Informatics

Radiation Oncology has benefited from unprecedented technological advancement in the last 20 years. The result is a multi-disciplinary field with a large number of treatment modalities all equipped with highly conformal deliveries and accurate positioning. More and more genetic and molecular information is also available to document and better understand cancer. Such information is added to an already large amount of digital medical information used in Radiation Oncology.

UCSF has invested considerable resources and hired worldwide experts in the field of "Big Data" with the objectives of building a database for predictive medicine and providing the full spectrum of oncology data and genomics at the point of care. Advanced software platforms are utilized to build databases. Our department has built considerable databases for breast, prostate, brachytherapy, central nervous system, total body irradiation and Gamma Knife. Tools for analytics are being built with these databases with the goal of answering important clinical questions that are frequently too difficult for national organizations and protocols.
- Demographics, tumor info, morbidities, prescription details, administrative data.
- OTV: acute toxicities.
- Tumor control, toxicities.
- Genetic information.
- Imaging, dose and volumes.
- Patient setup, on-treatment notes, etc.
- Baseline + follow-up care, toxicity.

UCSF Main Site

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