HYALURONIC ACID DERIVATIVES

Gel-ONE* (hyaluronan), Hyalgan*, Supartz* (sodium hyaluronate),
Euflexxa, GelSyn-3*, GenVisc 850 (sodium hyaluronate), Hymovis, Monovisc, Orthovisc
(hyaluronan), Synvisc, Synvisc - One (hylan G-F 20)

*Preferred Product

RATIONALE FOR INCLUSION IN PA PROGRAM

Background
Osteoarthritis of the knee is a disease in which the elastoviscous property of the synovial fluid in
the knee joint becomes diminished, resulting in less protection and shock absorption. Orthovisc,
Monovisc, Euflexxa, Supartz, Hymovis, Gel-ONE, GelSyn-3, GenVisc 850, Hyalgan, Synvisc and
Synvisc-One are hyaluronan derivatives that are injected into the knee joints to increase the
elastoviscous properties of arthritic joint fluid and slow its outflow from the joint. The goal of
therapy is to restore the viscoelasticity in the affected joints, thereby decreasing pain, improving
mobility, and restoring the natural protective functions (1).

The American College of Rheumatology (ACR) updated its guidelines for the treatment of
osteoarthritis (OA) of the knee in 2012. In mild symptomatic OA, treatment may be limited to
patient education, physical and occupational therapy and other non-pharmacologic modalities.
Nonpharmacologic modalities strongly recommended for the management of knee OA were
aerobic, aquatic, and/or resistance exercises as well as weight loss for overweight patients.
Nonpharmacologic modalities conditionally recommended for knee OA included medial wedge
insoles for valgus knee OA, subtalar strapped lateral insoles for varus knee OA, medially directed
patellar taping, manual therapy, walking aids, thermal agents, tai chi, self-management programs,
and psychosocial interventions. Pharmacologic modalities conditionally recommended for the initial
management of patients with knee OA included acetaminophen, oral and topical NSAIDs,
tramadol, and intraarticular corticosteroid injections (1).

Regulatory Status
FDA-approved indication: Hyaluronic acid derivatives are indicated for the treatment of pain in
osteoarthritis (OA) of the knee in patients who have failed to respond adequately to conservative
non-pharmacologic therapy, simple analgesics (e.g., acetaminophen), NSAIDs, tramadol, or intra-
articular steroid injections (2-12).

The hyaluronic acid derivatives are contraindicated for use in patients with known hypersensitivity
to hyaluronan (sodium hyaluronate) preparations. Orthovisc lists hypersensitivity to gram positive
bacterial proteins as an additional contraindication (4). Caution should be exercised when Gel-
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One, Hylgan, Synvisc, Synvisc-One and Supartz are administered to patients with allergies to
avian proteins, feathers, and egg products (3-8).

Hyaluronic acid derivatives are contraindicated to treat patients with knee joint infections,
infections or skin diseases in the area of the injection site (2-12).

A treatment cycle for most of the hyaluronan derivatives typically involves multiple weekly
injections. Euflexxa, GelSyn-3, and Synvisc are given for a total of three injections. Orthovisc is
given for three or four injections. GenVisc 850, Supartz and Hylgan are given for a total of three
or five injections. Gel-One and Synvisc-One differ from the other hyaluronan derivatives in that it
only requires one injection. Repeat courses of hyaluronan derivatives may be administered if
symptoms return (2-12).

Upon the basis of high quality supporting evidence, the American Academy of Orthopedic
Surgeons cannot recommend using hyaluronic acid for patients with symptomatic osteoarthritis of
the knee (13).

**Summary**

Osteoarthritis of the knee is a disease in which the elastoviscous property of the synovial fluid in
the knee joint becomes diminished, resulting in less protection and shock absorption. Orthovisc,
Monovisc, Euflexxa, GelSyn-3, GenVisc 850, Supartz, Hymovis, Gel-One, Hylgan, Synvisc and
Synvisc-One are hyaluronan derivatives that are injected into the knee joints to increase the
elastoviscous properties of arthritic joint fluid and slow its outflow from the joint. The goal of
therapy is to restore the viscoelasticity in the affected joints, thereby decreasing pain, improving
mobility, and restoring the natural protective functions (1-12).

Prior approval is required to ensure the safe, clinically appropriate and cost effective use of the
hyaluronic acid derivatives while maintaining optimal therapeutic outcomes.

**References**

1. American College of Rheumatology, Subcommittee on Osteoarthritis Guidelines.
   Recommendations for the medical management of osteoarthritis of the hip and knee: 2012
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