

Place of crenobalneotherapy in International  
guidelines or recommendations.  
Preponderance of evidence or expert opinion?  
Examples of chronic low back pain and knee  
osteoarthritis ”

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# Chronic low back pain and knee osteoarthritis

- Are the two most treated pathologies among the rheumatological indications in spa therapy
- Boulangé (1999): spa patients observed in a French Health Centre
  - Low back pain 84% of patients
  - Knee osteoarthritis 47% of patients
- Are two pathologies that appear to be widely evaluated by randomized clinical trials

# Clinical practice guidelines / recommendations

- Definition: developed statements to assist practitioners and patient decisions about appropriate health care
- Guidelines are based on:
  - Scientific levels of evidence: mainly randomized clinical trials and meta analysis
  - Experts 'opinion
- Presence in the guidelines represent a scientific, strong and independent validation of the interest of a therapeutic

# Crenobalneotherapy in guidelines

- What is the place of crenobalneotherapy in the management of chronic low back pain and knee osteoarthritis in the national and international clinical practice guidelines ?

# OBJECTIVES

- To evaluate the scientific level of evidence obtained by randomized clinical trials in the evaluation of crenobalneotherapy in low back pain and knee osteoarthritis
- To seek the presence of crenobalneotherapy or its therapeutic components (heat therapy, pool exercises) in the latest guidelines.

# METHODS

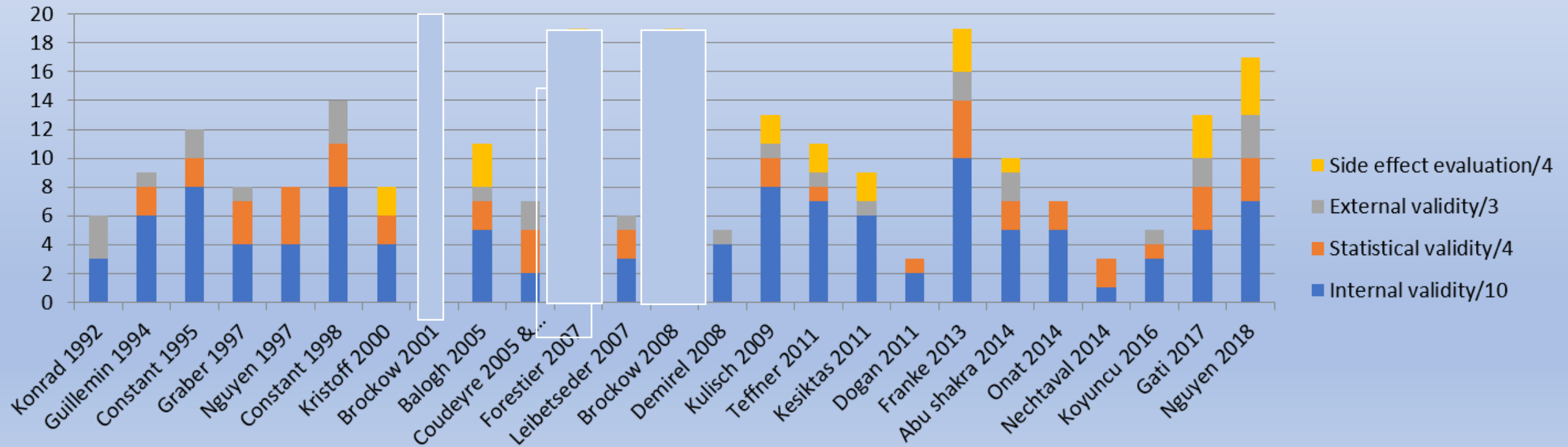
- Bibliographic recherche on PUBMED and PEDRO databases with keywords: “low back pain”, “knee osteoarthritis” AND “recommendations” and “guidelines” OR “randomized clinical trials”
- Assessment of randomized clinical trials by a scoring grid
- Then we searched the presence of “crenbalneotherapy” or “balneotherapy” or “spa therapy” or “heat therapy” or “pool therapy” in the latest recommendations or guidelines
  - Low back pain: in international recommendations since 2015
  - Knee osteoarthritis: in world, US, UK, French national recommendations or guidelines since 2013

# Assessment of Randomized clinical trials in Rheumatology by a scoring grid

- The methodological quality of RCTs was assessed by a scoring grid of 21 items (1 point for 1 validated item)
- Internal validity (assessment of the risk of bias), CLEAR NTP (non pharmacological treatments) grid: 10 items
- External validity: 3 items
- Statistical validity: 4 items
- Evaluation of adverse effects: 4 items

# RESULTS: IN CHRONIC LOW BACK PAIN

- 15 published RCTs assessing crenobalneotherapy
- Scoring grid: low to medium quality





Country Year	Sponsor	Recommendation Crenobalneotherapy	Recommendation Heat or Aquatic exercises
France 2019 HAS	High Authority of Health	not mentioned	
Belgium 2017 Van Vambeke	Centre Fédéral d'expertise des soins de Santé	not mentioned	
United Kingdom 2016 NICE	National Institute of Health and Care Excellent	not mentioned	
Denmark 2018 Stockhendahl	National Clinical Guidelines	not mentioned	Superficial heat (acute low back pain)
USA 2017 Qaseem	American College of Physicians	not mentioned	
USA Minnesota 2018	Institute for Clinical System Improvement	not mentioned	Heat or cold for acute or subacute low back pain
Canada (Alberta) 2015	Toward Optimized Practice	not mentioned	Heat or cold or alternate heat and cold for acute LBP Aquatic exercises (systematical review)
Germany 2017 Chenot	National Care Guideline	not mentioned	Not cold

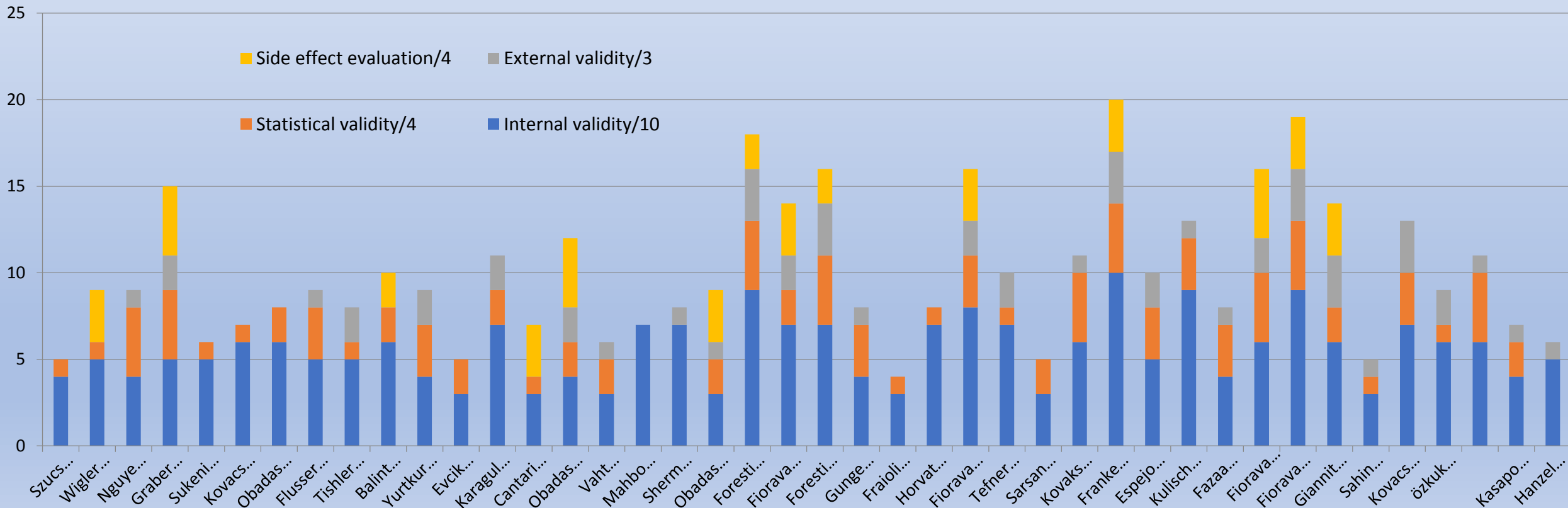
Country Year	Bibliographic Research of crenobalneotherapy	Crenobalneotherapy is a recognized therapy in the country
France 2019 HAS	NO	YES
Belgium 2017	NO	NO
United Kingdom 2016 NICE	NO	NO
Denmark 2018	NO	NO
USA 2017 Qaseem	NO	NO
USA Minnesota 2018	NO	NO
Canada (Alberta) 2015	NO	NO
Germany 2017	NO	YES

# Chronic low back pain

- Crenobalneotherapy does not appear in any of the recommendations of the 8 countries
- Among components of crenobalneotherapy (aquatic therapy, heat)
  - Only aquatic exercises appear in recommendations of one country (Canada)
  - Heat therapy appears in recommendations of 3 countries but only for acute or subacute low back pain
- There is no bibliographic research for crenobalneotherapy in the recommendations of the 8 countries
- In 6/8 countries the crenobalneotherapy is not a recognized therapy

# Knee osteoarthritis

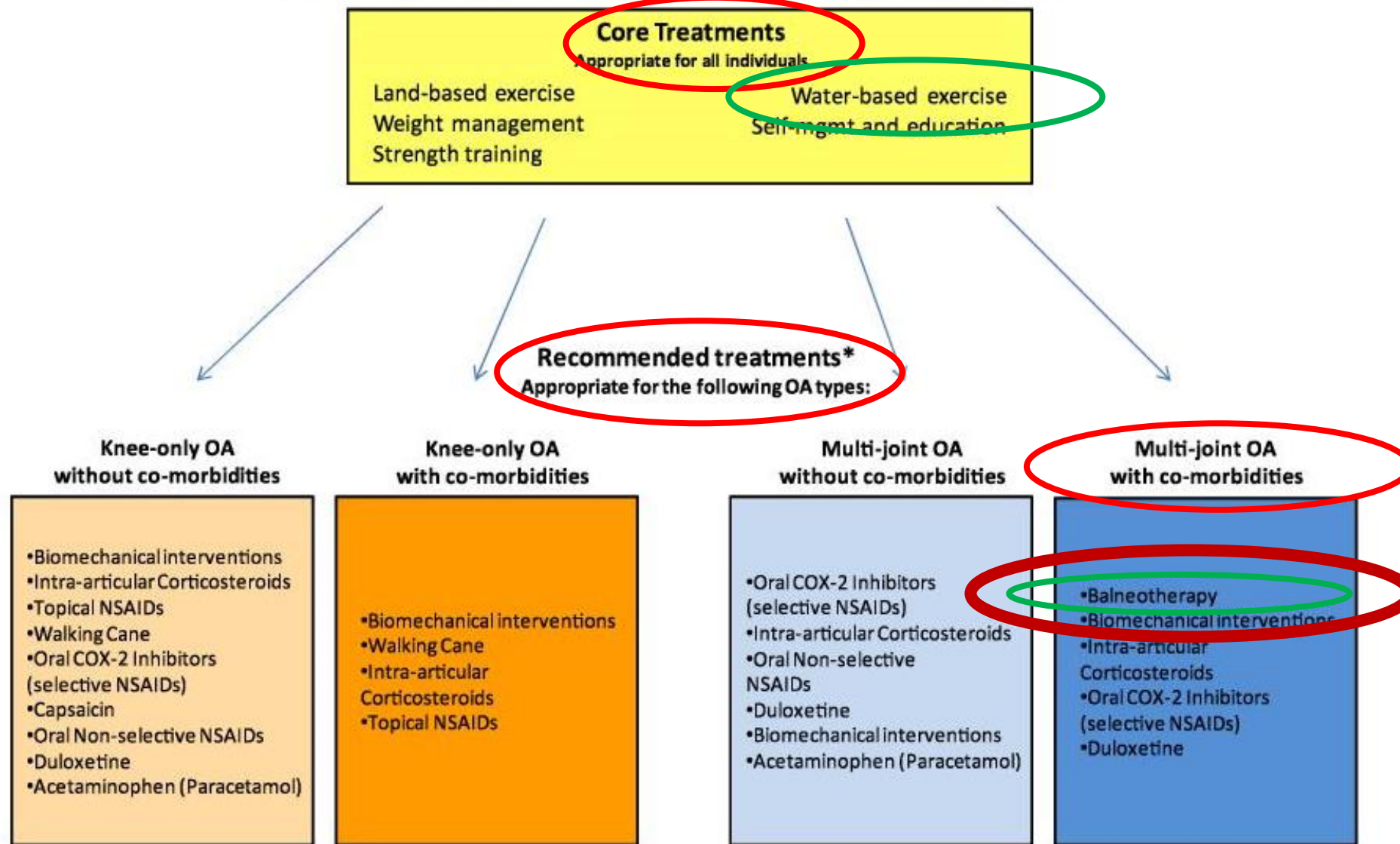
- 28 published RCTs assessing crenobalneotherapy
- Scoring grid: Low to high quality



# Knee osteoarthritis: recommendations

Countries	Sponsor	Crenobalneotherapy	Therapeutic components of balneotherapy
WORLD	OARSI 2014	Only for a subgroup “Multiple joint OA with relevant comorbidity” Level of evidence: “fair”	Thermal agent Pool exercises
EUROPEAN	EULAR 2013	Not mentioned	Thermal agent Pool exercises (according patient’s preference)
EUROPEAN	ESCEO 2019	Not mentioned	Thermal agent Pool exercises
UK	NICE 2014	Not mentioned	Pool exercises
USA	ACR 2012	Not mentioned	Thermal agent Pool exercises

## OARSI Guidelines for the Non-surgical Management of Knee OA



\*OARSI also recommends referral for consideration of open orthopedic surgery if more conservative treatment modalities are found ineffective.

Fig. 1. Appropriate treatments summary.

# Knee osteoarthritis

- Crenobalneotherapy is present in only 1/5 guidelines
- OARSI guidelines
  - Crenotherapy is valid only for a subgroup of patients
- The bibliographic research is often not exhaustive and sometimes excluded crenobalneotherapy trials
- Among components of crenibalneotherapy
  - Pool exercises are present in 5/5 guidelines
  - Thermal agent are present in 4/5 guidelines

# Low presence of crenobalneotherapy in the guidelines

- Despite of numerous RCTs published, crenobalneotherapy appears either very rarely or does not appear at all in the recommendations and guidelines for chronic low back pain or knee osteoarthritis



# This can have several explanations

- The bibliographic research is often not exhaustive and sometimes excluded crenobalneotherapy trials
- The methodologic quality of the published clinical trials is not sufficient to convince the experts.
- The experts may have negative prejudgment against the spa treatment, especially when they come from countries where spa therapy is not recognized as a usual treatment modality like USA, UK, or Northern European countries

# Conclusions

- The publication of new RCTs with high methodological quality is needed to improve the level of scientific evidence and the opinion of the experts on crenobalneotherapy.
- An improvement of the bibliographic research is also essential to avoid a "biographical research bias" when establishing guidelines and recommendations
- The presence of experts without prejudice appears highly desirable (but it may be a dream ?)

Dziękuję za uwagę!

Thank you for your attention !

