While the use of ionizing radiation and radioisotopes brings huge benefit to the human society, its potential hazards are also gradually becoming apparent. With limited knowledge in radiation’s detriment and due to other restrictions in the research environments, doctors and scientists paid a price or even lost their lives in their early work with x-rays and radionuclides. Marie Curie, who discovered radium, died of a malignant blood disease probably because of the radiation exposure to her bone marrow during her lengthy research work with the radionuclide. The widespread use of x-ray in medical diagnosis and treatment for some diseases in the early 30’s without realizing its harmful effects led to cases of radiation dermatitis and chronic ulceration, eventually resulting in radiation induced cancers. Following these, various radiation induced malignancies surfaced one after another, drawing attention on the detrimental effects due to radiation.

All in all, we have to protect ourselves and our descendants while reaping the benefit from the use of radiation. In order to minimize the risk of using ionizing radiation and to set up appropriate protection measures, we need to understand the effects of ionizing radiation on our bodies.

1. How does ionizing radiation affect our body?
2. What is absorbed dose?
3. What are the biological effects of ionizing radiation?
4. What is the relationship between radiation dose and its effects on human body?

The above information is provided by RHD of DH

(*) (Source: "A Century of X-Rays and Radioactivity in Medicine", published by Institute of Physics, UK (1993))