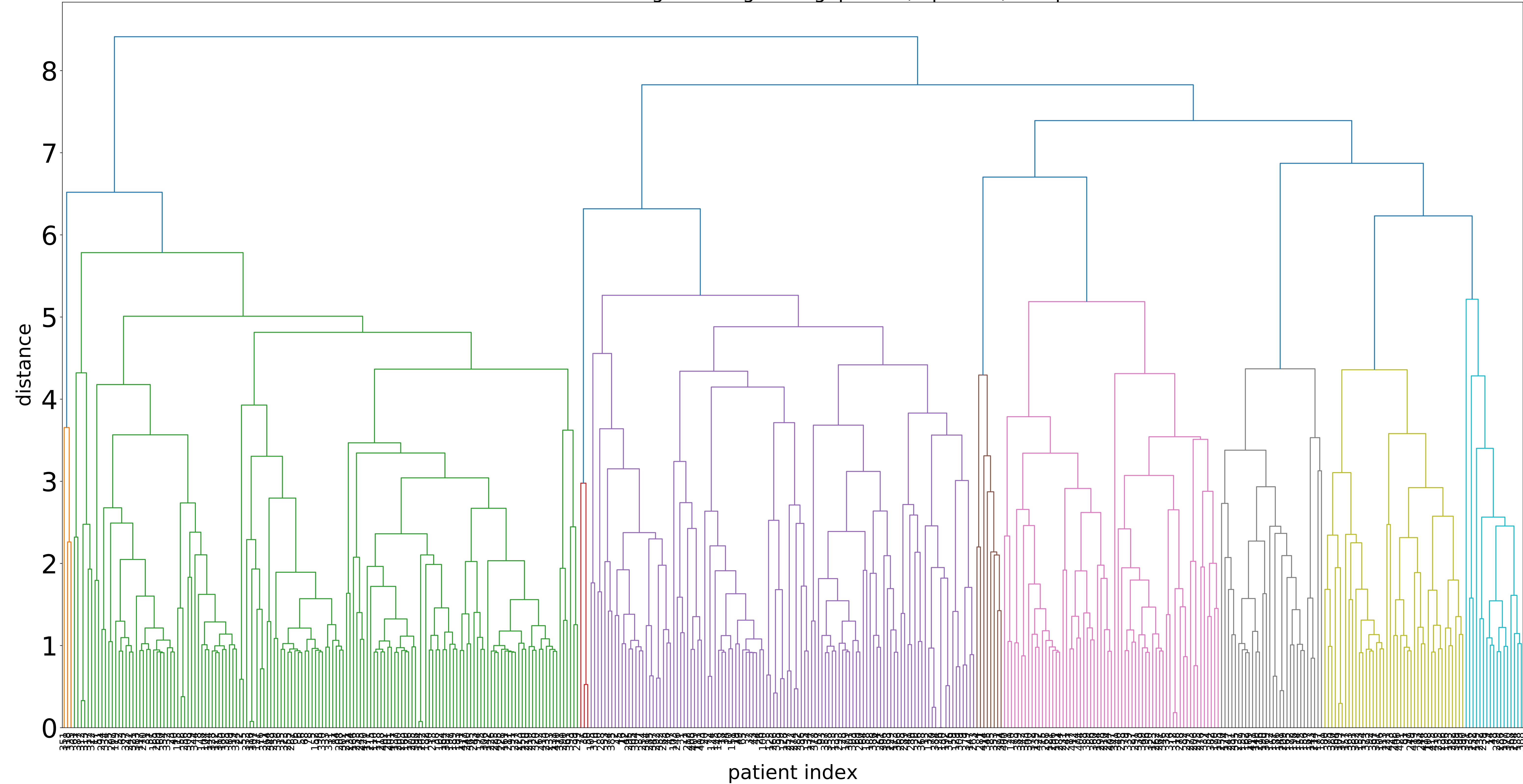
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.73856	0.55907	0.05577	0.17118	0.13551	0.71505	0.309	0.7629	4e-05	0.41489	0.39229	0.22222	0.19919	0.17298
3.0	1.00003	0.70239	0.52535	0.32624	0.19238	0.4862	0.68415	-0.4314	0.72115	8e-05	0.56237	0.36231	0.22222	0.24124	0.18487
4.0	1.0	0.72971	0.57267	0.54123	0.17611	0.61056	0.72626	-1.23983	0.73319	0.00011	0.71189	0.40409	0.22222	0.21366	0.18772
5.0	1.0	0.76582	0.61821	0.60392	0.13058	0.67489	0.76273	-2.13405	0.76894	0.00013	0.76357	0.4498	0.22222	0.26691	0.19697
6.0	1.0	0.90738	0.8295	0.94929	0.06077	0.87984	0.90532	-3.58116	0.90946	0.00019	0.91546	0.71354	0.22222	0.2655	0.19697
7.0	1.0	0.91882	0.84971	0.93817	0.04882	0.8957	0.91768	-4.3586	0.91997	0.0002	0.92899	0.7424	0.22222	0.30693	0.20498
8.0	1.0	0.91374	0.84184	0.89932	0.054	0.89028	0.91307	-5.55202	0.91442	0.00021	0.92813	0.73081	1.33333	0.26267	0.21076
9.0	1.0	0.90532	0.82772	0.87249	0.04794	0.88165	0.90419	-6.48837	0.90646	0.00021	0.92576	0.71167	1.33333	0.30133	0.22954
10.0	1.0	0.88586	0.79603	0.81883	0.06344	0.8598	0.88345	-7.58774	0.88829	0.00022	0.91591	0.67082	1.33333	0.29741	0.24326
11.0	1.0	0.86381	0.75946	0.7591	0.07826	0.83503	0.85913	-9.09145	0.86856	0.00022	0.90369	0.62424	2.0	0.34384	0.25115
12.0	1.0	0.83279	0.70981	0.7017	0.09453	0.79969	0.8254	-10.1865	0.84032	0.00022	0.88631	0.5618	2.0	0.31475	0.2586
13.0	1.0	0.81009	0.67259	0.65291	0.10526	0.77443	0.79934	-11.67493	0.82109	0.00022	0.87344	0.51703	2.0	0.39675	0.25873
14.0	1.0	0.7884	0.64637	0.65065	0.12	0.75173	0.77985	-12.54839	0.79713	0.00022	0.87277	0.48768	2.0	0.3763	0.26075
15.0	1.0	0.76624	0.61992	0.64816	0.14201	0.72931	0.7595	-13.08365	0.77309	0.00023	0.87334	0.4596	2.0	0.34374	0.22979
16.0	1.0	0.75326	0.60038	0.61748	0.14854	0.71582	0.74439	-14.71108	0.76232	0.00024	0.86884	0.43893	2.0	0.34632	0.23901
17.0	1.0	0.74255	0.58436	0.59487	0.15327	0.70468	0.73173	-16.3218	0.75363	0.00024	0.86501	0.42231	2.0	0.34326	0.24204
18.0	1.0	0.72909	0.56592	0.57384	0.16035	0.6906	0.71675	-17.15069	0.74177	0.00024	0.8611	0.40353	2.0	0.33179	0.16812
19.0	1.0	0.6899	0.52502	0.59217	0.18718	0.65024	0.6847	-18.37284	0.69517	0.00025	0.86405	0.36041	2.0	0.31585	0.17413
20.0	1.0	0.67167	0.50264	0.56244	0.19845	0.63103	0.66546	-20.03636	0.67799	0.00025	0.85964	0.33952	2.0	0.31203	0.17506

Standard deviation of Adjusted Rand versus number of clusters

gap: 0.40, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 0.50, Tp: 2.00, complete link

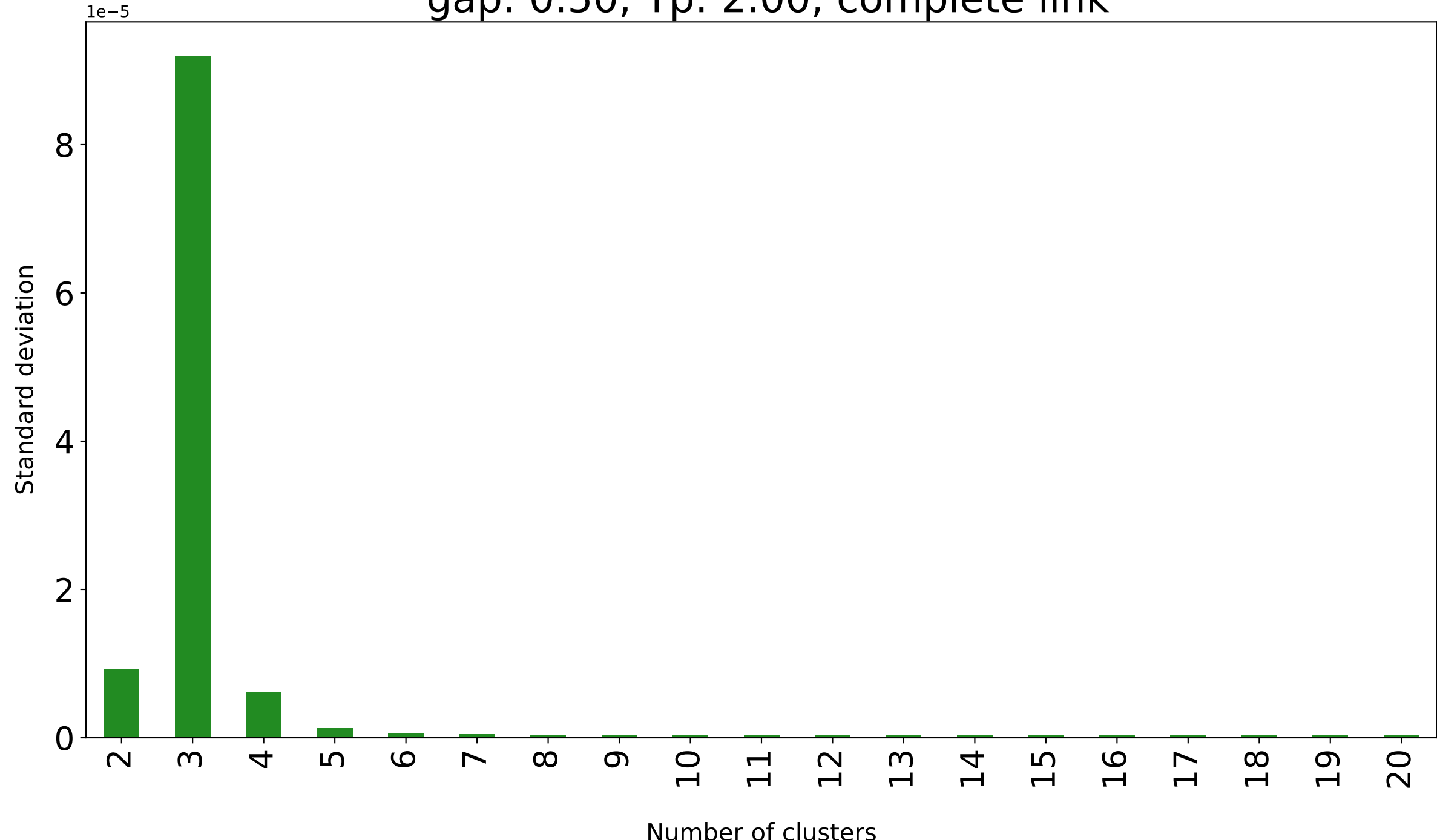


Cophenetic Correlation Coefficient: 0.7402954182693452

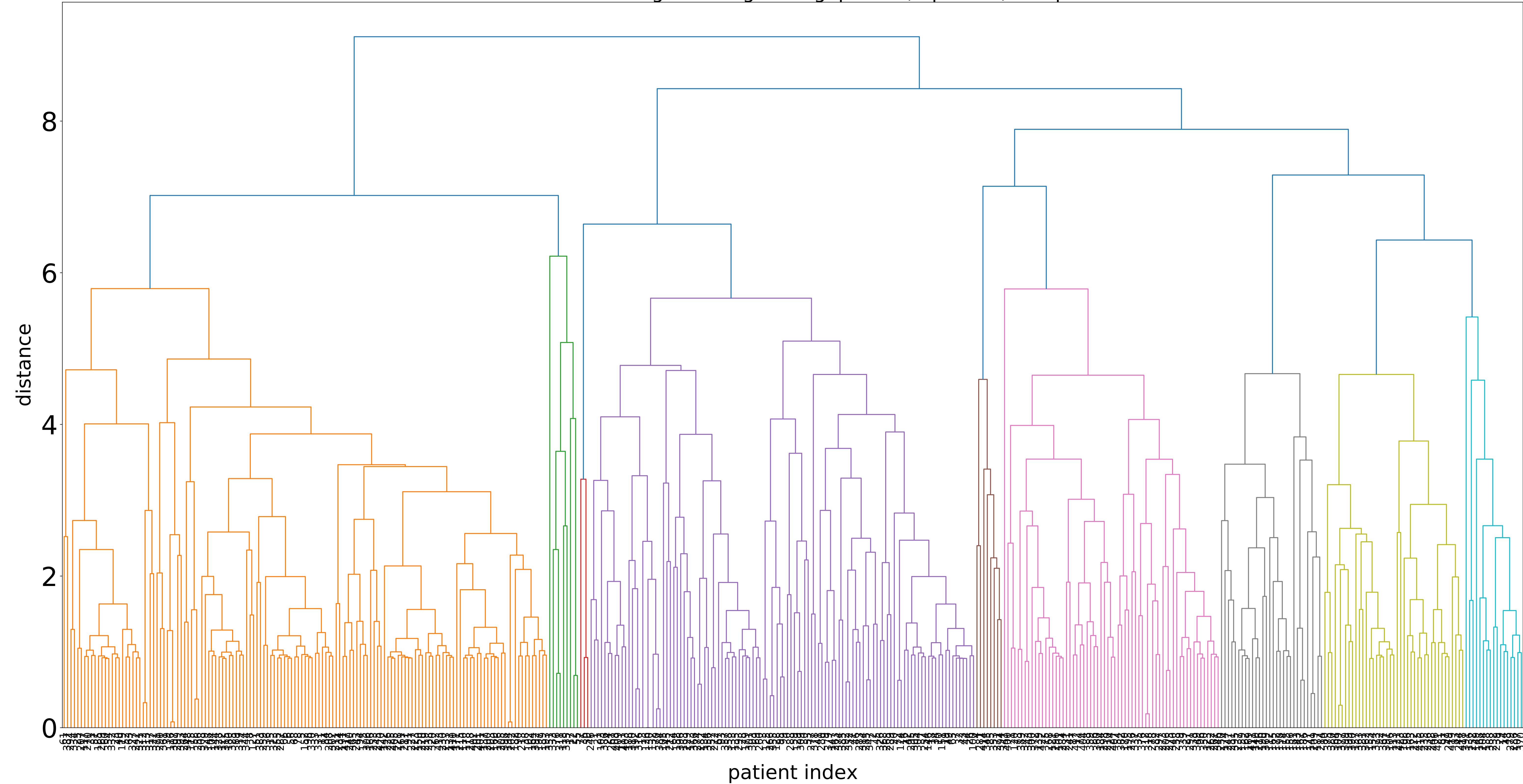
Average values of five clustering indices
gap: 0.50, Tp: 2.00, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.96034	0.93589	0.88046	0.02739	0.87878	0.95773	-0.17035	0.96307	0.00014	0.91999	0.91299	0.0	0.28454	0.26607
3.0	1.0	0.91989	0.8682	0.91598	0.05579	0.87296	0.91754	-0.70107	0.92229	0.00015	0.89416	0.81077	0.01739	0.32817	0.20186
4.0	1.0	0.92703	0.87086	0.93357	0.05925	0.89764	0.92529	-1.50381	0.9288	0.00018	0.91964	0.79334	0.01739	0.3419	0.21714
5.0	1.0	0.96421	0.93318	0.9716	0.03066	0.95178	0.96366	-2.68512	0.96475	0.0002	0.96363	0.88401	0.0338	0.37802	0.22258
6.0	1.0	0.97373	0.95089	0.96751	0.01923	0.96533	0.97335	-3.342	0.97411	0.00021	0.97486	0.91414	0.03448	0.39409	0.22888
7.0	1.0	0.97589	0.95393	0.95643	0.01582	0.96874	0.97554	-4.70763	0.97624	0.00021	0.97795	0.91662	1.33333	0.37131	0.19376
8.0	1.0	0.96459	0.93244	0.9263	0.0273	0.95479	0.96376	-5.89911	0.96543	0.00021	0.96881	0.8797	1.33333	0.38232	0.19645
9.0	1.0	0.95802	0.92066	0.9075	0.02369	0.94751	0.95636	-6.99546	0.9597	0.00022	0.96499	0.8641	1.33333	0.39243	0.21164
10.0	1.0	0.92874	0.86808	0.85986	0.04053	0.91187	0.92609	-8.06464	0.93142	0.00022	0.94377	0.78023	1.33333	0.36218	0.23253
11.0	1.0	0.86174	0.75967	0.81466	0.08223	0.8308	0.85979	-8.15272	0.86372	0.00021	0.90184	0.62211	1.33333	0.30682	0.15049
12.0	1.0	0.84032	0.72617	0.75753	0.09789	0.8065	0.83684	-9.65803	0.84384	0.00021	0.89057	0.58086	2.0	0.3522	0.15133
13.0	1.0	0.80662	0.67783	0.71138	0.11852	0.76898	0.80264	-10.50641	0.81065	0.00021	0.87737	0.52349	2.0	0.32141	0.1567
14.0	1.0	0.71346	0.55379	0.69423	0.16444	0.66754	0.71097	-11.41916	0.71596	0.00022	0.85076	0.38528	2.0	0.281	0.16081
15.0	1.0	0.67297	0.50428	0.69039	0.20335	0.62744	0.66892	-11.91901	0.67708	0.00023	0.84776	0.33878	2.0	0.2637	0.16309
16.0	1.0	0.65084	0.47411	0.73209	0.21627	0.60978	0.64081	-12.52563	0.66115	0.00025	0.85338	0.31304	2.0	0.25404	0.17231
17.0	1.0	0.64304	0.46784	0.70576	0.21967	0.60197	0.63499	-14.10296	0.65129	0.00026	0.85518	0.30762	2.0	0.26339	0.1777
18.0	1.0	0.64001	0.46295	0.71798	0.21865	0.60123	0.63024	-15.24143	0.65007	0.00027	0.86016	0.3036	2.0	0.25683	0.17968
19.0	1.0	0.63246	0.45575	0.70104	0.22353	0.59389	0.62364	-17.06541	0.64153	0.00027	0.86155	0.29732	2.0	0.24408	0.17983
20.0	1.0	0.6446	0.4683	0.72292	0.22079	0.60928	0.6351	-18.65449	0.65438	0.00029	0.87101	0.30831	2.0	0.23991	0.18012

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.50, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 0.60, Tp: 2.00, complete link

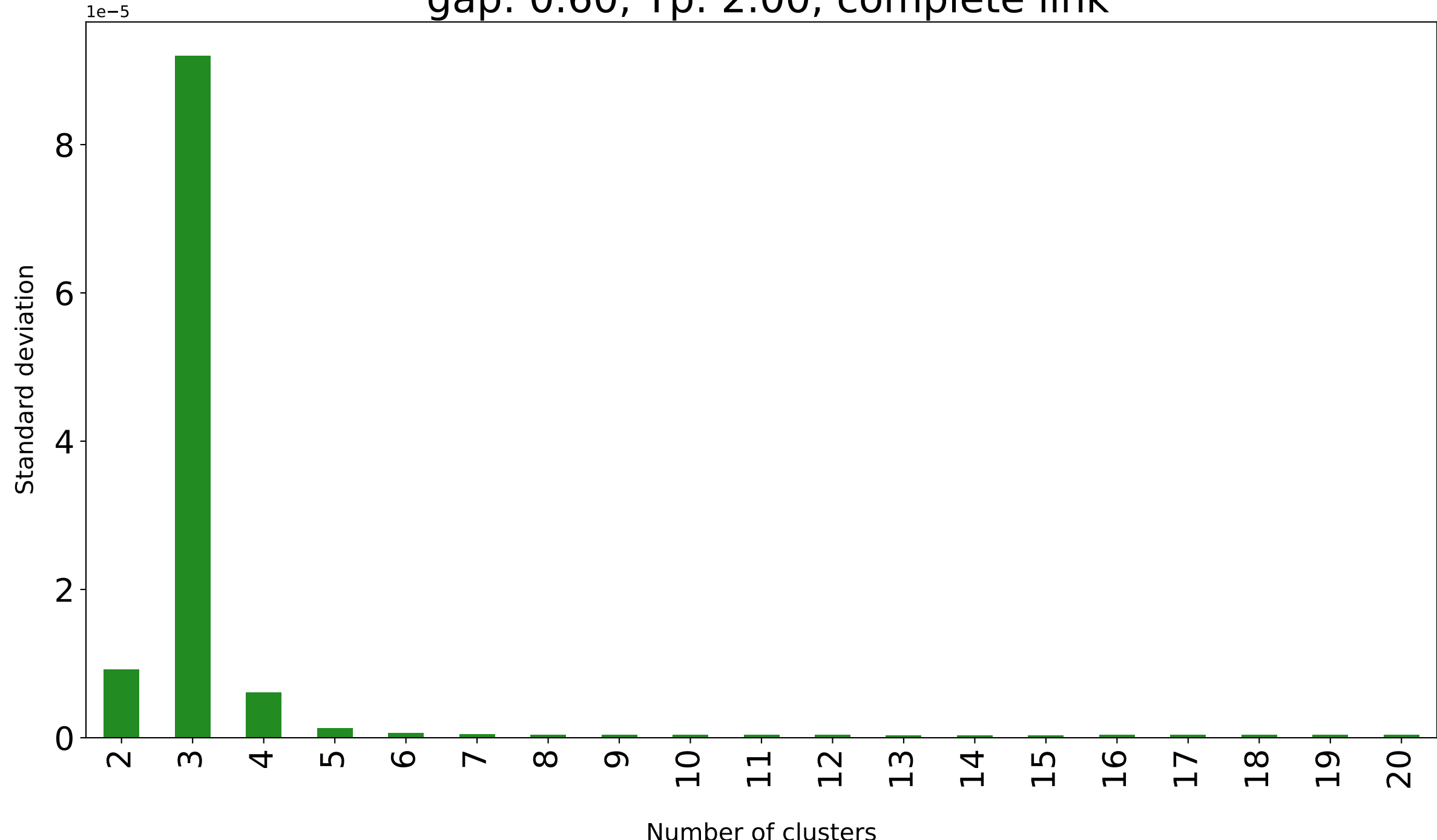


Cophenetic Correlation Coefficient: 0.7278492617361961

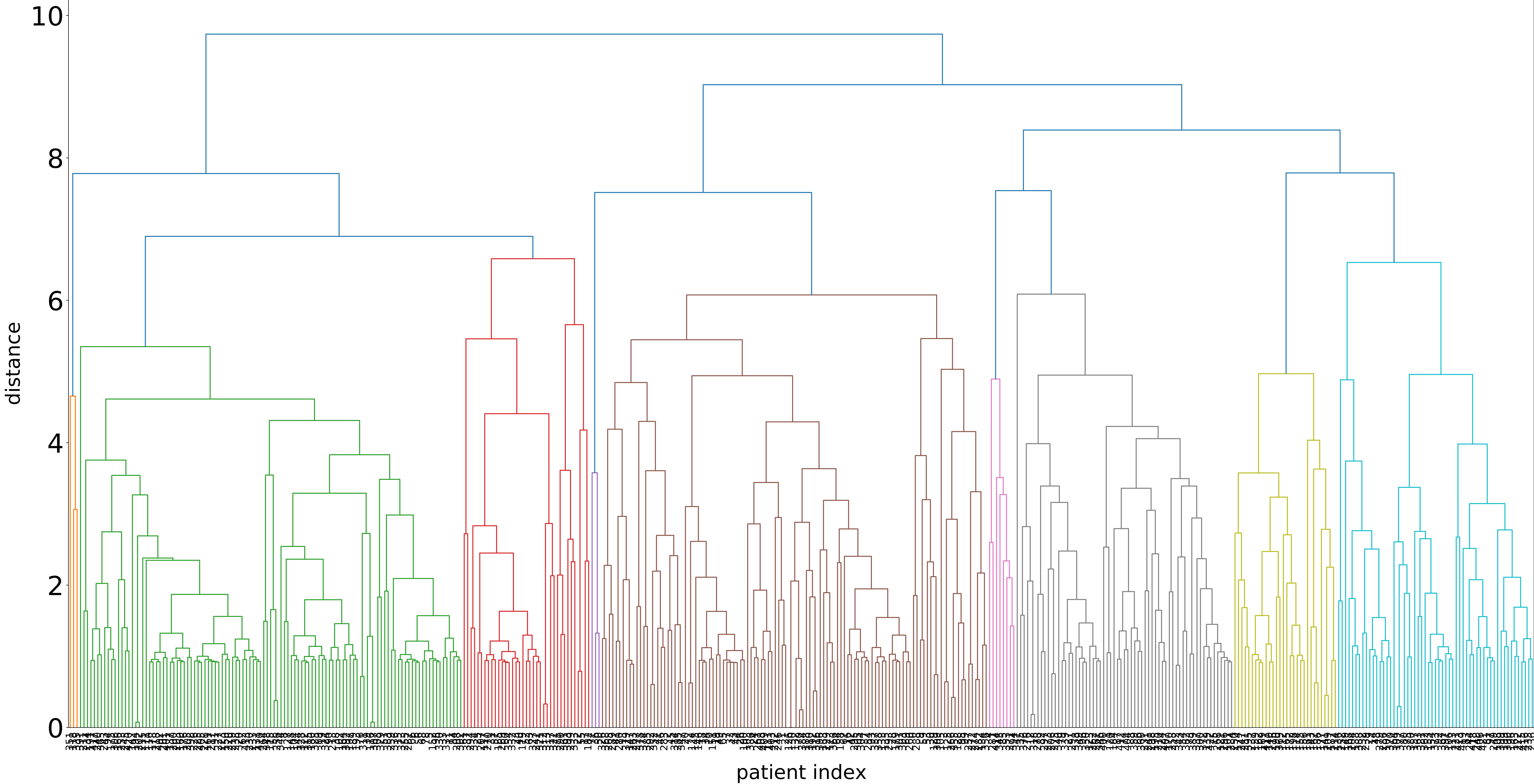
Average values of five clustering indices
gap: 0.60, Tp: 2.00, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.9515	0.92295	0.87555	0.03397	0.86638	0.94945	-0.15373	0.95363	0.00014	0.90778	0.89376	0.0	0.28263	0.25899
3.0	1.0	0.93024	0.88225	0.94692	0.04573	0.88794	0.92679	-0.7287	0.93378	0.00015	0.90166	0.82966	0.01739	0.32686	0.20174
4.0	1.0	0.91634	0.85311	0.92276	0.06641	0.88298	0.9147	-1.47219	0.918	0.00017	0.90944	0.7665	0.01739	0.34163	0.21843
5.0	1.0	0.9504	0.91012	0.95804	0.03992	0.93313	0.94963	-2.62649	0.95118	0.00019	0.95034	0.84964	0.02817	0.37777	0.22297
6.0	1.0	0.96214	0.93095	0.95802	0.02706	0.94964	0.96165	-3.27499	0.96262	0.0002	0.96358	0.88263	0.03448	0.39282	0.22682
7.0	1.0	0.95102	0.90856	0.95591	0.02959	0.93639	0.95057	-4.43463	0.95147	0.00021	0.9558	0.83884	0.88889	0.33735	0.19656
8.0	1.0	0.9488	0.90439	0.93676	0.03313	0.9344	0.94831	-5.65984	0.94929	0.00021	0.95581	0.83172	0.88889	0.35	0.20299
9.0	1.0	0.94356	0.89499	0.91742	0.03311	0.92892	0.94266	-6.57764	0.94447	0.00022	0.9538	0.81803	0.88889	0.36539	0.20993
10.0	1.0	0.92515	0.86109	0.8593	0.04128	0.90684	0.92309	-8.03748	0.92722	0.00022	0.94036	0.76505	2.0	0.43288	0.22544
11.0	1.0	0.86511	0.76405	0.84842	0.07518	0.8355	0.86354	-9.00619	0.8667	0.00022	0.90583	0.62599	2.0	0.39453	0.18718
12.0	1.0	0.83496	0.71749	0.77486	0.09123	0.80058	0.83265	-10.5129	0.83728	0.00022	0.89004	0.56679	2.0	0.43965	0.19121
13.0	1.0	0.80103	0.66842	0.79822	0.12875	0.76571	0.79887	-11.14418	0.80319	0.00023	0.88461	0.50691	2.0	0.40032	0.17243
14.0	1.0	0.79364	0.65945	0.76225	0.13343	0.75836	0.79203	-12.81056	0.79526	0.00024	0.88496	0.49736	2.0	0.43485	0.1832
15.0	1.0	0.78015	0.64098	0.74915	0.14502	0.74483	0.77843	-13.16475	0.78189	0.00024	0.8838	0.47673	2.0	0.42015	0.16181
16.0	1.0	0.76915	0.62619	0.7202	0.15069	0.73295	0.76738	-14.42721	0.77093	0.00024	0.88077	0.46047	2.0	0.4117	0.16904
17.0	1.0	0.77374	0.63314	0.74182	0.15592	0.74047	0.772	-15.89069	0.7755	0.00026	0.88899	0.46904	2.0	0.39113	0.17203
18.0	1.0	0.75724	0.61183	0.73398	0.17458	0.72325	0.75541	-16.5398	0.75908	0.00026	0.88604	0.44673	2.0	0.36936	0.17413
19.0	1.0	0.7467	0.59843	0.70807	0.1825	0.71213	0.74483	-17.9828	0.74857	0.00026	0.88396	0.43291	2.0	0.36281	0.1745
20.0	1.0	0.74046	0.59043	0.69071	0.18788	0.70587	0.73843	-19.67017	0.7425	0.00027	0.8835	0.42492	2.0	0.34854	0.17605

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.60, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 0.70, Tp: 2.00, complete link

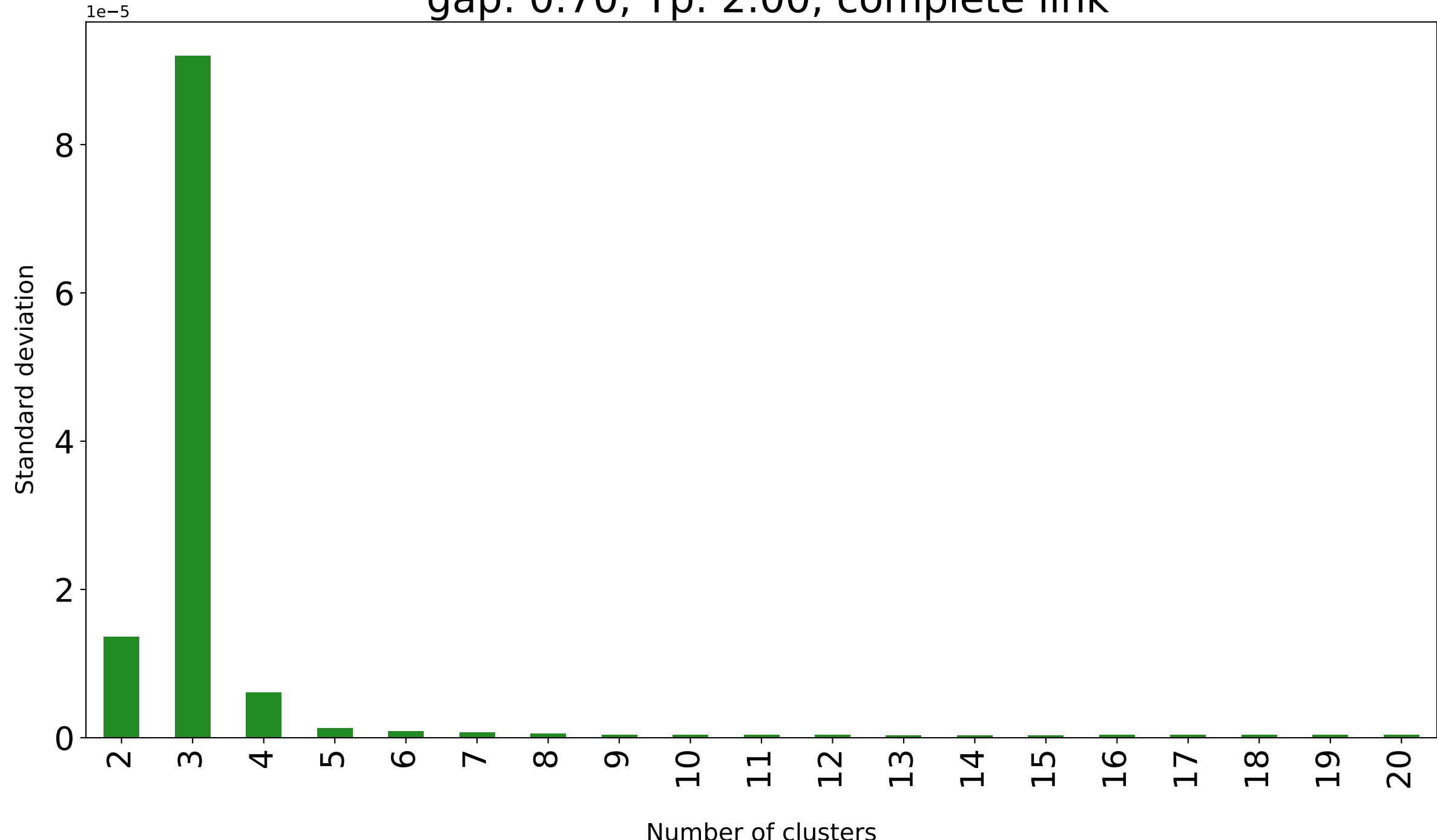


Cophenetic Correlation Coefficient: 0.694275740426429

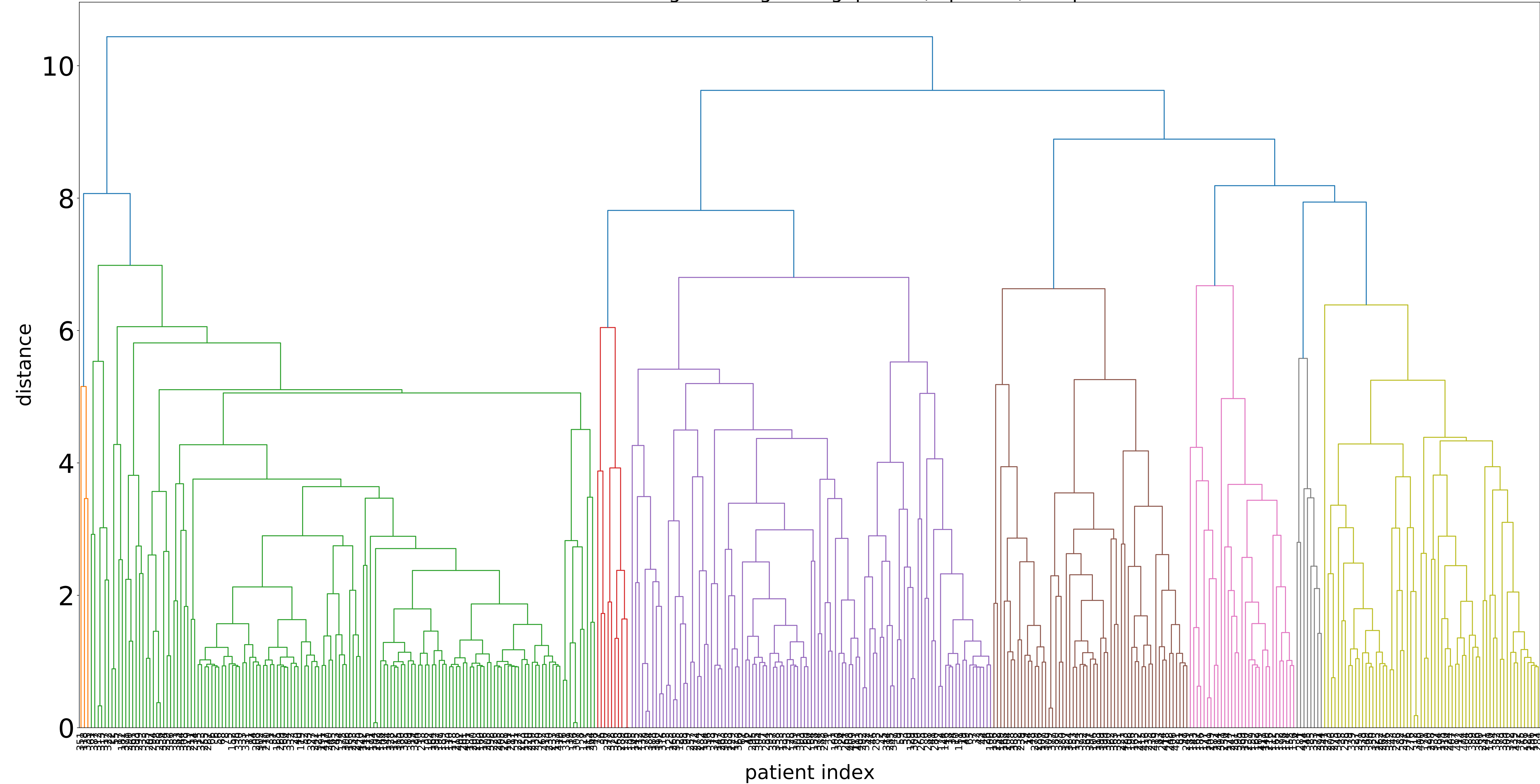
Average values of five clustering indices
gap: 0.70, Tp: 2.00, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.92666	0.88308	0.81819	0.05129	0.79802	0.9235	-0.10633	0.92993	0.00013	0.85981	0.83769	0.0106	0.27513	0.24178
3.0	1.0	0.92066	0.86897	0.91998	0.05202	0.87208	0.91763	-0.72655	0.92379	0.00015	0.89211	0.81064	0.01739	0.31758	0.18974
4.0	1.0	0.90036	0.82893	0.8995	0.07478	0.85963	0.89844	-1.4433	0.90232	0.00017	0.8924	0.73355	0.01739	0.33247	0.20441
5.0	1.0	0.93613	0.88763	0.93777	0.04554	0.91329	0.93522	-2.59314	0.93705	0.00019	0.93628	0.81769	0.01739	0.36923	0.20463
6.0	1.0	0.94035	0.89392	0.93135	0.04119	0.92017	0.93983	-3.82777	0.94087	0.0002	0.94281	0.82391	1.33333	0.34177	0.21115
7.0	1.0	0.95033	0.91111	0.93452	0.0307	0.9345	0.94989	-4.5423	0.95078	0.0002	0.95412	0.85142	1.33333	0.35763	0.21188
8.0	1.0	0.94809	0.90585	0.90801	0.03196	0.93308	0.94714	-5.78948	0.94905	0.00021	0.95442	0.84237	1.33333	0.36506	0.23081
9.0	1.0	0.86309	0.75904	0.88048	0.08097	0.82986	0.86114	-6.72557	0.86506	0.00021	0.89605	0.61668	1.33333	0.29925	0.1645
10.0	1.0	0.85129	0.74195	0.84249	0.09178	0.81695	0.84977	-7.89161	0.85281	0.00021	0.89268	0.59496	1.33333	0.27409	0.16583
11.0	1.0	0.84356	0.73123	0.82481	0.08614	0.80988	0.84186	-8.81197	0.84527	0.00022	0.89332	0.58346	1.33333	0.29827	0.17795
12.0	1.0	0.81955	0.69555	0.77013	0.09826	0.78221	0.81748	-10.3092	0.82164	0.00021	0.88148	0.53999	2.0	0.35207	0.17828
13.0	1.0	0.78259	0.64289	0.75555	0.12811	0.74254	0.78071	-10.61277	0.78449	0.00022	0.87134	0.47712	2.0	0.32334	0.14529
14.0	1.0	0.77868	0.63772	0.72568	0.13005	0.73931	0.77684	-12.16726	0.78054	0.00023	0.87292	0.47149	2.0	0.32917	0.15048
15.0	1.0	0.77482	0.63189	0.70507	0.13174	0.73627	0.77235	-12.73574	0.77732	0.00023	0.87411	0.46536	2.0	0.31579	0.15059
16.0	1.0	0.77203	0.62723	0.68663	0.13464	0.7342	0.76872	-14.08031	0.77538	0.00023	0.87492	0.46052	2.0	0.3096	0.15095
17.0	1.0	0.78207	0.64276	0.73793	0.14441	0.74885	0.78003	-15.04849	0.78414	0.00025	0.88922	0.47796	2.0	0.29124	0.15368
18.0	1.0	0.77565	0.6339	0.72078	0.15202	0.74239	0.77323	-16.86422	0.77809	0.00026	0.88842	0.46862	2.0	0.32129	0.1634
19.0	1.0	0.76155	0.61478	0.69115	0.16232	0.72707	0.75846	-18.39222	0.76467	0.00026	0.88372	0.44845	2.0	0.35762	0.16543
20.0	1.0	0.74856	0.59744	0.67099	0.17209	0.71328	0.74502	-20.09485	0.75216	0.00026	0.88042	0.4303	2.0	0.34149	0.16578

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.70, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 0.80, Tp: 2.00, complete link

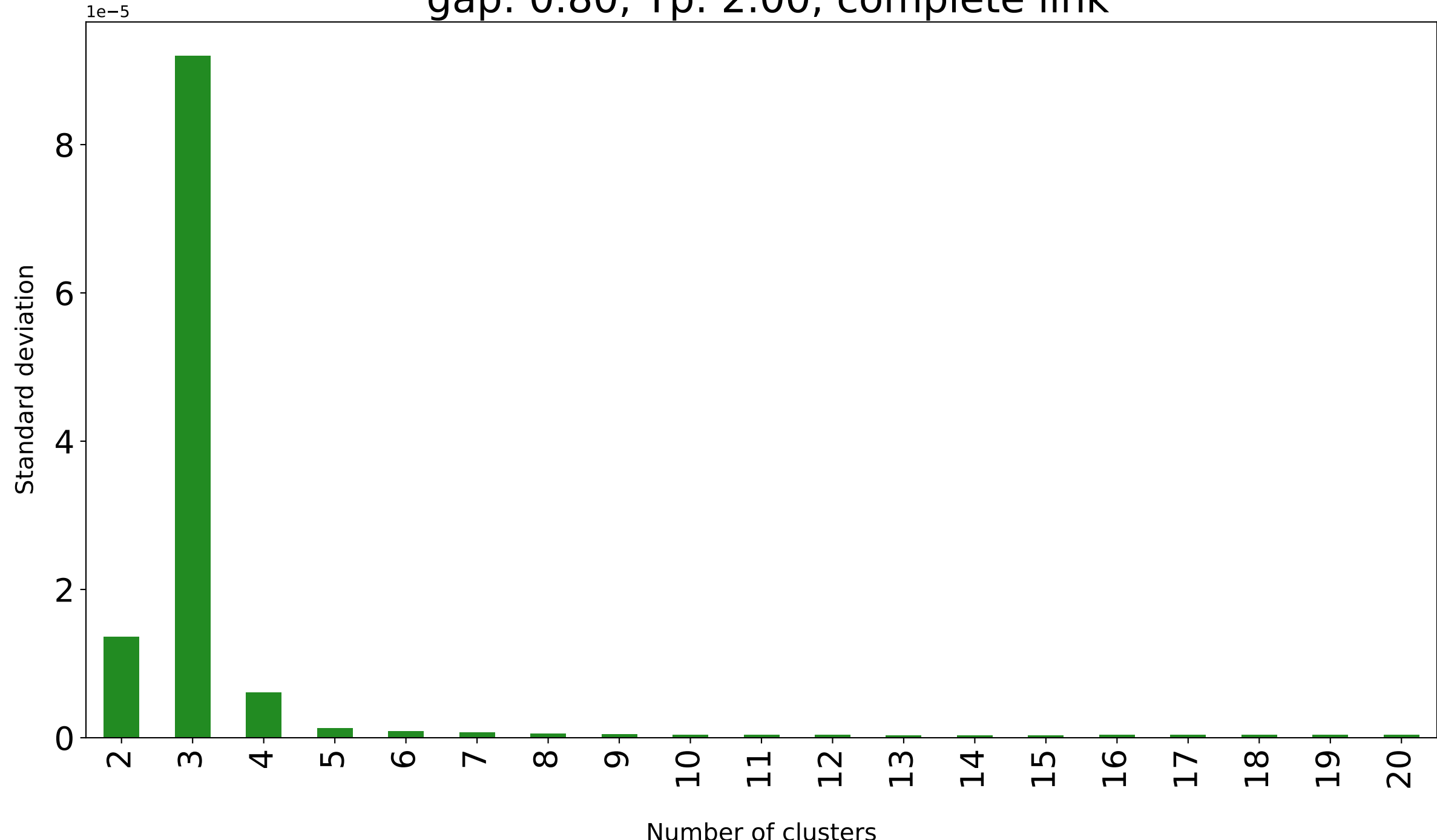


Cophenetic Correlation Coefficient: 0.6784110395850228

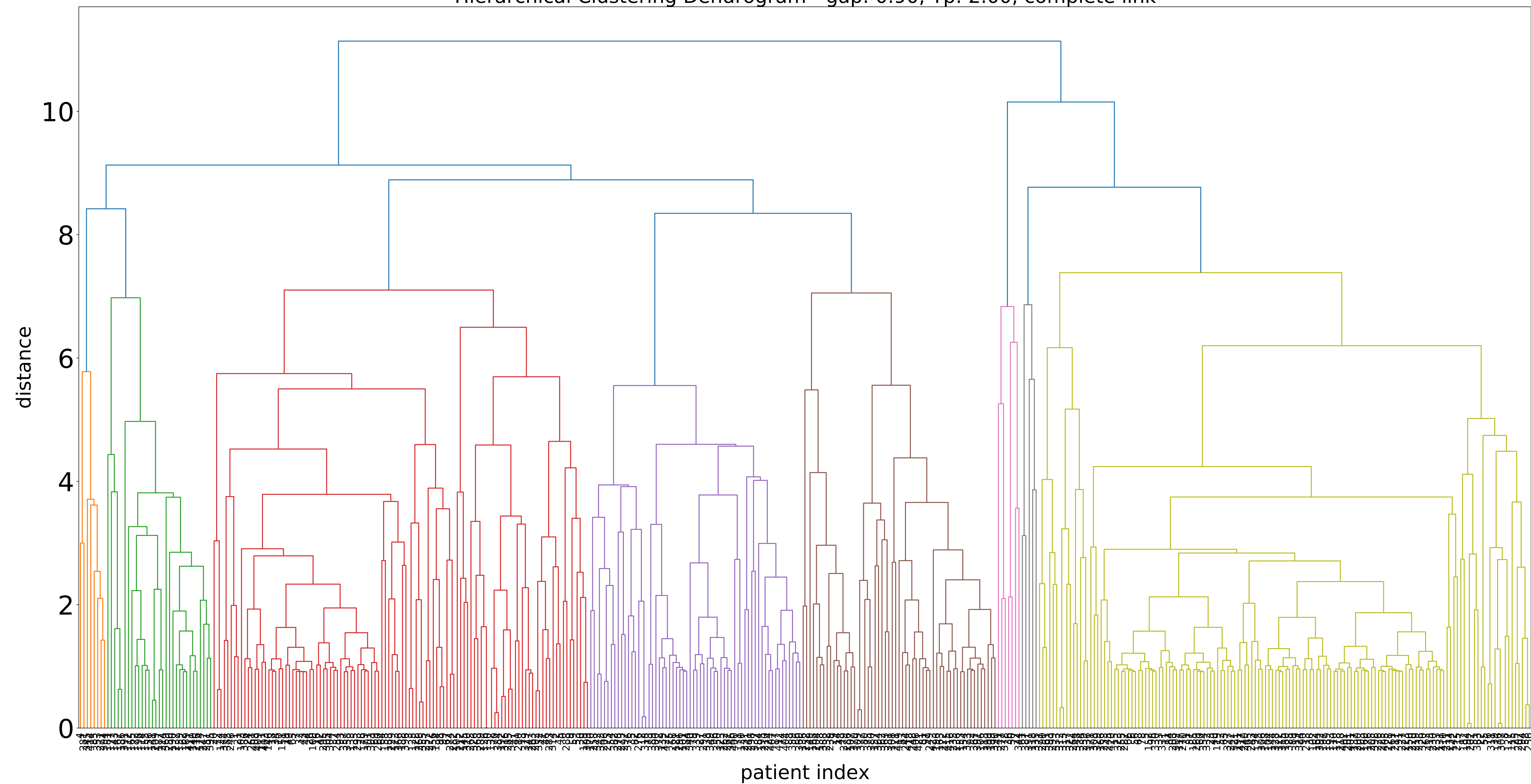
Average values of five clustering indices
gap: 0.80, Tp: 2.00, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.93566	0.89593	0.83971	0.04377	0.8203	0.93254	-0.12363	0.9389	0.00013	0.87459	0.85485	0.0	0.27261	0.22671
3.0	1.0	0.90793	0.8476	0.90831	0.06079	0.85023	0.90402	-0.67564	0.91198	0.00015	0.87298	0.78037	0.01739	0.3114	0.17907
4.0	1.0	0.89497	0.81937	0.89328	0.07538	0.85092	0.89269	-1.4707	0.89729	0.00017	0.8844	0.71935	0.01739	0.31283	0.19444
5.0	1.0	0.9182	0.85388	0.92605	0.05992	0.88956	0.9171	-2.51228	0.91931	0.00018	0.91869	0.76004	0.01739	0.35587	0.1973
6.0	1.0	0.9272	0.86942	0.92062	0.05276	0.90292	0.92648	-3.73051	0.92792	0.00019	0.9303	0.78282	1.33333	0.32949	0.20051
7.0	1.0	0.93778	0.88777	0.91872	0.04243	0.9182	0.93717	-4.4401	0.93839	0.0002	0.94274	0.81143	1.33333	0.34427	0.20374
8.0	1.0	0.93356	0.87978	0.91132	0.04387	0.91448	0.93288	-5.62548	0.93424	0.00021	0.94269	0.7972	1.33333	0.31272	0.15104
9.0	1.0	0.90362	0.82712	0.85551	0.06314	0.87837	0.90242	-6.78599	0.90483	0.00021	0.92228	0.71487	1.33333	0.28299	0.15509
10.0	1.0	0.84961	0.74103	0.82051	0.10539	0.81479	0.84854	-7.09338	0.85069	0.00021	0.89227	0.5951	1.33333	0.24281	0.15584
11.0	1.0	0.8411	0.72807	0.7893	0.11834	0.80599	0.83998	-8.52543	0.84224	0.00021	0.89042	0.57851	1.33333	0.21859	0.15691
12.0	1.0	0.85005	0.74101	0.80103	0.10474	0.81863	0.84887	-9.69892	0.85124	0.00022	0.90024	0.59441	1.33333	0.2511	0.16292
13.0	1.0	0.84326	0.7298	0.77309	0.10792	0.8117	0.84134	-11.30281	0.84518	0.00023	0.89825	0.58046	2.0	0.30687	0.17176
14.0	1.0	0.83585	0.71853	0.75848	0.1145	0.80463	0.83353	-12.53526	0.8382	0.00023	0.89794	0.56671	2.0	0.29394	0.17213
15.0	1.0	0.82568	0.70197	0.72823	0.11699	0.79373	0.82211	-14.04196	0.82929	0.00023	0.89369	0.54662	2.0	0.29779	0.179
16.0	1.0	0.83478	0.71612	0.74751	0.11968	0.80603	0.83171	-15.67692	0.83789	0.00025	0.90351	0.56419	2.0	0.29616	0.1865
17.0	1.0	0.83156	0.71015	0.73174	0.12395	0.80297	0.82758	-16.79897	0.83558	0.00025	0.90267	0.55693	2.0	0.30212	0.18801
18.0	1.0	0.82494	0.69924	0.71351	0.12812	0.79601	0.81984	-18.32813	0.83012	0.00025	0.89997	0.54415	2.0	0.31639	0.18833
19.0	1.0	0.816	0.68601	0.701	0.13527	0.78674	0.81036	-19.02556	0.82173	0.00025	0.89801	0.52885	2.0	0.30695	0.19212
20.0	1.0	0.80281	0.66812	0.69171	0.14965	0.77277	0.79724	-20.13691	0.80848	0.00026	0.89534	0.50863	2.0	0.29723	0.19787

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.80, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 0.90, Tp: 2.00, complete link

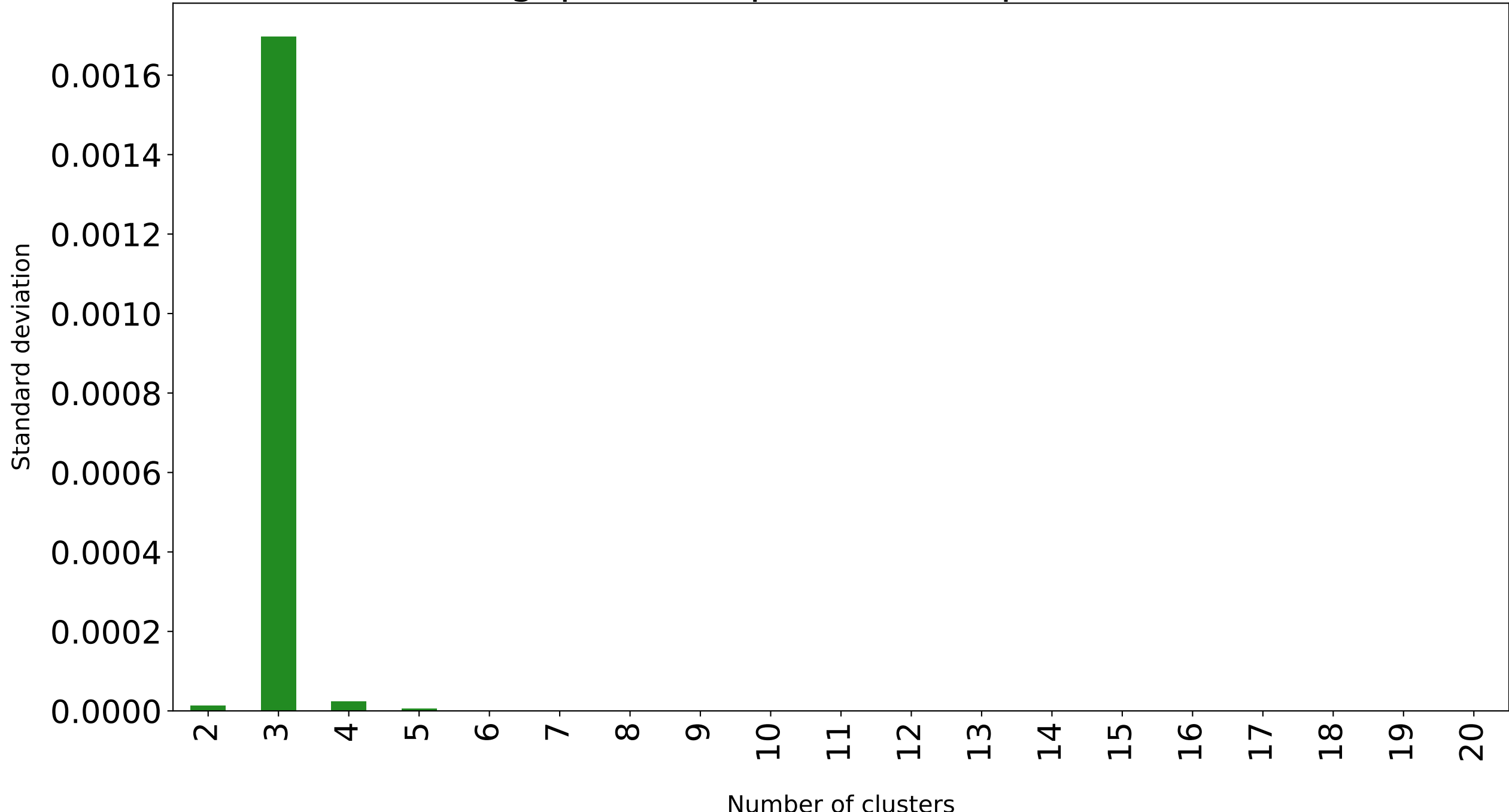


Cophenetic Correlation Coefficient: 0.6362486041357961

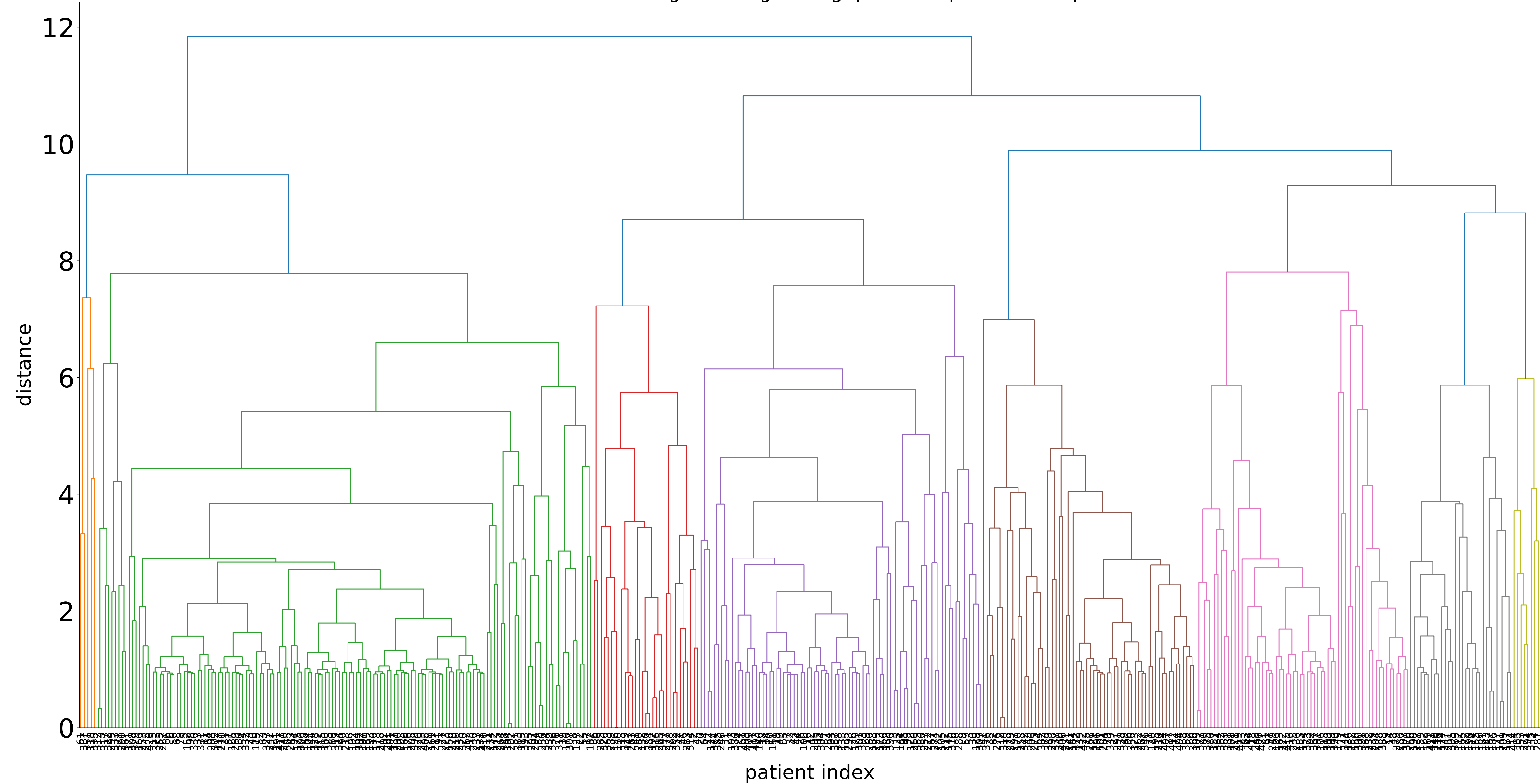
Average values of five clustering indices
gap: 0.90, Tp: 2.00, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90538	0.84021	0.79964	0.06245	0.73773	0.90051	-0.05723	0.91042	0.00012	0.80654	0.76279	0.03979	0.2477	0.17513
3.0	0.99986	0.79015	0.65669	0.5112	0.13914	0.60773	0.77904	-0.42565	0.80152	0.0001	0.67254	0.51967	1.18227	0.23361	0.19474
4.0	1.00001	0.71076	0.55132	0.45266	0.19252	0.54369	0.70077	-0.73493	0.72097	9e-05	0.6411	0.3958	1.18227	0.23971	0.19999
5.0	1.0	0.84475	0.74023	0.80318	0.11426	0.78167	0.84234	-2.08022	0.84721	0.00015	0.83694	0.60728	1.18227	0.25327	0.18155
6.0	1.0	0.85395	0.75288	0.78802	0.1113	0.80114	0.8527	-3.20693	0.8552	0.00016	0.85751	0.61947	1.24138	0.21568	0.1891
7.0	1.0	0.85342	0.75043	0.76297	0.10997	0.80339	0.8517	-3.84197	0.85516	0.00017	0.86129	0.61464	1.24138	0.25527	0.19077
8.0	1.0	0.91563	0.85258	0.89681	0.05458	0.89073	0.91501	-5.37564	0.91626	0.0002	0.9273	0.76151	1.24138	0.27882	0.21561
9.0	1.0	0.87873	0.78798	0.86681	0.07486	0.84734	0.87772	-6.56664	0.87975	0.0002	0.90465	0.66101	1.24138	0.2444	0.2019
10.0	1.0	0.81897	0.69493	0.83353	0.11722	0.77893	0.81683	-6.86485	0.82113	0.00021	0.8747	0.53919	1.24138	0.2153	0.16547
11.0	1.0	0.82563	0.70477	0.83343	0.11122	0.78957	0.82388	-7.93549	0.8274	0.00022	0.88552	0.55064	1.24138	0.24954	0.16731
12.0	1.0	0.82767	0.70834	0.81957	0.11326	0.79319	0.82648	-9.48524	0.82886	0.00022	0.89037	0.55465	1.24138	0.23492	0.17005
13.0	1.0	0.83161	0.71429	0.80205	0.11077	0.79891	0.8306	-11.02805	0.83263	0.00023	0.89546	0.56193	1.37931	0.24833	0.17079
14.0	1.0	0.82997	0.7113	0.77847	0.11311	0.79794	0.82877	-12.59639	0.83117	0.00023	0.89679	0.55773	1.37931	0.23673	0.17963
15.0	1.0	0.83048	0.71094	0.76595	0.11301	0.79962	0.82885	-13.99821	0.83213	0.00024	0.89926	0.5565	1.37931	0.23741	0.18663
16.0	1.0	0.831	0.7107	0.75182	0.11469	0.80107	0.82872	-15.23806	0.83331	0.00024	0.90093	0.55617	2.0	0.2492	0.18827
17.0	1.0	0.84551	0.73398	0.83507	0.11694	0.8208	0.84444	-16.83742	0.84659	0.00027	0.91742	0.58496	2.0	0.22217	0.18925
18.0	1.0	0.84508	0.73368	0.82582	0.11785	0.82073	0.84405	-18.59296	0.84611	0.00027	0.9185	0.58495	2.0	0.22829	0.20198
19.0	1.0	0.83768	0.72249	0.80575	0.12366	0.81255	0.83661	-19.68594	0.83875	0.00027	0.91582	0.57078	2.0	0.23898	0.20309
20.0	1.0	0.82719	0.70685	0.786	0.13185	0.80129	0.82584	-20.97749	0.82854	0.00028	0.91279	0.55183	2.0	0.24287	0.20492

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.90, Tp: 2.00, complete link



Hierarchical Clustering Dendrogram - gap: 1.00, Tp: 2.00, complete link



Cophenetic Correlation Coefficient: 0.6317197977521738

Average values of five clustering indices
gap: 1.00, Tp: 2.00, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90043	0.83498	0.76165	0.0663	0.70789	0.89459	-0.03685	0.90646	0.00012	0.79471	0.76506	0.00727	0.26202	0.17863
3.0	1.00001	0.82478	0.71551	0.81104	0.11492	0.69603	0.81369	-0.40363	0.83647	0.00012	0.74356	0.60474	0.02469	0.29669	0.16096
4.0	1.0	0.8014	0.67776	0.82463	0.13192	0.70694	0.79166	-1.04664	0.81165	0.00014	0.76691	0.54559	0.06	0.32165	0.16813
5.0	1.0	0.82212	0.70836	0.81147	0.12275	0.75033	0.81823	-2.08878	0.82611	0.00015	0.81426	0.57232	1.6	0.26307	0.1714
6.0	1.0	0.86133	0.76598	0.87329	0.09463	0.81344	0.85854	-3.15143	0.86417	0.00017	0.86707	0.64312	1.6	0.27181	0.18052
7.0	1.0	0.87829	0.79359	0.86509	0.07901	0.83843	0.87662	-3.94841	0.87998	0.00018	0.8884	0.6799	1.6	0.30268	0.18282
8.0	1.0	0.85218	0.74871	0.86483	0.09399	0.81095	0.85007	-4.38799	0.85431	0.00019	0.8782	0.6119	1.6	0.26359	0.1053
9.0	1.0	0.82972	0.71489	0.82172	0.10868	0.78592	0.82805	-5.33908	0.83141	0.00019	0.86948	0.56754	1.6	0.28372	0.1056
10.0	1.0	0.82512	0.70604	0.81755	0.11278	0.78451	0.82359	-6.74703	0.82666	0.0002	0.87545	0.55399	1.6	0.26881	0.10852
11.0	1.0	0.82009	0.69845	0.81306	0.11852	0.78097	0.81867	-7.03091	0.82154	0.00021	0.87836	0.54429	1.6	0.2444	0.11163
12.0	1.0	0.8283	0.70998	0.80306	0.11224	0.79218	0.82754	-8.54241	0.82906	0.00022	0.88709	0.55678	1.8	0.25538	0.11377
13.0	1.0	0.82963	0.71155	0.79046	0.11189	0.79463	0.82886	-9.72328	0.8304	0.00022	0.88993	0.55818	1.8	0.27308	0.11502
14.0	1.0	0.82964	0.71081	0.77329	0.11287	0.79571	0.82871	-10.95678	0.83058	0.00023	0.89225	0.55665	1.93333	0.23946	0.11766
15.0	1.0	0.82918	0.70901	0.75683	0.11409	0.79623	0.82774	-12.5931	0.83062	0.00023	0.89399	0.55397	2.0	0.28775	0.11937
16.0	1.0	0.82582	0.70266	0.73856	0.11784	0.79315	0.82369	-14.13368	0.82795	0.00023	0.89349	0.54551	2.0	0.28719	0.12455
17.0	1.0	0.84566	0.73362	0.82425	0.12193	0.8193	0.84503	-15.61427	0.84628	0.00026	0.91339	0.58266	2.0	0.25697	0.12919
18.0	1.0	0.84419	0.73138	0.81181	0.12243	0.81807	0.84351	-17.08065	0.84487	0.00026	0.91387	0.57989	2.0	0.26576	0.13187
19.0	1.0	0.83845	0.72264	0.79385	0.1256	0.81187	0.83758	-18.83084	0.83932	0.00026	0.91201	0.56914	2.0	0.28217	0.13357
20.0	1.0	0.83024	0.70969	0.77702	0.13177	0.80297	0.82892	-20.58597	0.83157	0.00026	0.90905	0.55294	2.0	0.3217	0.13372

Standard deviation of Adjusted Rand versus number of clusters
gap: 1.00, Tp: 2.00, complete link

