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WHAT TO DO WHEN THERE IS NO EVIDENCE?

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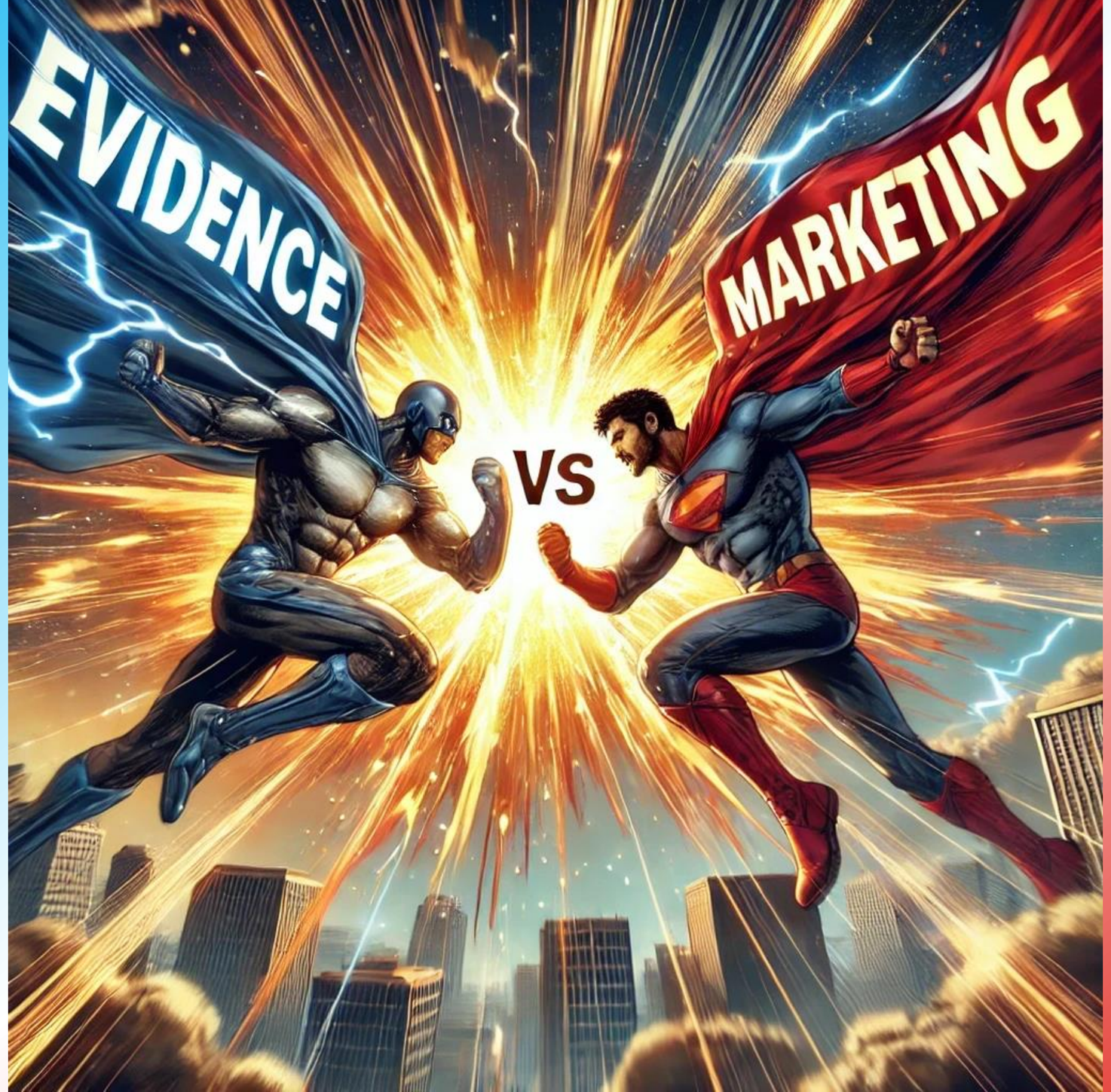
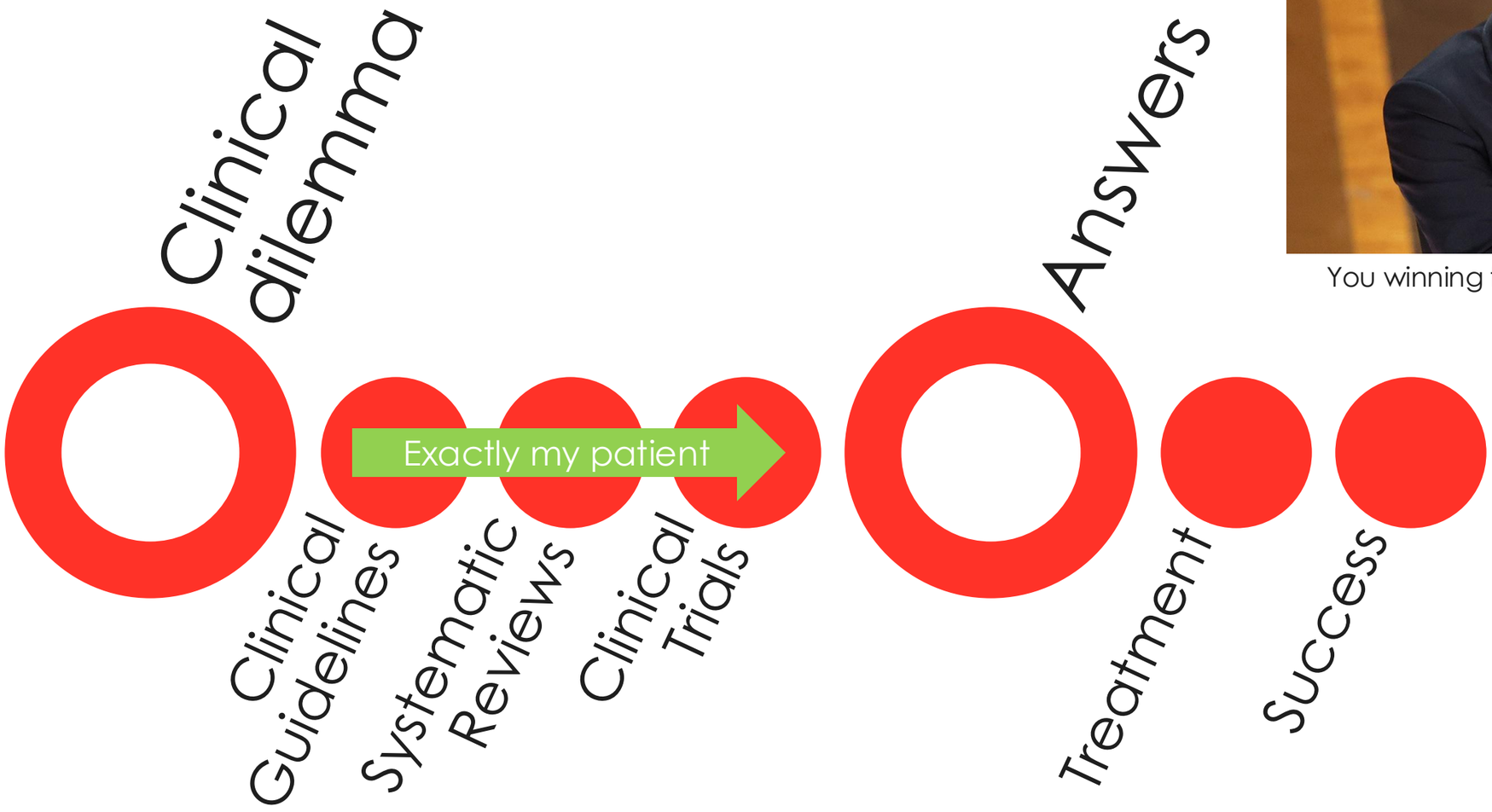
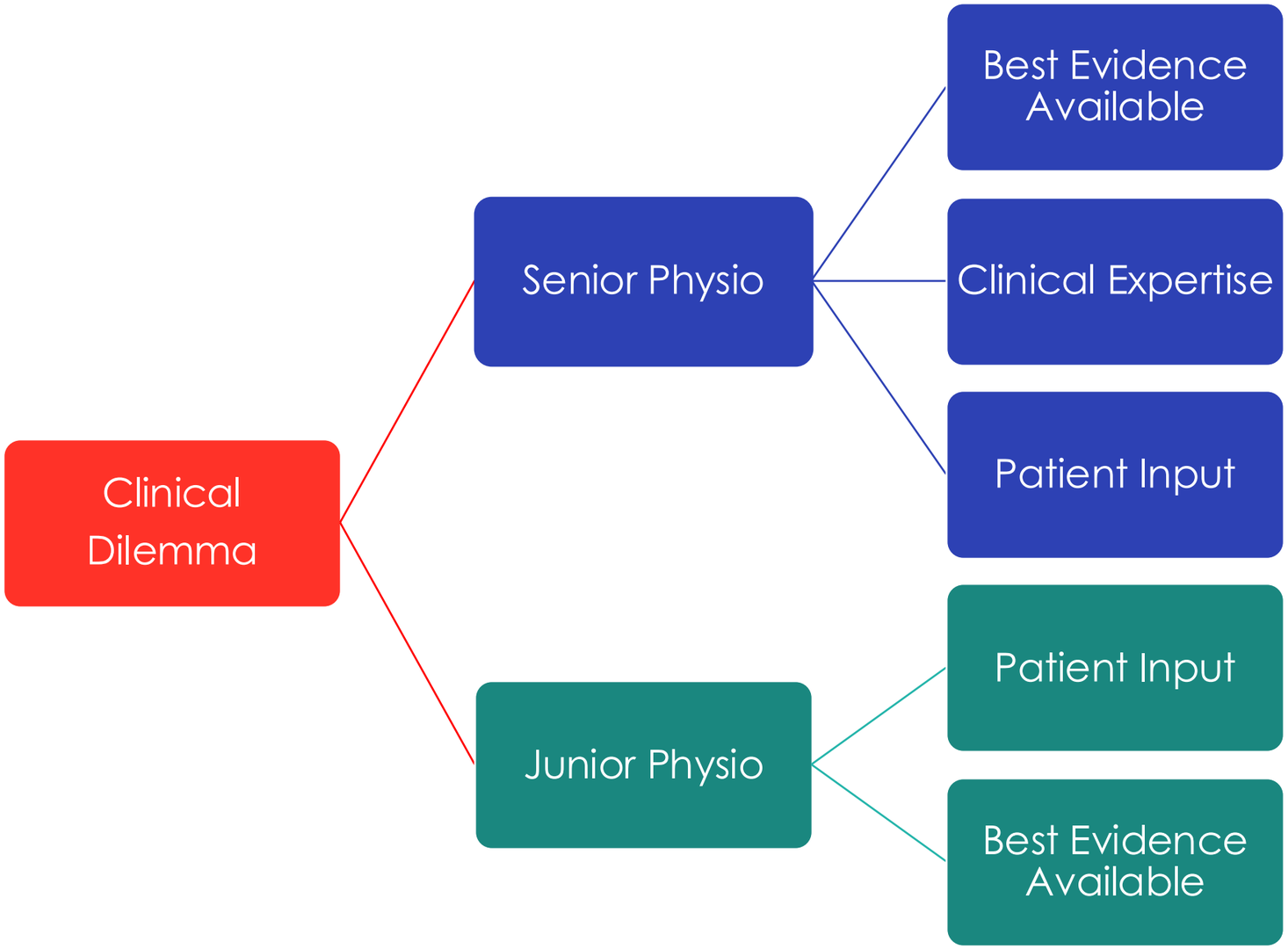

EVIDENCE
VS
MARKETING

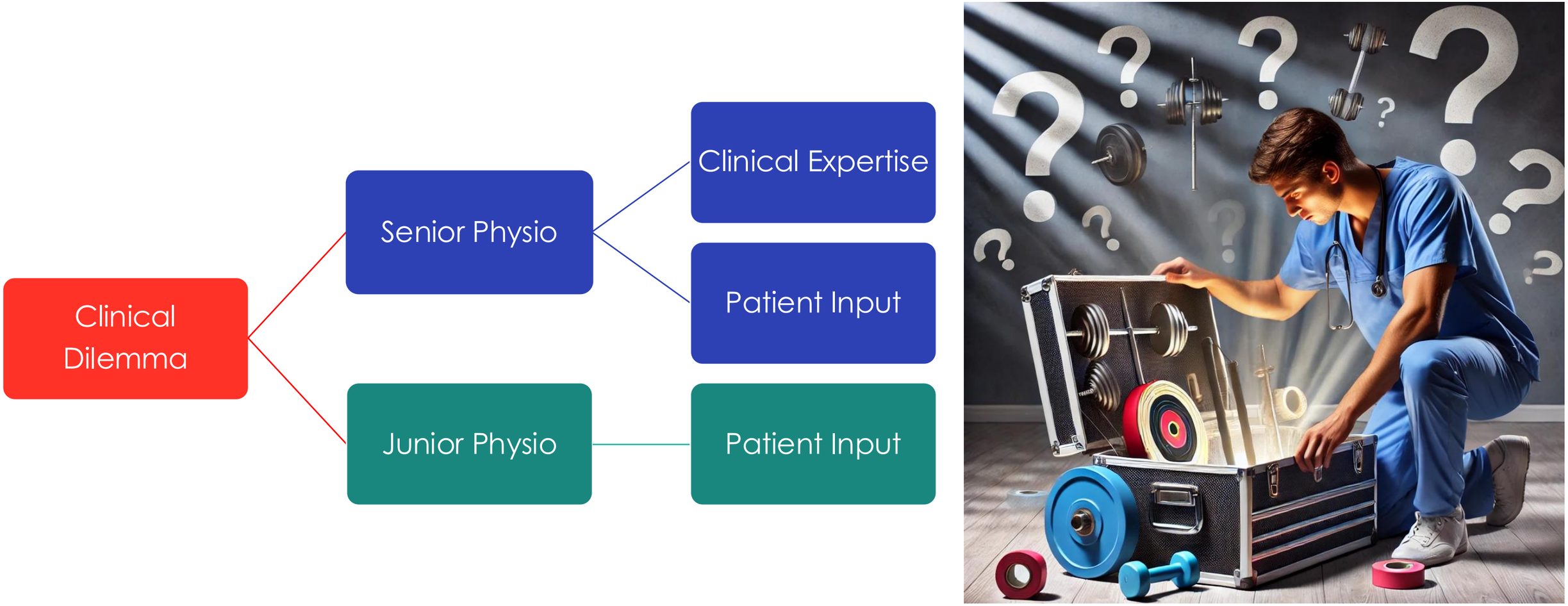
What do we mean by “No evidence”

The Ideal World

You winning the Award for **Best Physio of the year**







Not our target population

Int J Environ Res Public Health. 2022 Nov 3;19(21):14426. doi: 10.3390/ijerph192114426.

Plantar Fasciitis in Soccer Players–A Systemic Review

David C Noriega [1] [2], Ángel Cristo [1], Alejandro León [1], Belén García-Medrano [1], Alberto Caballero-García [3], Alfredo Córdova-Martinez [4]

Not our injury/problem

Clinical Trial > J Sport Rehabil. 2022 Nov 21;32(3):265-271. doi: 10.1123/jsr.2022-0021.

Print 2023 Mar 1.

Ultrasound-Guided Percutaneous Needle Electrolysis Combined With Therapeutic Exercise May Add Benefit in the Management of Soleus Injury in Female Soccer Players: A Pilot Study

Blanca De-la-Cruz-Torres [1], Beatriz Romero-Rodríguez [1], Carlos Romero-Morales [2]

Not our segment

Randomized Controlled Trial > Br J Sports Med. 2015 Oct;49(19):1277-83.
doi: 10.1136/bjsports-2014-094386. Epub 2015 May 15.

Isometric exercise induces analgesia and reduces inhibition in patellar tendinopathy

Ebonie Rio [1], Dawson Kidgell [2], Craig Purdam [3], Jamie Gaida [4], G Lorimer Moseley [5], Alan J Pearce [6], Jill Cook [1]

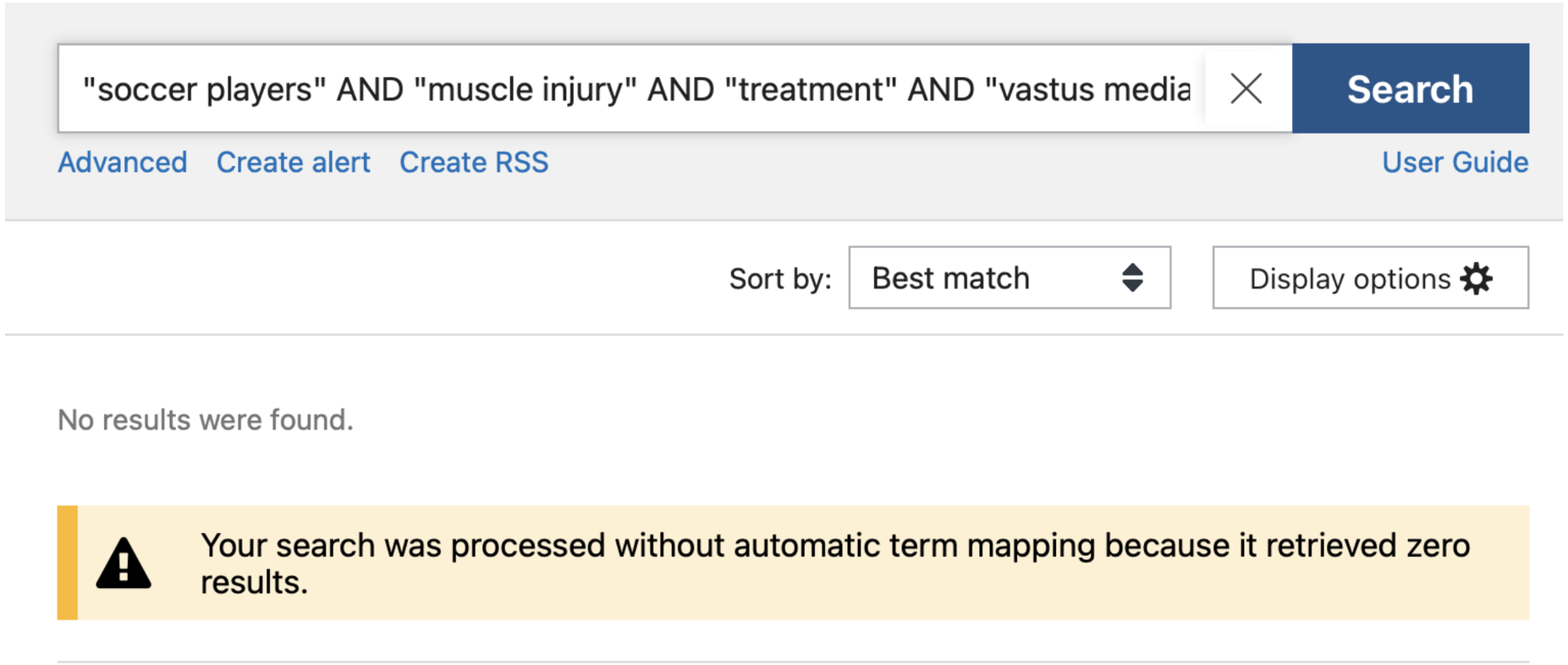
Not our treatment

Review > Int J Environ Res Public Health. 2022 Feb 7;19(3):1859.
doi: 10.3390/ijerph19031859.

The Effectiveness of Ultrasound Deep Heat Therapy for Adhesive Capsulitis: A Systematic Review and Meta-Analysis

Jung-Ha Sung [1], Jung-Min Lee [1 2 3], Jung-Hyun Kim [1 4]

Not evidence at all



PARTIAL VASTUS LATERALIS TEAR AFTER A DIRECT IMPACT IN A FEMALE PROFESSIONAL SOCCER PLAYER. WITH HEMATOMA, PARTIAL LOSS OF FUNCTION, PAIN, MID SEASSON, WITH THREE IMPORTANT MATCHES AHEAD.

1.Do no harm

1. Do no harm
2. Anatomy

1. Do no harm
2. Anatomy
3. Physiology

1. Do no harm
2. Anatomy
3. Physiology
4. Biomechanics

1. Do no harm
2. Anatomy
3. Physiology
4. Biomechanics
5. Pain Mechanisms

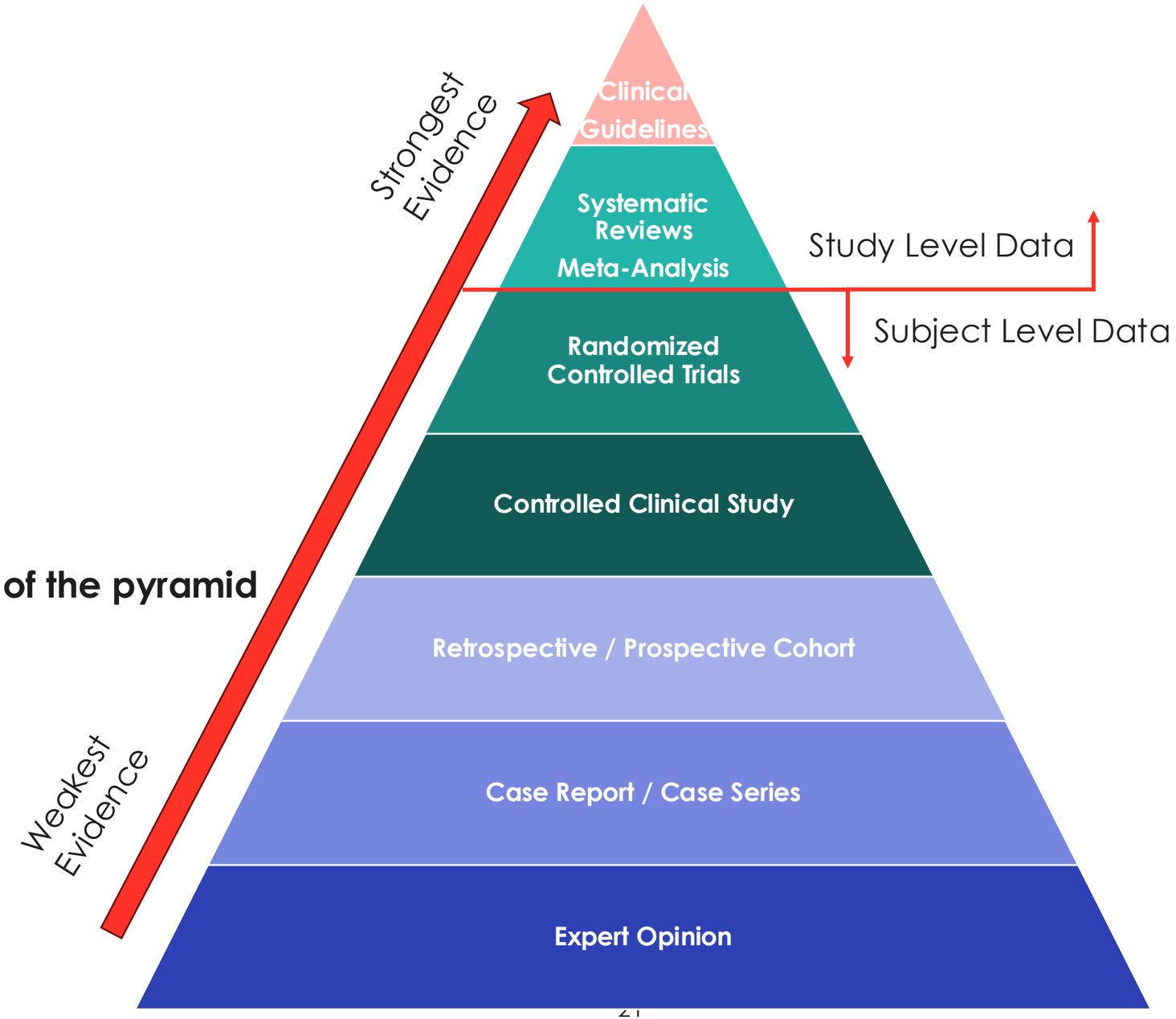
1. Do no harm
2. Anatomy
3. Physiology
4. Biomechanics
5. Pain Mechanisms
6. Clinical Reasoning

1. Do no harm
2. Anatomy
3. Physiology
4. Biomechanics
5. Pain Mechanisms
6. Clinical Reasoning
7. Talk to other professionals

1. Do no harm
2. Anatomy
3. Physiology
4. Biomechanics
5. Pain Mechanisms
6. Clinical Reasoning
7. Talk to other professionals
8. Record & Measure Everything

And now:

Become part of the pyramid



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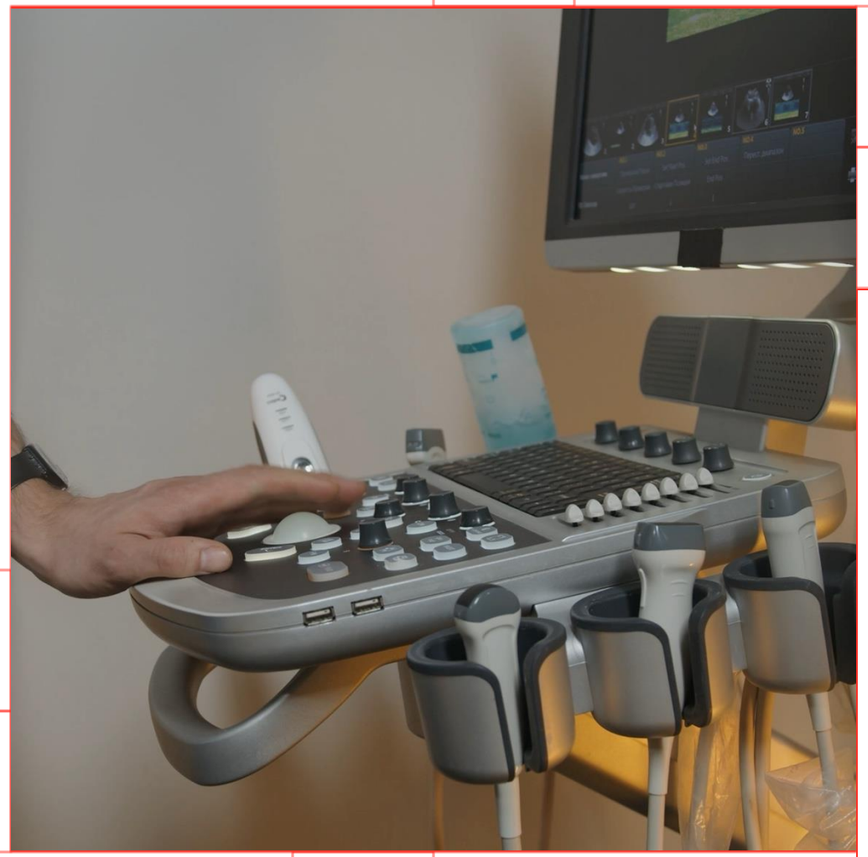
REHABILITATIVE ULTRASOUND IMAGING - RUSI

Is it EBP? When and Why use it?

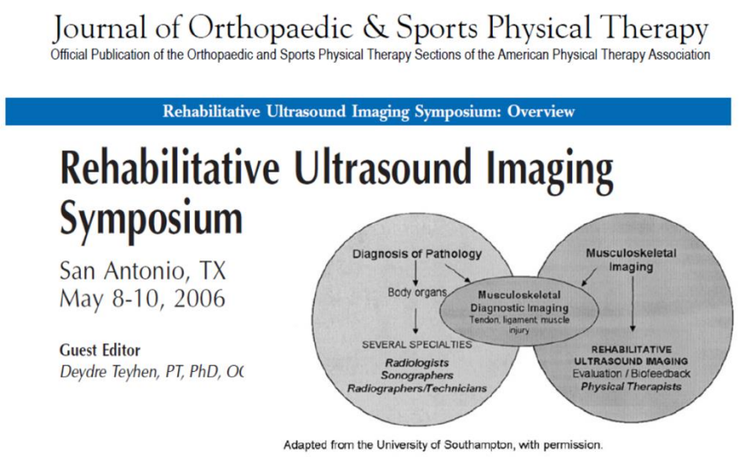
What is it?



The use of US in order to get dynamic or static images of the MSK system.

- **Is it a trend?**
- **Is it legal?**
- **Is it useful?**
- **Is it necessary?**

When did it Start?



1968

The first report of muscle imaging linked to rehabilitation

1980s

Dr Archie Young et al at sowed the seeds for the use of USI by physical therapists.

1990s

Resurgence in the interest of rehabilitative applications of USI amongst clinical therapists.

2006

US Army-Baylor University hosted an international symposium on RUSI

2009

ISEAPT: created and admitted to the WCPT in2011 recognizes US as part of physiotherapy for **diagnostic + treatment**

2016

2nd International symposium on RUSI hosted in Madrid

2024

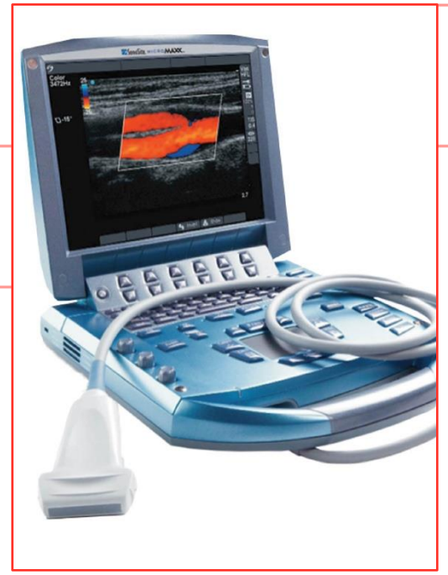
31 research papers publish in the last 5 years using the words "Rehabilitative Ultrasound Imaging"

>1000 results “muscle” and “ultrasound”

Several Masters and Doctorate programs

Types of UltraSound

Stationary US



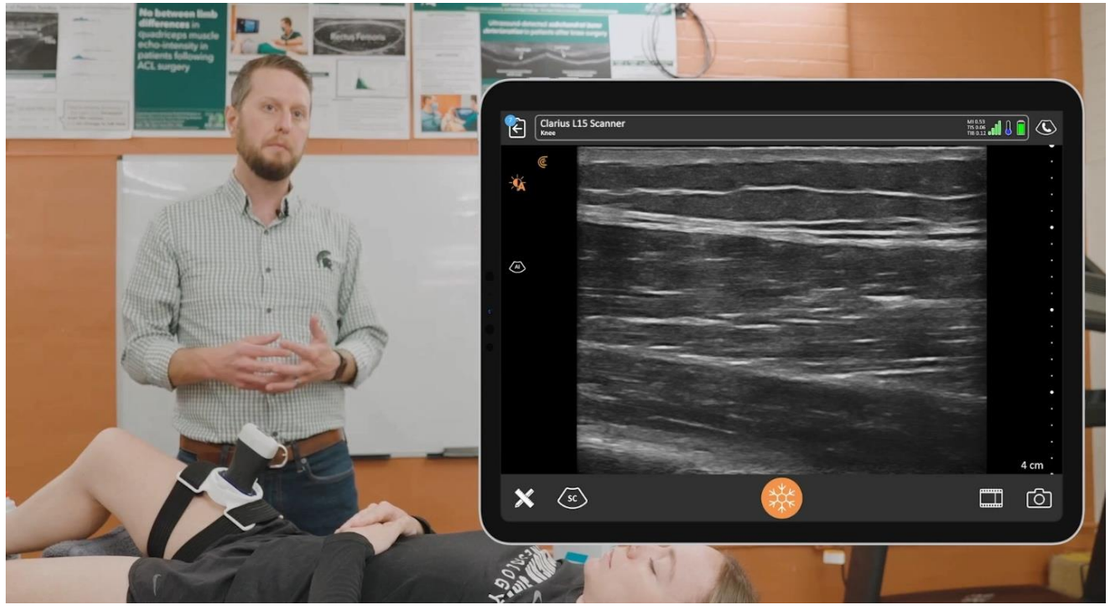
Portable US

Wireless Us

US Probes

Possible Applications

Include (but are not limited to): assist with physical therapy diagnosis, guide treatment procedures and evaluate treatment outcomes.



https://www.youtube.com/watch?v=Xie-jH4G__k

- Invasive Techniques Guidance
- Biofeedback
- Follow-up & Assessment
- Research

Weak Points

Extra Education

Needs further education.

Not taught in Bachelors Degree

Expensive

Initial Investment is high.

Most US cost > 15000€

Long Learning Curve

Hugely related to experience

Needs a lot of time to master

Strong Points

Portable

Easy to transport and use in non hospital/standard spaces.

Dynamic

You can see changes and tissue behaviour onsite

Cost - Efficient

One if the chapest diagnostic by image there is

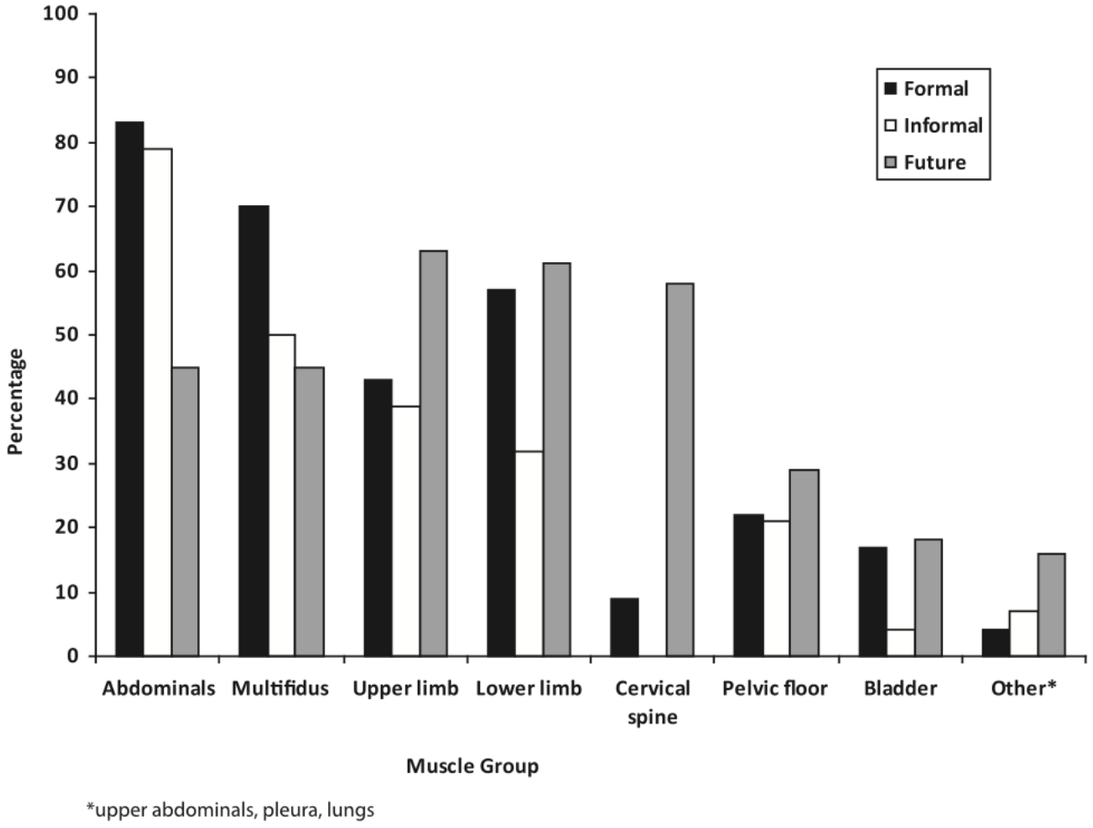


Fig. 1. Percentage of respondents trained to image specific muscles between formal, informal and future training needs.

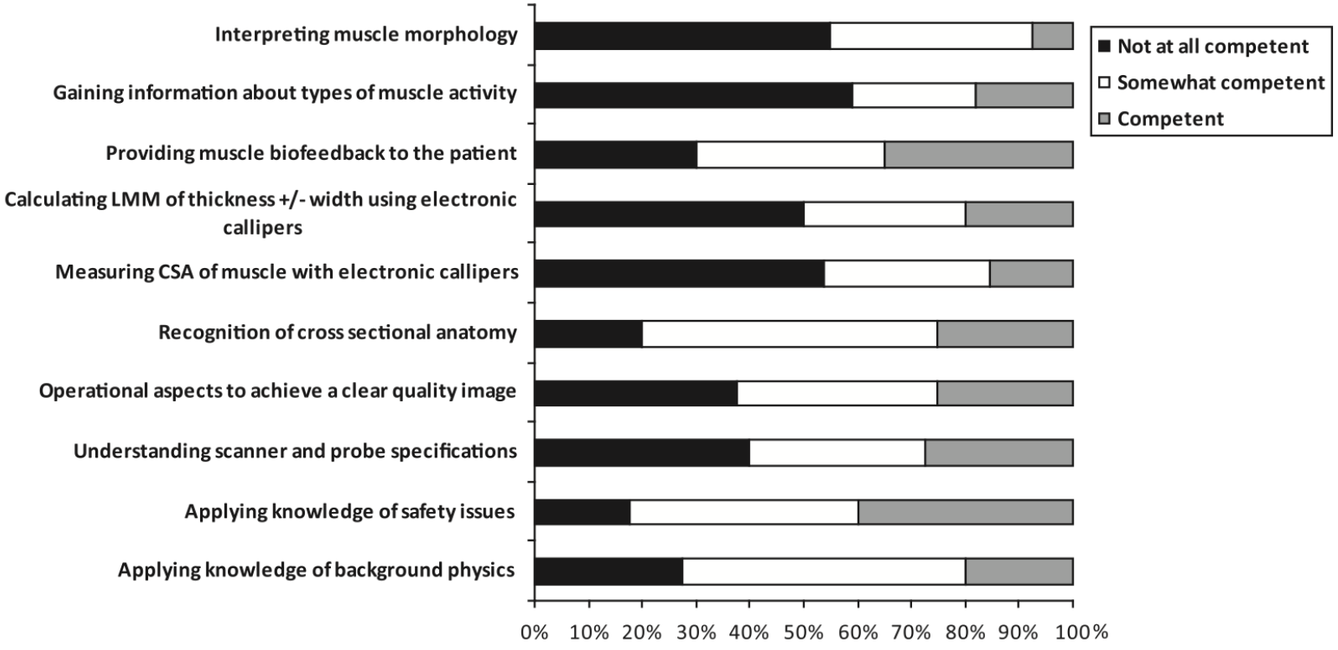
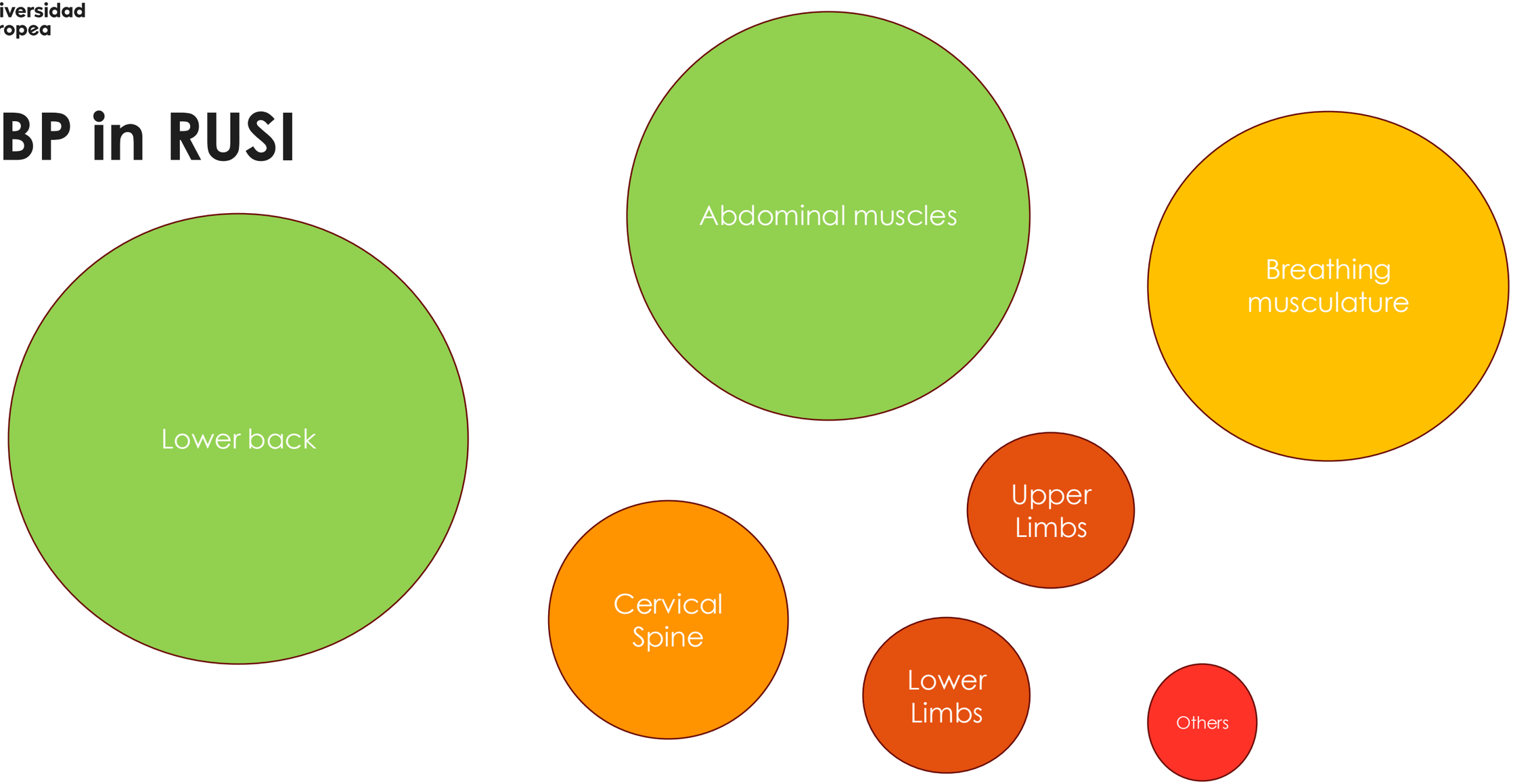


Fig. 2. Respondents perceived competency of specific skills, $n = 40$.

EBP in RUSI



In conclusion

RUSI can:

- Provide feedback to both the physical therapist and patient that may help determine which verbal or tactile cues are most effective to facilitate proper performance of therapeutic exercises during the early phase of rehabilitation.
- Assist physical therapists in their decision-making process related to exercise prescription and progression.
- Help determine when specific injuries have been sufficiently addressed to permit the exercise progression necessary to achieve maximal pain-free function

Thank you