

## NATIONAL PROTOCOL FOR QUALITY ASSURANCE IN BONE DENSITOMETRY

A. Slavtchev, J. Vassileva

National Centre of Radiobiology and Radiation Protection – Sofia, Bulgaria

Osteoporosis becomes largely one of the most important socially significant and costly diseases. Modern techniques (DXA, US) are applied for bone densitometry. At the moment only 12 DXA and large number of US systems are in use in Bulgaria but a National Programme for constraining osteoporosis has been recently elaborated and approved by the Ministry of Health and at present under implementation throughout the country. It aims at reducing the risk factors spreading, at diminishing the fracture risk the morbidity and the mortality from osteoporosis. An integral multidisciplinary approach to the problem solving is applied as well as training on three levels – doctors, patients, population, which effectively will contribute for obtaining real results in preventing osteoporosis. The program foresees a set of 56 regional centers to be set up with relevant instrumentation for bone densitometry. This paper presents a draft of a National protocol for quality assurance of the bone densitometers including quality control. The protocol is an essential part of the National Programme. This protocol was prepared in compliance with international standards (ISCD), literature review as well as based on the recommendations from the SENTINEL project working group. The methodology has been tested in practice by measurements on site. The protocol consists of the methodology for commissioning of DXA systems (functional assessment, entrance dose, radiation protection, calibration, phantom studies). The protocol also includes part for ongoing QC procedures, including multi-centre clinical trials and cross-calibrations.

E-mail presenting author:

[a.slavtchev@ncrrp.org](mailto:a.slavtchev@ncrrp.org)