SUPPLEMENTAL FIGURES

Figure E1. Heat map depicting clustering of individual items in SNOT-22 questionnaire in CRS patients. Pair-wise correlation matrix with clustering was employed to place increasingly associated symptoms together. Color represents degree of similarity with highly similar cells in red.

Figure E2. A. Organized but random layout of patients (grey nodes) and symptoms (white nodes, center). **B**, Network depicting a layout after application of force directed and weighted degree centrality (WDC) algorithms revealing structure to the symptom patterns. Size of variable nodes (white, symptoms) corresponds to degree centrality.

Figure E3. Final network reveals symptom heterogeneity. Node size corresponds weighted degree centrality (WDC). The clusters are red (A), orange (B), green (C), cyan (D) and blue (E) color. Dendrogram clustering is shown (inset). Black dashed line represents sinonasal symptom cluster. Patients with H-AS sensitivity, square nodes (□); circular nodes (o) without (AT). * represents ASA challenged patients confirmed ASA sensitivity.

Supplementary table 1. Network analysis involving distance metric. Proximity of each cluster to predominant symptom clusters was calculated using mean weights. Edge weight (computed from the patient response to individual SNOT item) is inversely proportional to distance between nodes, thus higher edge weights represent shorter internode distance and therefore closely associating nodes.

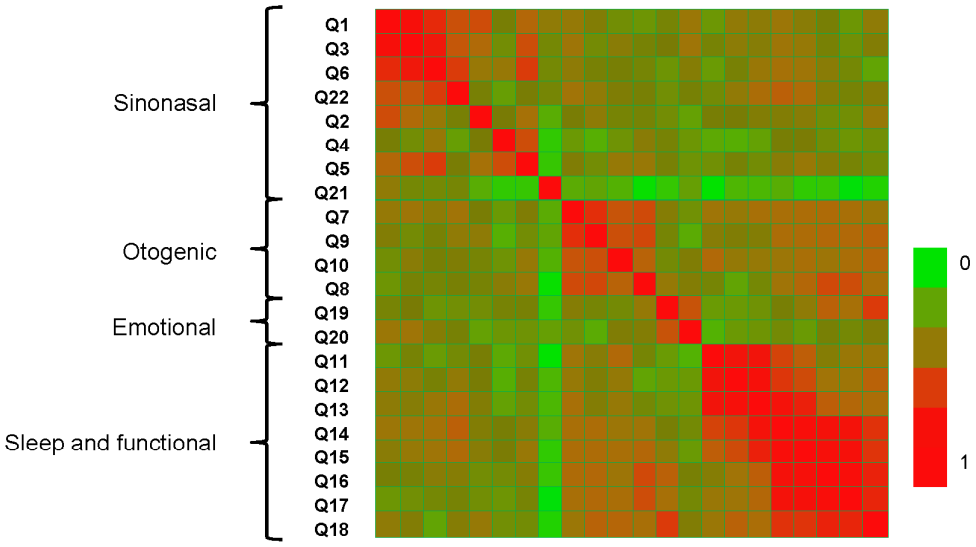

Sinonasal
Otogenic
Emotional
Sleep and functional
Q1
Q3
Q6
Q22
Q2
Q4
Q5
Q21
Q7
Q9
Q10
Q8
Q19
Q20
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
0
1

Figure E1

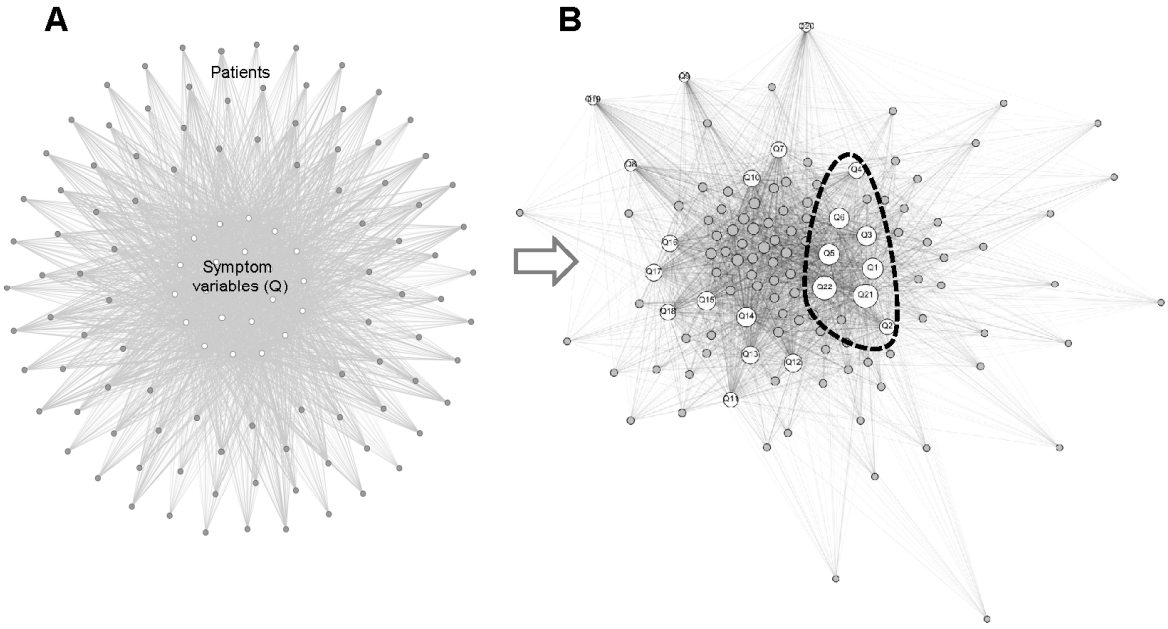
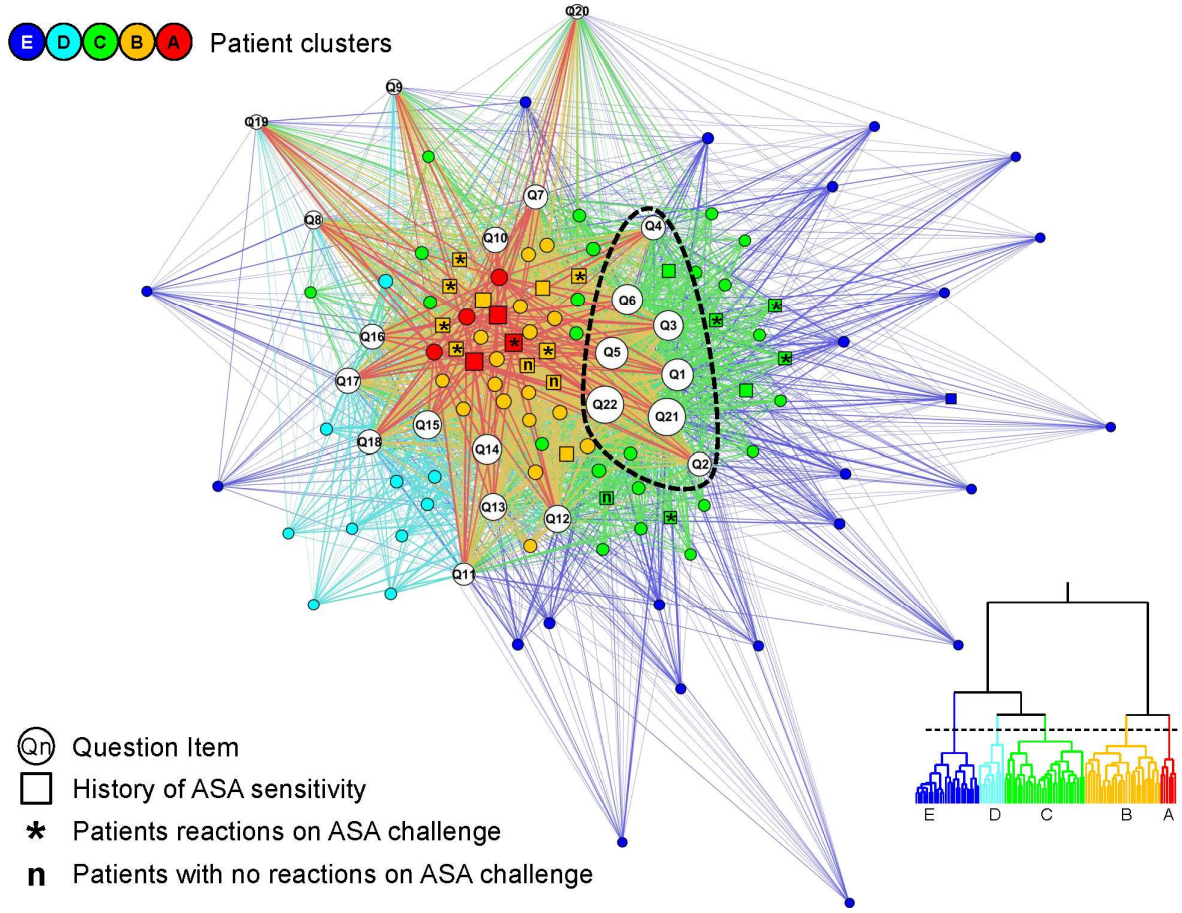

A
Patients
Symptom
variables (Q)
B
Q20
Q4
Q19
Q7
Q9
Q10
Q5
Q6
Q3
Q13
Q8
Q17
C1
Q22
Q21
Q16
Q18
Q14
Q2
Q12
Q11

Figure E2


E D C B A Patient clusters
Q20
Q9
Q19
Q7
Q8
Q4
Q10
Q6
Q3
Q16
Q5
Q1
Q17
Q22
Q21
Q15
Q18
Q14
Q2
Q13
Q12
Q11
E D C B A
Qn Question Item
History of ASA sensitivity
* Patients reactions on ASA challenge
n Patients with no reactions on ASA challenge

Distance analysis to calculate the affinity of patient clusters with symptom clusters.

(Distance)$^{-1}$ Mean ± SD (AU) / Cluster	(Mean distance)$^{-1}$ to Sinonasal symptom cluster (Dotted line)	(Mean distance)$^{-1}$ to Non Sinonasal symptoms	p	Affinity to cluster
A (6)	4.14 ± 1.3	4.14 ± 1.3	1	Both
B (28)	3.35 ± 1.3	2.7 ± 1.5	0.0001	Sinonasal
C (30)	2.87 ± 1.4	1.51 ± 1.4	0.0001	Sinonasal
D (10)	1.3 ± 1.5	2.06 ± 1.6	0.0006	Non Sinonasal
E (23)	1.37 ± 1.3	0.62 ± 1	0.0001	Sinonasal

Table Supp 1