**Supplementary materials 2:** The illustration of area under curve (AUC) for network metrics. The AUC for a network metric Y which was calculated over the sparisty threshold range of S1 to Sn with interval of $\triangle$S, was computed as $Y^{AUC} = \sum_{k=1}^{n-1}[Y(S_k) + Y(S_{k+1})] \times \Delta S/2$. In the current study, S1= 0.10, Sn = 0.34 and $\triangle$S = 0.01(Figure S1).