The Doctors’ Osteoporosis Association was established in 2007 in Kazakhstan and in the same year joined the Russian Osteoporosis Association. Since the establishment of the Association, scientific conferences ‘Modern aspects of diagnosis and treatment of osteoporosis’ have been organized and conducted in eight regional centres in the Republic of Kazakhstan (Taldy-Korgan, Semipalatinsk, Kostanai, Karaganda, Pavlodar, Taraz, Shymkent, Aktyubinsk) as well as in the cities of Almaty and Astana.

In April 2007 the conference was dedicated to urgent problems of osteoporosis and with the participation of leading Russian scientists was held in conjunction with the First Congress of Rheumatology in Central Asia and Kazakhstan. In October 2007 and November 2008 there were national conferences in Almaty with participant doctors from Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan. On October 20th, 2009, World Osteoporosis Day was marked for the first time; all densitometry examinations were free for patients in Almaty and members of the Association conducted a press-conference for mass media.

The Kazakh Doctors’ Osteoporosis Association has initiated research on the incidence of hip and wrist fractures in Almaty. They have also been carrying out epidemiological research on osteoporosis in the population of Almaya using ultrasound.

As a result of these activities, the number of densitometers in the country has significantly increased from 1 to 9 QUS ultrasound and 5 DXA machines.

The present population in the Republic of Kazakhstan is estimated to be 16 million, 7.7 million men and 8.3 million women. 23% (3.5 million) of the population is 50 years of age and over and 6% (850,000) is 70 and over. The average life expectancy in the republic comprises 61.9 years in men and 72.4 years in women. By 2050, it is estimated that 41% (6.2 million) of the population will be 50 and over and 14% (2 million) will be 70 and over while the total population will be 15 million (fig. 1).

The population over 50 years is growing slowly, however among women the number of elderly people has been increasing slightly faster.

There is no epidemiological data about the number of people suffering from osteopenia and osteoporosis. A study of BMD in the 50-59 age group revealed osteopenia in 33.3% (in 27.3% of men and 37.6% of women) and osteoporosis in 12.5% of women and 9.1% of men.

Hip fractures

According to the official statistics, 2,238 hip fractures were registered in 2009: 1,328 concerned men and 910 women. Low energy hip fractures were registered...
in 1,395 people: 748 men and 647 women. The incidence of hip fracture varies from 1.03 to 562.09 per 100,000 population depending on gender and age: from 2.2 to 352.5/100,000 among men and from 0.1 to 651.1/100,000 among women.

In Almaty a study of the incidence of low energy hip fractures in men and women over 50 years of age showed that the incidence made up 11.2 per 100,000 population aged over 50 years, increasing with age and reaching up to 514.3 per 100,000 population over 85 years (fig. 2). There are reasons to assume that not all elderly patients with hip fracture seek specialized medical attention and are hospitalized, therefore, real figures could be considerably higher.

In the Republic of Kazakhstan there is extremely low surgical activity following hip fractures. Fewer than 50% of patients with hip fracture are hospitalized, and only 30% undergo hip replacement. Patients with hip fracture are usually not operated on because of financial difficulties, as patients often have to buy endoprostheses themselves. The mean number of days spent in hospital for a hip fracture is 16.5 days and the average treatment cost including hip replacement is 4,700 USD.

**Vertebral fractures**

From 2002 to 2008 vertebral fractures were officially registered in 947 people (461 men and 486 women). The vast majority of patients with vertebral fractures associated with osteoporosis are not diagnosed.

**Diagnosis**

There are 5 DXA machines in the Republic of Kazakhstan (0.3 per million population): 2 are located in the capital city Astana and 3 others in Almaty, Karaganda and Pavlodar. There are also 9 QUS instruments. The average cost of this examination is 17 USD. The state does not reimburse the patient’s expenses on densitometry. Therefore, not all patients can afford to undergo a densitometric examination. There is no waiting time for densitometry.

There is an urgent need to establish more professional training programs and to include osteoporosis education in the medical curriculum.
Calcium and vitamin D

In August 2008, the Kazakh Academy of Nutrition studied the average consumption of dairy products (g/day) in men and women of Kazakhstan. A very low consumption of milk and dairy products was observed, a fact that can lead to a lack of calcium intake, a significant risk factor for osteoporosis and osteoporotic fractures.

Prevention, education, government policy

The Doctors’ Osteoporosis Association conducts scientific conferences, interactive training schools for doctors, and schools on osteoporosis for patients. Every year on October 20 it holds an open day with information and densitometry testing for the public and press-conferences on the problem of osteoporosis for mass media.

The State Project called ‘Healthy Kazakhstan’ has been developed with the purpose of improving the health of the citizens of Kazakhstan and setting up a competitive health care system to ensure steady socio-demographic development of the country.

One of the main focuses of the project is strengthening preventive measures – ie. screening tests, improvement of diagnosis, treatment and rehabilitation of the main socially-significant diseases. The population will have free access to complete prophylactic check-ups of the National Screening Programme (diabetes mellitus, anaemia, cancer, etc.). The Health Centres for Postmenopausal Women have opened and perform screening examinations and treat osteoporosis in women over 50.

The problem of osteoporosis and osteoporotic fractures is relevant to the Republic of Kazakhstan. There is an urgent necessity for multicentre epidemiological studies that should be supported by the government authorities. The results of these studies have to form the basis of the state programme on diagnosis, prevention and treatment of osteoporosis and osteoporotic fractures.

References