Table 1: Network metrics of the null model. The network construction was performed by recconnecting nodes according to the Erdös-Renyi model

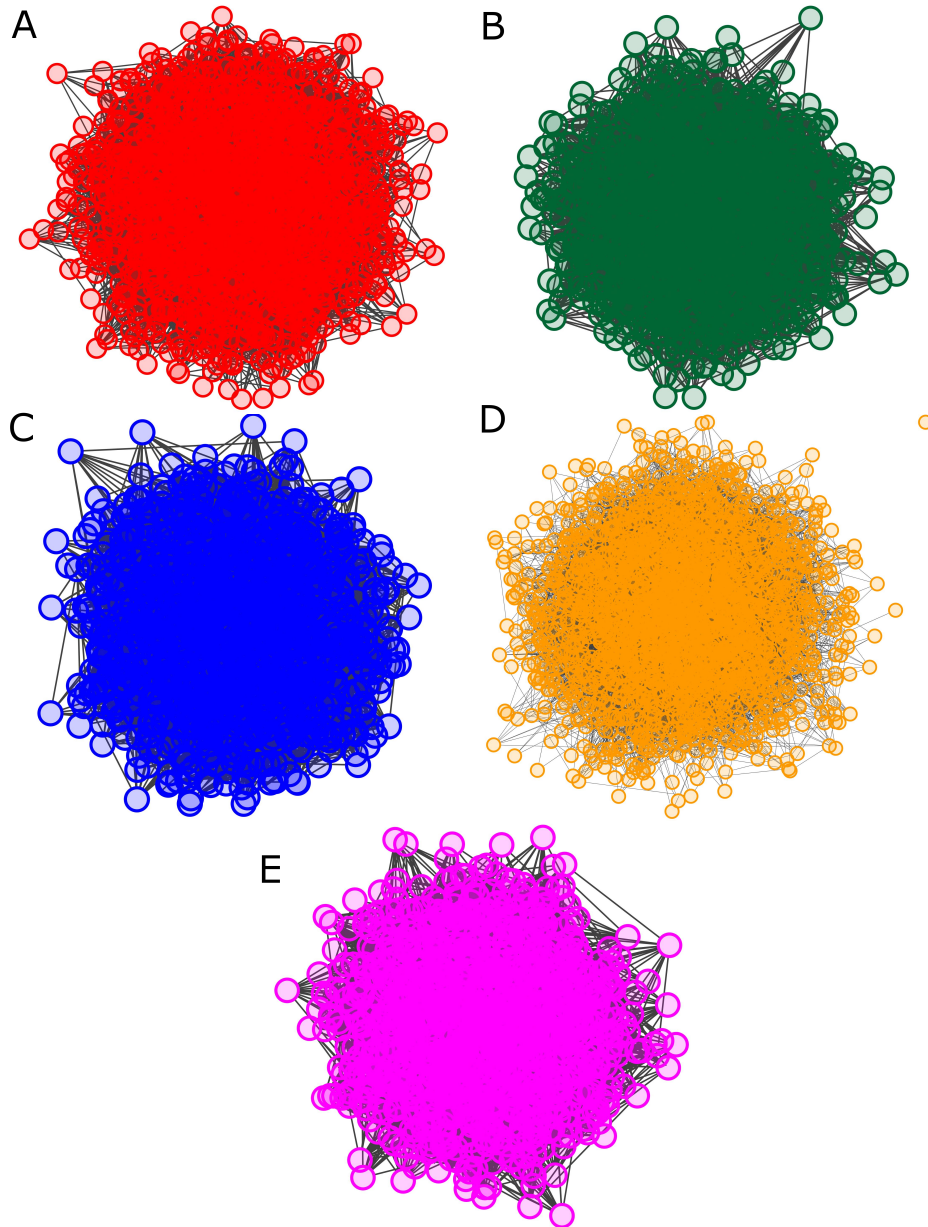| Parameter	Luminal A	Luminal B	Basal	HER2-enriched	Non-tumor
Nodes	1,451	1,018	1,046	2,100	1,027
Edges	10,013	9,880	9,972	9,827	9,966
Connected components	1	1	1	2	1
Clustering Coefficient	0.0100	0.0190	0.0184	0.0041	0.0189

Figure 1. Visualization of the null model networks. The network construction was performed by recconnecting nodes of each phenotype network (luminal A, luminal B, basal, HER2-enriched, and non-tumor) according to the Erdös-Renyi model.