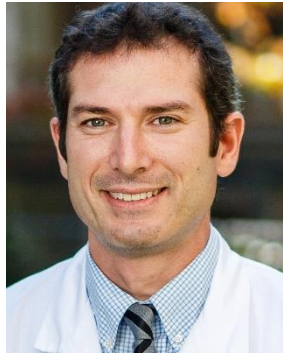


RADIOMICS RESEARCH GROUP

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KEYWORDS - Radiomics, Quantitative Image Analysis

SUMMARY & MISSION STATEMENT

We want to establish Radiomics biomarkers as a standard component in personalized health outcome modelling.

OVERVIEW

Radiological imaging is an essential component of disease staging, treatment response assessment and follow-up in almost all solid cancer types and many other diseases. However, image analysis is today mostly a manual process and therefore prone to inter- and intra-observer variation. Additionally, image analysis results in a most qualitative characterization, which makes radiological reports unsuitable for outcome modelling in the context of personalized health.

In our research group, we develop and evaluate computer-based algorithms for quantitative medical image analysis using advanced mathematics, statistics and machine learning, a methodology called Radiomics. We have developed a fully dicom-compatible radiomics software solution, standardized in a multicenter study. The software allows radiomics analysis to the highest international standards: morphological, intensity, texture and transform-based (wavelet transform) analysis with calculation of >1400 radiomic features per image. The group demonstrated profound experience with all endpoints of radiomic analysis: robustness against non-standardized imaging protocols, prediction of outcome and correlation with tumor biology.

SELECTED CANCER RELATED PUBLICATIONS

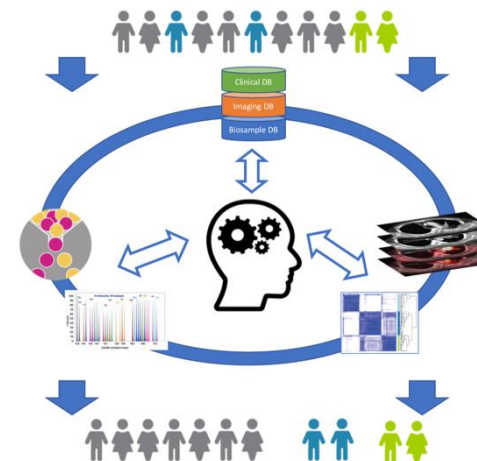
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Radiomics as a component of multi-systems outcome modeling in personalized health