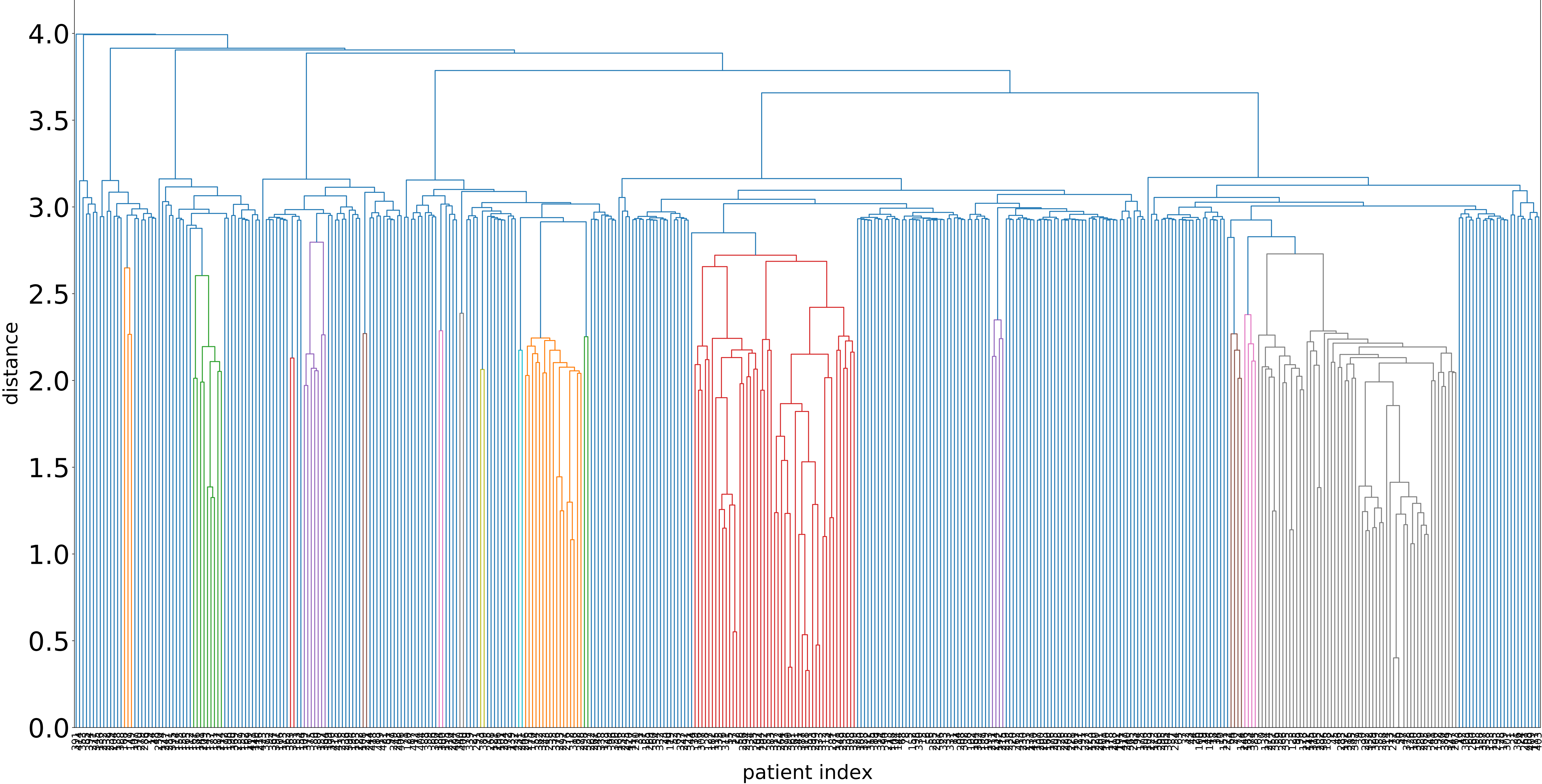


Hierarchical Clustering Dendrogram - gap: 0.00, Tp: 0.25, average link

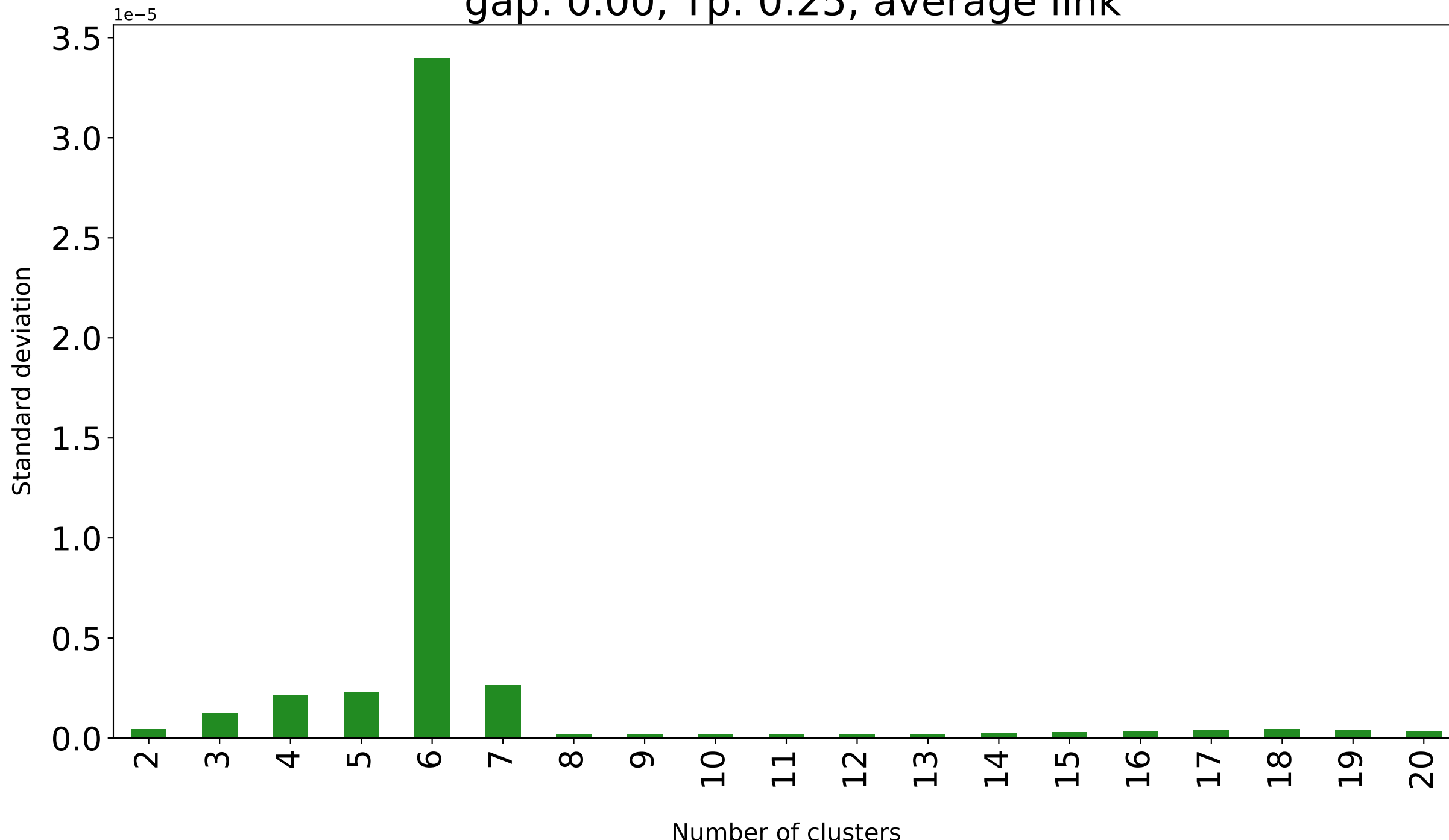


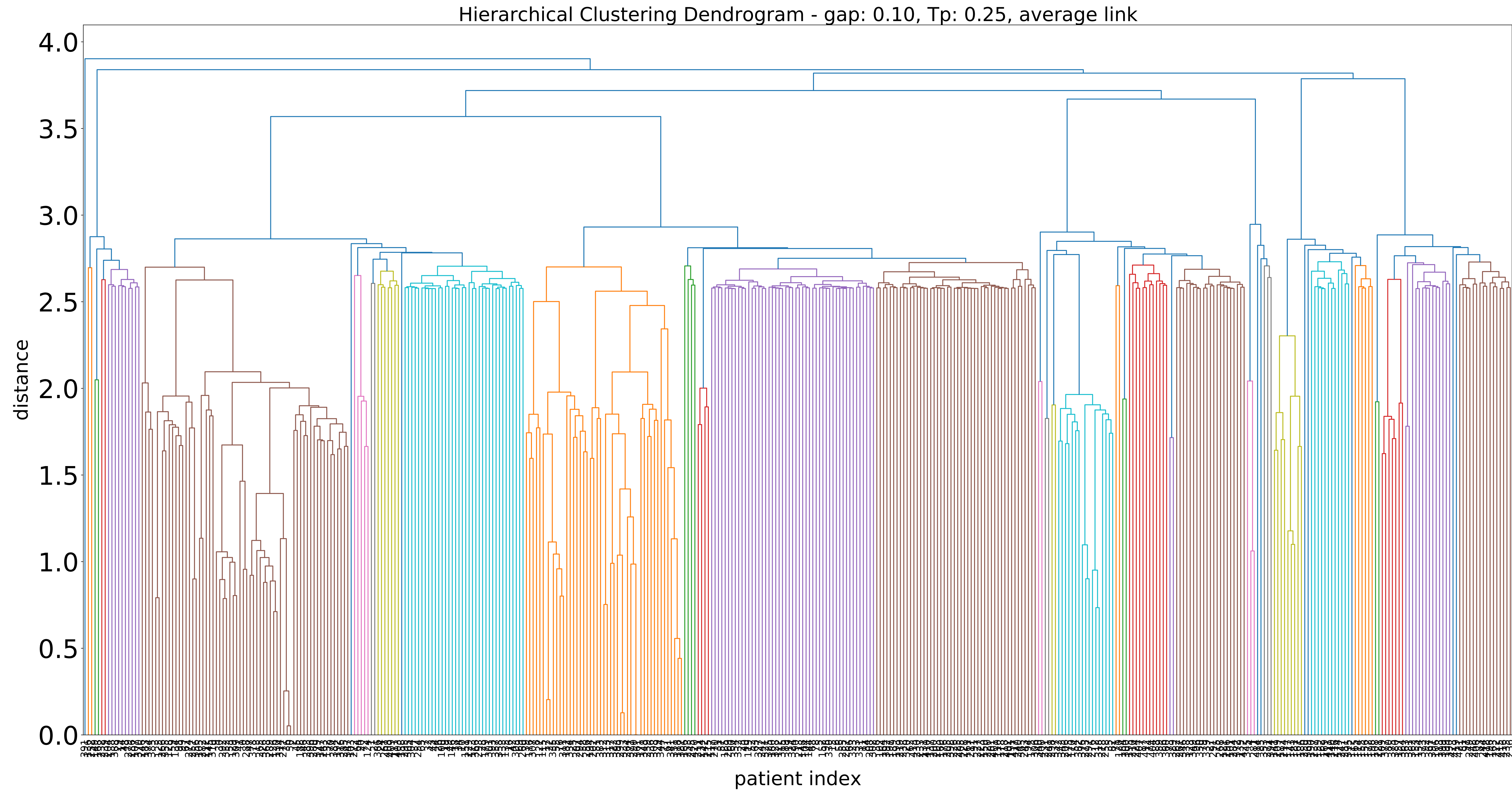
Cophenetic Correlation Coefficient: 0.7508227035372539

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.98629	0.97321	0.37508	0.00699	0.37445	0.98605	0.02759	0.98654	0.00236	0.95004	0.95003	2.0	0.54785	0.76108
3.0	1.0	0.96332	0.93074	0.58838	0.01945	0.67088	0.96175	-0.00871	0.96492	0.00072	0.88461	0.88237	2.0	0.43863	0.52317
4.0	1.0	0.90867	0.8349	0.46858	0.04891	0.57188	0.90453	-0.1757	0.91285	0.0002	0.75512	0.73839	2.0	0.37755	0.29327
5.0	1.0	0.91088	0.83516	0.58878	0.05188	0.72596	0.90718	-0.75121	0.91462	0.00015	0.77932	0.72985	2.0	0.34182	0.29327
6.0	0.99999	0.94686	0.90262	0.83326	0.02477	0.89632	0.94282	-2.06301	0.95097	0.00015	0.89761	0.84939	2.0	0.31333	0.29327
7.0	1.0	0.92825	0.87482	0.83957	0.038	0.89885	0.91979	-3.94371	0.93708	0.00015	0.9083	0.82494	2.0	0.2925	0.29327
8.0	1.0	0.98598	0.9729	0.98079	0.00611	0.98162	0.98597	-6.434	0.986	0.00021	0.98688	0.9491	2.0	0.28197	0.1502
9.0	1.0	0.97964	0.9609	0.96551	0.00924	0.97347	0.97954	-7.6461	0.97974	0.00021	0.98129	0.92778	2.0	0.35157	0.1502
10.0	1.0	0.97944	0.96068	0.97619	0.01013	0.97337	0.97936	-9.03311	0.97952	0.00022	0.98154	0.92761	2.0	0.31019	0.15067
11.0	1.0	0.97991	0.96154	0.97359	0.0106	0.97402	0.97982	-10.45242	0.98	0.00022	0.98203	0.92918	2.0	0.36075	0.15067
12.0	1.0	0.97868	0.95919	0.96897	0.01205	0.97249	0.97857	-11.86444	0.9788	0.00022	0.98103	0.92497	2.0	0.4026	0.15067
13.0	1.0	0.97649	0.95499	0.96324	0.01469	0.96974	0.97633	-12.91101	0.97665	0.00022	0.97923	0.91744	2.0	0.36773	0.15067
14.0	1.0	0.96891	0.94076	0.94129	0.01842	0.96028	0.96849	-14.3017	0.96933	0.00022	0.973	0.89316	2.0	0.33643	0.15067
15.0	1.0	0.95527	0.91539	0.90798	0.02589	0.94335	0.95422	-15.72289	0.95633	0.00022	0.96186	0.8511	2.0	0.37112	0.15067
16.0	1.0	0.9524	0.91158	0.90957	0.03118	0.94079	0.95094	-16.81075	0.95388	0.00022	0.96193	0.84973	2.0	0.34995	0.15067
17.0	1.0	0.93295	0.87661	0.86528	0.04381	0.91747	0.93011	-18.3626	0.93582	0.00022	0.94774	0.79709	2.0	0.33135	0.15067
18.0	1.0	0.90431	0.82606	0.80987	0.05836	0.88344	0.89958	-19.80457	0.9091	0.00022	0.92807	0.72257	2.0	0.3148	0.15067
19.0	1.0	0.87787	0.78107	0.76486	0.06901	0.85275	0.87166	-21.25455	0.88417	0.00022	0.91243	0.65922	2.0	0.29952	0.15067
20.0	1.0	0.9202	0.85511	0.93959	0.0535	0.90553	0.91819	-24.08743	0.92222	0.00027	0.94973	0.76041	2.0	0.28596	0.15296

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

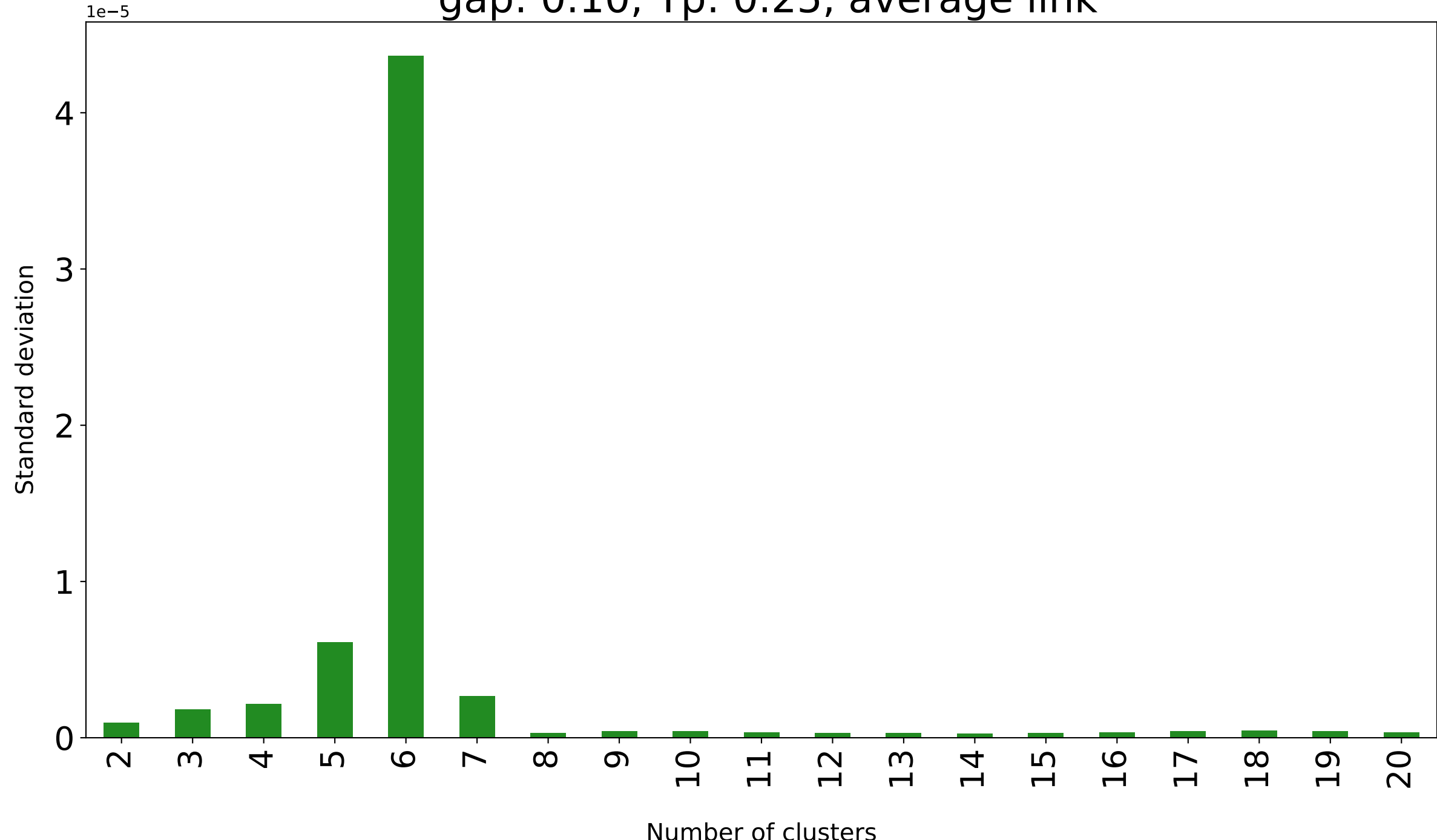




Average values of five clustering indices
gap: 0.10, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.9654	0.93356	0.16443	0.01835	0.1939	0.96416	0.06068	0.96666	0.00104	0.88314	0.88291	2.0	0.55131	0.64862
3.0	1.0	0.91799	0.8492	0.32953	0.04648	0.43603	0.91454	0.03842	0.92149	0.0002	0.76341	0.75326	2.0	0.45096	0.36483
4.0	1.0	0.93177	0.87497	0.84224	0.05414	0.76962	0.92966	-0.57114	0.93389	0.00014	0.82995	0.79338	2.0	0.36989	0.24634
5.0	1.0	0.95846	0.92231	0.88104	0.02685	0.88804	0.95699	-1.28524	0.95994	0.00015	0.90351	0.86785	2.0	0.36489	0.24634
6.0	0.99998	0.90433	0.82705	0.9653	0.04914	0.81619	0.89789	-2.26356	0.91087	0.00013	0.82226	0.73309	2.0	0.33574	0.25161
7.0	1.0	0.9123	0.84786	0.81367	0.04752	0.87415	0.90328	-3.45499	0.92171	0.00015	0.88744	0.78322	2.0	0.32173	0.25161
8.0	1.0	0.96794	0.93912	0.94645	0.01686	0.95913	0.96697	-5.7427	0.96892	0.00021	0.97169	0.89348	2.0	0.31237	0.10779
9.0	1.0	0.90307	0.82018	0.78965	0.0485	0.87921	0.89789	-6.76116	0.9083	0.0002	0.91884	0.7087	2.0	0.294	0.10779
10.0	1.0	0.95657	0.92108	0.9521	0.02737	0.94693	0.9555	-8.3958	0.95766	0.00025	0.96834	0.86896	2.0	0.25603	0.10779
11.0	1.0	0.95592	0.91937	0.93191	0.03057	0.94691	0.95478	-10.03601	0.95707	0.00026	0.9698	0.86532	2.0	0.25067	0.10779
12.0	1.0	0.93604	0.88193	0.88158	0.04519	0.92389	0.93373	-11.47973	0.93836	0.00026	0.95775	0.8045	2.0	0.23518	0.10779
13.0	1.0	0.90624	0.8273	0.81274	0.06457	0.8893	0.90203	-13.03262	0.91049	0.00025	0.93953	0.71947	2.0	0.20783	0.10779
14.0	1.0	0.94124	0.89054	0.92583	0.04603	0.93142	0.94037	-14.86409	0.94211	0.0003	0.9662	0.81041	2.0	0.19803	0.10779
15.0	1.0	0.94644	0.89892	0.91702	0.04288	0.93789	0.94588	-16.77843	0.94699	0.00031	0.97048	0.82055	2.0	0.19852	0.10779
16.0	1.0	0.96678	0.93619	0.9614	0.03037	0.96174	0.96661	-18.48657	0.96694	0.00033	0.98255	0.88234	2.0	0.1976	0.10779
17.0	1.0	0.96489	0.9326	0.95371	0.03279	0.95965	0.96477	-20.15291	0.96501	0.00033	0.98185	0.8757	2.0	0.2441	0.10779
18.0	1.0	0.96067	0.92464	0.9421	0.03677	0.95486	0.9605	-22.02786	0.96084	0.00033	0.97983	0.86169	2.0	0.28509	0.10779
19.0	1.0	0.9559	0.91567	0.92927	0.03948	0.94947	0.95564	-23.88148	0.95617	0.00033	0.97757	0.84627	2.0	0.32133	0.10779
20.0	1.0	0.95258	0.90988	0.93472	0.03947	0.94583	0.95242	-25.71773	0.95274	0.00034	0.97653	0.83672	2.0	0.3069	0.10779

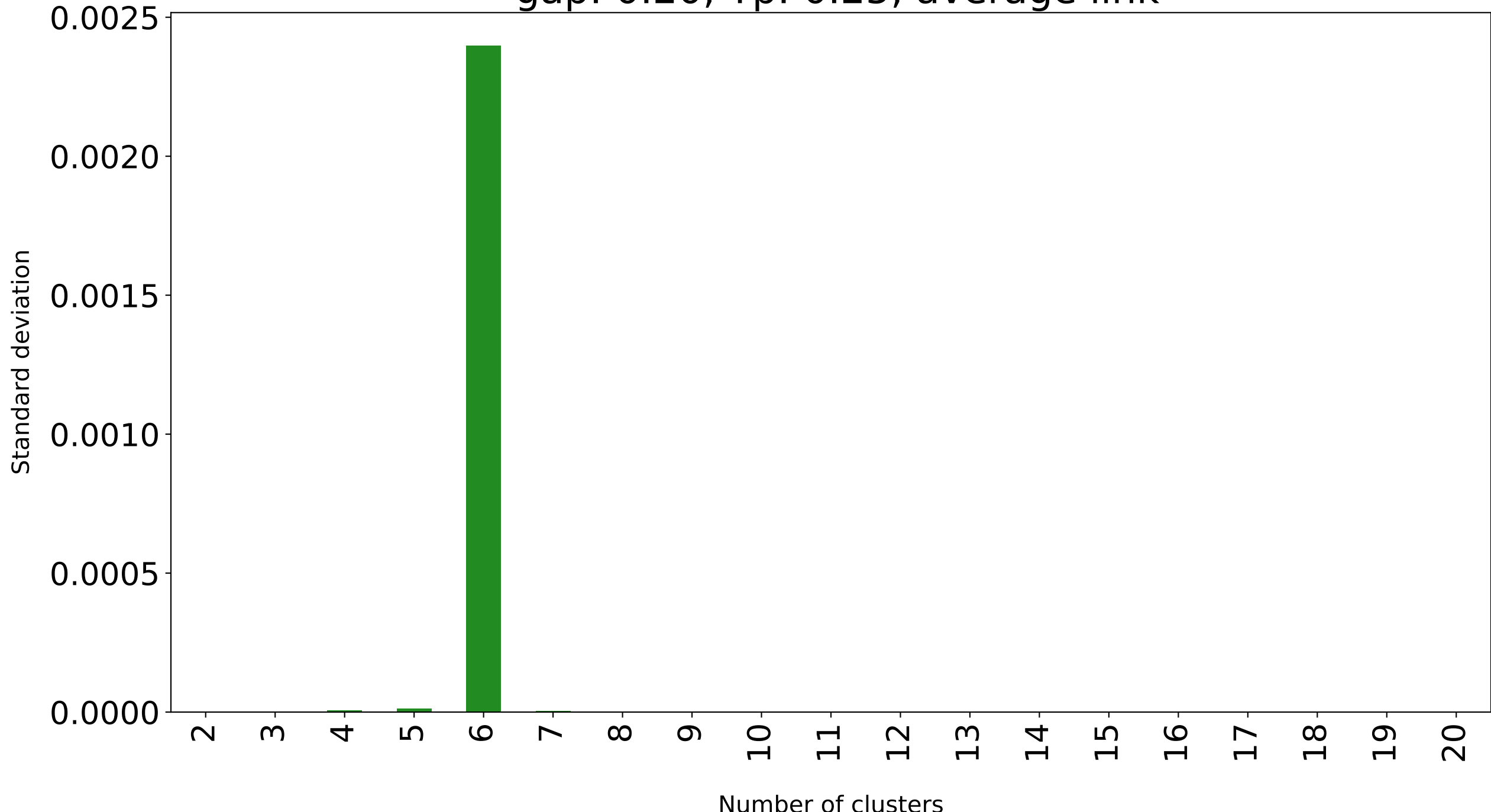
Standard deviation of Adjusted Rand versus number of clusters
gap: 0.10, Tp: 0.25, average link

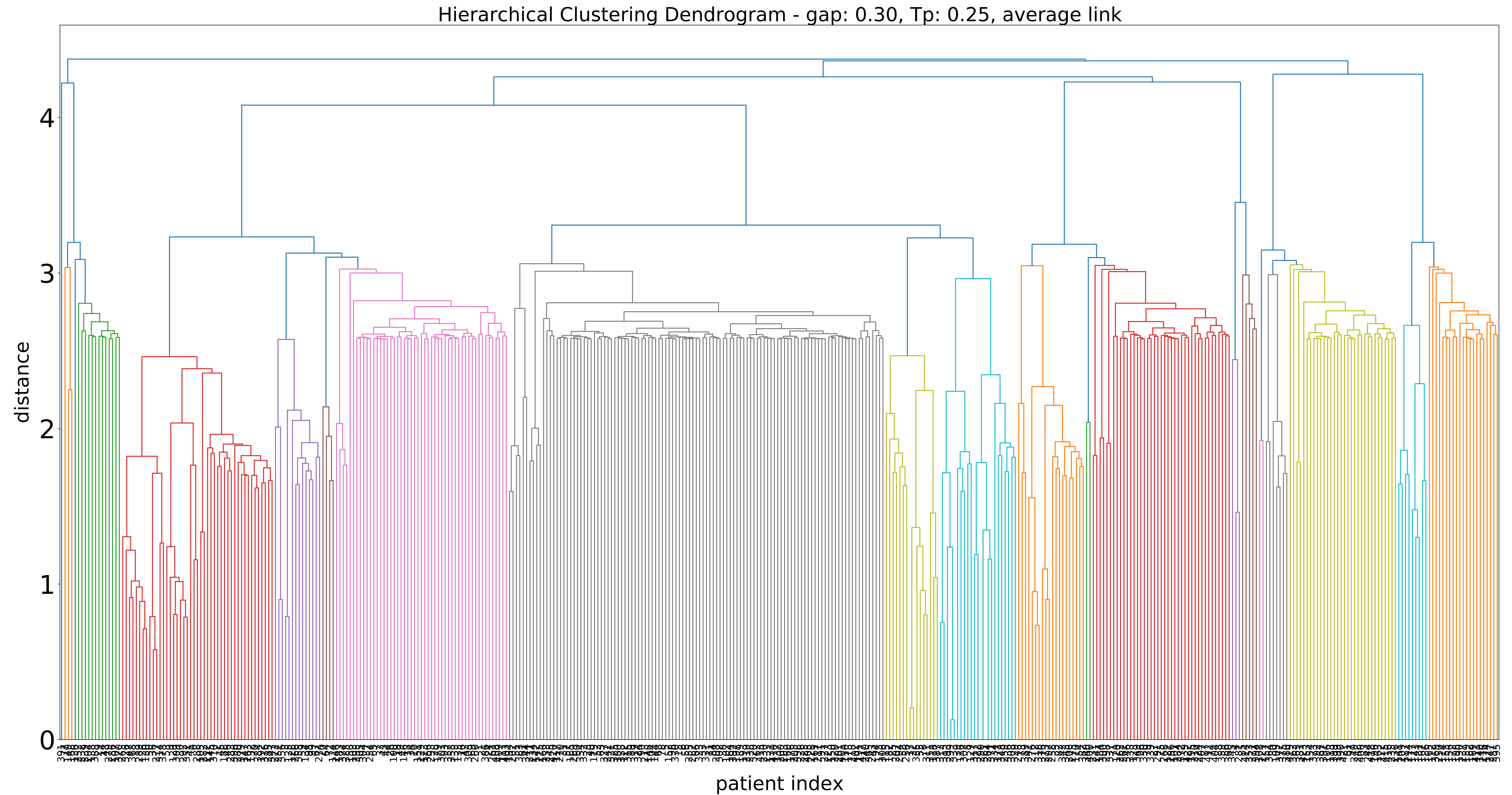


Average values of five clustering indices
gap: 0.20, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.92312	0.85948	0.27577	0.04563	0.3007	0.92102	0.1208	0.92524	0.00015	0.77313	0.7669	0.27778	0.18896	0.27216
3.0	1.0	0.91689	0.84852	0.82555	0.06216	0.70272	0.91367	-0.13667	0.92015	0.00013	0.79066	0.75453	0.27778	0.17148	0.22834
4.0	1.0	0.9579	0.92112	0.9043	0.03454	0.88089	0.95687	-0.68001	0.95894	0.00015	0.89934	0.86347	0.27778	0.22056	0.22834
5.0	0.99999	0.94344	0.89644	0.81519	0.03203	0.87056	0.94058	-1.33859	0.94636	0.00015	0.88132	0.83183	2.0	0.37607	0.22834
6.0	0.99983	0.90823	0.83783	0.94599	0.0495	0.82969	0.90286	-2.394	0.9137	0.00013	0.83962	0.75196	2.0	0.34754	0.15033
7.0	1.0	0.8873	0.81053	0.77145	0.06131	0.83465	0.87783	-3.38669	0.89717	0.00014	0.85774	0.73438	2.0	0.33255	0.15033
8.0	1.0	0.97112	0.94502	0.95436	0.01556	0.9632	0.97024	-5.79092	0.97202	0.00021	0.97447	0.90361	2.0	0.32458	0.18323
9.0	1.0	0.91802	0.84705	0.82151	0.04056	0.89778	0.91373	-6.83464	0.92235	0.00021	0.93121	0.74928	2.0	0.31171	0.18323
10.0	1.0	0.95015	0.90803	0.93567	0.03408	0.93951	0.94895	-8.39919	0.95136	0.00025	0.9646	0.84487	2.0	0.27492	0.19349
11.0	1.0	0.90022	0.81898	0.95293	0.06584	0.8819	0.89676	-9.15059	0.9037	0.00027	0.93618	0.70755	2.0	0.25592	0.19349
12.0	1.0	0.9104	0.83713	0.95065	0.06404	0.89526	0.90788	-10.61366	0.91295	0.00029	0.947	0.73286	2.0	0.2563	0.19349
13.0	1.0	0.92857	0.86863	0.9482	0.0537	0.91701	0.92736	-12.66989	0.92979	0.0003	0.95993	0.77745	2.0	0.24434	0.19349
14.0	1.0	0.94122	0.89086	0.93871	0.04752	0.932	0.94066	-14.31414	0.94179	0.00031	0.96822	0.8104	2.0	0.22512	0.19349
15.0	1.0	0.94879	0.90356	0.93358	0.04309	0.941	0.94847	-16.14109	0.9491	0.00032	0.97311	0.82824	2.0	0.22479	0.19349
16.0	1.0	0.95079	0.90673	0.9267	0.04282	0.94349	0.95055	-18.06888	0.95103	0.00033	0.97473	0.83213	2.0	0.22653	0.19349
17.0	1.0	0.95795	0.91981	0.94796	0.03703	0.9519	0.95785	-19.54736	0.95805	0.00034	0.97902	0.8536	2.0	0.22782	0.20405
18.0	1.0	0.95628	0.91677	0.94804	0.0377	0.95011	0.95622	-21.23048	0.95635	0.00034	0.97858	0.84828	2.0	0.22543	0.20405
19.0	1.0	0.95978	0.92309	0.95549	0.0353	0.9542	0.9597	-22.58474	0.95985	0.00035	0.98055	0.85886	2.0	0.22747	0.20405
20.0	1.0	0.96146	0.92624	0.95581	0.03427	0.95617	0.96139	-24.60723	0.96154	0.00035	0.98153	0.86438	2.0	0.23108	0.20405

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

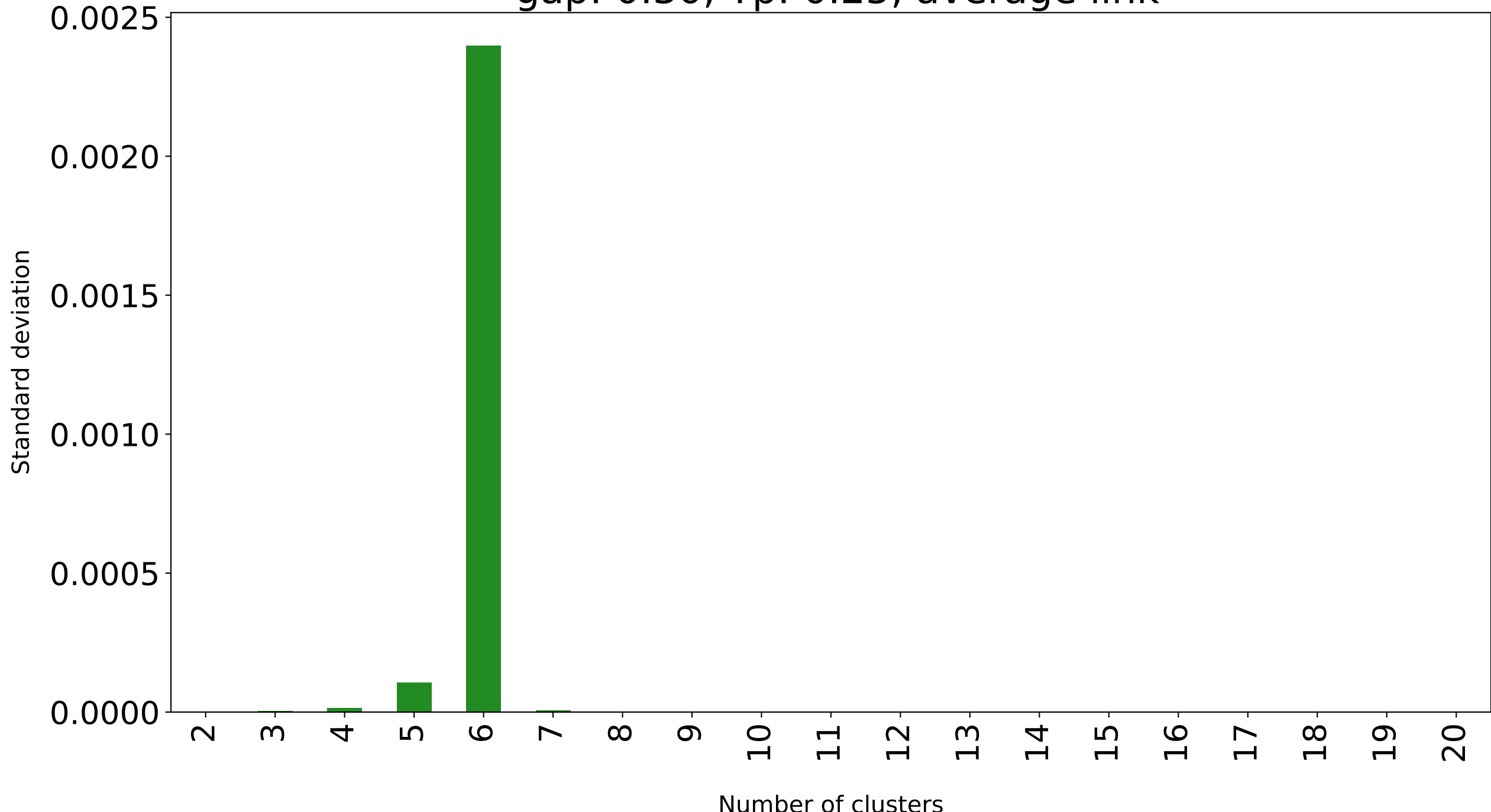


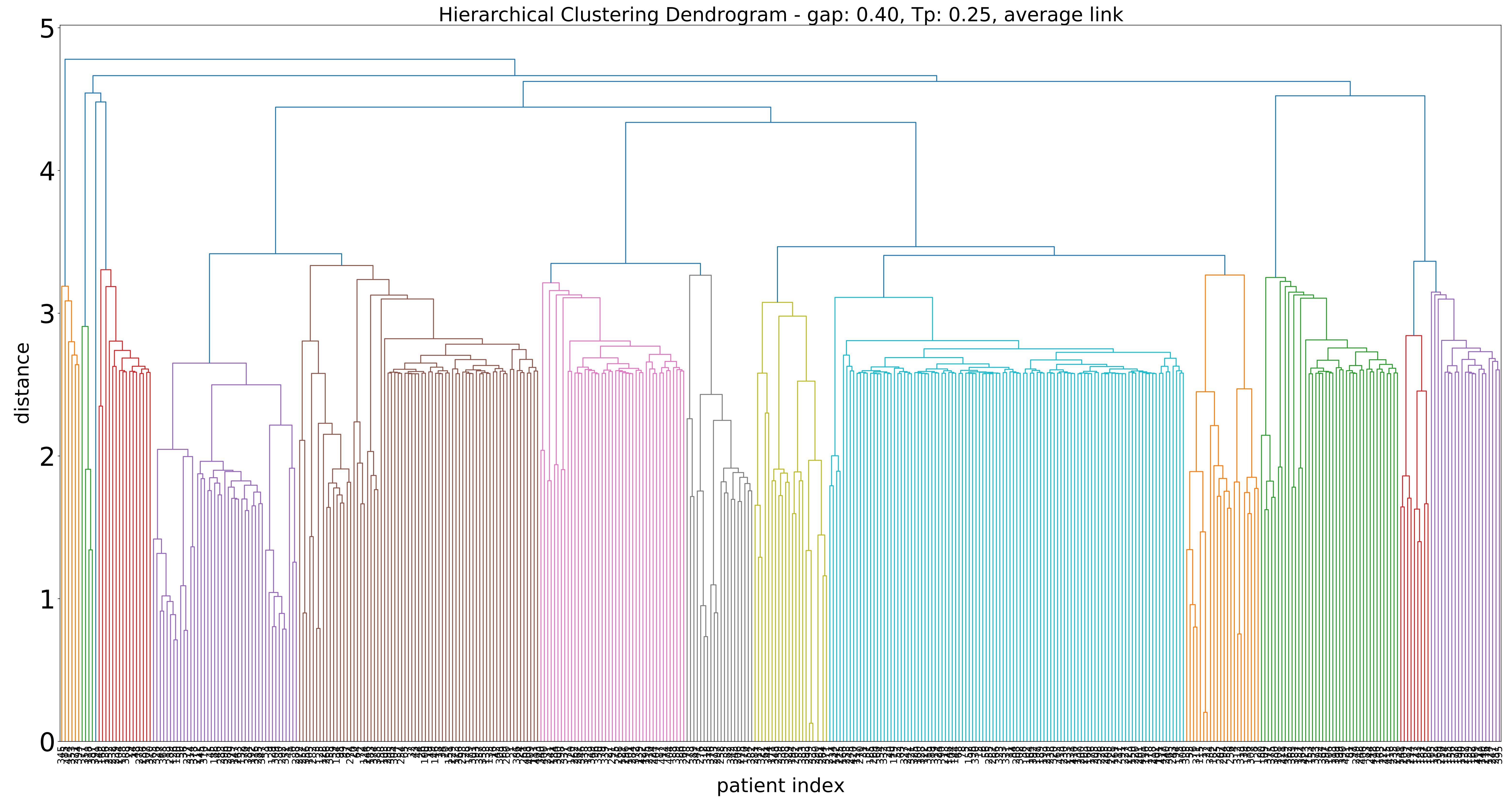


Average values of five clustering indices
gap: 0.30, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.90334	0.82632	0.21646	0.05659	0.26153	0.90029	0.14565	0.90641	0.00012	0.72803	0.72064	0.25556	0.20235	0.28538
3.0	1.0	0.94116	0.89226	0.87008	0.04594	0.80454	0.9394	-0.21053	0.94295	0.00015	0.85465	0.82118	0.25556	0.18331	0.21481
4.0	0.99999	0.94255	0.89649	0.83438	0.04195	0.85955	0.94053	-0.69231	0.9446	0.00015	0.87817	0.83188	0.25556	0.23598	0.21481
5.0	0.99998	0.88854	0.80226	0.95221	0.06328	0.79002	0.88132	-1.40196	0.8959	0.00013	0.80011	0.69986	0.25556	0.23361	0.18393
6.0	0.99999	0.91079	0.8544	0.90212	0.05074	0.84598	0.90772	-2.09126	0.91391	0.00014	0.86781	0.78852	0.33333	0.23697	0.18393
7.0	1.0	0.84545	0.74949	0.68961	0.08427	0.76893	0.83486	-3.2535	0.85647	0.00013	0.80866	0.65846	2.0	0.34291	0.18393
8.0	1.0	0.97734	0.95672	0.96702	0.01278	0.97064	0.97674	-5.80394	0.97796	0.00021	0.97892	0.92269	2.0	0.33538	0.21841
9.0	1.0	0.94877	0.90242	0.88646	0.02552	0.93515	0.94696	-6.8843	0.95059	0.00021	0.95542	0.83097	2.0	0.32583	0.21841
10.0	1.0	0.91248	0.8408	0.91635	0.05529	0.89242	0.91102	-7.93684	0.91395	0.00023	0.93529	0.73497	2.0	0.29046	0.23567
11.0	1.0	0.85859	0.74993	0.90053	0.08977	0.83165	0.85521	-8.56912	0.862	0.00024	0.90935	0.60533	2.0	0.2813	0.23567
12.0	1.0	0.8772	0.78147	0.88214	0.08364	0.85538	0.87536	-10.10119	0.87906	0.00026	0.92662	0.64767	2.0	0.27919	0.2514
13.0	1.0	0.88128	0.78855	0.85814	0.08434	0.86128	0.88011	-11.97649	0.88245	0.00028	0.93276	0.65625	2.0	0.26741	0.2514
14.0	1.0	0.8795	0.78495	0.82925	0.08669	0.86005	0.87837	-13.44566	0.88063	0.00028	0.93416	0.64971	2.0	0.24702	0.2514
15.0	1.0	0.89456	0.80986	0.85671	0.07664	0.87859	0.8941	-14.82446	0.89501	0.0003	0.94571	0.68348	2.0	0.24346	0.25636
16.0	1.0	0.89366	0.80789	0.84564	0.07745	0.87794	0.89298	-16.55164	0.89435	0.00031	0.9461	0.6804	2.0	0.2431	0.25636
17.0	1.0	0.91729	0.84789	0.89566	0.06506	0.90558	0.91706	-17.90868	0.91751	0.00033	0.95969	0.73854	2.0	0.23935	0.25636
18.0	1.0	0.91681	0.84698	0.89382	0.06586	0.90533	0.91656	-19.28685	0.91706	0.00033	0.96029	0.73702	2.0	0.24487	0.25636
19.0	1.0	0.92009	0.85246	0.89366	0.06434	0.90922	0.91981	-21.30452	0.92037	0.00034	0.96224	0.74514	2.0	0.24431	0.25636
20.0	1.0	0.91947	0.85113	0.88716	0.06418	0.90861	0.91908	-23.20881	0.91985	0.00034	0.96216	0.74295	2.0	0.2812	0.25636

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

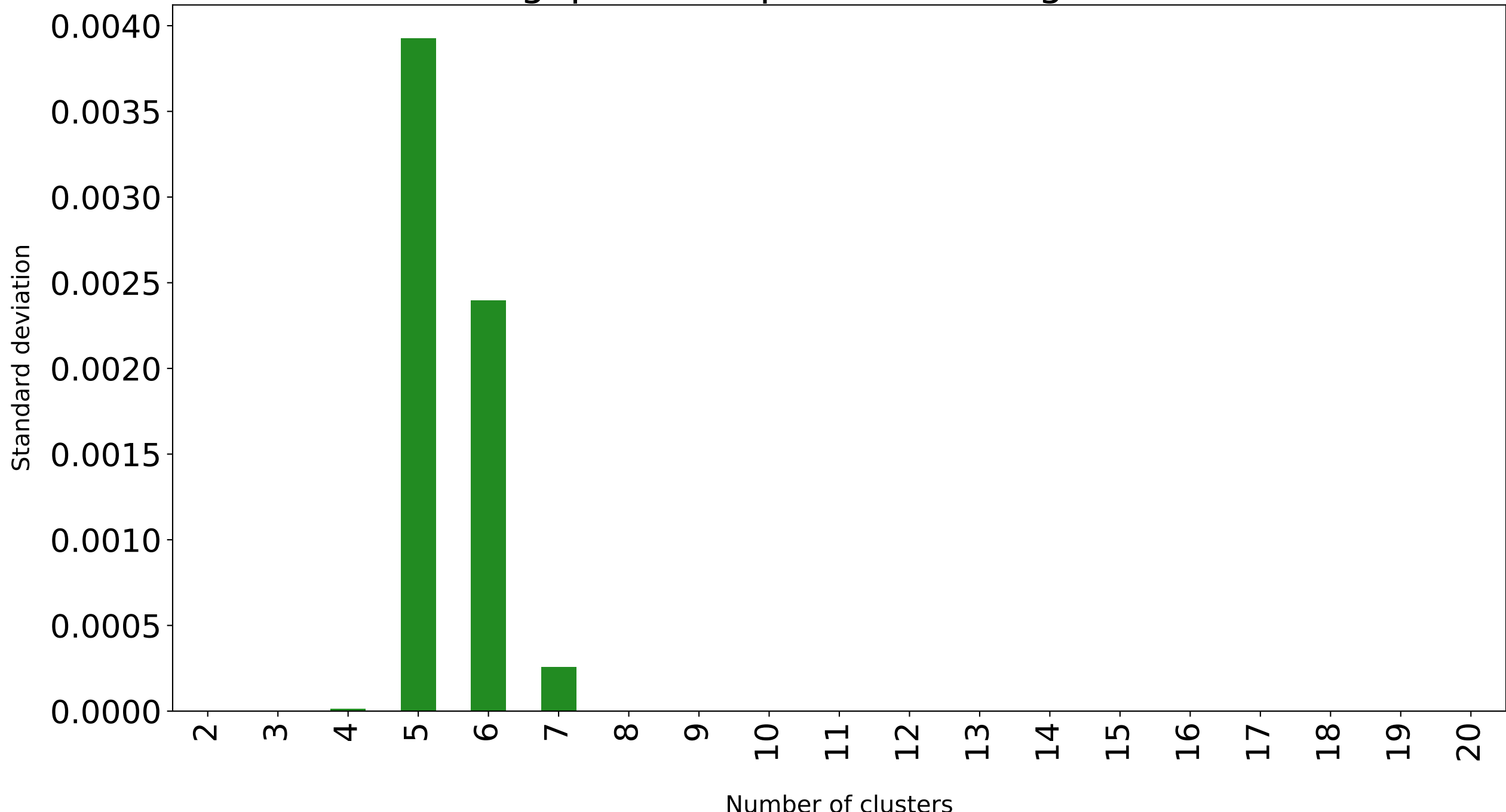


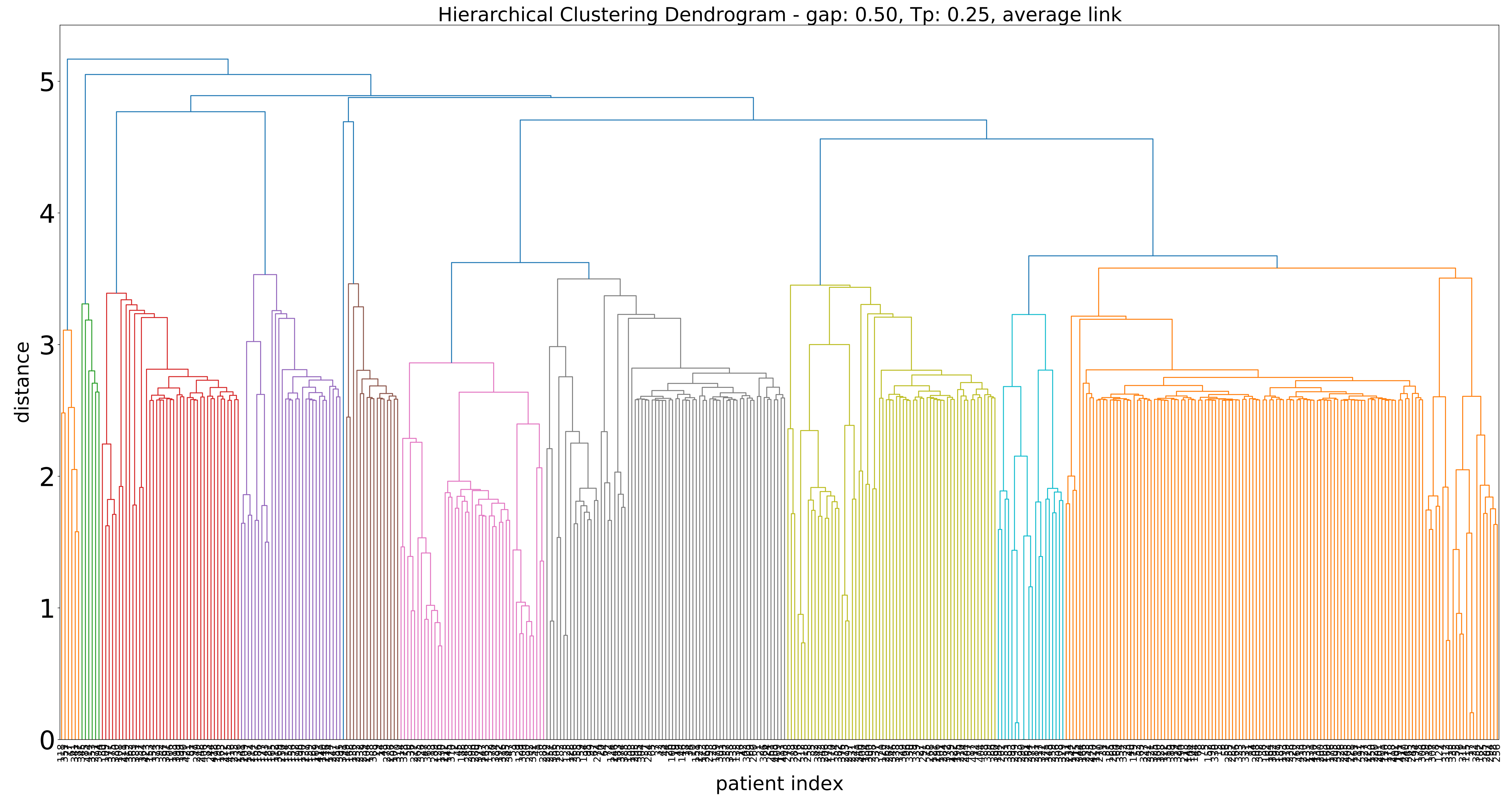


Average values of five clustering indices
gap: 0.40, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.92599	0.86416	0.27167	0.04101	0.29628	0.92209	0.10799	0.92995	0.00041	0.78362	0.7818	0.2	0.24943	0.37522
3.0	1.0	0.8591	0.75029	0.31691	0.08443	0.40847	0.85249	0.10283	0.86579	0.00013	0.64165	0.61597	0.33333	0.23697	0.20816
4.0	0.99999	0.95154	0.91146	0.88285	0.04962	0.88435	0.94986	-0.79793	0.95325	0.00015	0.8969	0.85336	0.33333	0.21083	0.20831
5.0	0.99975	0.90106	0.825	0.71513	0.07556	0.80274	0.89416	-1.10634	0.90815	0.00013	0.81518	0.73609	0.5	0.26432	0.20831
6.0	1.00011	0.84067	0.72156	0.55881	0.08404	0.7082	0.8267	-1.57153	0.85515	0.00012	0.72093	0.59703	0.5	0.28864	0.20831
7.0	1.00003	0.76156	0.59588	0.3981	0.12547	0.60015	0.73323	-2.21414	0.79198	0.0001	0.61396	0.44798	2.0	0.39015	0.20831
8.0	1.0	0.81117	0.68049	0.61929	0.0907	0.73206	0.80027	-4.85903	0.82227	0.00014	0.78848	0.53901	2.0	0.37073	0.21976
9.0	1.0	0.95732	0.91838	0.90476	0.02089	0.94591	0.95597	-7.53205	0.95868	0.00021	0.96284	0.85679	2.0	0.35723	0.25554
10.0	1.0	0.9133	0.84268	0.88012	0.04587	0.89249	0.91197	-8.63268	0.91463	0.00022	0.93388	0.73846	2.0	0.31321	0.25463
11.0	1.0	0.85485	0.74914	0.84766	0.07854	0.82504	0.8532	-9.29778	0.85649	0.00023	0.90441	0.6087	2.0	0.30219	0.25941
12.0	1.0	0.88379	0.79192	0.91705	0.07264	0.86356	0.88145	-10.78977	0.88614	0.00027	0.93096	0.66363	2.0	0.28376	0.25941
13.0	1.0	0.89424	0.81085	0.89139	0.07085	0.87677	0.89339	-12.82831	0.8951	0.00029	0.94116	0.68961	2.0	0.27371	0.25941
14.0	1.0	0.90382	0.82585	0.90868	0.06612	0.88913	0.90312	-14.26863	0.90452	0.00031	0.94976	0.70904	2.0	0.26515	0.25941
15.0	1.0	0.92812	0.86614	0.95425	0.05502	0.91797	0.92727	-15.59624	0.92897	0.00033	0.96429	0.76818	2.0	0.25585	0.25941
16.0	1.0	0.93426	0.87733	0.94673	0.0525	0.92512	0.93384	-17.62753	0.93469	0.00034	0.96808	0.78522	2.0	0.25342	0.25941
17.0	1.0	0.93591	0.8803	0.94344	0.05226	0.92715	0.93558	-18.75114	0.93625	0.00035	0.9694	0.7897	2.0	0.25953	0.25941
18.0	1.0	0.93412	0.87714	0.93469	0.05368	0.92523	0.93388	-20.30215	0.93437	0.00035	0.96898	0.78421	2.0	0.26355	0.25941
19.0	1.0	0.93673	0.88157	0.93786	0.05321	0.92836	0.93651	-22.04003	0.93695	0.00035	0.97073	0.79076	2.0	0.26216	0.25941
20.0	1.0	0.94219	0.89121	0.94669	0.05121	0.9347	0.94198	-23.4675	0.94239	0.00036	0.9737	0.80621	2.0	0.2657	0.25941

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

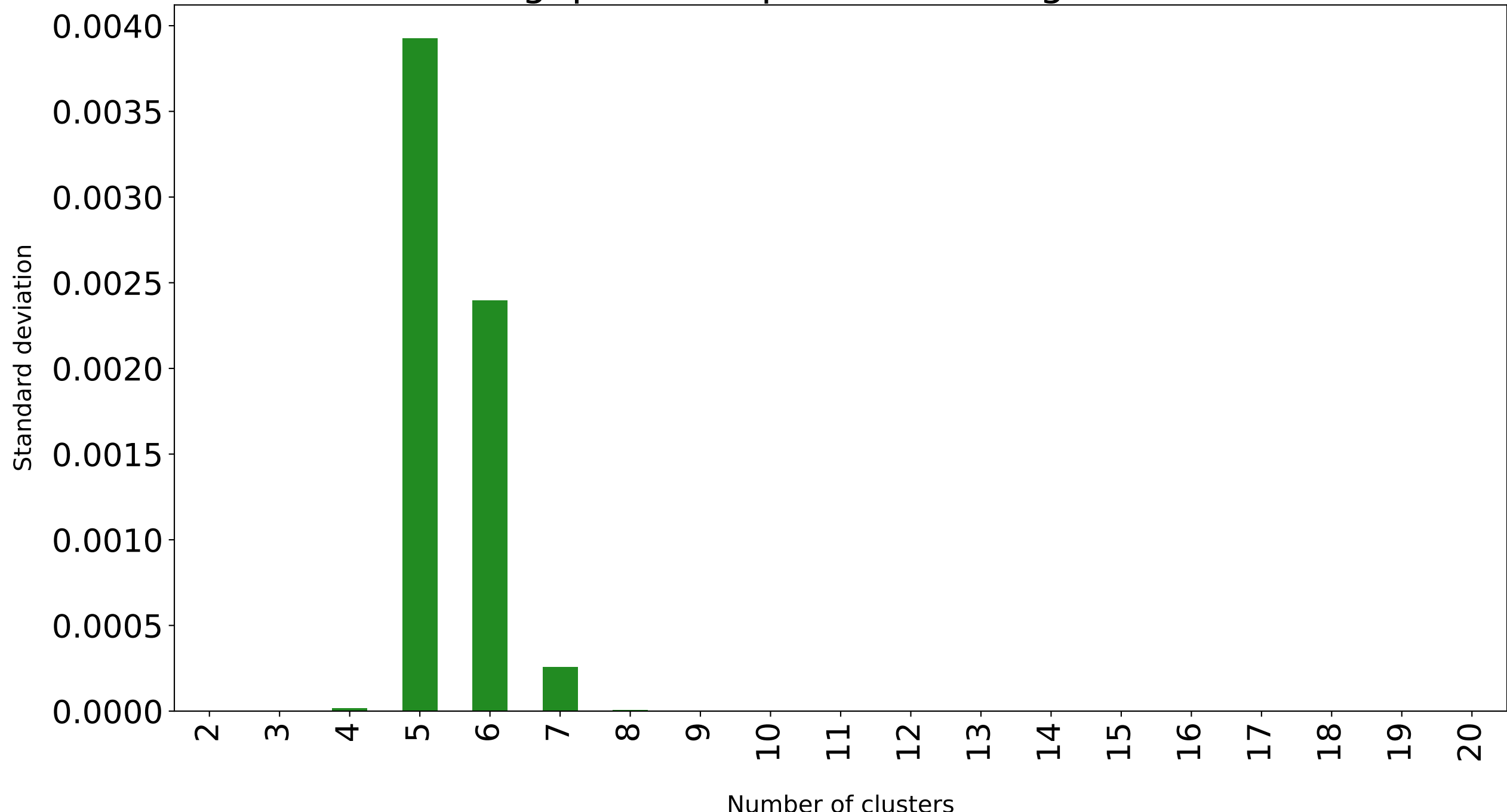


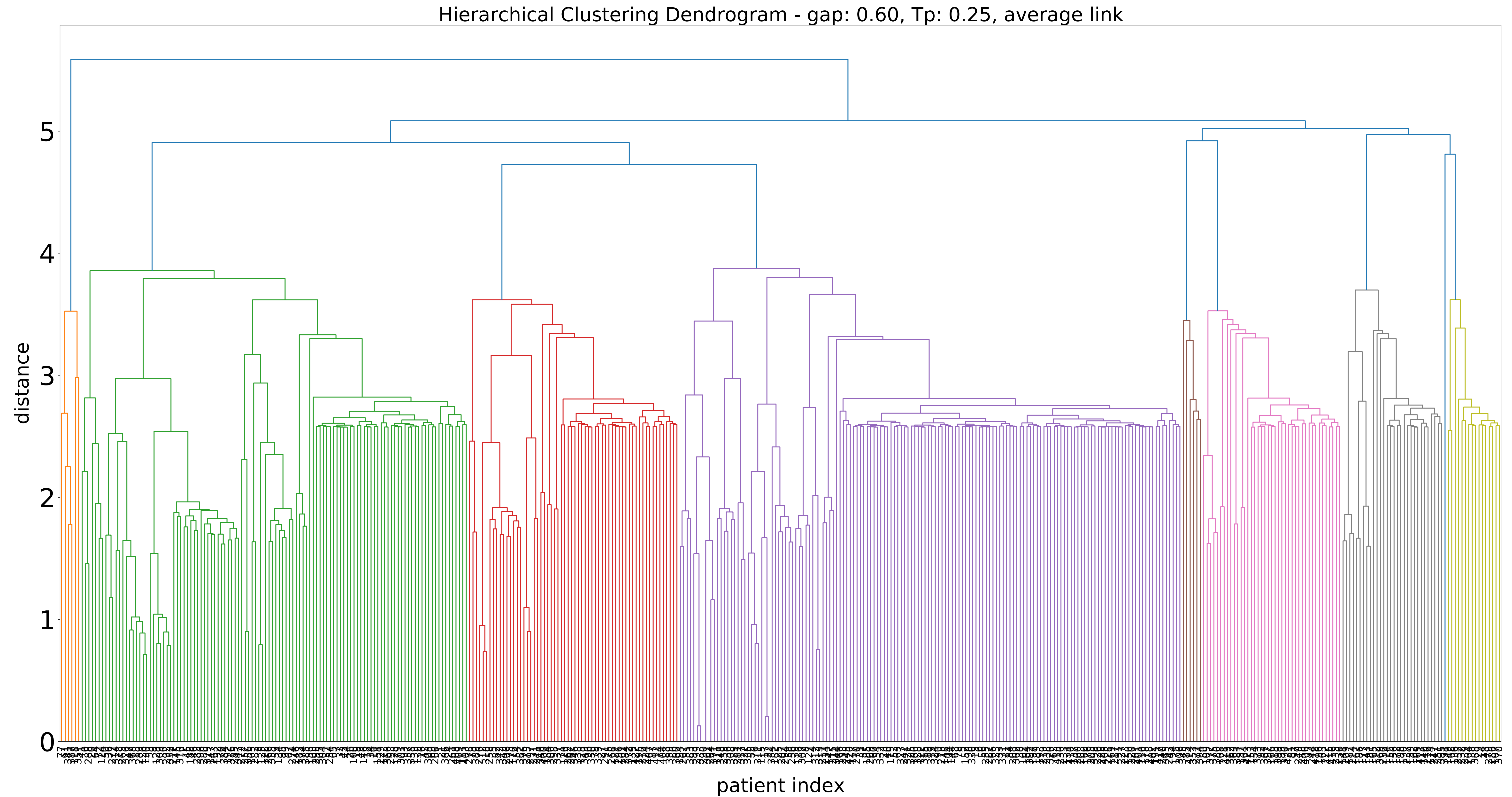


Average values of five clustering indices
gap: 0.50, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.94568	0.90139	0.49967	0.03131	0.48513	0.94257	0.07663	0.94883	0.0007	0.84507	0.84423	0.33333	0.30673	0.20677
3.0	1.0	0.86025	0.74973	0.18952	0.07894	0.28864	0.85137	0.16599	0.8693	0.00016	0.62748	0.6172	0.33333	0.31359	0.21776
4.0	0.99999	0.91182	0.84049	0.67833	0.06953	0.75527	0.90903	-0.47218	0.91468	0.00013	0.80154	0.73893	0.33333	0.2702	0.20675
5.0	0.99996	0.89664	0.81823	0.71958	0.07989	0.79347	0.88957	-1.09599	0.90393	0.00013	0.8083	0.72641	0.33333	0.27002	0.20675
6.0	1.00003	0.8255	0.69889	0.53371	0.09475	0.68657	0.81009	-1.56756	0.8415	0.00011	0.70316	0.57052	0.33333	0.29545	0.20675
7.0	1.00001	0.8058	0.70272	0.73145	0.10613	0.69601	0.80084	-3.17016	0.81088	0.00012	0.76589	0.59995	0.33333	0.28889	0.22196
8.0	1.0	0.81754	0.69904	0.65472	0.09135	0.73585	0.80898	-4.77656	0.82624	0.00014	0.79498	0.57168	2.0	0.37496	0.22196
9.0	1.0	0.9705	0.94325	0.94041	0.01617	0.96236	0.96991	-7.56075	0.97109	0.00022	0.97413	0.89774	2.0	0.36186	0.25445
10.0	1.0	0.92837	0.86797	0.9128	0.03892	0.91059	0.92763	-8.64389	0.92911	0.00022	0.944	0.77412	2.0	0.32293	0.24538
11.0	1.0	0.86151	0.75851	0.87643	0.07497	0.83237	0.85959	-9.22597	0.86343	0.00023	0.90623	0.62056	2.0	0.31269	0.25402
12.0	1.0	0.89042	0.80131	0.94858	0.06748	0.87095	0.88674	-10.70522	0.89414	0.00027	0.93182	0.67885	2.0	0.29547	0.25402
13.0	1.0	0.90646	0.83002	0.93193	0.06324	0.89059	0.90472	-12.77671	0.90821	0.00028	0.94545	0.71834	2.0	0.28528	0.25402
14.0	1.0	0.91333	0.84233	0.90965	0.06069	0.89925	0.91255	-14.11511	0.9141	0.0003	0.95213	0.7348	2.0	0.28084	0.25402
15.0	1.0	0.91636	0.84673	0.92596	0.06186	0.90379	0.91565	-15.21181	0.91707	0.00031	0.95666	0.73948	2.0	0.27974	0.25402
16.0	1.0	0.91628	0.84684	0.90385	0.0627	0.90404	0.91589	-17.22129	0.91668	0.00032	0.95792	0.73908	2.0	0.27782	0.25402
17.0	1.0	0.91363	0.8419	0.89204	0.06634	0.90135	0.91329	-18.78801	0.91397	0.00033	0.95769	0.73047	2.0	0.27527	0.25402
18.0	1.0	0.93346	0.87593	0.93657	0.05509	0.92447	0.93317	-20.31752	0.93374	0.00035	0.96864	0.78237	2.0	0.27151	0.25402
19.0	1.0	0.93459	0.87791	0.9379	0.05481	0.92593	0.93435	-22.04511	0.93484	0.00035	0.96969	0.7853	2.0	0.27047	0.25402
20.0	1.0	0.93879	0.88524	0.94464	0.0536	0.93084	0.93855	-23.45961	0.93903	0.00036	0.97211	0.7968	2.0	0.27398	0.25402

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

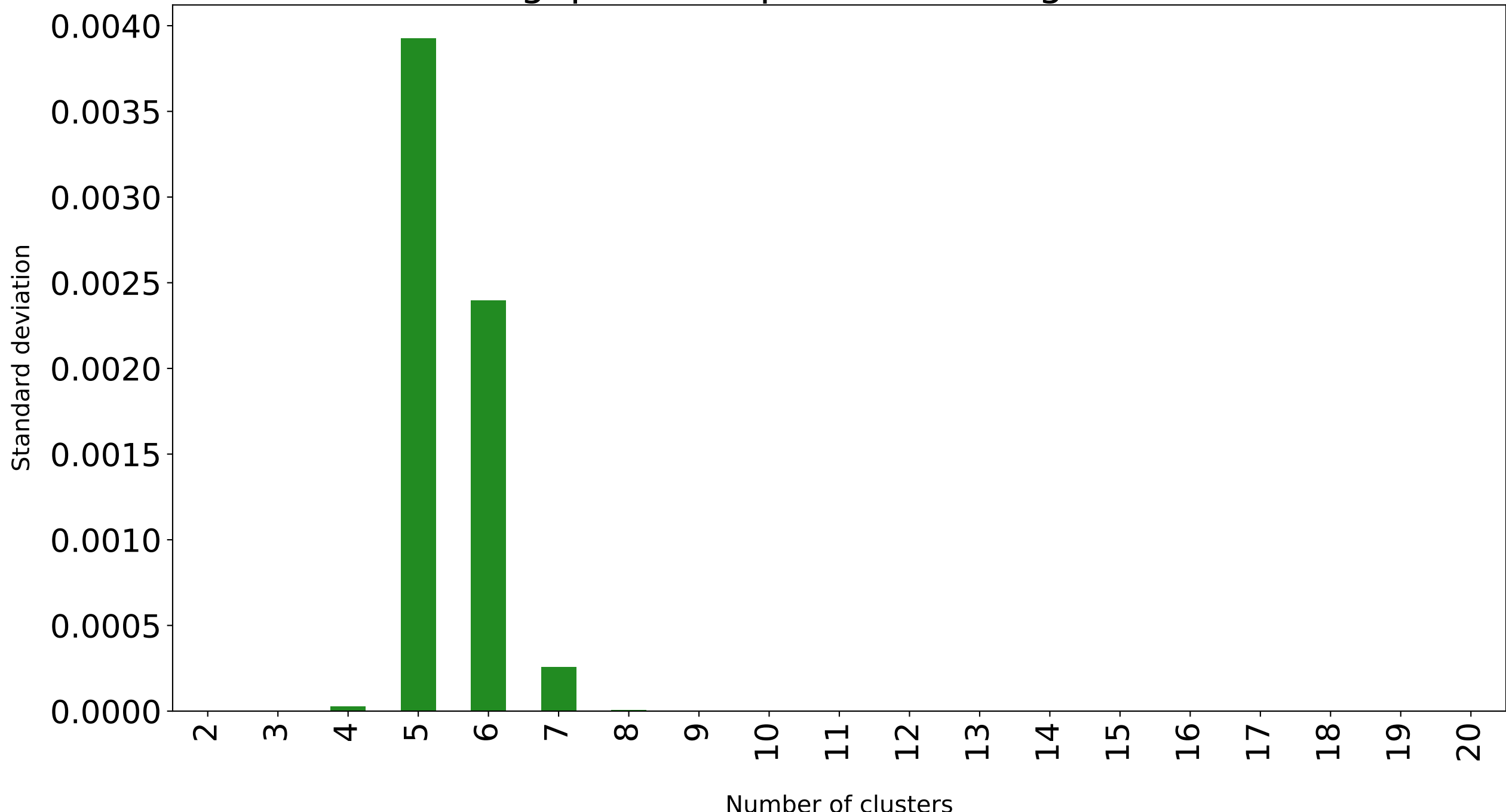


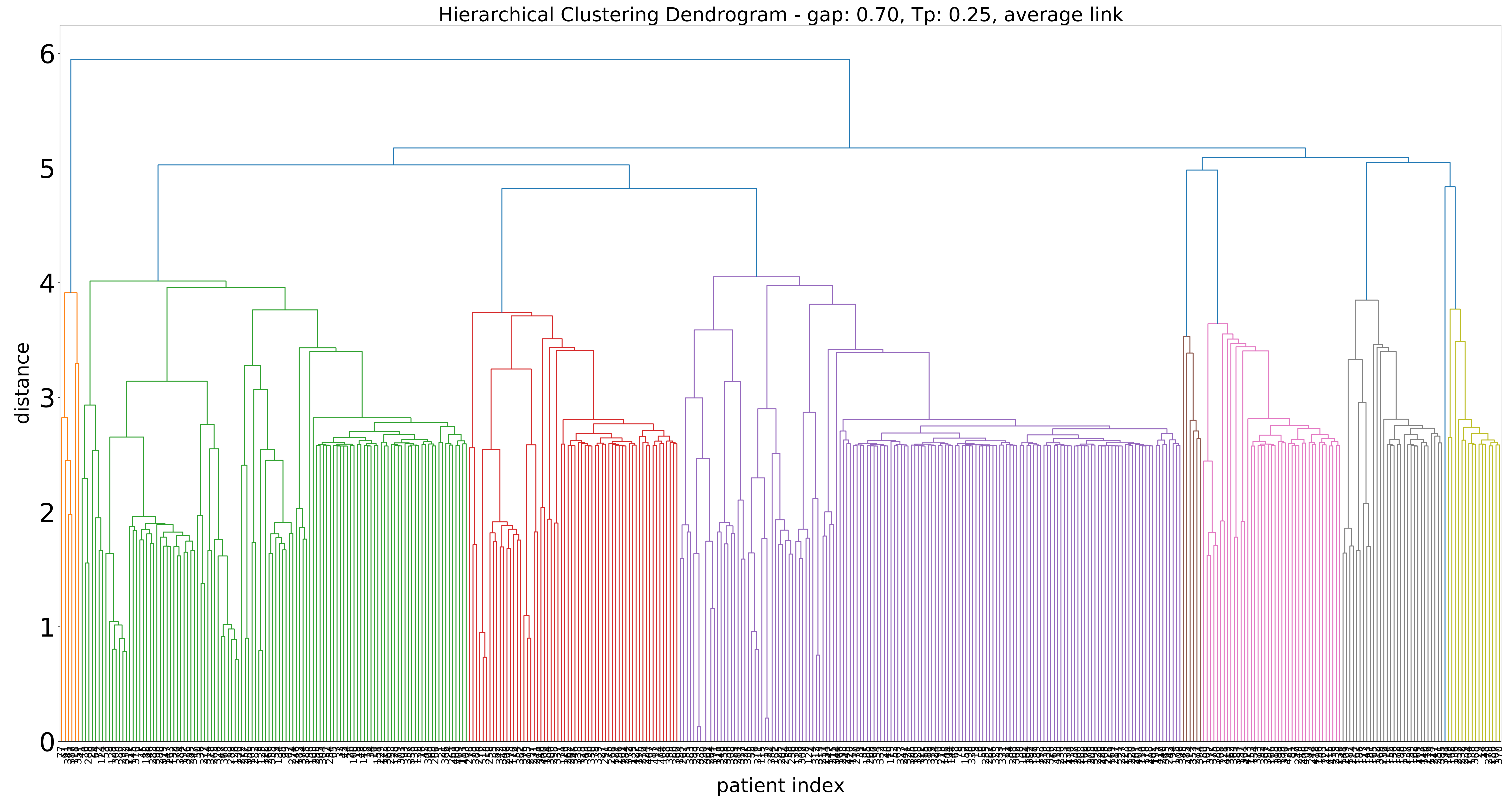


Average values of five clustering indices
gap: 0.60, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.97689	0.9578	0.7611	0.01442	0.72498	0.97557	0.03103	0.97824	0.00109	0.93275	0.93221	0.33333	0.3137	0.20181
3.0	1.0	0.89331	0.80828	0.83041	0.07374	0.63374	0.88772	-0.17731	0.89899	0.00012	0.73893	0.70027	0.33333	0.22307	0.20371
4.0	1.0	0.93749	0.88863	0.89837	0.05891	0.83914	0.93558	-0.66946	0.93943	0.00014	0.86544	0.8196	0.33333	0.2423	0.20371
5.0	1.00003	0.88921	0.81116	0.7284	0.07351	0.7823	0.88206	-1.03212	0.89657	0.00013	0.80497	0.72488	0.33333	0.27719	0.20371
6.0	1.00001	0.78932	0.64112	0.45383	0.11704	0.62673	0.77027	-1.52243	0.80908	0.0001	0.6503	0.49803	0.33333	0.29622	0.20371
7.0	1.0	0.89472	0.83436	0.83981	0.05756	0.83915	0.89222	-3.78422	0.89725	0.00015	0.87665	0.76767	0.33333	0.28994	0.22046
8.0	1.0	0.86874	0.7745	0.73255	0.06421	0.81523	0.86124	-5.10411	0.87638	0.00015	0.85343	0.66781	2.0	0.3745	0.22046
9.0	1.0	0.97165	0.94543	0.94318	0.01562	0.9638	0.97109	-7.55875	0.9722	0.00022	0.97509	0.90146	2.0	0.36201	0.2464
10.0	1.0	0.93021	0.87147	0.92183	0.03738	0.9127	0.92959	-8.62766	0.93082	0.00022	0.94512	0.77949	2.0	0.32661	0.2378
11.0	1.0	0.89536	0.81234	0.85598	0.05711	0.87145	0.89426	-8.80424	0.89646	0.00022	0.92411	0.69154	2.0	0.31624	0.24019
12.0	1.0	0.8688	0.76976	0.83067	0.07374	0.84209	0.86735	-10.08119	0.87025	0.00023	0.91371	0.63368	2.0	0.3143	0.24019
13.0	1.0	0.88184	0.7889	0.89718	0.06896	0.861	0.8802	-11.41275	0.88349	0.00027	0.92986	0.65728	2.0	0.3101	0.24952
14.0	1.0	0.88995	0.80267	0.87981	0.06814	0.87143	0.88901	-13.3893	0.89089	0.00028	0.93774	0.67561	2.0	0.30115	0.24952
15.0	1.0	0.90623	0.83012	0.90885	0.06608	0.89152	0.90552	-14.51526	0.90695	0.0003	0.94985	0.71584	2.0	0.28402	0.24952
16.0	1.0	0.90022	0.82006	0.88066	0.07092	0.88497	0.89969	-16.36797	0.90075	0.0003	0.94812	0.70034	2.0	0.28328	0.24952
17.0	1.0	0.8933	0.80823	0.86003	0.07686	0.87755	0.89277	-17.86845	0.89382	0.00031	0.94623	0.68232	2.0	0.28386	0.24952
18.0	1.0	0.90306	0.82387	0.8913	0.07365	0.88951	0.90272	-19.13108	0.90339	0.00033	0.95333	0.70311	2.0	0.28061	0.24952
19.0	1.0	0.92447	0.85974	0.94016	0.06166	0.91447	0.92395	-20.72341	0.925	0.00035	0.96486	0.75672	2.0	0.2783	0.24952
20.0	1.0	0.93183	0.87262	0.94692	0.05845	0.923	0.93139	-22.61761	0.93228	0.00036	0.96886	0.77667	2.0	0.2777	0.24952

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

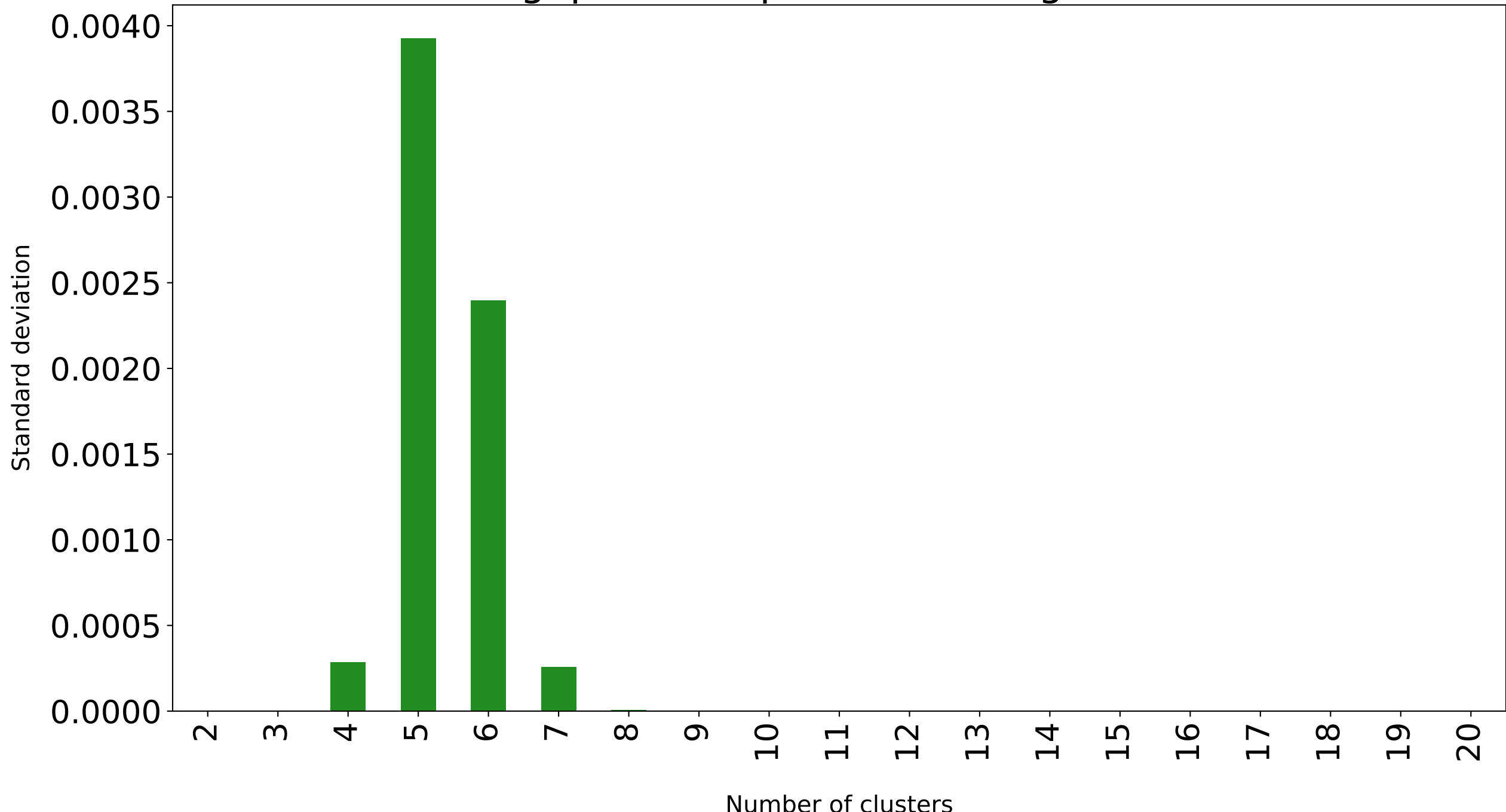


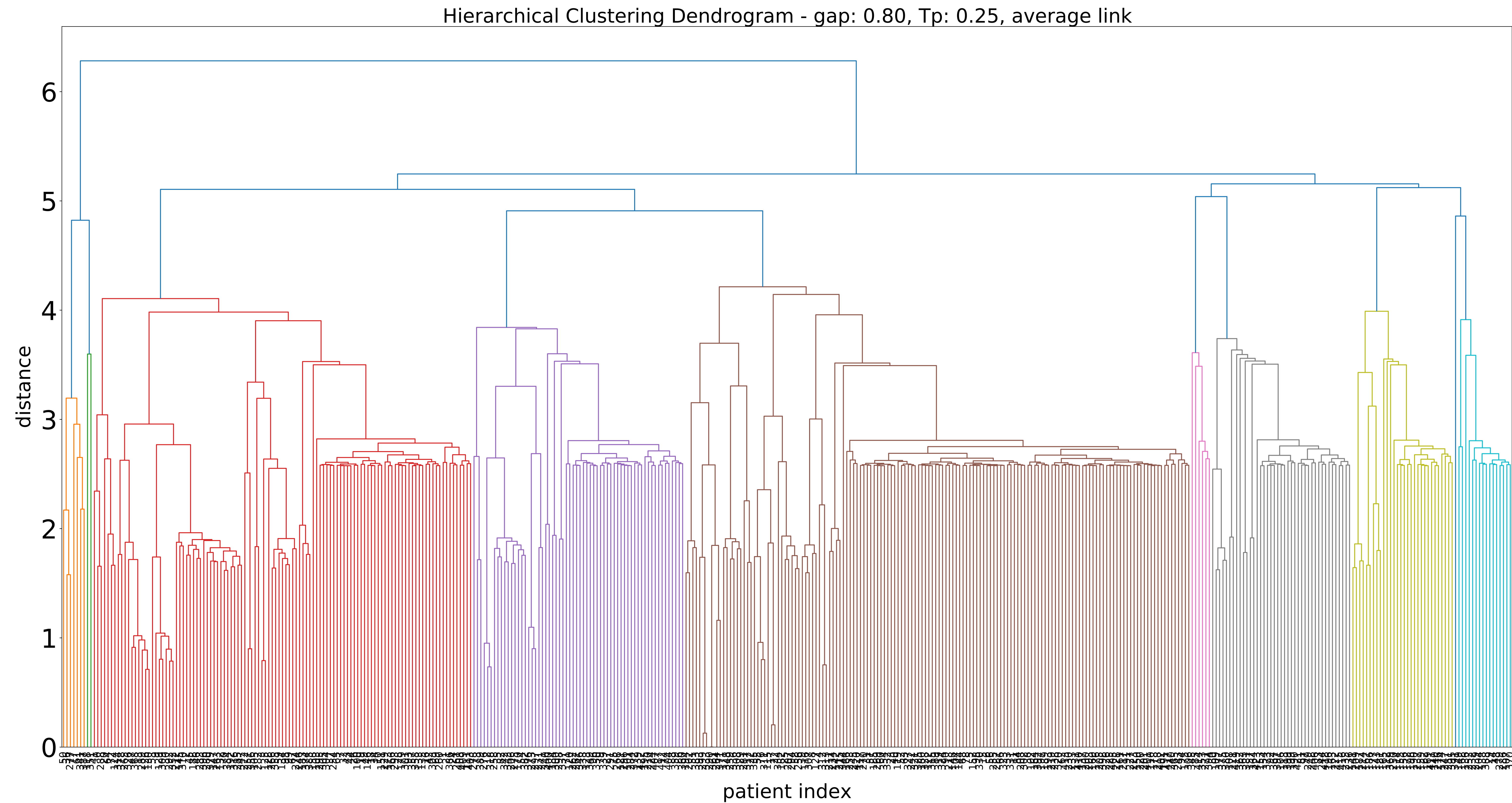


Average values of five clustering indices gap: 0.70, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.98564	0.97315	0.79278	0.01001	0.76479	0.98499	0.02176	0.98629	0.0012	0.95498	0.95443	0.66667	0.32097	0.204
3.0	1.0	0.89547	0.81461	0.81962	0.07048	0.63294	0.88992	-0.19043	0.90112	0.00012	0.74649	0.7144	0.66667	0.2182	0.20349
4.0	1.00002	0.91133	0.84906	0.83942	0.07406	0.78549	0.90844	-0.61623	0.91428	0.00013	0.82411	0.76834	0.66667	0.23759	0.20349
5.0	1.00001	0.84075	0.73731	0.61804	0.10192	0.69489	0.83042	-0.93596	0.85142	0.00012	0.73391	0.63246	0.66667	0.27287	0.20349
6.0	1.00001	0.91575	0.85986	0.92335	0.05442	0.8661	0.91216	-2.81244	0.91946	0.00015	0.88635	0.79304	0.66667	0.27022	0.22397
7.0	1.0	0.92698	0.87773	0.87093	0.04057	0.89282	0.92456	-4.02167	0.92943	0.00016	0.91576	0.81702	0.66667	0.28639	0.22397
8.0	1.0	0.86493	0.76034	0.7031	0.06514	0.81493	0.85604	-5.19915	0.87396	0.00016	0.85095	0.63849	2.0	0.36999	0.22397
9.0	1.0	0.9668	0.93747	0.94817	0.01962	0.95695	0.9659	-7.45161	0.96771	0.00021	0.96931	0.89077	2.0	0.3584	0.24976
10.0	1.0	0.92879	0.86792	0.93061	0.03832	0.91069	0.92801	-8.55771	0.92957	0.00022	0.94307	0.77224	2.0	0.32653	0.23699
11.0	1.0	0.90609	0.82939	0.8862	0.0513	0.88403	0.90515	-8.74373	0.90703	0.00022	0.9301	0.71439	2.0	0.31785	0.24078
12.0	1.0	0.87555	0.77992	0.8558	0.06903	0.84959	0.87427	-9.96738	0.87682	0.00023	0.9164	0.64575	2.0	0.31666	0.24078
13.0	1.0	0.87188	0.77259	0.90224	0.07481	0.84884	0.86959	-11.17666	0.87419	0.00026	0.92235	0.63602	2.0	0.31329	0.25799
14.0	1.0	0.8823	0.79059	0.88038	0.07316	0.86185	0.88118	-13.12345	0.88343	0.00027	0.93166	0.65987	2.0	0.30003	0.25799
15.0	1.0	0.88832	0.80055	0.86269	0.07143	0.86983	0.88759	-15.08846	0.88905	0.00028	0.938	0.6729	2.0	0.29351	0.25799
16.0	1.0	0.90739	0.83265	0.89219	0.06829	0.89314	0.90694	-16.37221	0.90784	0.0003	0.9516	0.71992	2.0	0.2813	0.25799
17.0	1.0	0.90166	0.82246	0.86534	0.07235	0.88701	0.90106	-18.25892	0.90225	0.00031	0.94989	0.70404	2.0	0.28093	0.25799
18.0	1.0	0.91015	0.83635	0.89266	0.06919	0.89748	0.90984	-19.55804	0.91045	0.00033	0.95643	0.72281	2.0	0.27856	0.25799
19.0	1.0	0.9107	0.83692	0.88803	0.07069	0.89844	0.91038	-21.2175	0.91102	0.00033	0.95759	0.72291	2.0	0.27965	0.25799
20.0	1.0	0.93397	0.87679	0.93775	0.05795	0.92535	0.93372	-22.93147	0.93422	0.00036	0.9698	0.78352	2.0	0.27887	0.25799

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

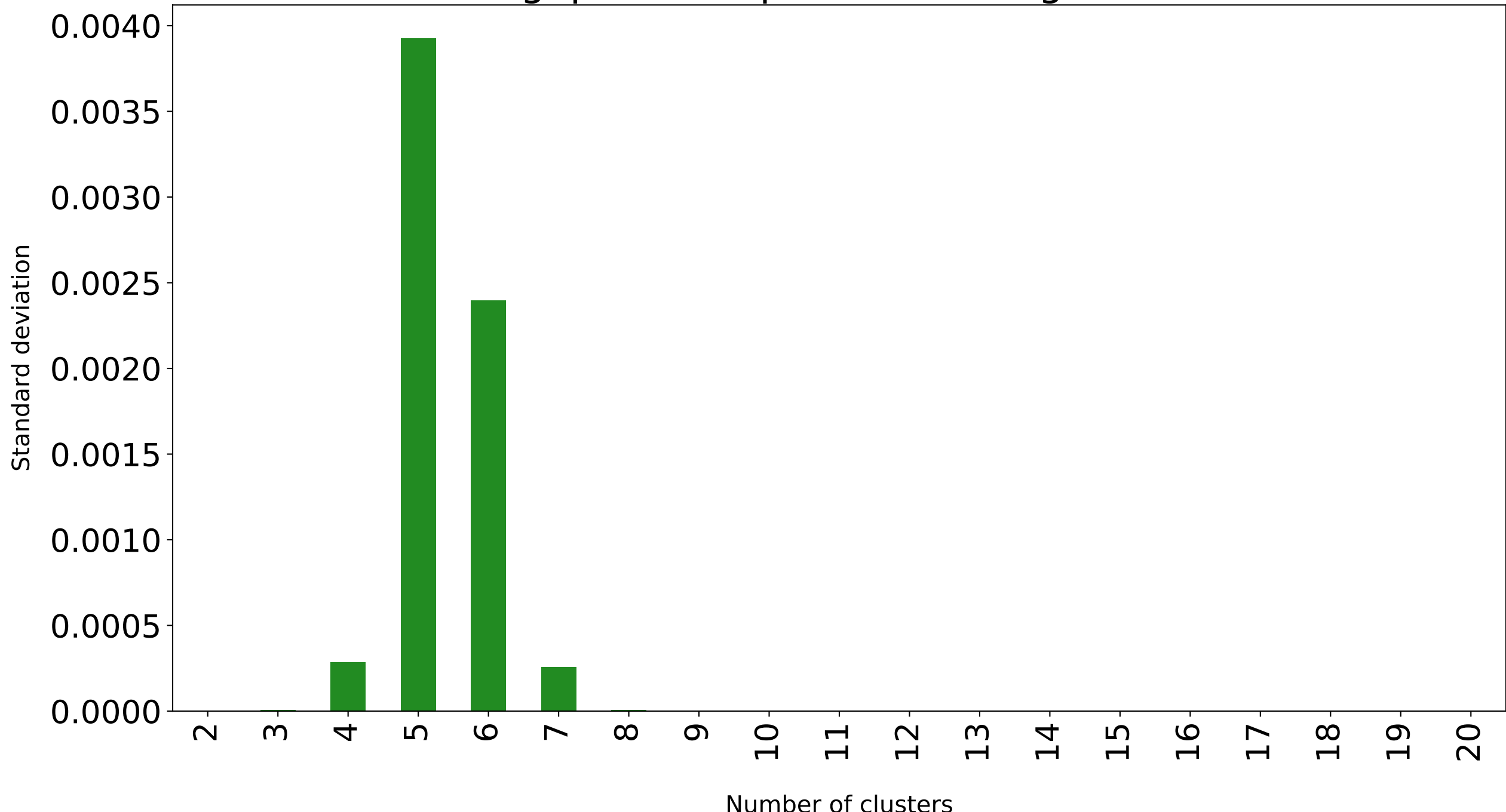


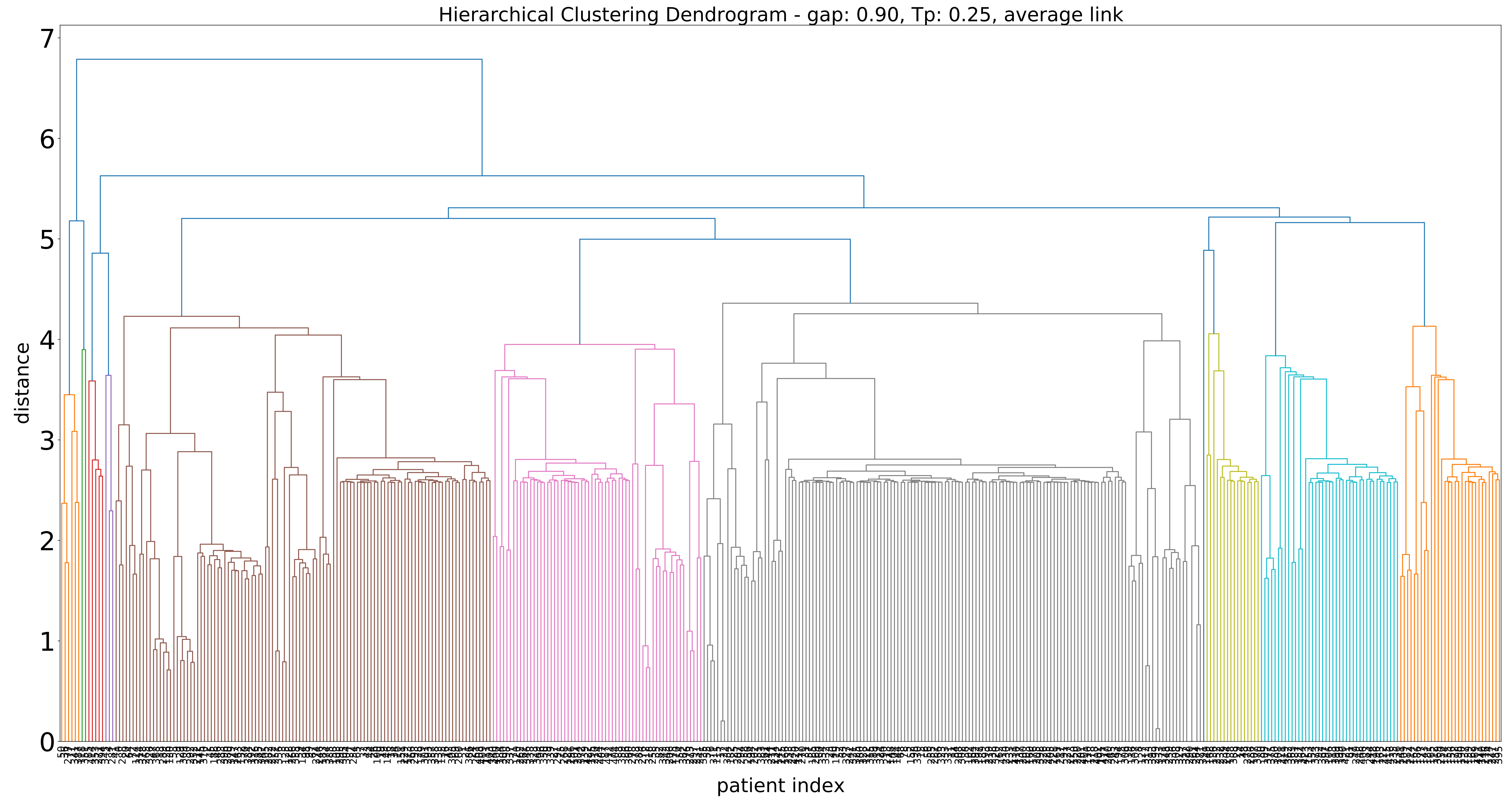


Average values of five clustering indices
gap: 0.80, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99299	0.98632	0.95205	0.0056	0.82668	0.9929	0.00624	0.99308	0.00096	0.97467	0.97413	0.22222	0.32547	0.21148
3.0	1.0	0.87291	0.78056	0.82402	0.08233	0.57749	0.86611	-0.14394	0.87985	0.00012	0.70566	0.67225	0.22222	0.21381	0.21148
4.0	0.99997	0.85906	0.77437	0.73645	0.10073	0.67511	0.85499	-0.54507	0.8632	0.00012	0.74748	0.67816	0.22222	0.23481	0.21148
5.0	1.00002	0.79903	0.67176	0.5375	0.12448	0.62032	0.78649	-0.89467	0.81197	0.0001	0.6728	0.54702	0.23529	0.2716	0.21148
6.0	1.00001	0.93726	0.89121	0.9583	0.04262	0.90112	0.93409	-2.9624	0.94054	0.00016	0.91293	0.83235	0.23529	0.26557	0.22138
7.0	1.0	0.93237	0.8821	0.8842	0.03751	0.90319	0.92921	-4.1082	0.93558	0.00016	0.92149	0.81914	0.23529	0.2822	0.22138
8.0	1.0	0.93768	0.88642	0.98362	0.03276	0.91714	0.93374	-5.74668	0.94171	0.0002	0.9349	0.82041	0.23529	0.28188	0.24615
9.0	1.0	0.96877	0.94114	0.96469	0.01883	0.95958	0.96793	-7.48456	0.96962	0.00022	0.97118	0.89734	2.0	0.35616	0.24615
10.0	1.0	0.95463	0.9138	0.90912	0.02404	0.94272	0.95357	-8.94308	0.9557	0.00022	0.96168	0.84858	2.0	0.34409	0.24615
11.0	1.0	0.92964	0.86995	0.90714	0.04053	0.91297	0.92866	-10.13488	0.93062	0.00023	0.94658	0.77728	2.0	0.32357	0.26977
12.0	1.0	0.90304	0.82512	0.88506	0.05492	0.88233	0.90195	-11.35337	0.90413	0.00024	0.93303	0.71034	2.0	0.32022	0.26977
13.0	1.0	0.88152	0.7894	0.84092	0.06918	0.8582	0.88012	-11.69221	0.88293	0.00024	0.92366	0.65917	2.0	0.31672	0.26977
14.0	1.0	0.8641	0.76057	0.78938	0.08311	0.83894	0.86172	-13.38906	0.8665	0.00025	0.91609	0.62061	2.0	0.31088	0.26977
15.0	1.0	0.88665	0.79814	0.87054	0.07086	0.86783	0.88578	-14.98083	0.88753	0.00028	0.93681	0.67052	2.0	0.30542	0.26977
16.0	1.0	0.90771	0.83292	0.90094	0.06676	0.89353	0.90704	-16.29921	0.90837	0.00031	0.9516	0.72041	2.0	0.29173	0.26977
17.0	1.0	0.90445	0.82689	0.87334	0.06877	0.89029	0.90388	-18.27636	0.90502	0.00031	0.95149	0.70996	2.0	0.29108	0.26977
18.0	1.0	0.91503	0.84447	0.90001	0.06443	0.90321	0.91471	-19.6479	0.91536	0.00033	0.95915	0.73471	2.0	0.28948	0.26977
19.0	1.0	0.91354	0.84144	0.89049	0.06745	0.90183	0.91324	-21.30219	0.91383	0.00034	0.95941	0.72886	2.0	0.28927	0.26977
20.0	1.0	0.93846	0.88454	0.94485	0.05403	0.93055	0.9382	-23.0093	0.93872	0.00036	0.97217	0.79551	2.0	0.28962	0.26977

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



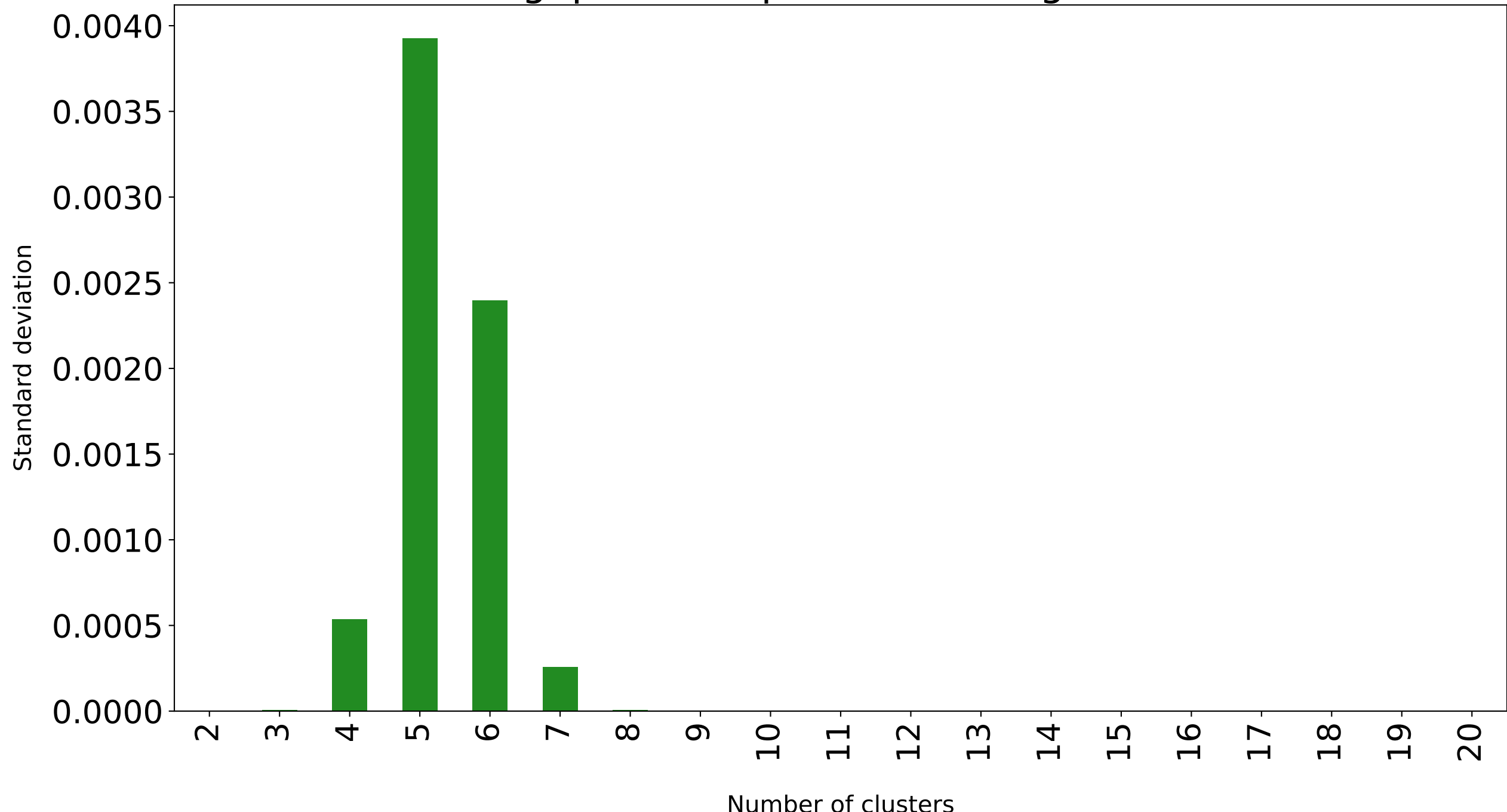


Cophenetic Correlation Coefficient: 0.7493009058764919

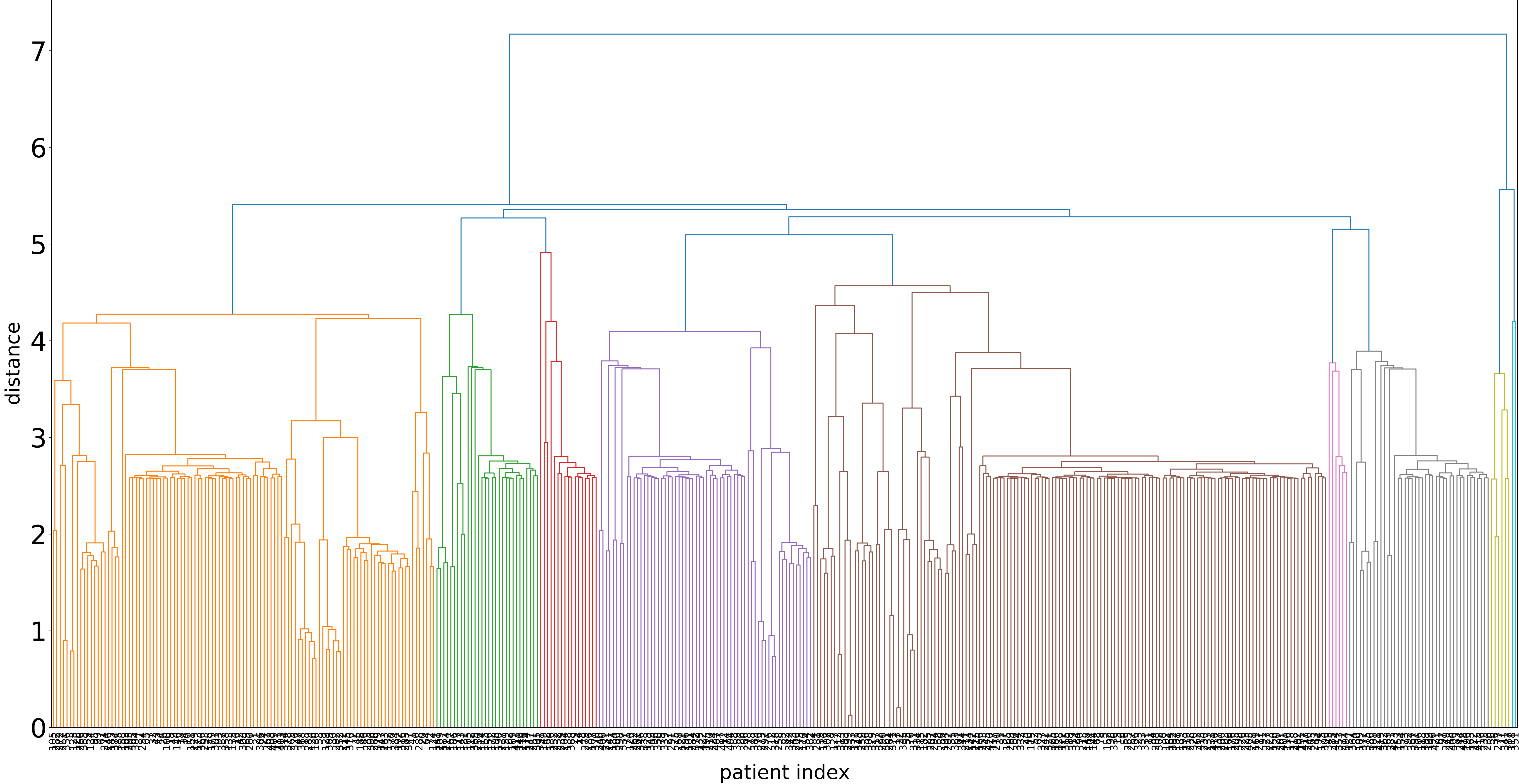
Average values of five clustering indices
gap: 0.90, Tp: 0.25, average link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99431	0.98904	0.91035	0.00468	0.87355	0.99415	0.00382	0.99447	0.00105	0.98037	0.97994	0.0	0.34189	0.22096
3.0	1.0	0.88542	0.79749	0.44616	0.06796	0.42309	0.87775	0.12292	0.8933	0.00027	0.70523	0.69415	0.5	0.26542	0.22237
4.0	0.99997	0.80226	0.68639	0.58155	0.13109	0.52999	0.7955	-0.27966	0.80918	9e-05	0.64539	0.56379	0.5	0.22182	0.22388
5.0	1.00003	0.75039	0.60159	0.41853	0.16662	0.51271	0.73661	-0.51897	0.76463	9e-05	0.59645	0.45994	0.5	0.23853	0.22388
6.0	1.0	0.91855	0.85406	0.91098	0.0734	0.87294	0.91559	-2.43432	0.9216	0.00015	0.8883	0.76374	0.5	0.23763	0.2283
7.0	1.0	0.91115	0.84225	0.83294	0.07442	0.87187	0.90783	-3.5923	0.91452	0.00016	0.89457	0.74911	1.8	0.23435	0.2283
8.0	1.0	0.87126	0.77187	0.72642	0.06324	0.82488	0.86351	-4.76355	0.87913	0.00016	0.8607	0.65466	1.8	0.25828	0.2283
9.0	1.0	0.96687	0.93748	0.97002	0.02083	0.95693	0.96609	-6.7662	0.96765	0.00021	0.96918	0.88996	1.8	0.26538	0.28037
10.0	1.0	0.96491	0.93293	0.93829	0.02156	0.95541	0.96432	-8.28634	0.96551	0.00022	0.9699	0.87967	2.0	0.33059	0.28037
11.0	1.0	0.93276	0.87278	0.85546	0.0337	0.91566	0.93069	-9.35746	0.93484	0.00022	0.94402	0.78045	2.0	0.34171	0.28037
12.0	1.0	0.89302	0.80664	0.81868	0.05315	0.86814	0.89095	-10.52623	0.8951	0.00022	0.91998	0.68289	2.0	0.33563	0.29557
13.0	1.0	0.90736	0.83332	0.86662	0.05904	0.88872	0.90574	-12.05593	0.909	0.00025	0.93845	0.72697	2.0	0.31477	0.29557
14.0	1.0	0.88929	0.80208	0.8289	0.07281	0.86868	0.88736	-12.48007	0.89123	0.00025	0.93105	0.67933	2.0	0.3125	0.29322
15.0	1.0	0.87602	0.77827	0.78709	0.08353	0.85423	0.87292	-14.24948	0.87914	0.00026	0.92526	0.64505	2.0	0.30881	0.29322
16.0	1.0	0.91305	0.84207	0.8906	0.06564	0.8992	0.91247	-16.05243	0.91363	0.0003	0.953	0.73429	2.0	0.30386	0.3083
17.0	1.0	0.91016	0.83622	0.86433	0.06726	0.89642	0.90936	-18.03382	0.91097	0.0003	0.95281	0.72419	2.0	0.29942	0.3083
18.0	1.0	0.92196	0.85654	0.89051	0.06117	0.91075	0.92149	-19.46707	0.92243	0.00032	0.96125	0.75434	2.0	0.29527	0.3083
19.0	1.0	0.91805	0.84894	0.87463	0.06272	0.90659	0.91735	-20.96039	0.91875	0.00033	0.96003	0.74135	2.0	0.29399	0.31027
20.0	1.0	0.94143	0.8904	0.92823	0.05053	0.93365	0.94119	-22.64773	0.94166	0.00036	0.97279	0.80639	2.0	0.29119	0.31027

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



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



Cophenetic Correlation Coefficient: 0.740743405583321

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

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2.0	1.0	0.99512	0.99032	0.87596	0.00424	0.87502	0.99509	0.00367	0.99514	0.001	0.98166	0.98114	0.5	0.34982	0.23022
3.0	1.0	0.94874	0.90656	0.59616	0.03175	0.70011	0.94455	0.00462	0.95303	0.00068	0.85922	0.85546	1.8	0.28818	0.23022
4.0	0.99999	0.81299	0.70381	0.50107	0.10886	0.47625	0.80632	-0.55163	0.81981	8e-05	0.64393	0.5919	1.8	0.24074	0.2322
5.0	1.00006	0.83726	0.72782	0.71848	0.10145	0.68774	0.83075	-1.63044	0.84394	0.00011	0.73652	0.60104	1.8	0.22596	0.23456
6.0	1.0	0.92019	0.85873	0.94438	0.06003	0.87174	0.91614	-3.10931	0.92439	0.00015	0.88492	0.77839	1.8	0.23242	0.23489
7.0	1.0	0.94331	0.89898	0.91981	0.03652	0.91611	0.94097	-4.15595	0.94569	0.00016	0.92884	0.83943	1.8	0.25488	0.23489
8.0	1.0	0.90647	0.83339	0.80119	0.04747	0.87108	0.90098	-5.24258	0.91204	0.00016	0.89584	0.74454	1.8	0.27015	0.23489
9.0	1.0	0.9548	0.91763	0.9695	0.02429	0.94023	0.95276	-7.26441	0.95687	0.00021	0.95495	0.86644	1.8	0.27463	0.25976
10.0	1.0	0.96658	0.93708	0.94227	0.01783	0.95707	0.9658	-8.90598	0.96735	0.00022	0.97027	0.89014	2.0	0.3396	0.25976
11.0	1.0	0.93492	0.87799	0.94777	0.03487	0.91893	0.93378	-9.76781	0.93607	0.00023	0.94854	0.78835	2.0	0.32102	0.29798
12.0	1.0	0.91943	0.85305	0.92899	0.04638	0.90183	0.91821	-11.20196	0.92066	0.00024	0.94273	0.75386	2.0	0.32405	0.29798
13.0	1.0	0.91492	0.84604	0.8802	0.05448	0.89761	0.91347	-12.0152	0.91638	0.00025	0.94291	0.74567	2.0	0.32893	0.30672
14.0	1.0	0.88954	0.80228	0.91578	0.07232	0.86997	0.88748	-13.06448	0.89162	0.00027	0.93362	0.67995	2.0	0.32152	0.31974
15.0	1.0	0.90426	0.82772	0.90182	0.0669	0.88814	0.90329	-15.15747	0.90523	0.00029	0.94561	0.71534	2.0	0.31881	0.31974
16.0	1.0	0.91152	0.83955	0.89862	0.06316	0.89725	0.91085	-15.86984	0.91219	0.0003	0.9516	0.73114	2.0	0.31819	0.31463
17.0	1.0	0.91178	0.83919	0.87674	0.0637	0.89802	0.91105	-17.87283	0.91251	0.0003	0.95298	0.72904	2.0	0.31405	0.31463
18.0	1.0	0.90618	0.8288	0.85077	0.06667	0.89202	0.90492	-19.88179	0.90744	0.00031	0.95091	0.71326	2.0	0.39537	0.31463
19.0	1.0	0.9221	0.85603	0.88331	0.0583	0.91101	0.92139	-21.48165	0.92281	0.00033	0.96136	0.75269	2.0	0.38839	0.31463
20.0	1.0	0.93902	0.8861	0.92329	0.04933	0.9308	0.93872	-23.17839	0.93932	0.00035	0.97126	0.7997	2.0	0.385	0.31463

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

