

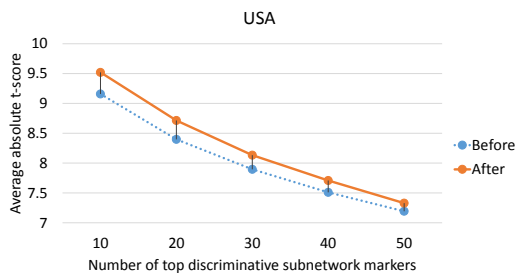
Additional File 1: Supplementary Material for “Simultaneous Identification of Robust Synergistic Subnetwork Markers for Effective Cancer Prognosis”

Navadon Khunlertgit¹ and Byung-Jun Yoon^{1,2,*}

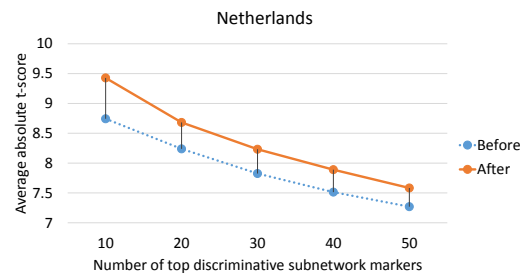
¹ Department of Electrical and Computer Engineering, Texas A&M University, College Station,
TX 77843-3128, USA

² College of Science, Engineering, and Technology, Hamad Bin Khalifa University (HBKU),
P.O. Box 5825, Doha, Qatar

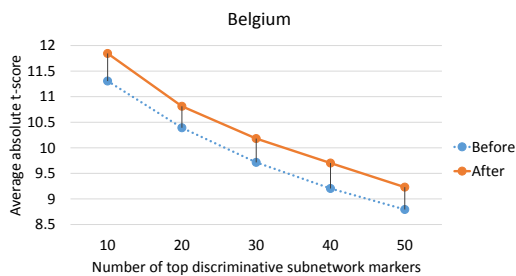
* Correspondence: Byung-Jun Yoon (bjyoon@ece.tamu.edu)



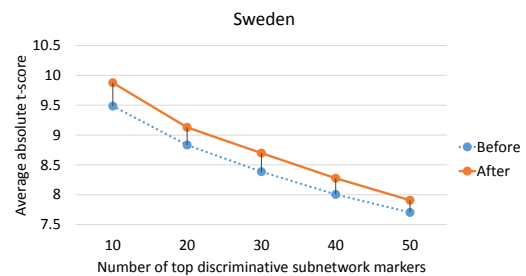
(a)



(b)



(c)



(d)

Figure S1: **Discriminative power of the identified subnetwork markers.** We computed the mean absolute t -score of the top $K=10, 20, 30, 40,$ and 50 markers identified by the proposed method with and without post processing step for the following datasets: (a) USA, (b) Netherlands, (c) Belgium, and (d) Sweden.

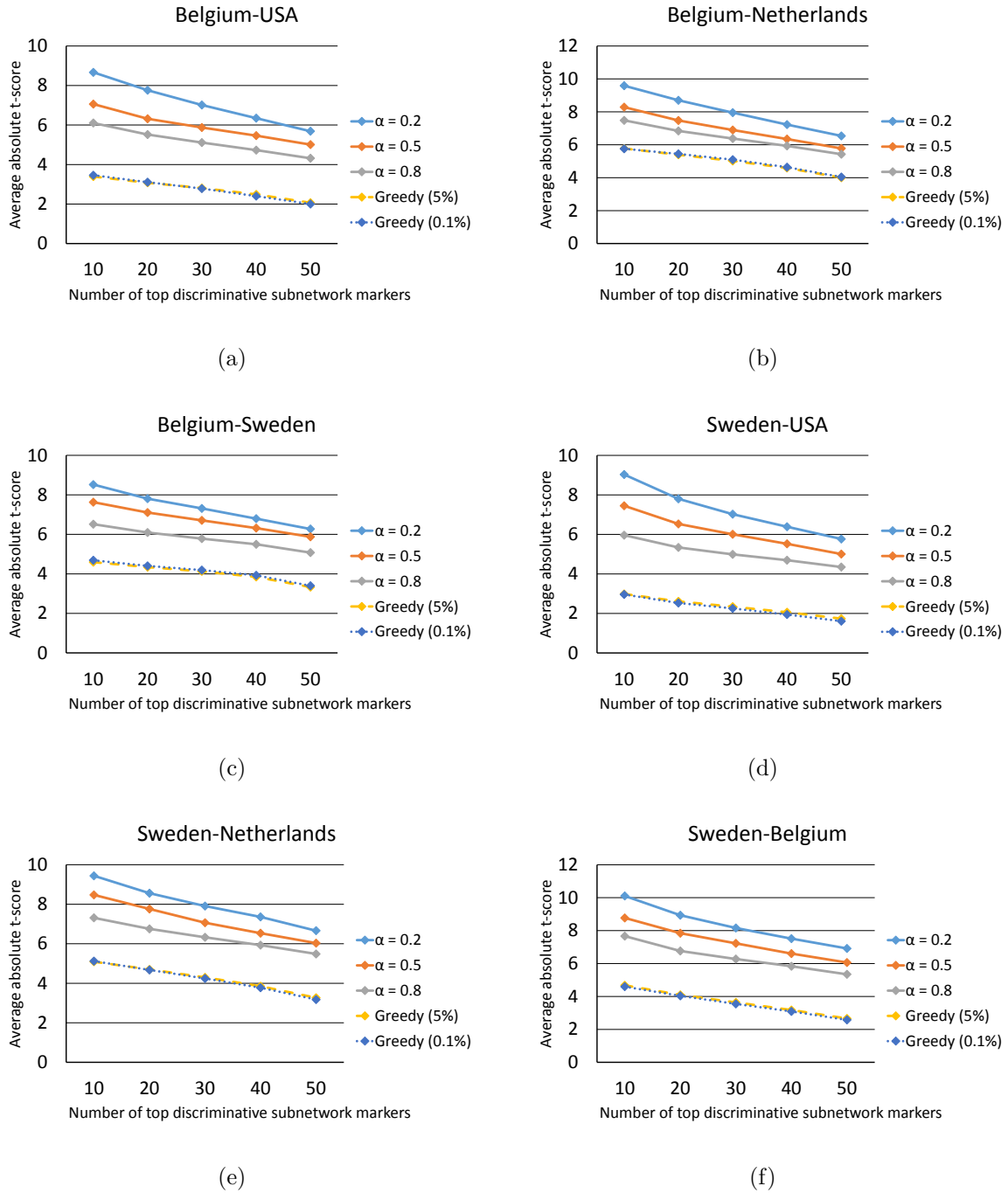


Figure S2: **Discriminative power of the identified subnetwork markers.** We computed the mean absolute t -score of the top $K=10, 20, 30, 40,$ and 50 markers for all datasets. The markers were identified using the first dataset and their discriminative power was evaluated on the second dataset. The experiments were performed for the following dataset pairs: (a) Belgium-USA, (b) Belgium-Netherlands, (c) Belgium-Sweden, (d) Sweden-USA, (e) Sweden-Netherlands, and (f) Sweden-Belgium.

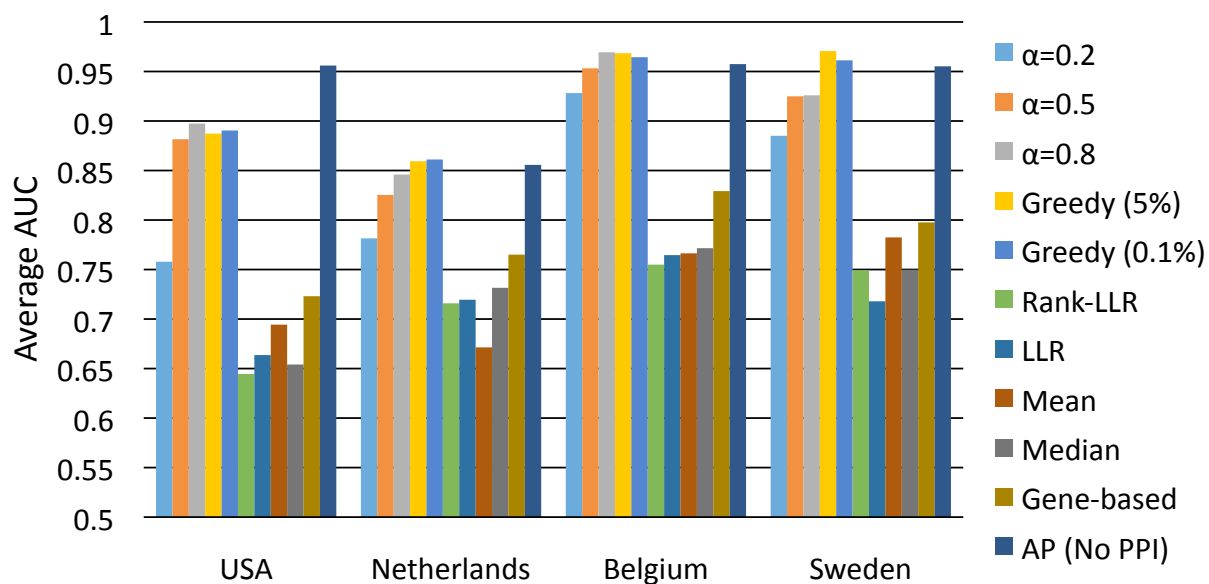


Figure S3: **Classification performance.** We performed cross-validation experiments to evaluate the classification performance of several subnetwork and pathway marker identification methods. The marker were identified using the entire dataset. The classifiers were trained and evaluated on different folds of the same dataset.