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(54) **Title: SMALL CELL LUNG CANCER TUMOR ANTIGENS AND USES THEREOF**

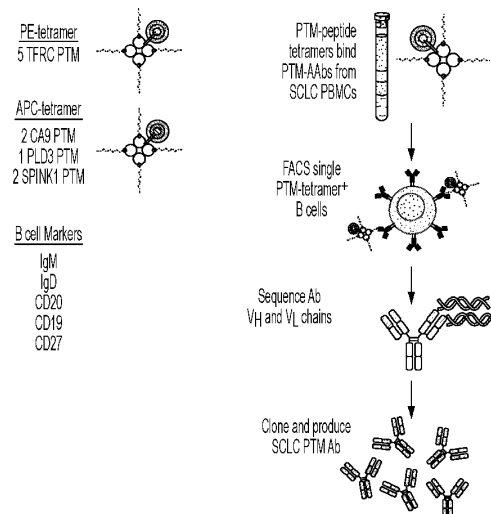


FIG. 13

(57) **Abstract:** Disclosed herein are high performance biomarkers and panels for small cell lung cancer (SCLC) early detection useful for identifying, diagnosing, and treating SCLC patients at an early stage. The method of diagnosing and treating SCLC in a subject can include detecting presence of autoantibodies that specifically bind one or more epitopes of antigens in a biological sample obtained from the subject, wherein the one or more epitopes of the antigens comprises a post-translational modification; diagnosing the subject with SCLC when the presence of the autoantibodies is detected in the biological sample; and treating the SCLC in the subject by administering a chemotherapy regimen, an immunotherapy regimen, an antibody, performing a surgery, and/or radiotherapy. In one example, the post-translational modifications targeted by the autoantibodies include citrullination, isoaspartylation and/or cancer-specific glycosylation.

[Continued on next page]

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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