

EVER PRESEN SELF-CONSCIOUS HOUSEBOUND RES **SO** GRAD \square SORE AND ACH LOOKING FRUSTR **CHANGES WHO** I'M NOT MYSELF ANYMORE ISOLATING

Patient **case study.** Osteoarthritis

#ListenToPain

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Start here



Presentation

Alex



Alex presents with right knee pain and stiffness.



Presentation



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Clinical examination



Differential diagnosis

HALEON





She had diffuse, aching pain over the right knee with periodic sharp exacerbations for two years.

She says pain aggravates on walking and relieves with rest.



She has joint stiffness in the mornings that lasts for less than 15 minutes and disappears on resuming activities.



She has experienced slight swelling of the right knee joint for the past week.

Q

Treatment plan



Clinical evidence



Follow-up & summary

















History



Past history and family history:

No history of:

- Fever or loss of weight or appetite.
- Trauma, injury, fall, sprain or surgery.

No history of:

- Chronic disease, ailment or drug allergy.
- Gout, rheumatoid arthritis, degenerative joint disease.

Prolonged history

of dyspepsia and often complains of acidity.

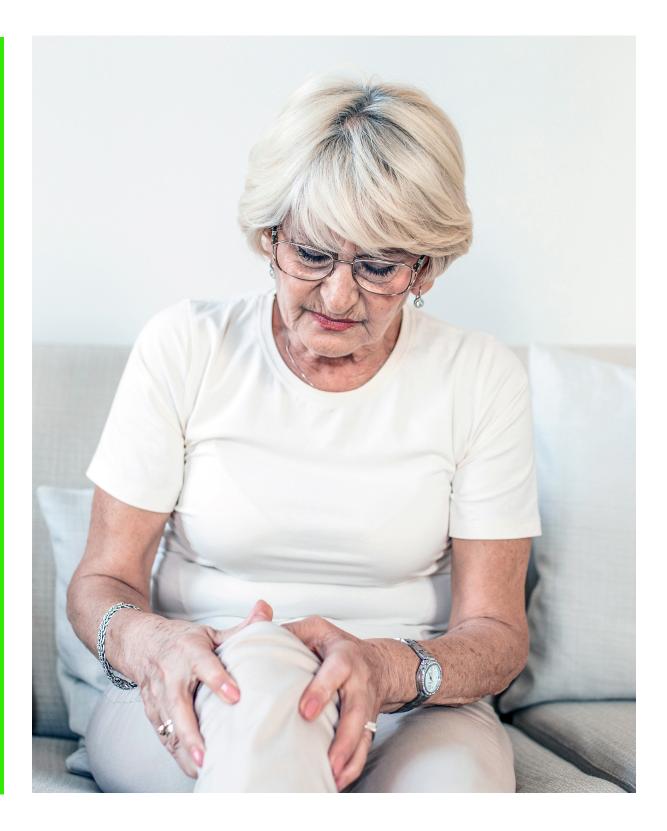
In the past, has taken some pain killers 'on and off'.

OA, osteoarthritis.



HALEON

Family history revealed that her mother had osteoarthritis (OA).





Treatment plan



Clinical evidence

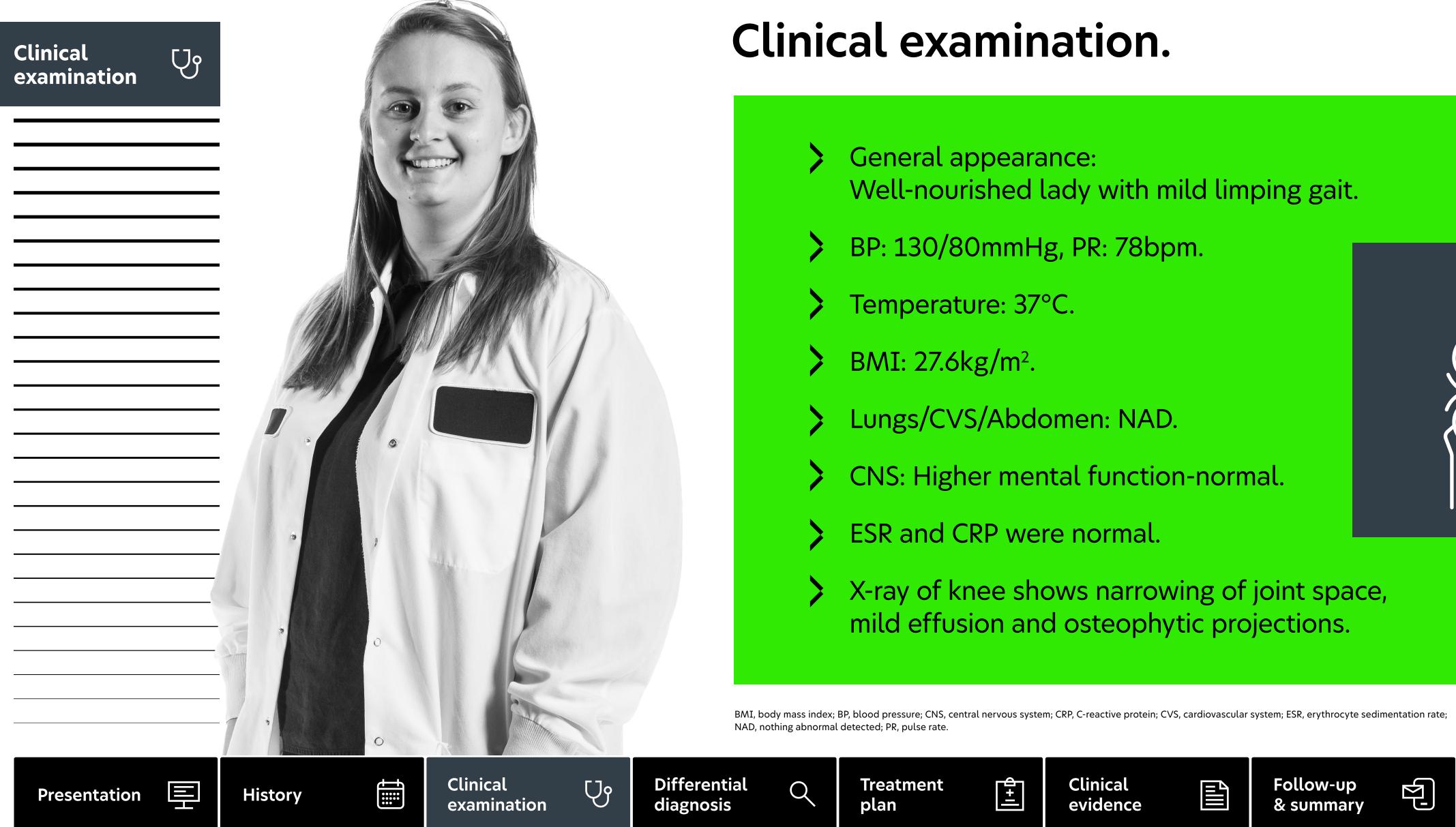


Follow-up & summary





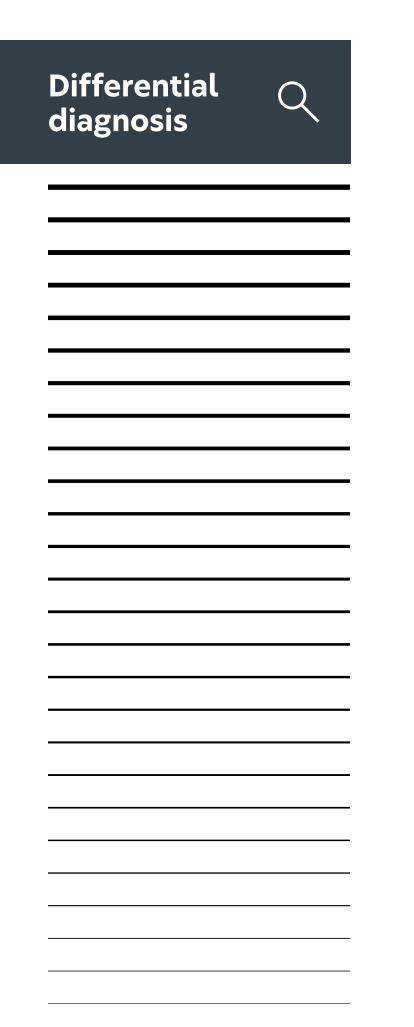




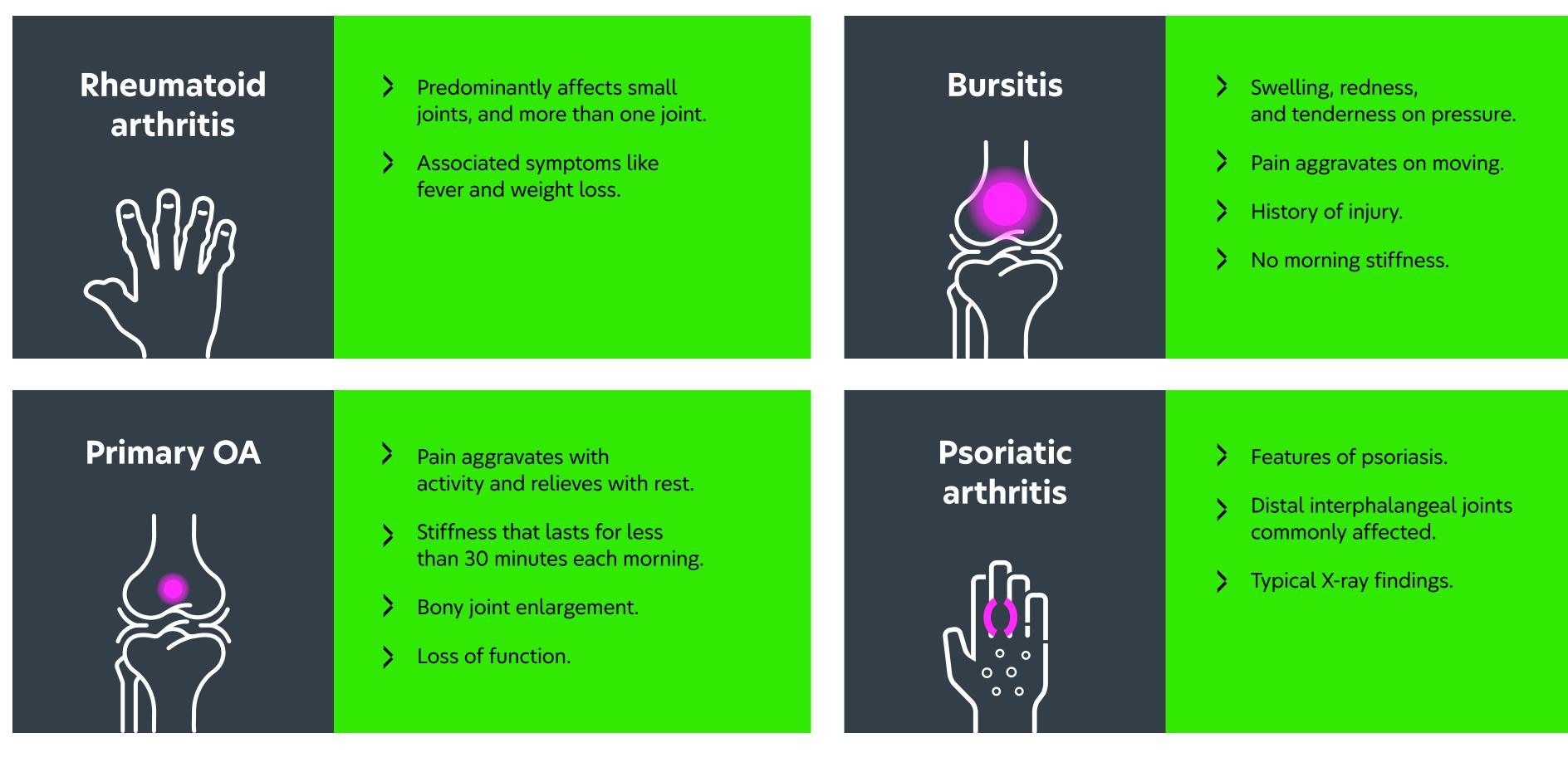
HALEON







What are the possible causes for Alex's stiffness and pain?^{1,2}



OA, osteoarthritis.

1. Sen R, Hurley J. Treasure Island (FL): StatPearls Publishing 2021. Available at: www.ncbi.nlm.nih.gov/books/NBK482326 (last accessed May 2021). 2. Sankowski A. Pol J Radiol 2013;78(1):7-17.



HALEON



Clinical evidence



Follow-up & summary











Differential diagnosis

Q

What are the possible causes for Alex's stiffness and pain?

Click an option to select your answer.

PRIMARY OA RHEUMATOID ARTHRITIS BURSITIS **PSORIATIC ARTHRITIS**

OA, osteoarthritis.





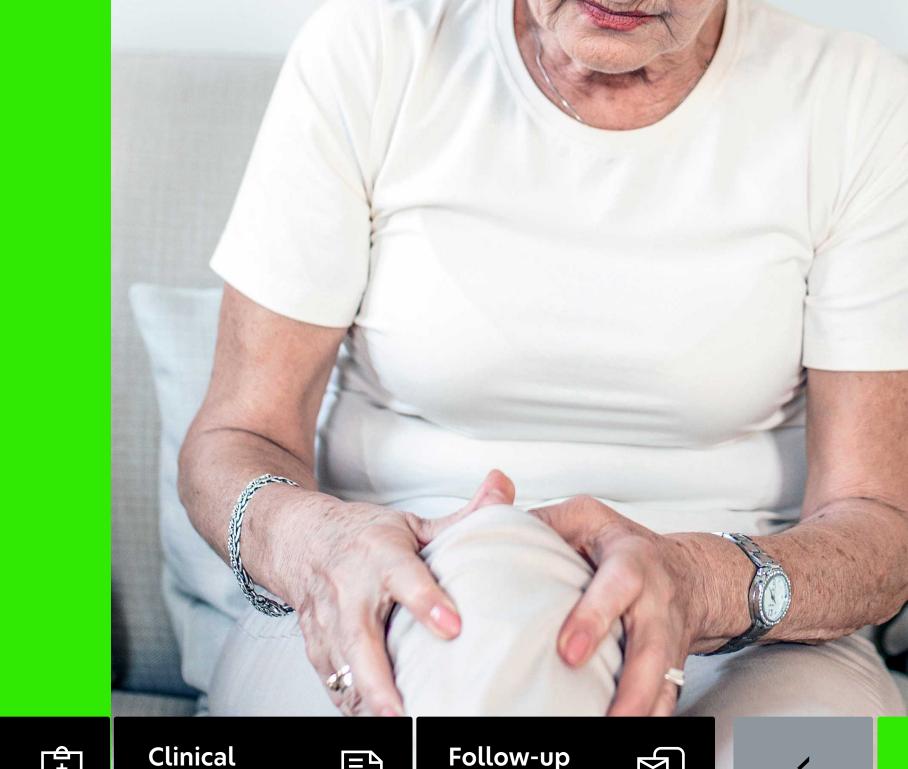




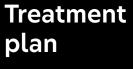


Differential diagnosis





Q





evidence



Follow-up & summary





Differential diagnosis

What are the possible causes for Alex's stiffness and pain?

Q

Click an option to select your answer.

PRIMARY OA RHEUMATOID X ARTHRITIS BURSITIS PSORIATIC ARTHRITIS

OA, osteoarthritis.

Ē Presentation





Clinical examination



Differential diagnosis





Treatment plan

Q







Differential diagnosis

What are the possible causes for Alex's stiffness and pain?

Q

Click an option to select your answer.

PRIMARY OA RHEUMATOID ARTHRITIS BURSITIS × **PSORIATIC** ARTHRITIS

OA, osteoarthritis.

Ē Presentation









Differential diagnosis

HALEON



Q

plan



evidence

Follow-up & summary





Differential diagnosis

What are the possible causes for Alex's stiffness and pain?

Q

Click an option to select your answer.

PRIMARY OA RHEUMATOID ARTHRITIS BURSITIS **PSORIATIC ARTHRITIS**

OA, osteoarthritis.

Ē Presentation





Clinical examination

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Differential diagnosis

HALEON





Q





Clinical evidence



Follow-up & summary





Differential diagnosis

Q

What are the possible causes for Alex's stiffness and pain?

Click an option to select your answer.



RHEUMATOID ARTHRITIS

BURSITIS

PSORIATIC ARTHRITIS

OA, osteoarthritis.

Ē Presentation









Differential diagnosis

HALEON



Q





Clinical evidence



they

Follow-up & summary





Differential diagnosis



Alex was diagnosed by an orthopaedic surgeon as grade-3 OA, based on the following radiological investigation criteria.

Radiological features for grading¹

- Formation of **osteophytes** on the joint margins or, in the case of the knee joint, on the tibial spines.
- Periarticular ossicles; these are found chiefly in relation to the distal and proximal interphalangeal joints.

Radiographic criteria for assessment of OA¹

Grade 0	None	No featu
Grade 1	Doubtful	Minute o
Grade 2	Minimal	Definite
Grade 3	Moderate	Moderat
Grade 4	Severe	Joint spa

Reproduced from Spector and Cooper (1993. Osteoarthritis and Cartilage 1:203-206) with permission.

OA, osteoarthritis.

1. Arden N, Nevitt M. Best Pract Res Clin Rheumatol 2006;20(1):3-25.



- Narrowing of joint cartilage associated with sclerosis of subchondral bone.
- Small pseudocystic areas with sclerotic walls situated usually in the subchondral bone.
- Altered shape of the bone ends, particular in the head of the femur.

- ures of OA
- osteophyte, doubtful significance
- osteophyte, unimpaired joint space
- ate diminution of joint space
- pace greatly impaired with sclerosis of subchondral bone





Treatment plan



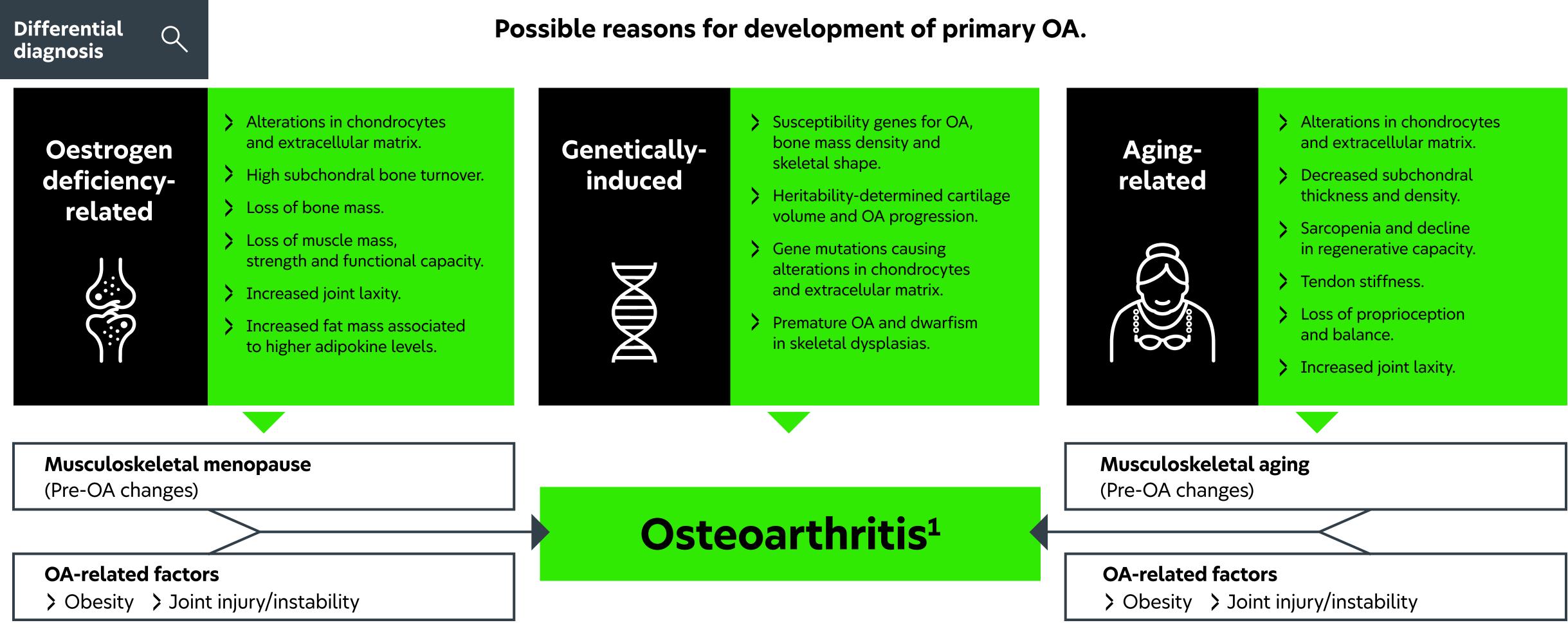
Clinical evidence



Follow-up & summary

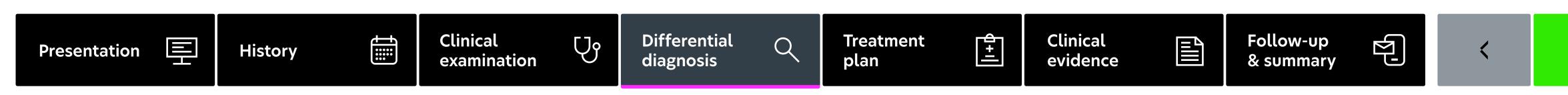






OA, osteoarthritis.

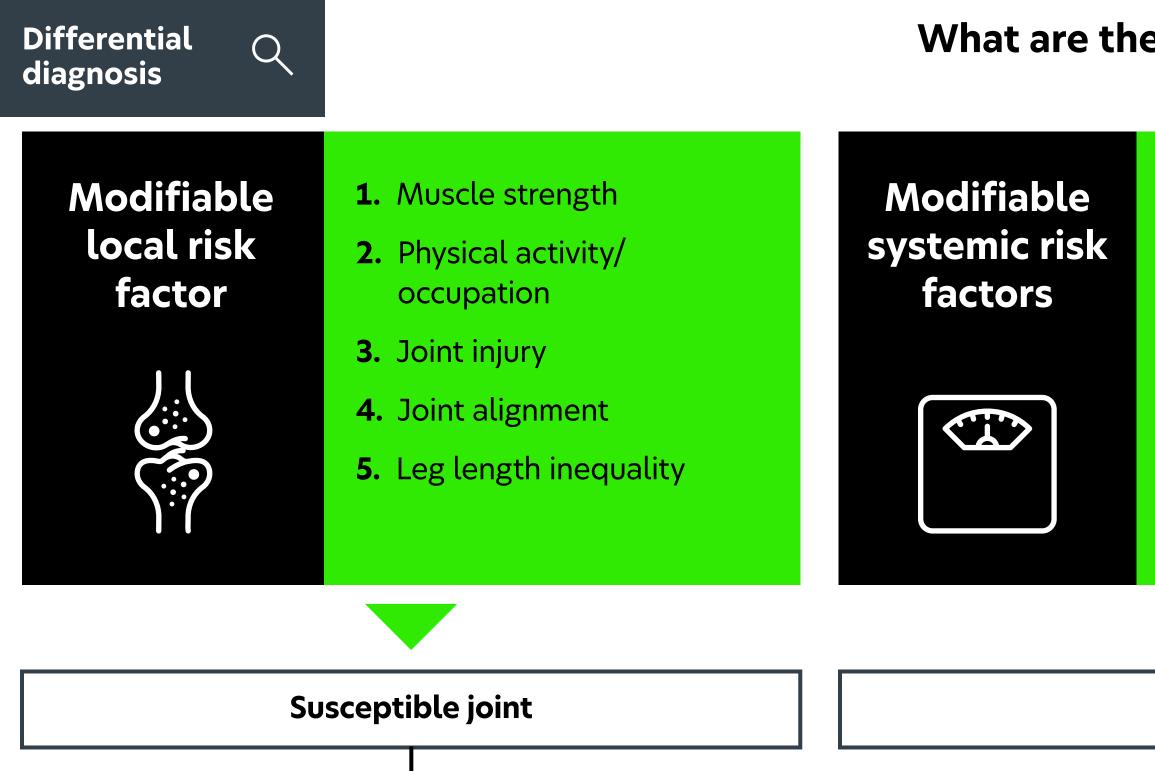
1. Sen R, Hurley J. Treasure Island (FL): StatPearls Publishing 2021. Available at: www.ncbi.nlm.nih.gov/books/NBK482326 (last accessed May 2021). 2. Sankowski A. Pol J Radiol 2013;78(1):7-17.



HALEON

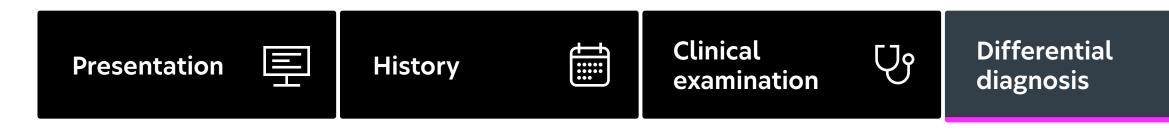






OA, osteoarthritis.

1. Johnson V, Hunter D. Best Pract Res Clin Rheumatol 2014;28(1):5-15.



HALEON

What are the risk factors for OA?¹

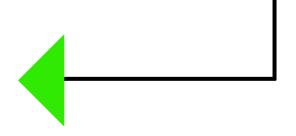
- **1.** Obesity
- **2.** Diet
- 3. Bone metabolism



- **1.** Age
- **2.** Sex
- **3.** Genetics
- **4.** Ethnicity

Predisposed individual

Increased risk of incident OA





Treatment plan



Clinical evidence



Follow-up & summary











Differential diagnosis

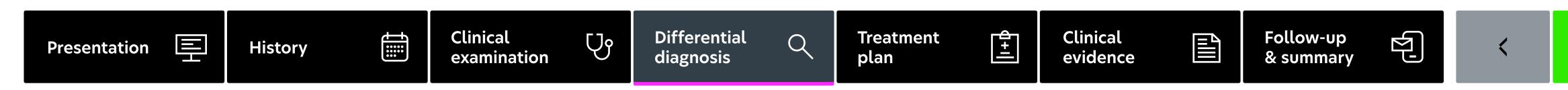
Risk factors for OA in Alex.¹

Q

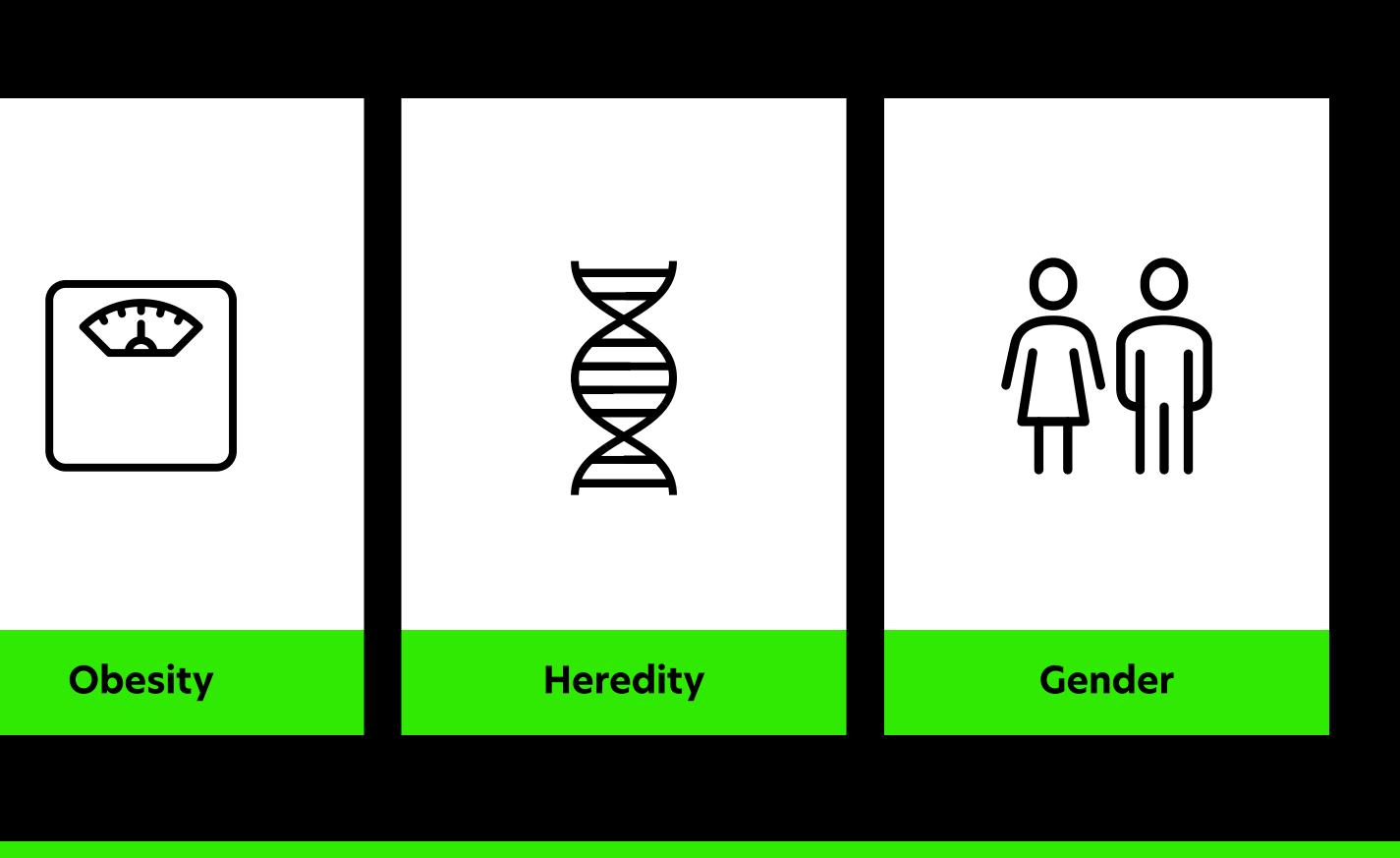


Older age

OA, osteoarthritis. 1. Johnson V, Hunter D. Best Pract Res Clin Rheumatol 2014;28(1):5-15.















Lifestyle modification

- **>** Exercise.
- > Weight loss.

NSAID, non-steroidal anti-inflammatory drug. 1. Kolasinski S, et al. Arthritis Care Res 2020:72(2):149-162.



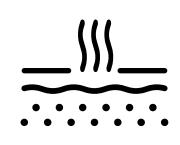
HALEON

Clinical recommendations for Alex.



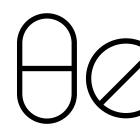
Non-pharmacologic

- Heat, therapeutic cooling. $\mathbf{>}$
- Tibiofemoral knee brace for stability.
- Balance training. \mathbf{i}
- **>** Yoga.



Pharmacologic

- > Oral non-steroidal anti-inflammatory drugs (NSAIDs).
- > Topical NSAIDs.
- > Oral paracetamol.





Q



Clinical evidence



Follow-up & summary









Treatment plan



What modalities can be used to treat Alex?

Click an option to select your answer.

WEIGHT LOSS EXERCISE PHYSIOTHERAPY MANAGEMENT **ALL OF THE ABOVE**

Presentation



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History



Clinical examination



Differential diagnosis

PHARMACOLOGICAL







Treatment plan



Clinical evidence



Follow-up & summary





Treatment plan



What modalities can be used to treat Alex?

Click an option to select your answer.

× WEIGHT LOSS EXERCISE PHYSIOTHERAPY PHARMACOLOGICAL MANAGEMENT ALL OF THE ABOVE

Presentation



Ē

History



Clinical examination



Differential diagnosis





Treatment plan

Q



Clinical evidence



Follow-up & summary





Treatment plan



What modalities can be used to treat Alex?

Click an option to select your answer.

WEIGHT LOSS **× EXERCISE** PHYSIOTHERAPY PHARMACOLOGICAL MANAGEMENT ALL OF THE ABOVE

Presentation



Ē

History



Clinical examination



Differential diagnosis

Q





Treatment plan



Clinical evidence



Follow-up & summary





Treatment plan



What modalities can be used to treat Alex?

Click an option to select your answer.

WEIGHT LOSS EXERCISE

× PHYSIOTHERAPY

MANAGEMENT

ALL OF THE ABOVE

Presentation



Ē

History



Clinical examination



Differential diagnosis

PHARMACOLOGICAL

Q



Treatment plan



Clinical evidence





Treatment plan



What modalities can be used to treat Alex?

Click an option to select your answer.

WEIGHT LOSS EXERCISE PHYSIOTHERAPY

ALL OF THE ABOVE

Presentation



History



Clinical examination

×



Differential diagnosis

PHARMACOLOGICAL MANAGEMENT



Q



Treatment plan



Clinical evidence



Follow-up & summary





Treatment plan



What modalities can be used to treat Alex?

Click an option to select your answer.

✓ WEIGHT LOSS ✓ EXERCISE ✓ PHYSIOTHERAPY PHARMACOLOGICAL MANAGEMENT ALL OF THE ABOVE

Presentation



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History



Clinical examination



Differential diagnosis



Treatment plan

Q



Clinical evidence



Ary

Follow-up & summary





Treatment plan



Lifestyle modification for Alex¹

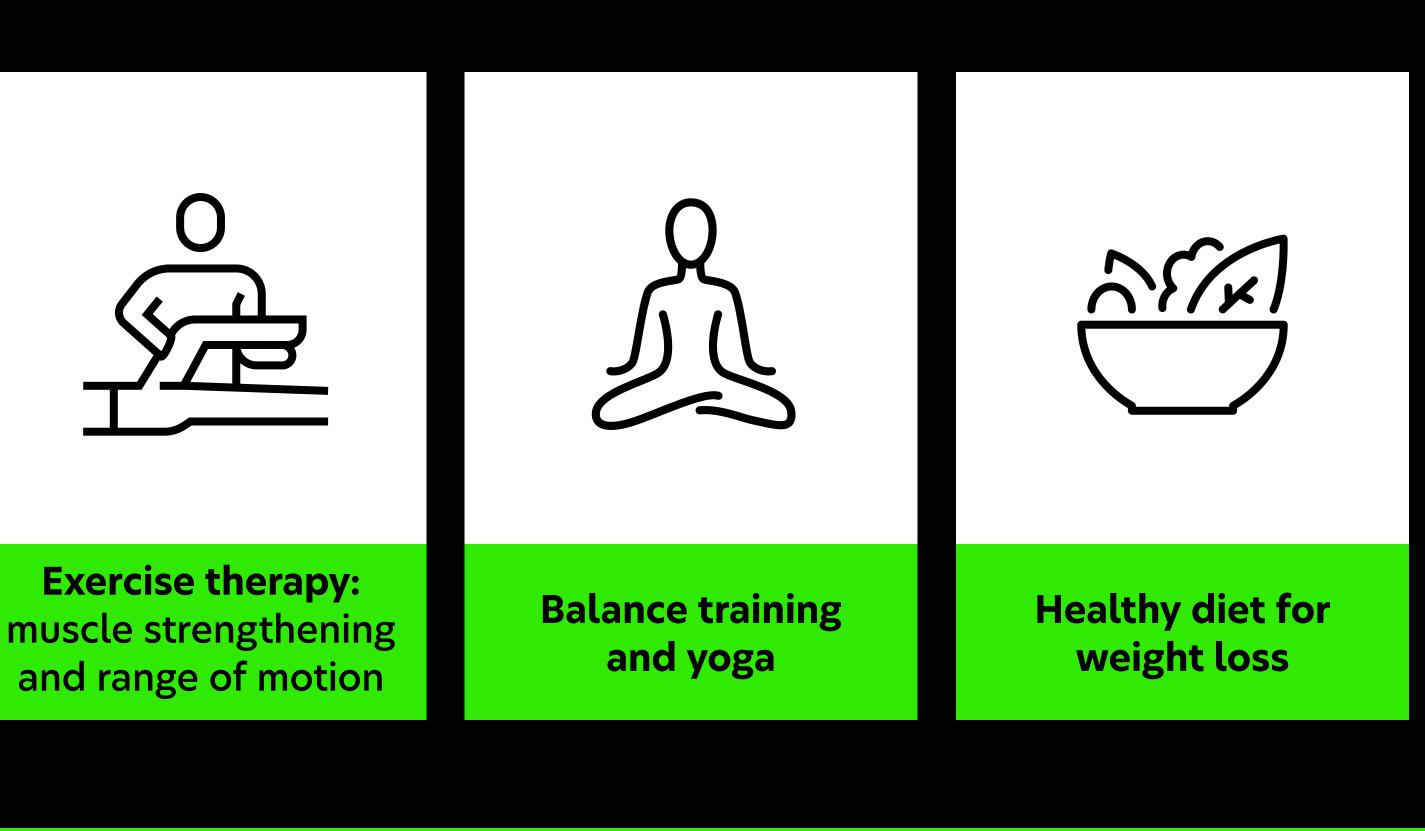


Regular walking

1. Johnson V, Hunter D. Best Pract Res Clin Rheumatol 2014:28(1):5-15.









Treatment plan



Clinical evidence



Follow-up & summary





Treatment plan



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC ORAL PARACETAMOL ORAL **IBUPROFEN**

ALL OF **THE ABOVE**

Presentation



Ē

History



Clinical examination



Differential diagnosis





Treatment plan







Treatment plan



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC × ORAL PARACETAMOL ORAL **IBUPROFEN**

> ALL OF THE ABOVE

Presentation



Ē

History



Clinical examination



Differential diagnosis

HALEON





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Treatment plan



Clinical evidence



Follow-up & summary



Treatment plan



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC

ORAL PARACETAMOL

ORAL **IBUPROFEN**

ALL OF THE ABOVE

Presentation



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History



Clinical examination

X



Differential diagnosis

HALEON

Q





Clinical evidence



they a

Follow-up & summary





Treatment plan



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC ORAL PARACETAMOL



ALL OF THE ABOVE

Presentation







Clinical examination

X



Differential diagnosis

HALEON

Q

plan







Treatment plan



What are the possible therapeutic options for Alex?

Click an option to select your answer.

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TOPICAL DICLOFENAC ORAL PARACETAMOL TBUPROFEN ALL OF THE ABOVE

Presentation









Differential diagnosis

HALEON





Treatment plan



Clinical evidence



Follow-up & summary





Clinical evidence

What do guidelines recommend?

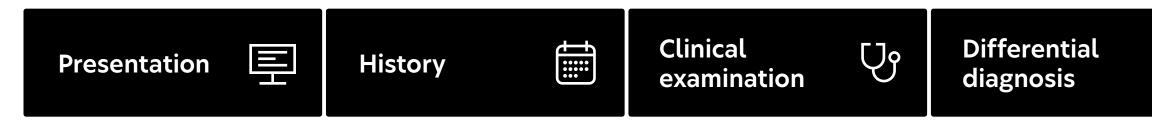
Topical NSAIDs

There is strong-grade evidence from over 13 clinical guidelines & systematic reviews recommending use of topical NSAIDs over systemic treatments due to a more favourable safety profile (e.g., ESCEO, OARSI, ACR, NICE).

Paracetamol for OA

Based on guidelines & peer-reviewed literature, the role of paracetamol in OA has been downgraded to neutral or weak recommendation (e.g., ESCEO, OARSI, ACR).

ACR, American College of Rheumatology and the Arthritis Foundation; ESCEO, The European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis; NICE, National Institute for Health and Care Excellence; NSAID, non-steroidal anti-inflammatory drug; OA, osteoarthritis; OARSI, Osteoarthritis Research Society International; PANLAR, Pan American League of Associations for Rheumatology; RACGP, The Royal Australian College of General Practitioners.



HALEON





Treatment plan



Clinical evidence



Follow-up & summary







References

1. Bannuru R, et al. Osteoarthritis Cartilage 2019;27(11):1578-1589.

2. Kolasinski S, et al. Arthritis Rheumatol 2020:72(2):220-233.

3. Rillo O, et al. J Clin Rheumatol 2016;22(7):345-354.

4. National Institute for Health and Care Excellence (NICE), United Kingdom. Osteoarthritis: care and management. Clinical guideline CG177. Available at: www.nice.org.uk/guidance/cg177 (last accessed May 2021).

5. Royal Australian College of General Practitioners. Guideline for the management of knee and hip osteoarthritis 2nd edition. Available at: www.racgp.org.au/getattachment/71ab5b77-afdf-4b01-90c3-04f61a910be6/Guideline-for-the-management-of-knee-and-hip-osteoarthritis.aspx (last accessed May 2021).

6. Bruyere O, et al. Semin Arthritis Rheum 2019;49(3):337-350.

7. Kloppenburg M, et al. Ann Rheum Dis 2019;78(1):16-24.

8. The Best Practice Advocacy Centre New Zealand. Managing pain in osteoarthritis: focus on the person. Available at: www.bpac.org.nz/2018/osteoarthritis.aspx (last accessed May 2021).

9. Kielly J, et al. Can Pharm J (Ott) 2017;150(3):156-168.

10. Ariani A, et al. Reumatismo 2019;71(51):5-21.

11. National Institute of Social Services for Retirees and Pensioners (INSSJP-PAMI), Argentina. La osteoartritis. Prevención, tratamiento y profilaxis. Available from: www.prestadores.pami.org.ar/portalmedicosdecabecera/includes/pdf/Cartilla_Medicos_Artrosis.pdf (last accessed May 2021).



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18. Ibrahim G, et al. Clin Exp Rheumatol 2009;27(3):469.

19. Conaghan P, et al. Drugs Aging 2019;36(1):7-14.

20. Rodriguez-Merchan C. *J Acute Dis* 2016;5(3):190-193.

21. Stewart M, et al. Rheumatol Int 2018;38(11):1985-1997.

22. Bannuru R, et al. Osteoarthritis Cartilage 2020;28:S73-574.

23. Witten PJ, Xia J. Curr Med Res Opin 2020;36(4):637-650.



Treatment plan



Clinical evidence



Follow-up & summary





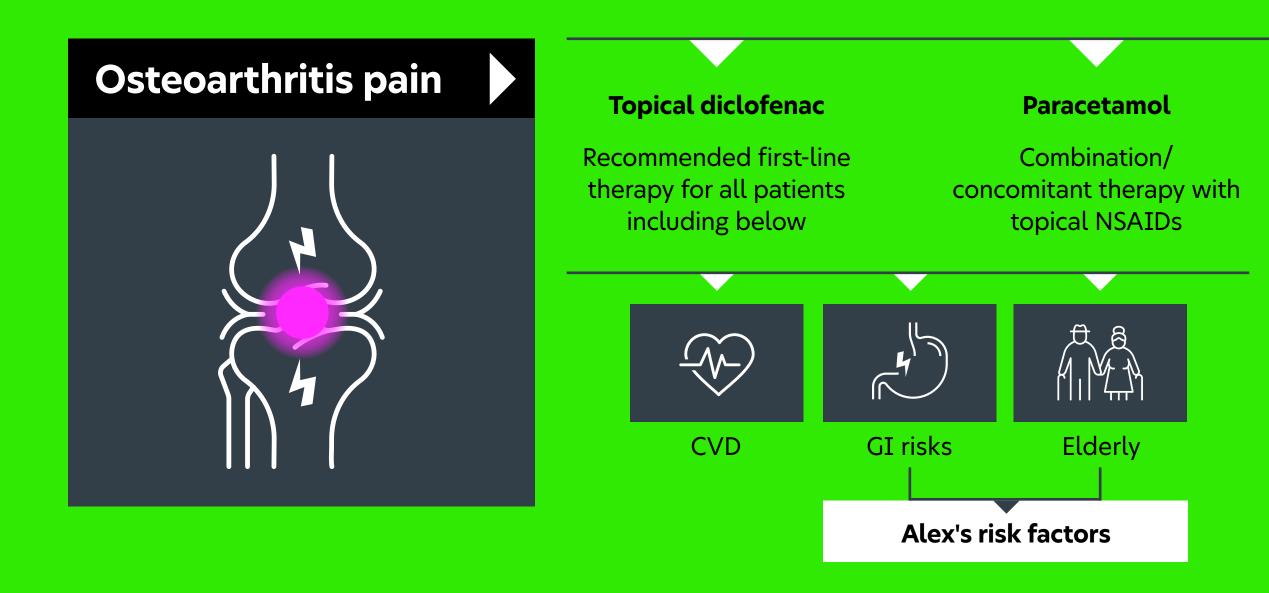




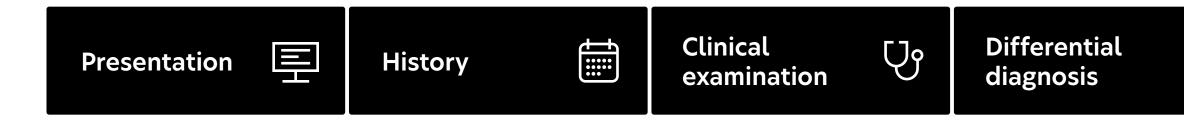
Clinical evidence



What do guidelines recommend?



CVD, cardiovascular disease; GI, gastrointestinal; NSAID, non-steroidal anti-inflammatory drug.



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Ibuprofen

Recommended when response to paracetamol is inadequate

$\star \star \star$

Based on robust evidence 15 guidelines & 6 systemic reviews.¹⁻²³

View references >



Treatment plan



Clinical evidence



Follow-up & summary









References

1. Bannuru R, et al. Osteoarthritis Cartilage 2019;27(11):1578-1589.

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3. Rillo O, et al. J Clin Rheumatol 2016;22(7):345-354.

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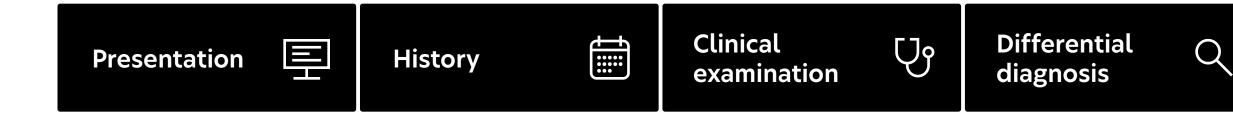
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22. Bannuru R, et al. Osteoarthritis Cartilage 2020;28:S73-574.

23. Witten PJ, Xia J. Curr Med Res Opin 2020;36(4):637-650.



Treatment plan



Clinical evidence



Follow-up & summary









Clinical evidence



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC ORAL PARACETAMOL ORAL **IBUPROFEN** TOPICAL **DICLOFENAC +** ORAL PARACETAMOL

Presentation



History



Clinical examination



Differential diagnosis





Treatment plan



Clinical evidence



Follow-up & summary





Clinical evidence



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC X

> ORAL PARACETAMOL

ORAL IBUPROFEN

TOPICAL **DICLOFENAC +** ORAL PARACETAMOL

Presentation



History



Clinical examination



Differential diagnosis





Treatment plan







Clinical evidence



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC



ORAL **IBUPROFEN**

TOPICAL **DICLOFENAC +** ORAL PARACETAMOL

Presentation



History



Clinical examination



Differential diagnosis

HALEON





Treatment plan



Clinical evidence



Follow-up & summary





Clinical evidence



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC ORAL PARACETAMOL

ORAL IBUPROFEN

TOPICAL **DICLOFENAC +** ORAL PARACETAMOL

Presentation



History



Clinical examination

X



Differential diagnosis





Treatment plan







Clinical evidence



What are the possible therapeutic options for Alex?

Click an option to select your answer.

TOPICAL DICLOFENAC ORAL PARACETAMOL

ORAL IBUPROFEN



TOPICAL **DICLOFENAC +** ORAL PARACETAMOL

Presentation





Clinical examination



Differential diagnosis





Treatment plan







Clinical evidence



What is the recommended management protocol for Alex?

This elderly patient has a history of GI adverse events.



This recommendation is per the current guidelines, however final clinical decision needs to be taken by the physician on a case-by-case basis.¹

GI, gastrointestinal; NSAID, non-steroidal anti-inflammatory drug; PPI, proton pump inhibitor. 1. Kolasinski S, et al. Arthritis Rheumatol 2020:72(2):220-233.



HALEON



Low-dose **ibuprofen** along with PPI for short-term when response to paracetamol is ineffective

OR





Treatment plan



Clinical evidence



Follow-up & summary







Image: Second second

Follow-up

& summary

Alex's **follow-up** management.

> If symptoms persist, low-dose **ibuprofen** (200mg every 6 hours) along with short-term PPI (for up to 10 days) is recommended, if paracetamol is ineffective.²

> If unresponsive after the above, **refer to a specialist.**

PPI, proton pump inhibitor

1. Kolasinski S, et al. Arthritis Rheumatol 2020:72(2):220-233. 2. United States Food & Drug Administration (FDA). Ibuprofen Drugs Facts Label. Available at: www.fda.gov/drugs/postmarket-drug-safety-information-patients-and-providers/ibuprofen-drug-facts-label (last accessed May 2021).



Treatment

plan

Q



Follow-up & summary



Summary

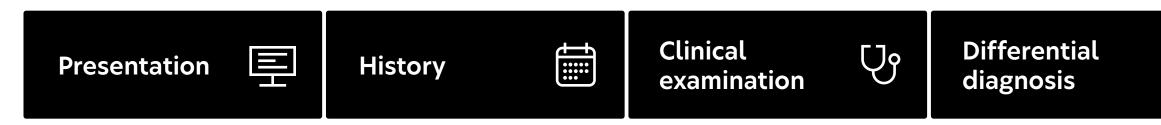
A 67-year-old lady

presented with right knee pain and stiffness each morning for the last 2 years.

- Symptoms have worsened over the last 5-6 months, affecting her daily activities. Pain tends to worsen throughout the day, whereas stiffness tends to improve. She had also noticed slight swelling of the right knee joint for the past 1 week.
- She has a prolonged history of dyspepsia and often complains of acidity. X-ray of knee shows narrowing of joint space, mild effusion and osteophytic projections.
- Based on the clinical features and radiological findings a diagnosis of primary OA was made.

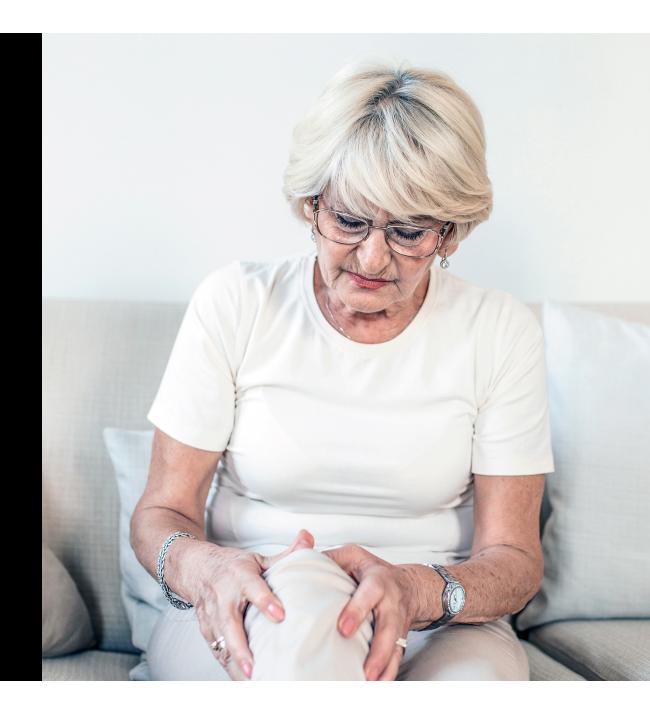
OA, osteoarthritis; SOS, as necessary.

1. United States Food & Drug Administration (FDA). Voltaren Gel (diclofenac sodium topical gel). Highlights of prescribing information. Available at: www.accessdata.fda.gov/drugsatfda_docs/label/2009/022122s006lbl.pdf (last accessed May 2021).



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Application of topical diclofenac 1% gel (2g) four times a day and oral paracetamol 500mg-1g SOS is recommended for this patient.









Clinical evidence



Follow-up & summary







For Healthcare professionals only, Always read label before use. If you wish to report any adverse event, product quality complaint, or Medical enquiry, please contact us at mystory.ae@haleon.com or +973 16500 404. Item Code: PM-BH-PAN-24-00022 | Preparation date: June 2024

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