

## World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases (WCO-IOF-ESCEO 2021): ESCEO Symposium Abstracts

© International Osteoporosis Foundation and National Osteoporosis Foundation 2021

### ESCEO1 SIMILARITIES AND DIFFERENCES BETWEEN THE OARSI AND ESCEO GUIDELINES FOR THE MAN- AGEMENT OF KNEE OSTEOARTHRITIS

T. E. McAlindon<sup>1</sup>, R. R. Bannuru<sup>1</sup>

<sup>1</sup>Center for Treatment Comparison and Integrative Analysis, Division of Rheumatology, Tufts Medical Center, Boston, United States on behalf of OARSI and ESCEO joint working group

**Objectives:** Knee osteoarthritis (OA) is a highly heterogeneous disease known to have significant impacts on quality of life. With newly published data and the identification of new OA phenotypes, the management of knee OA has become increasingly challenging. Two international organisations updated their treatment algorithms in 2019 for the non-surgical management of knee OA; (i) the Osteoarthritis Research Society International (OARSI) and (ii) the European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis (ESCEO). Our aims were to examine the similarities and differences between these two guidelines and provide a narrative to help guide healthcare providers through the complexities of non-surgical management of knee OA.

**Methods:** A joint working group comprising selected authors of the 2019 OARSI and ESCEO guidelines as well as independent members convened for a 1-day meeting and jointly reviewed these guidelines (November 13, 2019). A comprehensive discussion was held among all members of the working group to discuss the treatment algorithms and the methodological approaches used to formulate recommendations in the OARSI and ESCEO guidelines. The working group was convened and funded by ESCEO.

**Results:** OARSI and ESCEO both recommend education, structured exercise and weight loss as core treatments, topical NSAIDs as first-line treatments and oral NSAIDs and intra-articular injections for persistent pain. Low-dose, short-term acetaminophen, pharmaceutical grade glucosamine and

chondroitin sulfate are recommended by ESCEO. OARSI strongly recommends against the use of all glucosamine and chondroitin formulations and conditionally recommend against acetaminophen use. If symptoms persist, ESCEO recommended the short-term use of weak opioids (e.g. tramadol) whilst OARSI makes no such recommendation due to a poor safety profile and lack of treatment efficacy.

**Conclusions:** The guidelines agreed in the majority of their recommendations providing a framework of local guideline production. There were some differences that were thought to be predominantly the result of differences in guideline methodology. These algorithms provide a useful guide for patients and healthcare providers for the non-surgical management of knee OA.

**Funding:** The joint working group was funded by ESCEO

### ESCEO2 HOW CAN WE EXPLAIN THE DIFFERENCES BETWEEN THE OARSI AND ESCEO GUIDE- LINES FOR THE MANAGEMENT OF KNEE OSTEOARTHRITIS?

N. K. Arden<sup>1,2,3</sup>, T. A. Perry<sup>1</sup>, R. R. Bannuru<sup>4</sup>, O. Bruyère<sup>3,5</sup>, C. Cooper<sup>2,3</sup>, I. K. Haugen<sup>6</sup>, M. C. Hochberg<sup>7</sup>, T. E. McAlindon<sup>4</sup>, A. Mobasher<sup>8,9,10</sup>, J.-Y. Reginster<sup>3,11</sup>

<sup>1</sup>Versus Arthritis Centre for Sport, Exercise and Osteoarthritis, University of Oxford, Oxford, United Kingdom, <sup>2</sup>MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton General Hospital, Southampton, United Kingdom, <sup>3</sup>WHO Collaborating Centre for Public Health Aspects of Musculoskeletal Health and Aging, Liège, Belgium, <sup>4</sup>Center for Treatment Comparison and Integrative Analysis, Division of Rheumatology, Tufts Medical Center, Boston, United States, <sup>5</sup>Division of Public Health, Epidemiology and Health Economics, University of Liège, CHU Sart Tilman, Liège, Belgium, <sup>6</sup>Department of Rheumatology, Diakonhjemmet Hospital, Oslo, Norway, <sup>7</sup>Departments of Medicine and Epidemiology and Public Health, University of Maryland School of Medicine, Baltimore, United States,

<sup>8</sup>Research Unit of Medical Imaging, Physics and Technology, University of Oulu, Oulu, Finland, <sup>9</sup>Department of Regenerative Medicine, State Research Institute Centre for Innovative Medicine, Vilnius, Lithuania, <sup>10</sup>UMC Utrecht, Departments of Orthopedics, Rheumatology and Clinical Immunology, Utrecht, The Netherlands, <sup>11</sup>Chair for Biomarkers of Chronic Diseases, Biochemistry Department, College of Science, King Saud University, Riyadh, Saudi Arabia

**Purpose:** Knee osteoarthritis (OA) is a highly heterogeneous disease known to have significant impacts on quality of life. With newly published data and the identification of new OA phenotypes, the management of knee OA has become increasingly challenging. Two international organisations updated their treatment algorithms in 2019 for the non-surgical management of knee OA; (i) the Osteoarthritis Research Society International (OARSI) and (ii) the European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis (ESCEO). Our aims were to examine the similarities and differences between these treatment algorithms for the non-surgical management of knee OA.

**Methods:** A joint working group comprising selected authors of the 2019 OARSI and ESCEO guidelines as well as independent members convened for a 1-day meeting and jointly reviewed these guidelines (November 13, 2019). The working group was selected for its experience across rheumatology and orthopaedics, knowledge of recommendations/guidelines for the management of OA, and was thought to be representative of the wider, international OA field. A comprehensive discussion was held among all members of the working group to discuss the treatment algorithms.

**Results:** Both the 2019 OARSI and ESCEO guidelines were constructed to provide a practical algorithm to help guide clinicians in their decision-making for the treatment management of knee OA. Both guidelines aimed to deliver patient-centred recommendations with both presenting personalised recommendations based upon a patient's gastrointestinal and cardiovascular risk profile. OARSI further considered frailty and widespread pain/depression comorbidities whilst ESCEO also tailored treatments to participants aged over 75 years (this age group was not considered separately by OARSI). Both organizations used well-characterised procedures for the reporting of the treatment guidelines; however, some key differences were observed; these are summarised in Table 1. Specifically, there were differences in the constitution of the panel(s), literature search strategies used, voting procedures and scaling of the treatment recommendations.

In a stepwise manner, both OARSI and ESCEO recommended education, the provision of arthritis-related information, structured exercise and weight loss (if overweight) as core treatments (see Table 2). Both recommended topical non-steroidal anti-inflammatories (NSAIDs) as first-line

treatments with non-selective NSAIDs and intra-articular injections recommended in those with persistent pain. OARSI, however, recommended topical NSAIDs as the first pharmacological treatment whilst ESCEO did not. Low-dose, short-term acetaminophen, pharmaceutical-grade glucosamine and chondroitin sulphate were recommended by ESCEO whilst OARSI strongly recommended against their use (all formulations). If symptoms persist, ESCEO recommended the short-term use of weak opioids (e.g. tramadol) whilst OARSI makes no such recommendation due to a poor safety profile and lack of treatment efficacy. OARSI does, however, recommend the use of duloxetine only for patients who have knee OA and widespread pain and/or depression. **Conclusion:** The guidelines agreed in the majority of their recommendations providing a framework of local guideline production. There were some differences that were thought to be predominantly the result of differences in guideline methodology. These algorithms provide a useful guide for patients and healthcare providers for the non-surgical management of knee OA.

### ESCEO3

#### PATIENTS TO BE INCLUDED IN CLINICAL TRIALS ASSESSING THE SAFETY AND EFFICACY OF NEW CHEMICAL ENTITIES AIMING AT THE TREATMENT OF SARCOPENIA

M. M. Rosa<sup>1,2</sup>

<sup>1</sup>Laboratório de Farmacologia Clínica e Terapêutica, Faculdade de Medicina da Universidade de Lisboa, Lisbon, Portugal, <sup>2</sup>Neurology Dept., CHULN, Lisbon, Portugal

**Objective:** Choosing the population to be enrolled in trials on sarcopenia

**Material and methods:** Clinical development of agents aiming at the treatment of sarcopenia has been facing several issues hampering the identification of valuable drugs to fight the disorder, thus delaying the requirements for marketing authorisation. Selection of the adequate population to study is challenging. The characteristics of the population vary depending on (a) the phase of the development plan (early proof of concept/dose finding or later confirmatory studies), (b) the expected mode of action/specific clinical setting, and (c) study duration. Patients with a “sarcopenic risk profile” are the starting requirement (choice of diagnostic criteria and diagnostic tools), followed by the disease stage where the intended intervention is likely to be effective (ambulant patients), and amenable for detection of efficacy (selection of efficacy tools and study duration). For the confirmatory phase 3 trials, characteristics that mimic the general sarcopenic population (including some frequent comorbidities) should also be present: the required external validity of these studies pays off the increased heterogeneity and resulting higher sample size.