Medical Imaging

SYSTEM AND METHOD FOR GENERATING PERCISION MEDICINE REPORTS USING TOPOLOGICAL ANALYSIS OF MEDICAL IMAGING DATA AND CORRELATION DATASETS

WARF: P250240US01

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Most medical imaging techniques currently in use focus primarily on providing anatomical information. These methods, while valuable for visualizing structures within the body, often fail to provide substantial insights into the underlying biological processes or physiological functions. Furthermore, in cases where biological or physiological information can be inferred from imaging data, it is typically qualitative rather than quantitative in nature.

The Invention

UW Madison researchers have developed methods for generating patient-specific reports that correlate imaging data to underlying biology, physiology, and/or genetics to enhance precision medicine in patients. Advanced image analysis techniques can provide greater specificity of image-derived metrics to enable more specific correlation of imaging findings with underlying biological processes and physiological functions. This enhanced capability will enable more personalized and effective treatment strategies for patients. For example, a patient's imaging data can be processed with topological data analysis and correlation data to generate the patient-specific report that goes beyond the anatomical information typically available from imaging data to drive precision medicine analysis and decision making.

Additional Information

For More Information About the Inventors
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Tech Fields
- Medical Imaging : MRI

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846