

AbstractID: 14602 Title: NCI Initiatives to Create Public Resources to Evaluate CAD
Methods: Progress to Date

The National Cancer Institute (NCI) has developed several initiatives supporting the creation of reference databases as public resources to facilitate the evaluation of CAD or image processing methods. They include the combined Lung Image Database Consortium (LIDC) and Image Database Resource Initiative (IDRI) which include both X-ray CT and plain film or digital images of the lung, which are annotated to permit the evaluation of the performance of software tools for lung cancer detection. A second public resource is the Reference Image Database to Evaluate the Response to Therapy (RIDER) that is designed to assist researchers in the evaluation of image processing methods to measure responses to therapy. This data base includes both repeat and longitudinal images of phantom s and patients for a range of organ systems and imaging modalities. Finally NCI has recently funded the Quantitative Imaging Network (QIN), the goals of which are to facilitate clinical decision making through development and validation of quantitative imaging methods, including testing of new imaging protocols and methods in early phase trials. Cooperative group members agree to share their data. These initiatives will be reviewed, along with options for AAPM members to participate and take advantage of the public resources as potential international reference standards to evaluate software tools. Specific details about the importance of the initial efforts to create the LIDC and IDRI initiative will be addressed.