

Consensus statement on viscosupplementation with hyaluronic acid for the management of OA

AND

Decision algorithms for the re-treatment with viscosupplementation in patients suffering from knee osteoarthritis.

Recommendations from the EUROpean VIScosupplementation COnsensus group



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- ❖ from **6** EU countries
- ❖ rheumatologists, orthopedic surgeons, specialists in rehabilitation
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- ❖ **WELCOME TURKEY – Prof Demirhan Dıraçoğlu**



Publications



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Consensus statement on viscosupplementation with hyaluronic acid for the management of osteoarthritis

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Publications

Cartilage. 2018 Jun 1;1947603518783455. doi: 10.1177/1947603518783455. [Epub ahead of print]

EUROVISCO Recommendations for Optimizing the Clinical Results of Viscosupplementation in Osteoarthritis.

Conrozier T¹, Monfort J², Chevalier X³, Raman R⁴, Richette P⁵, Diraçoğlu D⁶, Bard H⁷, Baron D⁸, Jerosch J⁹, Migliore A¹⁰, Henrotin Y¹¹.

Cartilage. 2018 Jul;9(3):263-275. doi: 10.1177/1947603517693043. Epub 2017 Feb 1.

Decision Algorithms for the Retreatment with Viscosupplementation in Patients Suffering from Knee Osteoarthritis: Recommendations from the EUROpean VIScosupplementation CONsensus Group (EUROVISCO).

Raman R¹, Henrotin Y², Chevalier X³, Migliore A⁴, Jerosch J⁵, Montfort J⁶, Bard H⁷, Baron D⁸, Richette P⁹, Conrozier T¹⁰.

EUROVISCO Guidelines for the Design and Conduct of Clinical Trials Assessing the Disease-Modifying Effect of Knee Viscosupplementation

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Background

- ❖ **Viscosupplementation (VS) is a symptomatic treatment of knee osteoarthritis (KOA).**
- ❖ **Despite positive assessment by clinicians and a high level of evidence, recent guidelines fail to recommend this .**
- ❖ **To provide clarification to prescribers and users of VS, a task force of European experts on OA has been brought together in order to propose a consensual approach on VS in knee and other joints OA.**
- ❖ **“EUROVISCO group”**

Methods



- ❖ **3** members of the group were tasked to collate an exhaustive literature analysis on the topic.
- ❖ **24** statements were discussed during the meeting. After extensive debate, the expert panel had to give opinion on issues within statements.

For each out of the 24 issues, the average voting score, standard deviation, median and range are given as well as the global opinion (Disagree, Doubtful, Agree).

Results

Agreement was achieved on some recommendations.

In particular, the expert achieved unanimous agreement in favor of the following statements:

1. VS is an **effective treatment for mild to moderate knee OA**;
2. VS is not an alternative to surgery in advanced hip OA;
3. VS is a **well-tolerated treatment of knee and other joints OA**;
4. VS should not be used only in patients who have failed to respond adequately to analgesics and NSAIDs;

Results

In particular, the expert achieved unanimous agreement in favor of the following statements:

5. **VS is a « positive » indication** but not a « lack of anything better » indication;
6. The dosing regimen must be supported by evidence-based medicine;
7. **Cross-linking** is a proven means for prolonging IA residence time of HA;
8. The **best approach to inject accurately knee joint is the lateral mid-patellar one**;
9. When VS is performed under fluoroscopy, the amount of radiopaque contrast agent must be as low as possible to avoid viscosupplement dilution.

RE TREATMENT



Background

- ❖ **Viscosupplementation (VS) is a symptomatic treatment of knee osteoarthritis (KOA).**
- ❖ **Although systematic reviews of its repeat use showed favorable benefit/risk ratio, no study was focused on the indication of **re-treatment**.**
- ❖ **A task force, the “**EUROVISCO group**”, has met to look at issues regarding the decision making of re-treatment with VS in KOA.**

Methods

- ❖ **4** members of the group were tasked to collate an exhaustive literature analysis on the topic.
- ❖ **18** statements were discussed during the meeting. After extensive debate, the expert panel had to give opinion on **88** issues within the 18 statements.



- ❖ **1**: to define "success" and "failure" of VS.
- ❖ **2**: to determine when and how to re-treat patients in whom VS previously failed.
- ❖ **3**: to determine when to re-treat patients, successfully treated by a previous VS.

Methods

❖ Scoring and voting methods:

- ❖ For each statement, the experts had to score according to their degree of agreement, using an **4-point Likert scale (0-3)**, 0 meaning « I don't agree », 1 "I tend to disagree", 2 "I tend to agree" and 3 «I fully agree ». Each item was finally classified into 2 categories: "Agree" or "Disagree".
- ❖ After debate and review of literature a statement was adopted and was included into the decision algorithm only if **8 experts or more** voted "I Agree" .
- ❖ At the end of the session, **2 "Decision Trees"** regarding re-treatment with VS were built according to the results of the votes after taking into account all suggestions and comments.

Definition of treatment "failure"

Issues on Definition of Treatment Failure in Knee OA	Level of Consensus	Agreement	
		Agree	Disagree
Do you agree or disagree with the following definition of "treatment failure six months after VS"?			
Pain decrease on VAS <20 mm	Moderately in favor	7	3
Pain decrease on VAS or WOMAC score <50%	Strongly against	2	8
Pain decrease on VAS or WOMAC score <MCII	Strongly in favor	8	2
Remaining pain >PASS	Strongly in favor	9	1
Pain decrease <MCII and pain >PASS	Moderately in favor	7	3
Pain decrease >MCII and pain <PASS but patient dissatisfied	Strongly in favor	8	2
Pain decrease <MCII and pain >PASS but patient satisfied	Strongly against	2	8

The « Patient Acceptable Symptom State » PASS, and the patient self-assessment of satisfaction were considered as the most relevant tools, to define treatment failure.

Predictive factors of "failure"

Among the following items which are those you consider as predictive factors of viscosupplementation failure?

Kellgren-Lawrence grade III and IV	Moderate against	3	7
Kellgren-Lawrence grade IV only	Unanimous in favour	10	0
Overweight (BMI between 25 and 30)	No consensus	5	5
Obesity (BMI>30).	Unanimous in favour	10	0
Clinical severity: pain on VAS >6 and ≤8	Strong against	2	8
Clinical severity: pain on VAS ≥8	Weak in favour	6	4
Severe patello-femoral involvement	Strong in favour	9	1
Isolated patello-femoral OA	Strong in favour	8	2
Synovial fluid effusion <10 ml	Strong against	2	8
Synovial fluid effusion >10 ml	Moderate in favour	7	3
Pain due to meniscus tear.	Strong in favour	9	1
OA flare	Strong in favour	8	2

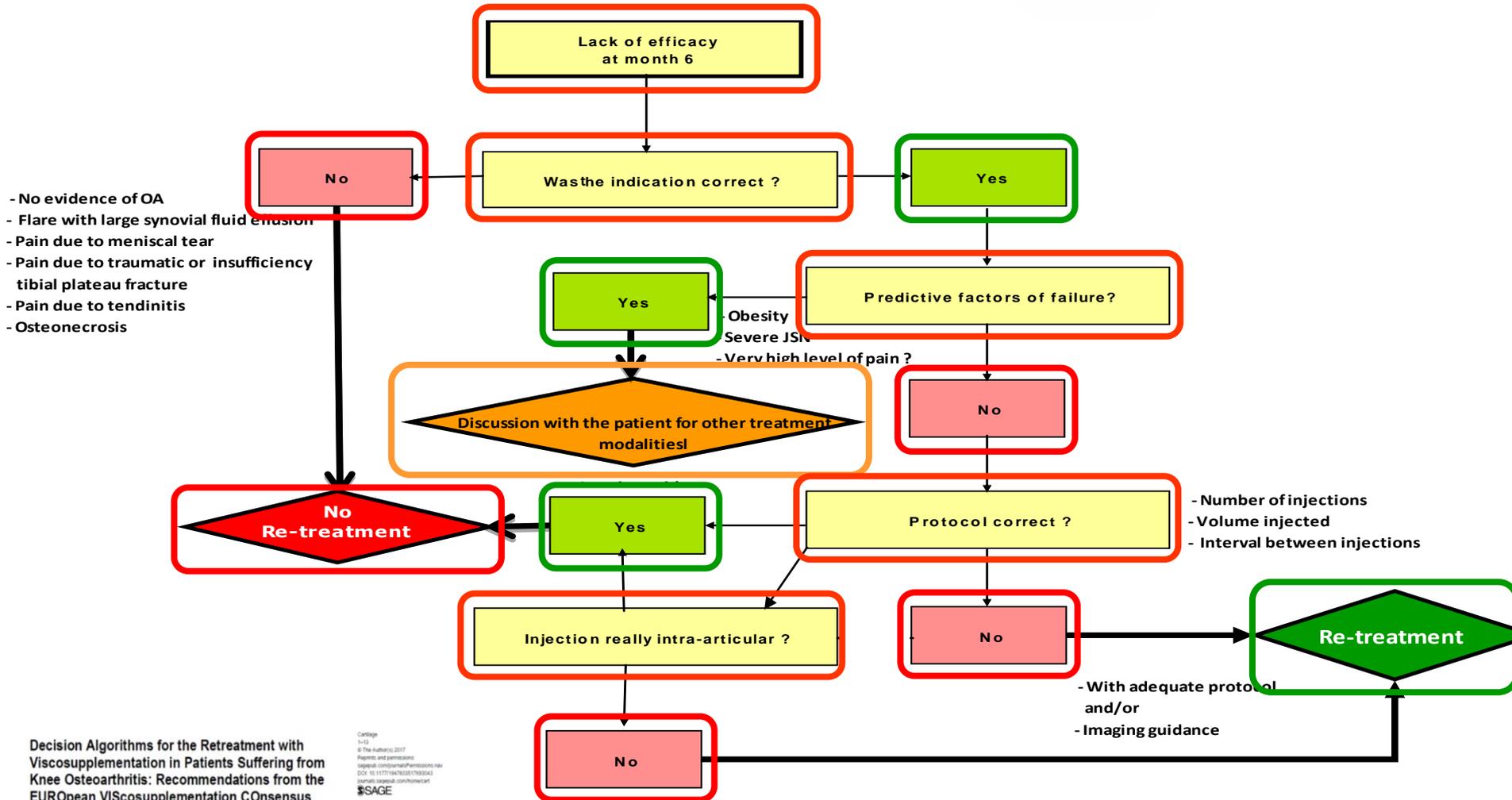
❖ Protocol of injections:

Do you think the dosing regimen must be supported by evidence-based-medicine?	Unanimous in favour	10	0
Do you agree with these assertions?			
Only cross-linking allows a "single injection" regimen?	Unanimous in favour	10	0
Repeated injections (minimum 3) are always necessary for viscosupplements made of linear HA ?	Strong in favour	8	2

❖ Accuracy of injections:

How to ensure the intra-articular administration of the viscosupplement ?			
Imaging guidance	Moderate in favour	7	3
Synovial fluid aspiration	Strong in favour	9	1
Absence of pain at injection	Weak against	4	6
Lateral mid-patellar route of injection	Strong in favour	9	1
Physician experience	Strong in favour	9	1

Algorithm in case of failure



Decision Algorithms for the Retreatment with Viscosupplementation in Patients Suffering from Knee Osteoarthritis: Recommendations from the EUROpean VIScosupplementation CONsensus Group (EUROVISCO)

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Re-treatment after success of viscosupplementation



Issues on re-treatment after success of viscosupplementation	Level of consensus	Agreement	
		Agree	Disagree
Re-treatment with VS must be considered			
Systematically every 6 to 12 months, even if patients remain asymptomatic	Strong against	2	8
Only if pain returns to pre-treatment levels	Strong against	2	8
Only from a certain level of pain (i.e. PASS)	Strong in favour	8	2
As soon as pain occurs again	Strong in favour	9	1
According to the patient's wishes	Moderate in favour	7	3

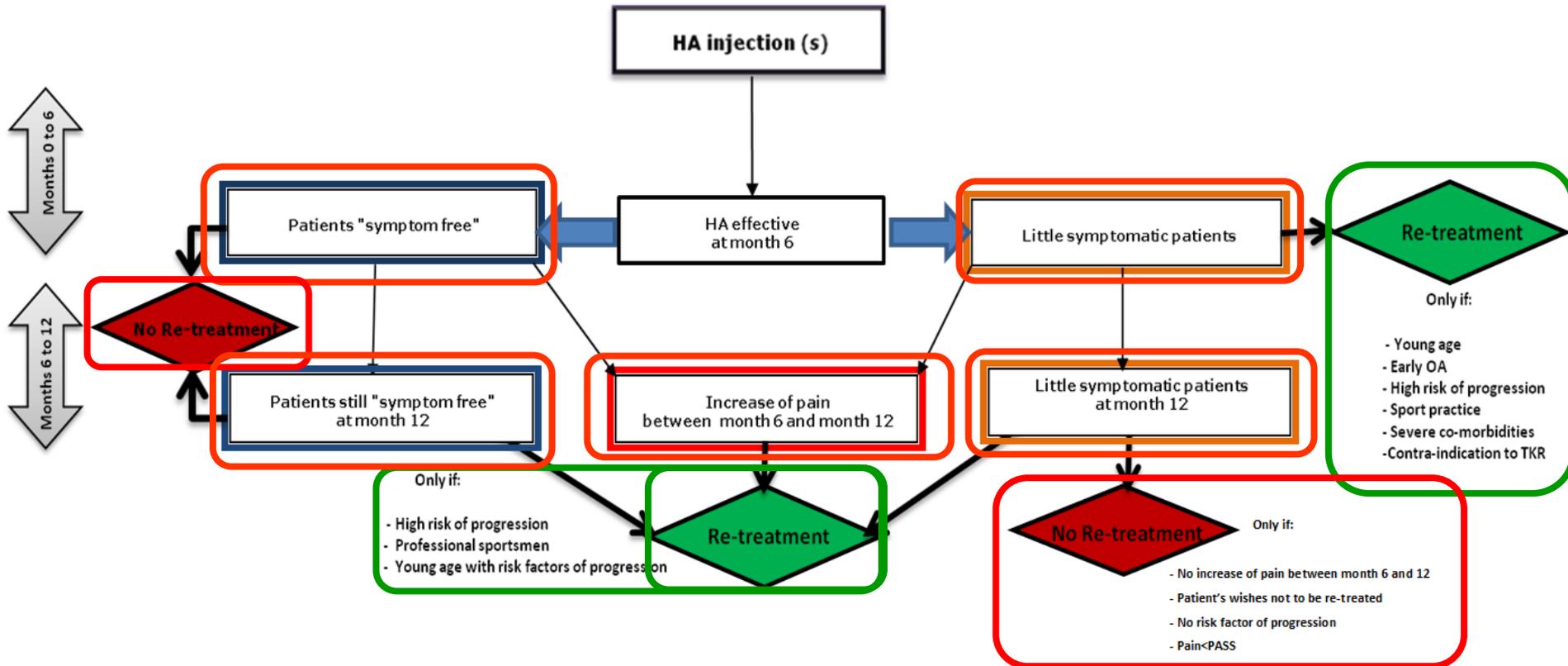
Re-treatment after success of viscosupplementation

Which of these clinical situations may push you into retreating patients?			
Early stage of OA?	Strongly in favor	9	1
Advanced stage of OA?	Strongly against	2	8
Young age?	Strongly in favor	9	1
Elderly	Moderately against	3	7
Risk factors of rapid progression?	Strongly in favor	9	1
Sports practice (leisure)?	No consensus	5	5
Sports practice (professional)?	Strongly in favor	9	1
Contraindication to arthroplasty?	Moderately in favor	7	3
Severe comorbidities?	Strongly in favor	8	2
Does the chondroprotective properties of HA influence your decision to retreat asymptomatic or little symptomatic patients with HA?	Strongly in favor	8	2

VS = viscosupplementation; OA = osteoarthritis; PASS = Patient's Acceptable Symptom State; HA = hyaluronic acid.

When VS was previously successful, re-treatment can be considered after recurrence or increase in pain. However, in subjects with high risk of disease progression, in young patients, and in professional sportsmen re-treatment could be considered systematically, because of the probability of hyaluronic acid to slow OA progression

Algorithm in case of success



Conclusion

The EUROVISCO working group drew up a set of suggestions aimed to help practitioners in the decision making of re-treatment with VS in patients with knee OA who were previously treated with IA HA injections.

- ❖ **In case of failure**, the authors draw attention to the necessity of a rigorous clinical and radiological analysis, and to the use of VS in concordance with data from the Evidence-Based-Medicine.
- ❖ **In patients who previously improved with VS**, re-treatment can be considered as soon as pain recurs or increases again. However, in subjects with a high risk of progression, in young patients, early OA, professional sportsmen, VS re-treatment can be considered systematically even in asymptomatic patients as there is compelling new evidence on HA to retard OA progression

OPTIMISING Visco TREATMENT

HOW TO GET THE BEST RESULTS

Original Article

EUROVISCO Recommendations for Optimizing the Clinical Results of Viscosupplementation in Osteoarthritis

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Jörg Jerosch⁹, Alberto Migliore¹⁰, and Yves Henrotin¹¹**

GOALS OF THIS PUBLICATION

❖ 3 MAIN GOALS

- (1) to identify the population subgroups that can benefit the most from viscosupplementation,
- (2) to provide recommendations on techniques of injection that will optimize the chance of success of HA injections, and
- (3) to discuss the appropriateness of using HA in several clinical situations that are commonplace in daily practice but have not been yet the subject of specific recommendations.

METHODS

❖ 4 Issues were identified

- (1) Imaging factors predicting failure or response to viscosupplementation in osteoarthritis of the knee and other joints;
- (2) Clinical factors predicting failure or response to viscosupplementation in osteoarthritis of the knee and other joints;
- (3) Imaging guidance and injection techniques for optimizing the results of viscosupplementation in osteoarthritis of the knee and other joints
- (4) do soluble biomarkers allow to predict the response to viscosupplementation in osteoarthritis of the knee and other joints

RESULTS / RECOMMENDATIONS

❖ 5 KEY STATEMENTS - UNANIMOUS

A **good indication, based on both an accurate analysis of signs, symptoms** and clinical history and a careful clinical examination may improve the chances of success of VS.

A good indication based on **a precise analysis of the radiological features** may improve the chances of success of VS.

A **good technique of injection** and/or the use of an imaging guidance may enhance the chances of success of VS.

Radiological severity (KL score IV vs. I-III) may influence the response of VS in the knee.

Radiological severity (KL score IV vs. I-III) may influence the response of VS in the hip.

RESULTS / RECOMMENDATIONS

❖ 3 KEY RECOMMENDATIONS – ON INJECTION TECHNIQUES

We recommend administering VS in the knee through a **lateral patellofemoral route**.

We recommend performing VS under fluoroscopy or ultrasound guidance in the hip.

We recommend performing VS under fluoroscopy or ultrasound guidance in the ankle.



RESULTS / RECOMMENDATIONS

❖ FURTHER RECOMMENDATIONS – ON INJECTION TECHNIQUES

We recommend **withdrawing any synovial fluid** by careful aspiration before injecting HA in any joint.

We recommend **respecting the dosing regimen**—number of HA injections and interval between injections—that have been proved by controlled randomized trials regardless the joint to be treated.

We recommend performing VS under fluoroscopy or ultrasound guidance in the **hip, Ankle and Shoulder**

RESULTS / RECOMMENDATIONS

❖ 2 KEY PATIENT SELECTION CRITERIA – APPROPRIATE PATIENTS

Patients with symptomatic, mild to moderate knee OA (JSN grade 0-2, KL I-III), with normal weight or moderate overweight (BMI < 30), not sufficiently improved by nonpharmacological interventions and analgesics/NSAIDs.

Patients with symptomatic, mild to moderate knee OA (JSN grade 0-2, KL I-III), with normal weight or moderate overweight (BMI < 30), with contraindication to analgesics/NSAIDs.

Patients with symptomatic, mild to moderate hip OA (JSN grade 0-2, KL I-III), not sufficiently improved by nonpharmacological interventions and analgesics/NSAIDs.

“The right medicine”,

“in the right quantity”,

“given in the right stop”,

“at the right time”.

Quoted from David Lannik MD, 2005.

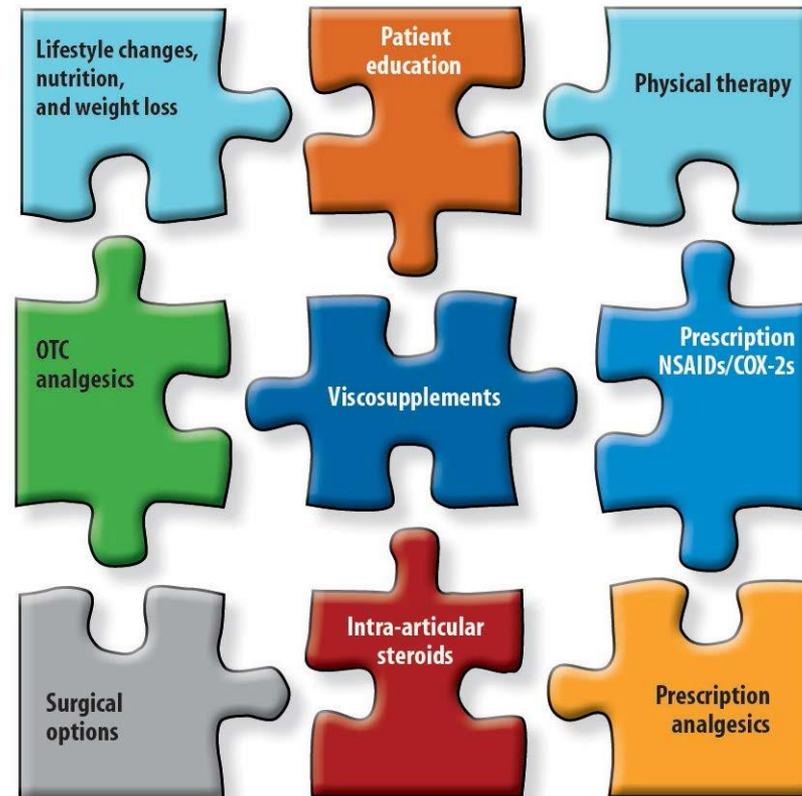


SUMMARY

- ❖ **Appropriate patient Selection – Select the BEST RESPONDER**
- ❖ **Educate the patient- Set realistic Expectations**
- ❖ **Identify a Positive Indication to use Viscosupplementation**
- ❖ **Use a High MW, Cross linked product for best results**
- ❖ **Injection technique is KEY in achieving the best response and avoiding complications and reactions**
- ❖ **Re treatment must be offered for the correct patient at the right time**
- ❖ **“EUROVISCO Guidelines” is a great resource in the daily management of patients in ‘real’ life setting**

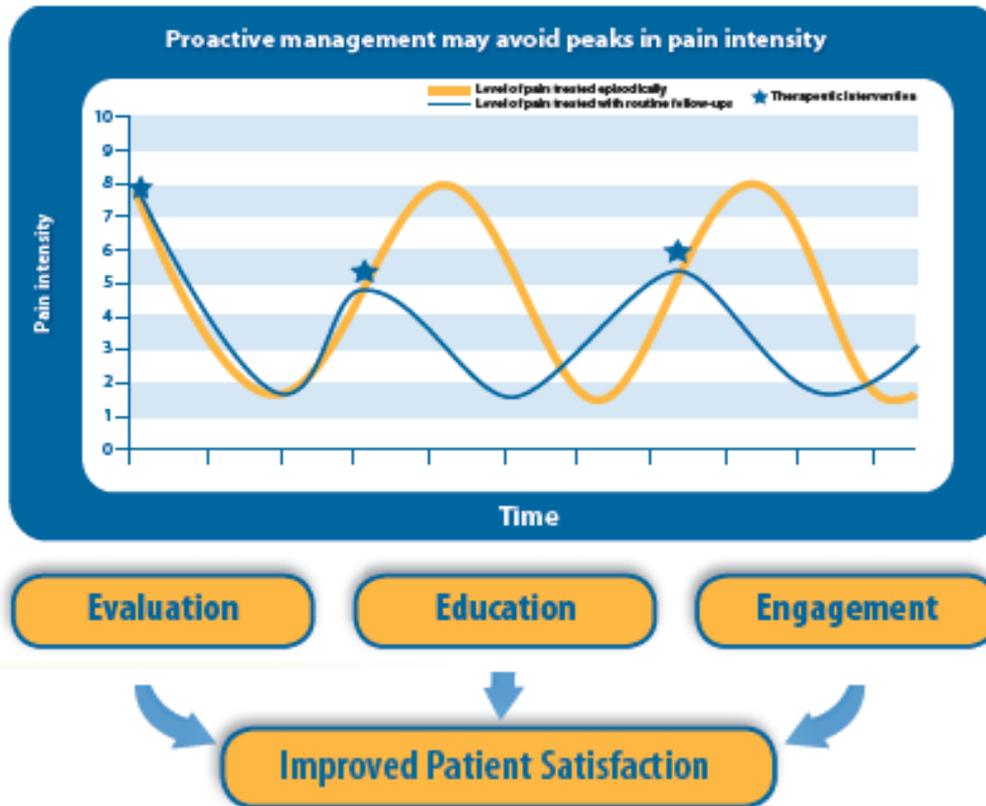
EACH PATIENT PRESENTS WITH INDIVIDUAL NEEDS¹⁻³

AN INDIVIDUALIZED MULTIMODAL APPROACH IS RECOMMENDED



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LONGITUDINAL PROACTIVE CARE





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