

**Additional file 20: Categorical GES analyses results in function of external TNBC clusters (C'1, C'2 and C'3).**

GES name	subtype	All (n = 257)	C'1 (n = 61)	C'2 (n = 97)	C'3 (n = 99)	P
4-TNBC	BLIA	109	15	19	75	< 0.0001
	BLIS	101	4	76	21	
	LAR	18	18	0	0	
	MES	18	13	2	3	
	Unclassified	11	11	0	0	
CIT	Basal-like	187	5	89	93	< 0.0001
	Luminal A	0	0	0	0	
	Luminal B	1	1	0	0	
	Luminal C	11	11	0	0	
	Molecular-apocrine	31	31	0	0	
	Normal	7	4	3	0	
	Unclassified	20	9	5	6	
Claudin-low	Claudin-low	12	3	2	7	0.2259
	Other	245	58	95	92	
	ER-negative	67	7	47	13	
CC+	125	7	42	76		
CC+/IR+	25	14	8	3		
IR+	16	9	0	7		
SR+	22	22	0	0		
PAM50	Unclassified	2	2	0	0	< 0.0001
	Basal-like	198	14	89	95	
	HER2-E	30	29	0	1	
	Luminal A	8	8	0	0	
	Luminal B	4	4	0	0	
	NBL	17	6	8	3	
TNBCtype	Unclassified	0	0	0	0	< 0.0001
	BL1	43	0	26	17	
	BL2	26	8	5	13	
	IM	49	2	2	45	
	LAR	36	35	0	1	
	M	39	1	37	1	
	MSL	19	8	8	3	
	Unclassified	45	7	19	19	

GES: gene-expression signature; BLIA: basal-like immune activated; BLIS: basal-like immune suppressed ; LAR: luminal androgen receptor; MES: mesenchymal; CIT: tumor identity card; CC+: cell cycle; CC+/IR+: cell cycle and immune response; ECM+: extracellular matrix; IR+: immune response; SR+: steroid hormone response; NBL: normal breast-like; BL1: basal-like 1; BL2: basal-like 2; IM: immunomodulatory; M: mesenchymal-like; MSL: mesenchymal stem-like.