

Οστεοαρθρίτιδα: Φαρμακευτική και μη φαρμακευτική θεραπεία

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Περίληψη

ΟΑ: μία "ιδιόρυθμη" πάθηση

Ιδιαιτερότητες μελετών στην ΟΑ

Θεραπευτικές επιλογές:

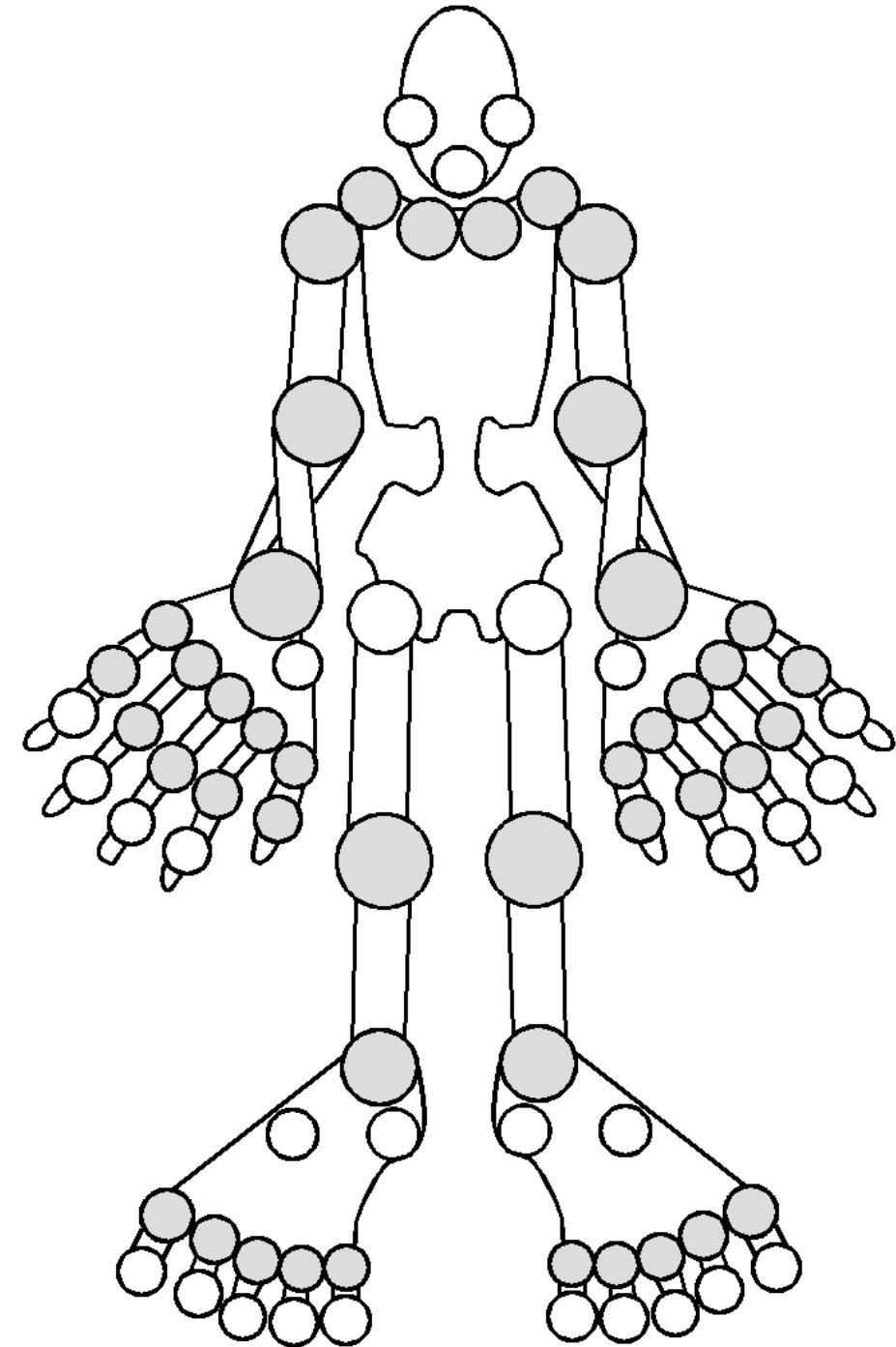
Φαρμακευτικές επιλογές

Μη φαρμακευτικές επιλογές (άσκηση- απώλεια βάρους)

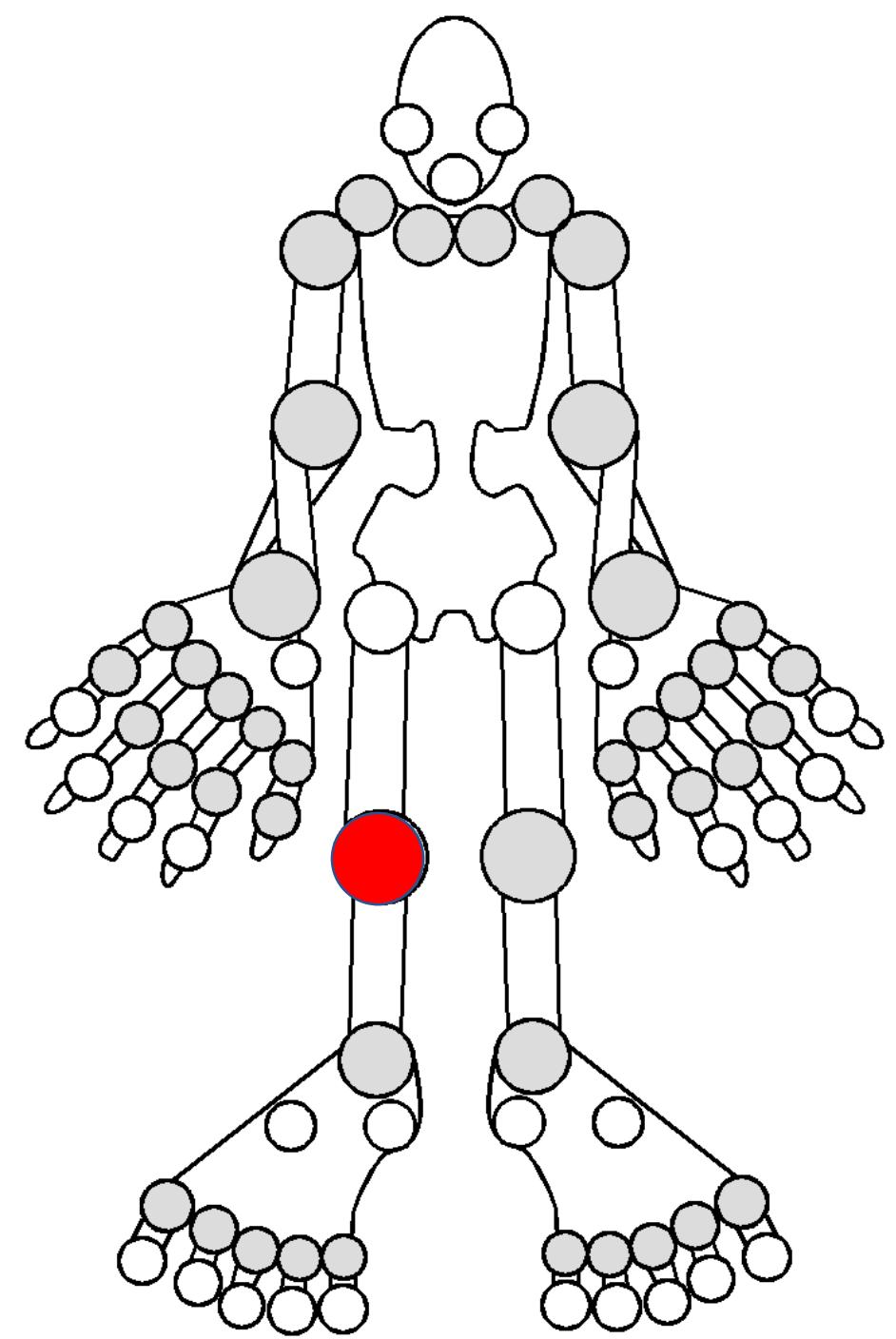


Is OA one disease?

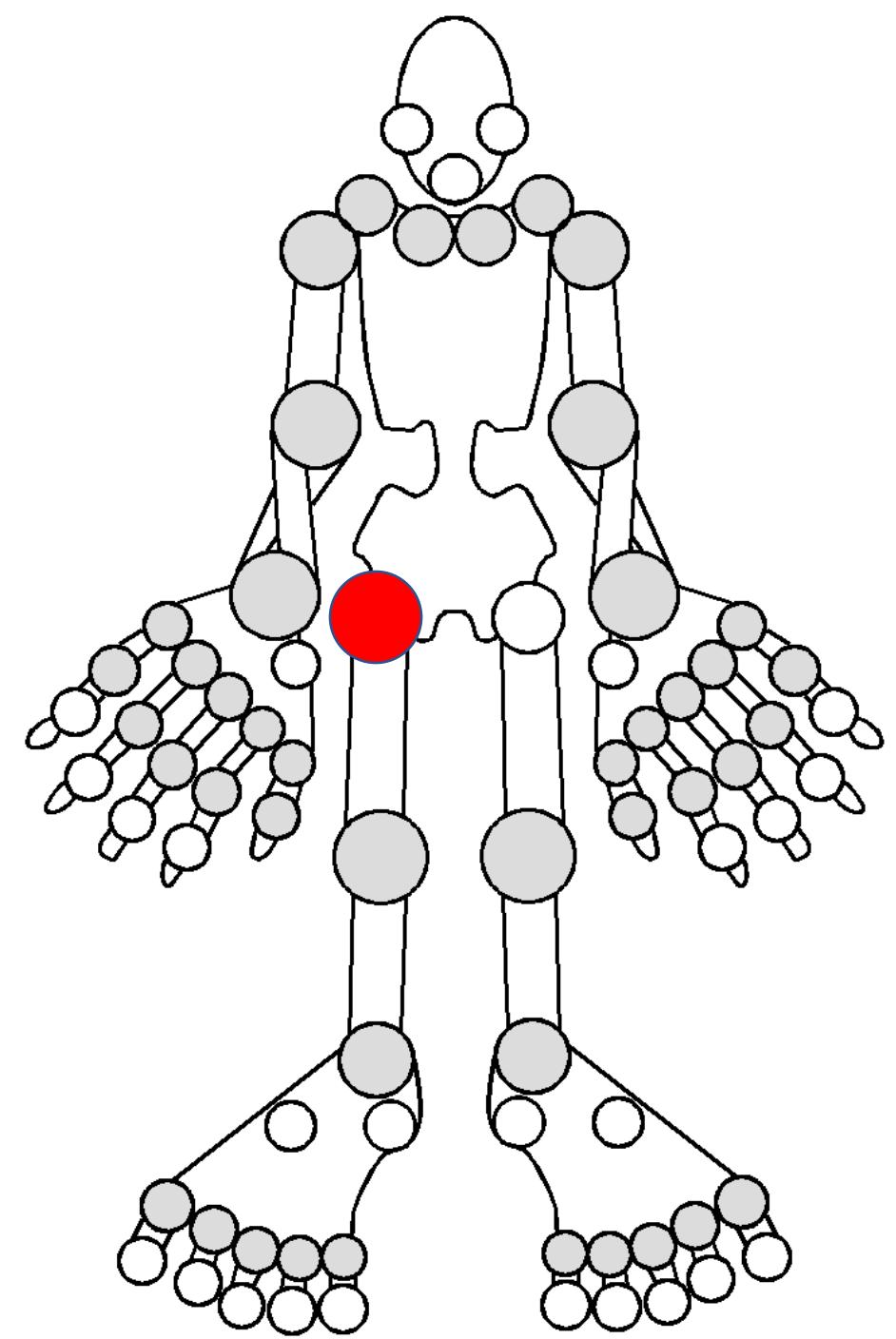
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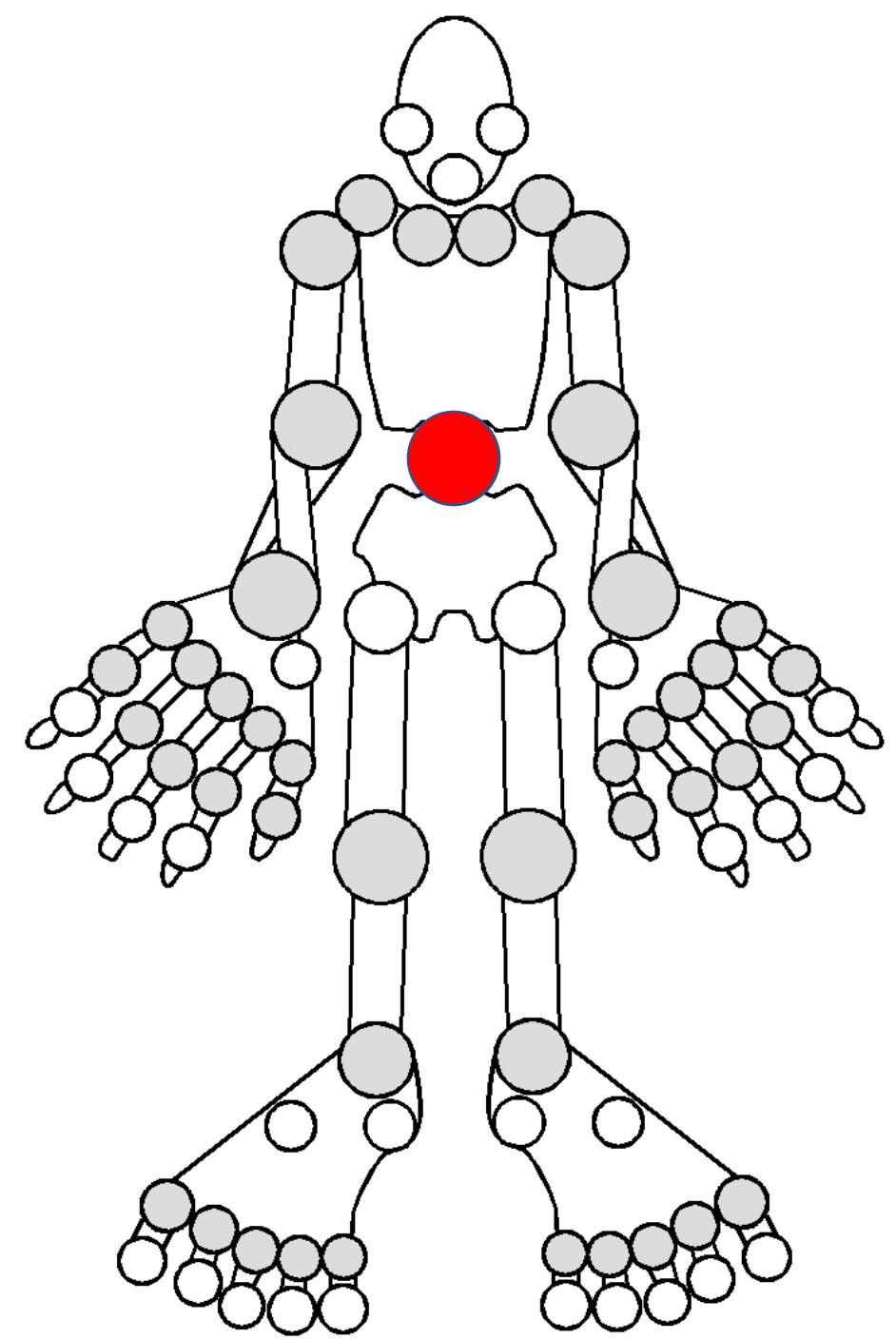
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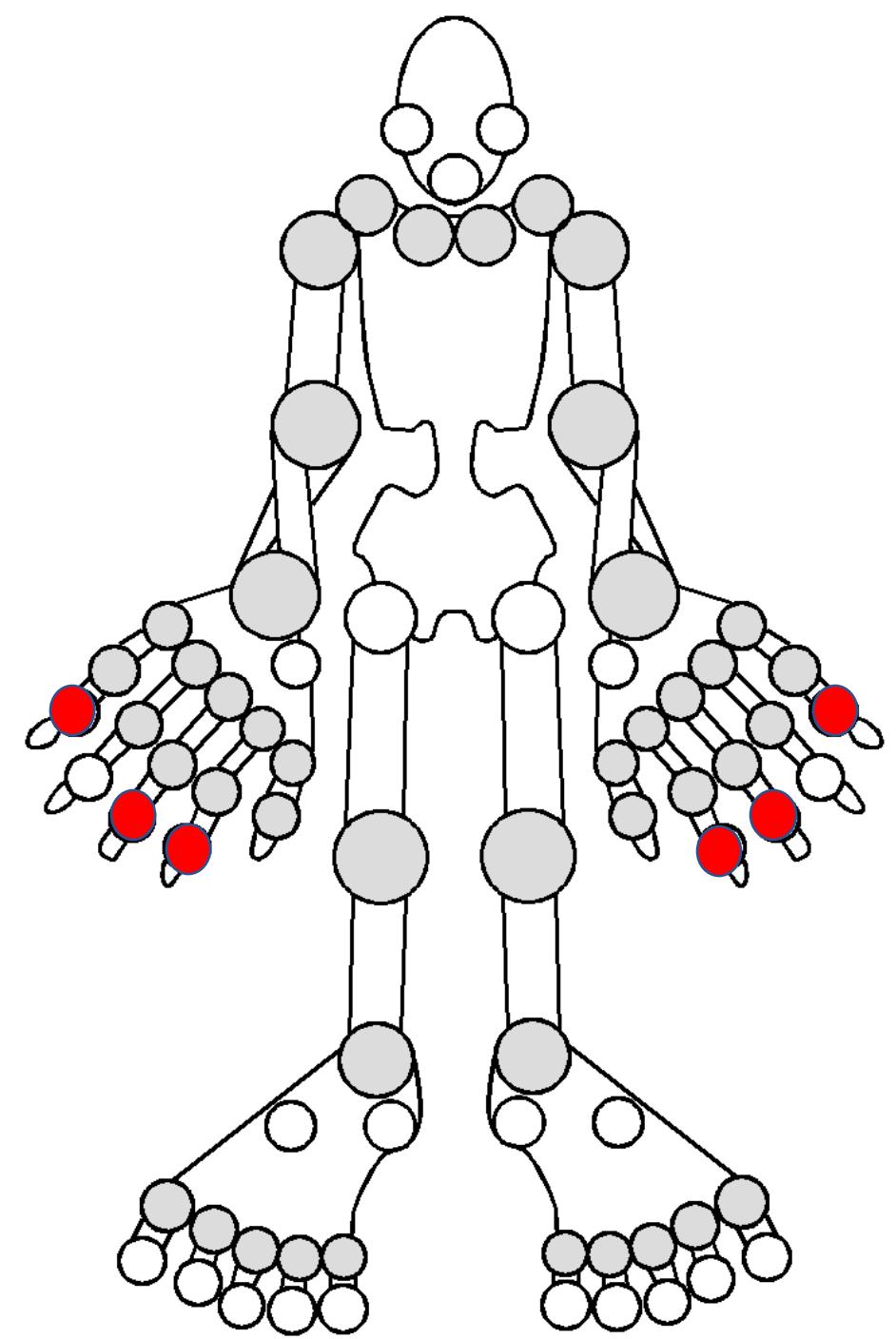
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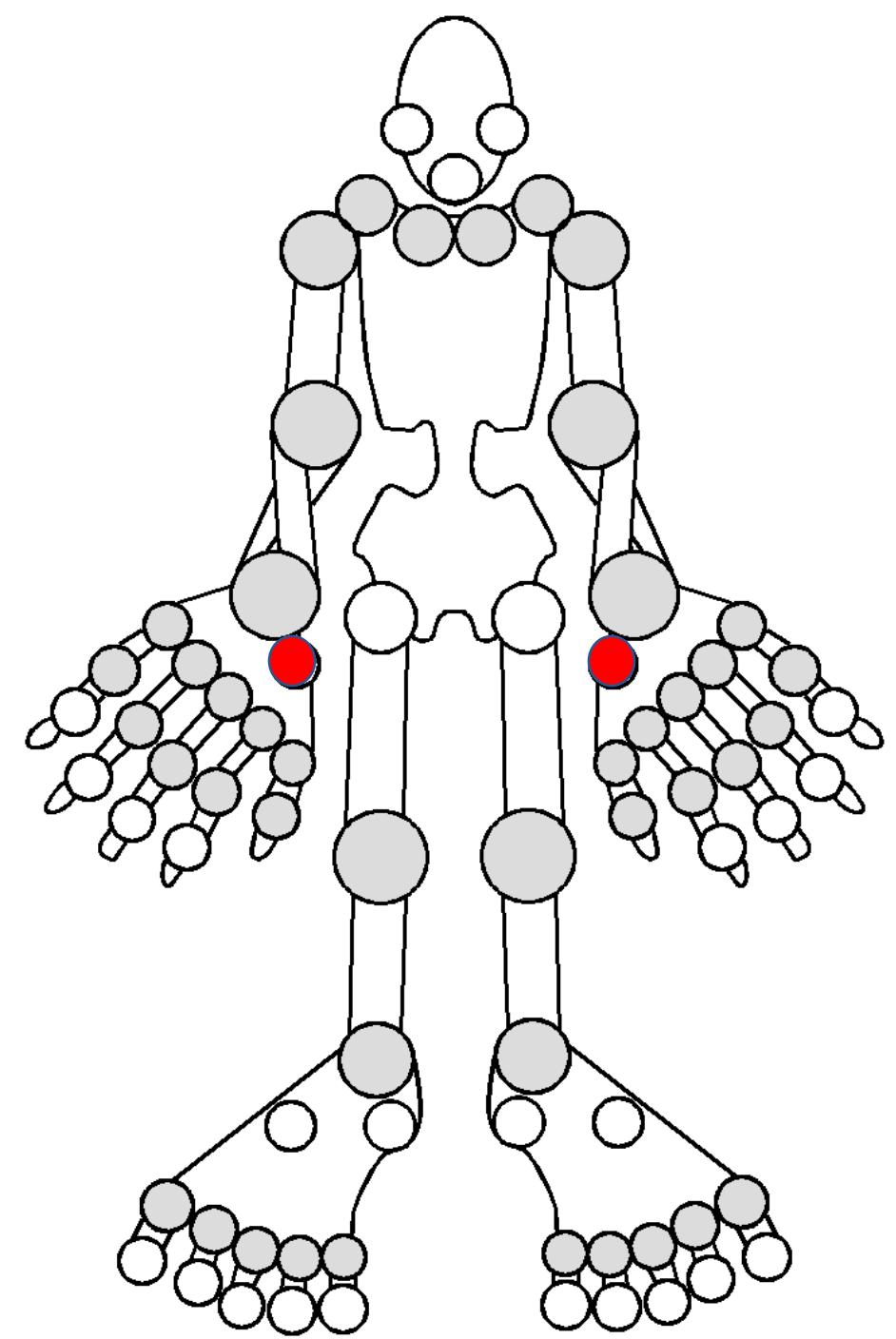
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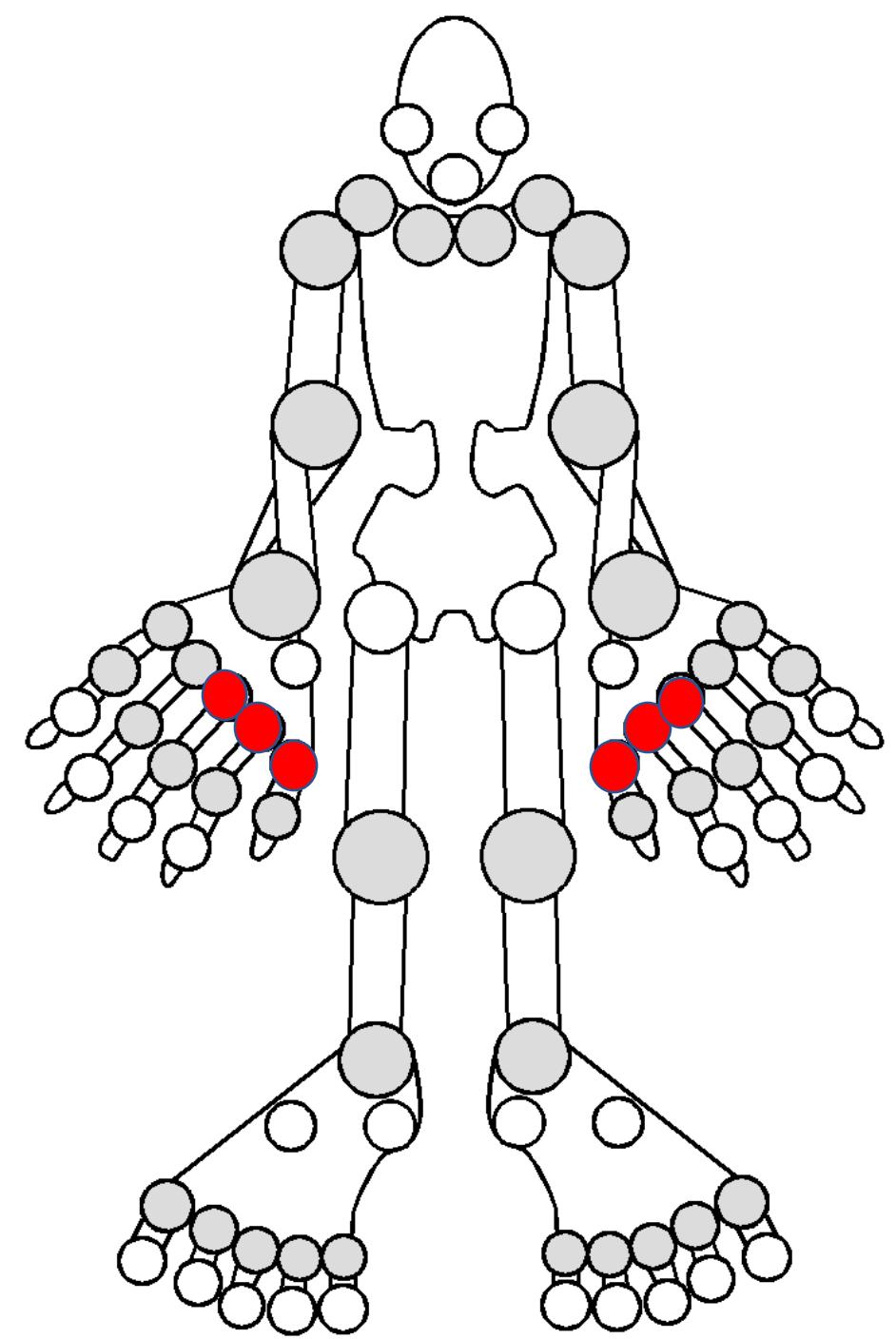
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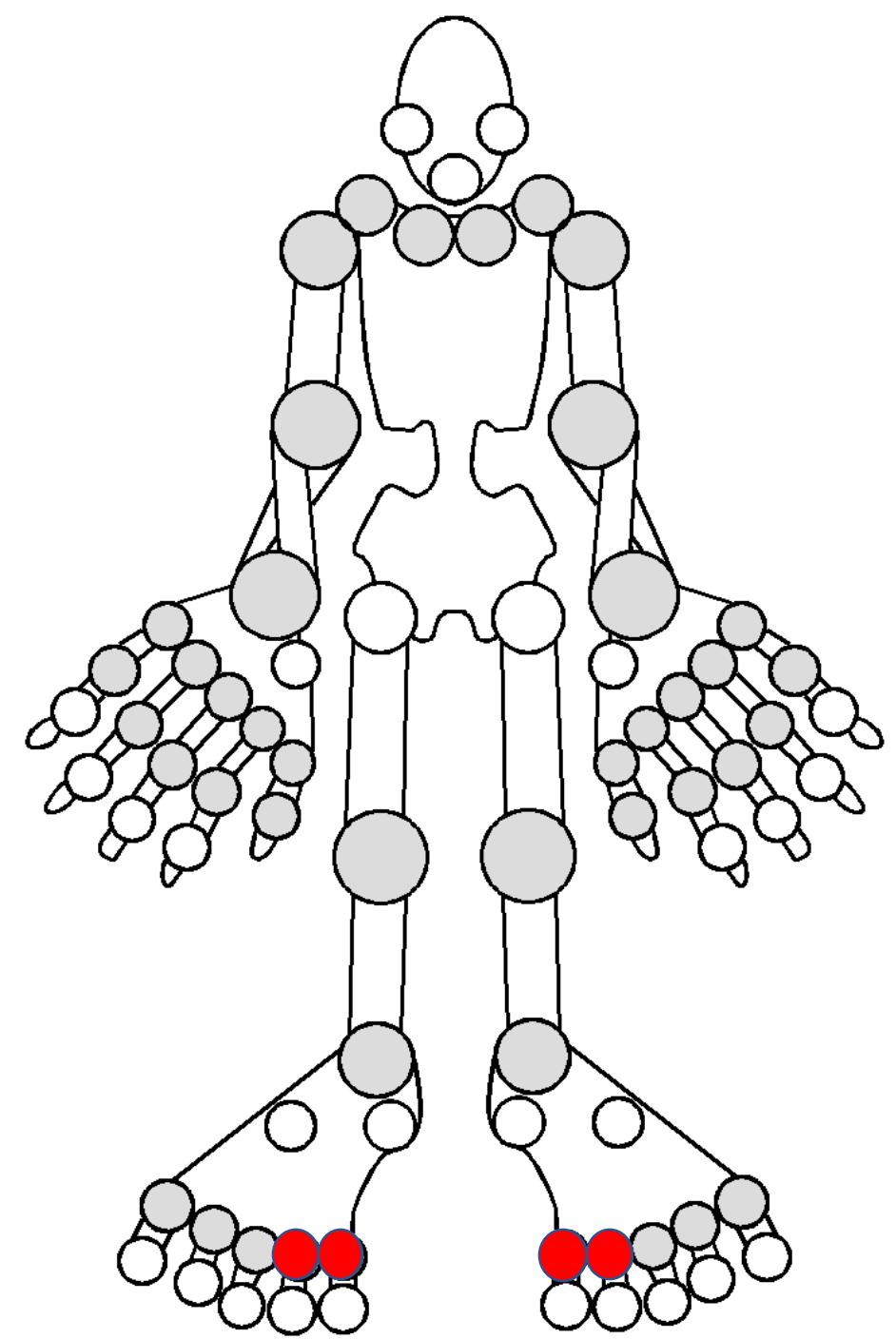
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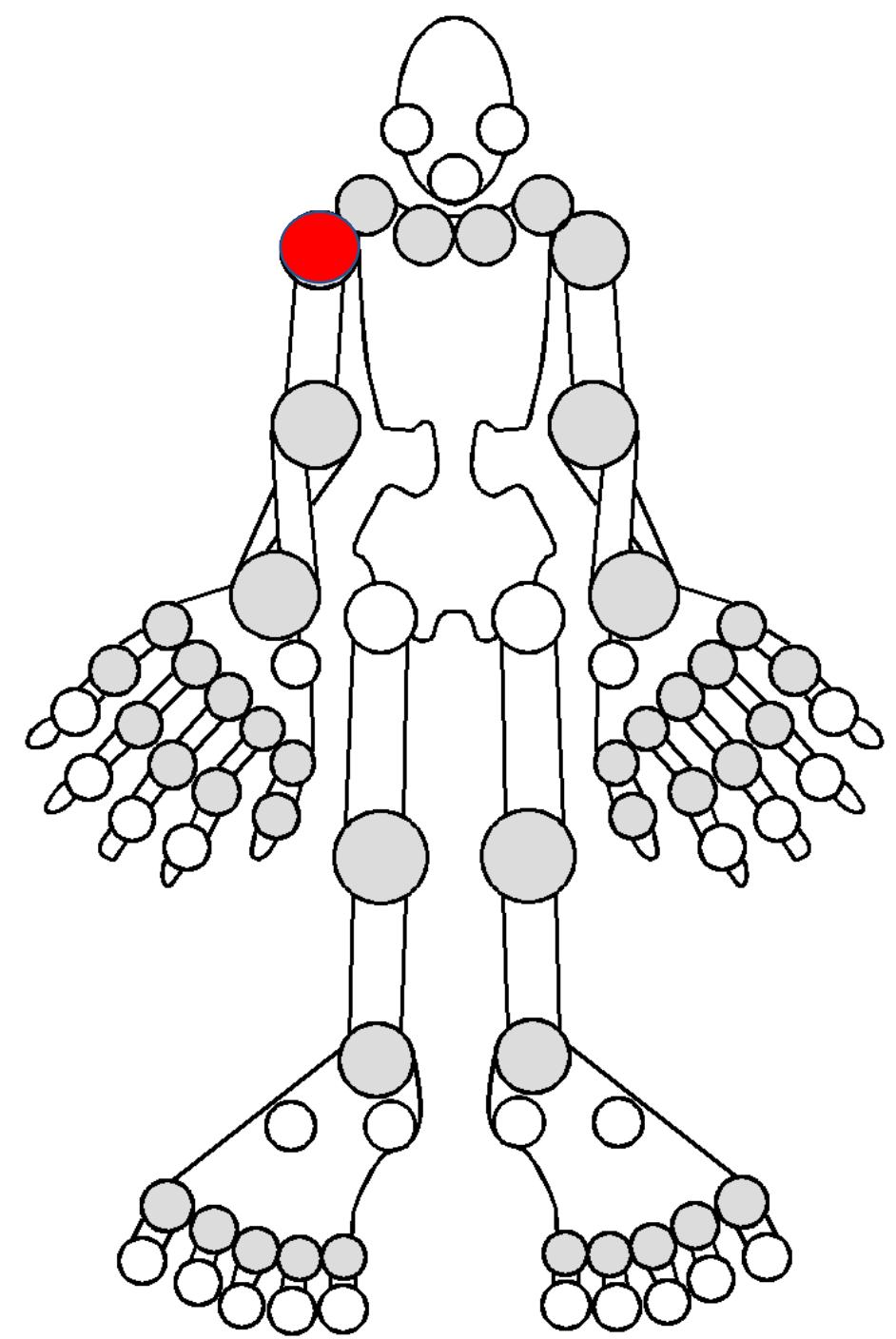
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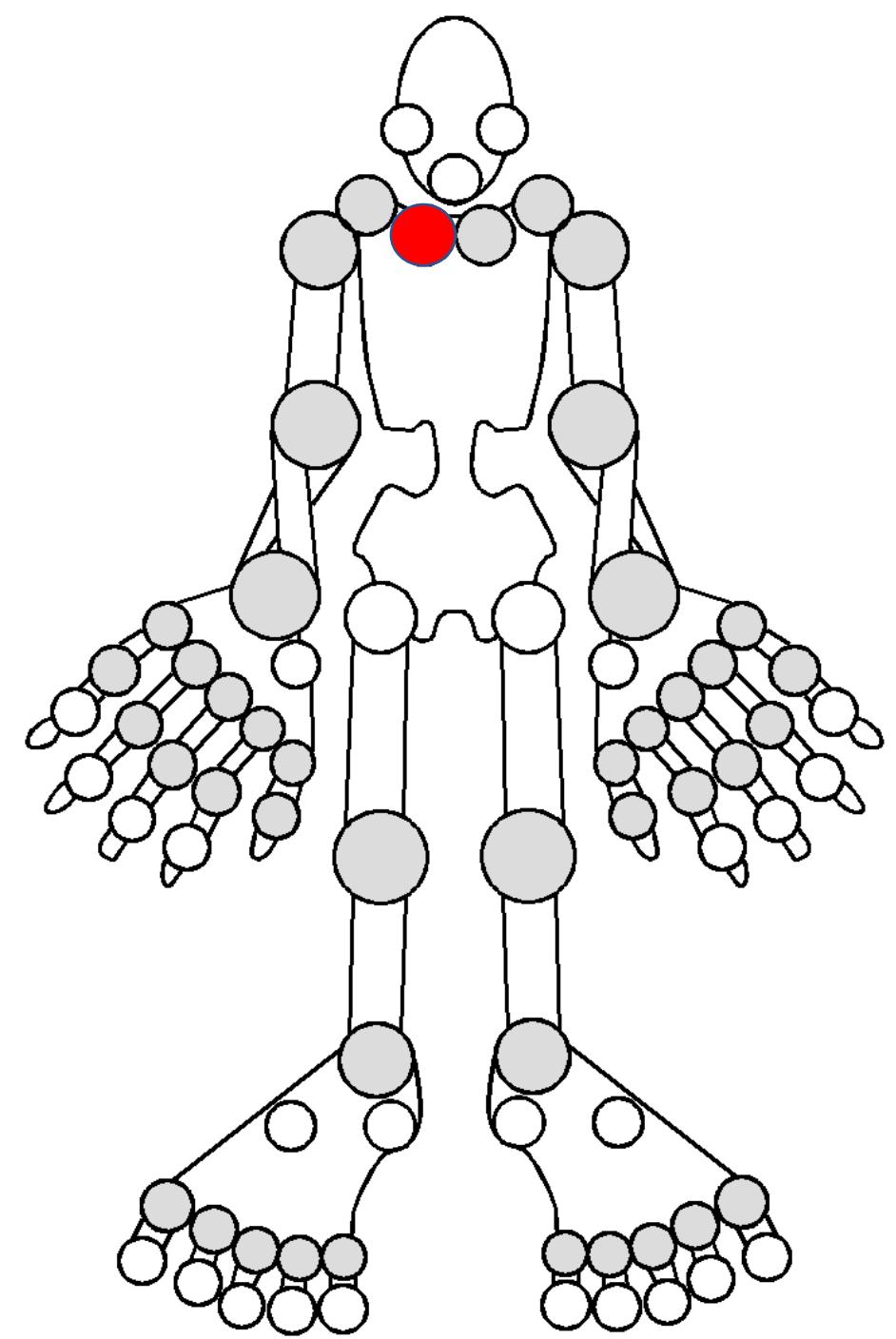
Is OA one disease?



Is OA one disease?

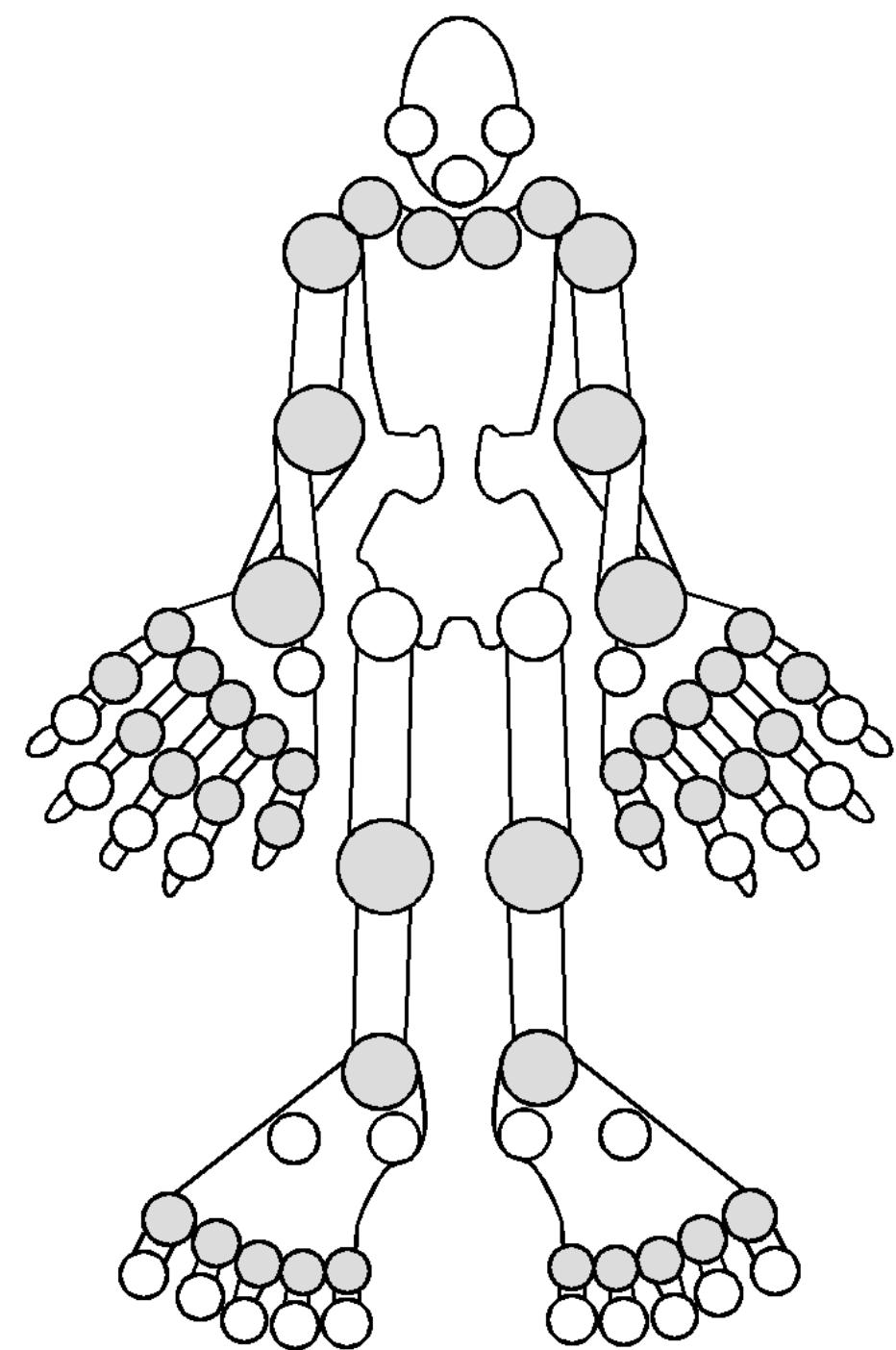


Is OA one disease?



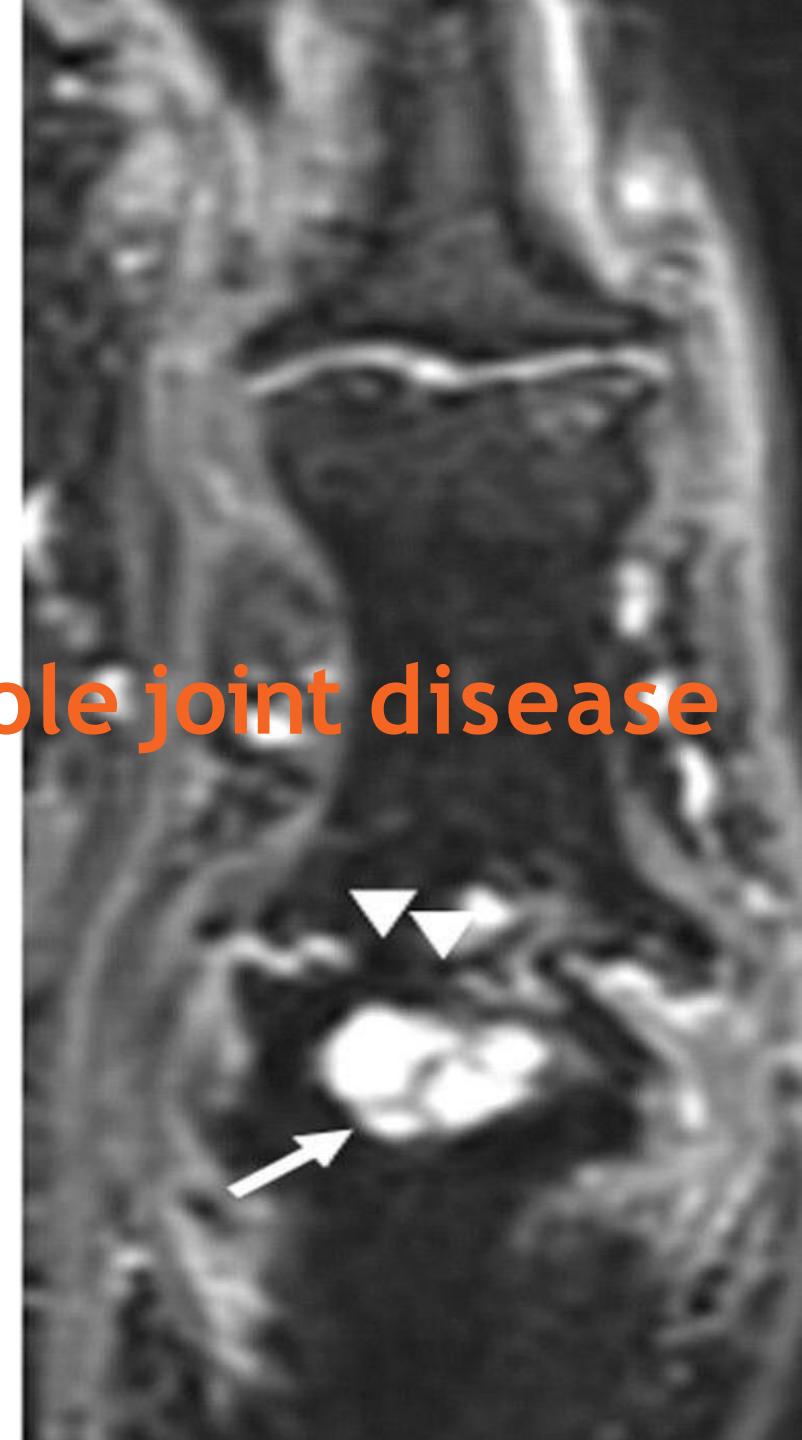
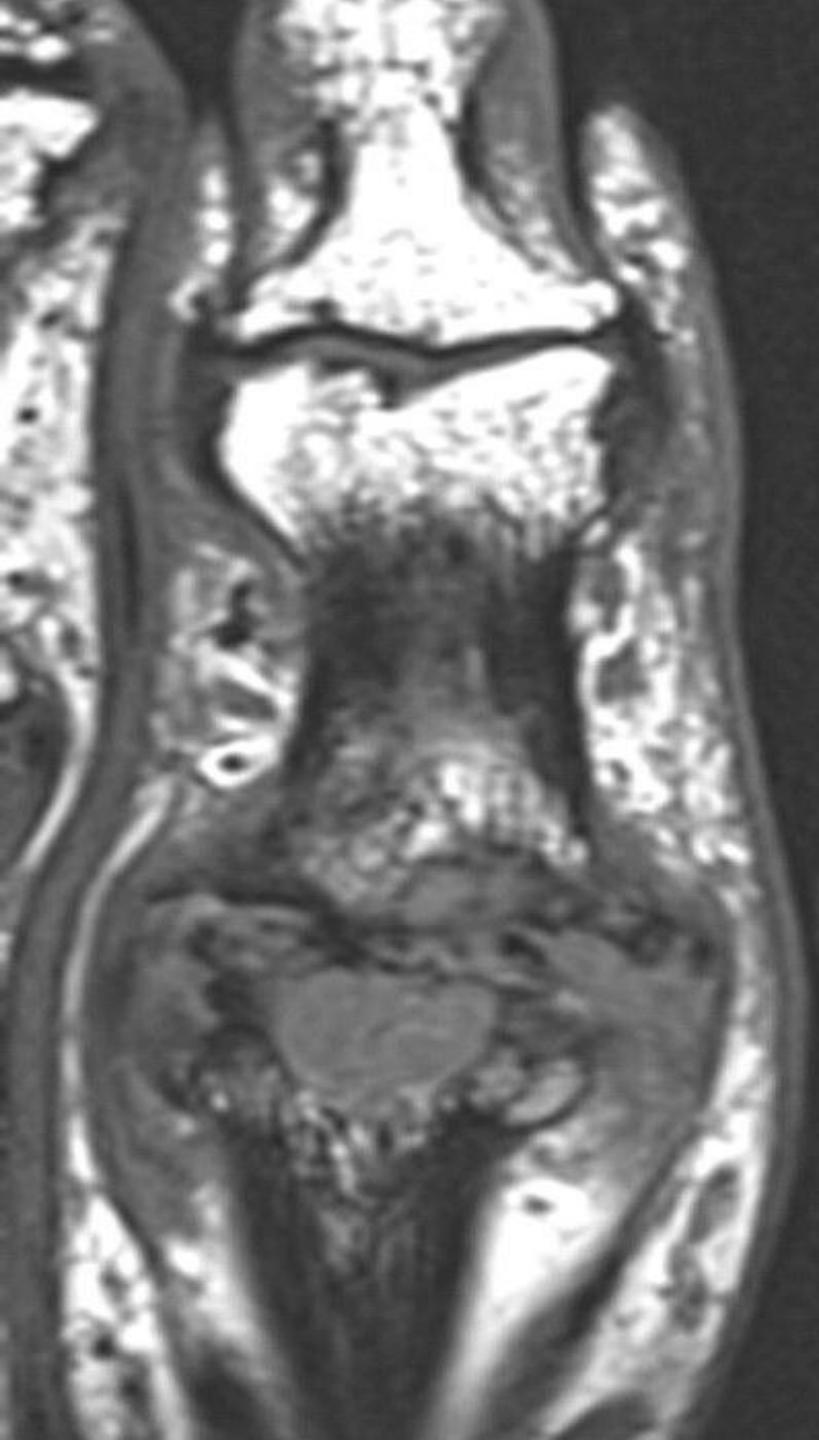
Is OA one disease?

- Different risk factors
- Different clinical associations
- Different genetics
- Multiple phenotypes (even for the same site)
- Different treatment response



Μία νόσος- πολλαπλές παθολογίες

Λέπτυνση του χόνδρου
Υμενίτιδα
Ενδοαρθρική συλλογή υγρού
Οστεόφυτα
Υποχόνδριες κύστες
Οστικές διαβρώσεις
Οστικό οίδημα
Βλάβες μηνίσκων
Βλάβες συνδεσμικών στοιχείων



Osteoarthritis: whole joint disease

The NEW ENGLAND JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

FEBRUARY 23, 2006

VOL. 354 NO. 8

Glucosamine, Chondroitin Sulfate, and the Two in Combination for Painful Knee Osteoarthritis

Daniel O. Clegg, M.D., Domenic J. Reda, Ph.D., Crystal L. Harris, Pharm.D., Marguerite A. Klein, M.S.,

James R. O'Dell, M.D., Michele M. Hooper, M.D., John D. Bradley, M.D., Clifton O. Bingham III, M.D.,

Michael H. Weisman, M.D., Christopher G. Jackson, M.D., Nancy E. Lane, M.D., John J. Cush, M.D.,

Larry W. Moreland, M.D., H. Ralph Schumacher, Jr., M.D., Chester V. Oddis, M.D., Frederick Wolfe, M.D.,

Jerry A. Molitor, M.D., David E. Yocum, M.D., Thomas J. Schnitzer, M.D., Daniel E. Furst, M.D., Allen D. Sawitzke, M.D.,

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Glucosamine, Chondroitin Sulfate, and the Two in Combination

for Painful Knee Osteoarthritis

CONCLUSIONS

Daniel
James
Michael
Larry W.
Jerry A. Molit

Glucosamine and chondroitin sulfate alone or in combination did not reduce pain effectively in the overall group of patients with osteoarthritis of the knee. Exploratory analyses suggest that the combination of glucosamine and chondroitin sulfate may be effective in the subgroup of patients with moderate-to-severe knee pain. (ClinicalTrials.gov number, NCT00032890.)

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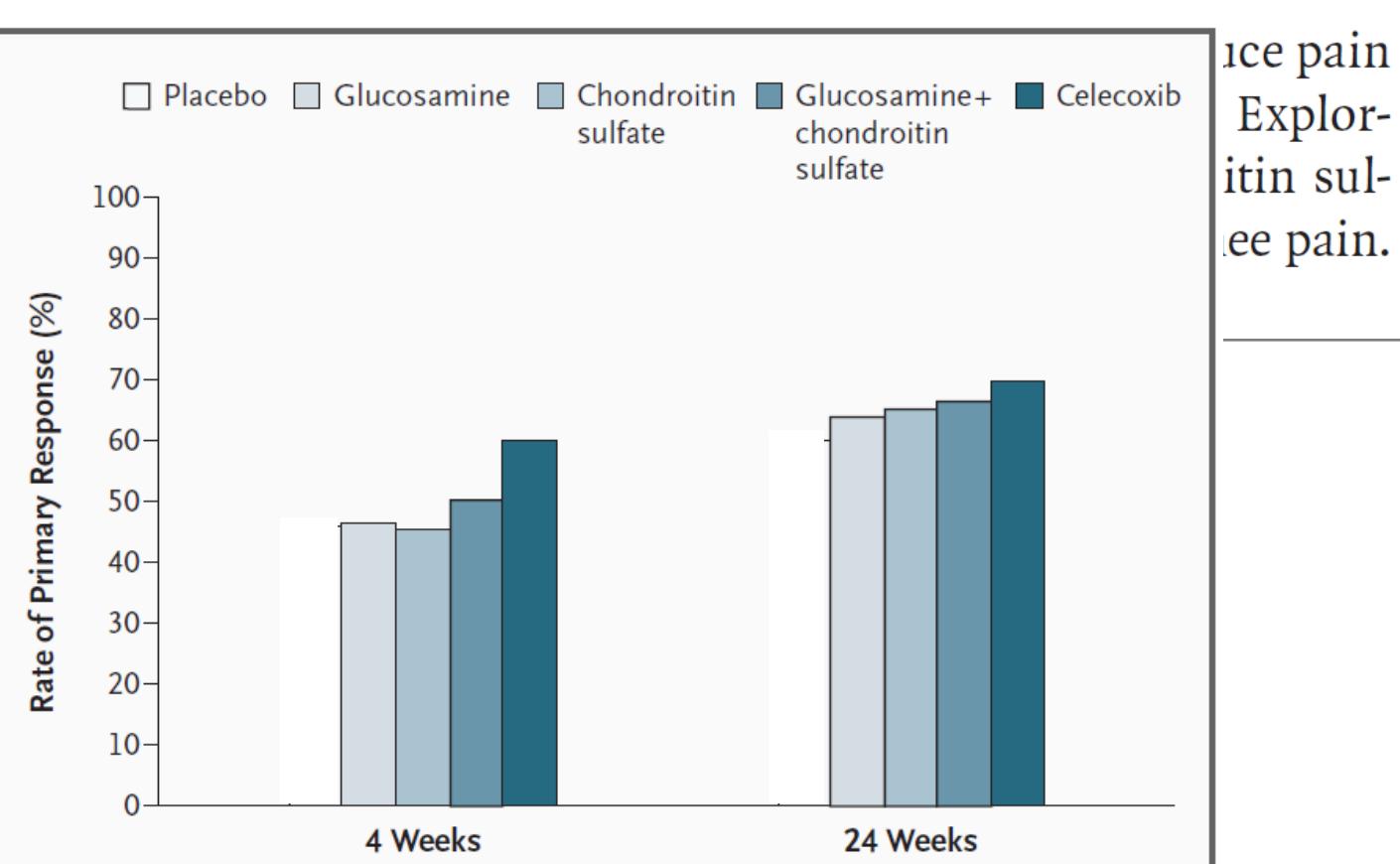
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CONCLUSIONS

Daniel
James
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Glucosamine and chondroitin sulfate are effective in the treatment of knee osteoarthritis. In efficacy analyses similar to those presented here, chondroitin sulfate may be effective in relieving pain in patients with knee osteoarthritis. (ClinicalTrials.gov identifier: NCT00000001.)



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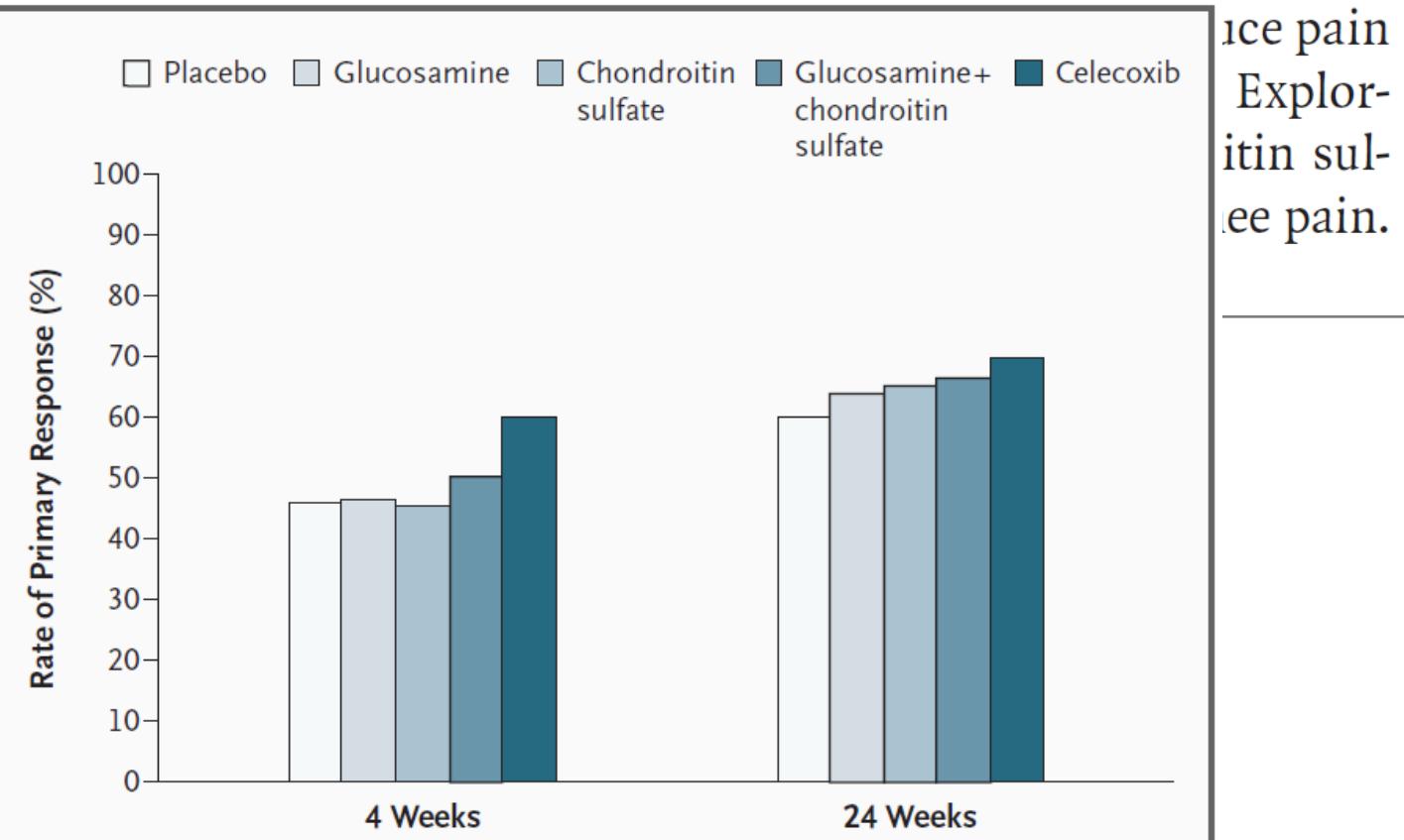
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Placebo is a powerful drug in OA...

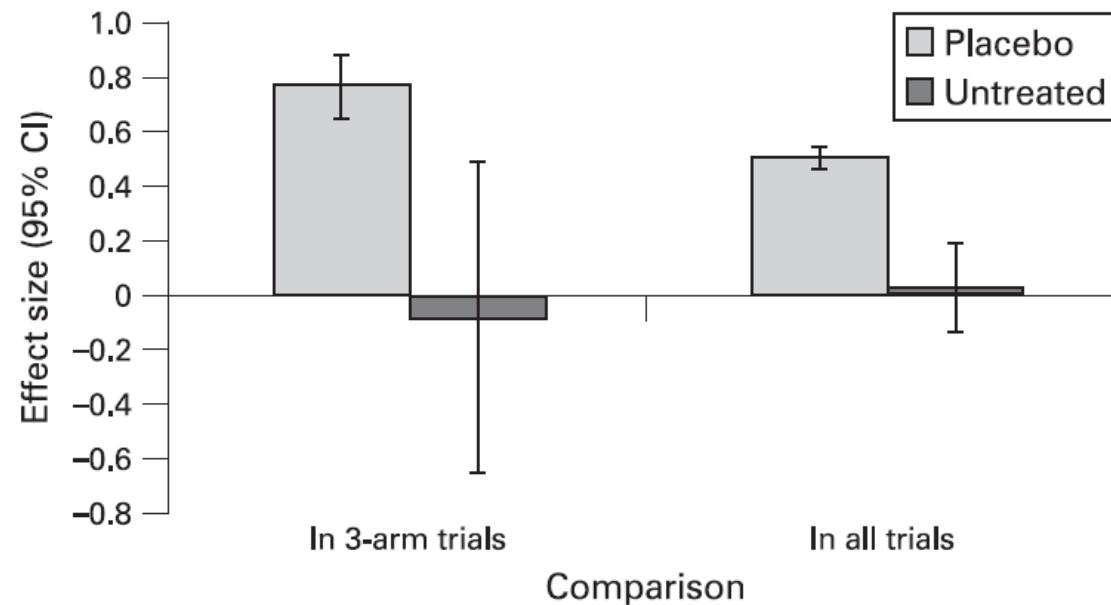
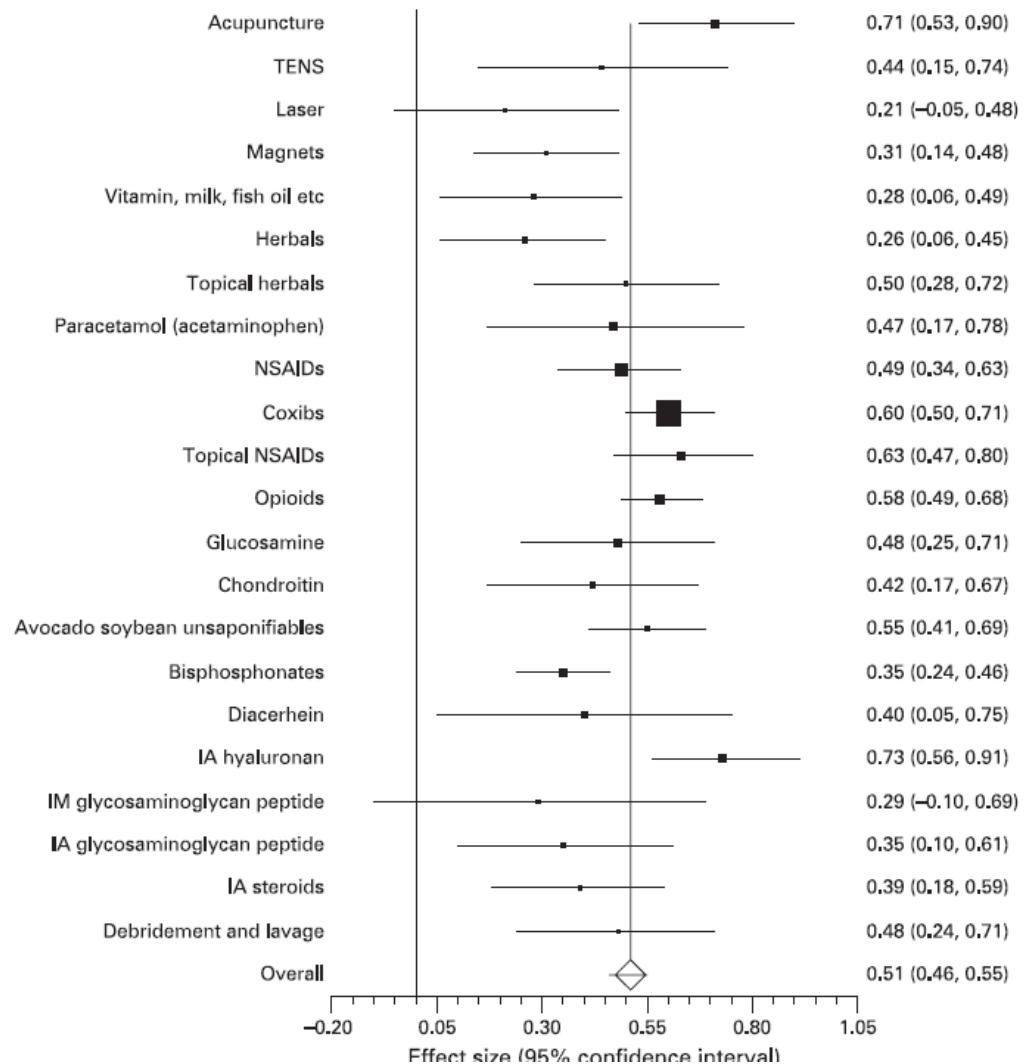


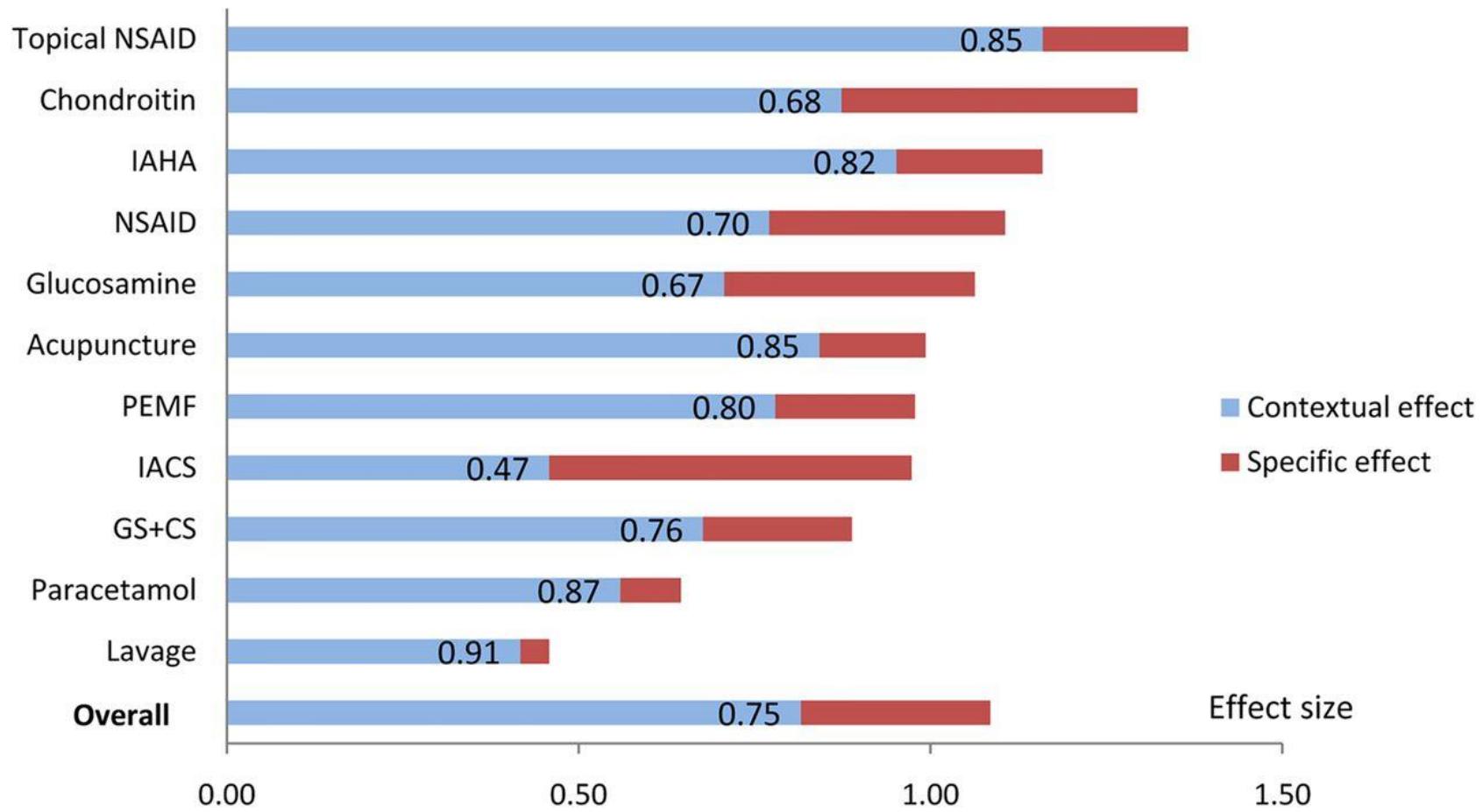
Figure 3 Effect size between placebo and untreated control. In three-arm trials: direct comparison between placebo and untreated control within the three trials that included placebo and untreated control, In all trials: indirect comparison between all placebo ($n = 193$) and all untreated control ($n = 14$) from different trials.

Placebo is a powerful drug in OA...

Figure 4 Placebo effect for pain categorised according to active treatment. IA, intra-articular; IM, intramuscular; NSAID, non-steroidal anti-inflammatory drug; TENS, transcutaneous electrical nerve stimulator.



75% of pain reduction is attributed to placebo/contextual effects



Clinical practice guidelines
Evidence-based recommendations

2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee

Sharon L. Kolasinski,¹ Tuhina Neogi,² Marc C. Hochberg,³ Carol Oatis,⁴ Gordon Guyatt,⁵ Joel Block,⁶ Leigh Callahan,⁷ Cindy Copenhaver,⁸ Carole Dodge,⁹ David Felson,² Kathleen Gellar,¹⁰ William F. Harvey,¹¹ Gillian Hawker,¹² Edward Herzig,¹³ C. Kent Kwok,¹⁴ Amanda E. Nelson,⁷  Jonathan Samuels,¹⁵ Carla S. Schmid,¹⁶ Daniel White,¹⁶ Barton Wise,¹⁷ Roy D. Altman,¹⁸ Dana DiRenzo,¹⁹  Joann Fontanarosa,²⁰ Gina Girardi,²¹ Mariko Ishimori,²¹ Devyani Misra,² Amit Aakash Shah,²² Anna K. Shmagel,²³ Louise M. Thoma,⁷ Marat Turgunbaev,²² Amy S. Turner,²² and James Reston²⁰

Osteoarthritis and Cartilage



OARSI guidelines for the non-surgical management of knee, hip, and polyarticular osteoarthritis

R.R. Bannuru ^{† *}, M.C. Osani [†], E.E. Vaysbrot [†], N.K. Arden ^{‡ §}, K. Bennell ^{||},
S.M.A. Bierma-Zeinstra ^{¶ #}, V.B. Kraus ^{††}, L.S. Lohmander ^{††}, J.H. Abbott ^{§§}, M. Bhandari ^{|||},
F.J. Blanco ^{¶¶ ##}, R. Espinosa ^{††† †††}, I.K. Haugen ^{§§§}, J. Lin ^{||||}, L.A. Mandl ^{¶¶¶},
E. Moilanen ^{## ##}, N. Nakamura ^{††††}, L. Snyder-Mackler ^{††††}, T. Trojian ^{§§§§},
M. Underwood ^{|||||| ¶¶¶¶}, T.E. McAlindon [†]



AAOS Clinical Practice Guideline Summary

AAOS Clinical Practice Guideline Summary: Management of Osteoarthritis of the Knee (Nonarthroplasty), Third Edition

Robert H. Brophy, MD 

Yale A. Fillingham, MD

ABSTRACT

Management of Osteoarthritis of the Knee (nonarthroplasty) Evidence-Based Clinical Practice Guideline is based on a systematic review of published studies for the nonarthroplasty treatment of osteoarthritis of

Endorsed by: AAHKS, AANA

INDICATION PROFILE

PROCEDURE RECOMMENDATIONS

Function-Limiting Pain

- Function-Limiting Pain that is intermittent and predictable
- Function-Limiting Pain that is constant
- Function-Limiting Pain that is constant with intense intermittent unpredictable episodes

Pattern of Arthritic Involvement

- Arthritic Involvement predominantly in one weight bearing compartment
- Arthritic Involvement predominantly in two or three compartments
- Arthritic Involvement isolated in patellofemoral compartment

Imaging (Joint Space Most Involved Compartment) and Range of Motion

- Minimal Joint Space Narrowing (KL 0-1)
- Mild to Moderate Joint Space Narrowing (KL 2-3) with full range of extension/flexion
- Mild to Moderate Joint Space Narrowing (KL 2-3) with lack of full range of extension (> 5-degree flexion contracture) and/or flexion (< 110 degrees)
- Severe Joint Space Narrowing (KL 4)

Mechanical Symptoms Compatible with Meniscal Tear or Loose Body

- Mechanical Symptoms Present
- Mechanical Symptoms Absent

Age (Including Patient Activity Level and Physiologic Status)

- Young
- Middle-Aged
- Elderly

SUBMIT

Endorsed by: AAHKS, AANA

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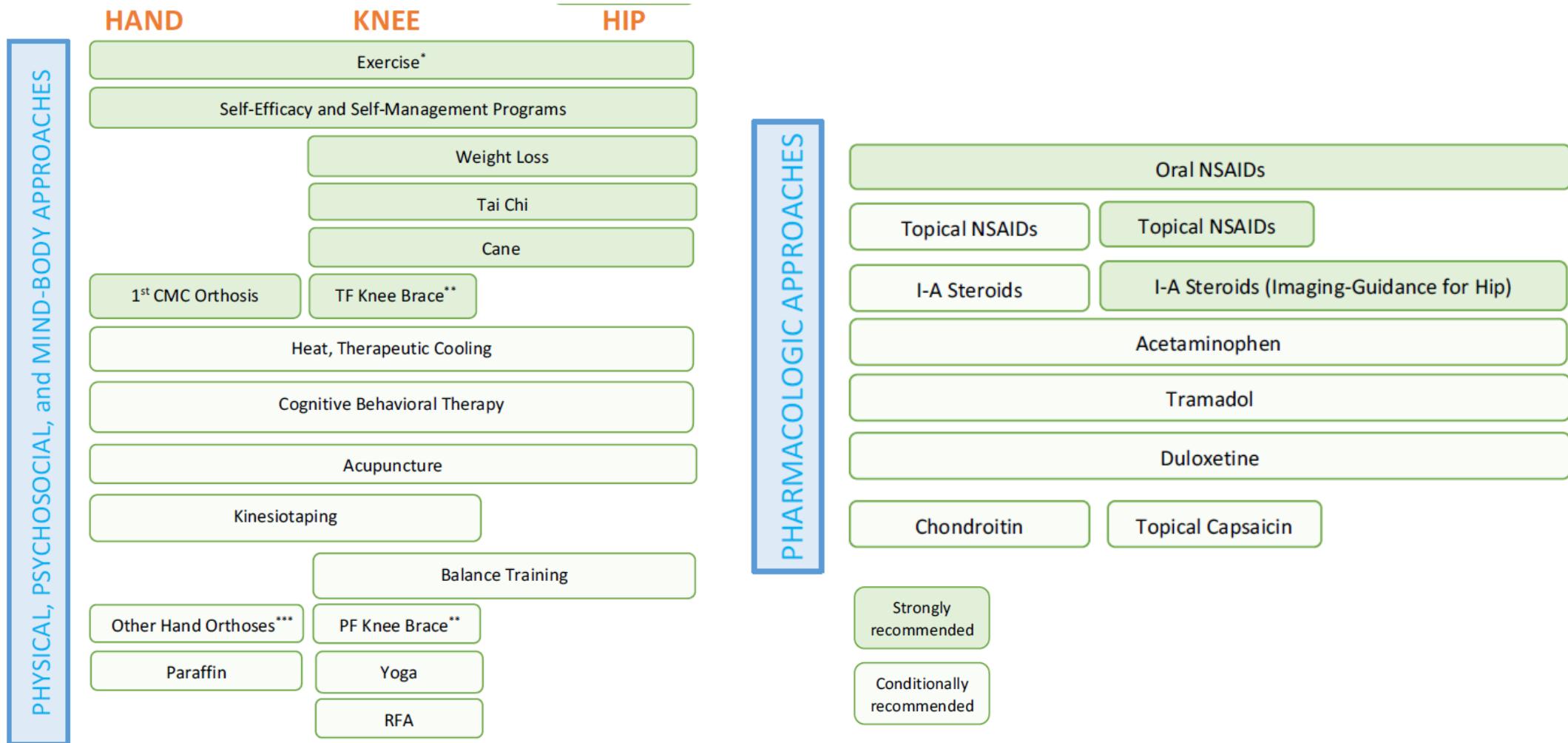
SUBMIT

PROCEDURE RECOMMENDATIONS

<input checked="" type="checkbox"/>	Self-Management Programs (unsupervised exercise, tai chi, weight loss, aerobic walking)	8
<input checked="" type="checkbox"/>	Prescribed Physical Therapy (Supervised Exercise, manual therapy, neuromuscular training, etc.)	8
<input checked="" type="checkbox"/>	Hinged Knee Brace and/or Unloading Brace, Assistive Devices (e.g., cane, walker)	7
<input checked="" type="checkbox"/>	NSAID or Acetaminophen	
<input checked="" type="checkbox"/>	Intraarticular Corticosteroids	8
<input checked="" type="checkbox"/>	Arthroscopic Partial Meniscectomy or Shaving	3
<input checked="" type="checkbox"/>	PRP	3

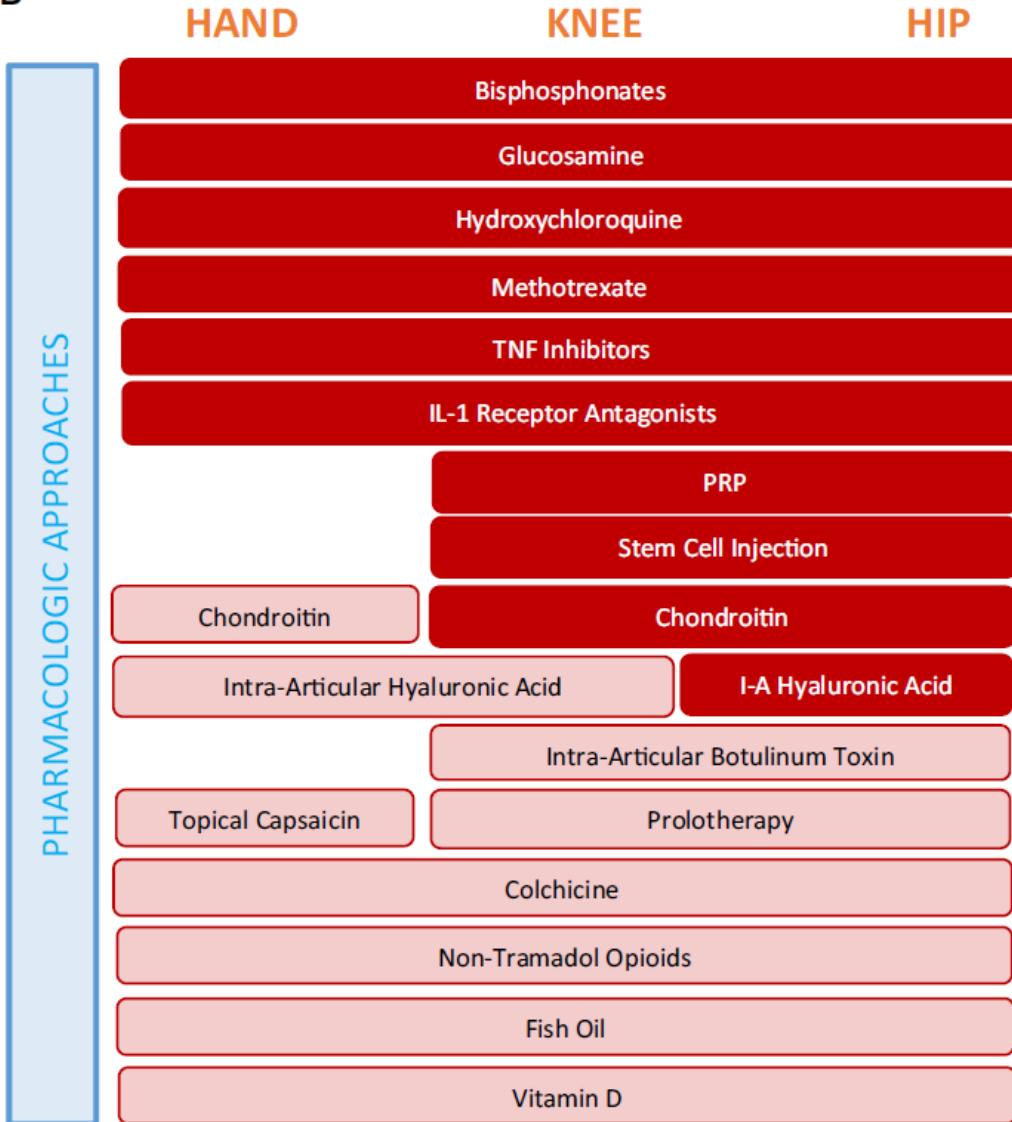
E-MAIL RESULTS**PRINT****COPY**

ACR guidelines (2019)



ACR guidelines (2019)

B



PHYSICAL, PSYCHOSOCIAL, and MIND-BODY APPROACHES

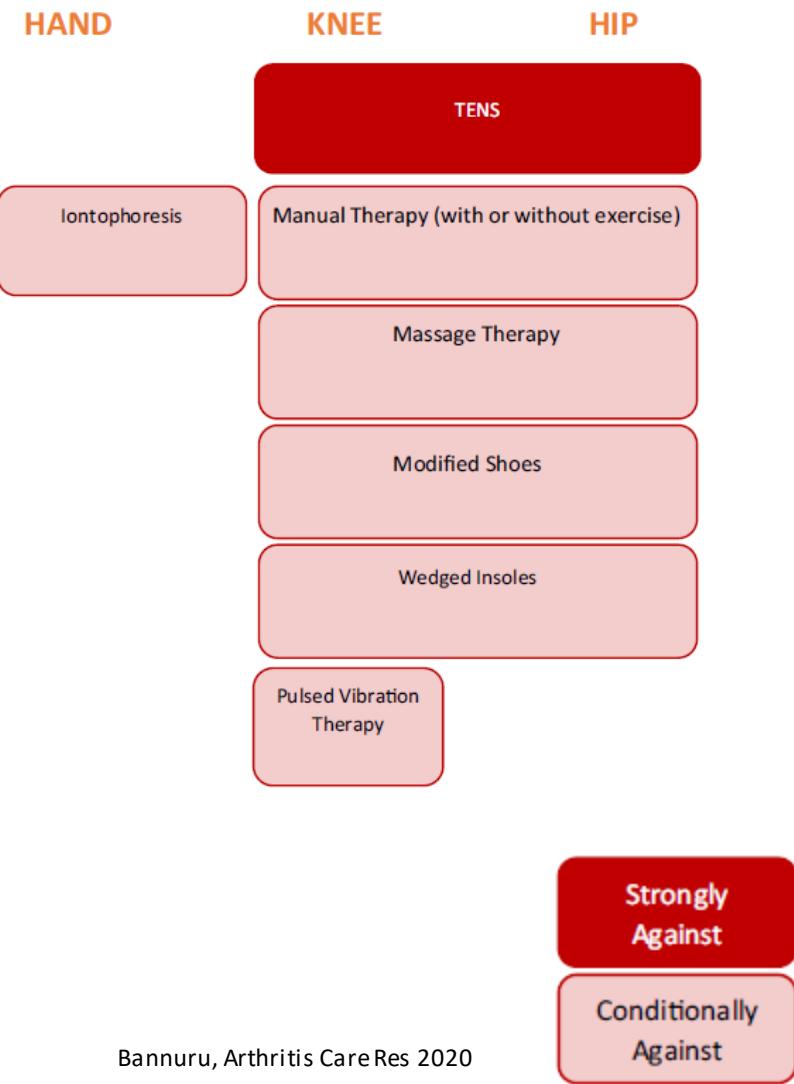


Table 2. Recommendations for the pharmacologic management of osteoarthritis of the hand, knee, and hip

Intervention	Joint		
	Hand	Knee	Hip
Topical nonsteroidal antiinflammatory drugs			
Topical capsaicin			
Oral nonsteroidal antiinflammatory drugs			
Intraarticular glucocorticoid injection			
Ultrasound-guided intraarticular glucocorticoid injection			
Intraarticular glucocorticoid injection compared to other injections			
Acetaminophen			
Duloxetine			
Tramadol			
Non-tramadol opioids			
Colchicine			
Fish oil			
Vitamin D			
Bisphosphonates			
Glucosamine			
Chondroitin sulfate			
Hydroxychloroquine			
Methotrexate			
Intraarticular hyaluronic acid injection	(First carpometacarpal)		
Intraarticular botulinum toxin			
Prolotherapy			
Platelet-rich plasma			
Stem cell injection			
Biologics (tumor necrosis factor inhibitors, interleukin-1 receptor antagonists)			

Strongly recommended
Conditionally recommended
Strongly recommended against
Conditionally recommended against
No recommendation

Guidelines: critique

Clin Orthop Relat Res (2022) 480:1-3
DOI 10.1097/CORR.0000000000002068

Clinical Orthopaedics
and Related Research®
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Editorial

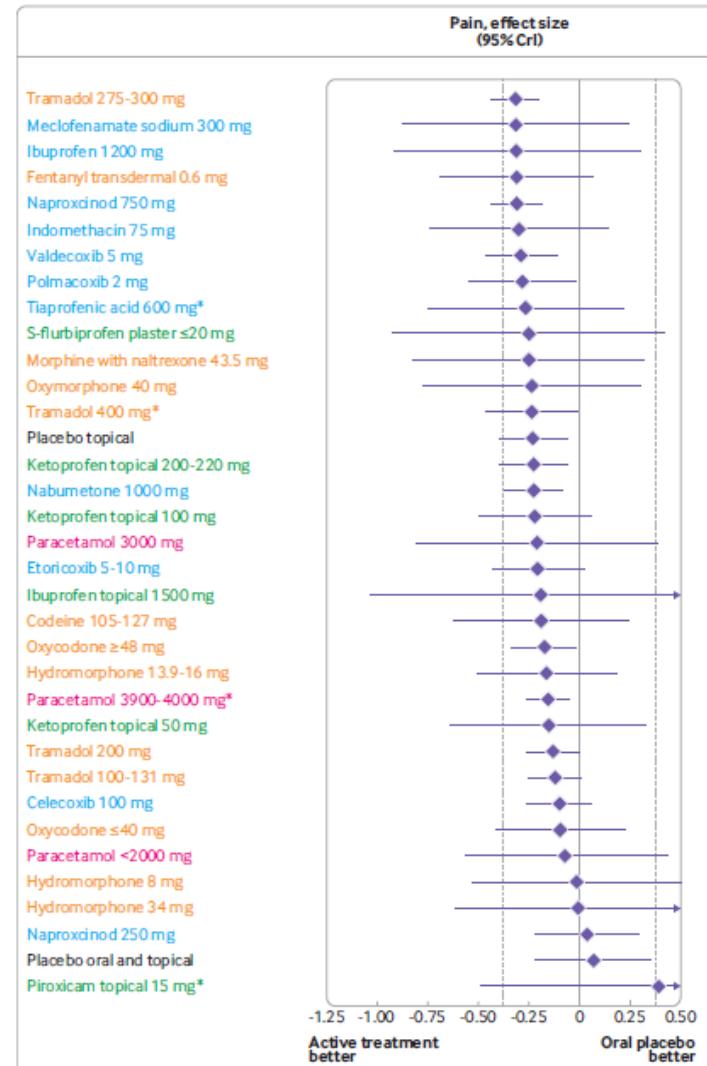
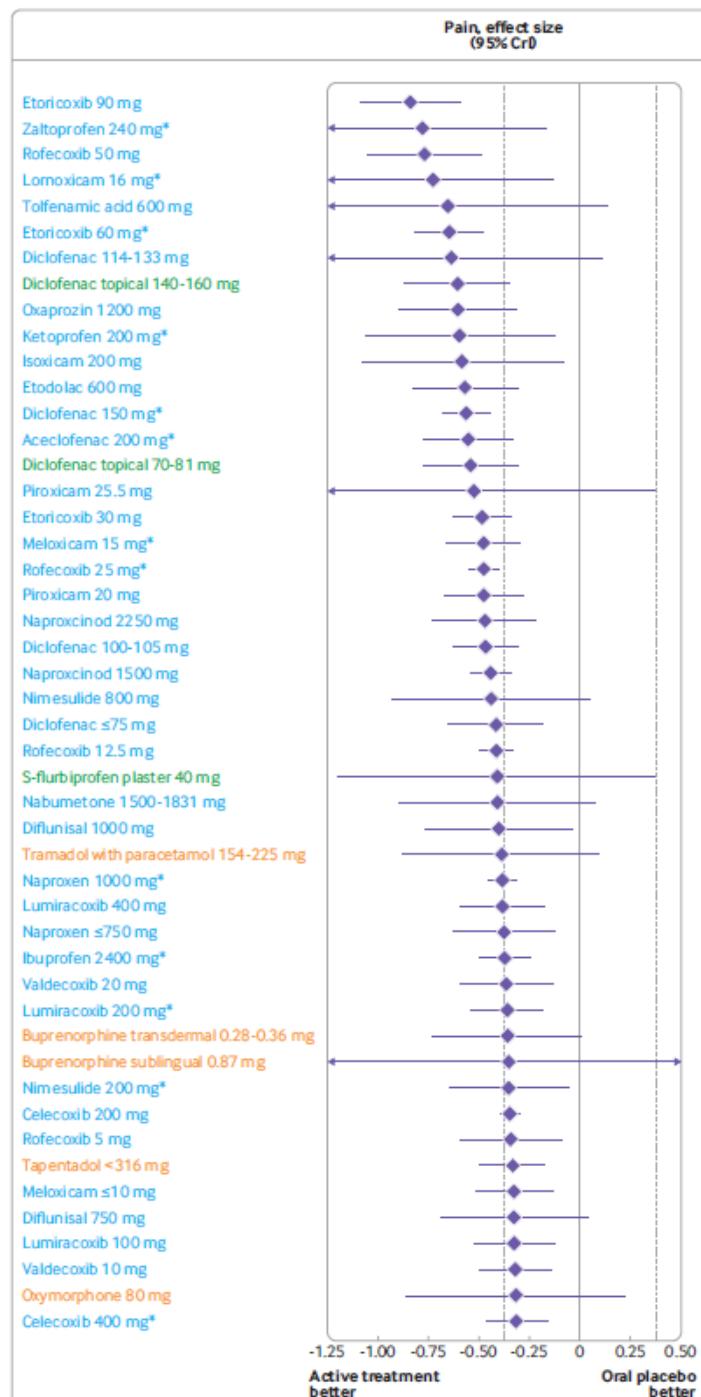
Published online: 25 November 2021

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Editorial: The New AAOS Guidelines on Knee Arthroscopy for Degenerative Meniscus Tears are a Step in the Wrong Direction

Seth S. Leopold MD¹ 

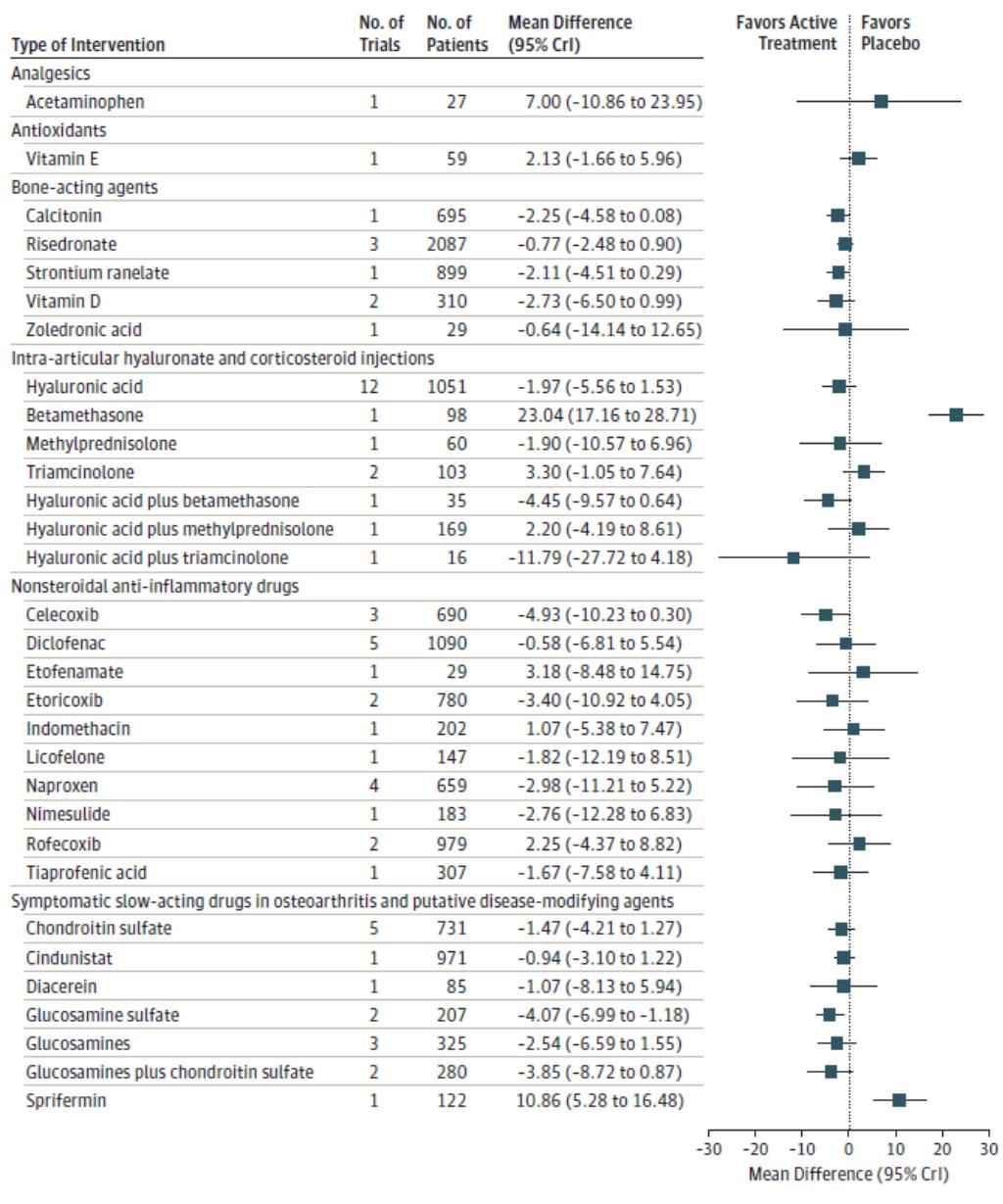
Guidelines: critique



Da Costa, BMJ 2022

Guidelines: critique

Figure 2. Forest Plot for the Estimates of Long-term Treatment Effects of Interventions on Knee Pain



Estimates are expressed on a 0 to 100 scale. Point estimates refer to the posterior mean. The bars indicate 95% credibility intervals (CrIs).

Management of osteoarthritis

Explain that:

- osteoarthritis is diagnosed clinically and usually does not need imaging to confirm diagnosis
- management is guided by symptoms and physical function
- the core treatments are therapeutic exercise and weight management, alongside information and support.

Exercise	Weight management	Information and support
<ul style="list-style-type: none">• For all people with osteoarthritis, offer therapeutic exercise tailored to their needs (for example, local muscle strengthening, general aerobic fitness).• Consider supervised therapeutic exercise sessions.• Advise people it may initially cause pain or discomfort but long-term adherence to an exercise plan will benefit the joints, reduce pain and improve function.• Consider combining therapeutic exercise with an education programme or behaviour change approaches in a structured treatment package.	<p>For people who are living with overweight or obesity:</p> <ul style="list-style-type: none">• advise them that weight loss will improve quality of life and physical function, and reduce pain• support them to choose a weight loss goal• explain that any weight loss is likely to be beneficial, but losing 10% is likely to be better than 5%. <p>For guidance and information on weight management, including interventions for weight loss, see NICE's topic page on obesity.</p>	<ul style="list-style-type: none">• Tailor information to the person's individual needs and ensure it is in an accessible format.• Advise where people can find further information on:<ul style="list-style-type: none">◦ the condition and information that challenges common misconceptions◦ specific types of exercise◦ managing their symptoms◦ how to access additional information and support◦ benefits and limitations of treatment.

Manual therapy

Only consider for hip and knee osteoarthritis and alongside therapeutic exercise.

Devices

Consider walking aids for lower limb osteoarthritis.

Do not offer:

- acupuncture or dry needling
- electrotherapy treatments
- insoles, braces, tape, splints or supports routinely.

Pharmacological management

If needed, use:

- alongside non-pharmacological treatments and to support therapeutic exercise
- the lowest effective dose for the shortest possible time.

Review with the person whether to continue treatment. Base frequency of reviews on clinical need.

- Offer a topical non-steroidal anti-inflammatory drug (NSAID) for knee osteoarthritis.
- Consider a topical NSAID for other osteoarthritis-affected joints.

Consider an oral NSAID if topical medicines are ineffective or unsuitable and offer a gastroprotective treatment alongside.

Do not offer:

- paracetamol or weak opioids routinely, unless:
 - used infrequently for short-term pain relief
 - all other treatments are ineffective or unsuitable
- glucosamine
- strong opioids
- intra-articular hyaluronan injections.

Consider intra-articular corticosteroid injections for short-term relief when other pharmacological treatments are ineffective or unsuitable or to support therapeutic exercise.

This is a summary of the recommendations on managing osteoarthritis in [NICE's guideline on osteoarthritis in over 16s: diagnosis and management](#)

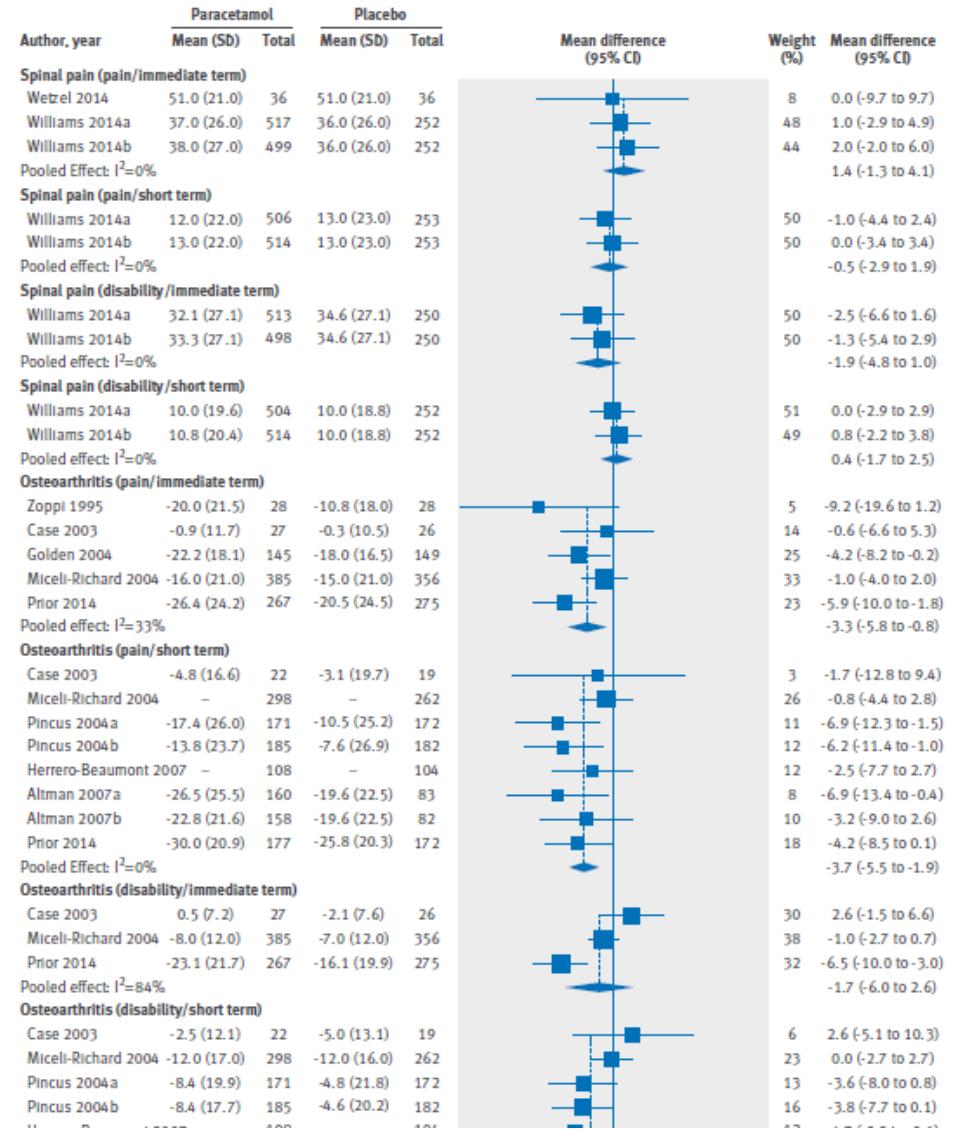
Referral for joint replacement

Consider referring people with hip, knee or shoulder osteoarthritis for joint replacement if:

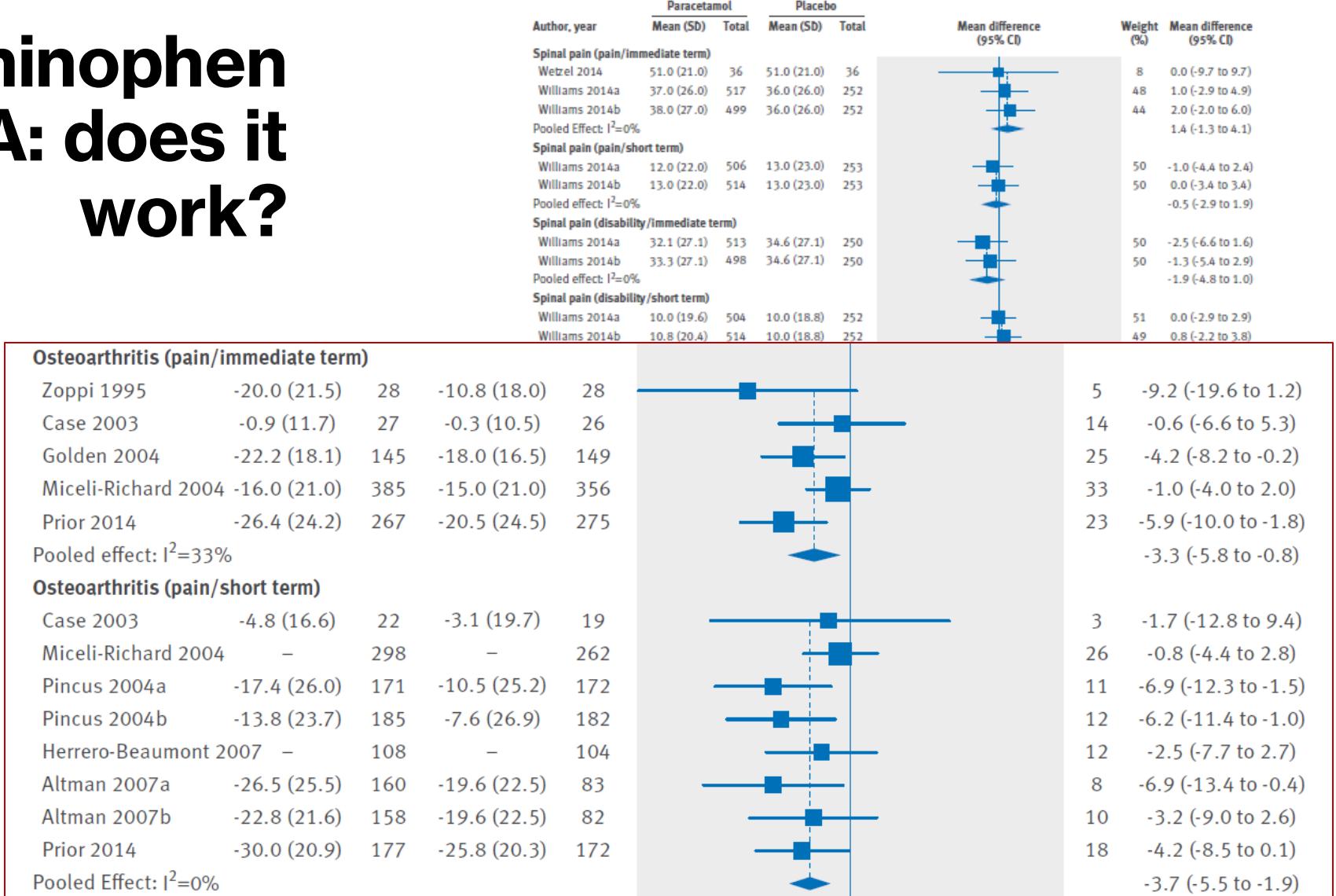
- joint symptoms are substantially impacting their quality of life and
- non-surgical management is ineffective or unsuitable.

Do not exclude people from referral for joint replacement because of age, sex or gender, smoking, comorbidities, or overweight or obesity.

Acetaminophen for OA: does it work?



Acetaminophen for OA: does it work?



Acetaminophen for OA: does it work?

OPEN ACCESS



Efficacy and safety of paracetamol for spinal pain and osteoarthritis: systematic review and meta-analysis of randomised placebo controlled trials

Gustavo C Machado,¹ Chris G Maher,¹ Paulo H Ferreira,² Marina B Pinheiro,² Chung-Wei Christine Lin,¹ Richard O Day,^{3,4} Andrew J McLachlan,^{5,6} Manuela L Ferreira^{1,7}

ABSTRACT

OBJECTIVE

To investigate the efficacy and safety of paracetamol (acetaminophen) in the management of spinal pain and osteoarthritis of the hip or knee.

DESIGN

Systematic review and meta-analysis.

DATA SOURCES

Medline, Embase, AMED, CINAHL, Web of Science, LILACS, International Pharmaceutical Abstracts, and Cochrane Central Register of Controlled Trials from inception to December 2014.

ELIGIBILITY CRITERIA FOR SELECTING STUDIES

Randomised controlled trials comparing the efficacy and safety of paracetamol with placebo for spinal pain (neck or low back pain) and osteoarthritis of the hip or knee.

DATA EXTRACTION

Two independent reviewers extracted data on pain, disability, and quality of life. Secondary outcomes were adverse effects, patient adherence, and use of rescue medication. Pain and disability scores were converted to a scale of 0 (no pain or disability) to 100 (worst possible pain or disability). We calculated weighted mean differences or risk ratios and 95% confidence intervals using a random effects model. The Cochrane Collaboration's tool was used for assessing risk of bias, and the GRADE approach was

ineffective for reducing pain intensity (weighted mean difference -0.5 , 95% confidence interval -2.9 to 1.9) and disability (0.4 , -1.7 to 2.5) or improving quality of life (0.4 , -0.9 to 1.7) in the short term in people with low back pain. For hip or knee osteoarthritis there was "high quality" evidence that paracetamol provides a significant, although not clinically important, effect on pain (-3.7 , -5.5 to -1.9) and disability (-2.9 , -4.9 to -0.9) in the short term. The number of patients reporting any adverse event (risk ratio 1.0 , 95% confidence interval 0.9 to 1.1), any serious adverse event (1.2 , 0.7 to 2.1), or withdrawn from the study because of adverse events (1.2 , 0.9 to 1.5) was similar in the paracetamol and placebo groups. Patient adherence to treatment (1.0 , 0.9 to 1.1) and use of rescue medication (0.7 , 0.4 to 1.3) was also similar between groups. "High quality" evidence showed that patients taking paracetamol are nearly four times more likely to have abnormal results on liver function tests (3.8 , 1.9 to 7.4), but the clinical importance of this effect is uncertain.

CONCLUSIONS

Paracetamol is ineffective in the treatment of low back pain and provides minimal short term benefit for people with osteoarthritis. These results support the reconsideration of recommendations to use paracetamol for patients with low back pain and osteoarthritis of the hip or knee in clinical practice guidelines.

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Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/bmj.h1225>)

Acetaminophen for OA: does it work?

OPEN ACCESS



Efficacy and safety of paracetamol for spinal pain and osteoarthritis: systematic review and meta-analysis of randomised placebo controlled trials

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Two independent reviewers extracted data on pain, disability, and quality of life. Secondary outcomes were adverse effects, patient adherence, and use of rescue medication. Pain and disability scores were converted to a scale of 0 (no pain or disability) to 100 (worst possible pain or disability). We calculated weighted mean differences or risk ratios and 95% confidence intervals using a random effects model. The Cochrane Collaboration's tool was used for assessing risk of bias, and the GRADE approach was

used to evaluate the quality of evidence. The primary outcome was effective for reducing pain intensity (weighted mean difference -0.5 , 95% confidence interval -2.9 to 1.9) and disability (0.4 , -1.7 to 2.5) or improving quality of life (0.4 , -0.9 to 1.7) in the short term in people with low back pain. For hip or knee osteoarthritis there was "high quality" evidence that paracetamol provides a significant, although not clinically important, effect on pain (-3.7 , -5.5 to -1.9) and disability (-2.9 , -4.9 to -0.9) in the short term. The number of patients reporting any adverse event (risk ratio 1.0 , 95% confidence interval 0.9 to 1.1), any serious adverse

event (risk ratio 1.0 , 95% confidence interval 0.7 to 1.3), and discontinuation due to adverse events (risk ratio 1.0 , 95% confidence interval 0.7 to 1.3) was similar between groups. There was no evidence of heterogeneity between studies.

CONCLUSIONS

Paracetamol is ineffective in the treatment of low back pain and provides minimal short term benefit for people with osteoarthritis. These results support the reconsideration of recommendations to use paracetamol for patients with low back pain and osteoarthritis of the hip or knee in clinical practice guidelines.

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Acetaminophen for OA: does it work?

OPEN ACCESS



Efficacy and safety of paracetamol for spinal pain and osteoarthritis: systematic review and meta-analysis of randomised placebo controlled trials

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ABSTRACT

OBJECTIVE

To investigate the efficacy and safety of paracetamol (acetaminophen) in the management of spinal pain and osteoarthritis of the hip or knee.

DESIGN

Systematic review and meta-analysis.

DATA SOURCES

Medline, Embase, AMED, CINAHL, LILACS, International Pharmaceutical Abstracts, Cochrane Central Register of Controlled Trials, and ClinicalTrials.gov inception to December 2014.

Paracetamol is ineffective for reducing pain intensity (weighted mean difference -0.5 , 95% confidence interval -2.9 to 1.9) and disability (0.4 , -1.7 to 2.5) or improving quality of life (0.4 , -0.9 to 1.7) in the short term in people with low back pain. For hip or knee osteoarthritis there was "high quality" evidence that paracetamol provides a significant, although not clinically important, effect on pain (-3.7 , -5.5 to -1.9) and disability (-2.9 , -4.9 to 0.0) in the short term. The number of patients needed to treat to benefit one person is 1.0 , 95% confidence interval 0.1 to 2.0 . There were serious adverse effects associated with paracetamol.

CONCLUSIONS

Paracetamol is ineffective in the treatment of low back pain and provides minimal short term benefit for people with osteoarthritis. These results support the reconsideration of recommendations to use paracetamol for patients with low back pain and osteoarthritis of the hip or knee in clinical practice guidelines.

confidence intervals using a random effects model. The Cochrane Collaboration's tool was used for assessing risk of bias, and the GRADE approach was

paracetamol for patients with low back pain and osteoarthritis of the hip or knee in clinical practice guidelines.

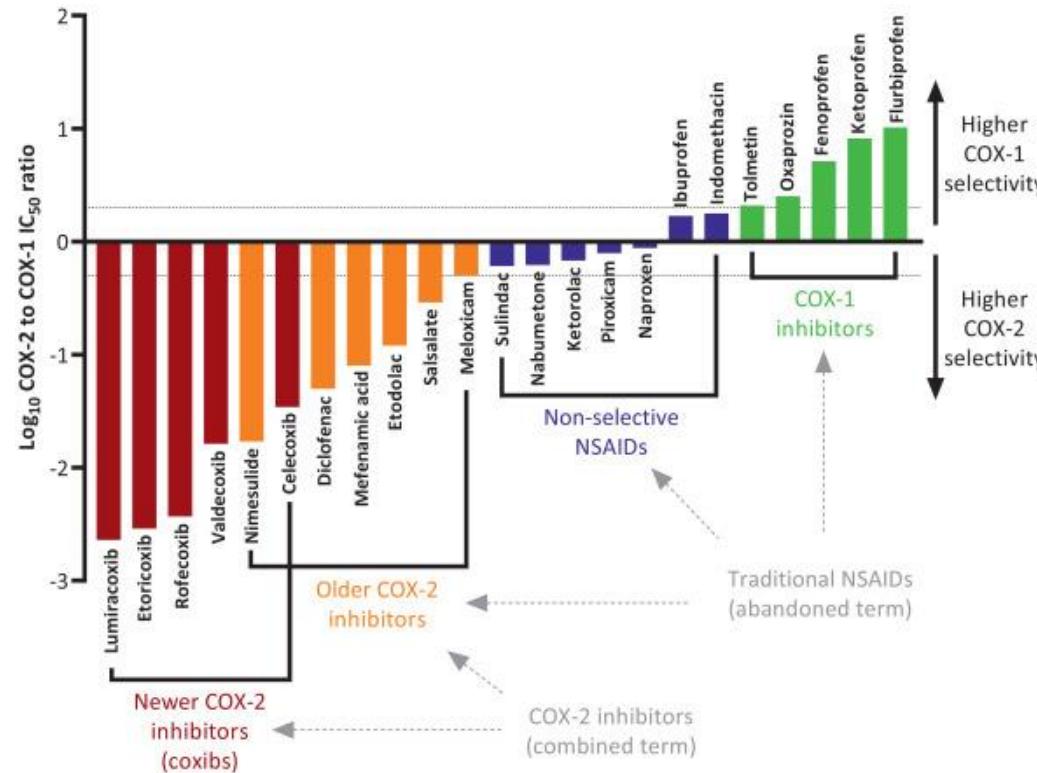
ΜΣΑΦ

Διαφορετικά προφίλ (εκλεκτικότητα COX-1 & COX-2)

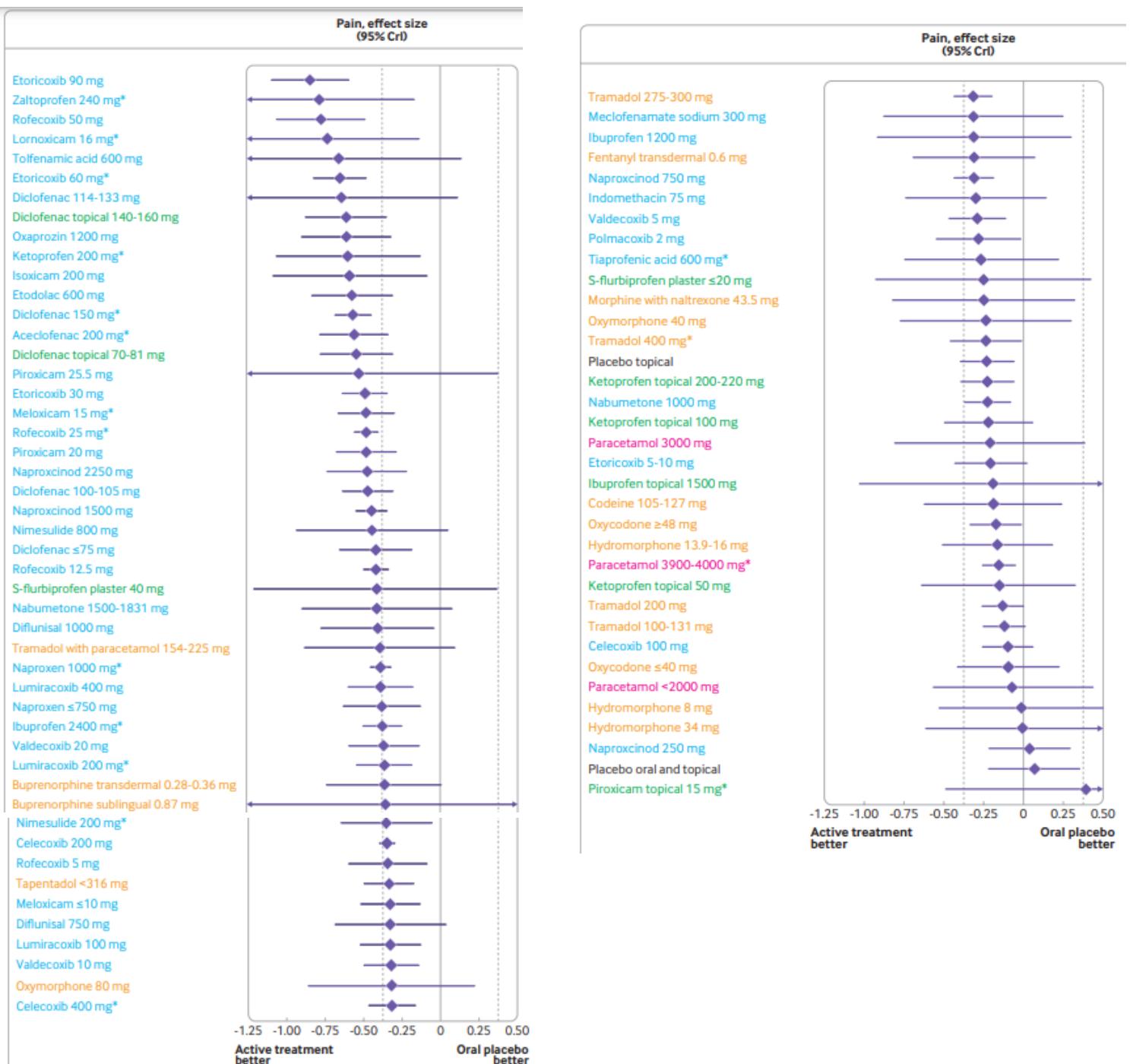
Προφίλ ανεπιθύμητων ενεργειών

Προφίλ ασθενούς

Εκλεκτικότητα COX-1/2



NSAIDs: do they work in OA?



Χειρουργική Θεραπεία

Επίλογος

Χειρουργική Θεραπεία

Ολική αρθροπλαστική (total joint arthroplasty)

Ημιαρθροπλαστική (unicompartmental)

Οστεοτομίες (tibial osteotomy)

Αρθροσκοπική έκπλυση και καθαρισμός (lavage and debridement)

Μερική μηνισκεκτομή (partial meniscectomy)

Ολική αρθροπλαστική

Καλά αποτελέσματα

Πολλές τεχνικές

Χρόνος αναθεώρησης (revision)

Προεγχειρητική εκτίμηση κινδύνου

Προεγχειρητική προετοιμασία (απώλεια βάρους, ασκηση,
φυσικοθεραπεία)

Ολική αρθροπλαστική- διάρκεια ζωής εμφυτευμάτων

Ισχίο:

10 ετής επιβίωση του εμφυτεύματος: 95,6%

20-ετης επιβίωση του εμφυτεύματος: 85%

Γόνατο:

10 ετής επιβίωση του εμφυτεύματος: 96,1%

20-ετης επιβίωση του εμφυτεύματος: 89,7%

Μία κρίσιμη παράμετρος: η ηλικία

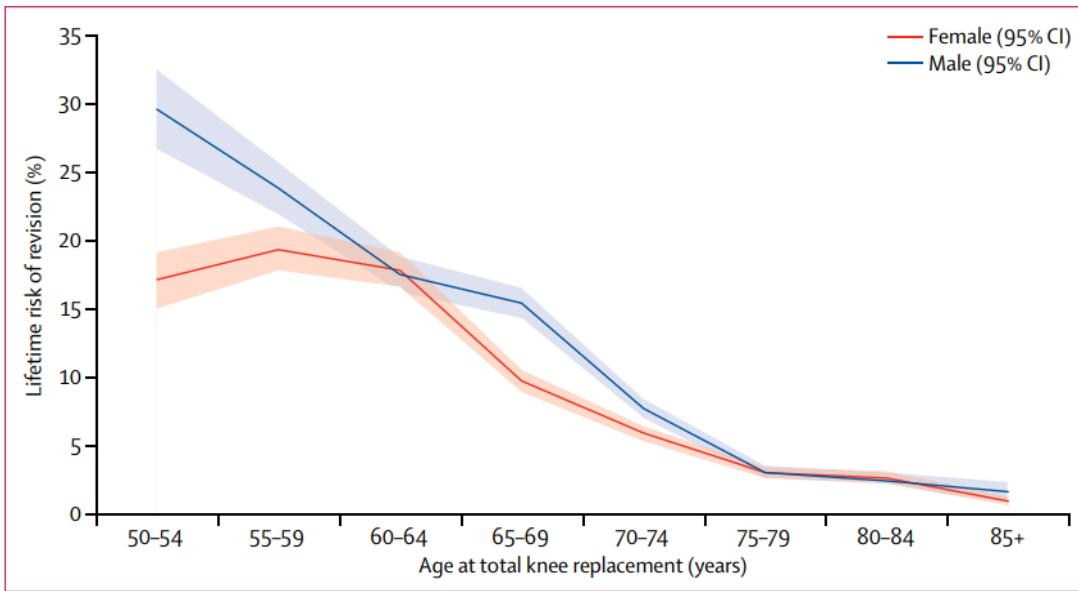


Figure 2: Lifetime risk of revision after total hip replacement

Plot showing estimates of lifetime risk of total hip replacement revision against age at the time of total hip replacement primary surgery (in 5-year age bands) and stratified by sex (results adjusted for lost and censored population).

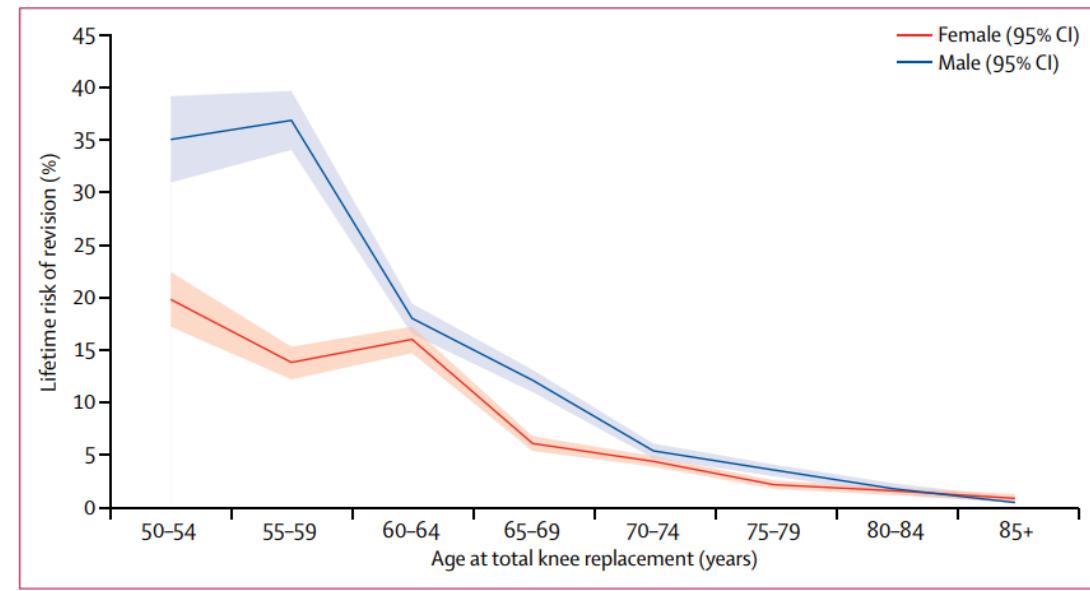


Figure 3: Lifetime risk of revision after total knee replacement

Plot showing estimates of lifetime risk of total knee replacement revision against age at the time of primary total knee replacement surgery (in 5-year age bands) and stratified by sex (results adjusted for lost and censored population).

Ημιαρθροπλαστική (unicompartmental)

UNICCOMPARTMENTAL VS. TOTAL KNEE ARTHROPLASTY

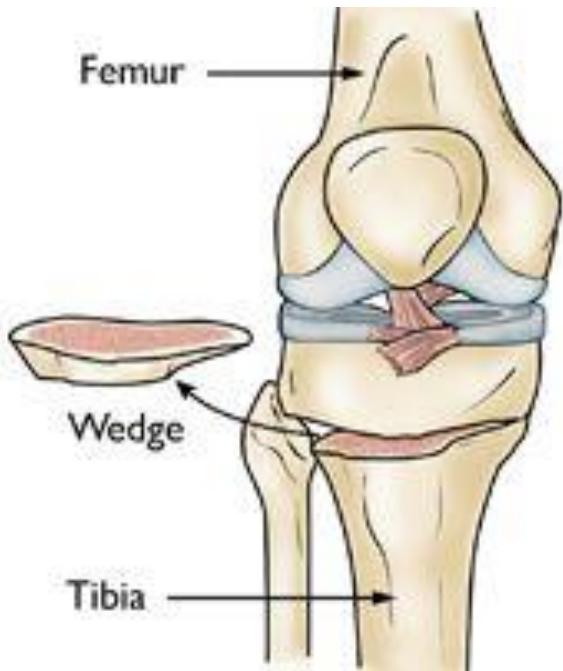
The practitioner can use unicompartmental arthroplasty vs total knee arthroplasty for patients with predominantly medial compartment osteoarthritis, as evidence reports improved patient reported and functional outcomes in the short term; however, long-term rates of revision in unicompartmental knee arthroplasty may be higher than total knee arthroplasty.

Strength of Evidence: Strong

Strength of Recommendation: Moderate  (downgraded)

Evidence from two or more “Moderate” quality studies with consistent findings, or evidence from a single “High” quality study for recommending for or against the intervention. Also, higher strength evidence can be downgraded to limited due to major concerns addressed in the EtD Framework.

Οστεοτομία



Οστεοτομία

Tibial Osteotomy

High tibial osteotomy may be considered to improve pain and function in properly indicated patients with unicompartmental knee osteoarthritis.

Strength of recommendation: Limited. 
(downgrade)

Lavage and debridement

Lavage/Débridement

Arthroscopy with lavage and/or débridement in patients with a primary diagnosis of knee osteoarthritis is not recommended.

Strength of recommendation: Moderate. 

Partial meniscectomy

Partial Meniscectomy

Arthroscopic partial meniscectomy can be used for the treatment of meniscal tears in patients with concomitant mild-to-moderate osteoarthritis who have failed physical therapy or other nonsurgical treatments.

Strength of recommendation: Moderate.  4 blue stars, 1 grey star

Συμπερασματα

Εξατομικευμένη προσέγγιση

("θετική" ανάλογα με την εστία, την βαρύτητα, την λειτουργική επιβάρυνση κλπ)

("αρνητική" ανάλογα με το προφίλ ασθενούς/ κίνδυνο τοξικότητας)

ΠΑυσίπονα (παρακεταμόλη/ ασθενή οπιοειδή)

ΜΣΑΦ

Ενδοαρθρικές ενεσεις (κορτικοειδή)

Συμπερασματα

Εμφαση στην μη φαρμακευτική θεραπεία:

Ασκηση

Φυσικοθεραπεία

Απώλεια βάρους