Ensuring effective justification of medical exposure in diagnostic imaging

The extent of radiation exposure of patients has increased dramatically in recent times. The major part of this exposure now arises from practices that barely existed two decades ago. In some countries the population dose from medical exposures now rivals that from natural background radiation. Notably, research has demonstrated a high rate of inappropriate or unnecessary examinations. It is estimated that 30% to 50% of examinations are routinely not justified and that in some cases this may be as high as 75%.

In order to review the arrangements to ensure effective justification of medical exposure in diagnostic imaging in the day-to-day practice of hospitals and clinics, a Technical Meeting was held in Vienna on 4-6 October 2010. This meeting follows the International Workshop on Justification of Medical Exposure in Diagnostic Imaging, held jointly with the European Commission in Brussels, 2-4 September 2009.

In particular, the three key areas (the AAA international campaign) in ensuring effective justification were explored: Awareness, to enable effective communication about radiation risks; Appropriateness, to ensure that those referred for radiological examinations really need them; and Audit, to check the effectiveness of the referral process and related processes.

To advance this concerted campaign, more than 30 participants from all regions, and including representatives from WHO, the EC, ICRU, ISR, ACR and FDA, met in Vienna to develop these efforts further in three different strands: the practical application of tools for justification; regulatory issues; and communication issues in justification. Major areas that need action were identified, such as the coordination of methods and evidence used as the basis for clinical imaging recommendations, engagement of all relevant organizations in deployment of these recommendations, and involvement of manufacturers and referring healthcare providers. Furthermore, the important role of education and training was re-emphasized. Regulatory authorities have a key role in ensuring effective justification, and an effective partnership with the medical community must be maintained to do this.