

AbstractID: 14580 Title: CE - Therapy SAMs: DICOM- an Overview with an Emphasis on Therapy

In recent years, there has been a large increase in the amount of data required to deliver a radiotherapy treatment due to advances in IMRT, modulated arc delivery, IGRT, and 4D imaging. This has also resulted in an increased reliance on the Digital Imaging and Communications in Medicine (DICOM) standard in radiation oncology in order to move treatment and verification data from imaging to planning to treatment. This session will go over the fundamentals of the DICOM standard, with an emphasis on radiotherapy. Topics to be covered include the DICOM communications protocol, DICOM workstations and application entity configurations, content and structure of a part 10 file, RT-Plan Information Object Definition (IOD), free ware and shareware applications, and clinical examples of troubleshooting data transfers and extracting associated information found in DICOM headers.

Learning Objectives:

1. Understand the communication amongst DICOM Application Entities.
2. Learn the content and structure of a DICOM part 10 file.
3. Understand the DICOM RT-Plan IOD.
4. Review DICOM software applications and their uses in clinical radiotherapy processes.