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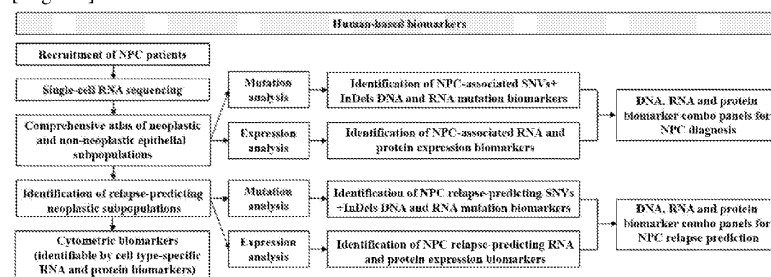
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(54) Title: COMPOSITIONS AND METHODS FOR NON-INVASIVE RAPID TEST FOR DNA, RNA, AND PROTEIN MARKERS PRESENT IN NASOPHARYNGEAL CARCINOMA

[Fig. 1A]



(57) Abstract: Compositions, kits and methods of determining the presence of nasopharyngeal carcinoma (NPC) in a subject or relapse prediction of NPC in the subject are provided, with high specificity, sensitivity, and accuracy. Exemplary mutations include mutations in EMP2, IL32, EEF2KMT, CSTA, SOCS1, TESMIN, and IGFBP7 can be used to detect NPC. Mutations in IL32, DHX57, HMGN2P3, DNAJC11, EIF2AK1, FAM234A, PARPBP, ARL5A, ATPAF1, HDAC2, TACSRD2, and/or LMO4 used to achieve NPC relapse prediction. The analyte to be detected can be either RNA or protein, peptide, or fragment thereof etc. can detect NPC. High level of LY6D-positive neoplastic cells, neoplastic SPB cells reflected by RNA/protein expression of KRT16, CEBPD, CDKN1A, PGM2, and LY6D, neoplastic SPB1, SPB2 cells neoplastic SPB5 cells HDAC-mutated neoplastic SPB1 cells ATPAF1-mutated neoplastic SPB1, and low level of non-neoplastic SPB cells, non-neoplastic SPB1, and high neoplasticity of SPB cells can be used for NPC relapse prediction.