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(54) **Title:** DNA METHYLATION BIOMARKERS FOR EARLY DETECTION OF CERVICAL CANCER

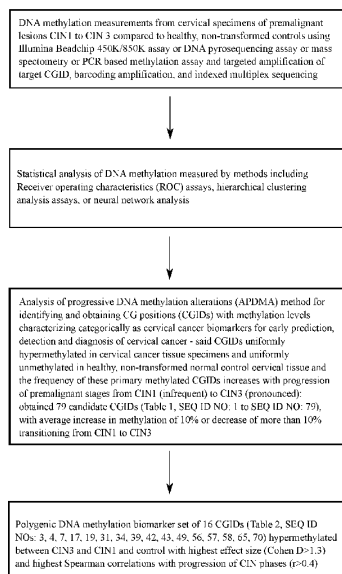


FIGURE 1

(57) **Abstract:** The present invention discloses an in vitro method for obtaining DNA methylation biomarkers as exquisite DNA methylation positions in the human genome (i.e., CGIDs) that predict cervical cancer especially at as yet inaccessible early stages by examining progression of "categorical" DNA methylation alterations in three stages of premalignant lesions (cervical intraepithelial neoplasia (CIN)), progressing from CIN1 to CIN3. The present invention discloses combinations of CGIDs for detecting with high specificity and sensitivity cervical cancer by measuring their DNA methylation status and deriving a "methylation score", which is useful as a biomarker for cervical cancer. Also disclosed are kits for predicting cervical cancer using such CGIDs using multiplexed next generation sequencing methylation assays, pyrosequencing assays and methylation specific PCR. The DNA methylation markers (CGIDs) described in the present invention are useful for cervical screening and early detection of cervical cancer by any person skilled in the art to detect cervical cancer.

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