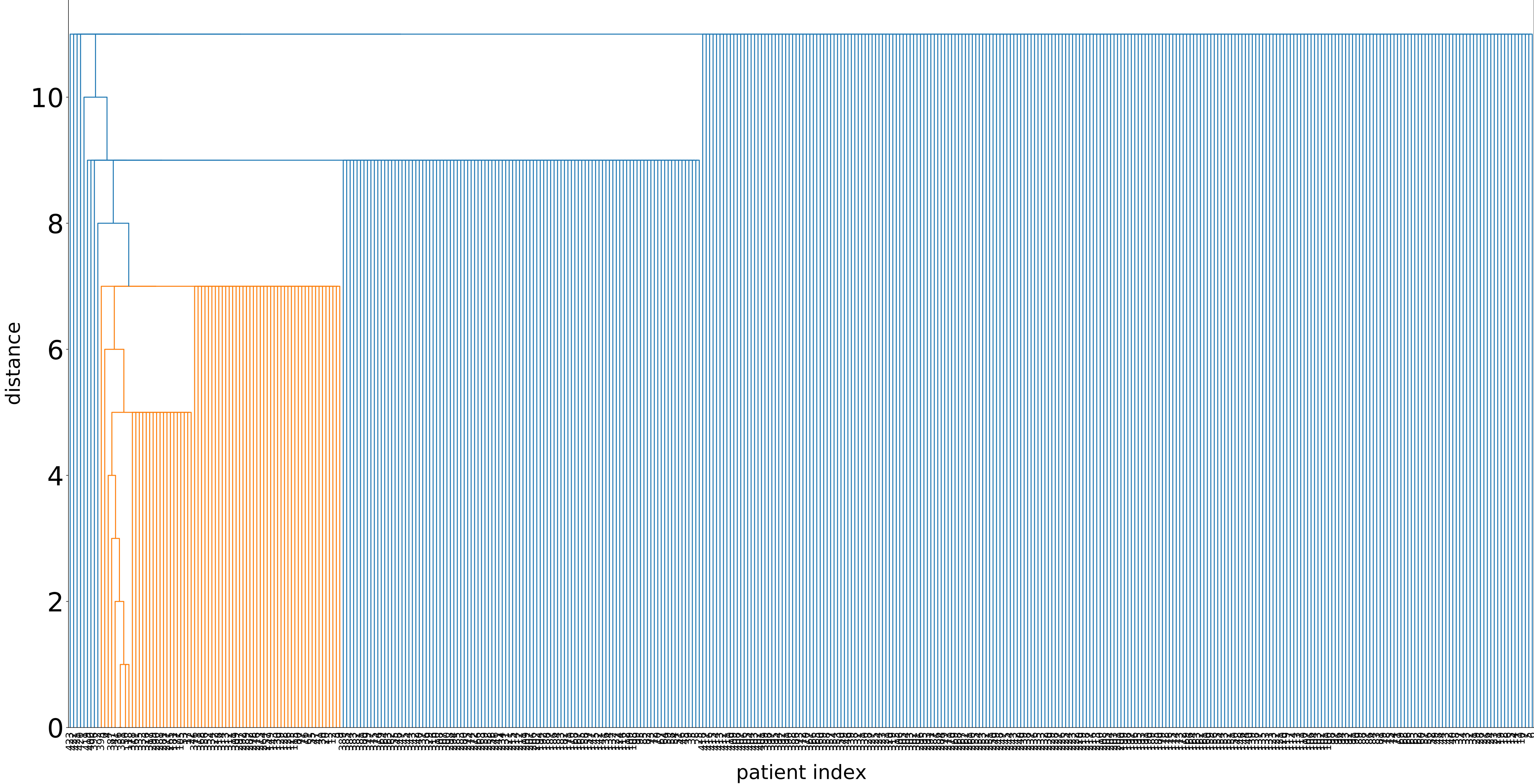Hierarchical Clustering Dendrogram - gap: -1.00, Tp: 0.25, complete link
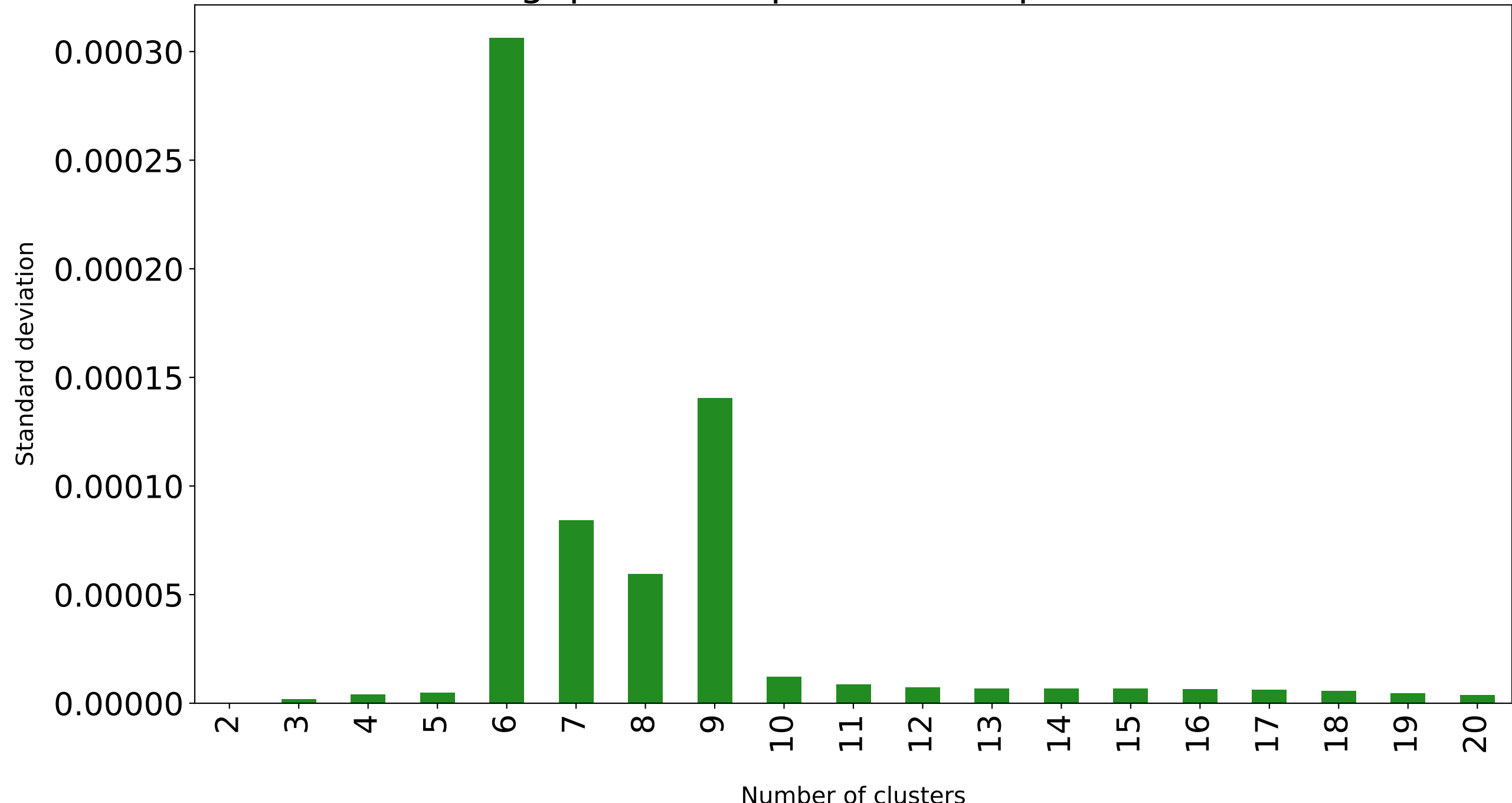
Cophenetic Correlation Coefficient: 0.66366093946908
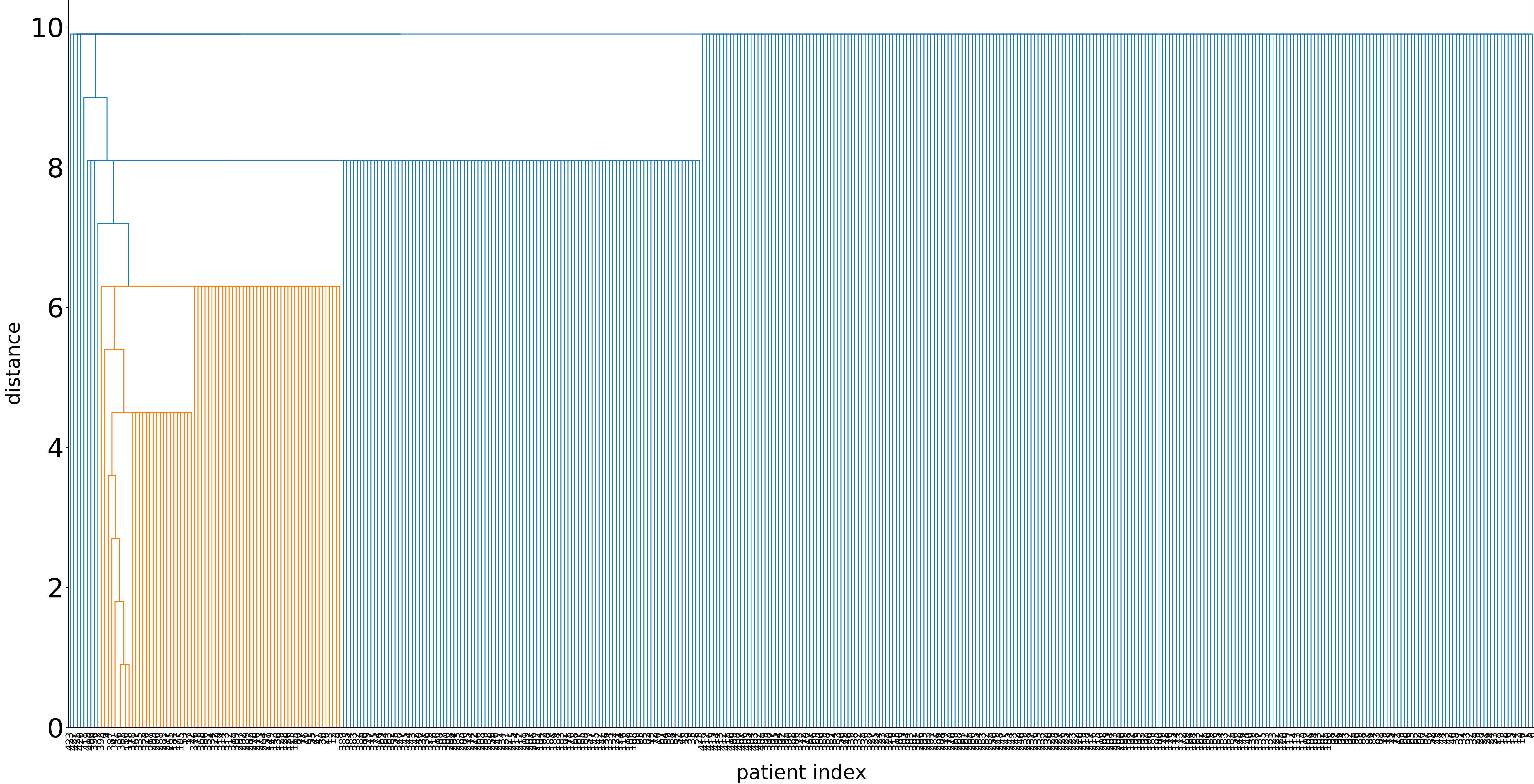
Average values of five clustering indices
gap: -1.00, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99903	0.99806	0.692	0.00048	0.692	0.99903	0.00096	0.99903	0.00436	0.99615	0.99615	2.0	0.53287	0.45455
3.0	1.0	0.98691	0.97714	0.70721	0.00932	0.78653	0.98535	-0.00277	0.98857	0.00284	0.96739	0.96731	2.0	0.68863	0.45455
4.0	1.0	0.9327	0.8844	0.61533	0.04982	0.69794	0.92372	0.02166	0.9422	0.00164	0.84421	0.84332	2.0	0.76652	0.45455
5.0	1.0	0.85941	0.75897	0.42757	0.10399	0.51837	0.84044	0.04866	0.87949	0.00086	0.67897	0.6756	2.0	0.81325	0.45455
6.0	0.99996	0.91108	0.84828	0.83429	0.06404	0.72571	0.90037	-1.88102	0.92236	0.00012	0.80246	0.7924	2.0	0.67106	0.45455
7.0	1.0	0.91008	0.84655	0.84526	0.06447	0.72929	0.89941	-2.35357	0.92134	0.00012	0.80154	0.78928	2.0	0.71805	0.45455
8.0	1.0	0.90922	0.84509	0.85214	0.06484	0.73238	0.89858	-2.84354	0.92044	0.00012	0.80089	0.78672	2.0	0.75329	0.45455
9.0	1.00002	0.90825	0.84346	0.85425	0.06527	0.73441	0.89765	-3.34418	0.91941	0.00012	0.80008	0.78385	2.0	0.7807	0.45455
10.0	1.0	0.90739	0.8421	0.85484	0.06565	0.73621	0.89685	-3.86291	0.9185	0.00012	0.79953	0.7815	2.0	0.80263	0.45455
11.0	1.0	0.90659	0.84072	0.8588	0.06599	0.73871	0.89607	-4.39965	0.91767	0.00012	0.79903	0.77908	2.0	0.82058	0.45455
12.0	1.0	0.90563	0.83912	0.85844	0.06641	0.74006	0.89516	-4.94297	0.91665	0.00012	0.7983	0.77628	2.0	0.83553	0.45455
13.0	1.0	0.90568	0.83916	0.85892	0.06601	0.74429	0.8954	-5.52153	0.91651	0.00012	0.79979	0.77543	2.0	0.84818	0.45455
14.0	1.0	0.90585	0.83929	0.86266	0.06554	0.74931	0.89572	-6.12569	0.91652	0.00013	0.80143	0.77468	2.0	0.85902	0.45455
15.0	1.0	0.90724	0.84143	0.86771	0.06416	0.7575	0.89739	-6.78465	0.91762	0.00013	0.80563	0.77658	2.0	0.86842	0.45455
16.0	1.0	0.91307	0.85092	0.87567	0.05955	0.77737	0.90406	-7.59529	0.92256	0.00013	0.81929	0.78795	2.0	0.87665	0.45455
17.0	1.0	0.92139	0.86452	0.886	0.05306	0.80324	0.9135	-8.52781	0.92969	0.00013	0.83798	0.80468	2.0	0.8839	0.45455
18.0	1.0	0.93633	0.88894	0.9018	0.04177	0.84629	0.93037	-9.72495	0.94259	0.00014	0.87049	0.83512	2.0	0.89035	0.45455
19.0	1.0	0.95252	0.91555	0.9148	0.02957	0.89069	0.94867	-11.03599	0.95656	0.00014	0.90534	0.86856	2.0	0.89612	0.45455
20.0	1.0	0.963	0.93264	0.92216	0.02165	0.91941	0.96054	-12.21435	0.96558	0.00015	0.92795	0.88967	2.0	0.90132	0.45455

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

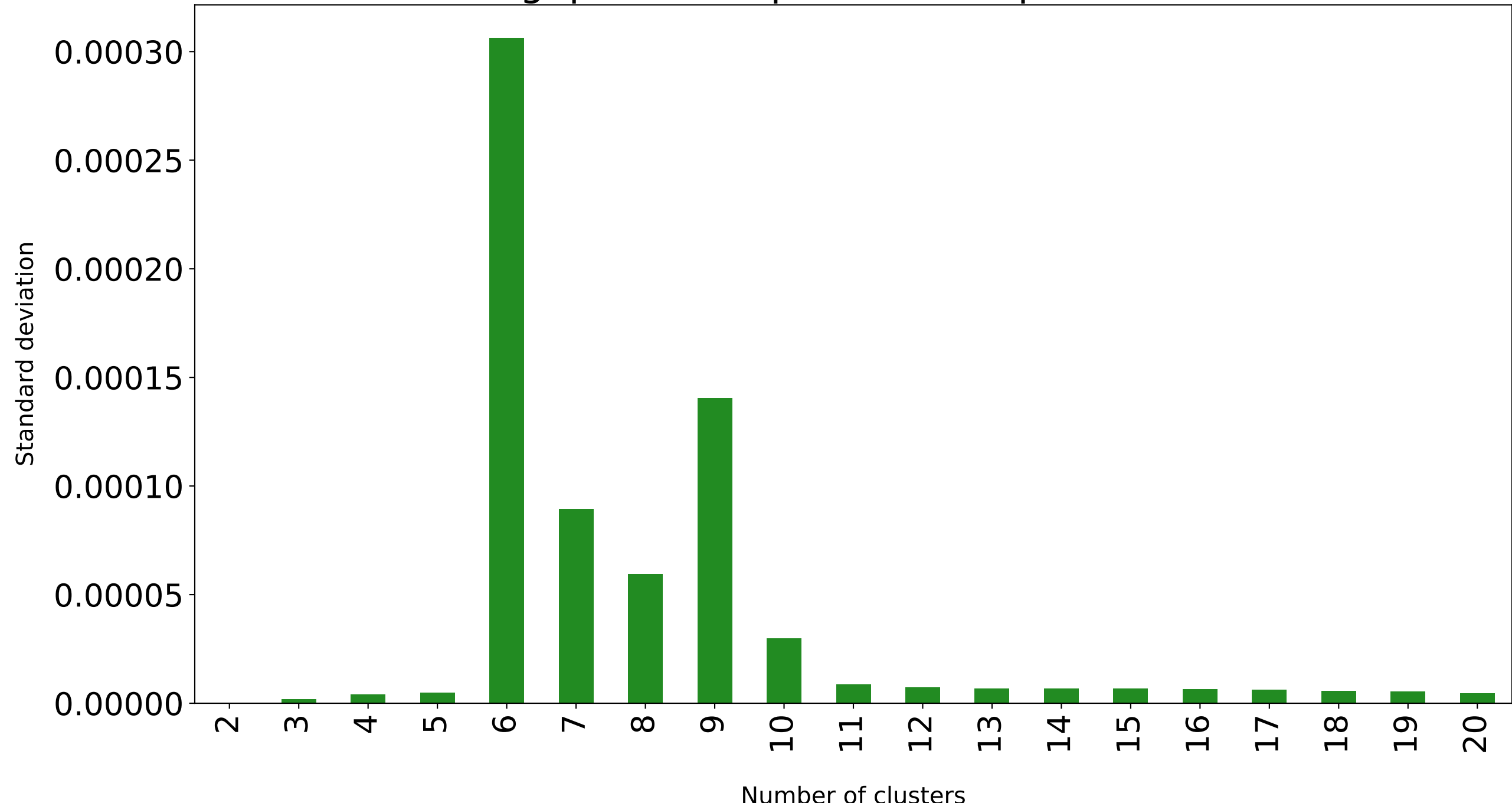Hierarchical Clustering Dendrogram - gap: -0.90, Tp: 0.25, complete link

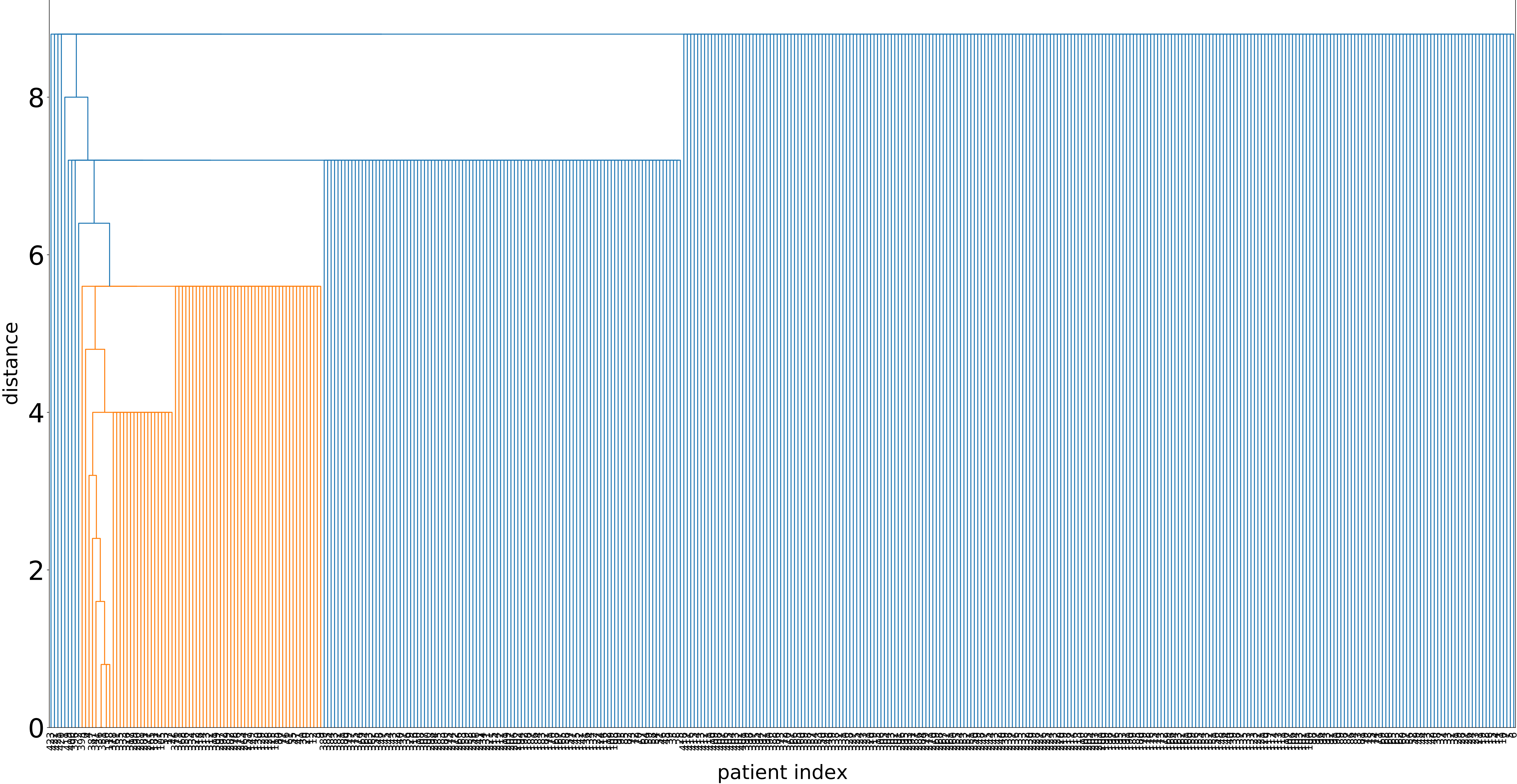Cophenetic Correlation Coefficient: 0.66366093946908

Average values of five clustering indices
gap: -0.90, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99911	0.99821	0.716	0.00045	0.716	0.9991	0.00067	0.99911	0.00451	0.99645	0.99645	2.0	0.53287	0.45455
3.0	1.0	0.98704	0.97739	0.72714	0.00925	0.81507	0.98548	-0.00373	0.9887	0.00296	0.9679	0.96781	2.0	0.68863	0.45455
4.0	1.0	0.93652	0.89095	0.64867	0.04681	0.72571	0.92806	0.01434	0.94547	0.00167	0.85313	0.85224	2.0	0.76652	0.45455
5.0	1.0	0.85433	0.75038	0.45035	0.10768	0.52875	0.83462	0.04617	0.87519	0.00084	0.66822	0.66467	2.0	0.81325	0.45455
6.0	0.99999	0.91942	0.86198	0.87771	0.0577	0.75602	0.90966	-1.96615	0.92972	0.00013	0.82073	0.8102	2.0	0.67106	0.45455
7.0	0.99999	0.91841	0.86023	0.87987	0.05814	0.75811	0.90868	-2.45339	0.92867	0.00013	0.81969	0.80704	2.0	0.71805	0.45455
8.0	1.00001	0.9176	0.85884	0.88445	0.05848	0.76081	0.9079	-2.96047	0.92784	0.00013	0.81906	0.80456	2.0	0.75329	0.45455
9.0	1.00001	0.91669	0.85727	0.88467	0.05887	0.7625	0.90702	-3.47849	0.92688	0.00013	0.81825	0.80178	2.0	0.7807	0.45455
10.0	1.0	0.91589	0.85586	0.88761	0.05921	0.76477	0.90623	-4.0159	0.92607	0.00013	0.81764	0.79923	2.0	0.80263	0.45455
11.0	1.0	0.91502	0.8544	0.88671	0.05958	0.7661	0.9054	-4.56479	0.92517	0.00013	0.81697	0.79666	2.0	0.82058	0.45455
12.0	1.0	0.9142	0.85305	0.88501	0.05994	0.76719	0.90462	-5.1295	0.9243	0.00013	0.81641	0.79432	2.0	0.83553	0.45455
13.0	1.0	0.9133	0.85155	0.88262	0.06033	0.76794	0.90376	-5.70456	0.92334	0.00013	0.81571	0.79173	2.0	0.84818	0.45455
14.0	1.0	0.9124	0.84999	0.88222	0.06072	0.76909	0.90289	-6.29543	0.92242	0.00013	0.81501	0.78897	2.0	0.85902	0.45455
15.0	1.0	0.91604	0.8559	0.88736	0.0577	0.78285	0.9071	-7.02605	0.92545	0.00013	0.82398	0.79576	2.0	0.86842	0.45455
16.0	1.0	0.91863	0.8601	0.8902	0.05542	0.79305	0.91015	-7.75881	0.92757	0.00013	0.83064	0.80044	2.0	0.87665	0.45455
17.0	1.0	0.92459	0.86973	0.89807	0.05066	0.81262	0.91693	-8.62479	0.93266	0.00013	0.84431	0.81192	2.0	0.8839	0.45455
18.0	1.0	0.93168	0.88131	0.90431	0.04518	0.83416	0.92501	-9.56722	0.93871	0.00014	0.8603	0.82606	2.0	0.89035	0.45455
19.0	1.0	0.9421	0.89842	0.91151	0.03727	0.86357	0.93684	-10.66495	0.94764	0.00014	0.88317	0.84726	2.0	0.89612	0.45455
20.0	1.0	0.95261	0.91556	0.9201	0.02938	0.89286	0.94872	-11.83066	0.9567	0.00014	0.90594	0.86848	2.0	0.90132	0.45455

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

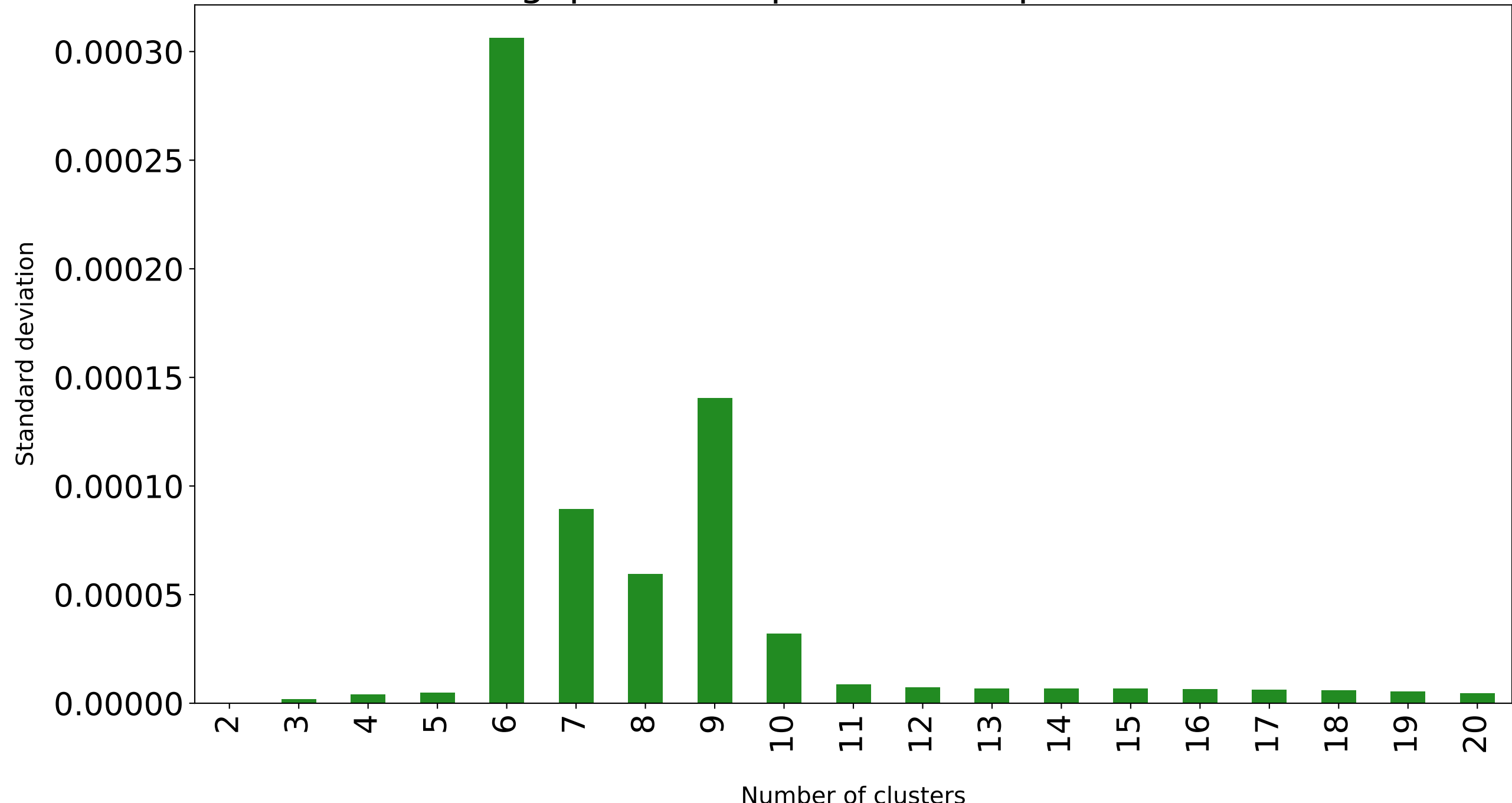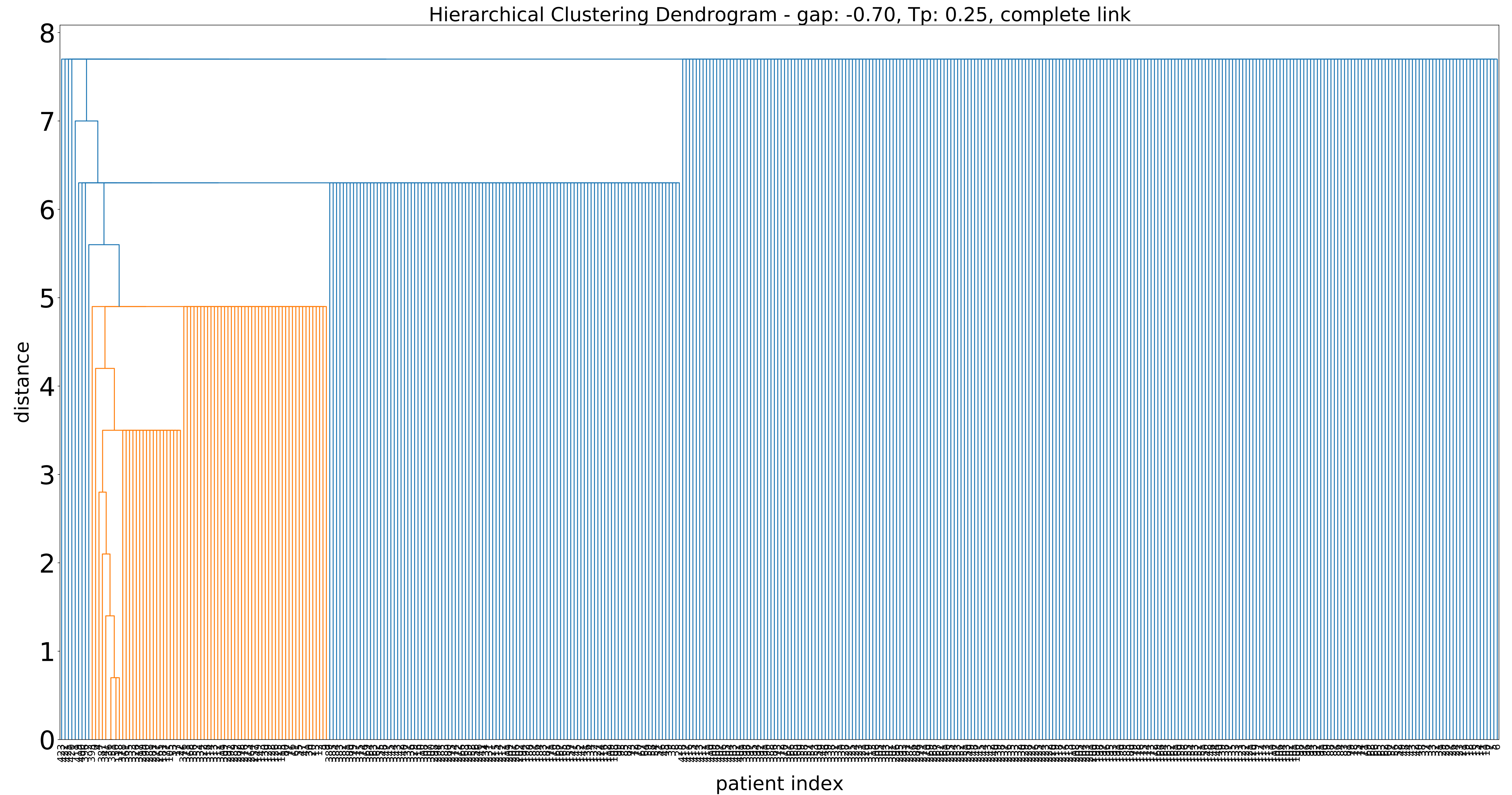Hierarchical Clustering Dendrogram - gap: -0.80, Tp: 0.25, complete link

distance

patient index

Cophenetic Correlation Coefficient: 0.66366093946908

Average values of five clustering indices
gap: -0.80, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99928	0.99857	0.772	0.00036	0.772	0.99928	-0.0	0.99928	0.00486	0.99715	0.99715	2.0	0.53287	0.45455
3.0	1.0	0.9882	0.97939	0.73725	0.00849	0.81602	0.98678	-0.00457	0.98969	0.00293	0.97064	0.97056	2.0	0.68863	0.45455
4.0	1.0	0.94907	0.9124	0.67895	0.03744	0.75437	0.94233	0.00161	0.9562	0.00176	0.88153	0.88082	2.0	0.76652	0.45455
5.0	1.0	0.85865	0.75767	0.4391	0.10445	0.52756	0.83957	0.04624	0.87883	0.00086	0.67752	0.67396	2.0	0.81325	0.45455
6.0	0.99995	0.91449	0.85396	0.85095	0.06173	0.73832	0.90416	-1.91514	0.92539	0.00012	0.81012	0.79994	2.0	0.67106	0.45455
7.0	1.0	0.91347	0.85216	0.85986	0.06217	0.7415	0.90316	-2.39335	0.92434	0.00012	0.8091	0.79668	2.0	0.71805	0.45455
8.0	1.0	0.91266	0.85078	0.86614	0.06252	0.74452	0.90238	-2.89105	0.9235	0.00013	0.80851	0.79421	2.0	0.75329	0.45455
9.0	1.0	0.9117	0.84915	0.86768	0.06294	0.74642	0.90146	-3.39836	0.92249	0.00013	0.80768	0.79131	2.0	0.7807	0.45455
10.0	1.0	0.91086	0.84778	0.86777	0.06331	0.74809	0.90067	-3.92376	0.9216	0.00013	0.8071	0.78893	2.0	0.80263	0.45455
11.0	1.0	0.90985	0.84604	0.86804	0.06375	0.74952	0.89969	-4.45743	0.92055	0.00013	0.8062	0.78582	2.0	0.82058	0.45455
12.0	1.0	0.90889	0.84442	0.86799	0.06416	0.75087	0.89878	-5.00744	0.91955	0.00013	0.80542	0.78297	2.0	0.83553	0.45455
13.0	1.0	0.90799	0.84294	0.86672	0.06456	0.75193	0.89792	-5.57361	0.9186	0.00013	0.80479	0.78041	2.0	0.84818	0.45455
14.0	1.0	0.91061	0.84725	0.871	0.06231	0.76296	0.901	-6.24759	0.92073	0.00013	0.81164	0.78532	2.0	0.85902	0.45455
15.0	1.0	0.91424	0.85311	0.87718	0.05922	0.77693	0.90521	-6.97466	0.92375	0.00013	0.82059	0.792	2.0	0.86842	0.45455
16.0	1.0	0.91883	0.86047	0.88343	0.05543	0.79332	0.9105	-7.75579	0.9276	0.00013	0.83154	0.80039	2.0	0.87665	0.45455
17.0	1.0	0.9225	0.86636	0.88901	0.05248	0.80666	0.91472	-8.55422	0.93069	0.00013	0.8404	0.80715	2.0	0.8839	0.45455
18.0	1.0	0.93173	0.88137	0.89863	0.04539	0.83444	0.92518	-9.55971	0.93862	0.00014	0.86092	0.82549	2.0	0.89035	0.45455
19.0	1.0	0.94341	0.90049	0.90854	0.0365	0.86735	0.93841	-10.70637	0.94867	0.00014	0.88633	0.84926	2.0	0.89612	0.45455
20.0	1.0	0.95741	0.92345	0.91945	0.02593	0.9053	0.95423	-12.00176	0.96076	0.00015	0.91634	0.87802	2.0	0.90132	0.45455

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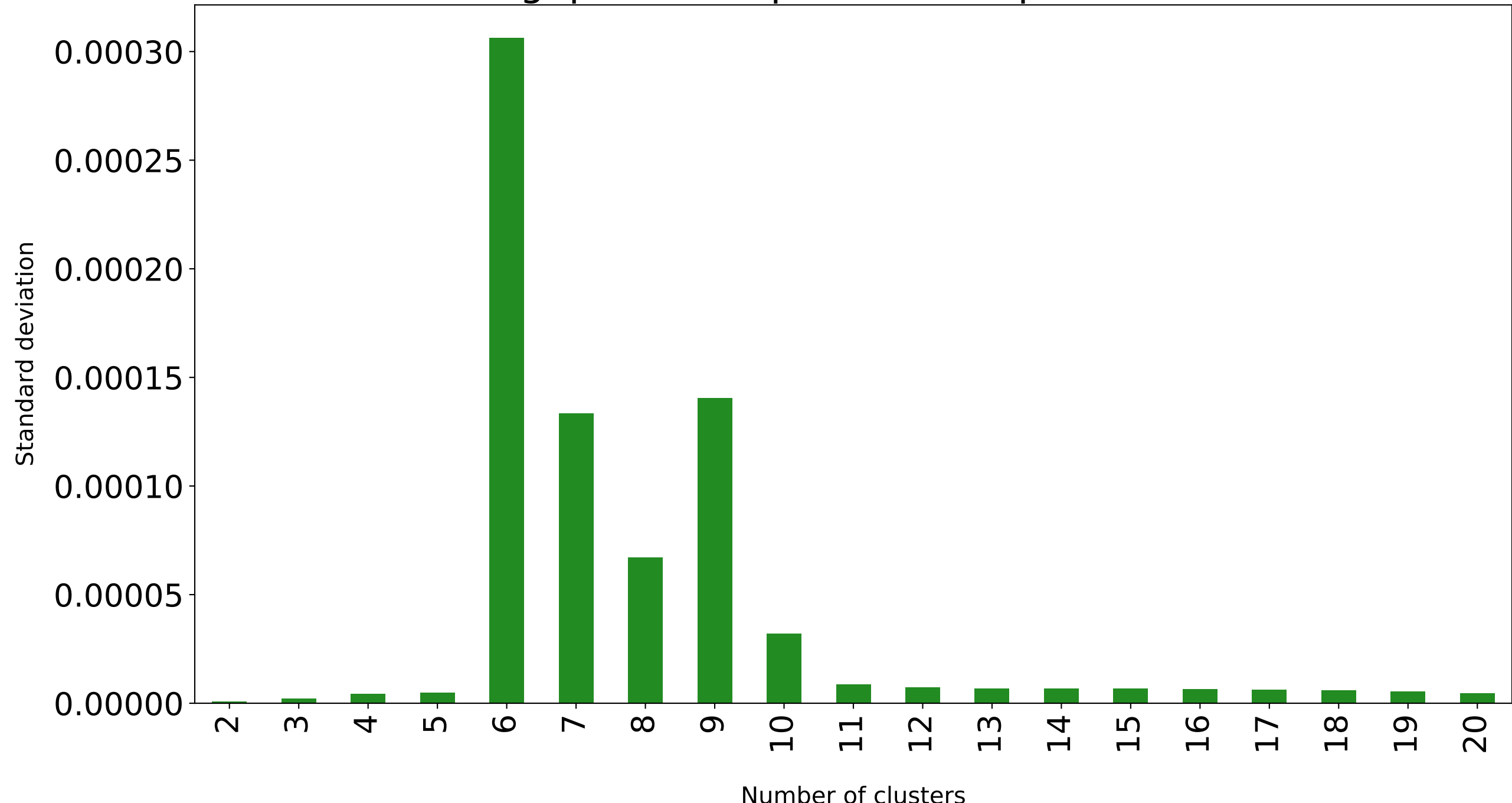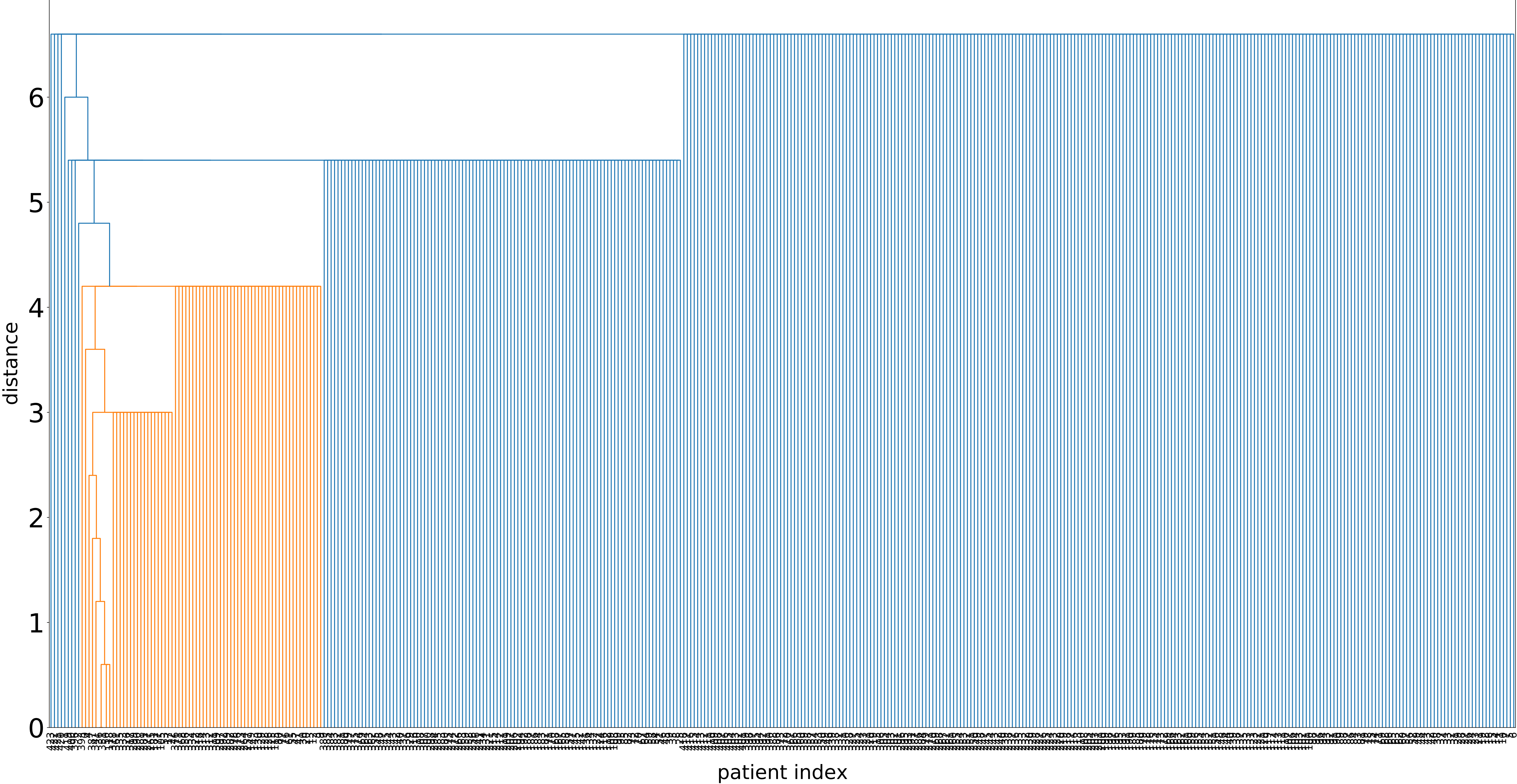gap: -0.80, Tp: 0.25, complete link

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

Cophenetic Correlation Coefficient: 0.6636609394690799

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99801	0.99635	0.724	0.00125	0.724	0.99786	0.00171	0.99817	0.00456	0.99399	0.99399	2.0	0.53287	0.45455
3.0	1.0	0.98361	0.97153	0.71928	0.01182	0.79556	0.98158	0.00032	0.98576	0.00285	0.96007	0.95999	2.0	0.68863	0.45455
4.0	1.0	0.92862	0.87743	0.63165	0.05254	0.70546	0.91907	0.02352	0.93872	0.00163	0.83518	0.83423	2.0	0.76652	0.45455
5.0	1.0	0.8531	0.74832	0.44822	0.10865	0.52446	0.8332	0.04944	0.87416	0.00083	0.66546	0.66201	2.0	0.81325	0.45455
6.0	0.99998	0.93384	0.88647	0.89069	0.04736	0.80035	0.92598	-2.11493	0.94213	0.00013	0.85333	0.84262	2.0	0.67106	0.45455
7.0	0.99999	0.93279	0.88462	0.89182	0.04782	0.80156	0.92497	-2.63069	0.94104	0.00013	0.85207	0.83921	2.0	0.71805	0.45455
8.0	1.00001	0.93202	0.88328	0.89456	0.04815	0.80333	0.92422	-3.16739	0.94024	0.00013	0.85135	0.83677	2.0	0.75329	0.45455
9.0	1.0	0.93102	0.88156	0.89201	0.0486	0.80375	0.92326	-3.71096	0.93919	0.00013	0.85024	0.83368	2.0	0.7807	0.45455
10.0	1.0	0.93009	0.87994	0.89168	0.049	0.80462	0.92237	-4.27165	0.93823	0.00013	0.84927	0.83075	2.0	0.80263	0.45455
11.0	1.0	0.92922	0.87838	0.89225	0.04938	0.80568	0.92151	-4.84865	0.93733	0.00013	0.84839	0.82793	2.0	0.82058	0.45455
12.0	1.0	0.92827	0.87671	0.89167	0.04979	0.80636	0.92059	-5.43669	0.93636	0.00013	0.84741	0.82491	2.0	0.83553	0.45455
13.0	1.0	0.92738	0.87512	0.89125	0.05017	0.80709	0.91972	-6.04146	0.93545	0.00013	0.84654	0.82204	2.0	0.84818	0.45455
14.0	1.0	0.92771	0.87553	0.89325	0.04964	0.81131	0.9202	-6.69496	0.93562	0.00013	0.84826	0.8218	2.0	0.85902	0.45455
15.0	1.0	0.92785	0.87562	0.89308	0.04921	0.81475	0.9205	-7.35543	0.9356	0.00013	0.84964	0.821	2.0	0.86842	0.45455
16.0	1.0	0.92931	0.87791	0.89525	0.04782	0.82167	0.92225	-8.07898	0.93675	0.00013	0.85375	0.82318	2.0	0.87665	0.45455
17.0	1.0	0.933	0.88388	0.89902	0.04485	0.83435	0.92651	-8.89489	0.93985	0.00014	0.86257	0.8301	2.0	0.8839	0.45455
18.0	1.0	0.94119	0.89723	0.90606	0.03845	0.85852	0.93582	-9.88605	0.94684	0.00014	0.88076	0.84638	2.0	0.89035	0.45455
19.0	1.0	0.95167	0.91428	0.91549	0.03043	0.88828	0.94768	-11.0086	0.95586	0.00014	0.90355	0.86734	2.0	0.89612	0.45455
20.0	1.0	0.96919	0.94304	0.92946	0.01723	0.93498	0.96745	-12.4518	0.97102	0.00015	0.94076	0.9036	2.0	0.90132	0.45455

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

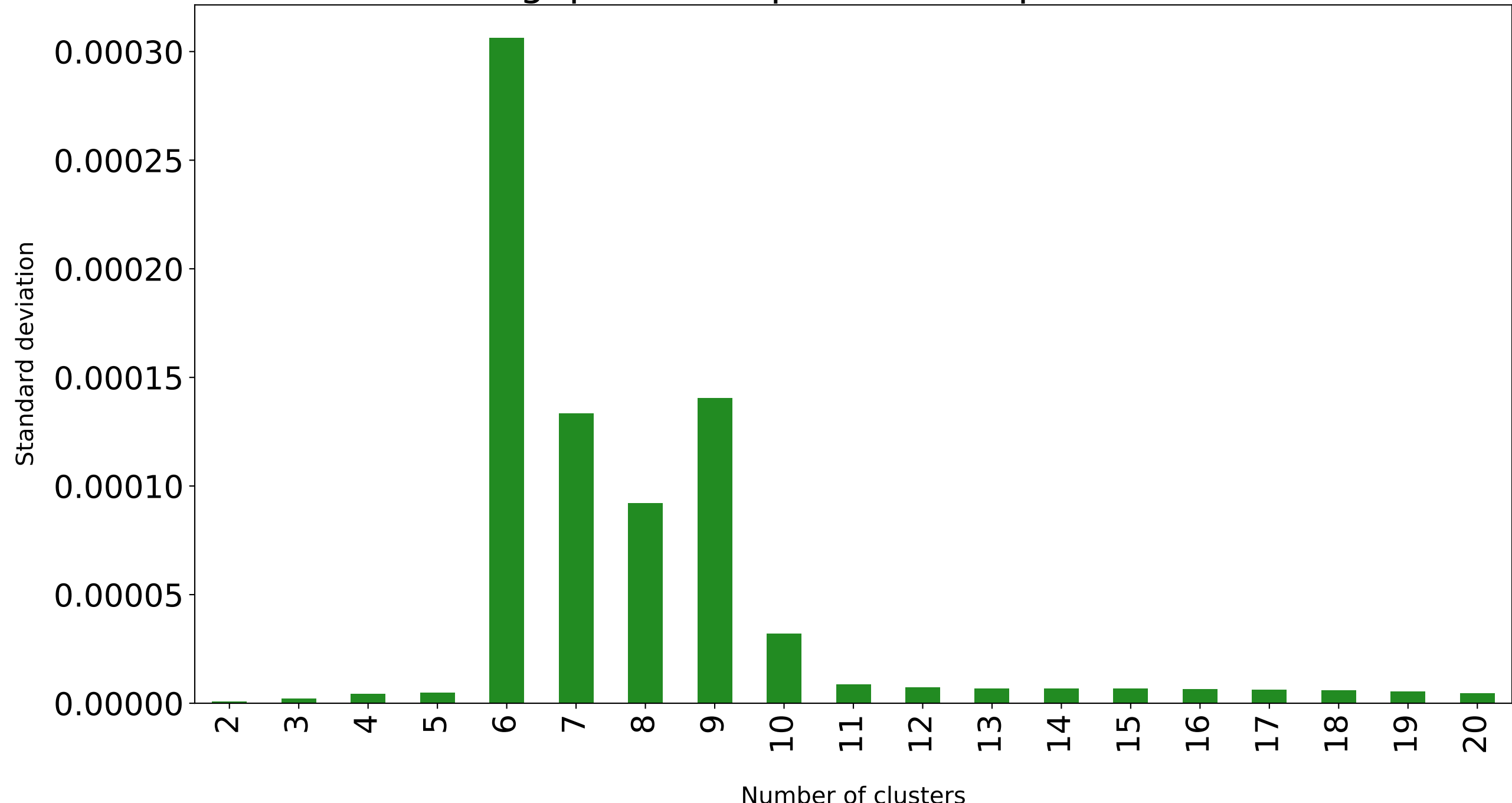Hierarchical Clustering Dendrogram - gap: -0.60, Tp: 0.25, complete link

distance

patient index

Cophenetic Correlation Coefficient: 0.6636609394690799

Average values of five clustering indices
gap: -0.60, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99924	0.99849	0.76	0.00038	0.76	0.99924	0.00014	0.99925	0.00479	0.997	0.997	2.0	0.53287	0.45455
3.0	1.0	0.99177	0.98554	0.76925	0.00587	0.84245	0.99082	-0.0099	0.99277	0.00299	0.97902	0.97896	2.0	0.68863	0.45455
4.0	1.0	0.94799	0.91059	0.68575	0.03835	0.76001	0.94109	0.00152	0.9553	0.00176	0.8793	0.87854	2.0	0.76652	0.45455
5.0	0.99999	0.85233	0.74682	0.43684	0.10879	0.51995	0.83239	0.04964	0.87341	0.00083	0.66334	0.65957	2.0	0.81325	0.45455
6.0	0.99998	0.92269	0.86772	0.87617	0.05578	0.76567	0.91334	-1.99832	0.93256	0.00013	0.82834	0.81822	2.0	0.67106	0.45455
7.0	0.99999	0.92166	0.86599	0.87576	0.05624	0.76707	0.91237	-2.49122	0.93147	0.00013	0.82726	0.81511	2.0	0.71805	0.45455
8.0	1.0	0.92074	0.86442	0.87749	0.05664	0.76885	0.91148	-3.00106	0.93051	0.00013	0.82639	0.81229	2.0	0.75329	0.45455
9.0	1.0	0.91984	0.86288	0.8782	0.05704	0.77038	0.91062	-3.52554	0.92956	0.00013	0.82557	0.80956	2.0	0.7807	0.45455
10.0	1.0	0.91909	0.86169	0.87789	0.05736	0.77179	0.90992	-4.06985	0.92876	0.00013	0.82509	0.80751	2.0	0.80263	0.45455
11.0	1.0	0.91838	0.86052	0.87871	0.05767	0.77342	0.90925	-4.63091	0.92801	0.00013	0.82466	0.80548	2.0	0.82058	0.45455
12.0	1.0	0.91757	0.85918	0.87832	0.05803	0.77461	0.90848	-5.20269	0.92716	0.00013	0.82408	0.80315	2.0	0.83553	0.45455
13.0	1.0	0.91673	0.85776	0.87794	0.05839	0.77571	0.90768	-5.78772	0.92628	0.00013	0.82345	0.80065	2.0	0.84818	0.45455
14.0	1.0	0.9159	0.85644	0.87507	0.05877	0.77614	0.9069	-6.38567	0.92537	0.00013	0.82288	0.79841	2.0	0.85902	0.45455
15.0	1.0	0.91723	0.85844	0.87989	0.05747	0.78396	0.9085	-7.05932	0.92642	0.00013	0.82685	0.80004	2.0	0.86842	0.45455
16.0	1.0	0.92085	0.8643	0.88439	0.05446	0.79718	0.9127	-7.8215	0.92942	0.00013	0.8357	0.80674	2.0	0.87665	0.45455
17.0	1.0	0.92911	0.87767	0.89664	0.04805	0.82329	0.92205	-8.76772	0.93654	0.00013	0.85416	0.82299	2.0	0.8839	0.45455
18.0	1.0	0.94083	0.89673	0.91085	0.03904	0.85774	0.93527	-9.87704	0.94668	0.00014	0.87971	0.84658	2.0	0.89035	0.45455
19.0	1.0	0.94568	0.90452	0.9154	0.03521	0.8728	0.94081	-10.80446	0.95081	0.00014	0.89073	0.85572	2.0	0.89612	0.45455
20.0	1.0	0.95722	0.9234	0.92258	0.02639	0.90422	0.9539	-12.00112	0.96071	0.00015	0.91565	0.87907	2.0	0.90132	0.45455

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

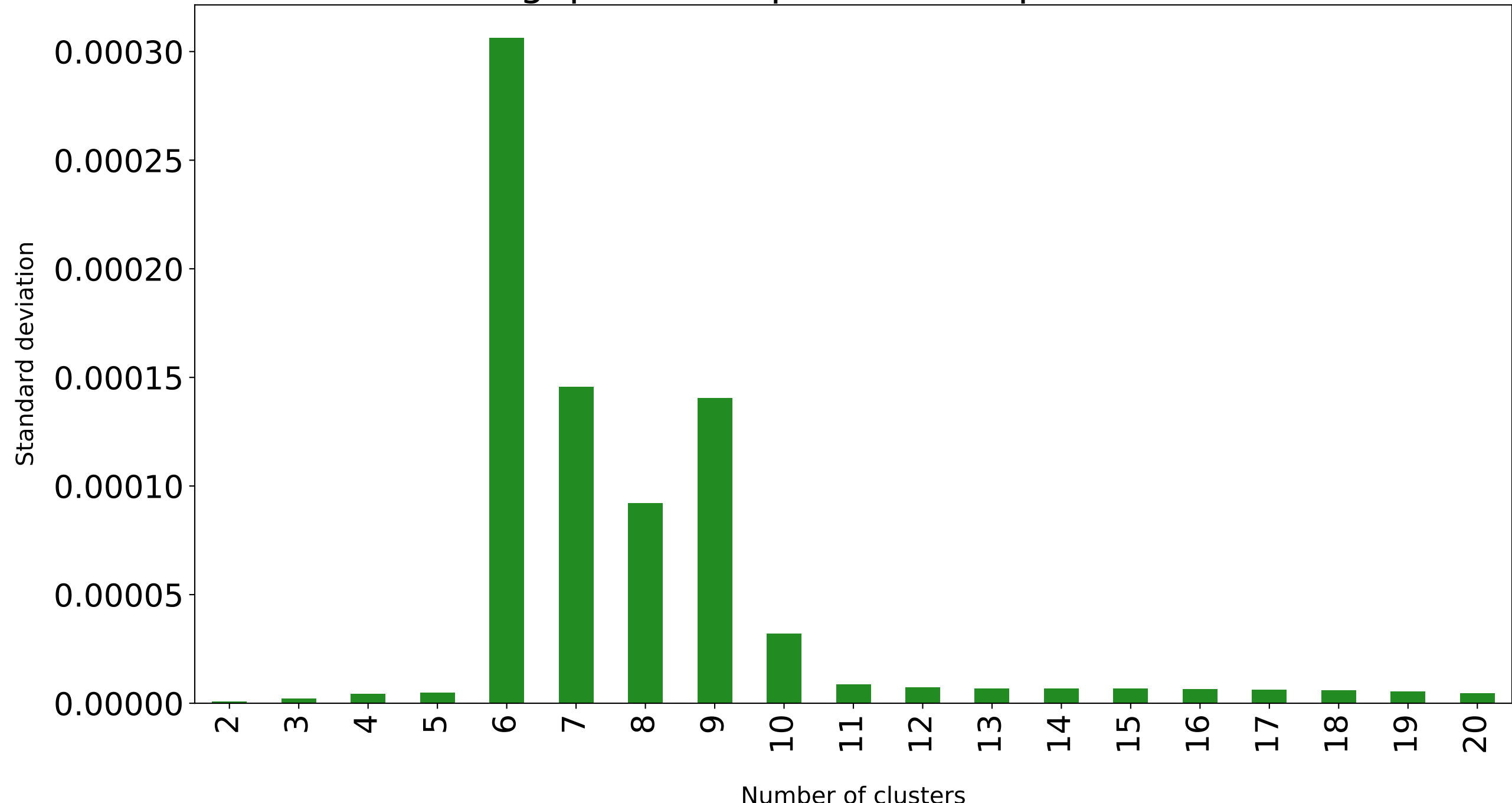Hierarchical Clustering Dendrogram - gap: -0.50, Tp: 0.25, complete link

distance

patient index
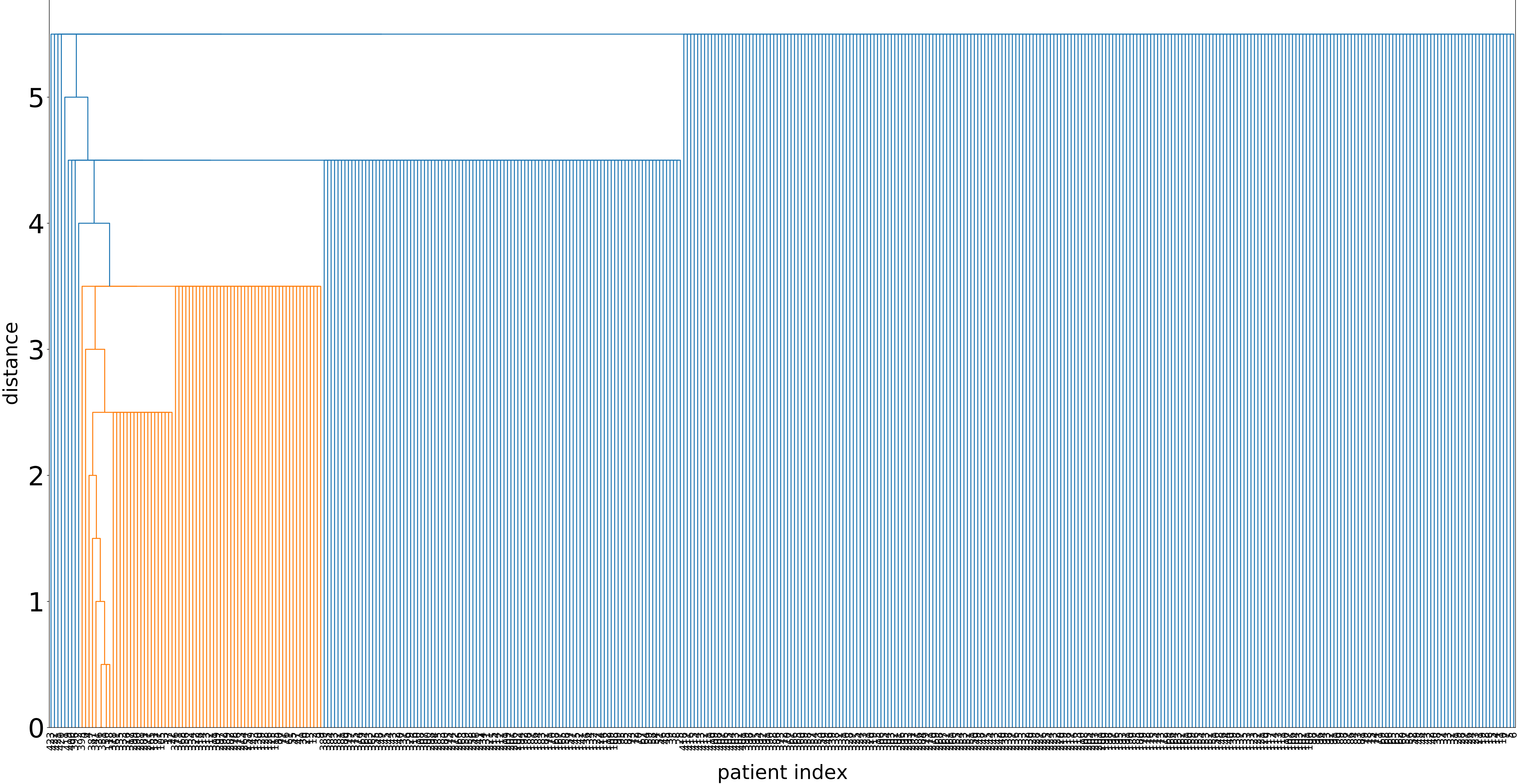
Cophenetic Correlation Coefficient: 0.66366093946908

Average values of five clustering indices
gap: -0.50, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99927	0.99854	0.768	0.00036	0.768	0.99927	5e-05	0.99927	0.00484	0.9971	0.9971	2.0	0.53287	0.45455
3.0	1.0	0.9871	0.9775	0.73729	0.00931	0.82028	0.98553	-0.00386	0.98875	0.00295	0.96817	0.96805	2.0	0.68863	0.45455
4.0	1.0	0.94003	0.89696	0.66344	0.04421	0.73639	0.93205	0.01009	0.94848	0.00169	0.8612	0.86032	2.0	0.76652	0.45455
5.0	0.99999	0.84414	0.7329	0.41718	0.11515	0.49887	0.82305	0.05946	0.86645	0.00078	0.64507	0.64119	2.0	0.81325	0.45455
6.0	0.99997	0.92295	0.86808	0.88302	0.05545	0.76713	0.91359	-2.00281	0.93283	0.00013	0.82873	0.81873	2.0	0.67106	0.45455
7.0	0.99999	0.92204	0.86644	0.89037	0.05584	0.77013	0.91269	-2.5006	0.93191	0.00013	0.82781	0.8157	2.0	0.71805	0.45455
8.0	1.0	0.92108	0.86477	0.89049	0.05626	0.77173	0.91177	-3.01055	0.93091	0.00013	0.82684	0.81269	2.0	0.75329	0.45455
9.0	1.0	0.9201	0.86313	0.88769	0.05669	0.77263	0.91084	-3.53359	0.92988	0.00013	0.82591	0.80978	2.0	0.7807	0.45455
10.0	1.0	0.9192	0.86162	0.88615	0.05709	0.77373	0.90998	-4.0735	0.92893	0.00013	0.82512	0.80711	2.0	0.80263	0.45455
11.0	1.0	0.91828	0.86007	0.88395	0.0575	0.77454	0.9091	-4.62644	0.92795	0.00013	0.82431	0.80438	2.0	0.82058	0.45455
12.0	1.0	0.91722	0.85821	0.88271	0.05796	0.77532	0.90807	-5.18825	0.92686	0.00013	0.82323	0.80102	2.0	0.83553	0.45455
13.0	1.0	0.91624	0.85656	0.87977	0.05839	0.77573	0.90714	-5.76637	0.92582	0.00013	0.82236	0.79813	2.0	0.84818	0.45455
14.0	1.0	0.91536	0.85511	0.8779	0.05877	0.77641	0.90631	-6.36445	0.9249	0.00013	0.8217	0.7956	2.0	0.85902	0.45455
15.0	1.0	0.91682	0.85751	0.87931	0.05742	0.78358	0.90808	-7.0433	0.92603	0.00013	0.82601	0.79811	2.0	0.86842	0.45455
16.0	1.0	0.92487	0.87061	0.88924	0.05111	0.80928	0.91725	-7.93218	0.93289	0.00013	0.84426	0.81393	2.0	0.87665	0.45455
17.0	1.0	0.92744	0.87473	0.89172	0.04887	0.81897	0.92026	-8.70394	0.935	0.00013	0.85073	0.81846	2.0	0.8839	0.45455
18.0	1.0	0.93794	0.89187	0.90202	0.04076	0.84961	0.93216	-9.76363	0.94402	0.00014	0.8738	0.83959	2.0	0.89035	0.45455
19.0	1.0	0.94953	0.91087	0.91094	0.03196	0.88204	0.9453	-10.91578	0.95398	0.00014	0.89903	0.8632	2.0	0.89612	0.45455
20.0	1.0	0.95772	0.92407	0.9178	0.02556	0.90528	0.95458	-12.00499	0.96101	0.00015	0.91684	0.8791	2.0	0.90132	0.45455

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

Hierarchical Clustering Dendrogram - gap: -0.40, Tp: 0.25, complete link

patient index

distance
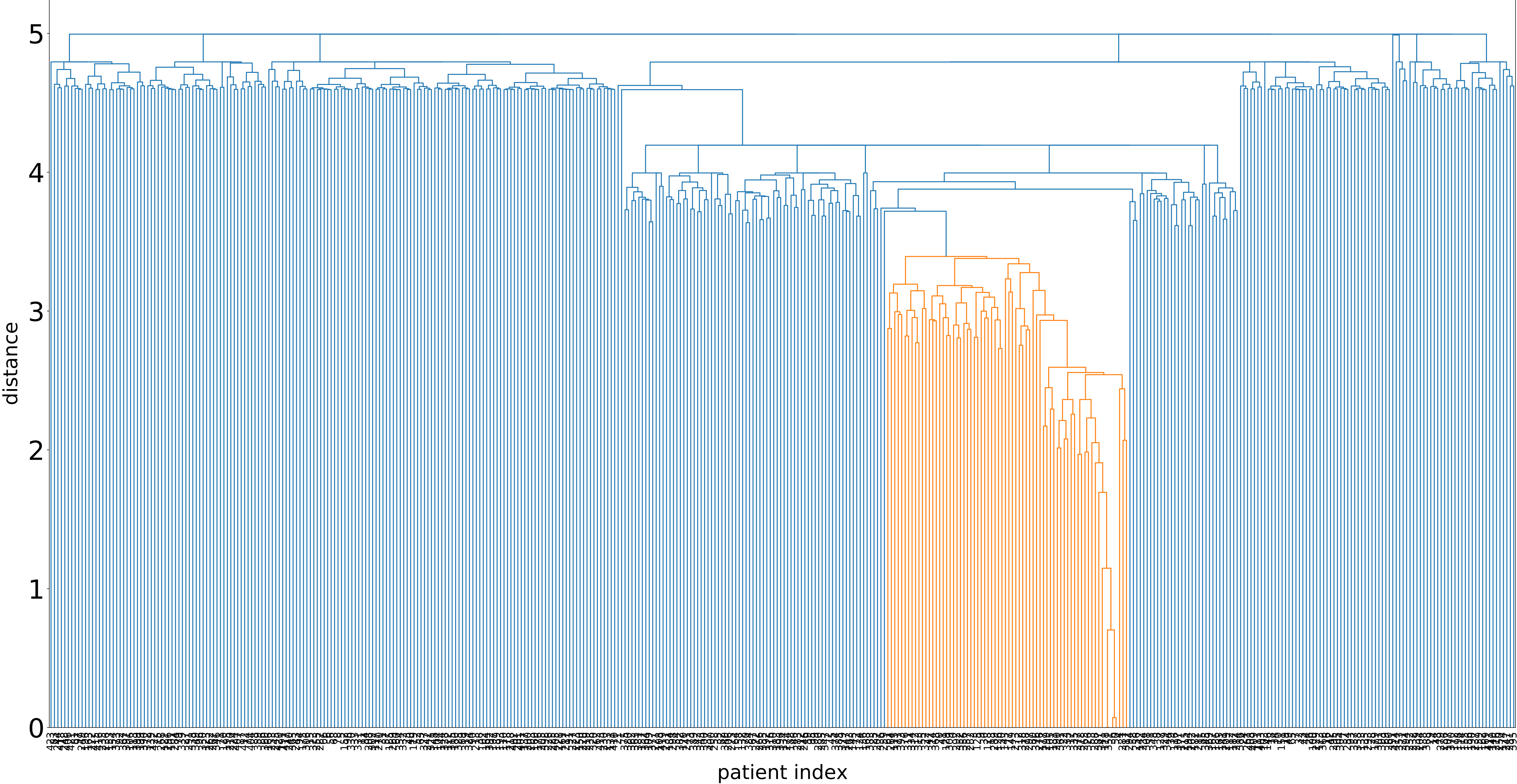
Cophenetic Correlation Coefficient: 0.6579682026378146

Average values of five clustering indices
gap: -0.40, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.95751	0.92792	0.75347	0.02408	0.75204	0.95645	0.01581	0.95861	0.00027	0.89332	0.89141	2.0	0.02933	0.48918
3.0	0.99999	0.90321	0.84422	0.71887	0.05682	0.75789	0.8986	-0.23099	0.90795	0.00015	0.81645	0.78642	2.0	0.00819	0.48089
4.0	1.00002	0.86774	0.79408	0.75032	0.07445	0.76131	0.86622	-1.10725	0.86928	0.00012	0.81179	0.71213	2.0	-0.01683	0.4397
5.0	1.0	0.90082	0.84411	0.88498	0.06075	0.83657	0.89853	-2.0564	0.90315	0.00014	0.86908	0.78178	2.0	-0.03715	0.4397
6.0	1.0	0.91503	0.86975	0.88639	0.05065	0.86089	0.91362	-3.15077	0.91646	0.00015	0.89178	0.82244	2.0	-0.04479	0.4397
7.0	1.0	0.9216	0.88174	0.89269	0.03825	0.87186	0.92028	-4.07467	0.92294	0.00015	0.90133	0.84365	2.0	-0.04488	0.44022
8.0	1.0	0.92123	0.88106	0.8914	0.03881	0.87131	0.91991	-5.16686	0.92257	0.00015	0.90087	0.84237	2.0	0.08745	0.45804
9.0	1.0	0.9167	0.87274	0.87874	0.04482	0.86499	0.91522	-6.25008	0.9182	0.00015	0.8956	0.82829	2.0	0.18889	0.45804
10.0	1.0	0.90875	0.85866	0.86216	0.05543	0.85453	0.90705	-7.10173	0.91047	0.00015	0.88735	0.80536	2.0	0.16432	0.45804
11.0	1.0	0.90083	0.84357	0.84042	0.06149	0.84489	0.89871	-8.09167	0.90297	0.00015	0.87938	0.78029	2.0	0.14547	0.45804
12.0	1.0	0.88184	0.8078	0.78985	0.06957	0.82274	0.87876	-9.32912	0.88494	0.00015	0.86187	0.72279	2.0	0.12911	0.45804
13.0	1.0	0.86595	0.77791	0.74581	0.07797	0.80379	0.8617	-10.22415	0.87024	0.00015	0.84664	0.6757	2.0	0.11694	0.45804
14.0	1.0	0.90221	0.83176	0.88589	0.06835	0.86482	0.90008	-12.68159	0.90437	0.00018	0.89817	0.73978	2.0	0.08589	0.45804
15.0	1.0	0.90174	0.82924	0.88093	0.076	0.86622	0.89979	-14.04657	0.90371	0.00018	0.90117	0.73139	2.0	0.0751	0.45804
16.0	1.0	0.90157	0.82828	0.86791	0.07928	0.86658	0.89969	-15.47201	0.90346	0.00018	0.90214	0.72789	2.0	0.13293	0.45804
17.0	1.0	0.91708	0.85354	0.92905	0.07165	0.88981	0.91495	-16.89078	0.91923	0.00019	0.92025	0.76569	2.0	0.12021	0.45804
18.0	1.0	0.92283	0.86376	0.92865	0.06786	0.89762	0.92099	-18.61992	0.9247	0.0002	0.92637	0.78136	2.0	0.10947	0.45804
19.0	1.0	0.92279	0.86366	0.92477	0.0677	0.89763	0.92097	-20.18084	0.92463	0.0002	0.92652	0.78101	2.0	0.15641	0.45804
20.0	1.0	0.92053	0.85956	0.91732	0.07019	0.89479	0.91871	-21.80648	0.92237	0.0002	0.92474	0.77407	2.0	0.19881	0.45804

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

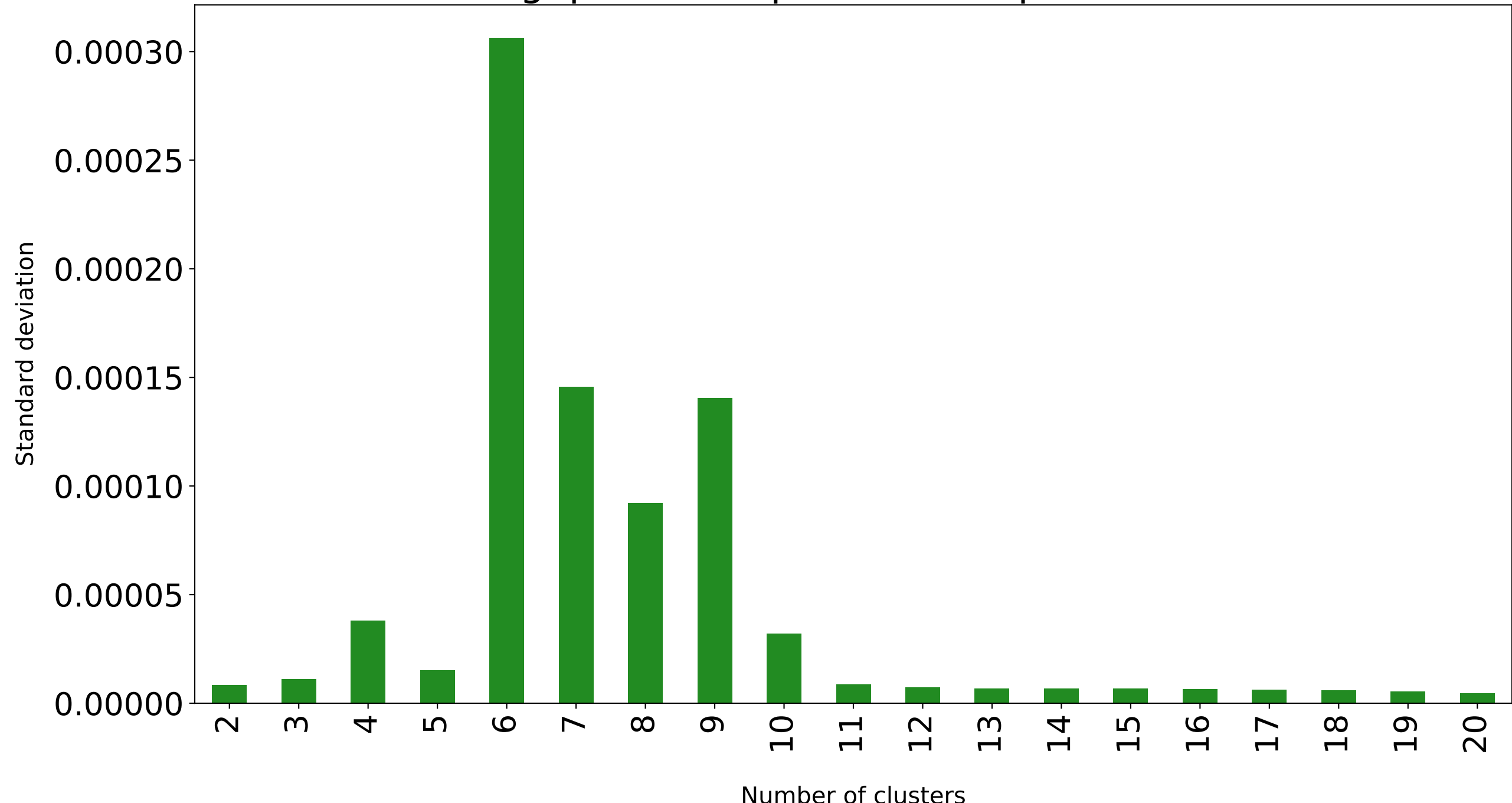Hierarchical Clustering Dendrogram - gap: -0.30, Tp: 0.25, complete link
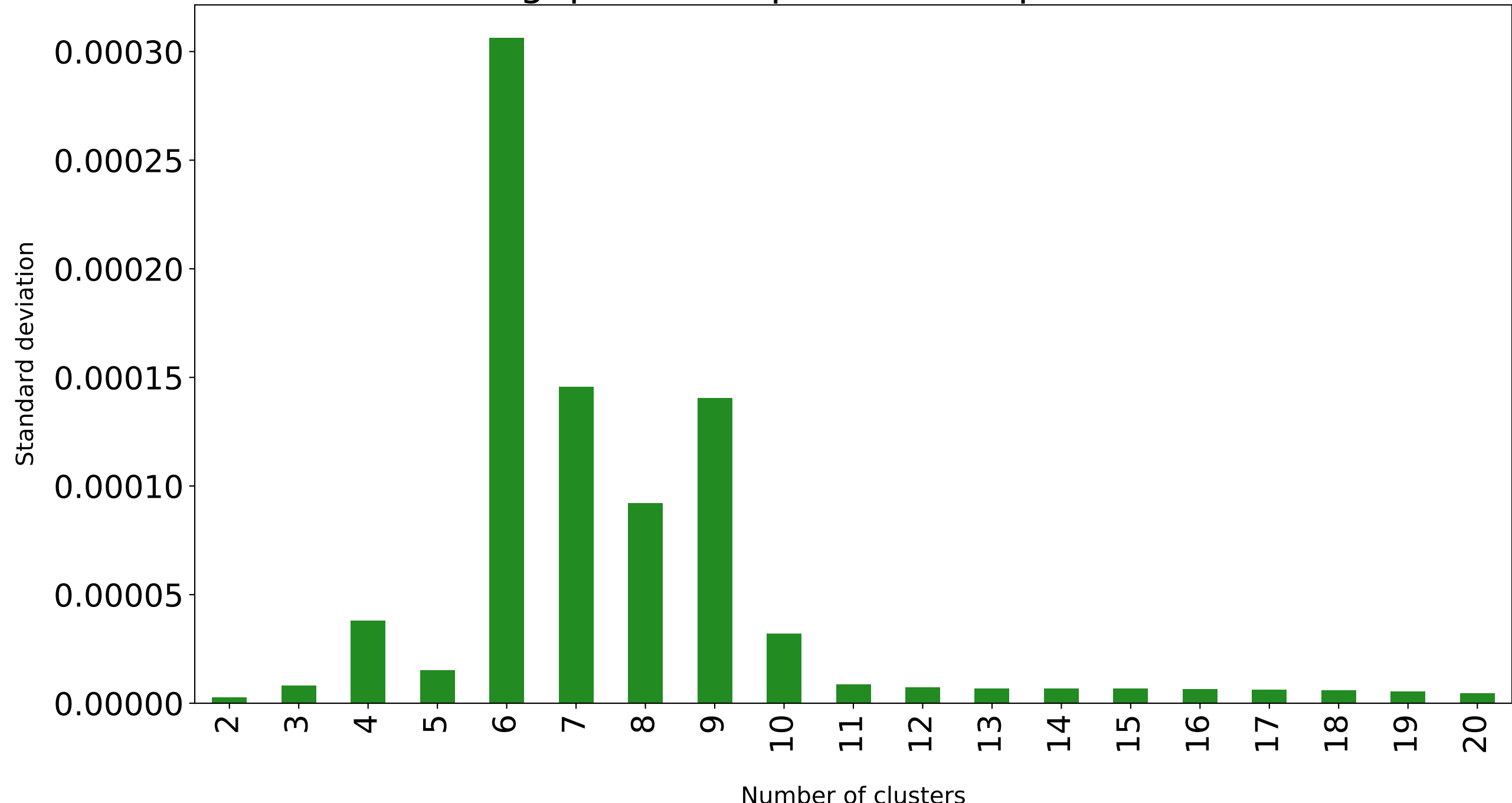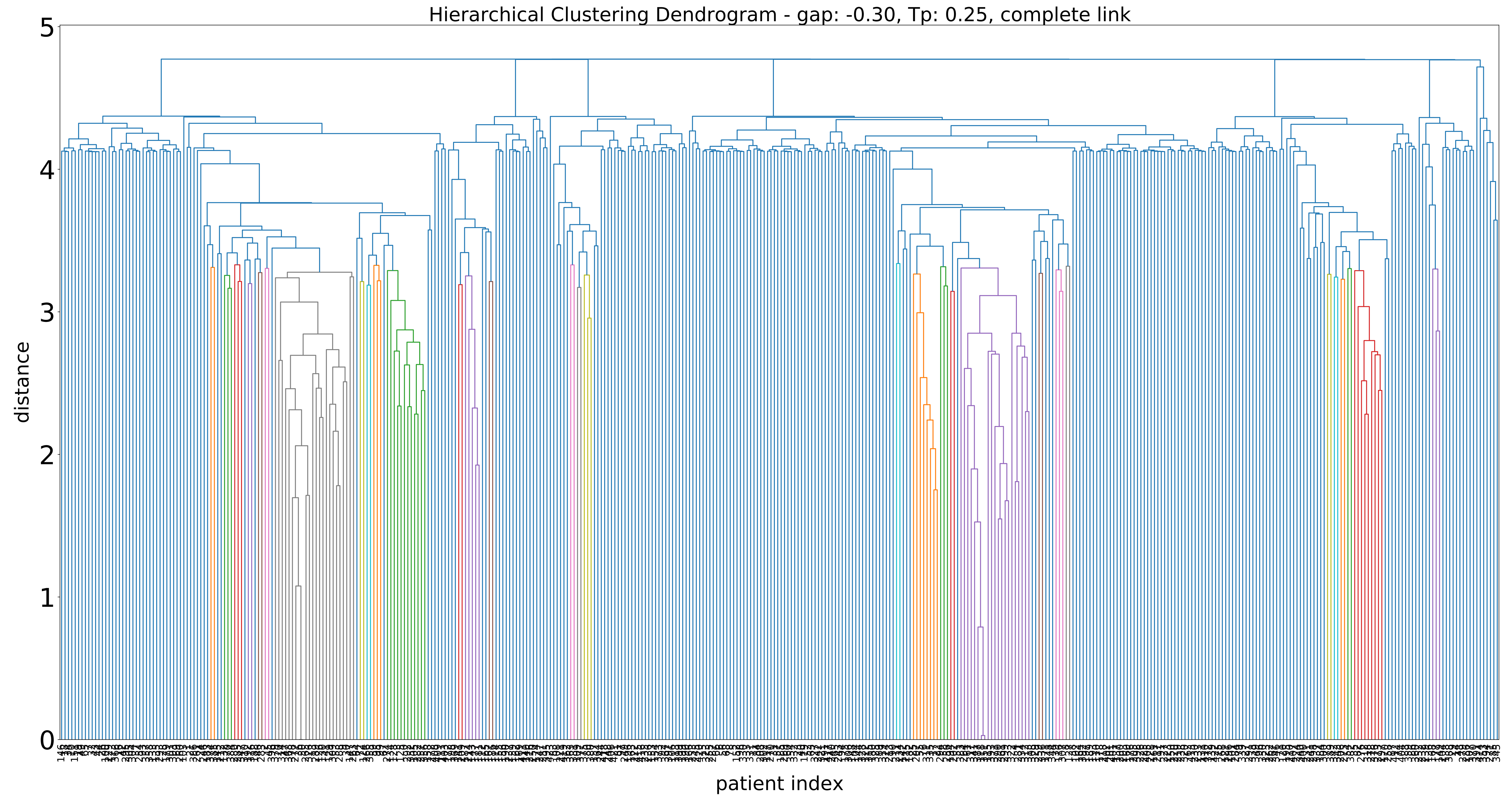
Cophenetic Correlation Coefficient: 0.4706882823180109

Average values of five clustering indices
gap: -0.30, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.87249	0.80124	0.60496	0.07842	0.62959	0.87074	-0.05294	0.87425	0.0001	0.75971	0.72289	0.56579	0.06055	0.06593
3.0	1.00001	0.84766	0.75726	0.7743	0.10038	0.73695	0.84579	-0.51805	0.84956	0.00012	0.78621	0.65077	1.69859	0.04697	0.06595
4.0	1.0	0.87992	0.78952	0.90409	0.08508	0.83025	0.87632	-1.41055	0.88358	0.00016	0.86483	0.67167	1.75211	0.04741	0.06596
5.0	1.0	0.94271	0.89352	0.92034	0.04313	0.92302	0.94257	-2.6234	0.94284	0.00019	0.94343	0.8134	1.92927	0.05822	0.06598
6.0	1.0	0.96698	0.9366	0.96391	0.02531	0.95652	0.96692	-3.73969	0.96704	0.00021	0.96878	0.88277	1.92927	0.05548	0.066
7.0	1.0	0.97612	0.95377	0.96803	0.01267	0.96869	0.9761	-4.95434	0.97614	0.00021	0.97766	0.91311	2.0	0.05525	0.0667
8.0	1.0	0.97065	0.94366	0.95424	0.01513	0.96178	0.97044	-6.29392	0.97085	0.00021	0.97302	0.8965	2.0	0.17713	0.07196
9.0	1.0	0.90496	0.82878	0.91726	0.05303	0.87948	0.90388	-6.87974	0.90604	0.00021	0.92179	0.71705	2.0	0.12507	0.07197
10.0	1.0	0.88895	0.80279	0.8923	0.06065	0.86094	0.88757	-8.24711	0.89033	0.00021	0.91313	0.68061	2.0	0.11168	0.072
11.0	1.0	0.87995	0.78887	0.86419	0.06645	0.85038	0.87855	-9.70026	0.88136	0.00021	0.9083	0.66212	2.0	0.19254	0.07201
12.0	1.0	0.87153	0.77611	0.83233	0.07148	0.84124	0.8697	-11.25907	0.87338	0.00021	0.90515	0.64663	2.0	0.17491	0.07201
13.0	1.0	0.84966	0.74465	0.79607	0.08366	0.81699	0.84752	-12.57673	0.85182	0.00021	0.89678	0.60952	2.0	0.1596	0.07206
14.0	1.0	0.82893	0.71305	0.7437	0.08987	0.79332	0.8259	-14.04549	0.83198	0.00021	0.88631	0.57061	2.0	0.21888	0.0721
15.0	1.0	0.75808	0.61436	0.76385	0.12232	0.7154	0.75551	-15.07332	0.76067	0.00022	0.86256	0.45352	2.0	0.20135	0.07212
16.0	1.0	0.75436	0.61055	0.74845	0.12493	0.71156	0.75234	-16.73349	0.75641	0.00022	0.86271	0.44985	2.0	0.25144	0.0722
17.0	1.0	0.75145	0.60813	0.73249	0.1285	0.70913	0.7498	-18.09631	0.75311	0.00023	0.86431	0.44831	2.0	0.23589	0.07221
18.0	1.0	0.74668	0.60281	0.70869	0.13177	0.70459	0.7452	-19.90719	0.74817	0.00023	0.8649	0.44337	2.0	0.27896	0.0723
19.0	1.0	0.7526	0.61153	0.71132	0.12772	0.71333	0.75135	-21.72868	0.75386	0.00024	0.87291	0.45363	2.0	0.26334	0.07232
20.0	1.0	0.74926	0.60736	0.68916	0.12842	0.71052	0.74793	-23.65676	0.75059	0.00024	0.8741	0.44941	2.0	0.30063	0.07237

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

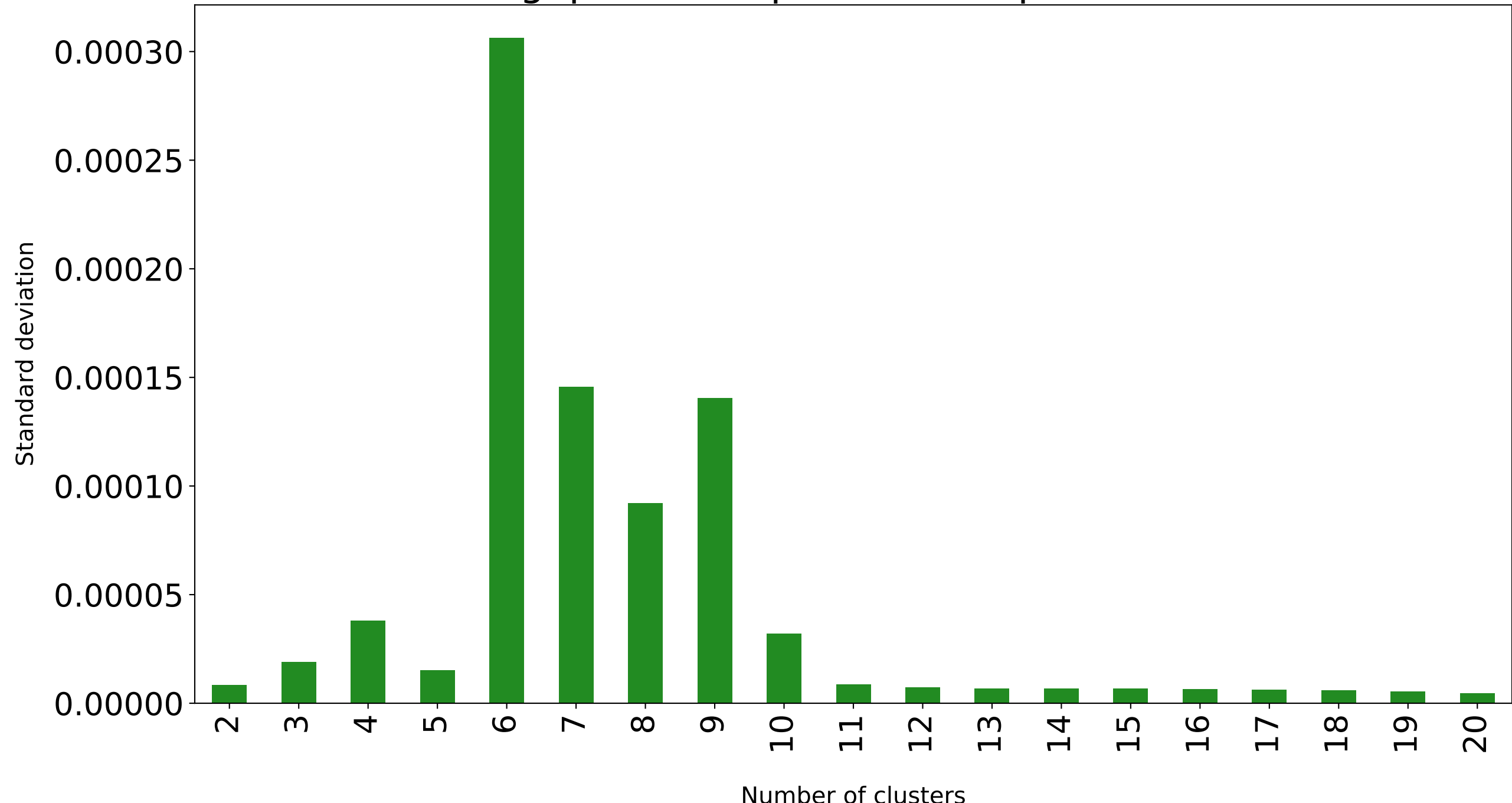Hierarchical Clustering Dendrogram - gap: -0.20, Tp: 0.25, complete link

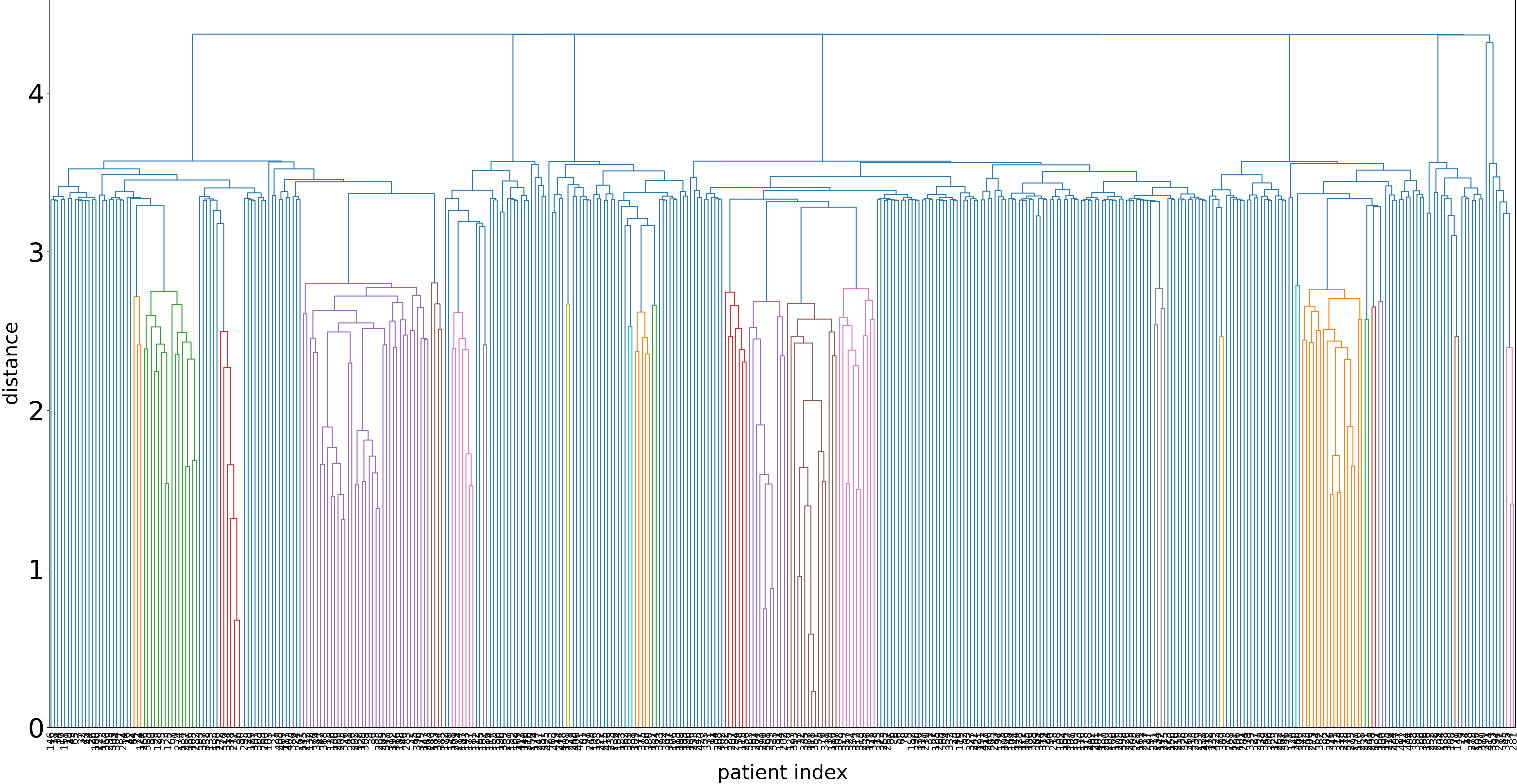patient index
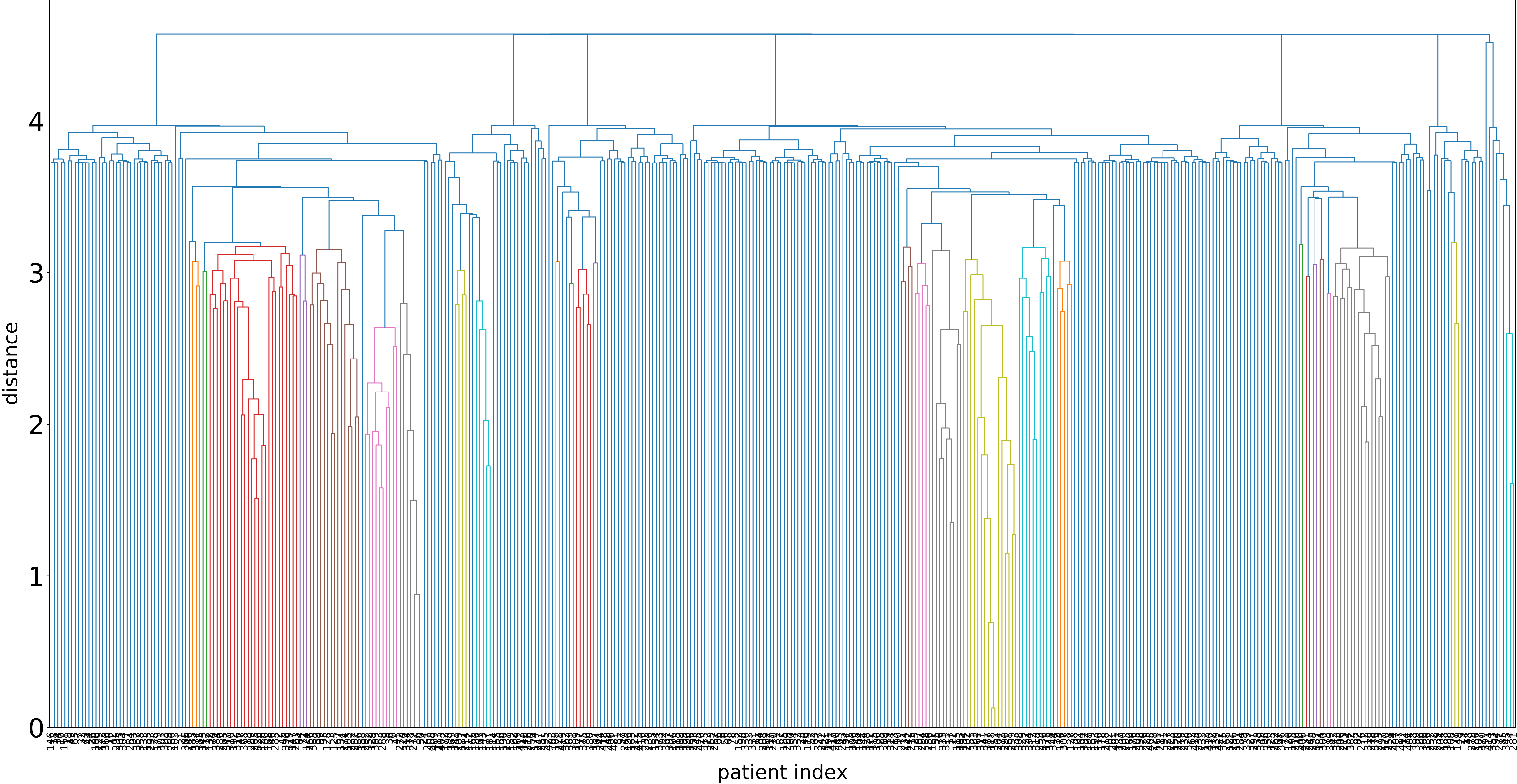
Cophenetic Correlation Coefficient: 0.5536209885632254

Average values of five clustering indices
gap: -0.20, Tp: 0.25, complete link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.90368	0.84856	0.70654	0.0591	0.72169	0.90237	-0.11034	0.905	0.00012	0.81703	0.78655	0.20645	0.08673	0.09069
3.0	1.00001	0.86885	0.78545	0.82835	0.08635	0.77048	0.86611	-0.57527	0.87162	0.00012	0.80708	0.68575	1.39531	0.07653	0.09071
4.0	1.0	0.88074	0.79095	0.90886	0.0845	0.83139	0.87683	-1.35105	0.88472	0.00016	0.86526	0.67455	1.39531	0.07892	0.09072
5.0	1.0	0.94201	0.89248	0.92195	0.04412	0.92218	0.94189	-2.56913	0.94212	0.00019	0.94305	0.81219	1.75366	0.0959	0.09075
6.0	1.0	0.97086	0.94394	0.9718	0.02472	0.96176	0.97076	-3.47676	0.97096	0.00021	0.97262	0.89619	1.75366	0.0939	0.09079
7.0	1.0	0.98068	0.96256	0.97714	0.01178	0.97477	0.98063	-4.39721	0.98074	0.00021	0.98209	0.92967	1.77236	0.10075	0.09179
8.0	1.0	0.97188	0.94617	0.95449	0.01588	0.96365	0.97156	-5.74504	0.97221	0.00021	0.97459	0.90217	2.0	0.21682	0.10438
9.0	1.0	0.91434	0.84433	0.93036	0.04989	0.89176	0.91321	-6.32378	0.91547	0.00021	0.92993	0.74024	2.0	0.17049	0.1044
10.0	1.0	0.89537	0.81408	0.89252	0.05743	0.86959	0.894	-7.77047	0.89674	0.00021	0.91953	0.69886	2.0	0.15388	0.10443
11.0	1.0	0.8813	0.79238	0.85432	0.06552	0.85308	0.87968	-9.24443	0.88293	0.00021	0.91171	0.67072	2.0	0.22868	0.10445
12.0	1.0	0.87303	0.77908	0.82505	0.07074	0.84393	0.871	-10.79307	0.87508	0.00022	0.90809	0.653	2.0	0.20603	0.10447
13.0	1.0	0.85738	0.75624	0.80414	0.08109	0.8269	0.8552	-12.12137	0.85958	0.00022	0.90297	0.62486	2.0	0.18667	0.10453
14.0	1.0	0.84025	0.72709	0.75319	0.08555	0.80797	0.83662	-13.67346	0.84393	0.00022	0.89466	0.5855	2.0	0.24446	0.1046
15.0	1.0	0.76699	0.62554	0.77123	0.11933	0.72683	0.7645	-14.48308	0.76951	0.00023	0.86967	0.46469	2.0	0.22601	0.10463
16.0	1.0	0.76843	0.62878	0.75937	0.11818	0.72922	0.76655	-16.18601	0.77032	0.00023	0.87307	0.4688	2.0	0.2139	0.10477
17.0	1.0	0.76745	0.62846	0.74673	0.11983	0.72884	0.7659	-17.60489	0.769	0.00024	0.87505	0.46929	2.0	0.20181	0.10477
18.0	1.0	0.76412	0.62435	0.72882	0.12272	0.72567	0.76268	-19.34663	0.76555	0.00024	0.87544	0.46495	2.0	0.24594	0.10492
19.0	1.0	0.76684	0.62883	0.7256	0.12076	0.73056	0.76569	-21.21928	0.76799	0.00025	0.88167	0.47044	2.0	0.23159	0.10496
20.0	1.0	0.76715	0.62916	0.7081	0.11957	0.73201	0.76589	-23.21989	0.76841	0.00025	0.88466	0.47075	2.0	0.27043	0.10503

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

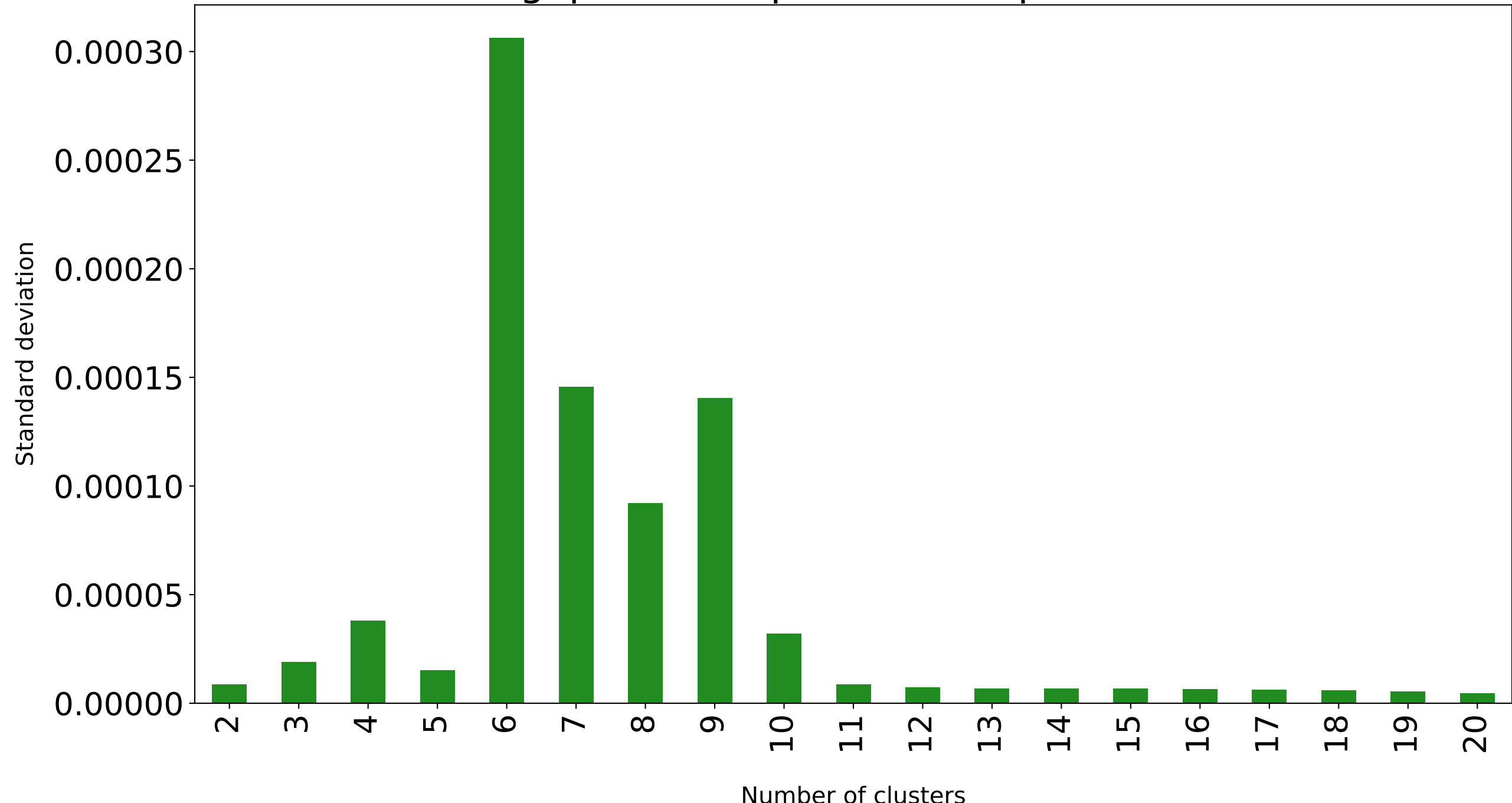Hierarchical Clustering Dendrogram - gap: -0.10, Tp: 0.25, complete link

distance

patient index

Cophenetic Correlation Coefficient: 0.6429182343820385

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.88483	0.82346	0.65651	0.07161	0.67651	0.88351	-0.09555	0.88615	0.00011	0.78981	0.75968	0.09677	0.11457	0.11771
3.0	1.00001	0.87286	0.79644	0.82141	0.08409	0.78138	0.87083	-0.61236	0.87492	0.00013	0.82069	0.70807	0.74648	0.10621	0.11774
4.0	1.0	0.89089	0.80826	0.92757	0.07849	0.8456	0.88664	-1.40033	0.89522	0.00016	0.87505	0.70315	0.77978	0.10925	0.11776
5.0	1.0	0.95285	0.91225	0.93879	0.03727	0.93668	0.95268	-2.65575	0.95302	0.00019	0.9534	0.84615	0.95854	0.13209	0.11779
6.0	1.0	0.98285	0.96654	0.98721	0.01691	0.97751	0.98278	-3.59195	0.98292	0.00021	0.9838	0.93659	1.41538	0.12924	0.11785
7.0	1.0	0.99127	0.98282	0.99179	0.00586	0.9886	0.99125	-4.51278	0.99129	0.00022	0.99186	0.96685	1.46667	0.13708	0.1192
8.0	1.0	0.98345	0.96795	0.97182	0.01014	0.97872	0.98315	-5.88035	0.98375	0.00022	0.9851	0.94118	2.0	0.24901	0.14405
9.0	1.0	0.90503	0.8266	0.93695	0.06366	0.88096	0.90318	-6.16922	0.90689	0.00021	0.92363	0.71106	2.0	0.20661	0.14409
10.0	1.0	0.8889	0.80101	0.91089	0.07066	0.86224	0.88691	-7.58683	0.89091	0.00021	0.91518	0.67634	2.0	0.18515	0.14414
11.0	1.0	0.87803	0.78468	0.8765	0.07623	0.84958	0.8761	-9.07625	0.87998	0.00021	0.90983	0.65538	2.0	0.25186	0.14417
12.0	1.0	0.86634	0.76714	0.84197	0.08345	0.8363	0.86419	-10.60615	0.86851	0.00021	0.90451	0.63345	2.0	0.224	0.14419
13.0	1.0	0.83848	0.72664	0.80144	0.10579	0.80515	0.83596	-11.83027	0.84103	0.00022	0.89323	0.58455	2.0	0.20187	0.14429
14.0	1.0	0.80595	0.67783	0.7207	0.11506	0.76836	0.80206	-13.32646	0.8099	0.00022	0.87791	0.52578	2.0	0.25904	0.1444
15.0	1.0	0.7613	0.61082	0.81725	0.13771	0.72513	0.75559	-14.63407	0.76711	0.00025	0.87561	0.44431	2.0	0.24082	0.14445
16.0	1.0	0.75921	0.60928	0.80429	0.13924	0.72316	0.75433	-16.23545	0.76417	0.00025	0.87687	0.44275	2.0	0.22394	0.14465
17.0	1.0	0.75511	0.60519	0.7894	0.14348	0.71907	0.75104	-17.58267	0.75925	0.00025	0.87767	0.43869	2.0	0.21283	0.14466
18.0	1.0	0.74747	0.59663	0.76383	0.14895	0.71103	0.74436	-19.27773	0.75061	0.00026	0.87731	0.42972	2.0	0.25379	0.14489
19.0	1.0	0.75022	0.60155	0.75687	0.14261	0.71602	0.74802	-21.15195	0.75244	0.00027	0.88467	0.43509	2.0	0.24144	0.14495
20.0	1.0	0.74189	0.59257	0.72446	0.14696	0.70765	0.74046	-23.07526	0.74332	0.00027	0.88506	0.42653	2.0	0.27982	0.14505

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

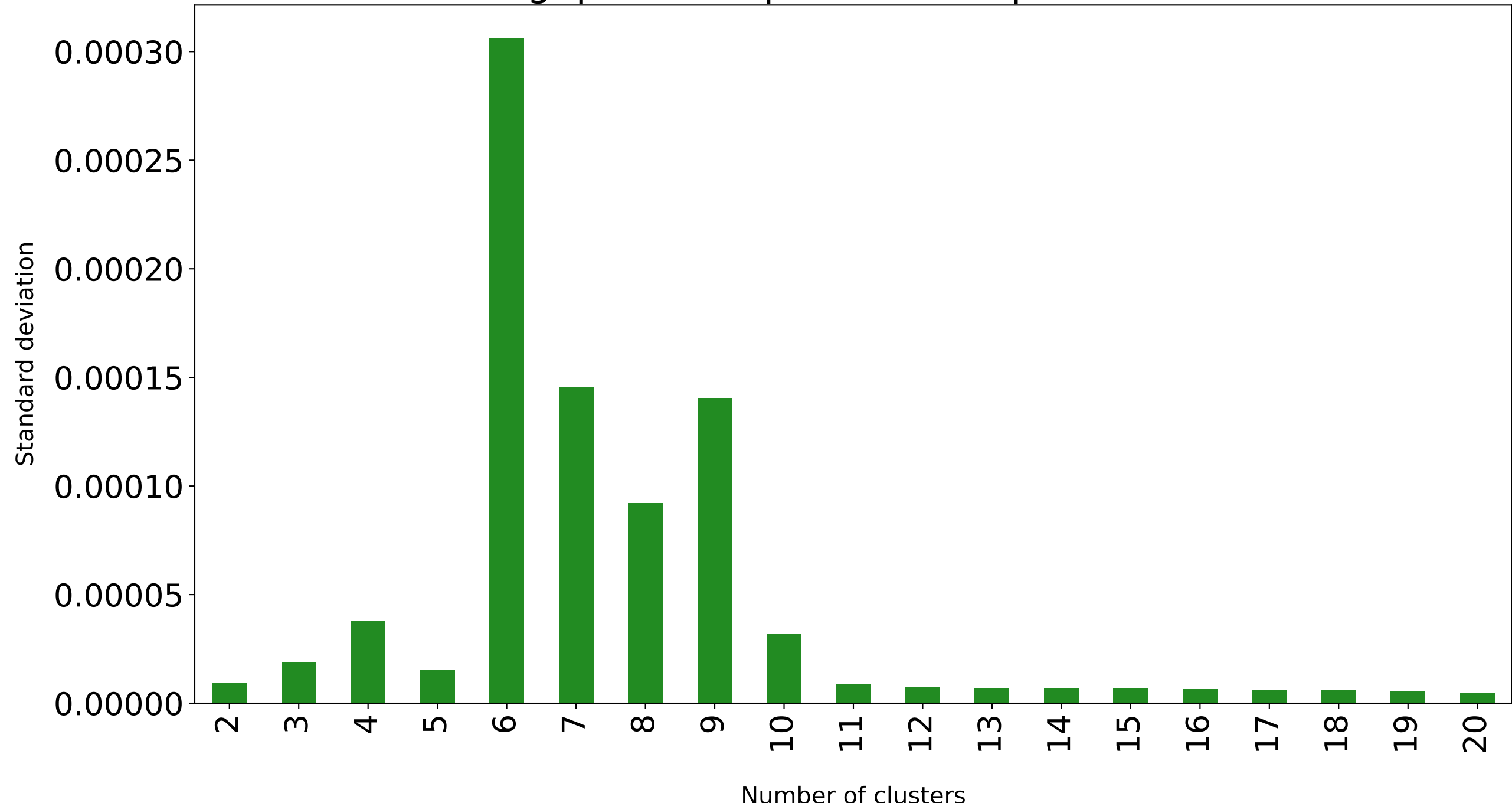Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 0.25, complete link

distance
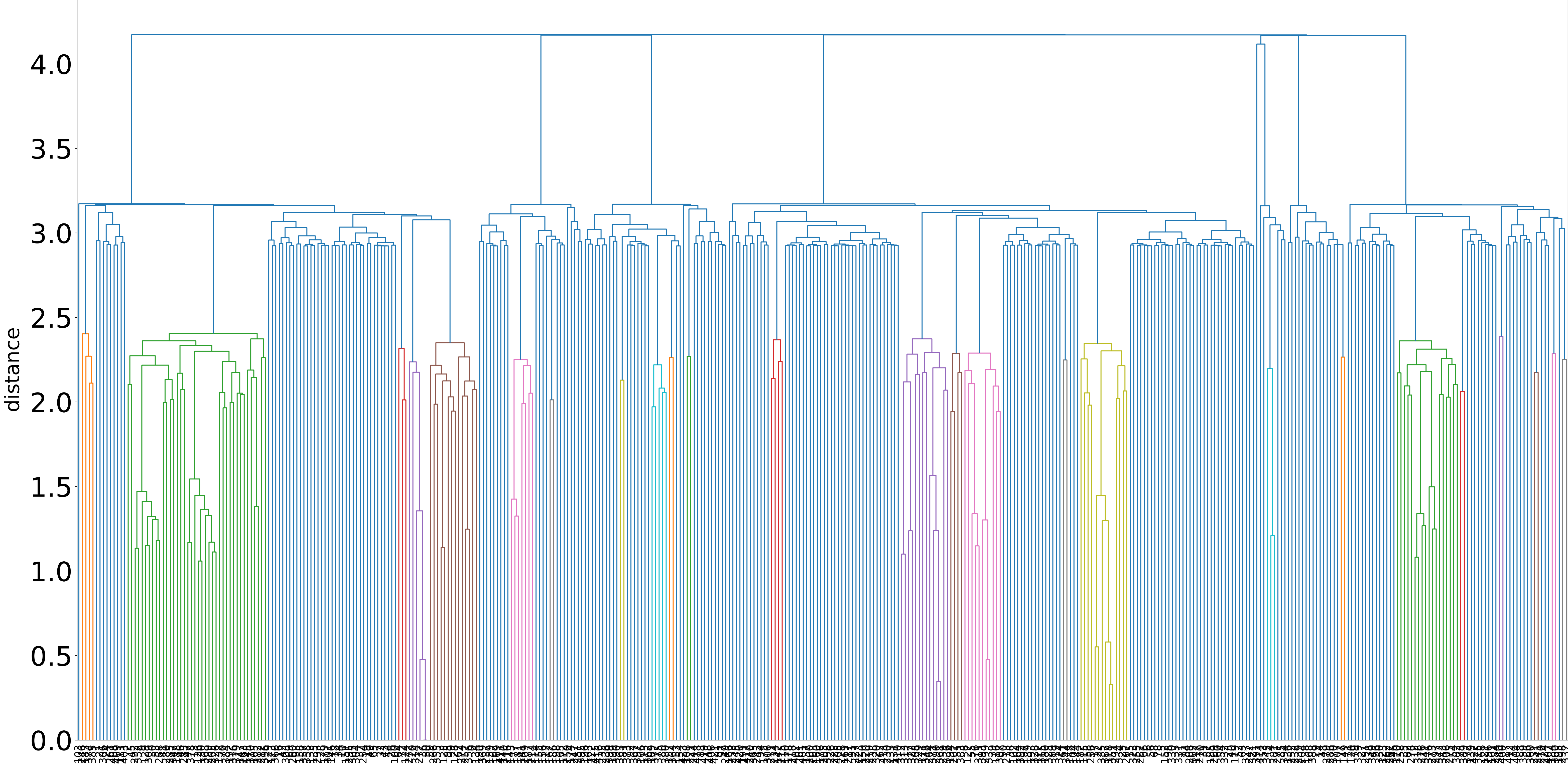
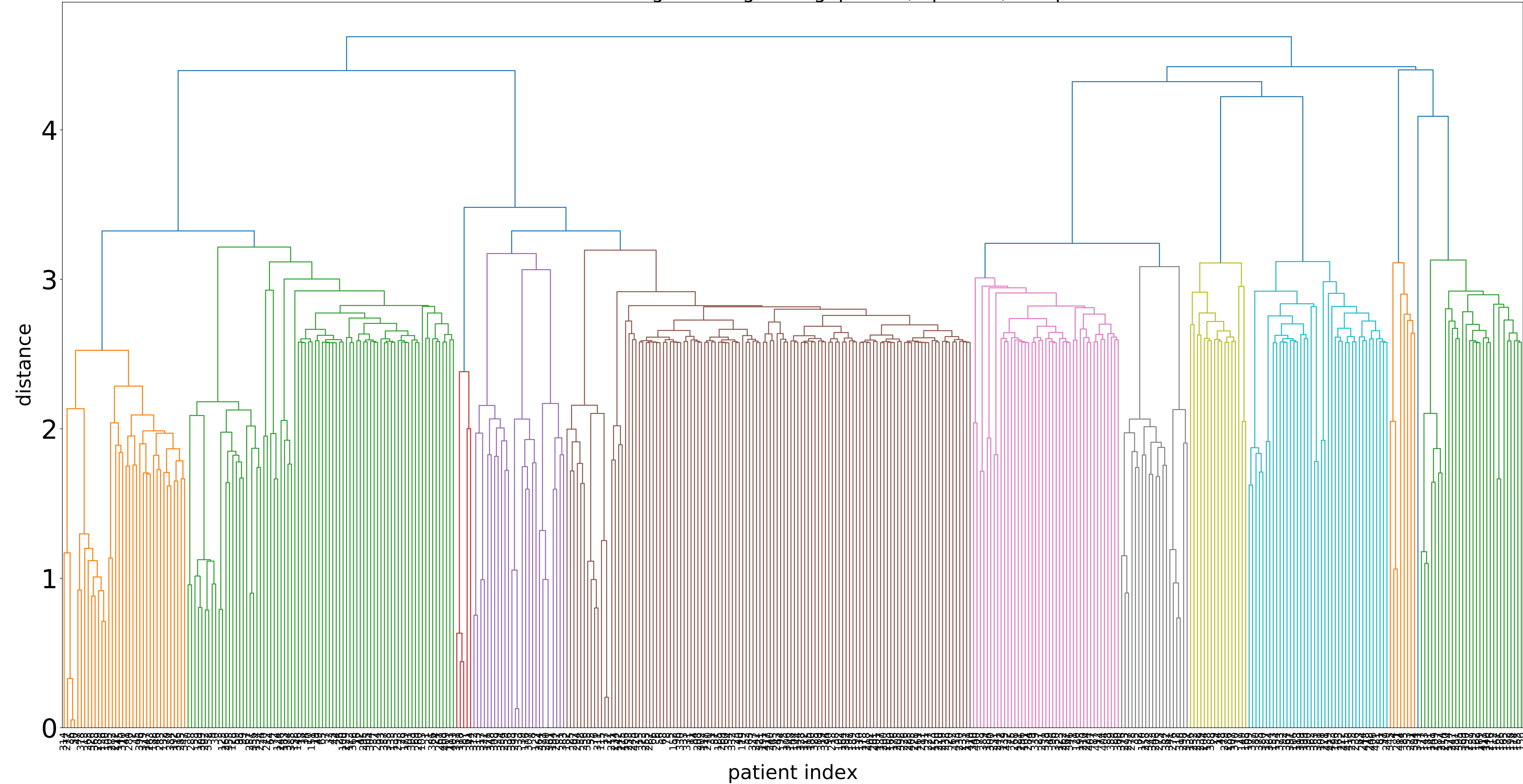patient index

Cophenetic Correlation Coefficient: 0.7115753978445999

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99999	0.8919	0.83389	0.68433	0.06739	0.70454	0.89076	-0.11267	0.89306	0.00012	0.80452	0.77371	0.03226	0.1442	0.12315
3.0	1.0	0.90328	0.8444	0.87157	0.06423	0.83103	0.90115	-0.66207	0.90547	0.00013	0.85971	0.77741	0.05634	0.13675	0.12318
4.0	1.0	0.90139	0.82691	0.92239	0.06604	0.86077	0.89787	-1.44712	0.90498	0.00017	0.88828	0.73118	0.1573	0.13938	0.12321
5.0	1.0	0.94963	0.90729	0.93395	0.03167	0.93241	0.94945	-2.6643	0.94982	0.00019	0.95062	0.83999	0.1573	0.16779	0.12325
6.0	1.0	0.94984	0.90646	0.91777	0.03742	0.93399	0.94961	-3.22829	0.95007	0.0002	0.95314	0.83582	0.44444	0.16356	0.1233
7.0	1.0	0.97532	0.95329	0.96007	0.01459	0.96795	0.97522	-4.43623	0.97542	0.00021	0.97774	0.91596	0.47059	0.17314	0.12479
8.0	1.0	0.97524	0.95279	0.95429	0.01385	0.96799	0.97501	-5.81944	0.97548	0.00021	0.97772	0.91472	2.0	0.28085	0.16196
9.0	1.0	0.96293	0.92857	0.91461	0.01774	0.95277	0.96201	-7.12695	0.96386	0.00021	0.96735	0.87197	2.0	0.35056	0.16201
10.0	1.0	0.94909	0.90384	0.89693	0.02456	0.93564	0.94797	-8.5136	0.95022	0.00022	0.957	0.83217	2.0	0.30896	0.16207
11.0	1.0	0.93559	0.87981	0.8723	0.0406	0.91933	0.93388	-9.72708	0.93732	0.00022	0.94733	0.79506	2.0	0.2702	0.16211
12.0	1.0	0.92407	0.85956	0.84699	0.04835	0.90573	0.92139	-11.15999	0.92677	0.00022	0.93935	0.76591	2.0	0.23944	0.16213
13.0	1.0	0.90911	0.83306	0.81478	0.05582	0.88794	0.90528	-12.24281	0.91299	0.00022	0.92875	0.72694	2.0	0.21857	0.16224
14.0	1.0	0.89584	0.81305	0.81073	0.06277	0.87315	0.89217	-13.19753	0.89955	0.00022	0.92412	0.70061	2.0	0.20313	0.16232
15.0	1.0	0.85905	0.75358	0.75289	0.08821	0.83107	0.85334	-14.4703	0.86488	0.00022	0.90433	0.6213	2.0	0.19088	0.1624
16.0	1.0	0.82379	0.70469	0.78658	0.10302	0.79452	0.82119	-16.38336	0.82641	0.00026	0.90254	0.55768	2.0	0.18039	0.16241
17.0	1.0	0.8227	0.70168	0.84302	0.10149	0.79765	0.81974	-17.71408	0.82569	0.00029	0.9134	0.55165	2.0	0.17707	0.16243
18.0	1.0	0.83428	0.71891	0.83996	0.09523	0.81149	0.83207	-19.513	0.83651	0.0003	0.92123	0.57165	2.0	0.17545	0.16246
19.0	1.0	0.83936	0.72664	0.8375	0.09177	0.8176	0.83742	-21.35678	0.84131	0.00031	0.92472	0.58111	2.0	0.1628	0.1625
20.0	1.0	0.84525	0.73585	0.82931	0.08842	0.82475	0.84361	-23.40518	0.84689	0.00031	0.92904	0.59283	2.0	0.20467	0.16258

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

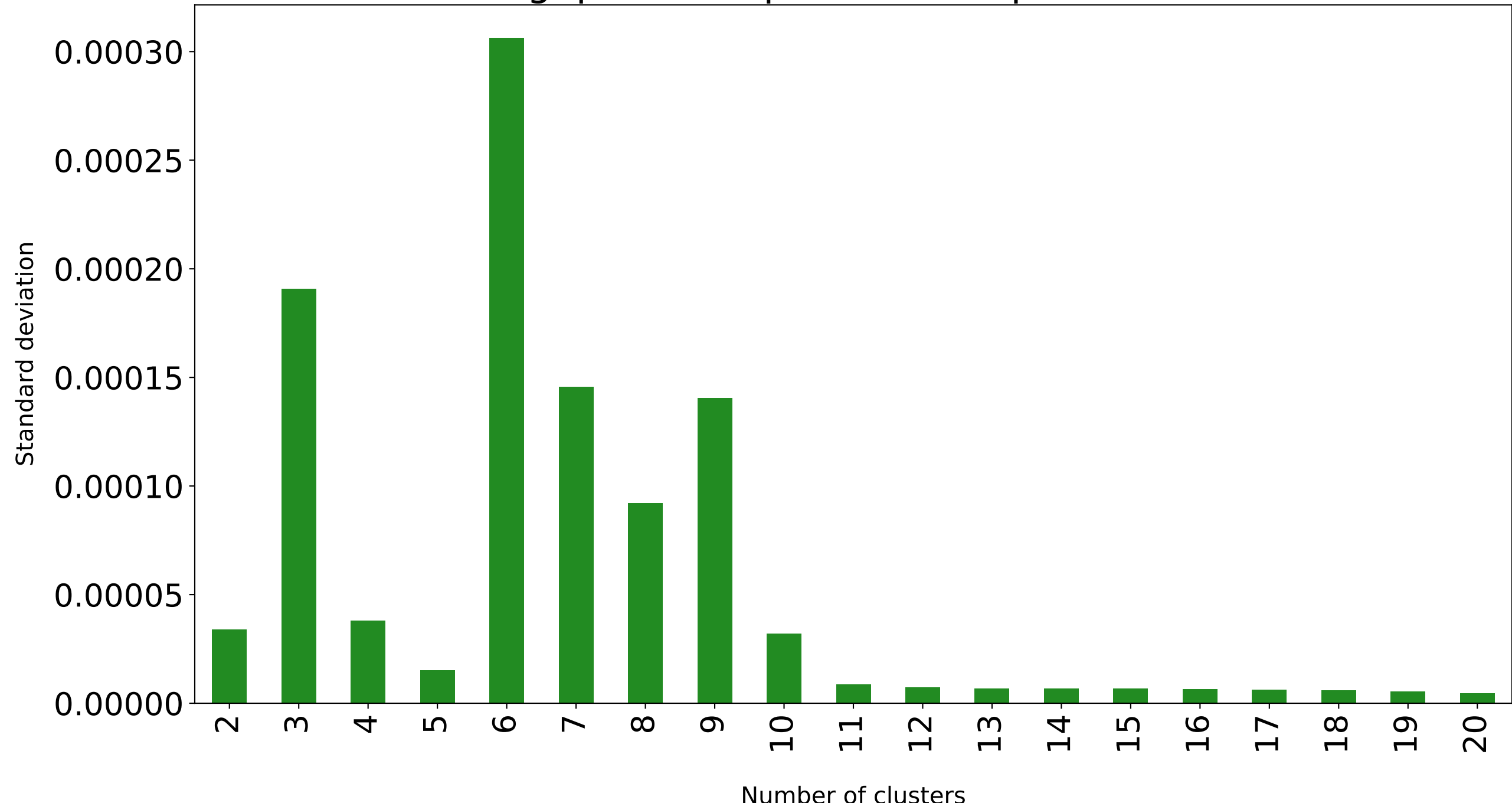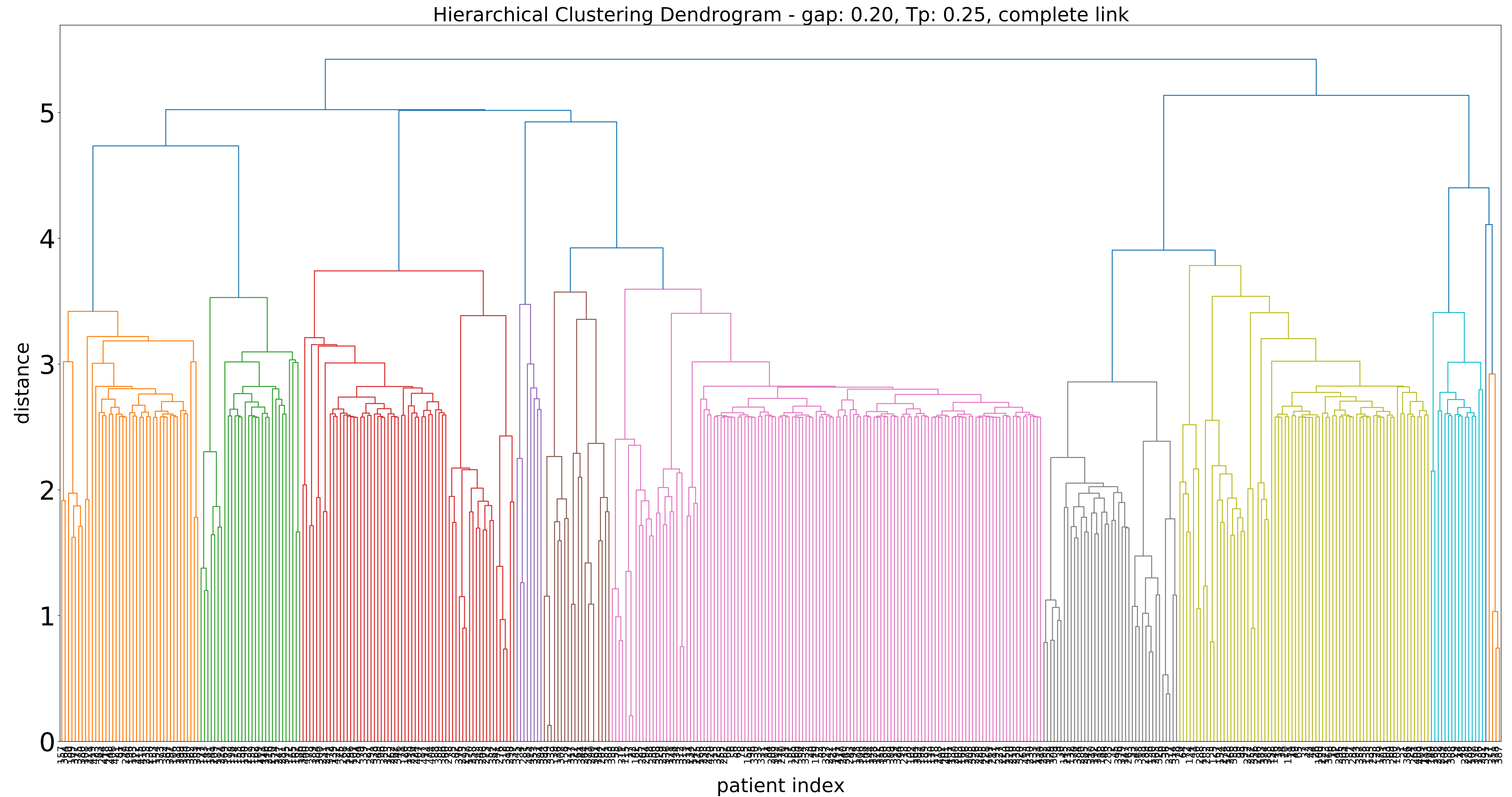Hierarchical Clustering Dendrogram - gap: 0.10, Tp: 0.25, complete link

Cophenetic Correlation Coefficient: 0.7345821477507194

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99998	0.86398	0.79566	0.72069	0.10279	0.69709	0.86296	-0.0042	0.86502	0.00011	0.77925	0.72099	0.0875	0.10963	0.1054
3.0	1.00003	0.77654	0.65894	0.55801	0.18282	0.60728	0.77307	-0.19289	0.78004	0.0001	0.69268	0.53164	0.09917	0.12569	0.10591
4.0	1.00001	0.72143	0.55825	0.42376	0.2117	0.56978	0.70315	-0.64935	0.74039	0.0001	0.64036	0.41072	0.09917	0.17913	0.10603
5.0	1.0	0.88942	0.80039	0.7863	0.09547	0.85014	0.88768	-2.02789	0.89117	0.00017	0.88777	0.6726	0.09917	0.19538	0.10784
6.0	1.0	0.96044	0.92507	0.94074	0.03762	0.94802	0.96034	-3.22788	0.96054	0.0002	0.96303	0.86469	0.17241	0.19901	0.1104
7.0	1.0	0.97996	0.96157	0.96797	0.01426	0.97395	0.97989	-4.42363	0.98003	0.00021	0.98178	0.92918	0.35294	0.21492	0.11395
8.0	1.0	0.97442	0.95087	0.94854	0.01415	0.96712	0.974	-5.84031	0.97484	0.00021	0.97714	0.91112	2.0	0.3121	0.1339
9.0	1.0	0.93941	0.8851	0.87231	0.03143	0.92359	0.93784	-6.90826	0.94098	0.00021	0.94891	0.79957	2.0	0.29082	0.14024
10.0	1.0	0.87075	0.77624	0.8264	0.07378	0.84184	0.8697	-7.78507	0.8718	0.00022	0.90938	0.64794	2.0	0.24913	0.14025
11.0	1.0	0.86094	0.75961	0.84828	0.08113	0.83423	0.86017	-8.85071	0.86172	0.00024	0.91393	0.62184	2.0	0.23575	0.14384
12.0	1.0	0.85078	0.74272	0.82196	0.08869	0.82461	0.85009	-10.12457	0.85147	0.00026	0.9144	0.59703	2.0	0.22613	0.14495
13.0	1.0	0.85029	0.7411	0.83348	0.09271	0.8265	0.84971	-10.91834	0.85088	0.00028	0.92076	0.5931	2.0	0.21758	0.14589
14.0	1.0	0.90572	0.82825	0.93235	0.07791	0.89223	0.90472	-12.80125	0.90672	0.00032	0.95304	0.71194	2.0	0.21405	0.14694
15.0	1.0	0.91309	0.84157	0.93	0.07738	0.901	0.91241	-14.51464	0.91377	0.00033	0.95795	0.73269	2.0	0.20447	0.14898
16.0	1.0	0.92085	0.85483	0.92806	0.07408	0.91016	0.92044	-16.54894	0.92127	0.00034	0.96278	0.75185	2.0	0.20135	0.14946
17.0	1.0	0.92314	0.85838	0.93656	0.07677	0.91316	0.92266	-18.42456	0.92362	0.00035	0.96497	0.75659	2.0	0.18486	0.14957
18.0	1.0	0.92859	0.86757	0.94632	0.07608	0.9196	0.92807	-19.8642	0.92912	0.00036	0.96818	0.77052	2.0	0.18525	0.14985
19.0	1.0	0.93381	0.8768	0.94237	0.07329	0.92557	0.93349	-21.41907	0.93414	0.00037	0.97091	0.78449	2.0	0.18712	0.14991
20.0	1.0	0.93769	0.88379	0.93819	0.07153	0.93003	0.93748	-23.10195	0.93789	0.00038	0.97301	0.79555	2.0	0.17871	0.1511

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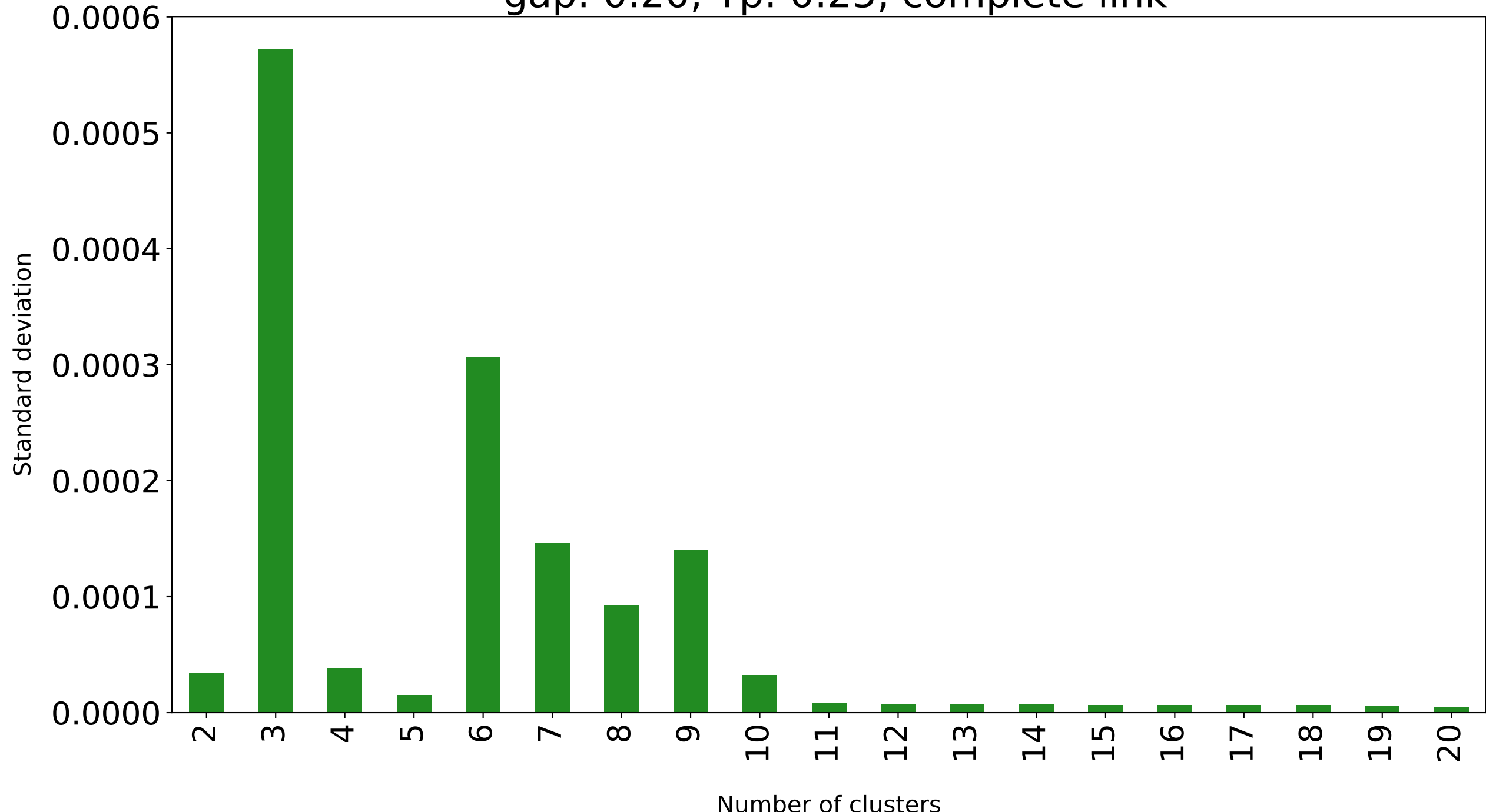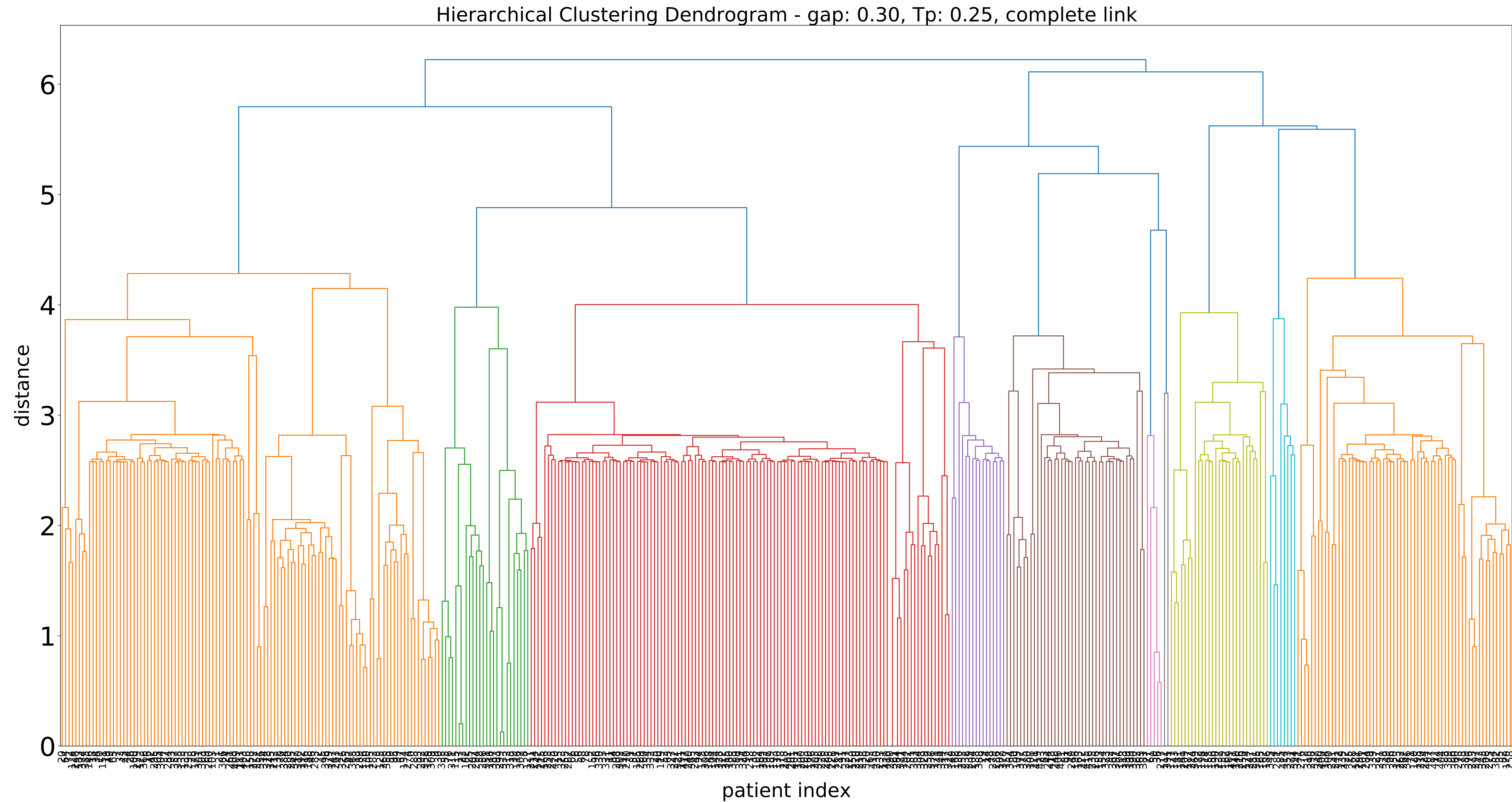gap: 0.10, Tp: 0.25, complete link

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

Cophenetic Correlation Coefficient: 0.7243069112600068

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99996	0.64165	0.4878	0.1847	0.27284	0.19178	0.64082	0.32407	0.6425	3e-05	0.4483	0.34578	0.02076	0.15661	0.14916
3.0	1.00004	0.69546	0.5335	0.32926	0.19824	0.44811	0.68393	-0.32064	0.70727	7e-05	0.56118	0.3804	0.38095	0.18137	0.15254
4.0	1.00001	0.74384	0.59268	0.52602	0.1549	0.61573	0.73773	-1.02421	0.75001	0.00011	0.70412	0.43223	0.38095	0.17676	0.15273
5.0	1.0	0.9074	0.83386	0.85997	0.06731	0.87596	0.90705	-2.36605	0.90775	0.00018	0.91095	0.72305	0.38095	0.19681	0.15555
6.0	1.0	0.93271	0.87702	0.89513	0.06032	0.91167	0.93244	-2.97998	0.93298	0.0002	0.93835	0.78909	0.38095	0.20177	0.16183
7.0	1.0	0.95643	0.91918	0.9416	0.03122	0.94363	0.95626	-4.29121	0.9566	0.00021	0.9616	0.85774	0.38095	0.22098	0.17408
8.0	1.0	0.95435	0.91439	0.9213	0.02811	0.94155	0.95381	-5.39938	0.95489	0.00021	0.96045	0.84927	0.8	0.22767	0.18645
9.0	1.0	0.92211	0.85423	0.83288	0.04233	0.90221	0.91946	-6.79977	0.92479	0.00021	0.93485	0.75347	2.0	0.32936	0.19525
10.0	1.0	0.86302	0.76001	0.78034	0.08121	0.83199	0.86077	-7.61933	0.86528	0.00021	0.90122	0.62137	2.0	0.27356	0.19617
11.0	1.0	0.85261	0.74425	0.81282	0.08694	0.82351	0.85177	-8.61047	0.85344	0.00024	0.90664	0.59707	2.0	0.26207	0.2025
12.0	1.0	0.84123	0.72662	0.77712	0.09599	0.81208	0.83997	-8.93767	0.8425	0.00024	0.90499	0.57496	2.0	0.25307	0.20481
13.0	1.0	0.82686	0.7053	0.75854	0.10653	0.79741	0.82546	-10.15843	0.82826	0.00025	0.9029	0.54883	2.0	0.24889	0.21311
14.0	1.0	0.86954	0.77078	0.83634	0.09606	0.84933	0.86905	-11.85927	0.87002	0.00029	0.9321	0.63155	2.0	0.24757	0.21446
15.0	1.0	0.87314	0.77594	0.82765	0.09401	0.85403	0.87247	-13.22858	0.87381	0.00029	0.93523	0.63809	2.0	0.23819	0.21652
16.0	1.0	0.87989	0.78674	0.85028	0.09405	0.86262	0.87952	-14.23653	0.88026	0.00031	0.94118	0.65209	2.0	0.23624	0.2171
17.0	1.0	0.88643	0.79686	0.84981	0.08963	0.87055	0.88594	-16.26318	0.88692	0.00032	0.94545	0.66565	2.0	0.23251	0.22052
18.0	1.0	0.88867	0.79975	0.83961	0.08748	0.87342	0.88786	-17.77379	0.88948	0.00032	0.94711	0.66926	2.0	0.23374	0.2241
19.0	1.0	0.89136	0.80382	0.8409	0.08639	0.87688	0.89052	-19.55766	0.89221	0.00033	0.94947	0.67447	2.0	0.22601	0.22471
20.0	1.0	0.89373	0.80703	0.83612	0.08513	0.87978	0.89265	-21.57051	0.89481	0.00034	0.95094	0.67841	2.0	0.22367	0.2248

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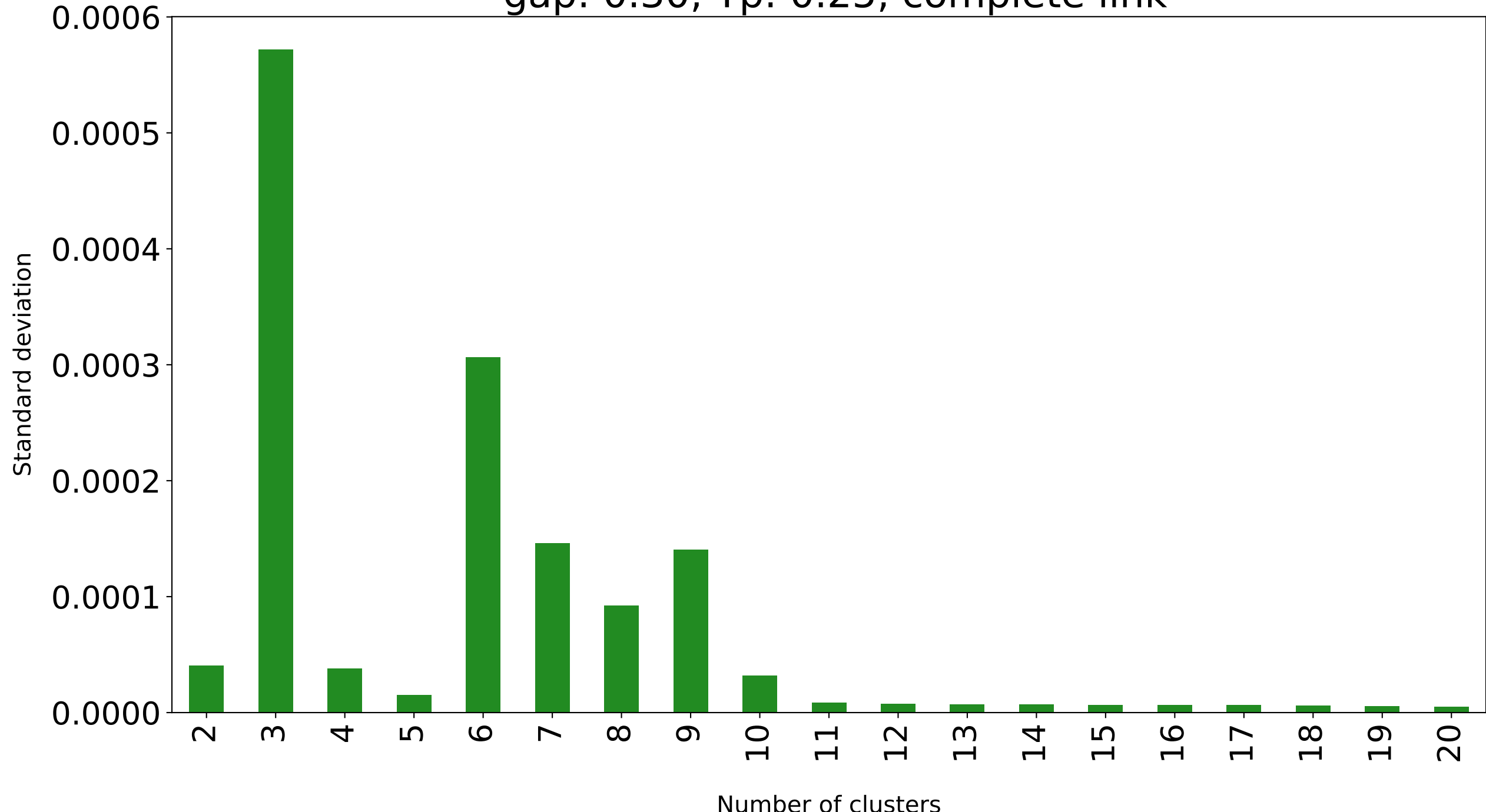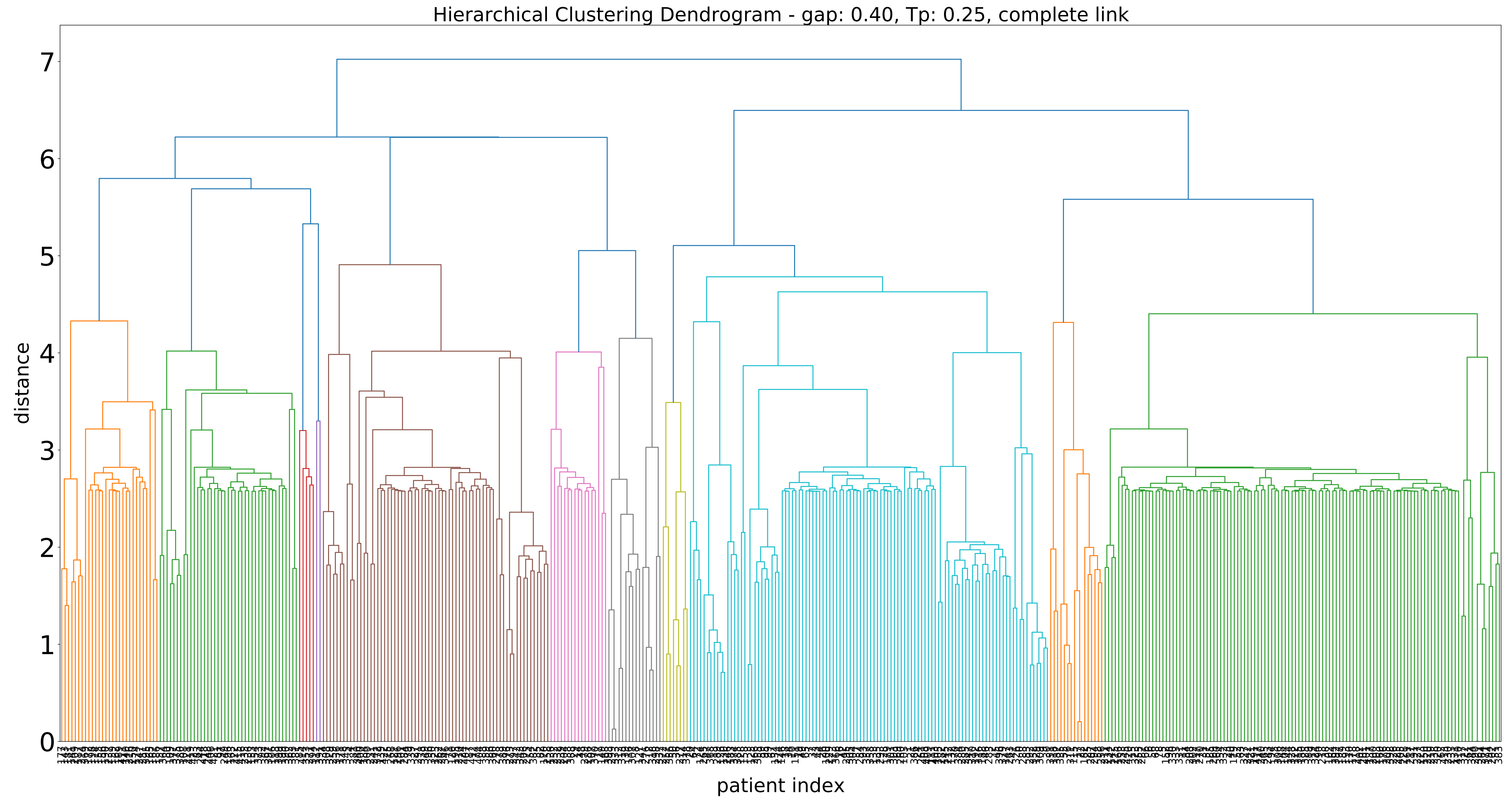gap: 0.20, Tp: 0.25, complete link

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

Cophenetic Correlation Coefficient: 0.7341554163827297

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99996	0.79817	0.69436	0.57609	0.14782	0.56055	0.7973	0.1241	0.79907	9e-05	0.67588	0.57683	0.12195	0.12059	0.19283
3.0	1.00003	0.67857	0.5257	0.40307	0.23271	0.4493	0.67499	-0.08496	0.68219	7e-05	0.58438	0.37566	0.3125	0.13552	0.18393
4.0	1.0	0.76516	0.62566	0.72917	0.17211	0.66732	0.76125	-0.98073	0.76915	0.00013	0.75565	0.46935	0.3125	0.17741	0.18962
5.0	1.0	0.85138	0.74883	0.81868	0.1106	0.80081	0.8504	-2.16987	0.85238	0.00017	0.86123	0.61319	0.3125	0.21201	0.19067
6.0	1.0	0.87535	0.78511	0.8237	0.09311	0.83621	0.87476	-2.77937	0.87593	0.00018	0.88902	0.65971	0.3125	0.22076	0.1961
7.0	1.0	0.90126	0.82605	0.85298	0.065	0.87247	0.90068	-3.92728	0.90183	0.0002	0.9154	0.71714	0.33333	0.23512	0.20544
8.0	1.0	0.90049	0.82269	0.83171	0.06042	0.87315	0.8993	-5.04501	0.90168	0.0002	0.91712	0.7105	1.14286	0.2284	0.21841
9.0	1.0	0.8939	0.81163	0.87265	0.07094	0.8686	0.89329	-6.10289	0.89452	0.00022	0.92143	0.69233	1.14286	0.20518	0.22796
10.0	1.0	0.8749	0.78051	0.8097	0.08111	0.847	0.87347	-7.48976	0.87634	0.00022	0.91162	0.65014	2.0	0.20708	0.2489
11.0	1.0	0.84377	0.73249	0.83007	0.10321	0.81359	0.84282	-8.28282	0.84471	0.00024	0.90316	0.58521	2.0	0.19131	0.2514
12.0	1.0	0.84621	0.73601	0.81077	0.10292	0.81816	0.84538	-9.3658	0.84704	0.00025	0.909	0.58909	2.0	0.1821	0.25699
13.0	1.0	0.84241	0.72925	0.79786	0.1053	0.81567	0.84143	-10.07209	0.8434	0.00026	0.91188	0.57892	2.0	0.18384	0.26635
14.0	1.0	0.88815	0.80051	0.89877	0.09791	0.87132	0.88731	-11.90012	0.88898	0.0003	0.94256	0.6736	2.0	0.17723	0.26796
15.0	1.0	0.90218	0.82374	0.90241	0.09184	0.88792	0.90169	-13.19334	0.90267	0.00032	0.95117	0.70615	2.0	0.18251	0.27135
16.0	1.0	0.90801	0.83317	0.89964	0.09039	0.89499	0.9077	-15.22421	0.90833	0.00033	0.95525	0.71879	2.0	0.18791	0.27518
17.0	1.0	0.91112	0.8378	0.88985	0.08906	0.89878	0.91085	-16.74961	0.91139	0.00033	0.95743	0.72429	2.0	0.19297	0.27574
18.0	1.0	0.9138	0.8422	0.89071	0.0887	0.90214	0.9135	-18.10349	0.91411	0.00034	0.95957	0.73068	2.0	0.20045	0.28669
19.0	1.0	0.91176	0.83851	0.8864	0.09048	0.90018	0.91149	-19.85609	0.91204	0.00035	0.95969	0.72455	2.0	0.1928	0.28678
20.0	1.0	0.92603	0.863	0.92264	0.08474	0.91677	0.92585	-21.71953	0.92622	0.00037	0.96751	0.7616	2.0	0.18919	0.28726

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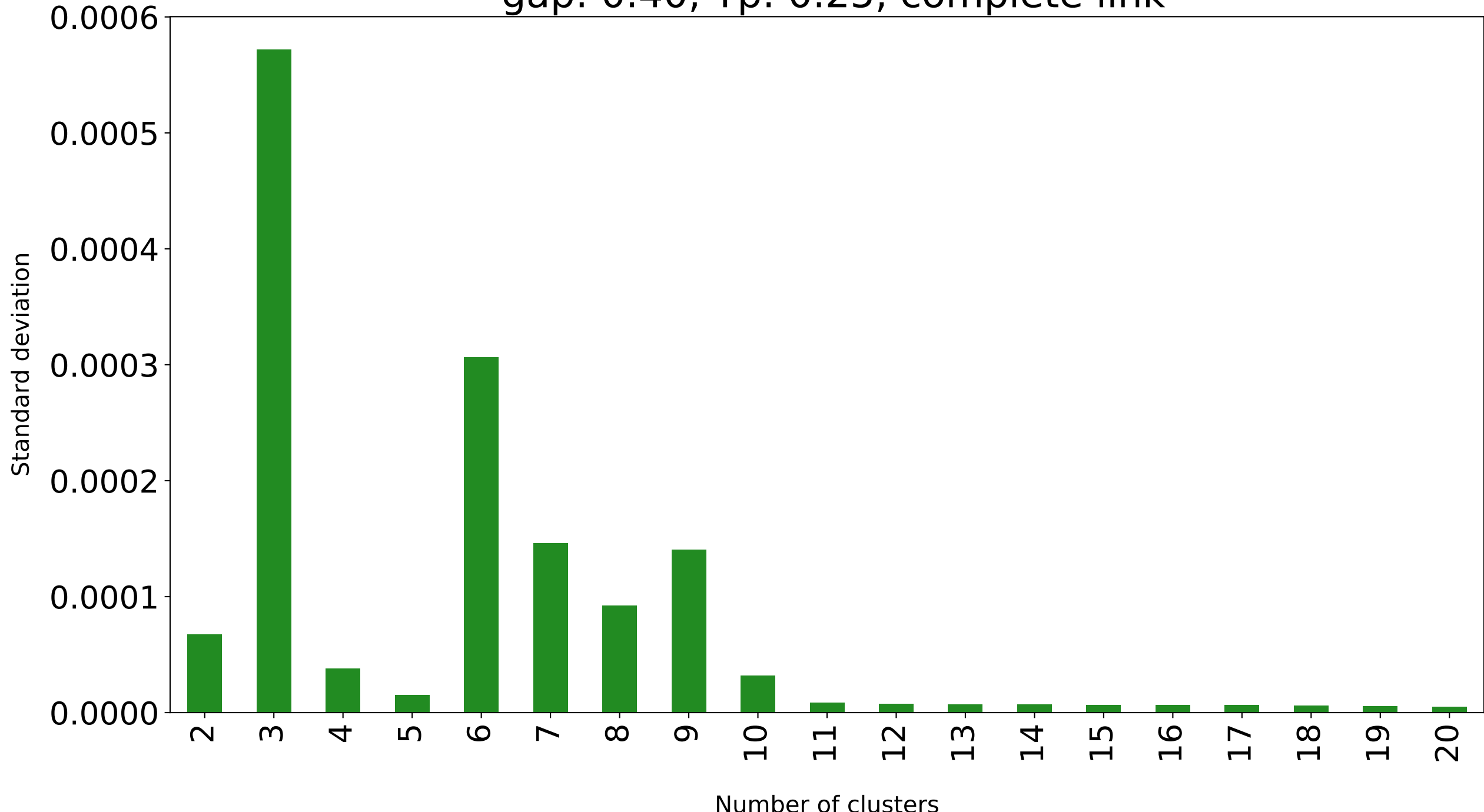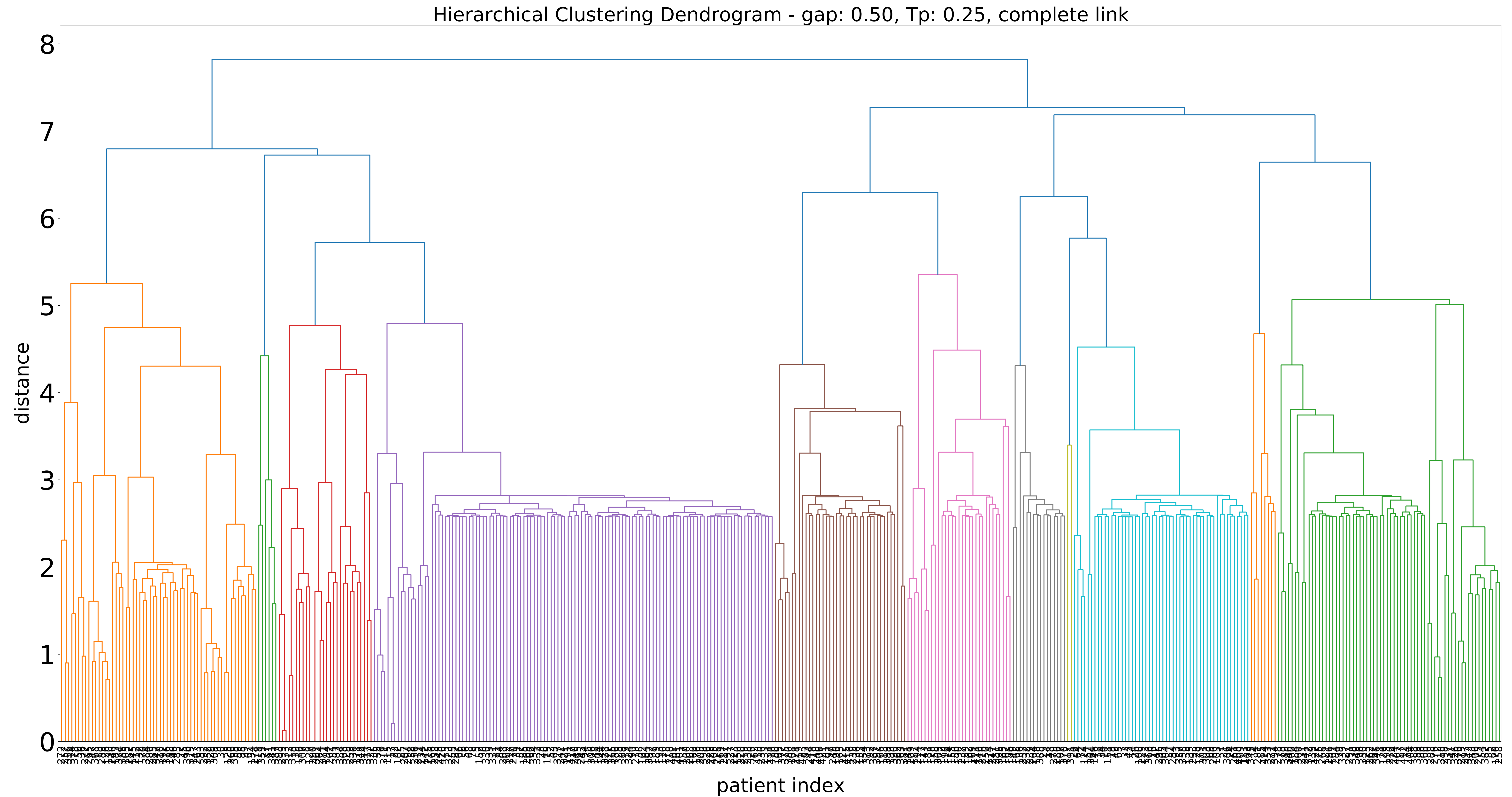gap: 0.30, Tp: 0.25, complete link

Hierarchical Clustering Dendrogram - gap: 0.40, Tp: 0.25, complete link

Cophenetic Correlation Coefficient: 0.6871868097142786

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99994	0.73285	0.60093	0.44509	0.19894	0.42055	0.73119	0.22963	0.73454	7e-05	0.57851	0.46097	0.13559	0.12046	0.19964
3.0	1.00001	0.67925	0.52516	0.53526	0.21424	0.48336	0.67568	-0.16064	0.68287	8e-05	0.61363	0.3742	0.13559	0.19011	0.20842
4.0	1.0	0.73086	0.58021	0.70514	0.1774	0.62168	0.72552	-0.82176	0.73635	0.00012	0.72681	0.42158	0.16	0.18519	0.20854
5.0	1.0	0.79694	0.67007	0.78192	0.13913	0.72948	0.7947	-1.80495	0.7992	0.00016	0.81618	0.51876	0.24242	0.19519	0.22376
6.0	1.0	0.82337	0.70513	0.81394	0.11781	0.77129	0.82187	-2.92002	0.82489	0.00017	0.85081	0.5559	0.25	0.2183	0.22795
7.0	1.0	0.83797	0.72664	0.80788	0.10539	0.79281	0.83702	-4.08066	0.83893	0.00018	0.86844	0.58157	0.57143	0.20897	0.23237
8.0	1.0	0.84205	0.73174	0.82843	0.10305	0.80314	0.84104	-5.20636	0.84306	0.0002	0.88224	0.58695	0.57143	0.20791	0.24338
9.0	1.0	0.83549	0.72192	0.78694	0.10669	0.79701	0.83455	-6.48443	0.83643	0.0002	0.88242	0.57459	2.0	0.21469	0.25402
10.0	1.0	0.81418	0.68894	0.74894	0.12348	0.77423	0.81308	-7.51867	0.81528	0.00021	0.87585	0.53151	2.0	0.21598	0.24167
11.0	1.0	0.80876	0.68033	0.72476	0.12272	0.76972	0.80705	-8.751	0.81048	0.00021	0.87664	0.52144	2.0	0.21643	0.24882
12.0	1.0	0.81289	0.68482	0.71806	0.1205	0.77707	0.81048	-9.43168	0.81531	0.00022	0.88413	0.52622	2.0	0.20483	0.25531
13.0	1.0	0.81129	0.68272	0.73087	0.13144	0.77826	0.80949	-10.38743	0.81311	0.00024	0.89184	0.52253	2.0	0.18613	0.25498
14.0	1.0	0.84553	0.73328	0.8105	0.11648	0.82126	0.84491	-11.73447	0.84615	0.00028	0.91903	0.58197	2.0	0.18564	0.26807
15.0	1.0	0.89005	0.80279	0.89192	0.10784	0.87426	0.88957	-13.64717	0.89054	0.00031	0.94589	0.67405	2.0	0.17937	0.27264
16.0	1.0	0.89321	0.8079	0.88987	0.10806	0.87823	0.89288	-15.57805	0.89355	0.00032	0.94858	0.68071	2.0	0.18625	0.27315
17.0	1.0	0.89576	0.81211	0.88417	0.10331	0.88133	0.89547	-16.8902	0.89604	0.00032	0.9504	0.68663	2.0	0.1963	0.2736
18.0	1.0	0.89333	0.80824	0.87085	0.10426	0.87882	0.89302	-18.72933	0.89365	0.00033	0.94999	0.68141	2.0	0.20617	0.28441
19.0	1.0	0.89141	0.80479	0.85846	0.10413	0.87694	0.89097	-19.87136	0.89186	0.00033	0.94989	0.67631	2.0	0.21262	0.29368
20.0	1.0	0.88757	0.79833	0.85298	0.10731	0.87301	0.88711	-21.60207	0.88802	0.00034	0.94942	0.66689	2.0	0.20846	0.29377

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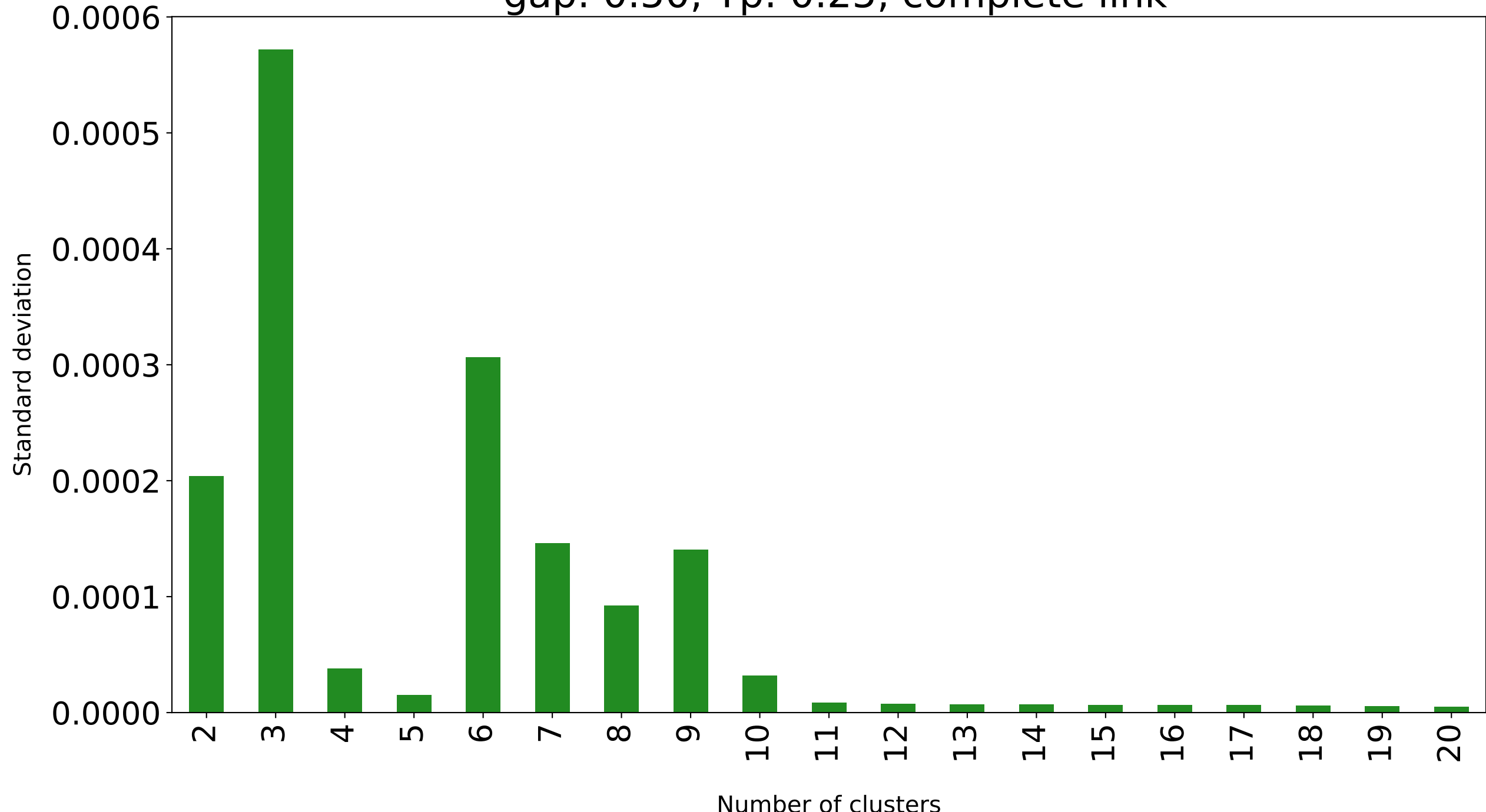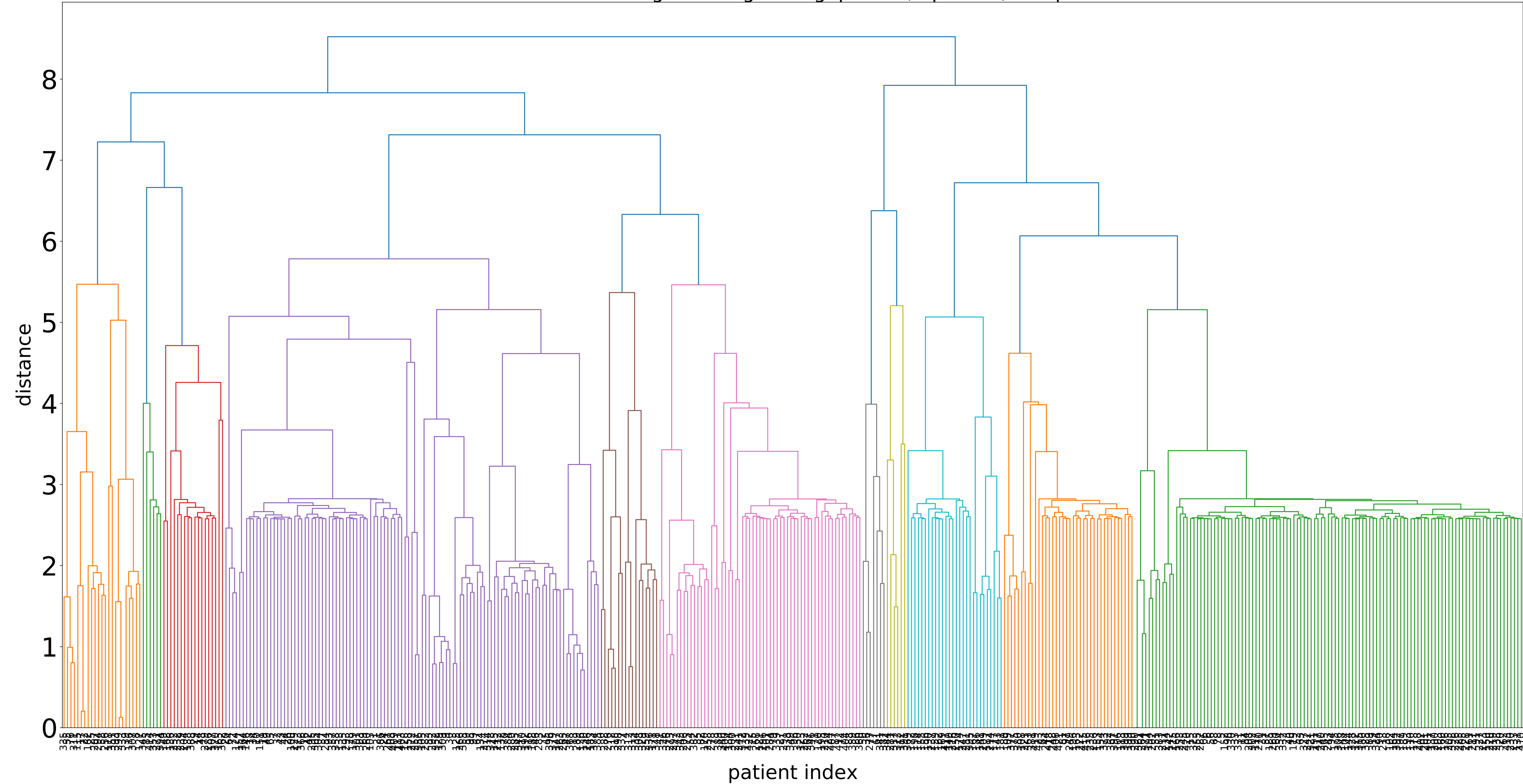gap: 0.40, Tp: 0.25, complete link

Hierarchical Clustering Dendrogram - gap: 0.50, Tp: 0.25, complete link

Cophenetic Correlation Coefficient: 0.6782640995793605

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99987	0.6702	0.50733	0.31145	0.23522	0.28543	0.66736	0.33227	0.67312	5e-05	0.48101	0.34585	0.09346	0.13752	0.17606
3.0	1.00001	0.59564	0.42678	0.34171	0.30472	0.32485	0.59288	0.26355	0.59846	5e-05	0.51189	0.27556	0.17143	0.15002	0.17818
4.0	1.00001	0.6378	0.47103	0.44978	0.24466	0.4641	0.63527	-0.35519	0.64034	8e-05	0.62026	0.31286	0.17143	0.17385	0.18839
5.0	1.0	0.73491	0.58712	0.706	0.19308	0.64484	0.73142	-1.22426	0.73848	0.00014	0.76199	0.42674	0.17143	0.17069	0.19039
6.0	1.0	0.75219	0.60843	0.71266	0.18711	0.67708	0.75041	-2.11609	0.75401	0.00015	0.79336	0.44625	0.66667	0.20224	0.19271
7.0	1.0	0.76183	0.62029	0.70881	0.18283	0.695	0.76095	-2.84947	0.76273	0.00016	0.8116	0.45685	0.66667	0.21272	0.2034
8.0	1.0	0.79077	0.65802	0.74934	0.14879	0.73731	0.78996	-4.1509	0.79159	0.00018	0.84314	0.49735	0.66667	0.23404	0.20486
9.0	1.0	0.81085	0.68624	0.7679	0.12553	0.76604	0.81004	-5.37528	0.81167	0.00019	0.86487	0.53096	0.66667	0.2485	0.22179
10.0	1.0	0.81743	0.69418	0.74644	0.11715	0.77631	0.81616	-6.85503	0.8187	0.0002	0.87345	0.53937	2.0	0.231	0.22367
11.0	1.0	0.82377	0.70213	0.83543	0.12306	0.79003	0.82221	-8.31562	0.82534	0.00023	0.8914	0.54733	2.0	0.20083	0.23917
12.0	1.0	0.82685	0.70756	0.81476	0.12596	0.79508	0.82613	-10.05016	0.82758	0.00024	0.89775	0.55359	2.0	0.2105	0.24364
13.0	1.0	0.83351	0.71672	0.80895	0.12565	0.80459	0.83266	-11.47014	0.83435	0.00025	0.90558	0.56406	2.0	0.20363	0.25272
14.0	1.0	0.83052	0.71176	0.81343	0.12999	0.80352	0.8297	-12.1244	0.83135	0.00027	0.9104	0.55721	2.0	0.19883	0.25551
15.0	1.0	0.82828	0.70774	0.78684	0.12787	0.802	0.82754	-13.2753	0.82901	0.00027	0.91229	0.5509	2.0	0.2001	0.267
16.0	1.0	0.87126	0.7727	0.87658	0.11535	0.85319	0.87057	-15.08945	0.87196	0.00031	0.93802	0.63328	2.0	0.20957	0.26826
17.0	1.0	0.88525	0.795	0.88596	0.10548	0.86959	0.88479	-16.48965	0.88571	0.00032	0.94605	0.66315	2.0	0.20915	0.26961
18.0	1.0	0.8958	0.81205	0.90972	0.10434	0.88208	0.89514	-17.72123	0.89645	0.00034	0.95218	0.68763	2.0	0.2022	0.2739
19.0	1.0	0.89978	0.81887	0.90376	0.10223	0.88674	0.89932	-19.21633	0.90024	0.00034	0.95458	0.69726	2.0	0.20747	0.28306
20.0	1.0	0.91068	0.83706	0.91223	0.09852	0.89935	0.9103	-20.6897	0.91106	0.00036	0.96035	0.72367	2.0	0.21211	0.28525

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

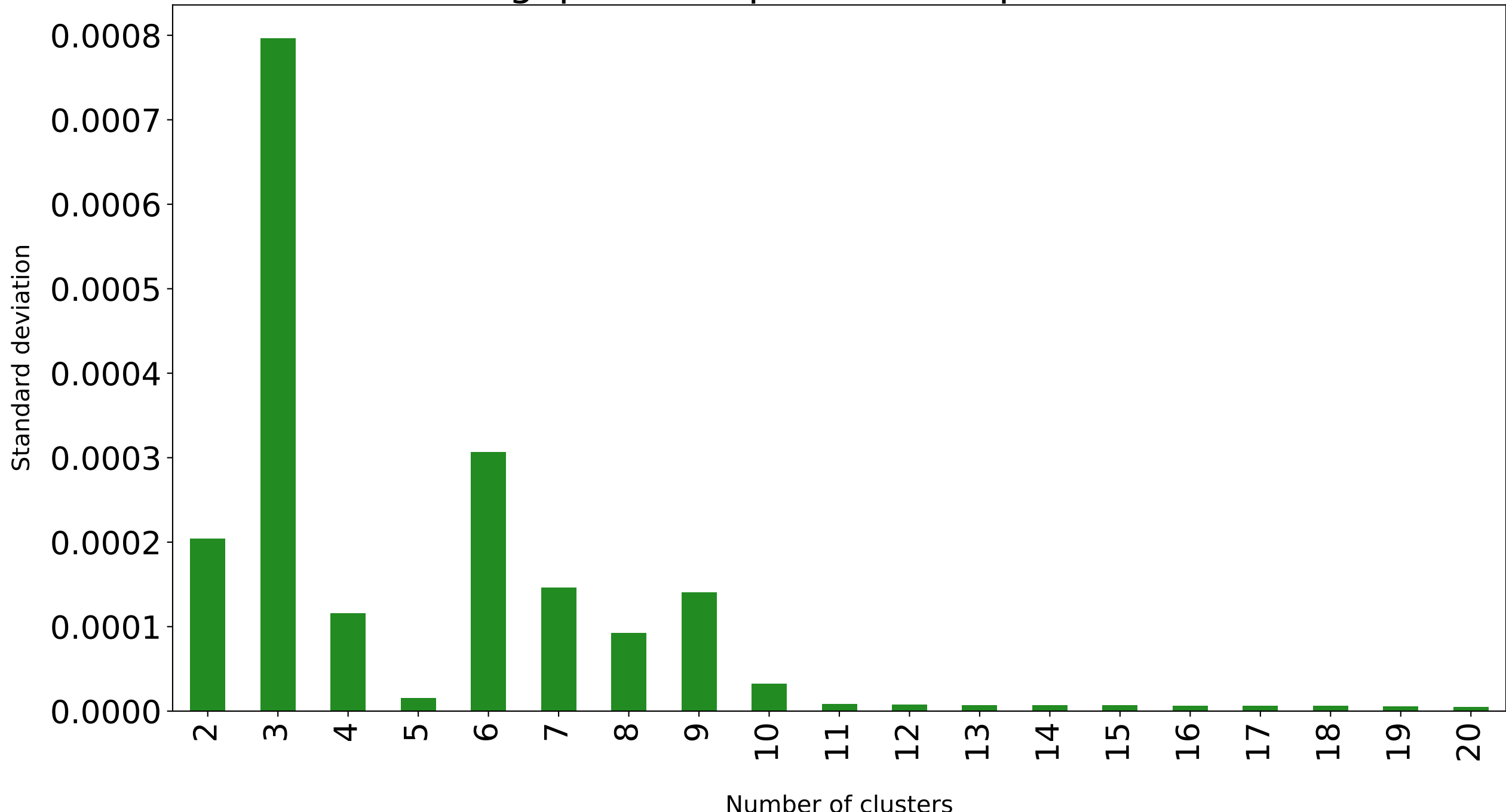Hierarchical Clustering Dendrogram - gap: 0.60, Tp: 0.25, complete link

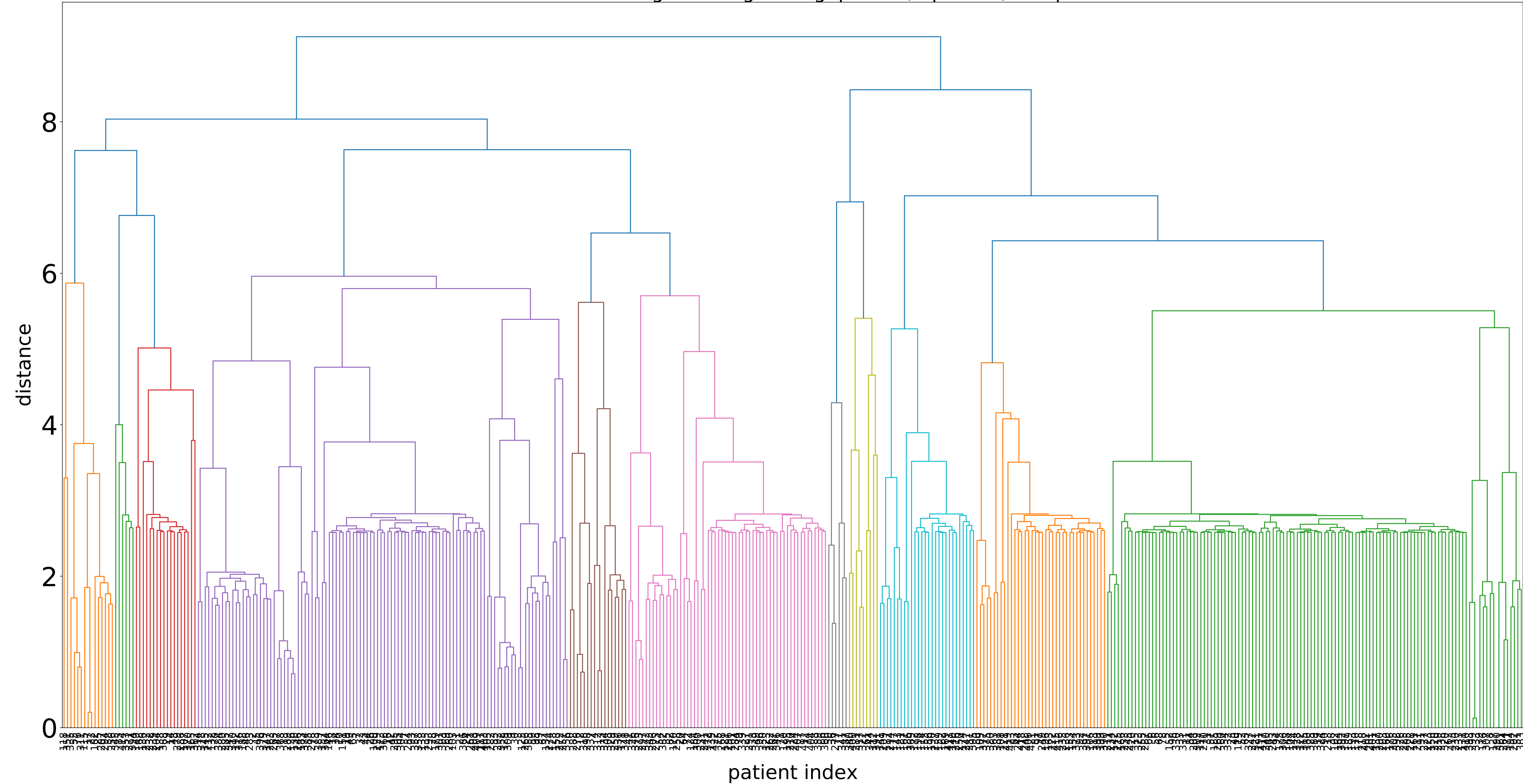Cophenetic Correlation Coefficient: 0.6332444160071892

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99989	0.61232	0.43853	0.12921	0.3003	0.1152	0.6057	0.43772	0.61918	2e-05	0.3911	0.28445	0.08621	0.12412	0.18894
3.0	1.0	0.56281	0.39277	0.16745	0.3255	0.18064	0.55987	0.358	0.56578	3e-05	0.42239	0.24741	0.30769	0.1626	0.19114
4.0	1.00002	0.54988	0.3811	0.26297	0.32827	0.28556	0.54676	-0.0861	0.55304	5e-05	0.50181	0.23907	0.51064	0.13558	0.20468
5.0	1.00001	0.60618	0.44043	0.44439	0.26453	0.44233	0.60409	-1.0727	0.60829	9e-05	0.62633	0.28925	0.51064	0.17589	0.19103
6.0	1.0	0.62182	0.45481	0.44904	0.24128	0.48113	0.61897	-1.95836	0.6247	0.0001	0.65958	0.3003	0.66667	0.18539	0.20534
7.0	1.0	0.69355	0.53522	0.58213	0.19867	0.60244	0.69185	-3.14308	0.69527	0.00014	0.75373	0.372	0.66667	0.19265	0.20714
8.0	1.0	0.70168	0.54319	0.57233	0.18641	0.61825	0.69911	-4.22672	0.70427	0.00014	0.76753	0.37908	0.66667	0.22505	0.21645
9.0	1.0	0.70239	0.53971	0.54825	0.18319	0.62479	0.69752	-5.37258	0.70731	0.00015	0.77484	0.37399	1.33333	0.2337	0.21799
10.0	1.0	0.70708	0.54363	0.5514	0.18259	0.63684	0.70154	-5.93842	0.71268	0.00016	0.78926	0.37683	1.33333	0.21578	0.22751
11.0	1.0	0.78401	0.64703	0.71712	0.1456	0.74046	0.78301	-7.63249	0.78501	0.00021	0.8642	0.48327	1.33333	0.2166	0.23866
12.0	1.0	0.80765	0.67857	0.8212	0.14085	0.77434	0.80614	-8.8675	0.80918	0.00024	0.89118	0.51849	1.33333	0.2042	0.25233
13.0	1.0	0.81922	0.69572	0.81906	0.13211	0.78884	0.81827	-10.12191	0.82016	0.00025	0.90047	0.53855	1.33333	0.20232	0.25266
14.0	1.0	0.82439	0.70249	0.82586	0.13226	0.79671	0.82336	-11.7073	0.82543	0.00027	0.90792	0.54573	1.33333	0.20882	0.25716
15.0	1.0	0.83877	0.72362	0.81777	0.12456	0.81428	0.83811	-12.64652	0.83943	0.00028	0.91801	0.57062	1.33333	0.21759	0.26513
16.0	1.0	0.84607	0.73399	0.80363	0.12241	0.8234	0.84536	-14.61761	0.84678	0.00029	0.9235	0.58286	2.0	0.21899	0.26763
17.0	1.0	0.85647	0.74966	0.82454	0.12301	0.83641	0.85604	-15.68255	0.85689	0.00031	0.93173	0.60193	2.0	0.21962	0.26768
18.0	1.0	0.88706	0.79779	0.88517	0.11694	0.87218	0.88669	-17.60458	0.88744	0.00033	0.94849	0.66637	2.0	0.20894	0.27201
19.0	1.0	0.89484	0.81039	0.89354	0.11371	0.88131	0.89446	-19.05703	0.89522	0.00034	0.95294	0.68394	2.0	0.21704	0.27245
20.0	1.0	0.90425	0.82595	0.90001	0.1061	0.89223	0.90395	-21.20117	0.90455	0.00036	0.95802	0.70617	2.0	0.2164	0.2746

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

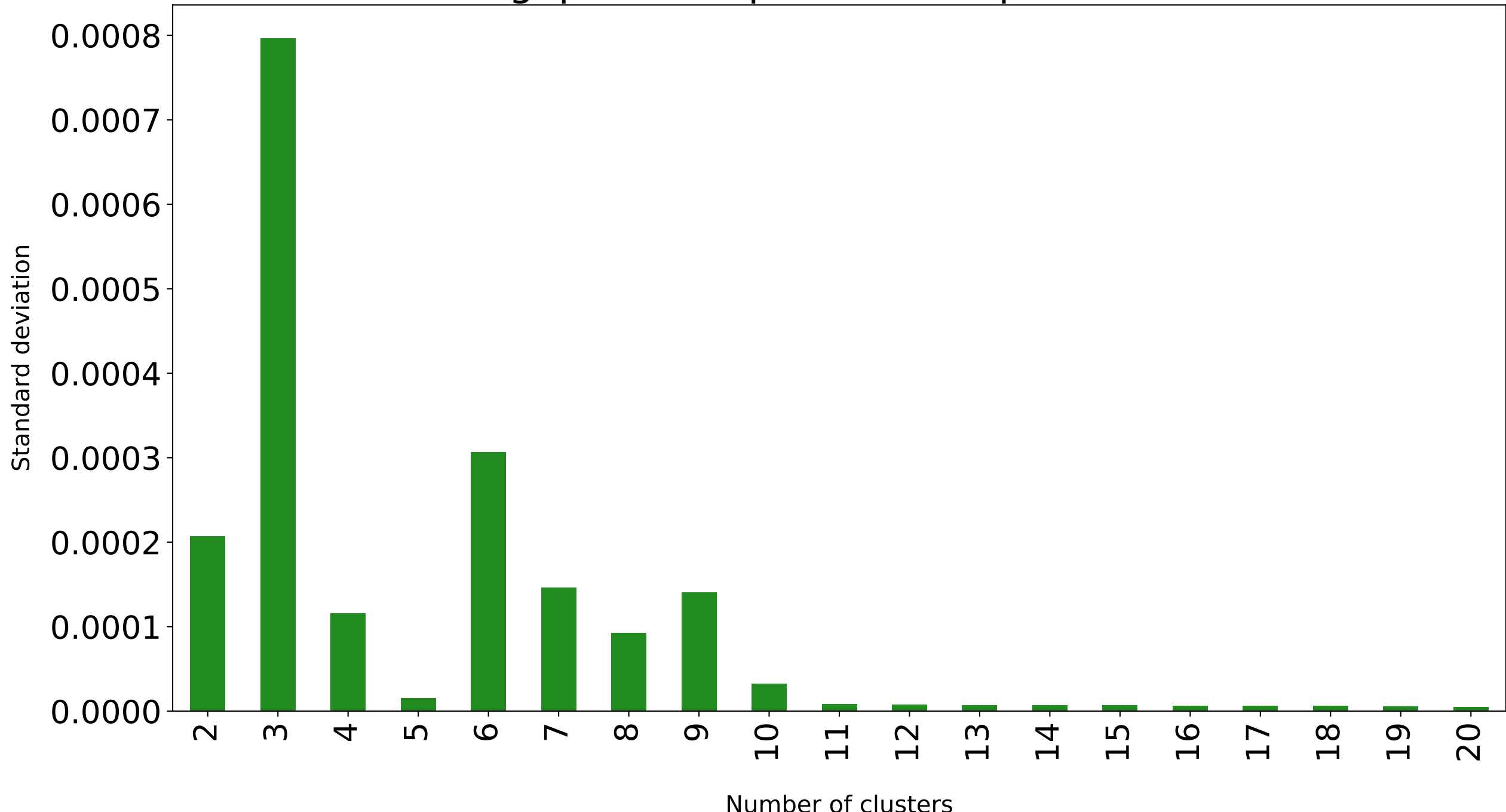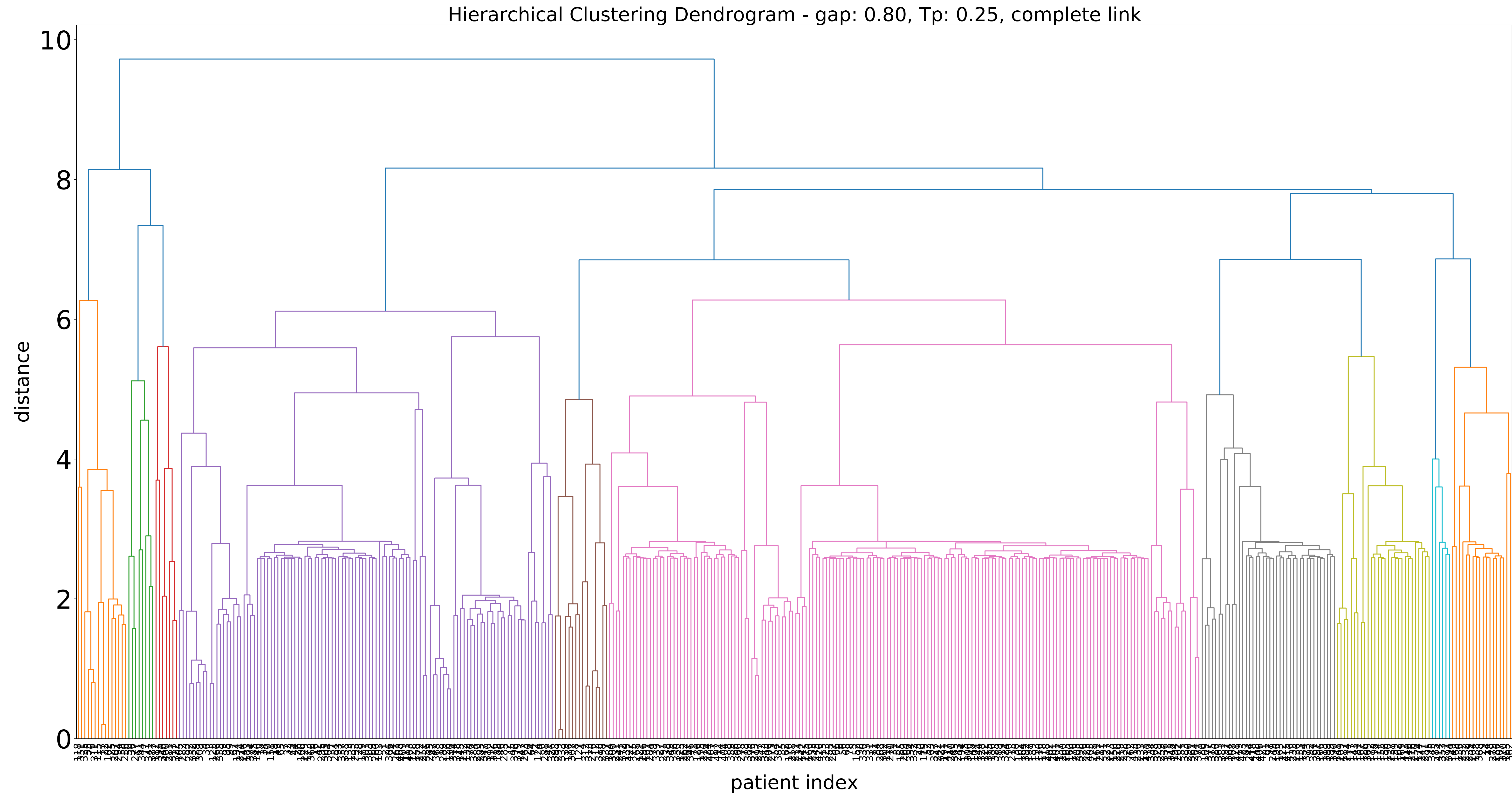Hierarchical Clustering Dendrogram - gap: 0.70, Tp: 0.25, complete link

Cophenetic Correlation Coefficient: 0.6307419544840157

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	0.99989	0.63242	0.45124	0.10689	0.28548	0.09244	0.6192	0.41513	0.64623	1e-05	0.37829	0.29375	0.05005	0.12552	0.18996
3.0	0.99997	0.56922	0.39901	0.17645	0.3239	0.16936	0.56666	0.38922	0.5718	3e-05	0.41509	0.25218	0.14815	0.15379	0.19912
4.0	1.00002	0.54805	0.38037	0.25317	0.33247	0.26156	0.54586	0.02135	0.55026	4e-05	0.48322	0.23862	0.34188	0.12576	0.20966
5.0	1.00001	0.58896	0.42348	0.41567	0.27812	0.40468	0.58686	-0.82642	0.59109	8e-05	0.59703	0.27584	0.34188	0.15871	0.19423
6.0	1.00001	0.60198	0.43455	0.41365	0.25508	0.44572	0.59962	-1.70391	0.60436	9e-05	0.63396	0.28326	0.37037	0.19688	0.21077
7.0	1.0	0.64961	0.48562	0.51903	0.22704	0.5389	0.6477	-2.75393	0.65153	0.00012	0.7123	0.32715	0.37037	0.20452	0.21323
8.0	1.0	0.6687	0.50425	0.51498	0.21223	0.57293	0.66512	-3.87573	0.67232	0.00013	0.73826	0.343	0.37037	0.22142	0.21886
9.0	1.0	0.67358	0.50571	0.50096	0.20216	0.58536	0.66746	-4.9706	0.67979	0.00014	0.74866	0.3429	0.37037	0.24736	0.22662
10.0	1.0	0.68047	0.51206	0.5092	0.19768	0.6005	0.67384	-5.54416	0.68719	0.00015	0.7646	0.34777	0.37037	0.23049	0.23025
11.0	1.0	0.76429	0.62135	0.67885	0.15609	0.71541	0.76276	-7.1586	0.76582	0.0002	0.84916	0.45682	0.37037	0.23037	0.24833
12.0	1.0	0.77826	0.63891	0.74556	0.15308	0.73769	0.7775	-8.24752	0.77902	0.00022	0.87124	0.47319	0.37037	0.21569	0.25217
13.0	1.0	0.78729	0.65025	0.72972	0.14743	0.75005	0.78635	-10.01261	0.78824	0.00023	0.88012	0.48492	2.0	0.21581	0.25532
14.0	1.0	0.80522	0.67524	0.76793	0.14043	0.77383	0.80449	-11.29525	0.80595	0.00026	0.89699	0.51306	2.0	0.21147	0.25956
15.0	1.0	0.80599	0.67638	0.76963	0.14209	0.77664	0.80539	-12.8652	0.80659	0.00027	0.90266	0.51428	2.0	0.21535	0.26356
16.0	1.0	0.81239	0.68496	0.7625	0.13599	0.78476	0.8116	-13.67199	0.81319	0.00028	0.90758	0.52393	2.0	0.22614	0.26891
17.0	1.0	0.87592	0.78009	0.89423	0.12477	0.85952	0.87499	-15.70724	0.87684	0.00033	0.94299	0.644	2.0	0.21728	0.27381
18.0	1.0	0.88162	0.7895	0.88953	0.12348	0.86619	0.88101	-17.6594	0.88222	0.00034	0.94644	0.65656	2.0	0.21179	0.27455
19.0	1.0	0.89049	0.80374	0.89198	0.11962	0.8765	0.8901	-19.59502	0.89088	0.00034	0.95135	0.67558	2.0	0.20014	0.28025
20.0	1.0	0.89847	0.81661	0.89216	0.11377	0.88573	0.89821	-21.21466	0.89872	0.00035	0.95559	0.693	2.0	0.20081	0.28109

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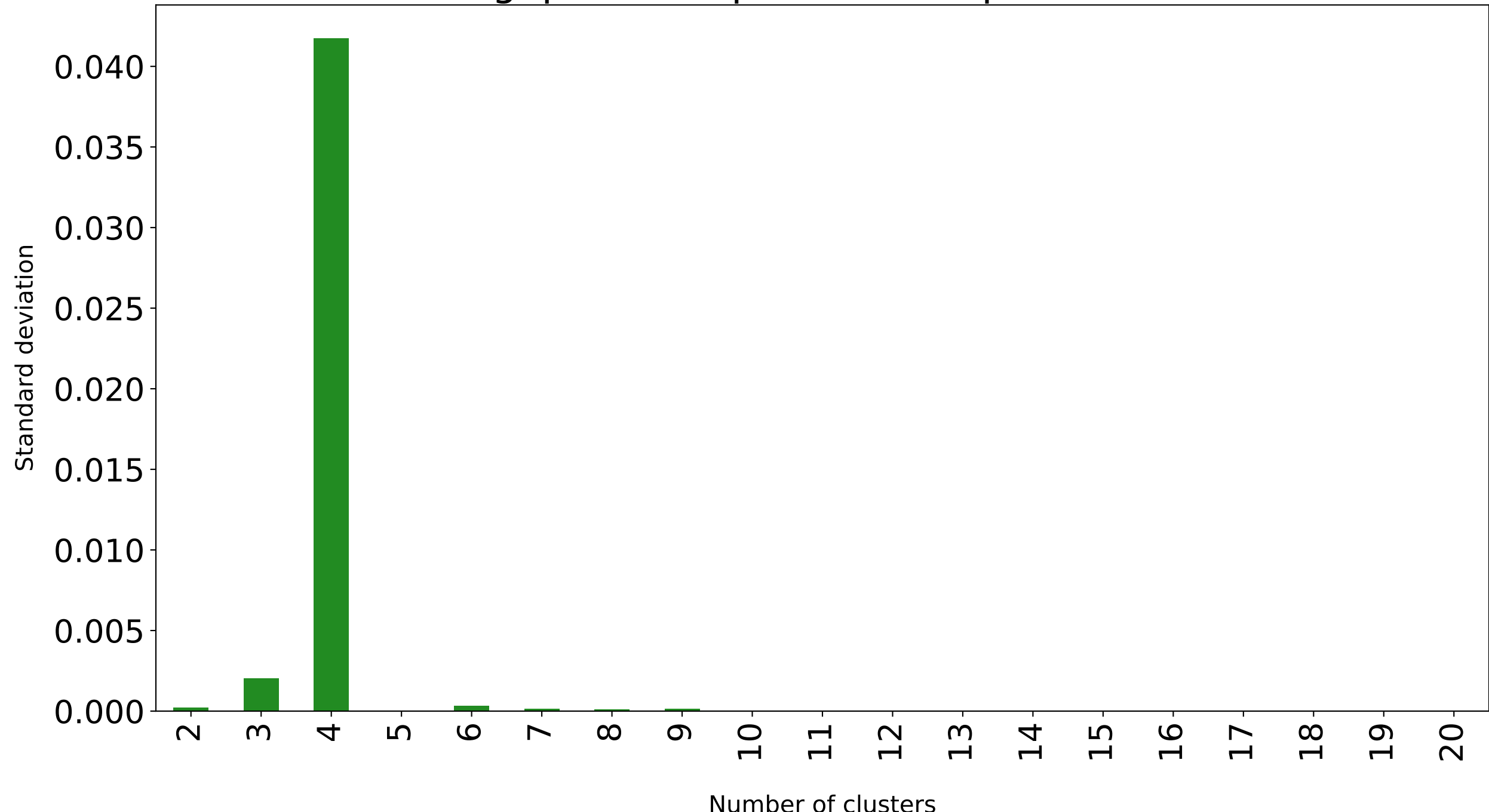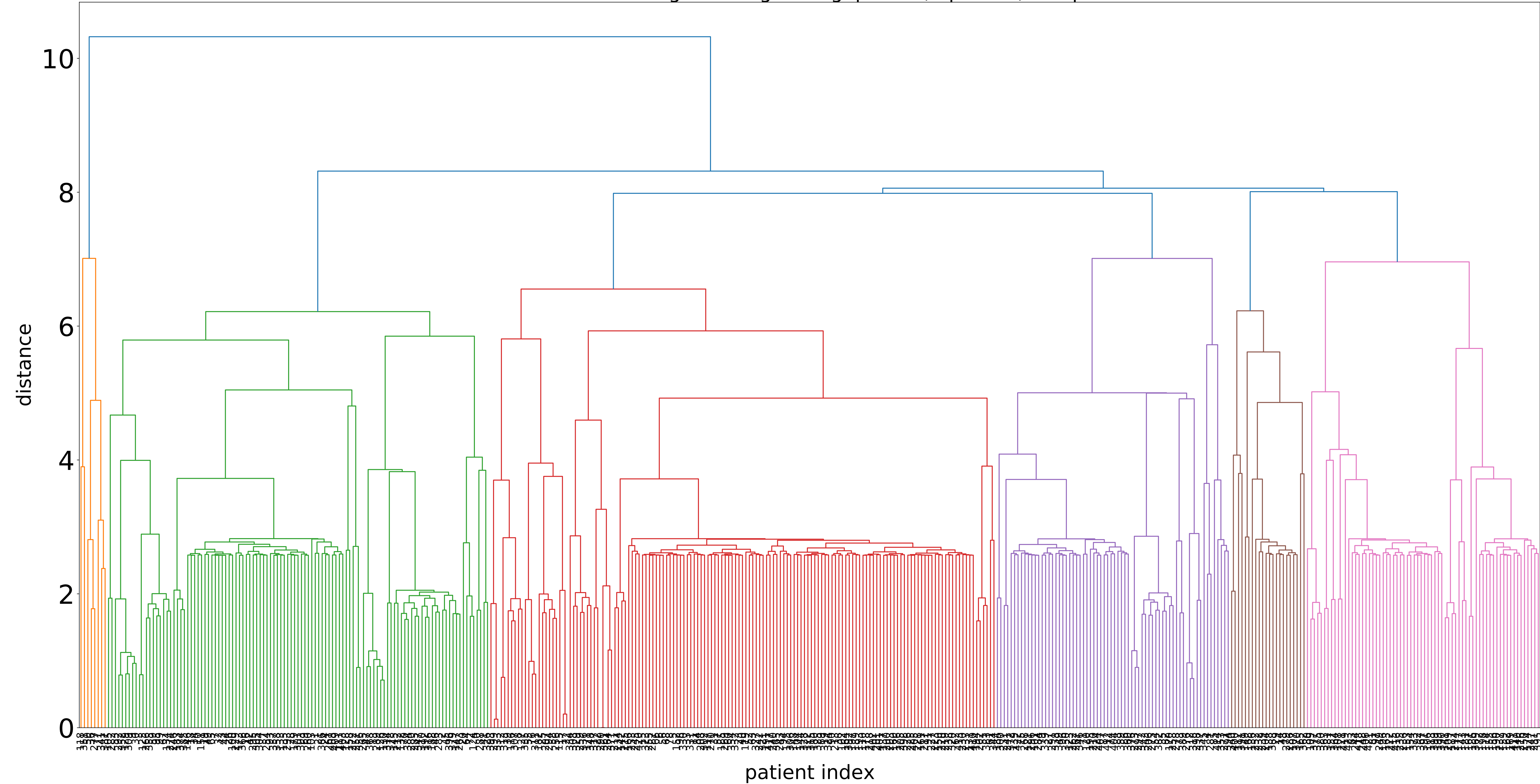gap: 0.70, Tp: 0.25, complete link

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

Cophenetic Correlation Coefficient: 0.6876095268562388

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.84526	0.73916	0.4399	0.10565	0.28912	0.83781	0.2188	0.85291	0.00014	0.63319	0.61594	0.07407	0.13067	0.21284
3.0	1.00006	0.67424	0.52172	0.32452	0.23114	0.31833	0.67107	0.12674	0.67747	5e-05	0.5073	0.37246	0.07407	0.1623	0.21335
4.0	0.99742	0.60771	0.43616	0.21648	0.2626	0.29201	0.5986	-0.1873	0.61707	5e-05	0.47528	0.28669	0.2963	0.21088	0.22118
5.0	1.00001	0.65838	0.50213	0.48745	0.23645	0.49848	0.65629	-1.27198	0.6605	9e-05	0.64767	0.34944	0.2963	0.19068	0.22282
6.0	1.0	0.68116	0.52684	0.50999	0.21792	0.55462	0.67809	-1.91358	0.68426	0.00011	0.69557	0.37277	0.2963	0.19613	0.23663
7.0	1.0	0.68894	0.52812	0.49101	0.20803	0.57948	0.68201	-3.00863	0.69598	0.00012	0.71417	0.37046	0.31746	0.20925	0.25314
8.0	1.0	0.68095	0.51106	0.4603	0.20764	0.57885	0.6694	-4.05465	0.69278	0.00012	0.71524	0.35168	0.37037	0.24169	0.25329
9.0	1.0	0.68176	0.50903	0.46	0.18539	0.58743	0.66878	-5.02314	0.69506	0.00013	0.72663	0.34798	0.37037	0.25587	0.25367
10.0	1.0	0.69081	0.52341	0.496	0.18319	0.60832	0.68066	-5.93869	0.70117	0.00014	0.756	0.36268	0.37037	0.24084	0.27042
11.0	1.0	0.79582	0.66664	0.72394	0.12862	0.75264	0.79416	-8.031	0.79749	0.0002	0.86628	0.512	0.37037	0.23662	0.27064
12.0	1.0	0.79615	0.66456	0.69796	0.12554	0.75501	0.79348	-9.6653	0.79884	0.00021	0.86967	0.50802	2.0	0.23598	0.27744
13.0	1.0	0.81034	0.68434	0.77341	0.12887	0.7767	0.80951	-10.71446	0.81118	0.00024	0.89156	0.5265	2.0	0.22997	0.28979
14.0	1.0	0.82041	0.69792	0.76772	0.12236	0.78997	0.81931	-11.47532	0.82152	0.00025	0.90037	0.54203	2.0	0.23381	0.28051
15.0	1.0	0.85846	0.7548	0.84343	0.11352	0.83687	0.85775	-13.40591	0.85917	0.00029	0.92743	0.613	2.0	0.2203	0.28188
16.0	1.0	0.86758	0.76846	0.83327	0.11011	0.84792	0.867	-15.39135	0.86816	0.0003	0.93353	0.62994	2.0	0.21647	0.28262
17.0	1.0	0.89836	0.81736	0.90025	0.1005	0.88429	0.89791	-16.76156	0.89882	0.00033	0.95149	0.69663	2.0	0.21605	0.2891
18.0	1.0	0.90369	0.82609	0.90133	0.09779	0.89065	0.90335	-18.75142	0.90403	0.00033	0.95494	0.70883	2.0	0.22434	0.2974
19.0	1.0	0.90443	0.82722	0.89135	0.0981	0.89171	0.90419	-20.71753	0.90467	0.00034	0.956	0.70993	2.0	0.22755	0.30875
20.0	1.0	0.90331	0.82491	0.8785	0.09999	0.89065	0.903	-22.29983	0.90362	0.00034	0.95604	0.70591	2.0	0.2254	0.3195

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

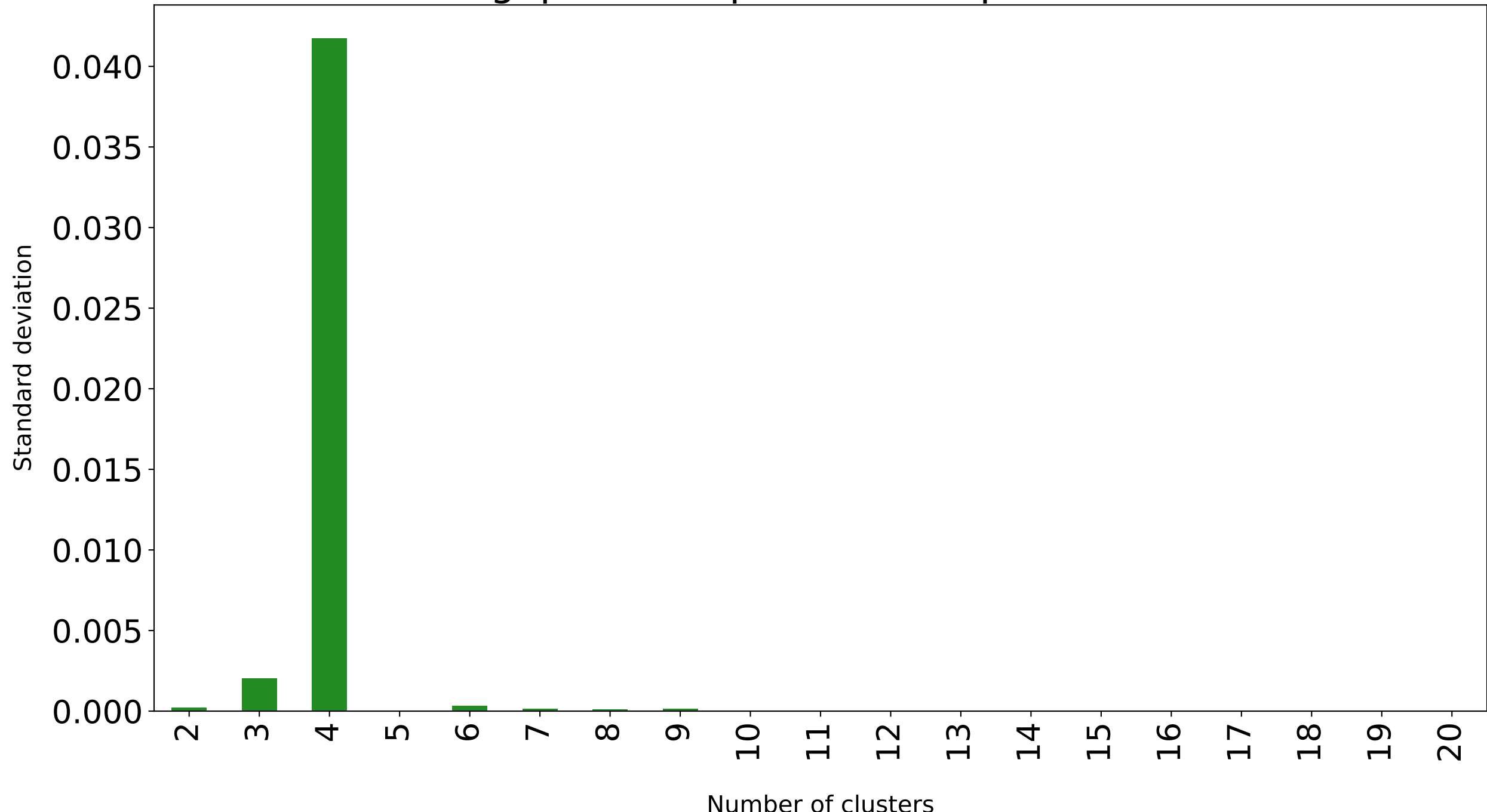Hierarchical Clustering Dendrogram - gap: 0.90, Tp: 0.25, complete link

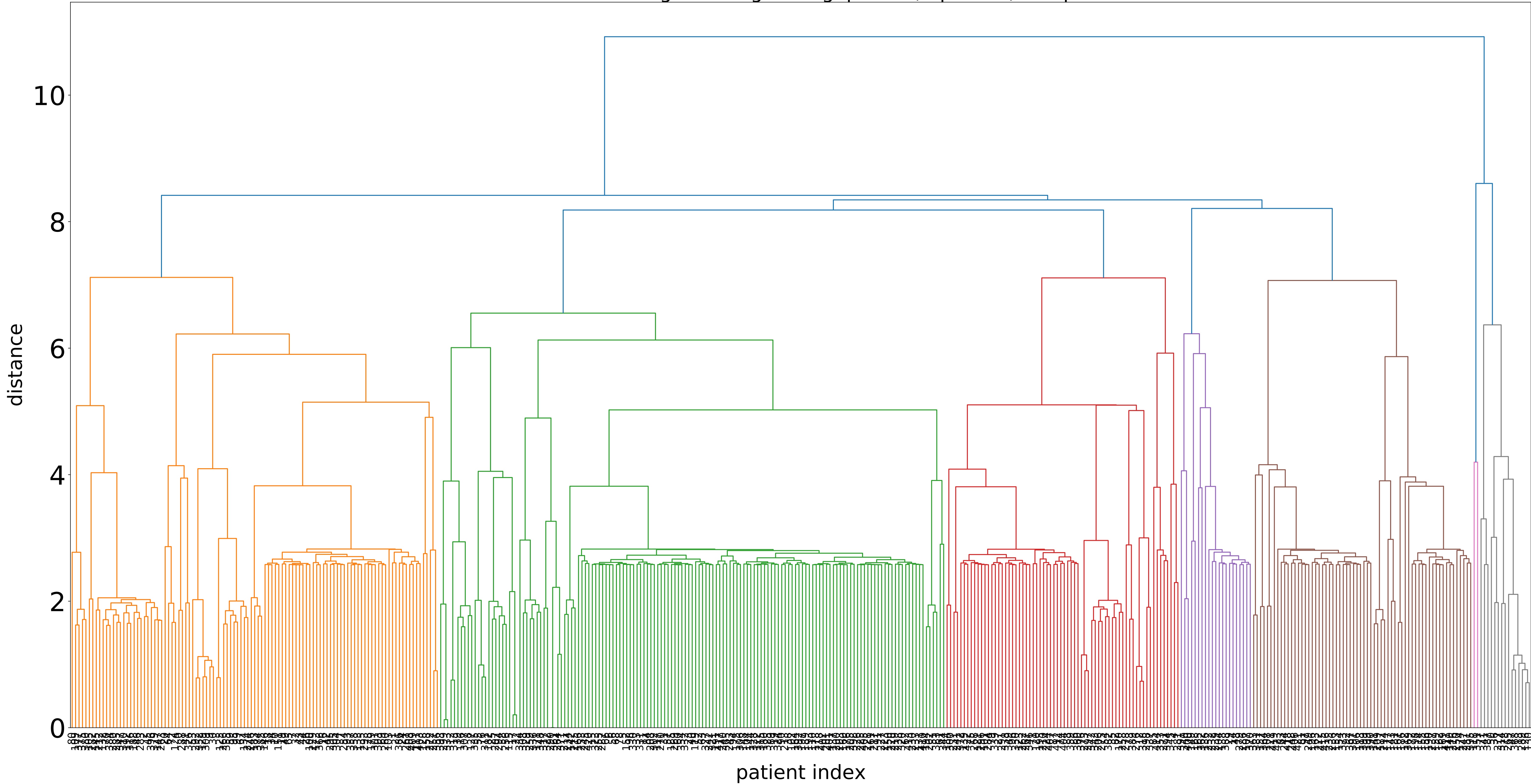Cophenetic Correlation Coefficient: 0.7298357740390699

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.91603	0.8516	0.46838	0.05648	0.55593	0.90878	0.10843	0.92356	0.00051	0.78303	0.77884	0.0	0.34189	0.22096
3.0	0.99999	0.71294	0.56973	0.32981	0.19798	0.33533	0.70855	0.03245	0.71741	6e-05	0.52779	0.42764	0.00729	0.25249	0.22795
4.0	1.0	0.65286	0.49568	0.44513	0.23233	0.43224	0.65005	-0.49043	0.65572	7e-05	0.58316	0.34498	0.04938	0.22295	0.22944
5.0	1.00001	0.66993	0.51389	0.45834	0.21235	0.4991	0.66664	-1.08936	0.67325	9e-05	0.63781	0.36073	0.40404	0.21964	0.23015
6.0	1.0	0.74662	0.60853	0.69408	0.16787	0.65812	0.74399	-2.31895	0.74931	0.00014	0.77036	0.45812	0.40404	0.22727	0.26205
7.0	1.0	0.76661	0.63465	0.67996	0.15793	0.69187	0.76504	-3.53562	0.76818	0.00015	0.79974	0.48487	2.0	0.22751	0.26209
8.0	1.0	0.78027	0.65144	0.67672	0.1499	0.7153	0.77835	-4.29459	0.7822	0.00016	0.81959	0.50195	2.0	0.23255	0.26402
9.0	1.0	0.79689	0.67377	0.69583	0.12668	0.74195	0.79483	-5.66253	0.79897	0.00018	0.84188	0.52783	2.0	0.24831	0.28037
10.0	1.0	0.80301	0.67875	0.7453	0.12426	0.75708	0.80186	-6.87969	0.80416	0.0002	0.86192	0.52774	2.0	0.22923	0.28852
11.0	1.0	0.80938	0.68526	0.72353	0.11866	0.76734	0.80743	-8.38681	0.81134	0.0002	0.87027	0.53348	2.0	0.22703	0.28906
12.0	1.0	0.80542	0.6783	0.77168	0.12903	0.76816	0.80459	-9.25155	0.80624	0.00023	0.88211	0.52135	2.0	0.21514	0.2979
13.0	1.0	0.82574	0.70586	0.81855	0.12333	0.79551	0.8247	-10.98191	0.8268	0.00025	0.90133	0.55224	2.0	0.21448	0.30193
14.0	1.0	0.84385	0.73279	0.81872	0.11592	0.81802	0.84309	-11.75723	0.84462	0.00027	0.91477	0.58521	2.0	0.22083	0.28928
15.0	1.0	0.85906	0.75505	0.81476	0.10653	0.83674	0.85827	-13.2271	0.85985	0.00028	0.92535	0.61243	2.0	0.22936	0.29012
16.0	1.0	0.88205	0.79121	0.86505	0.09851	0.8646	0.88159	-14.48209	0.88251	0.0003	0.9408	0.66034	2.0	0.22905	0.29368
17.0	1.0	0.88826	0.80037	0.85809	0.09763	0.87212	0.88786	-15.97584	0.88866	0.00031	0.94492	0.67141	2.0	0.23673	0.29655
18.0	1.0	0.89046	0.80386	0.85665	0.09572	0.87496	0.88996	-17.86924	0.89095	0.00032	0.94682	0.67654	2.0	0.2421	0.29932
19.0	1.0	0.88931	0.80159	0.84546	0.09567	0.87392	0.88858	-19.75331	0.89004	0.00032	0.94685	0.67331	2.0	0.24425	0.33299
20.0	1.0	0.89323	0.80784	0.84897	0.09428	0.8788	0.8925	-21.63349	0.89397	0.00033	0.94988	0.68187	2.0	0.23209	0.33482

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

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

Cophenetic Correlation Coefficient: 0.6886325360317476

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.92516	0.86704	0.60099	0.05319	0.49266	0.92085	0.11318	0.9296	0.00033	0.79866	0.79152	0.13072	0.27114	0.20692
3.0	0.99999	0.7701	0.60923	0.12563	0.15599	0.23487	0.74763	0.22692	0.79357	9e-05	0.47926	0.45759	2.0	0.30032	0.21155
4.0	0.9999	0.65536	0.48539	0.24389	0.22421	0.34617	0.6431	-0.34652	0.66798	6e-05	0.49694	0.33135	2.0	0.24111	0.21336
5.0	1.00002	0.67623	0.51906	0.45392	0.21083	0.50477	0.67202	-1.21072	0.6805	9e-05	0.63769	0.36436	2.0	0.2272	0.21689
6.0	1.00001	0.69629	0.53346	0.46632	0.18845	0.56548	0.68809	-2.16777	0.70463	0.00011	0.68203	0.37299	2.0	0.22974	0.21754
7.0	1.0	0.79511	0.67284	0.73919	0.13804	0.72984	0.79373	-3.67549	0.7965	0.00016	0.82277	0.52788	2.0	0.2384	0.2501
8.0	1.0	0.77545	0.64339	0.7334	0.1554	0.7129	0.77431	-4.20175	0.77659	0.00017	0.82357	0.48878	2.0	0.21442	0.25037
9.0	1.0	0.7804	0.6495	0.72445	0.15287	0.72285	0.77945	-4.98777	0.78136	0.00017	0.83457	0.49485	2.0	0.21977	0.25182
10.0	1.0	0.79385	0.66639	0.73621	0.12614	0.74416	0.79286	-6.45682	0.79485	0.00019	0.85281	0.51269	2.0	0.23486	0.27165
11.0	1.0	0.79491	0.66305	0.78993	0.12843	0.75319	0.79356	-7.6855	0.79628	0.00021	0.86951	0.50345	2.0	0.22337	0.27955
12.0	1.0	0.80243	0.67289	0.768	0.12545	0.76405	0.80164	-9.09057	0.80322	0.00022	0.87894	0.51278	2.0	0.21895	0.28584
13.0	1.0	0.81263	0.68625	0.74972	0.11988	0.77793	0.81151	-10.89902	0.81376	0.00023	0.88866	0.52751	2.0	0.21893	0.28603
14.0	1.0	0.8254	0.70385	0.75906	0.11671	0.79497	0.82407	-11.61118	0.82674	0.00025	0.90044	0.54781	2.0	0.21882	0.29049
15.0	1.0	0.87214	0.77539	0.84354	0.10519	0.85181	0.87166	-13.5431	0.87262	0.00028	0.93203	0.63868	2.0	0.21906	0.2963
16.0	1.0	0.8807	0.78825	0.84208	0.09672	0.86229	0.88012	-14.98403	0.88127	0.00029	0.93783	0.65518	2.0	0.22741	0.30065
17.0	1.0	0.87913	0.78541	0.83204	0.09787	0.86073	0.87839	-16.29159	0.87986	0.00029	0.93758	0.65111	2.0	0.23625	0.30105
18.0	1.0	0.87472	0.77777	0.81685	0.10145	0.85602	0.87368	-18.04322	0.87577	0.0003	0.93609	0.64038	2.0	0.23444	0.30162
19.0	1.0	0.89375	0.80947	0.86563	0.09582	0.87873	0.89334	-19.44226	0.89416	0.00032	0.94849	0.68468	2.0	0.23683	0.30348
20.0	1.0	0.89309	0.80823	0.85885	0.09291	0.87831	0.89258	-21.41008	0.89361	0.00032	0.94907	0.68286	2.0	0.2441	0.34595

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