

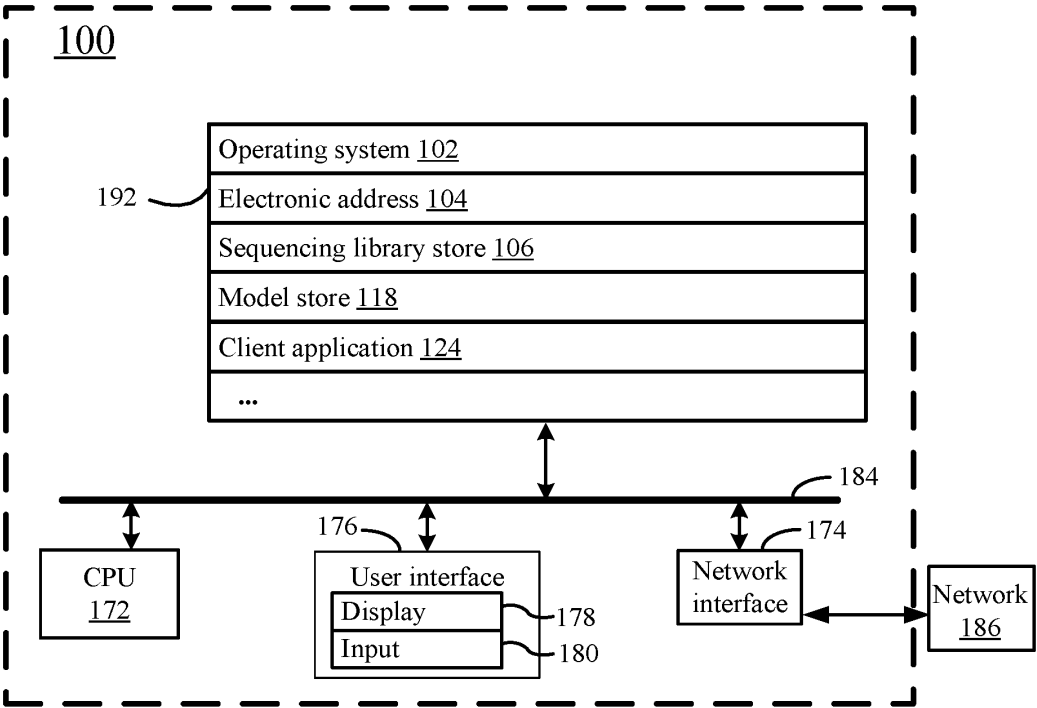


Figure 1A

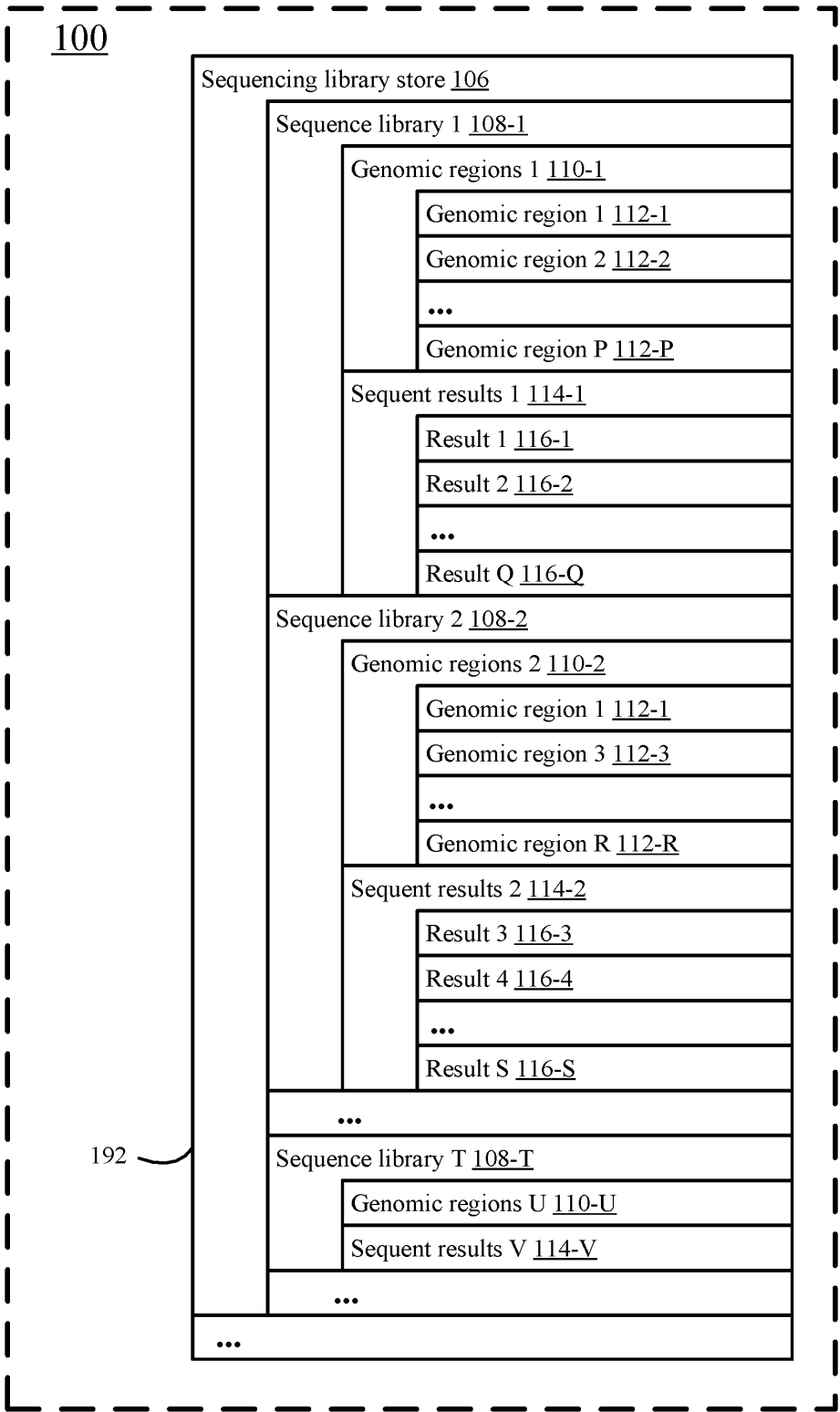


Figure 1B

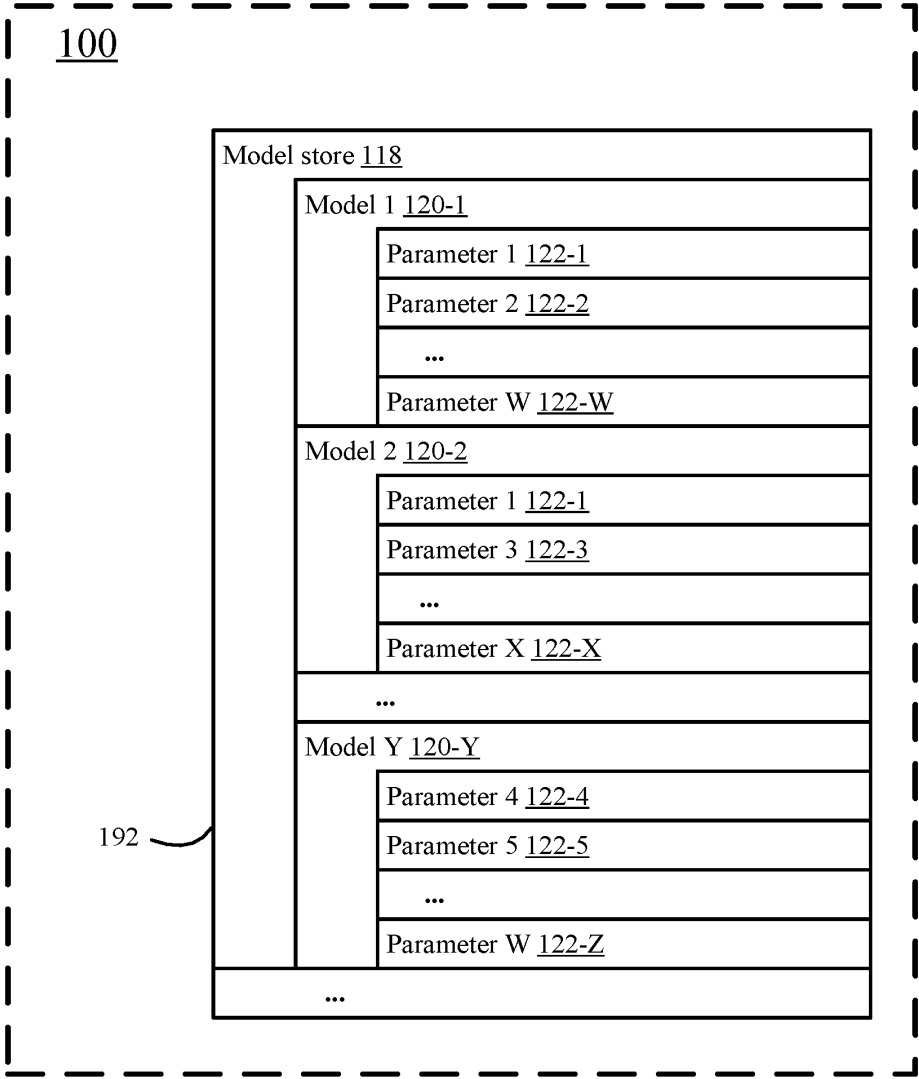


Figure 1C

200

(202) A method for detecting the presence of a cancer and for identifying the cancer origin in a test subject.



(204) Bisulfite treating cell free DNA (cfDNA) from a liquid biopsy sample of the test subject.

(206) The liquid biopsy sample comprises a body fluid, blood, or plasma.



(208) Using the bisulfite treated cfDNA to prepare (i) a first sequencing library for a plurality of specific target genomic regions and (ii) a second sequencing library for a genome from a flow through of the first sequencing library

(210) The plurality of specific target genomic regions comprises at least 200, at least 250, at least 300, at least 350, at least 400, at least 450, at least 500 or more cancer specific regions.

(212) The plurality of specific target genomic regions comprises at least five nucleic acid sequences selected from SEQ ID NOs: 1-450.

(214) The plurality of specific target genomic regions is captured by a set of DNA probes.

(216) The plurality of specific target genomic regions have a different methylation percentage between the test subject and a cohort of healthy subjects.

(218) The first sequencing library is prepared for paired-end sequencing,



A

Figure 2A

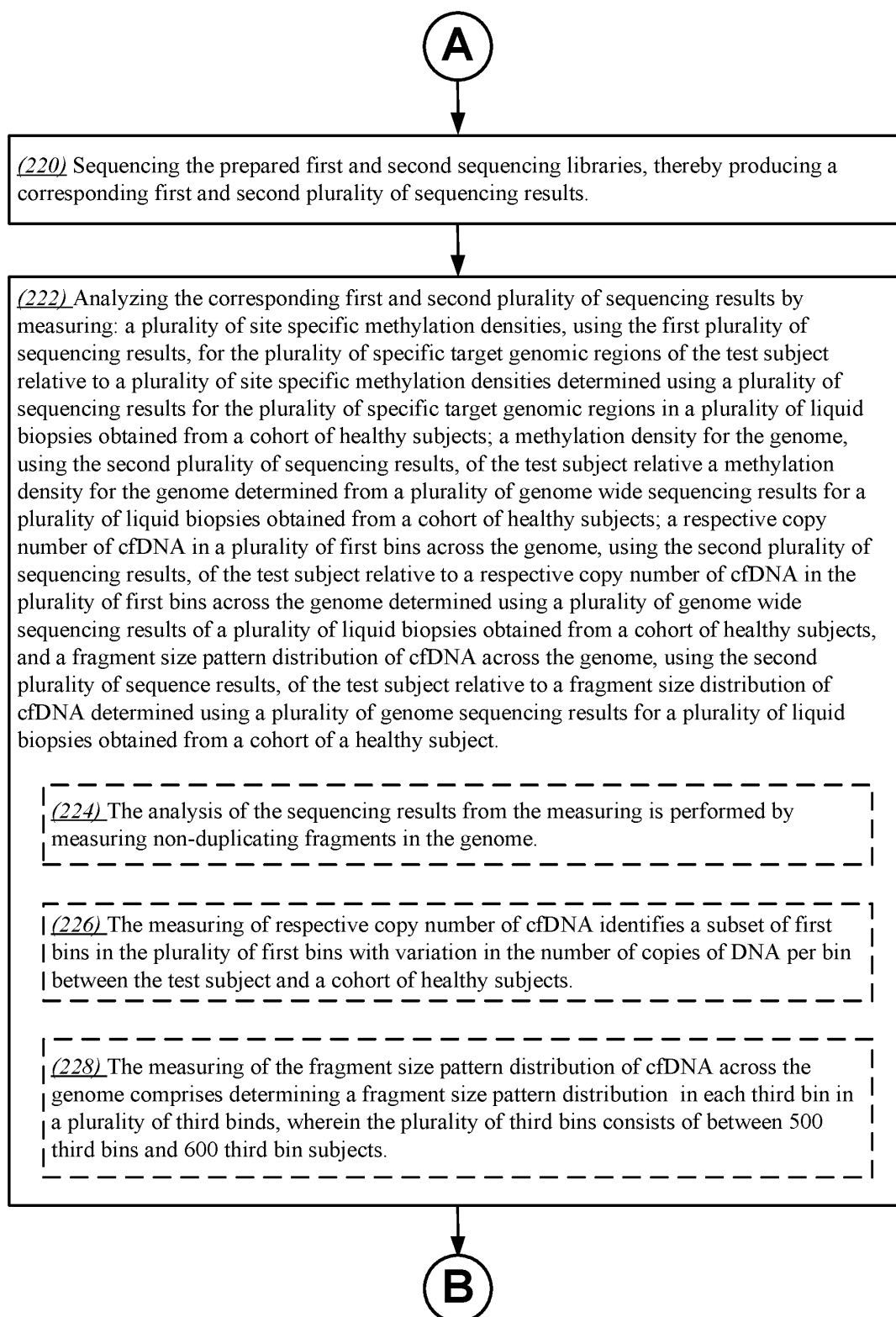
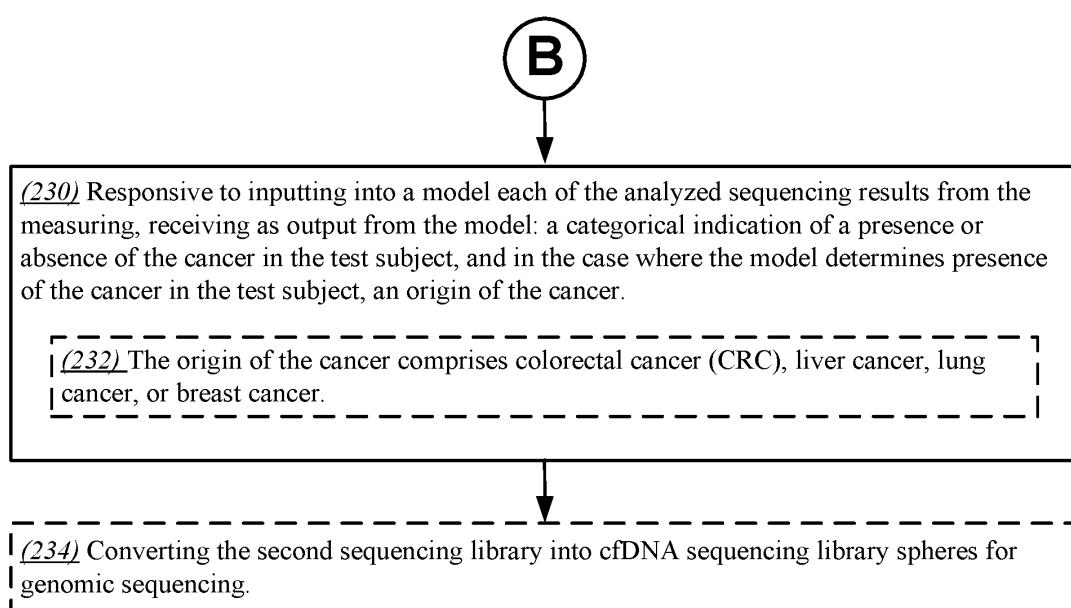


Figure 2B

**Figure 2C**

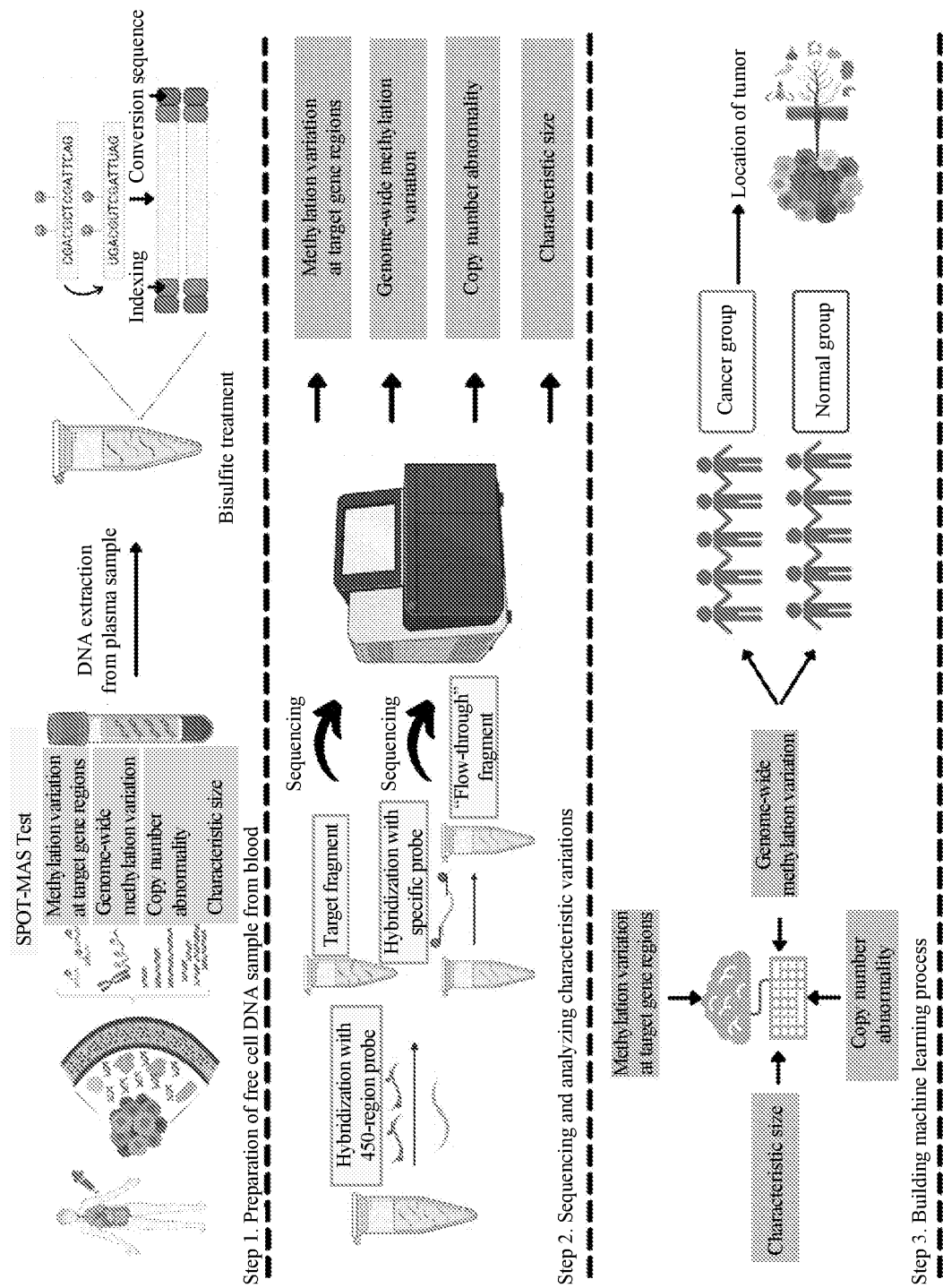


Figure 3

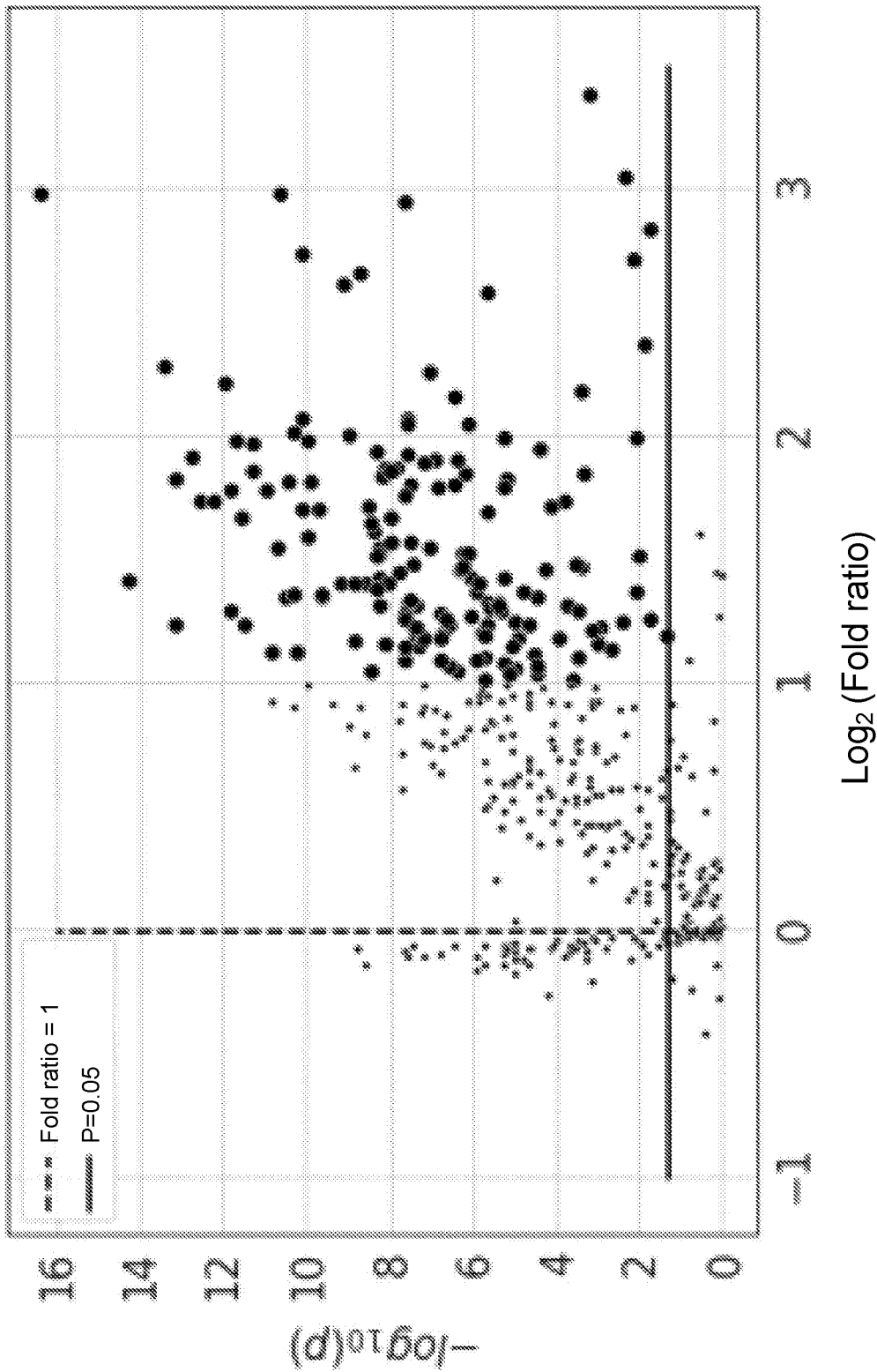


Figure 4

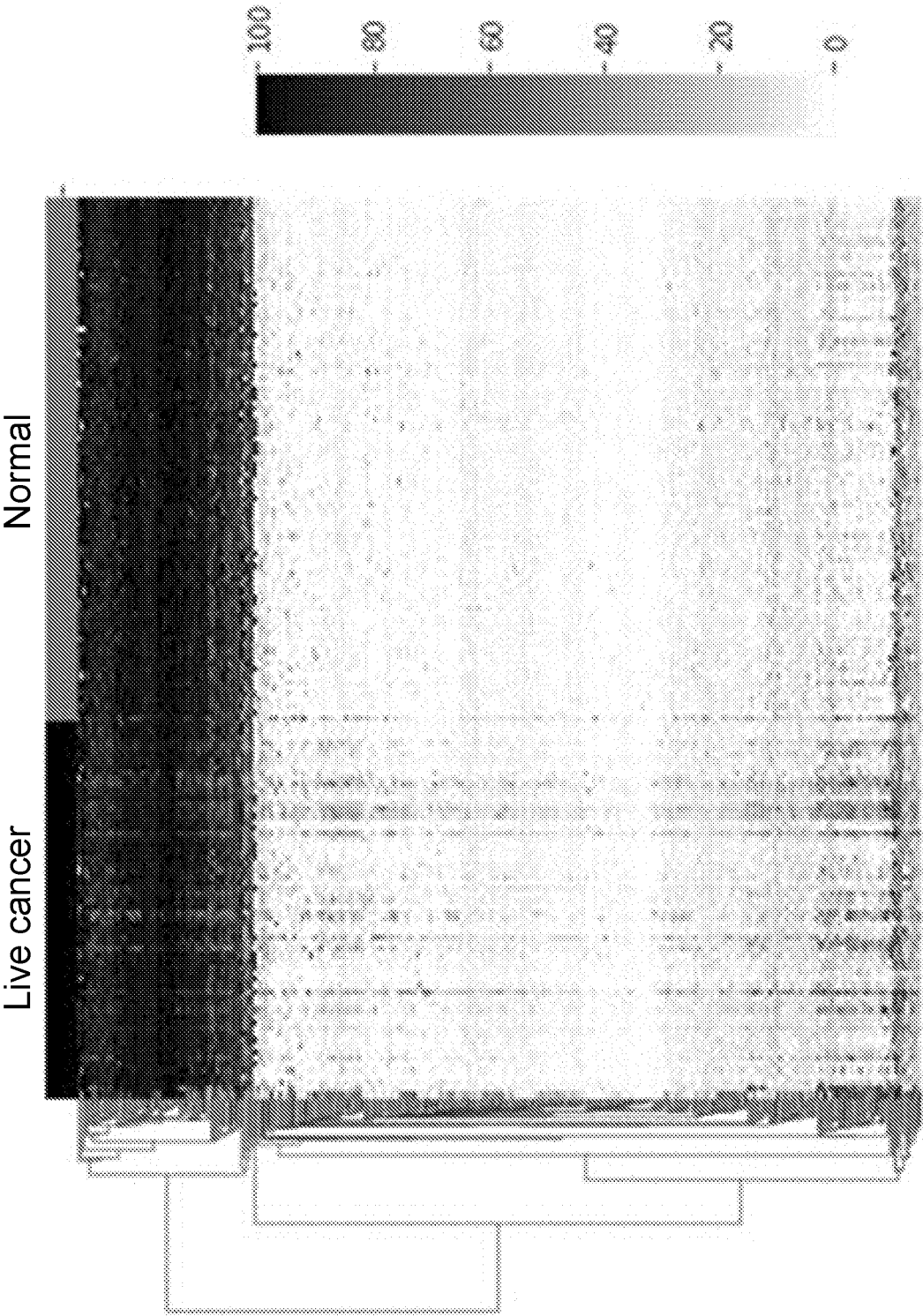


Figure 5

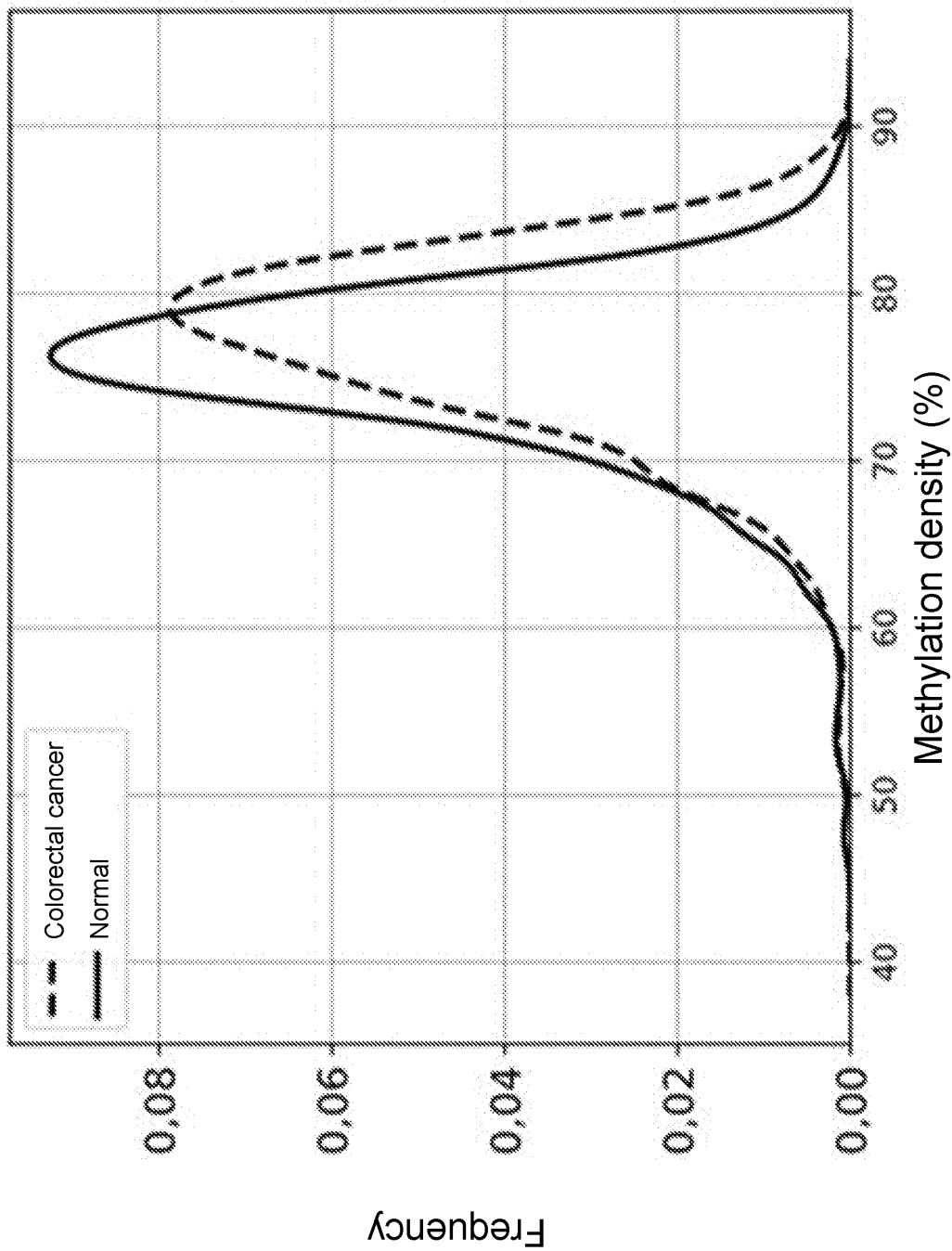


Figure 6

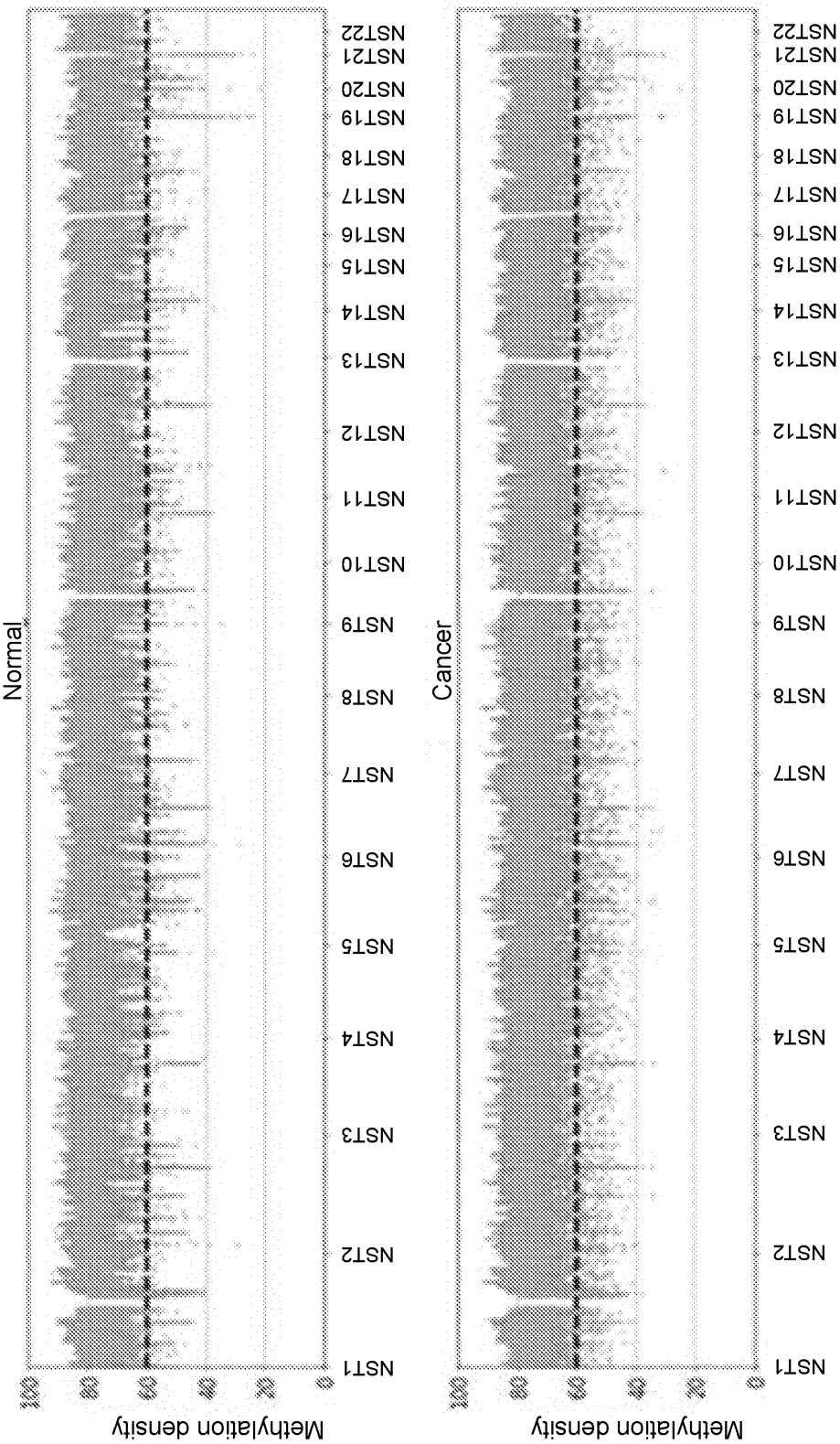


Figure 7

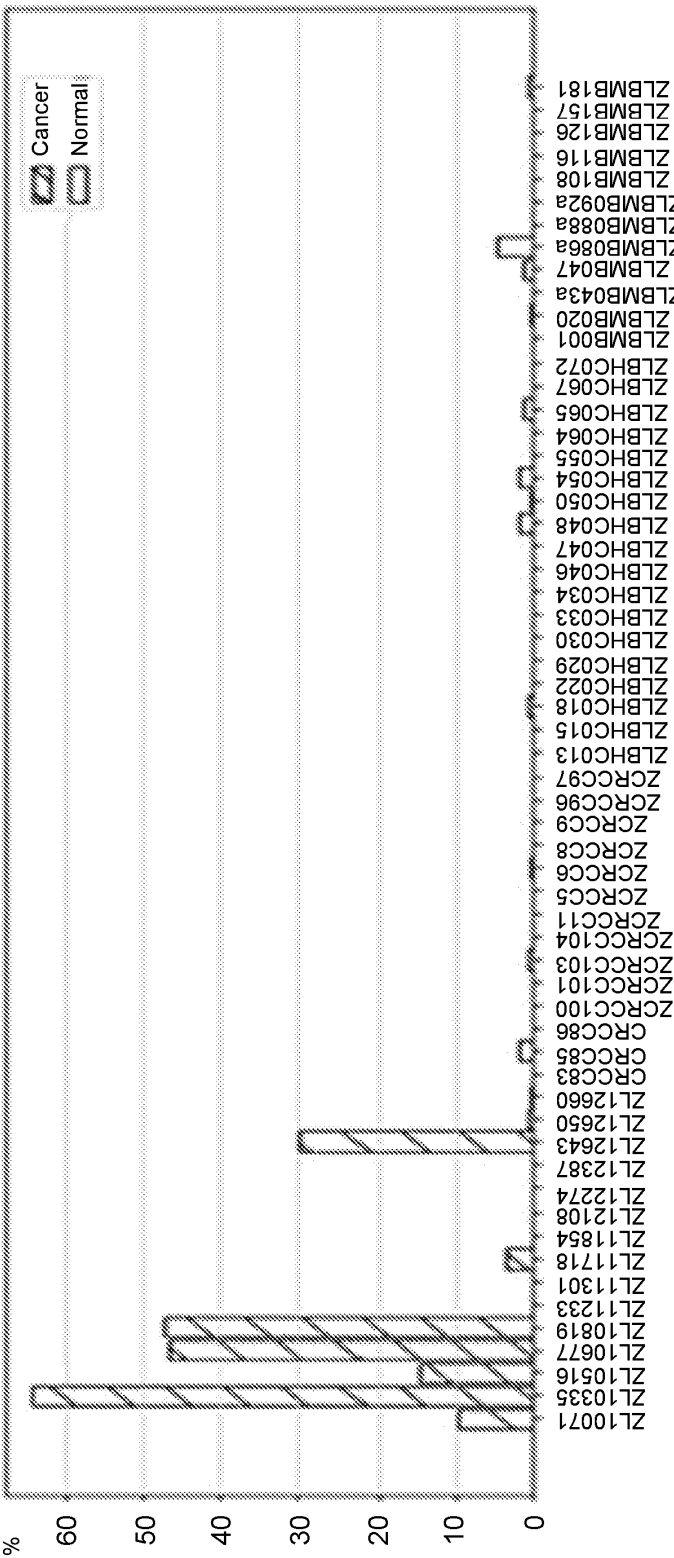


Figure 8

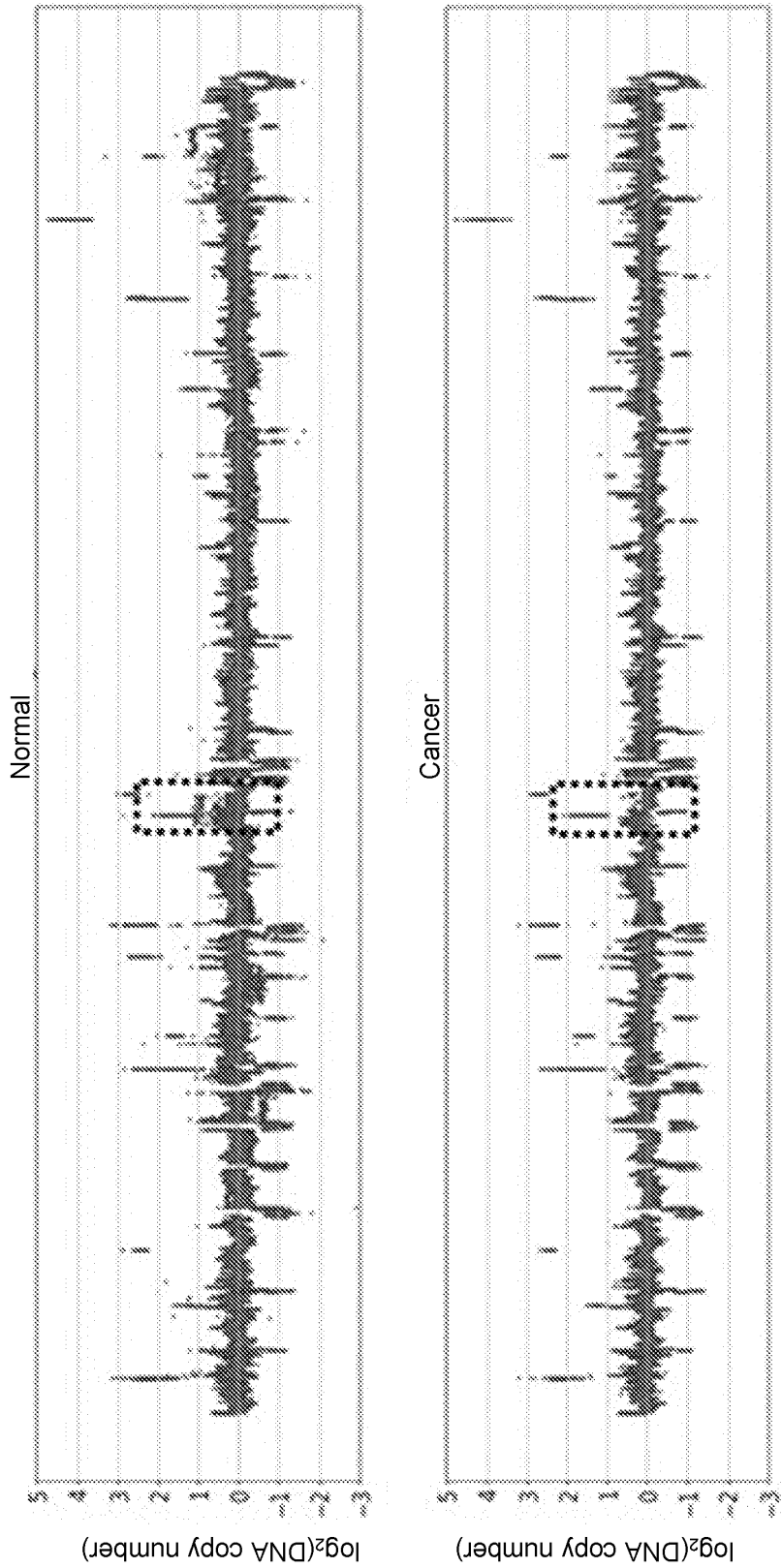


Figure 9

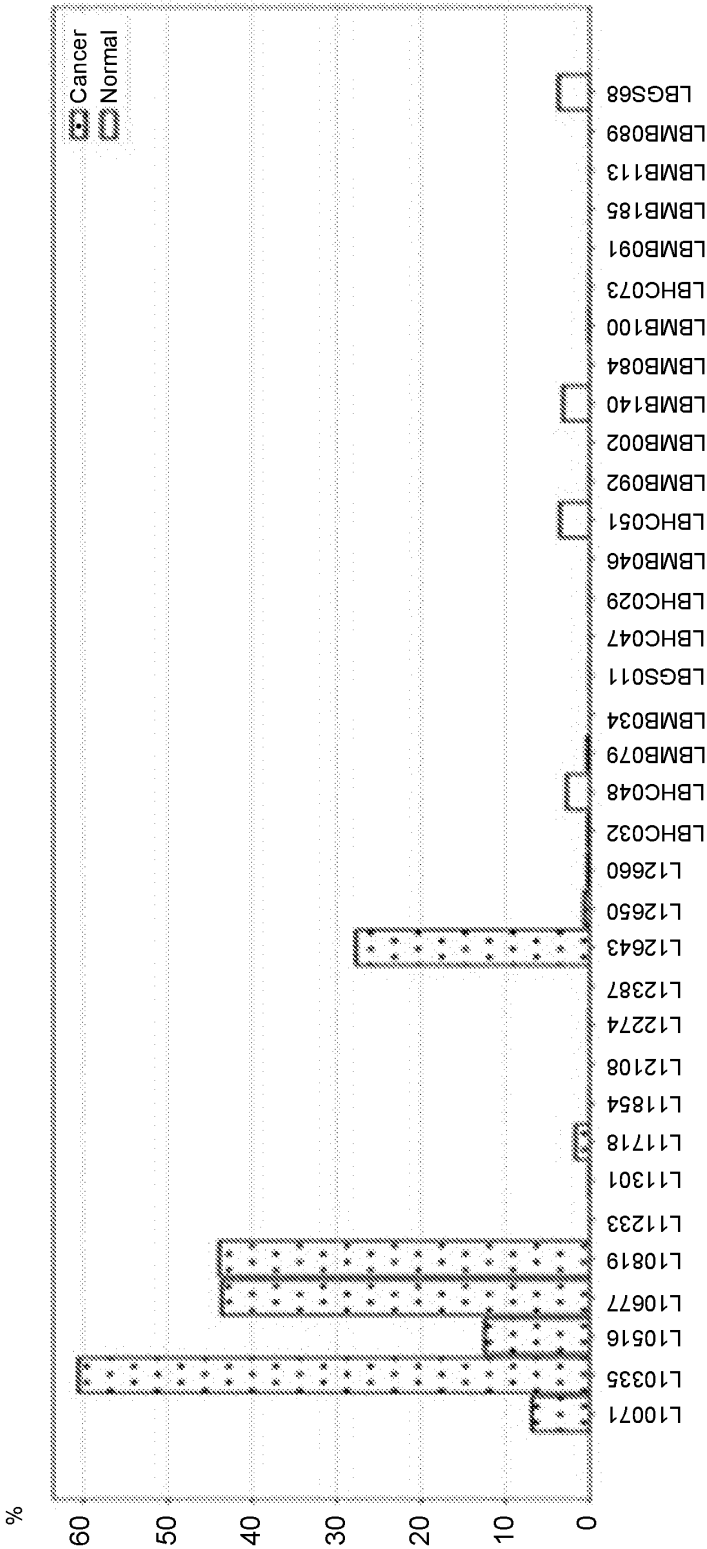


Figure 10

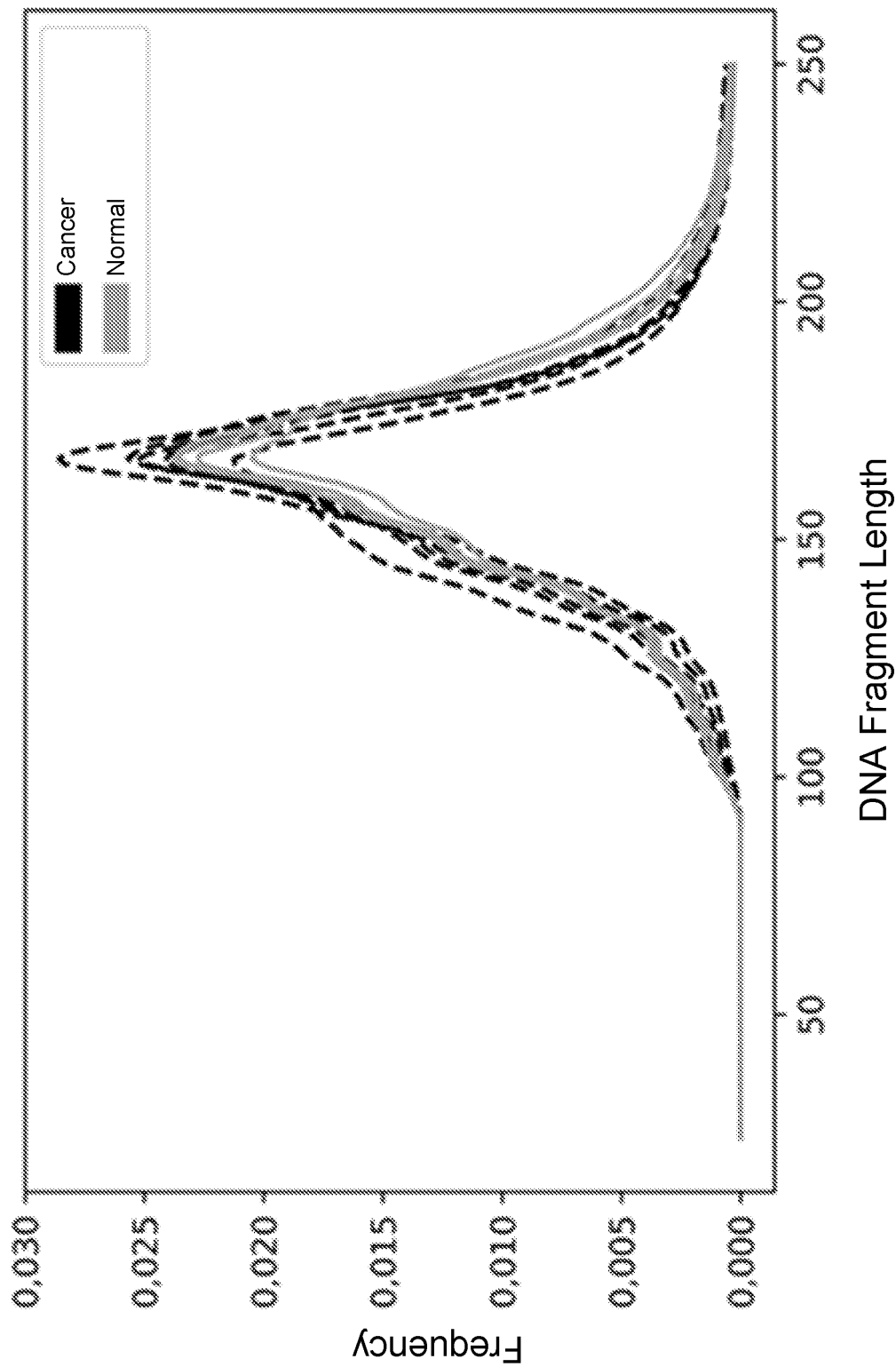


Figure 11

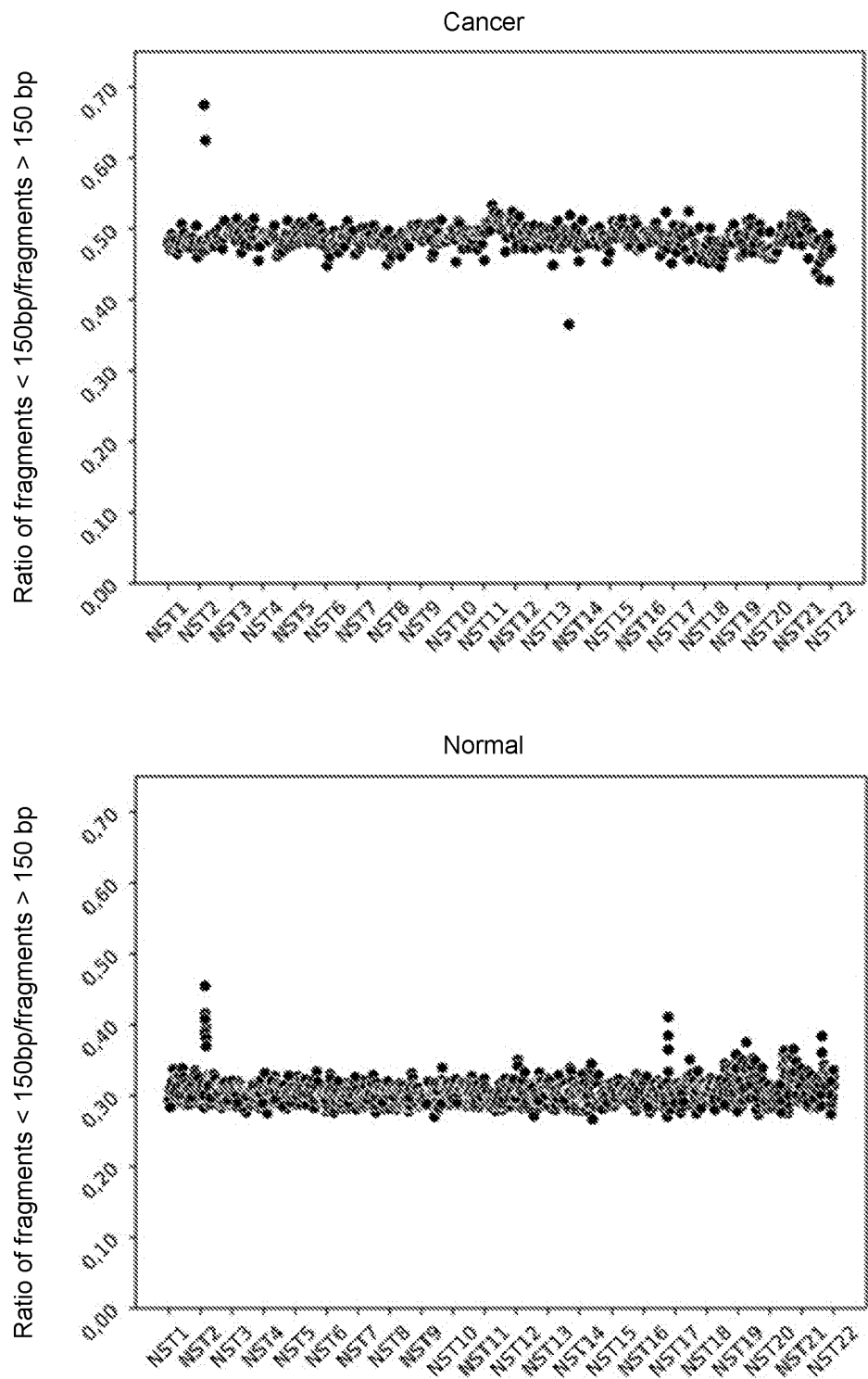


Figure 12

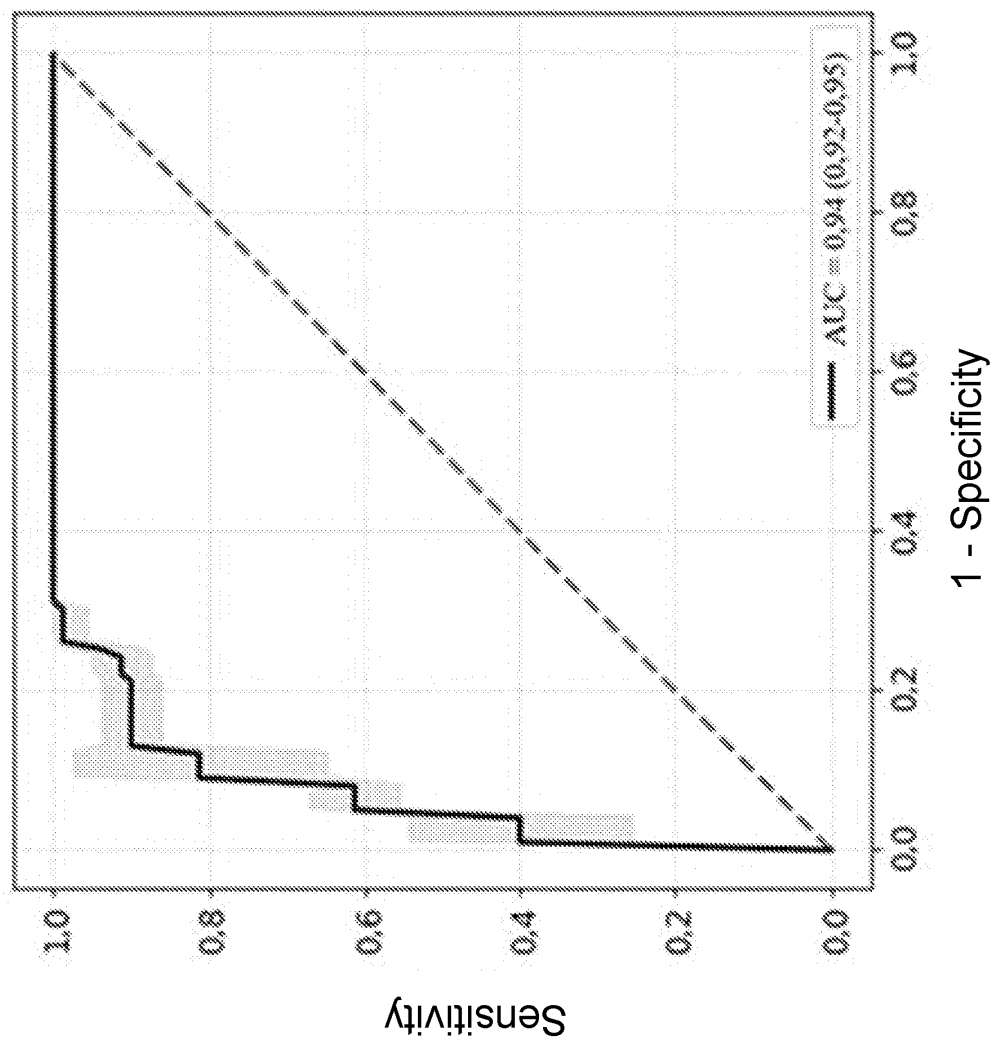


Figure 13

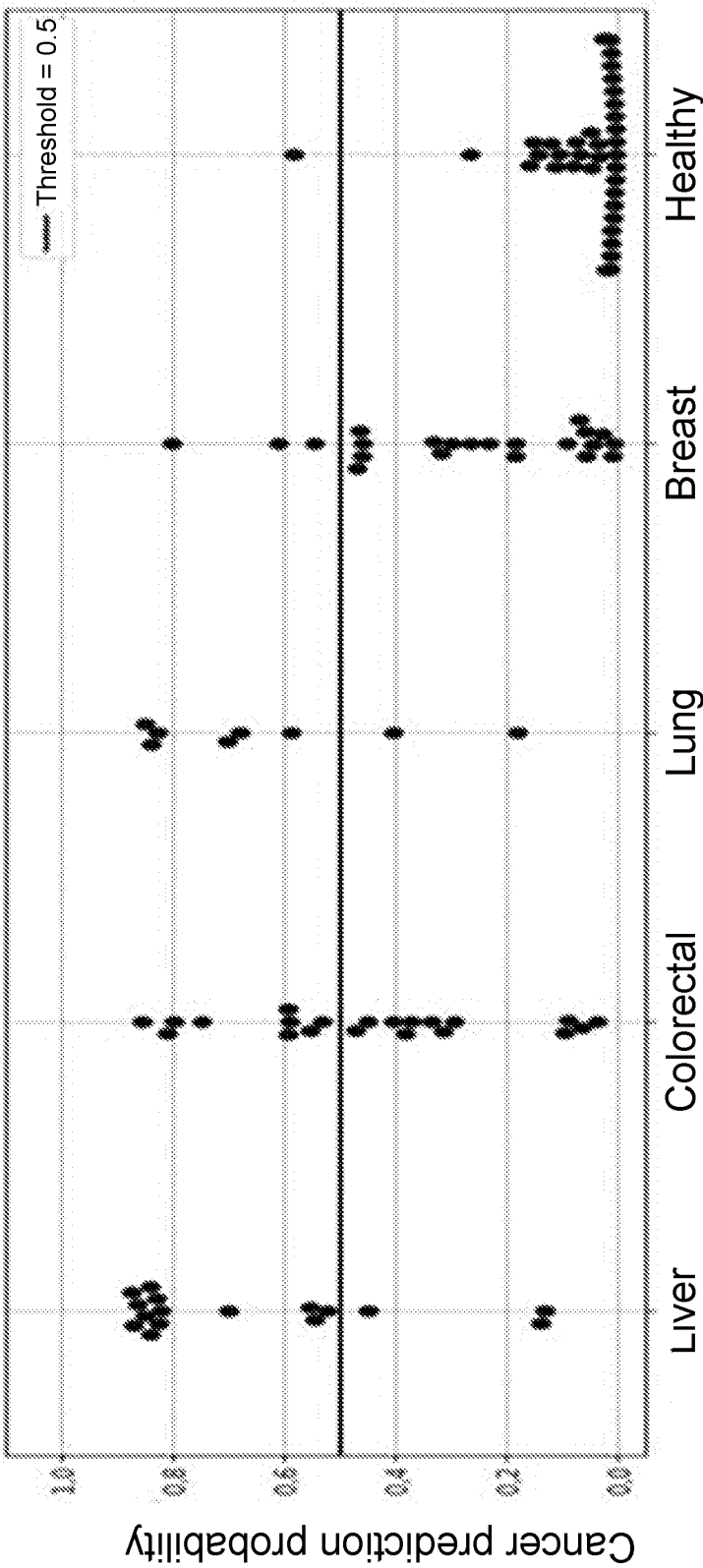


Figure 14

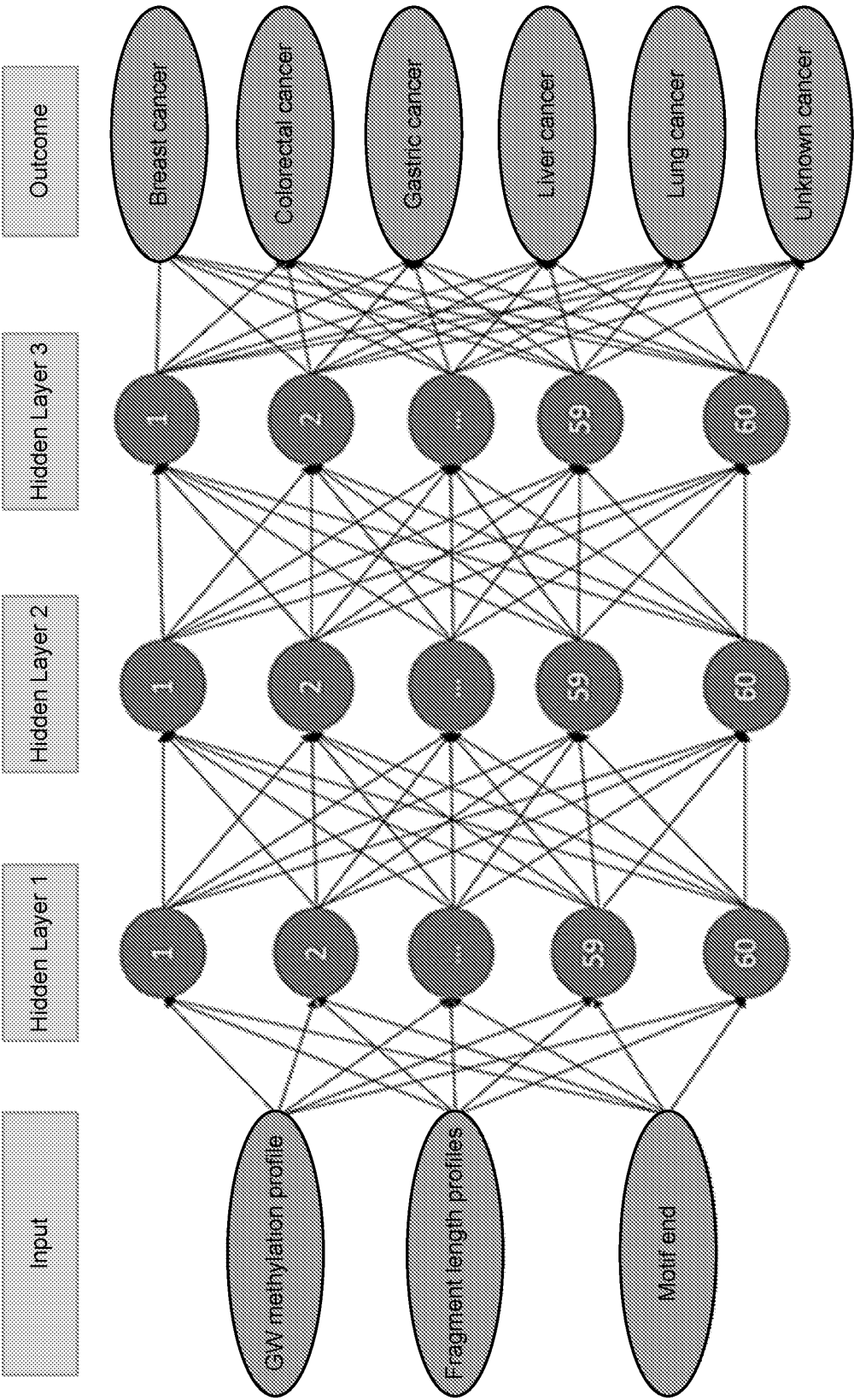


Figure 15

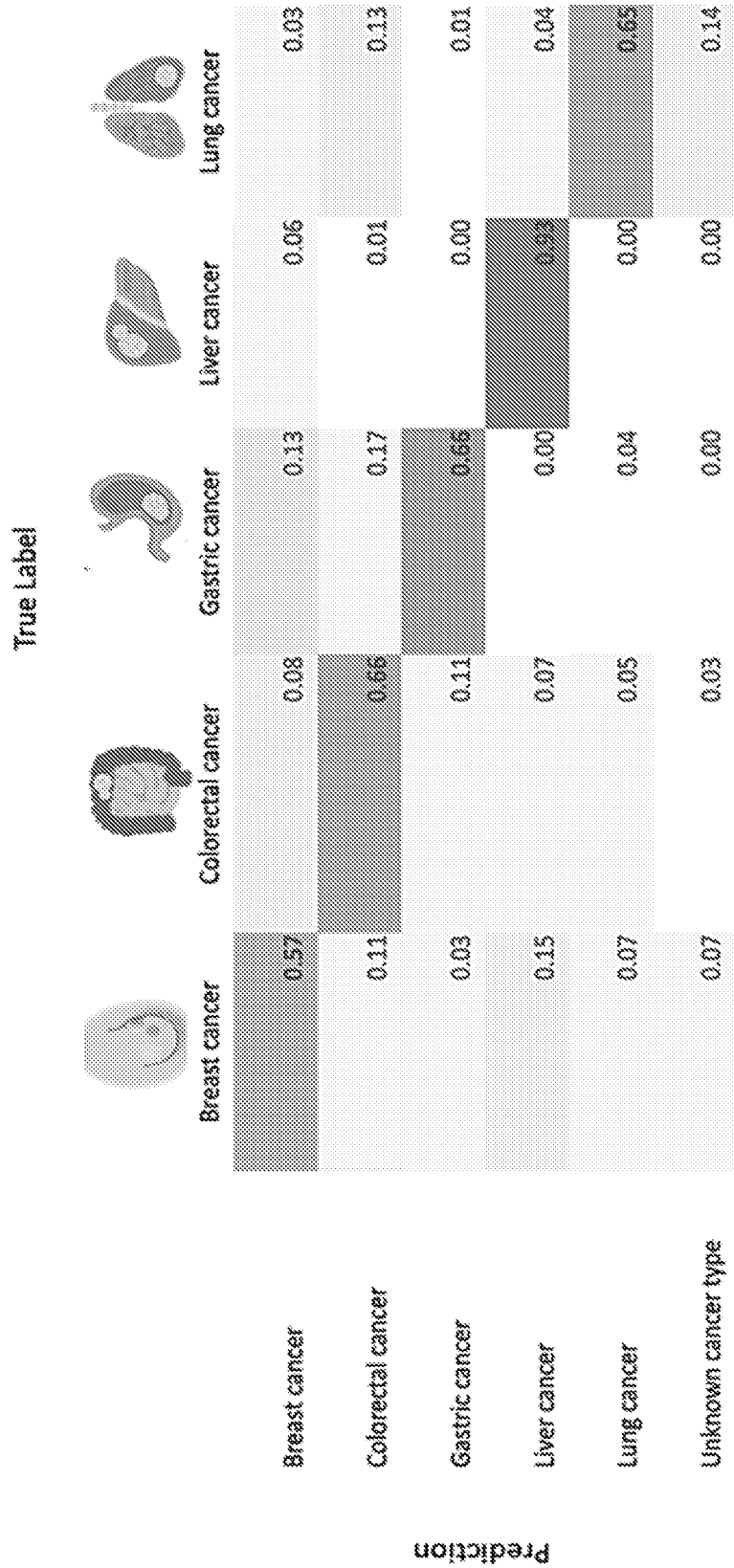


Figure 16