INCREASED USE OF CT CAUSES CONCERN IN THE NORDIC COUNTRIES

The Nordic radiation protection authorities are concerned about the increased use of computed tomography (CT). They want to draw attention to the potential risks involved and avert unjustified CT examinations, notwithstanding the distinct recognition of the large benefits of CT as a diagnostic tool.

CT involves much higher radiation doses compared to conventional X-ray procedures. This has resulted in higher doses to the population from medical imaging. In the Nordic countries, CT procedures have been growing markedly the past 20 years, and currently contribute to 50-80% of the total population dose from medical X-ray imaging. It is also of concern that the use of CT for paediatric patients has increased, since children are more sensitive to radiation compared to adults.

A substantial number of diagnostic procedures with CT are judged as not justified and do not have a positive influence on the patient's health. There are also reports of individual patients being exposed to high cumulative doses as they are undergoing multiple CT examinations.

Stronger focus on justification and optimization

The Nordic radiation protection authorities urge all radiology departments in the Nordic countries to focus on optimization and justification, especially the latter. It has been recognized for a long time that the main factor in reducing radiation doses from CT examinations is to avert unnecessary and unjustified examinations.

The basic principles of radiation protection are justification and optimization. Justification strives to ensure that the benefit of using radiation outweighs the possibility of radiation induced harm. Optimization implies that every effort is taken to assure the appropriate image quality at the lowest possible dose. (Coherent with "As low as reasonably achievable" – the ALARA principle.)

The "Triple A" concept

To obtain justification the Nordic authorities emphasize the importance of **Awareness** about radiation risks; **Appropriateness** to ensure that patients referred for radiological examinations really need them; and **Audit** to check the quality of the referral and the effectiveness of the related processes.

Read the joint statement from the Nordic radiation protection authorities here