In Romania there are more than 3 million women older than 50 years of age and based on our epidemiological data around 1 million would be osteoporotic or osteopenic. The estimated number of hip fractures was 18,400 cases in 2009. Osteoporosis is not a health priority but a national treatment programme, financed by the government, has been implemented to provide free treatment to severely osteoporotic patients. The osteoporotic patients also benefit from treatment reimbursement (50%) before the first fracture. Guidelines on prevention, diagnosis and treatment are available.

A national strategy based on more accurate epidemiological data (hip, vertebral, wrist fractures) should be developed and implemented. The Romanian Society of Osteoporosis (SROBMS) is currently working on a national FRAX® model, which will allow better fracture prediction at the individual level and cost-efficiency analysis of the national treatment program. National guidelines have been developed on optimum daily intake of calcium and vitamin D but currently there is no national public health programme regarding calcium and vitamin D supplementation.

The present population in Romania is estimated to be 22 million, of this 34% (7.3 million) is 50 years of age and over and 11% (2.3 million) is 70 and over. By 2050, it is estimated that 52% (9.3 million) of the population will be 50 and over and 24% (4.3 million) will be 70 and over while the total population will decrease to 18 million (fig. 1).

The estimated number of hip fractures was 18,400 cases in 2009. The estimated total direct hospital costs of a hip fracture was around €3500 in 2010.

No available information

In Romania, it is estimated that there are 4 diagnostic scanners (DXA) per million population. This number has doubled compared to 2007 but is still below the European recommendation. Most DXA scanners are only available in large cities and in the private sector. The waiting time for a DXA exam is a few days in the public health system and the cost for a DXA scan of

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**Figure 1** Population projection for Romania until 2050

<table>
<thead>
<tr>
<th>Year</th>
<th>Total pop</th>
<th>50 and over</th>
<th>70 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>20</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>2020</td>
<td>25</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>2050</td>
<td>25</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>

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prevalence of postmenopausal osteoporosis at 11.5%, osteoporosis with fractures at 5%, and osteopenia at 16.8%, in a representative population of women over 55 years. Therefore one in three women would be osteopenic or osteoporotic after the age of 55 in Romania.
hip or spine varies between €10 to €40 and between €20 to €60 for both. In the public system, reimbursement is €10 per scan.

Physicians benefited from standardized training through IOF and ISCD courses with certification (three IOF courses in the last few years). The Romanian Society of Osteoporosis (SROBMS) is planning to carry out training courses for physicians and technicians every year, on a national basis, starting in 2011 and to develop a quality assurance protocol for DXA machines.

**Reimbursement**

Proven therapies are reimbursed up to 50%, the main criteria for reimbursement is T-score <-2.5 SD. Diagnosed osteoporotic patients are eligible for treatment reimbursement before the first fracture. Reimbursed drugs are: bisphosphonates (alendronate, risedronate, ibandronate, zoledronate), raloxifene, strontium ranelate, tibolone and estrogens. Teriparatide treatment is provided for free to severe osteoporotic patients through the national treatment programme, financed by the government.

**Calcium and vitamin D**

National guidelines have been developed on the optimum daily intake of calcium and vitamin D but currently there is no national public health programme regarding calcium and vitamin D supplementation.

A study published in 2008 investigated the vitamin D status in 1,048 postmenopausal Romanian women with osteoporosis. Most patients were untreated with osteoporosis drugs and did not receive vitamin D supplementation. A high prevalence of both vitamin D deficiency (25OH-vitamin D < 10 ng/mL in 22.2% and insufficiency (25OH-vitamin D=10-30 ng/mL in 61.3%) has been found. This study also revealed a high prevalence of low vitamin D when using other cut-offs as reported in the literature. Values lower than 30 ng/mL were observed in 83.5% of studied women and 61.0% had values lower than 20 ng/mL. Oral vitamin D3 supplementation with 1000 IU/day is adequate to achieve (time-dependent 3-18 months) and maintain optimal serum 25OH-vitamin D concentration for only half of the postmenopausal osteoporosis patients.

**Prevention, education, government policy**

Guidelines on prevention, diagnosis and treatment are available on the website: [www.ms.ro](http://www.ms.ro)

A national treatment programme which is financed by the government has been implemented to provide free treatment for severely osteoporotic patients. These patients also benefit from treatment reimbursement before the first fracture.

In Romania, some scientific and patient societies organize training programmes for health professionals, alone and in collaboration with IOF.

The Ministry of Education provides some funding through grant applications but this is not specific for bone research.

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**References**

1. Grigorie D, Vlădescu C - to be published.