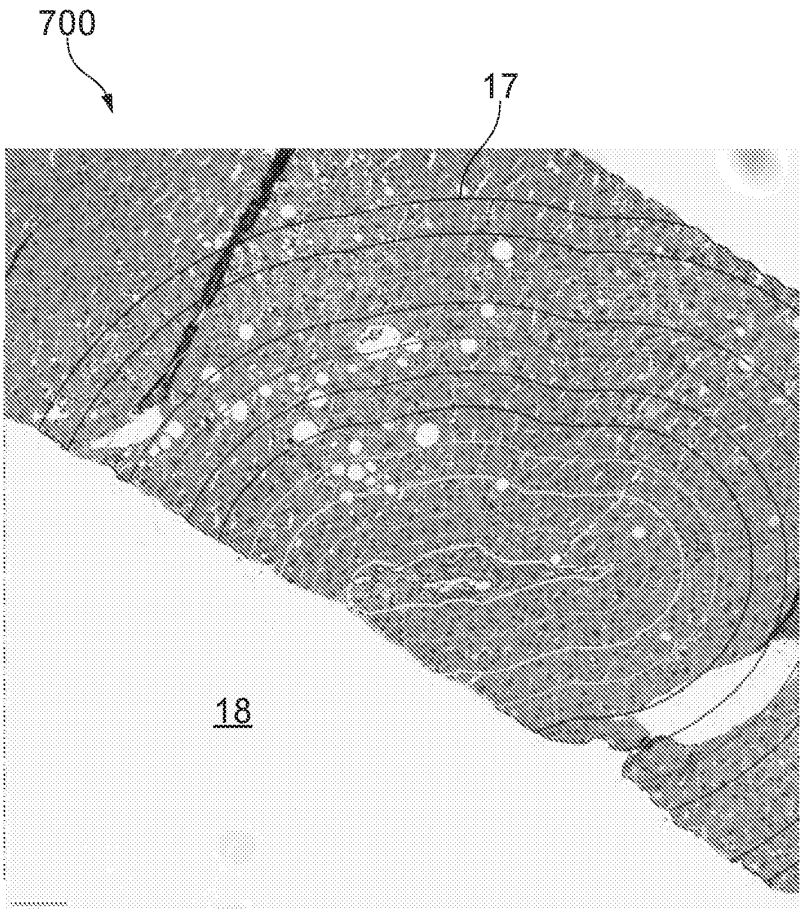

FIG. 1

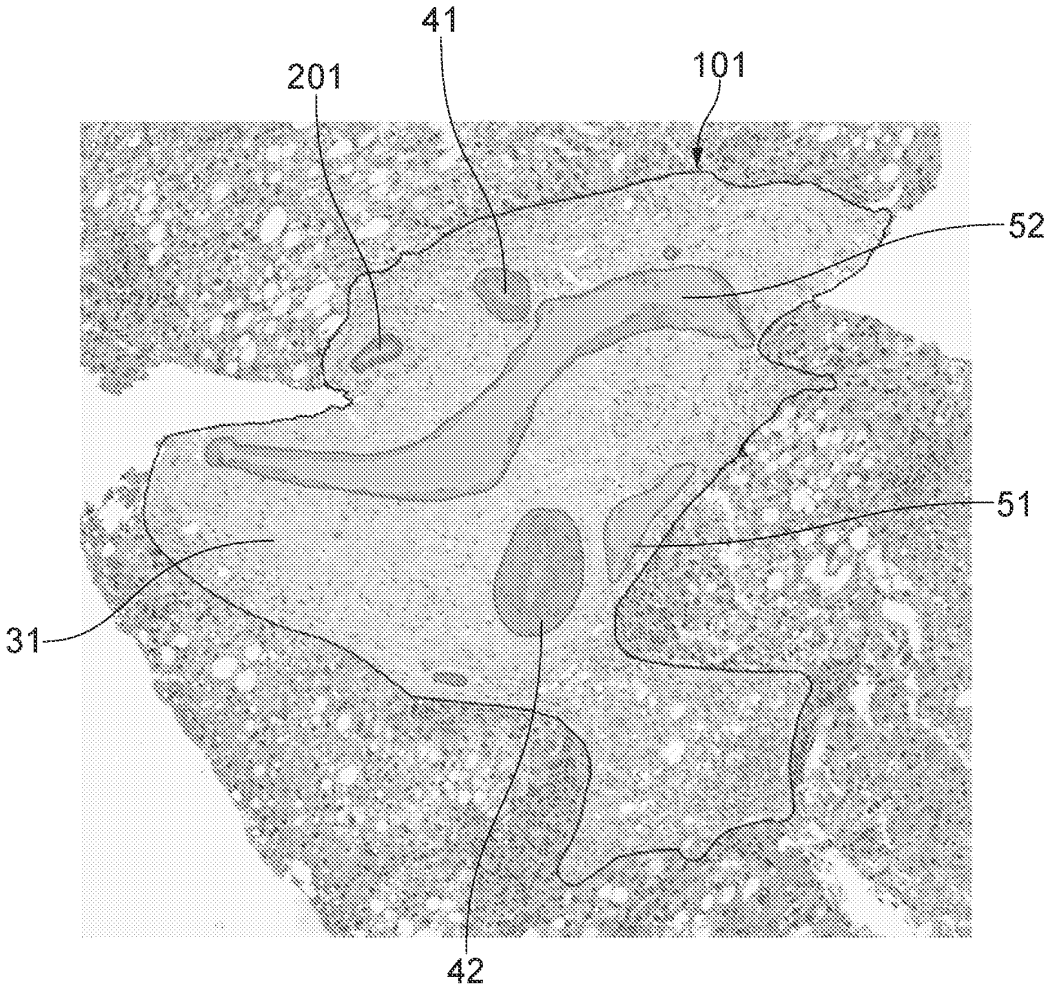

FIG. 2

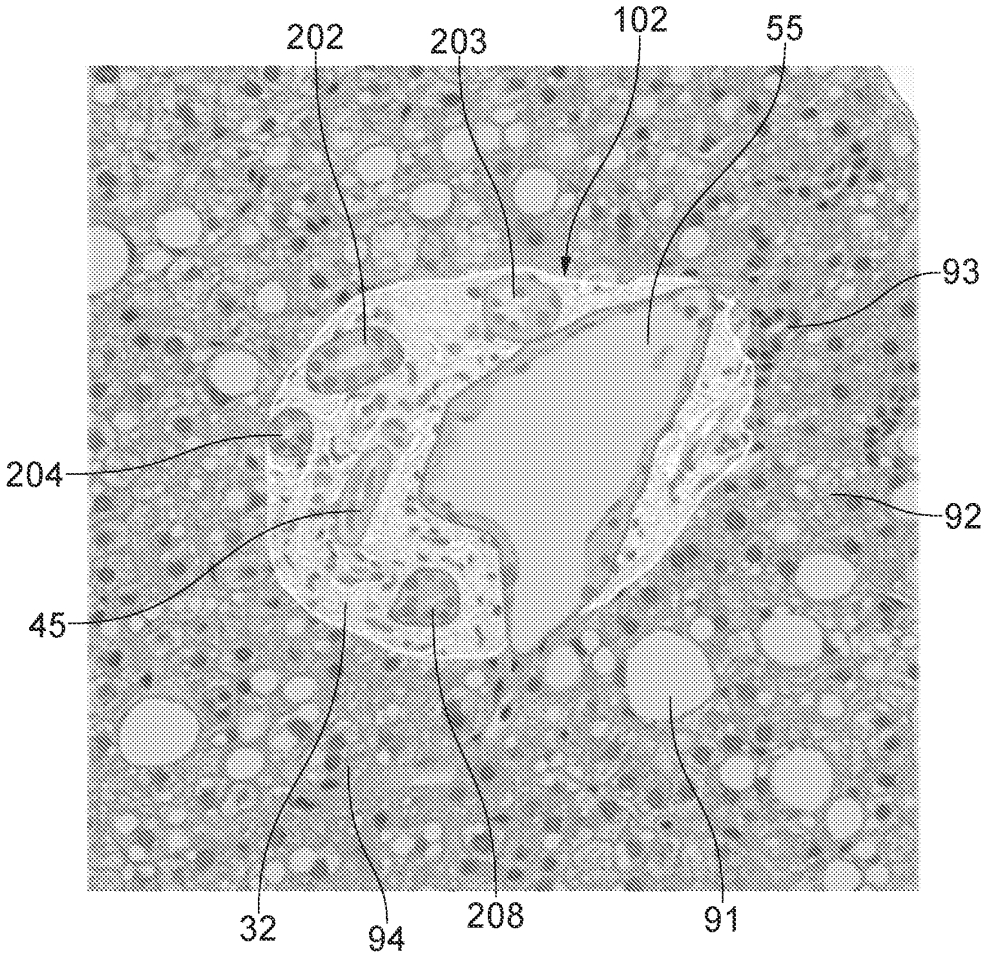

FIG. 3

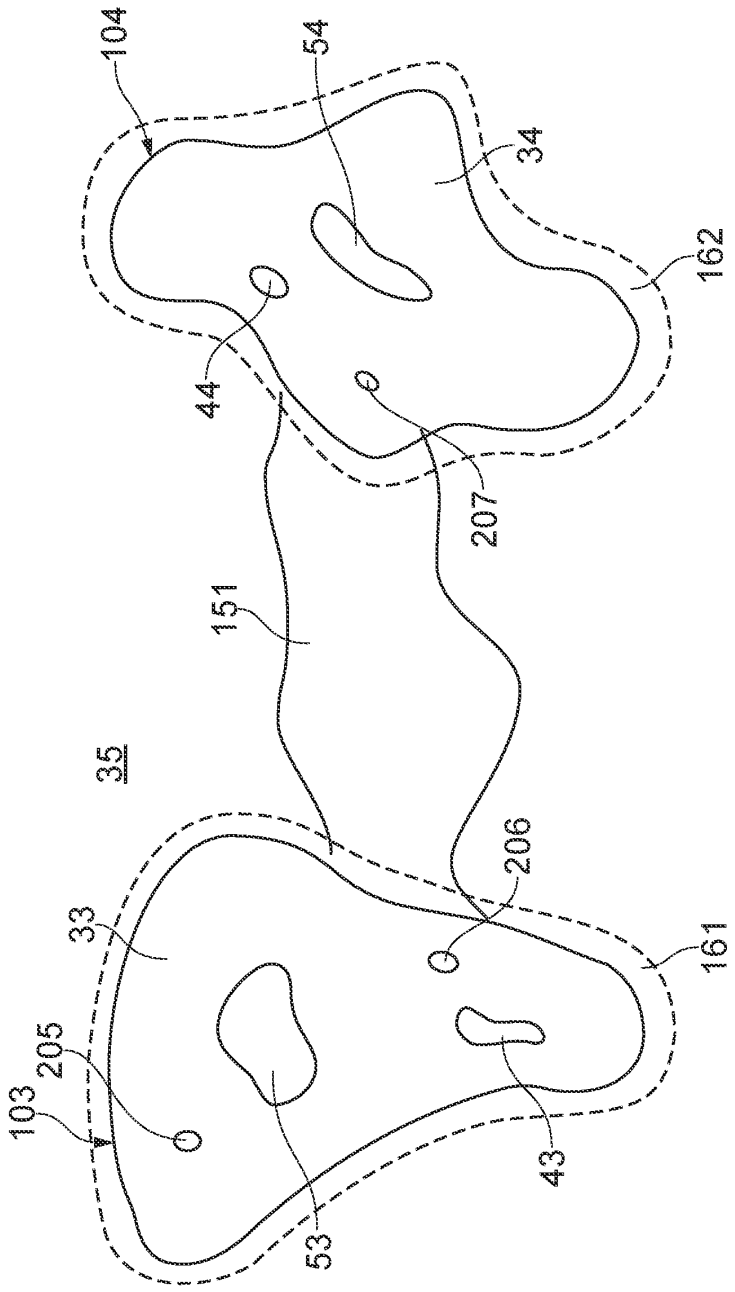

FIG. 4

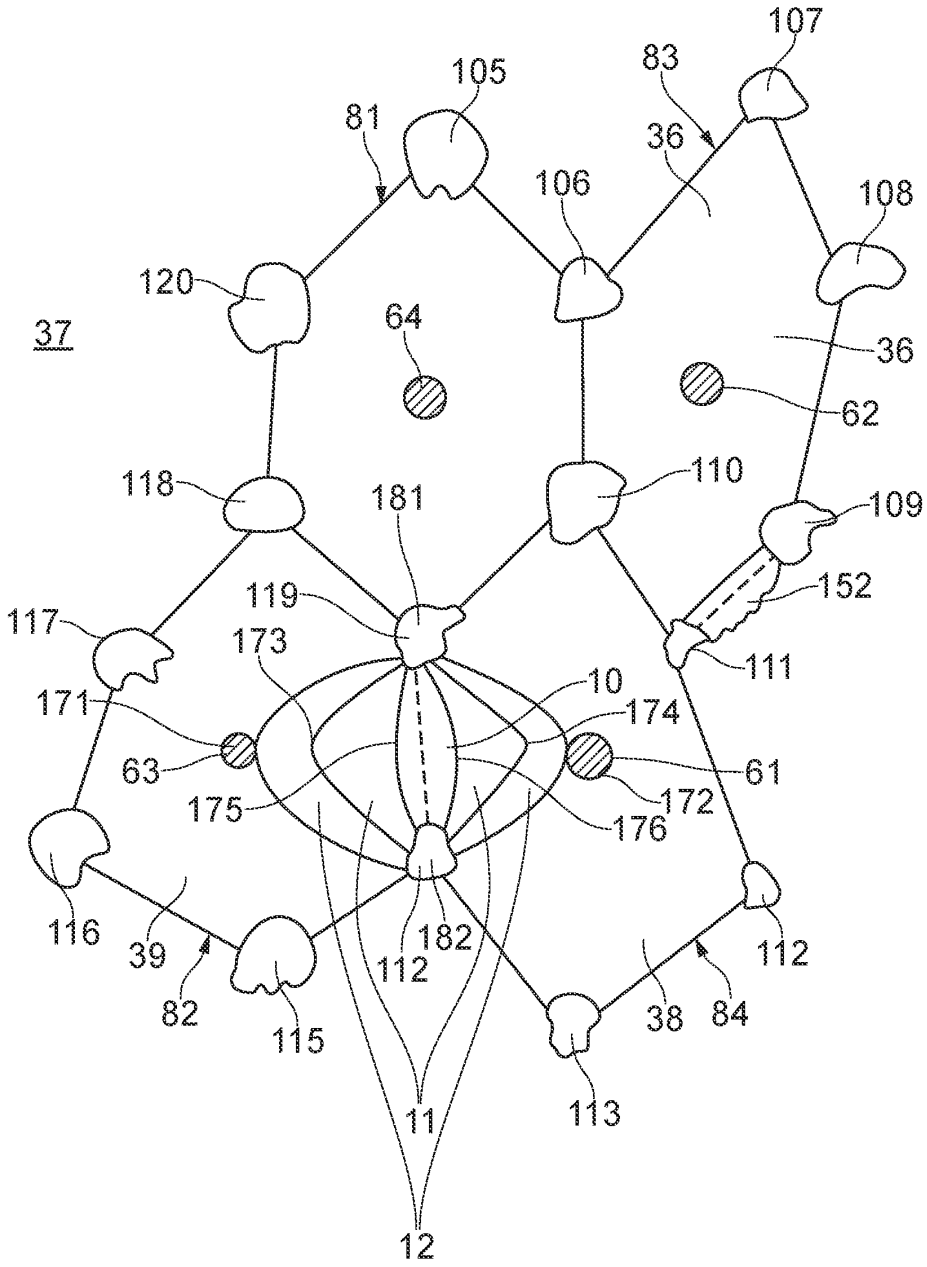
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FIG. 5

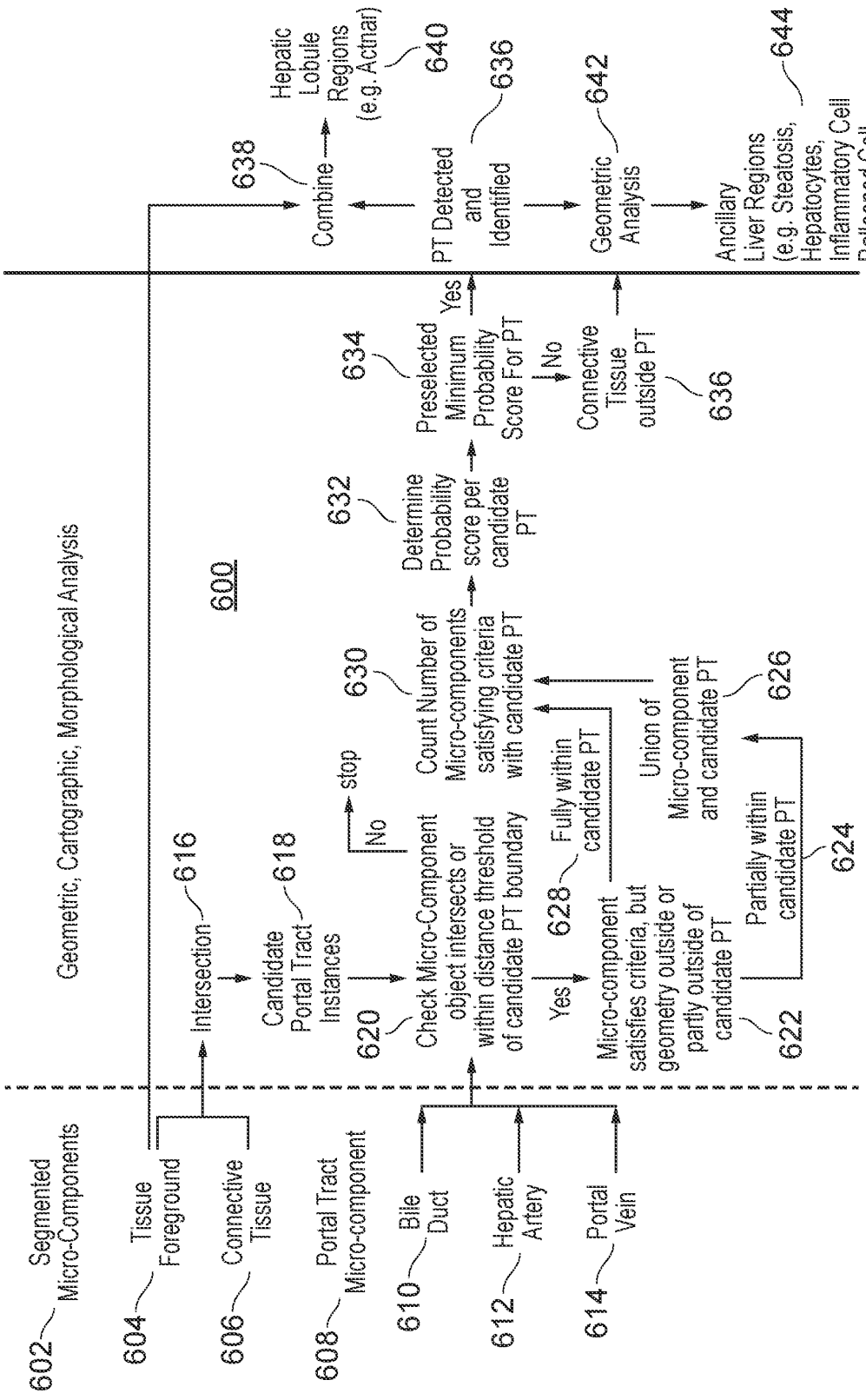
600
Geometric, Cartographic, Morphological Analysis
602 Segmented Micro-Components
604 Tissue Foreground
606 Connective Tissue
608 Portal Tract Micro-component
610 Bile Duct
612 Hepatic Artery
614 Portal Vein
Intersection 616
Candidate Portal Tract Instances 618
620 Check Micro-Component object intersects or within distance threshold of candidate PT boundary
No
stop
Yes
Micro-component satisfies criteria, but geometry outside or partly outside of candidate PT
622
628 Fully within candidate PT
Partially within candidate PT 624
Union of Micro-component and candidate PT 626
630 Count Number of Micro-components satisfying criteria with candidate PT
632 Determine Probability score per candidate PT
634 Preselected Minimum Probability Score For PT
Yes
No
Connective Tissue outside PT 636
PT Detected and Identified 636
638 Combine
Hepatic Lobule Regions (e.g. Actnar) 640
Geometric Analysis 642
Ancillary Liver Regions (e.g. Steatosis, Hepatocytes, Inflammatory Cell Ballooned Cell 644

FIG. 6