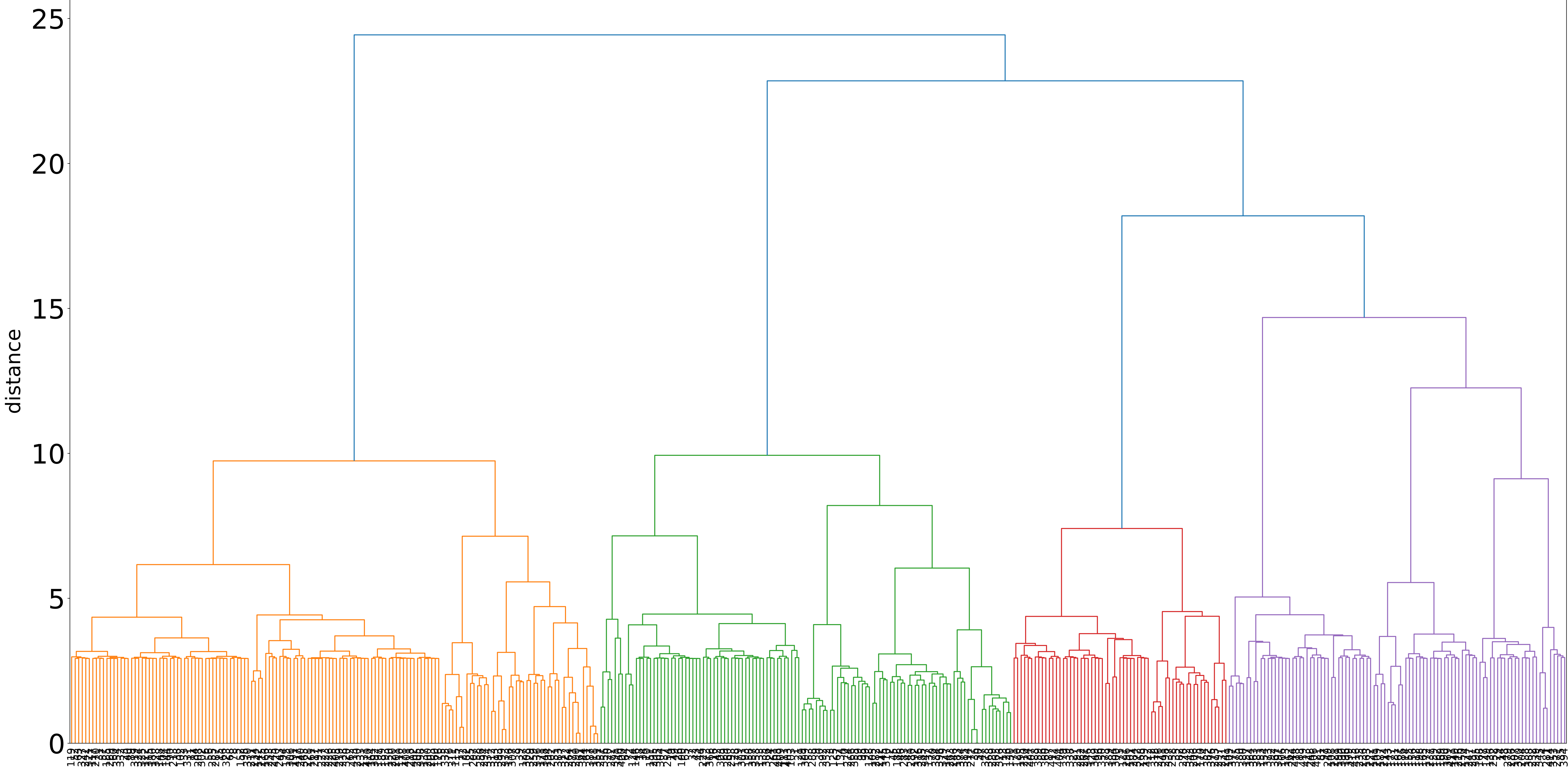


Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 0.25, ward link



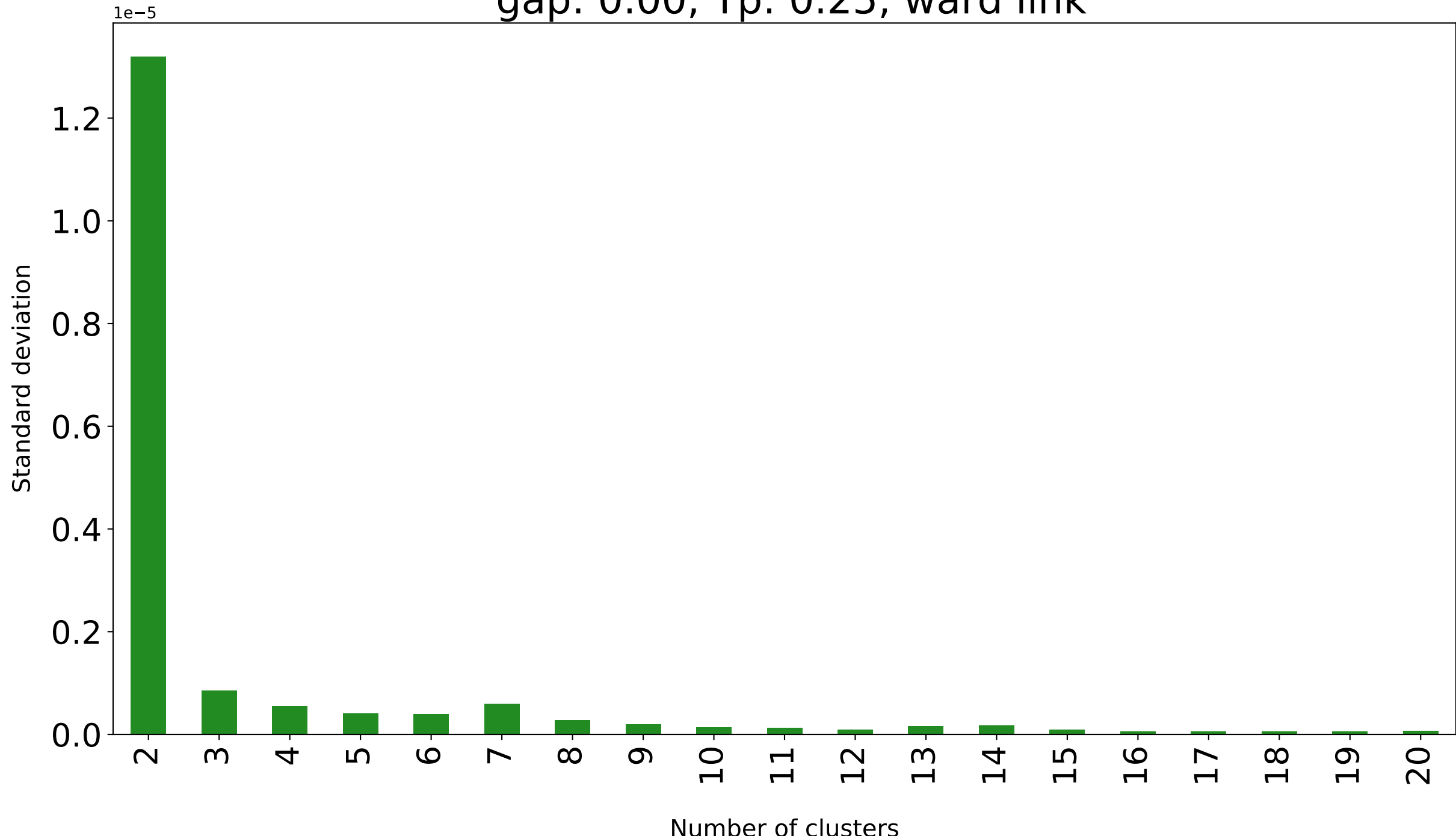
patient index

Cophenetic Correlation Coefficient: 0.6074444948287754

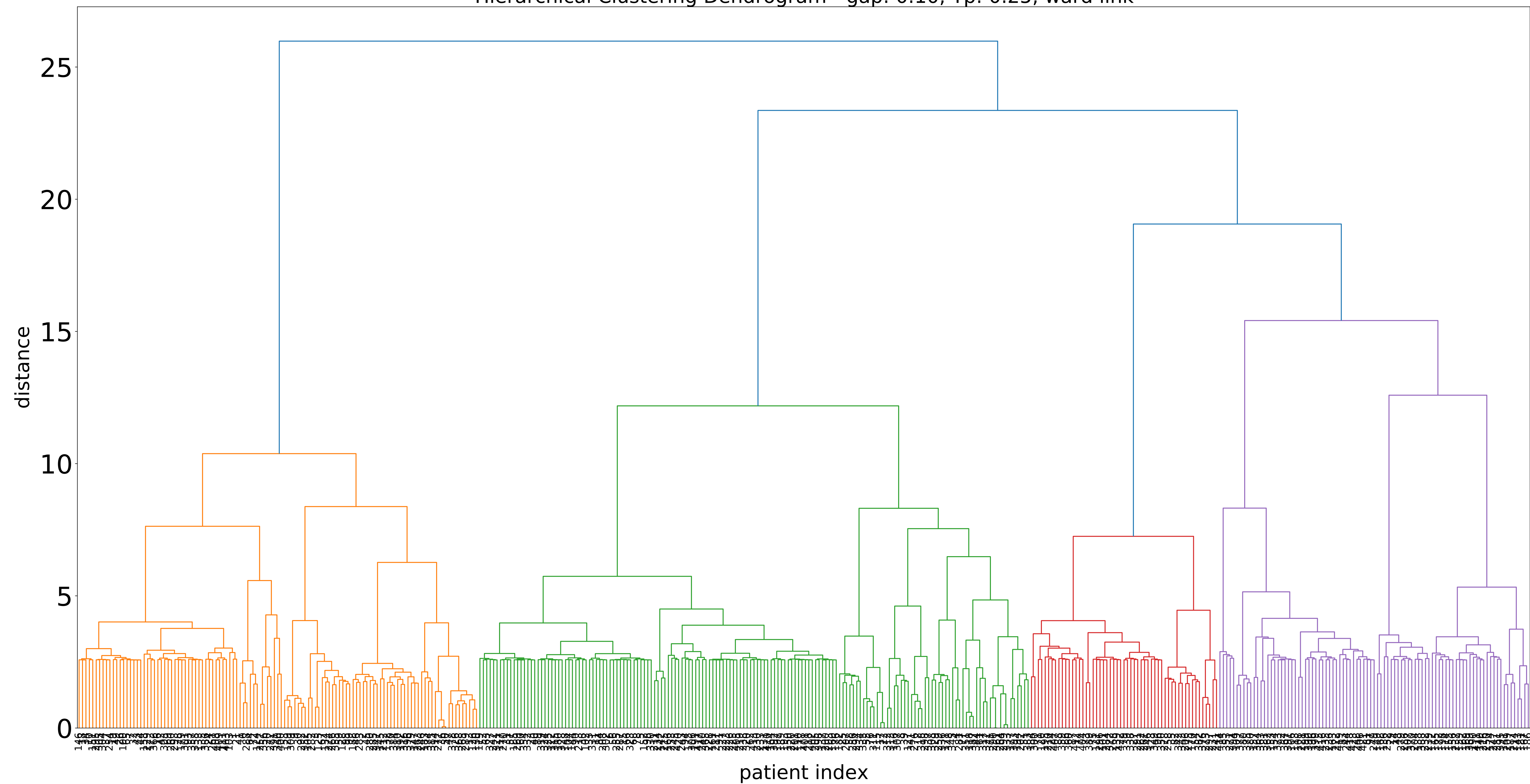
# Average values of five clustering indices gap: 0.00, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99998	0.68619	0.55258	0.27205	0.23738	0.26867	0.68561	0.24349	0.68677	4e-05	0.509	0.43027	0.0365	0.11626	0.14731
3.0	1.0	0.9501	0.9075	0.92802	0.02574	0.92465	0.95008	-0.74	0.95011	0.00016	0.93602	0.83731	0.12739	0.13512	0.12315
4.0	1.0	0.94531	0.89926	0.92893	0.0313	0.92476	0.94524	-1.54724	0.94537	0.00018	0.9429	0.8246	0.18229	0.14855	0.12315
5.0	1.0	0.94583	0.89945	0.93715	0.03416	0.92791	0.94565	-2.41313	0.94601	0.0002	0.94794	0.82366	0.21818	0.15623	0.12315
6.0	1.0	0.94543	0.89937	0.92717	0.03481	0.92895	0.94502	-3.30839	0.94584	0.0002	0.95072	0.82585	0.42	0.16299	0.12315
7.0	1.0	0.81483	0.69847	0.75466	0.10891	0.77068	0.8142	-3.65876	0.81547	0.00019	0.86818	0.55806	1.09649	0.12747	0.12315
8.0	1.0	0.90831	0.8344	0.92559	0.0601	0.89179	0.90712	-5.41016	0.90951	0.00027	0.94453	0.72551	1.09649	0.10917	0.12315
9.0	1.0	0.92473	0.86257	0.90985	0.05145	0.91191	0.92449	-6.64898	0.92497	0.00029	0.95717	0.76534	1.09649	0.12678	0.12315
10.0	1.0	0.93025	0.87151	0.91984	0.05113	0.9192	0.93013	-7.3279	0.93038	0.00031	0.96262	0.77772	1.09649	0.11342	0.12315
11.0	1.0	0.92267	0.85805	0.91941	0.06043	0.9113	0.92254	-8.64794	0.9228	0.00032	0.96114	0.75605	1.09649	0.10763	0.12315
12.0	1.0	0.93621	0.88093	0.92344	0.05855	0.92731	0.93608	-10.19945	0.93634	0.00034	0.9692	0.78987	1.25	0.1008	0.15072
13.0	1.0	0.91257	0.84195	0.87586	0.07007	0.90186	0.91075	-11.5521	0.91441	0.00035	0.96124	0.73913	1.25	0.1066	0.15072
14.0	1.0	0.87197	0.77505	0.89338	0.08532	0.85897	0.8698	-12.51846	0.87415	0.00041	0.95239	0.64267	1.25	0.10049	0.15072
15.0	1.0	0.90631	0.83003	0.91182	0.0672	0.89762	0.90574	-13.83865	0.9069	0.00046	0.96831	0.71432	1.30435	0.09385	0.15072
16.0	1.0	0.91174	0.83876	0.91023	0.07005	0.9039	0.91166	-14.913	0.91182	0.00048	0.9716	0.72488	1.30435	0.0924	0.15072
17.0	1.0	0.91471	0.84388	0.91416	0.06696	0.90736	0.91464	-17.07823	0.91479	0.00049	0.97326	0.73272	1.30435	0.08959	0.15072
18.0	1.0	0.91259	0.84014	0.91016	0.06836	0.90528	0.91248	-18.99679	0.91269	0.0005	0.97336	0.72693	1.30435	0.09516	0.15072
19.0	1.0	0.90601	0.8294	0.89298	0.07606	0.89837	0.90582	-21.0697	0.9062	0.00051	0.97206	0.71203	2.0	0.09528	0.15072
20.0	1.0	0.88463	0.79451	0.85318	0.08903	0.87565	0.88399	-22.11988	0.88527	0.00051	0.96689	0.66396	2.0	0.0976	0.15072

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



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

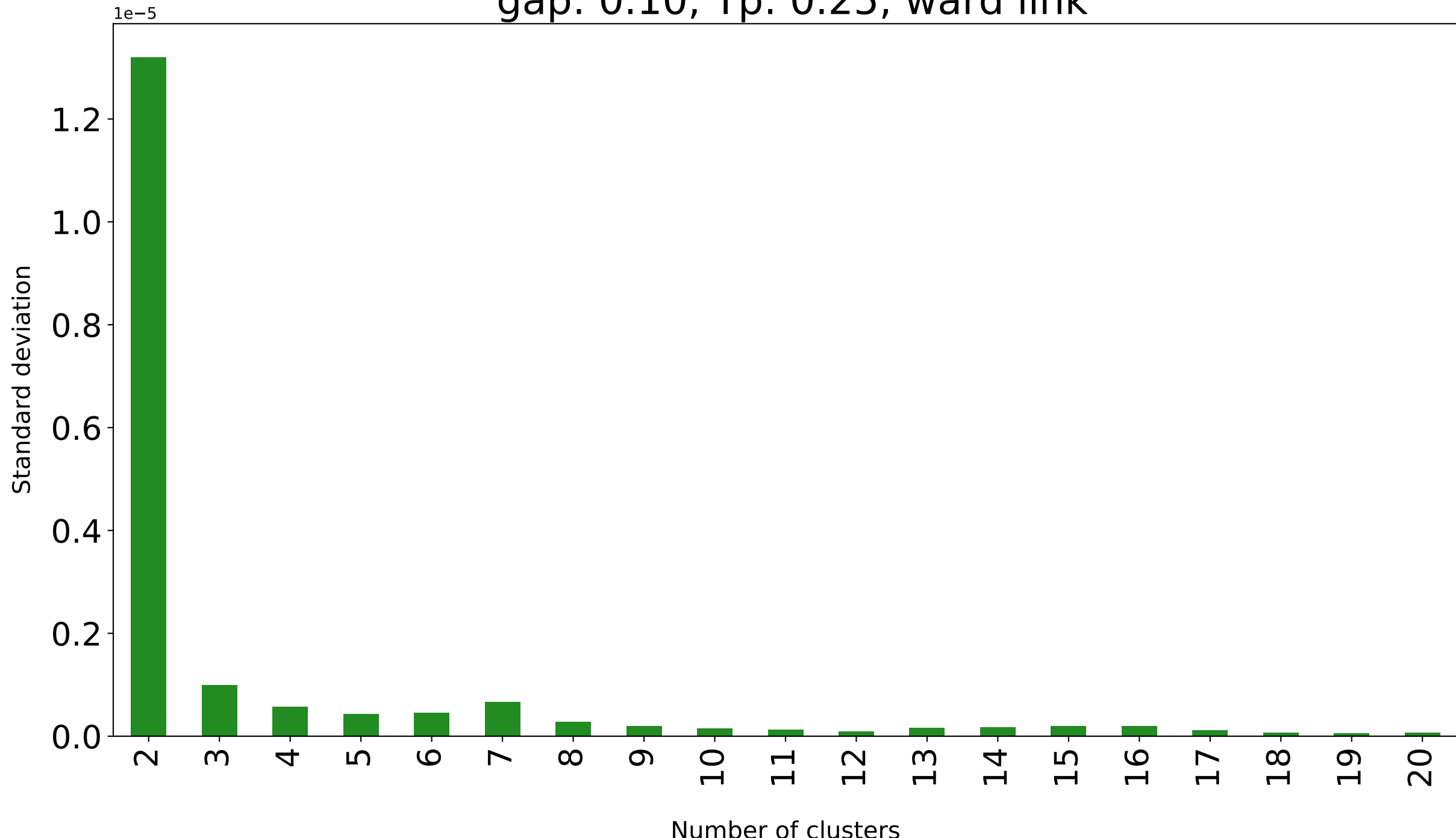


Cophenetic Correlation Coefficient: 0.6443940571372577

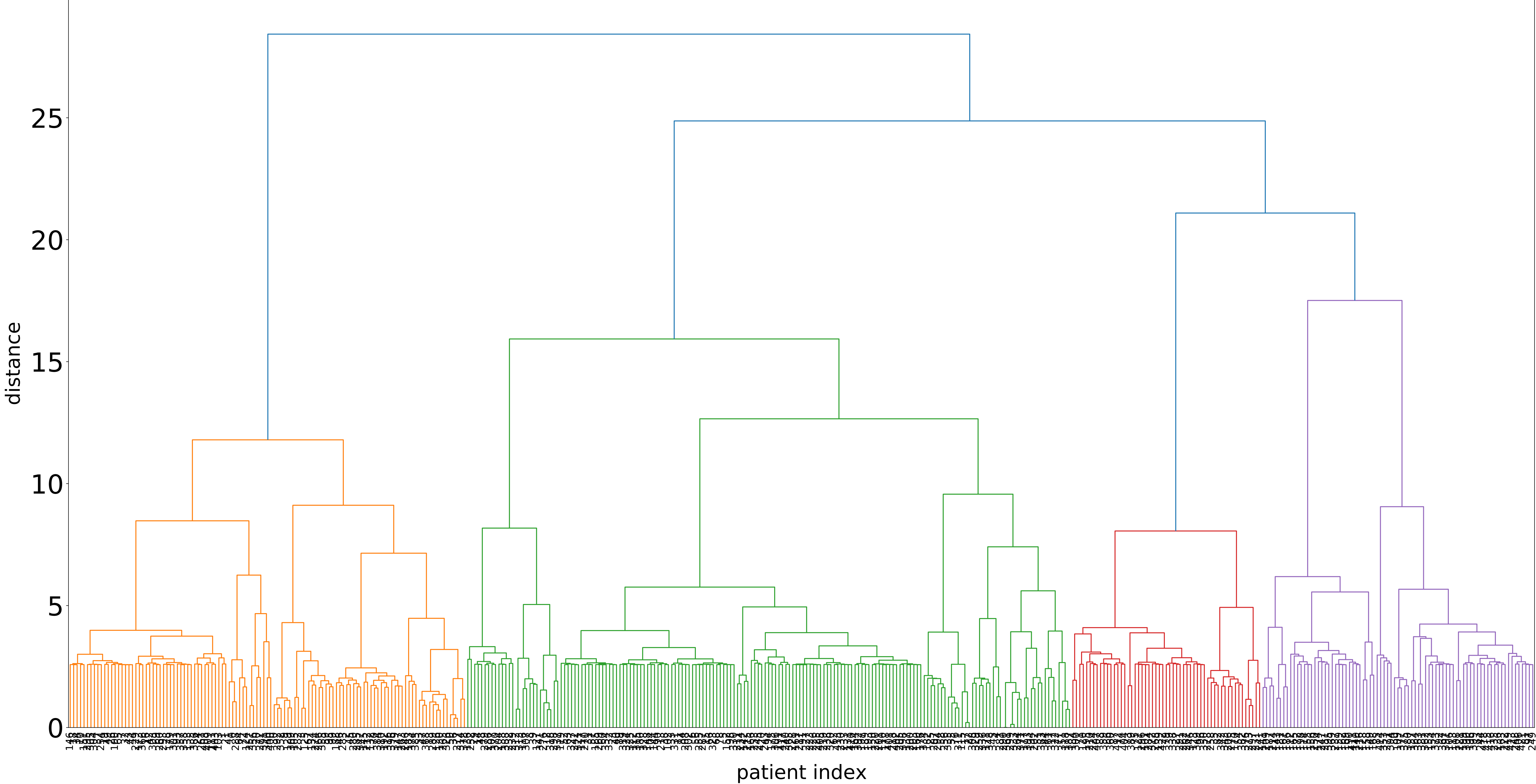
Average values of five clustering indices  
gap: 0.10, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.92604	0.88395	0.83023	0.05309	0.8245	0.9258	-0.14781	0.92627	0.00014	0.86898	0.82901	0.09121	0.16534	0.10083
3.0	1.0	0.92122	0.85659	0.8839	0.04047	0.88084	0.92119	-0.67168	0.92126	0.00015	0.89995	0.75524	0.28767	0.1564	0.10562
4.0	1.0	0.91999	0.85477	0.87258	0.04597	0.88946	0.91981	-1.48141	0.92017	0.00017	0.91608	0.75359	0.38462	0.17492	0.10562
5.0	1.0	0.91525	0.84605	0.87055	0.05154	0.88651	0.91499	-2.33922	0.9155	0.00018	0.91802	0.73922	0.46667	0.18542	0.10562
6.0	1.0	0.90802	0.83412	0.83816	0.05585	0.87977	0.90671	-3.22582	0.90934	0.00019	0.91593	0.72511	0.63913	0.20993	0.10562
7.0	1.0	0.86785	0.7797	0.8375	0.08181	0.83679	0.86758	-4.2538	0.86813	0.00022	0.90651	0.66303	0.63913	0.17074	0.10562
8.0	1.0	0.87616	0.78223	0.87357	0.08172	0.85372	0.87547	-5.22253	0.87685	0.00026	0.92644	0.6493	0.86333	0.1535	0.10663
9.0	1.0	0.87703	0.78272	0.87209	0.0875	0.85642	0.87668	-5.86783	0.87739	0.00027	0.93165	0.64727	0.875	0.14073	0.10663
10.0	1.0	0.88939	0.80256	0.86482	0.08288	0.87171	0.88921	-7.56314	0.88956	0.00029	0.94086	0.67451	0.875	0.15678	0.10663
11.0	1.0	0.89317	0.808	0.86446	0.09021	0.87716	0.89296	-8.7545	0.89338	0.0003	0.94572	0.68082	0.875	0.16295	0.10663
12.0	1.0	0.90439	0.82614	0.87929	0.09218	0.89087	0.90424	-9.42204	0.90454	0.00032	0.95364	0.70585	0.875	0.14926	0.10663
13.0	1.0	0.90812	0.83227	0.88019	0.09806	0.89572	0.90784	-10.65359	0.90841	0.00034	0.95703	0.71484	0.875	0.15007	0.10663
14.0	1.0	0.91927	0.85304	0.90165	0.09131	0.90925	0.91851	-12.37873	0.92005	0.00036	0.96448	0.75096	0.875	0.14537	0.10663
15.0	1.0	0.88153	0.79278	0.83083	0.1131	0.86816	0.87866	-13.47018	0.88443	0.00036	0.95107	0.67351	0.875	0.13828	0.10981
16.0	1.0	0.83798	0.72201	0.74831	0.11885	0.8213	0.83237	-14.62117	0.84366	0.00036	0.93716	0.58217	0.875	0.13699	0.10981
17.0	1.0	0.89218	0.80676	0.90628	0.09362	0.88274	0.89113	-15.9307	0.89324	0.00047	0.96521	0.6821	0.875	0.12882	0.10981
18.0	1.0	0.90071	0.82058	0.8968	0.08934	0.89227	0.90046	-17.10783	0.90095	0.00049	0.96927	0.69915	2.0	0.13256	0.13223
19.0	1.0	0.90823	0.83288	0.90319	0.08347	0.90067	0.90819	-19.37136	0.90827	0.00051	0.97247	0.71611	2.0	0.12793	0.13223
20.0	1.0	0.91363	0.84192	0.91193	0.08148	0.90671	0.91357	-21.36274	0.91368	0.00052	0.9747	0.72946	2.0	0.13248	0.13223

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



Hierarchical Clustering Dendrogram - gap: 0.20, Tp: 0.25, ward link



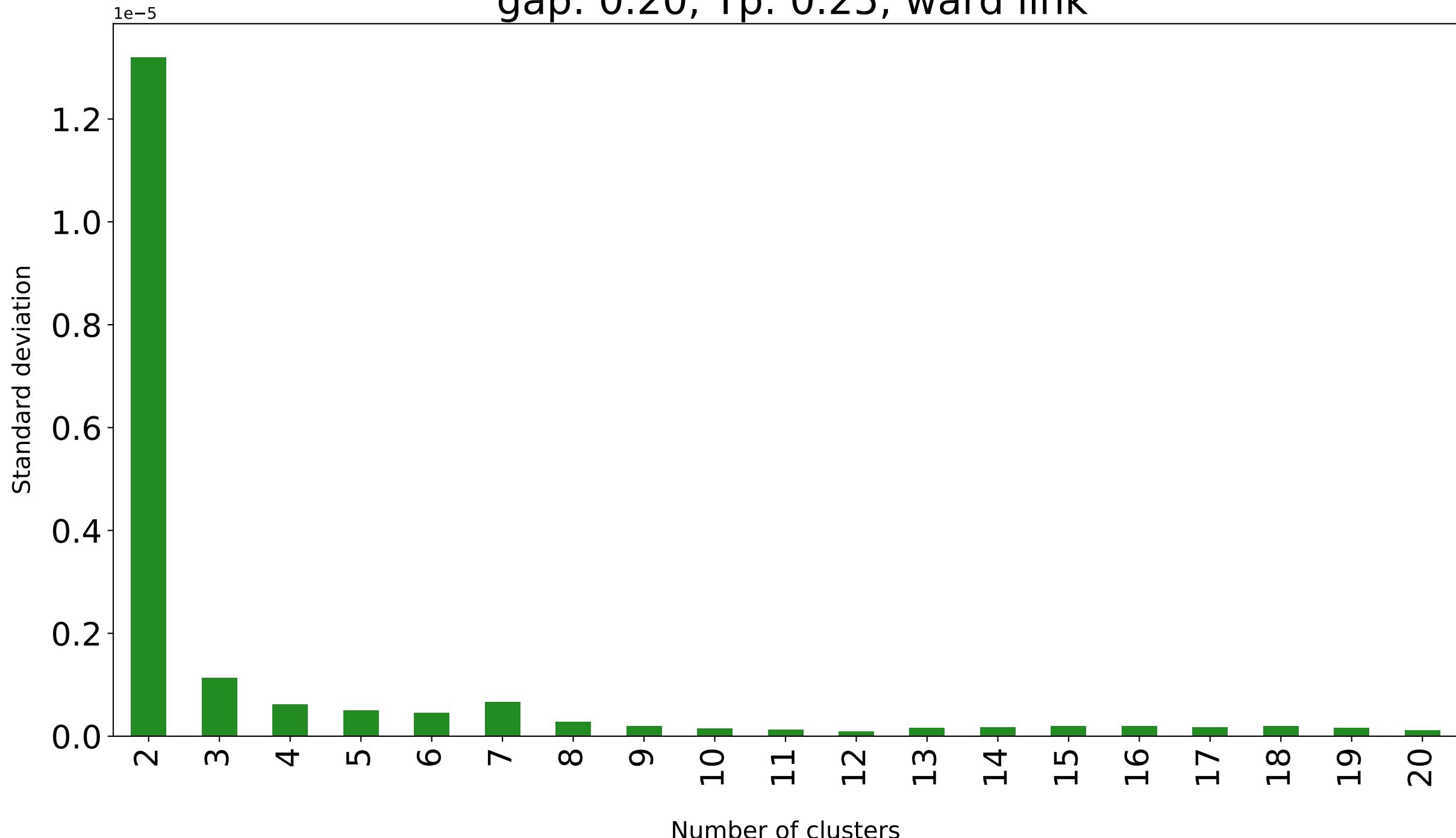
Cophenetic Correlation Coefficient: 0.6521323813451348

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

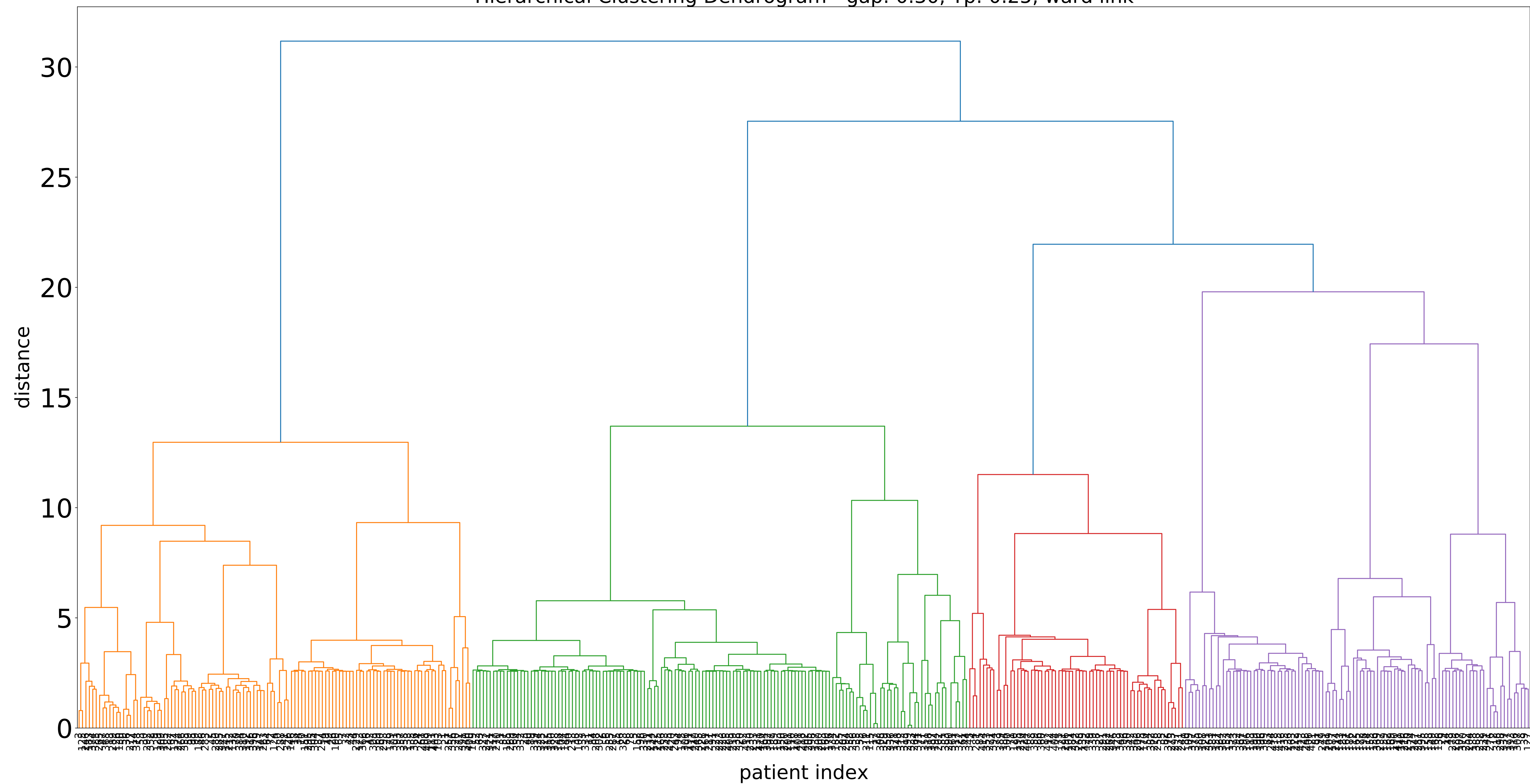
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.91574	0.86213	0.78988	0.05843	0.79837	0.91544	-0.11287	0.91604	0.00013	0.84272	0.78737	0.09061	0.17531	0.14127
3.0	1.0	0.85433	0.74834	0.77297	0.07752	0.77888	0.85428	-0.51157	0.85438	0.00014	0.82059	0.60255	0.26119	0.16132	0.15248
4.0	1.0	0.85314	0.74602	0.76121	0.08155	0.79523	0.85259	-1.1997	0.85368	0.00015	0.84664	0.60004	0.44304	0.18848	0.15248
5.0	1.0	0.85249	0.7441	0.75284	0.08718	0.80051	0.85122	-2.11836	0.85377	0.00016	0.85584	0.59785	0.63636	0.21598	0.15248
6.0	1.0	0.87103	0.77416	0.82202	0.08955	0.83357	0.87018	-3.02708	0.87189	0.00019	0.88977	0.63903	0.63636	0.19539	0.15248
7.0	1.0	0.8533	0.75278	0.82952	0.10328	0.82014	0.85282	-4.02663	0.85378	0.00022	0.8985	0.61904	0.63636	0.16677	0.15248
8.0	1.0	0.85724	0.75193	0.86292	0.10862	0.83198	0.85637	-4.95598	0.85811	0.00026	0.91706	0.60795	0.63636	0.15286	0.15248
9.0	1.0	0.86595	0.76499	0.8539	0.11394	0.84372	0.86564	-6.00396	0.86626	0.00027	0.9264	0.62288	0.63636	0.16595	0.15248
10.0	1.0	0.87518	0.77918	0.86628	0.11199	0.85581	0.87497	-6.78072	0.8754	0.00029	0.93501	0.64109	0.63636	0.15867	0.15248
11.0	1.0	0.88707	0.7981	0.86272	0.10669	0.87027	0.8869	-8.49072	0.88725	0.0003	0.94311	0.66673	0.63636	0.17424	0.15248
12.0	1.0	0.89703	0.814	0.87687	0.10958	0.88258	0.89692	-9.13303	0.89714	0.00032	0.95054	0.68834	0.63636	0.15797	0.15248
13.0	1.0	0.90239	0.82256	0.87361	0.106	0.88911	0.90221	-10.45883	0.90257	0.00033	0.95418	0.70023	0.63636	0.16611	0.15248
14.0	1.0	0.92352	0.8585	0.91339	0.09572	0.91359	0.92347	-12.17155	0.92357	0.00035	0.96545	0.75376	0.63636	0.16133	0.15248
15.0	1.0	0.9224	0.85697	0.9085	0.10352	0.91263	0.92222	-13.3155	0.92258	0.00036	0.9658	0.75236	0.63636	0.15637	0.16146
16.0	1.0	0.92375	0.86091	0.91084	0.09533	0.91478	0.92299	-14.49773	0.92451	0.00037	0.96797	0.76335	0.63636	0.15443	0.16146
17.0	1.0	0.90126	0.8244	0.86212	0.10178	0.89043	0.89901	-15.63993	0.90355	0.00037	0.9602	0.71603	2.0	0.15855	0.19034
18.0	1.0	0.86708	0.76925	0.79908	0.11091	0.85357	0.86252	-17.68705	0.8717	0.00038	0.94895	0.64549	2.0	0.15442	0.19034
19.0	1.0	0.86267	0.75957	0.89522	0.10709	0.85074	0.85979	-18.78513	0.86559	0.00046	0.95513	0.62195	2.0	0.14351	0.19034
20.0	1.0	0.888	0.79974	0.90372	0.09544	0.8788	0.8866	-20.92095	0.8894	0.0005	0.96569	0.67272	2.0	0.14782	0.19034



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



Hierarchical Clustering Dendrogram - gap: 0.30, Tp: 0.25, ward link

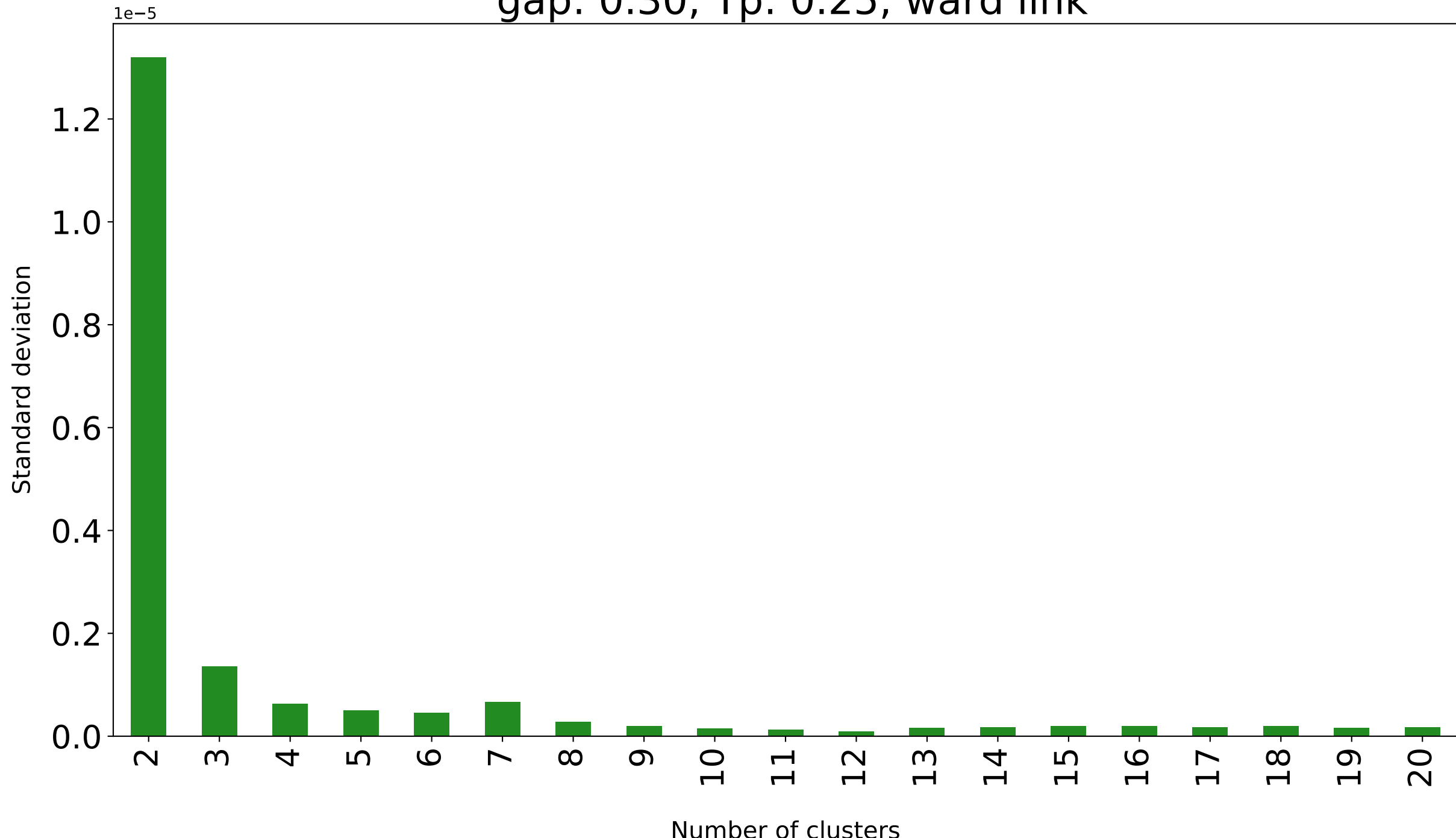


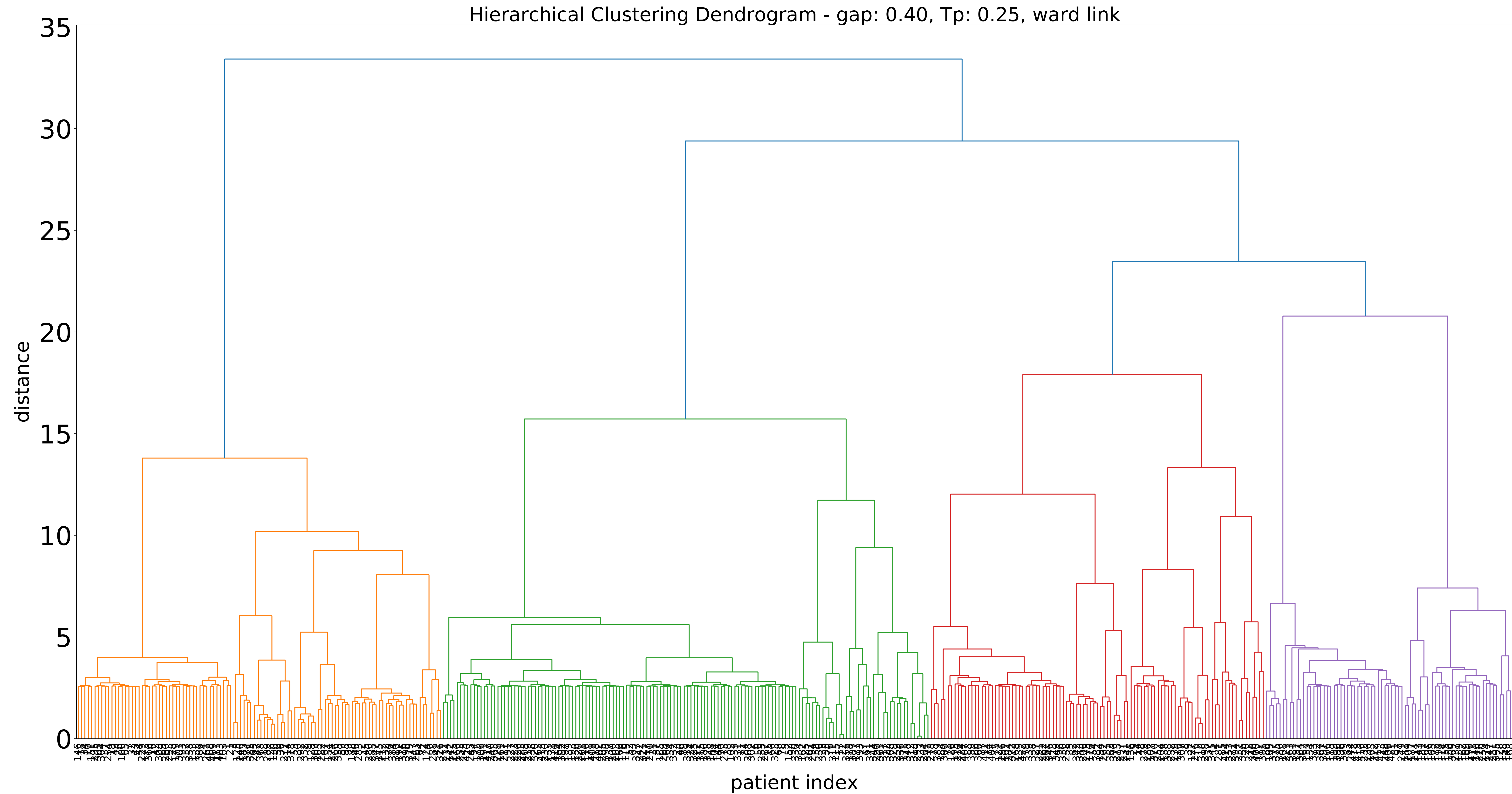
Cophenetic Correlation Coefficient: 0.6457931300621561

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.92973	0.88112	0.82448	0.0475	0.83121	0.92948	-0.13132	0.92999	0.00014	0.86353	0.80988	0.06796	0.1857	0.17132
3.0	1.0	0.88311	0.79506	0.82429	0.0621	0.82295	0.88307	-0.55446	0.88316	0.00014	0.85512	0.66812	0.21341	0.17637	0.18434
4.0	1.0	0.85849	0.75531	0.82067	0.08614	0.80584	0.85829	-1.18504	0.85869	0.00016	0.85834	0.61282	0.34653	0.18208	0.18609
5.0	1.0	0.86877	0.77058	0.84998	0.08799	0.82652	0.86822	-2.09367	0.86932	0.00018	0.87981	0.63279	0.35	0.20046	0.18609
6.0	1.0	0.86275	0.76121	0.80414	0.09572	0.82388	0.86168	-3.0763	0.86383	0.00019	0.88494	0.62225	0.51852	0.21125	0.18993
7.0	1.0	0.85029	0.747	0.81796	0.10544	0.8164	0.84983	-4.22949	0.85075	0.00021	0.89621	0.60962	0.51852	0.18324	0.18993
8.0	1.0	0.85353	0.74683	0.85283	0.11089	0.82737	0.85279	-5.14096	0.85427	0.00025	0.91457	0.60189	0.51852	0.16851	0.19298
9.0	1.0	0.87632	0.78163	0.86215	0.10335	0.85566	0.87605	-5.92183	0.8766	0.00028	0.93155	0.64571	0.51852	0.17588	0.19298
10.0	1.0	0.87961	0.7864	0.85508	0.10559	0.86047	0.87937	-7.17353	0.87986	0.00029	0.93596	0.65134	0.51852	0.18653	0.20498
11.0	1.0	0.88678	0.79769	0.85363	0.10541	0.86957	0.88647	-8.44401	0.88709	0.0003	0.94182	0.66669	2.0	0.18128	0.20498
12.0	1.0	0.88439	0.7936	0.86127	0.12069	0.86799	0.88424	-9.11993	0.88454	0.00031	0.94408	0.66005	2.0	0.17597	0.20498
13.0	1.0	0.90188	0.82174	0.88991	0.11134	0.88868	0.9018	-10.72834	0.90197	0.00033	0.95447	0.6987	2.0	0.17015	0.20498
14.0	1.0	0.91514	0.84392	0.89887	0.09945	0.90402	0.91506	-12.11851	0.91523	0.00035	0.96139	0.73116	2.0	0.16873	0.20498
15.0	1.0	0.93194	0.87292	0.93	0.08854	0.92335	0.93188	-13.24216	0.93201	0.00037	0.96993	0.77574	2.0	0.16332	0.20498
16.0	1.0	0.93723	0.88225	0.93303	0.08512	0.92945	0.93718	-13.89357	0.93728	0.00037	0.97268	0.79051	2.0	0.16427	0.20498
17.0	1.0	0.93829	0.88425	0.93269	0.09018	0.93083	0.93817	-15.83282	0.9384	0.00038	0.97369	0.79416	2.0	0.16245	0.23382
18.0	1.0	0.94047	0.88857	0.93512	0.08665	0.9335	0.94022	-17.87371	0.94072	0.00039	0.97522	0.80254	2.0	0.15854	0.23382
19.0	1.0	0.9232	0.86085	0.90357	0.09159	0.91489	0.92193	-19.66437	0.92449	0.00039	0.96967	0.76677	2.0	0.1631	0.23382
20.0	1.0	0.89941	0.82146	0.85318	0.09756	0.88917	0.89648	-21.38279	0.90238	0.00039	0.96159	0.71438	2.0	0.16951	0.26795

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



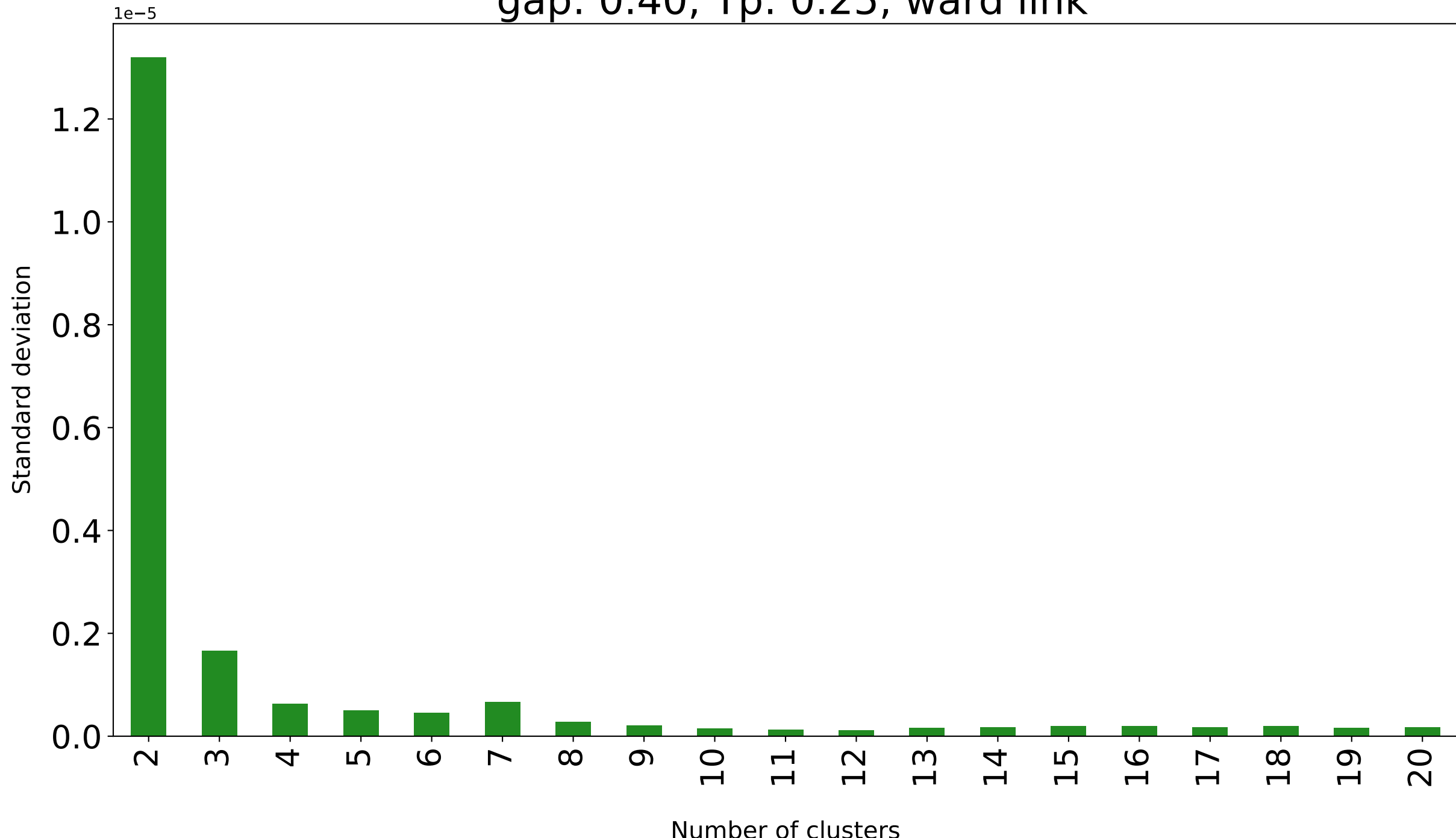


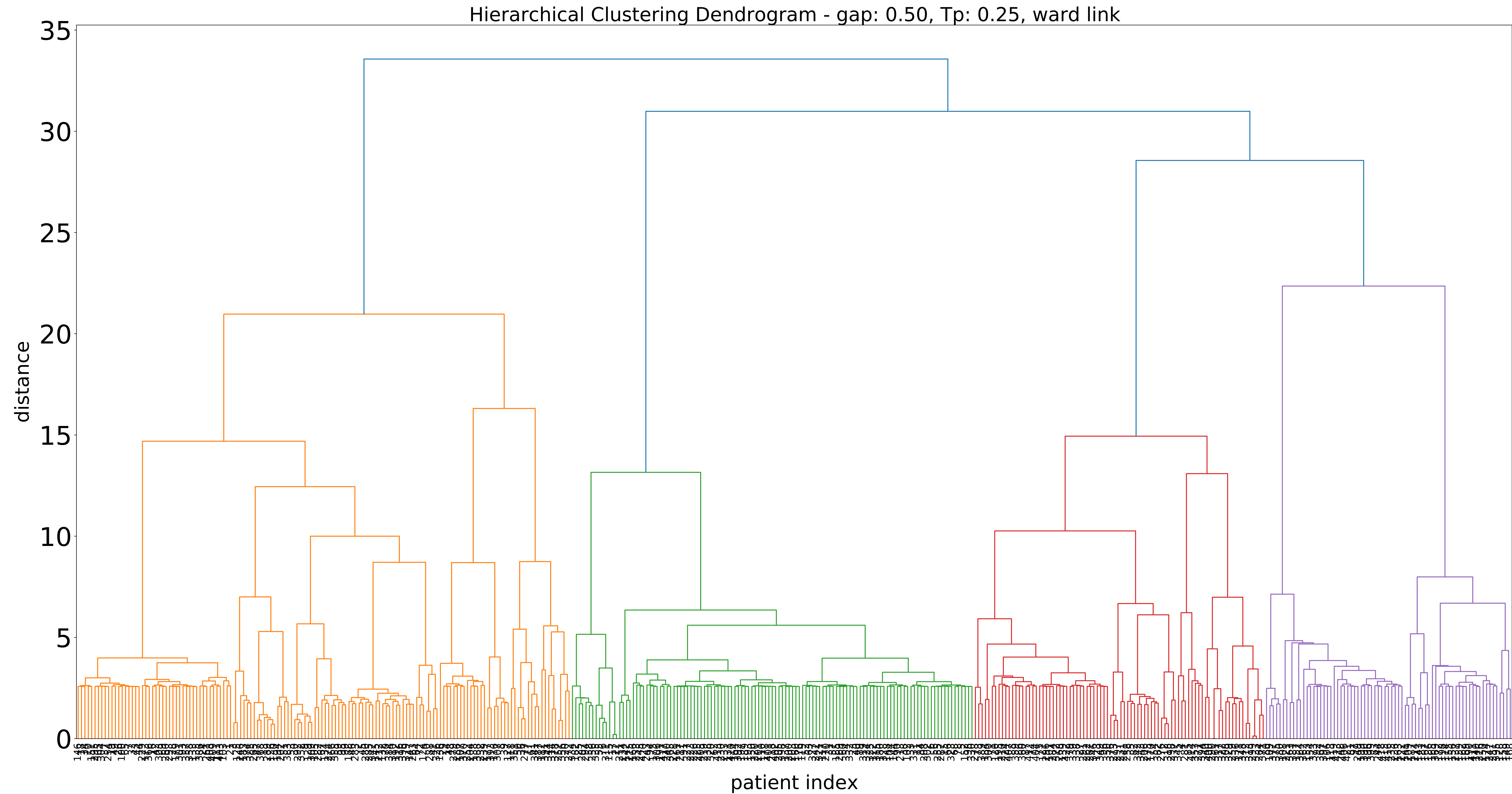
Cophenetic Correlation Coefficient: 0.6231327609033663

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.91061	0.8535	0.75242	0.06124	0.78363	0.91004	-0.11944	0.91118	0.00013	0.83174	0.77588	0.05063	0.20014	0.19452
3.0	1.0	0.85674	0.75448	0.776	0.07729	0.7821	0.85665	-0.51633	0.85682	0.00014	0.82407	0.61424	0.18605	0.18435	0.21071
4.0	1.0	0.82905	0.70988	0.79044	0.10532	0.76627	0.82872	-1.0851	0.82938	0.00015	0.83202	0.55384	0.29224	0.17841	0.21967
5.0	1.0	0.8288	0.70976	0.77426	0.11256	0.77264	0.82837	-2.00041	0.82923	0.00016	0.84411	0.55429	0.33333	0.2228	0.21967
6.0	1.0	0.84243	0.72978	0.79016	0.11114	0.79902	0.84145	-2.78269	0.8434	0.00018	0.87174	0.58043	0.4	0.19924	0.21967
7.0	1.0	0.83374	0.72139	0.82272	0.12189	0.79703	0.83296	-3.85816	0.83453	0.00021	0.88685	0.57642	0.4	0.17653	0.21967
8.0	1.0	0.83914	0.72457	0.8503	0.12256	0.81057	0.83799	-4.84375	0.84029	0.00025	0.90652	0.57385	0.4	0.16508	0.21967
9.0	1.0	0.86294	0.76102	0.85806	0.11552	0.84002	0.86247	-5.90437	0.8634	0.00027	0.92425	0.61937	1.0	0.15949	0.22306
10.0	1.0	0.86172	0.75846	0.85793	0.12601	0.84028	0.86134	-7.2905	0.8621	0.00028	0.92822	0.61456	1.0	0.1486	0.22306
11.0	1.0	0.87556	0.77994	0.86676	0.11787	0.8571	0.87532	-8.6267	0.8758	0.0003	0.9376	0.64252	1.0	0.16793	0.22385
12.0	1.0	0.8825	0.7907	0.85441	0.1134	0.8656	0.8823	-9.85422	0.8827	0.00031	0.94253	0.65655	1.33333	0.17888	0.23962
13.0	1.0	0.89932	0.81766	0.8922	0.11435	0.88573	0.8992	-10.74817	0.89944	0.00033	0.95316	0.69332	1.33333	0.17764	0.20702
14.0	1.0	0.91071	0.83652	0.89471	0.10943	0.89897	0.91063	-12.58681	0.9108	0.00034	0.95931	0.72037	2.0	0.18377	0.24126
15.0	1.0	0.93042	0.87031	0.92623	0.09738	0.92163	0.93036	-13.79835	0.93048	0.00036	0.96927	0.77172	2.0	0.17221	0.24126
16.0	1.0	0.93855	0.88463	0.93223	0.09007	0.93095	0.93851	-15.11322	0.93859	0.00037	0.97329	0.79439	2.0	0.17808	0.24126
17.0	1.0	0.94235	0.89143	0.93507	0.08729	0.93534	0.94231	-15.76177	0.94238	0.00038	0.97532	0.80556	2.0	0.17834	0.24126
18.0	1.0	0.94141	0.88975	0.93016	0.08905	0.9344	0.94136	-17.39181	0.94146	0.00038	0.97526	0.80284	2.0	0.17333	0.24126
19.0	1.0	0.94488	0.89597	0.93629	0.08457	0.93843	0.94482	-19.43897	0.94494	0.00039	0.97715	0.81309	2.0	0.16838	0.25454
20.0	1.0	0.94371	0.89457	0.93374	0.08357	0.93736	0.94345	-21.24303	0.94398	0.0004	0.97727	0.81271	2.0	0.17608	0.25454

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





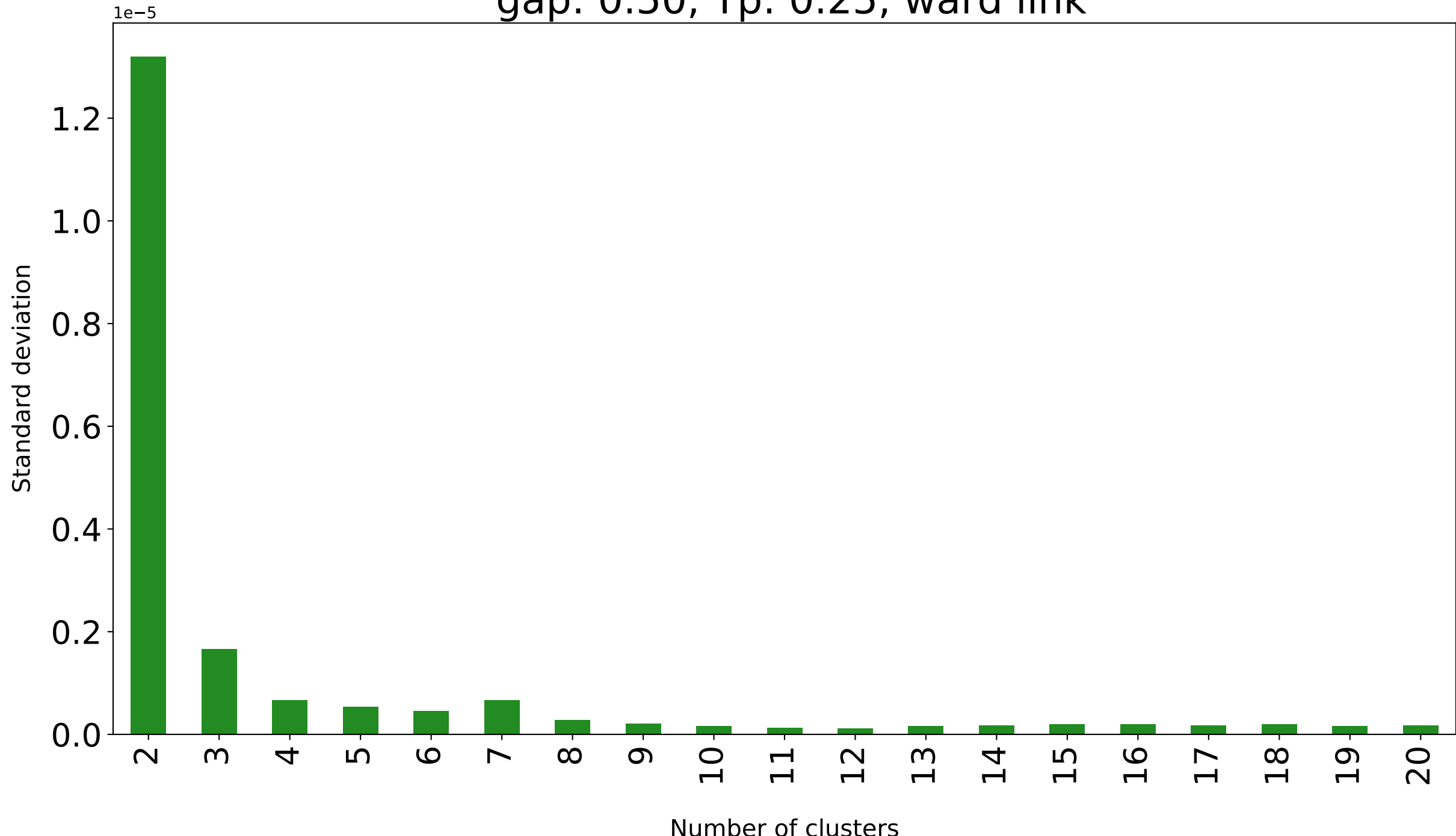
Cophenetic Correlation Coefficient: 0.6345468445636064



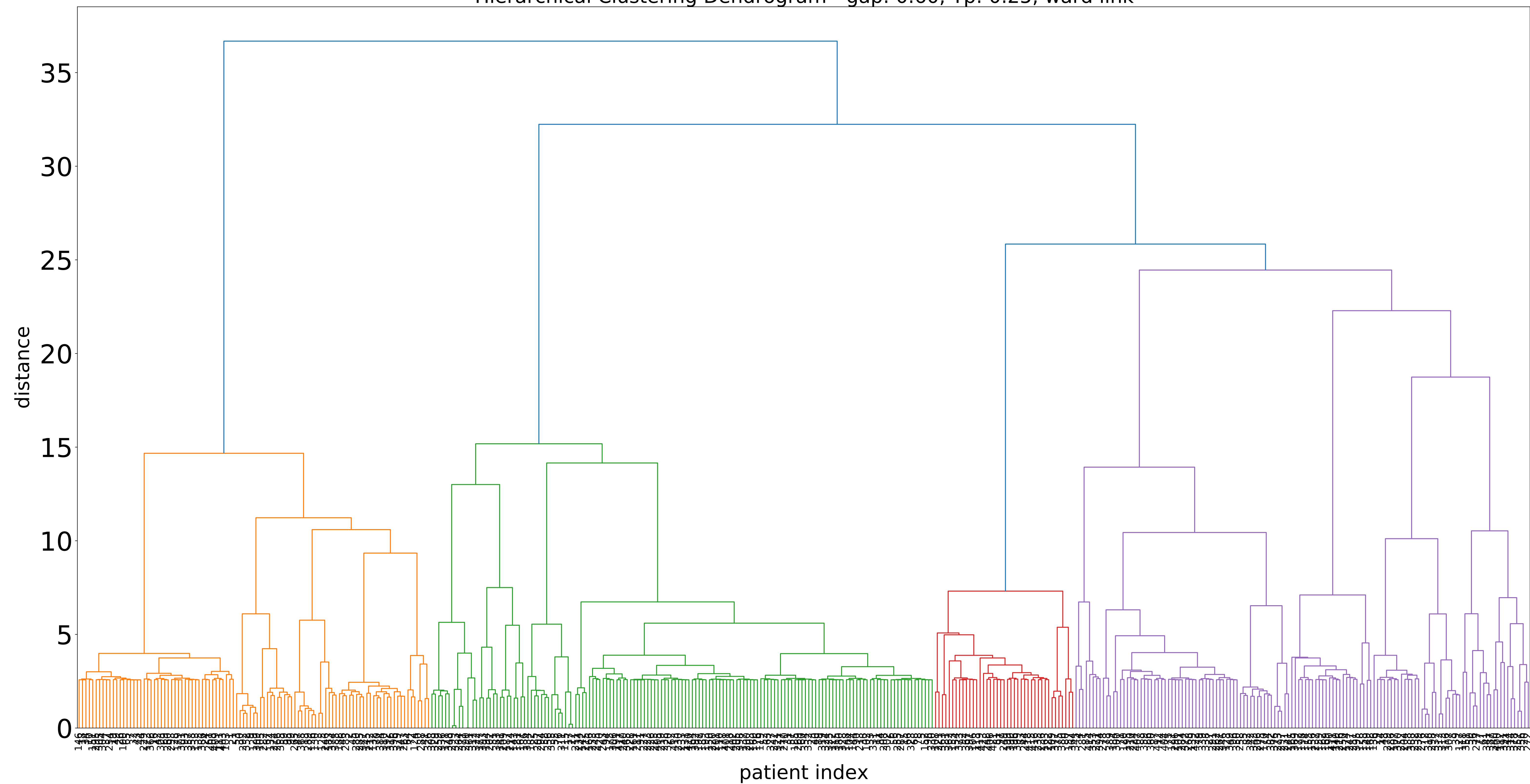
# Average values of five clustering indices gap: 0.50, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.84985	0.74581	0.72443	0.10064	0.6563	0.84888	0.06037	0.85082	0.00011	0.71703	0.60555	0.09247	0.14876	0.19581
3.0	1.0	0.77411	0.63425	0.66346	0.12738	0.65814	0.77402	-0.23345	0.7742	0.00012	0.73581	0.46814	0.09247	0.16013	0.19581
4.0	1.0	0.75959	0.61486	0.68577	0.13714	0.67019	0.75933	-0.80956	0.75985	0.00013	0.77008	0.44746	0.18493	0.17927	0.19581
5.0	1.0	0.75362	0.60666	0.66739	0.14145	0.67159	0.75312	-1.67152	0.75412	0.00014	0.78096	0.43871	0.28125	0.22991	0.19581
6.0	1.0	0.78721	0.65103	0.75406	0.14217	0.73067	0.78633	-2.75367	0.78809	0.00017	0.83548	0.48695	0.57692	0.20436	0.18211
7.0	1.0	0.80318	0.673	0.7202	0.14089	0.75665	0.80197	-3.86264	0.8044	0.00019	0.85903	0.51246	1.0	0.21627	0.20677
8.0	1.0	0.78944	0.65211	0.68713	0.15919	0.74697	0.78682	-4.60224	0.79208	0.00021	0.8651	0.48908	1.0	0.1988	0.20677
9.0	1.0	0.83202	0.71412	0.78542	0.13288	0.80274	0.83145	-5.80468	0.83258	0.00025	0.90467	0.55972	1.0	0.18114	0.20677
10.0	1.0	0.86849	0.76913	0.85303	0.1183	0.84769	0.86819	-7.38116	0.86878	0.00028	0.93057	0.62879	1.0	0.18839	0.20677
11.0	1.0	0.87991	0.78667	0.84774	0.11159	0.86164	0.87962	-8.73635	0.8802	0.0003	0.93838	0.65148	1.0	0.19898	0.20677
12.0	1.0	0.8884	0.80058	0.86862	0.11937	0.87245	0.88825	-9.54655	0.88855	0.00031	0.94568	0.67079	1.0	0.18124	0.20035
13.0	1.0	0.89921	0.81748	0.89706	0.11601	0.88572	0.89906	-10.80577	0.89936	0.00033	0.95343	0.69321	1.0	0.17879	0.20035
14.0	1.0	0.91986	0.85189	0.92736	0.10335	0.90962	0.91965	-11.92452	0.92007	0.00036	0.96417	0.74353	1.0	0.16739	0.20035
15.0	1.0	0.92861	0.86709	0.92895	0.0983	0.91965	0.92852	-13.54981	0.92871	0.00036	0.96859	0.76665	2.0	0.16793	0.23743
16.0	1.0	0.93591	0.87996	0.93402	0.09396	0.92802	0.93585	-14.21797	0.93597	0.00037	0.97227	0.78705	2.0	0.16843	0.23743
17.0	1.0	0.94137	0.88968	0.93513	0.08789	0.93427	0.94134	-15.50552	0.9414	0.00038	0.975	0.80265	2.0	0.17738	0.23743
18.0	1.0	0.94484	0.89592	0.94056	0.086	0.9383	0.94481	-17.54265	0.94487	0.00039	0.9769	0.81294	2.0	0.17242	0.2493
19.0	1.0	0.94308	0.89266	0.93936	0.08764	0.93648	0.94303	-19.28685	0.94313	0.0004	0.97661	0.80737	2.0	0.18022	0.2493
20.0	1.0	0.94277	0.89211	0.93307	0.08936	0.93624	0.9427	-20.27325	0.94283	0.0004	0.97681	0.80663	2.0	0.18377	0.2493

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



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

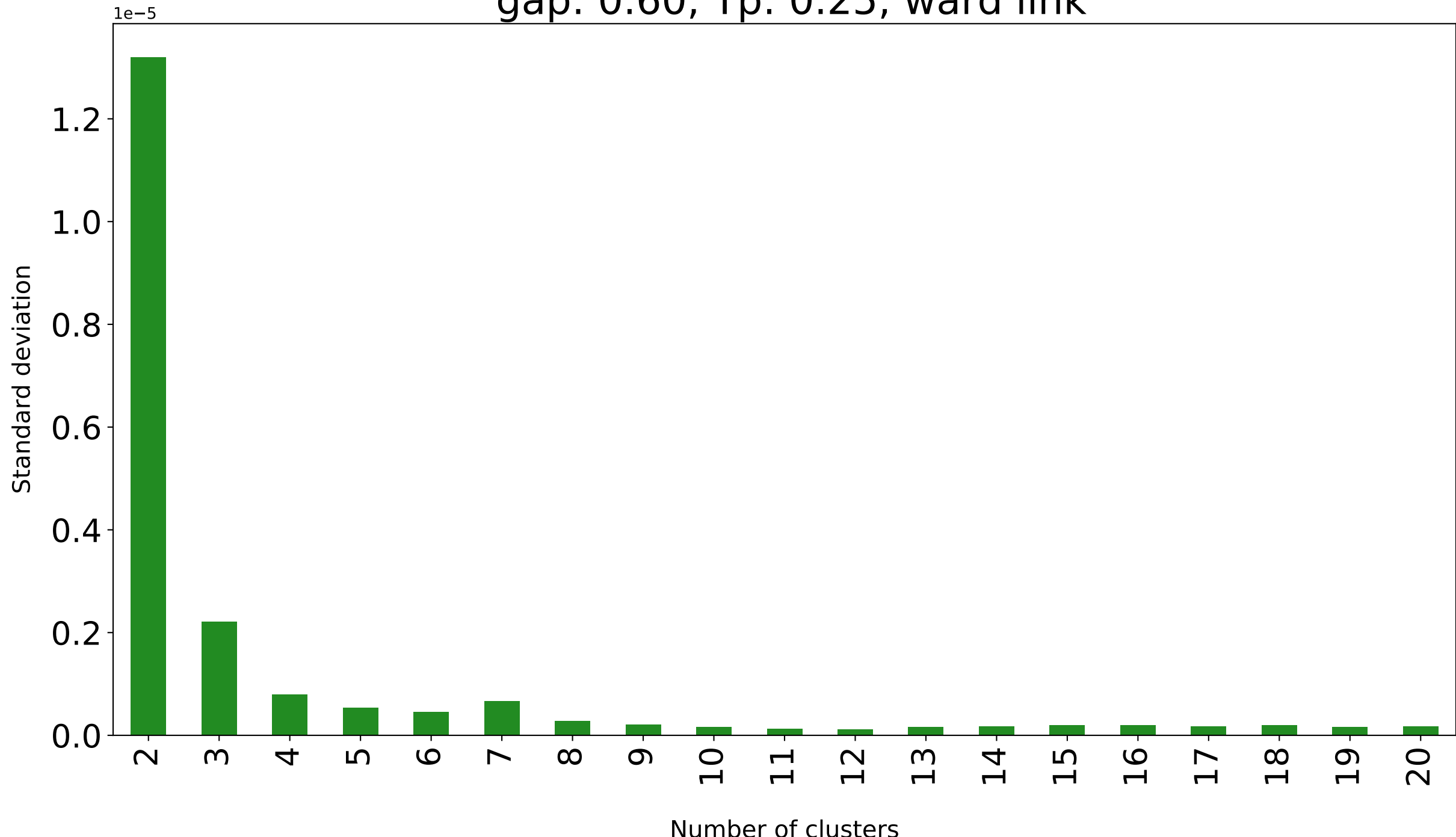


Cophenetic Correlation Coefficient: 0.6122170144326434

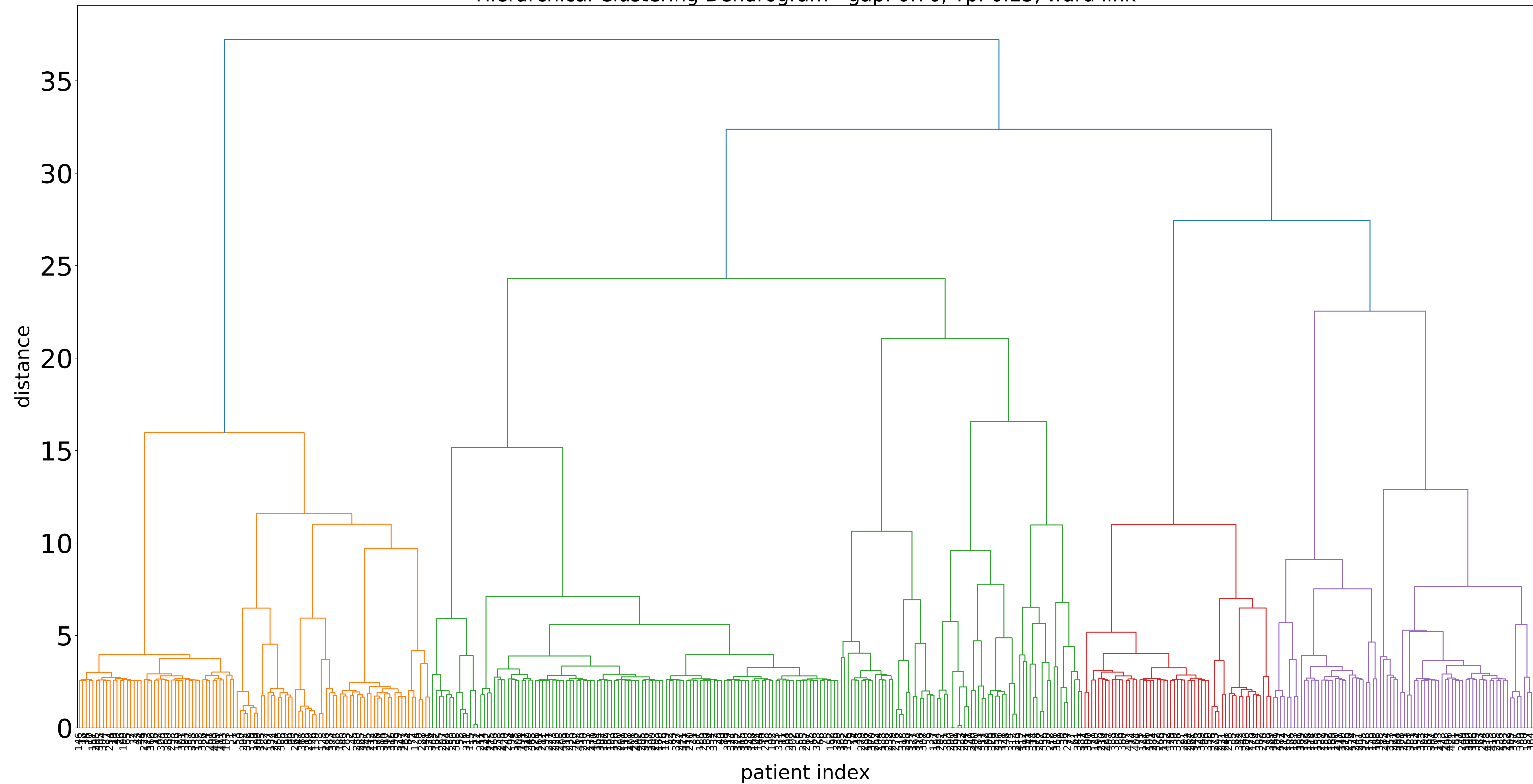
# Average values of five clustering indices gap: 0.60, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.88415	0.80935	0.67037	0.07979	0.71663	0.88319	-0.06713	0.88511	0.00012	0.77939	0.70999	0.0514	0.20968	0.16675
3.0	1.00001	0.77603	0.63917	0.65299	0.12728	0.65722	0.77584	-0.3352	0.77623	0.00011	0.73434	0.47657	0.22126	0.19097	0.16675
4.0	1.0	0.71504	0.55891	0.58818	0.19357	0.60375	0.71472	-0.80593	0.71535	0.00012	0.72483	0.39094	0.28947	0.22138	0.16675
5.0	1.0	0.779	0.64005	0.72187	0.15208	0.70997	0.77835	-1.78879	0.77964	0.00015	0.80942	0.47434	0.47143	0.20946	0.16675
6.0	1.0	0.79356	0.65994	0.7099	0.14367	0.73691	0.79267	-2.81256	0.79446	0.00017	0.83612	0.49721	0.47826	0.22218	0.1962
7.0	1.0	0.7797	0.63828	0.6543	0.15142	0.7259	0.77636	-3.79598	0.78306	0.00018	0.83657	0.47376	1.1	0.22088	0.19633
8.0	1.0	0.7892	0.65242	0.69482	0.17059	0.74678	0.7872	-5.05261	0.79121	0.00021	0.86599	0.489	1.1	0.19088	0.19896
9.0	1.0	0.81109	0.68389	0.76065	0.15503	0.77815	0.81058	-6.10288	0.8116	0.00024	0.89352	0.52333	1.1	0.1762	0.19896
10.0	1.0	0.85444	0.74752	0.8375	0.13668	0.83149	0.8542	-7.66925	0.85468	0.00028	0.92368	0.6005	1.1	0.19061	0.19896
11.0	1.0	0.87655	0.78159	0.85788	0.12714	0.85808	0.87639	-8.37729	0.8767	0.0003	0.93772	0.6447	1.375	0.19547	0.19896
12.0	1.0	0.88128	0.78882	0.85161	0.12482	0.86413	0.8811	-10.05398	0.88147	0.00031	0.94173	0.65407	1.375	0.195	0.19896
13.0	1.0	0.8923	0.80642	0.87634	0.12406	0.87759	0.8922	-11.15863	0.8924	0.00033	0.94952	0.67789	1.375	0.1873	0.19896
14.0	1.0	0.89694	0.81387	0.88116	0.12277	0.88339	0.89686	-11.96313	0.89702	0.00034	0.9532	0.68808	1.375	0.18615	0.19322
15.0	1.0	0.90294	0.82344	0.87889	0.11831	0.89046	0.90281	-13.55481	0.90306	0.00035	0.95666	0.70126	2.0	0.18408	0.24066
16.0	1.0	0.92864	0.86709	0.92828	0.10369	0.91986	0.92857	-15.35284	0.92871	0.00037	0.96919	0.76645	2.0	0.18293	0.24066
17.0	1.0	0.94147	0.88969	0.94226	0.08988	0.93442	0.94142	-16.74834	0.94153	0.00038	0.97512	0.80233	2.0	0.18944	0.24066
18.0	1.0	0.95001	0.90509	0.951	0.08316	0.94409	0.94996	-17.47857	0.95005	0.00039	0.97905	0.82778	2.0	0.18803	0.24066
19.0	1.0	0.9487	0.90288	0.94196	0.08088	0.94271	0.94865	-19.44126	0.94874	0.0004	0.97877	0.82454	2.0	0.18196	0.24066
20.0	1.0	0.94422	0.89483	0.94054	0.0837	0.93787	0.94416	-21.22808	0.94428	0.0004	0.97744	0.81132	2.0	0.18013	0.24066

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



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

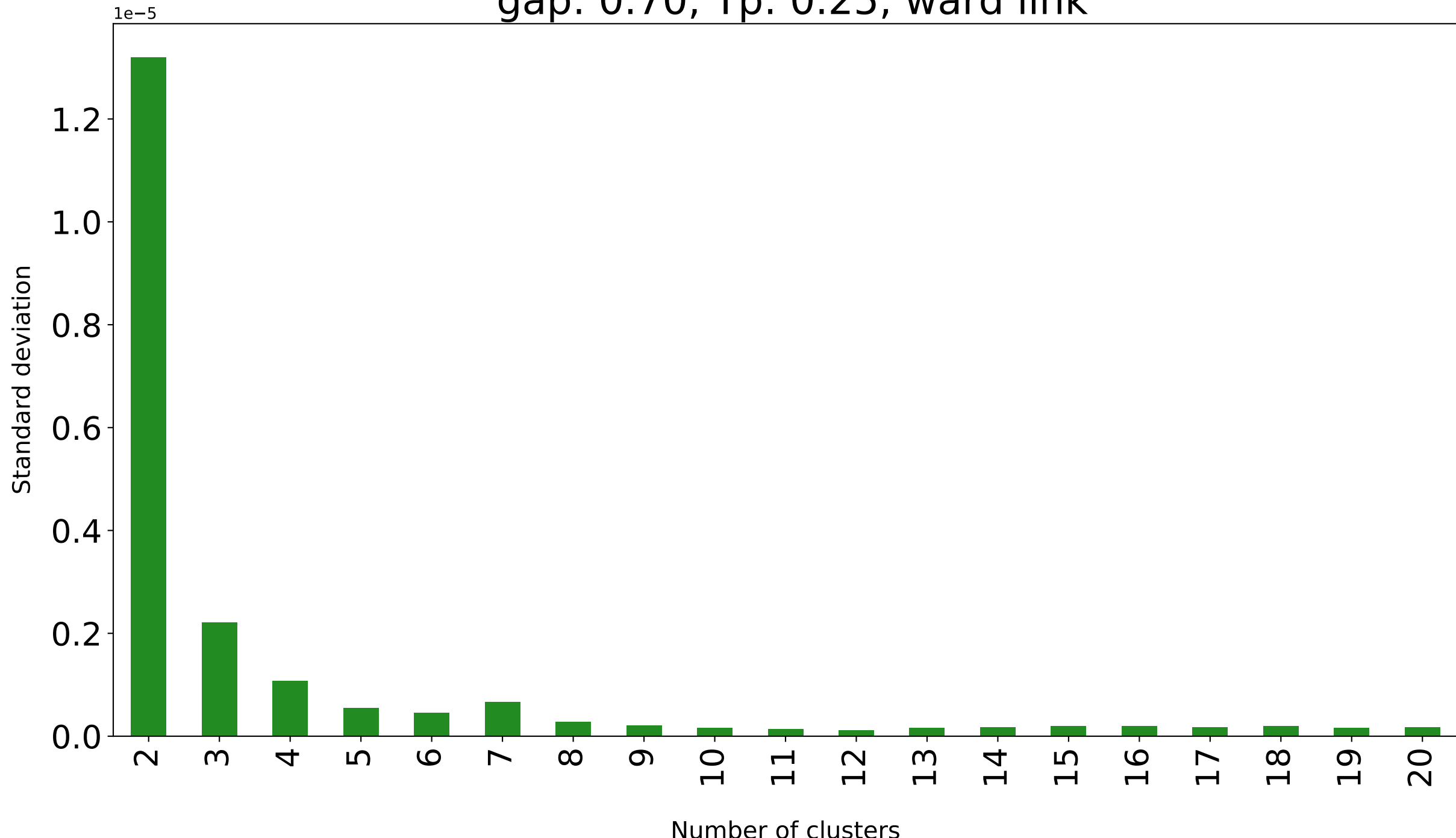


Cophenetic Correlation Coefficient: 0.6148151353582699

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

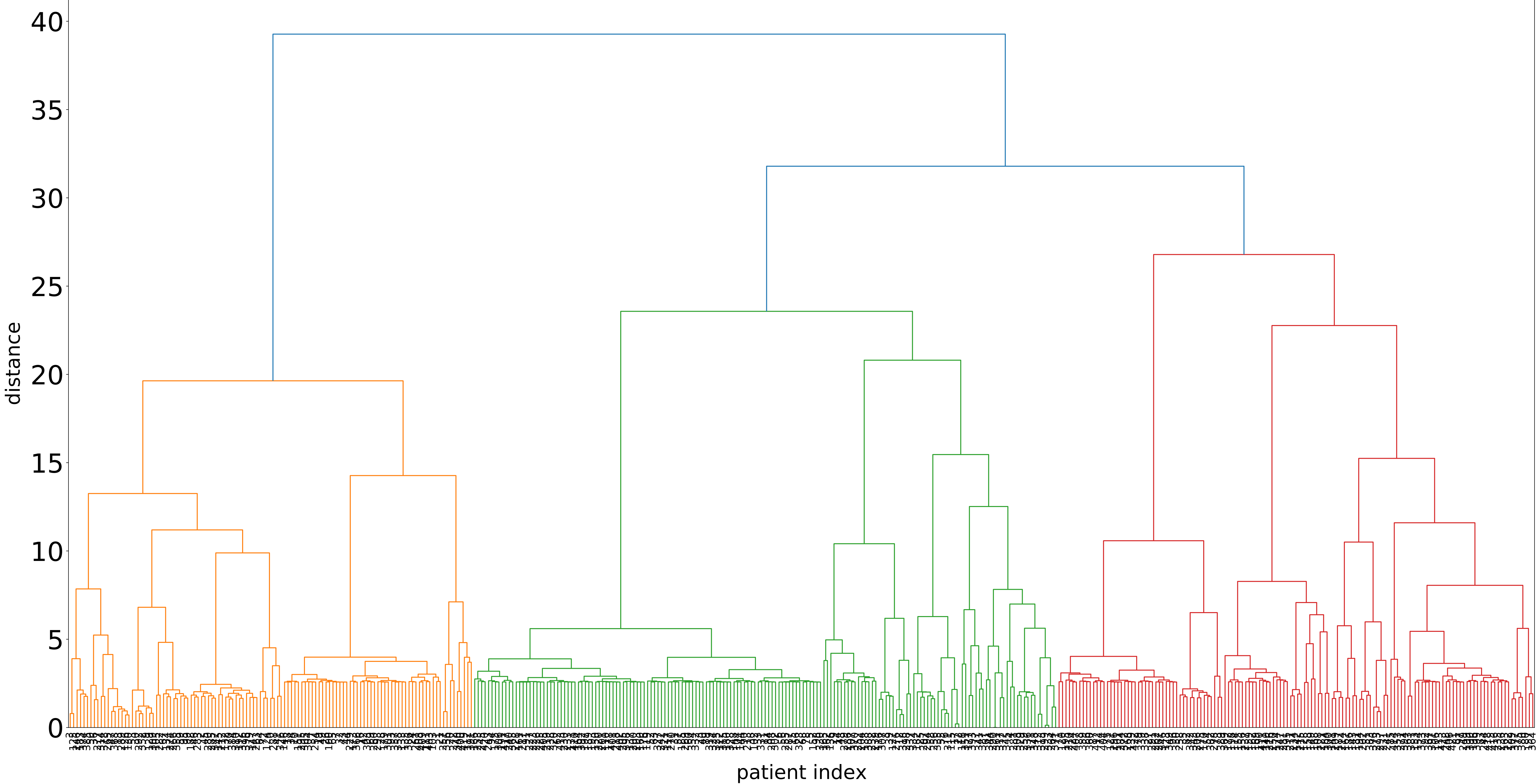
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.8971	0.82685	0.70564	0.07021	0.74637	0.89627	-0.07709	0.89793	0.00012	0.79813	0.73004	0.03738	0.20724	0.16675
3.0	1.0	0.79093	0.66062	0.66343	0.11867	0.67842	0.79069	-0.37249	0.79116	0.00012	0.74844	0.50257	0.12632	0.18492	0.18867
4.0	1.0	0.77907	0.64368	0.64395	0.1266	0.68919	0.77785	-0.9834	0.78029	0.00013	0.77396	0.48431	0.12632	0.21821	0.18867
5.0	1.0	0.77797	0.63831	0.75988	0.15641	0.71412	0.77644	-1.6173	0.7795	0.00016	0.81814	0.4741	0.33803	0.18399	0.18867
6.0	1.0	0.79979	0.66913	0.76448	0.13877	0.74966	0.79909	-2.79514	0.8005	0.00018	0.85137	0.50816	0.33803	0.21306	0.18867
7.0	1.0	0.81732	0.69463	0.76544	0.13478	0.7773	0.81662	-3.71818	0.81802	0.00021	0.87661	0.53932	0.42857	0.20532	0.19903
8.0	1.0	0.79547	0.661	0.69832	0.15562	0.7552	0.79322	-4.59022	0.79772	0.00021	0.87157	0.49907	1.05263	0.19443	0.19984
9.0	1.0	0.82758	0.70756	0.77684	0.13417	0.79823	0.82709	-5.75025	0.82807	0.00025	0.90421	0.55151	1.05263	0.18145	0.19984
10.0	1.0	0.87957	0.78708	0.86714	0.1133	0.86101	0.8794	-7.25884	0.87975	0.00029	0.9377	0.65357	1.05263	0.19592	0.19984
11.0	1.0	0.88602	0.79702	0.86523	0.11009	0.86906	0.88586	-8.9126	0.88617	0.0003	0.94267	0.66651	1.05263	0.21049	0.19984
12.0	1.0	0.89457	0.81053	0.88507	0.11187	0.87978	0.89445	-9.96936	0.89469	0.00032	0.94943	0.68453	1.05263	0.20093	0.19984
13.0	1.0	0.90035	0.8197	0.88889	0.11204	0.88693	0.90027	-10.69907	0.90044	0.00033	0.95378	0.69689	1.05263	0.19704	0.19445
14.0	1.0	0.90873	0.83313	0.91543	0.11001	0.8971	0.9085	-12.37296	0.90897	0.00035	0.9594	0.71578	1.05263	0.19092	0.19445
15.0	1.0	0.91976	0.85192	0.9191	0.1023	0.90972	0.91965	-14.03043	0.91987	0.00036	0.9649	0.74368	2.0	0.18835	0.2335
16.0	1.0	0.93375	0.87613	0.93302	0.09075	0.92566	0.93367	-15.47857	0.93382	0.00038	0.97156	0.781	2.0	0.19334	0.2335
17.0	1.0	0.9407	0.88847	0.93759	0.08629	0.93361	0.94065	-16.16634	0.94074	0.00039	0.97499	0.80073	2.0	0.19014	0.2335
18.0	1.0	0.94366	0.89378	0.93932	0.08702	0.93705	0.94362	-17.59426	0.94369	0.00039	0.97661	0.80941	2.0	0.19027	0.2335
19.0	1.0	0.94665	0.8992	0.9429	0.08379	0.94053	0.94661	-19.74314	0.9467	0.0004	0.97825	0.81847	2.0	0.18848	0.2383
20.0	1.0	0.94411	0.89457	0.93322	0.08565	0.93778	0.94403	-21.60508	0.94419	0.0004	0.97747	0.81085	2.0	0.19134	0.2383

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





Hierarchical Clustering Dendrogram - gap: 0.80, Tp: 0.25, ward link

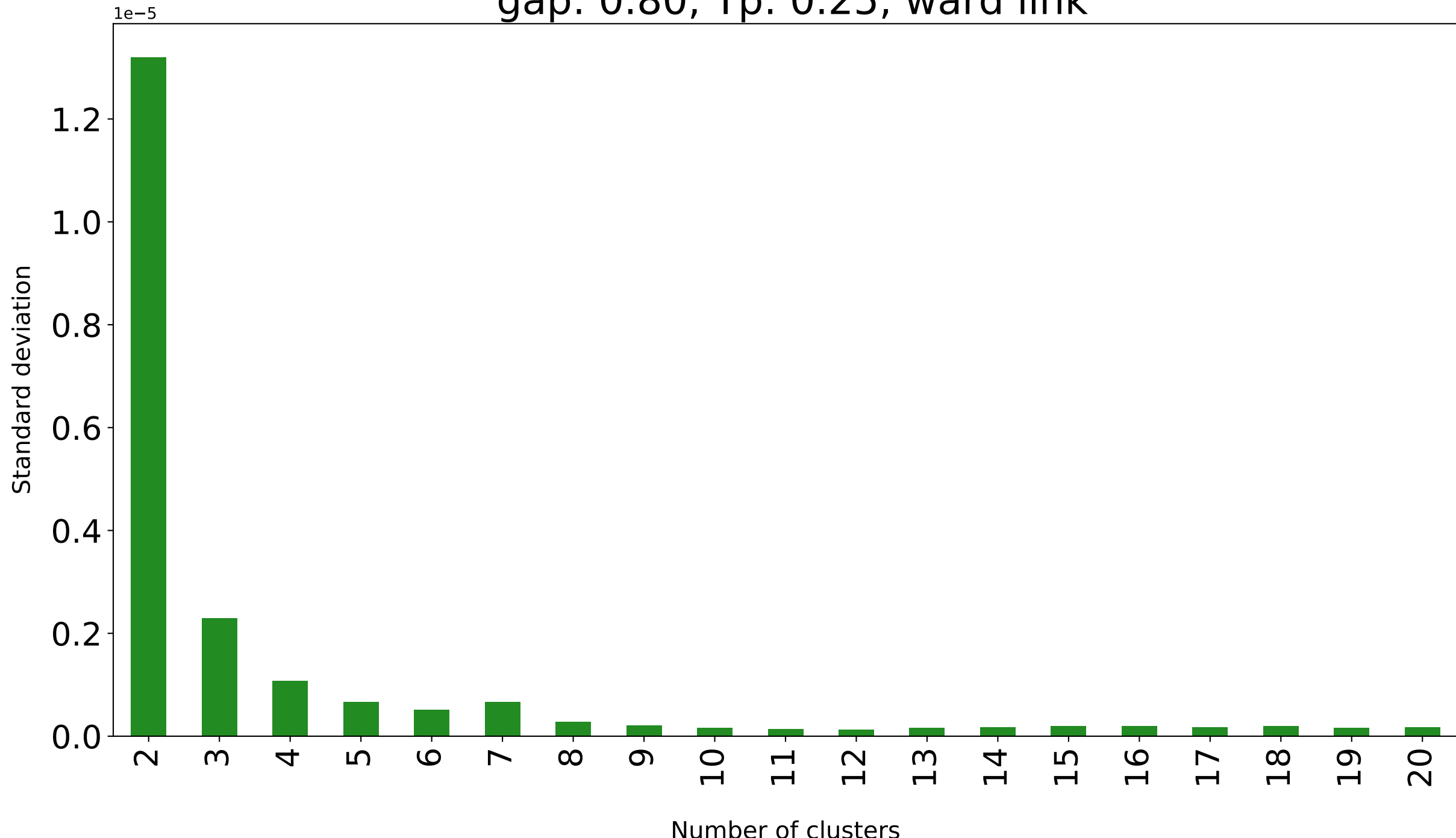


Cophenetic Correlation Coefficient: 0.5974043453956946

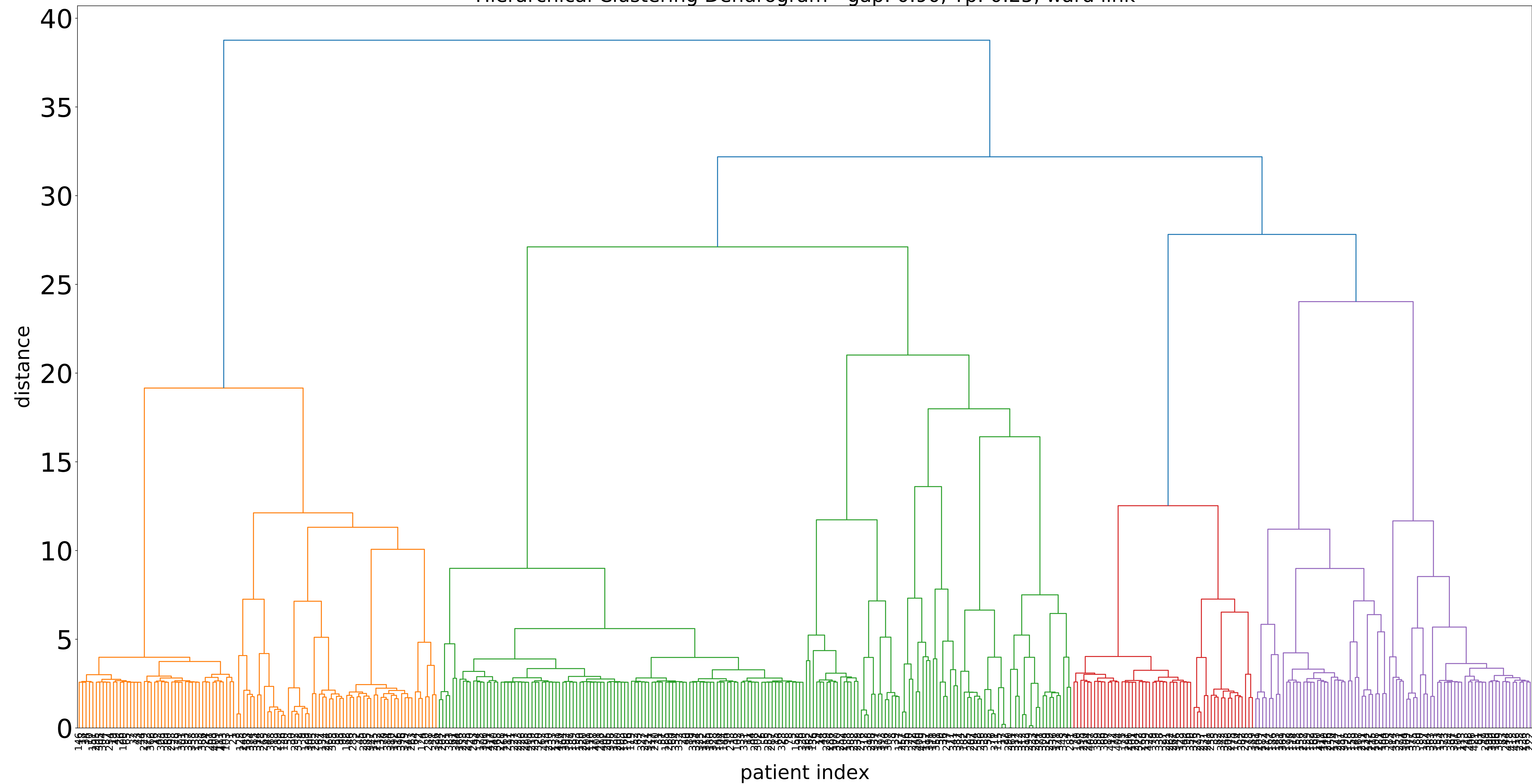
# Average values of five clustering indices gap: 0.80, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90762	0.84326	0.7852	0.06179	0.77771	0.90721	-0.07204	0.90802	0.00013	0.81998	0.7512	0.10256	0.19597	0.19395
3.0	1.0	0.79984	0.67302	0.7021	0.11378	0.69477	0.79961	-0.36581	0.80007	0.00012	0.76162	0.51656	0.14201	0.17357	0.22736
4.0	1.0	0.78278	0.64881	0.67527	0.13305	0.69713	0.78232	-0.97501	0.78324	0.00013	0.78282	0.48844	0.14201	0.20324	0.22736
5.0	1.0	0.755	0.61052	0.71316	0.16491	0.68459	0.75403	-1.62317	0.75597	0.00016	0.80291	0.44641	0.35294	0.17426	0.22736
6.0	1.0	0.78408	0.65	0.73699	0.15813	0.73132	0.78368	-2.80776	0.78449	0.00018	0.84444	0.48896	0.35294	0.19082	0.22736
7.0	1.0	0.78462	0.64894	0.7141	0.15743	0.73848	0.78371	-3.79355	0.78554	0.0002	0.85841	0.48667	0.46154	0.19227	0.22736
8.0	1.0	0.79596	0.66338	0.78712	0.15508	0.76026	0.79525	-4.71176	0.79668	0.00024	0.88504	0.50108	0.46154	0.19125	0.22736
9.0	1.0	0.80963	0.68197	0.78095	0.15163	0.77853	0.80941	-5.86454	0.80985	0.00025	0.89852	0.5206	0.46154	0.20799	0.22736
10.0	1.0	0.841	0.7274	0.82125	0.1378	0.81671	0.84082	-7.41653	0.84119	0.00028	0.91914	0.57502	0.46154	0.19888	0.22736
11.0	1.0	0.85477	0.74824	0.83329	0.13271	0.83364	0.85461	-8.83207	0.85494	0.0003	0.92885	0.60155	2.0	0.19149	0.22736
12.0	1.0	0.85958	0.75523	0.85499	0.13894	0.84041	0.85935	-9.62988	0.85981	0.00031	0.93468	0.61011	2.0	0.1945	0.19134
13.0	1.0	0.86281	0.7601	0.84894	0.13881	0.84459	0.86267	-11.08081	0.86294	0.00032	0.93768	0.61601	2.0	0.1961	0.23097
14.0	1.0	0.86966	0.77062	0.8496	0.13461	0.85285	0.86952	-12.90585	0.8698	0.00033	0.94214	0.62968	2.0	0.21045	0.23097
15.0	1.0	0.87997	0.78668	0.871	0.12806	0.86511	0.87985	-14.06262	0.8801	0.00035	0.94842	0.65083	2.0	0.19945	0.23097
16.0	1.0	0.90066	0.81998	0.90738	0.11374	0.88883	0.90042	-15.89214	0.90091	0.00037	0.95845	0.69737	2.0	0.19329	0.23097
17.0	1.0	0.90745	0.83139	0.90943	0.10494	0.89658	0.90729	-17.86085	0.90761	0.00038	0.96177	0.71396	2.0	0.1921	0.23097
18.0	1.0	0.91681	0.84727	0.91964	0.09523	0.90723	0.91666	-19.32272	0.91695	0.00039	0.96617	0.73778	2.0	0.19803	0.23097
19.0	1.0	0.92357	0.85878	0.92537	0.09042	0.91495	0.92345	-20.08801	0.92368	0.0004	0.96944	0.75504	2.0	0.19542	0.23097
20.0	1.0	0.93238	0.87369	0.93975	0.08851	0.92494	0.93222	-22.17487	0.93255	0.00041	0.97344	0.77742	2.0	0.1889	0.23097

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



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

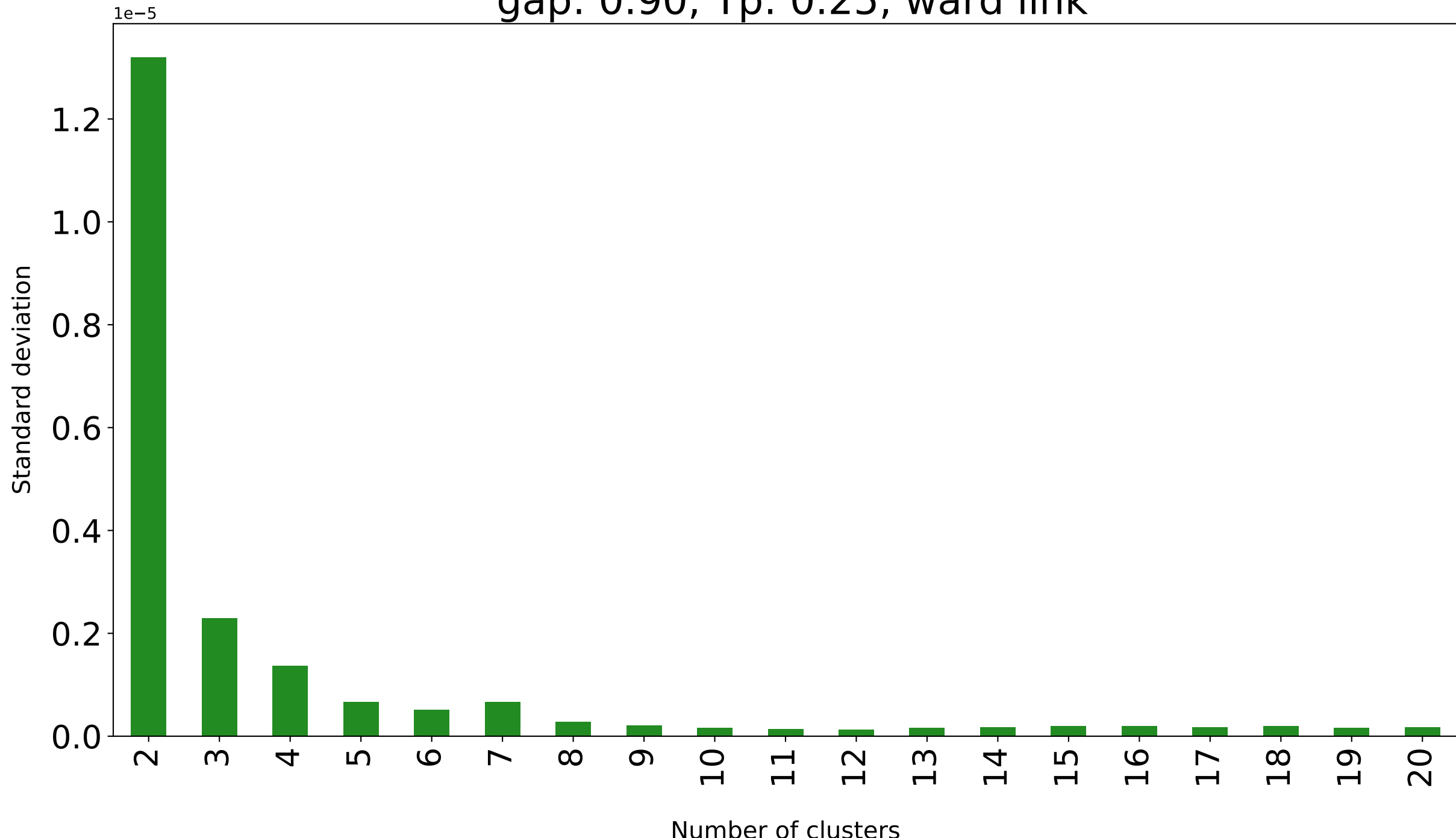


Cophenetic Correlation Coefficient: 0.584622149912175

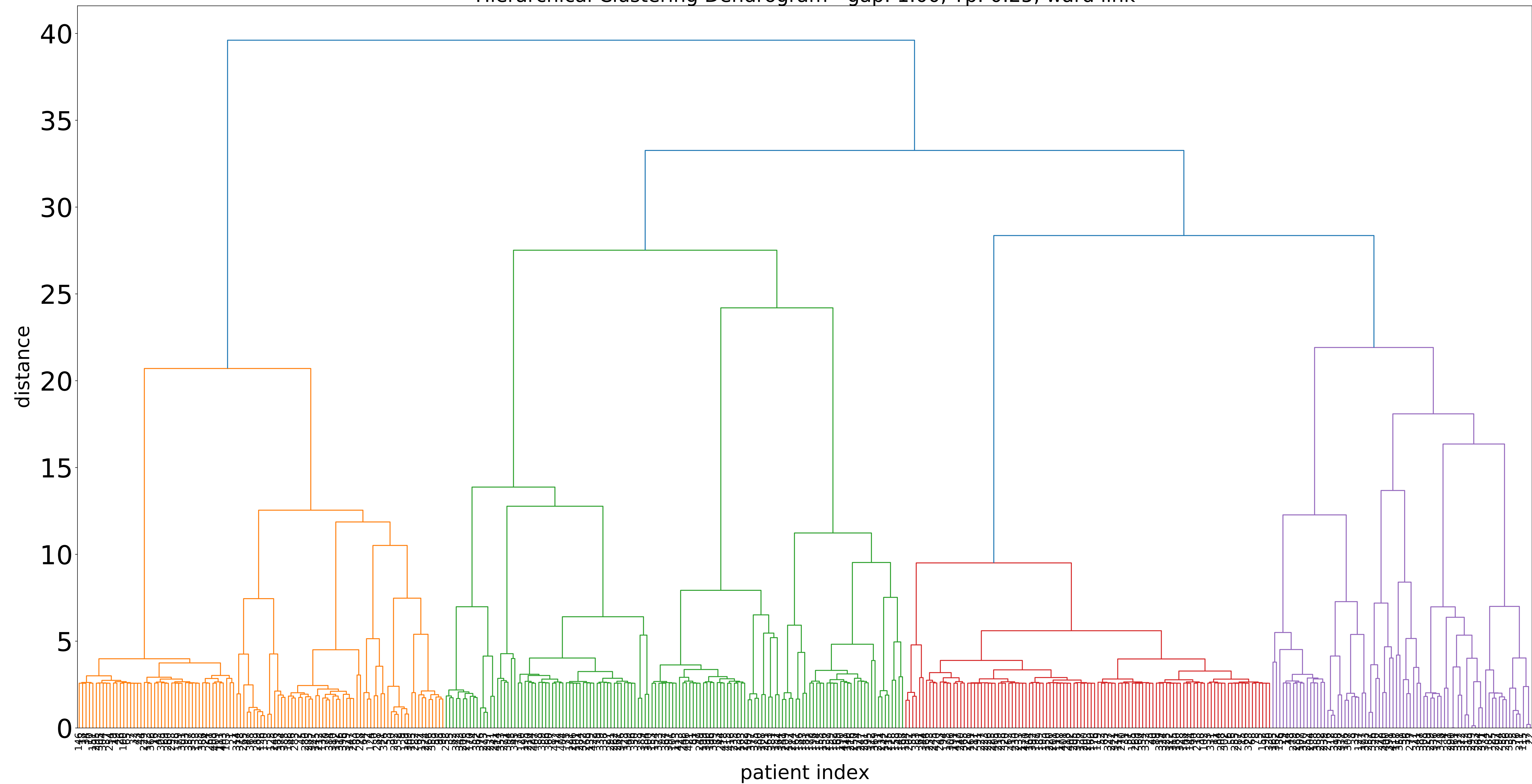
# Average values of five clustering indices gap: 0.90, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90381	0.83747	0.72823	0.06579	0.76432	0.90307	-0.08678	0.90456	0.00013	0.81106	0.74484	0.03762	0.20437	0.17799
3.0	1.0	0.79978	0.67406	0.68228	0.11409	0.69318	0.79965	-0.38245	0.79991	0.00012	0.76016	0.51945	0.19459	0.17941	0.19145
4.0	1.0	0.76229	0.62557	0.62761	0.13909	0.66694	0.76128	-0.96778	0.7633	0.00013	0.76303	0.46911	0.19459	0.2102	0.19145
5.0	1.0	0.78279	0.64718	0.74956	0.14503	0.72289	0.78201	-1.72663	0.78357	0.00017	0.82852	0.48544	0.46154	0.17594	0.19145
6.0	1.0	0.79743	0.66828	0.75165	0.14021	0.74951	0.79715	-2.88088	0.7977	0.00019	0.85693	0.50958	0.46154	0.19976	0.19145
7.0	1.0	0.79879	0.66873	0.73731	0.14306	0.75758	0.79814	-3.78882	0.79944	0.00021	0.87186	0.50937	0.64286	0.1904	0.1897
8.0	1.0	0.8227	0.70138	0.80344	0.12748	0.79211	0.82243	-4.79833	0.82297	0.00025	0.90089	0.54483	0.64286	0.19438	0.1897
9.0	1.0	0.84358	0.73172	0.81936	0.12565	0.8183	0.84341	-6.03548	0.84375	0.00027	0.91669	0.58121	1.05882	0.17844	0.21064
10.0	1.0	0.85059	0.742	0.81521	0.12118	0.82745	0.85035	-7.12294	0.85082	0.00028	0.92296	0.59399	1.05882	0.21097	0.21064
11.0	1.0	0.85155	0.74249	0.79768	0.12016	0.82936	0.85089	-8.52296	0.85221	0.00029	0.92519	0.59403	2.0	0.21753	0.24806
12.0	1.0	0.84958	0.73933	0.80072	0.12201	0.82829	0.84907	-9.98394	0.85009	0.0003	0.92773	0.5893	2.0	0.21264	0.24806
13.0	1.0	0.85761	0.75176	0.82237	0.12469	0.83846	0.85734	-10.7786	0.85787	0.00032	0.93458	0.60493	2.0	0.20651	0.22893
14.0	1.0	0.86578	0.76392	0.82549	0.11786	0.84825	0.86538	-12.07967	0.86617	0.00033	0.9396	0.62028	2.0	0.20754	0.22893
15.0	1.0	0.87613	0.77988	0.83358	0.11008	0.86038	0.87567	-13.95488	0.8766	0.00034	0.94528	0.64119	2.0	0.21915	0.22893
16.0	1.0	0.89093	0.80399	0.86158	0.10041	0.87754	0.89069	-15.14478	0.89117	0.00036	0.95327	0.6745	2.0	0.21481	0.22893
17.0	1.0	0.89967	0.81827	0.87336	0.09419	0.88765	0.89946	-17.2471	0.89987	0.00037	0.95788	0.69458	2.0	0.21541	0.23964
18.0	1.0	0.90519	0.82733	0.87663	0.08931	0.89408	0.90496	-17.99273	0.90543	0.00037	0.96085	0.70759	2.0	0.21092	0.23964
19.0	1.0	0.93201	0.87337	0.93044	0.08604	0.92438	0.93191	-19.97799	0.93211	0.0004	0.97291	0.77748	2.0	0.20316	0.23964
20.0	1.0	0.94038	0.88793	0.94429	0.0824	0.93386	0.94027	-22.08653	0.9405	0.00041	0.97671	0.80029	2.0	0.19783	0.23964

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



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



Cophenetic Correlation Coefficient: 0.5779002217677486

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.89418	0.82415	0.71598	0.07357	0.74517	0.89345	-0.05862	0.89492	0.00012	0.79783	0.72829	0.09969	0.20192	0.17737
3.0	1.00001	0.79227	0.6644	0.67646	0.12087	0.67925	0.79185	-0.34776	0.79271	0.00012	0.74995	0.50888	0.17486	0.18017	0.21189
4.0	1.0	0.74222	0.59666	0.67518	0.1727	0.6488	0.7417	-0.7654	0.74274	0.00013	0.76077	0.43432	0.49123	0.15054	0.21189
5.0	1.0	0.79298	0.66134	0.75805	0.13843	0.73671	0.7925	-1.7373	0.79347	0.00017	0.83804	0.50072	0.49123	0.16979	0.21189
6.0	1.0	0.7892	0.65692	0.73452	0.14562	0.73936	0.78893	-2.82134	0.78948	0.00019	0.85154	0.49642	0.49123	0.2052	0.21189
7.0	1.0	0.78573	0.65015	0.71038	0.14855	0.74191	0.78479	-3.72754	0.78668	0.00021	0.86383	0.48793	0.57143	0.19679	0.21005
8.0	1.0	0.82356	0.70255	0.79776	0.12505	0.7931	0.82335	-4.79429	0.82377	0.00025	0.90135	0.54591	0.57143	0.20512	0.21005
9.0	1.0	0.84159	0.7281	0.80781	0.12396	0.81595	0.84139	-6.01927	0.84179	0.00027	0.91546	0.5756	1.66667	0.19058	0.21005
10.0	1.0	0.84596	0.73411	0.80043	0.12219	0.82207	0.84556	-7.065	0.84635	0.00028	0.92031	0.58279	1.66667	0.22402	0.21005
11.0	1.0	0.84708	0.73577	0.80526	0.12438	0.82477	0.84677	-8.5252	0.8474	0.00029	0.92485	0.58465	1.66667	0.2262	0.21005
12.0	1.0	0.85232	0.74284	0.79502	0.11983	0.83142	0.85154	-9.95718	0.8531	0.0003	0.92869	0.5933	2.0	0.23058	0.245
13.0	1.0	0.85743	0.75001	0.79498	0.11719	0.83789	0.8564	-11.62343	0.85846	0.00031	0.93265	0.60208	2.0	0.23571	0.245
14.0	1.0	0.86628	0.76412	0.82011	0.12068	0.84881	0.86577	-12.46291	0.86679	0.00033	0.93965	0.6198	2.0	0.22894	0.22709
15.0	1.0	0.87491	0.77741	0.82652	0.1129	0.85899	0.87429	-13.81485	0.87554	0.00034	0.94454	0.63736	2.0	0.22993	0.22709
16.0	1.0	0.8894	0.80106	0.85677	0.10671	0.87586	0.88912	-14.81316	0.88969	0.00035	0.95267	0.66958	2.0	0.22296	0.22709
17.0	1.0	0.8974	0.8142	0.86748	0.10192	0.88514	0.89715	-16.91417	0.89765	0.00036	0.95695	0.6882	2.0	0.2241	0.2402
18.0	1.0	0.90321	0.82368	0.87111	0.09662	0.89184	0.90292	-17.82686	0.9035	0.00037	0.95991	0.70167	2.0	0.22257	0.2402
19.0	1.0	0.91093	0.8365	0.8787	0.09158	0.90067	0.91062	-19.97881	0.91123	0.00038	0.96366	0.72035	2.0	0.2181	0.2402
20.0	1.0	0.94213	0.89098	0.93732	0.08543	0.93575	0.94206	-22.05781	0.94219	0.00041	0.97725	0.80485	2.0	0.21111	0.2402



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

