iOncology.ai

AI in Oncology in collaboration with AIIMS New Delhi:
- Development of India centric evidence based diagnostic and treatment platform for Breast Cancer, Ovarian Cancer powered by HPC-AI
- Prevention of cancer in high risk patients
- Early diagnosis of cancer patients
- Use of technology like Artificial Intelligence, Machine Learning, Deep Learning, Big Data in cancer research on HPC

AI in Cancer improves
- Accuracy of Diagnosis – through Modeling on Radiology – MRI, Mammography & Digital pathology based imaging data
- Prediction of Treatment outcome, Prognosis – using Machine Learning
- Drug Discovery in Oncology
- Next generation sequencing for Oncology

Current Need
- Meaningful use of clinical data for precision medicine in Cancer
- Decision support system for diagnosis and treatment of Cancer Use of computervision technique for AI based imaging

iOncology.ai offers
- Web based EHR system for Cancer / Proforma for breast and ovarian Cancer
- HPC AI/ML based models integrated with EHR system
- HPC AI based model for classification based on MRI Data along with segmentation
- ML based prediction model based on Mammography report
- Platform for standardizing Proforma based Data collection of cancer – Breast cancer, Ovarian cancer
- AI pipeline with components for Data upload, Model upload, Model re-training, Model validation, Data export, Use Model

Data and components of project

Demographic Data

Clinical Data: Symptoms, Investigations (Lab & Radiology), Diagnosis (TNM Classification, Staging), Treatment, Outcome/ QoL

Genomics Data

Screening for Cancer Risk

Web based Screening and Case recording System
+
AI & ML Based models for Clinical Decision Support

Personalized recommendations for Diagnosis, Treatment, Diet, Lifestyle, Prognosis, Outcome, Preventive measures

Web based System Hosting infrastructure

Big Data & Advanced Computing infrastructure

Train the Machine Learning Algorithm

Training Data

Evaluate

Model

Input Data

Machine Learning Algorithm

Prediction

Artificial Intelligence and Quantum Computing Group
Centre for Development of Advanced Computing (C-DAC),
Innovation Park, Panchavati, Pashan, Pune –411 008, Maharashtra (India) Tel: 020-25503351, email: ayusoft-support@cdac.in