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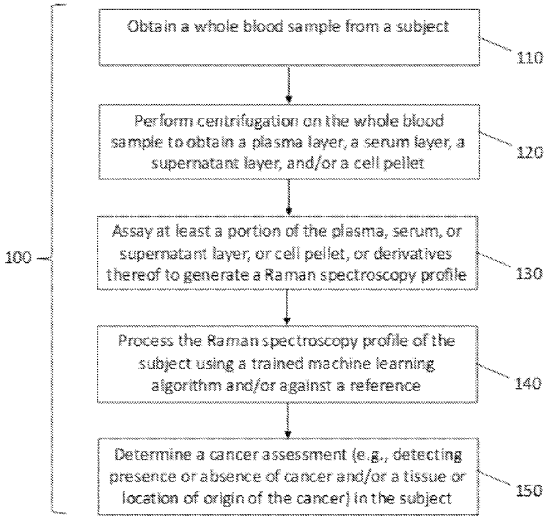


FIG. 1

(57) Abstract: In an aspect, the present disclosure provides a method for determining a cancer assessment of a subject, comprising: (a) obtaining a whole blood sample from the subject; (b) performing centrifugation on the whole blood sample to obtain a plasma layer, a serum layer, a supernatant layer, or a cell pellet; (c) assaying at least a portion of the plasma layer, the serum layer, the supernatant layer, or the cell pellet, or derivatives thereof, to generate a Raman spectroscopy profile of the whole blood sample of the subject; (d) processing the Raman spectroscopy profile of the whole blood sample of the subject using a trained machine learning algorithm or against a reference; and (e) determining the cancer assessment of the subject, based at least in part on the processing in (d).

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