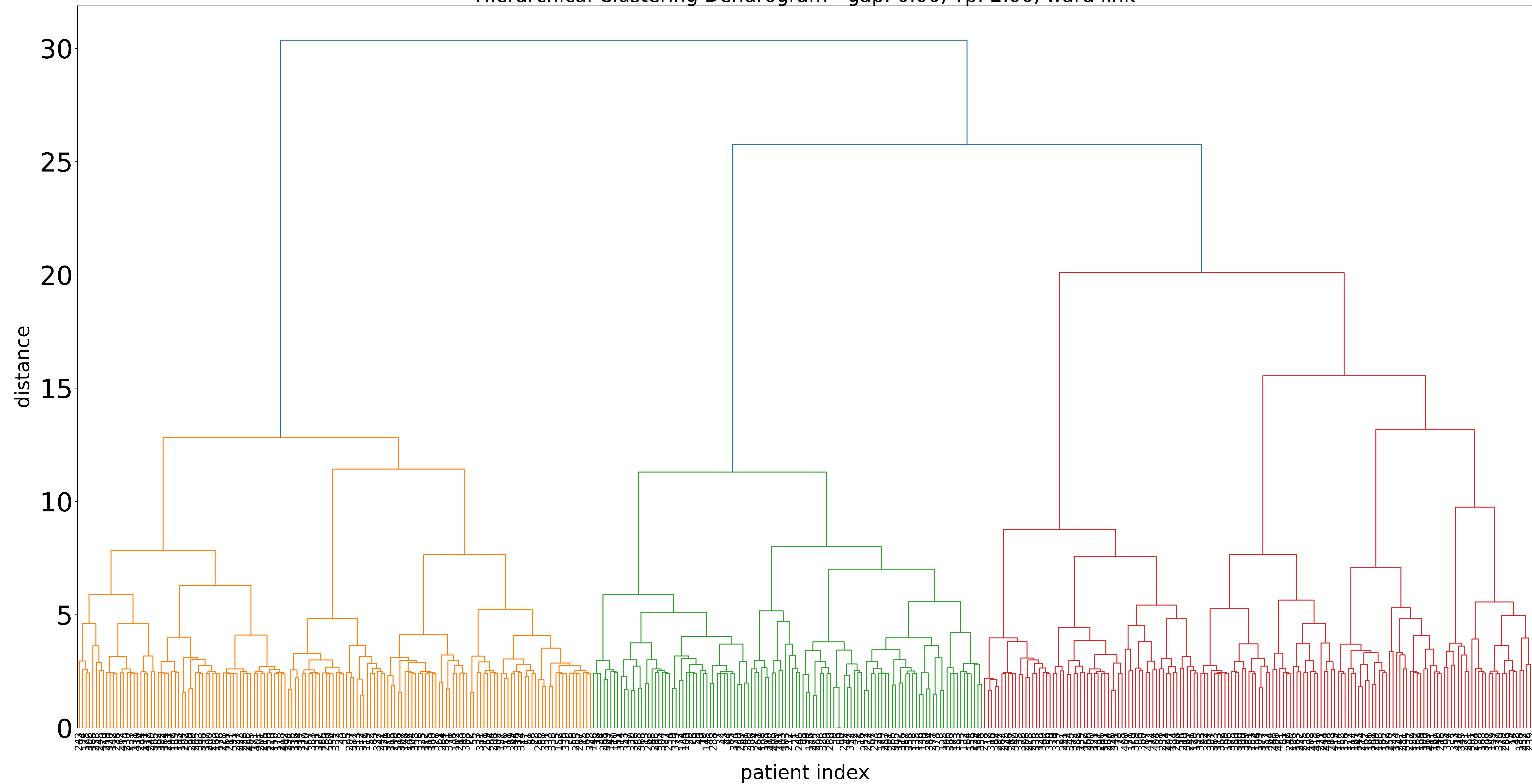Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 2.00, ward link
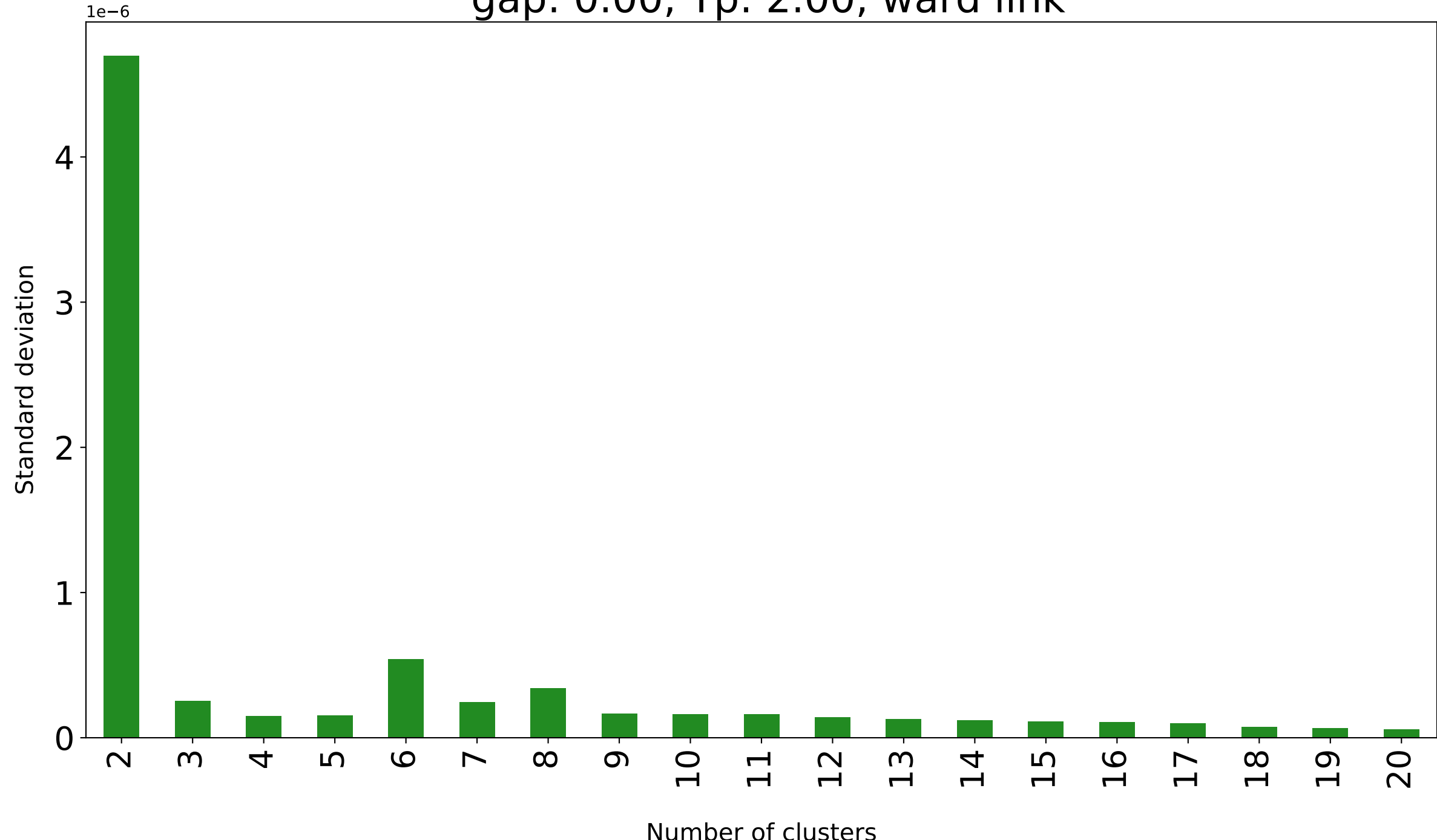
Cophenetic Correlation Coefficient: 0.7542879279105159

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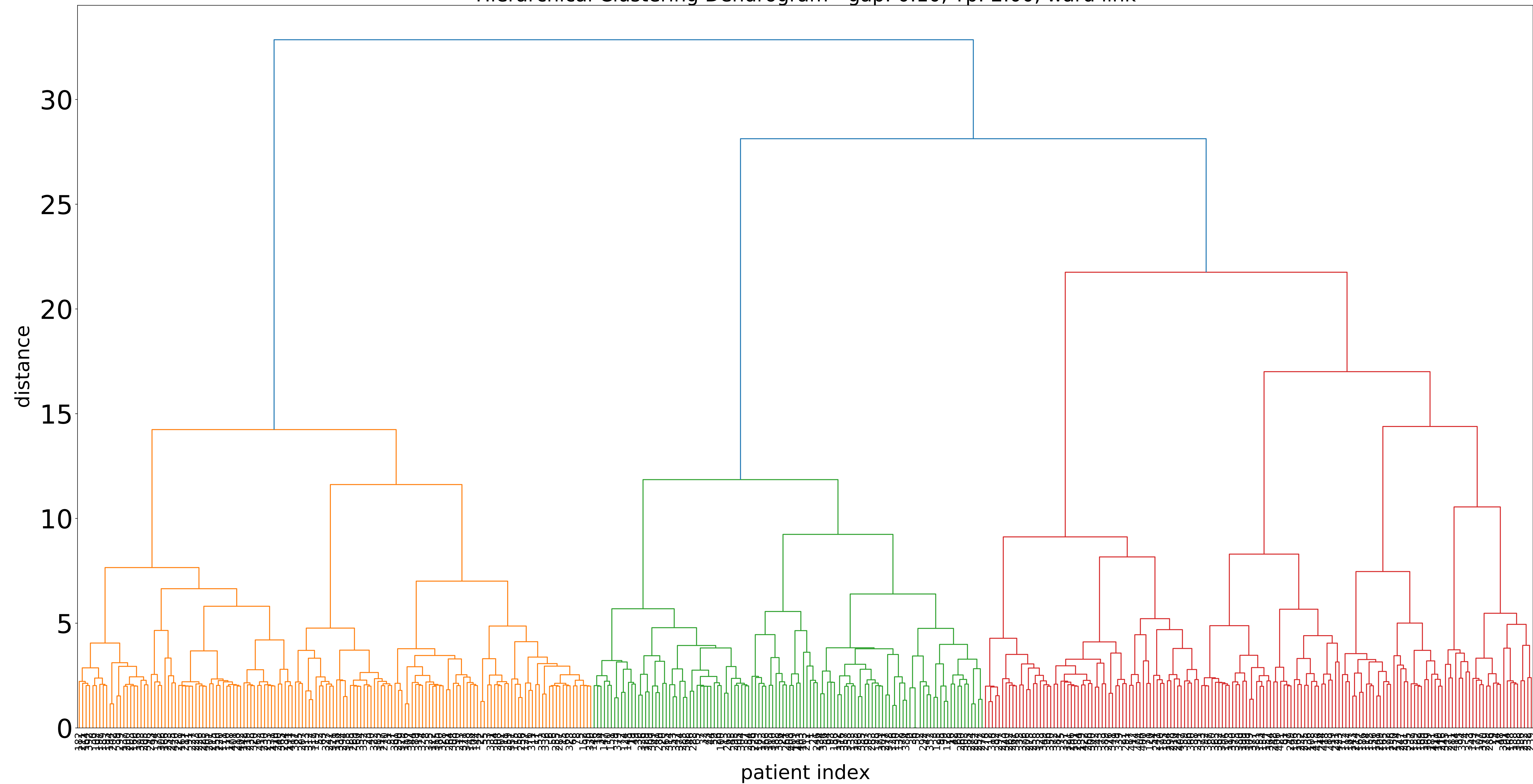## gap: 0.00, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.98793	0.98086	0.97063	0.00839	0.97269	0.98792	0.03819	0.98794	0.00015	0.97925	0.97107	0.0292	0.15347	0.45118
3.0	1.0	0.99441	0.98914	0.99132	0.00267	0.99155	0.99441	0.02371	0.99441	0.00017	0.99258	0.97948	0.1	0.18013	0.44813
4.0	1.0	0.99278	0.98594	0.99133	0.00392	0.9901	0.99278	0.03195	0.99279	0.0002	0.99228	0.97329	0.16495	0.19389	0.44813
5.0	1.0	0.9886	0.97787	0.98795	0.01064	0.98488	0.98858	0.06205	0.98862	0.00021	0.98892	0.95824	0.42105	0.20178	0.44813
6.0	1.0	0.95362	0.91682	0.91483	0.03127	0.94159	0.95188	0.12608	0.95537	0.00021	0.9612	0.86811	0.67692	0.20654	0.44813
7.0	1.0	0.96403	0.93385	0.96039	0.02353	0.95634	0.96398	0.12368	0.96407	0.00026	0.97539	0.88517	0.67692	0.16676	0.44813
8.0	1.0	0.9335	0.88439	0.90944	0.0375	0.92182	0.93304	0.17411	0.93395	0.00028	0.96153	0.8154	0.67692	0.15528	0.44813
9.0	1.0	0.93068	0.87369	0.9285	0.03917	0.92103	0.93044	0.20765	0.93093	0.00034	0.9667	0.78479	0.73043	0.14149	0.4215
10.0	1.0	0.92312	0.86092	0.90435	0.04333	0.91286	0.92288	0.22083	0.92336	0.00034	0.9645	0.76548	1.4	0.15621	0.4215
11.0	1.0	0.90331	0.82827	0.8811	0.05255	0.89157	0.90308	0.26019	0.90353	0.00036	0.95911	0.71768	1.4	0.14957	0.4215
12.0	1.0	0.89186	0.80903	0.86522	0.06355	0.88002	0.89163	0.30075	0.8921	0.00039	0.95823	0.68891	1.81333	0.14423	0.4215
13.0	1.0	0.84637	0.73778	0.82123	0.09207	0.83122	0.84617	0.39186	0.84658	0.0004	0.94637	0.59227	1.81333	0.13629	0.4215
14.0	1.0	0.82144	0.70131	0.80723	0.10696	0.80558	0.82129	0.44573	0.82159	0.00042	0.94348	0.54747	1.81333	0.12484	0.4215
15.0	1.0	0.82001	0.6994	0.79715	0.10573	0.8052	0.81982	0.44728	0.8202	0.00045	0.94676	0.54529	1.81333	0.12065	0.4215
16.0	1.0	0.82115	0.70157	0.79823	0.10312	0.80755	0.82094	0.44583	0.82136	0.00048	0.95073	0.54892	1.81333	0.12089	0.4215
17.0	1.0	0.81537	0.69245	0.78113	0.10571	0.80215	0.81489	0.45644	0.81586	0.0005	0.95167	0.53719	1.9	0.11794	0.4215
18.0	1.0	0.81765	0.69448	0.79972	0.1044	0.80569	0.81747	0.45924	0.81783	0.00055	0.95608	0.53707	2.0	0.11271	0.35977
19.0	1.0	0.82289	0.70201	0.80814	0.10175	0.81204	0.82278	0.45032	0.823	0.00059	0.95994	0.54597	2.0	0.10856	0.35977
20.0	1.0	0.81634	0.69175	0.79138	0.10507	0.80552	0.81607	0.4659	0.81661	0.0006	0.95986	0.53265	2.0	0.10794	0.35977

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	0.97619	0.96406	0.94343	0.01725	0.94547	0.97617	0.06586	0.97621	0.00015	0.96087	0.94953	0.05839	0.18292	0.3969
3.0	1.0	0.99193	0.98436	0.98728	0.00392	0.98782	0.99193	0.03406	0.99193	0.00017	0.98933	0.97051	0.1	0.21456	0.36136
4.0	1.0	0.99008	0.9807	0.98809	0.00547	0.98638	0.99007	0.04418	0.99008	0.0002	0.98938	0.96342	0.16495	0.23161	0.36136
5.0	1.0	0.98483	0.97066	0.9848	0.01487	0.97986	0.9848	0.07528	0.98485	0.00021	0.98525	0.94508	0.28571	0.24322	0.36136
6.0	1.0	0.92623	0.86842	0.86092	0.04828	0.90727	0.92342	0.17774	0.92905	0.00021	0.93882	0.79378	1.23077	0.25197	0.36136
7.0	1.0	0.97556	0.95327	0.97814	0.01486	0.97033	0.97549	0.09806	0.97562	0.00026	0.98299	0.91379	1.23077	0.20745	0.36136
8.0	1.0	0.85798	0.75902	0.86781	0.07406	0.83367	0.85714	0.30833	0.85882	0.00027	0.92032	0.63046	1.23077	0.17683	0.34893
9.0	1.0	0.93228	0.87533	0.93633	0.0374	0.92277	0.93177	0.20634	0.93279	0.00034	0.9669	0.7859	1.23077	0.17522	0.34893
10.0	1.0	0.93853	0.88629	0.92259	0.03275	0.93032	0.93839	0.1888	0.93867	0.00035	0.97145	0.80197	2.0	0.19311	0.38003
11.0	1.0	0.89347	0.81121	0.87629	0.05693	0.88054	0.89337	0.2799	0.89356	0.00036	0.9551	0.69115	2.0	0.18585	0.38003
12.0	1.0	0.91699	0.84955	0.90828	0.04708	0.90786	0.91691	0.2479	0.91706	0.0004	0.96774	0.74534	2.0	0.17925	0.38003
13.0	1.0	0.89395	0.81127	0.87474	0.06385	0.88306	0.89377	0.30022	0.89412	0.00041	0.96129	0.68948	2.0	0.16867	0.38003
14.0	1.0	0.8845	0.79674	0.8582	0.06591	0.8735	0.88416	0.31273	0.88484	0.00043	0.96053	0.67132	2.0	0.1672	0.38003
15.0	1.0	0.86842	0.77045	0.86048	0.07655	0.85706	0.86822	0.35411	0.86862	0.00046	0.959	0.63302	2.0	0.15722	0.38003
16.0	1.0	0.85345	0.74793	0.82725	0.08507	0.84154	0.85305	0.38138	0.85386	0.00047	0.95677	0.60489	2.0	0.15574	0.38003
17.0	1.0	0.83118	0.71469	0.82319	0.09306	0.81883	0.83096	0.41818	0.83139	0.00051	0.955	0.56245	2.0	0.14594	0.38003
18.0	1.0	0.82995	0.71223	0.8075	0.09493	0.81836	0.82969	0.43191	0.83021	0.00054	0.95744	0.55857	2.0	0.14418	0.38003
19.0	1.0	0.82975	0.71199	0.82357	0.0971	0.81914	0.82958	0.4506	0.82992	0.00058	0.9608	0.55804	2.0	0.13619	0.32687
20.0	1.0	0.81996	0.69712	0.81881	0.10782	0.80934	0.8197	0.47833	0.82022	0.0006	0.9606	0.53918	2.0	0.13093	0.32687

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

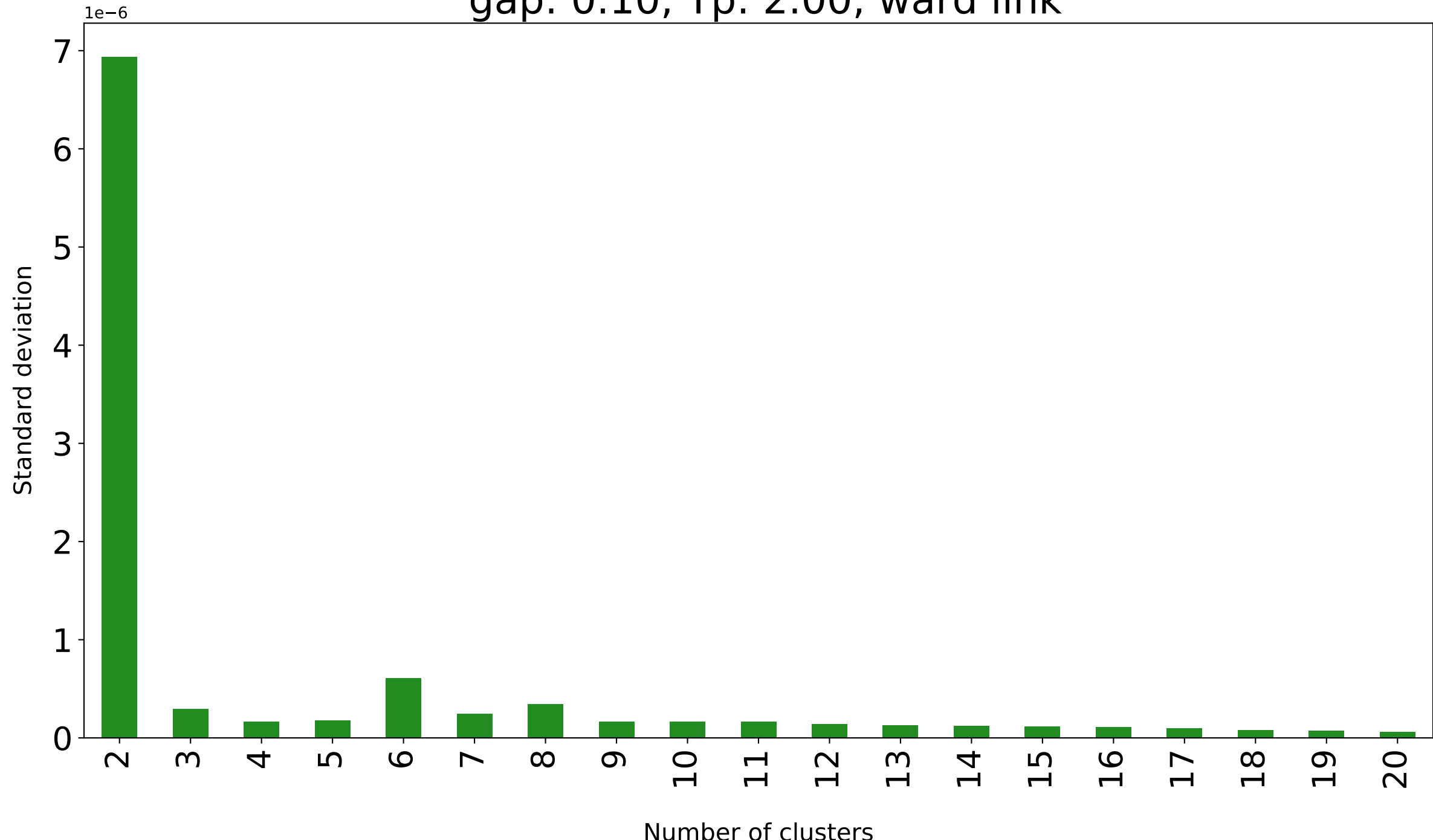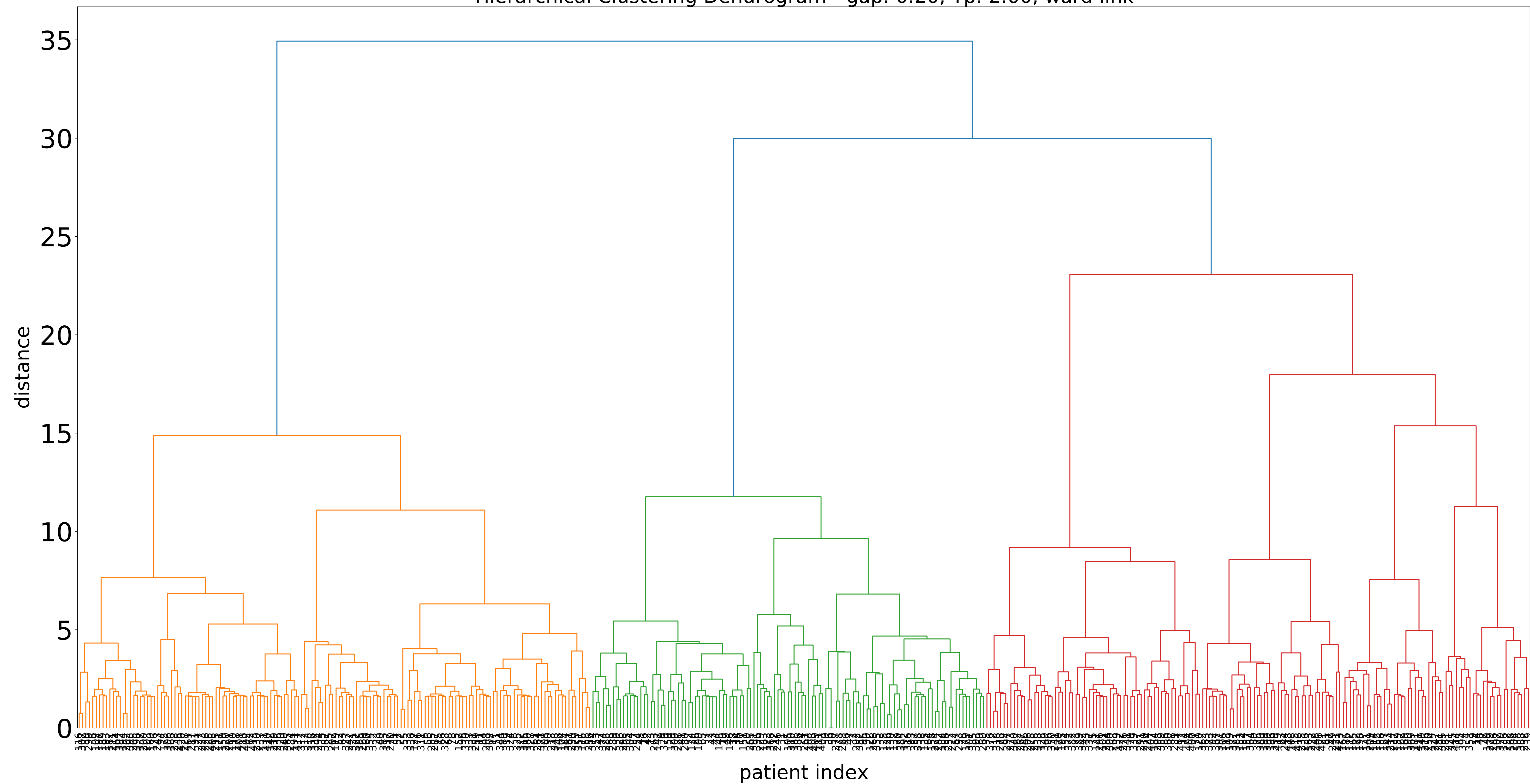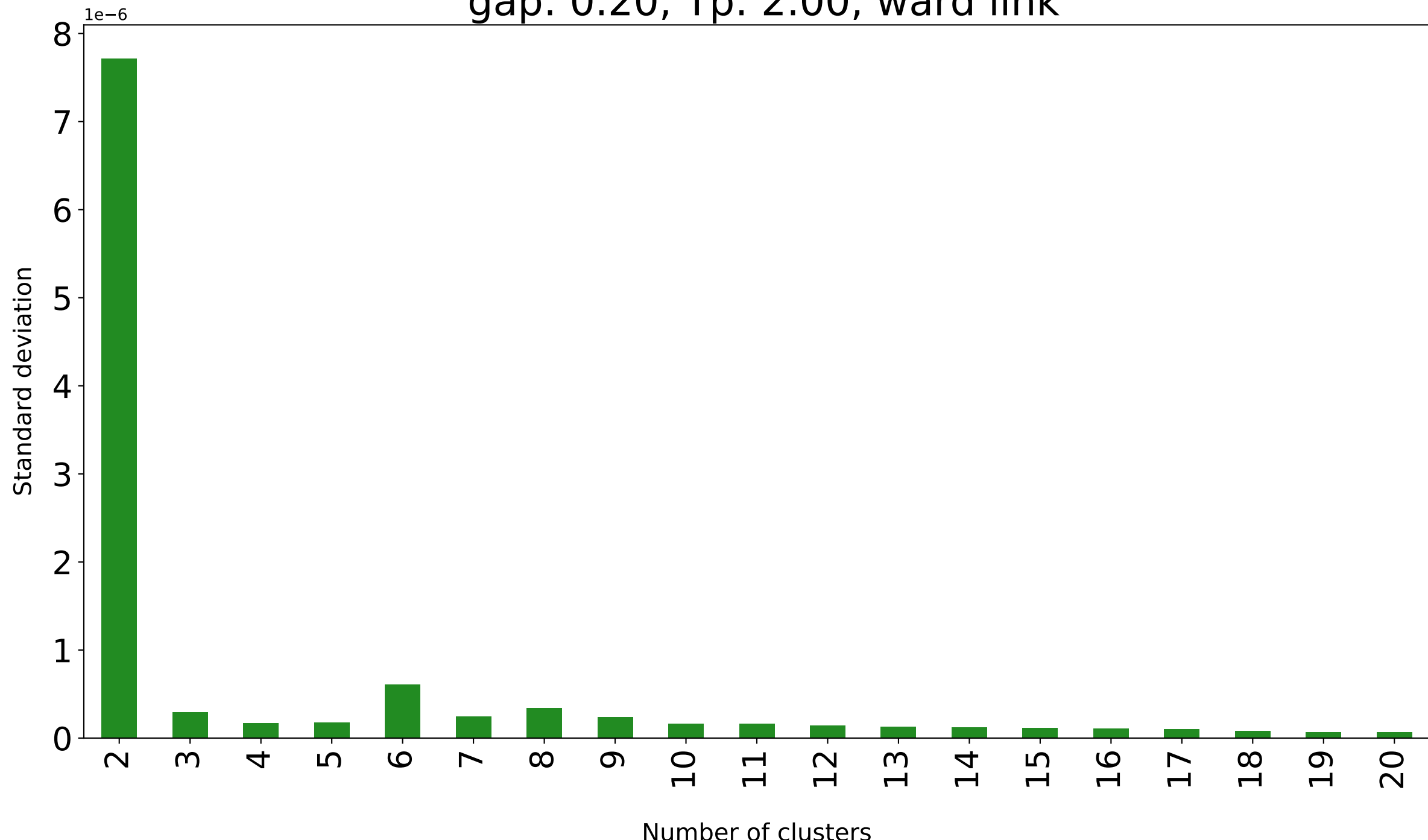Hierarchical Clustering Dendrogram - gap: 0.20, Tp: 2.00, ward link

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	0.96945	0.9544	0.92753	0.02232	0.92964	0.96942	0.0823	0.96948	0.00015	0.95021	0.93704	0.03504	0.21356	0.35428
3.0	1.0	0.99031	0.98115	0.98571	0.00477	0.98537	0.99031	0.04447	0.99031	0.00017	0.98715	0.96419	0.10435	0.24845	0.2902
4.0	1.0	0.9902	0.9809	0.98815	0.00511	0.98656	0.99019	0.04444	0.9902	0.0002	0.98953	0.96366	0.125	0.2695	0.2907
5.0	1.0	0.98595	0.97274	0.98493	0.01244	0.98136	0.98593	0.06736	0.98597	0.00021	0.98635	0.94866	0.21818	0.28388	0.2907
6.0	1.0	0.92272	0.86198	0.85174	0.04974	0.90288	0.91966	0.18401	0.92581	0.0002	0.93573	0.78378	0.48	0.29652	0.3011
7.0	1.0	0.96712	0.93707	0.96669	0.01828	0.96008	0.96706	0.12713	0.96717	0.00026	0.97712	0.8841	0.48	0.24608	0.3011
8.0	1.0	0.87014	0.77514	0.89207	0.06998	0.84789	0.86864	0.31392	0.87165	0.00027	0.92582	0.64742	0.48	0.20983	0.28954
9.0	1.0	0.87976	0.78858	0.83656	0.06445	0.86116	0.87866	0.31249	0.88086	0.00029	0.93693	0.66126	1.5	0.23746	0.30274
10.0	1.0	0.9219	0.85726	0.90668	0.04029	0.91134	0.92178	0.24485	0.92202	0.00034	0.96351	0.75578	1.5	0.22725	0.30274
11.0	1.0	0.88688	0.80111	0.87063	0.05958	0.87307	0.88679	0.31425	0.88697	0.00035	0.95216	0.6776	1.5	0.21743	0.32829
12.0	1.0	0.88964	0.80365	0.87919	0.06211	0.87742	0.88959	0.32479	0.88969	0.00039	0.95704	0.67692	1.5	0.20894	0.32829
13.0	1.0	0.8723	0.77623	0.85521	0.07305	0.85902	0.87218	0.36501	0.87242	0.0004	0.95307	0.63975	1.5	0.19769	0.32829
14.0	1.0	0.86611	0.76718	0.84416	0.07147	0.85313	0.86586	0.37149	0.86637	0.00042	0.95374	0.62935	1.5	0.19724	0.32829
15.0	1.0	0.84306	0.73062	0.84597	0.08868	0.82935	0.84273	0.43133	0.8434	0.00044	0.95068	0.57973	1.5	0.18403	0.32829
16.0	1.0	0.83764	0.72349	0.82631	0.08992	0.8242	0.83742	0.43843	0.83785	0.00046	0.95154	0.57209	1.5	0.1829	0.32829
17.0	1.0	0.82127	0.69883	0.79331	0.09921	0.80743	0.82095	0.47376	0.82158	0.00048	0.94981	0.54111	1.5	0.18129	0.32829
18.0	1.0	0.80852	0.68112	0.77254	0.10773	0.79486	0.80794	0.5063	0.8091	0.0005	0.95004	0.52161	1.5	0.17894	0.29794
19.0	1.0	0.8083	0.68048	0.80258	0.10997	0.79593	0.80804	0.52763	0.80856	0.00055	0.9545	0.5195	1.5	0.16819	0.29794
20.0	1.0	0.80138	0.67077	0.78393	0.11635	0.78898	0.80111	0.54736	0.80164	0.00056	0.95431	0.50834	2.0	0.16782	0.34682

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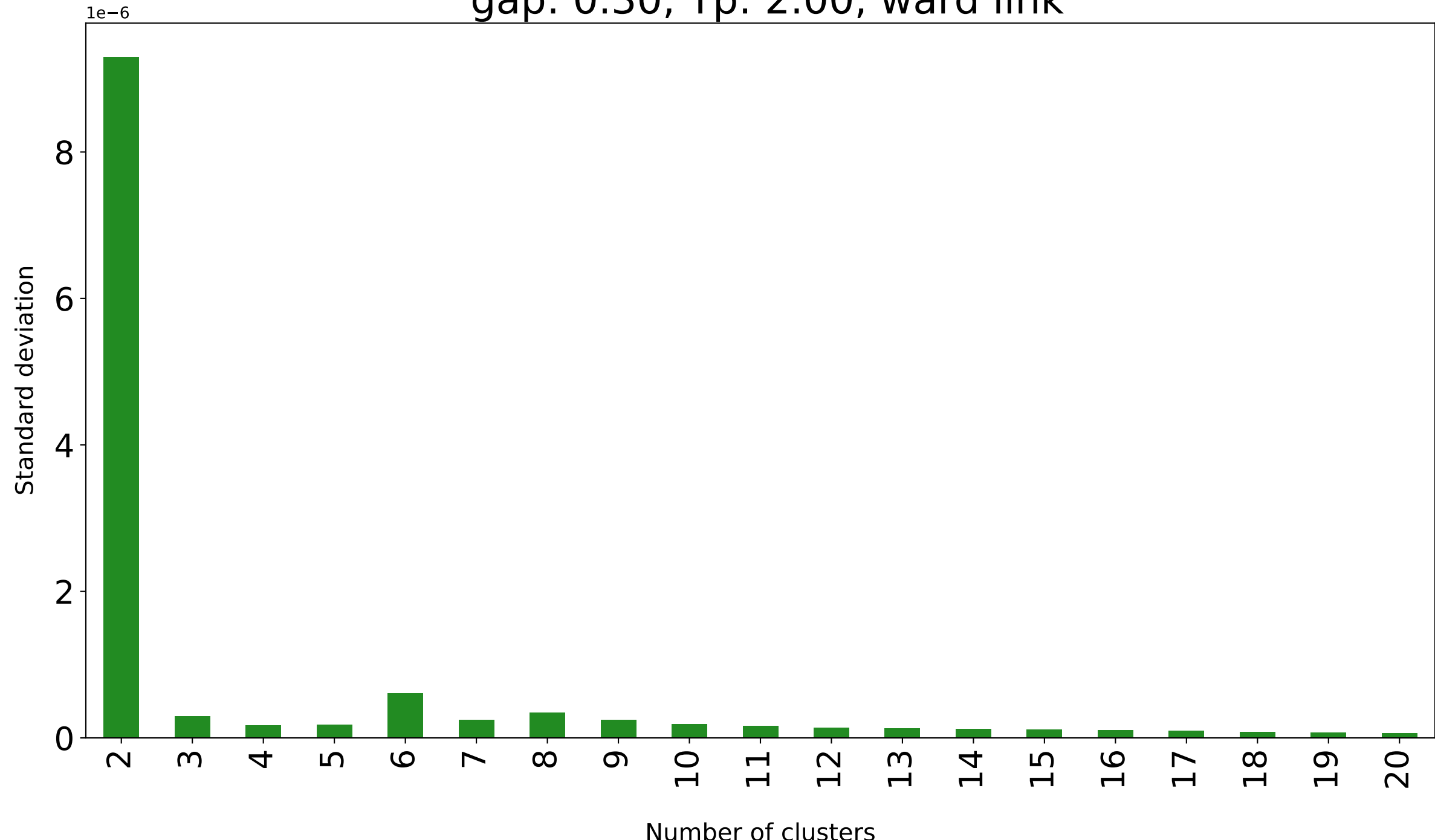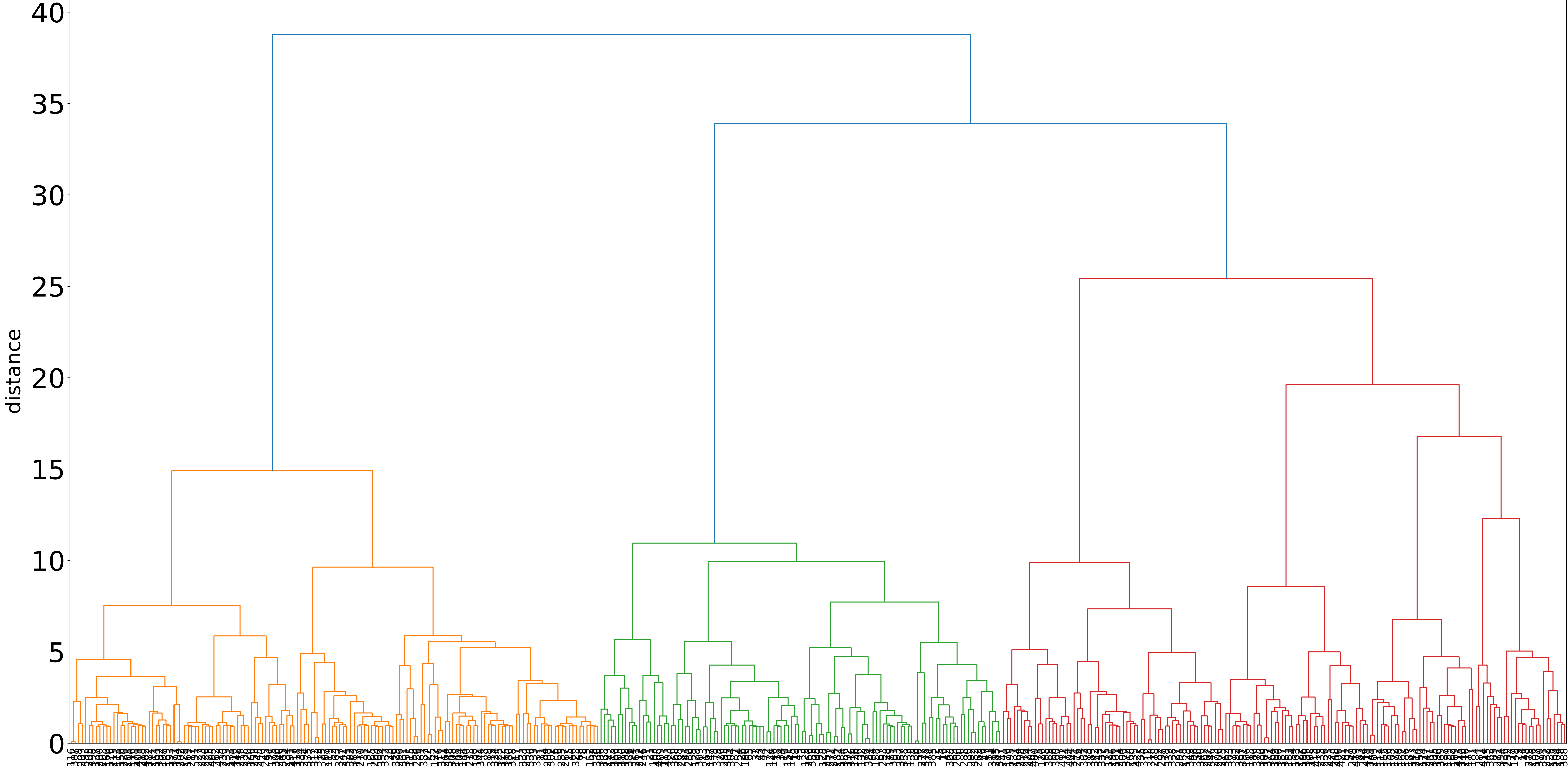gap: 0.20, Tp: 2.00, ward link

Hierarchical Clustering Dendrogram - gap: 0.30, 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	0.95696	0.93801	0.899	0.03194	0.89975	0.95692	0.10493	0.95699	0.00014	0.93201	0.91933	0.04672	0.24612	0.31624
3.0	1.0	0.99292	0.98616	0.98958	0.00361	0.98933	0.99292	0.03479	0.99292	0.00017	0.9906	0.97344	0.13913	0.28607	0.23204
4.0	1.0	0.9929	0.98609	0.99109	0.00374	0.99027	0.9929	0.03411	0.9929	0.0002	0.99239	0.97328	0.16667	0.31103	0.23843
5.0	1.0	0.98397	0.96904	0.98127	0.01753	0.97873	0.98396	0.07984	0.98398	0.00021	0.98447	0.94205	0.29091	0.32782	0.23843
6.0	1.0	0.96694	0.94039	0.93848	0.02151	0.95823	0.96571	0.08932	0.96818	0.00021	0.97198	0.90448	0.64	0.34375	0.2445
7.0	1.0	0.96528	0.93387	0.963	0.0192	0.95784	0.96523	0.13222	0.96533	0.00026	0.97586	0.87902	0.64	0.28774	0.23765
8.0	1.0	0.92928	0.87102	0.8839	0.03934	0.91584	0.92781	0.19807	0.93076	0.00026	0.9546	0.7852	2.0	0.31838	0.25174
9.0	1.0	0.87025	0.77443	0.85795	0.07096	0.84938	0.86966	0.33067	0.87084	0.00028	0.93051	0.64152	2.0	0.27548	0.24437
10.0	1.0	0.86151	0.76026	0.85397	0.07573	0.84251	0.8612	0.36682	0.86182	0.00031	0.93536	0.62071	2.0	0.25937	0.25381
11.0	1.0	0.83129	0.71482	0.8125	0.09627	0.81053	0.83116	0.44087	0.83142	0.00033	0.92885	0.56243	2.0	0.24487	0.25381
12.0	1.0	0.84277	0.73129	0.81478	0.09319	0.82496	0.84266	0.43535	0.84289	0.00036	0.93809	0.58187	2.0	0.24036	0.26731
13.0	1.0	0.83156	0.71484	0.7974	0.09836	0.81364	0.8313	0.46061	0.83182	0.00037	0.93724	0.56191	2.0	0.23223	0.26731
14.0	1.0	0.78125	0.64342	0.76658	0.12692	0.76027	0.78104	0.54669	0.78146	0.00038	0.92622	0.47801	2.0	0.21813	0.26731
15.0	1.0	0.78192	0.64425	0.76476	0.12219	0.76245	0.7817	0.54758	0.78213	0.0004	0.93095	0.47875	2.0	0.21425	0.26731
16.0	1.0	0.7716	0.6295	0.78617	0.1346	0.75342	0.77079	0.59398	0.77242	0.00043	0.9344	0.46253	2.0	0.2045	0.26731
17.0	1.0	0.7787	0.6403	0.78013	0.12426	0.76209	0.77828	0.57265	0.77912	0.00046	0.93991	0.47531	2.0	0.20315	0.26731
18.0	1.0	0.74113	0.5887	0.76925	0.14181	0.7238	0.73969	0.63752	0.74258	0.00048	0.93631	0.41923	2.0	0.19144	0.26761
19.0	1.0	0.74768	0.59727	0.76987	0.13815	0.73176	0.74654	0.63537	0.74882	0.00052	0.94127	0.42776	2.0	0.18658	0.26761
20.0	1.0	0.75115	0.60258	0.76039	0.13982	0.73607	0.75052	0.65145	0.75178	0.00054	0.94441	0.43349	2.0	0.18971	0.26044

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

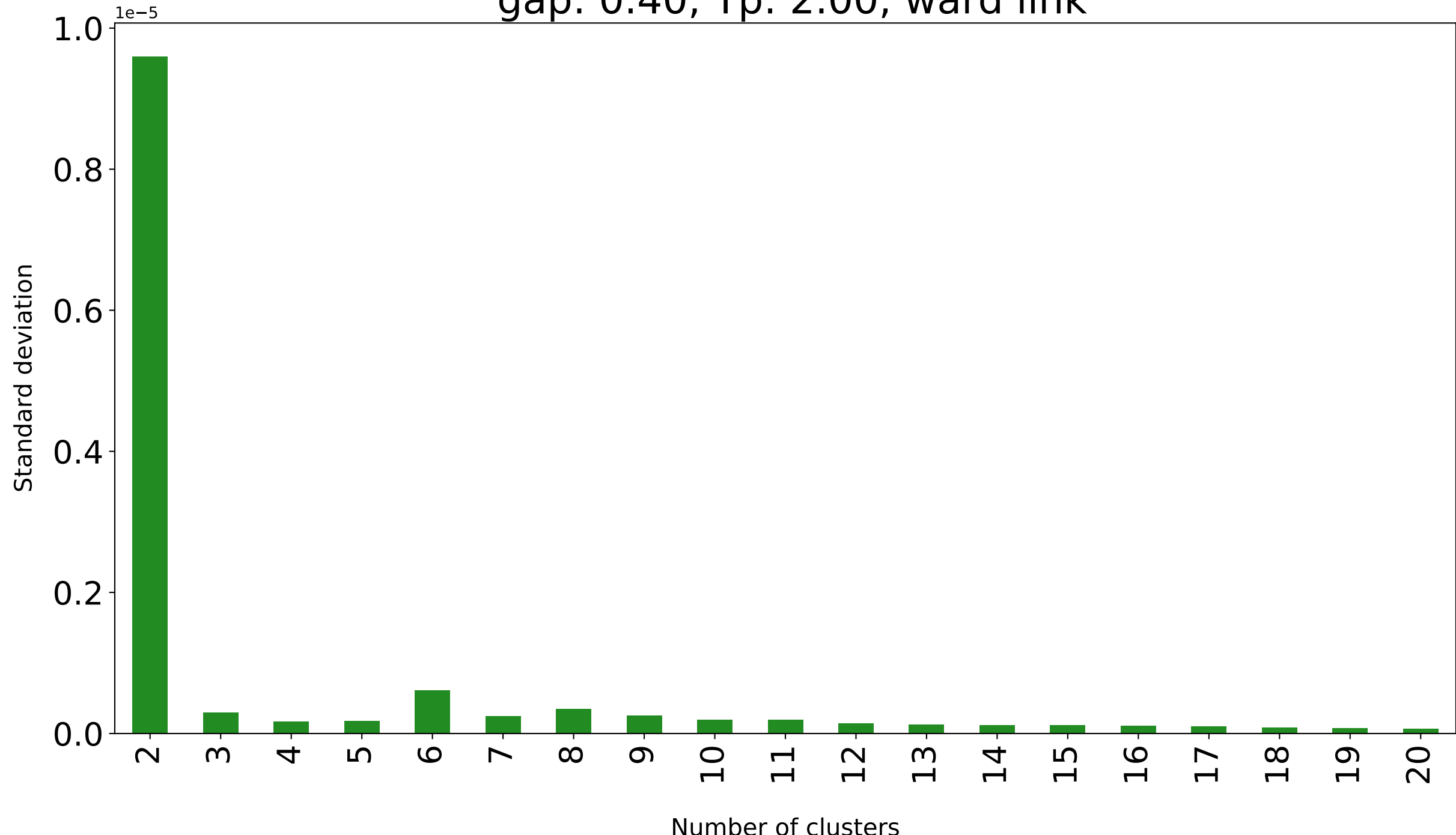Hierarchical Clustering Dendrogram - gap: 0.40, Tp: 2.00, ward link
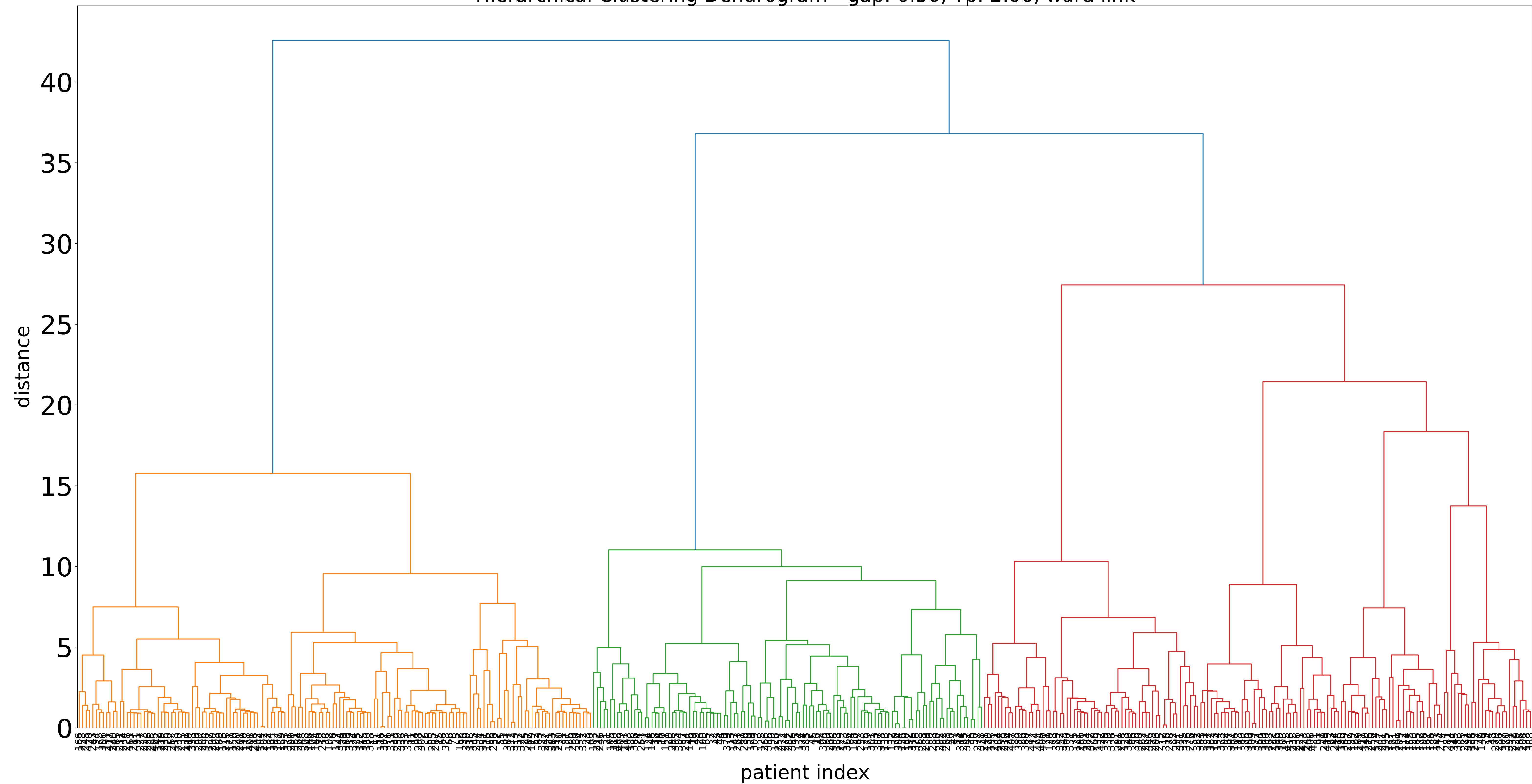
Cophenetic Correlation Coefficient: 0.7030468635959852

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	1.0	0.95392	0.93375	0.89216	0.03438	0.89266	0.95387	0.11254	0.95397	0.00014	0.92732	0.91407	0.0	0.27303	0.27232
3.0	1.0	0.99572	0.99154	0.99307	0.0021	0.99354	0.99572	0.02262	0.99572	0.00017	0.99426	0.98345	0.0	0.31908	0.19837
4.0	1.0	0.99537	0.99089	0.99446	0.00247	0.99366	0.99537	0.02398	0.99538	0.0002	0.99503	0.98227	0.0	0.34684	0.21135
5.0	1.0	0.98897	0.97868	0.98798	0.01259	0.98538	0.98897	0.05706	0.98898	0.00021	0.98935	0.96002	0.0	0.36501	0.21135
6.0	1.0	0.99482	0.98996	0.99504	0.00392	0.99329	0.99475	0.02973	0.99489	0.00022	0.99525	0.9812	0.42308	0.38184	0.21135
7.0	1.0	0.9661	0.93498	0.9653	0.01876	0.95891	0.96605	0.13344	0.96616	0.00026	0.97657	0.8799	0.42308	0.3201	0.17237
8.0	1.0	0.95334	0.91261	0.93757	0.02567	0.94404	0.95287	0.15778	0.95381	0.00026	0.96915	0.84601	0.61111	0.35041	0.17939
9.0	1.0	0.89519	0.8149	0.85916	0.05818	0.87718	0.89461	0.27823	0.89577	0.00027	0.94025	0.7003	1.1	0.3175	0.17939
10.0	1.0	0.82234	0.70153	0.80051	0.10031	0.79616	0.82185	0.43787	0.82282	0.00028	0.91259	0.54705	1.1	0.29255	0.11662
11.0	1.0	0.80325	0.67532	0.76234	0.10653	0.77747	0.8027	0.46949	0.80381	0.0003	0.91266	0.51805	1.1	0.27695	0.11662
12.0	1.0	0.83919	0.72609	0.82551	0.09051	0.82113	0.83903	0.44324	0.83935	0.00036	0.93715	0.57573	1.1	0.26772	0.13104
13.0	1.0	0.82854	0.71039	0.80549	0.09501	0.81055	0.82839	0.46641	0.82869	0.00037	0.93698	0.55622	1.1	0.25652	0.13104
14.0	1.0	0.82126	0.69948	0.8101	0.10115	0.80419	0.82111	0.50681	0.82142	0.0004	0.93958	0.54249	1.1	0.24392	0.13104
15.0	1.0	0.77755	0.63776	0.79259	0.12962	0.7586	0.77671	0.58964	0.7784	0.00041	0.93205	0.47209	1.1	0.23006	0.13104
16.0	1.0	0.77614	0.63573	0.79442	0.12819	0.75843	0.77518	0.5979	0.77711	0.00044	0.93591	0.46982	1.1	0.22531	0.13104
17.0	1.0	0.77405	0.63344	0.78281	0.12658	0.75707	0.77342	0.60593	0.77469	0.00046	0.93845	0.46741	1.1	0.22058	0.13104
18.0	1.0	0.766	0.62277	0.77385	0.13056	0.74951	0.76538	0.63344	0.76662	0.00048	0.93995	0.45588	1.57143	0.213	0.13104
19.0	1.0	0.75893	0.61337	0.76109	0.13377	0.74285	0.75844	0.64979	0.75943	0.0005	0.94127	0.44547	1.57143	0.2074	0.13104
20.0	1.0	0.75075	0.60295	0.73796	0.14205	0.73475	0.75043	0.67576	0.75106	0.00051	0.94153	0.43448	2.0	0.20796	0.13104

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

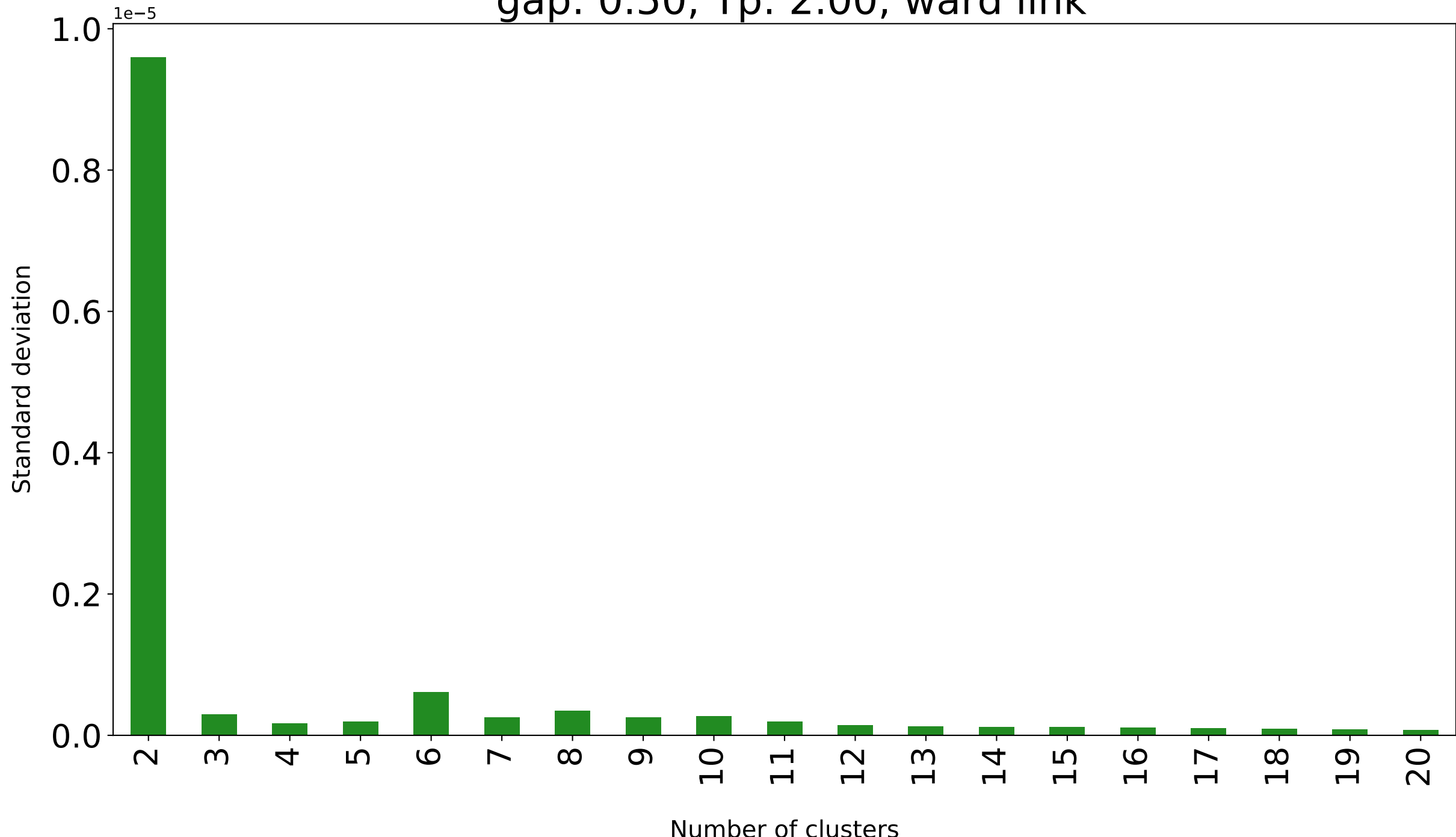Hierarchical Clustering Dendrogram - gap: 0.50, Tp: 2.00, ward link

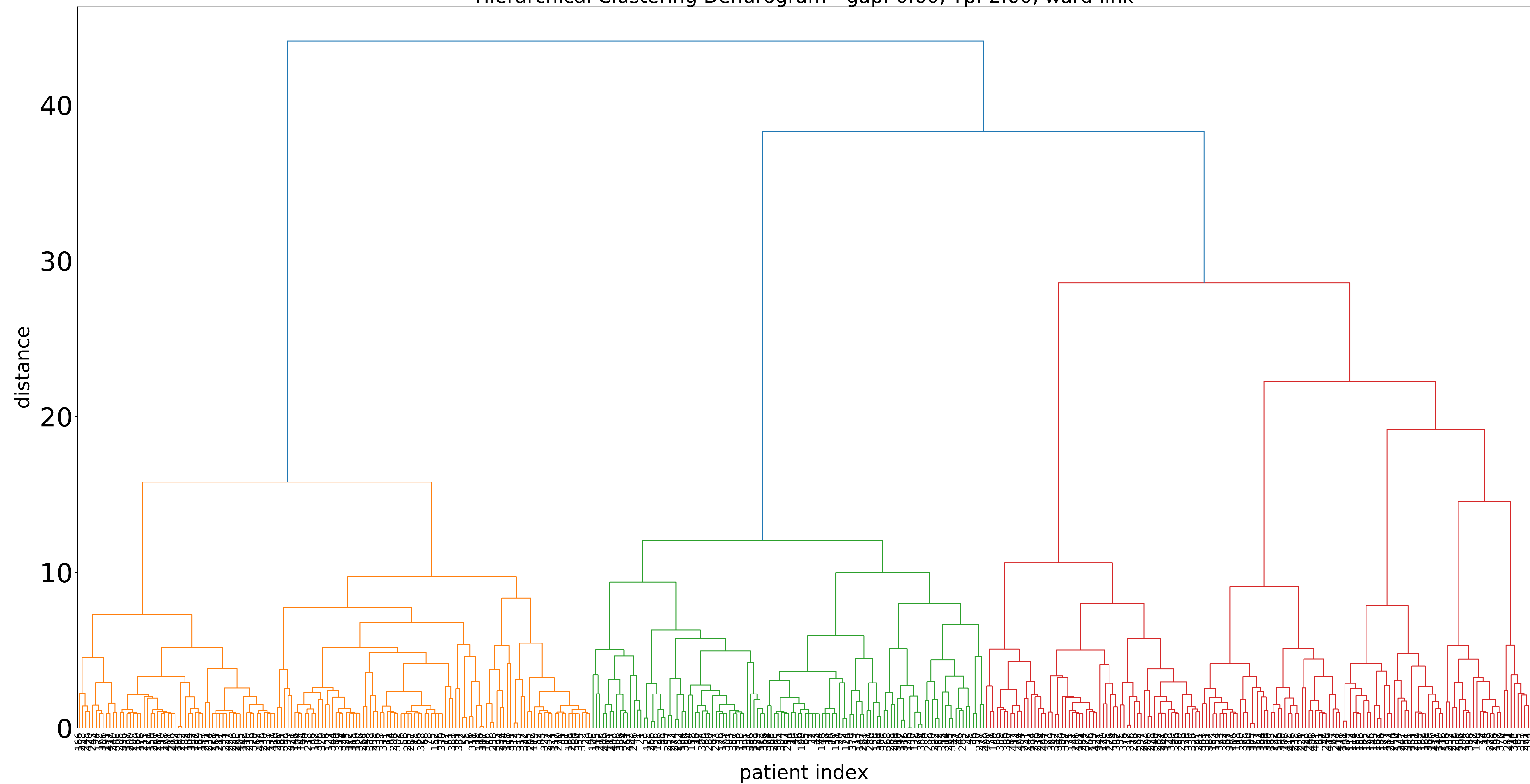Cophenetic Correlation Coefficient: 0.6971030576889141

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	0.96656	0.95143	0.92123	0.02472	0.9223	0.96653	0.08514	0.96658	0.00015	0.94678	0.93576	0.0	0.28454	0.26607
3.0	1.0	0.9951	0.99031	0.992	0.0024	0.9926	0.9951	0.02611	0.9951	0.00017	0.99342	0.98104	0.0	0.33042	0.20186
4.0	1.0	0.99454	0.98922	0.99343	0.00291	0.99252	0.99454	0.0288	0.99454	0.0002	0.99414	0.97897	0.0	0.35893	0.20931
5.0	1.0	0.97756	0.95684	0.97475	0.02879	0.97024	0.97755	0.11433	0.97757	0.00021	0.97832	0.91983	0.0	0.37832	0.20931
6.0	1.0	0.99513	0.99034	0.9973	0.00403	0.99363	0.99512	0.03405	0.99514	0.00022	0.9954	0.98102	0.23077	0.39548	0.20931
7.0	1.0	0.95968	0.92376	0.96685	0.02338	0.95085	0.95907	0.14165	0.96029	0.00026	0.97085	0.86456	0.23077	0.33257	0.14783
8.0	1.0	0.961	0.92637	0.95263	0.02213	0.95295	0.96075	0.13958	0.96125	0.00026	0.97357	0.86791	0.33333	0.36502	0.16165
9.0	1.0	0.89838	0.81889	0.85295	0.05597	0.88046	0.8975	0.27481	0.89926	0.00027	0.94035	0.70419	0.8	0.33392	0.16165
10.0	1.0	0.84684	0.73879	0.7742	0.08494	0.82275	0.84489	0.38047	0.8488	0.00027	0.9186	0.59904	0.8	0.3088	0.16165
11.0	1.0	0.7928	0.65999	0.74093	0.11322	0.76483	0.79196	0.48947	0.79365	0.00029	0.90561	0.4993	0.8	0.28808	0.16165
12.0	1.0	0.81309	0.68763	0.79435	0.10404	0.79176	0.81282	0.49437	0.81336	0.00034	0.92622	0.52861	0.8	0.26571	0.16165
13.0	1.0	0.8164	0.69212	0.82159	0.10975	0.79763	0.81592	0.53893	0.81688	0.00037	0.93391	0.5339	0.8	0.25008	0.16165
14.0	1.0	0.82399	0.70302	0.82581	0.10217	0.80715	0.82364	0.5284	0.82434	0.0004	0.94024	0.54644	0.8	0.2407	0.16165
15.0	1.0	0.81599	0.69171	0.8065	0.10794	0.7992	0.81574	0.55447	0.81625	0.00041	0.94023	0.5331	0.8	0.23365	0.202
16.0	1.0	0.78431	0.64732	0.78244	0.12352	0.76612	0.7839	0.61549	0.78472	0.00042	0.93491	0.48216	0.8	0.2296	0.202
17.0	1.0	0.77556	0.63589	0.76235	0.1284	0.75756	0.77523	0.6331	0.77588	0.00043	0.93542	0.46997	0.8	0.22455	0.202
18.0	1.0	0.77703	0.63795	0.75016	0.12628	0.76002	0.77662	0.62891	0.77743	0.00045	0.93859	0.47249	0.8	0.22703	0.15049
19.0	1.0	0.7839	0.64725	0.76262	0.12107	0.76848	0.78358	0.6243	0.78422	0.00049	0.94394	0.48262	0.8	0.2198	0.15049
20.0	1.0	0.78568	0.64932	0.75142	0.12221	0.77107	0.78514	0.62724	0.78622	0.00051	0.94655	0.4849	2.0	0.22704	0.15049

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

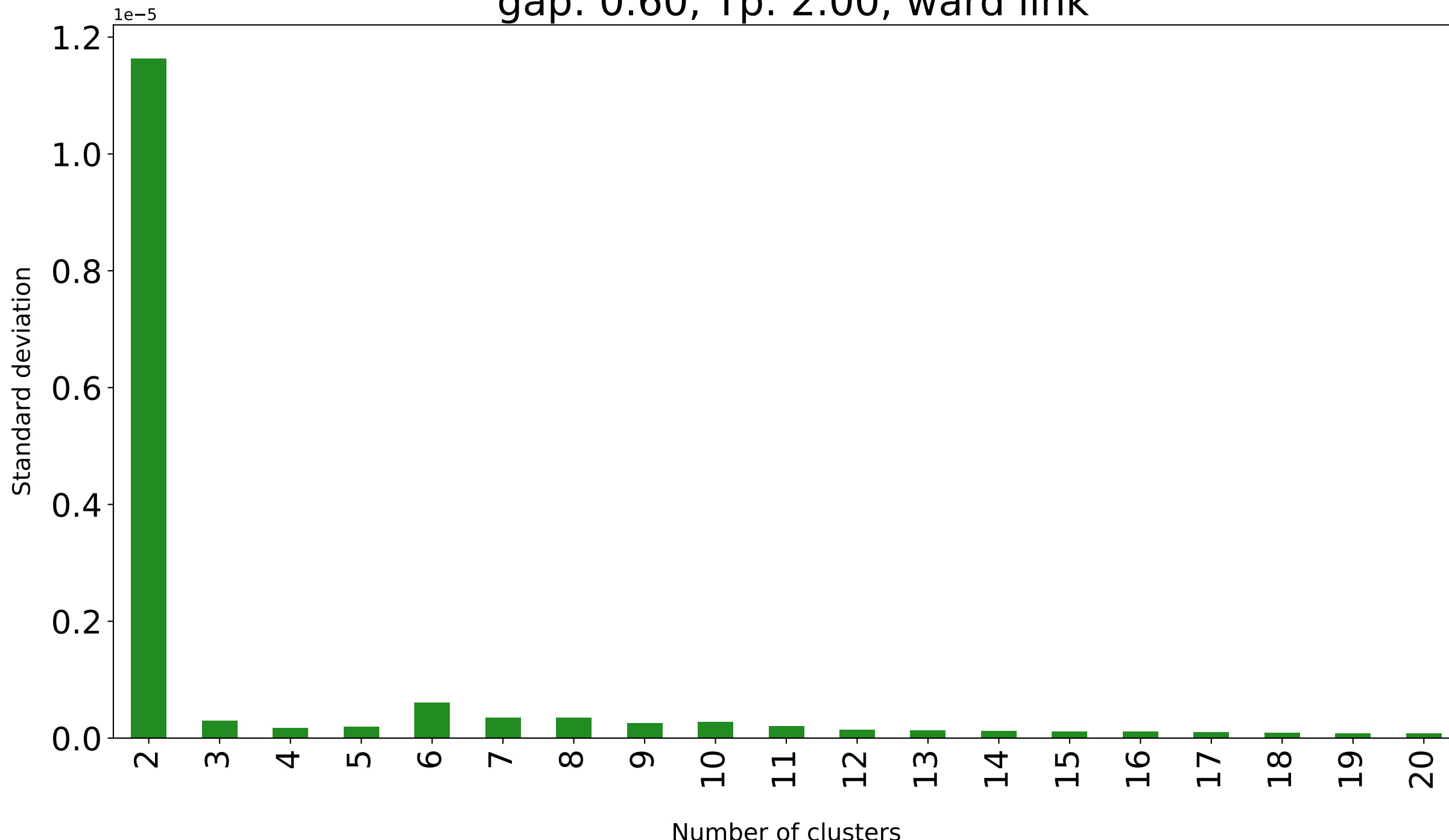Hierarchical Clustering Dendrogram - gap: 0.60, Tp: 2.00, ward link

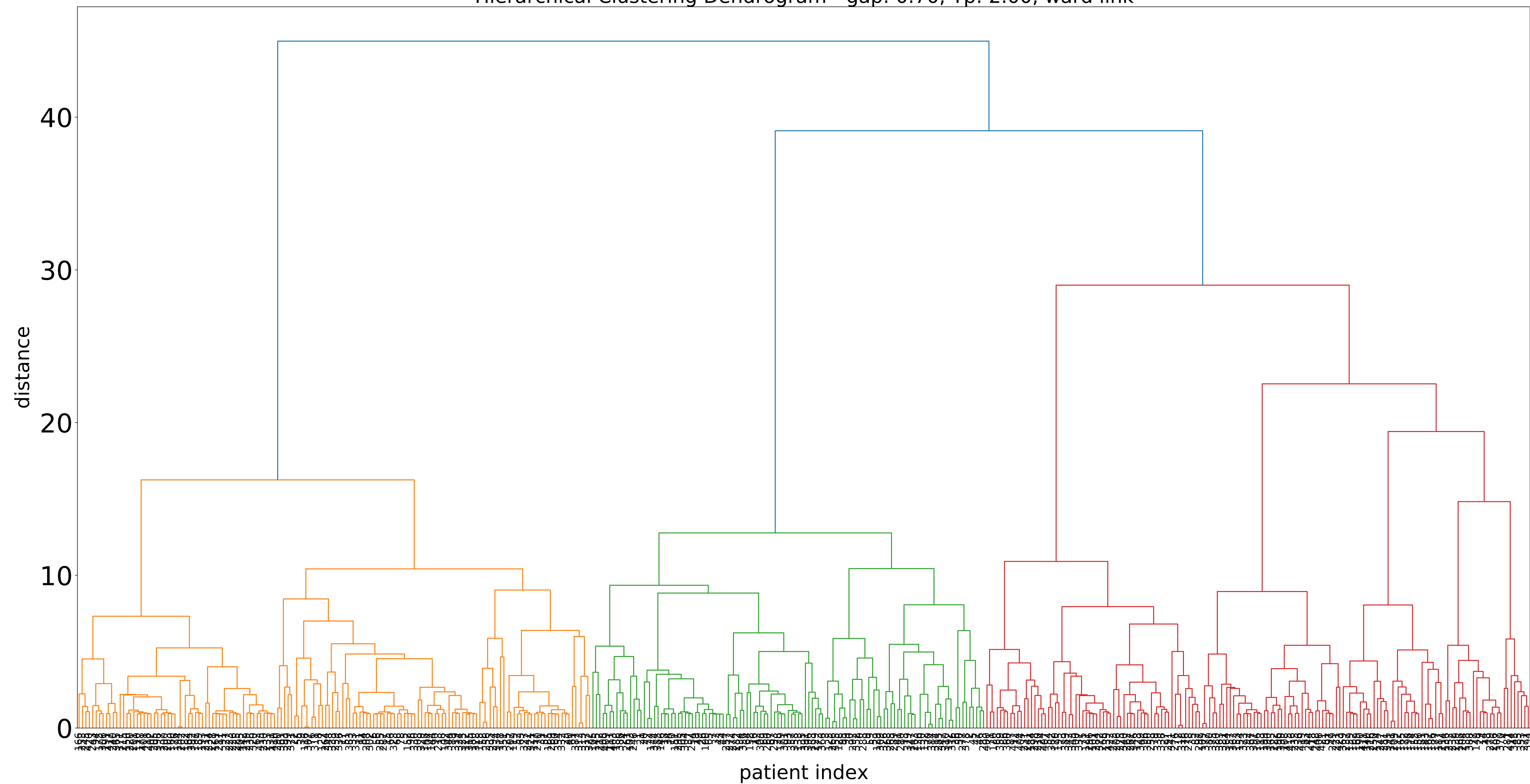Cophenetic Correlation Coefficient: 0.6774117708646596

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	0.92905	0.89838	0.83441	0.05319	0.8348	0.92898	0.17047	0.92912	0.00013	0.88856	0.86914	0.0	0.28263	0.25899
3.0	1.0	0.99427	0.98865	0.99197	0.00301	0.99134	0.99427	0.03311	0.99427	0.00017	0.99231	0.97777	0.02899	0.3269	0.20174
4.0	1.0	0.99315	0.98648	0.99091	0.00357	0.99062	0.99315	0.03611	0.99315	0.0002	0.99265	0.97363	0.02899	0.35711	0.2087
5.0	1.0	0.97547	0.95284	0.96991	0.03008	0.96744	0.97546	0.12342	0.97547	0.00021	0.97627	0.91241	0.02899	0.37742	0.2087
6.0	1.0	0.99298	0.98624	0.99102	0.00423	0.99084	0.99295	0.0367	0.99302	0.00022	0.99343	0.97357	0.02899	0.39723	0.2087
7.0	1.0	0.94864	0.90402	0.9628	0.02855	0.93705	0.94729	0.15275	0.95	0.00025	0.96143	0.83541	0.03623	0.32928	0.13814
8.0	1.0	0.96196	0.92829	0.94916	0.02077	0.95404	0.96171	0.13064	0.96221	0.00026	0.97407	0.87168	0.03623	0.3659	0.15013
9.0	1.0	0.88493	0.79751	0.8907	0.06669	0.86564	0.88437	0.30835	0.88549	0.00028	0.9359	0.67306	0.26144	0.31255	0.15013
10.0	1.0	0.83413	0.72038	0.80843	0.09352	0.80943	0.8336	0.41547	0.83465	0.00028	0.91755	0.57286	0.26144	0.29044	0.15013
11.0	1.0	0.79872	0.66923	0.7606	0.11386	0.77203	0.79822	0.50466	0.79923	0.00029	0.90993	0.51069	0.26144	0.27387	0.15013
12.0	1.0	0.80779	0.68004	0.8103	0.11423	0.78628	0.80715	0.53894	0.80842	0.00034	0.92519	0.52015	0.26144	0.2582	0.15013
13.0	1.0	0.81417	0.68939	0.81449	0.11269	0.79493	0.8137	0.54774	0.81464	0.00037	0.93242	0.5313	0.66667	0.25216	0.15013
14.0	1.0	0.80935	0.68271	0.80611	0.11532	0.79079	0.80894	0.56475	0.80976	0.00038	0.93443	0.52354	0.66667	0.24226	0.15013
15.0	1.0	0.81722	0.69367	0.80097	0.10958	0.80023	0.81693	0.55139	0.81751	0.0004	0.93963	0.53579	0.66667	0.23573	0.17564
16.0	1.0	0.78552	0.64938	0.77181	0.12865	0.76692	0.78519	0.61757	0.78584	0.00041	0.93371	0.48484	0.66667	0.22967	0.17564
17.0	1.0	0.78275	0.64552	0.75832	0.12919	0.76482	0.78238	0.63024	0.78312	0.00043	0.93575	0.48051	0.66667	0.23051	0.14752
18.0	1.0	0.77756	0.63866	0.74393	0.12719	0.76012	0.777	0.63425	0.77813	0.00044	0.9371	0.47354	0.66667	0.226	0.14752
19.0	1.0	0.7788	0.63984	0.73993	0.12683	0.76238	0.77808	0.64058	0.77953	0.00046	0.94034	0.47448	2.0	0.22468	0.14752
20.0	1.0	0.77093	0.62999	0.74628	0.12846	0.75521	0.77049	0.65416	0.77138	0.00049	0.94267	0.46415	2.0	0.21987	0.14752

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

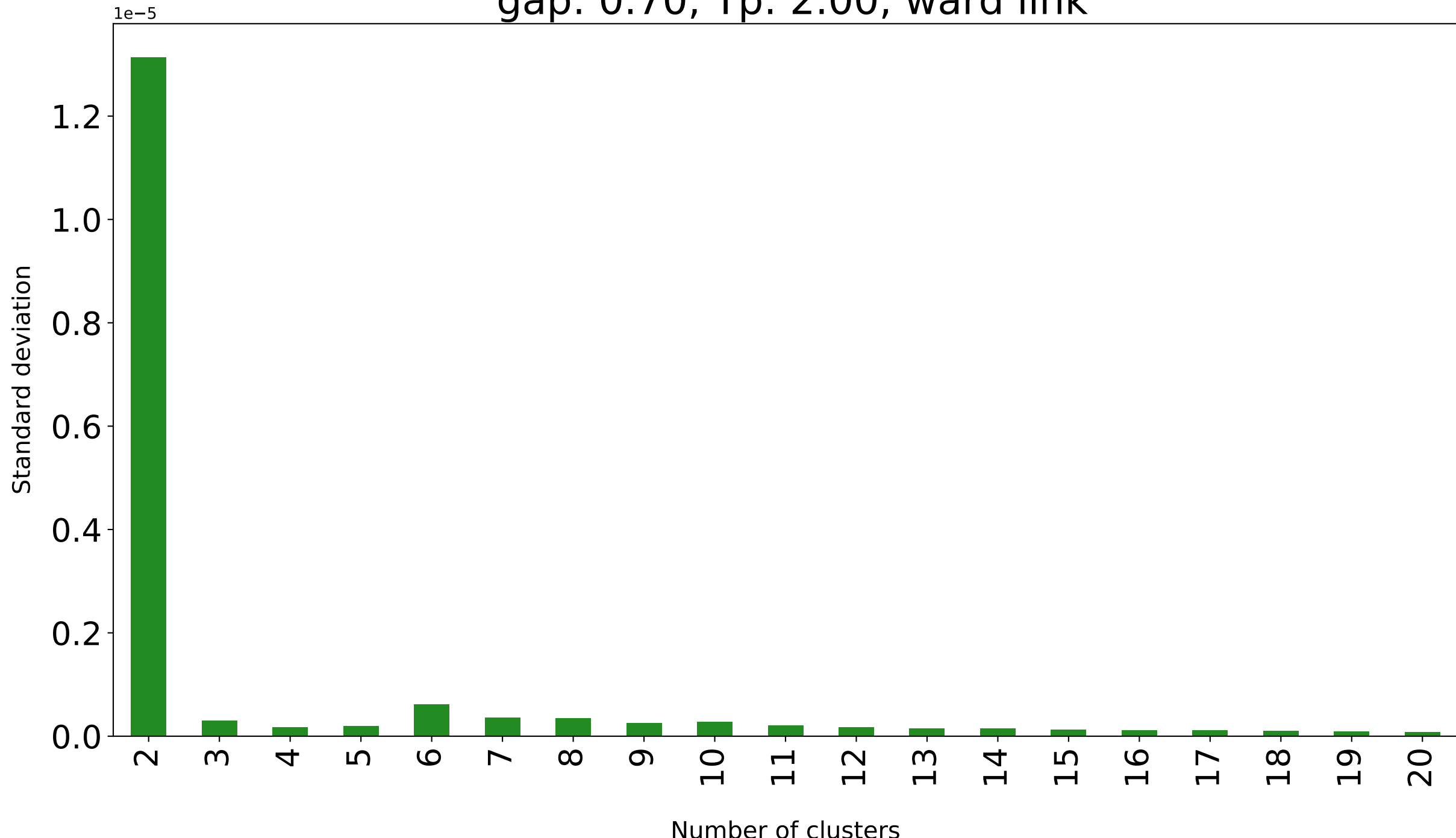Hierarchical Clustering Dendrogram - gap: 0.70, Tp: 2.00, ward link

Cophenetic Correlation Coefficient: 0.6452722976984332

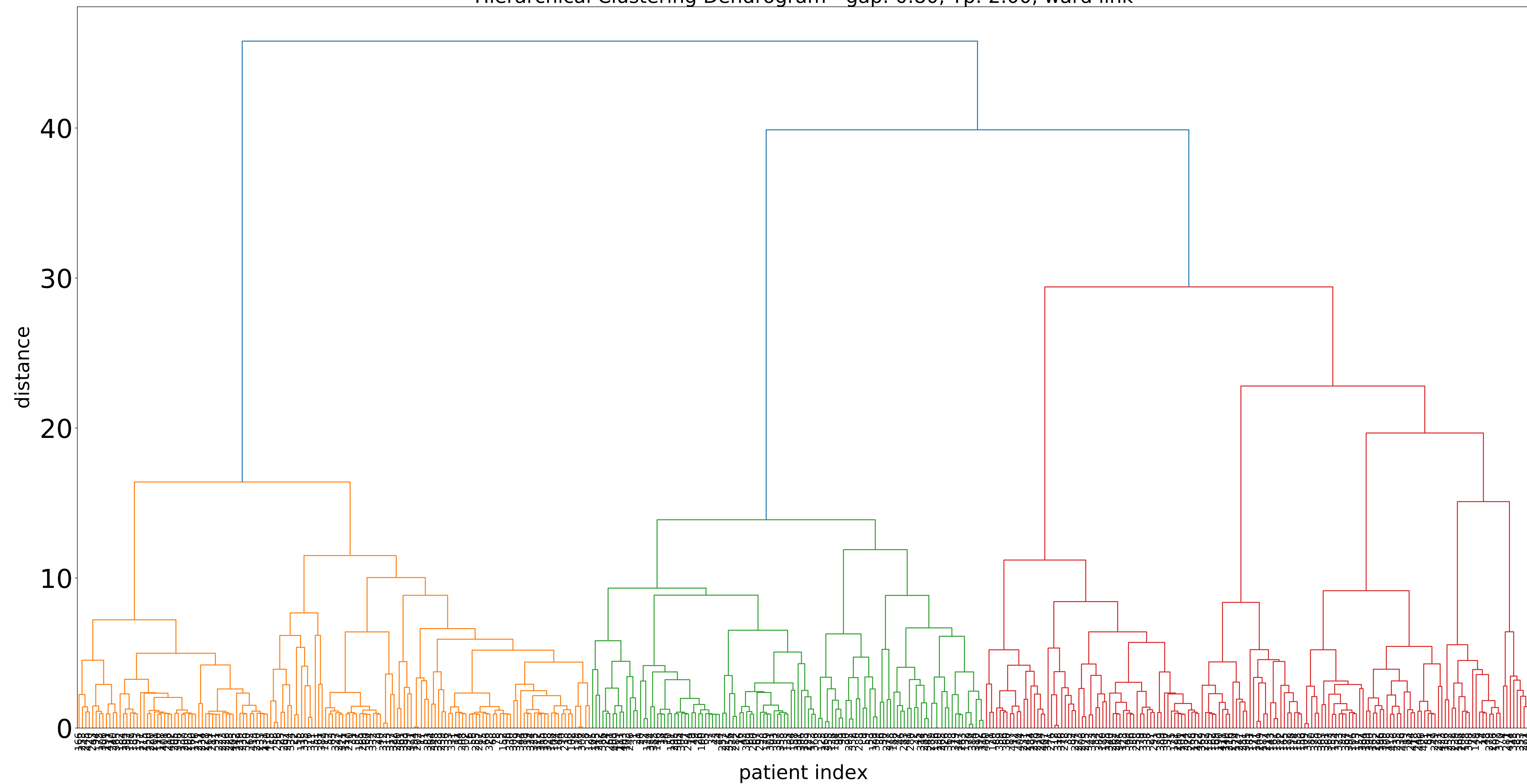# Average values of five clustering indices
gap: 0.70, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.90439	0.86334	0.7775	0.0721	0.77759	0.90429	0.22733	0.90449	0.00012	0.8502	0.82473	0.0	0.27753	0.24178
3.0	1.0	0.9937	0.98754	0.9911	0.00328	0.99049	0.9937	0.03578	0.9937	0.00017	0.99156	0.97565	0.02899	0.31931	0.18974
4.0	1.0	0.99236	0.98493	0.98984	0.00404	0.98953	0.99236	0.04005	0.99236	0.0002	0.9918	0.97065	0.02899	0.34872	0.19731
5.0	1.0	0.97452	0.95106	0.96912	0.03051	0.96622	0.97451	0.12734	0.97453	0.00021	0.97545	0.9093	0.02899	0.36846	0.19731
6.0	1.0	0.99258	0.98541	0.99087	0.00453	0.99031	0.99255	0.03885	0.99261	0.00022	0.99305	0.97187	0.02899	0.38802	0.19731
7.0	1.0	0.95346	0.91296	0.9644	0.02586	0.94302	0.95238	0.14439	0.95456	0.00025	0.96535	0.84978	0.03623	0.32096	0.13059
8.0	1.0	0.95042	0.90885	0.92451	0.02618	0.94056	0.94965	0.15074	0.95119	0.00026	0.96721	0.84442	0.03623	0.3562	0.14015
9.0	1.0	0.88641	0.79906	0.88232	0.06755	0.86759	0.88603	0.32699	0.8868	0.00028	0.93738	0.67274	0.2451	0.30492	0.12422
10.0	1.0	0.83407	0.71962	0.80667	0.09525	0.80927	0.83369	0.44311	0.83446	0.00028	0.91731	0.57012	0.2451	0.28442	0.12422
11.0	1.0	0.81565	0.69186	0.76294	0.10642	0.79039	0.8148	0.50377	0.81651	0.00029	0.91444	0.53582	0.58824	0.28036	0.12422
12.0	1.0	0.78768	0.65288	0.77326	0.12401	0.7627	0.78721	0.58589	0.78816	0.00032	0.9143	0.48993	0.58824	0.26156	0.12422
13.0	1.0	0.79121	0.65756	0.78525	0.13008	0.76883	0.79067	0.60506	0.79176	0.00035	0.92208	0.49499	0.66667	0.24831	0.12422
14.0	1.0	0.78461	0.64893	0.76003	0.13717	0.76268	0.7842	0.63524	0.78502	0.00036	0.92337	0.48568	0.66667	0.24004	0.15065
15.0	1.0	0.77825	0.64013	0.75082	0.14004	0.75703	0.77785	0.65265	0.77865	0.00037	0.92534	0.47558	0.66667	0.22884	0.15065
16.0	1.0	0.79632	0.66476	0.78667	0.12654	0.77837	0.79598	0.61773	0.79665	0.00041	0.93605	0.50286	0.66667	0.21751	0.15065
17.0	1.0	0.79647	0.66506	0.77939	0.12901	0.77945	0.79619	0.62783	0.79676	0.00043	0.93904	0.50327	2.0	0.21623	0.15065
18.0	1.0	0.79292	0.66001	0.76507	0.13253	0.7764	0.79251	0.64109	0.79334	0.00045	0.94047	0.49761	2.0	0.21206	0.15065
19.0	1.0	0.78678	0.65121	0.75142	0.13162	0.77058	0.78624	0.64415	0.78732	0.00046	0.94132	0.48745	2.0	0.20835	0.15065
20.0	1.0	0.77688	0.63777	0.75314	0.13669	0.76109	0.77648	0.66574	0.77729	0.00048	0.94256	0.47227	2.0	0.20187	0.15065

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

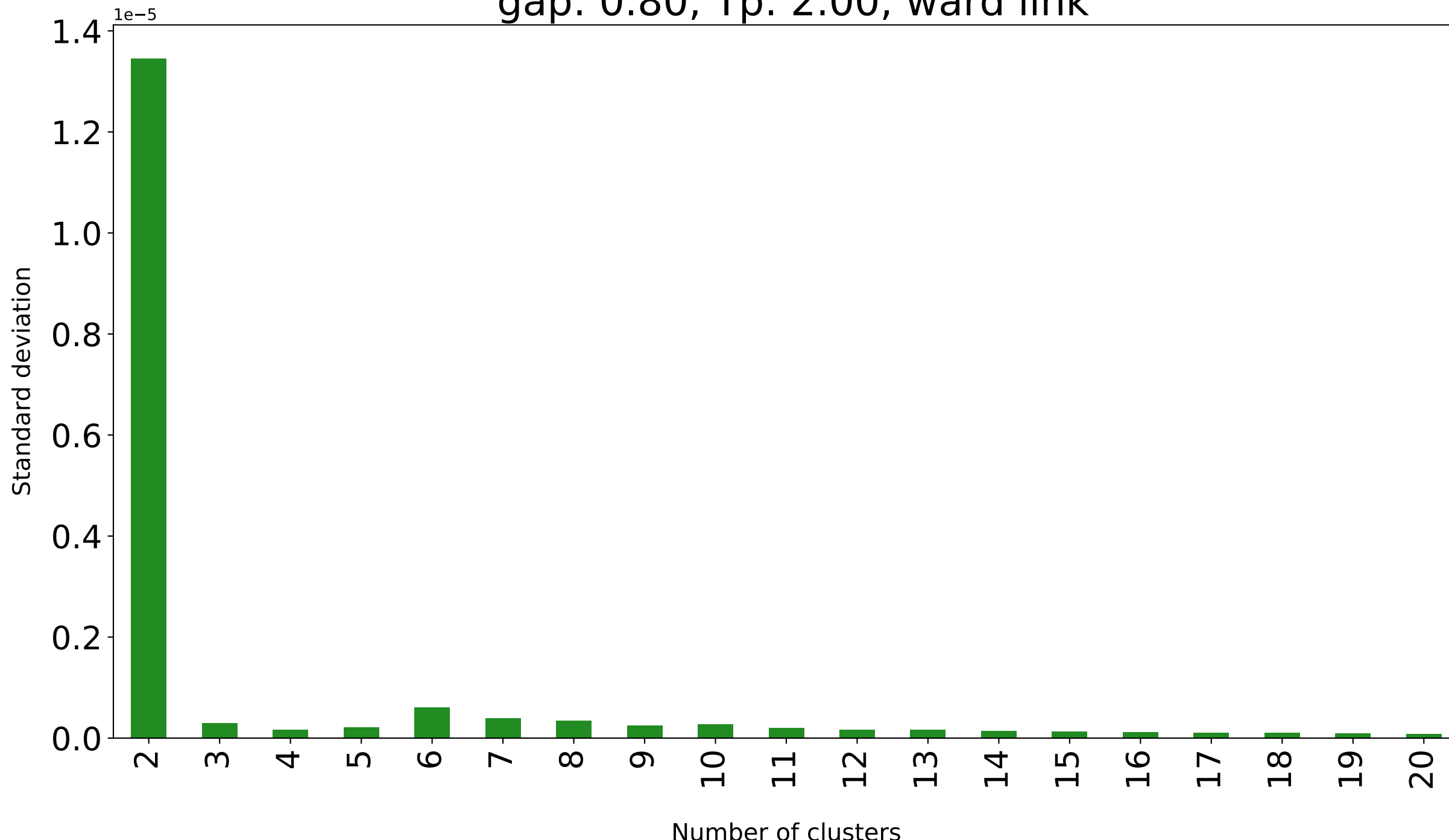Hierarchical Clustering Dendrogram - gap: 0.80, Tp: 2.00, ward link

distance

patient index

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	0.89201	0.84527	0.74825	0.08114	0.74857	0.89187	0.25858	0.89215	0.00012	0.83029	0.80079	0.0	0.27261	0.22671
3.0	1.0	0.99267	0.98556	0.98948	0.00379	0.98892	0.99267	0.04046	0.99267	0.00017	0.99019	0.97198	0.04348	0.31168	0.17907
4.0	1.0	0.99112	0.98258	0.98865	0.00467	0.98783	0.99112	0.04497	0.99112	0.0002	0.99049	0.9664	0.04348	0.34055	0.19023
5.0	1.0	0.97128	0.94497	0.95798	0.03417	0.96184	0.97126	0.14117	0.9713	0.0002	0.97216	0.89845	0.04348	0.36764	0.19023
6.0	1.0	0.99138	0.98309	0.99021	0.0051	0.98873	0.99133	0.04364	0.99142	0.00022	0.99192	0.96758	0.04348	0.37908	0.19023
7.0	1.0	0.94644	0.90053	0.96346	0.02921	0.93425	0.94493	0.15725	0.94796	0.00025	0.95947	0.83098	0.04348	0.31104	0.12591
8.0	1.0	0.94278	0.89435	0.90596	0.03011	0.93152	0.94168	0.16793	0.94389	0.00026	0.96219	0.82018	0.04348	0.34499	0.13141
9.0	1.0	0.90009	0.82038	0.89313	0.05864	0.88363	0.89984	0.30314	0.90034	0.00029	0.94501	0.70067	0.30303	0.29786	0.13141
10.0	1.0	0.86231	0.76019	0.82783	0.07967	0.8415	0.86191	0.40824	0.86272	0.00029	0.93003	0.61853	0.83333	0.29315	0.13141
11.0	1.0	0.8252	0.70497	0.80028	0.10132	0.80147	0.82488	0.51036	0.82552	0.0003	0.91972	0.54925	0.83333	0.26809	0.14301
12.0	1.0	0.81443	0.68988	0.78934	0.10663	0.79139	0.81398	0.53797	0.81488	0.00032	0.92109	0.53213	0.83333	0.25635	0.14301
13.0	1.0	0.78571	0.65013	0.78294	0.1255	0.76187	0.78502	0.60779	0.78641	0.00033	0.91739	0.48721	0.83333	0.24694	0.14301
14.0	1.0	0.77969	0.64085	0.78582	0.13385	0.75715	0.7788	0.63265	0.78059	0.00035	0.92088	0.47564	0.83333	0.23612	0.14301
15.0	1.0	0.76431	0.62062	0.76471	0.14469	0.74165	0.7636	0.67189	0.76501	0.00037	0.92026	0.45379	0.83333	0.22562	0.14301
16.0	1.0	0.77801	0.63775	0.79562	0.13331	0.75835	0.77684	0.64213	0.77919	0.0004	0.92957	0.47161	0.83333	0.21417	0.14301
17.0	1.0	0.79158	0.65695	0.80278	0.12941	0.77406	0.79071	0.62611	0.79245	0.00043	0.93694	0.49347	2.0	0.2127	0.14301
18.0	1.0	0.79457	0.66147	0.79157	0.12837	0.77791	0.79403	0.61893	0.79511	0.00044	0.93998	0.49846	2.0	0.21623	0.14301
19.0	1.0	0.79526	0.66222	0.79131	0.12928	0.77959	0.7948	0.62401	0.79573	0.00046	0.94322	0.49879	2.0	0.21385	0.14301
20.0	1.0	0.79761	0.66575	0.78916	0.12488	0.78282	0.79719	0.61251	0.79804	0.00049	0.9462	0.5031	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
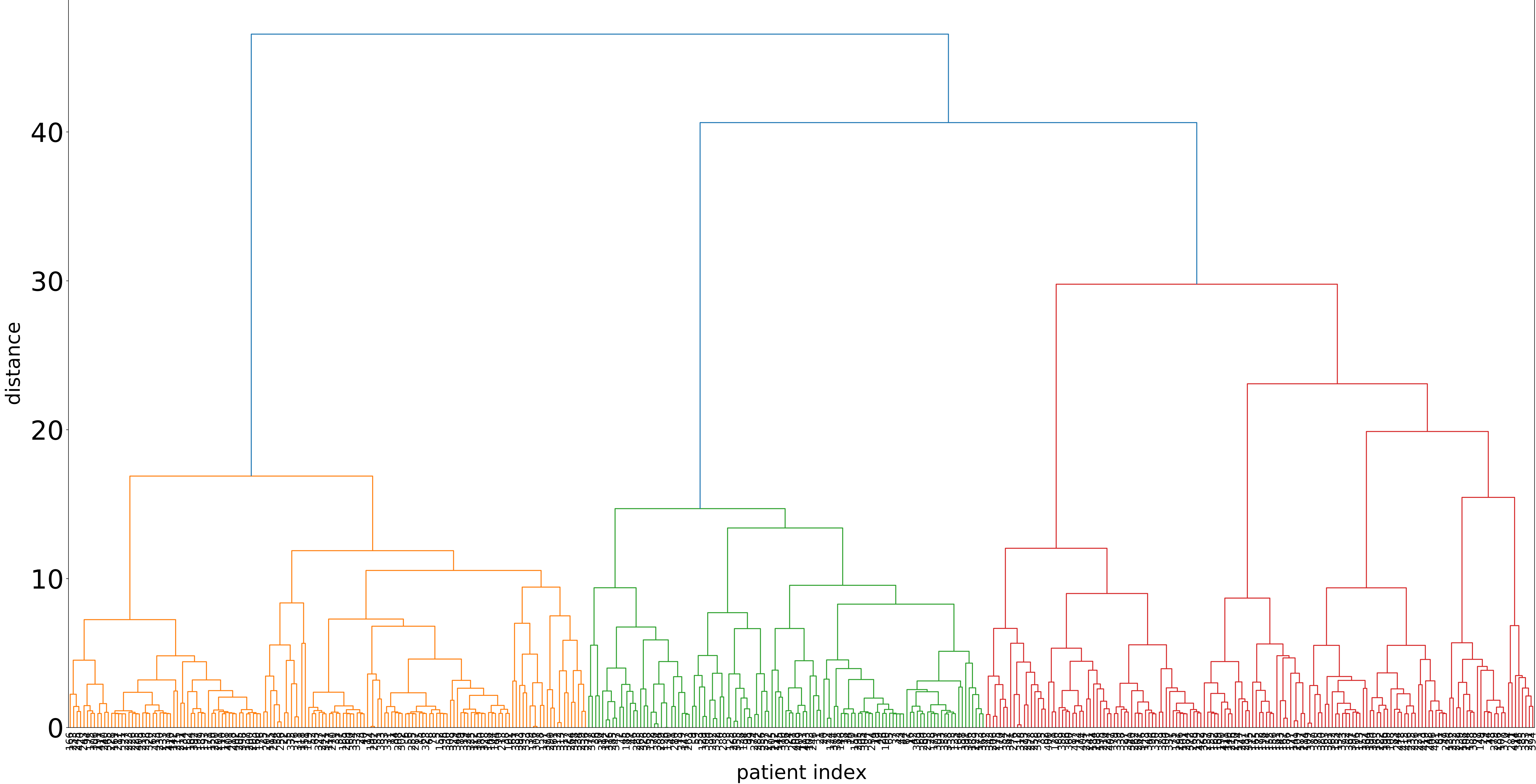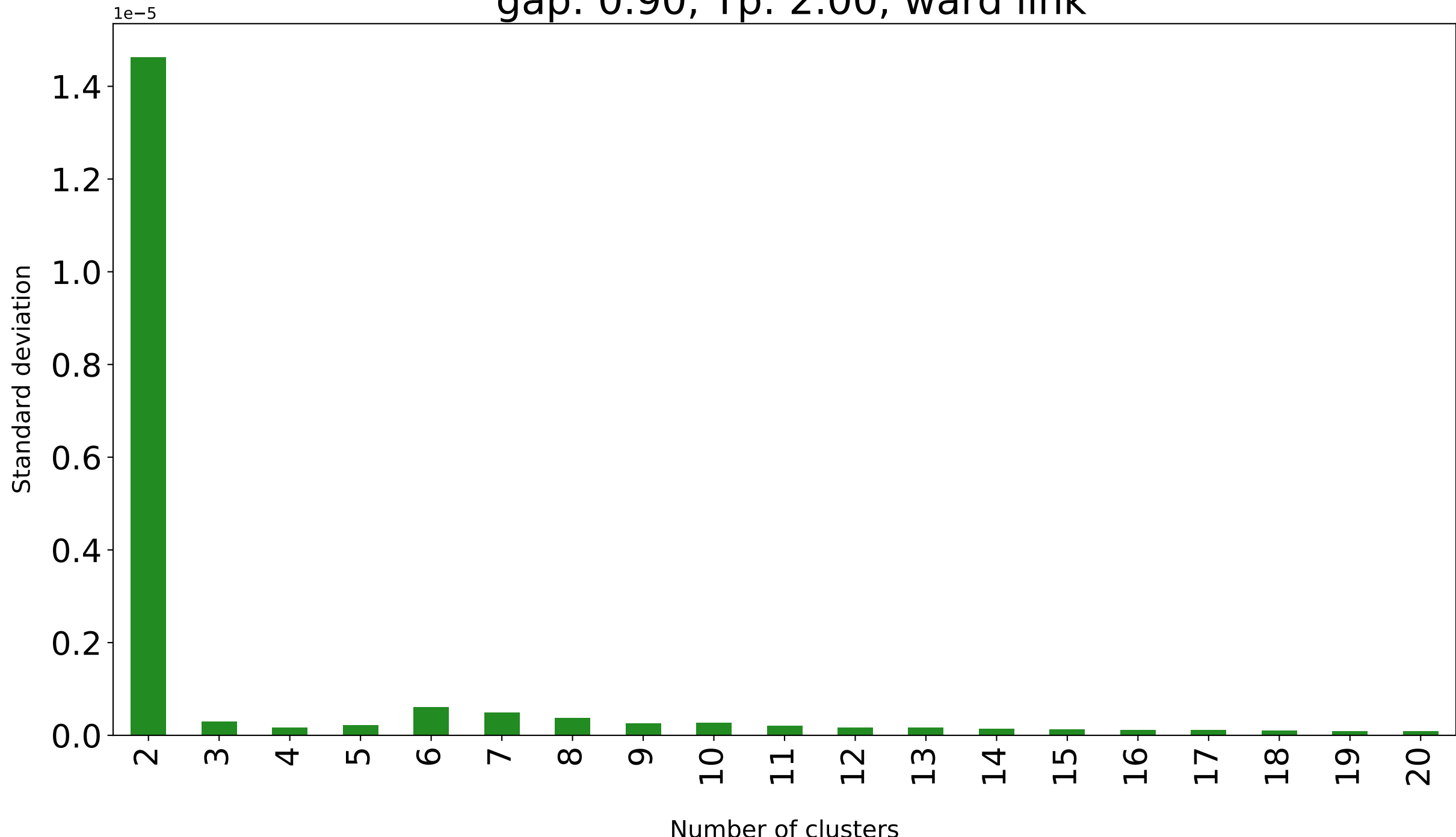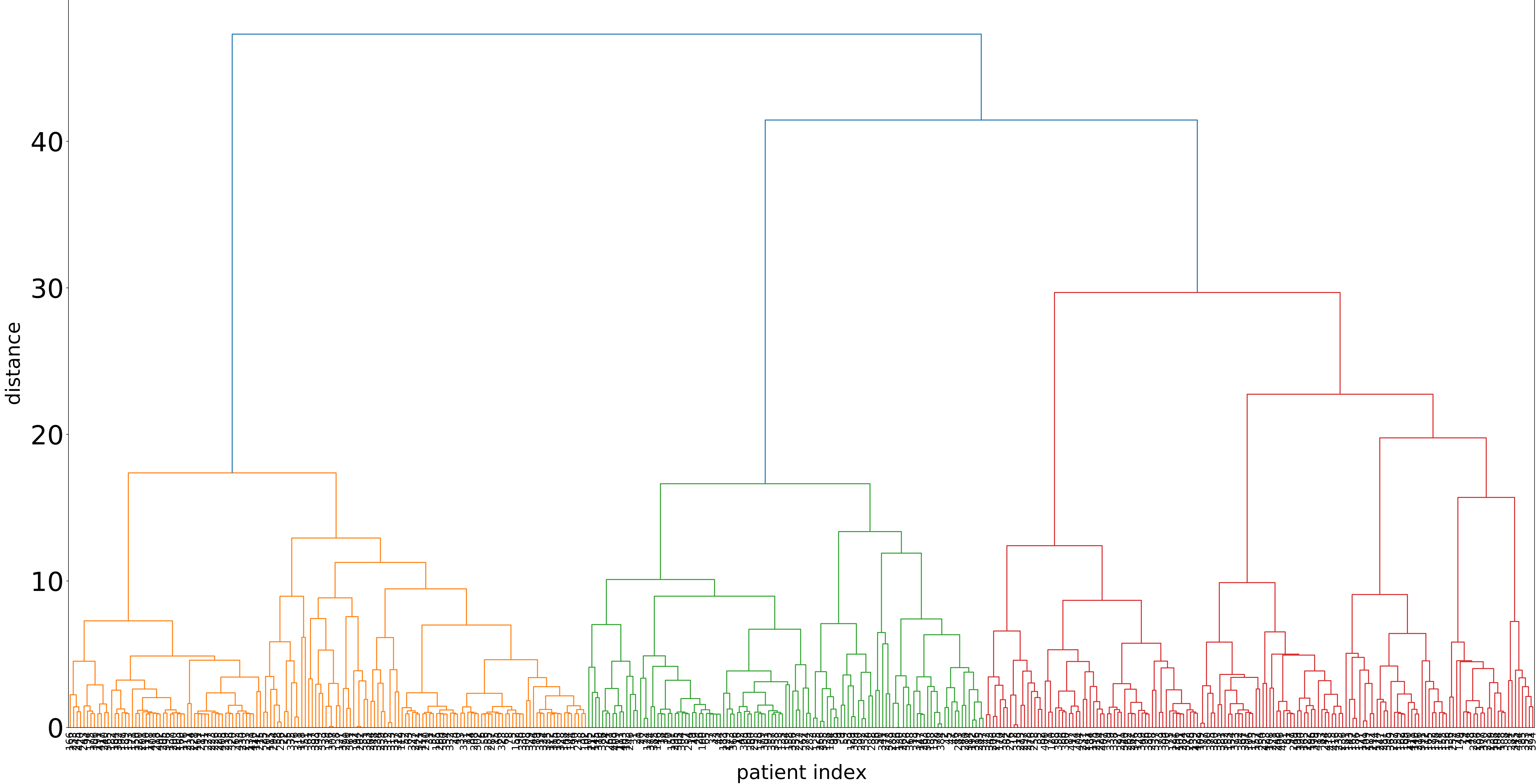
Average values of five clustering indices
gap: 0.90, Tp: 2.00, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.85621	0.79465	0.6655	0.10845	0.66503	0.85602	0.33961	0.8564	0.00011	0.77472	0.73728	0.0	0.2679	0.21341
3.0	1.0	0.99111	0.98249	0.98712	0.00462	0.98657	0.99111	0.04911	0.99111	0.00017	0.98811	0.96601	0.01799	0.30436	0.16953
4.0	1.0	0.98982	0.98	0.98688	0.00542	0.98604	0.98981	0.05334	0.98982	0.0002	0.98909	0.96139	0.01799	0.33272	0.17441
5.0	1.0	0.97072	0.94391	0.95719	0.03347	0.96114	0.9707	0.14576	0.97074	0.0002	0.97172	0.89658	0.01799	0.35938	0.17441
6.0	1.0	0.9875	0.97604	0.98274	0.0075	0.9838	0.98735	0.05774	0.98766	0.00021	0.98858	0.9559	0.01799	0.37036	0.17441
7.0	1.0	0.93259	0.88055	0.94097	0.03476	0.91718	0.93154	0.18208	0.93365	0.00024	0.95091	0.80563	0.01799	0.30288	0.11544
8.0	1.0	0.9052	0.83009	0.84309	0.04937	0.88662	0.90295	0.24216	0.90747	0.00025	0.93784	0.72522	0.01799	0.336	0.1237
9.0	1.0	0.90422	0.82728	0.87189	0.05275	0.88791	0.90373	0.2922	0.90472	0.00028	0.9455	0.71152	0.1217	0.29879	0.1237
10.0	1.0	0.86557	0.76577	0.84113	0.07255	0.84526	0.86524	0.39573	0.86591	0.00029	0.93178	0.62698	0.17991	0.28382	0.1237
11.0	1.0	0.82969	0.71097	0.80023	0.09081	0.80601	0.82935	0.4761	0.83003	0.0003	0.92005	0.55567	0.17991	0.26867	0.1237
12.0	1.0	0.82797	0.7086	0.81193	0.09821	0.80631	0.82757	0.5109	0.82837	0.00032	0.92574	0.55323	0.17991	0.25364	0.13564
13.0	1.0	0.8142	0.68838	0.82983	0.11495	0.79346	0.81318	0.56937	0.81522	0.00034	0.92739	0.5297	0.17991	0.21925	0.13564
14.0	1.0	0.79315	0.6576	0.82018	0.13069	0.77185	0.79159	0.62707	0.7947	0.00036	0.92454	0.49331	0.27586	0.20797	0.13564
15.0	1.0	0.78801	0.65208	0.79395	0.1396	0.76704	0.78724	0.65695	0.78879	0.00037	0.92603	0.48781	0.41379	0.19934	0.13564
16.0	1.0	0.7796	0.64132	0.76582	0.14828	0.75861	0.77916	0.67363	0.78003	0.00038	0.92601	0.4762	0.51724	0.20153	0.13564
17.0	1.0	0.77085	0.62965	0.7565	0.15269	0.75035	0.77043	0.69304	0.77127	0.00039	0.9273	0.4635	0.51724	0.19535	0.13564
18.0	1.0	0.76954	0.6274	0.76232	0.15009	0.7503	0.76903	0.68582	0.77006	0.00041	0.93116	0.46056	0.51724	0.19066	0.13564
19.0	1.0	0.76847	0.62601	0.75612	0.15045	0.74998	0.76796	0.686	0.76897	0.00043	0.93358	0.45911	0.51724	0.18902	0.13564
20.0	1.0	0.77176	0.6304	0.7421	0.14725	0.75406	0.77116	0.67214	0.77235	0.00044	0.93612	0.46405	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

patient index

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	0.8408	0.7723	0.63025	0.12036	0.6297	0.84057	0.37875	0.84104	0.0001	0.75037	0.70799	0.0	0.2634	0.20167
3.0	1.0	0.98478	0.97027	0.97683	0.00774	0.97702	0.98478	0.08014	0.98478	0.00017	0.97978	0.94315	0.01799	0.29637	0.16737
4.0	1.0	0.9848	0.97031	0.98034	0.00829	0.97915	0.9848	0.08069	0.9848	0.0002	0.98372	0.94325	0.01799	0.32436	0.16737
5.0	1.0	0.96494	0.93309	0.95963	0.03818	0.95348	0.96492	0.18941	0.96497	0.0002	0.96622	0.87733	0.04926	0.33719	0.16737
6.0	1.0	0.97885	0.95963	0.97284	0.01486	0.97253	0.97864	0.10961	0.97905	0.00021	0.98068	0.92626	0.04926	0.35337	0.16737
7.0	1.0	0.86885	0.77912	0.87799	0.07004	0.8385	0.86745	0.32029	0.87027	0.00022	0.90632	0.66414	0.04926	0.28812	0.11078
8.0	1.0	0.84726	0.73866	0.88362	0.08559	0.81983	0.84408	0.41648	0.85048	0.00025	0.90824	0.59956	0.09549	0.24903	0.11684
9.0	1.0	0.85808	0.75727	0.85709	0.07738	0.8339	0.85686	0.40825	0.85931	0.00027	0.92017	0.62234	0.09549	0.28286	0.11684
10.0	1.0	0.84857	0.74087	0.821	0.08189	0.82518	0.84785	0.45255	0.84929	0.00028	0.92191	0.59676	0.34483	0.27835	0.11684
11.0	1.0	0.84241	0.72994	0.81735	0.08777	0.82063	0.84202	0.50249	0.84281	0.0003	0.92615	0.57931	0.34483	0.26179	0.12649
12.0	1.0	0.83352	0.71652	0.80856	0.09136	0.81236	0.83315	0.52168	0.83389	0.00032	0.92749	0.5624	0.34483	0.25286	0.12649
13.0	1.0	0.83388	0.71639	0.78886	0.09189	0.8137	0.8332	0.52427	0.83456	0.00033	0.93009	0.56184	0.82759	0.24156	0.129
14.0	1.0	0.83357	0.71689	0.8201	0.10503	0.81523	0.83316	0.56244	0.83397	0.00036	0.93587	0.56334	0.82759	0.21531	0.129
15.0	1.0	0.80877	0.68072	0.80683	0.12384	0.78934	0.80823	0.62609	0.80932	0.00037	0.93156	0.51972	0.82759	0.20742	0.129
16.0	1.0	0.7943	0.66069	0.79432	0.13438	0.77454	0.79373	0.66157	0.79488	0.00038	0.93009	0.49702	0.82759	0.19997	0.129
17.0	1.0	0.79429	0.66069	0.80218	0.13824	0.77578	0.7935	0.67117	0.79509	0.0004	0.93387	0.49744	0.82759	0.18463	0.129
18.0	1.0	0.78209	0.64439	0.77951	0.14748	0.76328	0.78144	0.70327	0.78275	0.00041	0.93273	0.47953	0.82759	0.18372	0.129
19.0	1.0	0.77792	0.63831	0.79345	0.15095	0.76019	0.77682	0.70945	0.77903	0.00044	0.93583	0.47305	0.82759	0.17631	0.129
20.0	1.0	0.77761	0.63851	0.77323	0.15054	0.76034	0.77702	0.70386	0.7782	0.00045	0.93764	0.47317	2.0	0.17245	0.13279

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