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(54) **Title**: MONITORING HEALTH AND DISEASE STATUS USING CLONOTYPE PROFILES

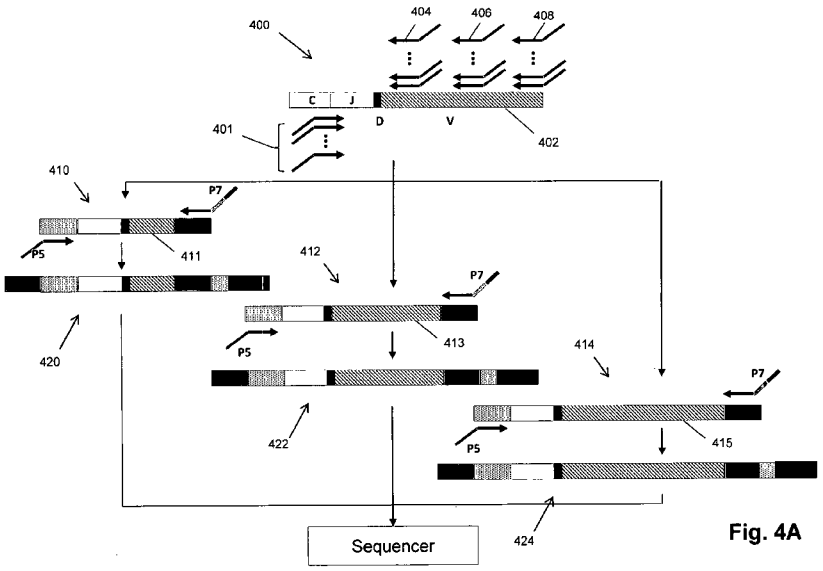


Fig. 4A

(57) **Abstract**: There is a need for improved methods for determining the diagnosis and prognosis of patients with conditions, including autoimmune disease and cancer, especially lymphoid neoplasms, such as lymphomas and leukemias. Provided herein are methods for using DNA sequencing to identify personalized, or patient-specific biomarkers in patients with lymphoid neoplasms, autoimmune disease and other conditions. Identified biomarkers can be used to determine and/or monitor the disease state for a subject with an associated lymphoid disorder or autoimmune disease or other condition. In particular, the invention provides a sensitive method for monitoring lymphoid neoplasms that undergo clonal evolutions without the need to development alternative assays for the evolved or mutated clones serving as patient-specific biomarkers.

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