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(54) Title: METHODS AND SYSTEMS FOR MOLECULAR DISEASE ASSESSMENT VIA ANALYSIS OF CIRCULATING TUMOR DNA

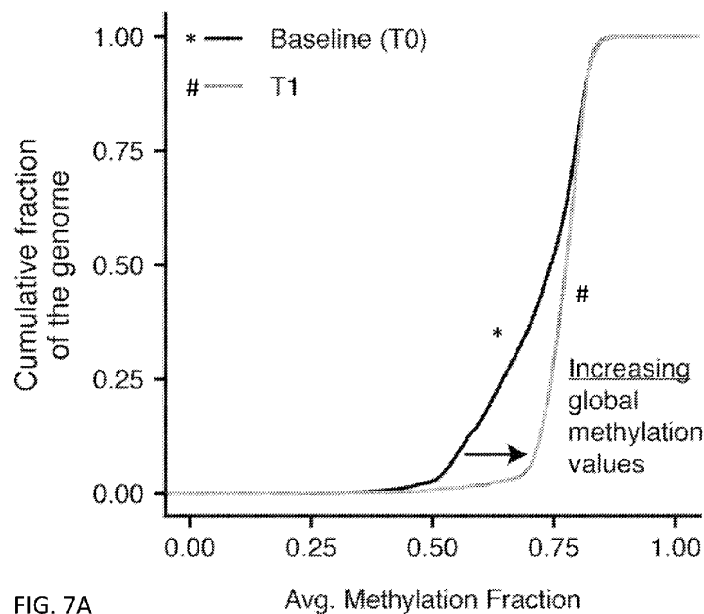


FIG. 7A

(57) Abstract: The present disclosure provides methods of assessing tumor status (e.g., progression, regression, recurrence, etc.) in a subject. In an aspect, a method for assessing tumor status (e.g., progression, regression, recurrence, etc.) of a subject may comprise: based on first and second WGS data of cfDNA molecules of a subject at different time points, determining (i) a first and second plurality of CNAs and (ii) a first and a second plurality of fragment lengths; processing the first and second plurality of CNAs to determine a CNA profile change; comparing the first and second plurality of fragment lengths to determine a fragment length profile change; determining a first or second tumor fraction of the subject at the first or second timepoint, based at least in part on the CNA profile change and the fragment length profile change; and detecting a tumor status of the subject based at least in part on the first or second tumor fraction.

[Continued on next page]

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