

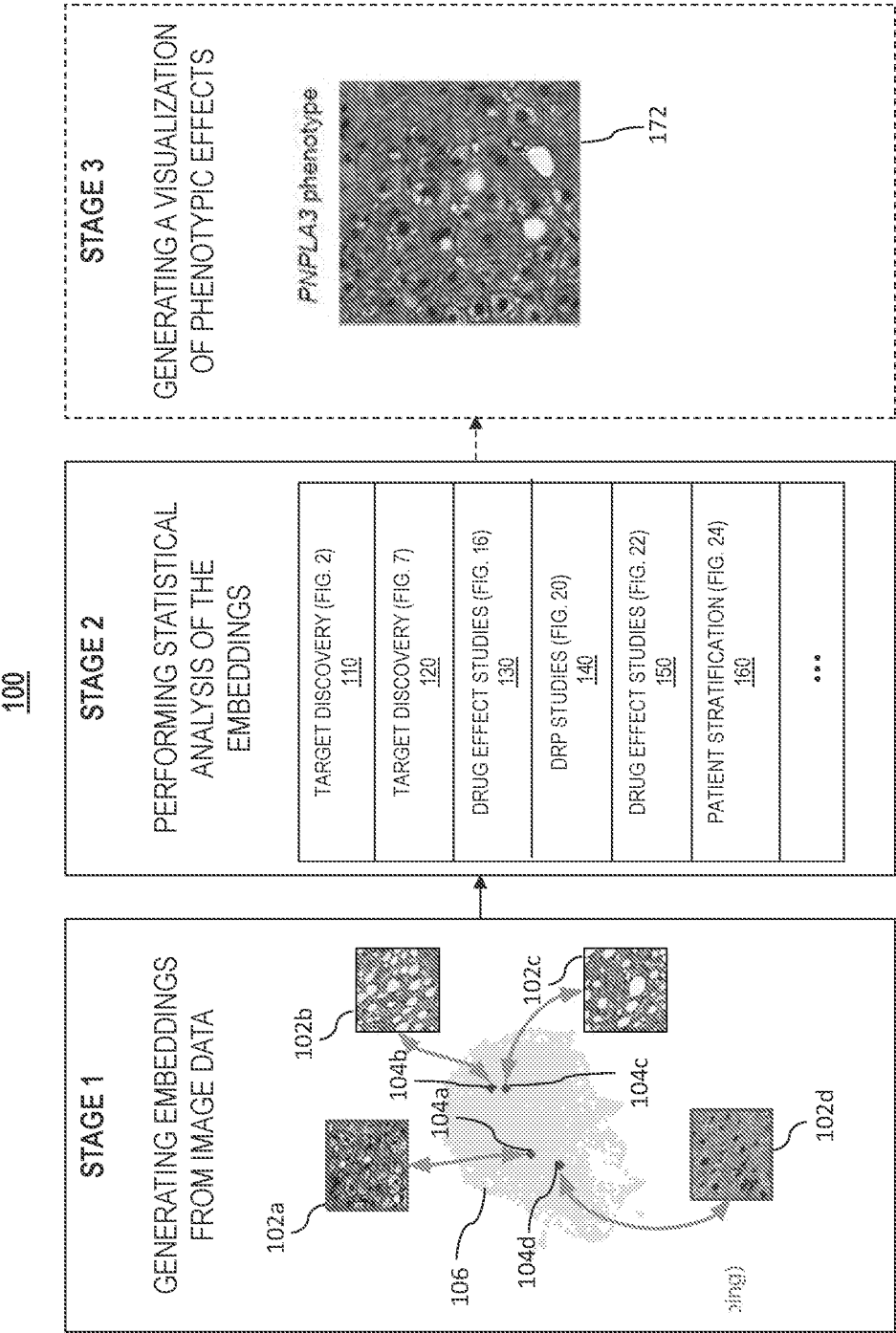


FIG. 1

200

202

inputting a plurality of medical images obtained from a group of clinical subjects into an unsupervised machine-learning model to obtain a plurality of embeddings in a latent space, each embedding corresponding to a phenotypic state relative to the disease of interest reflected in one or more of the plurality of medical images

204

Obtaining a plurality of predicted medical diagnosis scores corresponding to the plurality of embeddings using a linear regression model, each medical diagnosis score indicative of a state of the disease of interest or its progression

206

Associating the plurality of medical diagnosis scores with each candidate genetic variant of a plurality of candidate genetic variants expressed by the group of clinical subjects from whom the plurality of medical images was taken

208

Determining, based on the association, a correlation metric between the disease of interest and each genetic variant of interest, the correlation metric indicative of impact of the genetic variant of interest on the disease of interest

FIG. 2

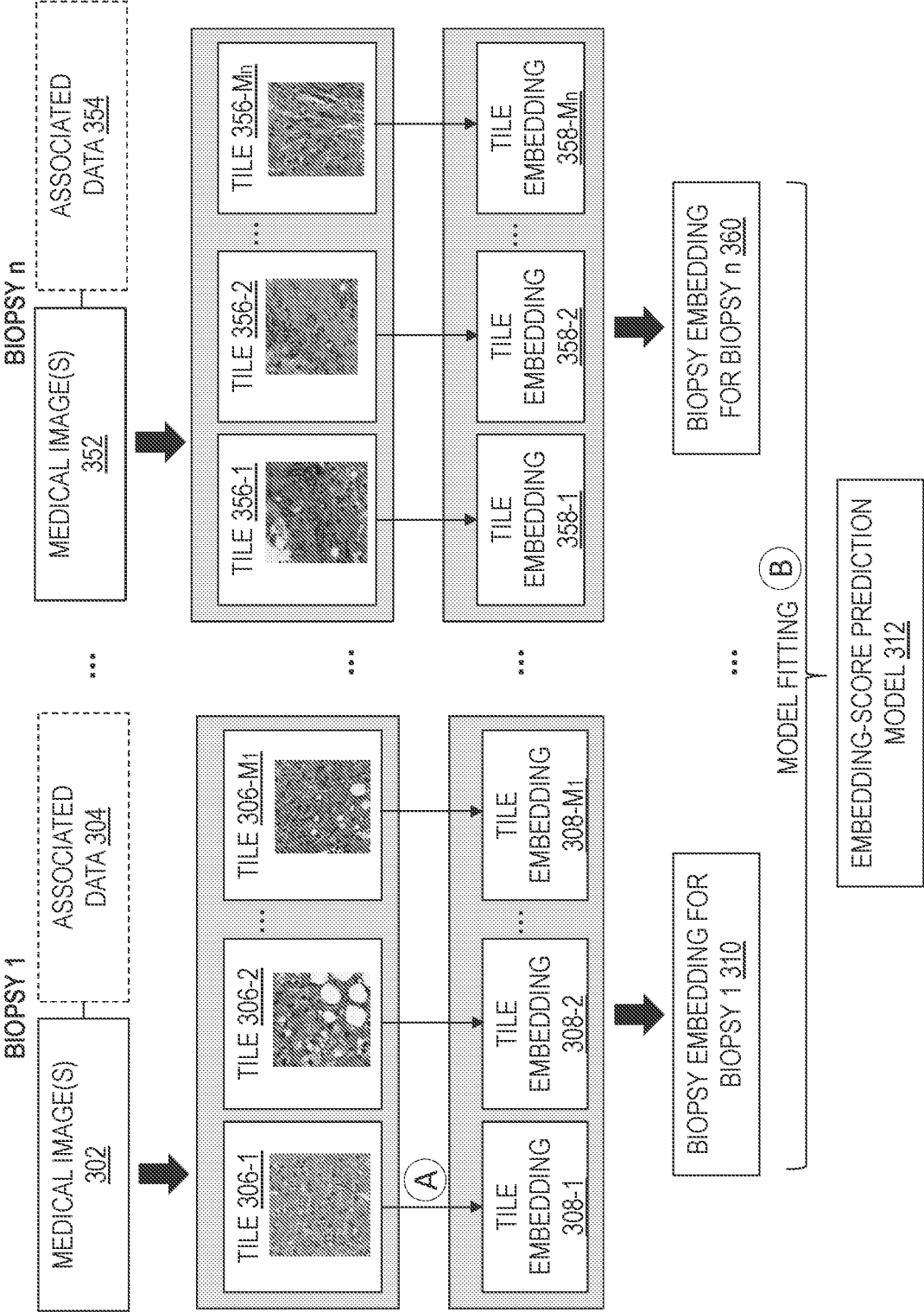


FIG. 3A

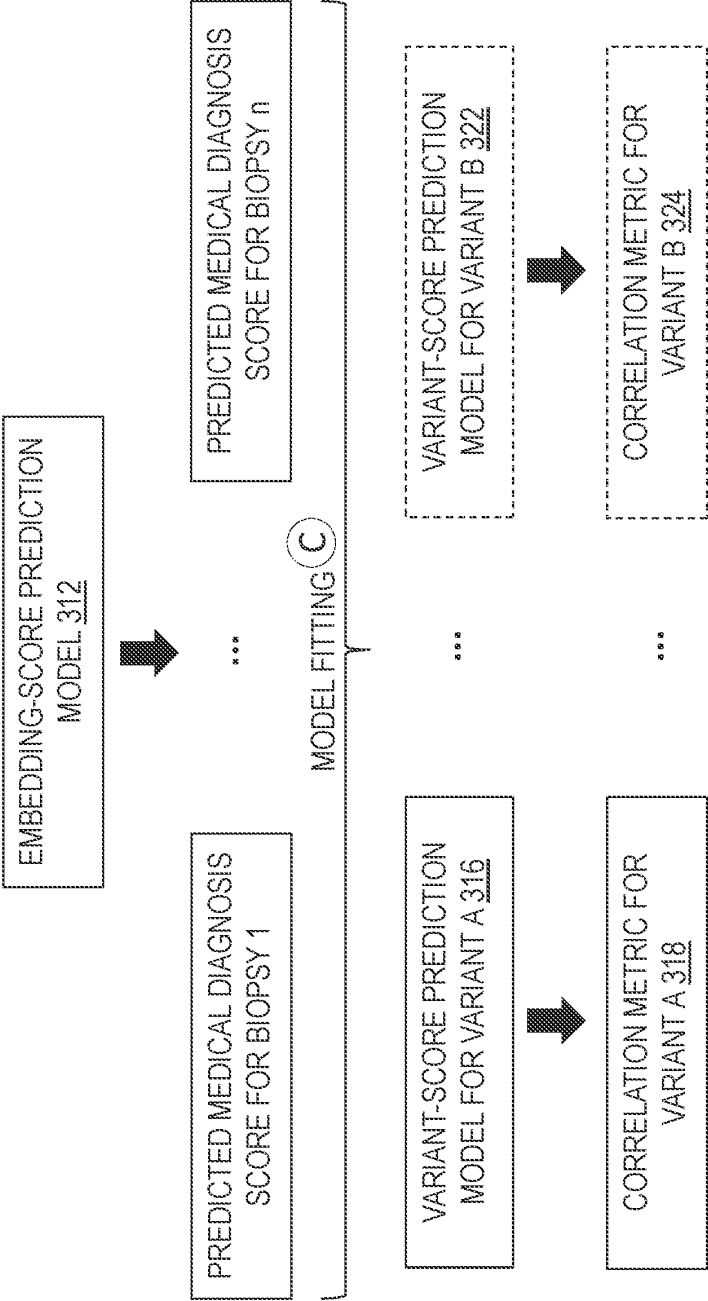


FIG. 3B

(A)

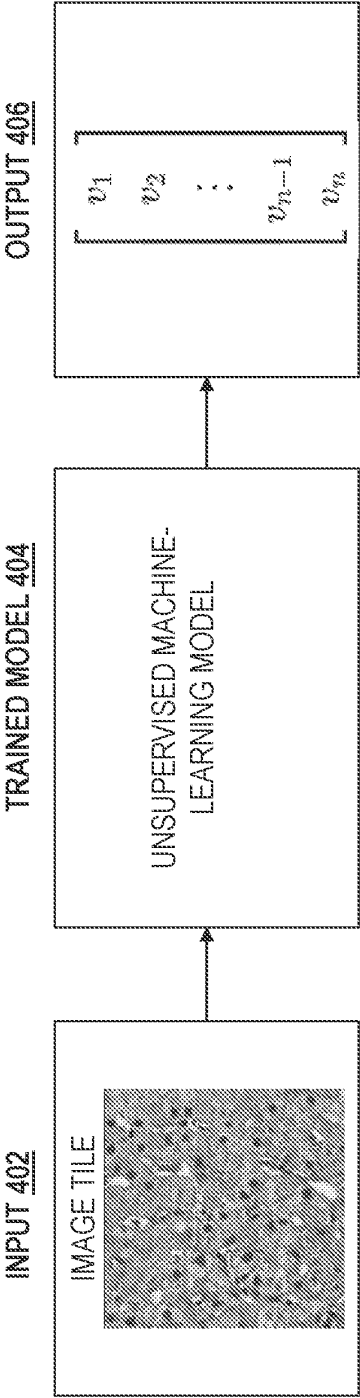


FIG. 4A

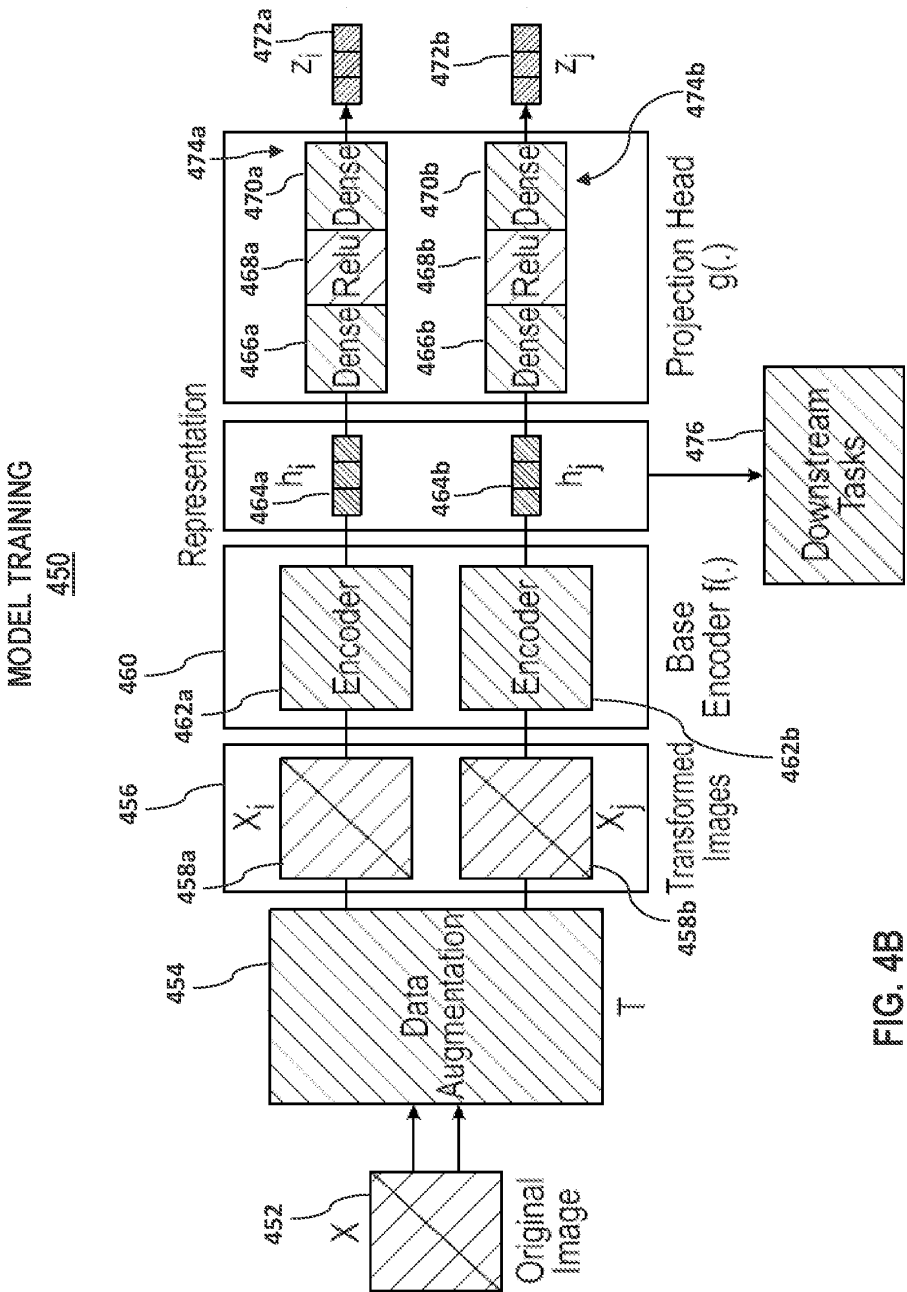


FIG. 4B

EMBEDDING-SCORE MODEL FITTING (B)

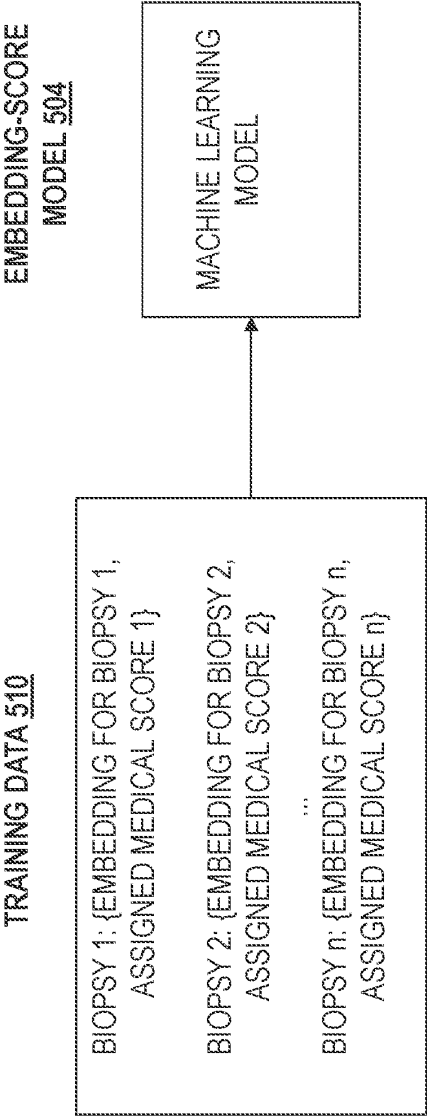


FIG. 5

VARIANT-SCORE MODEL FITTING (C)

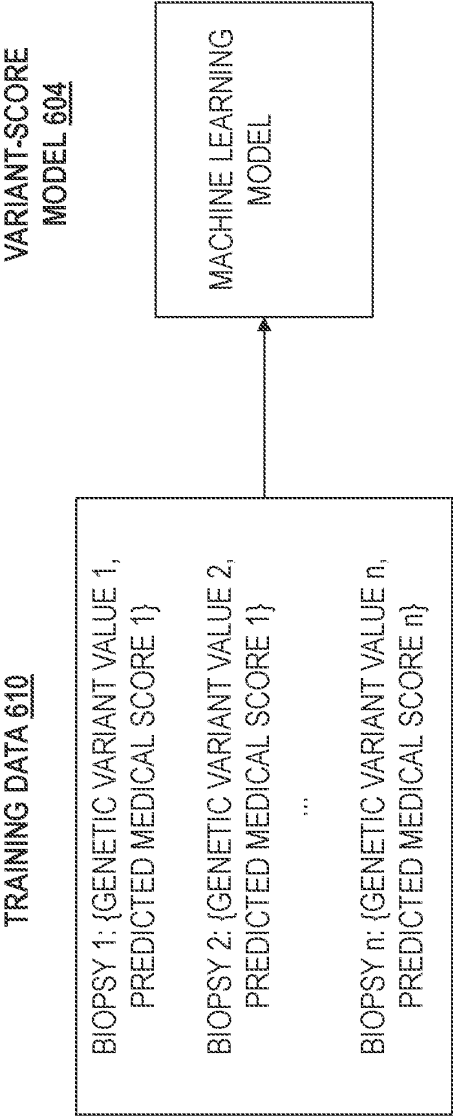


FIG. 6

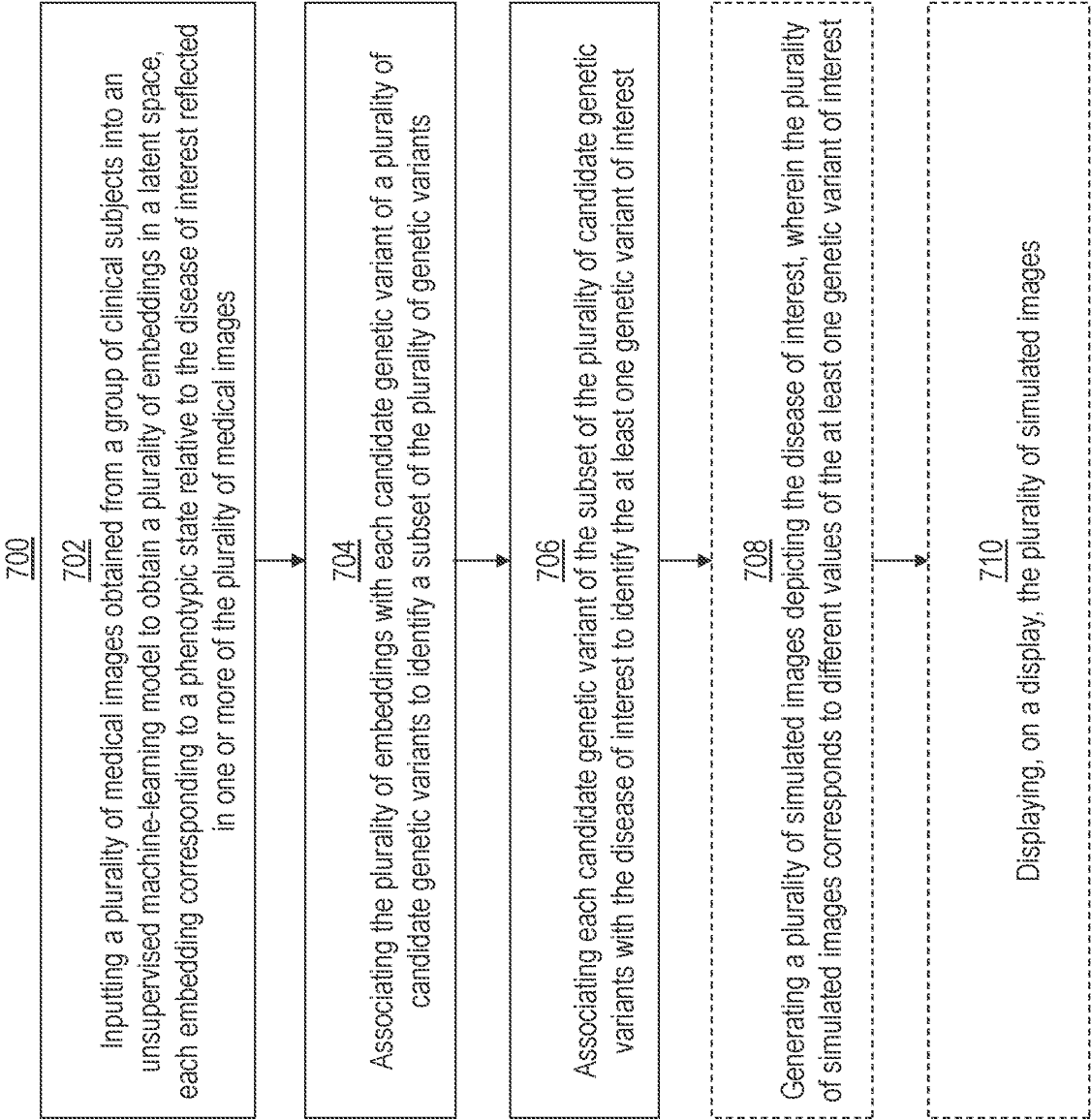


FIG. 7

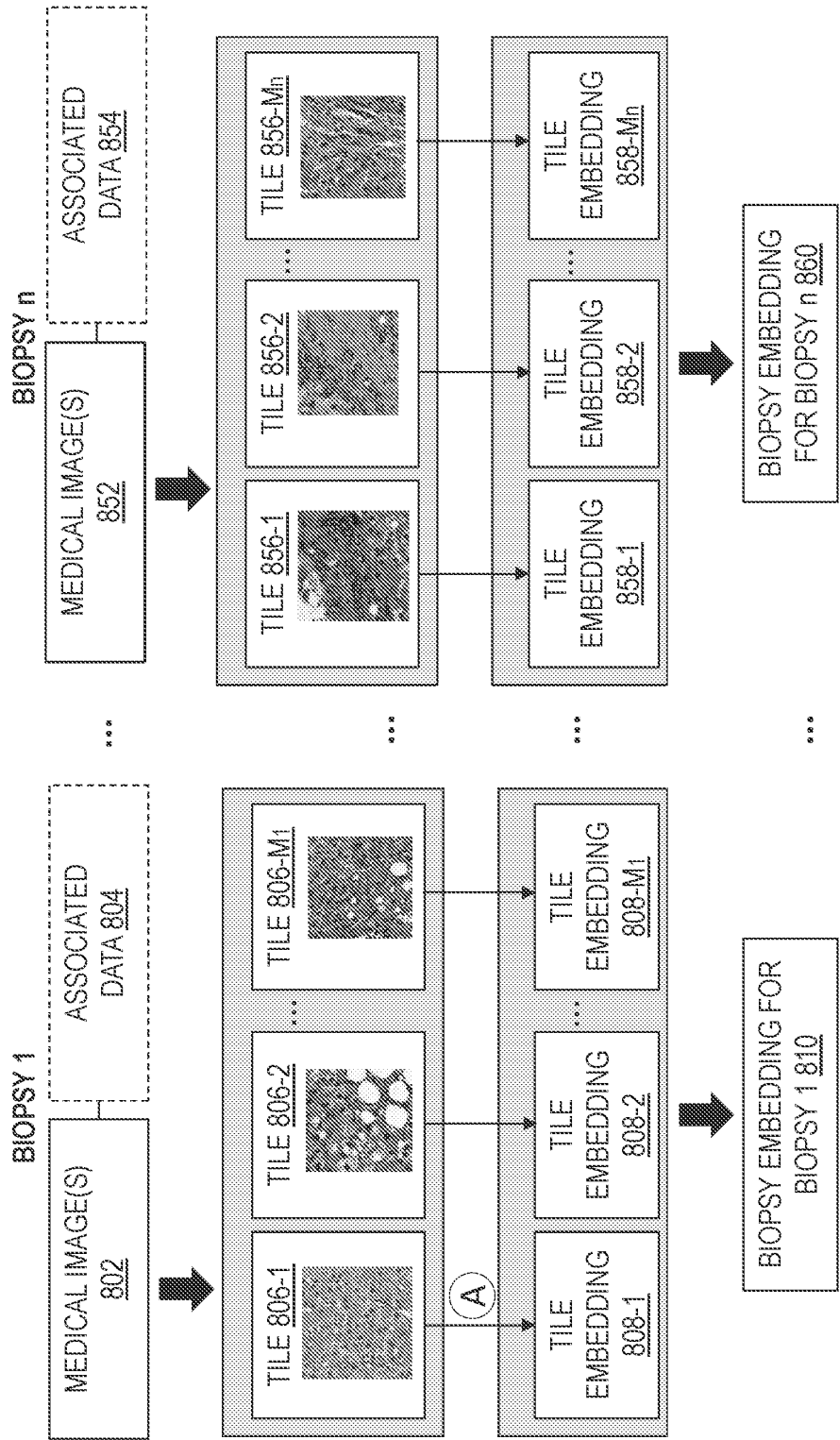


FIG. 8A

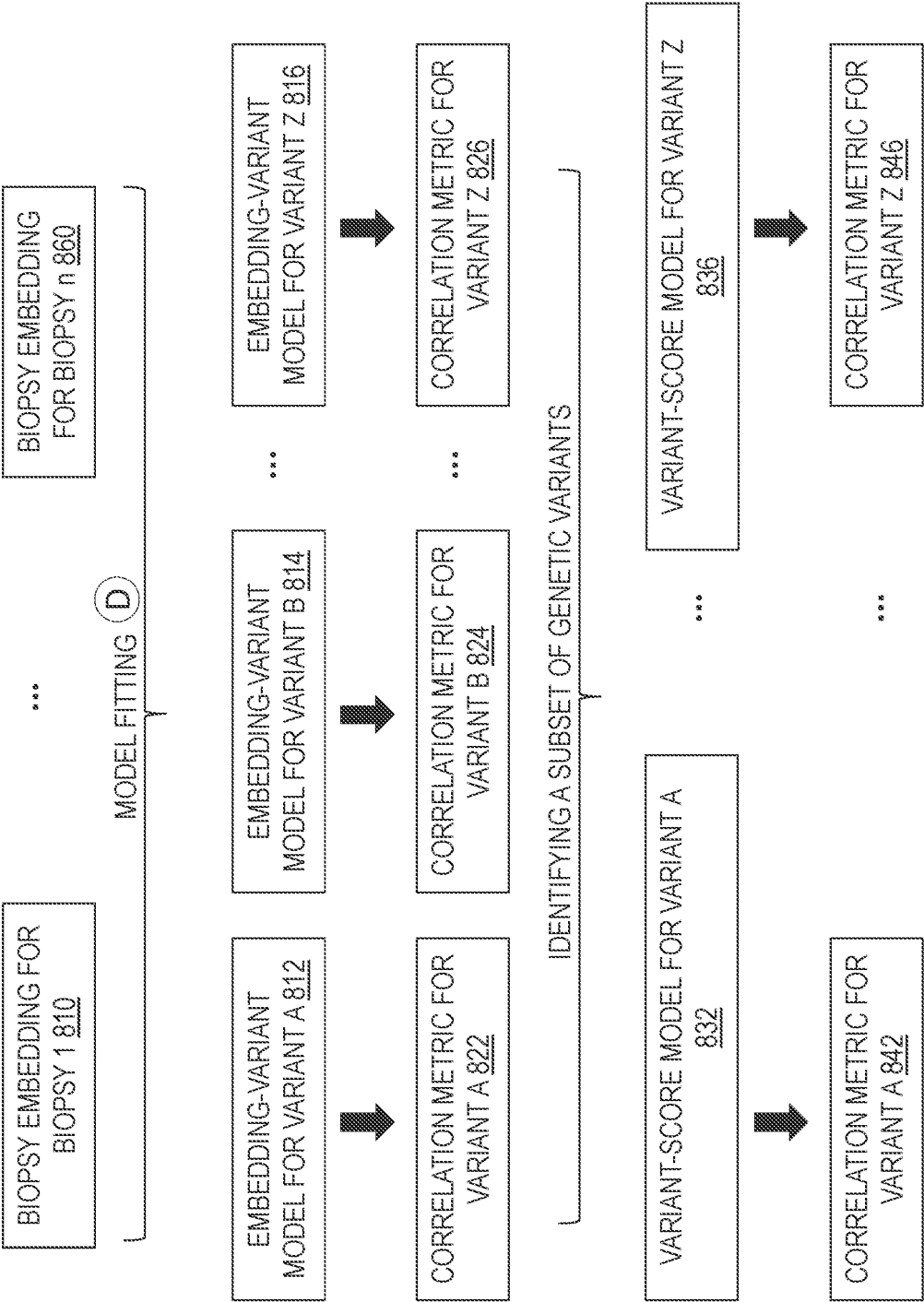


FIG. 8B

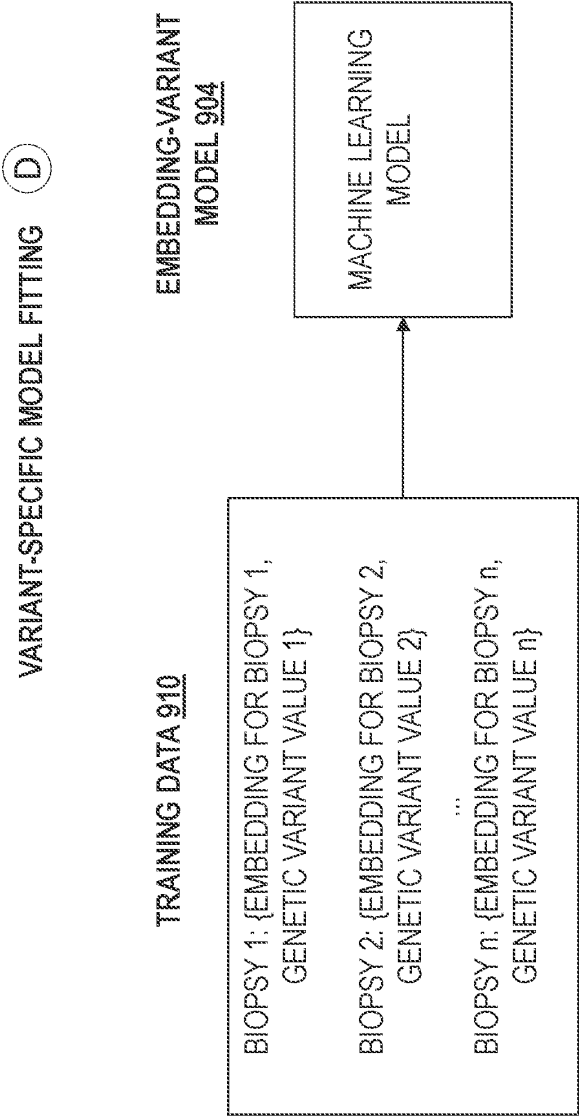


FIG. 9

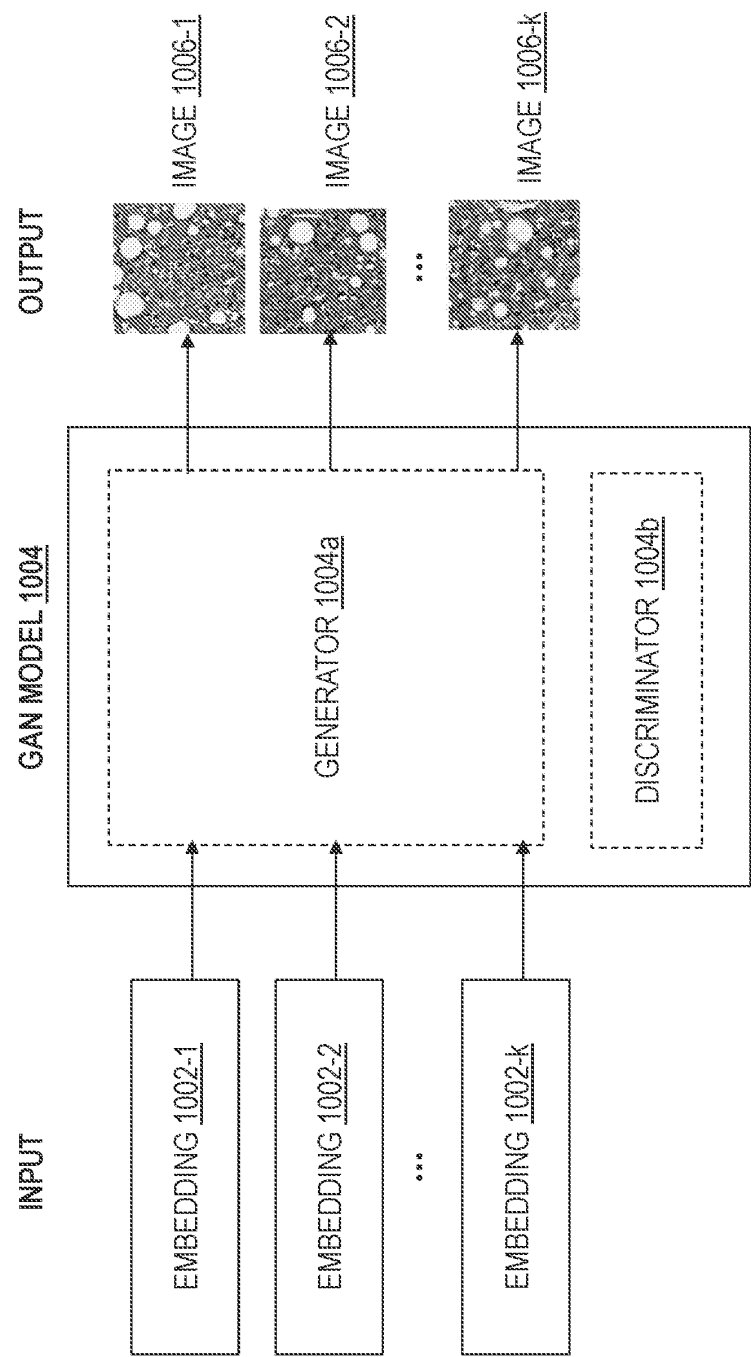


FIG. 10

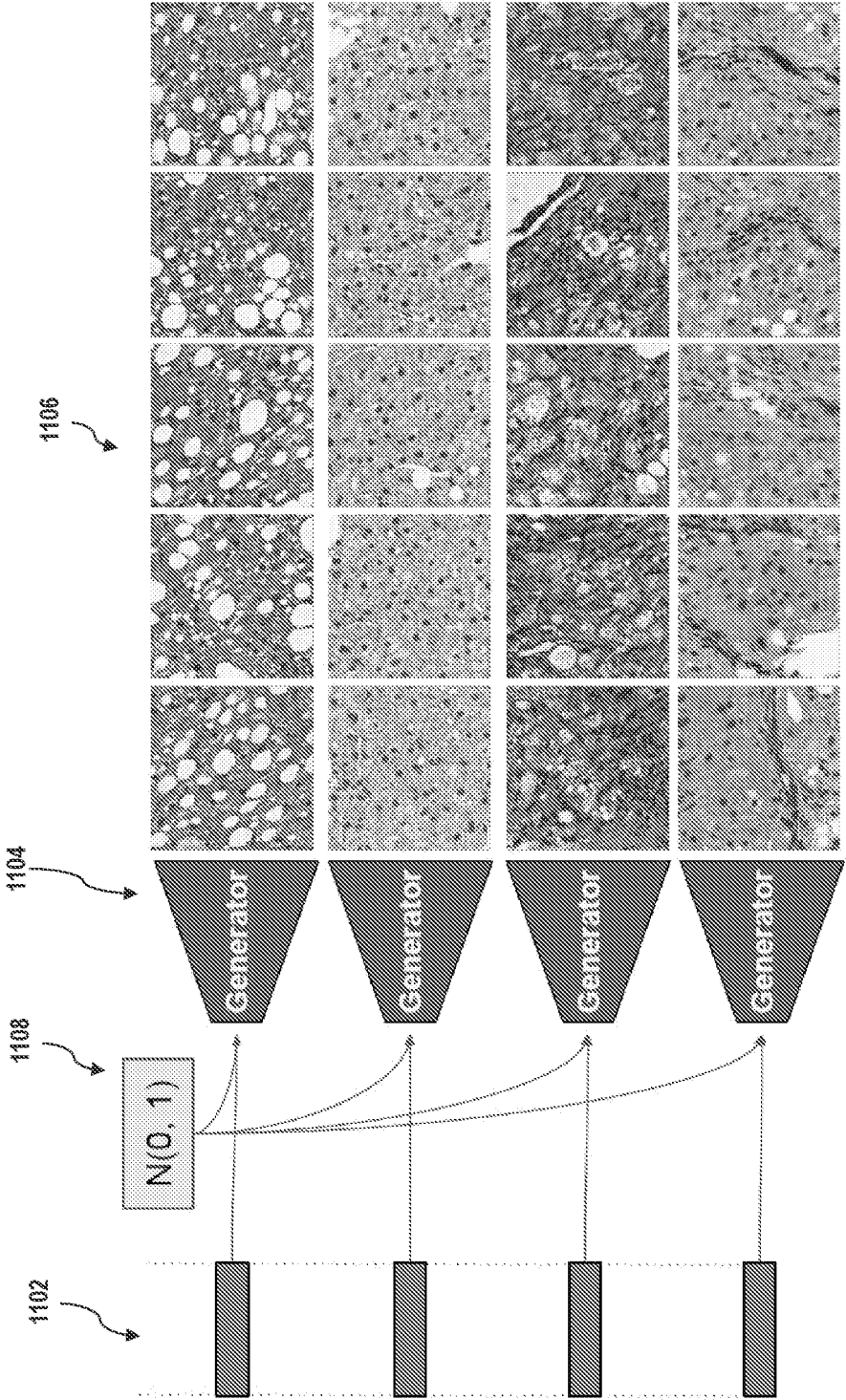


FIG. 11

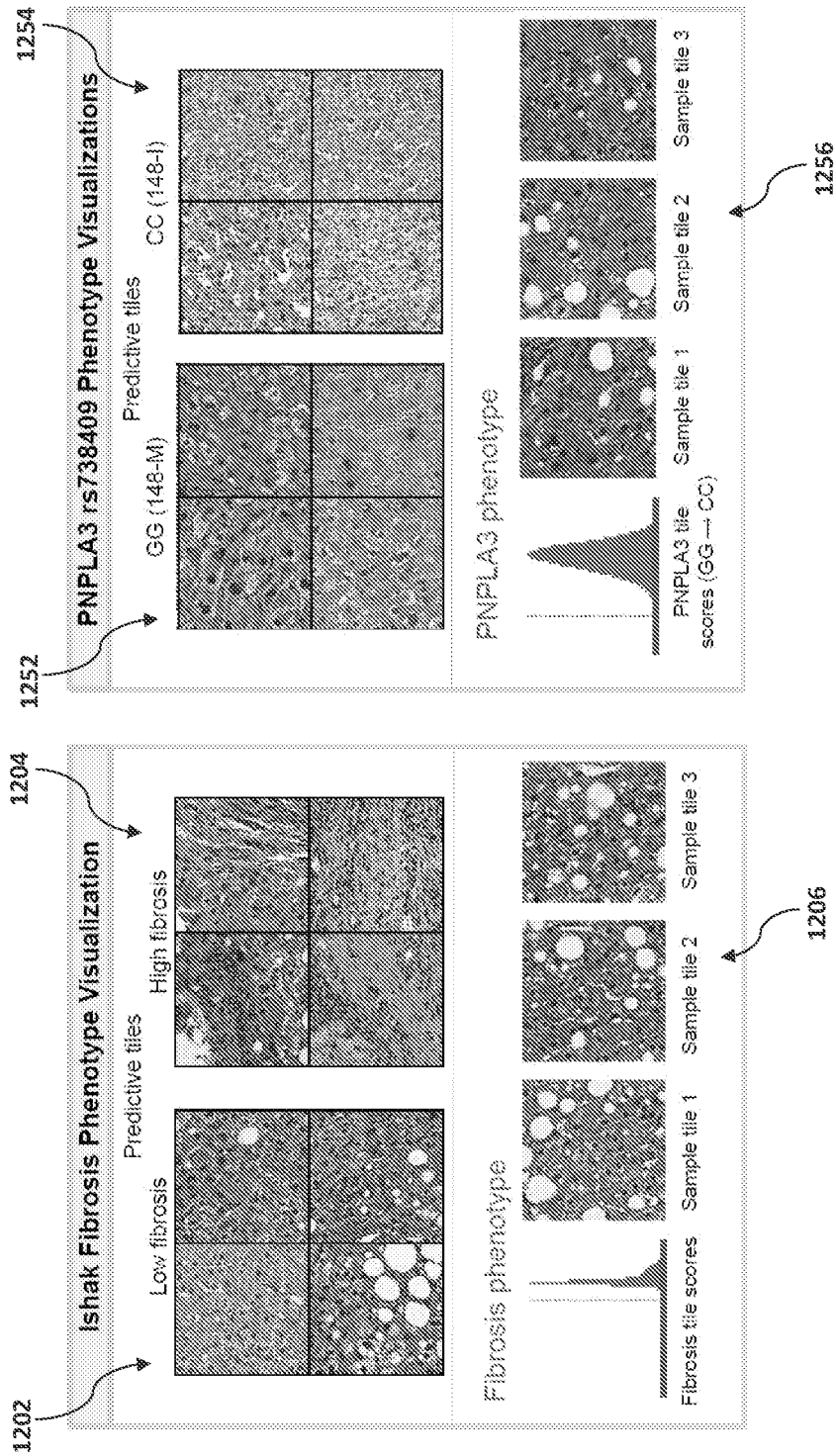


FIG. 12A

FIG. 12B

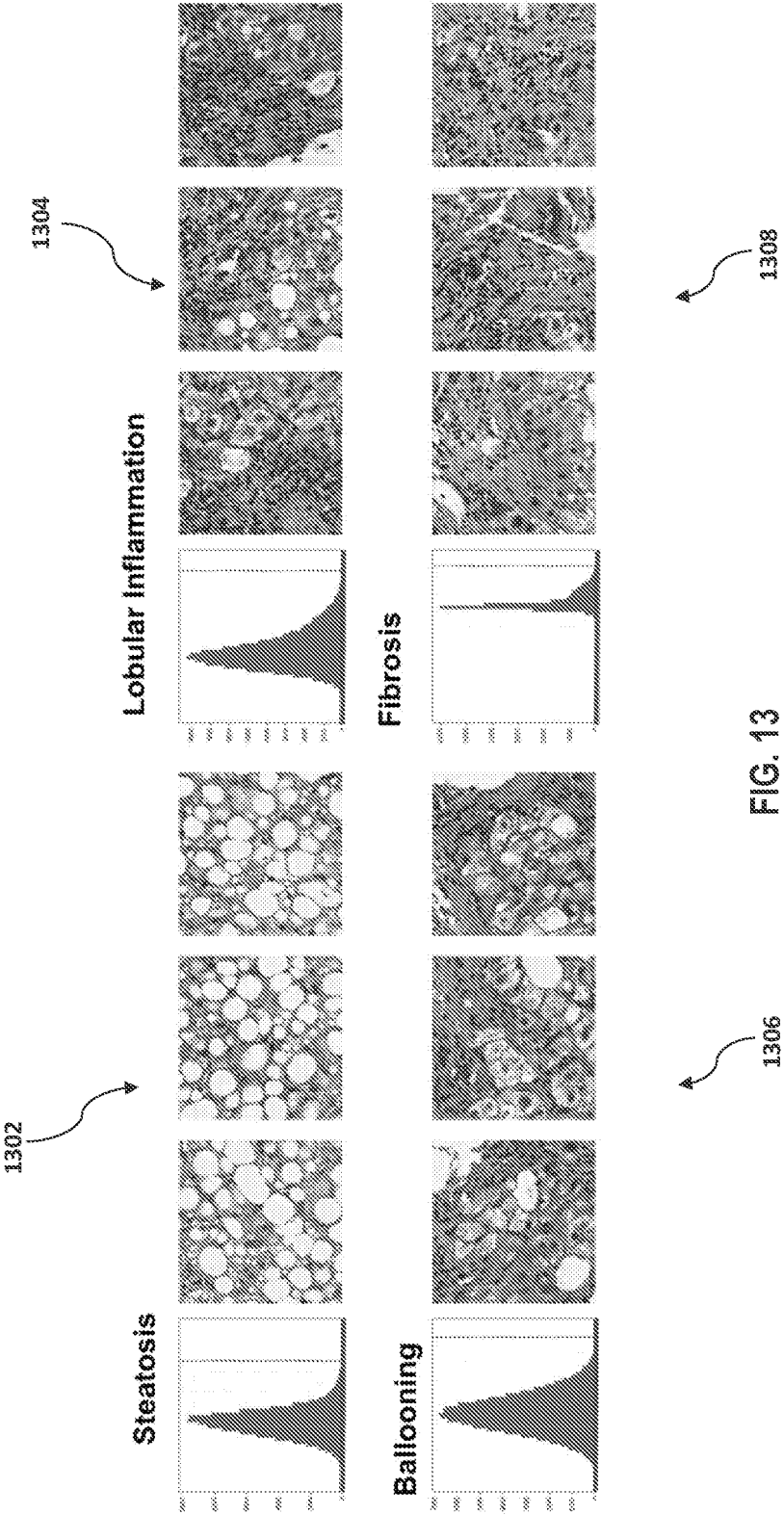


FIG. 13

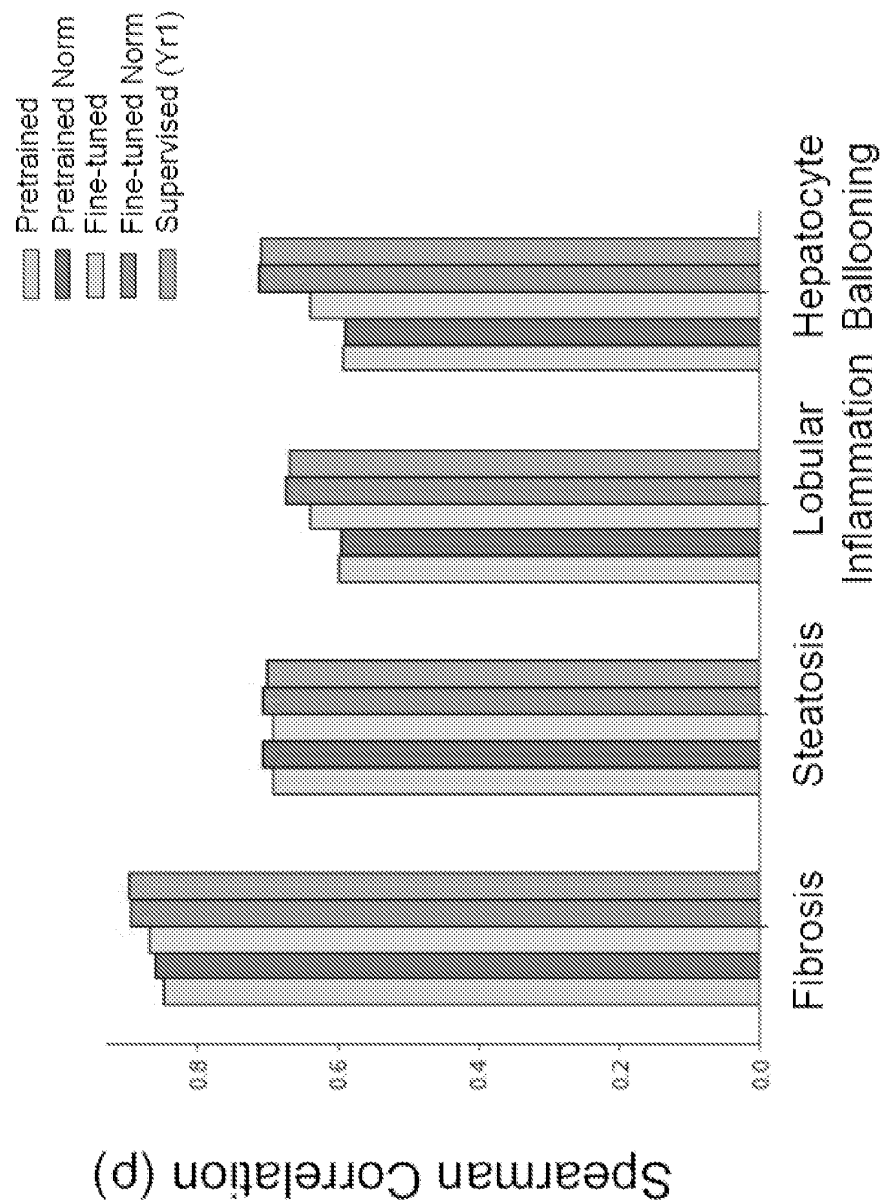
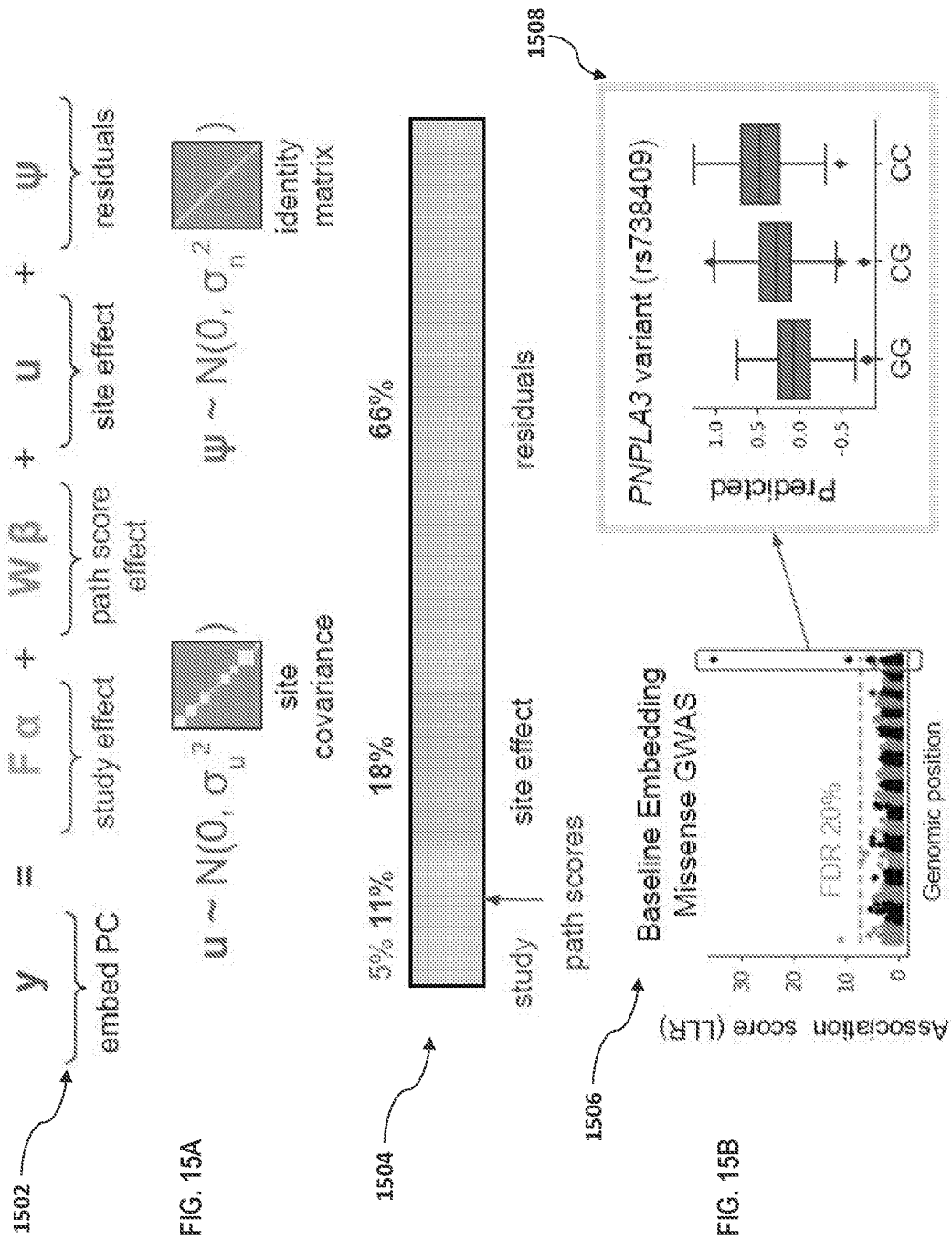


FIG. 14



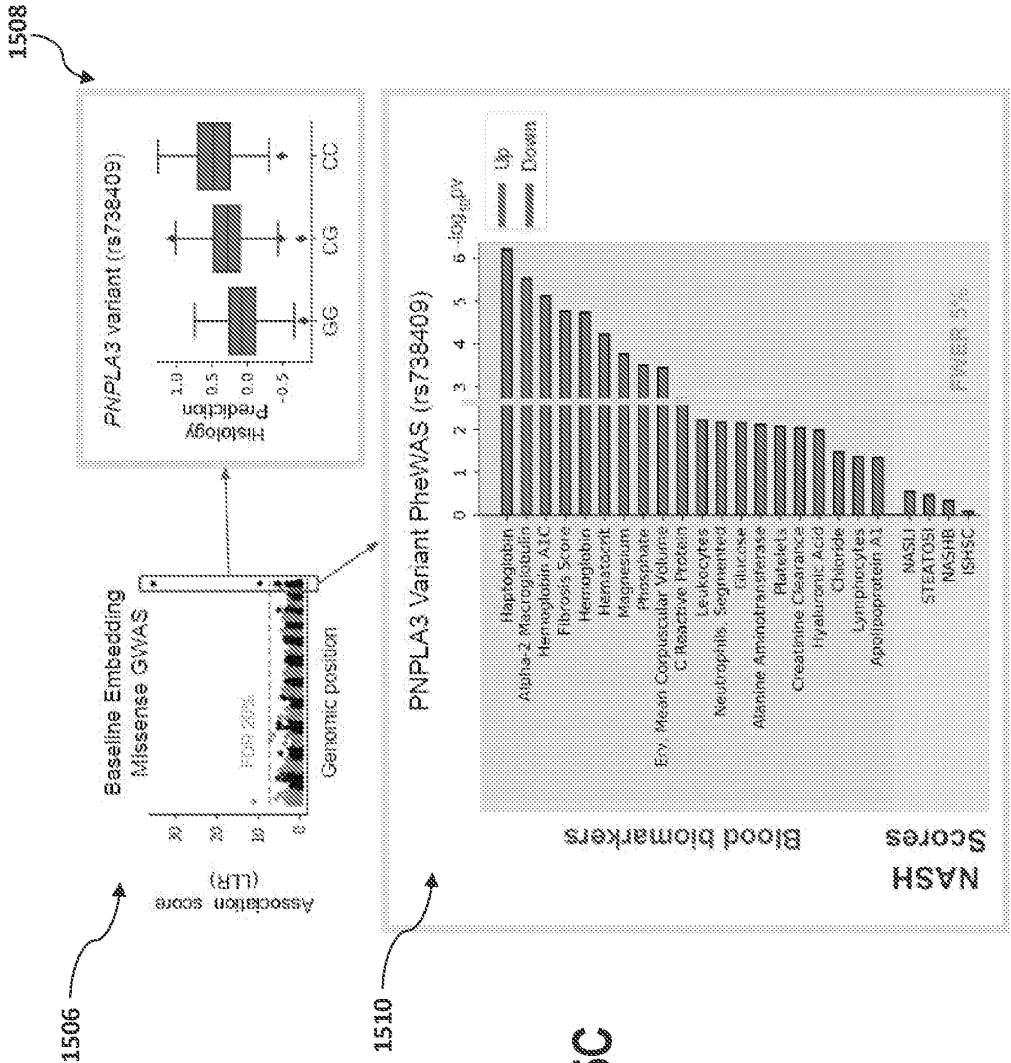


FIG. 15C



FIG. 16

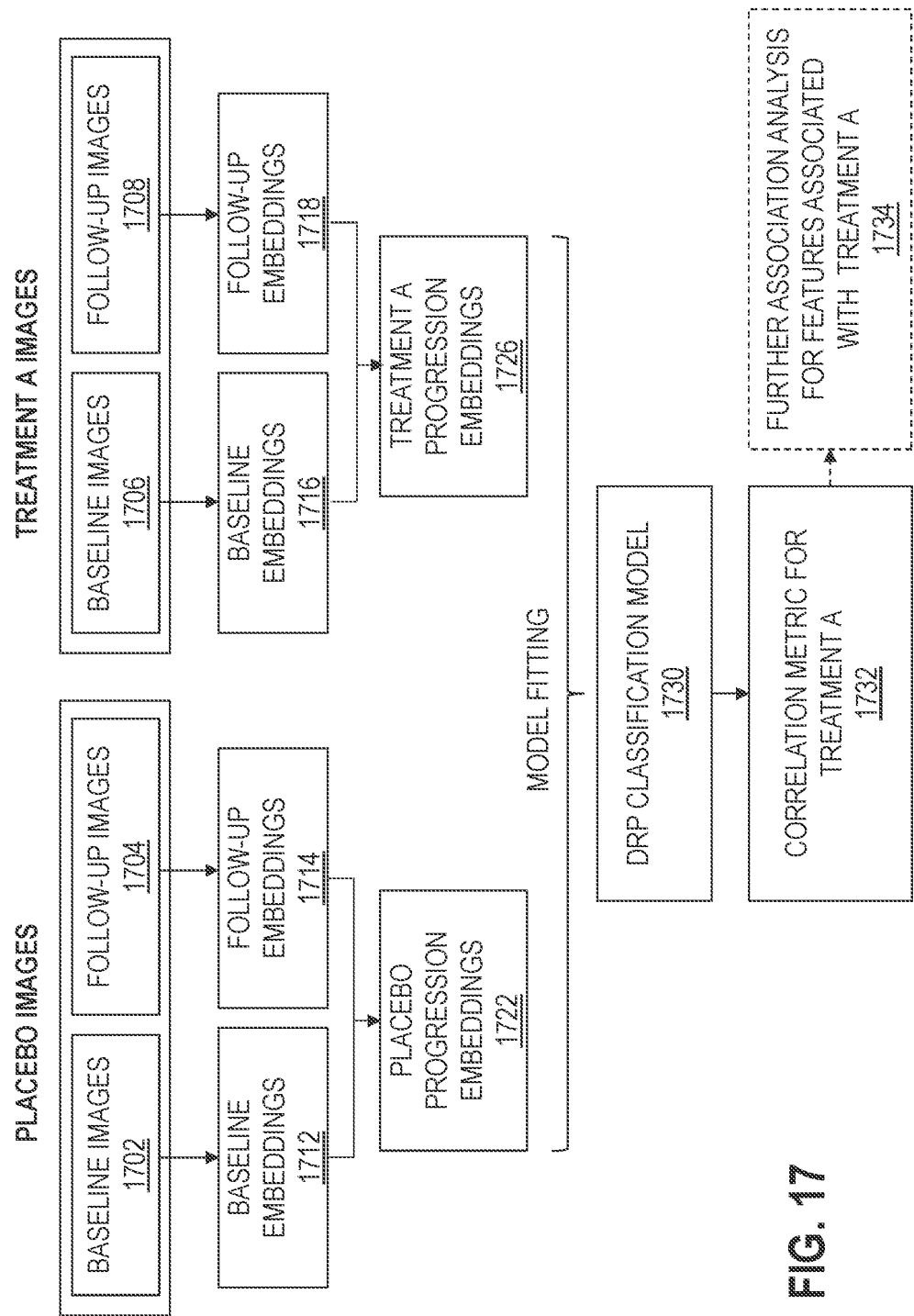


FIG. 17

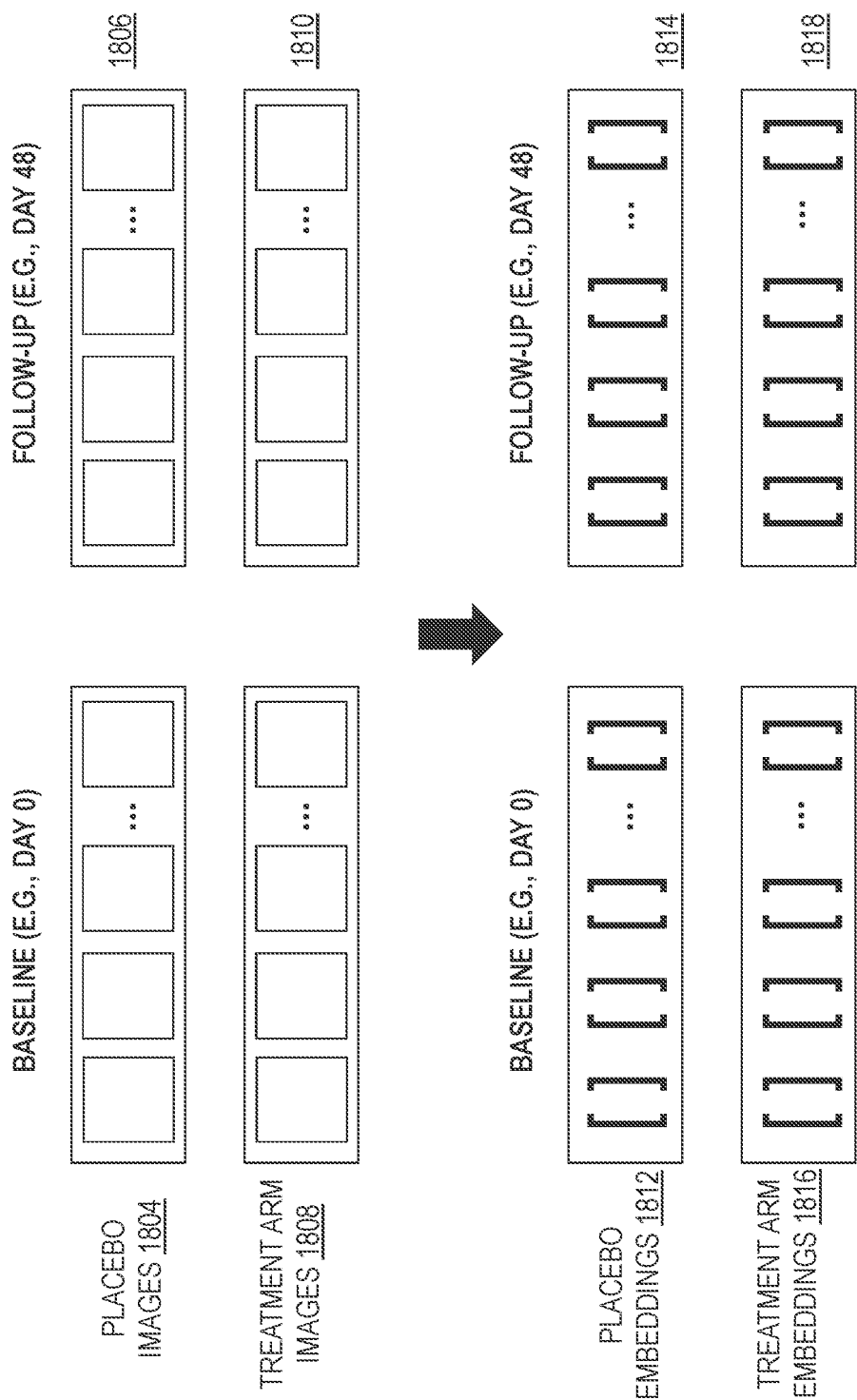


FIG. 18A

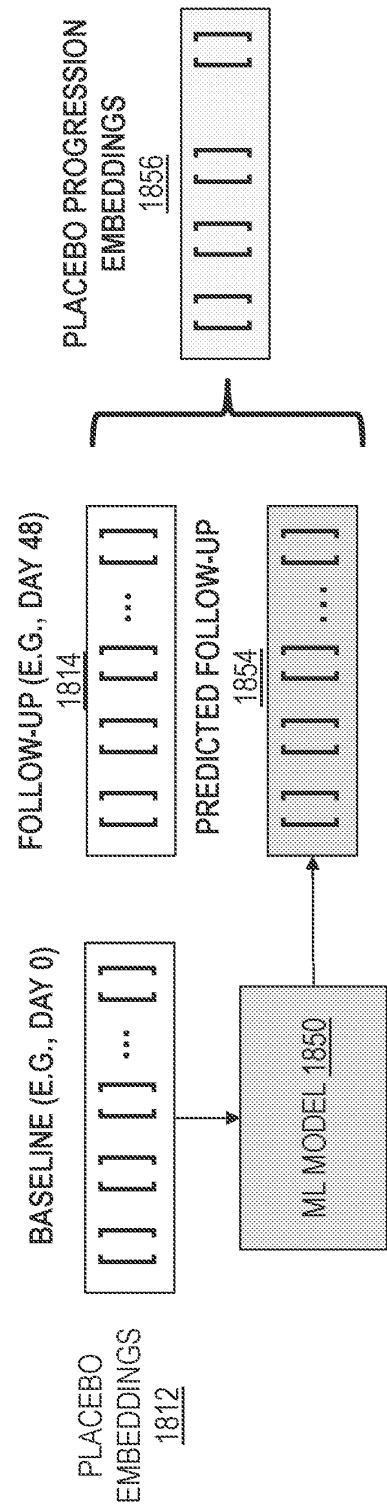


FIG. 18B

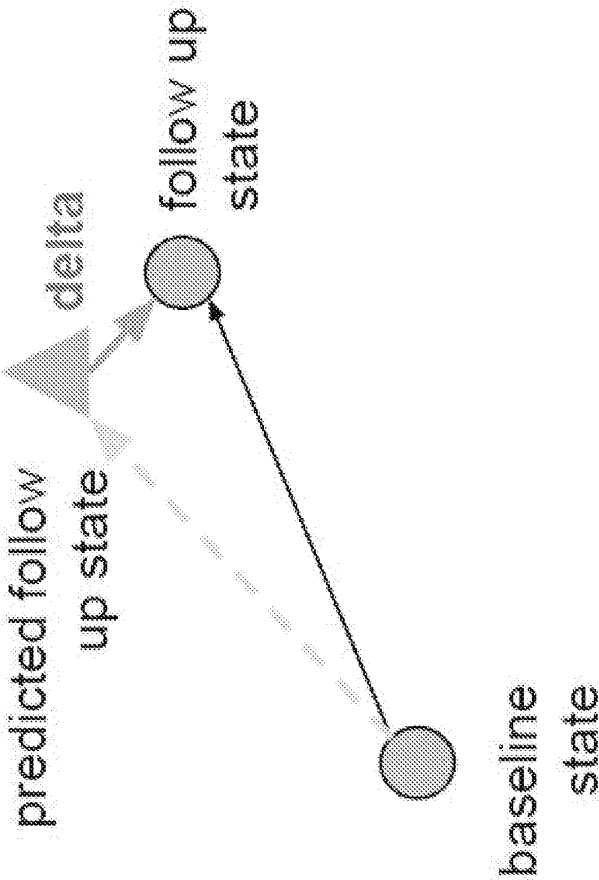


FIG. 18C

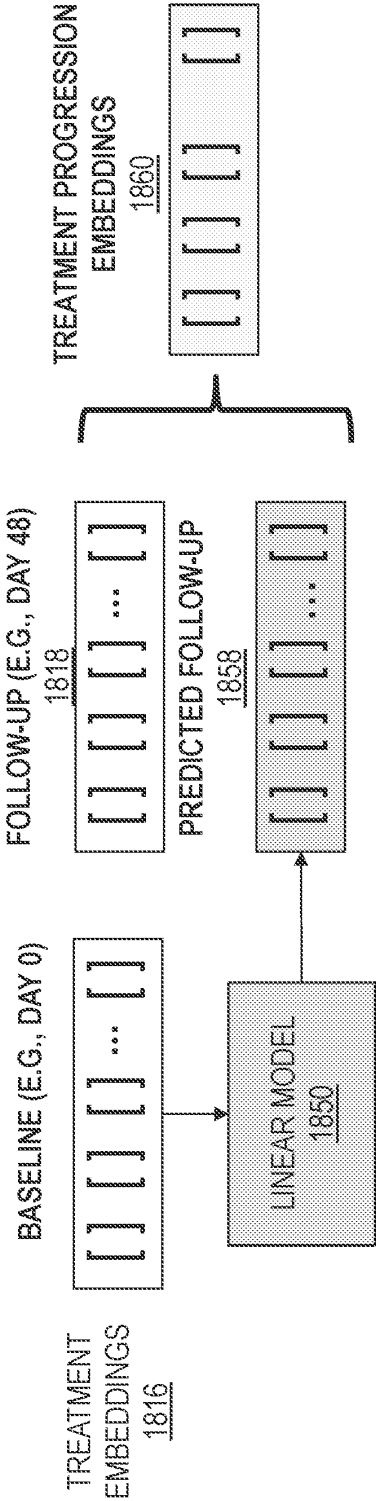


FIG. 18D

MODEL FITTING

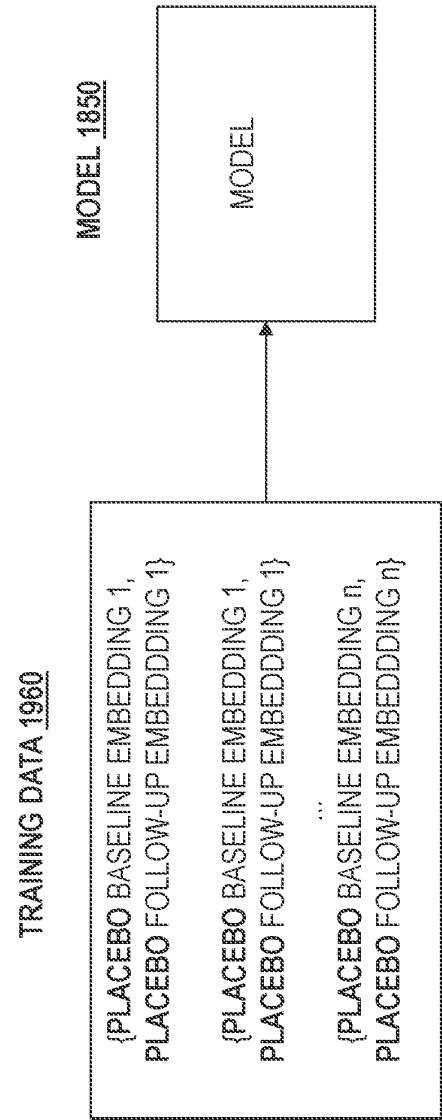


FIG. 19

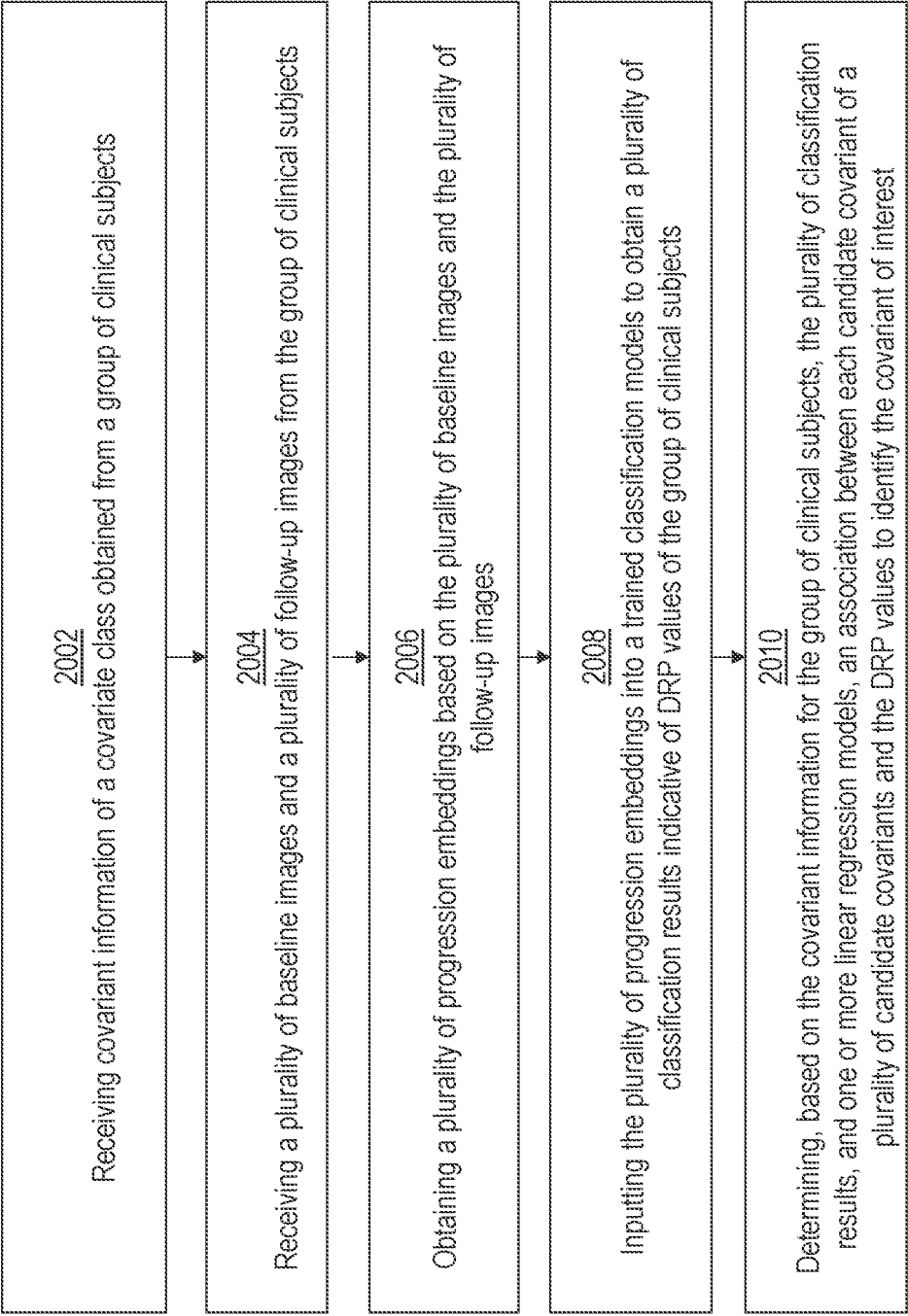


FIG. 20

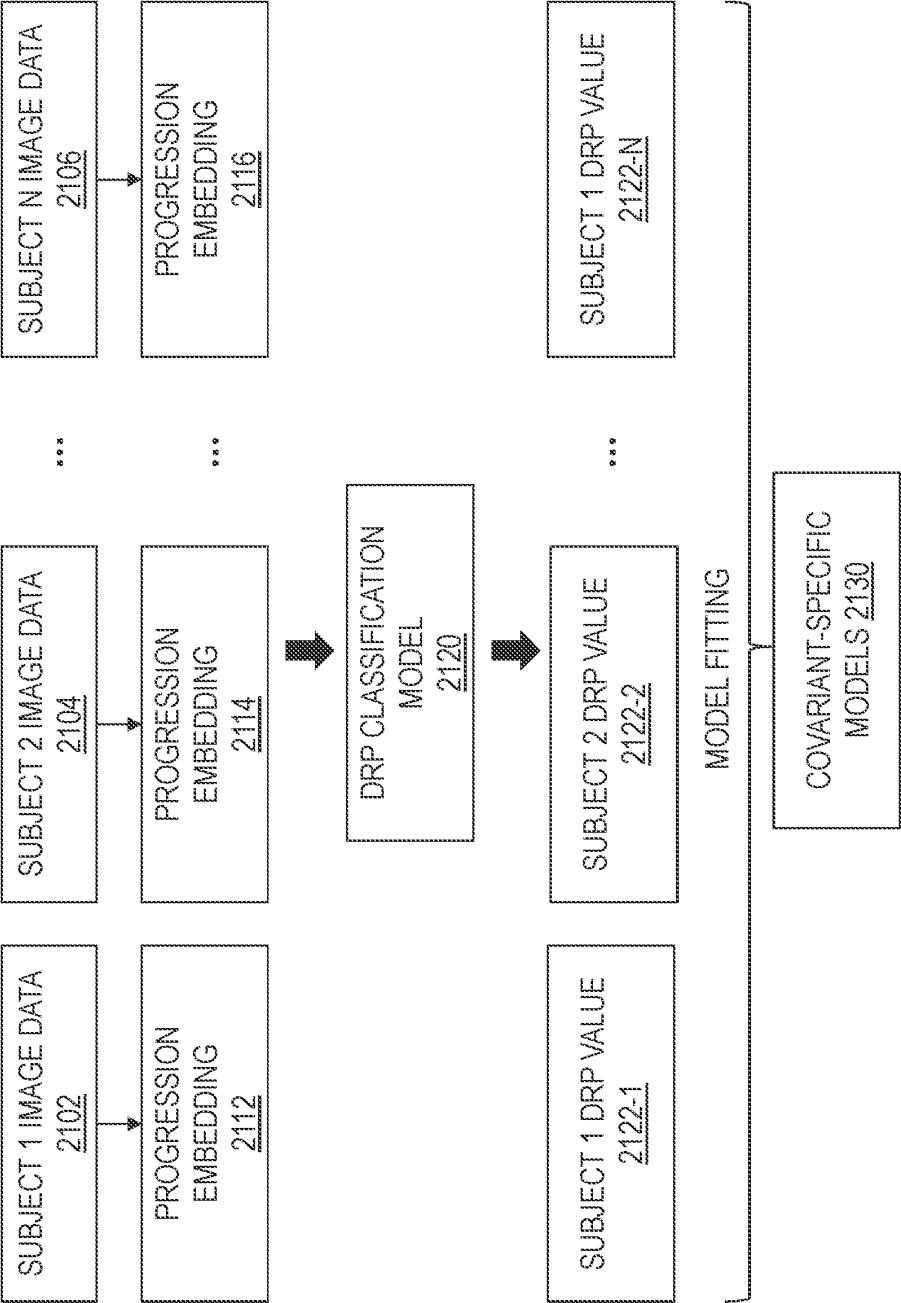


FIG. 21

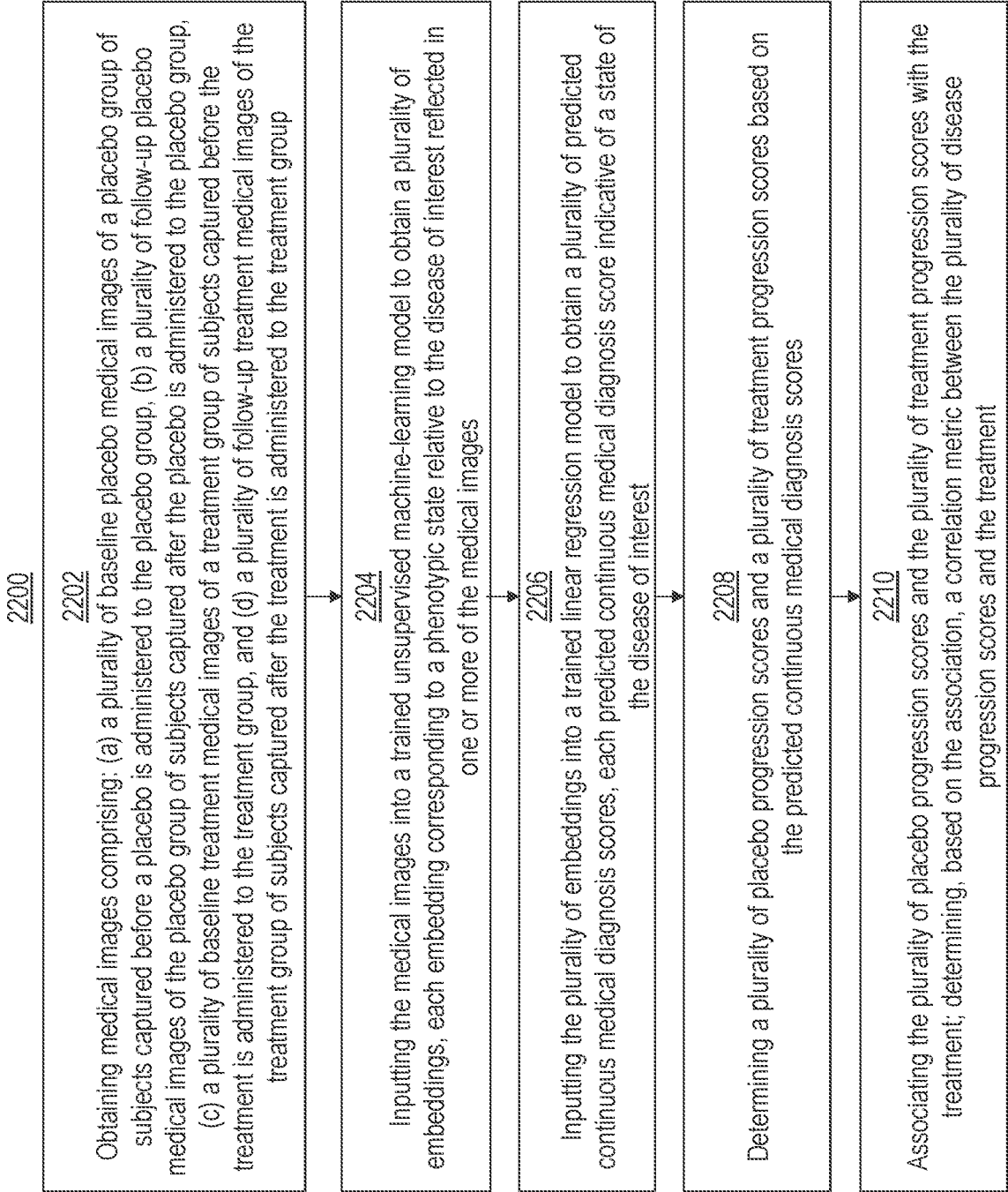


FIG. 22

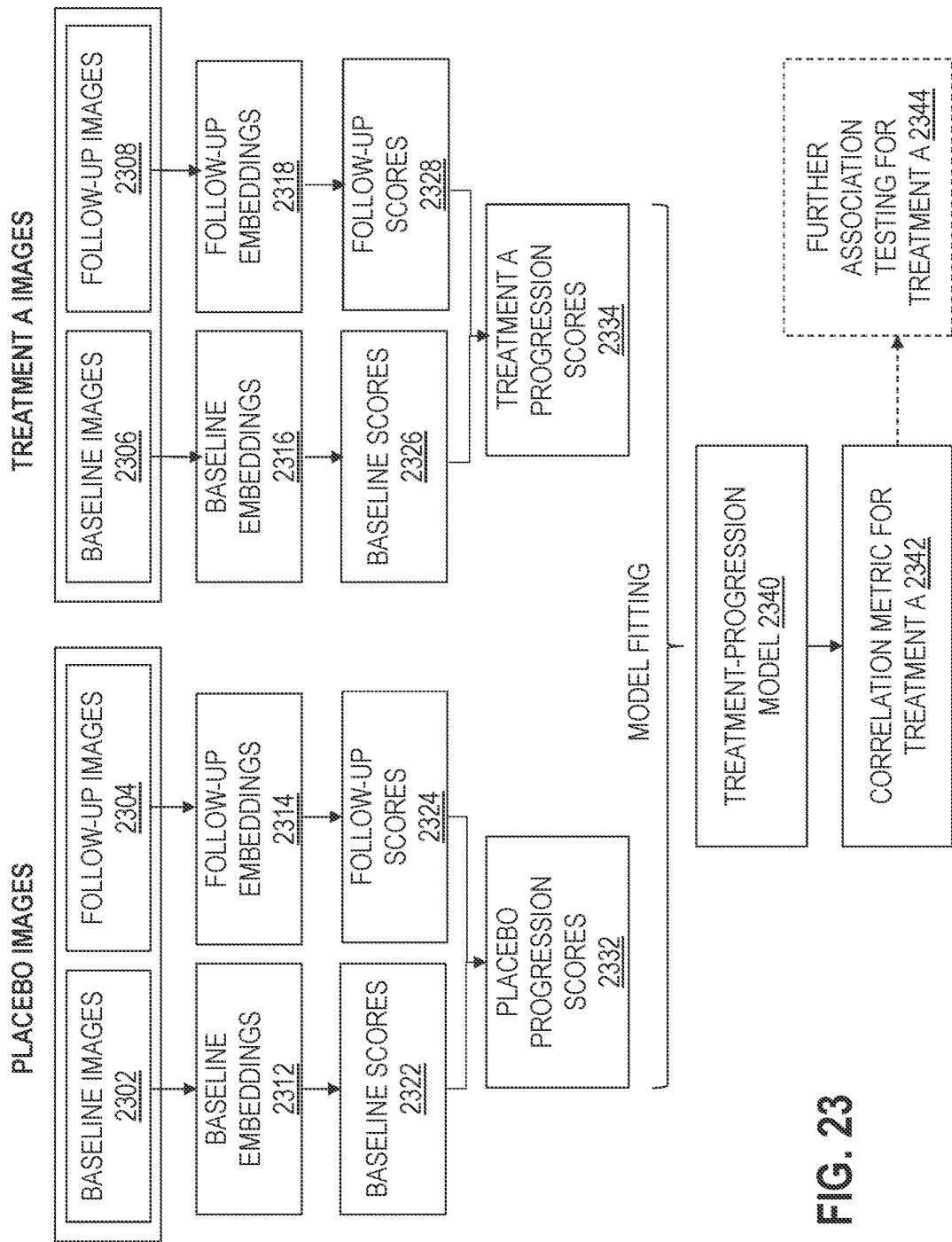


FIG. 23

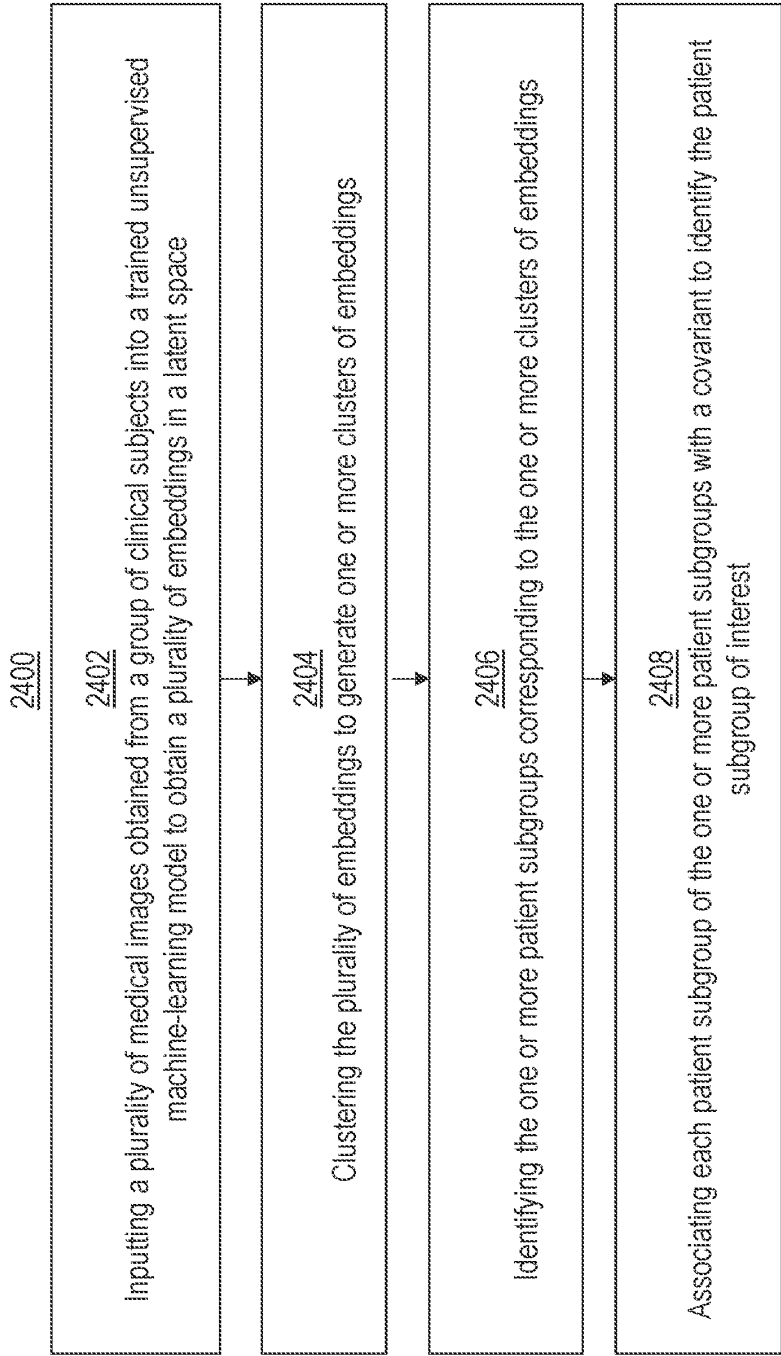


FIG. 24

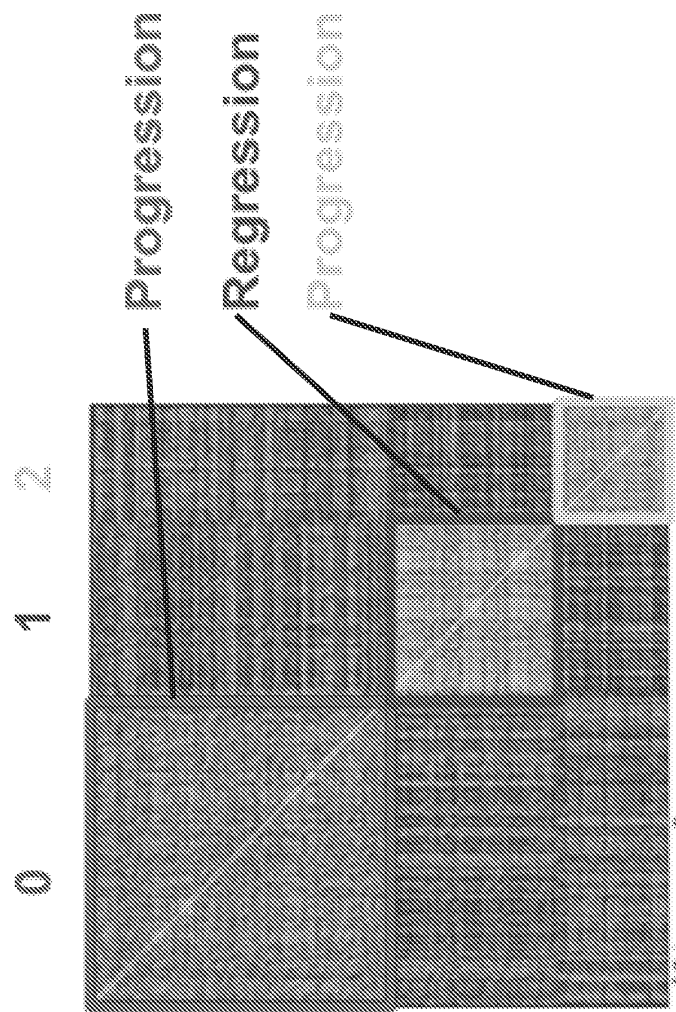


FIG. 25

FIG. 26A

FIG. 26B NASH Progression GWAS

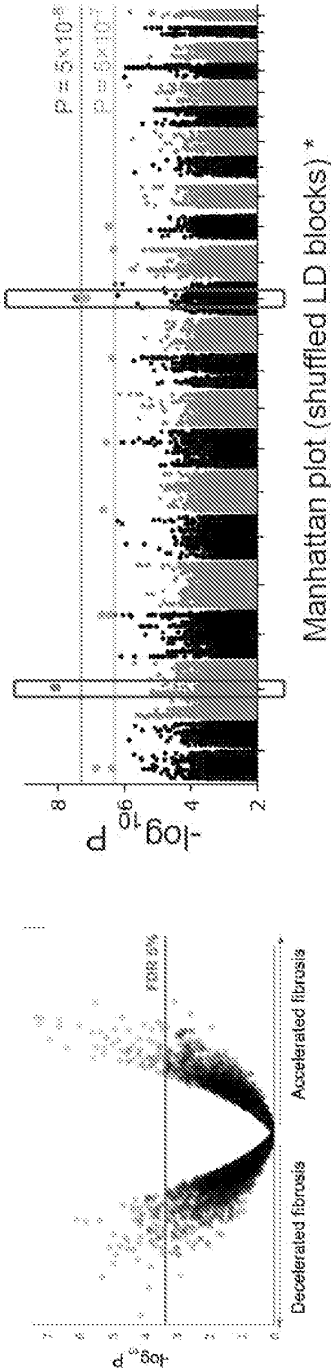
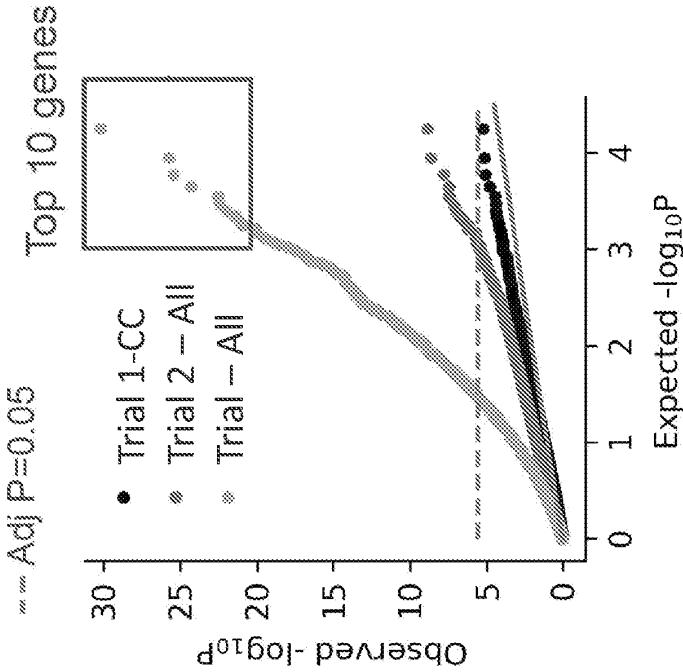


FIG. 27



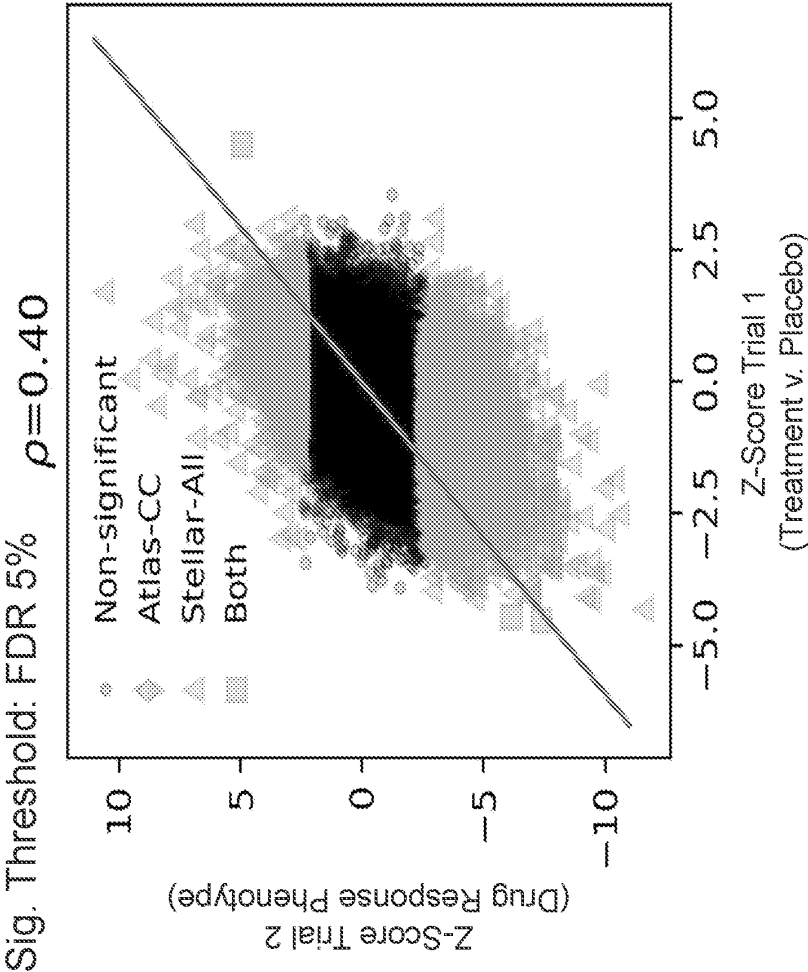


FIG. 28

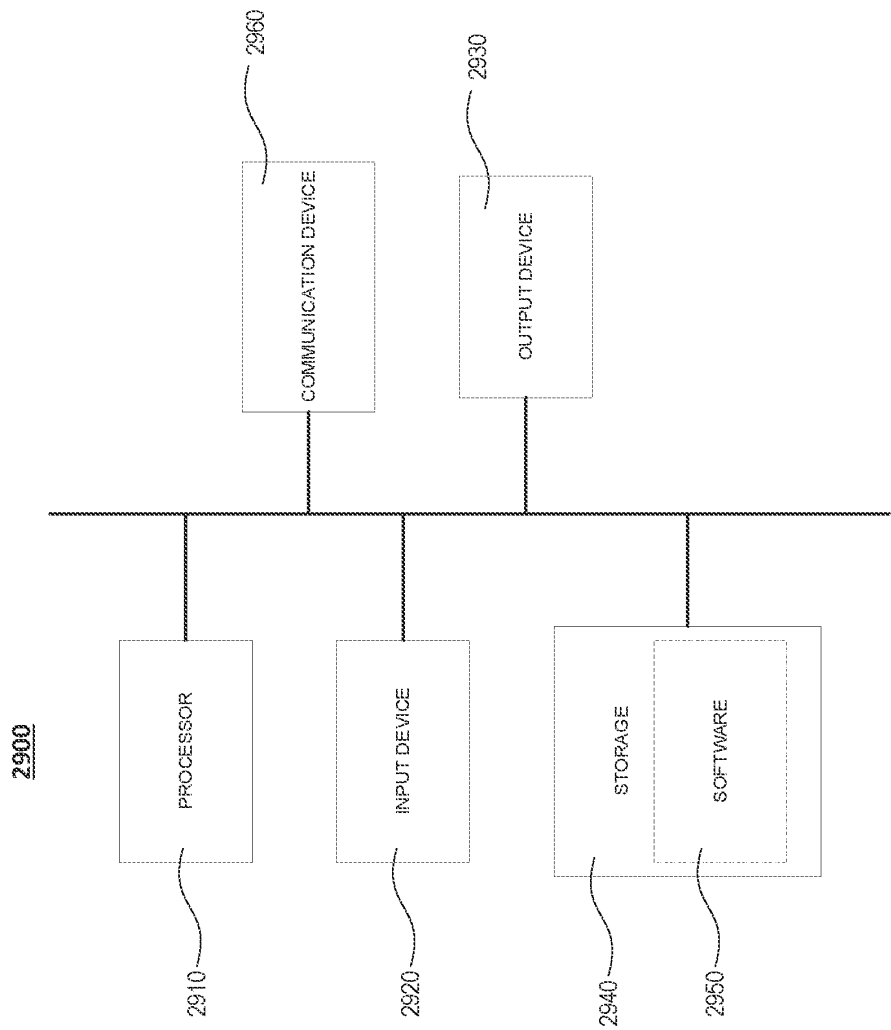


FIG. 29