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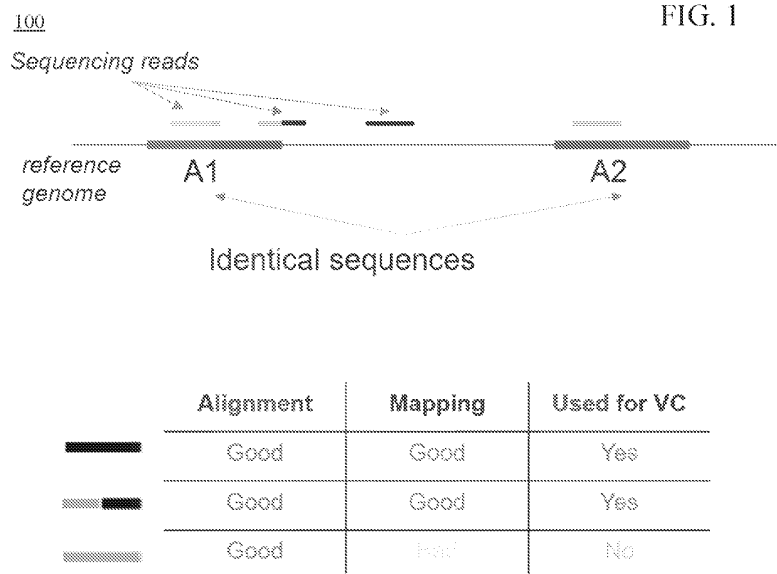
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(54) Title: USING FLOWCELL SPATIAL COORDINATES TO LINK READS FOR IMPROVED GENOME ANALYSIS



(57) Abstract: Methods are provided for assigning nucleic acid sequence reads to target polynucleotides, including providing a substrate having transposome complexes immobilized thereon, wherein the transposome complexes comprise a transposase and a first polynucleotide comprising an end sequence and a first tag; contacting the transposome complexes with target polynucleotides under conditions to fragment the target polynucleotides; amplifying the fragmented target polynucleotides to form a plurality of nucleic acid clusters on the substrate; obtaining location information for the plurality of nucleic acid clusters on the substrate; determining the nucleic acid sequence reads of the fragmented nucleic acids in each of the nucleic acid clusters; and assigning the nucleic acid sequence reads to the target polynucleotides using the obtained location information.

[Continued on next page]

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