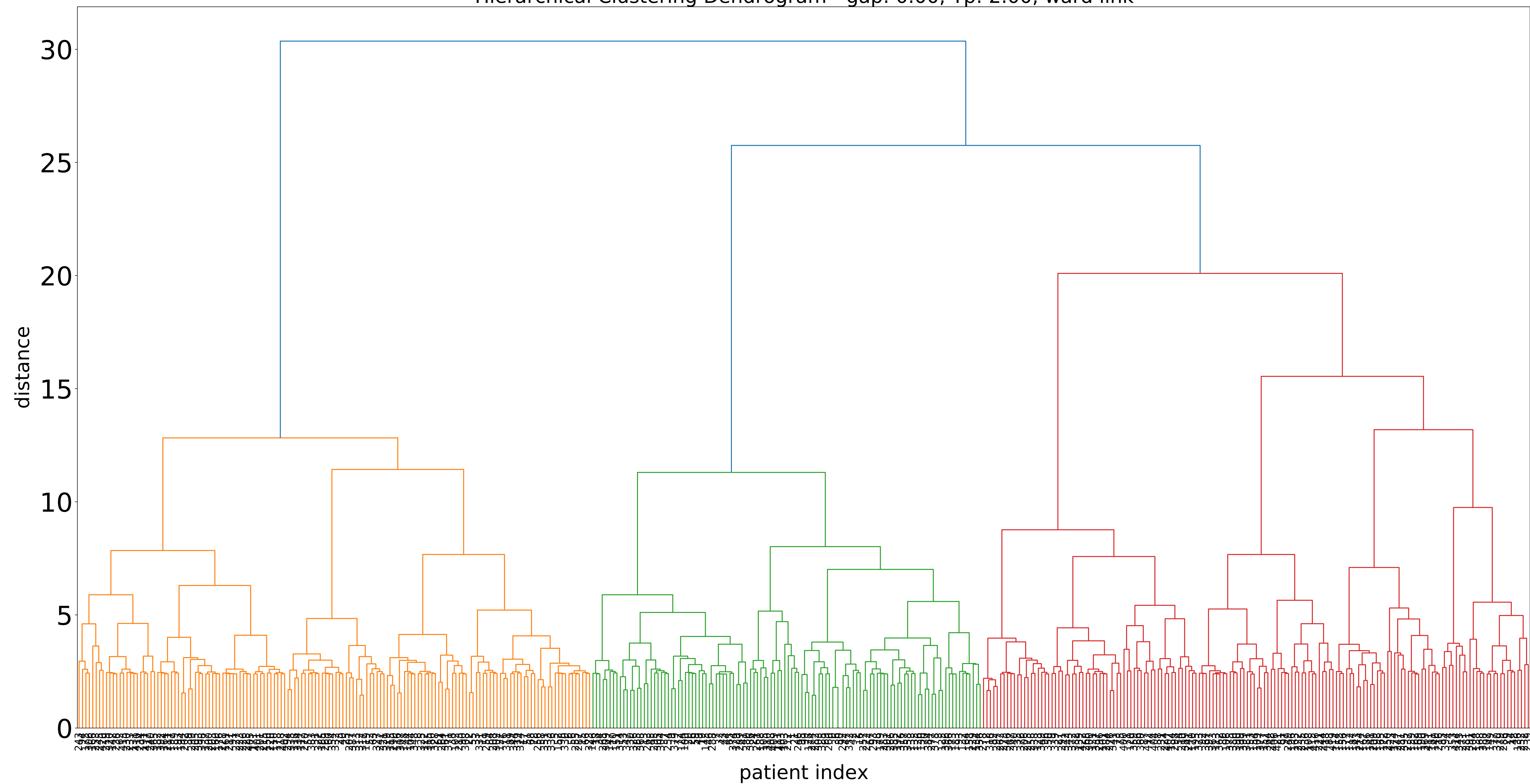


Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 2.00, ward link

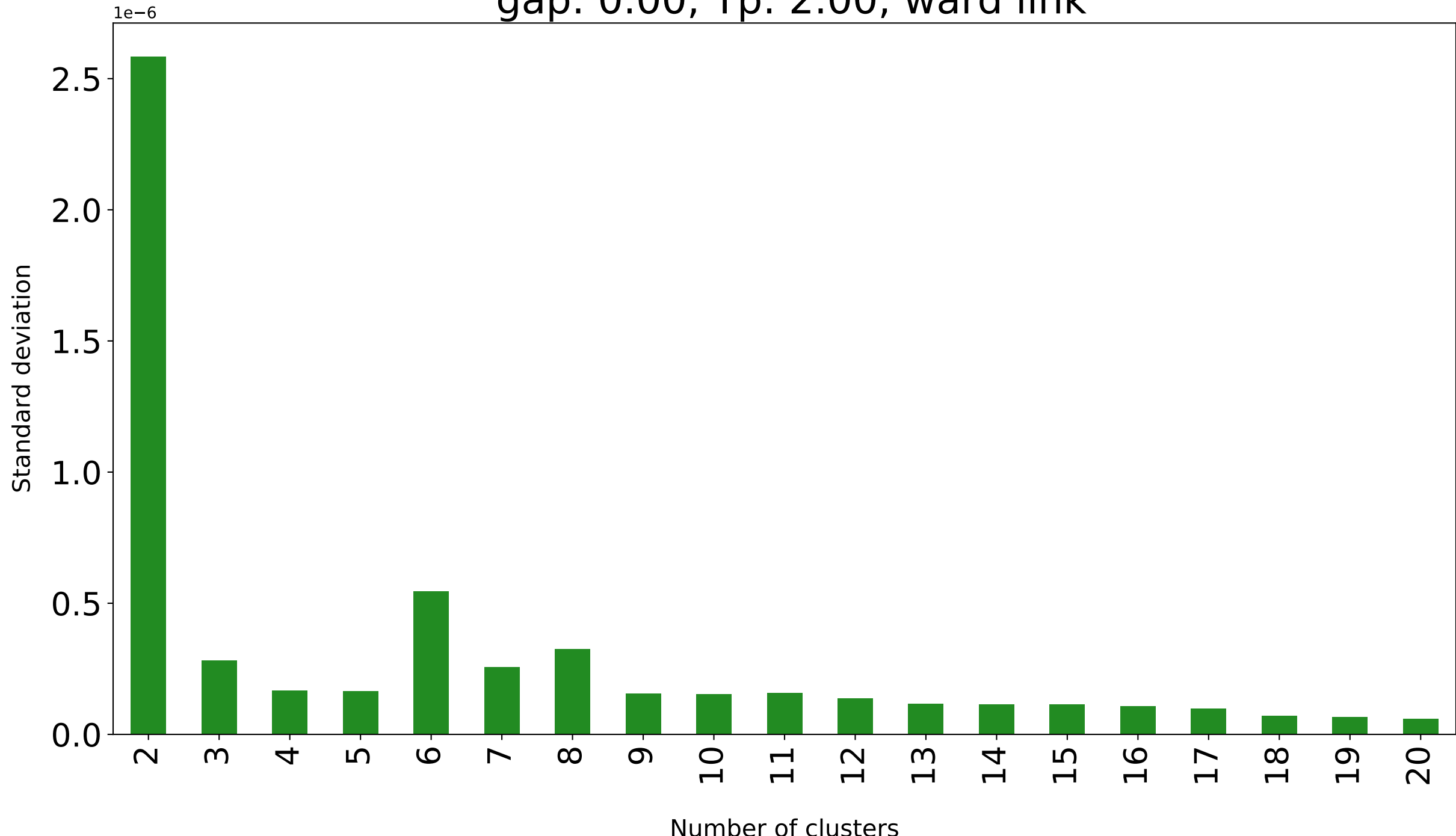


Cophenetic Correlation Coefficient: 0.7542879279105159

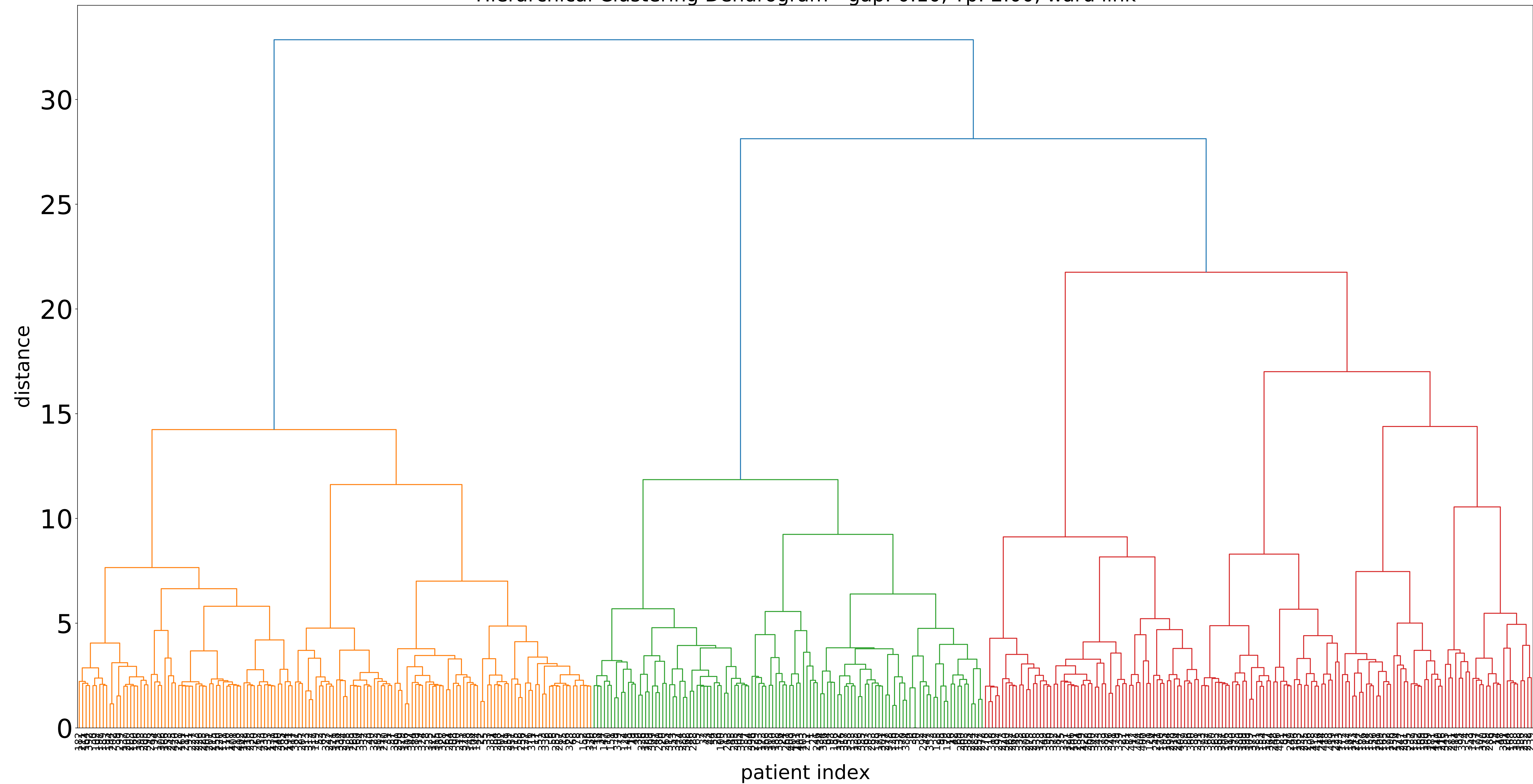
Average values of five clustering indices
gap: 0.00, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99302	0.98728	0.98167	0.00418	0.9847	0.99301	-0.22259	0.99303	0.00016	0.98632	0.97734	0.0292	0.15347	0.45118
3.0	1.0	0.99283	0.9861	0.9888	0.00343	0.98917	0.99283	-0.90828	0.99284	0.00017	0.9905	0.97378	0.1	0.18013	0.44813
4.0	1.0	0.99093	0.98238	0.98921	0.00497	0.98756	0.99092	-1.77653	0.99093	0.0002	0.99031	0.96669	0.16495	0.19389	0.44813
5.0	1.0	0.98632	0.97349	0.98593	0.01283	0.98185	0.9863	-2.70301	0.98635	0.00021	0.98671	0.95014	0.42105	0.20178	0.44813
6.0	1.0	0.94938	0.90892	0.9079	0.03415	0.93614	0.94751	-3.59957	0.95126	0.00021	0.95739	0.85478	0.67692	0.20654	0.44813
7.0	1.0	0.96369	0.93327	0.96073	0.02447	0.9559	0.9636	-4.89835	0.96379	0.00026	0.97503	0.88432	0.67692	0.16676	0.44813
8.0	1.0	0.93734	0.89051	0.91595	0.03622	0.92631	0.93698	-6.04147	0.9377	0.00028	0.96367	0.82348	0.67692	0.15528	0.44813
9.0	1.0	0.93298	0.87749	0.93078	0.03815	0.92366	0.93279	-7.1218	0.93317	0.00034	0.96786	0.79055	0.73043	0.14149	0.4215
10.0	1.0	0.92474	0.86346	0.90656	0.04228	0.91471	0.92449	-7.97527	0.92498	0.00035	0.96524	0.76931	1.4	0.15621	0.4215
11.0	1.0	0.90246	0.82666	0.88055	0.05306	0.89064	0.90221	-8.9941	0.90271	0.00036	0.95877	0.71544	1.4	0.14957	0.4215
12.0	1.0	0.89306	0.81085	0.86697	0.06182	0.88133	0.89285	-9.70147	0.89327	0.00039	0.95866	0.69131	1.81333	0.14423	0.4215
13.0	1.0	0.84786	0.7394	0.82356	0.09048	0.83286	0.84767	-11.37202	0.84805	0.0004	0.9469	0.59318	1.81333	0.13629	0.4215
14.0	1.0	0.82231	0.70216	0.80706	0.10677	0.80659	0.82217	-12.33346	0.82245	0.00043	0.94389	0.54754	1.81333	0.12484	0.4215
15.0	1.0	0.8179	0.69646	0.79355	0.10801	0.80294	0.81768	-14.30416	0.81812	0.00045	0.94623	0.54196	1.81333	0.12065	0.4215
16.0	1.0	0.8223	0.7031	0.7975	0.1036	0.80881	0.82205	-16.01016	0.82255	0.00048	0.95109	0.55038	1.81333	0.12089	0.4215
17.0	1.0	0.81985	0.69902	0.78392	0.10399	0.80696	0.81935	-18.24513	0.82035	0.00051	0.95285	0.54517	1.9	0.11794	0.4215
18.0	1.0	0.8209	0.69899	0.80246	0.10196	0.80914	0.82074	-18.96117	0.82107	0.00055	0.9568	0.54202	2.0	0.11271	0.35977
19.0	1.0	0.82158	0.69998	0.8065	0.10256	0.81063	0.82145	-20.92802	0.82171	0.00059	0.95956	0.54321	2.0	0.10856	0.35977
20.0	1.0	0.81578	0.69098	0.78977	0.10555	0.80491	0.81546	-23.0217	0.81609	0.0006	0.9597	0.53186	2.0	0.10794	0.35977

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.00, Tp: 2.00, ward link



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

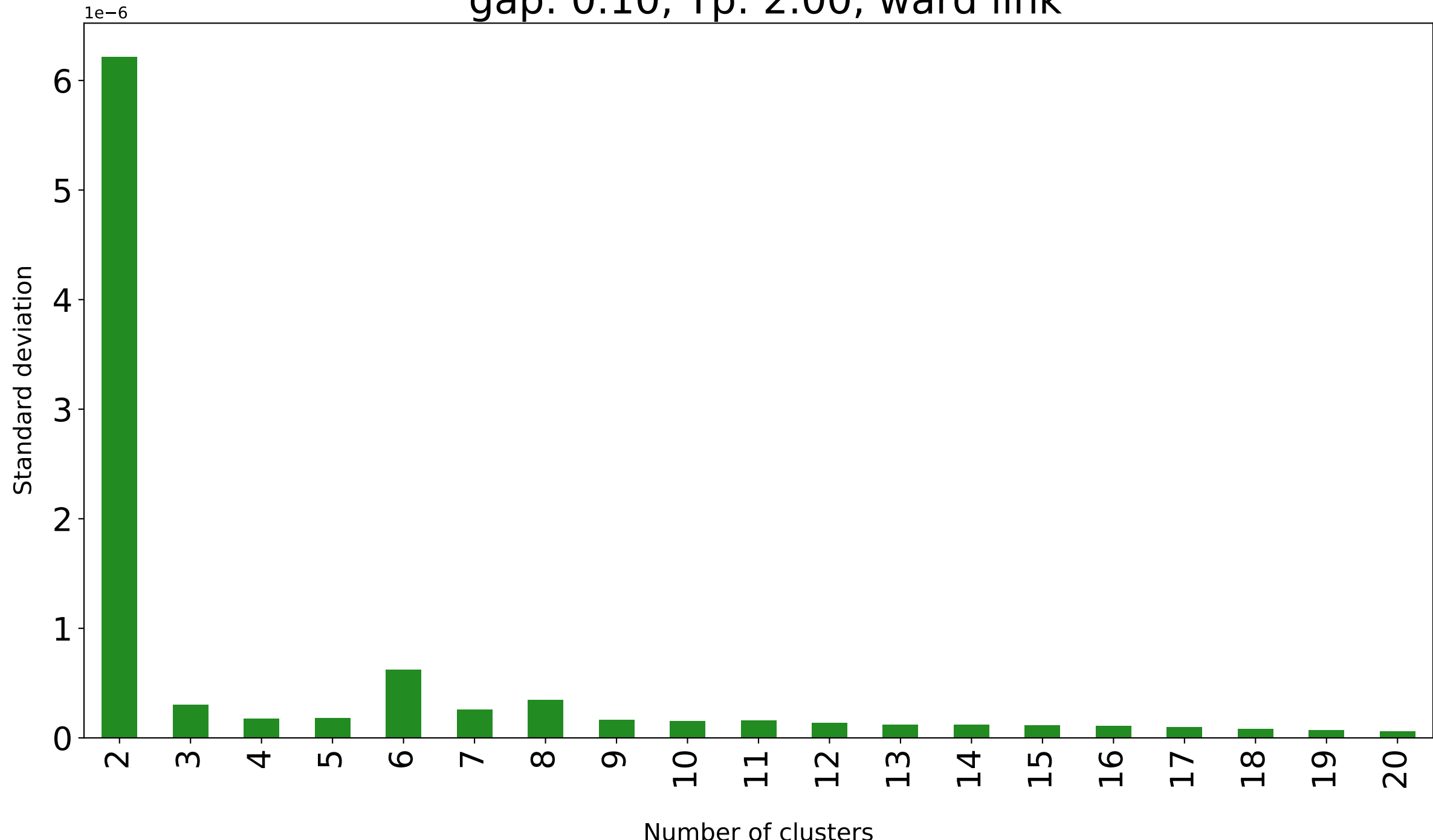


Cophenetic Correlation Coefficient: 0.7482430148601317

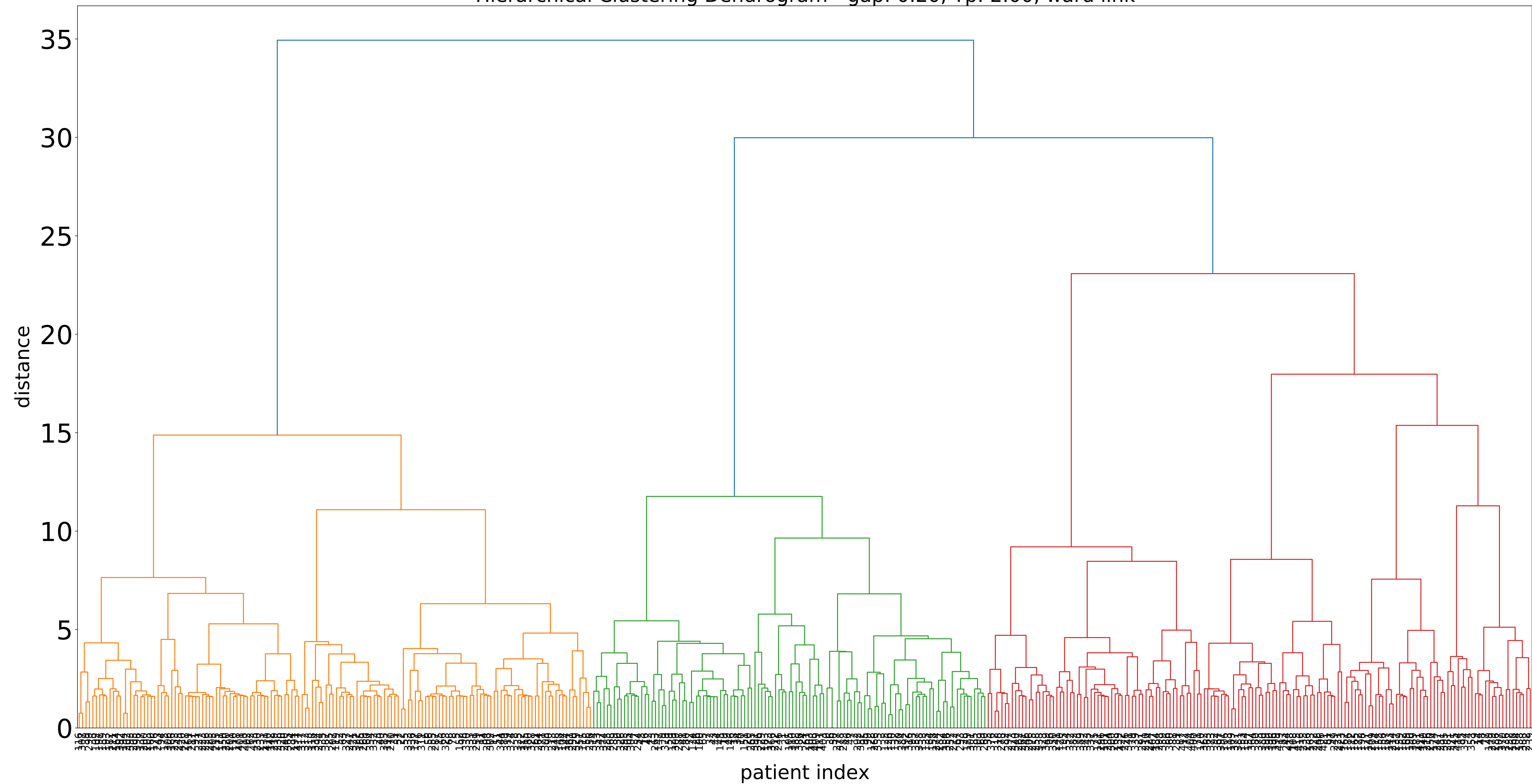
Average values of five clustering indices gap: 0.10, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.97843	0.96673	0.9479	0.01518	0.95059	0.97841	-0.20201	0.97844	0.00015	0.96377	0.95175	0.05839	0.18292	0.3969
3.0	1.0	0.99163	0.98379	0.98695	0.00403	0.98736	0.99163	-0.90397	0.99163	0.00017	0.98893	0.96948	0.1	0.21456	0.36136
4.0	1.0	0.99036	0.98128	0.98889	0.00509	0.98676	0.99035	-1.77205	0.99037	0.0002	0.98968	0.96462	0.16495	0.23161	0.36136
5.0	1.0	0.98504	0.97109	0.9854	0.01451	0.98013	0.98502	-2.69856	0.98507	0.00021	0.98543	0.94595	0.28571	0.24322	0.36136
6.0	1.0	0.91813	0.85417	0.84362	0.05296	0.89714	0.9149	-3.54664	0.92138	0.0002	0.93209	0.77252	1.23077	0.25197	0.36136
7.0	1.0	0.97763	0.95702	0.97957	0.01371	0.97285	0.97757	-4.94804	0.97769	0.00026	0.9844	0.92019	1.23077	0.20745	0.36136
8.0	1.0	0.8627	0.76639	0.87173	0.07172	0.83917	0.8619	-5.49016	0.86351	0.00027	0.92282	0.64047	1.23077	0.17683	0.34893
9.0	1.0	0.9365	0.88354	0.93741	0.03517	0.92758	0.93617	-7.122	0.93684	0.00034	0.9691	0.80005	1.23077	0.17522	0.34893
10.0	1.0	0.93994	0.88925	0.92448	0.03185	0.9319	0.93978	-8.05943	0.94011	0.00035	0.97207	0.80785	2.0	0.19311	0.38003
11.0	1.0	0.89141	0.80775	0.87445	0.05861	0.87818	0.89131	-8.52247	0.8915	0.00036	0.95406	0.686	2.0	0.18585	0.38003
12.0	1.0	0.91658	0.84963	0.90961	0.04786	0.90735	0.91652	-9.90917	0.91665	0.0004	0.96742	0.74719	2.0	0.17925	0.38003
13.0	1.0	0.8952	0.81388	0.87619	0.06269	0.8844	0.895	-11.72389	0.89541	0.00041	0.96161	0.69449	2.0	0.16867	0.38003
14.0	1.0	0.88231	0.7933	0.8555	0.06803	0.87106	0.88193	-13.34551	0.8827	0.00043	0.95966	0.66664	2.0	0.1672	0.38003
15.0	1.0	0.8671	0.76887	0.85901	0.07845	0.85561	0.86689	-14.89831	0.8673	0.00046	0.95859	0.63171	2.0	0.15722	0.38003
16.0	1.0	0.853	0.7477	0.82596	0.08577	0.84106	0.8526	-17.01782	0.85341	0.00047	0.95666	0.60528	2.0	0.15574	0.38003
17.0	1.0	0.83352	0.71882	0.8247	0.09242	0.82136	0.8333	-18.12935	0.83373	0.00051	0.95568	0.56871	2.0	0.14594	0.38003
18.0	1.0	0.831	0.71453	0.80858	0.09458	0.81949	0.83073	-20.26779	0.83127	0.00054	0.95775	0.56265	2.0	0.14418	0.38003
19.0	1.0	0.83222	0.7155	0.82792	0.09577	0.82175	0.83205	-21.05921	0.83241	0.00059	0.9613	0.56216	2.0	0.13619	0.32687
20.0	1.0	0.82274	0.70115	0.82326	0.10475	0.81226	0.82248	-23.0404	0.823	0.00061	0.96111	0.54404	2.0	0.13093	0.32687

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.10, Tp: 2.00, ward link



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



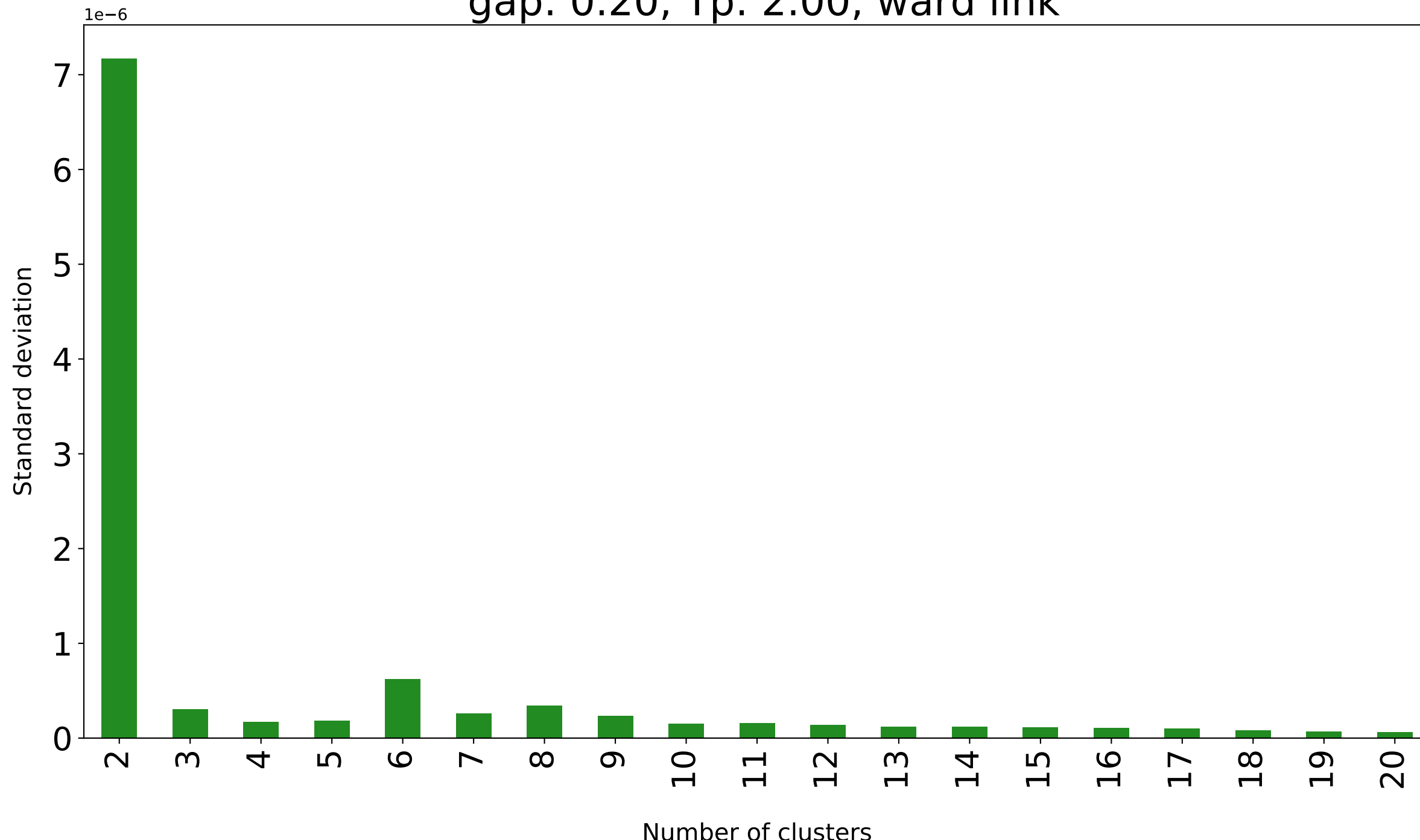
Cophenetic Correlation Coefficient: 0.7268939590765223

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.97235	0.95832	0.93398	0.01987	0.93633	0.97232	-0.19259	0.97239	0.00015	0.95449	0.94153	0.03504	0.21356	0.35428
3.0	1.0	0.98907	0.97875	0.98395	0.0054	0.9835	0.98907	-0.88513	0.98907	0.00017	0.98552	0.95969	0.10435	0.24845	0.2902
4.0	1.0	0.98864	0.97788	0.98613	0.006	0.9844	0.98863	-1.75419	0.98864	0.0002	0.98783	0.95798	0.125	0.2695	0.2907
5.0	1.0	0.98253	0.96625	0.98093	0.01642	0.97681	0.98251	-2.66983	0.98256	0.00021	0.98302	0.93685	0.21818	0.28388	0.2907
6.0	1.0	0.92977	0.87476	0.86737	0.04497	0.91163	0.92704	-3.5371	0.93253	0.00021	0.94144	0.80375	0.48	0.29652	0.3011
7.0	1.0	0.96331	0.93018	0.96321	0.02086	0.95542	0.96324	-4.83967	0.96337	0.00026	0.97443	0.87254	0.48	0.24608	0.3011
8.0	1.0	0.86333	0.76514	0.88288	0.07358	0.83991	0.86189	-5.38776	0.86478	0.00027	0.92227	0.63485	0.48	0.20983	0.28954
9.0	1.0	0.87919	0.78774	0.83486	0.0644	0.86058	0.8781	-6.46469	0.88029	0.00029	0.93688	0.66012	1.5	0.23746	0.30274
10.0	1.0	0.91921	0.85246	0.90193	0.04142	0.90834	0.91906	-7.84356	0.91936	0.00034	0.96242	0.74805	1.5	0.22725	0.30274
11.0	1.0	0.8878	0.80223	0.871	0.05909	0.87415	0.8877	-8.48695	0.88791	0.00036	0.95263	0.67847	1.5	0.21743	0.32829
12.0	1.0	0.8869	0.79959	0.87614	0.06364	0.87439	0.88684	-9.69512	0.88697	0.00038	0.95603	0.67201	1.5	0.20894	0.32829
13.0	1.0	0.87145	0.7753	0.85401	0.07365	0.8581	0.87132	-11.46668	0.87158	0.0004	0.95285	0.63935	1.5	0.19769	0.32829
14.0	1.0	0.86894	0.77122	0.84822	0.0693	0.8562	0.86869	-13.11234	0.86918	0.00042	0.95458	0.63403	1.5	0.19724	0.32829
15.0	1.0	0.84634	0.73509	0.84999	0.08648	0.83289	0.84599	-14.67646	0.84668	0.00044	0.95158	0.58467	1.5	0.18403	0.32829
16.0	1.0	0.84076	0.72767	0.82947	0.08784	0.82757	0.84056	-16.77493	0.84097	0.00046	0.95238	0.57662	1.5	0.1829	0.32829
17.0	1.0	0.82413	0.70317	0.79449	0.09725	0.81054	0.82376	-18.68446	0.8245	0.00048	0.95063	0.54689	1.5	0.18129	0.32829
18.0	1.0	0.80931	0.68191	0.77222	0.10614	0.79568	0.80867	-19.17779	0.80994	0.0005	0.95011	0.52215	1.5	0.17894	0.29794
19.0	1.0	0.81214	0.68569	0.80666	0.10672	0.8	0.81186	-20.42946	0.81241	0.00055	0.95531	0.52527	1.5	0.16819	0.29794
20.0	1.0	0.80491	0.67538	0.78763	0.11276	0.79271	0.80462	-22.37313	0.80519	0.00056	0.95502	0.51317	2.0	0.16782	0.34682

Standard deviation of Adjusted Rand versus number of clusters

gap: 0.20, Tp: 2.00, ward link

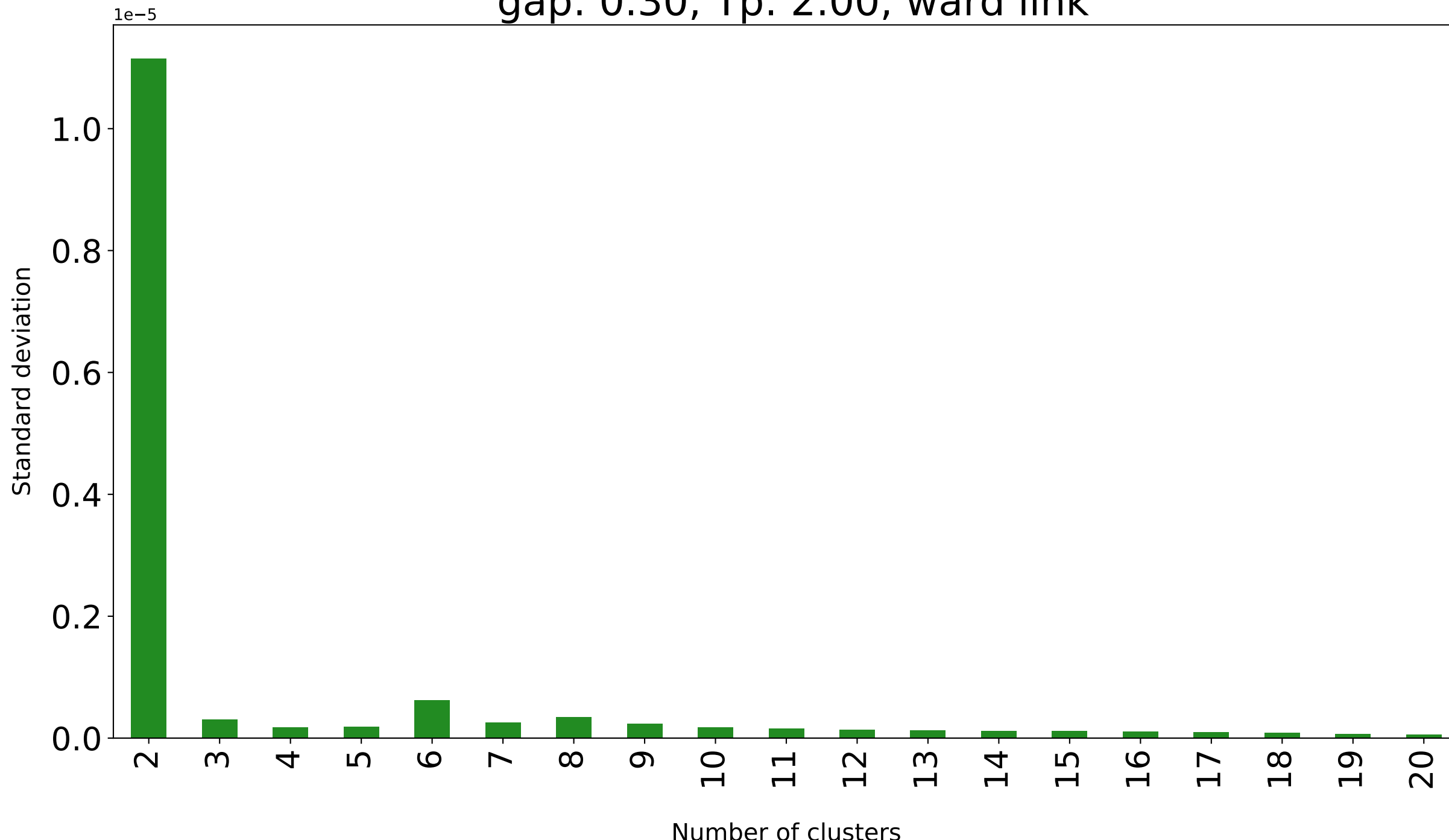


Cophenetic Correlation Coefficient: 0.710517641652284

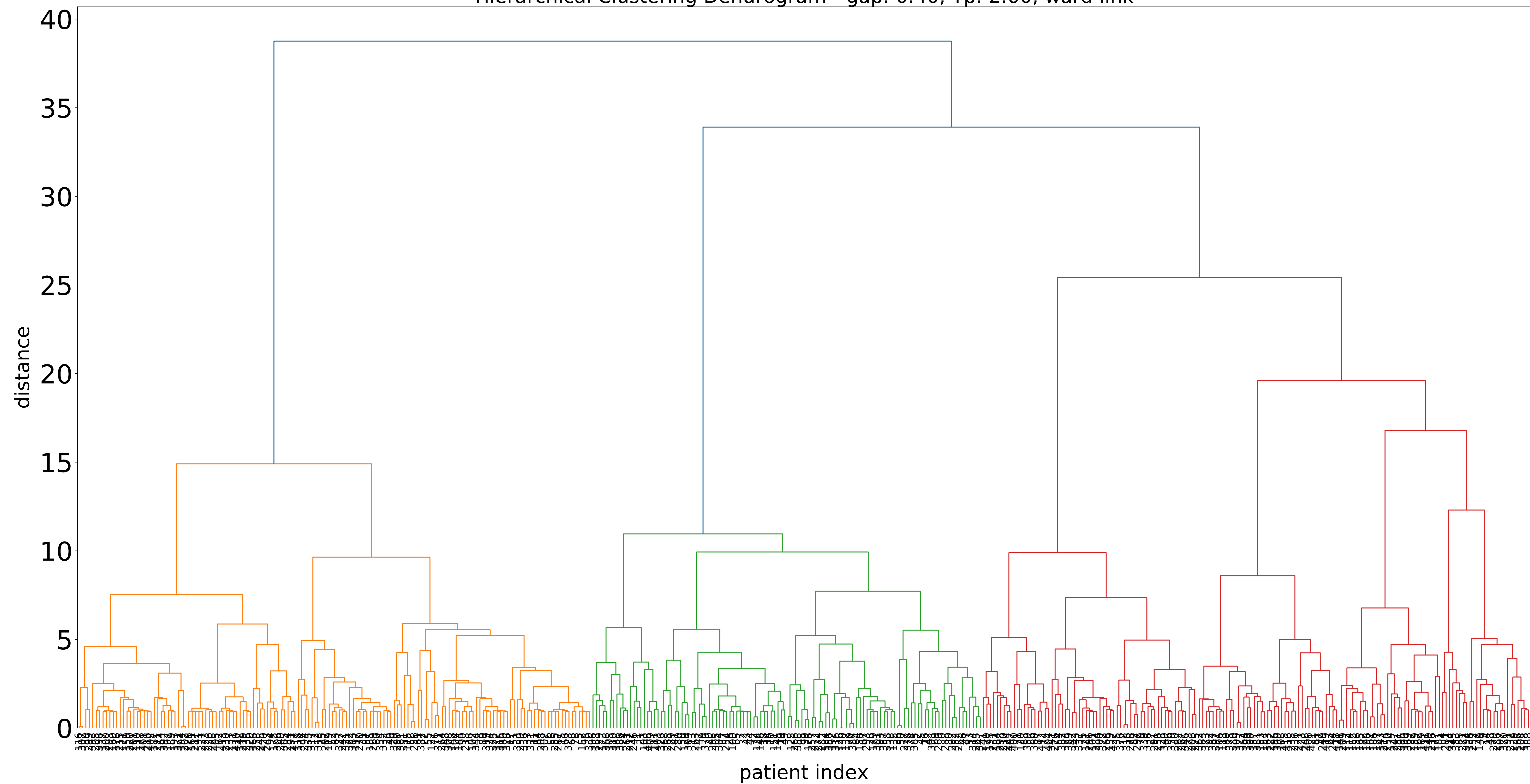
Average values of five clustering indices
gap: 0.30, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.93708	0.90971	0.85327	0.04717	0.85379	0.93703	-0.14403	0.93713	0.00014	0.9011	0.88333	0.04672	0.24612	0.31624
3.0	1.0	0.993	0.98628	0.9899	0.00352	0.98944	0.993	-0.8994	0.993	0.00017	0.99069	0.97359	0.13913	0.28607	0.23204
4.0	1.0	0.99199	0.98437	0.98975	0.00444	0.98902	0.99199	-1.77383	0.992	0.0002	0.99143	0.97015	0.16667	0.31103	0.23843
5.0	1.0	0.98533	0.97161	0.98298	0.01525	0.98054	0.98532	-2.69431	0.98534	0.00021	0.98577	0.94667	0.29091	0.32782	0.23843
6.0	1.0	0.96447	0.93576	0.93362	0.02298	0.95508	0.96314	-3.6344	0.96581	0.00021	0.96978	0.89674	0.64	0.34375	0.2445
7.0	1.0	0.96532	0.93394	0.96233	0.01941	0.95786	0.96528	-4.87233	0.96536	0.00026	0.97584	0.87907	0.64	0.28774	0.23765
8.0	1.0	0.92598	0.86524	0.87724	0.04192	0.91185	0.92439	-5.61459	0.92757	0.00026	0.95231	0.77625	2.0	0.31838	0.25174
9.0	1.0	0.8653	0.76648	0.84892	0.07367	0.84379	0.86471	-6.30118	0.8659	0.00028	0.92832	0.63036	2.0	0.27548	0.24437
10.0	1.0	0.85581	0.75123	0.84623	0.07919	0.83609	0.85546	-7.5024	0.85616	0.00031	0.93289	0.60848	2.0	0.25937	0.25381
11.0	1.0	0.82655	0.70785	0.80678	0.09919	0.80523	0.82638	-8.79046	0.82673	0.00033	0.92693	0.55391	2.0	0.24487	0.25381
12.0	1.0	0.84057	0.72789	0.81148	0.09419	0.82257	0.84043	-9.65523	0.84071	0.00036	0.93741	0.57732	2.0	0.24036	0.26731
13.0	1.0	0.82986	0.71204	0.79593	0.09906	0.81178	0.82962	-11.37736	0.8301	0.00037	0.93668	0.55785	2.0	0.23223	0.26731
14.0	1.0	0.78077	0.64245	0.76788	0.12677	0.75972	0.78057	-12.80908	0.78098	0.00037	0.92597	0.47645	2.0	0.21813	0.26731
15.0	1.0	0.7813	0.64306	0.76622	0.12214	0.76171	0.78103	-14.19794	0.78157	0.0004	0.93051	0.47708	2.0	0.21425	0.26731
16.0	1.0	0.76947	0.62653	0.78542	0.13557	0.75112	0.76856	-14.863	0.77038	0.00043	0.93376	0.45923	2.0	0.2045	0.26731
17.0	1.0	0.77705	0.6378	0.77929	0.12542	0.7603	0.77657	-17.06983	0.77753	0.00046	0.93939	0.47218	2.0	0.20315	0.26731
18.0	1.0	0.74242	0.59043	0.76981	0.14133	0.72519	0.74095	-18.04192	0.74389	0.00048	0.93664	0.42119	2.0	0.19144	0.26761
19.0	1.0	0.74654	0.5957	0.76916	0.13926	0.73051	0.74533	-20.04126	0.74776	0.00051	0.94084	0.42617	2.0	0.18658	0.26761
20.0	1.0	0.75246	0.60413	0.76234	0.1394	0.73742	0.75181	-21.41357	0.75311	0.00054	0.94454	0.43499	2.0	0.18971	0.26044

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



Hierarchical Clustering Dendrogram - gap: 0.40, Tp: 2.00, ward link

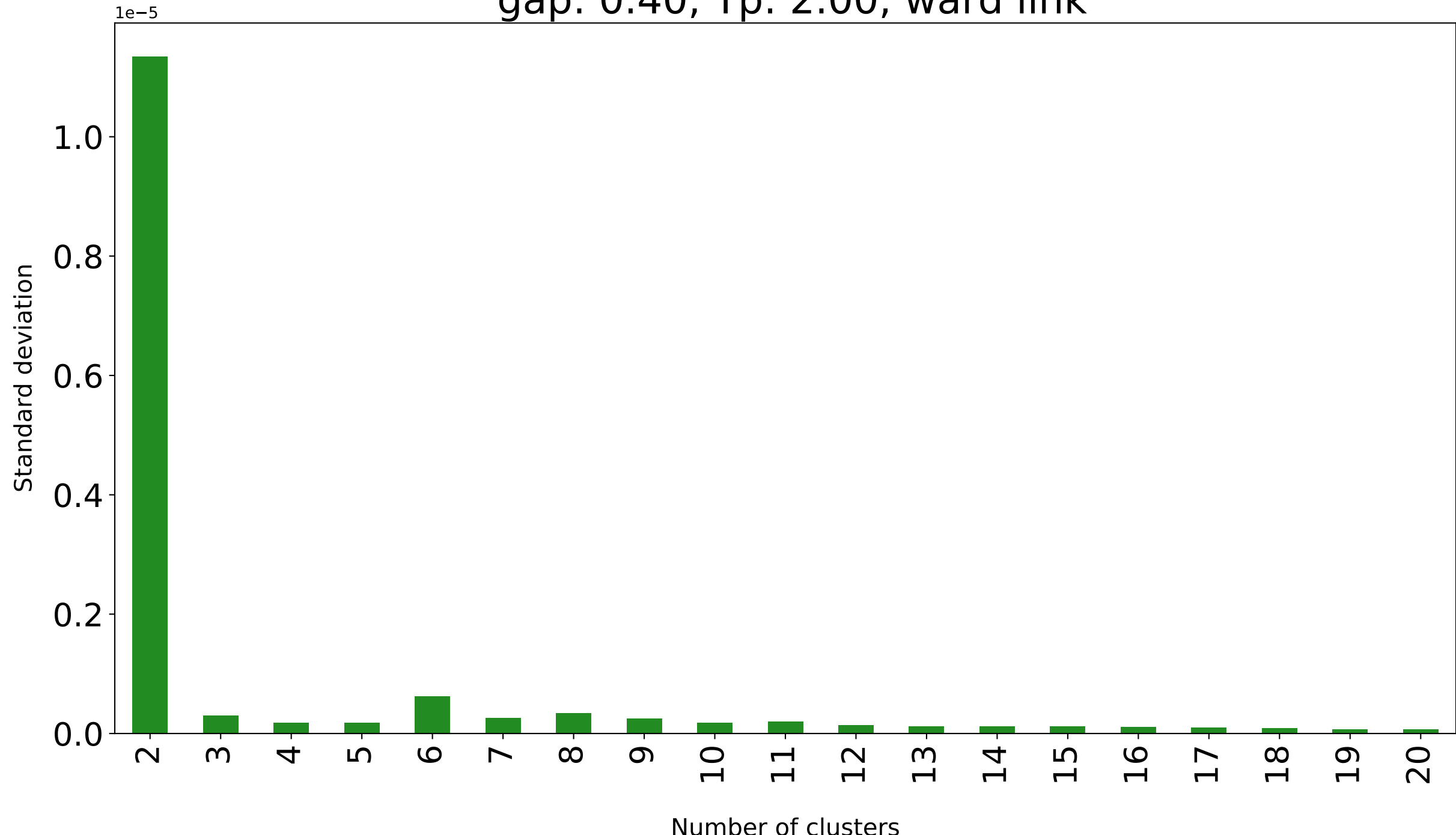


Cophenetic Correlation Coefficient: 0.7030468635959852

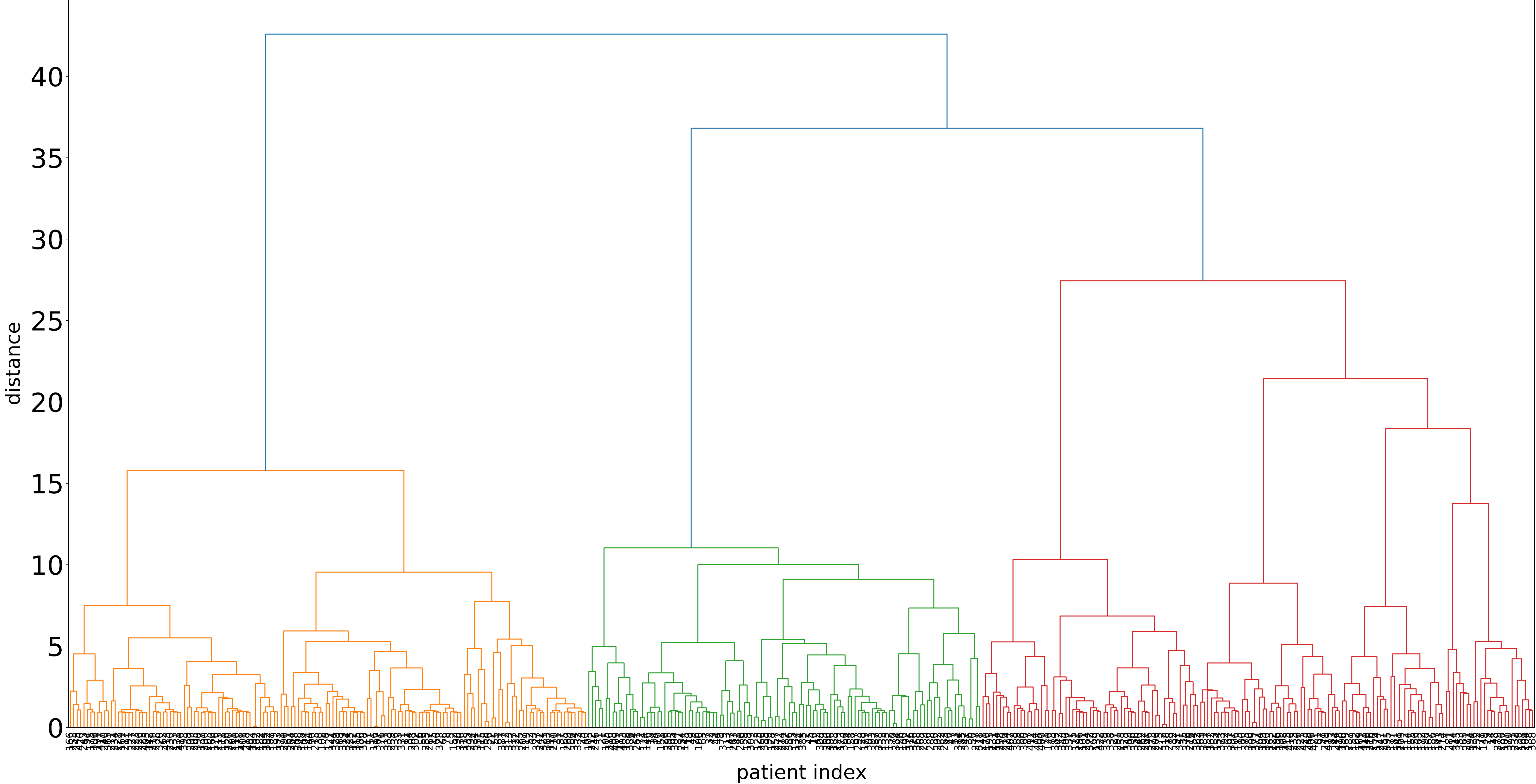
Average values of five clustering indices gap: 0.40, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.93584	0.90805	0.8507	0.04847	0.85107	0.93577	-0.14346	0.9359	0.00013	0.89932	0.88151	0.0	0.27303	0.27232
3.0	1.0	0.99573	0.99158	0.99318	0.00209	0.99356	0.99573	-0.91304	0.99573	0.00017	0.99429	0.98358	0.0	0.31908	0.19837
4.0	1.0	0.99567	0.99144	0.99499	0.0022	0.99406	0.99567	-1.79416	0.99567	0.0002	0.99534	0.98331	0.0	0.34684	0.21135
5.0	1.0	0.9872	0.97527	0.98593	0.01528	0.98301	0.98719	-2.7145	0.98721	0.00021	0.98759	0.95369	0.0	0.36501	0.21135
6.0	1.0	0.99031	0.98192	0.98574	0.00679	0.98761	0.99001	-3.70049	0.9906	0.00022	0.99142	0.96893	0.42308	0.38184	0.21135
7.0	1.0	0.96402	0.93147	0.96404	0.02031	0.95632	0.96395	-4.88335	0.96409	0.00026	0.97499	0.8747	0.42308	0.3201	0.17237
8.0	1.0	0.94664	0.90081	0.92531	0.02935	0.936	0.94599	-5.67072	0.9473	0.00026	0.96467	0.82787	0.61111	0.35041	0.17939
9.0	1.0	0.89481	0.81411	0.85875	0.05841	0.87671	0.89414	-6.334	0.89549	0.00027	0.93987	0.69887	1.1	0.3175	0.17939
10.0	1.0	0.82098	0.69895	0.79911	0.10083	0.79456	0.82041	-6.80897	0.82155	0.00028	0.91168	0.54316	1.1	0.29255	0.11662
11.0	1.0	0.80211	0.67387	0.75899	0.10775	0.77613	0.80149	-8.22464	0.80274	0.0003	0.91199	0.51651	1.1	0.27695	0.11662
12.0	1.0	0.83445	0.71884	0.8193	0.09367	0.81579	0.83428	-9.60208	0.83462	0.00035	0.93516	0.56627	1.1	0.26772	0.13104
13.0	1.0	0.82779	0.70914	0.80458	0.096	0.80961	0.82766	-11.38095	0.82793	0.00037	0.93638	0.55434	1.1	0.25652	0.13104
14.0	1.0	0.81619	0.692	0.80599	0.10577	0.79848	0.81601	-11.90862	0.81638	0.00039	0.9374	0.53331	1.1	0.24392	0.13104
15.0	1.0	0.77089	0.62822	0.78711	0.13495	0.75122	0.76995	-13.42301	0.77183	0.00041	0.92955	0.46092	1.1	0.23006	0.13104
16.0	1.0	0.76614	0.62221	0.78447	0.13521	0.74747	0.76511	-14.79466	0.76716	0.00043	0.9326	0.45504	1.1	0.22531	0.13104
17.0	1.0	0.76908	0.62673	0.77687	0.1304	0.7516	0.76841	-16.95463	0.76976	0.00045	0.93672	0.45999	1.1	0.22058	0.13104
18.0	1.0	0.7582	0.6126	0.76602	0.1356	0.74104	0.75754	-18.45411	0.75886	0.00047	0.93762	0.4452	1.57143	0.213	0.13104
19.0	1.0	0.7568	0.61039	0.75958	0.13577	0.74049	0.75623	-20.40667	0.75736	0.00049	0.94043	0.4422	1.57143	0.2074	0.13104
20.0	1.0	0.74845	0.5997	0.73638	0.14469	0.73222	0.74807	-21.33485	0.74883	0.00051	0.94067	0.43085	2.0	0.20796	0.13104

Standard deviation of Adjusted Rand versus number of clusters
gap: 0.40, Tp: 2.00, ward link



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

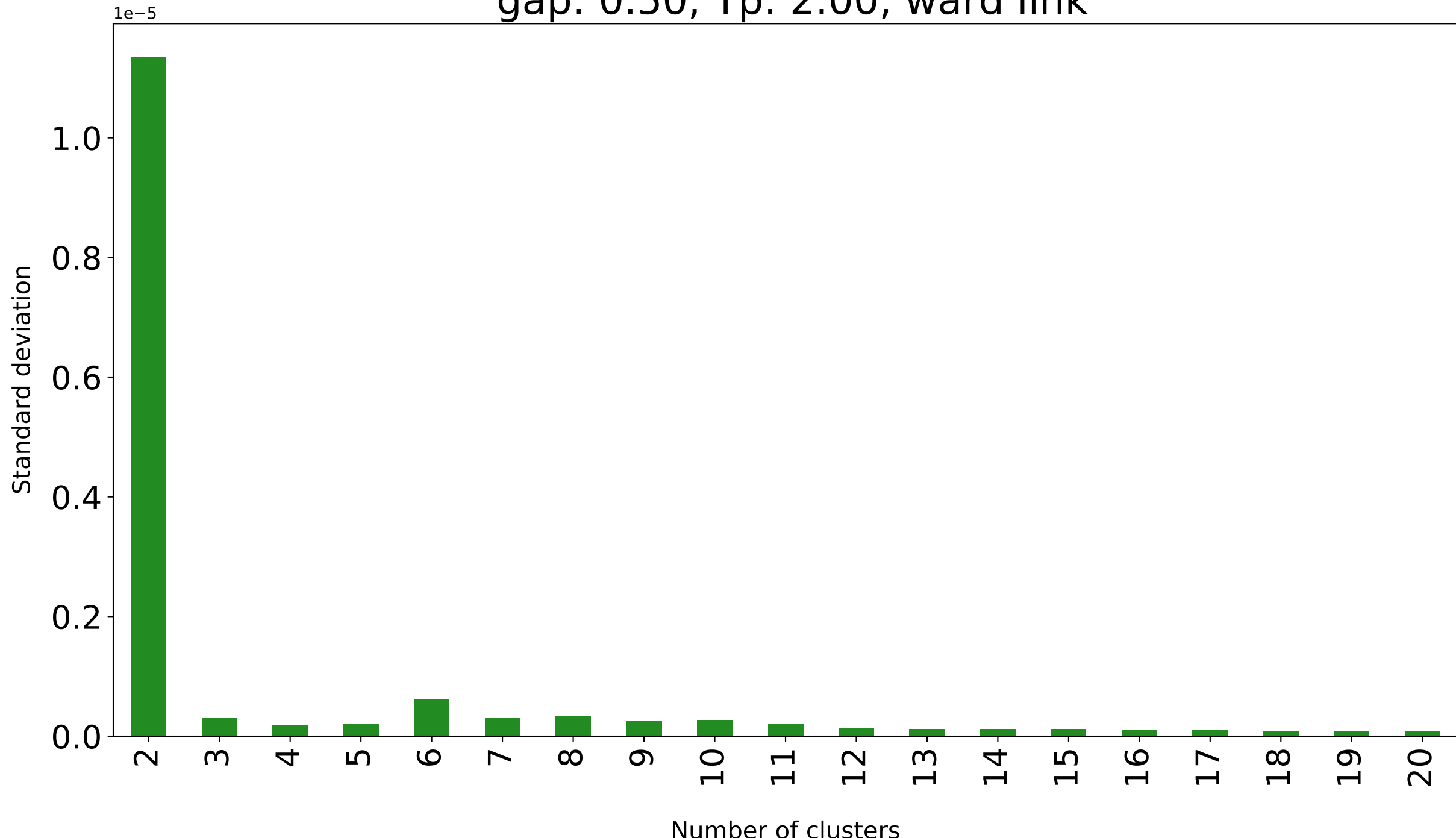


Cophenetic Correlation Coefficient: 0.6971030576889141

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.97072	0.95685	0.93065	0.0215	0.93219	0.9707	-0.19137	0.97075	0.00015	0.95277	0.94148	0.0	0.28454	0.26607
3.0	1.0	0.99453	0.98922	0.99126	0.00264	0.99174	0.99453	-0.90899	0.99453	0.00017	0.99268	0.97899	0.0	0.33042	0.20186
4.0	1.0	0.99404	0.98825	0.99307	0.00308	0.99183	0.99404	-1.78585	0.99404	0.0002	0.99359	0.97713	0.0	0.35893	0.20931
5.0	1.0	0.97726	0.9563	0.97486	0.02858	0.96984	0.97724	-2.65492	0.97727	0.00021	0.97806	0.91898	0.0	0.37832	0.20931
6.0	1.0	0.9937	0.98777	0.99483	0.00461	0.99181	0.99362	-3.69993	0.99378	0.00022	0.99415	0.97708	0.23077	0.39548	0.20931
7.0	1.0	0.95533	0.91574	0.97078	0.02573	0.9454	0.95427	-4.83442	0.9564	0.00025	0.96686	0.85285	0.23077	0.33257	0.14783
8.0	1.0	0.96234	0.92902	0.95357	0.02106	0.95461	0.96206	-5.72979	0.96262	0.00026	0.97457	0.8731	0.33333	0.36502	0.16165
9.0	1.0	0.89561	0.81425	0.84642	0.05735	0.87727	0.89469	-6.25713	0.89652	0.00027	0.93895	0.69759	0.8	0.33392	0.16165
10.0	1.0	0.83597	0.72226	0.75712	0.08993	0.81029	0.83384	-7.39237	0.83811	0.00027	0.91332	0.5782	0.8	0.3088	0.16165
11.0	1.0	0.79029	0.65637	0.7349	0.11561	0.76215	0.78939	-8.07965	0.79119	0.00029	0.90496	0.49493	0.8	0.28808	0.16165
12.0	1.0	0.80894	0.68178	0.79045	0.10654	0.78709	0.80869	-9.34743	0.8092	0.00034	0.92452	0.52176	0.8	0.26571	0.16165
13.0	1.0	0.81662	0.69248	0.82104	0.10957	0.79791	0.81618	-10.01112	0.81706	0.00037	0.93413	0.5343	0.8	0.25008	0.16165
14.0	1.0	0.82169	0.69976	0.82258	0.10326	0.80464	0.82136	-11.90216	0.82202	0.0004	0.93953	0.5426	0.8	0.2407	0.16165
15.0	1.0	0.81344	0.68799	0.80004	0.10896	0.79648	0.8132	-13.49137	0.81369	0.00041	0.93963	0.52861	0.8	0.23365	0.202
16.0	1.0	0.781	0.64319	0.77427	0.1254	0.76258	0.78064	-15.22082	0.78135	0.00042	0.93417	0.4781	0.8	0.2296	0.202
17.0	1.0	0.77267	0.63226	0.75603	0.13036	0.75447	0.77238	-17.30271	0.77296	0.00043	0.93472	0.46637	0.8	0.22455	0.202
18.0	1.0	0.77635	0.63703	0.7479	0.12695	0.75926	0.77596	-18.68248	0.77673	0.00045	0.93835	0.47148	0.8	0.22703	0.15049
19.0	1.0	0.78533	0.64926	0.76134	0.12029	0.77006	0.78494	-20.22992	0.78572	0.00049	0.94442	0.48508	0.8	0.2198	0.15049
20.0	1.0	0.78517	0.64872	0.7492	0.12273	0.77058	0.78449	-22.45002	0.78586	0.00051	0.94652	0.48458	2.0	0.22704	0.15049

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

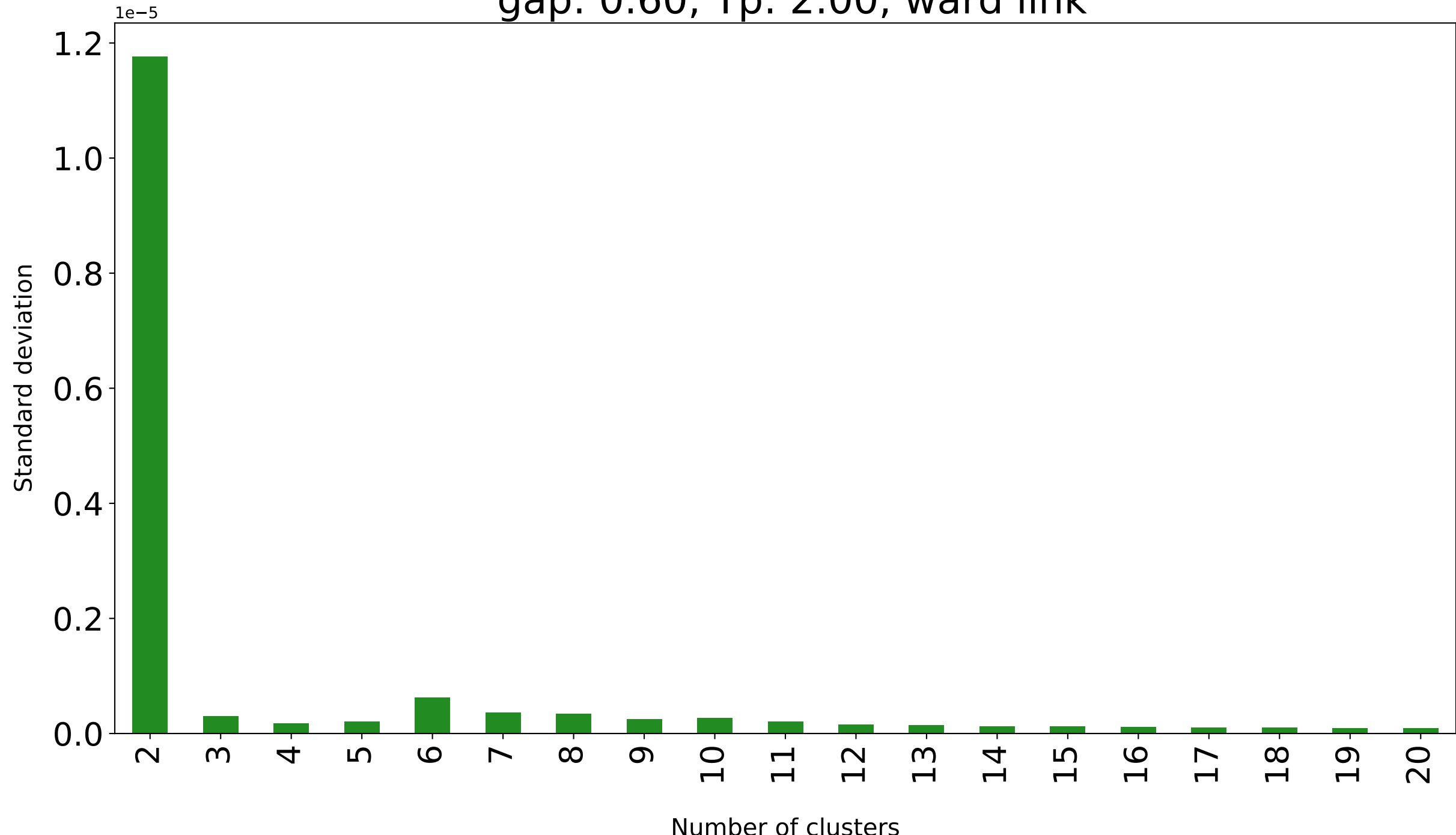


patient index

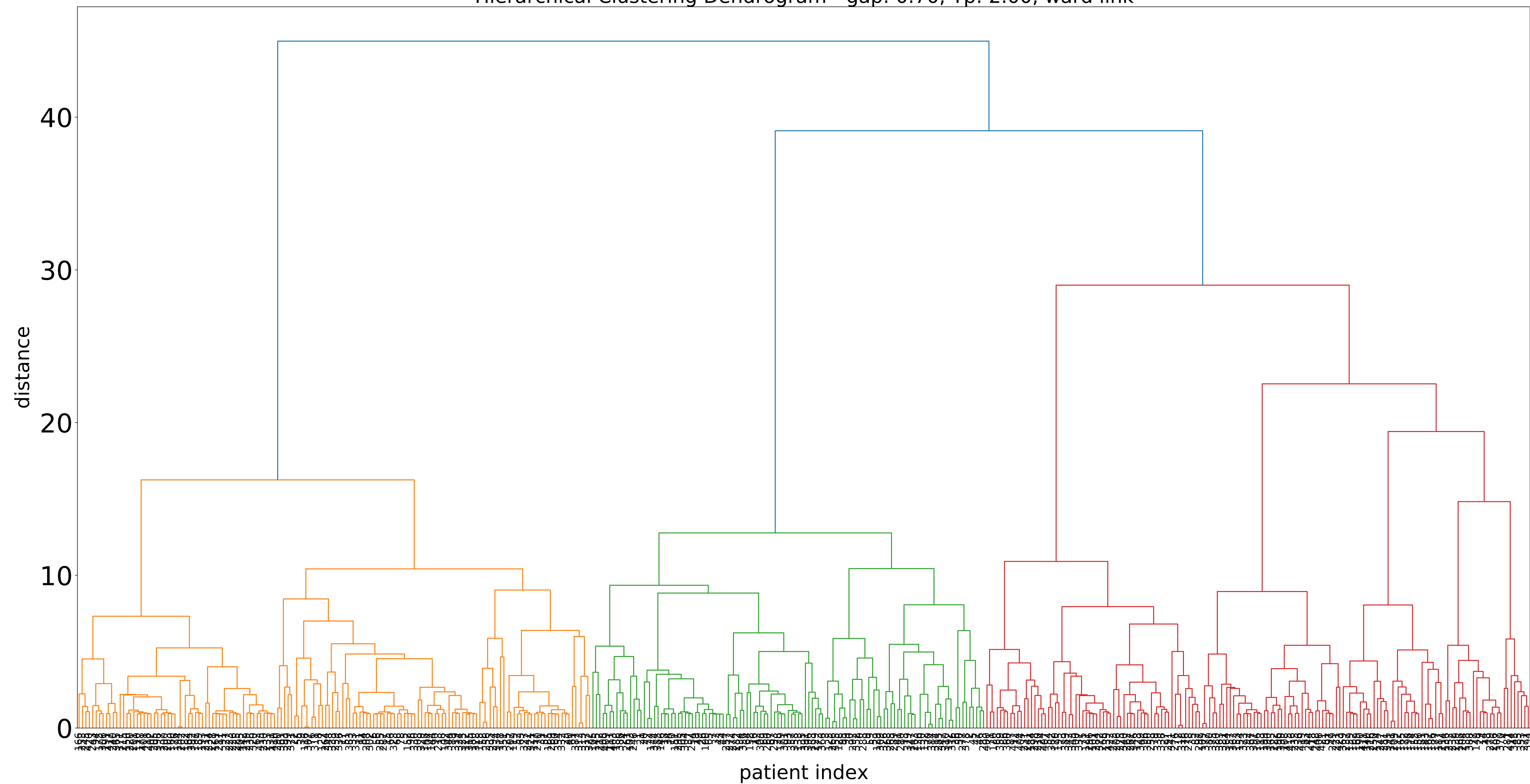
Average values of five clustering indices gap: 0.60, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.92719	0.8956	0.83018	0.05473	0.83067	0.92711	-0.12815	0.92728	0.00013	0.88556	0.86533	0.0	0.28263	0.25899
3.0	1.0	0.9943	0.98873	0.99211	0.00298	0.9914	0.9943	-0.89748	0.9943	0.00017	0.99236	0.97795	0.02899	0.3269	0.20174
4.0	1.0	0.99299	0.98619	0.99063	0.00372	0.99039	0.99299	-1.77065	0.99299	0.0002	0.99249	0.9732	0.02899	0.35711	0.2087
5.0	1.0	0.97661	0.95507	0.97138	0.02846	0.96898	0.9766	-2.64028	0.97662	0.00021	0.97743	0.91669	0.02899	0.37742	0.2087
6.0	1.0	0.99309	0.98648	0.99099	0.00423	0.99098	0.99305	-3.68366	0.99313	0.00022	0.99356	0.97409	0.02899	0.39723	0.2087
7.0	1.0	0.94405	0.8955	0.96259	0.03118	0.93139	0.94246	-4.7736	0.94566	0.00025	0.95772	0.82162	0.03623	0.32928	0.13814
8.0	1.0	0.95941	0.92375	0.94424	0.02151	0.95102	0.9591	-5.69734	0.95972	0.00026	0.97245	0.86431	0.03623	0.3659	0.15013
9.0	1.0	0.8837	0.79539	0.88754	0.06645	0.86426	0.88314	-6.31236	0.88426	0.00028	0.93539	0.66991	0.26144	0.31255	0.15013
10.0	1.0	0.83432	0.72237	0.81028	0.09218	0.80965	0.83382	-7.50612	0.83482	0.00028	0.91782	0.5781	0.26144	0.29044	0.15013
11.0	1.0	0.80067	0.67223	0.76179	0.11376	0.77442	0.80009	-8.08915	0.80125	0.0003	0.91123	0.51462	0.26144	0.27387	0.15013
12.0	1.0	0.8028	0.67336	0.80552	0.11533	0.78072	0.80215	-9.24439	0.80344	0.00034	0.9233	0.51308	0.26144	0.2582	0.15013
13.0	1.0	0.80973	0.6836	0.80985	0.11386	0.79002	0.80924	-10.02849	0.81022	0.00037	0.93086	0.52528	0.66667	0.25216	0.15013
14.0	1.0	0.80566	0.67736	0.80152	0.11567	0.78679	0.80525	-11.86076	0.80607	0.00038	0.93335	0.517	0.66667	0.24226	0.15013
15.0	1.0	0.80853	0.68196	0.78884	0.11389	0.79081	0.80825	-13.32664	0.80882	0.0004	0.93711	0.52295	0.66667	0.23573	0.17564
16.0	1.0	0.77971	0.64181	0.7639	0.13096	0.76069	0.77945	-14.49689	0.77997	0.00041	0.9323	0.47678	0.66667	0.22967	0.17564
17.0	1.0	0.77812	0.63957	0.75092	0.13093	0.75993	0.77778	-15.77918	0.77847	0.00043	0.93485	0.47427	0.66667	0.23051	0.14752
18.0	1.0	0.77394	0.63422	0.73748	0.129	0.75631	0.77343	-17.93115	0.77444	0.00044	0.93649	0.46915	0.66667	0.226	0.14752
19.0	1.0	0.7757	0.63623	0.73382	0.1283	0.75917	0.77499	-19.99793	0.77641	0.00047	0.93997	0.47131	2.0	0.22468	0.14752
20.0	1.0	0.76186	0.61836	0.73292	0.13221	0.74559	0.76147	-21.93086	0.76225	0.00049	0.94078	0.45197	2.0	0.21987	0.14752

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



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

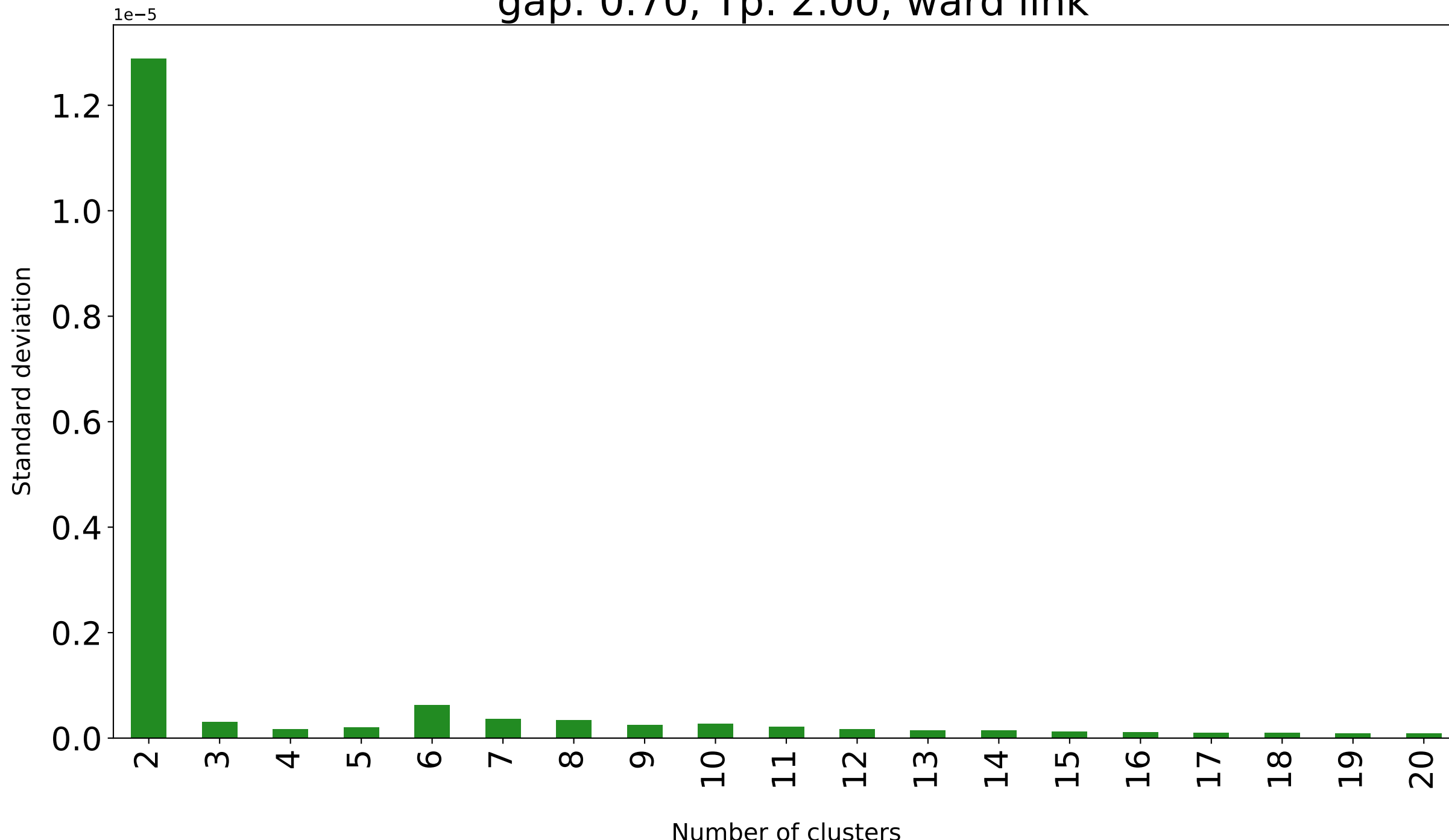


Cophenetic Correlation Coefficient: 0.6452722976984332

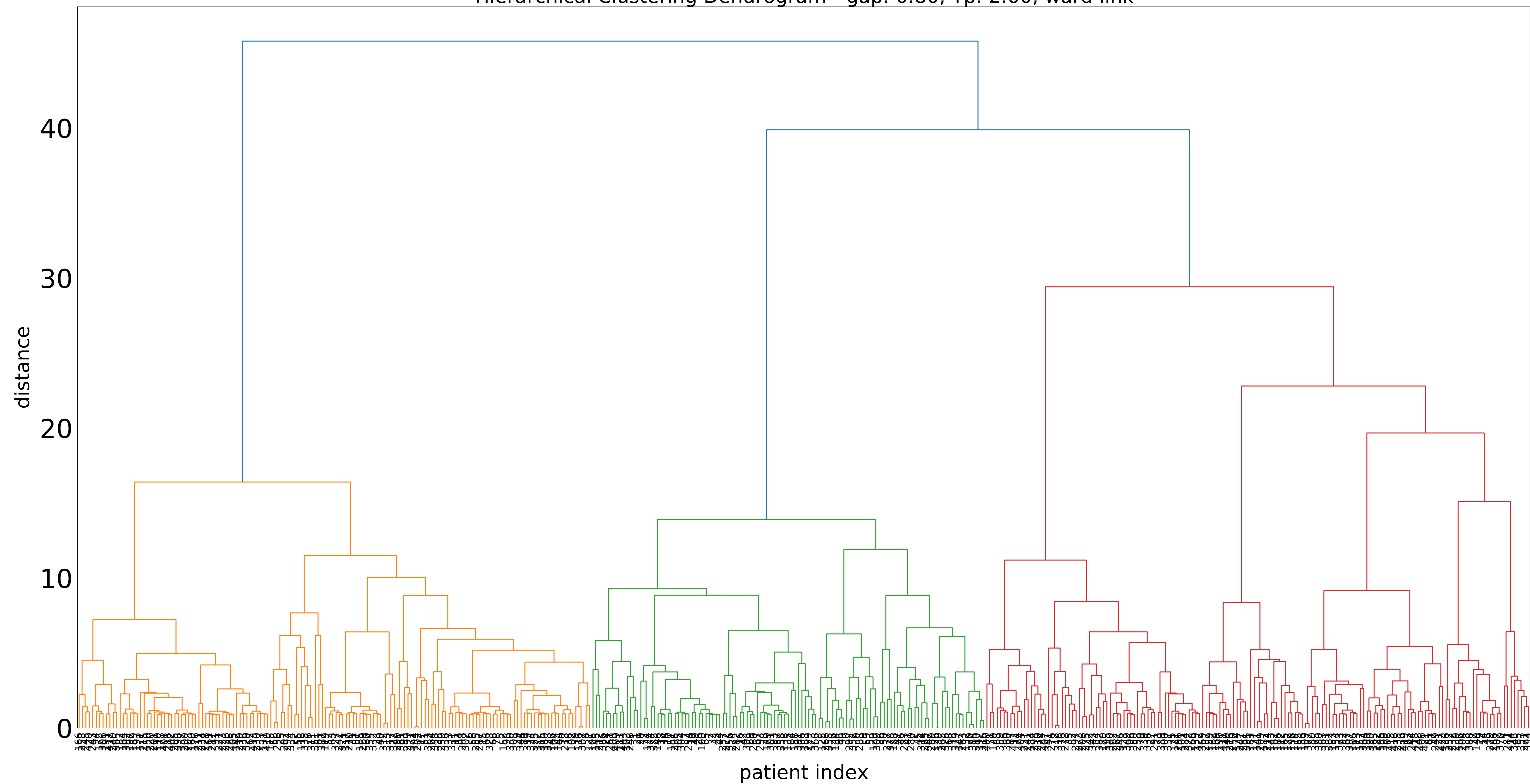
Average values of five clustering indices
gap: 0.70, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90767	0.86797	0.78501	0.0696	0.78515	0.90756	-0.09964	0.90778	0.00012	0.85524	0.83061	0.0	0.27753	0.24178
3.0	1.0	0.99343	0.987	0.99064	0.00345	0.99008	0.99343	-0.89277	0.99343	0.00017	0.99119	0.97459	0.02899	0.31931	0.18974
4.0	1.0	0.99244	0.9851	0.99004	0.00403	0.98963	0.99244	-1.76444	0.99244	0.0002	0.99187	0.97102	0.02899	0.34872	0.19731
5.0	1.0	0.97515	0.95226	0.9697	0.03048	0.96699	0.97514	-2.62372	0.97516	0.00021	0.97591	0.91142	0.02899	0.36846	0.19731
6.0	1.0	0.99206	0.98454	0.98953	0.00487	0.98965	0.992	-3.66688	0.99213	0.00022	0.99261	0.9707	0.02899	0.38802	0.19731
7.0	1.0	0.94743	0.9018	0.9633	0.02921	0.93555	0.94605	-4.78106	0.94882	0.00025	0.96046	0.83169	0.03623	0.32096	0.13059
8.0	1.0	0.94817	0.90442	0.92407	0.02781	0.93771	0.94749	-5.66684	0.94886	0.00026	0.96541	0.83595	0.03623	0.3562	0.14015
9.0	1.0	0.88082	0.79048	0.87785	0.07059	0.86098	0.88038	-6.18332	0.88126	0.00028	0.93413	0.66153	0.2451	0.30492	0.12422
10.0	1.0	0.82904	0.71282	0.80096	0.09881	0.80341	0.82865	-7.33103	0.82943	0.00028	0.91475	0.56267	0.2451	0.28442	0.12422
11.0	1.0	0.81041	0.68523	0.7584	0.10843	0.78428	0.80959	-7.73894	0.81123	0.00029	0.91181	0.52913	0.58824	0.28036	0.12422
12.0	1.0	0.78432	0.64817	0.76998	0.12479	0.75887	0.78383	-8.79852	0.7848	0.00032	0.91279	0.48462	0.58824	0.26156	0.12422
13.0	1.0	0.78765	0.65259	0.78119	0.13104	0.76481	0.78714	-9.3455	0.78817	0.00034	0.92057	0.48932	0.66667	0.24831	0.12422
14.0	1.0	0.7814	0.64455	0.75895	0.13749	0.75899	0.78104	-10.69228	0.78175	0.00035	0.92184	0.48067	0.66667	0.24004	0.15065
15.0	1.0	0.7731	0.63318	0.74558	0.14174	0.75127	0.77272	-12.52005	0.77349	0.00037	0.92331	0.46792	0.66667	0.22884	0.15065
16.0	1.0	0.7936	0.6607	0.78252	0.1267	0.77532	0.79323	-13.96796	0.79397	0.00041	0.93492	0.49799	0.66667	0.21751	0.15065
17.0	1.0	0.79292	0.65962	0.77489	0.13019	0.77556	0.79254	-15.98132	0.79331	0.00043	0.93777	0.49661	2.0	0.21623	0.15065
18.0	1.0	0.7886	0.65349	0.7588	0.13288	0.7717	0.78814	-16.80368	0.78906	0.00044	0.93912	0.48959	2.0	0.21206	0.15065
19.0	1.0	0.78209	0.64413	0.74527	0.13292	0.76547	0.78147	-18.96158	0.78271	0.00046	0.93981	0.4788	2.0	0.20835	0.15065
20.0	1.0	0.76475	0.62129	0.73914	0.14349	0.74801	0.7643	-20.14411	0.7652	0.00047	0.9392	0.45407	2.0	0.20187	0.15065

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



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

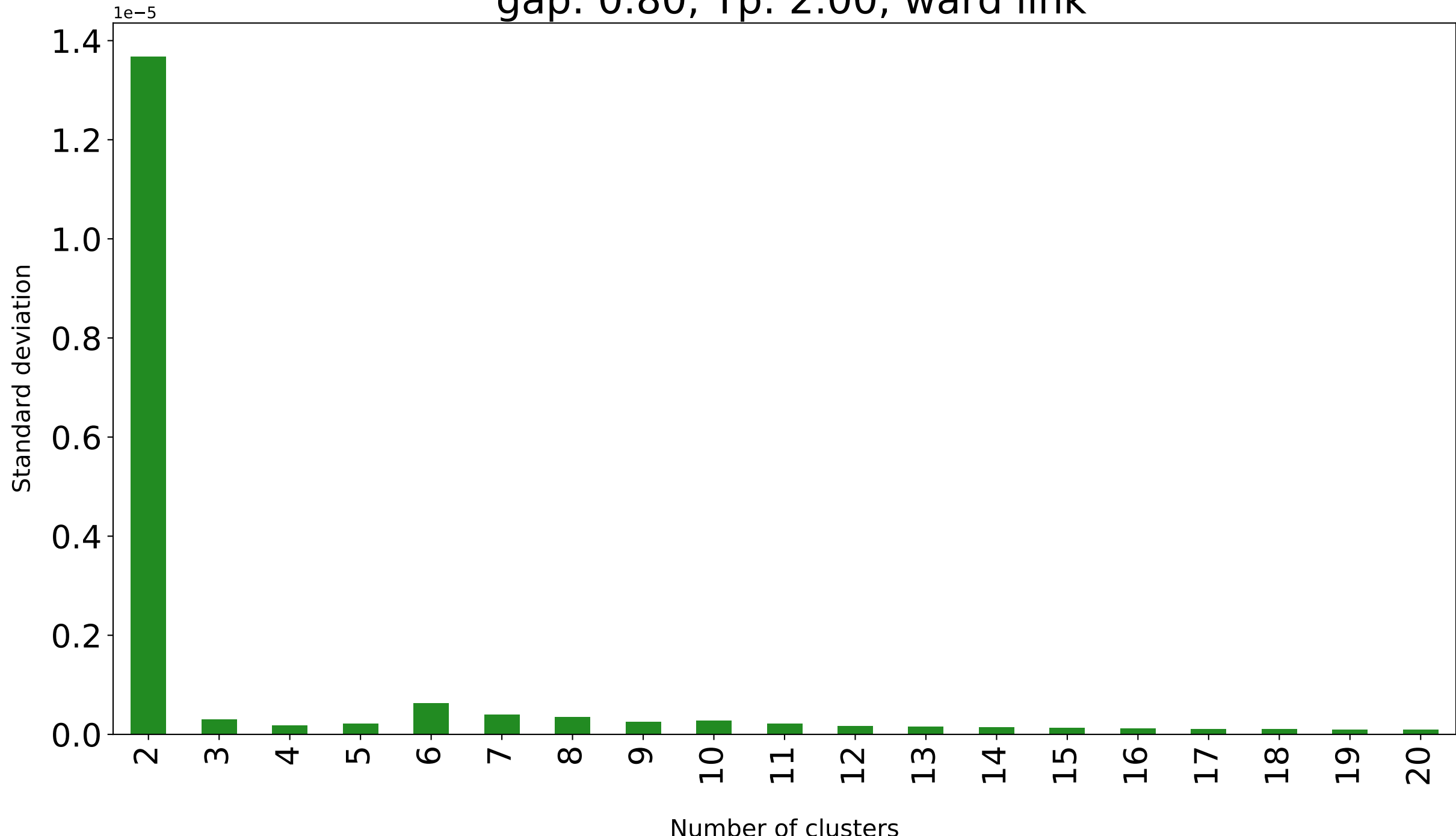


Cophenetic Correlation Coefficient: 0.6151390827715464

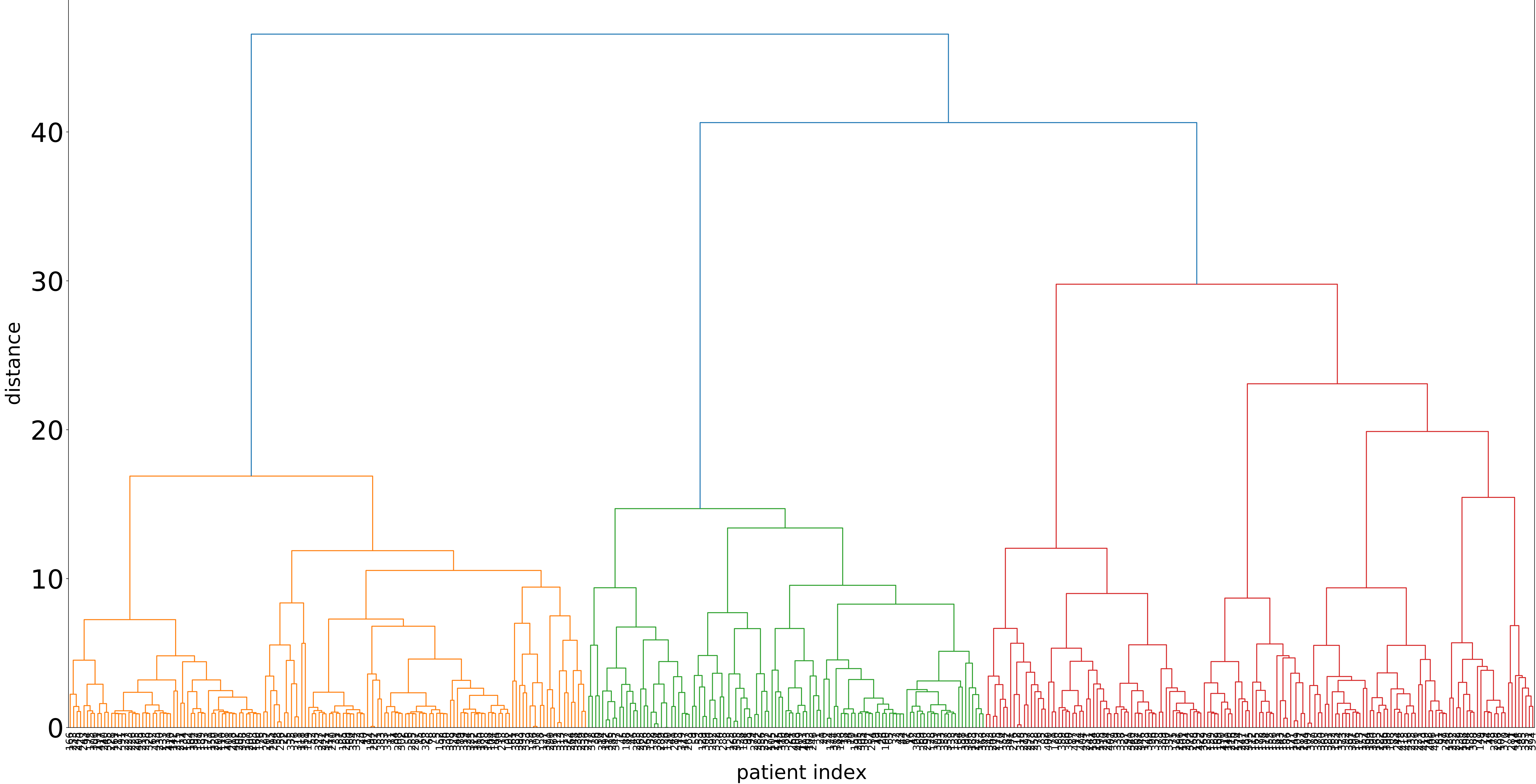
Average values of five clustering indices gap: 0.80, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.89092	0.84387	0.74646	0.08247	0.74647	0.89077	-0.07268	0.89107	0.00012	0.8289	0.79949	0.0	0.27261	0.22671
3.0	1.0	0.99269	0.98558	0.98946	0.00379	0.98896	0.99269	-0.89116	0.99269	0.00017	0.99021	0.97193	0.04348	0.31168	0.17907
4.0	1.0	0.99144	0.98317	0.98899	0.00448	0.98826	0.99144	-1.76253	0.99144	0.0002	0.99081	0.96742	0.04348	0.34055	0.19023
5.0	1.0	0.97121	0.94486	0.95789	0.03442	0.96175	0.97119	-2.68457	0.97122	0.0002	0.97213	0.89836	0.04348	0.36764	0.19023
6.0	1.0	0.99234	0.98485	0.99143	0.00447	0.98994	0.99232	-3.66855	0.99235	0.00022	0.99273	0.97045	0.04348	0.37908	0.19023
7.0	1.0	0.94544	0.89914	0.96152	0.02957	0.93294	0.94396	-4.77722	0.94693	0.00025	0.95867	0.82951	0.04348	0.31104	0.12591
8.0	1.0	0.93486	0.88086	0.89369	0.03414	0.92196	0.93354	-5.63859	0.93619	0.00026	0.95683	0.8006	0.04348	0.34499	0.13141
9.0	1.0	0.90161	0.82356	0.89682	0.05682	0.88532	0.90135	-6.35367	0.90187	0.00029	0.94566	0.70653	0.30303	0.29786	0.13141
10.0	1.0	0.86757	0.76894	0.83722	0.07548	0.84736	0.86721	-6.68854	0.86794	0.00029	0.93218	0.63104	0.83333	0.29315	0.13141
11.0	1.0	0.83001	0.71228	0.80821	0.09734	0.80677	0.8297	-7.79908	0.83033	0.0003	0.92142	0.55857	0.83333	0.26809	0.14301
12.0	1.0	0.81331	0.68839	0.78852	0.10724	0.79004	0.81292	-9.11045	0.8137	0.00032	0.92045	0.53018	0.83333	0.25635	0.14301
13.0	1.0	0.78018	0.64252	0.77618	0.12728	0.75567	0.77953	-10.17819	0.78083	0.00033	0.91524	0.47859	0.83333	0.24694	0.14301
14.0	1.0	0.77713	0.63733	0.78514	0.13457	0.75434	0.7762	-10.71744	0.77807	0.00035	0.92001	0.47178	0.83333	0.23612	0.14301
15.0	1.0	0.76232	0.61785	0.76571	0.14472	0.73946	0.76148	-12.52238	0.76316	0.00036	0.91945	0.45079	0.83333	0.22562	0.14301
16.0	1.0	0.77399	0.63268	0.7921	0.13561	0.75402	0.77279	-13.91687	0.7752	0.0004	0.92848	0.46664	0.83333	0.21417	0.14301
17.0	1.0	0.78952	0.65431	0.80221	0.12992	0.77183	0.7886	-15.99171	0.79045	0.00043	0.93628	0.49086	2.0	0.2127	0.14301
18.0	1.0	0.79492	0.66209	0.79373	0.12702	0.77829	0.7944	-17.48246	0.79543	0.00044	0.94011	0.49931	2.0	0.21623	0.14301
19.0	1.0	0.79573	0.66328	0.79321	0.12843	0.78011	0.79523	-18.42846	0.79623	0.00047	0.94341	0.50072	2.0	0.21385	0.14301
20.0	1.0	0.79629	0.66447	0.78817	0.12555	0.78144	0.79586	-20.69758	0.79672	0.00049	0.94598	0.50246	2.0	0.21072	0.14301

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



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

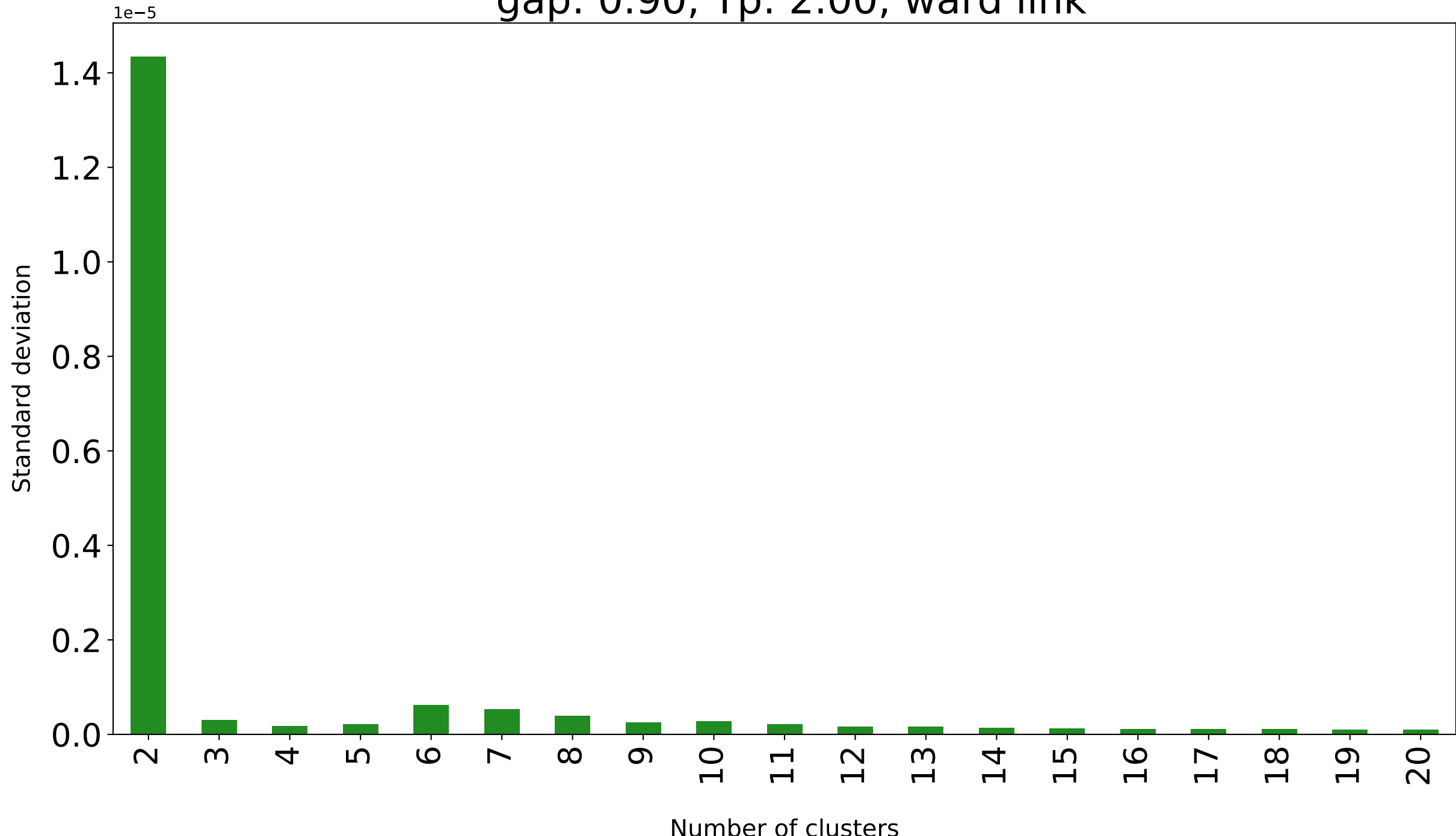


Cophenetic Correlation Coefficient: 0.5877249385905324

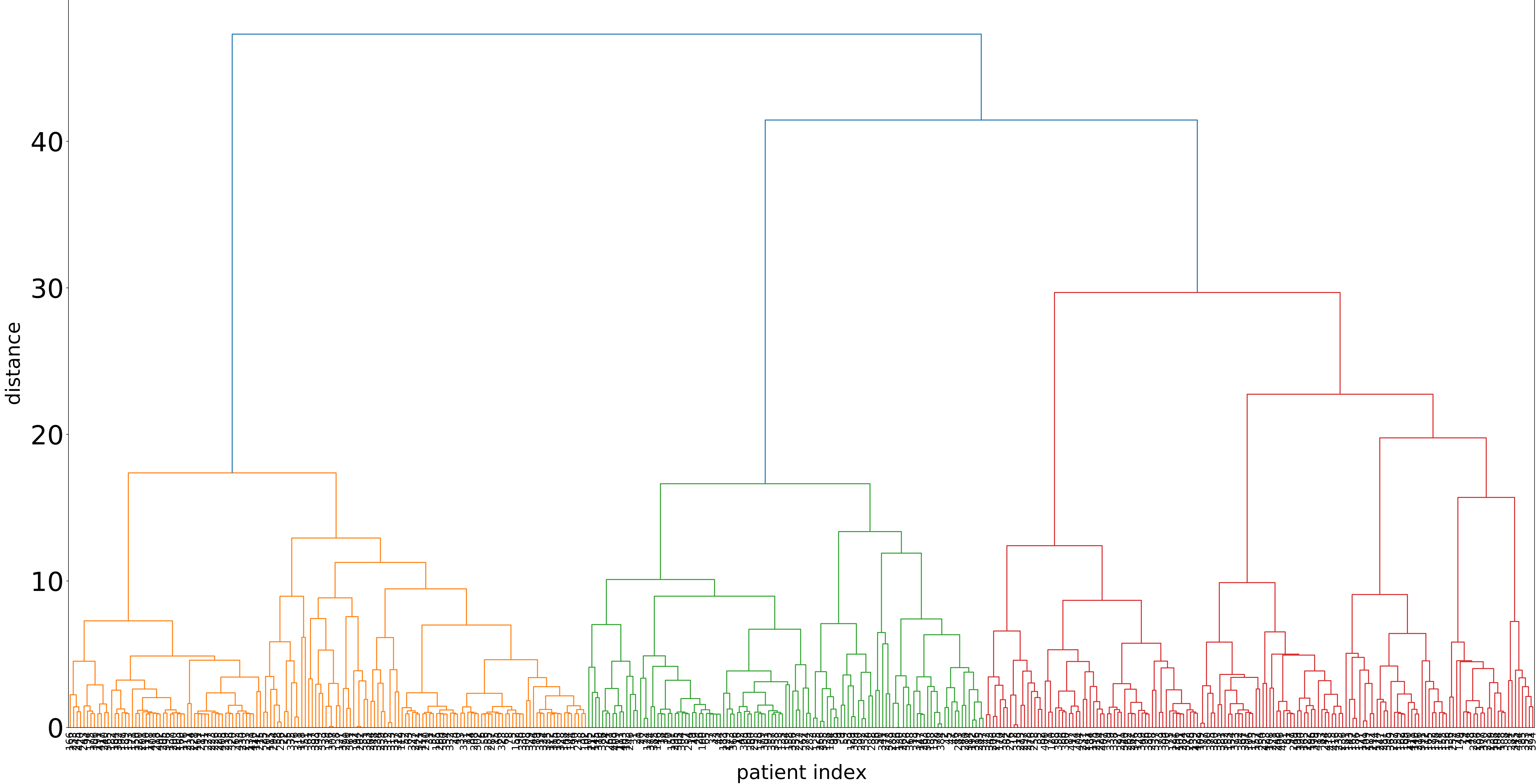
Average values of five clustering indices gap: 0.90, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.86875	0.81196	0.69501	0.09908	0.69488	0.86856	-0.03695	0.86893	0.00011	0.79392	0.75814	0.0	0.2679	0.21341
3.0	1.0	0.98859	0.97764	0.9832	0.00589	0.98277	0.98859	-0.87135	0.98859	0.00017	0.9848	0.95695	0.01799	0.30436	0.16953
4.0	1.0	0.98736	0.97527	0.98394	0.00664	0.98265	0.98735	-1.73695	0.98736	0.0002	0.98645	0.95258	0.01799	0.33272	0.17441
5.0	1.0	0.96851	0.93979	0.95501	0.03475	0.95816	0.96849	-2.65844	0.96853	0.0002	0.96952	0.8893	0.01799	0.35938	0.17441
6.0	1.0	0.98615	0.9733	0.98208	0.00843	0.98196	0.986	-3.62417	0.98629	0.00021	0.98717	0.95043	0.01799	0.37036	0.17441
7.0	1.0	0.92028	0.85961	0.93481	0.04153	0.90195	0.91879	-4.67598	0.92178	0.00024	0.94149	0.77499	0.01799	0.30288	0.11544
8.0	1.0	0.90089	0.82376	0.83827	0.05194	0.8814	0.8987	-5.5161	0.90311	0.00025	0.93521	0.71727	0.01799	0.336	0.1237
9.0	1.0	0.90234	0.82472	0.86989	0.05392	0.88565	0.90185	-6.35726	0.90284	0.00028	0.94438	0.70891	0.1217	0.29879	0.1237
10.0	1.0	0.86558	0.76596	0.8411	0.07371	0.84523	0.86533	-6.72756	0.86583	0.00029	0.93176	0.62728	0.17991	0.28382	0.1237
11.0	1.0	0.8268	0.70717	0.79692	0.09336	0.8027	0.82648	-7.65262	0.82711	0.00029	0.91876	0.55164	0.17991	0.26867	0.1237
12.0	1.0	0.82473	0.70439	0.81066	0.10084	0.80257	0.82437	-8.80123	0.8251	0.00032	0.92419	0.54898	0.17991	0.25364	0.13564
13.0	1.0	0.81364	0.68748	0.83395	0.11616	0.79273	0.8124	-9.88592	0.81487	0.00034	0.92669	0.52892	0.17991	0.21925	0.13564
14.0	1.0	0.79327	0.65816	0.82005	0.13314	0.77198	0.7917	-10.30176	0.79484	0.00036	0.92456	0.49464	0.27586	0.20797	0.13564
15.0	1.0	0.78708	0.65067	0.79235	0.14223	0.76602	0.78628	-12.03466	0.78788	0.00037	0.9257	0.48613	0.41379	0.19934	0.13564
16.0	1.0	0.77973	0.64138	0.76591	0.1507	0.75876	0.77926	-13.39039	0.78019	0.00038	0.92606	0.47608	0.51724	0.20153	0.13564
17.0	1.0	0.77196	0.63131	0.75825	0.1548	0.75153	0.77147	-15.24165	0.77244	0.00039	0.92753	0.46555	0.51724	0.19535	0.13564
18.0	1.0	0.77238	0.63217	0.76611	0.15092	0.75333	0.77182	-16.91526	0.77294	0.00041	0.93185	0.46702	0.51724	0.19066	0.13564
19.0	1.0	0.76755	0.62576	0.7532	0.15365	0.74898	0.76706	-19.04704	0.76803	0.00043	0.93334	0.45997	0.51724	0.18902	0.13564
20.0	1.0	0.7695	0.62781	0.73759	0.15074	0.75161	0.76885	-21.12169	0.77016	0.00044	0.93544	0.4618	2.0	0.18491	0.17895

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



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



Cophenetic Correlation Coefficient: 0.5599421703704721

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.81505	0.73579	0.57036	0.14008	0.56953	0.81475	0.04489	0.81535	9e-05	0.71023	0.66221	0.0	0.2634	0.20167
3.0	1.0	0.9857	0.97213	0.97859	0.00721	0.97841	0.9857	-0.86235	0.9857	0.00017	0.98102	0.94684	0.01799	0.29637	0.16737
4.0	1.0	0.98555	0.97183	0.9818	0.00777	0.98017	0.98554	-1.73011	0.98556	0.0002	0.98453	0.94628	0.01799	0.32436	0.16737
5.0	1.0	0.96774	0.9383	0.96362	0.03465	0.95719	0.96771	-2.55872	0.96778	0.0002	0.96885	0.88647	0.04926	0.33719	0.16737
6.0	1.0	0.97846	0.95909	0.9705	0.0147	0.97204	0.97822	-3.59669	0.9787	0.00021	0.98036	0.92599	0.04926	0.35337	0.16737
7.0	1.0	0.88088	0.79627	0.89126	0.06492	0.8535	0.87934	-4.5398	0.88244	0.00022	0.91449	0.68496	0.04926	0.28812	0.11078
8.0	1.0	0.84232	0.731	0.8826	0.08882	0.81393	0.83895	-5.09046	0.84572	0.00025	0.90505	0.58987	0.09549	0.24903	0.11684
9.0	1.0	0.85741	0.7567	0.85308	0.07858	0.83327	0.85638	-6.14409	0.85843	0.00027	0.92048	0.62207	0.09549	0.28286	0.11684
10.0	1.0	0.8532	0.74799	0.82336	0.07915	0.83062	0.85259	-6.6842	0.85381	0.00029	0.92457	0.60573	0.34483	0.27835	0.11684
11.0	1.0	0.84403	0.73274	0.82052	0.08664	0.82242	0.84349	-7.93922	0.84457	0.0003	0.92664	0.58401	0.34483	0.26179	0.12649
12.0	1.0	0.83443	0.7183	0.81117	0.09026	0.81339	0.83398	-8.8957	0.83489	0.00032	0.92784	0.56552	0.34483	0.25286	0.12649
13.0	1.0	0.83512	0.71835	0.79004	0.09187	0.81517	0.83443	-10.21392	0.83581	0.00033	0.93082	0.56446	0.82759	0.24156	0.129
14.0	1.0	0.83373	0.71682	0.81999	0.10472	0.81541	0.83341	-11.30884	0.83405	0.00036	0.93596	0.56251	0.82759	0.21531	0.129
15.0	1.0	0.80999	0.68188	0.81123	0.12162	0.79058	0.80944	-11.66253	0.81054	0.00037	0.93163	0.52026	0.82759	0.20742	0.129
16.0	1.0	0.79327	0.65878	0.79488	0.1346	0.77336	0.79265	-13.46462	0.79388	0.00038	0.92958	0.49428	0.82759	0.19997	0.129
17.0	1.0	0.79498	0.66106	0.80508	0.13787	0.77646	0.79413	-15.33938	0.79583	0.0004	0.9338	0.49722	0.82759	0.18463	0.129
18.0	1.0	0.78591	0.64903	0.78633	0.14543	0.76731	0.78526	-17.39324	0.78655	0.00041	0.93348	0.48396	0.82759	0.18372	0.129
19.0	1.0	0.781	0.64211	0.79941	0.14936	0.76342	0.77987	-18.64395	0.78214	0.00044	0.93632	0.47687	0.82759	0.17631	0.129
20.0	1.0	0.7791	0.64008	0.77714	0.15041	0.76184	0.77852	-20.78584	0.77967	0.00045	0.93772	0.47429	2.0	0.17245	0.13279

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

