



Osteoporosis in the EU: improving the assessment of fracture risk

Highlights of the 4th meeting of the European Union Osteoporosis Consultation Panel, hosted by the European Parliament Osteoporosis Interest Group at the Bavarian Representation, Brussels, Belgium on 19 April, 2006.



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Report of the 4th meeting of the European Union Osteoporosis Consultation Panel

Brussels, Belgium, April 19, 2006

Introduction

Some 65 participants from across Europe attended the fourth meeting of the European Union Osteoporosis Consultation Panel. They were joined by members of the European Parliament (EP) Osteoporosis Interest Group, the European Parliament, the Commission and other organisations.

The meeting continued the work of previous policy initiatives in Europe that began in 1996 to prepare recommendations aimed at making the prevention and management of osteoporosis and related fractures a health care priority in all EU member states. See page 8 for a background summary of previous EU initiatives and a list of the eight recommendations published in 1998.

Speakers included policy makers and leading osteoporosis experts

Held in the Bavarian Representation in Brussels, the meeting was hosted by Angelika Niebler MEP, Germany, co-chair of the EP Osteoporosis Interest Group, and Emilia Müller, Bavarian State Minister for European and Federal Affairs.

A highlight of the day was the keynote address given by the Austrian Federal Minister of Health and Women, Maria Rauch-Kallat. This was of special significance in that Austria held the EU Presidency in the first half of 2006 and selected women's health issues, including osteoporosis, as a priority for their policy programme.

Emilia Müller, Bavarian State Minister for European and Federal Affairs opened the meeting with an introductory speech, saying that one of the primary goals of politicians is to improve people's quality of life. She thanked the co-chairs and members of the EP Osteoporosis Interest Group for their commitment to the fight against osteoporosis, a disease which has an enormous impact on quality of life. "In Germany alone, about seven million people suffer from osteoporosis ... Despite these alarming figures, the threat posed by osteoporosis is still greatly underrated in our society." The Minister concluded her speech with the hope that the meeting would be an impulse for furthered efforts towards prevention of osteoporosis in all EU member states.



"...the threat posed by osteoporosis is still greatly underrated in our society."

Emilia Müller, Bavarian State Minister for European and Federal Affairs

Angelika Niebler, Co-chair of the European Parliament Osteoporosis Interest Group, talked about the importance of increasing awareness not only among the public, but also in political bodies on an EU and a national level. She underlined that the task of the EP Osteoporosis Interest Group is to take action at a European level to fight osteoporosis and to develop effective strategies for its prevention, saying "Altogether it is crucial for us to ensure that osteoporosis is included in relevant EU initiatives such as health and research strategies and their related programmes – the public health action programme and the research framework."



"...it is crucial for us to ensure that osteoporosis is included in relevant EU initiatives..."

Angelika Niebler, Co-chair of the European Parliament Osteoporosis Interest Group



Åse Fulke, Second National Expert, Directorate of General Health and Consumer Protection spoke on behalf of the European Commission. Stating that the Commission is aware that osteoporosis is one of the chronic diseases that has a major impact on quality of life, Ms. Fulke recalled the EU's past initiatives, most notably the eight recommendations of 1998. She also described current health-related initiatives that deal with lifestyle factors such as nutrition and physical activity that are important in terms of osteoporosis prevention.



"...one of the most serious and costly chronic diseases in Europe"

Maria Rauch-Kallat, Austrian Federal Minister of Health and Women

During her keynote address, **Maria Rauch-Kallat, Austrian Federal Minister of Health and Women**, pointed out that "in Austria, approximately 700,000 people currently suffer from osteoporosis, one of the most serious and costly chronic illnesses in Europe." She stated that women's health, including osteoporosis, was one of the priority health issues during the Austrian Presidency of the EU. The Minister also noted that the importance of osteoporosis prevention would be taken into account in the Council of the European Union's conclusions to be adopted by the Ministers of Health in the Employment, Social Policy, Health and Consumer Affairs (EPSCO) meeting on 1 – 2 June 2006.

Post-meeting note: With respect to women's health, the Council adopted a conclusion recognising that although women live longer than men they suffer a greater burden of unhealthy life years, and noted that osteoporosis prevalence and incidence (among other diseases) is higher among women than men. The full report on items debated and conclusions adopted can be found at the following link: www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/lsa/89830.pdf

Introducing a new paradigm for assessing those at risk for fracture

Prof. Juliet Compston, Chair of the EU Osteoporosis Consultation Panel, introduced this next session by stating "Fractures are often the first symptom of osteoporosis, and a warning of the risk of future fractures – a major cause of suffering, death and significant cost to the health system. The fracture risk assessment initiative, being developed by the WHO, represents a significant



"The fracture risk assessment initiative, being developed by the WHO, represents a significant advance in the identification of clinical risk factors for fracture for women and men who will benefit from treatment."

Prof. Juliet Compston, Chair of the EU Osteoporosis Consultation Panel

advance in the identification of clinical risk factors for fracture for women and men who will benefit from treatment. The Consultation Panel will be recommending that EU Member States adopt this approach to help tackle the growing threat of osteoporosis in Europe."

The theme **Assessing Fracture Risk in Clinical Practice: The WHO Approach** was introduced by Prof. Juliet Compston. **Prof. Olof Johnell** † of the University of Lund, Sweden and **Prof. John Kanis**, of the WHO Collaborating Centre for Metabolic Bone Disease, Sheffield, UK, subsequently gave a comprehensive two-part overview of this important new WHO initiative to improve the identification of people at risk of osteoporotic fractures.

It was shown that in Europe, osteoporotic fractures cause more lost years of 'healthy' life than do many other major diseases (including breast or colorectal cancer). Yet with current bone density (DXA)-based 'case finding strategies' many high risk individuals remain undetected. For example, it was shown that hip fracture risk is five times higher at age 80 than at age 50, although both individuals may have the same BMD values. In addition to age, other risk factors considered in the WHO model include gender, femoral neck BMD, prior fragility fracture after age 50, body mass index, use of glucocorticoids, secondary osteoporosis (e.g. associated with rheumatoid arthritis), parental history of hip fracture, current cigarette smoking and alcohol intake of more than two units per day. Since absolute risk of fracture also varies enormously around the world, country specific data are of importance for the development of a tool to implement this model. The new WHO approach represents a more accurate way of identifying those at risk of osteoporotic fractures.

On the following pages is a more detailed overview of the upcoming WHO initiative.

Improving the assessment of fracture risk: the WHO approach



Introduction

Fractures due to osteoporosis affect one woman in three and one man in five over the age of 50 years. They are a major cause of suffering and death in the elderly population and cost an estimated 30 billion euros each year in Europe. Because of the demographic changes occurring in the population, the number of fractures and their cost will double over the next few decades unless effective preventive strategies are developed.

A number of pharmacological interventions have been shown to be highly effective in reducing fractures in individuals with osteoporosis. However, current approaches to assessing fracture risk identify only a minority of those who would benefit from treatment and hence opportuni-

ties for prevention are often lost. The WHO approach utilizes easily identified clinical risk factors in addition to bone mineral density measurements to improve prediction of fracture, offering a means by which treatment can be better targeted and its cost-effectiveness improved.

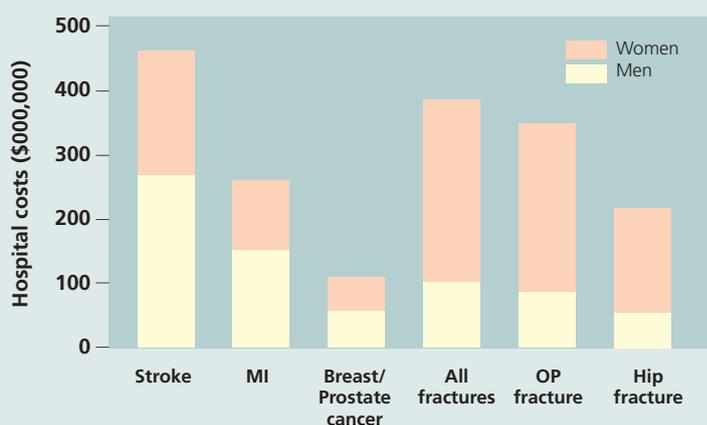
The global burden of osteoporosis

Osteoporosis is characterized by reduced bone mass and disruption of bone architecture, resulting in reduced bone strength and increased risk of fracture particularly in the hip, wrist and spine. The adverse effect of these fractures on quality of life is substantial, and increases with increasing age and number of fractures. In terms of hospital costs, the burden of osteoporotic fractures in women exceeds those attributable to breast cancer, myocardial infarction or stroke.

The global burden of a disease is best captured by DALYs – disability-adjusted life years. One DALY can be considered as one lost year of healthy life and this measure can be used to compare disease burden across a range of disease states. Recent studies have shown that in Europe, the number of disability-adjusted life years resulting from osteoporotic fractures exceeds that associated with many other chronic diseases including asthma, migraine, hypertensive heart disease and rheumatoid arthritis and with many forms of malignant disease including breast cancer, colon cancer, stomach cancer and cancer of the prostate¹.

¹ Reference: Johnell O and Kanis J. An estimate of the worldwide prevalence and disability associated with osteoporotic fractures. *Osteoporosis International* 2006; (in press; DOI: 10.1007/s00198-006-0172-4)

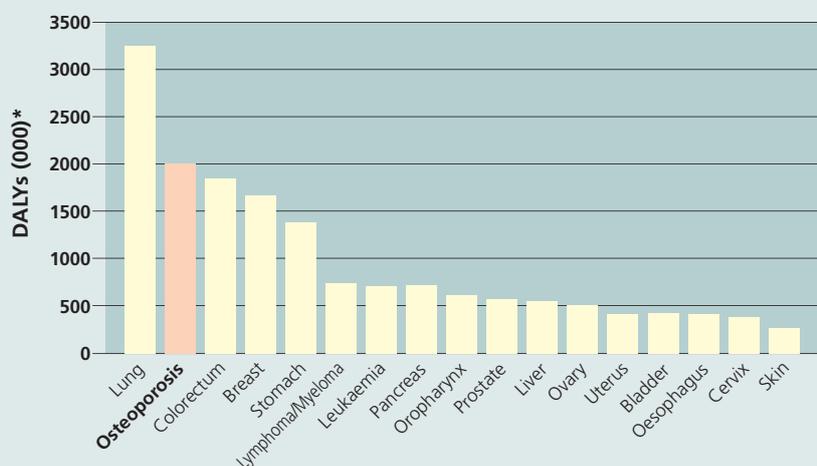
Burden of hospitalized fractures vs other disease states in Sweden



Adapted from Johnell O, Kanis JA, Jonsson B, Oden A, Johansson H, De Laet C. The Burden of Hospitalized Fractures in Sweden. *Osteoporosis Int* (2005) 16:222-228

A study carried out among women in Sweden showed that osteoporotic fractures cost more to treat than do breast cancer, stroke and myocardial infarction.

Osteoporosis: burden of disability



Adapted from Johnell O, Kanis JA. An Estimate of the Worldwide Prevalence and Disability Associated with Osteoporotic Fractures. *Osteoporos Int* in press (2006)

*DALY= disability adjusted life years; 1 DALY= one lost year of healthy life

Osteoporosis in Europe results in more lost years of healthy life than most cancers.

Assessment of fracture risk

For many years bone mineral density measurements have provided the standard method of assessing the risk of fracture, based on the WHO classification of osteoporosis as a bone mineral density 2.5 standard deviations or more below peak bone mass (T-score ≤ -2.5). However, this approach captures only a small proportion of those individuals who will suffer a fracture and hence if treatment is targeted only at such individuals, the global impact of intervention will be small.

Assessment of fracture risk can be improved by the use of clinical risk factors which act independently of bone mineral density to increase the risk of fracture, and this forms the basis of the WHO approach. The aims of this initiative are to optimize sensitivity (i.e. detection rate) of fracture risk prediction using a case finding strategy in men and women that can be widely implemented in primary care. To achieve this, the predictive value of clinical

risk factors has been studied in a number of large, prospectively studied population-based cohorts with a broad geographical representation. In total, 59,232 men and women have been studied to provide information over nearly 250,000 'person years'.

Easily identifiable risk factors shown to improve the prediction of fracture risk include the following:

- age
- previous fracture
- family history of hip fracture
- glucocorticoid (steroid) use
- current smoking
- alcohol use >2 units/day
- rheumatoid arthritis

Individually the presence of these risk factors were shown to increase the risk of hip fracture at least 1.5 to 2-fold after adjustment for bone mineral density.

“Easily identifiable risk factors can improve the prediction of fracture risk. We can do better than using bone mineral density (BMD) alone to determine who will fracture and who will not.”

Prof. John Kanis, WHO Collaborating Centre for Metabolic Bone Disease, Sheffield, UK



Awareness of which risk factors are manageable within a bone healthy lifestyle is important, such as smoking and alcohol use, versus those that are out of one's control. Many studies indicate that low intake of calcium is a risk factor for hip fracture, and while quantifying calcium intake in general practice is difficult, all osteoporosis guidelines include recommendations for both calcium and vitamin D intake. And of course exercise is a positive contributor to bone density.

Improving the assessment of fracture risk: the WHO approach



Hip fracture risk is five times higher at age 80 than at age 50, although both individuals may have the same BMD values.

Some of these risk factors vary in importance according to age. For example, risk factors for falling - such as visual impairment, reduced mobility and treatment with sedatives - are more strongly predictive of fracture in the elderly than in younger individuals.

Glucocorticoid use is an important cause of osteoporosis and fractures. Bone loss is believed to be most rapid in the first few months of treatment, with the most significant loss at the spine. However, the risk of hip fracture in this population is higher in younger ages.

We know that a history of fragility fracture is an important risk factor for future fracture - in fact the risk is approximately doubled. This risk is even more marked for

a vertebral fracture following a previous spine fracture, up to a 12-fold increase at any given BMD. As discussed, this risk increases with age.

In the WHO model, fracture risk is expressed as an absolute risk in terms of 10-year fracture probability (the % likelihood that an individual will sustain a fracture in the next 10 years), rather than as a T-score. This accommodates life expectancy and is more easily understood by both health professionals and patients.

According to nation-specific healthcare priorities, wealth and health expenditure, intervention thresholds can then be set that are based on the cost-effectiveness of treatment at given fracture probabilities.

Risk factors for hip fracture in men and women

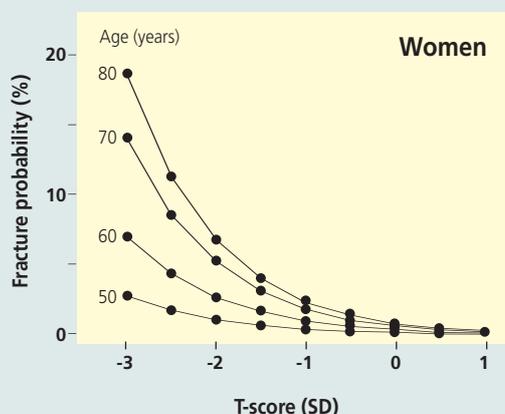


Adapted from Kanis JA, Borgstrom F, De Laet C, Johansson H, Johnell O, Jonsson B, Oden A, Zethraeus N, Pflieger B, Khaltaev N. Assessment of Fracture Risk. *Osteoporos Int* (2005) 16:581-589
*Family history

Prior fracture, a family history of hip fracture, and steroid use are among the most important risk factors for hip fracture.

Ten year probability of hip fracture in Swedish women relative to age and BMD

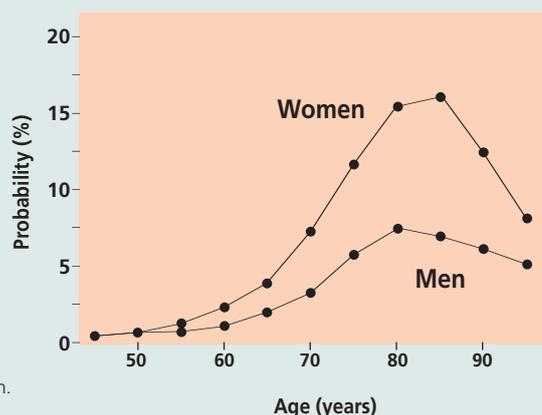
Adapted from Kanis JA, Johnell O, Oden A, Jonsson B, Dawson A, Dere W. Risk of Hip Fracture Derived from Relative Risks: An Analysis Applied to the Population of Sweden. *Osteoporos Int* (2002) 11:120-127



The relationship between BMD at the hip (expressed as a T-score) and hip fractures in women according to age: For any given T-score the risk is higher with increasing age.

Ten year probability of hip fracture in men and women in Sweden, relative to age

Adapted from Kanis JA, Johnell O, Oden A, Jonsson B, Dawson A, Dere W. Risk of Hip Fracture Derived from Relative Risks: An Analysis Applied to the Population of Sweden. *Osteoporos Int* (2000) 11:120-127



Hip fracture risk increases as people age. However, in the very elderly the probability of fracture actually begins to decrease since at this stage of life the risk of death outstrips the increasing risk of fracture with ageing.

Conclusion

This approach provides a practical tool with which fracture risk may be assessed in individual patients in clinical practice. In some individuals, for example those with a history of previous fragility fractures, or elderly individuals on high doses of glucocorticoids, fracture probability based on these risk factors alone will be sufficiently high to exceed the cost-effective intervention threshold, and bone mineral density measurements will not be required. In others, the absence of any risk factors will indicate a risk that is sufficiently low to exclude the need for bone mineral density assessment. In the remainder of individuals, bone mineral density measurements may be used in combination with clinical risk factors to determine whether fracture probability attains or exceeds the intervention threshold. The model will thus improve the prediction of fracture risk in clinical practice, enabling more accurate targeting of treatment and resulting in greater cost-effectiveness in the prevention of osteoporotic fractures.

"This approach will improve the delivery of health care to those most at need. The ability to identify individuals at high risk will lead to more cost-effective treatment and help decrease the burden of fractures due to osteoporosis in Europe."



Angelika Niebler, Co-chair of the European Parliament Osteoporosis Interest Group

Reports from the EU Osteoporosis Consultation Panel members

Progress made, challenges remain

In preparation for the April 19th meeting, members of the EU Osteoporosis Consultation Panel provided summary updates on their countries' achievements and challenges measured against the European Commission's eight recommendations.

Examples of achievements include:

- Osteoporosis Evidence-based Guidelines were developed or updated by several member states: Belgium, Netherlands, Slovakia, Slovenia, UK
- Calcium and vitamin D programmes were initiated in Austria, Finland, Czech Republic, Slovakia, Sweden
- In Poland and Austria, progress was made in disseminating information on fracture rates, and risk factors for fractures
- Lithuania instituted 18-hours of physician training on osteoporosis diagnosis and management
- The government of Ireland initiated a Fall Prevention and Fragility Fracture Task Force
- The NICE guidelines in the UK were developed on secondary prevention of osteoporosis, and significant funds allocated to increasing the number DXA machines throughout the country
- In France bone densitometry is reimbursed for key clinical indications

Challenges continue to exist:

- Osteoporosis is not yet listed as a government health care priority in most EU nations including: Austria, Czech Republic, Finland, Lithuania, Netherlands, Poland, Spain, Slovenia, Sweden, UK
- Hip Fracture Registries have not yet been developed in many countries: Belgium, Cyprus (in progress), Czech Republic, France, Estonia, Lithuania, Netherlands, Slovakia, Sweden
- Restrictions in treatment reimbursement and access to diagnostic bone densitometry remain significant in most countries, and often not available until after the first fracture occurs
- Peer-reviewed evidence based guidelines supporting diagnostics, efficacy and first line treatment are not universally available, either by Member States or within regions of a country, resulting in under-diagnosis and under-treatment in large segments of the European population

- Cost is a universal barrier to progress in providing access to diagnosis and treatment. The WHO Fracture Risk Assessment guidelines proposes the utilization of clinical risk factors that can be easily identified by health care practitioners, in addition to bone mineral density, to improve prediction of fracture, thus offering a means by which our limited resources for treatment can be better targeted and cost effectiveness improved.

A document containing all of the country progress reports submitted for this meeting can be found on the IOF website: www.osteofound.org



Recommendations from the 1998 European Commission "Report on Osteoporosis in the European Community – Action for Prevention"

Recommendation 1: Osteoporosis is to be adopted as a major healthcare target by the EU and governments of the Member States.

Recommendation 2: More information is required about the incidence and prevalence of osteoporotic fractures.

Recommendation 3: Co-ordinate national systems throughout the EU to plan effectively for an increase in demand for healthcare and to institute appropriate resource allocation.

Recommendation 4: Develop and implement policies to advise the general public and health professionals about calcium and vitamin D nutrition.

Recommendation 5: Access to bone densitometry systems should be universal for people with accepted clinical indications and reimbursement should be available for such individuals.

Recommendation 6: Member States to use an evidence-based approach to determine which treatment should be advised. Reimbursement should be available for all patients receiving treatment according to accepted indications.

Recommendation 7: Governments should actively promote national patient and scientific societies, providing financial support and helping to publicise their cause. Appropriate training of healthcare professionals involved in the management of osteoporosis should also be an important priority.

Recommendation 8: Further research is urgently required in a number of areas, including:

- Modifiable determinants (such as exercise and calcium intake) of peak bone mass and how these might be used to achieve higher peak bone mass in the population.
- Identification of risk factors for falling and the effects of fall prevention strategies on fracture.
- Assessment of the cost/utility ratio of screening in older women.
- The causes and treatment of osteoporosis in men.

Invited presentations

Several participants and guests of the Consultation Panel were invited to give presentations at the meeting. These included Prof. David Marsh (UK) speaking about the pressing need for national fracture audits and improvements in secondary prevention; Dr Dusa Hlade Zore (Slovenia) speaking about the Slovenian Osteoporosis Patient Society's activities and accomplishments;

Prof Gerold Holzer presenting an update on osteoporosis in Austria; Karen Ormerod, CEO of Osteoporosis Canada, presenting an example of a successful provincial osteoporosis strategy announced in Ontario, Canada; and Prof. Heinrich Resch of the Initiative Lebensbasis Knochen, OGEKM, who invited participants to attend the EU Summit Conference on the Prevention and Therapy of Osteoporosis, which was held on June 10-11, 2006 in Vienna, Austria.

Images from the meeting



Top half, clockwise from left: Invited speakers included Dr Dusa Hlade Zore, Prof. Heinrich Resch, Prof. David Marsh, Karen Ormerod, Prof. Gerold Holzer; Prof. John Kanis speaking to the media. Bottom half, clockwise from left: Some 65 delegates attended the meeting; Consultation Panel member Prof. Jorge Cannata (Spain); Åse Fulke, Second National Expert, Directorate of General Health and Consumer Protection speaking on behalf of the European Commission.



The osteoporosis consultation panel: a history



The launch of the Action Plan in 2003 at the European Parliament was a key milestone

The 4th EU Osteoporosis Consultation Panel meeting in Brussels continues the work of previous policy initiatives in Europe that began in 1996 to prepare recommendations aimed at making the prevention and management of osteoporosis and related fractures a health care priority in all EU member states.

In 1998, the European Commission published eight recommendations to address this goal (see page 8). However, an IOF audit two years later showed little progress had been made in implementing those recommendations. As a result the European Parliament Osteoporosis Interest Group, founded by Mel Read, UK MEP, initiated a Call to Action in 2001 to stimulate policy development.

The IOF received funding from the European Community in 2002 to begin updating the osteoporosis audit, and to publish a practical plan to implement the recommendations. This was done by forming an EU Osteoporosis Consultation Panel, composed of health policy makers and osteoporosis experts with EU-wide membership.

While significant progress has been made to advance the osteoporosis policy agenda, much still remains to be done.

In 2004, the Panel was expanded to include representation from the ten new EU Member States. The EU Osteoporosis Interest Group membership also grew to include 27 MEPs from 18 Member States, a move that is vital to the success of maintaining the osteoporosis policy program. In November, 2004, both these groups met in Brussels, where they heard about a recent survey published in *Osteoporosis International* that reported the number and availability of DXA scanners in Europe was inadequate to effectively diagnose and treat osteoporotic fractures, and that the burden of osteoporosis will continue to grow dramatically unless decisive action is taken at the national and European levels.

The 2006 meeting described in this report marks a new understanding in the diagnosis of those men and women at risk for fractures.



Memorial to Professor Olof Johnell

All members of the IOF and the wider osteoporosis community were greatly saddened to learn that Professor Olof Johnell passed away on April 23, 2006. His academic expertise spanned all areas of metabolic bone disease – basic and clinical research, epidemiology and health economics. He played an integral role in the establishment of the WHO fracture risk assessment initiative, from its concept through to the many significant publications identifying fracture risk factors. He

also contributed significantly to health policy work with the IOF and the WHO, and worked tirelessly on initiatives to enhance the training and capacity of orthopedic surgeons to identify and treat patients with osteoporosis, as a specialist advisor both to the IOF and the Bone and Joint Decade. Professor Johnell was a quiet, thoughtful, and modest man of intelligence who will be greatly missed by his many friends and colleagues.

Members of the European Parliament Osteoporosis Interest Group

Co-Chairs: Mary Honeyball MEP, UK and Angelika Niebler MEP, Germany

Vice-Chairs: Dorette Corbey MEP, The Netherlands and Péter Olajos, MEP Hungary

Members: Adamos Adamou MEP, Cyprus; Georgs Andrejevs MEP, Latvia; Pilar Ayuso Gonzalez MEP, Spain; Edit Bauer MEP, Slovakia; John Bowis MEP, UK; Frederika Brepoels MEP,

Belgium; Milan Cabrnoc MEP, Czech Republic; David Casa MEP, Malta; Charlotte Cederschiöld MEP, Sweden; Proinsias De Rossa MEP, Ireland; Den Dover MEP, UK; Genowefa Grabbowska MEP, Poland; Françoise Grosselet MEP, France; Richard Howitt MEP, UK; Caroline Jackson MEP, UK; Karin Jöns MEP, Germany; Rodi Kratsa-Tsagaropoulou MEP, Greece; Lasse Lehtinen MEP, Finland; Astrid Lulling MEP, Luxembourg; Elizabeth Lynne MEP,

UK; Mario Mantovani MEP, Italy; Arlene McCarthy MEP, UK; Mariann Mikko, MEP Estonia; Mojca Drnar Murko MEP, Slovenia; Siiri Oviir MEP, Estonia; Borut Pahor MEP, Slovenia; Frédérique Ries MEP, Belgium; Toomas Savi MEP, Estonia; Karin Scheele MEP, Austria; Gitte Seeberg MEP, Denmark; Catherine Stihler MEP, UK; Diana Wallis MEP, UK; Anna Záborská MEP, Slovakia

Members of the European Union Osteoporosis Consultation Panel

Austria: Prof. Gerold Holzer, Orthopaedic Surgeon, University of Vienna Medical School; Austrian Menopause Society / Dr Hubert Hrabčik, Director General of Public Health, Federal Ministry of Health and Women

Belgium: Prof. Jean-Yves Reginster, WHO Collaborating Center, Liege / Dr Stefan Goemaere, osteoporosis expert, Belgium Bone Club

Cyprus: George L. Georgiades MD, Spec. Endocrinologist, Vice President of the Cyprus Association for Musculoskeletal Diseases / Dr Christodoulos Kaisis, Ministry of Health

Czech Republic: Dr Milan Bayer, Czech Society for Metabolic Skeletal Diseases; Dr Jitka Vokrouhlicka, Czech Osteoporosis League board member

Estonia: Ivo Valter, MD, Centre for Clinical and Basic Research and representative of the Estonian Osteoporosis Society

Finland: Prof. Christel Lamberg-Allardt, Department of Applied Chemistry and Microbiology, University of Helsinki / Dr Olli Simonen, Government Ministerial Advisor

France: Prof. Liana Euler-Ziegler, Department of Rheumatology, University Hospital of Nice; Bone & Joint Decade French Network Co-ordinator / Dr Benoit Lavallart, Directorate-General of Health, Bureau of Chronic Diseases of Childhood and Ageing / Prof. Thierry Thomas, Head of Rheumatology Department, General Secretary of GRIO, INSERM, University Hospital

Germany: Prof. Helmut Minne, Klinik der Fürstehof Center of Endocrinology; German Academy of the Osteological & Rheumatological Sciences / Prof. Dr. Rita Süßmuth, Former President of the Bundestag, Head of the Parliamentary Assembly Delegation of the Organisation for Security and Cooperation in Europe

Greece: Dr Costas Phenekos, Designated representative of the Ministry of Health and Welfare; Director, Red Cross Hospital, Dept. of Endocrinology and Metabolism / Prof. George Lyritis, Orthopaedic Surgeon; Hellenic Osteoporosis Foundation

Hungary: Prof. Istvan Marton, gynaecologist, Hungarian Osteoporosis Patients Association and Hungarian Society for Osteoporosis and Osteoarthritis

Ireland: Prof. Moira O'Brien, Trinity College, Dublin; Irish Osteoporosis Society

Italy: Prof. Sergio Ortolani, Metabolic Bone Diseases Unit, Istituto Auxologico Italiano IRCCS

Latvia: Dr Ingrida Circene, Member of Parliament, Latvia / Ms. Inese Ergle, President of Latvia Osteoporosis Patient and Invalid Association

Lithuania: Dr Vidmantas Alekna, President, Lithuanian Osteoporosis Foundation

Luxembourg: Dr Marco Hirsch, Rheumatologist, Luxembourg Association for the Study of Bone Metabolism and Osteoporosis (ALEMO) / Dr Simone Steil, Chief Medical Officer, Division of Preventable Diseases, Ministry of Health

Malta: Prof. Mark Brincat, designated representative of the Ministry of Health

The Netherlands: Ms. Elisabeth de Boer-Oosterhuis, Chief Executive, Osteoporosis Society / Prof. Huibert A. P. Pols, Internist, Erasmus University Medical Centre Rotterdam / Dr Pepita Groenewald, Ministry of Public Health

Poland: Prof. Roman Lorenc, Professor of Biochemistry and Experimental Medicine, President of the Multidisciplinary Osteoporotic Forum

Portugal: Dr Viviana Tavares, Rheumatologist, Consultant for the Working Group for the National Plan Against Rheumatic Diseases, General Directorate of Health

Slovakia: Dr Eugen Nagy, Slovak Ministry of Health / Prof. Juraj Payer, Slovak Osteoporosis Society

Slovenia: Dusa Hlade Zore MD, President of the Slovene Osteoporosis Patient Society

Spain: Prof. Jorge B. Cannata Andia, Service of Bone and Mineral Metabolism, Istitute Reina Sofia of Investigation, Oviedo / Dr Sagrario Mateu Sanchis, Chief Mother and Child Health, Ministry of Health

Sweden: Caroline Akerhielm, Swedish Rheumatism Association

United Kingdom: Ms. Angela Jordan, National Osteoporosis Society / Mr. John Austin, Member of Parliament / Mr. Fergus Ewing, Member of the Scottish Parliament / Ms. Anne Simpson, National Osteoporosis Society, Development Manager for Scotland / Ms. Jeanette Owen, National Osteoporosis Society, Development Manager for Northern Ireland and Wales

European Union

Ms. Mary Honeyball, Member of the European Parliament, UK / Ms. Angelika Niebler, Member of the European Parliament, Germany / Dr Hermann Stamm, European Commission Joint Research Centre; Head of Unit 'Biomedical Materials and Systems', Institute for Health and Consumer Protection Europe / Dr Aushra Shatchkute, World Health Organization, Regional Office for Europe / Ms. Peggy Maguire, European Institute of Women's Health

International

Prof. Kristina Akesson, Bone & Joint Decade 2000-2010 / Prof. David Marsh, International Society for Fracture Repair / Dr Daniel Navid, CEO International Osteoporosis Foundation

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Dr Jo Cadogan, IOF Head of Policy

Consultation Panel Senior Advisor

Prof. Socrates Papapoulos, Endocrinology and Metabolic Diseases, University of Leiden; Board Member International Osteoporosis Foundation



“The Consultation Panel will be recommending that EU Member States adopt the WHO approach to help tackle the growing threat of osteoporosis in Europe.”

Prof. Juliet Compston, Chair of the EU Osteoporosis Consultation Panel

This report was published with the assistance of the International Osteoporosis Foundation (IOF). IOF provides secretariat support for the European Parliament Osteoporosis Interest Group and EU Osteoporosis Consultation Panel.

IOF is the only non-governmental organisation dedicated to the global fight against osteoporosis. Its membership includes leading researchers and physicians in the field of osteoporosis and some 173 member societies from all over the world. For further information about IOF visit: www.osteofound.org

September 2006



**International
Osteoporosis
Foundation**