

# ARTHRYS LWP<sub>s</sub> IN OSTEOARTHRITIS TREATMENT

CASE REPORT #3 - 29TH MAR 2022



**Francesco Fiacchi**  
Ospedale di Suzzarra  
Mantua, Italy



**Osteoarthritis**  
I-II-III Kellgren-  
Lawrence grade

Outpatient infiltration



**6+1 months**  
follow-up

Clinical assessment through VAS  
and K/HOOS-12 scales



**20 patients**  
34-73 years

**CHECK FOR MORE**



+39 0549 964537  
info@tissyou.com

Strada di Paderna 2  
Domagnano 47895, RSM

# RATIONALE

Osteoarthritis is a degenerative disease that affects joints, resulting in pain and limited mobility. Treatments range from physical work and NSAIDs administration to major surgeries; in this gap there are several minimally-invasive approaches that mostly consist in intra-articular injections, either of molecules, i.e., hyaluronic acid, or autologous blood- or fat-derived cells. Indeed, the regenerative medicine protocols gained enormous consent in the past years, although results are dependent on the high individual variability of each patient, e.g., age, BMI, gender, smoke-habits, tissue characteristics. Collagen peptides are a novel biological approach “from the bench” that can rely on high standardization. The low molecular weight peptides (LWPs) of Arthrys are obtained from the hydrolytic fragmentation of bovine collagen. LWPs can spread into the joint environment, acting as a direct reinforcement of the extracellular matrix of connective tissues deteriorated by degenerative, inflammatory, or traumatic events.

## METHODS



### Osteoarthritis (OA)

Kellgren-Lawrence grade I (3 knees), grade II (8 knees, 2 hips), grade III (3 knees, 4 hips)

All knees had medial femoral-tibial OA, except for one patellofemoral OA; three knees had meniscopathy



### 20 patients

14 knee, 6 hip  
34-73 years



### Knee

Outpatient infiltration and secondary treatment at 6 months



### Arthrys 5

ATY-52, 5 mg/ml

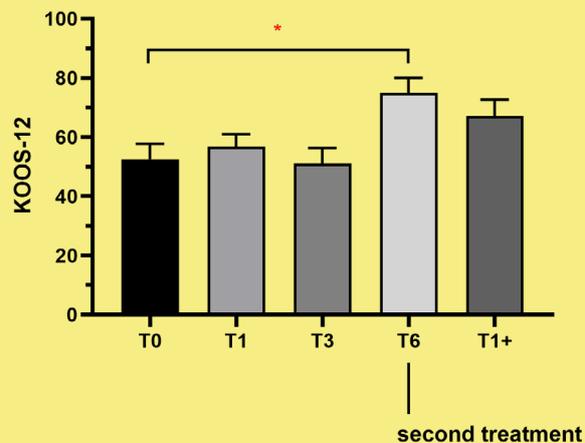
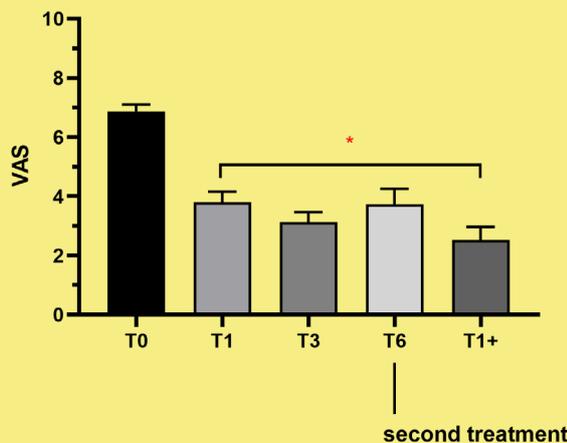


### VAS

K/HOOS-12

# KNEE GROUP

## SUB-ANALYSIS

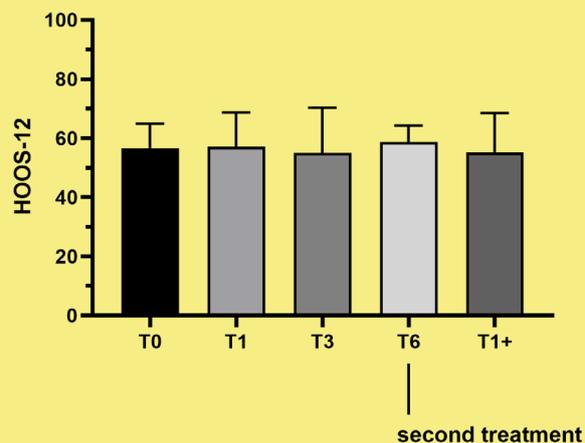
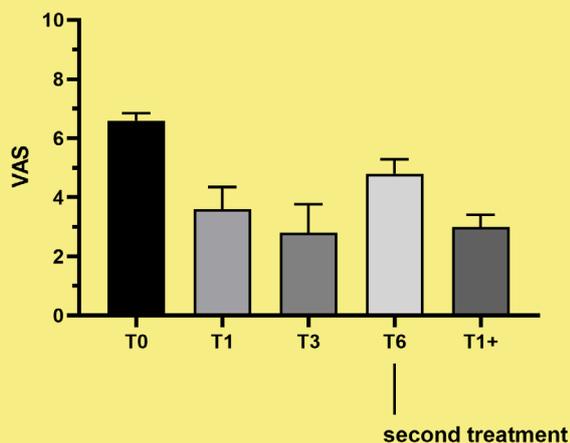


Mean VAS pain score and KOOS-12 functional score (n=14) before and after Arthrys 5 mg/ml treatment. Secondary injection of Arthrys 5 mg/ml was performed at 6 months.

Errors bars show SEM; \*p < 0.01

# HIP GROUP

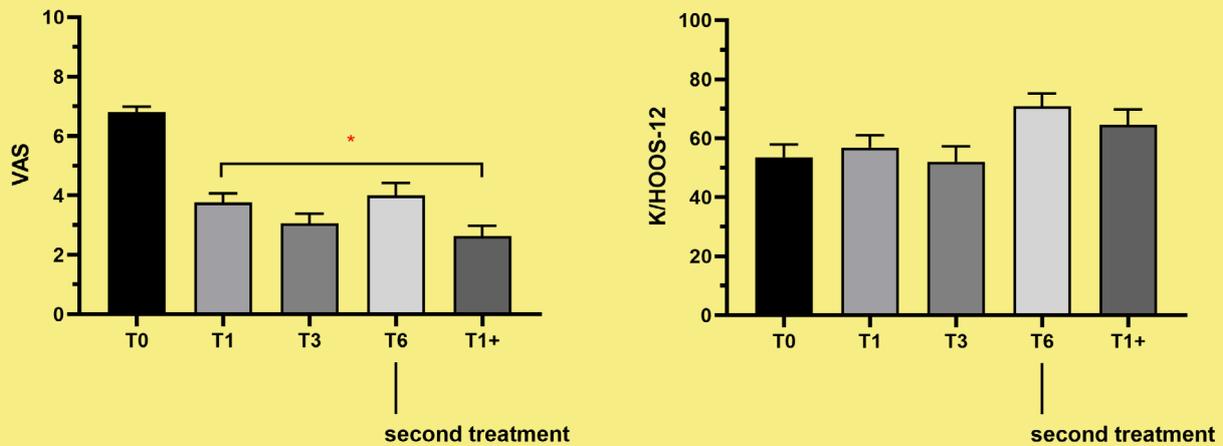
## SUB-ANALYSIS



Mean VAS pain score and HOOS-12 functional score (n=6) before and after Arthrys 5 mg/ml treatment. Secondary injection of Arthrys 5 mg/ml was performed at 6 months.

Errors bars show SEM; \*p < 0.01

## RESULTS SUMMARY



Mean VAS pain score and KOOS-12 functional score (n=6) before and after Arthrys 5 mg/ml treatment. Secondary injection of Arthrys 5 mg/ml was performed at 6 months.

Errors bars show SEM; \*p < 0.01

## DISCUSSION OF RESULTS

We observed solid pain relief 1 month after the first Arthrys injection which was maintained during all the follow-ups. Pain relief was even greater after 1 month following the secondary Arthrys injection, showing a statistically significant difference compared with the first treatment. Results on pain were consistent in both knee and hip groups.

Patients remarkably improved their articular functionally according to the KOOS-12 assessment with a peak at 6 months, showing a delayed outcome in comparison with pain relief. This result was not observed in the hip sub-population, probably due to the putative mechanical origin of hip OA, or due to OA severity since 4 out of 6 hips had a grade III OA on the Kellgren-Lawrence scale. However, even these patients achieved pain relief.