

DEVELOPMENT OF TRAINING SYLLABUS FOR RADIATION PROTECTION IN DUAL-ENERGY X-RAY ABSORPTIOMETRY (DEXA)

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Dual-Energy X-ray Absorptiometry (DEXA or DXA) is currently the gold-standard method for performing bone mineral densitometry (BMD). A single DEXA scan is a relatively low-dose diagnostic X-ray examination, however, radiation protection (RP) issues for both patients and staff should not be trivialised. Advances in DEXA technology, faster scanning times, greater patient throughput and the relatively low-cost of a DEXA scanner have all contributed to the increasing use of these systems. Proper training for DEXA operators will help promote good RP practice. The importance of training in RP has been highlighted in a number of international and EU publications. Article 7 of the EU Council Directive 97/43 Euratom (MED) states that particular attention should be paid to RP for population screening systems, and it is feasible that DEXA systems may be used for osteoporosis population screening in the future. One objective of the EU 6th Framework SENTINEL project was to develop training syllabi in RP and quality assurance (QA) for BMD. Initial work involved a review of the published literature on DEXA and training requirements for RP. Following this, a survey of DEXA training in EU member / candidate states was undertaken in the form of a questionnaire sent to all participating SENTINEL partners. The results showed that there was a need for an accredited DEXA RP training course in many EU states. The survey also showed that in a number of countries, DEXA systems are operated by nurses, who may not have undergone appropriate training in RP. A parallel review of the literature on QA in DEXA also showed that there is limited published guidance on acceptance testing / QA for DEXA. As a result, two training syllabi were developed, on RP in DEXA (for operators) and acceptance testing / QA of DEXA systems (for physicists / engineers). The training programmes were approved by the European Federation of Medical Physicists (EFOMP) and were delivered in St. James's Hospital, Dublin, in October 2006. Following the training course, a PC-based training CD was developed and distributed to the two participating SENTINEL partners (Finland and Slovenia) for review. Based on feedback received, the training program will be reviewed and the CD training program will be distributed. A harmonised approach to RP and QA training will help maintain good standards of education and promote consistent approaches to radiation safety across the EU.

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