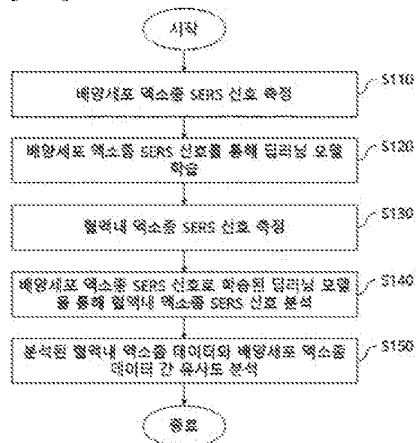
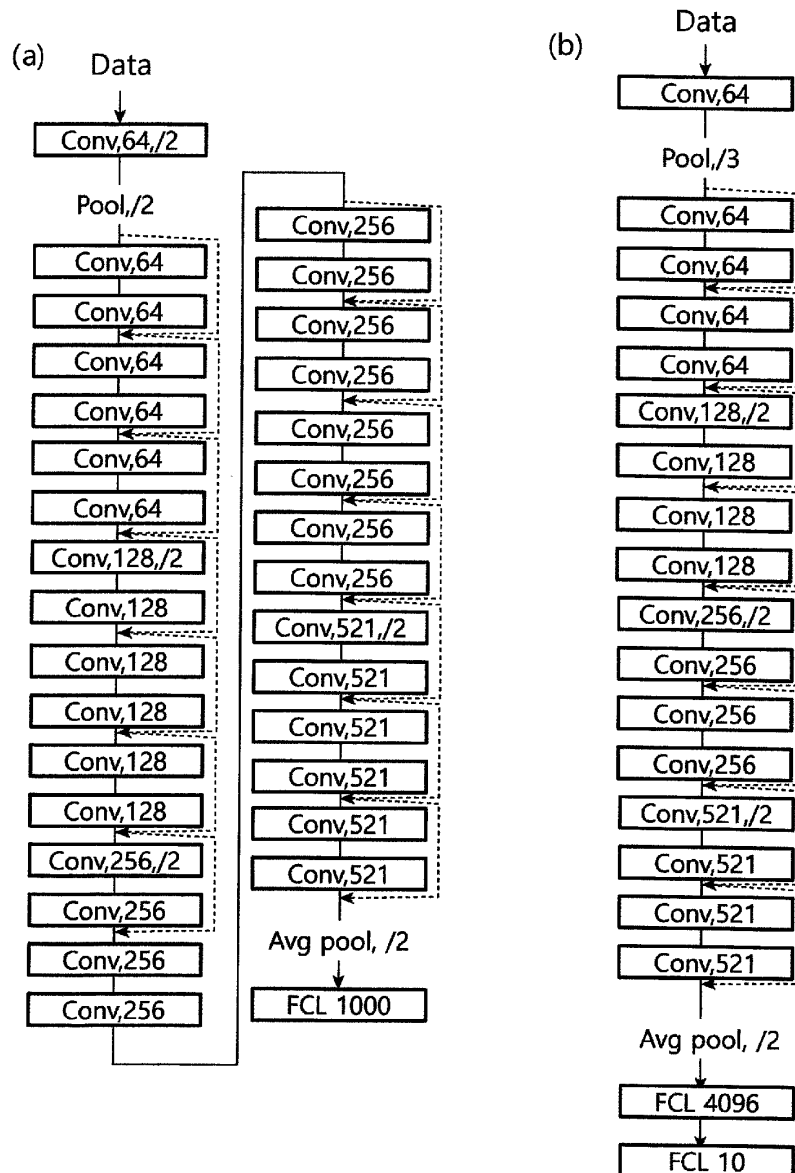


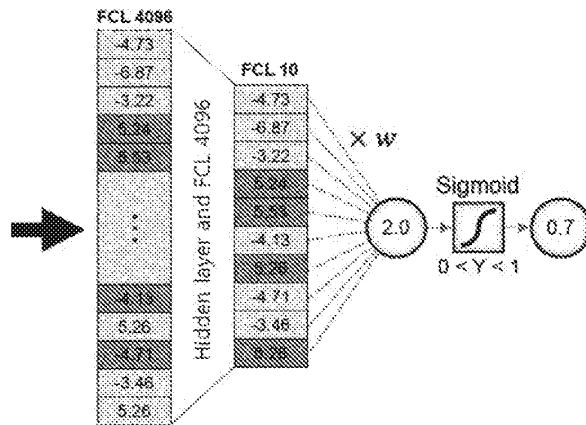
[51]



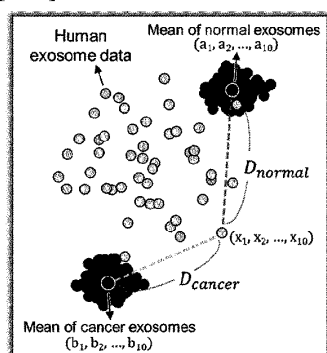
[도2]



[도3]



[도4]



Mahalanobis distance :

$$D = \sqrt{(A - X) \Sigma^{-1} (A - X)^T}$$

where A = Mean of normal or cancer exosomes
($a_1, a_2, \dots, a_{10}$) or ($b_1, b_2, \dots, b_{10}$)

X = Human exosome data
($x_1, x_2, \dots, x_{10}$)

$$\Sigma = \begin{pmatrix} \text{Cov}(A_1, A_1) & \dots & \text{Cov}(A_1, A_n) \\ \vdots & \ddots & \vdots \\ \text{Cov}(A_n, A_1) & \dots & \text{Cov}(A_n, A_n) \end{pmatrix}$$

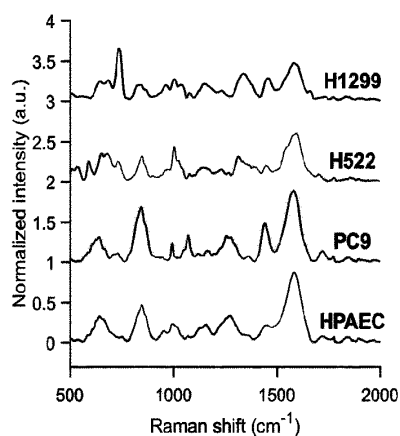
n = # of normal or cancer exosome data = 340

D_{normal} = de-similarity to normal exosome

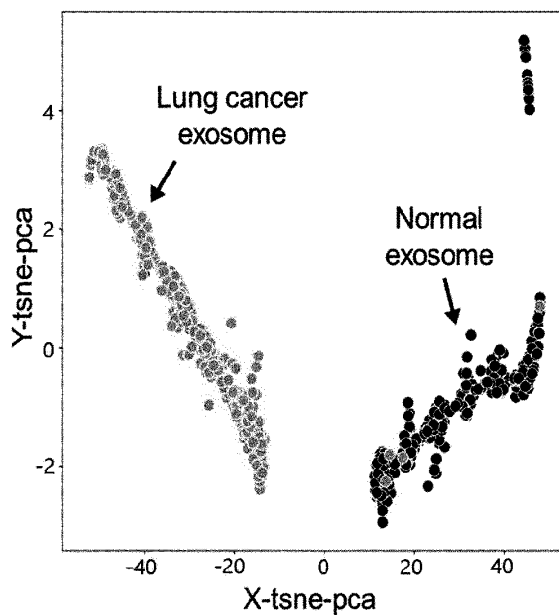
D_{cancer} = de-similarity to cancer exosome

$$D_{normal} / D_{cancer} = \text{Relative similarity to cancer exosome}$$

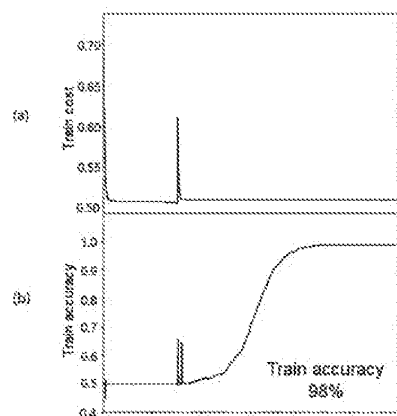
[도5]



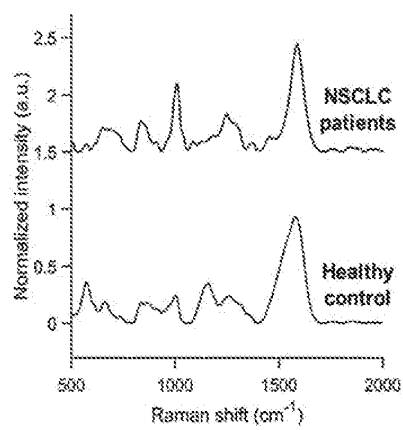
[도6]



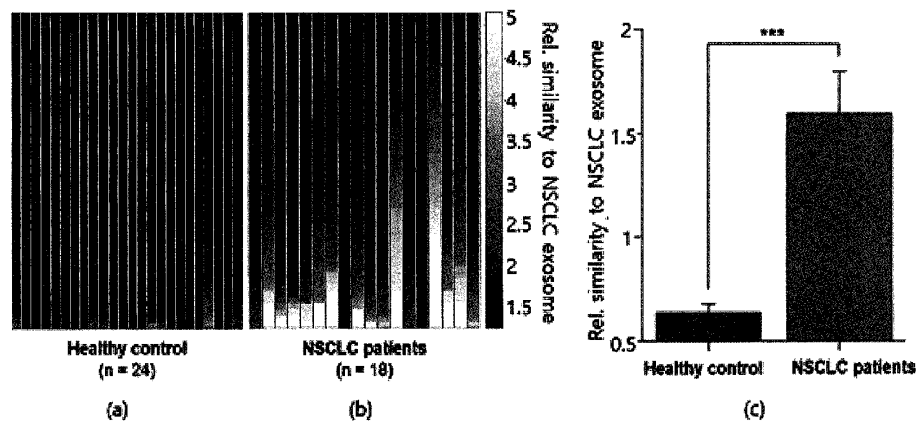
[도7]



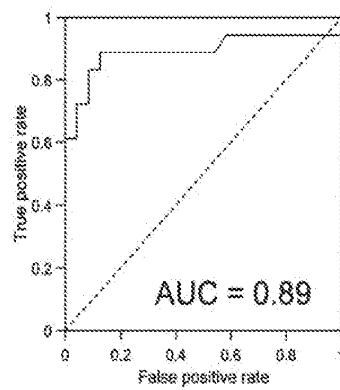
[도8]



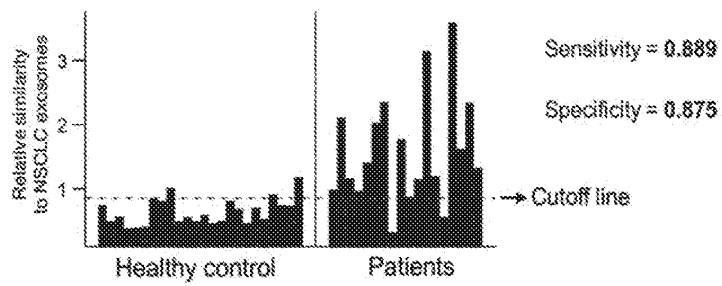
[도9]



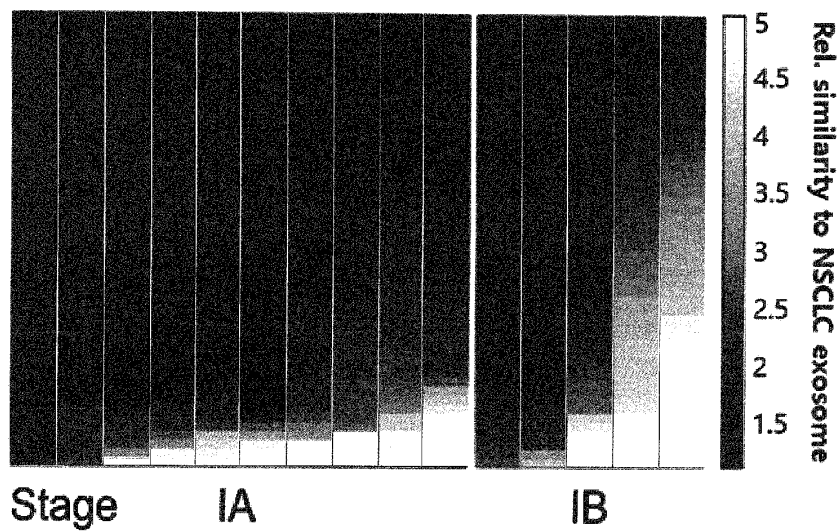
[도10]



[도 11]



[도 12]



[도 13]

