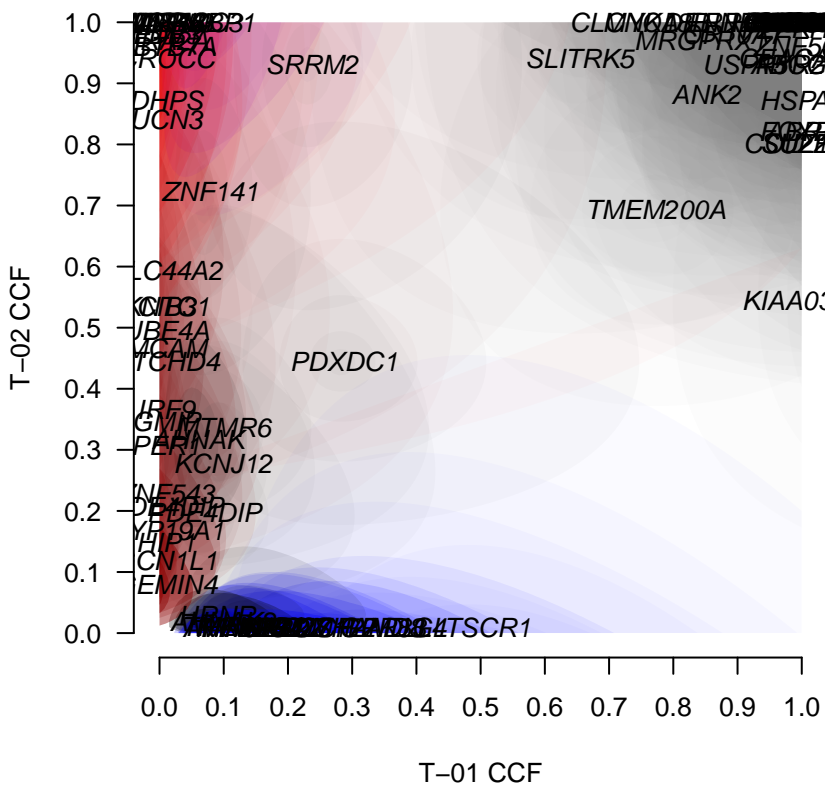
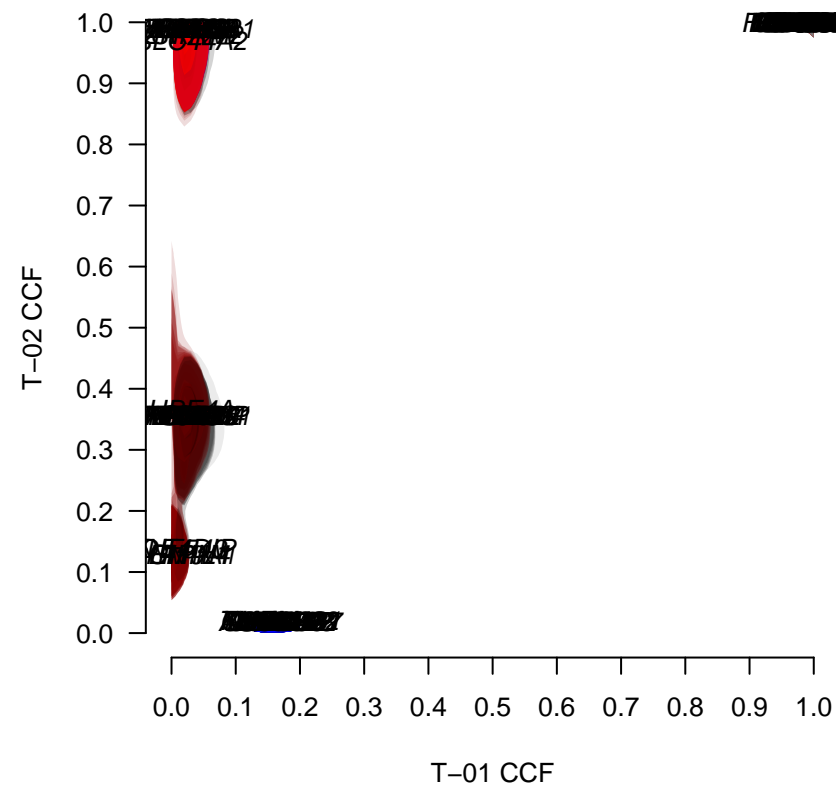


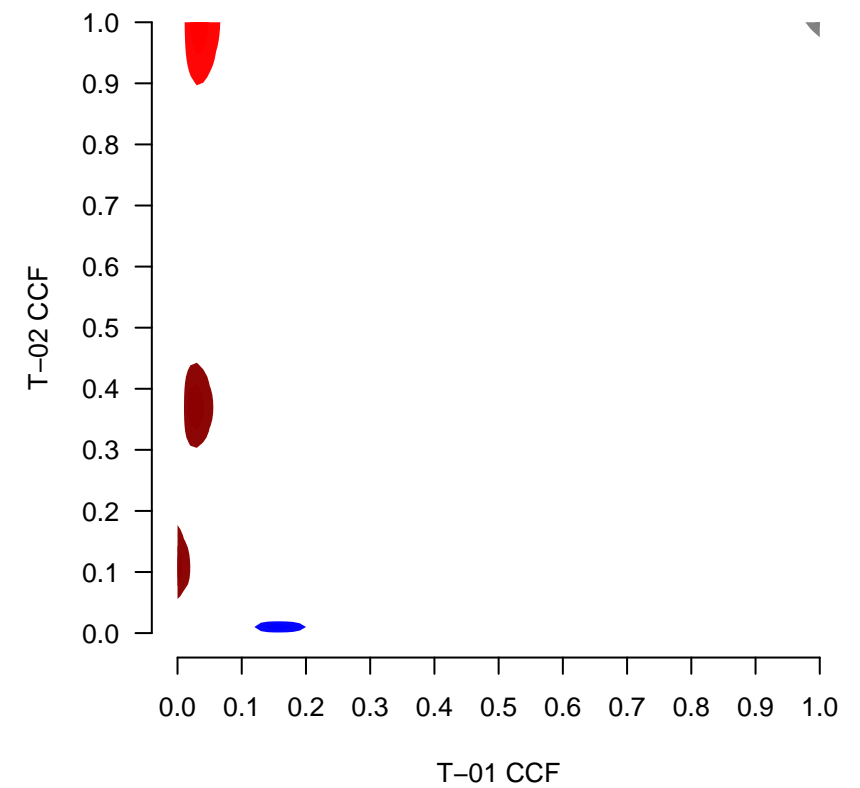
Before clustering



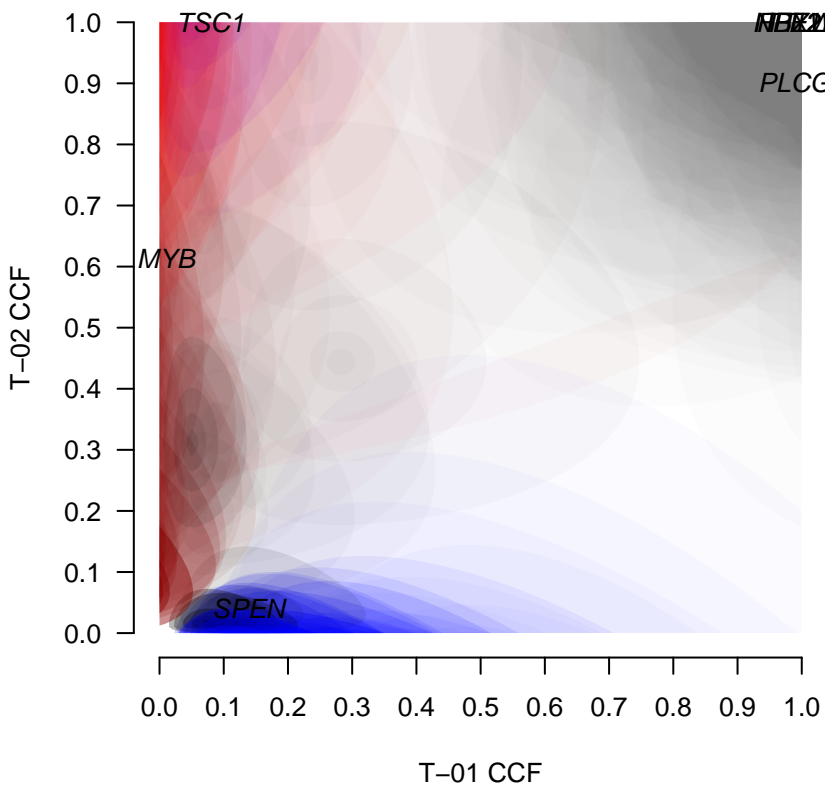
After clustering



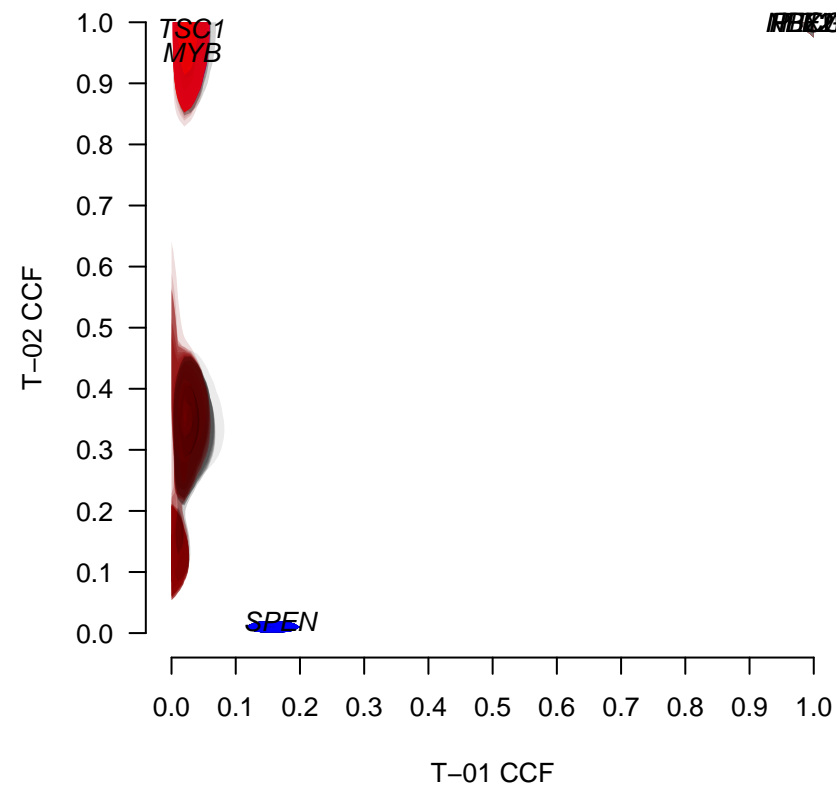
Cophenetic clustering with K = 5



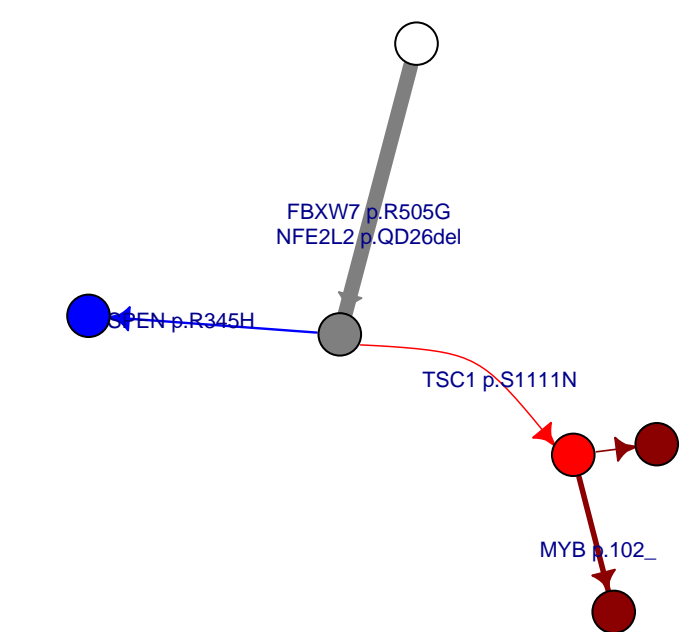
Before clustering

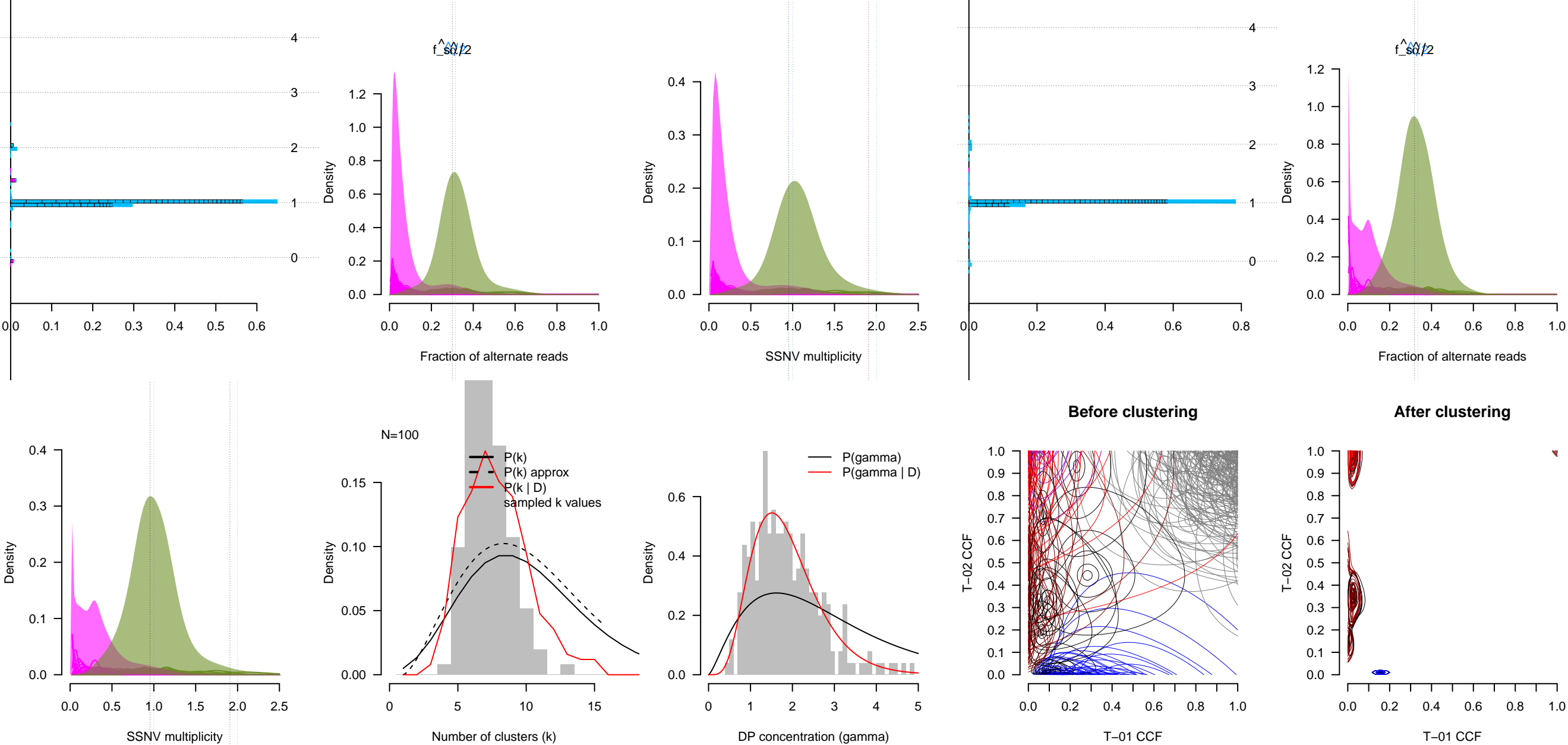



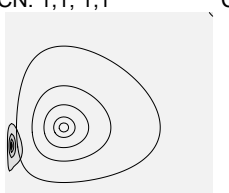




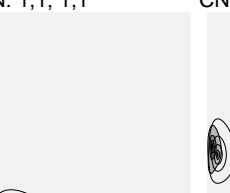
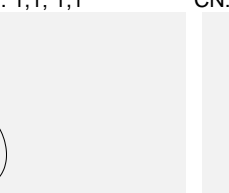
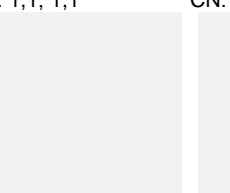
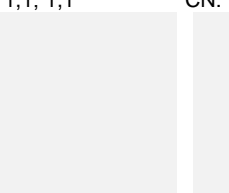
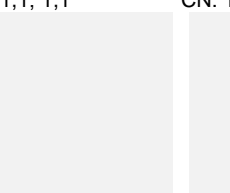
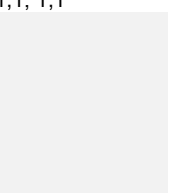
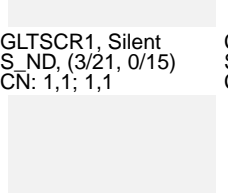
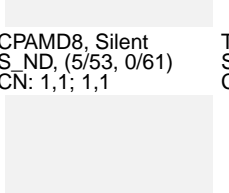
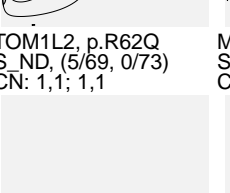
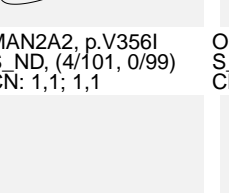
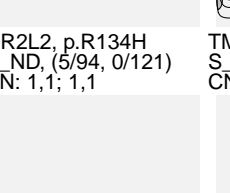
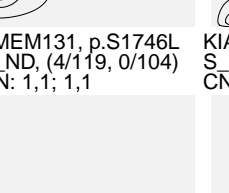
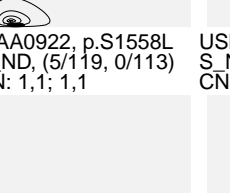
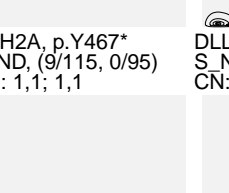
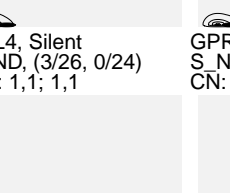
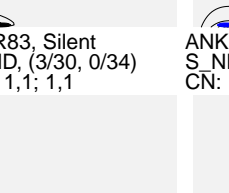
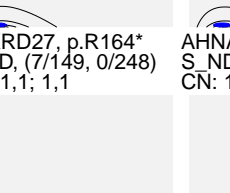
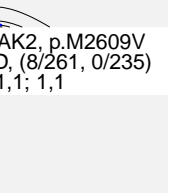
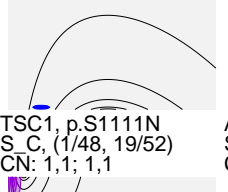
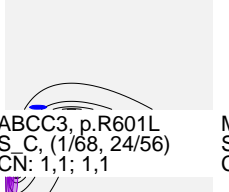
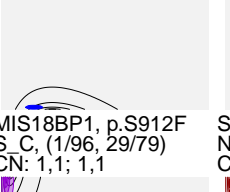
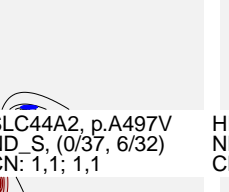
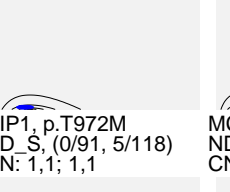
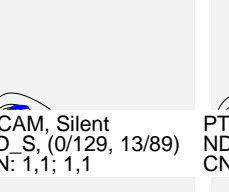
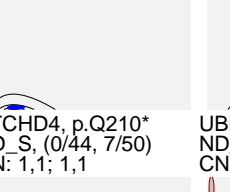
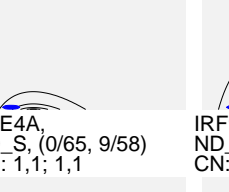
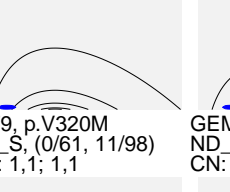
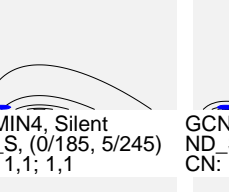
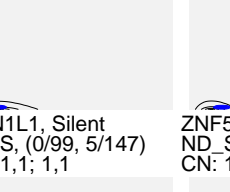




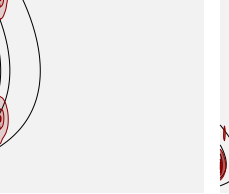
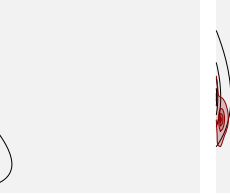
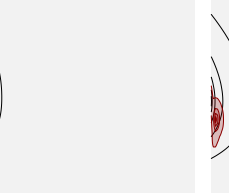
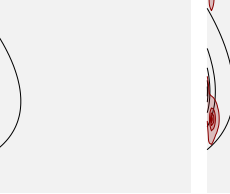
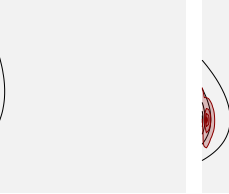
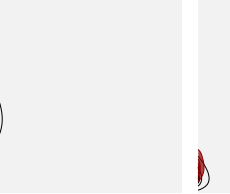
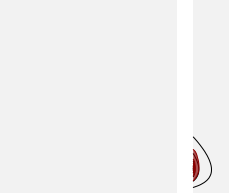
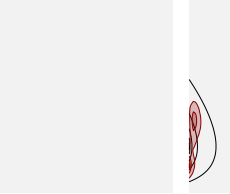
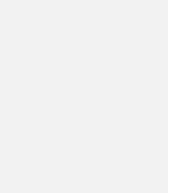
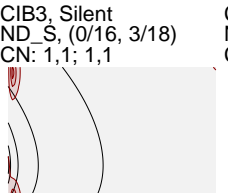
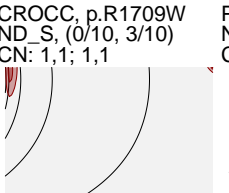
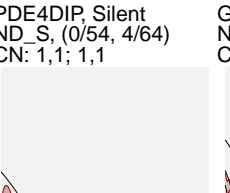
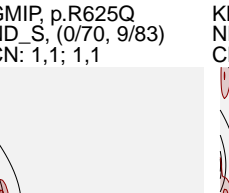
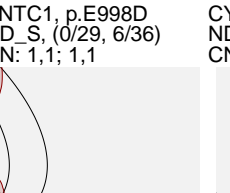
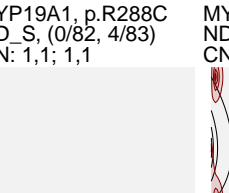
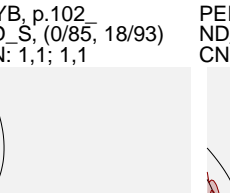
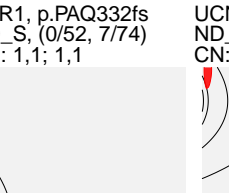
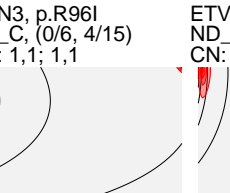
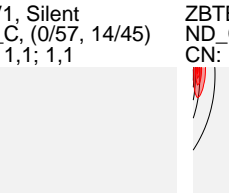
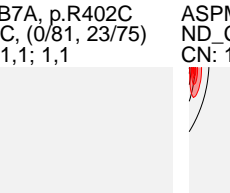
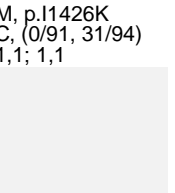
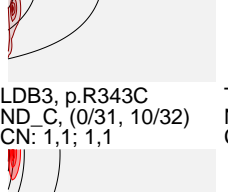
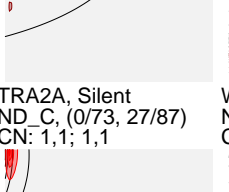
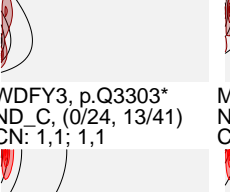
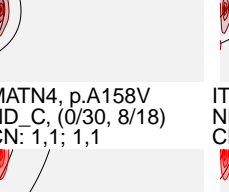
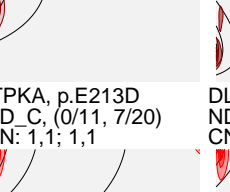
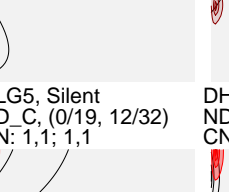
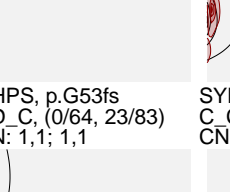
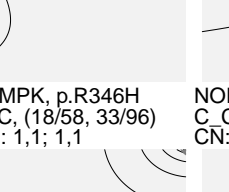
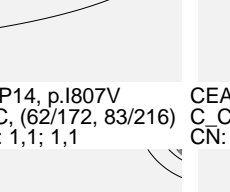
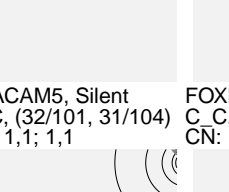
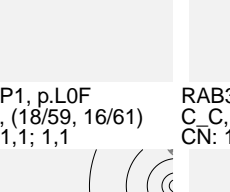
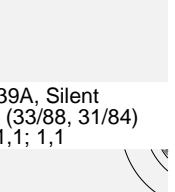
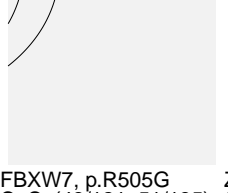
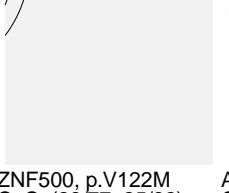
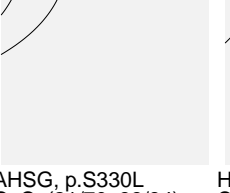

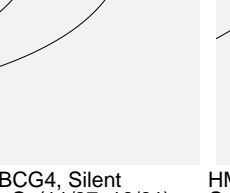
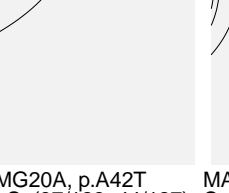
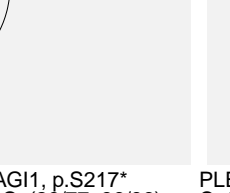
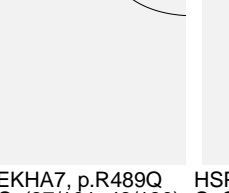
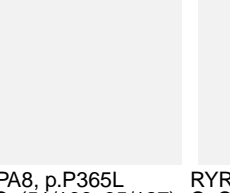
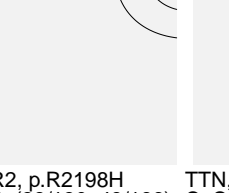
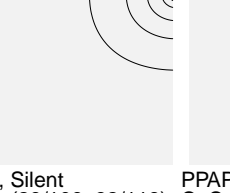
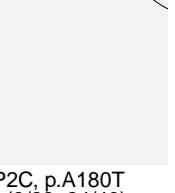
After clustering



related





<p>RRM2, p.S2485F S_S, (4/59, 16/54) CN: 1,1; 1,1</p> 	<p>PDXDC1, p.S424L S_S, (3/36, 8/57) CN: 1,1; 1,1</p> 	<p>KCNJ12, p.R118W S_S, (1/38, 3/36) CN: 1,1; 1,1</p> 	<p>MTMR6, Silent S_S, (1/39, 6/57) CN: 1,1; 1,1</p> 	<p>ZNF141, Silent S_S, (2/105, 21/92) CN: 1,1; 1,1</p> 	<p>PDE4DIP, Silent S_S, (1/56, 4/67) CN: 1,1; 1,1</p> 	<p>SPEN, p.R345H S_S, (5/129, 1/125) CN: 1,1; 1,1</p> 	<p>AHNAK, p.E1230D S_S, (5/365, 31/316) CN: 1,1; 1,1</p> 	<p>HRNR, p.I1082R S_S, (6/282, 1/299) CN: 1,1; 1,1</p> 	<p>AHNAK2, p.R814W S_S, (7/262, 1/341) CN: 1,1; 1,1</p> 	<p>B1BD7, p.R924Q S_ND, (4/78, 0/79) CN: 1,1; 1,1</p> 	<p>LIG4, p.S/15P S_ND, (4/80, 0/82) CN: 1,1; 1,1</p> 
<p>GLTSCR1, Silent S_ND, (3/21, 0/15) CN: 1,1; 1,1</p> 	<p>CPAMD8, Silent S_ND, (5/53, 0/61) CN: 1,1; 1,1</p> 	<p>TOM1L2, p.R62Q S_ND, (5/69, 0/73) CN: 1,1; 1,1</p> 	<p>MAN2A2, p.V356I S_ND, (4/101, 0/99) CN: 1,1; 1,1</p> 	<p>OR2L2, p.R134H S_ND, (5/94, 0/121) CN: 1,1; 1,1</p> 	<p>TMEM131, p.S1746L S_ND, (4/119, 0/104) CN: 1,1; 1,1</p> 	<p>KIAA0922, p.S1558L S_ND, (5/119, 0/113) CN: 1,1; 1,1</p> 	<p>USH2A, p.Y467* S_ND, (9/115, 0/95) CN: 1,1; 1,1</p> 	<p>DLL4, Silent S_ND, (3/26, 0/24) CN: 1,1; 1,1</p> 	<p>GPR83, Silent S_ND, (3/30, 0/34) CN: 1,1; 1,1</p> 	<p>ANKRD27, p.R164* S_ND, (7/149, 0/248) CN: 1,1; 1,1</p> 	<p>AHNAK2, p.M2609V S_ND, (8/261, 0/235) CN: 1,1; 1,1</p> 
<p>TSC1, p.S1111N S_C, (1/48, 19/52) CN: 1,1; 1,1</p> 	<p>ABCC3, p.R601L S_C, (1/68, 24/56) CN: 1,1; 1,1</p> 	<p>MIS18BP1, p.S912F S_C, (1/96, 29/79) CN: 1,1; 1,1</p> 	<p>SLC44A2, p.A497V ND_S, (0/37, 6/32) CN: 1,1; 1,1</p> 	<p>HIP1, p.T972M ND_S, (0/91, 5/118) CN: 1,1; 1,1</p> 	<p>MCAM, Silent ND_S, (0/129, 13/89) CN: 1,1; 1,1</p> 	<p>PTCHD4, p.Q210* ND_S, (0/44, 7/50) CN: 1,1; 1,1</p> 	<p>UBE4A, ND_S, (0/65, 9/58) CN: 1,1; 1,1</p> 	<p>IRF9, p.V320M ND_S, (0/61, 11/98) CN: 1,1; 1,1</p> 	<p>GEMIN4, Silent ND_S, (0/185, 5/245) CN: 1,1; 1,1</p> 	<p>GCN1L1, Silent ND_S, (0/99, 5/147) CN: 1,1; 1,1</p> 	<p>ZNF543, Silent ND_S, (0/64, 4/57) CN: 1,1; 1,1</p> 
<p>CIB3, Silent ND_S, (0/16, 3/18) CN: 1,1; 1,1</p> 	<p>CROCC, p.R1709W ND_S, (0/10, 3/10) CN: 1,1; 1,1</p> 	<p>PDE4DIP, Silent ND_S, (0/54, 4/64) CN: 1,1; 1,1</p> 	<p>GMIP, p.R625Q ND_S, (0/70, 9/83) CN: 1,1; 1,1</p> 	<p>KNTC1, p.E998D ND_S, (0/29, 6/36) CN: 1,1; 1,1</p> 	<p>CYP19A1, p.R288C ND_S, (0/82, 4/83) CN: 1,1; 1,1</p> 	<p>MYB, p.102 ND_S, (0/85, 18/93) CN: 1,1; 1,1</p> 	<p>PER1, p.PAQ332fs ND_S, (0/52, 7/74) CN: 1,1; 1,1</p> 	<p>UCN3, p.R96I ND_C, (0/6, 4/15) CN: 1,1; 1,1</p> 	<p>ETV1, Silent ND_C, (0/57, 14/45) CN: 1,1; 1,1</p> 	<p>ZBTB7A, p.R402C ND_C, (0/81, 23/75) CN: 1,1; 1,1</p> 	<p>ASPM, p.I1426K ND_C, (0/91, 31/94) CN: 1,1; 1,1</p> 
<p>LDB3, p.R343C ND_C, (0/31, 10/32) CN: 1,1; 1,1</p> 	<p>TRA2A, Silent ND_C, (0/73, 27/87) CN: 1,1; 1,1</p> 	<p>WDFY3, p.Q3303* ND_C, (0/24, 13/41) CN: 1,1; 1,1</p> 	<p>MATN4, p.A158V ND_C, (0/30, 8/18) CN: 1,1; 1,1</p> 	<p>ITPKA, p.E213D ND_C, (0/11, 7/20) CN: 1,1; 1,1</p> 	<p>DLG5, Silent ND_C, (0/19, 12/32) CN: 1,1; 1,1</p> 	<p>DHPS, p.G53fs ND_C, (0/64, 23/83) CN: 1,1; 1,1</p> 	<p>SYMPK, p.R346H C_C, (18/58, 33/96) CN: 1,1; 1,1</p> 	<p>NOP14, p.I807V C_C, (62/172, 83/216) CN: 1,1; 1,1</p> 	<p>CEACAM5, Silent C_C, (32/101, 31/104) CN: 1,1; 1,1</p> 	<p>FOXP1, p.L0F C_C, (18/59, 16/61) CN: 1,1; 1,1</p> 	<p>RAB39A, Silent C_C, (33/88, 31/84) CN: 1,1; 1,1</p> 
<p>FBXW7, p.R505G C_C, (43/121, 51/135) CN: 1,1; 1,1</p> 	<p>ZNF500, p.V122M C_C, (28/77, 25/82) CN: 1,1; 1,1</p> 	<p>AHSG, p.S330L C_C, (21/70, 33/84) CN: 1,1; 1,1</p> 	<p>HCN4, p.T547I C_C, (39/120, 56/142) CN: 1,1; 1,1</p> 	<p>ABCG4, Silent C_C, (11/37, 18/61) CN: 1,1; 1,1</p> 	<p>HMG20A, p.A42T C_C, (37/123, 44/127) CN: 1,1; 1,1</p> 	<p>MAGI1, p.S217* C_C, (26/77, 36/96) CN: 1,1; 1,1</p> 	<p>PLEKHA7, p.R489Q C_C, (37/101, 48/130) CN: 1,1; 1,1</p> 	<p>HSPA8, p.P365L C_C, (51/166, 35/127) CN: 1,1; 1,1</p> 	<p>RYR2, p.R2198H C_C, (38/130, 49/166) CN: 1,1; 1,1</p> 	<p>TTN, Silent C_C, (29/109, 32/118) CN: 1,2; 1,2</p> 	<p>PPAP2C, p.A180T C_C, (8/22, 24/46) CN: 1,1; 1,2</p> 
<p>TTLL9, Silent C_C, (12/32, 13/34) CN: 1,1; 1,1</p> 	<p>SULF1, p.Q118K C_C, (19/57, 13/51) CN: 1,1; 1,1</p> 	<p>TTN, Silent C_C, (21/76, 25/93) CN: 1,2; 1,2</p> 	<p>NFE2L2, Silent C_C, (47/130, 51/117) CN: 1,2; 1,2</p> 	<p>CACNA1I, p.R291H C_C, (20/55, 30/84) CN: 1,1; 1,1</p> 	<p>LRRC59, p.R198H C_C, (29/108, 47/145) CN: 1,1; 1,1</p> 	<p>OR10A7, p.A165T C_C, (21/79, 24/77) CN: 1,1; 1,1</p> 	<p>FCRL2, Silent C_C, (15/40, 15/46) CN: 1,1; 1,1</p> 	<p>NID1, Silent C_C, (8/21, 13/32) CN: 1,1; 1,1</p> 	<p>NFE2L2, p.QD26del C_C, (21/71, 29/75) CN: 1,2; 1,2</p> 	<p>NOL4, p.A77T C_C, (17/53, 27/67) CN: 1,1; 1,1</p> 	<p>MRGPRX1, p.E20K C_C, (29/115, 45/145) CN: 1,1; 1,1</p> 

HIST2H2BE, p.P2S C_C, (12/38, 17/43) CN: 1,1; 1,1	SLC5A1, p.R15L C_C, (18/31, 11/31) CN: 1,1; 1,1	ABRA, p.H129L C_C, (40/134, 24/123) CN: 1,2; 1,2	MYO18B, p.R2027C C_C, (6/26, 20/49) CN: 1,1; 1,1	SUZ12, Silent C_C, (27/75, 19/75) CN: 1,1; 1,1	PLEKHG2, p.E483* C_C, (10/31, 12/38) CN: 1,1; 1,1	PLCG2, Silent C_C, (27/81, 34/119) CN: 1,1; 1,1	DENND5B, p.I313V C_C, (5/19, 11/30) CN: 1,1; 1,1	DNAJC24, p.D/8G C_C, (5/14, 6/18) CN: 1,1; 1,1	KIAA0319, p.R/91* C_C, (17/32, 5/29) CN: 1,1; 1,1	USP15, p.R946Q C_C, (45/165, 54/182) CN: 1,1; 1,1	ANK2, Silent C_C, (24/94, 25/89) CN: 1,1; 1,1
CLCNKA, Silent C_C, (17/79, 25/76) CN: 1,1; 1,1	COL22A1, p.R1079W C_C, (13/42, 15/59) CN: 1,1; 1,1	SLITRK5, p.R451C C_C, (6/31, 12/40) CN: 1,1; 1,1	TMEM200A, p.P439L C_C, (18/78, 15/68) CN: 1,1; 1,1								