

## Artosyal® high molecular weight

It is a medical device based on hyaluronic acid sodium salt, with a constant molecular weight of 3,000,000 Dalton, which allows a perfect diffusion into the joint, this means that it does not create painful bulges within the joint. It is obtained by fermentation and this guarantees absolute purity thus minimizing the risks of allergens and inflammatory reactions. It also has a very high persistence and durability of action on site.



### COMPOSITION

Sodium hyaluronate (20 mg / ml), sodium dihydrogen phosphate dihydrate, biphasic sodium phosphate dodecahydrate, Water p.p.i.  
A syringe containing 2.0 mL apyrogenous, sterilized with moist heat.

### FEATURES

Long nonlinear sulphate chain of constant length. Repeating disaccharide units of N-acetylglucosamine and acid glucuronic. Forms a random coil in physiological solvents. MW up to 3,000,000 Da. Hyaluronic acid chains in which the carboxylic N acetyl groups are unaffected.

**ARTOSYAL®** is a replacement for synovial fluid that, thanks to its viscoelastic properties and lubricants, favors the restoration of rheological conditions of the altered joints in the case of degenerative or post-traumatic affections.

The product, improving the characteristics of synovial fluid, exerts a protective action on the joints and promotes the improvement of joint function and the reduction of the symptomatic pain.

**ARTOSYAL®** acts only at the level in which it is injected, without exerting any systemic action.



*hyaluronic acid 2.0%, 3,000,000 Da. for intra-articular use*

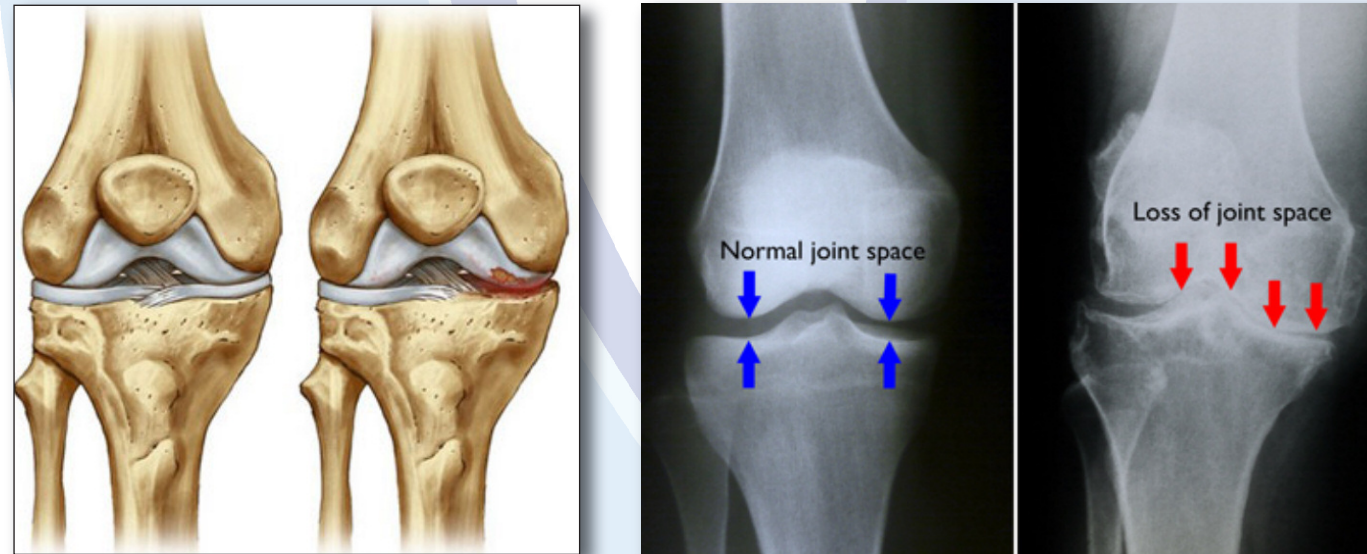
## VISCOSUPPLEMENTATION

*New concept of forced lubrication of the knee for the treatment of osteoarthritis (OA) which helps restore viscoelasticity of the synovial fluid by improving joint function.*



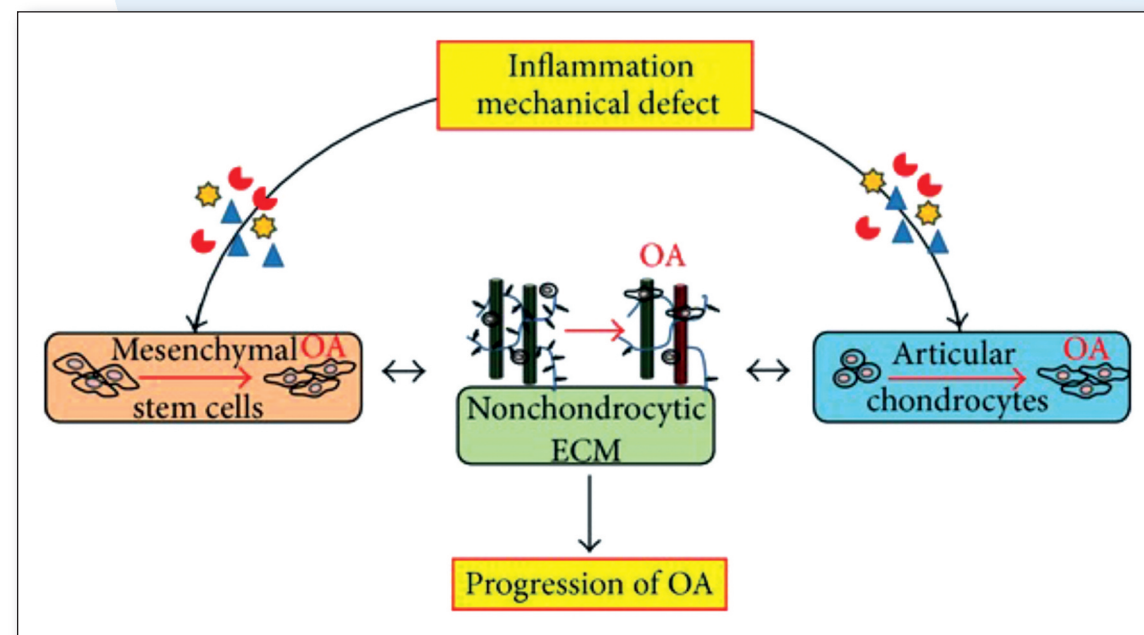
## CHONDROPROTECTION

Osteoarthritis (OA) is a degenerative disease that affects different tissues in the joints as surrounding articular cartilage, subchondral bone, synovial membrane, and ligaments.



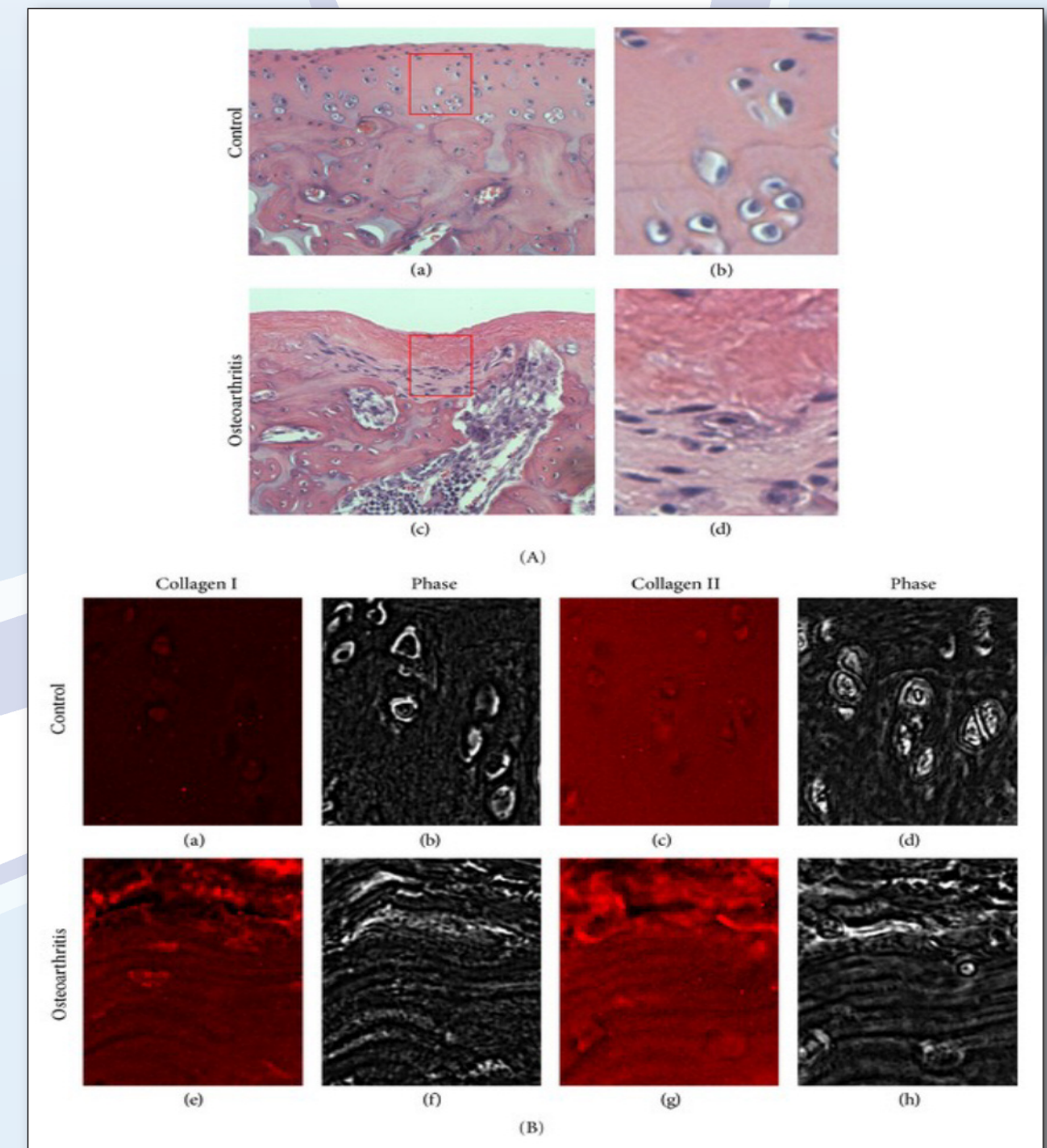
The main action of osteoarthritis is to cause a progressive deterioration of cartilage (which is not able to reform), and bone, with secondary deformation of the same and manufacture of growths, called "osteophytes", which mechanically hinder joint movement.

The alteration of the ECM changes the biomechanical environment of chondrocytes, which pushes further the degeneration's progression in the presence of inflammation.

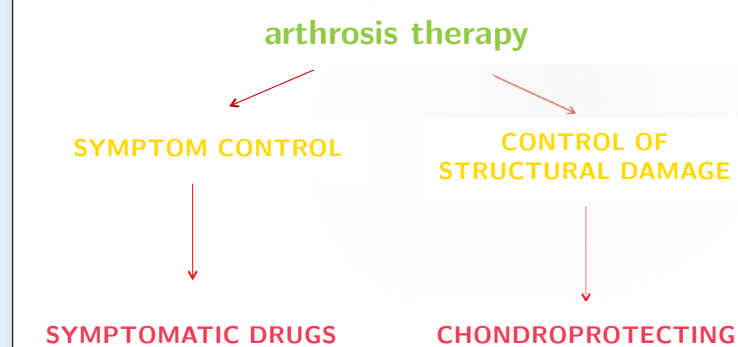


Interaction scheme between the extracellular matrix (ECM) and cell activity in inflammation during the progression of osteoarthritis (OA).

The changes in the structure of the extracellular matrix (ECM) and the composition of cartilage affected by osteoarthritis (OA).



The objectives of the osteoarthritis treatment



Hyaluronic acid of **Artosyal®** is a molecule of the extracellular matrix (ECM) with multiple physical and biological functions present in many tissues, including the cartilage.

