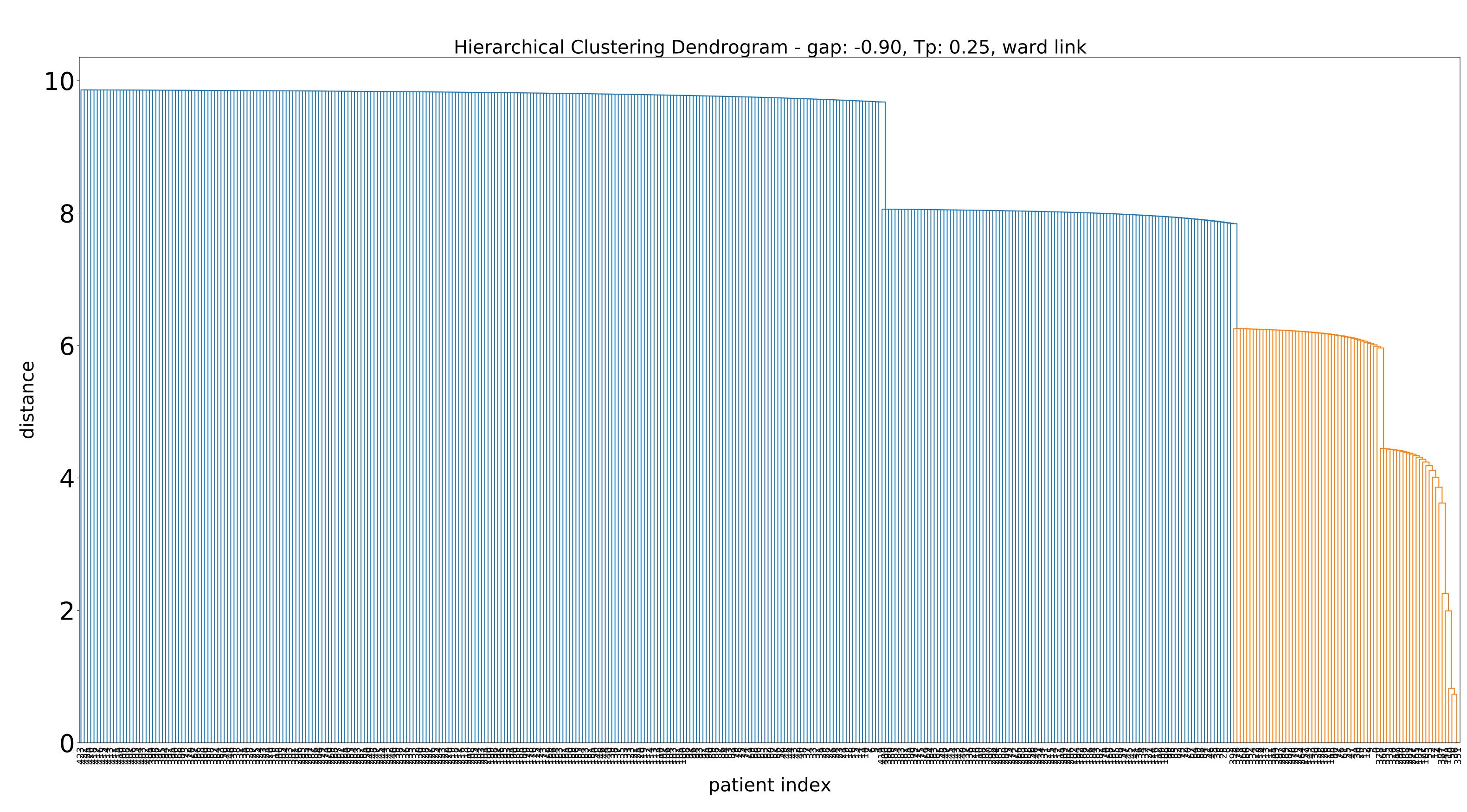


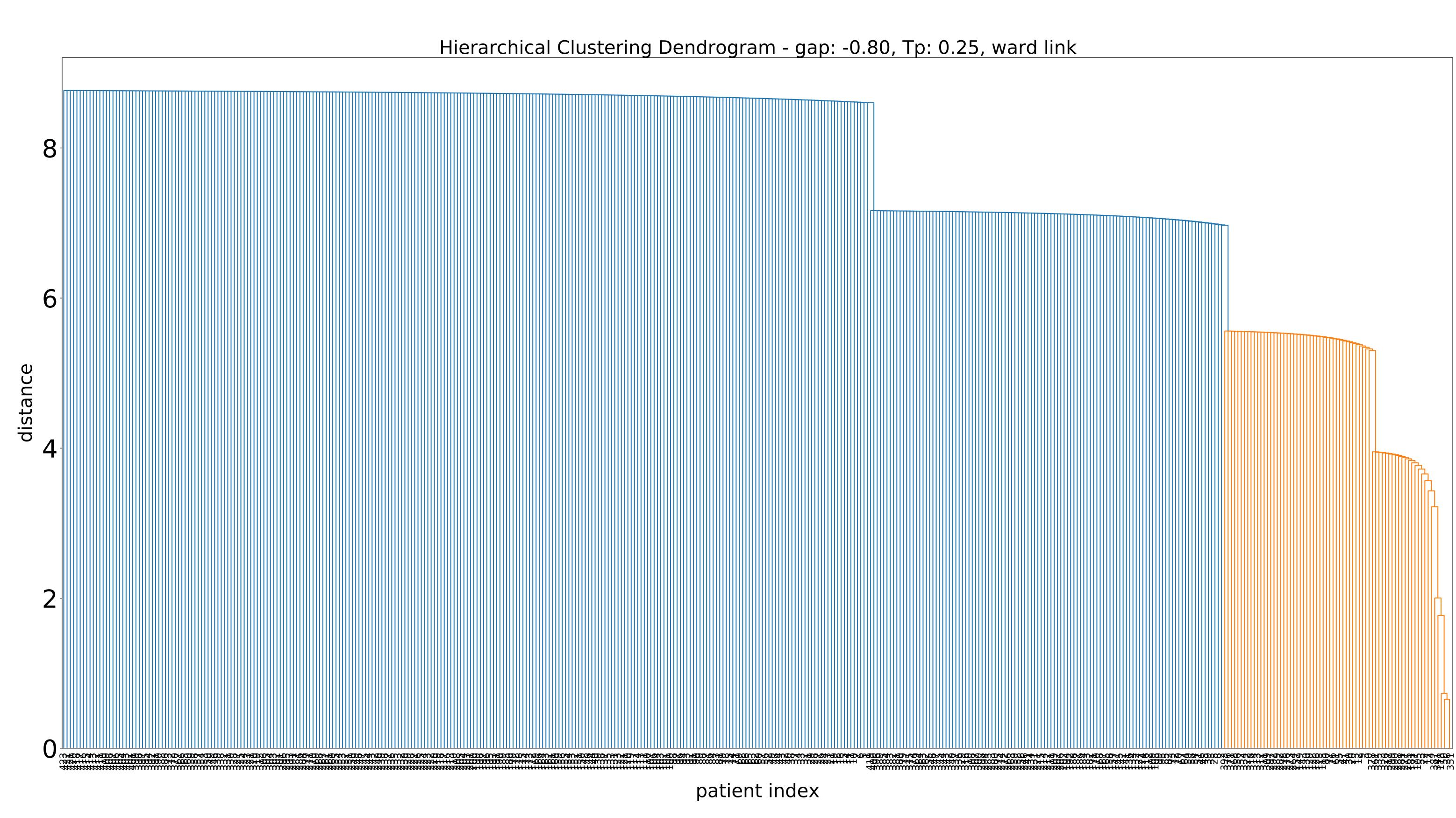
Average values of 15 clustering indices gap: -1.00, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	1.0	1.0	1.0	0.176	1.0	1.0	0.272	1.0	0.0	1.0	1.0	2.0	0.533	0.455
3	1.0	1.0	1.0	1.0	0.259	1.0	1.0	0.441	1.0	0.0	1.0	1.0	2.0	0.689	0.455
4	1.0	1.0	1.0	1.0	0.312	1.0	1.0	0.569	1.0	0.0	1.0	1.0	1.999	0.767	0.455
5	1.0	1.0	1.0	1.0	0.34	1.0	1.0	0.665	1.0	0.0	1.0	1.0	1.999	0.813	0.455
6	1.0	1.0	1.0	1.0	0.364	1.0	1.0	0.745	1.0	0.0	1.0	1.0	1.999	0.844	0.455
7	1.0	1.0	1.0	1.0	0.384	1.0	1.0	0.814	1.0	0.0	1.0	1.0	1.998	0.867	0.455
8	1.0	1.0	1.0	1.0	0.395	1.0	1.0	0.871	1.0	0.0	1.0	1.0	1.998	0.883	0.455
9	1.0	1.0	1.0	1.0	0.406	1.0	1.0	0.923	1.0	0.0	1.0	1.0	1.998	0.896	0.455
10	1.0	1.0	1.0	1.0	0.415	1.0	1.0	0.969	1.0	0.0	1.0	1.0	1.997	0.907	0.455
11	1.0	1.0	1.0	1.0	0.422	1.0	1.0	1.011	1.0	0.0	1.0	1.0	1.997	0.915	0.455
12	1.0	1.0	1.0	1.0	0.428	1.0	1.0	1.05	1.0	0.0	1.0	1.0	1.997	0.922	0.455
13	1.0	1.0	1.0	1.0	0.433	1.0	1.0	1.084	1.0	0.0	1.0	1.0	1.996	0.928	0.455
14	1.0	1.0	1.0	1.0	0.439	1.0	1.0	1.119	1.0	0.0	1.0	1.0	1.996	0.933	0.455
15	1.0	1.0	1.0	1.0	0.441	1.0	1.0	1.148	1.0	0.0	1.0	1.0	1.996	0.938	0.455
16	1.0	1.0	1.0	1.0	0.446	1.0	1.0	1.177	1.0	0.0	1.0	1.0	1.995	0.942	0.455
17	1.0	1.0	1.0	1.0	0.448	1.0	1.0	1.204	1.0	0.0	1.0	1.0	1.995	0.945	0.455
18	1.0	1.0	1.0	1.0	0.451	1.0	1.0	1.229	1.0	0.0	1.0	1.0	1.995	0.948	0.455
19	1.0	1.0	1.0	1.0	0.453	1.0	1.0	1.252	1.0	0.0	1.0	1.0	1.994	0.951	0.455
20	1.0	1.0	1.0	1.0	0.455	1.0	1.0	1.275	1.0	0.0	1.0	1.0	1.994	0.953	0.455



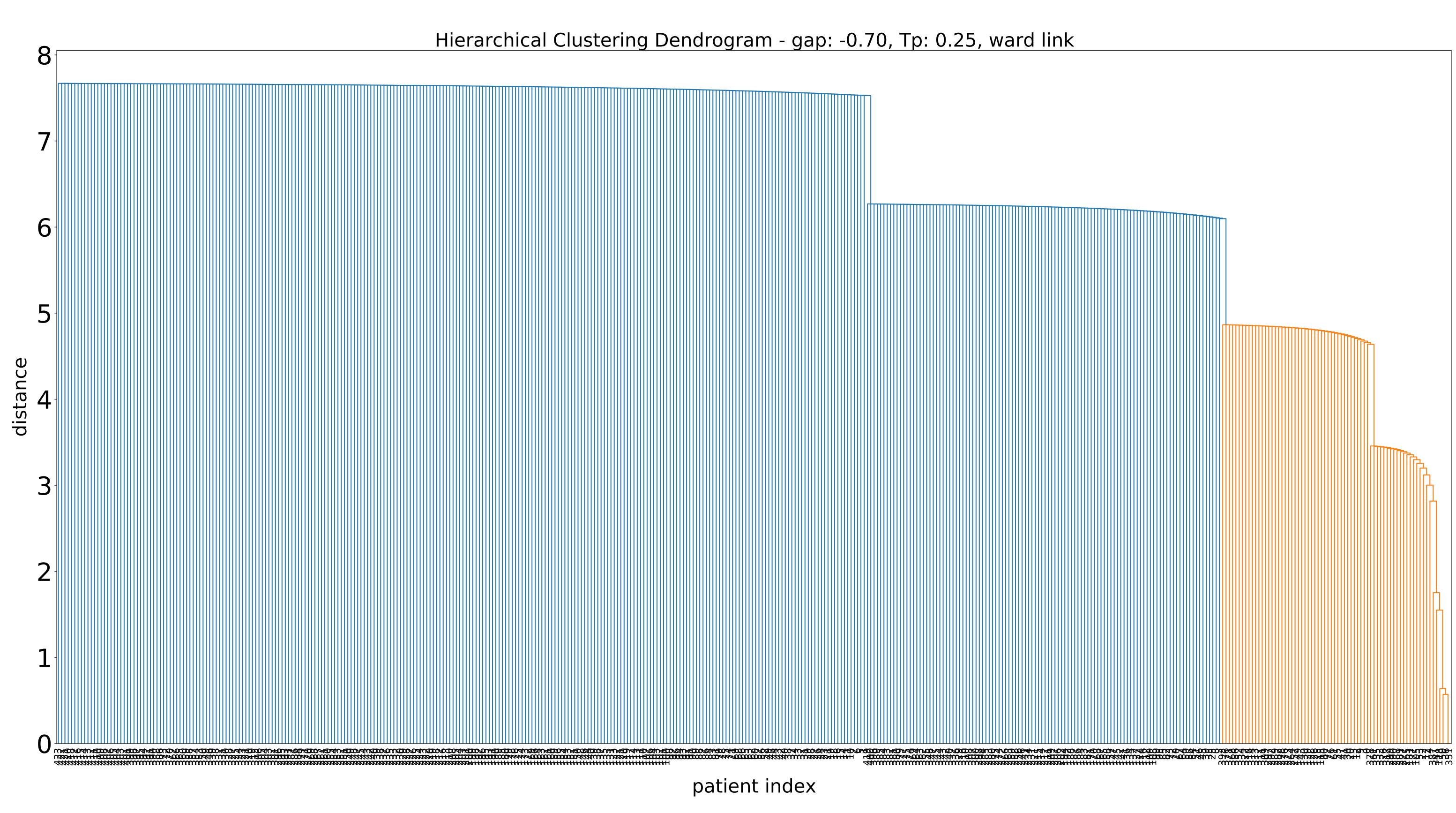
Average values of 15 clustering indices gap: -0.90, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	1.0	1.0	1.0	0.166	1.0	1.0	0.265	1.0	0.0	1.0	1.0	2.0	0.533	0.455
3	1.0	1.0	1.0	1.0	0.258	1.0	1.0	0.442	1.0	0.0	1.0	1.0	2.0	0.689	0.455
4	1.0	1.0	1.0	1.0	0.308	1.0	1.0	0.566	1.0	0.0	1.0	1.0	1.999	0.767	0.455
5	1.0	1.0	1.0	1.0	0.338	1.0	1.0	0.661	1.0	0.0	1.0	1.0	1.999	0.813	0.455
6	1.0	1.0	1.0	1.0	0.364	1.0	1.0	0.743	1.0	0.0	1.0	1.0	1.999	0.844	0.455
7	1.0	1.0	1.0	1.0	0.383	1.0	1.0	0.812	1.0	0.0	1.0	1.0	1.998	0.867	0.455
8	1.0	1.0	1.0	1.0	0.396	1.0	1.0	0.871	1.0	0.0	1.0	1.0	1.998	0.883	0.455
9	1.0	1.0	1.0	1.0	0.405	1.0	1.0	0.922	1.0	0.0	1.0	1.0	1.998	0.896	0.455
10	1.0	1.0	1.0	1.0	0.416	1.0	1.0	0.971	1.0	0.0	1.0	1.0	1.997	0.907	0.455
11	1.0	1.0	1.0	1.0	0.422	1.0	1.0	1.012	1.0	0.0	1.0	1.0	1.997	0.915	0.455
12	1.0	1.0	1.0	1.0	0.428	1.0	1.0	1.05	1.0	0.0	1.0	1.0	1.997	0.922	0.455
13	1.0	1.0	1.0	1.0	0.433	1.0	1.0	1.084	1.0	0.0	1.0	1.0	1.996	0.928	0.455
14	1.0	1.0	1.0	1.0	0.438	1.0	1.0	1.118	1.0	0.0	1.0	1.0	1.996	0.933	0.455
15	1.0	1.0	1.0	1.0	0.442	1.0	1.0	1.148	1.0	0.0	1.0	1.0	1.996	0.938	0.455
16	1.0	1.0	1.0	1.0	0.445	1.0	1.0	1.176	1.0	0.0	1.0	1.0	1.995	0.942	0.455
17	1.0	1.0	1.0	1.0	0.448	1.0	1.0	1.203	1.0	0.0	1.0	1.0	1.995	0.945	0.455
18	1.0	1.0	1.0	1.0	0.451	1.0	1.0	1.229	1.0	0.0	1.0	1.0	1.995	0.948	0.455
19	1.0	1.0	1.0	1.0	0.453	1.0	1.0	1.252	1.0	0.0	1.0	1.0	1.994	0.951	0.455
20	1.0	1.0	1.0	1.0	0.456	1.0	1.0	1.275	1.0	0.0	1.0	1.0	1.994	0.953	0.455



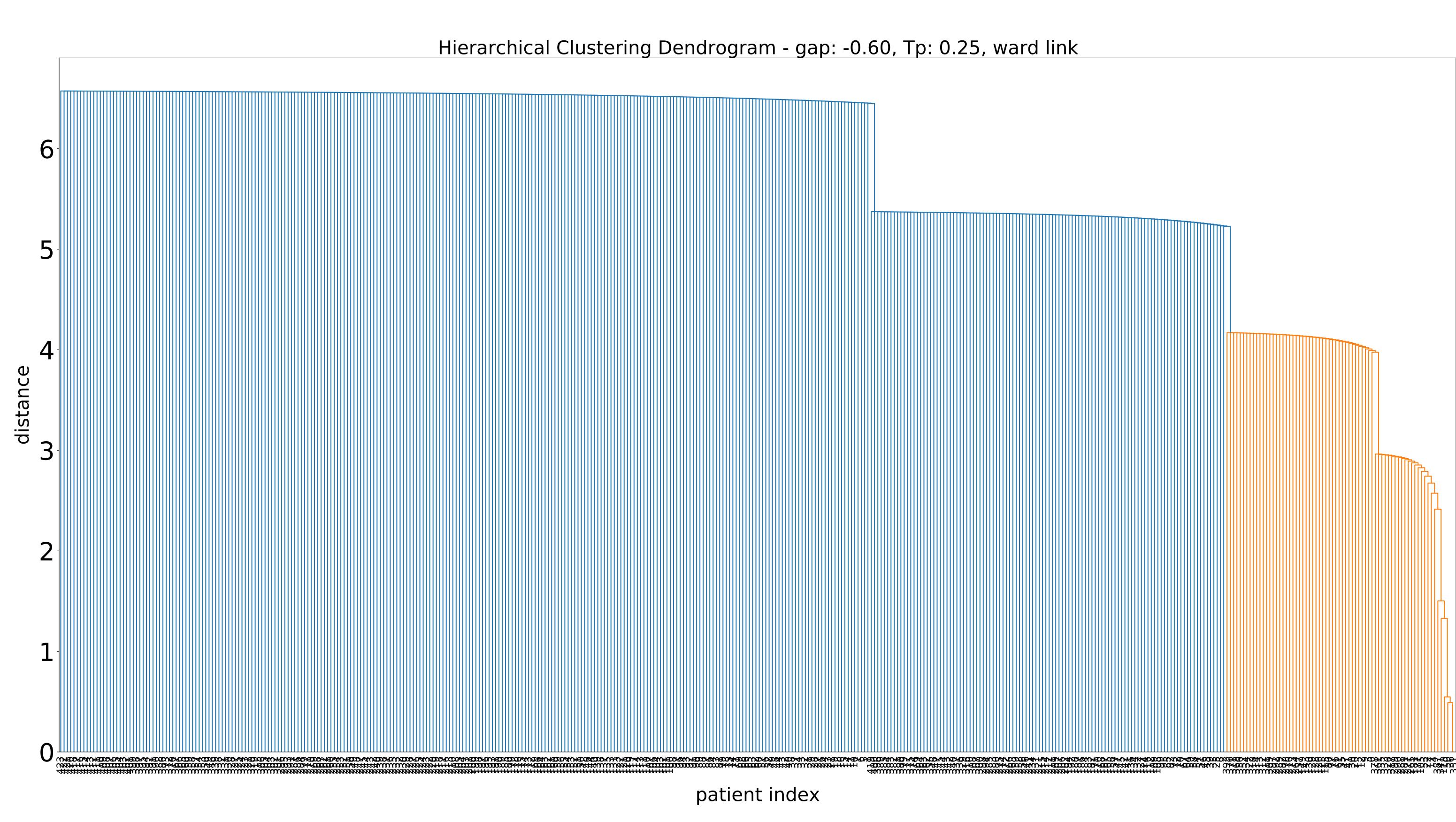
Average values of 15 clustering indices gap: -0.80, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	1.0	1.0	1.0	0.168	1.0	1.0	0.267	1.0	0.0	1.0	1.0	2.0	0.533	0.455
3	1.0	1.0	1.0	1.0	0.258	1.0	1.0	0.442	1.0	0.0	1.0	1.0	2.0	0.689	0.455
4	1.0	1.0	1.0	1.0	0.311	1.0	1.0	0.569	1.0	0.0	1.0	1.0	1.999	0.767	0.455
5	1.0	1.0	1.0	1.0	0.341	1.0	1.0	0.662	1.0	0.0	1.0	1.0	1.999	0.813	0.455
6	1.0	1.0	1.0	1.0	0.366	1.0	1.0	0.745	1.0	0.0	1.0	1.0	1.999	0.844	0.455
7	1.0	1.0	1.0	1.0	0.381	1.0	1.0	0.812	1.0	0.0	1.0	1.0	1.998	0.867	0.455
8	1.0	1.0	1.0	1.0	0.395	1.0	1.0	0.871	1.0	0.0	1.0	1.0	1.998	0.883	0.455
9	1.0	1.0	1.0	1.0	0.408	1.0	1.0	0.925	1.0	0.0	1.0	1.0	1.998	0.896	0.455
10	1.0	1.0	1.0	1.0	0.415	1.0	1.0	0.969	1.0	0.0	1.0	1.0	1.997	0.907	0.455
11	1.0	1.0	1.0	1.0	0.423	1.0	1.0	1.012	1.0	0.0	1.0	1.0	1.997	0.915	0.455
12	1.0	1.0	1.0	1.0	0.428	1.0	1.0	1.05	1.0	0.0	1.0	1.0	1.997	0.922	0.455
13	1.0	1.0	1.0	1.0	0.433	1.0	1.0	1.086	1.0	0.0	1.0	1.0	1.996	0.928	0.455
14	1.0	1.0	1.0	1.0	0.438	1.0	1.0	1.118	1.0	0.0	1.0	1.0	1.996	0.933	0.455
15	1.0	1.0	1.0	1.0	0.441	1.0	1.0	1.148	1.0	0.0	1.0	1.0	1.996	0.938	0.455
16	1.0	1.0	1.0	1.0	0.445	1.0	1.0	1.177	1.0	0.0	1.0	1.0	1.995	0.942	0.455
17	1.0	1.0	1.0	1.0	0.448	1.0	1.0	1.204	1.0	0.0	1.0	1.0	1.995	0.945	0.455
18	1.0	1.0	1.0	1.0	0.451	1.0	1.0	1.229	1.0	0.0	1.0	1.0	1.995	0.948	0.455
19	1.0	1.0	1.0	1.0	0.453	1.0	1.0	1.253	1.0	0.0	1.0	1.0	1.994	0.951	0.455
20	1.0	1.0	1.0	1.0	0.455	1.0	1.0	1.275	1.0	0.0	1.0	1.0	1.994	0.953	0.455



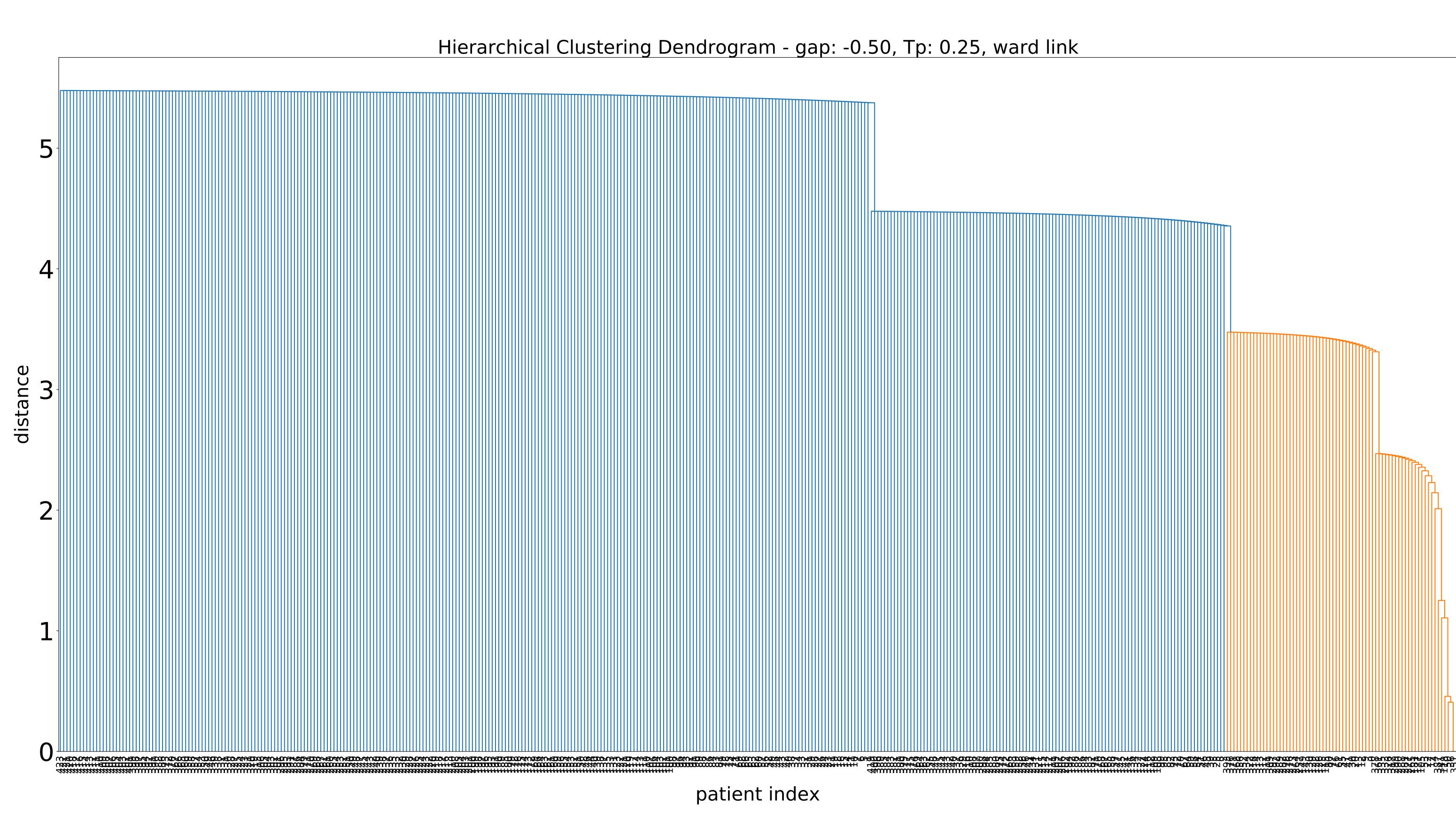
Average values of 15 clustering indices gap: -0.70, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	1.0	1.0	1.0	0.175	1.0	1.0	0.272	1.0	0.0	1.0	1.0	2.0	0.533	0.455
3	1.0	1.0	1.0	1.0	0.262	1.0	1.0	0.444	1.0	0.0	1.0	1.0	2.0	0.689	0.455
4	1.0	1.0	1.0	1.0	0.31	1.0	1.0	0.568	1.0	0.0	1.0	1.0	1.999	0.767	0.455
5	1.0	1.0	1.0	1.0	0.341	1.0	1.0	0.665	1.0	0.0	1.0	1.0	1.999	0.813	0.455
6	1.0	1.0	1.0	1.0	0.363	1.0	1.0	0.744	1.0	0.0	1.0	1.0	1.999	0.844	0.455
7	1.0	1.0	1.0	1.0	0.383	1.0	1.0	0.814	1.0	0.0	1.0	1.0	1.998	0.867	0.455
8	1.0	1.0	1.0	1.0	0.397	1.0	1.0	0.873	1.0	0.0	1.0	1.0	1.998	0.883	0.455
9	1.0	1.0	1.0	1.0	0.405	1.0	1.0	0.922	1.0	0.0	1.0	1.0	1.998	0.896	0.455
10	1.0	1.0	1.0	1.0	0.415	1.0	1.0	0.97	1.0	0.0	1.0	1.0	1.997	0.907	0.455
11	1.0	1.0	1.0	1.0	0.422	1.0	1.0	1.011	1.0	0.0	1.0	1.0	1.997	0.915	0.455
12	1.0	1.0	1.0	1.0	0.427	1.0	1.0	1.049	1.0	0.0	1.0	1.0	1.997	0.922	0.455
13	1.0	1.0	1.0	1.0	0.434	1.0	1.0	1.085	1.0	0.0	1.0	1.0	1.996	0.928	0.455
14	1.0	1.0	1.0	1.0	0.438	1.0	1.0	1.117	1.0	0.0	1.0	1.0	1.996	0.933	0.455
15	1.0	1.0	1.0	1.0	0.442	1.0	1.0	1.148	1.0	0.0	1.0	1.0	1.996	0.938	0.455
16	1.0	1.0	1.0	1.0	0.445	1.0	1.0	1.176	1.0	0.0	1.0	1.0	1.995	0.942	0.455
17	1.0	1.0	1.0	1.0	0.448	1.0	1.0	1.203	1.0	0.0	1.0	1.0	1.995	0.945	0.455
18	1.0	1.0	1.0	1.0	0.451	1.0	1.0	1.229	1.0	0.0	1.0	1.0	1.995	0.948	0.455
19	1.0	1.0	1.0	1.0	0.454	1.0	1.0	1.253	1.0	0.0	1.0	1.0	1.994	0.951	0.455
20	1.0	1.0	1.0	1.0	0.456	1.0	1.0	1.274	1.0	0.0	1.0	1.0	1.994	0.953	0.455



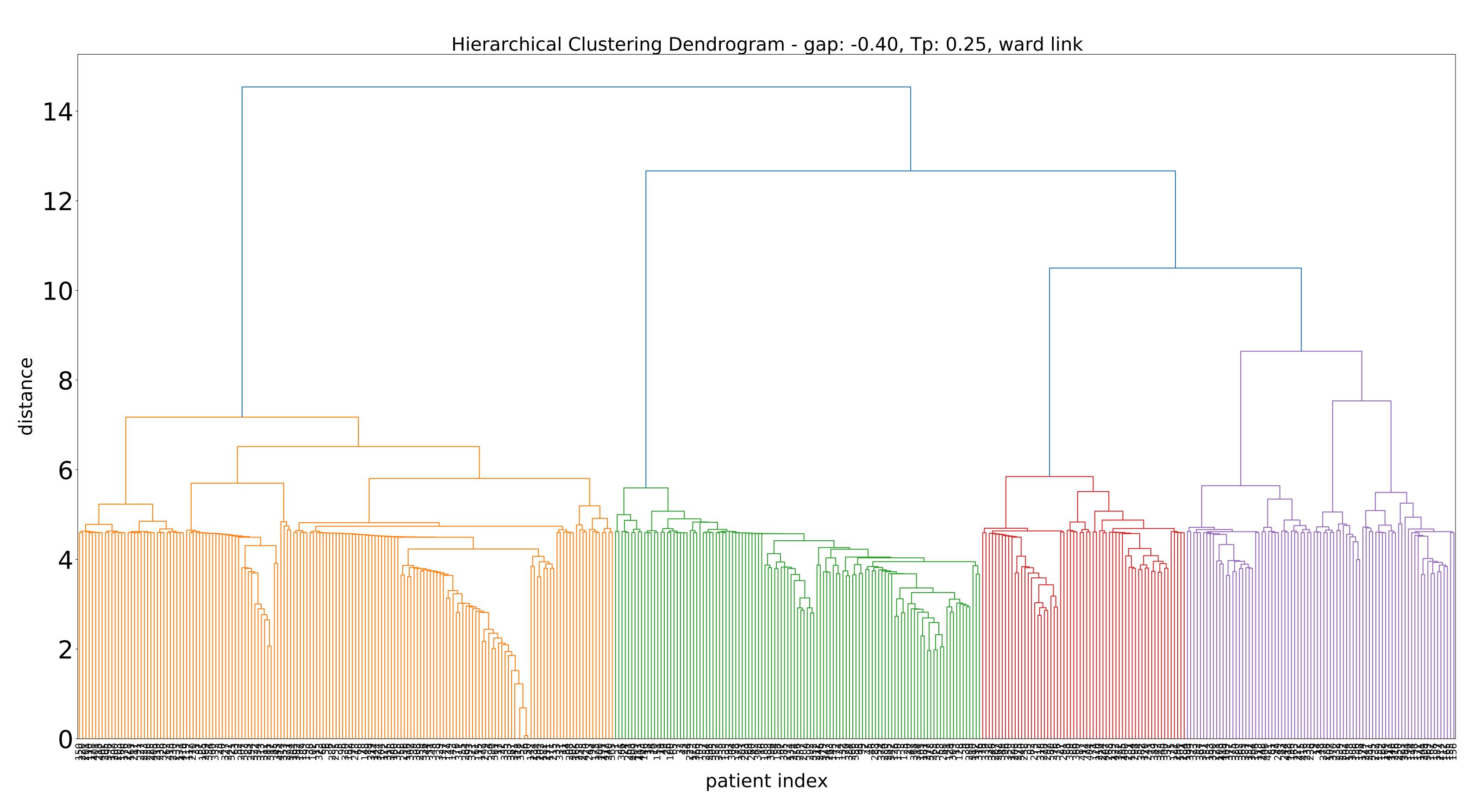
Average values of 15 clustering indices gap: -0.60, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	1.0	1.0	1.0	0.172	1.0	1.0	0.27	1.0	0.0	1.0	1.0	2.0	0.533	0.455
3	1.0	1.0	1.0	1.0	0.261	1.0	1.0	0.442	1.0	0.0	1.0	1.0	2.0	0.689	0.455
4	1.0	1.0	1.0	1.0	0.307	1.0	1.0	0.566	1.0	0.0	1.0	1.0	1.999	0.767	0.455
5	1.0	1.0	1.0	1.0	0.34	1.0	1.0	0.663	1.0	0.0	1.0	1.0	1.999	0.813	0.455
6	1.0	1.0	1.0	1.0	0.365	1.0	1.0	0.745	1.0	0.0	1.0	1.0	1.999	0.844	0.455
7	1.0	1.0	1.0	1.0	0.383	1.0	1.0	0.813	1.0	0.0	1.0	1.0	1.998	0.867	0.455
8	1.0	1.0	1.0	1.0	0.395	1.0	1.0	0.871	1.0	0.0	1.0	1.0	1.998	0.883	0.455
9	1.0	1.0	1.0	1.0	0.407	1.0	1.0	0.924	1.0	0.0	1.0	1.0	1.998	0.896	0.455
10	1.0	1.0	1.0	1.0	0.416	1.0	1.0	0.971	1.0	0.0	1.0	1.0	1.997	0.907	0.455
11	1.0	1.0	1.0	1.0	0.422	1.0	1.0	1.011	1.0	0.0	1.0	1.0	1.997	0.915	0.455
12	1.0	1.0	1.0	1.0	0.427	1.0	1.0	1.049	1.0	0.0	1.0	1.0	1.997	0.922	0.455
13	1.0	1.0	1.0	1.0	0.433	1.0	1.0	1.084	1.0	0.0	1.0	1.0	1.996	0.928	0.455
14	1.0	1.0	1.0	1.0	0.438	1.0	1.0	1.118	1.0	0.0	1.0	1.0	1.996	0.933	0.455
15	1.0	1.0	1.0	1.0	0.442	1.0	1.0	1.148	1.0	0.0	1.0	1.0	1.996	0.938	0.455
16	1.0	1.0	1.0	1.0	0.445	1.0	1.0	1.176	1.0	0.0	1.0	1.0	1.995	0.942	0.455
17	1.0	1.0	1.0	1.0	0.448	1.0	1.0	1.203	1.0	0.0	1.0	1.0	1.995	0.945	0.455
18	1.0	1.0	1.0	1.0	0.45	1.0	1.0	1.229	1.0	0.0	1.0	1.0	1.995	0.948	0.455
19	1.0	1.0	1.0	1.0	0.453	1.0	1.0	1.252	1.0	0.0	1.0	1.0	1.994	0.951	0.455
20	1.0	1.0	1.0	1.0	0.455	1.0	1.0	1.275	1.0	0.0	1.0	1.0	1.994	0.953	0.455



Average values of 15 clustering indices gap: -0.50, Tp: 0.25, ward link

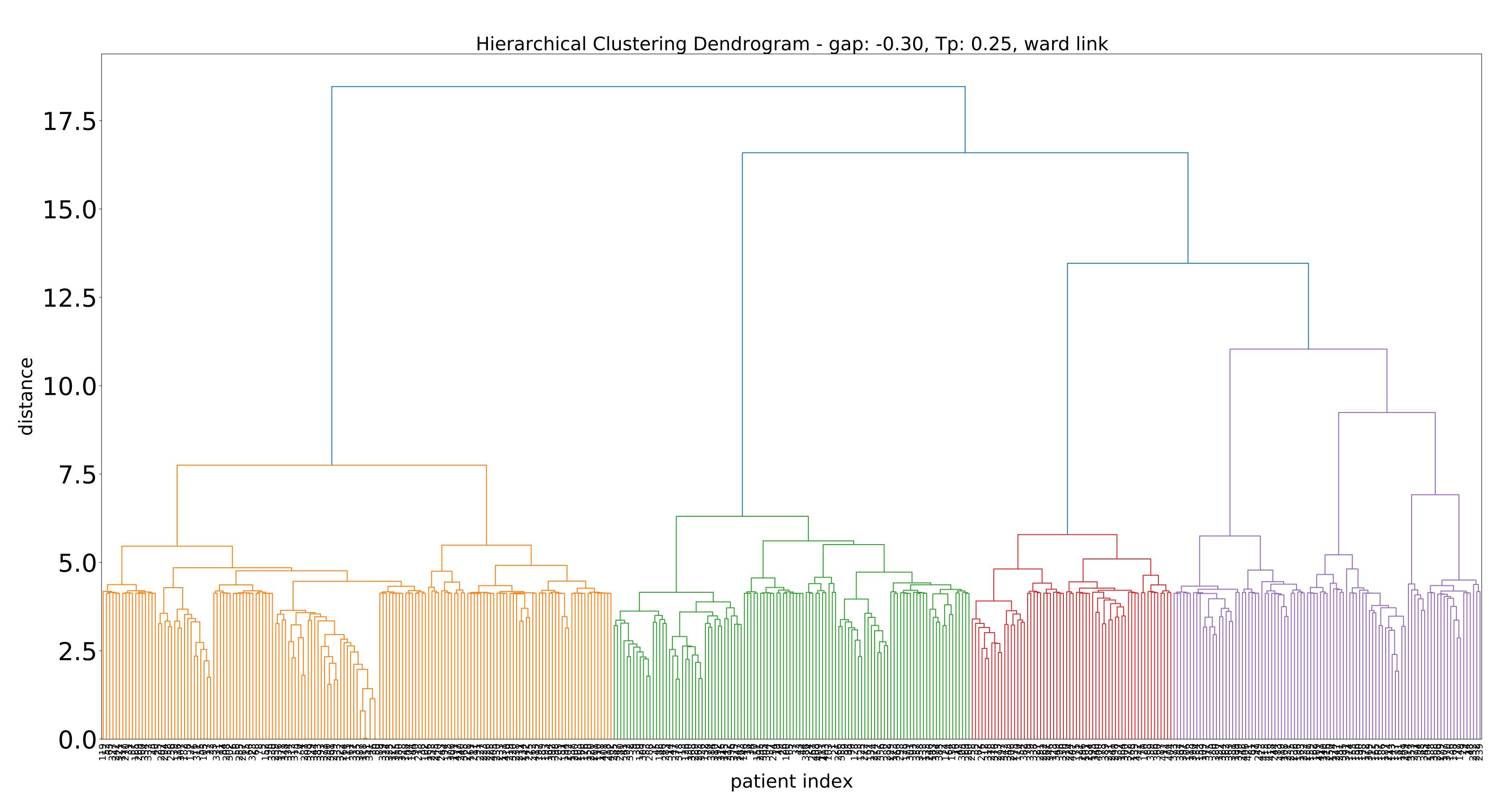
k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	1.0	1.0	1.0	0.175	1.0	1.0	0.272	1.0	0.0	1.0	1.0	2.0	0.533	0.455
3	1.0	1.0	1.0	1.0	0.259	1.0	1.0	0.443	1.0	0.0	1.0	1.0	2.0	0.689	0.455
4	1.0	1.0	1.0	1.0	0.31	1.0	1.0	0.568	1.0	0.0	1.0	1.0	1.999	0.767	0.455
5	1.0	1.0	1.0	1.0	0.342	1.0	1.0	0.665	1.0	0.0	1.0	1.0	1.999	0.813	0.455
6	1.0	1.0	1.0	1.0	0.366	1.0	1.0	0.745	1.0	0.0	1.0	1.0	1.999	0.844	0.455
7	1.0	1.0	1.0	1.0	0.383	1.0	1.0	0.813	1.0	0.0	1.0	1.0	1.998	0.867	0.455
8	1.0	1.0	1.0	1.0	0.396	1.0	1.0	0.871	1.0	0.0	1.0	1.0	1.998	0.883	0.455
9	1.0	1.0	1.0	1.0	0.406	1.0	1.0	0.923	1.0	0.0	1.0	1.0	1.998	0.896	0.455
10	1.0	1.0	1.0	1.0	0.413	1.0	1.0	0.968	1.0	0.0	1.0	1.0	1.997	0.907	0.455
11	1.0	1.0	1.0	1.0	0.422	1.0	1.0	1.012	1.0	0.0	1.0	1.0	1.997	0.915	0.455
12	1.0	1.0	1.0	1.0	0.428	1.0	1.0	1.051	1.0	0.0	1.0	1.0	1.997	0.922	0.455
13	1.0	1.0	1.0	1.0	0.433	1.0	1.0	1.086	1.0	0.0	1.0	1.0	1.996	0.928	0.455
14	1.0	1.0	1.0	1.0	0.438	1.0	1.0	1.119	1.0	0.0	1.0	1.0	1.996	0.933	0.455
15	1.0	1.0	1.0	1.0	0.442	1.0	1.0	1.148	1.0	0.0	1.0	1.0	1.996	0.938	0.455
16	1.0	1.0	1.0	1.0	0.445	1.0	1.0	1.177	1.0	0.0	1.0	1.0	1.995	0.942	0.455
17	1.0	1.0	1.0	1.0	0.447	1.0	1.0	1.203	1.0	0.0	1.0	1.0	1.995	0.945	0.455
18	1.0	1.0	1.0	1.0	0.451	1.0	1.0	1.229	1.0	0.0	1.0	1.0	1.995	0.948	0.455
19	1.0	1.0	1.0	1.0	0.453	1.0	1.0	1.253	1.0	0.0	1.0	1.0	1.994	0.951	0.455
20	1.0	1.0	1.0	1.0	0.456	1.0	1.0	1.276	1.0	0.0	1.0	1.0	1.994	0.953	0.455



Cophenetic Correlation Coefficient: 0.1850183151298107

Average values of 15 clustering indices gap: -0.40, Tp: 0.25, ward link

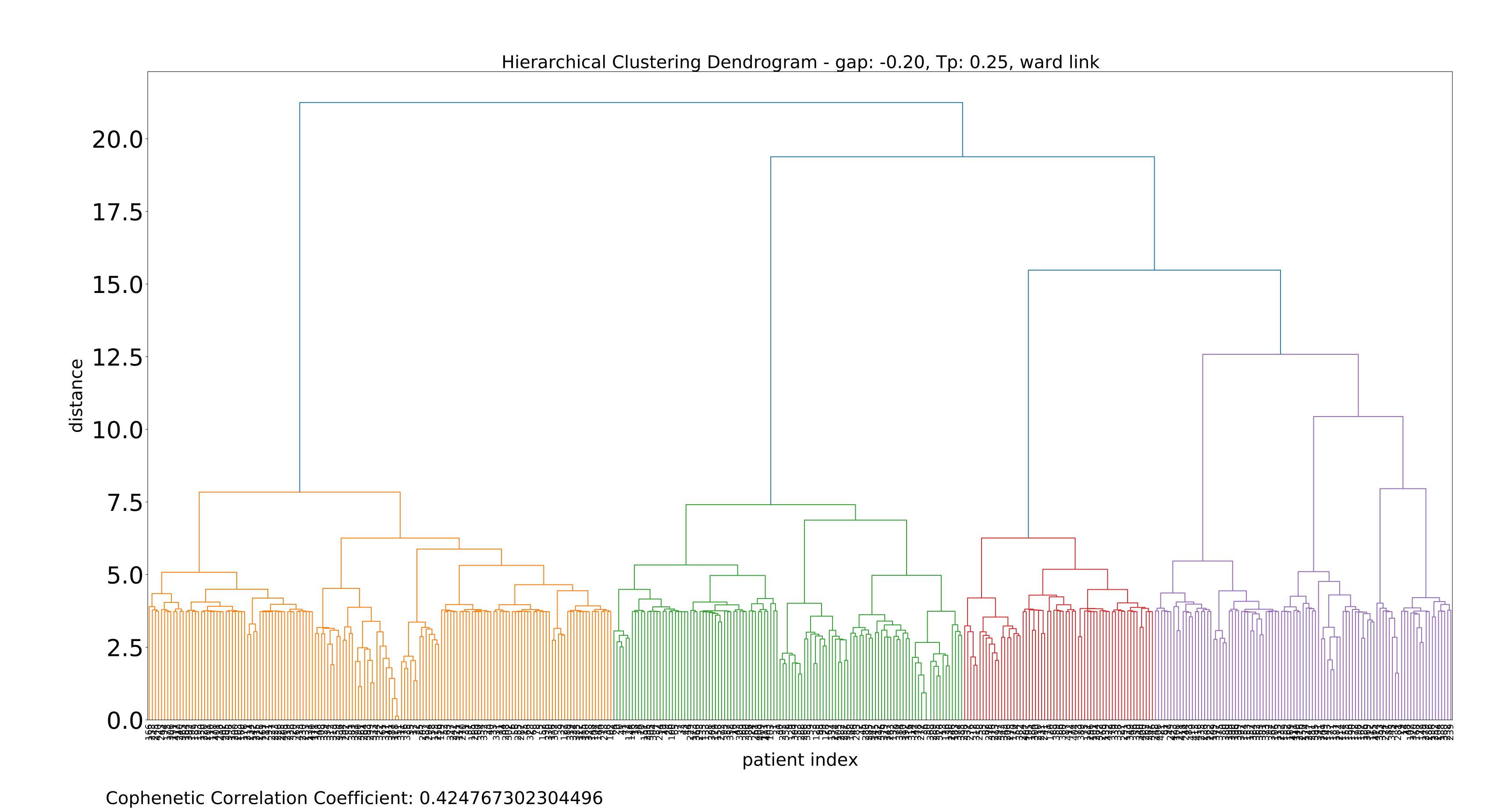
k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.55	0.378	0.035	0.372	0.03	0.547	0.559	0.552	0.0	0.347	0.233	1.654	0.025	0.213
3	1.0	0.287	0.164	-0.226	0.553	-0.309	0.282	0.906	0.291	-0.0	0.205	0.09	1.984	0.018	0.213
4	1.0	0.203	0.105	-0.202	0.604	-0.382	0.19	1.109	0.216	-0.0	0.171	0.055	1.973	0.014	0.213
5	1.0	0.171	0.082	-0.167	0.627	-0.385	0.152	1.221	0.192	-0.0	0.162	0.043	1.964	0.01	0.213
6	1.0	0.149	0.066	-0.134	0.652	-0.369	0.125	1.285	0.177	-0.0	0.159	0.034	1.961	0.008	0.213
7	1.0	0.109	0.045	-0.131	0.694	-0.438	0.086	1.366	0.139	-0.0	0.126	0.023	1.947	-0.0	0.213
8	1.0	0.081	0.031	-0.124	0.727	-0.497	0.06	1.404	0.109	-0.0	0.101	0.016	1.944	-0.009	0.197
9	1.0	0.07	0.025	-0.109	0.734	-0.497	0.049	1.369	0.101	-0.0	0.094	0.013	1.94	-0.007	0.197
10	1.0	0.061	0.021	-0.1	0.745	-0.506	0.041	1.296	0.091	-0.0	0.087	0.011	1.935	-0.023	0.197
11	1.0	0.057	0.019	-0.089	0.75	-0.489	0.037	1.147	0.09	-0.0	0.086	0.009	1.934	-0.026	0.197
12	1.0	0.054	0.017	-0.082	0.753	-0.48	0.033	0.966	0.088	-0.0	0.085	0.009	1.93	-0.025	0.197
13	1.0	0.049	0.015	-0.075	0.759	-0.48	0.029	0.75	0.083	-0.0	0.081	0.007	1.923	-0.028	0.197
14	1.0	0.046	0.013	-0.069	0.762	-0.471	0.026	0.498	0.081	-0.0	0.08	0.007	1.921	-0.028	0.197
15	1.0	0.044	0.012	-0.064	0.762	-0.463	0.024	0.165	0.08	-0.0	0.078	0.006	1.918	-0.028	0.197
16	1.0	0.042	0.011	-0.06	0.764	-0.453	0.022	-0.14	0.078	-0.0	0.078	0.006	1.917	-0.027	0.197
17	1.0	0.041	0.011	-0.056	0.763	-0.443	0.021	-0.553	0.078	-0.0	0.078	0.005	1.917	-0.028	0.202
18	1.0	0.038	0.01	-0.053	0.764	-0.438	0.019	-0.986	0.076	-0.0	0.076	0.005	1.913	-0.03	0.202
19	1.0	0.037	0.009	-0.05	0.764	-0.429	0.018	-1.502	0.076	-0.0	0.076	0.005	1.912	-0.032	0.202
20	1.0	0.036	0.009	-0.047	0.765	-0.421	0.017	-2.038	0.075	-0.0	0.076	0.004	1.912	-0.031	0.202
	•	•		-				•	•		•				



Cophenetic Correlation Coefficient: 0.3000630008429775

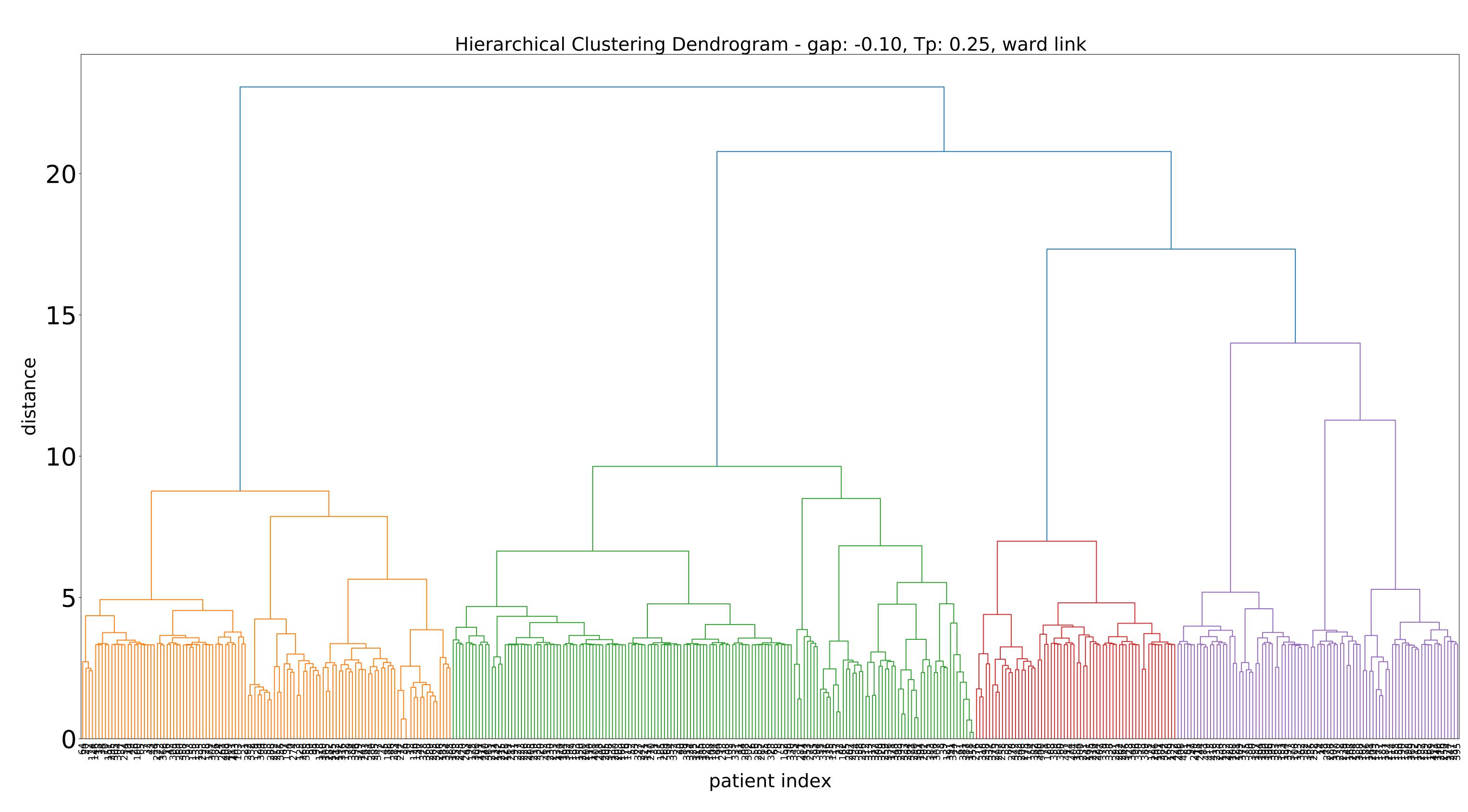
Average values of 15 clustering indices gap: -0.30, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.555	0.383	0.049	0.365	0.043	0.553	0.556	0.558	0.0	0.353	0.237	1.544	0.048	0.194
3	1.0	0.288	0.166	-0.235	0.555	-0.313	0.284	0.903	0.293	-0.0	0.204	0.09	1.804	0.051	0.194
4	1.0	0.198	0.103	-0.214	0.607	-0.4	0.186	1.112	0.211	-0.0	0.165	0.054	1.83	0.055	0.194
5	1.0	0.161	0.077	-0.173	0.638	-0.407	0.143	1.237	0.182	-0.0	0.153	0.04	1.906	0.056	0.194
6	1.0	0.14	0.062	-0.143	0.656	-0.399	0.118	1.303	0.167	-0.0	0.148	0.032	1.902	0.058	0.194
7	1.0	0.091	0.037	-0.143	0.719	-0.504	0.071	1.413	0.116	-0.0	0.105	0.019	1.923	0.033	0.194
8	1.0	0.083	0.032	-0.121	0.729	-0.484	0.062	1.385	0.113	-0.0	0.104	0.016	1.923	0.037	0.194
9	1.0	0.063	0.022	-0.114	0.752	-0.533	0.044	1.387	0.09	-0.0	0.084	0.011	1.931	0.001	0.194
10	1.0	0.055	0.019	-0.103	0.758	-0.536	0.037	1.301	0.083	-0.0	0.078	0.009	1.928	-0.0	0.194
11	1.0	0.052	0.017	-0.093	0.761	-0.525	0.033	1.161	0.081	-0.0	0.077	0.008	1.925	0.001	0.194
12	1.0	0.044	0.014	-0.085	0.769	-0.537	0.027	1.005	0.072	-0.0	0.069	0.007	1.917	-0.008	0.194
13	1.0	0.041	0.012	-0.079	0.77	-0.532	0.024	0.765	0.07	-0.0	0.067	0.006	1.914	-0.015	0.194
14	1.0	0.038	0.011	-0.073	0.773	-0.531	0.021	0.489	0.066	-0.0	0.064	0.005	1.906	-0.017	0.194
15	1.0	0.03	0.008	-0.069	0.793	-0.568	0.016	0.198	0.055	-0.0	0.053	0.004	1.898	-0.021	0.194
16	1.0	0.028	0.007	-0.064	0.793	-0.562	0.015	-0.203	0.053	-0.0	0.052	0.004	1.895	-0.021	0.201
17	1.0	0.026	0.007	-0.061	0.795	-0.557	0.013	-0.621	0.052	-0.0	0.05	0.003	1.891	-0.021	0.201
18	1.0	0.024	0.006	-0.057	0.795	-0.56	0.012	-1.175	0.049	-0.0	0.048	0.003	1.883	-0.023	0.201
19	1.0	0.019	0.005	-0.055	0.81	-0.598	0.009	-1.706	0.04	-0.0	0.039	0.002	1.892	-0.026	0.201
20	1.0	0.019	0.004	-0.052	0.81	-0.588	0.009	-2.353	0.04	-0.0	0.039	0.002	1.891	0.025	0.212
	•	-	-	•		•	•	-	•	•		•	<u> </u>		



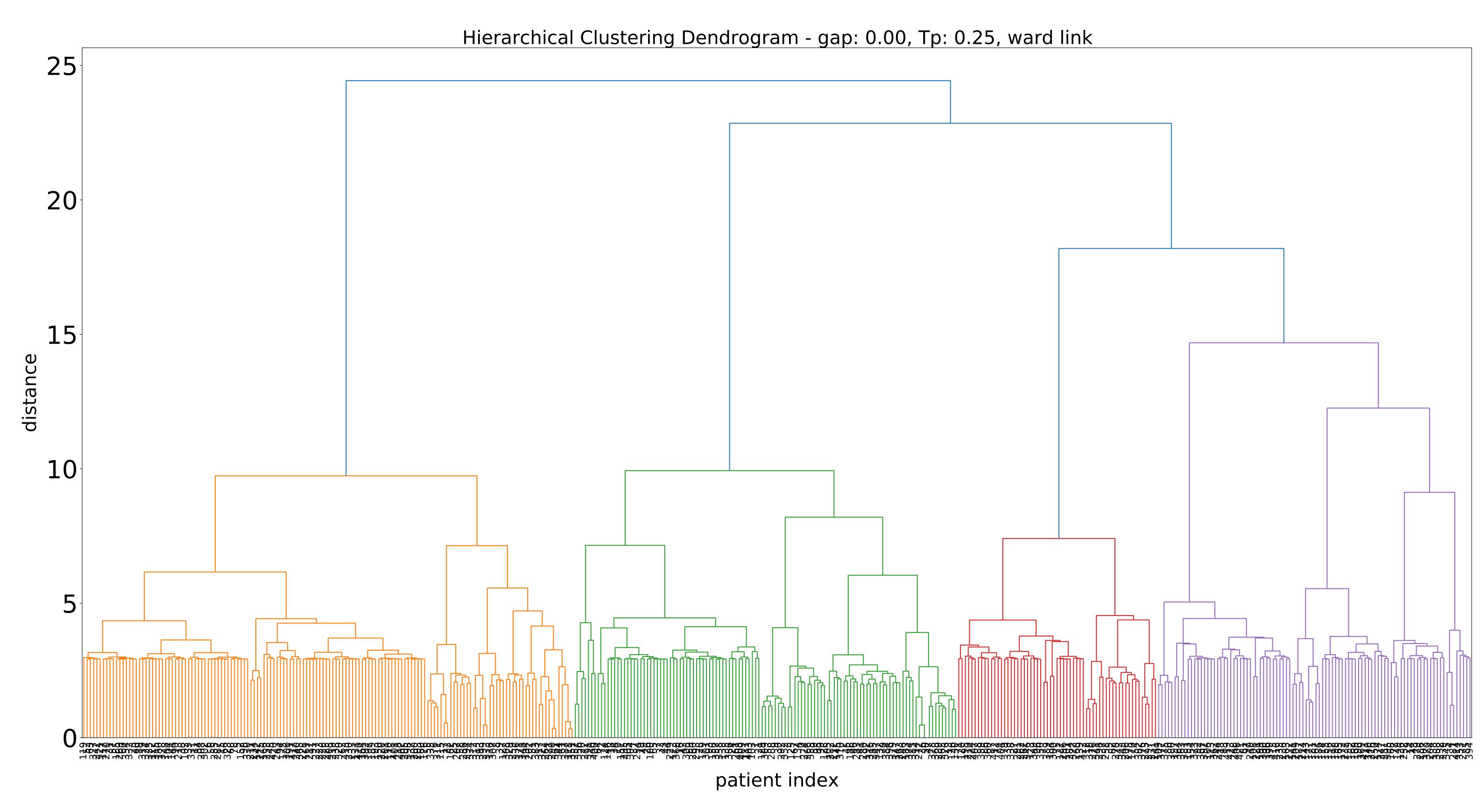
Average values of 15 clustering indices gap: -0.20, Tp: 0.25, ward link

K	AR	FM	J	AW	VD	H	F	VI	Κ	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.559	0.386	0.066	0.363	0.058	0.557	0.558	0.56	0.0	0.36	0.24	1.282	0.071	0.091
3	1.0	0.287	0.165	-0.239	0.559	-0.318	0.282	0.902	0.291	-0.0	0.202	0.09	1.611	0.081	0.091
4	1.0	0.193	0.1	-0.214	0.618	-0.407	0.181	1.119	0.207	-0.0	0.162	0.052	1.644	0.086	0.091
5	1.0	0.158	0.075	-0.175	0.645	-0.416	0.139	1.239	0.178	-0.0	0.15	0.039	1.797	0.089	0.091
6	1.0	0.136	0.06	-0.144	0.664	-0.408	0.114	1.311	0.163	-0.0	0.144	0.031	1.791	0.093	0.091
7	1.0	0.124	0.052	-0.122	0.679	-0.39	0.098	1.321	0.156	-0.0	0.143	0.026	1.799	0.104	0.091
8	1.0	0.084	0.032	-0.123	0.726	-0.486	0.062	1.377	0.113	-0.0	0.104	0.016	1.886	0.082	0.091
9	1.0	0.06	0.021	-0.114	0.758	-0.544	0.041	1.397	0.087	-0.0	0.081	0.011	1.887	0.049	0.091
10	1.0	0.052	0.018	-0.103	0.763	-0.549	0.035	1.308	0.079	-0.0	0.075	0.009	1.897	0.029	0.091
11	1.0	0.046	0.015	-0.094	0.768	-0.553	0.029	1.182	0.073	-0.0	0.069	0.007	1.896	0.027	0.091
12	1.0	0.035	0.011	-0.088	0.794	-0.597	0.021	1.032	0.058	-0.0	0.055	0.005	1.909	0.012	0.091
13	1.0	0.03	0.009	-0.083	0.803	-0.612	0.017	0.806	0.052	-0.0	0.049	0.004	1.921	0.012	0.091
14	1.0	0.028	0.008	-0.076	0.805	-0.605	0.016	0.524	0.05	-0.0	0.048	0.004	1.918	0.013	0.091
15	1.0	0.024	0.007	-0.071	0.81	-0.619	0.013	0.176	0.045	-0.0	0.043	0.003	1.914	0.007	0.091
16	1.0	0.02	0.005	-0.067	0.819	-0.638	0.011	-0.232	0.039	-0.0	0.038	0.003	1.906	0.001	0.091
17	1.0	0.018	0.005	-0.063	0.82	-0.643	0.009	-0.705	0.037	-0.0	0.035	0.002	1.899	-0.002	0.091
18	1.0	0.017	0.004	-0.059	0.821	-0.64	0.008	-1.245	0.035	-0.0	0.034	0.002	1.896	-0.002	0.094
19	1.0	0.015	0.004	-0.056	0.824	-0.649	0.007	-1.797	0.032	-0.0	0.031	0.002	1.886	-0.007	0.094
20	1.0	0.014	0.003	-0.053	0.825	-0.652	0.006	-2.437	0.03	-0.0	0.029	0.002	1.896	-0.016	0.094



Average values of 15 clustering indices gap: -0.10, Tp: 0.25, ward link

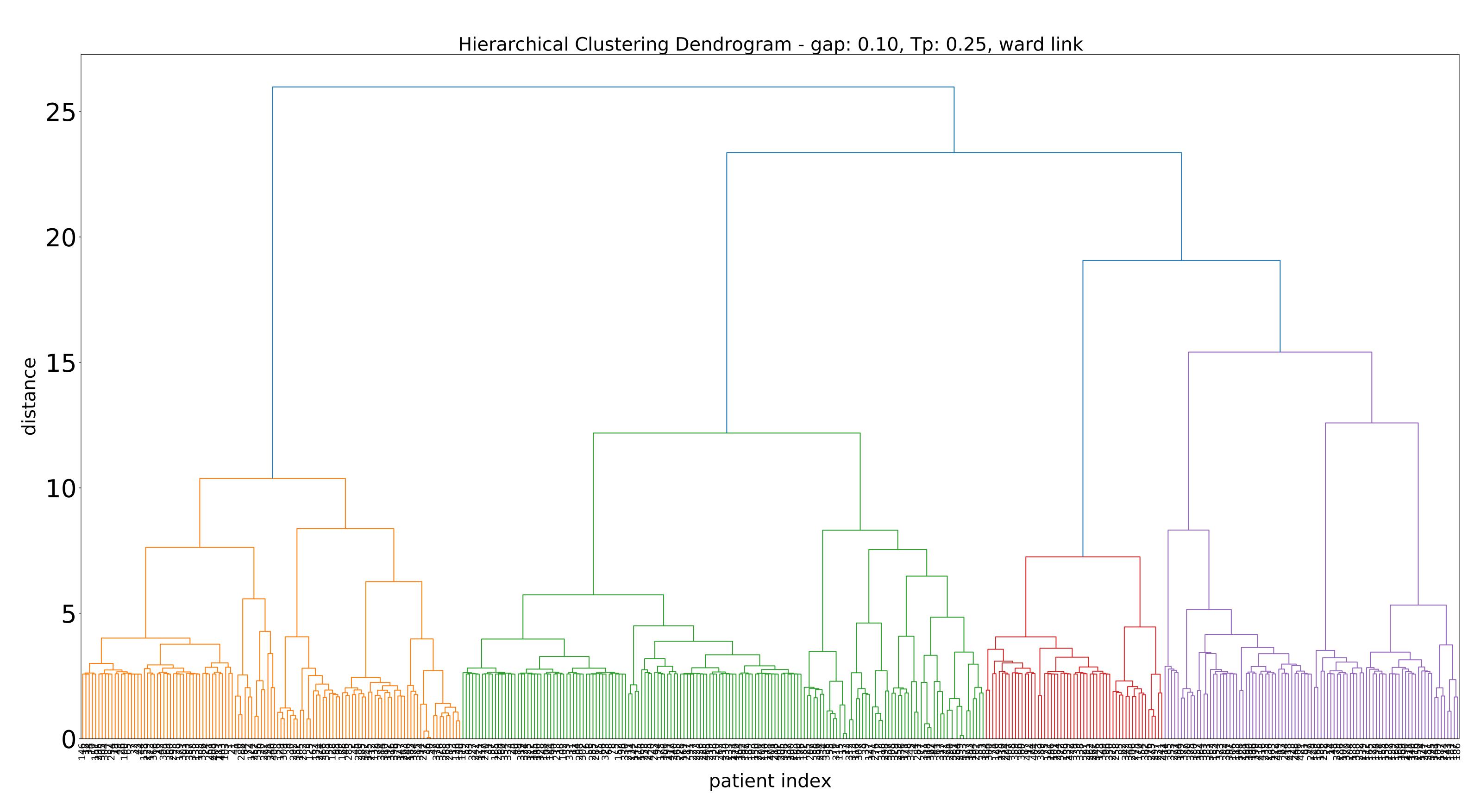
k	AR	FM	J	AW	VD	H	F	VI	Κ	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.625	0.453	0.209	0.312	0.186	0.623	0.526	0.626	0.0	0.424	0.293	1.048	0.115	0.118
3	1.0	0.286	0.164	-0.233	0.557	-0.315	0.282	0.905	0.291	-0.0	0.204	0.09	1.329	0.106	0.118
4	1.0	0.2	0.104	-0.211	0.604	-0.394	0.188	1.11	0.214	-0.0	0.167	0.055	1.345	0.117	0.118
5	1.0	0.163	0.078	-0.167	0.638	-0.396	0.144	1.234	0.185	-0.0	0.157	0.041	1.369	0.127	0.118
6	1.0	0.144	0.064	-0.138	0.656	-0.384	0.121	1.295	0.172	-0.0	0.153	0.033	1.642	0.141	0.118
7	1.0	0.094	0.038	-0.141	0.714	-0.493	0.073	1.399	0.12	-0.0	0.108	0.019	1.843	0.096	0.119
8	1.0	0.068	0.025	-0.131	0.745	-0.551	0.05	1.447	0.093	-0.0	0.085	0.013	1.843	0.082	0.119
9	1.0	0.061	0.022	-0.114	0.753	-0.538	0.043	1.389	0.089	-0.0	0.082	0.011	1.84	0.083	0.122
10	1.0	0.053	0.018	-0.103	0.76	-0.545	0.035	1.306	0.08	-0.0	0.076	0.009	1.849	0.07	0.122
11	1.0	0.047	0.015	-0.093	0.766	-0.547	0.03	1.173	0.074	-0.0	0.071	0.008	1.848	0.069	0.122
12	1.0	0.043	0.013	-0.086	0.767	-0.547	0.026	0.986	0.07	-0.0	0.067	0.007	1.853	0.072	0.123
13	1.0	0.029	0.008	-0.082	0.808	-0.619	0.017	0.809	0.05	-0.0	0.048	0.004	1.864	0.064	0.123
14	1.0	0.027	0.007	-0.076	0.808	-0.616	0.015	0.518	0.048	-0.0	0.046	0.004	1.872	0.054	0.123
15	1.0	0.025	0.007	-0.071	0.809	-0.612	0.013	0.15	0.046	-0.0	0.044	0.003	1.876	0.051	0.125
16	1.0	0.023	0.006	-0.066	0.81	-0.607	0.012	-0.216	0.044	-0.0	0.043	0.003	1.876	0.05	0.125
17	1.0	0.022	0.005	-0.062	0.811	-0.603	0.011	-0.649	0.043	-0.0	0.042	0.003	1.873	0.049	0.125
18	1.0	0.019	0.005	-0.058	0.816	-0.618	0.009	-1.204	0.038	-0.0	0.037	0.002	1.866	0.044	0.125
19	1.0	0.017	0.004	-0.055	0.817	-0.624	0.008	-1.799	0.036	-0.0	0.035	0.002	1.861	0.04	0.125
20	1.0	0.016	0.004	-0.052	0.818	-0.617	0.008	-2.306	0.035	-0.0	0.034	0.002	1.861	0.044	0.144



Cophenetic Correlation Coefficient: 0.6074444948287754

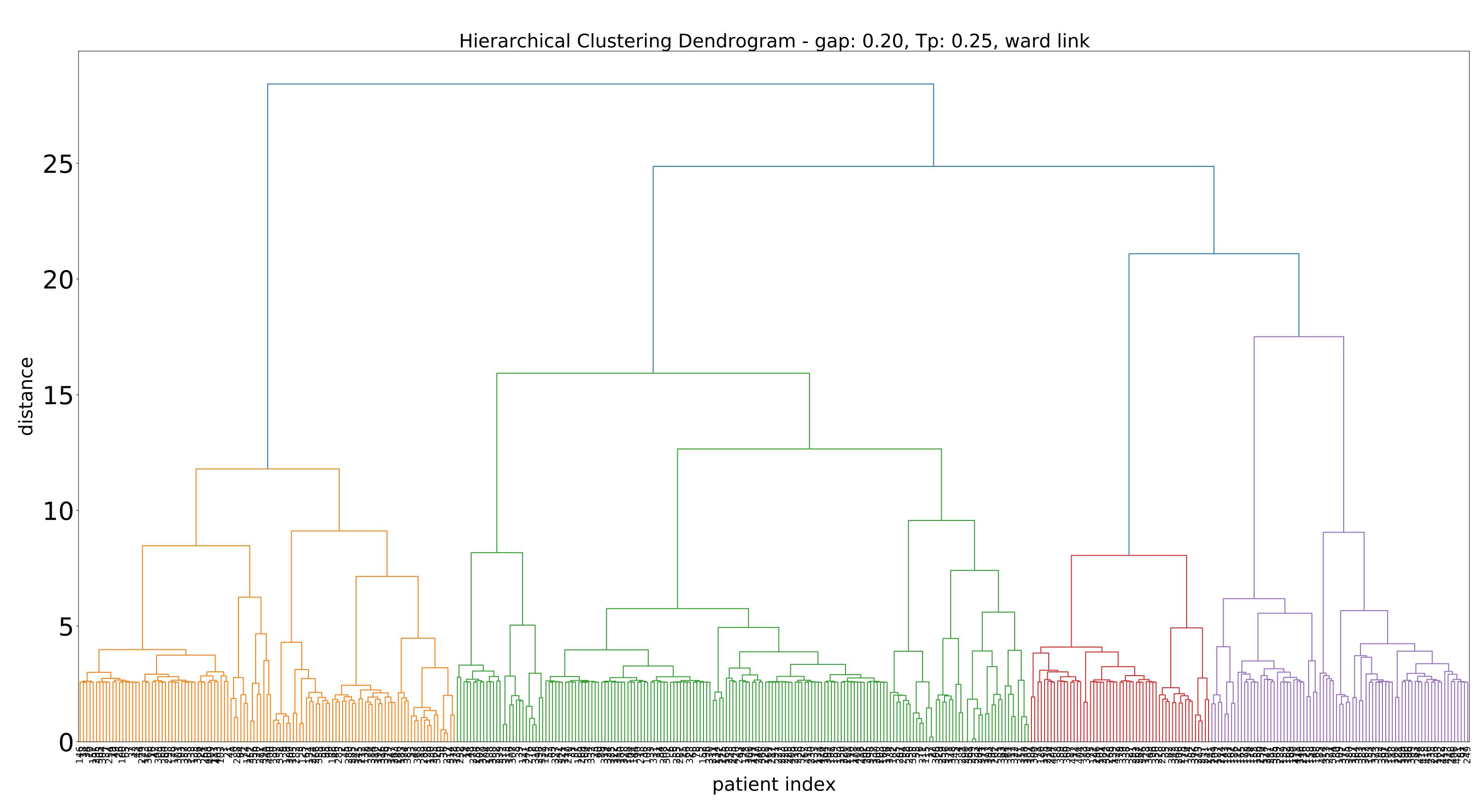
Average values of 15 clustering indices gap: 0.00, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.562	0.39	0.07	0.357	0.061	0.56	0.555	0.564	0.0	0.361	0.242	1.018	0.116	0.147
3	1.0	0.282	0.161	-0.233	0.566	-0.319	0.277	0.909	0.287	-0.0	0.202	0.088	0.998	0.135	0.123
4	1.0	0.192	0.099	-0.213	0.619	-0.407	0.18	1.118	0.206	-0.0	0.162	0.052	0.979	0.149	0.123
5	1.0	0.157	0.074	-0.175	0.646	-0.417	0.139	1.239	0.177	-0.0	0.15	0.039	0.973	0.156	0.123
6	1.0	0.135	0.06	-0.143	0.668	-0.408	0.113	1.312	0.163	-0.0	0.144	0.031	1.064	0.163	0.123
7	1.0	0.102	0.042	-0.134	0.684	-0.46	0.08	1.384	0.131	-0.0	0.118	0.021	1.398	0.127	0.123
8	1.0	0.066	0.025	-0.13	0.746	-0.557	0.048	1.445	0.091	-0.0	0.083	0.013	1.388	0.109	0.123
9	1.0	0.061	0.022	-0.114	0.754	-0.539	0.042	1.398	0.088	-0.0	0.082	0.011	1.385	0.127	0.123
10	1.0	0.053	0.018	-0.102	0.76	-0.542	0.035	1.299	0.081	-0.0	0.076	0.009	1.391	0.113	0.123
11	1.0	0.047	0.015	-0.094	0.765	-0.548	0.03	1.179	0.074	-0.0	0.071	0.008	1.389	0.108	0.123
12	1.0	0.043	0.013	-0.085	0.769	-0.539	0.026	0.998	0.072	-0.0	0.069	0.007	1.461	0.101	0.151
13	1.0	0.039	0.012	-0.078	0.772	-0.538	0.023	0.767	0.068	-0.0	0.065	0.006	1.463	0.107	0.151
14	1.0	0.027	0.008	-0.076	0.81	-0.613	0.015	0.529	0.048	-0.0	0.046	0.004	1.445	0.1	0.151
15	1.0	0.025	0.007	-0.071	0.81	-0.611	0.013	0.177	0.046	-0.0	0.044	0.003	1.479	0.094	0.151
16	1.0	0.023	0.006	-0.065	0.812	-0.606	0.012	-0.19	0.044	-0.0	0.043	0.003	1.482	0.092	0.151
17	1.0	0.022	0.005	-0.062	0.812	-0.602	0.011	-0.638	0.043	-0.0	0.042	0.003	1.481	0.09	0.151
18	1.0	0.021	0.005	-0.058	0.811	-0.593	0.01	-1.138	0.043	-0.0	0.041	0.003	1.479	0.095	0.151
19	1.0	0.02	0.005	-0.054	0.811	-0.586	0.009	-1.63	0.042	-0.0	0.041	0.002	1.828	0.095	0.151
20	1.0	0.019	0.004	-0.051	0.812	-0.579	0.009	-2.201	0.041	-0.0	0.04	0.002	1.83	0.098	0.151
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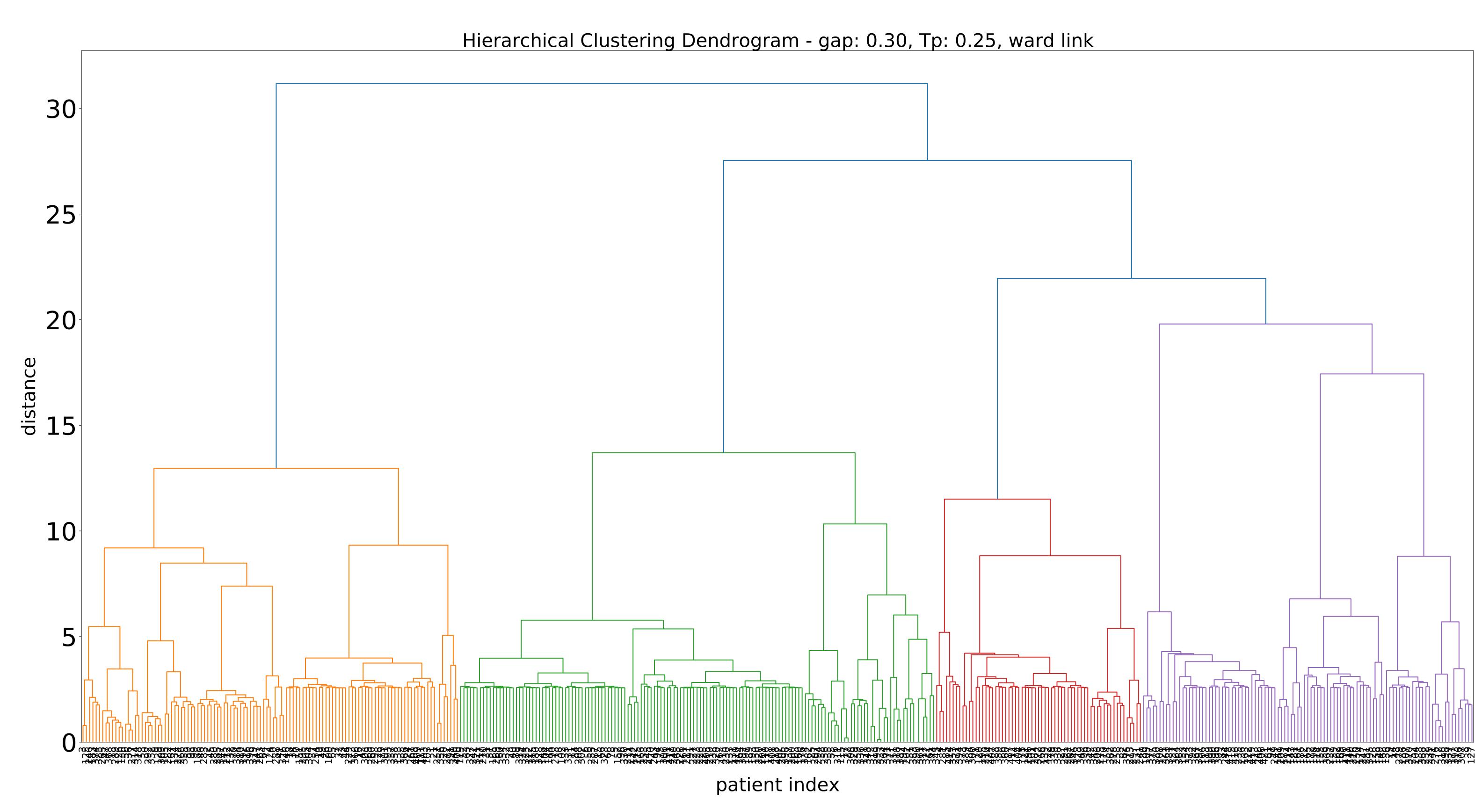
Average values of 15 clustering indices gap: 0.10, Tp: 0.25, ward link

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2	1.0	0.62	0.448	0.204	0.317		0.619	0.529	0.621	0.0	0.421	0.289		0.165	0.101
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	3	1.0								0.29	-0.0			1.057		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	4	1.0									-0.0			1.057		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	5	1.0									-0.0					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6	1.0									-0.0			1.153		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7	1.0			-0.138				1.408		-0.0					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	8	1.0			-0.13						-0.0					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9	1.0									-0.0			1.239		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10	1.0									-0.0					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11	1.0									-0.0					
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	12	1.0									-0.0	1 0.07				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	13	1.0							0.746		-0.0			1.223		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	14	1.0									-0.0			1.219		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	15	1.0									-0.0	0.062		1.219		0.11
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	16	1.0	0.032								-0.0	0.06				α
19 1.0 0.019 0.005 -0.054 0.005 -0.054 0.005	17	1.0									-0.0	0.041		1.208		0.11
	18	1.0									-0.0	0.041		1.77		
	19	1.0									-0.0	0.04				
$oxed{ }$	20	1.0	0.018	0.004	-0.051	0.813	-0.583	0.009	-2.201	0.04	-0.0	0.039	0.002	1.766	0.132	0.132



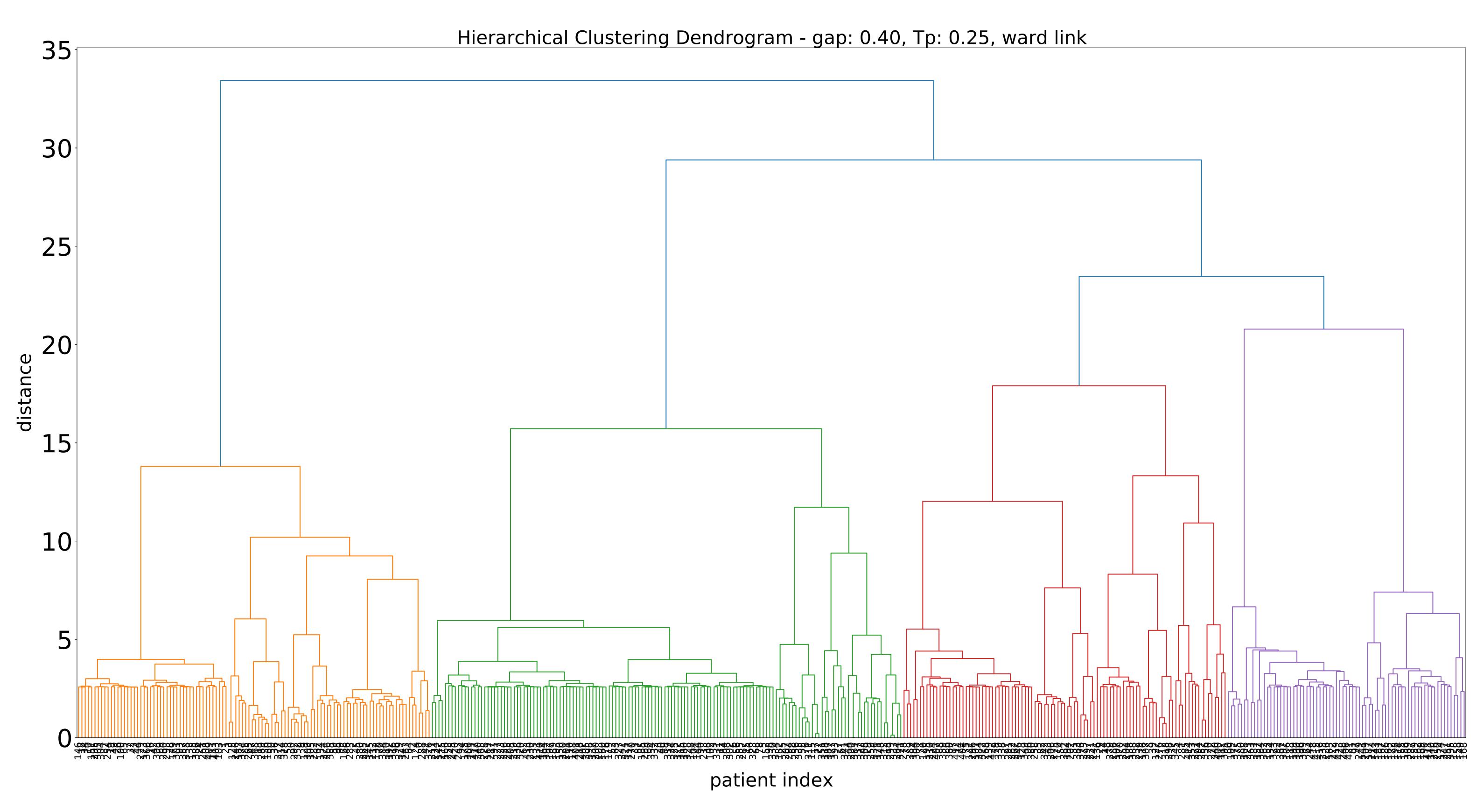
Average values of 15 clustering indices gap: 0.20, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.628	0.456	0.215	0.309	0.191	0.626	0.523	0.629	0.0	0.426	0.296	1.045	0.175	0.141
3	1.0	0.295	0.17	-0.22	0.538	-0.296	0.29	0.899	0.299	-0.0	0.21	0.093	1.039	0.161	0.152
4	1.0	0.216	0.113	-0.193	0.587	-0.354	0.203	1.093	0.23	-0.0	0.181	0.06	1.089	0.188	0.152
5	1.0	0.179	0.086	-0.153	0.62	-0.353	0.159	1.215	0.202	-0.0	0.173	0.045	1.169	0.216	0.152
6	1.0	0.131	0.058	-0.148	0.669	-0.424	0.109	1.327	0.157	-0.0	0.139	0.03	1.132	0.195	0.152
7	1.0	0.09	0.036	-0.142	0.719	-0.506	0.07	1.419	0.115	-0.0	0.104	0.018	1.11	0.167	0.152
8	1.0	0.064	0.024	-0.13	0.748	-0.563	0.047	1.463	0.089	-0.0	0.081	0.012	1.092	0.153	0.152
9	1.0	0.058	0.02	-0.115	0.755	-0.554	0.04	1.408	0.084	-0.0	0.078	0.01	1.088	0.166	0.152
10	1.0	0.051	0.017	-0.104	0.761	-0.555	0.034	1.32	0.078	-0.0	0.073	0.009	1.089	0.159	0.152
11	1.0	0.048	0.015	-0.092	0.765	-0.54	0.03	1.175	0.076	-0.0	0.072	0.008	1.083	0.174	0.152
12	1.0	0.043	0.013	-0.085	0.77	-0.54	0.026	0.985	0.071	-0.0	0.068	0.007	1.074	0.158	0.152
13	1.0	0.041	0.012	-0.077	0.771	-0.53	0.024	0.726	0.07	-0.0	0.067	0.006	1.071	0.166	0.152
14	1.0	0.037	0.01	-0.072	0.775	-0.534	0.021	0.454	0.065	-0.0	0.063	0.005	1.067	0.161	0.152
15	1.0	0.034	0.009	-0.067	0.777	-0.525	0.019	0.133	0.063	-0.0	0.062	0.005	1.065	0.156	0.161
16	1.0	0.032	0.008	-0.062	0.778	-0.521	0.017	-0.272	0.061	-0.0	0.06	0.004	1.068	0.154	0.161
17	1.0	0.031	0.008	-0.058	0.778	-0.511	0.016	-0.665	0.061	-0.0	0.06	0.004	1.749	0.159	0.19
18	1.0	0.029	0.007	-0.055	0.779	-0.507	0.014	-1.142	0.059	-0.0	0.058	0.004	1.746	0.154	0.19
19	1.0	0.019	0.005	-0.054	0.813	-0.592	0.009	-1.664	0.04	-0.0	0.039	0.002	1.734	0.144	0.19
20	1.0	0.019	0.004	-0.051	0.812	-0.584	0.009	-2.238	0.04	-0.0	0.039	0.002	1.731	0.148	0.19
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Average values of 15 clustering indices gap: 0.30, Tp: 0.25, ward link

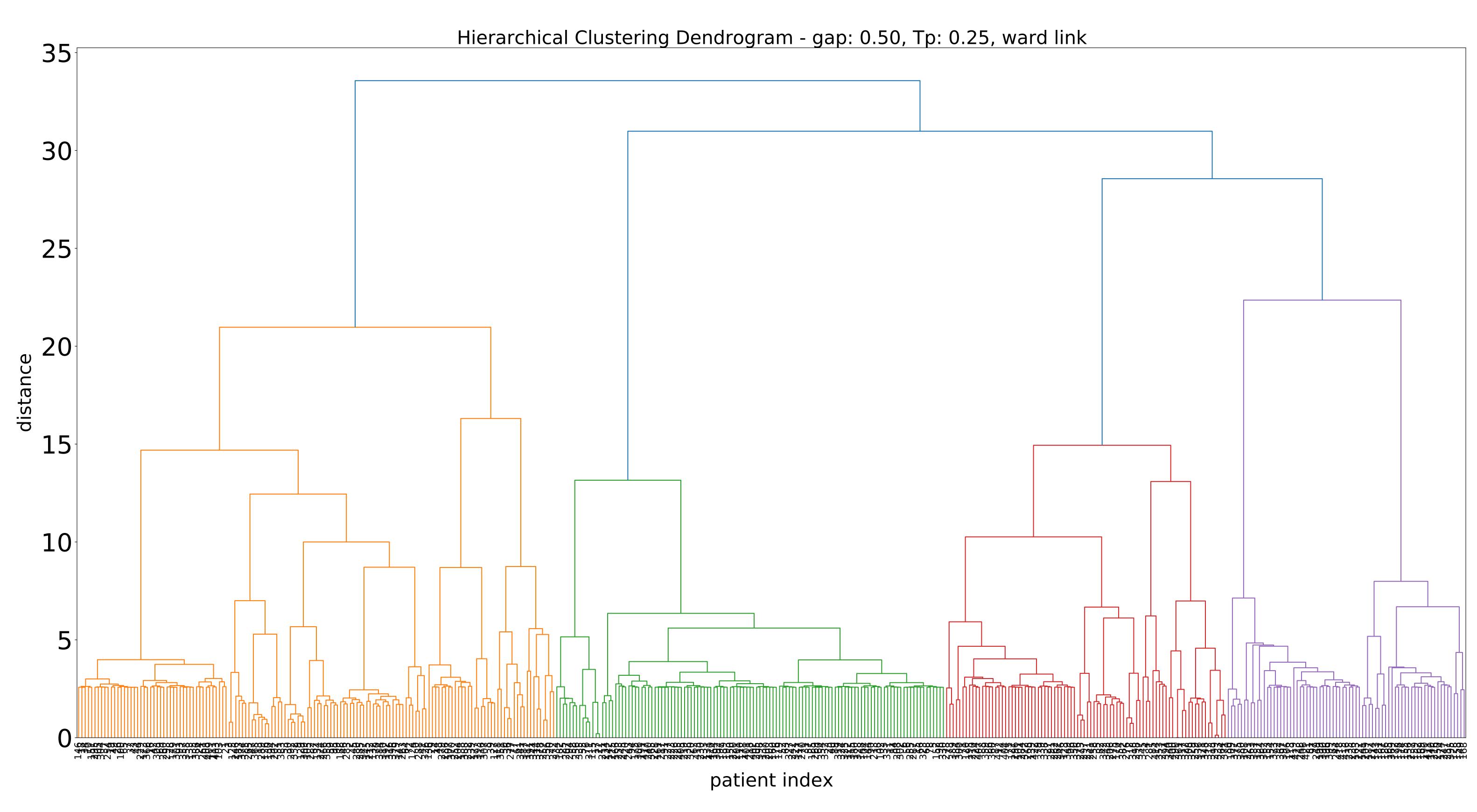
k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.623	0.451	0.212	0.316	0.192	0.622	0.529	0.624	0.0	0.426	0.292	1.034	0.186	0.171
3	1.0	0.282	0.161	-0.233	0.568	-0.318	0.278	0.909	0.287	-0.0	0.202	0.088	1.022	0.176	0.184
4	1.0	0.189	0.097	-0.217	0.624	-0.416	0.177	1.123	0.202	-0.0	0.159	0.051	1.024	0.182	0.186
5	1.0	0.152	0.072	-0.178	0.653	-0.429	0.134	1.246	0.173	-0.0	0.145	0.037	0.991	0.2	0.186
6	1.0	0.13	0.057	-0.147	0.671	-0.424	0.108	1.322	0.157	-0.0	0.138	0.029	1.06	0.211	0.19
7	1.0	0.091	0.037	-0.141	0.717	-0.502	0.071	1.412	0.117	-0.0	0.105	0.019	1.038	0.183	0.19
8	1.0	0.065	0.024	-0.129	0.747	-0.558	0.048	1.453	0.09	-0.0	0.082	0.012	1.015	0.169	0.193
9	1.0	0.059	0.021	-0.113	0.756	-0.547	0.041	1.399	0.085	-0.0	0.08	0.01	1.002	0.176	0.193
10	1.0	0.054	0.018	-0.102	0.76	-0.54	0.036	1.318	0.081	-0.0	0.077	0.009	0.998	0.187	0.205
11	1.0	0.05	0.016	-0.091	0.765	-0.528	0.031	1.169	0.079	-0.0	0.075	0.008	1.731	0.181	0.205
12	1.0	0.044	0.014	-0.084	0.769	-0.534	0.027	0.995	0.073	-0.0	0.07	0.007	1.729	0.176	0.205
13	1.0	0.04	0.012	-0.078	0.773	-0.535	0.023	0.79	0.068	-0.0	0.066	0.006	1.724	0.17	0.205
14	1.0	0.037	0.011	-0.072	0.774	-0.526	0.021	0.517	0.067	-0.0	0.065	0.005	1.72	0.169	0.205
15	1.0	0.034	0.009	-0.067	0.775	-0.528	0.019	0.156	0.063	-0.0	0.061	0.005	1.719	0.163	0.205
16	1.0	0.032	0.009	-0.062	0.776	-0.52	0.017	-0.211	0.062	-0.0	0.06	0.004	1.718	0.164	0.205
17	1.0	0.031	0.008	-0.058	0.777	-0.513	0.016	-0.648	0.06	-0.0	0.059	0.004	1.717	0.162	0.234
18	1.0	0.029	0.007	-0.055	0.779	-0.509	0.014	-1.104	0.058	-0.0	0.058	0.004	1.714	0.159	0.234
19	1.0	0.028	0.007	-0.052	0.779	-0.5	0.014	-1.631	0.058	-0.0	0.058	0.003	1.712	0.163	0.234
20	1.0	0.027	0.006	-0.049	0.78	-0.491	0.013	-2.146	0.058	-0.0	0.057	0.003	1.711	0.17	0.268
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Cophenetic Correlation Coefficient: 0.6231327609033664

Average values of 15 clustering indices gap: 0.40, Tp: 0.25, ward link

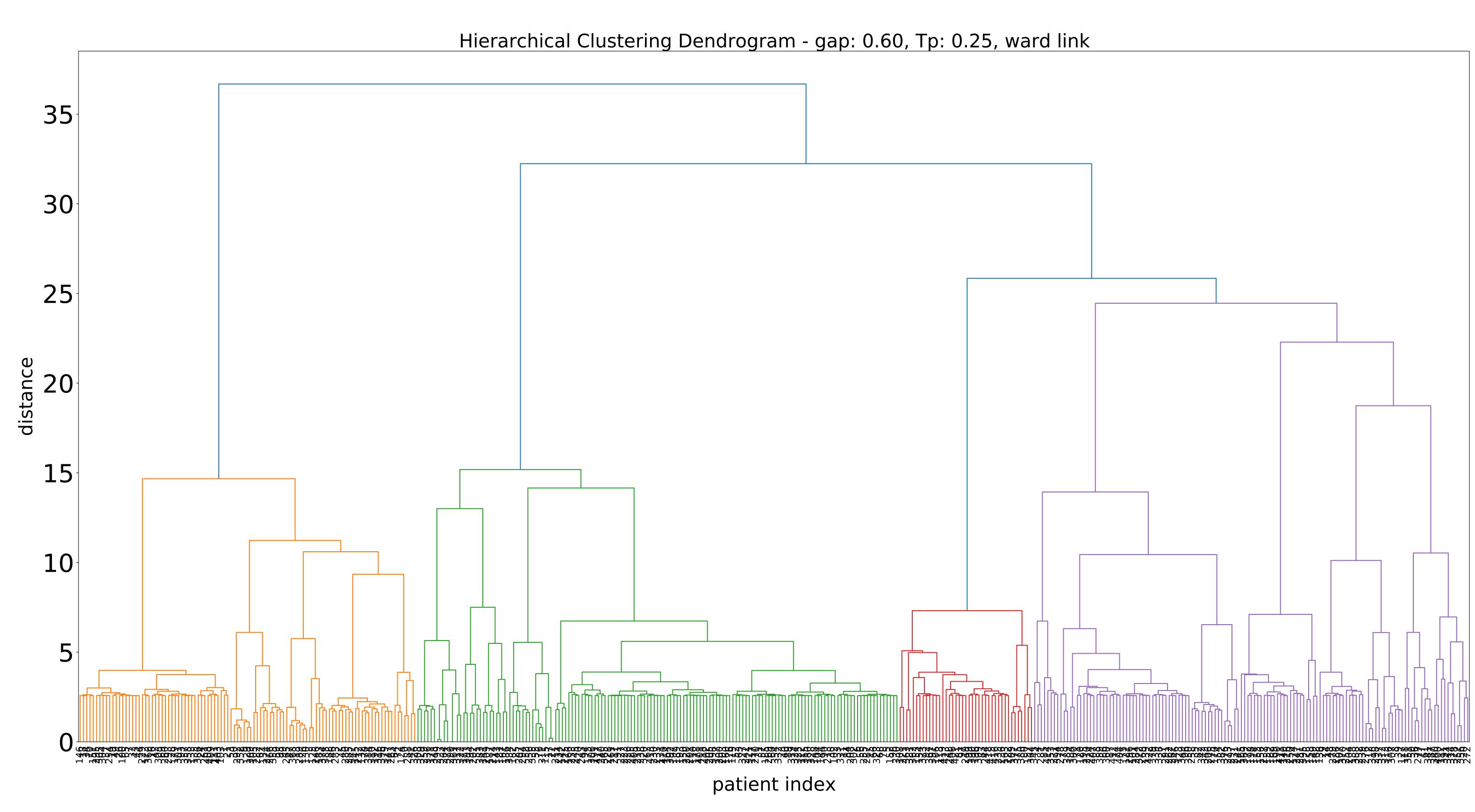
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.638	0.468	0.241	0.304	0.216	0.637	0.519	0.64	0.0	0.439	0.306	1.025	0.2	0.195
3	1.0	0.288	0.165	-0.233	0.557	-0.313	0.283	0.903	0.292	-0.0	0.204	0.09	1.008	0.184	0.211
4	1.0	0.189	0.097	-0.222	0.623	-0.422	0.177	1.122	0.201	-0.0	0.157	0.051	0.984	0.178	0.22
5	1.0	0.157	0.074	-0.174	0.653	-0.416	0.139	1.234	0.178	-0.0	0.15	0.039	0.986	0.223	0.22
6	1.0	0.126	0.055	-0.151	0.674	-0.439	0.104	1.331	0.151	-0.0	0.133	0.028	0.985	0.199	0.22
7	1.0	0.087	0.035	-0.142	0.723	-0.514	0.067	1.425	0.112	-0.0	0.101	0.018	0.952	0.177	0.22
8	1.0	0.064	0.024	-0.131	0.747	-0.563	0.047	1.46	0.089	-0.0	0.081	0.012	0.933	0.165	0.22
9	1.0	0.058	0.021	-0.114	0.755	-0.552	0.04	1.404	0.084	-0.0	0.078	0.01	1.22	0.159	0.223
10	1.0	0.051	0.017	-0.102	0.762	-0.551	0.034	1.335	0.078	-0.0	0.074	0.009	1.208	0.149	0.223
11	1.0	0.047	0.015	-0.092	0.765	-0.544	0.03	1.173	0.075	-0.0	0.071	0.008	1.202	0.168	0.224
12	1.0	0.044	0.014	-0.084	0.769	-0.53	0.027	1.028	0.073	-0.0	0.071	0.007	1.365	0.179	0.24
13	1.0	0.04	0.012	-0.077	0.773	-0.535	0.023	0.786	0.068	-0.0	0.066	0.006	1.359	0.178	0.207
14	1.0	0.038	0.011	-0.071	0.775	-0.524	0.021	0.505	0.067	-0.0	0.065	0.005	1.69	0.184	0.241
15	1.0	0.034	0.009	-0.067	0.777	-0.527	0.018	0.168	0.063	-0.0	0.062	0.005	1.687	0.172	0.241
16	1.0	0.032	0.009	-0.062	0.777	-0.518	0.017	-0.24	0.062	-0.0	0.061	0.004	1.685	0.178	0.241
17	1.0	0.031	0.008	-0.058	0.777	-0.512	0.016	-0.639	0.061	-0.0	0.06	0.004	1.683	0.178	0.241
18	1.0	0.03	0.007	-0.054	0.778	-0.502	0.015	-1.108	0.06	-0.0	0.059	0.004	1.682	0.173	0.241
19	1.0	0.028	0.007	-0.051	0.779	-0.499	0.013	-1.608	0.058	-0.0	0.058	0.003	1.678	0.168	0.255
20	1.0	0.027	0.006	-0.049	0.779	-0.491	0.013	-2.166	0.058	-0.0	0.057	0.003	1.676	0.176	0.255
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Cophenetic Correlation Coefficient: 0.6345468445636064

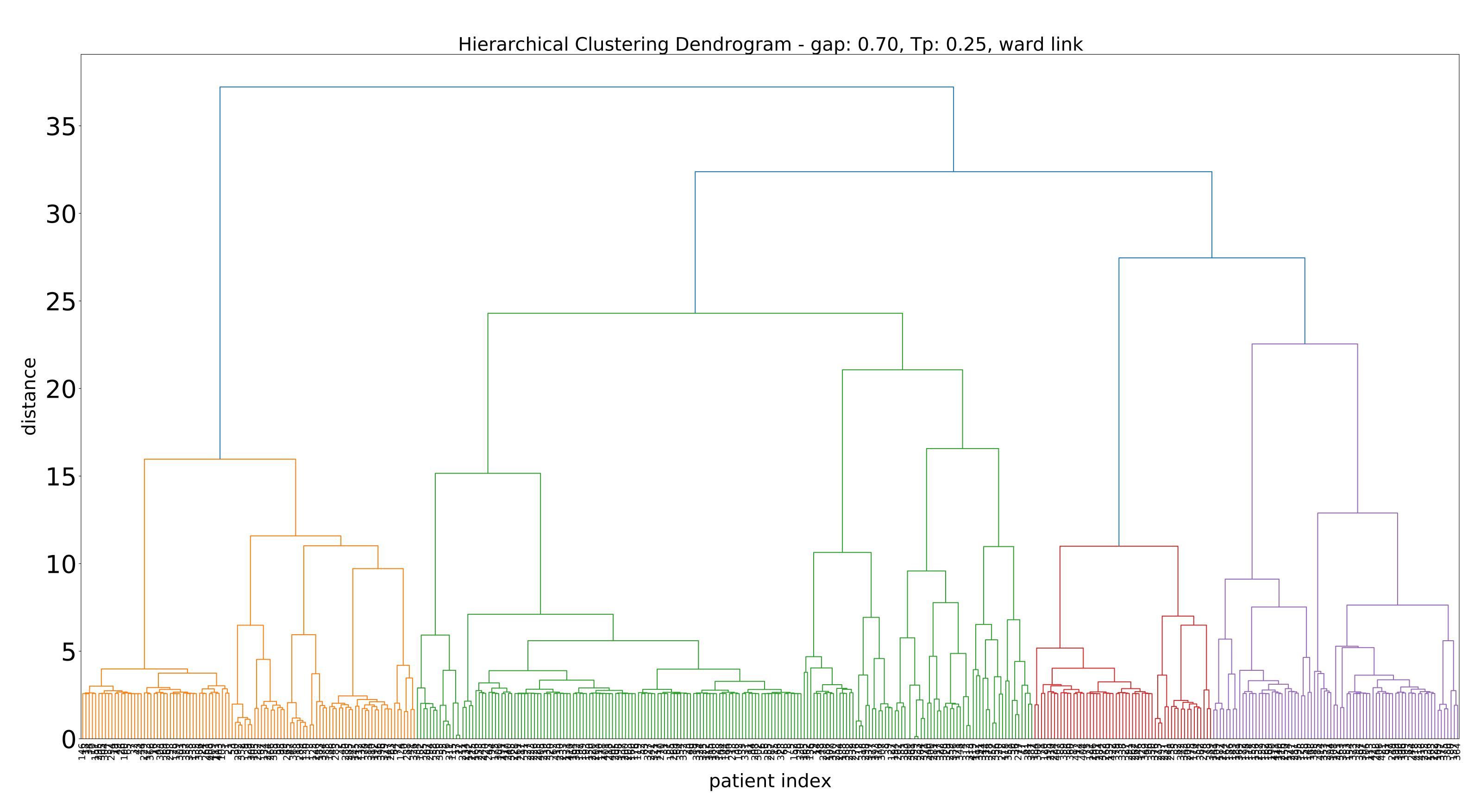
Average values of 15 clustering indices gap: 0.50, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.569	0.397	0.095	0.356	0.084	0.567	0.554	0.57	0.0	0.373	0.248	1.046	0.149	0.196
3	1.0	0.278	0.159	-0.234	0.573	-0.324	0.273	0.913	0.283	-0.0	0.2	0.086	0.979	0.16	0.196
4	1.0	0.19	0.098	-0.218	0.626	-0.416	0.178	1.122	0.203	-0.0	0.159	0.051	0.952	0.179	0.196
5	1.0	0.157	0.074	-0.17	0.656	-0.41	0.138	1.238	0.179	-0.0	0.151	0.039	0.983	0.23	0.196
6	1.0	0.114	0.049	-0.158	0.698	-0.475	0.094	1.355	0.138	-0.0	0.121	0.025	1.067	0.204	0.182
7	1.0	0.102	0.041	-0.133	0.711	-0.459	0.079	1.381	0.13	-0.0	0.118	0.021	1.27	0.216	0.207
8	1.0	0.085	0.032	-0.117	0.722	-0.469	0.063	1.389	0.116	-0.0	0.108	0.016	1.246	0.199	0.207
9	1.0	0.065	0.023	-0.111	0.739	-0.518	0.045	1.385	0.094	-0.0	0.088	0.012	1.223	0.181	0.207
10	1.0	0.053	0.018	-0.101	0.761	-0.542	0.035	1.309	0.081	-0.0	0.076	0.009	1.205	0.188	0.207
11	1.0	0.049	0.016	-0.091	0.765	-0.529	0.031	1.191	0.078	-0.0	0.075	0.008	1.2	0.199	0.207
12	1.0	0.044	0.014	-0.084	0.768	-0.531	0.027	0.982	0.073	-0.0	0.07	0.007	1.189	0.181	0.2
13	1.0	0.039	0.012	-0.078	0.772	-0.538	0.023	0.765	0.068	-0.0	0.065	0.006	1.179	0.179	0.2
14	1.0	0.036	0.01	-0.072	0.775	-0.538	0.02	0.481	0.064	-0.0	0.062	0.005	1.175	0.167	0.2
15	1.0	0.034	0.009	-0.066	0.777	-0.527	0.018	0.142	0.063	-0.0	0.061	0.005	1.672	0.168	0.237
16	1.0	0.032	0.009	-0.062	0.778	-0.52	0.017	-0.205	0.061	-0.0	0.06	0.004	1.67	0.168	0.237
17	1.0	0.031	0.008	-0.058	0.778	-0.511	0.016	-0.614	0.06	-0.0	0.06	0.004	1.668	0.177	0.237
18	1.0	0.029	0.007	-0.055	0.778	-0.506	0.015	-1.107	0.059	-0.0	0.058	0.004	1.664	0.172	0.249
19	1.0	0.028	0.007	-0.051	0.778	-0.498	0.014	-1.576	0.059	-0.0	0.058	0.003	1.661	0.18	0.249
20	1.0	0.027	0.006	-0.048	0.78	-0.489	0.013	-2.015	0.058	-0.0	0.058	0.003	1.661	0.184	0.249
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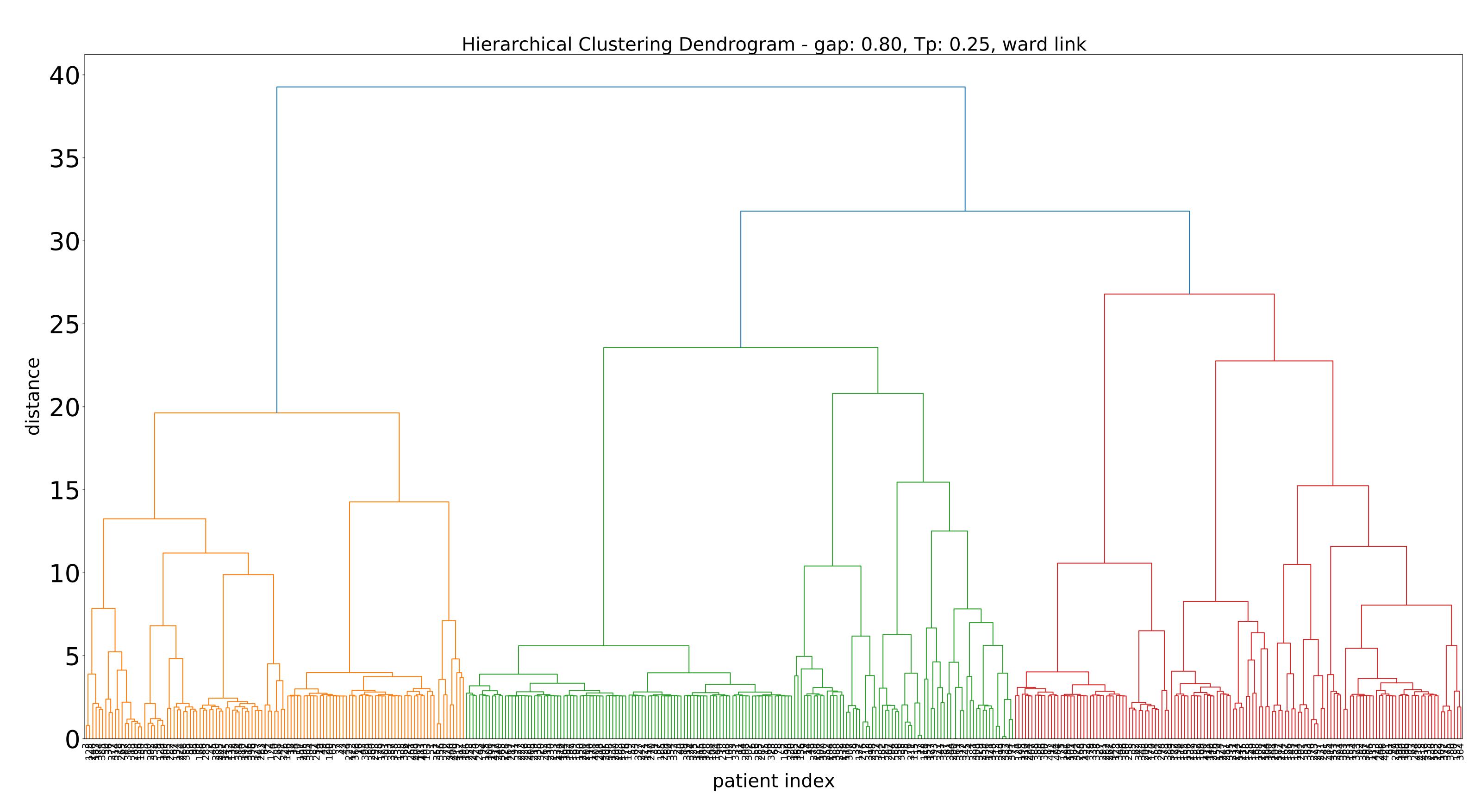
Average values of 15 clustering indices gap: 0.60, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	Н	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.647	0.477	0.262	0.302	0.237	0.645	0.516	0.648	0.0	0.45	0.314	1.026	0.21	0.167
3	1.0	0.285	0.163	-0.223	0.563	-0.308	0.28	0.907	0.29	-0.0	0.206	0.089	1.023	0.191	0.167
4	1.0	0.208	0.108	-0.196	0.619	-0.368	0.195	1.093	0.222	-0.0	0.176	0.057	1.002	0.221	0.167
5	1.0	0.149	0.07	-0.177	0.654	-0.433	0.131	1.251	0.17	-0.0	0.143	0.036	1.026	0.209	0.167
6	1.0	0.127	0.056	-0.149	0.672	-0.433	0.105	1.334	0.153	-0.0	0.135	0.029	1.004	0.222	0.196
7	1.0	0.113	0.046	-0.126	0.686	-0.421	0.089	1.358	0.144	-0.0	0.131	0.024	1.303	0.221	0.196
8	1.0	0.084	0.032	-0.119	0.723	-0.477	0.062	1.402	0.114	-0.0	0.106	0.016	1.27	0.191	0.199
9	1.0	0.064	0.023	-0.111	0.739	-0.521	0.045	1.393	0.093	-0.0	0.087	0.012	1.252	0.176	0.199
10	1.0	0.052	0.017	-0.102	0.761	-0.545	0.034	1.325	0.079	-0.0	0.075	0.009	1.233	0.191	0.199
11	1.0	0.048	0.015	-0.091	0.766	-0.537	0.03	1.178	0.076	-0.0	0.073	0.008	1.354	0.195	0.199
12	1.0	0.045	0.014	-0.083	0.768	-0.527	0.027	0.989	0.074	-0.0	0.071	0.007	1.348	0.195	0.199
13	1.0	0.04	0.012	-0.077	0.772	-0.533	0.023	0.775	0.069	-0.0	0.066	0.006	1.341	0.187	0.199
14	1.0	0.037	0.01	-0.071	0.775	-0.528	0.021	0.482	0.066	-0.0	0.064	0.005	1.336	0.186	0.193
15	1.0	0.035	0.01	-0.066	0.776	-0.517	0.019	0.152	0.065	-0.0	0.064	0.005	1.645	0.184	0.241
16	1.0	0.032	0.008	-0.062	0.778	-0.521	0.017	-0.207	0.061	-0.0	0.06	0.004	1.636	0.183	0.241
17	1.0	0.03	0.008	-0.058	0.778	-0.515	0.015	-0.652	0.06	-0.0	0.059	0.004	1.632	0.189	0.241
18	1.0	0.029	0.007	-0.055	0.778	-0.508	0.014	-1.118	0.059	-0.0	0.058	0.004	1.63	0.188	0.241
19	1.0	0.028	0.007	-0.051	0.778	-0.499	0.014	-1.638	0.058	-0.0	0.058	0.003	1.629	0.182	0.241
20	1.0	0.027	0.006	-0.048	0.779	-0.492	0.013	-2.173	0.057	-0.0	0.057	0.003	1.624	0.18	0.241
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Average values of 15 clustering indices gap: 0.70, Tp: 0.25, ward link

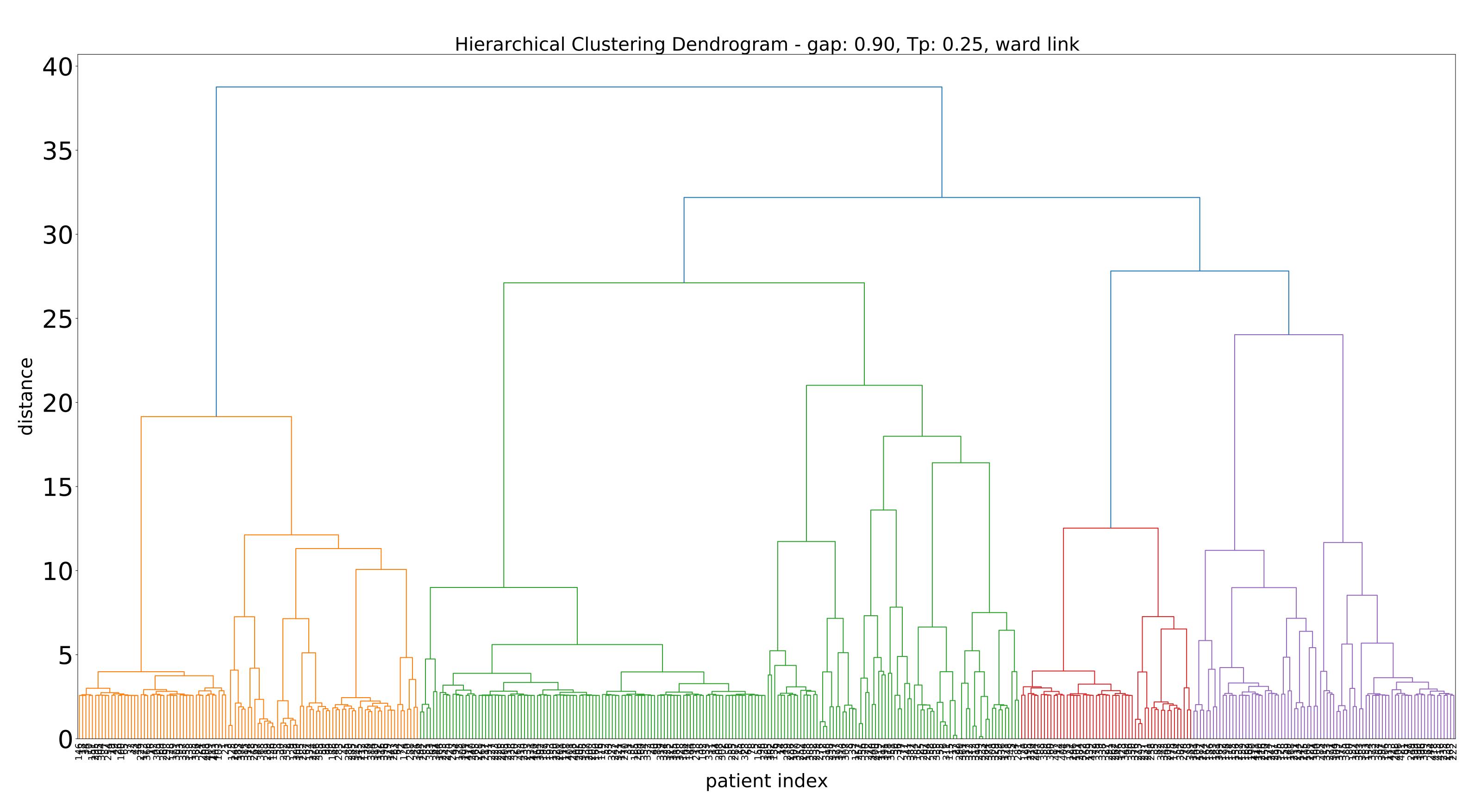
k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.649	0.479	0.264	0.298	0.237	0.647	0.514	0.65	0.0	0.45	0.316	1.019	0.207	0.167
3	1.0	0.304	0.177	-0.205	0.523	-0.275	0.3	0.893	0.309	-0.0	0.218	0.097	0.966	0.185	0.189
4	1.0	0.224	0.118	-0.178	0.576	-0.33	0.21	1.09	0.238	-0.0	0.19	0.062	0.931	0.218	0.189
5	1.0	0.129	0.06	-0.194	0.682	-0.493	0.113	1.287	0.148	-0.0	0.123	0.031	0.954	0.184	0.189
6	1.0	0.109	0.047	-0.161	0.701	-0.49	0.089	1.369	0.132	-0.0	0.116	0.024	0.927	0.213	0.189
7	1.0	0.092	0.037	-0.139	0.713	-0.493	0.072	1.413	0.119	-0.0	0.108	0.019	0.94	0.205	0.199
8	1.0	0.083	0.032	-0.12	0.722	-0.482	0.061	1.395	0.113	-0.0	0.105	0.016	1.24	0.194	0.2
9	1.0	0.064	0.022	-0.111	0.739	-0.525	0.044	1.389	0.092	-0.0	0.086	0.011	1.218	0.181	0.2
10	1.0	0.051	0.017	-0.102	0.762	-0.549	0.034	1.318	0.078	-0.0	0.074	0.009	1.195	0.196	0.2
11	1.0	0.048	0.015	-0.091	0.766	-0.535	0.03	1.182	0.077	-0.0	0.073	0.008	1.186	0.21	0.2
12	1.0	0.043	0.013	-0.084	0.77	-0.54	0.026	0.996	0.071	-0.0	0.068	0.007	1.178	0.201	0.2
13	1.0	0.04	0.012	-0.078	0.773	-0.535	0.023	0.75	0.068	-0.0	0.066	0.006	1.173	0.197	0.194
14	1.0	0.036	0.01	-0.072	0.775	-0.538	0.02	0.457	0.064	-0.0	0.062	0.005	1.163	0.191	0.194
15	1.0	0.034	0.009	-0.066	0.776	-0.526	0.019	0.096	0.063	-0.0	0.062	0.005	1.633	0.188	0.233
16	1.0	0.032	0.009	-0.062	0.778	-0.52	0.017	-0.246	0.061	-0.0	0.06	0.004	1.628	0.193	0.233
17	1.0	0.031	0.008	-0.058	0.778	-0.513	0.016	-0.669	0.06	-0.0	0.059	0.004	1.625	0.19	0.233
18	1.0	0.029	0.007	-0.055	0.779	-0.506	0.014	-1.143	0.059	-0.0	0.058	0.004	1.622	0.19	0.233
19	1.0	0.028	0.007	-0.051	0.78	-0.501	0.013	-1.671	0.057	-0.0	0.057	0.003	1.617	0.188	0.238
20	1.0	0.027	0.006	-0.049	0.78	-0.493	0.013	-2.249	0.057	-0.0	0.057	0.003	1.616	0.191	0.238
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Cophenetic Correlation Coefficient: 0.5974043453956946

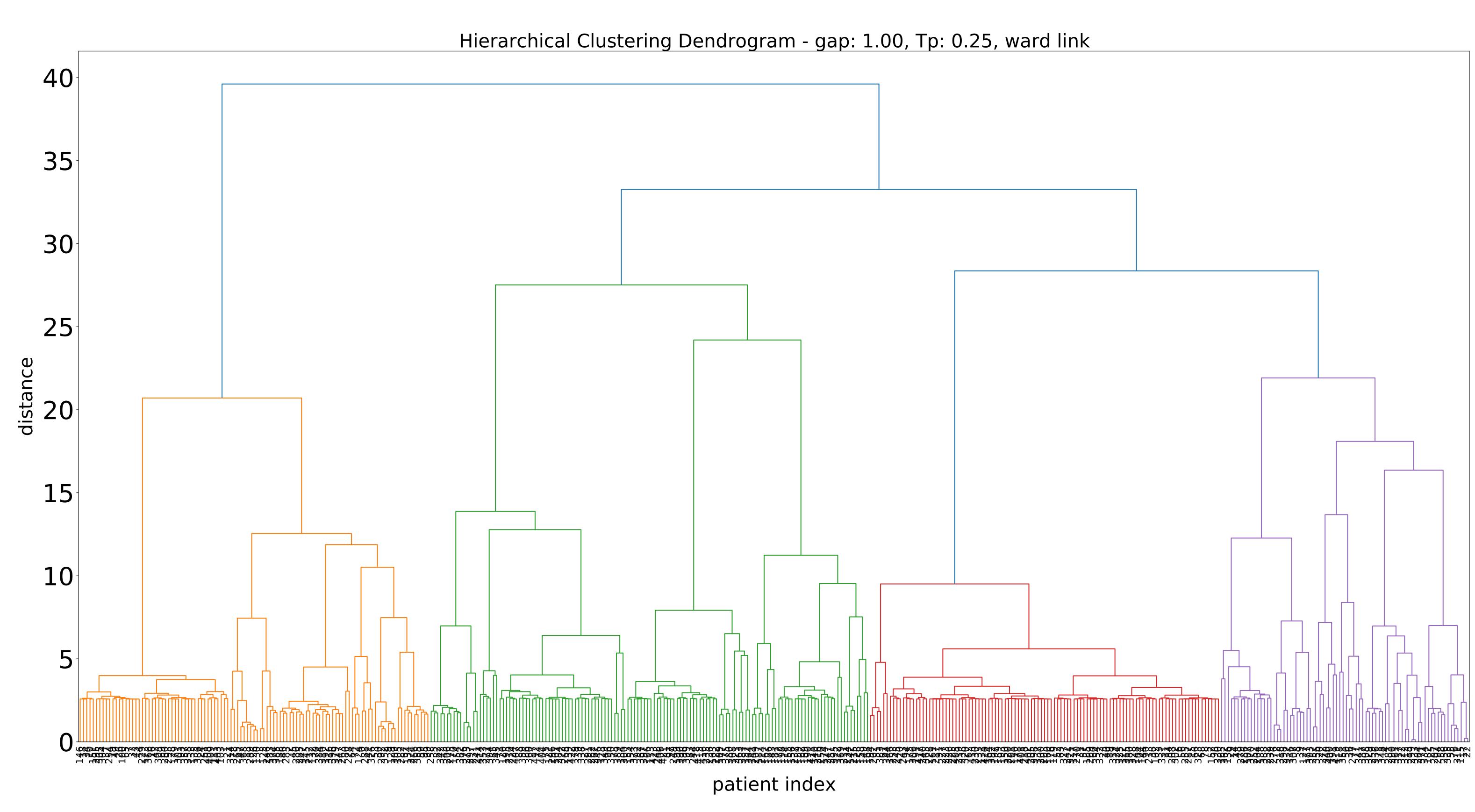
Average values of 15 clustering indices gap: 0.80, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.621	0.45	0.208	0.317	0.187	0.62	0.529	0.622	0.0	0.424	0.291	1.051	0.196	0.194
3	1.0	0.287	0.164	-0.219	0.552	-0.303	0.282	0.907	0.292	-0.0	0.207	0.09	0.982	0.174	0.227
4	1.0	0.21	0.109	-0.192	0.597	-0.362	0.197	1.101	0.224	-0.0	0.178	0.058	0.945	0.203	0.227
5	1.0	0.127	0.059	-0.198	0.689	-0.501	0.111	1.292	0.145	-0.0	0.121	0.03	0.998	0.174	0.227
6	1.0	0.104	0.044	-0.163	0.708	-0.506	0.085	1.38	0.126	-0.0	0.111	0.023	0.964	0.191	0.227
7	1.0	0.087	0.035	-0.141	0.721	-0.51	0.068	1.425	0.113	-0.0	0.102	0.018	0.993	0.192	0.227
8	1.0	0.062	0.023	-0.13	0.755	-0.57	0.045	1.47	0.086	-0.0	0.079	0.012	0.947	0.191	0.227
9	1.0	0.056	0.02	-0.115	0.76	-0.561	0.039	1.413	0.082	-0.0	0.076	0.01	0.935	0.208	0.227
10	1.0	0.05	0.017	-0.102	0.766	-0.556	0.033	1.34	0.077	-0.0	0.072	0.008	0.915	0.199	0.227
11	1.0	0.046	0.015	-0.092	0.77	-0.547	0.029	1.197	0.074	-0.0	0.07	0.007	1.67	0.191	0.227
12	1.0	0.041	0.012	-0.085	0.775	-0.551	0.025	1.004	0.068	-0.0	0.065	0.006	1.655	0.194	0.191
13	1.0	0.039	0.011	-0.078	0.777	-0.54	0.023	0.782	0.067	-0.0	0.065	0.006	1.649	0.196	0.231
14	1.0	0.037	0.01	-0.072	0.779	-0.529	0.021	0.493	0.066	-0.0	0.064	0.005	1.641	0.21	0.231
15	1.0	0.033	0.009	-0.067	0.781	-0.532	0.018	0.158	0.061	-0.0	0.061	0.005	1.634	0.199	0.231
16	1.0	0.031	0.008	-0.063	0.783	-0.531	0.016	-0.247	0.059	-0.0	0.058	0.004	1.627	0.193	0.231
17	1.0	0.03	0.008	-0.058	0.783	-0.521	0.015	-0.663	0.058	-0.0	0.057	0.004	1.624	0.192	0.231
18	1.0	0.028	0.007	-0.055	0.783	-0.515	0.014	-1.18	0.057	-0.0	0.056	0.003	1.619	0.198	0.231
19	1.0	0.027	0.006	-0.052	0.783	-0.509	0.013	-1.685	0.056	-0.0	0.055	0.003	1.616	0.195	0.231
20	1.0	0.025	0.006	-0.049	0.784	-0.507	0.012	-2.242	0.054	-0.0	0.054	0.003	1.609	0.189	0.231
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Average values of 15 clustering indices gap: 0.90, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.64	0.47	0.254	0.309	0.233	0.639	0.522	0.641	0.0	0.447	0.308	1.019	0.204	0.178
3	1.0	0.298	0.172	-0.207	0.533	-0.283	0.293	0.9	0.303	-0.0	0.215	0.094	1.008	0.179	0.191
4	1.0	0.219	0.114	-0.182	0.582	-0.34	0.205	1.093	0.233	-0.0	0.186	0.061	0.975	0.21	0.191
5	1.0	0.124	0.057	-0.198	0.693	-0.506	0.109	1.294	0.143	-0.0	0.119	0.03	1.025	0.176	0.191
6	1.0	0.103	0.044	-0.163	0.712	-0.506	0.085	1.377	0.126	-0.0	0.11	0.023	0.994	0.2	0.191
7	1.0	0.086	0.034	-0.142	0.724	-0.516	0.067	1.424	0.112	-0.0	0.1	0.018	1.046	0.19	0.19
8	1.0	0.064	0.024	-0.129	0.748	-0.562	0.046	1.468	0.088	-0.0	0.081	0.012	1.017	0.194	0.19
9	1.0	0.057	0.02	-0.113	0.755	-0.554	0.039	1.412	0.083	-0.0	0.077	0.01	1.199	0.178	0.211
10	1.0	0.052	0.017	-0.101	0.761	-0.544	0.034	1.309	0.08	-0.0	0.075	0.009	1.191	0.211	0.211
11	1.0	0.049	0.016	-0.09	0.764	-0.528	0.031	1.169	0.078	-0.0	0.075	0.008	1.658	0.218	0.248
12	1.0	0.044	0.014	-0.083	0.769	-0.528	0.027	0.993	0.074	-0.0	0.071	0.007	1.649	0.213	0.248
13	1.0	0.04	0.012	-0.077	0.771	-0.529	0.023	0.747	0.07	-0.0	0.067	0.006	1.639	0.207	0.229
14	1.0	0.038	0.011	-0.071	0.774	-0.521	0.021	0.477	0.067	-0.0	0.066	0.005	1.634	0.208	0.229
15	1.0	0.036	0.01	-0.065	0.776	-0.51	0.02	0.149	0.067	-0.0	0.065	0.005	1.627	0.219	0.229
16	1.0	0.033	0.009	-0.062	0.776	-0.513	0.017	-0.265	0.063	-0.0	0.062	0.004	1.62	0.215	0.229
17	1.0	0.031	0.008	-0.058	0.778	-0.509	0.016	-0.696	0.061	-0.0	0.06	0.004	1.612	0.215	0.24
18	1.0	0.029	0.007	-0.054	0.778	-0.503	0.015	-1.154	0.06	-0.0	0.059	0.004	1.609	0.211	0.24
19	1.0	0.027	0.006	-0.052	0.784	-0.509	0.013	-1.671	0.056	-0.0	0.055	0.003	1.596	0.203	0.24
20	1.0	0.025	0.006	-0.049	0.784	-0.508	0.012	-2.255	0.054	-0.0	0.053	0.003	1.589	0.198	0.24
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Average values of 15 clustering indices gap: 1.00, Tp: 0.25, ward link

k	AR	FM	J	AW	VD	H	F	VI	K	Phi	RT	SS	CVNN	S	Dunn
2	1.0	0.639	0.469	0.246	0.306	0.221	0.638	0.52	0.64	0.0	0.442	0.307	1.05	0.202	0.177
3	1.0	0.297	0.172	-0.212	0.533	-0.287	0.293	0.899	0.302	-0.0	0.214	0.094	0.998	0.18	0.212
4	1.0	0.175	0.089	-0.233	0.65	-0.454	0.163	1.139	0.187	-0.0	0.145	0.046	1.097	0.151	0.212
5	1.0	0.124	0.057	-0.199	0.692	-0.507	0.109	1.296	0.143	-0.0	0.119	0.03	1.035	0.17	0.212
6	1.0	0.105	0.045	-0.163	0.709	-0.502	0.086	1.374	0.128	-0.0	0.112	0.023	1.01	0.205	0.212
7	1.0	0.087	0.035	-0.14	0.724	-0.51	0.067	1.427	0.113	-0.0	0.102	0.018	1.012	0.197	0.21
8	1.0	0.065	0.024	-0.13	0.746	-0.559	0.047	1.46	0.09	-0.0	0.082	0.012	0.979	0.205	0.21
9	1.0	0.058	0.02	-0.113	0.755	-0.55	0.04	1.413	0.084	-0.0	0.079	0.01	1.503	0.191	0.21
10	1.0	0.053	0.018	-0.1	0.761	-0.538	0.035	1.303	0.081	-0.0	0.077	0.009	1.496	0.224	0.21
11	1.0	0.048	0.015	-0.092	0.764	-0.539	0.03	1.167	0.076	-0.0	0.072	0.008	1.483	0.226	0.21
12	1.0	0.045	0.014	-0.083	0.768	-0.524	0.027	0.99	0.075	-0.0	0.072	0.007	1.646	0.231	0.245
13	1.0	0.042	0.013	-0.076	0.771	-0.513	0.025	0.781	0.073	-0.0	0.071	0.006	1.639	0.236	0.245
14	1.0	0.038	0.011	-0.07	0.774	-0.516	0.022	0.478	0.069	-0.0	0.067	0.005	1.626	0.229	0.227
15	1.0	0.036	0.01	-0.065	0.775	-0.508	0.02	0.172	0.067	-0.0	0.066	0.005	1.62	0.23	0.227
16	1.0	0.033	0.009	-0.062	0.776	-0.513	0.017	-0.268	0.063	-0.0	0.062	0.004	1.612	0.223	0.227
17	1.0	0.031	0.008	-0.058	0.778	-0.508	0.016	-0.683	0.061	-0.0	0.06	0.004	1.605	0.224	0.24
18	1.0	0.029	0.007	-0.054	0.778	-0.503	0.015	-1.139	0.059	-0.0	0.059	0.004	1.601	0.223	0.24
19	1.0	0.028	0.007	-0.051	0.778	-0.496	0.014	-1.709	0.059	-0.0	0.058	0.003	1.596	0.218	0.24
20	1.0	0.025	0.006	-0.049	0.784	-0.504	0.012	-2.249	0.054	-0.0	0.054	0.003	1.582	0.211	0.24
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