

The concept of “radiation passport” or something similar has been around for over a decade but the current impetus is based on a) realization of increased radiation doses to *individual* patients in diagnostic and interventional procedures and b) possibility of electronic means to *achieve tracking* of procedures. Further, the existing approach of radiation protection is largely based on collective dose to the population with provisions for protection at an individual level through justification and optimization. There is now a need to establish approaches based on protection of an individual patient. Radiation exposure tracking seems a way forward in this respect. Technological advances in recent years have provided opportunities for tracking to becoming a reality. The IAEA project on Smart Card/SmartRadTrack will be discussed. The tracking is now a reality in a few dozen centers in many countries connected by picture archiving and communication system (PACS) and there is hope that this will get extended to cover other countries and continents.

It is clear that there is immense interest in achieving patient exposure tracking as per survey conducted by the IAEA in which 76 countries responded and all showing interest in the project. The commitment that is shown by national and international organizations dealing with radiation protection of patients, the actions taken by the IAEA in last few years to create awareness all indicate that in coming few years there are going to be many successful examples. While situation of patient exposure tracking in radiological examination looks very promising, major actions are needed to include radiation doses from nuclear medicine examinations.

The talk will review the situation in global context and describe solutions at different level of development of technology

### **Learning Objectives:**

1. Understand the underlying basis for the project on cumulative assessment of radiation exposure of the patient in series of examinations and procedures.
2. Understand the issues involved in tracking of series of radiological procedures and radiation doses.
3. To become familiar with the current status globally and understand the way forward to achieve tracking of radiological procedures for an individual patient.