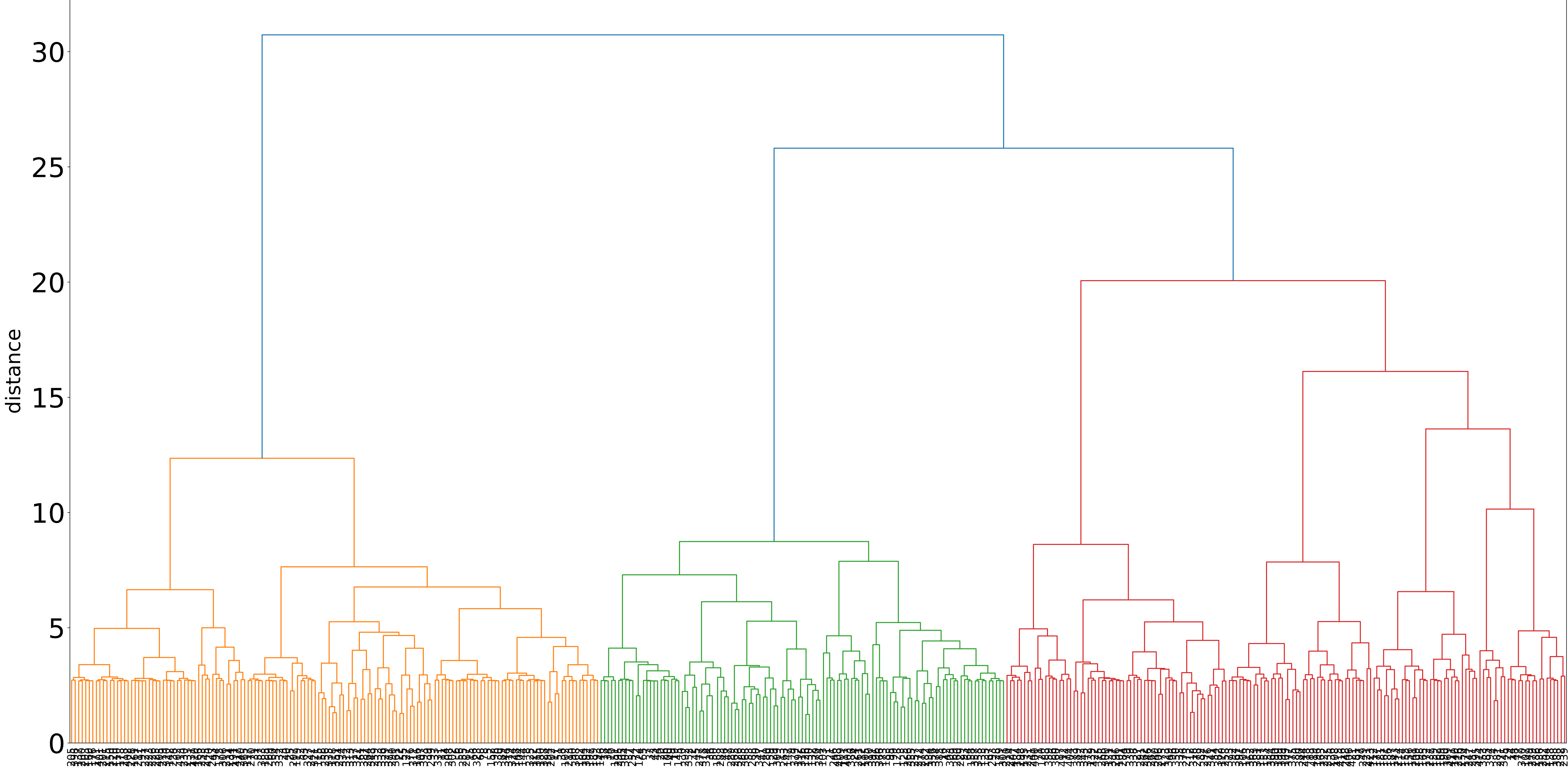


Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 1.00, ward link



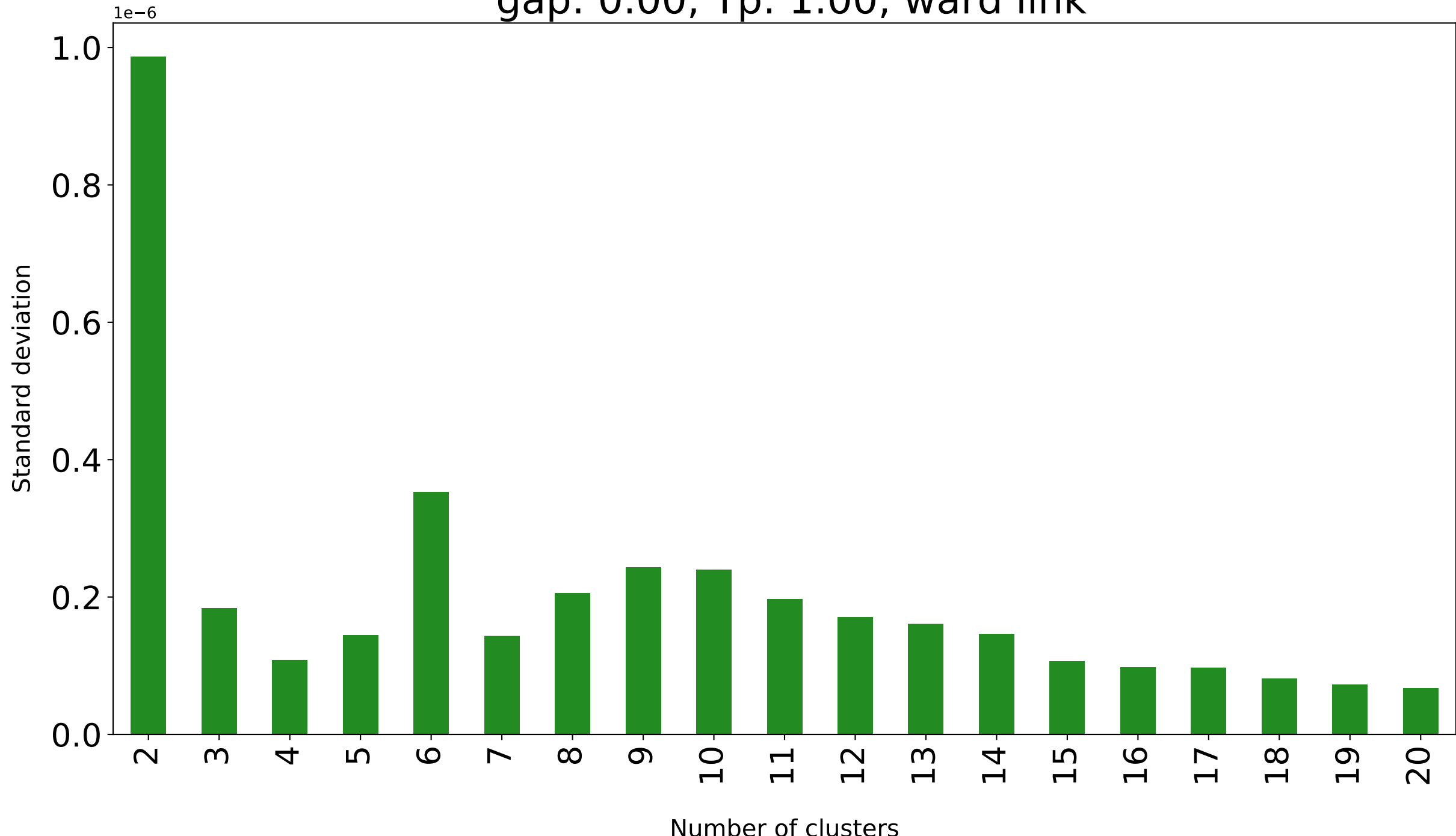
patient index

Cophenetic Correlation Coefficient: 0.7549195930431408

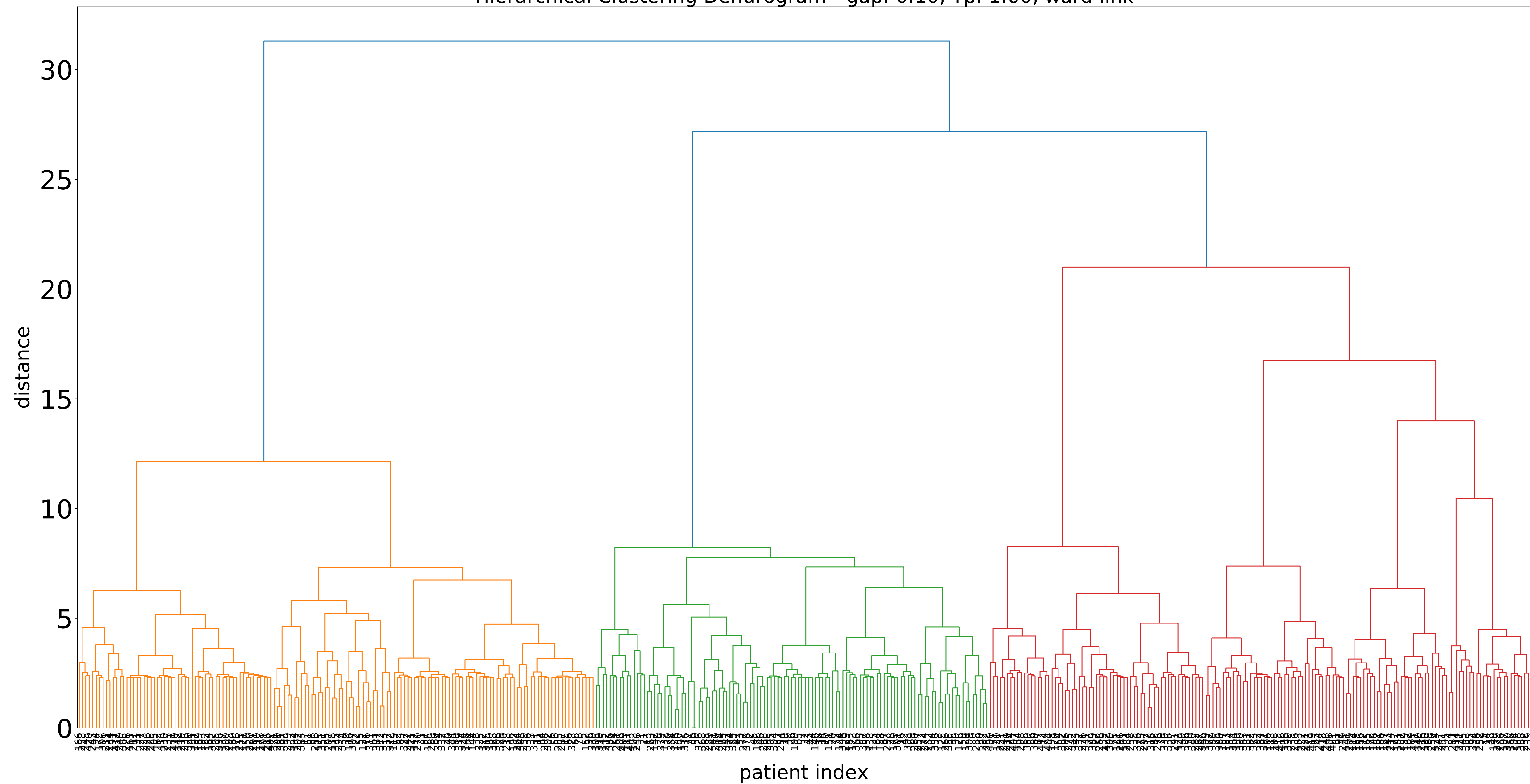
# Average values of five clustering indices gap: 0.00, Tp: 1.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99731	0.99471	0.99268	0.00146	0.99418	0.99731	-0.23347	0.99731	0.00016	0.99432	0.98981	0.0	0.15499	0.45421
3.0	1.0	0.99333	0.9869	0.99066	0.00341	0.98993	0.99333	-0.89531	0.99333	0.00017	0.99109	0.97465	0.0587	0.17868	0.4041
4.0	1.0	0.99235	0.98497	0.98992	0.0041	0.98951	0.99235	-1.76859	0.99235	0.0002	0.99179	0.97094	0.07407	0.19152	0.4041
5.0	1.0	0.98754	0.97578	0.98452	0.01202	0.98347	0.98753	-2.70021	0.98755	0.00021	0.98789	0.95411	0.08485	0.20109	0.4041
6.0	1.0	0.97979	0.96281	0.96427	0.01309	0.9743	0.97914	-3.65435	0.98044	0.00021	0.98249	0.9378	0.18667	0.20981	0.40501
7.0	1.0	0.95864	0.9216	0.9401	0.02328	0.94965	0.95856	-4.84185	0.95871	0.00025	0.97097	0.85813	0.28	0.16844	0.40501
8.0	1.0	0.94666	0.90038	0.91248	0.02969	0.93566	0.94604	-5.65061	0.94728	0.00025	0.96369	0.82593	0.28	0.19101	0.40501
9.0	1.0	0.84988	0.74204	0.84607	0.08219	0.82413	0.84917	-6.08895	0.85058	0.00026	0.91547	0.5976	1.07692	0.15364	0.3812
10.0	1.0	0.82211	0.70198	0.80075	0.09418	0.79458	0.82134	-7.33658	0.82288	0.00027	0.90871	0.54926	1.07692	0.13914	0.3812
11.0	1.0	0.80009	0.6694	0.75158	0.10266	0.77182	0.799	-8.04055	0.80118	0.00028	0.90493	0.50958	1.47368	0.13137	0.38461
12.0	1.0	0.77827	0.63767	0.69882	0.11416	0.74967	0.77611	-9.72367	0.78045	0.00029	0.90183	0.47306	1.47368	0.12195	0.38461
13.0	1.0	0.79486	0.66305	0.74569	0.11	0.77168	0.79416	-11.11801	0.79555	0.00033	0.91974	0.50237	1.47368	0.11423	0.38461
14.0	1.0	0.78851	0.65484	0.74693	0.11443	0.76703	0.78798	-12.06306	0.78905	0.00036	0.92477	0.49351	1.82609	0.10729	0.38461
15.0	1.0	0.7438	0.59391	0.74999	0.1454	0.72145	0.74299	-13.15507	0.74461	0.00038	0.92059	0.42571	1.88652	0.10014	0.38461
16.0	1.0	0.73038	0.57717	0.73612	0.15324	0.70869	0.72962	-14.98366	0.73114	0.0004	0.92242	0.40883	1.88652	0.09656	0.38461
17.0	1.0	0.73127	0.57927	0.71932	0.14864	0.71095	0.73092	-17.1617	0.73162	0.00043	0.92711	0.4116	1.88652	0.092	0.38461
18.0	1.0	0.73276	0.58065	0.71856	0.14645	0.71417	0.73247	-18.74695	0.73304	0.00046	0.93276	0.41227	1.88652	0.08729	0.38461
19.0	1.0	0.73455	0.58275	0.71752	0.14979	0.71743	0.73431	-19.4608	0.7348	0.0005	0.93763	0.41413	1.88652	0.08739	0.35542
20.0	1.0	0.73209	0.57963	0.72835	0.15499	0.71633	0.73177	-20.6386	0.7324	0.00054	0.94211	0.41105	2.0	0.08401	0.35542

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.00, Tp: 1.00, ward link



Hierarchical Clustering Dendrogram - gap: 0.10, Tp: 1.00, ward link

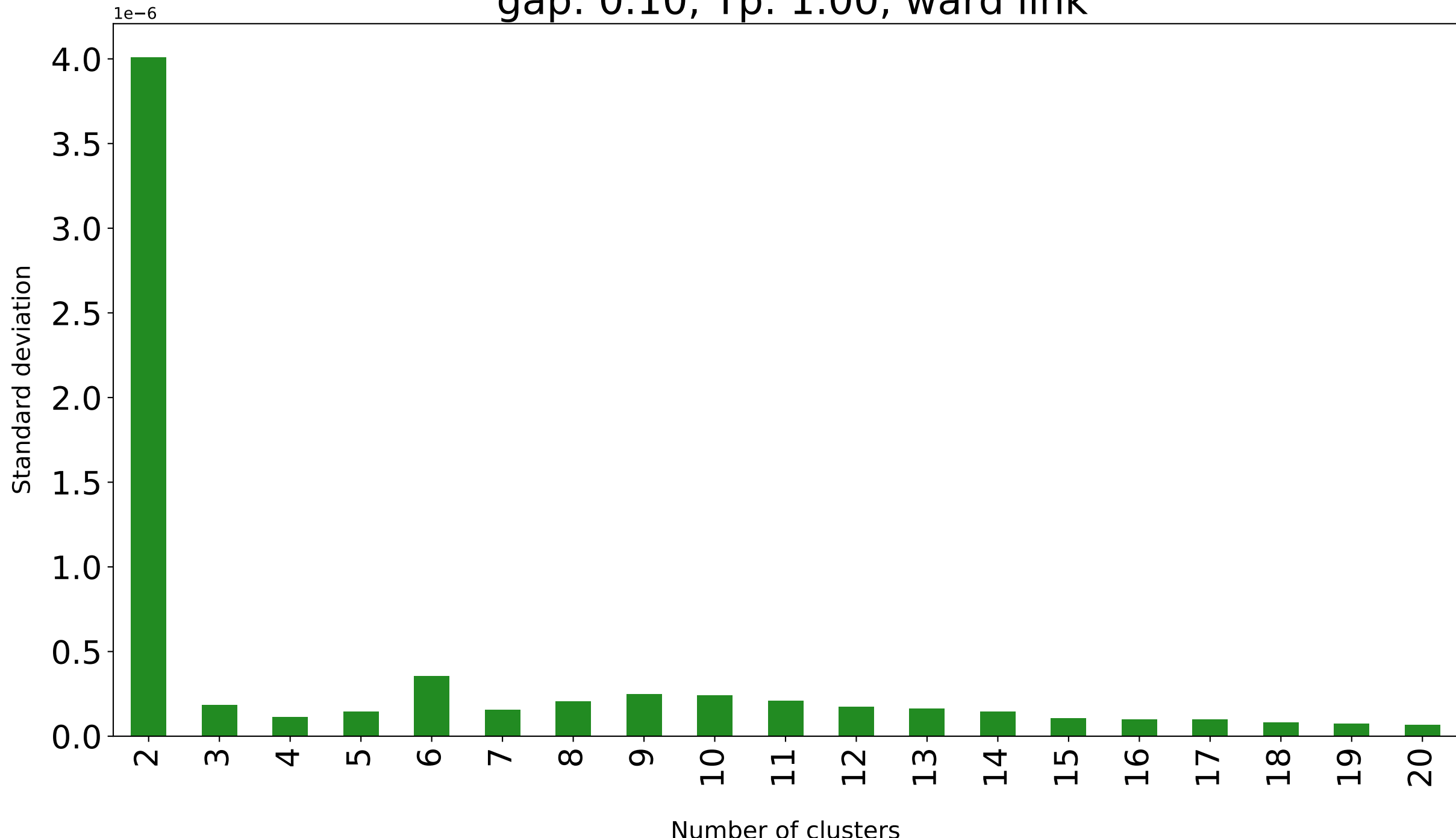


Cophenetic Correlation Coefficient: 0.7791449467669053

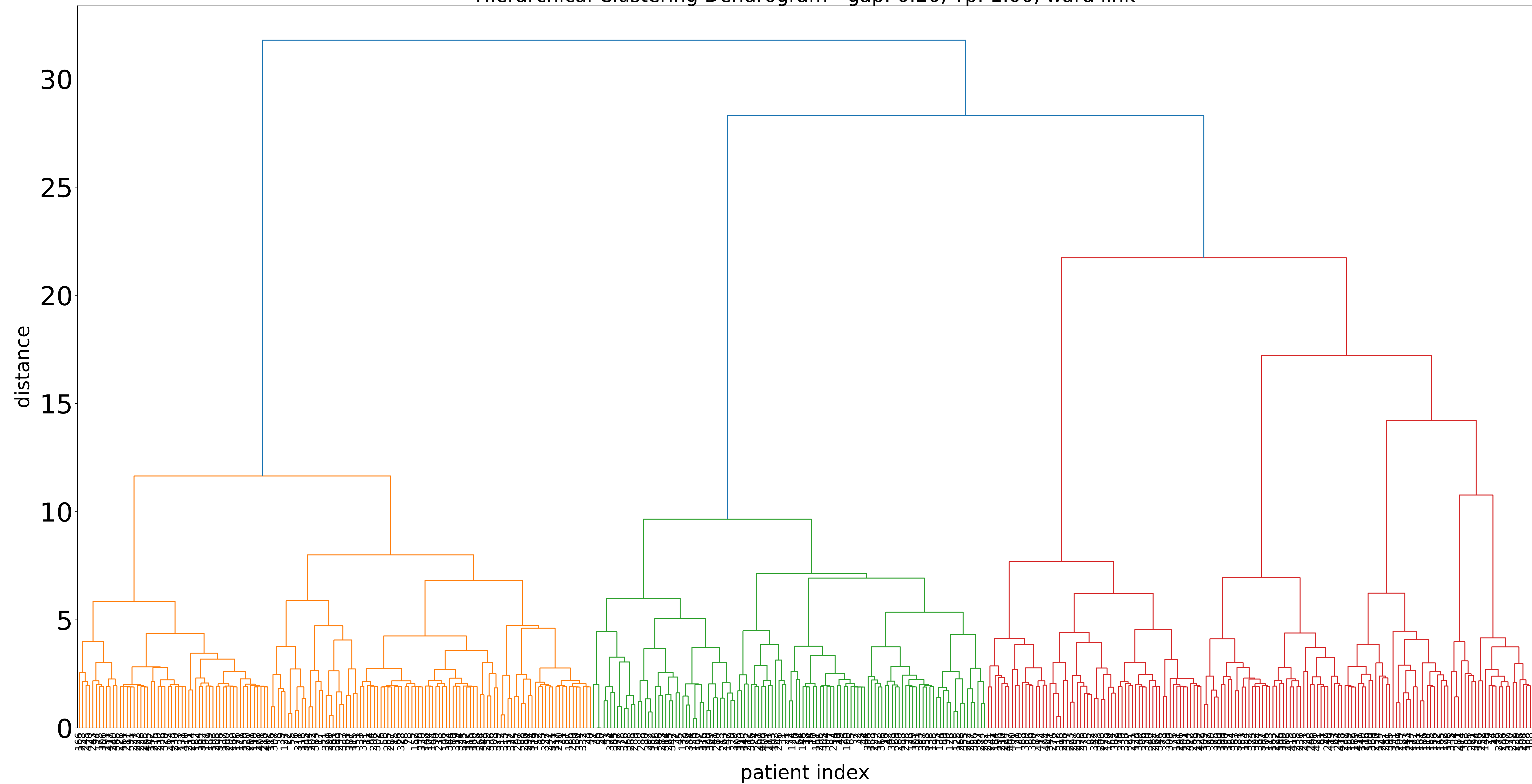
Average values of five clustering indices  
gap: 0.10, Tp: 1.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.98864	0.98124	0.9753	0.00757	0.97432	0.98863	-0.21909	0.98864	0.00015	0.97963	0.96985	0.05245	0.17739	0.38741
3.0	1.0	0.99139	0.98307	0.98772	0.00423	0.987	0.99139	-0.89489	0.99139	0.00017	0.9885	0.96721	0.05828	0.21048	0.36524
4.0	1.0	0.99005	0.98046	0.98542	0.00527	0.98635	0.99005	-1.75949	0.99005	0.0002	0.98932	0.96228	0.05828	0.22951	0.36524
5.0	1.0	0.98699	0.97462	0.98162	0.01118	0.98273	0.98698	-2.69287	0.98699	0.00021	0.98732	0.95165	0.05828	0.24209	0.36633
6.0	1.0	0.99071	0.98192	0.98515	0.00613	0.98788	0.99062	-3.65325	0.9908	0.00021	0.99131	0.9659	0.05828	0.25276	0.36633
7.0	1.0	0.96993	0.94232	0.96798	0.01735	0.96332	0.96974	-4.86981	0.97011	0.00026	0.97844	0.89399	0.46316	0.19959	0.36633
8.0	1.0	0.96524	0.9343	0.94882	0.01938	0.95809	0.96485	-5.72062	0.96564	0.00026	0.97631	0.88257	0.46316	0.22709	0.38073
9.0	1.0	0.85975	0.75472	0.77264	0.07377	0.83442	0.85731	-6.67139	0.8622	0.00025	0.91523	0.61554	0.46316	0.19875	0.38073
10.0	1.0	0.83804	0.72295	0.75167	0.08585	0.81209	0.8356	-7.28493	0.84049	0.00026	0.91216	0.57545	0.58667	0.17613	0.39554
11.0	1.0	0.82863	0.71176	0.77599	0.09482	0.80525	0.82762	-8.09744	0.82966	0.0003	0.9204	0.5624	0.75429	0.15752	0.25043
12.0	1.0	0.79391	0.65901	0.70801	0.11596	0.76834	0.79114	-9.80548	0.79669	0.0003	0.91078	0.49827	0.75429	0.14268	0.25043
13.0	1.0	0.79261	0.65607	0.70828	0.10773	0.76932	0.79	-10.86114	0.79524	0.00033	0.91759	0.49303	0.8186	0.1379	0.25043
14.0	1.0	0.79017	0.65564	0.76728	0.11953	0.77009	0.78996	-12.09427	0.79039	0.00038	0.92926	0.49165	0.8186	0.12818	0.25043
15.0	1.0	0.8109	0.68483	0.79797	0.10872	0.79442	0.81071	-13.64475	0.81109	0.00043	0.94117	0.52539	1.04762	0.12433	0.25043
16.0	1.0	0.79202	0.65802	0.77836	0.12589	0.7752	0.79184	-14.3055	0.7922	0.00044	0.93963	0.49385	2.0	0.12098	0.25043
17.0	1.0	0.77337	0.63293	0.74539	0.13104	0.75606	0.7731	-16.38622	0.77364	0.00045	0.93761	0.46661	2.0	0.11406	0.25043
18.0	1.0	0.7641	0.62068	0.74956	0.1344	0.74761	0.7639	-18.32178	0.76431	0.00048	0.94015	0.45328	2.0	0.11083	0.25043
19.0	1.0	0.7466	0.59749	0.7426	0.14652	0.73029	0.74633	-19.45572	0.74687	0.00051	0.94044	0.42848	2.0	0.10544	0.25043
20.0	1.0	0.75345	0.60643	0.7475	0.14674	0.73849	0.75319	-20.9172	0.75372	0.00054	0.94505	0.43793	2.0	0.10565	0.25043

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.10, Tp: 1.00, ward link



Hierarchical Clustering Dendrogram - gap: 0.20, Tp: 1.00, ward link



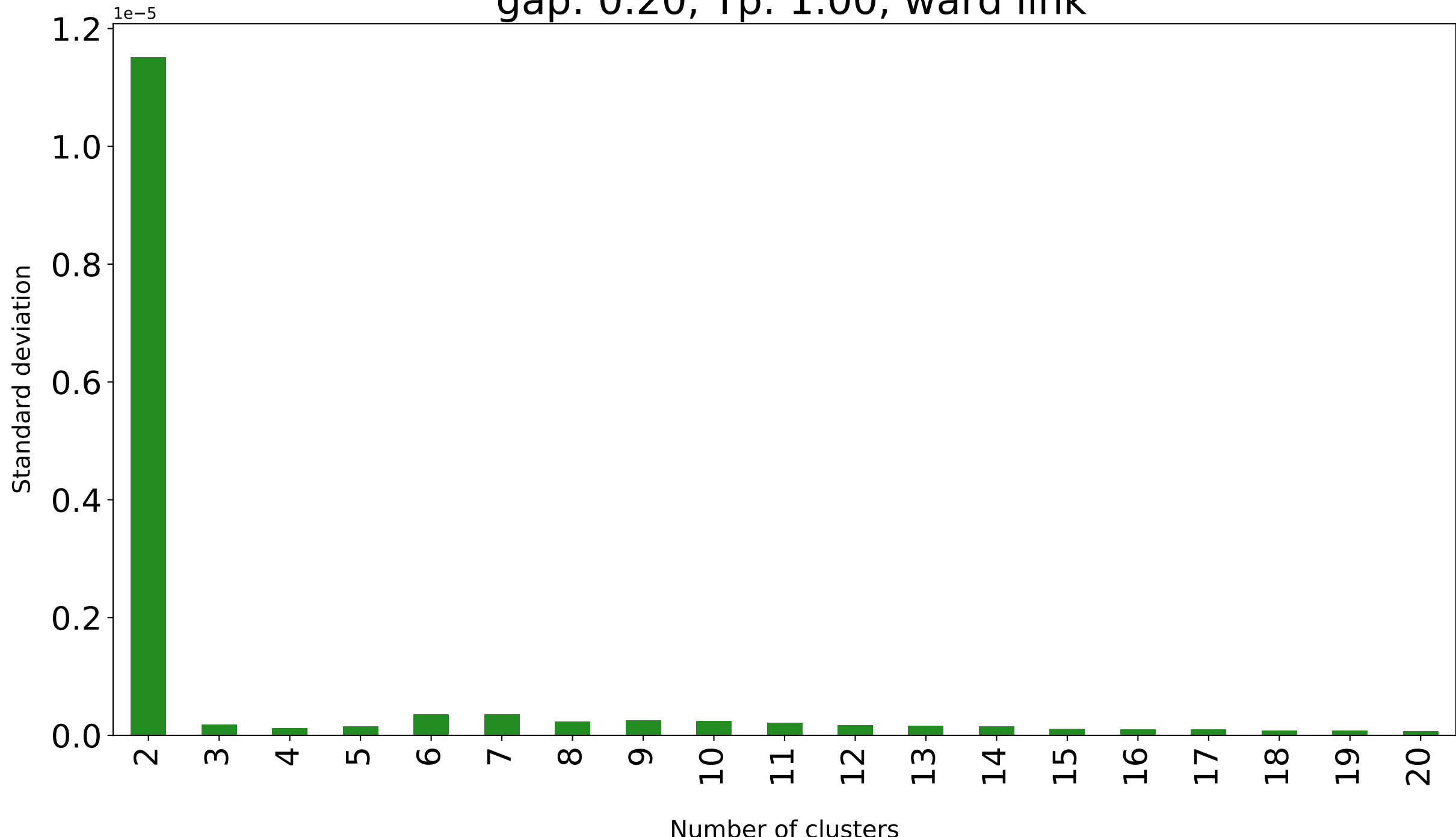
Cophenetic Correlation Coefficient: 0.7798381707648713

# Average values of five clustering indices gap: 0.20, Tp: 1.00, ward link

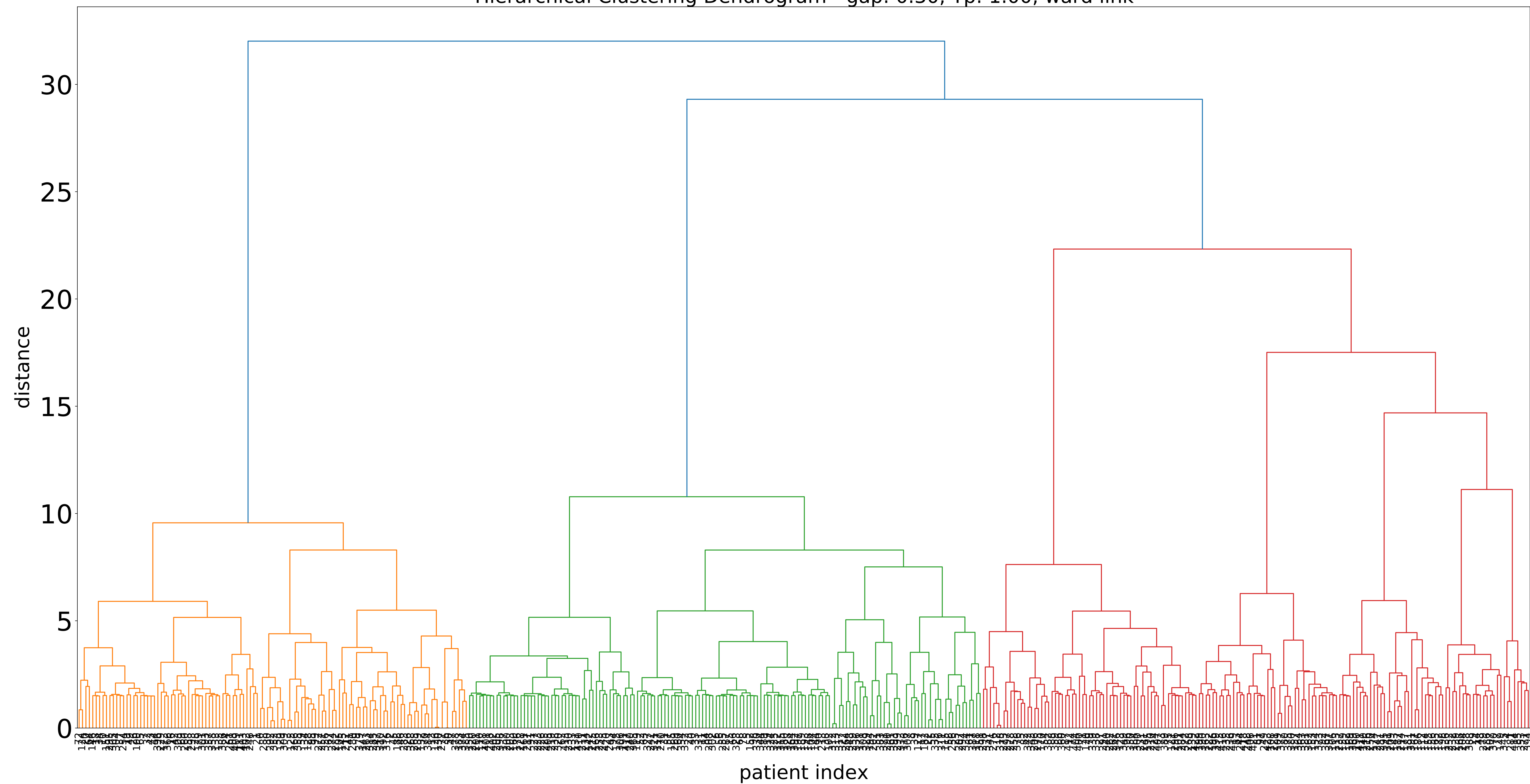
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.93386	0.90502	0.84671	0.05002	0.84675	0.9338	-0.13945	0.93393	0.00013	0.89608	0.87716	0.0292	0.20482	0.32755
3.0	1.0	0.9947	0.98953	0.99239	0.0026	0.99199	0.9947	-0.90695	0.9947	0.00017	0.9929	0.97959	0.12579	0.24425	0.31151
4.0	1.0	0.99163	0.9836	0.98815	0.00504	0.98853	0.99163	-1.77018	0.99163	0.0002	0.99105	0.96844	0.20833	0.2676	0.31151
5.0	1.0	0.98946	0.97945	0.98698	0.00995	0.98602	0.98946	-2.71353	0.98947	0.00021	0.98975	0.96082	0.36364	0.28228	0.3124
6.0	1.0	0.99392	0.98798	0.99351	0.00522	0.99202	0.99391	-3.67508	0.99393	0.00022	0.99424	0.97654	0.64516	0.29221	0.3124
7.0	1.0	0.95228	0.91025	0.97361	0.02748	0.94133	0.95075	-4.79362	0.95383	0.00025	0.96322	0.84586	0.64516	0.22993	0.3124
8.0	1.0	0.95881	0.92327	0.93672	0.02229	0.95056	0.95812	-5.73028	0.95951	0.00026	0.97237	0.86694	0.64516	0.26201	0.33173
9.0	1.0	0.93464	0.87934	0.9236	0.03513	0.92378	0.93453	-6.62375	0.93476	0.0003	0.9635	0.79014	0.9589	0.22418	0.29774
10.0	1.0	0.85736	0.75212	0.84571	0.07963	0.83712	0.85706	-7.35648	0.85767	0.0003	0.93143	0.60675	0.9589	0.20672	0.29542
11.0	1.0	0.83212	0.71498	0.80652	0.09686	0.81071	0.83188	-8.65125	0.83237	0.00032	0.92681	0.56109	0.9589	0.18547	0.29542
12.0	1.0	0.80526	0.67663	0.77494	0.11531	0.78287	0.805	-9.18377	0.80552	0.00033	0.92274	0.51573	1.33333	0.17643	0.29542
13.0	1.0	0.77969	0.64112	0.73417	0.13442	0.75611	0.77919	-10.89238	0.7802	0.00034	0.91804	0.47573	1.33333	0.16002	0.29542
14.0	1.0	0.77863	0.64025	0.74367	0.13459	0.75699	0.77829	-11.93394	0.77897	0.00037	0.92407	0.47511	1.33333	0.15448	0.29542
15.0	1.0	0.77815	0.63972	0.77855	0.14131	0.75888	0.77773	-13.14421	0.77858	0.00041	0.93138	0.47484	1.33333	0.1446	0.29542
16.0	1.0	0.76698	0.62485	0.75504	0.14881	0.74783	0.7667	-15.24485	0.76726	0.00042	0.93158	0.45854	1.33333	0.13585	0.29542
17.0	1.0	0.7697	0.62811	0.76416	0.1419	0.75217	0.76938	-16.64965	0.77002	0.00045	0.93679	0.46158	1.33333	0.13152	0.29542
18.0	1.0	0.76345	0.61986	0.75774	0.14542	0.74666	0.76313	-17.77749	0.76378	0.00047	0.93908	0.45265	1.33333	0.12831	0.24642
19.0	1.0	0.76742	0.62513	0.74884	0.1434	0.7517	0.76718	-19.04569	0.76767	0.0005	0.94273	0.45822	2.0	0.13074	0.24642
20.0	1.0	0.7611	0.61658	0.75454	0.14476	0.74625	0.76086	-21.13589	0.76133	0.00053	0.94556	0.44884	2.0	0.12796	0.24642



Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.20, Tp: 1.00, ward link



Hierarchical Clustering Dendrogram - gap: 0.30, Tp: 1.00, ward link

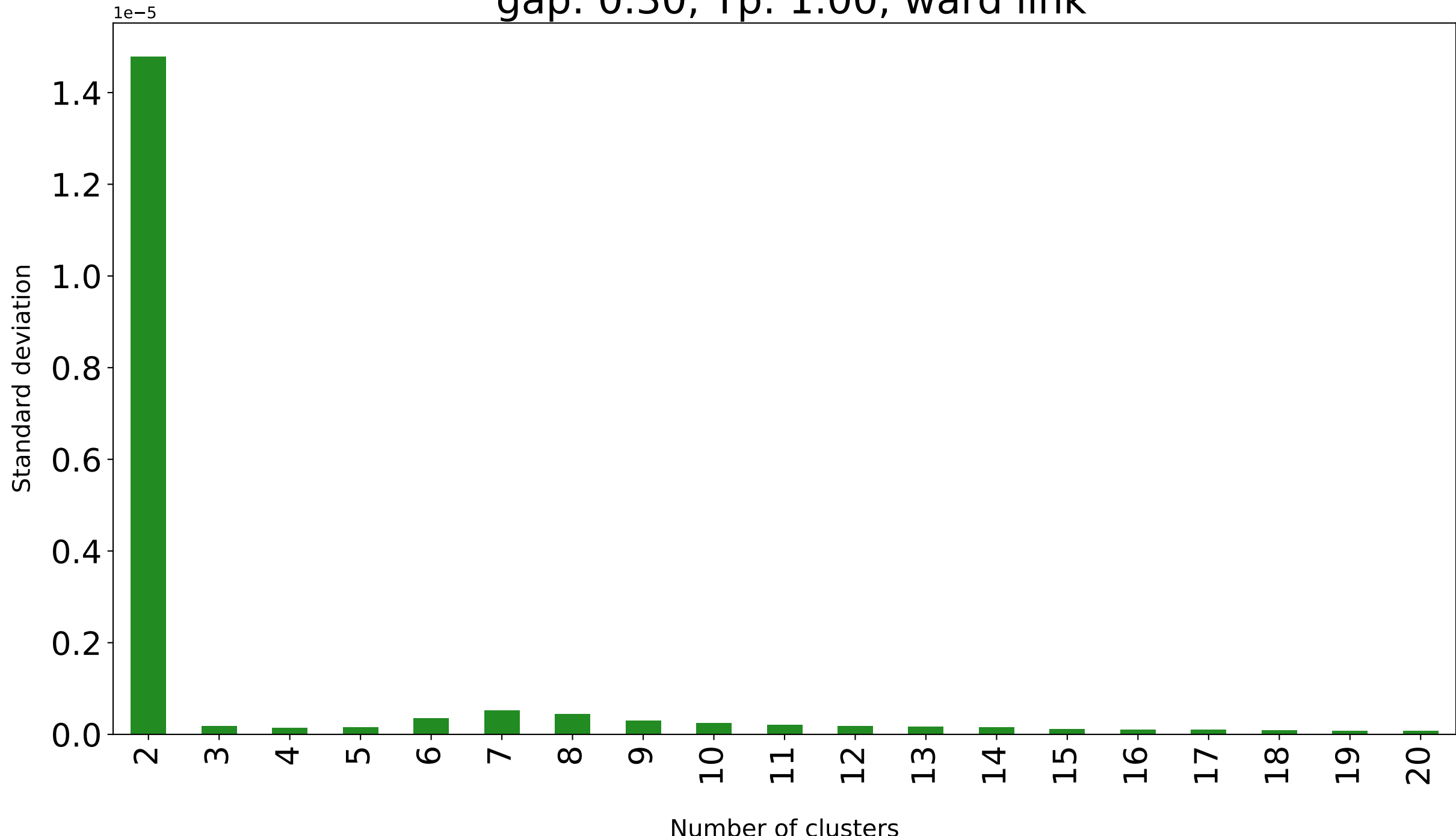


Cophenetic Correlation Coefficient: 0.7823976270407127

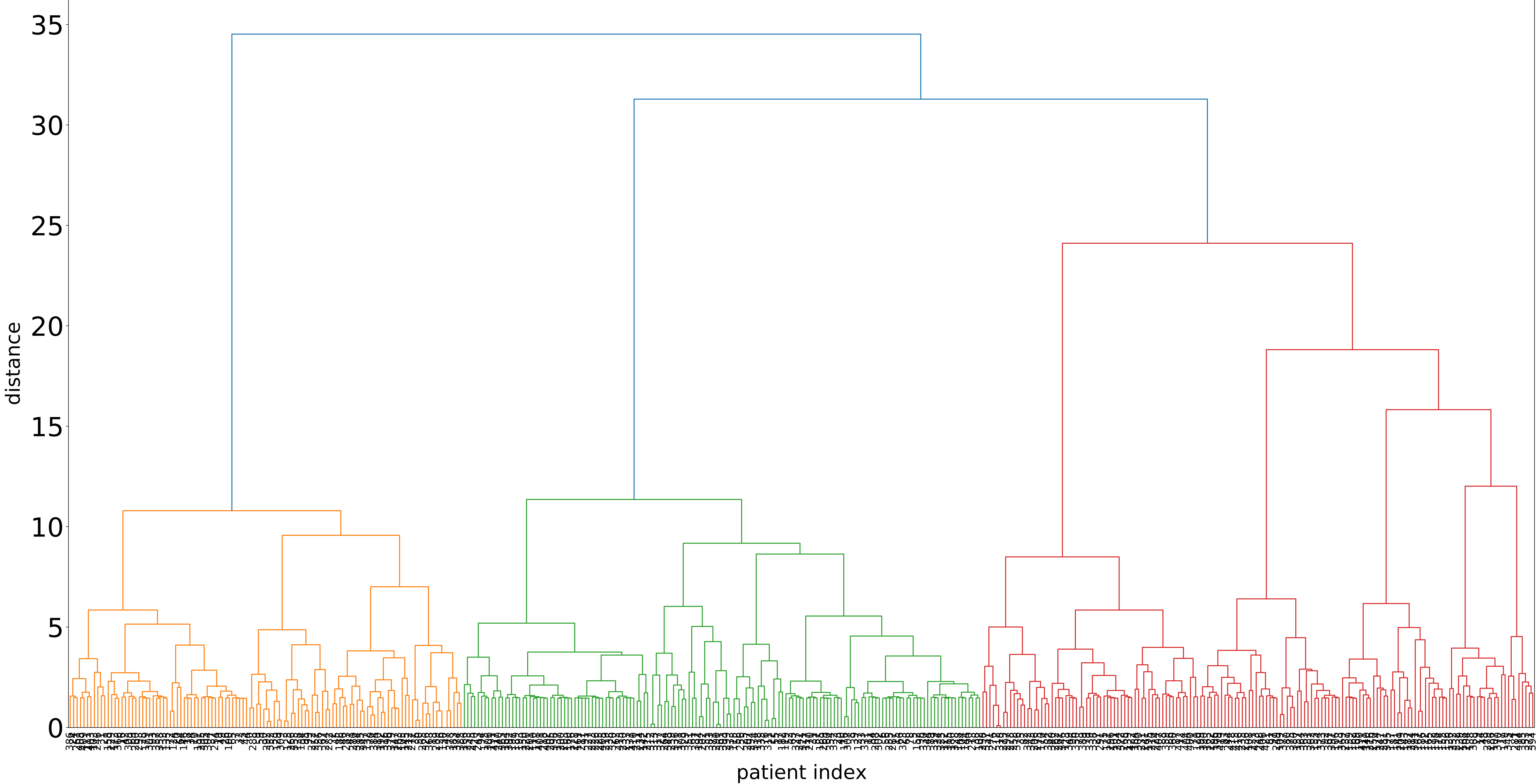
Average values of five clustering indices  
gap: 0.30, Tp: 1.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.80786	0.72599	0.54465	0.14501	0.54801	0.80723	-0.01525	0.8085	9e-05	0.69747	0.65209	0.06452	0.25932	0.23506
3.0	1.0	0.99373	0.98767	0.99004	0.00307	0.99052	0.99373	-0.90568	0.99373	0.00017	0.99161	0.97616	0.25	0.2803	0.26185
4.0	1.0	0.9904	0.98123	0.98719	0.00561	0.98685	0.99039	-1.7682	0.9904	0.0002	0.98977	0.96409	0.41237	0.30801	0.26185
5.0	1.0	0.98733	0.97539	0.98629	0.01192	0.98322	0.98732	-2.70842	0.98734	0.00021	0.98776	0.95346	0.71429	0.32458	0.26257
6.0	1.0	0.99251	0.98523	0.99474	0.00634	0.9902	0.99249	-3.67683	0.99254	0.00022	0.99295	0.97137	0.8	0.33693	0.26257
7.0	1.0	0.9317	0.87436	0.85596	0.03721	0.91486	0.92818	-4.44156	0.93526	0.00021	0.94308	0.7985	1.17647	0.36656	0.31315
8.0	1.0	0.92297	0.86416	0.89241	0.04209	0.90659	0.92201	-5.62162	0.92393	0.00025	0.94753	0.78062	1.17647	0.30126	0.33937
9.0	1.0	0.8931	0.81291	0.87446	0.05857	0.87514	0.8929	-6.47922	0.8933	0.00028	0.94084	0.69708	1.50943	0.25807	0.33937
10.0	1.0	0.84292	0.73073	0.78958	0.08157	0.81988	0.84209	-6.85114	0.84375	0.00029	0.92221	0.58209	1.73913	0.25189	0.22793
11.0	1.0	0.83286	0.71666	0.8408	0.09423	0.81243	0.83229	-8.00822	0.83343	0.00033	0.92951	0.56522	1.73913	0.22686	0.22793
12.0	1.0	0.852	0.74351	0.86961	0.08343	0.83569	0.85129	-9.43113	0.85272	0.00037	0.94246	0.59615	1.73913	0.20926	0.22793
13.0	1.0	0.87037	0.7725	0.88236	0.07744	0.8571	0.8699	-10.86741	0.87085	0.0004	0.95273	0.63462	1.73913	0.20538	0.22793
14.0	1.0	0.84914	0.74032	0.85332	0.09311	0.83467	0.84881	-12.66552	0.84948	0.00041	0.94841	0.59301	1.73913	0.18683	0.22793
15.0	1.0	0.82685	0.70756	0.81567	0.11033	0.81107	0.8266	-14.64616	0.82709	0.00042	0.94374	0.55246	1.73913	0.17493	0.22793
16.0	1.0	0.79863	0.66675	0.79972	0.12676	0.78184	0.7982	-15.41171	0.79906	0.00043	0.93968	0.50382	1.73913	0.16729	0.22793
17.0	1.0	0.78621	0.64999	0.7833	0.13603	0.76948	0.7858	-16.31497	0.78661	0.00045	0.93968	0.48529	2.0	0.16293	0.22793
18.0	1.0	0.75914	0.61259	0.77473	0.14491	0.742	0.75823	-17.42988	0.76004	0.00047	0.93753	0.44398	2.0	0.1546	0.22793
19.0	1.0	0.77011	0.62741	0.78601	0.13965	0.75488	0.76927	-19.38666	0.77095	0.00051	0.94404	0.46013	2.0	0.15214	0.22793
20.0	1.0	0.76786	0.62538	0.7672	0.14241	0.75317	0.76743	-20.72498	0.76828	0.00053	0.94608	0.45852	2.0	0.1521	0.22793

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.30, Tp: 1.00, ward link



Hierarchical Clustering Dendrogram - gap: 0.40, Tp: 1.00, ward link

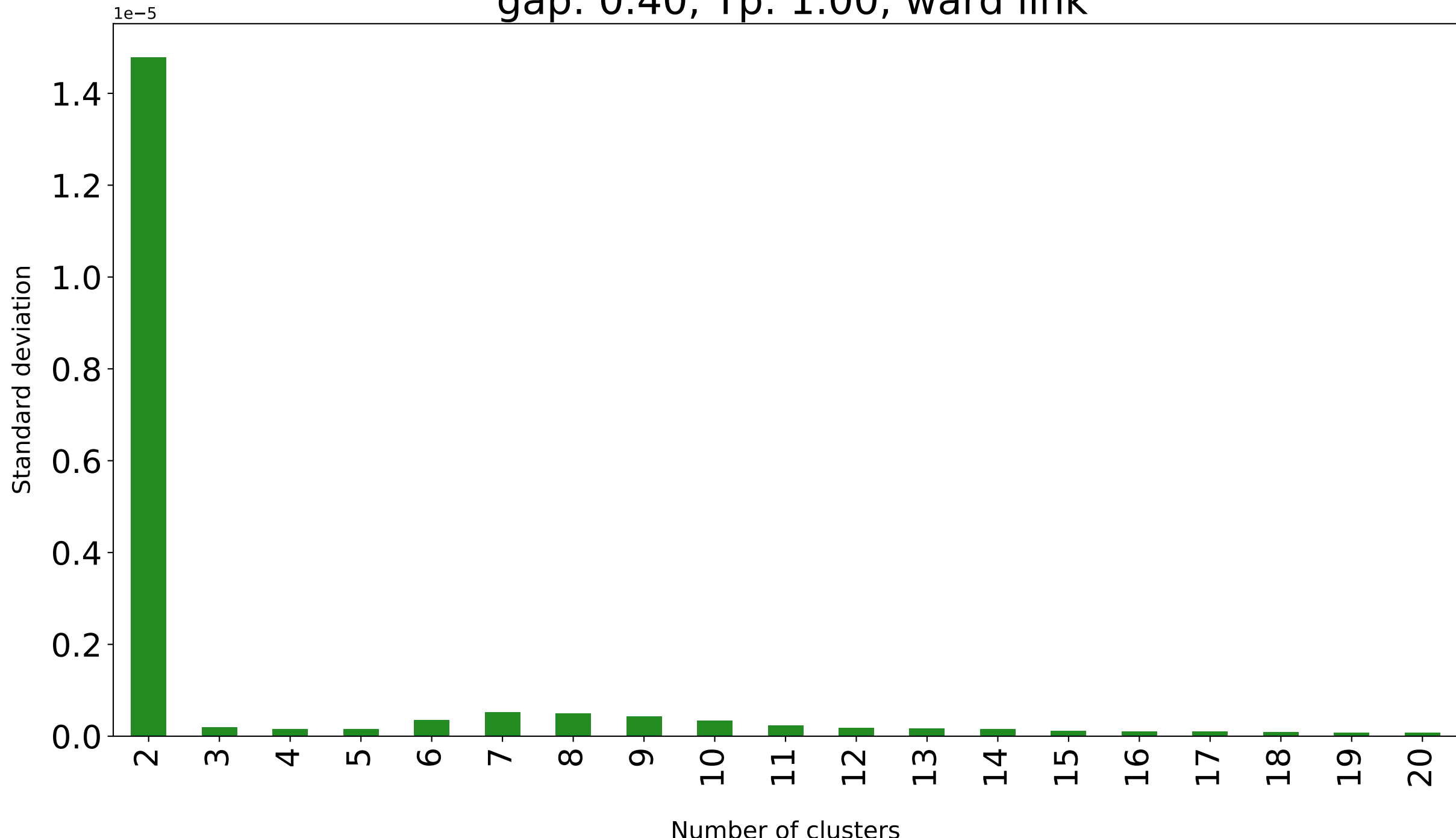


Cophenetic Correlation Coefficient: 0.765622741701294

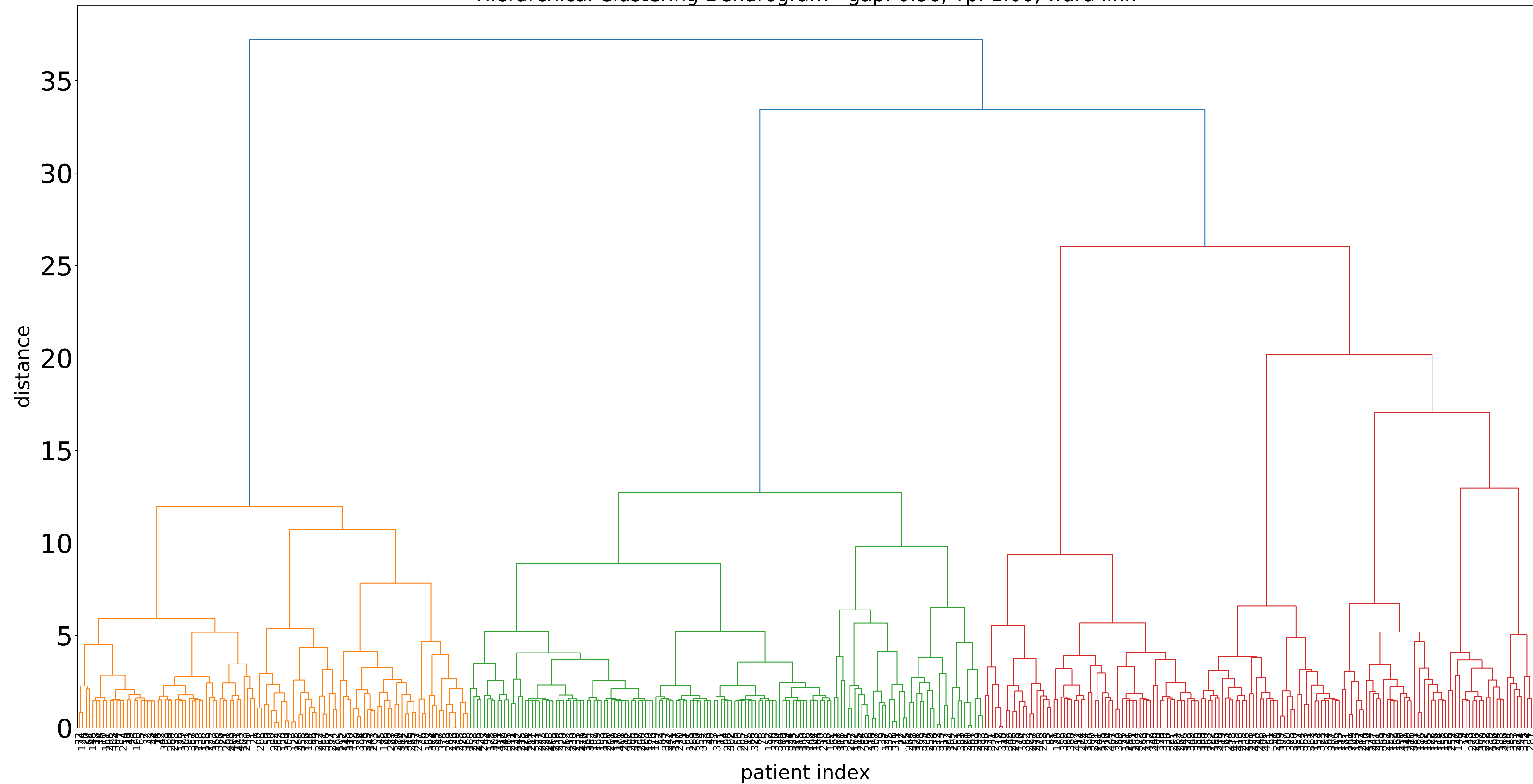
Average values of five clustering indices  
gap: 0.40, Tp: 1.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90086	0.85773	0.76428	0.07509	0.76679	0.90044	-0.15331	0.90127	0.00013	0.84268	0.8177	0.06129	0.26851	0.2326
3.0	1.0	0.99342	0.98707	0.98968	0.00323	0.99005	0.99342	-0.90303	0.99342	0.00017	0.9912	0.97501	0.2375	0.2876	0.26451
4.0	1.0	0.98897	0.97849	0.98503	0.00667	0.9849	0.98897	-1.75895	0.98898	0.0002	0.98825	0.95898	0.39175	0.31716	0.26451
5.0	1.0	0.98619	0.97318	0.98496	0.01298	0.98169	0.98618	-2.69649	0.9862	0.00021	0.9866	0.94926	0.67857	0.3347	0.26517
6.0	1.0	0.99152	0.98328	0.99362	0.0076	0.98889	0.9915	-3.65445	0.99154	0.00022	0.992	0.96762	0.76	0.34748	0.26517
7.0	1.0	0.93695	0.88257	0.86483	0.03521	0.92077	0.93424	-4.42167	0.93967	0.00021	0.9464	0.80589	1.11765	0.37777	0.30436
8.0	1.0	0.82228	0.70661	0.79137	0.10355	0.78422	0.82099	-5.26869	0.82357	0.00021	0.88201	0.56529	1.11765	0.30892	0.33246
9.0	1.0	0.8239	0.71159	0.82241	0.09691	0.79362	0.82302	-6.35689	0.82478	0.00025	0.90218	0.5748	1.11765	0.269	0.33246
10.0	1.0	0.8264	0.71212	0.80339	0.0909	0.79986	0.82567	-7.04008	0.82713	0.00028	0.9122	0.56906	1.11765	0.26604	0.21811
11.0	1.0	0.83744	0.72468	0.83926	0.08876	0.81626	0.8364	-8.39886	0.83849	0.00032	0.92724	0.57811	1.11765	0.24786	0.22176
12.0	1.0	0.86322	0.7625	0.85721	0.07652	0.8475	0.86276	-9.88664	0.86368	0.00036	0.94498	0.62368	1.11765	0.24055	0.22176
13.0	1.0	0.90569	0.82892	0.90874	0.05623	0.89597	0.90547	-11.26302	0.90591	0.00042	0.96529	0.71161	1.11765	0.22594	0.22176
14.0	1.0	0.90142	0.82176	0.90203	0.06377	0.89175	0.90127	-12.25635	0.90157	0.00043	0.96534	0.70076	1.11765	0.22145	0.22176
15.0	1.0	0.88246	0.79089	0.88461	0.07695	0.87155	0.88226	-14.09417	0.88265	0.00044	0.96078	0.65727	1.11765	0.20195	0.22176
16.0	1.0	0.86754	0.76786	0.86069	0.08979	0.8558	0.86735	-16.14796	0.86772	0.00045	0.95773	0.62716	1.11765	0.18979	0.22176
17.0	1.0	0.85366	0.74682	0.82938	0.1007	0.84127	0.85331	-17.97666	0.85401	0.00046	0.9552	0.60076	1.46154	0.18401	0.22176
18.0	1.0	0.83831	0.72396	0.81736	0.1068	0.8255	0.83797	-18.5118	0.83865	0.00048	0.95349	0.57214	1.46154	0.18092	0.22176
19.0	1.0	0.83591	0.72068	0.8229	0.10618	0.82376	0.83551	-20.32017	0.83631	0.0005	0.95559	0.56862	2.0	0.17369	0.22176
20.0	1.0	0.81145	0.68483	0.82237	0.1154	0.79871	0.81075	-21.53999	0.81216	0.00053	0.95307	0.52539	2.0	0.1667	0.22176

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.40, Tp: 1.00, ward link



Hierarchical Clustering Dendrogram - gap: 0.50, Tp: 1.00, ward link



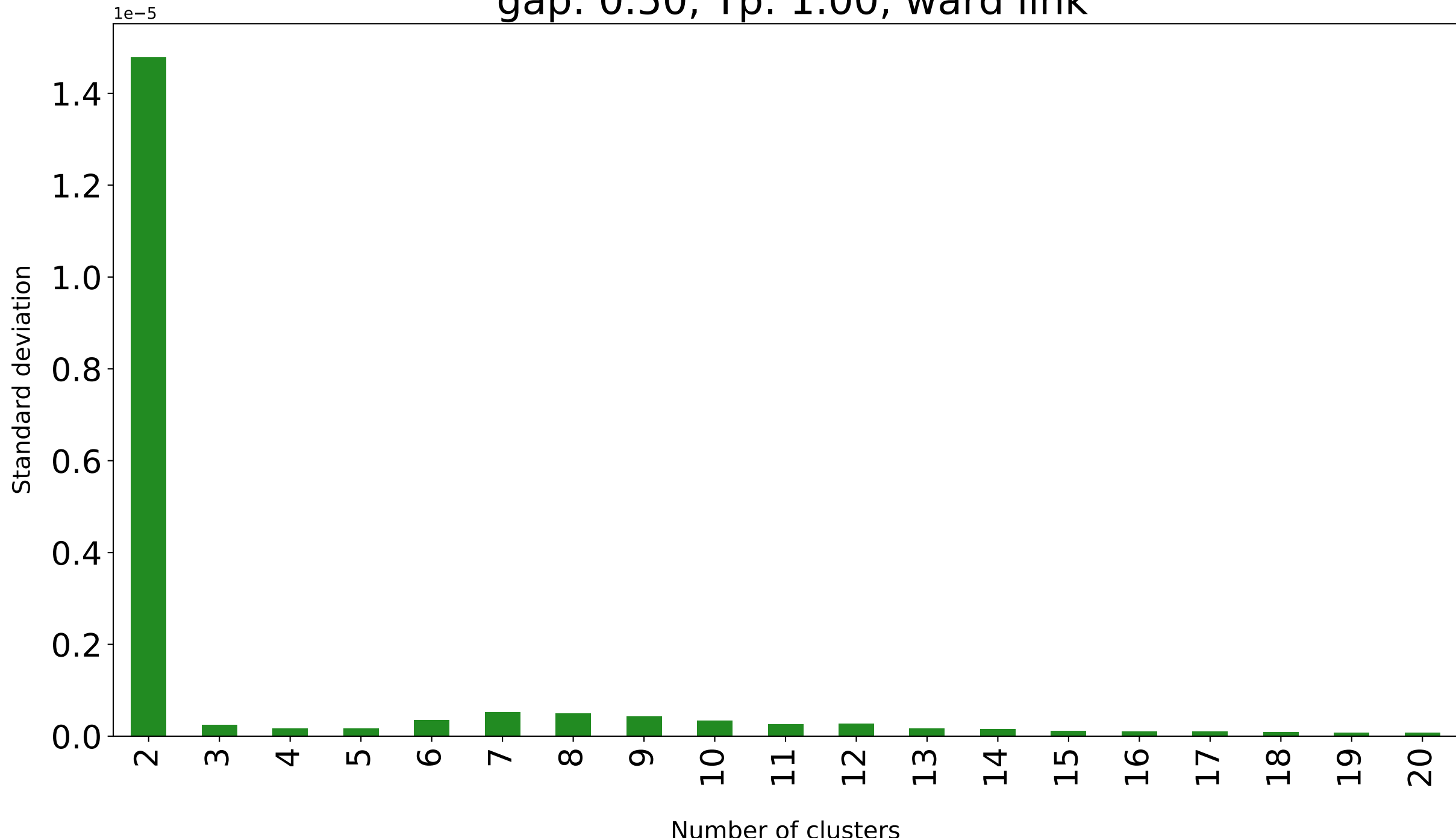
Cophenetic Correlation Coefficient: 0.7520153864248132

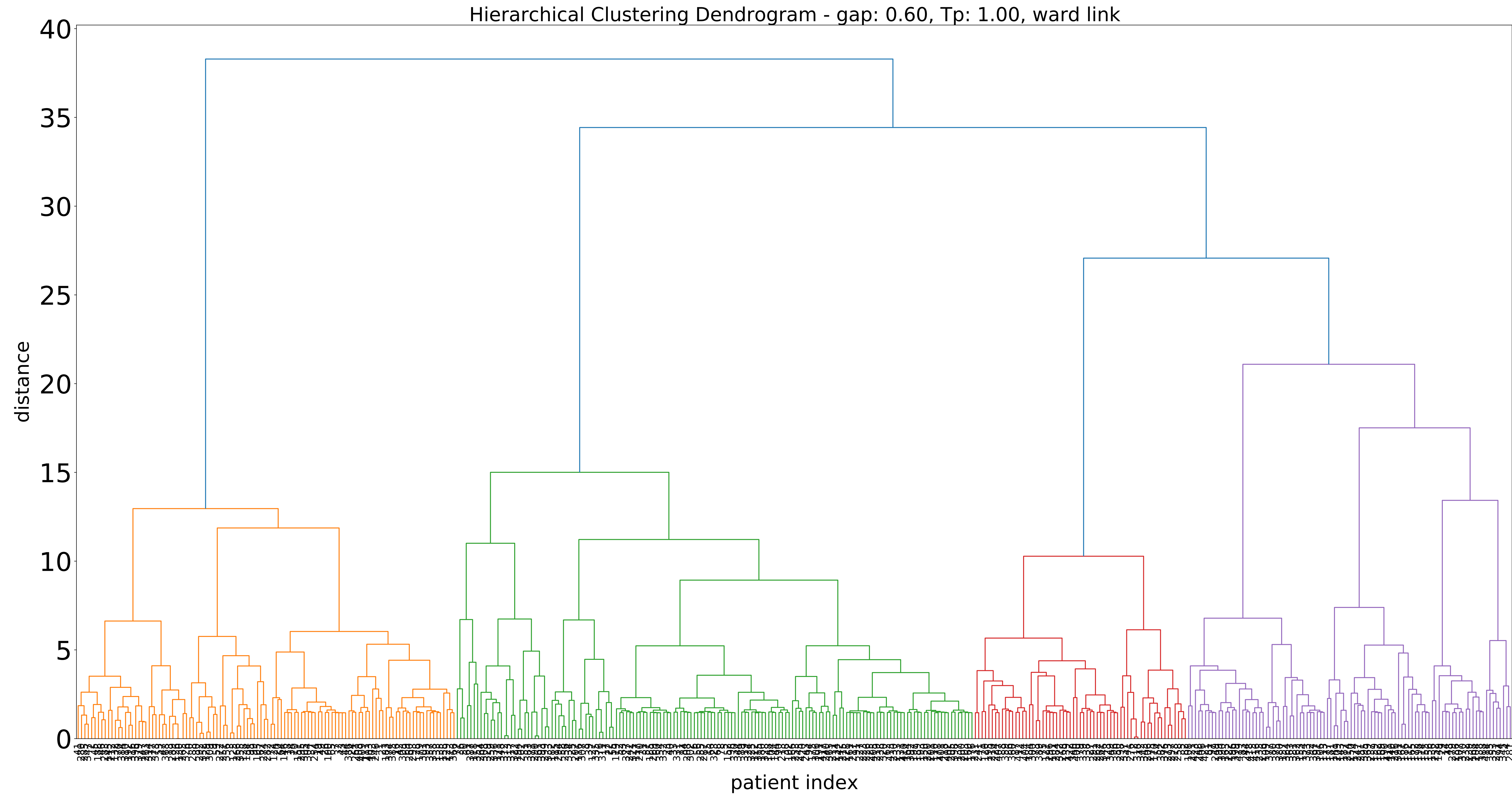


# Average values of five clustering indices gap: 0.50, Tp: 1.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.96677	0.95135	0.91931	0.02471	0.92111	0.96663	-0.25064	0.96692	0.00015	0.94571	0.93524	0.0129	0.27436	0.23447
3.0	1.0	0.99232	0.98501	0.988	0.00377	0.9884	0.99232	-0.89978	0.99232	0.00017	0.98978	0.97127	0.05	0.29154	0.26465
4.0	1.0	0.9886	0.97778	0.9851	0.00663	0.98436	0.98859	-1.75807	0.98861	0.0002	0.98782	0.95771	0.08247	0.32224	0.26465
5.0	1.0	0.98535	0.97158	0.98468	0.01338	0.98057	0.98533	-2.69191	0.98537	0.00021	0.98579	0.94643	0.14286	0.34054	0.26524
6.0	1.0	0.99084	0.98194	0.99324	0.00818	0.988	0.99082	-3.64345	0.99087	0.00022	0.99135	0.96505	0.16	0.35354	0.26524
7.0	1.0	0.92311	0.85662	0.83375	0.04336	0.90338	0.91993	-4.37841	0.92631	0.00021	0.93477	0.76236	0.23529	0.38401	0.29511
8.0	1.0	0.88348	0.79763	0.84232	0.06515	0.8583	0.8819	-5.46208	0.88507	0.00023	0.91987	0.68246	0.23529	0.31908	0.32846
9.0	1.0	0.90939	0.83809	0.91647	0.05686	0.89335	0.90876	-6.56292	0.91001	0.00028	0.9468	0.73262	0.23529	0.28207	0.32011
10.0	1.0	0.90621	0.83423	0.90999	0.06179	0.89125	0.9056	-7.24323	0.90682	0.00029	0.94963	0.72947	0.23529	0.27941	0.21217
11.0	1.0	0.89279	0.81387	0.8783	0.07099	0.87704	0.89216	-8.57209	0.89342	0.0003	0.94658	0.70244	0.23529	0.27072	0.2196
12.0	1.0	0.86827	0.7761	0.83292	0.07857	0.85137	0.86663	-9.89603	0.86992	0.00032	0.94105	0.65587	0.23529	0.25376	0.2196
13.0	1.0	0.89887	0.8182	0.92269	0.06078	0.8884	0.89754	-11.27078	0.9002	0.00042	0.96185	0.7006	0.23529	0.2256	0.2196
14.0	1.0	0.91778	0.84897	0.92904	0.05456	0.90987	0.91753	-12.45031	0.91803	0.00045	0.9714	0.74082	0.34783	0.22208	0.2196
15.0	1.0	0.90768	0.83196	0.9136	0.06458	0.89905	0.90749	-14.52974	0.90787	0.00045	0.96885	0.71525	0.57143	0.21852	0.22908
16.0	1.0	0.89479	0.81016	0.9096	0.07384	0.88546	0.89441	-16.42073	0.89517	0.00047	0.96609	0.68338	0.57143	0.20006	0.22908
17.0	1.0	0.89706	0.8144	0.90301	0.07523	0.88819	0.89679	-18.27145	0.89733	0.00048	0.96774	0.69015	0.57143	0.19969	0.22908
18.0	1.0	0.88992	0.80328	0.87928	0.07867	0.88073	0.88967	-19.7635	0.89018	0.00049	0.96654	0.67551	2.0	0.19822	0.24836
19.0	1.0	0.85957	0.75494	0.8736	0.09772	0.84874	0.85899	-20.51223	0.86015	0.0005	0.96028	0.61018	2.0	0.18848	0.24836
20.0	1.0	0.84042	0.72573	0.86423	0.10818	0.82892	0.83945	-22.17754	0.84138	0.00052	0.95751	0.57347	2.0	0.1793	0.24836

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.50, Tp: 1.00, ward link



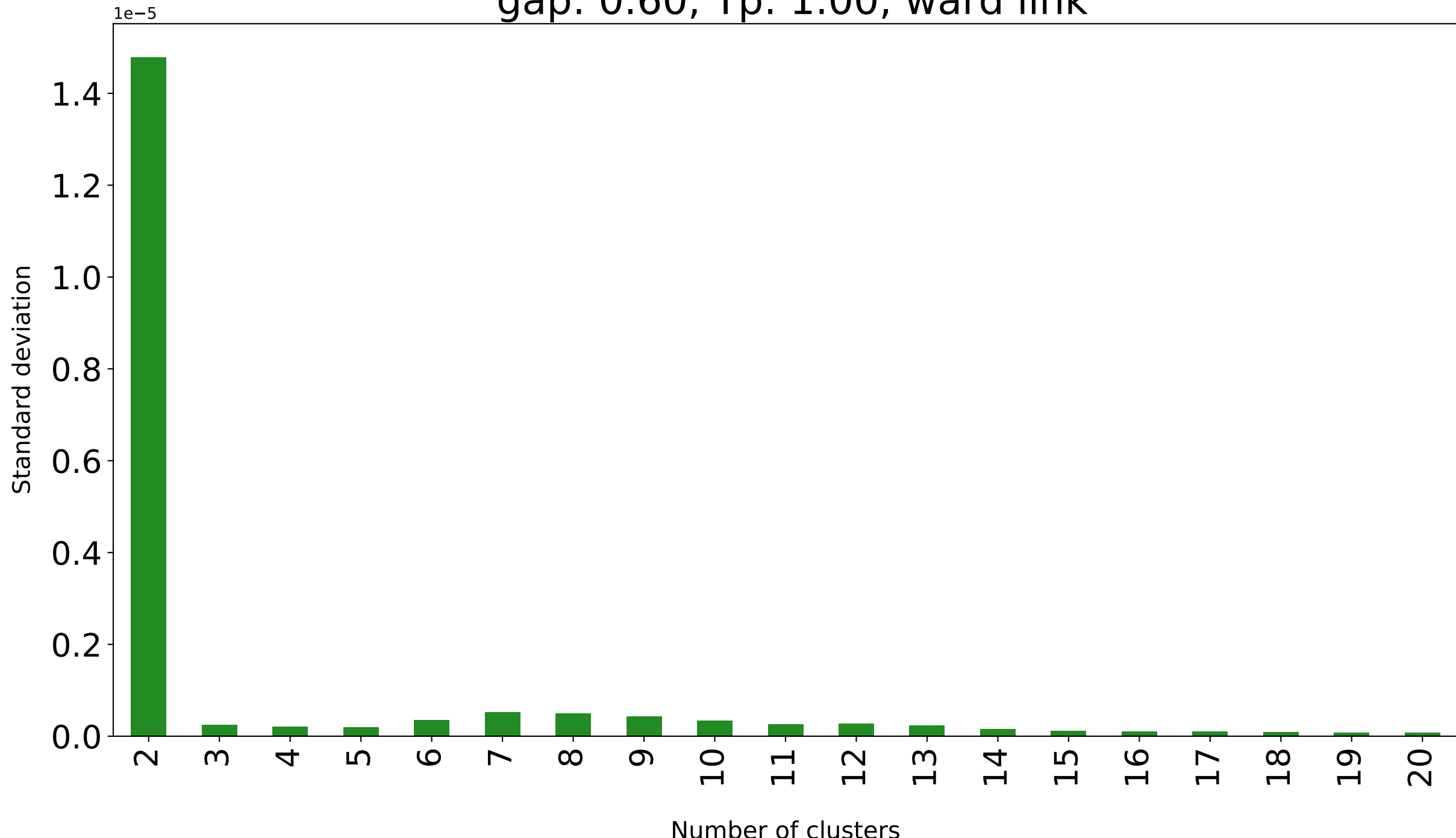


Cophenetic Correlation Coefficient: 0.7187601697611218

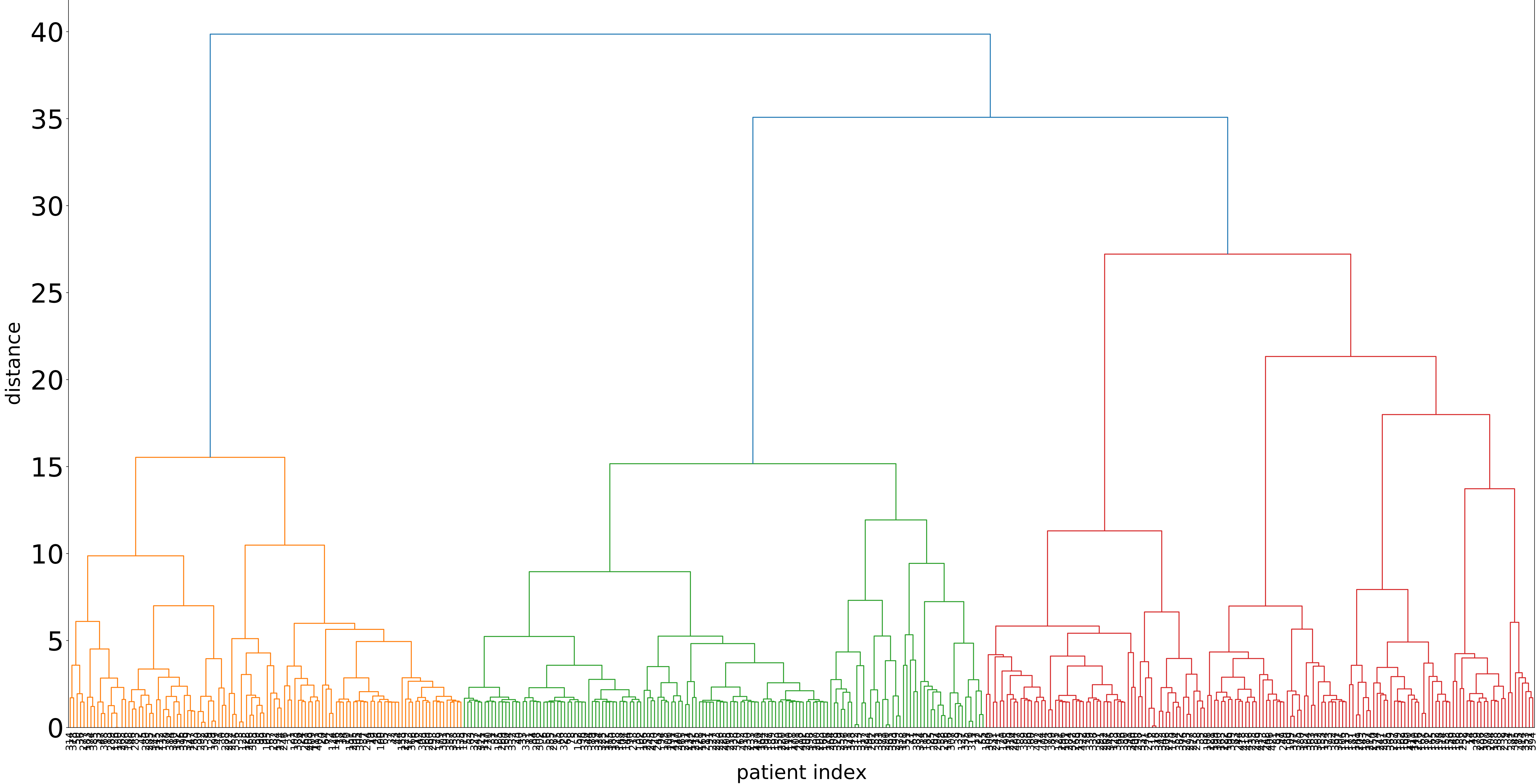
# Average values of five clustering indices gap: 0.60, Tp: 1.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.97662	0.96178	0.933	0.01634	0.94298	0.97652	-0.25471	0.97673	0.00016	0.95583	0.93978	0.03077	0.27239	0.15541
3.0	1.0	0.98279	0.96641	0.97198	0.00886	0.97399	0.98279	-0.87466	0.98279	0.00017	0.97708	0.93585	0.03571	0.28568	0.17514
4.0	1.0	0.97499	0.95167	0.96259	0.01307	0.96569	0.97498	-1.70212	0.975	0.00019	0.97338	0.90936	0.04167	0.31798	0.17514
5.0	1.0	0.97032	0.94293	0.96001	0.02052	0.9606	0.9703	-2.6056	0.97033	0.0002	0.97127	0.89399	0.07273	0.33775	0.17514
6.0	1.0	0.97518	0.9519	0.96569	0.01509	0.96748	0.97512	-3.53395	0.97523	0.00021	0.97676	0.90958	0.12903	0.35061	0.17514
7.0	1.0	0.89195	0.80704	0.87326	0.06289	0.86512	0.89117	-4.4831	0.89273	0.00021	0.91702	0.68356	0.28571	0.29293	0.18269
8.0	1.0	0.85022	0.73895	0.75936	0.08977	0.81709	0.84732	-5.25992	0.85313	0.00021	0.89376	0.59329	0.28571	0.32709	0.18608
9.0	1.0	0.85219	0.74338	0.7881	0.0895	0.82381	0.85099	-6.13631	0.85339	0.00024	0.90801	0.59654	0.28571	0.30025	0.17662
10.0	1.0	0.8596	0.75545	0.8074	0.08193	0.83511	0.85878	-6.87288	0.86041	0.00026	0.91936	0.61279	0.28571	0.29166	0.17662
11.0	1.0	0.90323	0.82713	0.90251	0.07065	0.8885	0.90265	-8.36333	0.90382	0.0003	0.94991	0.71464	0.28571	0.27018	0.17662
12.0	1.0	0.88422	0.79724	0.84508	0.08128	0.86797	0.88301	-9.88191	0.88544	0.00031	0.94389	0.67494	1.14286	0.25726	0.22029
13.0	1.0	0.85091	0.74446	0.77826	0.09003	0.83306	0.84724	-11.29307	0.85462	0.00033	0.93549	0.61111	1.14286	0.24553	0.22029
14.0	1.0	0.9079	0.83293	0.90979	0.06377	0.89878	0.90751	-12.60605	0.9083	0.00043	0.96712	0.71849	1.14286	0.21844	0.22029
15.0	1.0	0.90284	0.82422	0.89613	0.07231	0.89357	0.90276	-14.67463	0.90291	0.00044	0.96674	0.70431	1.14286	0.21759	0.22029
16.0	1.0	0.87924	0.78564	0.883	0.09075	0.86825	0.87905	-16.51086	0.87944	0.00045	0.96041	0.64993	1.14286	0.19893	0.22029
17.0	1.0	0.88553	0.7959	0.88193	0.0896	0.87536	0.88542	-18.34162	0.88565	0.00046	0.9633	0.66419	1.14286	0.19654	0.22029
18.0	1.0	0.88551	0.79568	0.86678	0.08719	0.87554	0.88535	-19.83764	0.88567	0.00047	0.9639	0.66357	2.0	0.21338	0.25667
19.0	1.0	0.88218	0.79027	0.85389	0.0904	0.87219	0.88186	-21.04673	0.8825	0.00048	0.96367	0.65641	2.0	0.21885	0.25667
20.0	1.0	0.88425	0.79372	0.85699	0.08658	0.87484	0.88381	-22.33072	0.88469	0.00049	0.96556	0.6618	2.0	0.20916	0.25667

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.60, Tp: 1.00, ward link



Hierarchical Clustering Dendrogram - gap: 0.70, Tp: 1.00, ward link

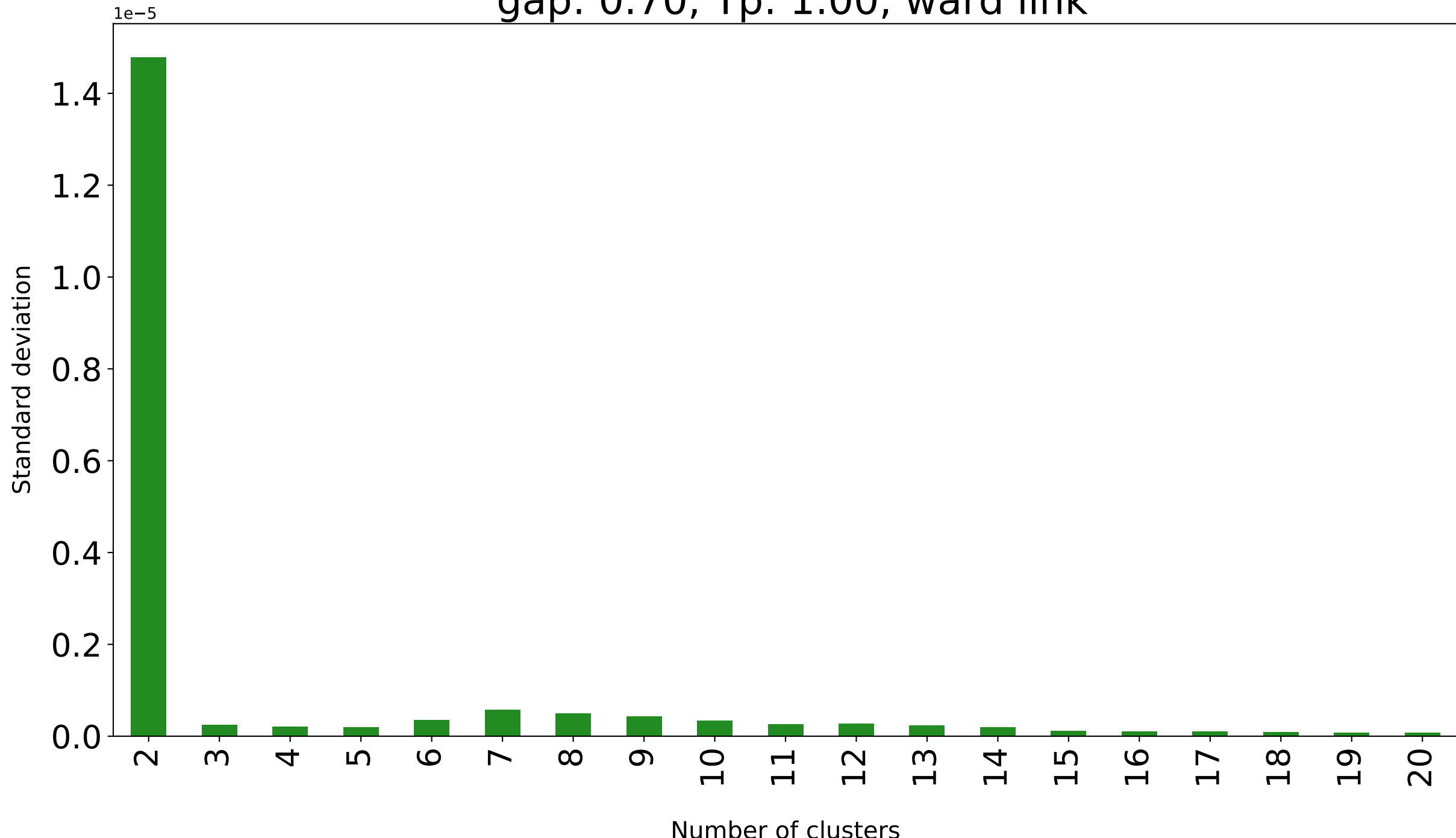


Cophenetic Correlation Coefficient: 0.6949553053179386

Average values of five clustering indices  
gap: 0.70, Tp: 1.00, ward link

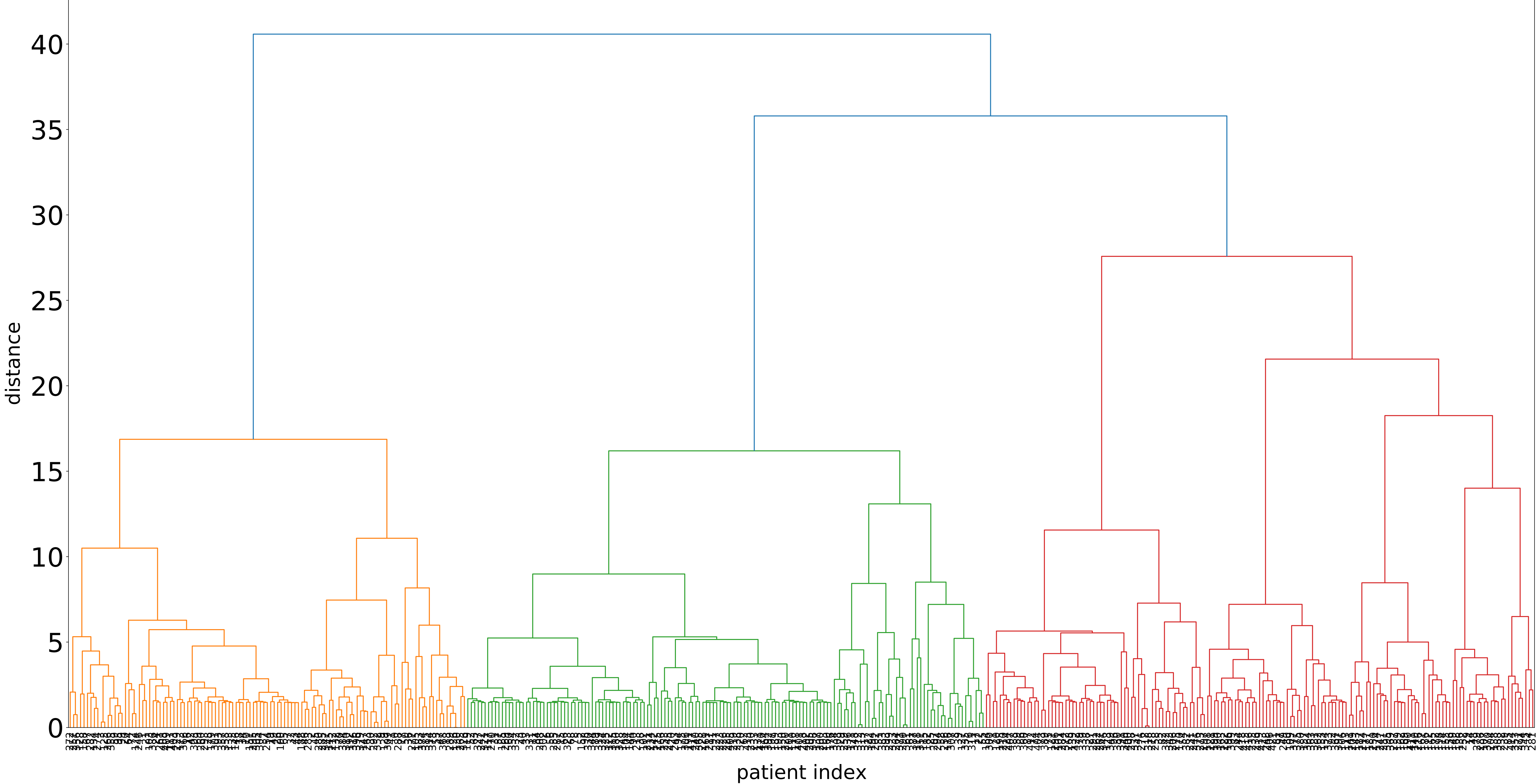
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.9843	0.97603	0.96092	0.01136	0.96233	0.98422	-0.27592	0.98437	0.00016	0.97288	0.96582	0.01075	0.26866	0.21105
3.0	1.0	0.99102	0.98233	0.98628	0.00443	0.98643	0.99102	-0.89904	0.99102	0.00017	0.98799	0.96575	0.02208	0.28286	0.25134
4.0	1.0	0.98253	0.966	0.97551	0.01047	0.97608	0.98252	-1.73215	0.98253	0.0002	0.98144	0.93549	0.05208	0.3108	0.25134
5.0	1.0	0.98041	0.96202	0.97578	0.01605	0.97403	0.9804	-2.64775	0.98042	0.00021	0.98104	0.92838	0.06173	0.33111	0.25183
6.0	1.0	0.98163	0.96474	0.97384	0.0136	0.97609	0.98149	-3.59119	0.98177	0.00021	0.98312	0.93505	0.11111	0.34761	0.25183
7.0	1.0	0.86812	0.77697	0.83187	0.07118	0.83542	0.86763	-3.88808	0.8686	0.00021	0.90172	0.65738	0.11111	0.30811	0.19981
8.0	1.0	0.885	0.79359	0.93068	0.06734	0.86334	0.88223	-5.22185	0.88779	0.00025	0.92657	0.66696	0.11111	0.25889	0.19981
9.0	1.0	0.90197	0.8238	0.91317	0.06112	0.88427	0.90111	-6.37359	0.90284	0.00027	0.94117	0.70865	0.11111	0.29403	0.20807
10.0	1.0	0.90292	0.82566	0.90092	0.06651	0.88651	0.90248	-7.64226	0.90337	0.00028	0.94524	0.7105	0.13889	0.27891	0.20807
11.0	1.0	0.89146	0.80628	0.89056	0.07555	0.87462	0.89112	-8.79229	0.89181	0.0003	0.94319	0.6813	0.13889	0.26676	0.20807
12.0	1.0	0.91002	0.83679	0.91603	0.06597	0.89728	0.90941	-9.87295	0.91064	0.00032	0.95593	0.72543	0.13889	0.26124	0.20807
13.0	1.0	0.8984	0.82155	0.88236	0.07492	0.88557	0.89709	-10.94887	0.89972	0.00034	0.95473	0.71278	0.19608	0.25753	0.18857
14.0	1.0	0.83729	0.72052	0.75006	0.10052	0.81889	0.83238	-12.49206	0.84224	0.00034	0.93218	0.57746	2.0	0.24651	0.2486
15.0	1.0	0.8965	0.81367	0.90569	0.07326	0.88658	0.89577	-13.67123	0.89724	0.00044	0.96395	0.69089	2.0	0.21858	0.2486
16.0	1.0	0.90301	0.82434	0.90217	0.07263	0.89405	0.90283	-15.86286	0.90319	0.00046	0.96766	0.70442	2.0	0.22032	0.2486
17.0	1.0	0.90271	0.82388	0.89544	0.07599	0.89394	0.9026	-17.71949	0.90282	0.00046	0.96831	0.70357	2.0	0.21665	0.2486
18.0	1.0	0.89713	0.81452	0.88112	0.08275	0.88808	0.897	-18.8872	0.89726	0.00047	0.96723	0.6899	2.0	0.22363	0.2486
19.0	1.0	0.89556	0.81178	0.87937	0.08376	0.88664	0.89542	-19.58895	0.89571	0.00048	0.96758	0.68568	2.0	0.22002	0.2486
20.0	1.0	0.89851	0.81667	0.901	0.08189	0.89021	0.89833	-21.61069	0.89869	0.0005	0.96969	0.69285	2.0	0.20515	0.2486

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.70, Tp: 1.00, ward link





Hierarchical Clustering Dendrogram - gap: 0.80, Tp: 1.00, ward link

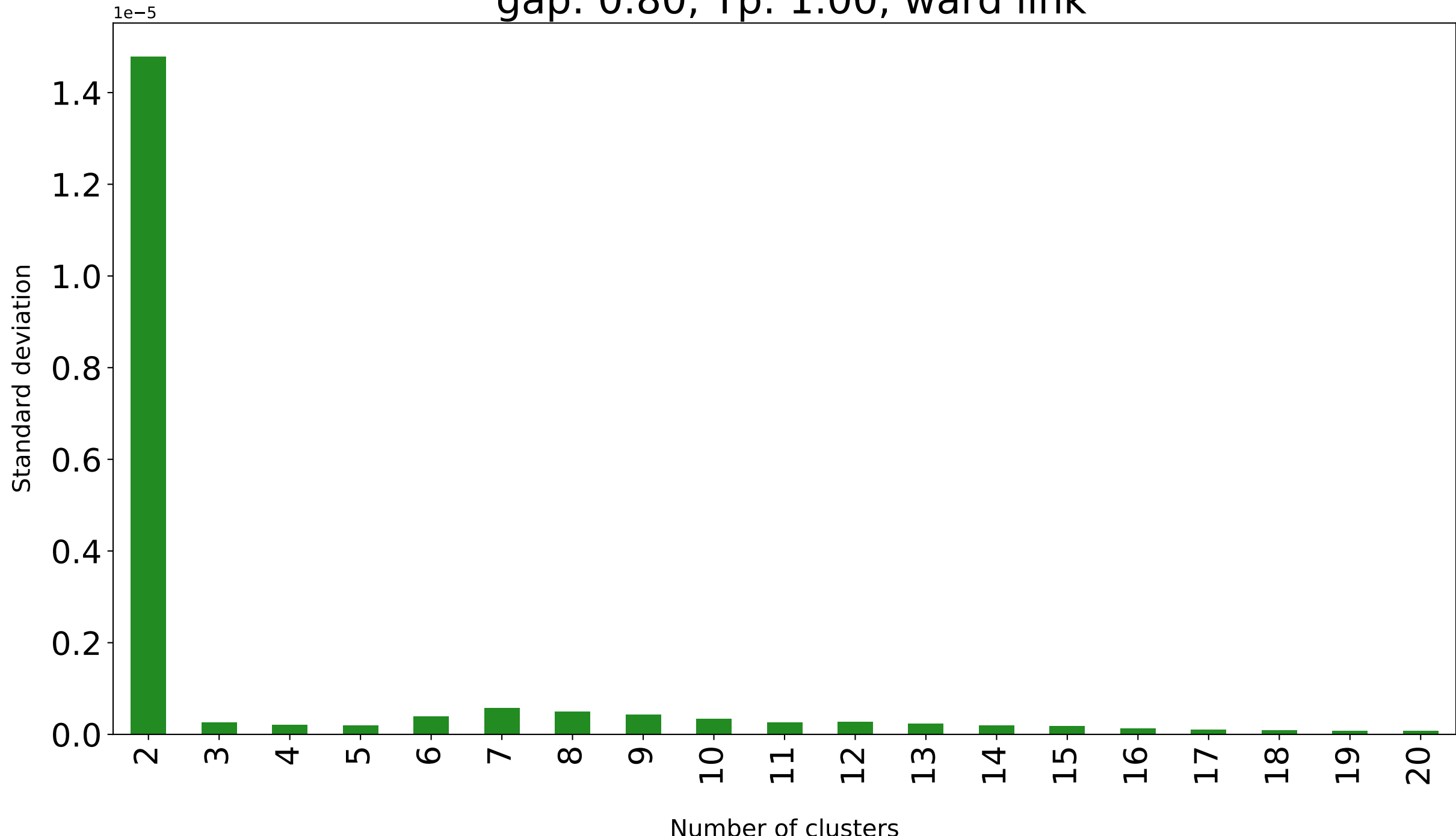


Cophenetic Correlation Coefficient: 0.6676535721146479

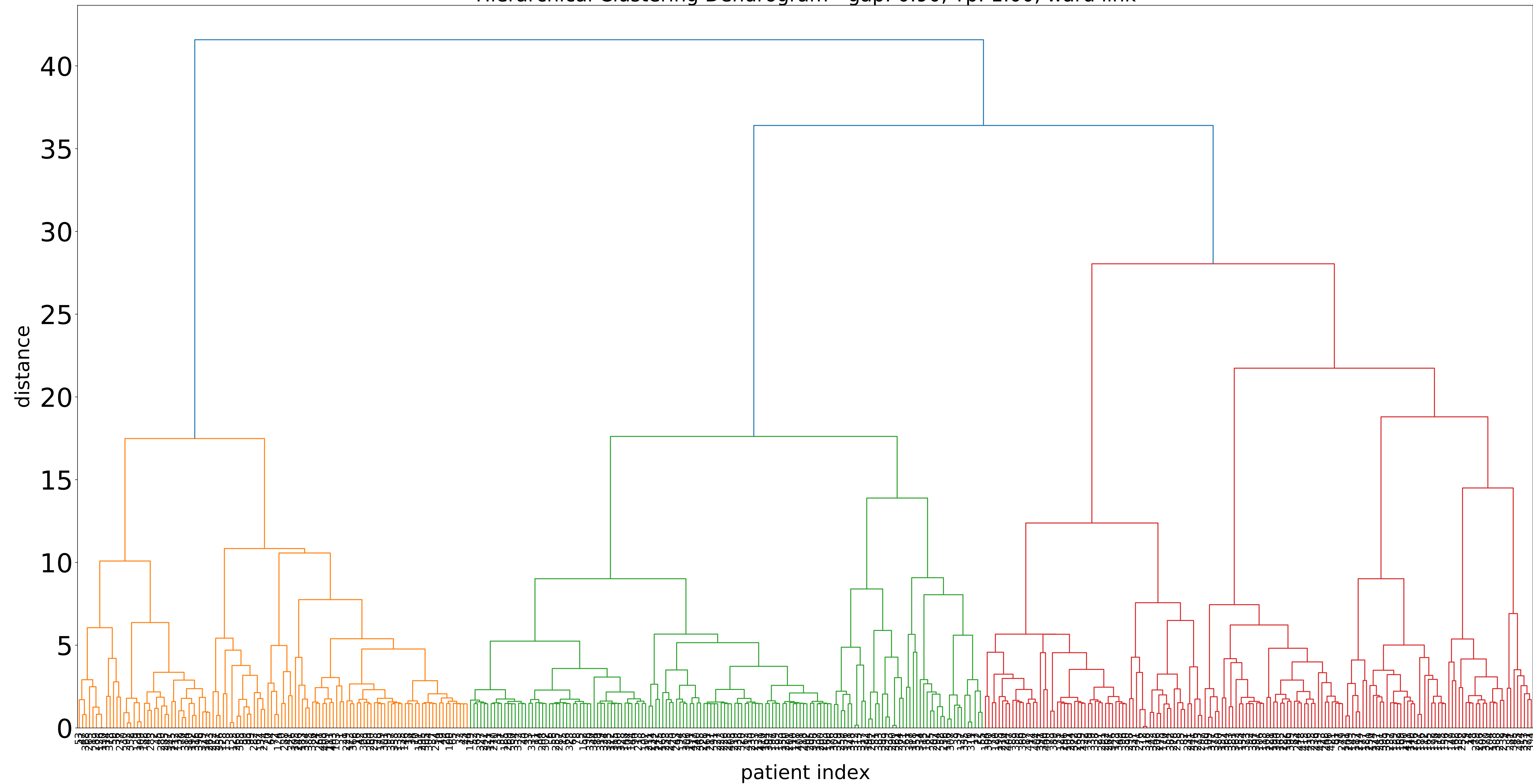
Average values of five clustering indices  
gap: 0.80, Tp: 1.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.98891	0.98167	0.97601	0.00773	0.97307	0.98888	-0.27489	0.98895	0.00016	0.97882	0.9706	0.0	0.26086	0.1975
3.0	1.0	0.98924	0.97898	0.98443	0.00542	0.98375	0.98924	-0.88383	0.98924	0.00017	0.9857	0.95982	0.02516	0.27681	0.23563
4.0	1.0	0.97994	0.96122	0.9737	0.01215	0.97252	0.97993	-1.71284	0.97995	0.00019	0.97872	0.92724	0.0625	0.30478	0.23563
5.0	1.0	0.97449	0.95094	0.97132	0.02286	0.96615	0.97447	-2.60781	0.97452	0.00021	0.97532	0.90889	0.07407	0.32463	0.23563
6.0	1.0	0.9621	0.92968	0.93631	0.02684	0.95119	0.96144	-3.52585	0.96276	0.00021	0.96636	0.87938	0.13333	0.3412	0.23563
7.0	1.0	0.85849	0.76166	0.81689	0.07646	0.82384	0.85793	-3.86511	0.85904	0.0002	0.89568	0.63659	0.13333	0.30584	0.19972
8.0	1.0	0.897	0.81423	0.93042	0.06001	0.8778	0.89508	-5.33144	0.89892	0.00026	0.93532	0.6958	0.13333	0.25877	0.20241
9.0	1.0	0.90839	0.83386	0.91472	0.05889	0.89202	0.90768	-6.43589	0.9091	0.00027	0.94542	0.72171	0.13333	0.29201	0.22125
10.0	1.0	0.9116	0.83977	0.91036	0.06228	0.89668	0.91112	-7.68999	0.91208	0.00029	0.94998	0.73063	0.18182	0.28096	0.22125
11.0	1.0	0.89439	0.81114	0.89731	0.07566	0.87801	0.89397	-8.82428	0.8948	0.0003	0.94467	0.68841	0.18182	0.26622	0.22125
12.0	1.0	0.89953	0.81924	0.89761	0.07829	0.8849	0.8992	-9.75923	0.89987	0.00031	0.95002	0.69892	0.42105	0.25455	0.21451
13.0	1.0	0.92345	0.85961	0.93462	0.0654	0.9133	0.92273	-10.96472	0.92418	0.00034	0.96428	0.76024	0.42105	0.25054	0.21451
14.0	1.0	0.82388	0.69479	0.91829	0.10548	0.80551	0.81658	-11.74703	0.83129	0.00037	0.92967	0.54045	0.42105	0.21611	0.21451
15.0	1.0	0.86457	0.7619	0.90883	0.08872	0.85109	0.86132	-13.4628	0.86786	0.00041	0.94974	0.62533	2.0	0.21201	0.21451
16.0	1.0	0.8889	0.80123	0.90711	0.07891	0.87844	0.8876	-15.72905	0.89021	0.00044	0.96161	0.67481	2.0	0.21626	0.21451
17.0	1.0	0.90137	0.82166	0.90447	0.07714	0.89245	0.90102	-17.68452	0.90172	0.00046	0.9676	0.70104	2.0	0.21554	0.21451
18.0	1.0	0.90068	0.82054	0.89276	0.07854	0.89191	0.90055	-19.19194	0.9008	0.00047	0.96824	0.69885	2.0	0.22041	0.25122
19.0	1.0	0.89919	0.81787	0.8916	0.08035	0.89052	0.89909	-19.81363	0.89929	0.00048	0.96855	0.69452	2.0	0.21877	0.25122
20.0	1.0	0.89624	0.81301	0.8841	0.08237	0.8875	0.89612	-21.10985	0.89635	0.00049	0.96823	0.68758	2.0	0.22267	0.25122

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.80, Tp: 1.00, ward link



Hierarchical Clustering Dendrogram - gap: 0.90, Tp: 1.00, ward link

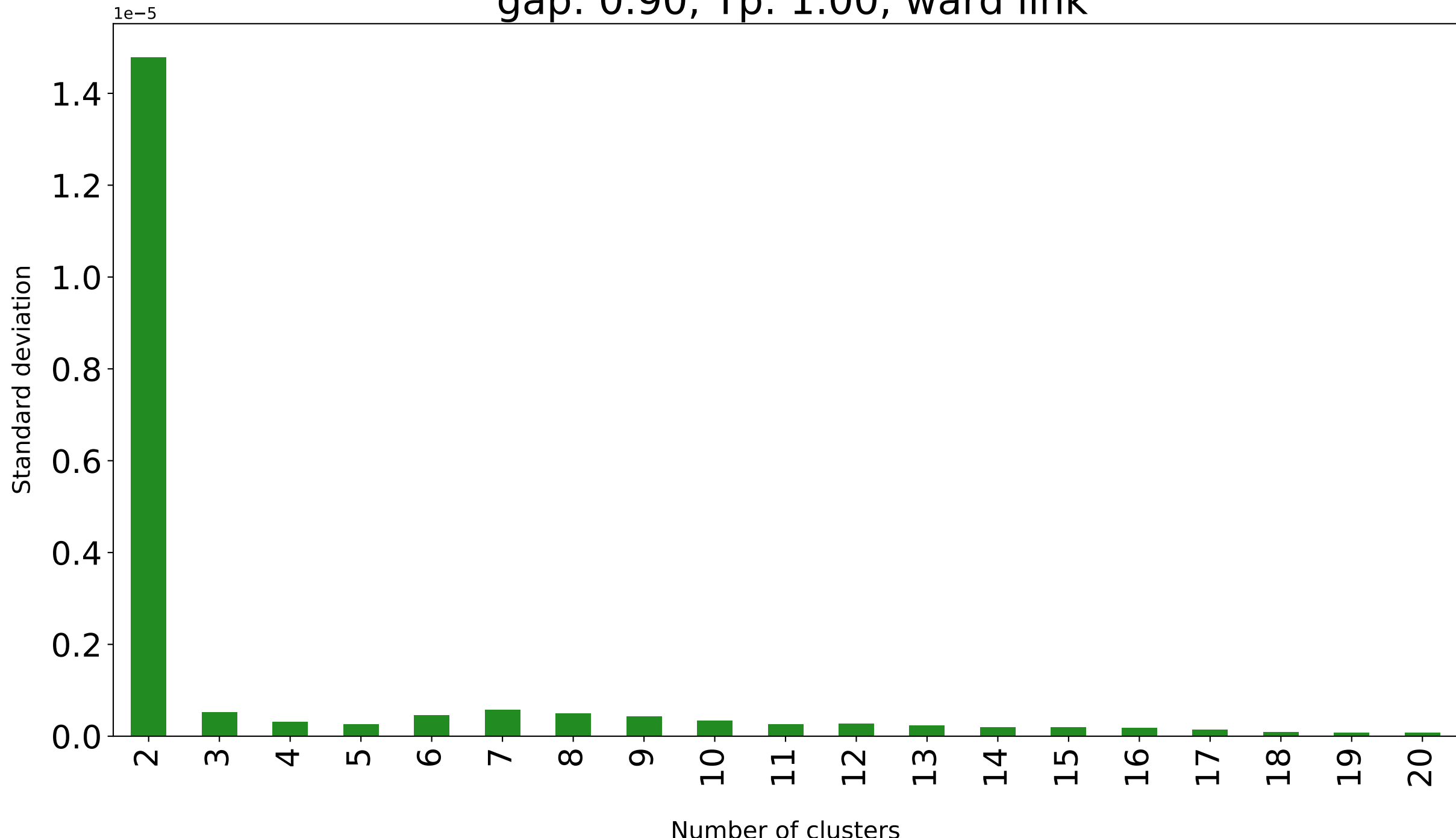


Cophenetic Correlation Coefficient: 0.6411699189912075

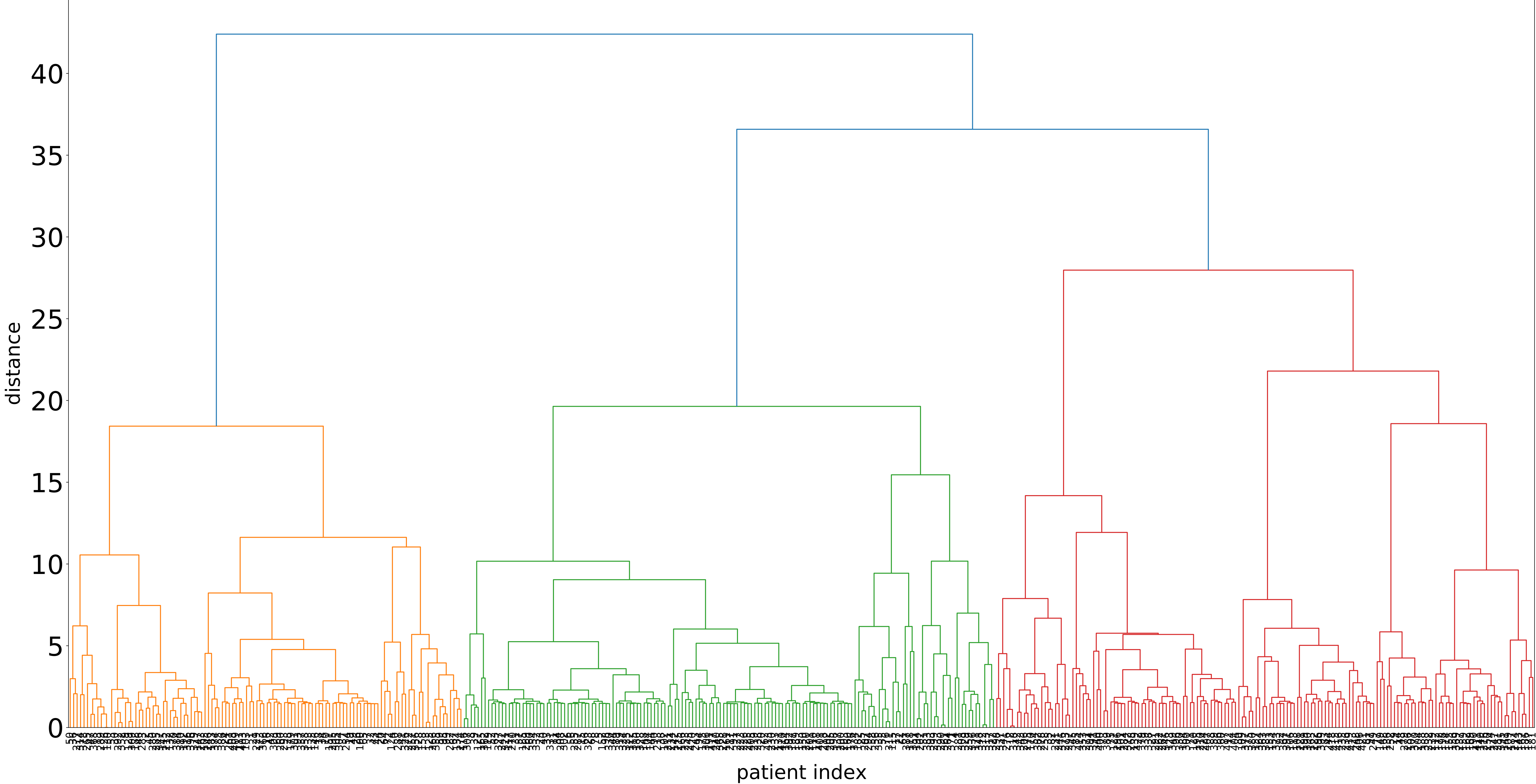
Average values of five clustering indices  
gap: 0.90, Tp: 1.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.98034	0.96929	0.95085	0.0142	0.95335	0.98027	-0.26591	0.98041	0.00016	0.96532	0.95478	0.0	0.26012	0.18559
3.0	1.0	0.98134	0.96447	0.97112	0.00941	0.97183	0.98134	-0.86269	0.98134	0.00017	0.97563	0.93476	0.03333	0.27455	0.2163
4.0	1.0	0.97412	0.95064	0.96802	0.01514	0.96451	0.97409	-1.68824	0.97414	0.00019	0.97268	0.90944	0.05556	0.30217	0.2163
5.0	1.0	0.96692	0.9371	0.964	0.02938	0.95616	0.96686	-2.56224	0.96699	0.0002	0.96823	0.88536	0.09697	0.31982	0.2163
6.0	1.0	0.91848	0.85182	0.85228	0.05447	0.89592	0.9168	-3.39884	0.92016	0.0002	0.93004	0.75584	0.10667	0.33644	0.2163
7.0	1.0	0.89047	0.81129	0.87858	0.06348	0.86537	0.88958	-4.4646	0.89137	0.00023	0.92205	0.70382	0.10667	0.27124	0.22705
8.0	1.0	0.90626	0.83054	0.91309	0.05847	0.88894	0.90549	-5.37041	0.90703	0.00027	0.94261	0.71745	0.10667	0.26318	0.1445
9.0	1.0	0.90825	0.83385	0.8922	0.06505	0.892	0.90791	-6.40854	0.90859	0.00028	0.94615	0.72079	0.15686	0.29249	0.15735
10.0	1.0	0.90826	0.83377	0.88475	0.0681	0.89293	0.90798	-7.63512	0.90853	0.00029	0.94874	0.7202	0.15686	0.28119	0.17308
11.0	1.0	0.89125	0.806	0.87569	0.07858	0.87441	0.891	-8.7582	0.8915	0.0003	0.94329	0.68066	0.15686	0.27007	0.17308
12.0	1.0	0.90773	0.83196	0.9078	0.07163	0.89451	0.9074	-9.64428	0.90806	0.00032	0.95459	0.71559	0.15686	0.2625	0.17308
13.0	1.0	0.91866	0.85069	0.91718	0.07087	0.9076	0.9184	-10.17026	0.91892	0.00034	0.96166	0.74361	0.33333	0.25698	0.17379
14.0	1.0	0.91852	0.85145	0.91345	0.07209	0.90808	0.91791	-11.33294	0.91913	0.00035	0.96329	0.74769	0.33333	0.25379	0.17379
15.0	1.0	0.88853	0.80375	0.84898	0.08542	0.87543	0.88624	-12.90147	0.89084	0.00035	0.95261	0.68697	2.0	0.24461	0.19004
16.0	1.0	0.84452	0.73098	0.89102	0.09916	0.82923	0.84072	-13.79282	0.84836	0.0004	0.94303	0.58584	2.0	0.21498	0.19004
17.0	1.0	0.87487	0.77888	0.89021	0.08629	0.86329	0.87333	-16.0932	0.87643	0.00044	0.95744	0.64457	2.0	0.22095	0.19004
18.0	1.0	0.8884	0.80068	0.88738	0.08328	0.8785	0.88792	-18.08454	0.88889	0.00046	0.96399	0.67202	2.0	0.21866	0.19004
19.0	1.0	0.89065	0.80412	0.87988	0.08643	0.88121	0.89049	-19.31912	0.89081	0.00047	0.96579	0.67555	2.0	0.22611	0.19004
20.0	1.0	0.8971	0.8146	0.89182	0.08564	0.8885	0.89698	-21.35338	0.89722	0.00049	0.9687	0.69022	2.0	0.22392	0.19004

Standard deviation of Adjusted Rand versus number of clusters  
gap: 0.90, Tp: 1.00, ward link



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



Cophenetic Correlation Coefficient: 0.6125325428254579

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.96116	0.94012	0.90274	0.02799	0.90801	0.96101	-0.23228	0.96131	0.00015	0.93269	0.91412	0.0	0.25669	0.17503
3.0	1.0	0.96025	0.92538	0.93933	0.02011	0.93999	0.96025	-0.80474	0.96025	0.00017	0.94859	0.86623	0.03463	0.26606	0.19175
4.0	1.0	0.94857	0.90385	0.93267	0.03011	0.9293	0.94853	-1.59245	0.94861	0.00019	0.94596	0.82934	0.06202	0.28543	0.19175
5.0	1.0	0.93147	0.87594	0.89996	0.05015	0.90924	0.93117	-2.56175	0.93177	0.00019	0.93575	0.79006	0.06857	0.31152	0.19175
6.0	1.0	0.87353	0.78159	0.86359	0.07895	0.84106	0.87276	-3.19944	0.8743	0.00021	0.90217	0.65475	0.11594	0.25162	0.19175
7.0	1.0	0.87042	0.775	0.8096	0.08101	0.84121	0.86908	-4.46083	0.87176	0.00022	0.9083	0.64534	0.15686	0.30103	0.19175
8.0	1.0	0.879	0.78594	0.84431	0.07566	0.85614	0.87857	-5.33281	0.87942	0.00025	0.92579	0.65232	0.15686	0.29192	0.13242
9.0	1.0	0.87622	0.78081	0.82966	0.08482	0.85411	0.87566	-6.38525	0.87678	0.00026	0.92728	0.64433	0.15686	0.28762	0.1514
10.0	1.0	0.8602	0.7565	0.82638	0.09623	0.83704	0.85989	-7.33622	0.86051	0.00027	0.92349	0.61265	0.15686	0.27944	0.1585
11.0	1.0	0.86685	0.76618	0.81885	0.08997	0.84579	0.86626	-8.97908	0.86743	0.00028	0.92943	0.62509	0.15686	0.29083	0.1585
12.0	1.0	0.88452	0.79358	0.86205	0.0844	0.86776	0.88427	-9.77808	0.88477	0.00031	0.94298	0.65989	0.15686	0.27217	0.1585
13.0	1.0	0.89329	0.80747	0.85761	0.07926	0.8783	0.89288	-10.46798	0.89371	0.00032	0.94847	0.67909	0.33333	0.2764	0.1585
14.0	1.0	0.89724	0.81458	0.86103	0.07743	0.88338	0.89674	-11.67386	0.89775	0.00033	0.95198	0.69041	0.33333	0.27168	0.1585
15.0	1.0	0.89211	0.80652	0.84755	0.08367	0.87811	0.89099	-13.03324	0.89325	0.00033	0.95078	0.68119	0.33333	0.26853	0.17869
16.0	1.0	0.89142	0.80896	0.85182	0.08981	0.87896	0.88906	-14.46483	0.89381	0.00036	0.95468	0.69547	0.7619	0.25143	0.17869
17.0	1.0	0.85961	0.75806	0.79022	0.09919	0.84461	0.85532	-16.48714	0.86395	0.00036	0.94417	0.63047	0.7619	0.25033	0.17869
18.0	1.0	0.82219	0.69588	0.71415	0.11072	0.80413	0.81504	-18.15695	0.82943	0.00036	0.93112	0.54826	2.0	0.24657	0.19079
19.0	1.0	0.88575	0.79644	0.88964	0.08242	0.87577	0.88475	-19.51896	0.88676	0.00047	0.96331	0.66755	2.0	0.22111	0.19079
20.0	1.0	0.9041	0.82634	0.90513	0.07612	0.89609	0.90368	-21.72548	0.90452	0.0005	0.97064	0.70844	2.0	0.21981	0.19079



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

