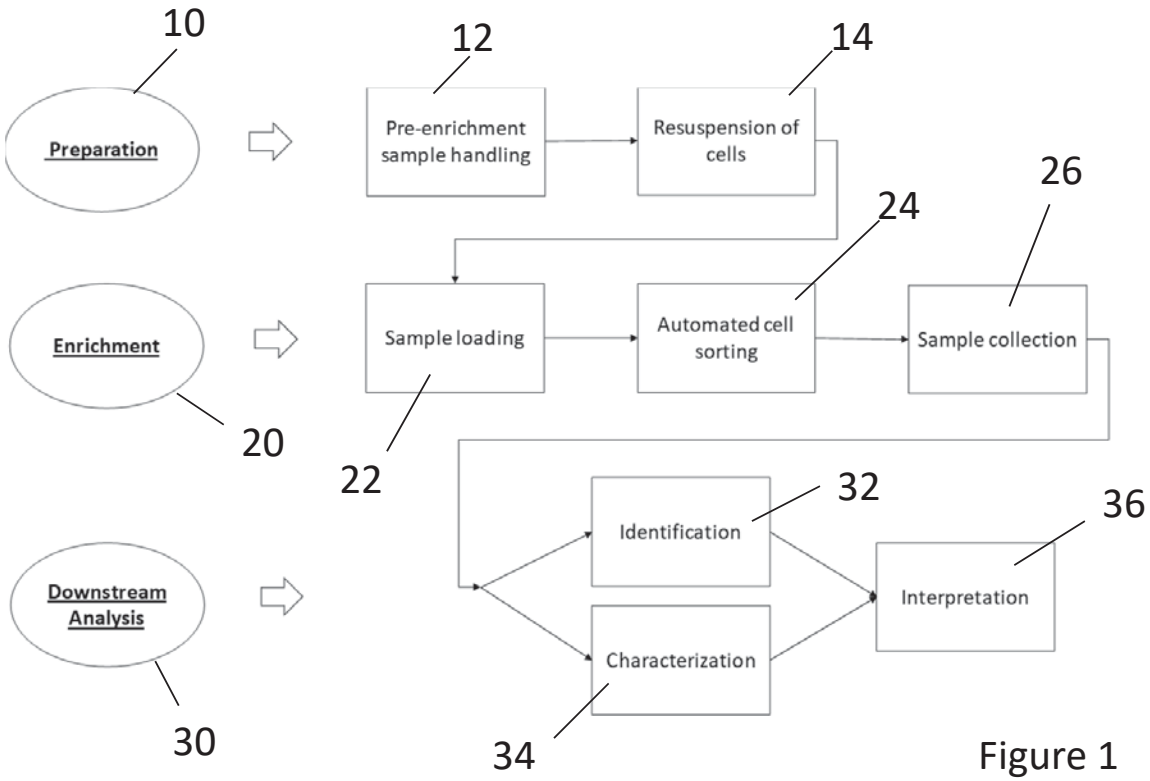


Figure 1

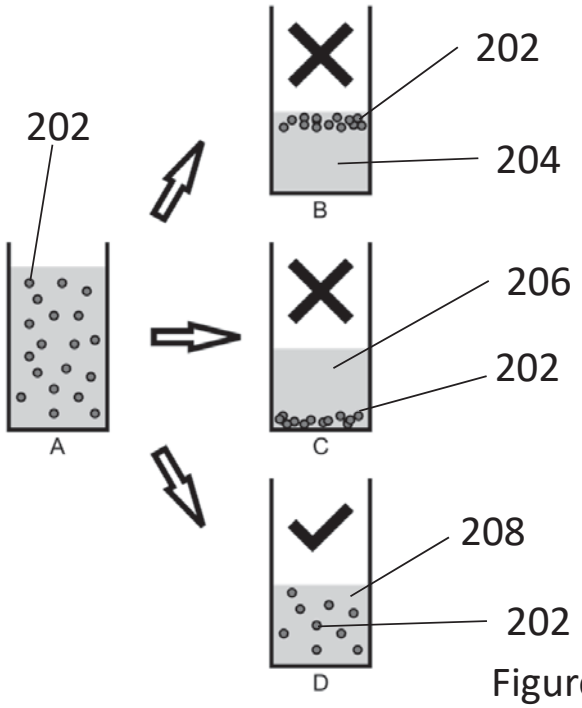


Figure 2

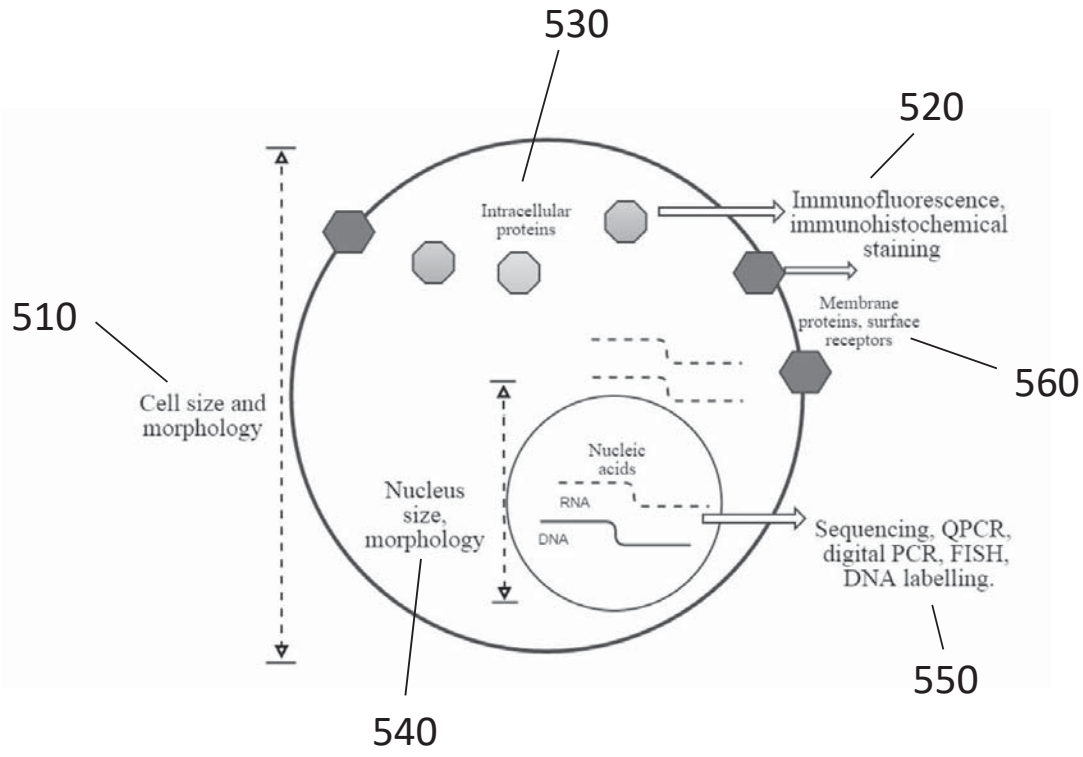
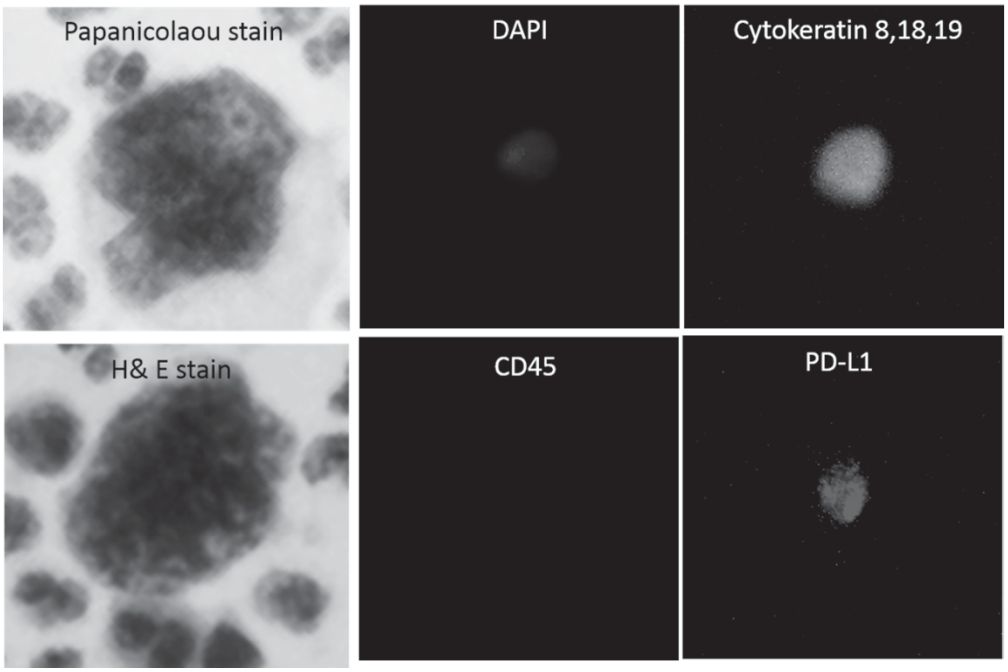

530
520
Intracellular proteins
Immunofluorescence, immunohistochemical staining
510
Membrane proteins, surface receptors
560
Cell size and morphology
Nucleic acids
RNA
DNA
Nucleus size, morphology
Sequencing, QPCR, digital PCR, FISH, DNA labelling.
550
540

Figure 5



(A) (B)

Figure 6

(A)

(B)

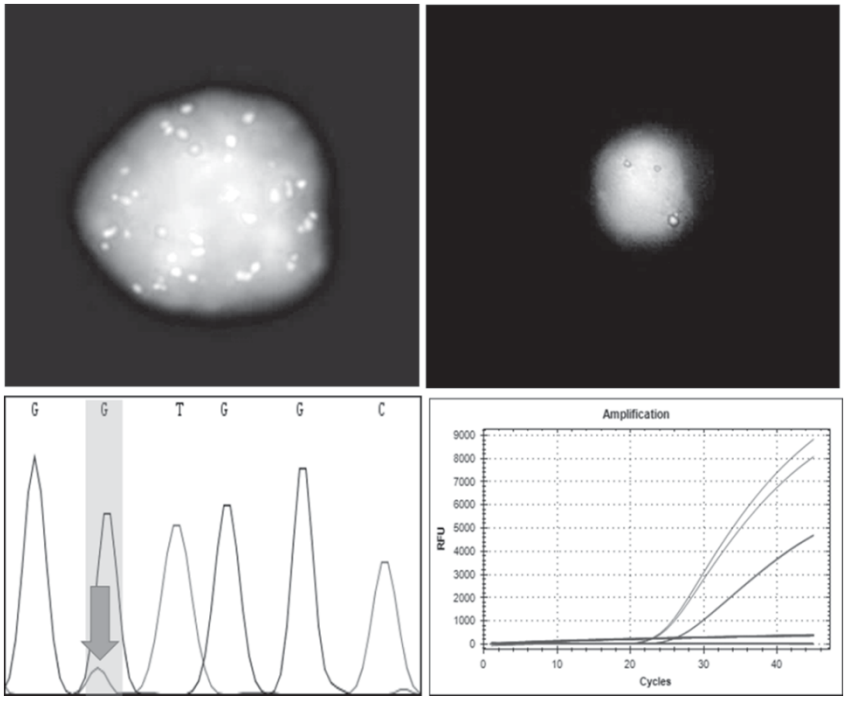


Figure 7

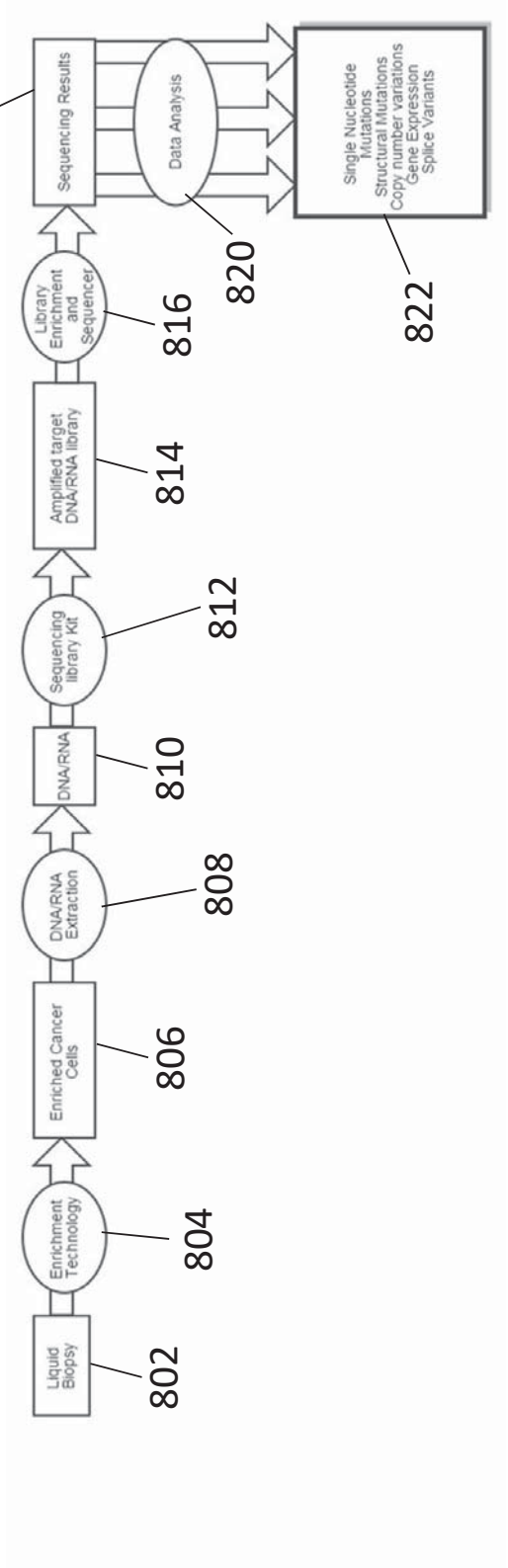

Liquid Biopsy
802
Enrichment Technology
804
Enriched Cancer Cells
806
DNA/RNA Extraction
808
DNA/RNA
810
Sequencing library Kit
812
Amplified target DNA/RNA library
814
Library Enrichment and Sequencer
816
Sequencing Results
818
Data Analysis
820
Single Nucleotide Mutations
Structural Mutations
Copy number variations
Gene Expression
Splice Variants
822

Figure 8

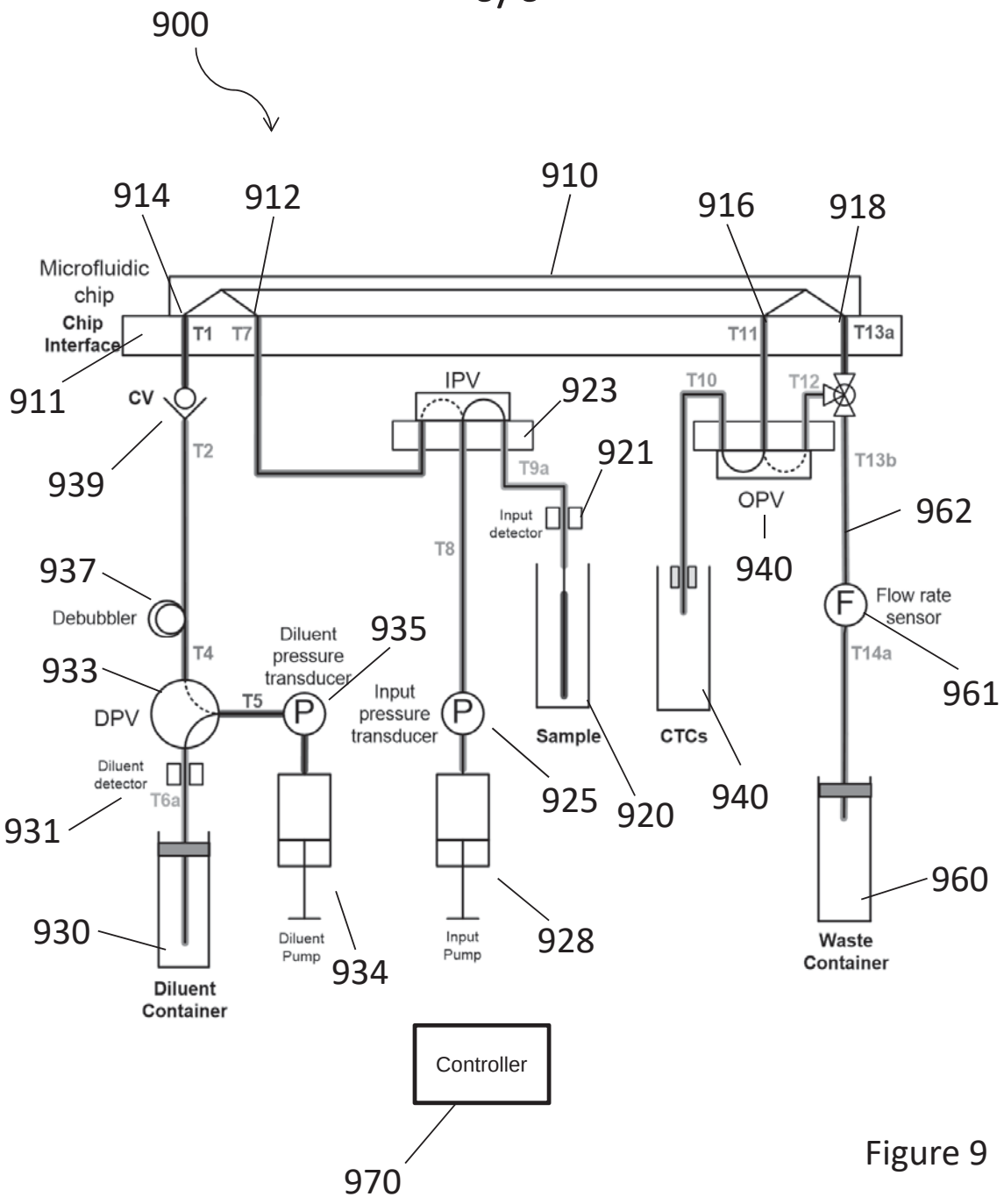

900
914
912
910
916
918
Microfluidic chip
Chip Interface
T1
T7
T11
T13a
911
CV
IPV
923
T10
T12
939
T2
T9a
921
T13b
Input detector
OPV
962
T8
940
937
Debubbler
F
Flow rate sensor
935
Diluent pressure transducer
T4
T14a
933
T5
Input pressure transducer
961
DPV
Sample
CTCs
Diluent detector
T6a
925
920
940
931
960
930
Diluent Pump
934
Input Pump
928
Waste Container
Diluent Container
Controller
970

Figure 9