Central West Medicale Inc.
Towards Healthier Philippines

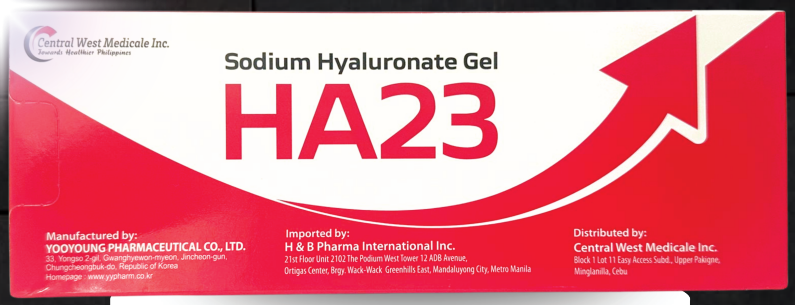
For medical or pharmaceutical professionals

HA23

Move Better. Longer

Advanced Single-Dose Hyaluronic Acid Injection

Up to 6 Months of Sustained Relief.



The FIRST and ONLY DVS CROSS-LINKED Hyaluronic Acid in the Philippines.

IMPROVEMENT IN SUSTAINABILITY
Enhanced Longevity

IMPROVEMENT OF LUBRICATING ACTION
Improved Lubrication

INJECTION SENSATION ENHANCEMENT
Easy Procedure

HA23 – Product Profile at a Glance

Product Name	HA23 (Philippine Brand of Resyno One, Korea)
Active Ingredient	DVS-Crosslinked Sodium Hyaluronate
Formulation	Sterile Hyaluronic Acid Gel in Prefilled Syringe
Indication	Symptomatic treatment of knee osteoarthritis
Dose and Administration	Single 2 mL intra-articular injection
Needle Size	23G
Mechanism of Action	Viscosupplementation and joint lubrication
Duration of Effect	Up to 6 months
Manufacturer	Yoo Young Pharmaceutical Co., Ltd., South Korea

About HA23

HA23 is the Philippine-registered brand name of Resyno One, a premium single-dose hyaluronic acid injection developed and manufactured in South Korea by Yooyoung Pharmaceutical Co., Ltd.

Resyno One utilizes proprietary DVS (Divinyl Sulfone) crosslinking technology, designed to provide enhanced structural stability, prolonged joint residence time, and sustained therapeutic effect.

Marketed in the Philippines as HA23, the product delivers the same formulation, quality standards, and clinical performance as Resyno One, while carrying a localized brand identity in full compliance with Philippine FDA registration requirements.

Proven Technology from Korea

HA23 is based on the clinically validated Resyno One formulation, supported by international clinical studies demonstrating sustained efficacy for up to 6 months with a single injection, significant improvement in pain and joint function, and a favorable safety profile.

As the Philippines' first and only DVS-crosslinked hyaluronic acid, HA23 brings globally trusted Korean innovation to Filipino patients and healthcare professionals.

Quality You Can Trust

Manufactured under strict international pharmaceutical standards, HA23 offers clinicians a reliable, high-quality viscosupplementation option that combines innovative crosslinking technology, consistent injectability, and long-lasting therapeutic benefit.

DOMESTIC NEW DRUG

A hyaluronic acid injection for the knee joint that lasts for **6 months** with a **single dose**

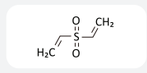
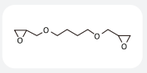
3 Special Features of ***HA23***

01 Enhanced Longevity
The well-packed DVSa-crosslinked structure of the hyaluronic acid gel increases in vivo stability.

02 Improved Lubrication
Hyaluronic acid solution provides an early onset effect, while crosslinked hyaluronic acid gel offers long-lasting benefits.

03 Easy Procedure
The particle size has been reduced to approximately 300 micrometers, and the uniformity in particle size ensures consistent injectability.

HA23 vs other single-dose therapies

	HA23	Other single-dose formulations
Active Ingredient Content	A 4:1 mixed gel of DVSa crosslinked sodium hyaluronate gel and sodium hyaluronate solution in one prefilled syringe	BDDE-crosslinked sodium hyaluronate gel in 1 prefilled syringe
		
	DVS[a] cross-linked HA[c] gel + Hyaluronic acid solution	BDDE[b] cross-linked HA[c] gel
Gel particle size	**Average gel particle size: approx. 300 μm**	**Average gel particle size: approx. 800 μm**
Crosslinking agent	DVS[a] (divinyl sulfone) 	BDDE[b] (1,4-butanediol diglycidyl ether) 
Hyaluronic acid content	**40 mg of sodium hyaluronate per prefilled syringe**	**60mg of BDDE-crosslinked sodium hyaluronate per prefilled syringe**
Injection needle	23G	21G
Indications and Usage	Osteoarthritis of the knee joint	Osteoarhritis of the knee joint
Dosage and Administration	Inject 1 vial (2 mL) into the knee joint cavity as a single dose. Administer appropriately based on considering a dosing interval of at least 6 months	Inject 1 vial (3 mL) into the knee joint cavity as a single dose. Administer appropriately based on considering a dosing interval of at least 6 months.

a. DVS : divinyl sulfone b. BDDE : 1,4-butanediol diglycidyl ether c. HA : hyaluronic acid

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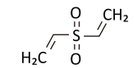
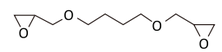
Enhanced Longevity

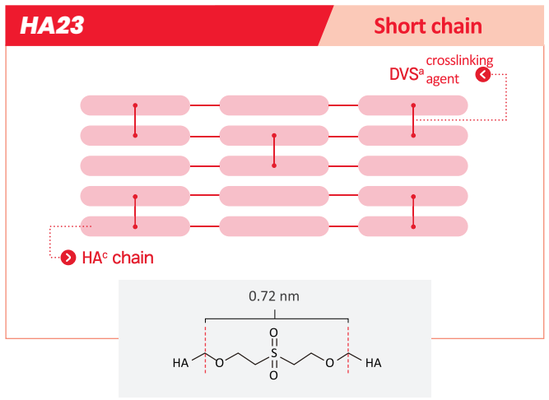
HA23 It was developed with a well-packed structure compared to other single-dose formulations, enhancing in vivo stability and retention.

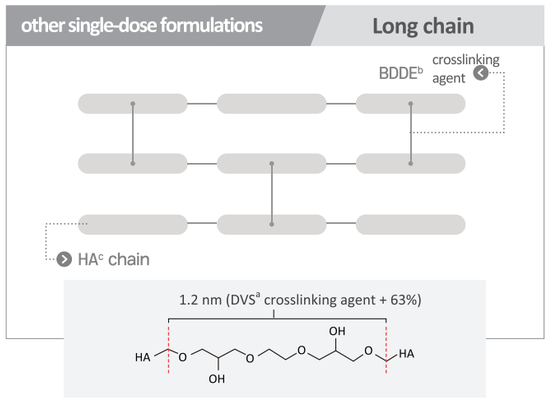
DVS[a] (divinyl sulfone)



BDDE[b] (1,4-butanediol diglycidyl ether)

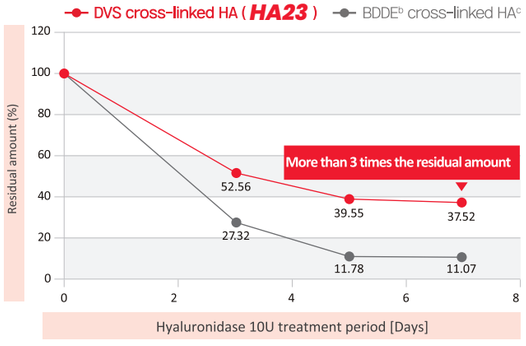




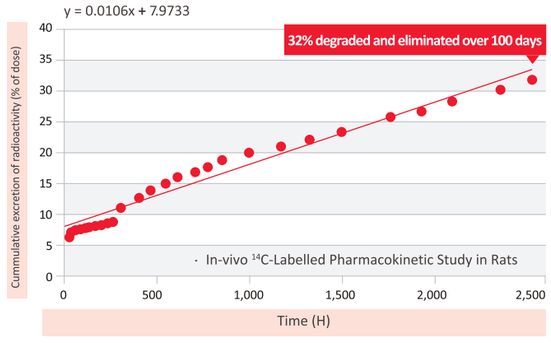


HA23 was confirmed to remain stably present over the same period through enzyme resistance testing and in vivo degradation evaluation.

Enzyme resistance testing



In vivo degradation evaluation



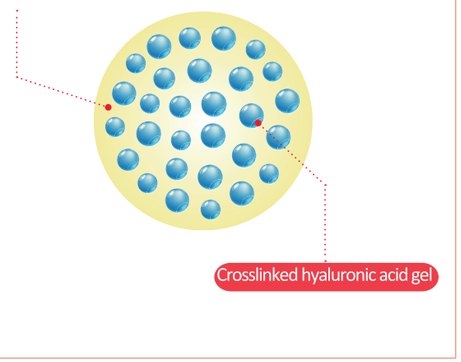
a. DVS : divinyl sulfone b. BDDE : 1,4-butanediol diglycidyl ether c. HA : hyaluronic acid

HA23
02

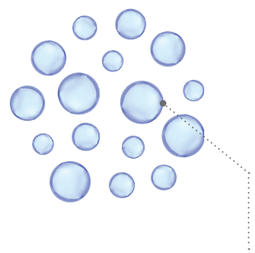
(Improved Lubrication)

HA23 consists of a mixed gel of
crosslinked hyaluronic acid gel and hyaluronic acid solution.

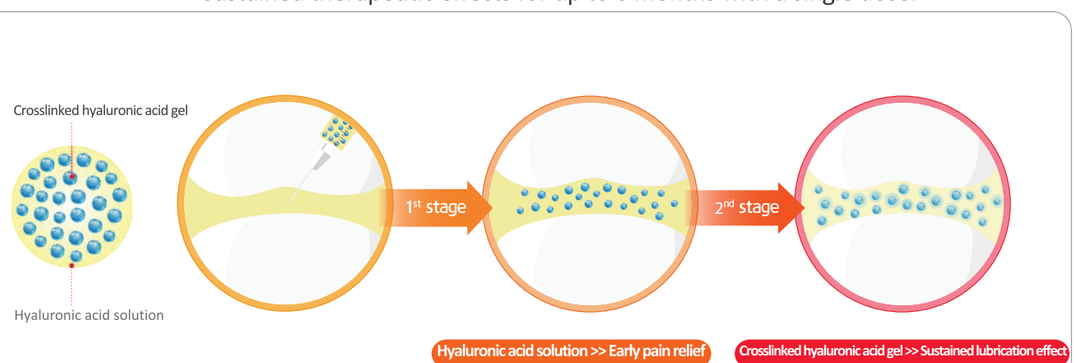
HA23 DVS[a] cross-linked HA[c] + HA[c] Solution



Other single-dose formulations BDDE[b] cross-linked HA[c]



HA23's hyaluronic acid solution acts immediately after injection
to reduce pain, while its crosslinked hyaluronic acid gel delivers
sustained therapeutic effects for up to 6 months with a single dose.



a. DVS : divinyl sulfone b. BDDE : 1,4-butanediol diglycidyl ether c. HA : hyaluronic acid

HA23
03

Central West Medicale Inc.
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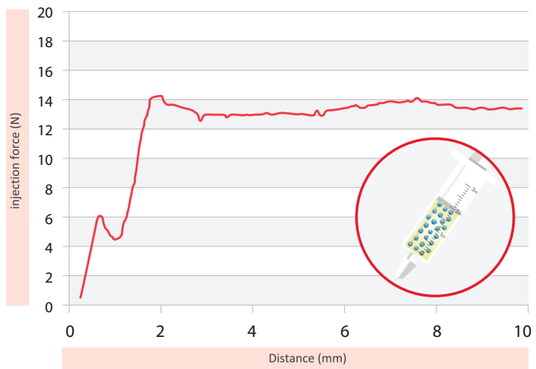
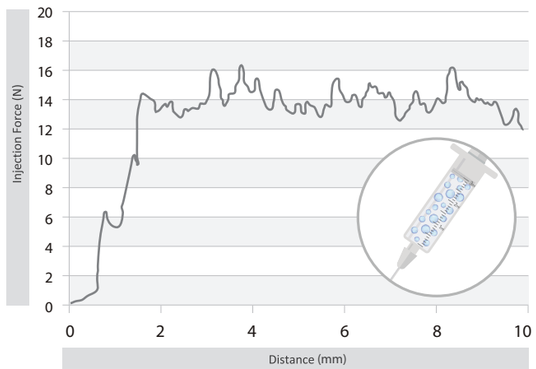
(Easy Procedure)

HA23 has reduced the particle size to approximately
300μm compared to other single-dose formulations, providing
a consistent injection feel with uniform particle size.

HA23 DVS[a] cross-linked HA[c] gel + Hyaluronic acid solution



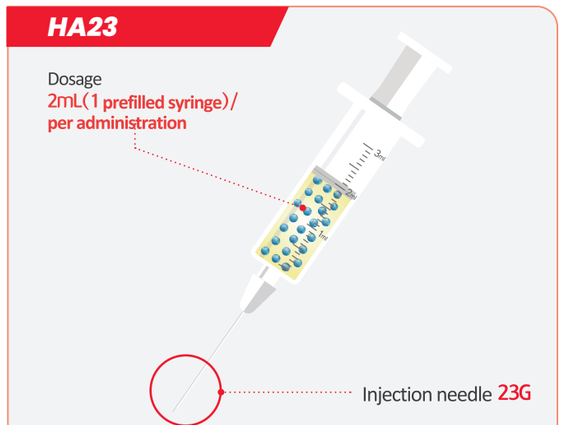
Other single-dose formulations BDDE[b] cross-linked HA[c]



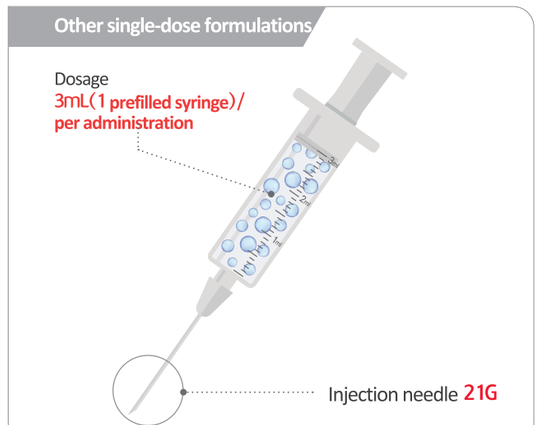
▶ Injection Speed : 13mm / min ▶ Needle Gauge : 23G

With relatively smaller and more uniform particle size, ***HA23*** is
provided with a 23G needle to reduce patient discomfort and has
demonstrated sufficient efficacy with a single 2 mL dose.

HA23



Other single-dose formulations

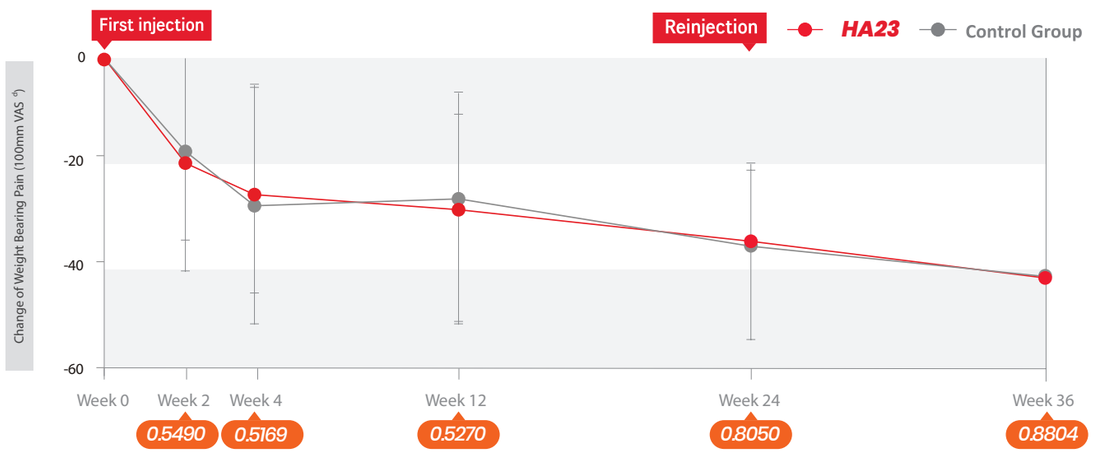


a. DVS : divinyl sulfone b. BDDE : 1,4-butanediol diglycidyl ether c. HA : hyaluronic acid

Phase 3 clinical trial results 01

Primary Outcome

At 12 weeks post-administration, evaluation of weight-bearing pain demonstrated that ***HA23*** was non-inferior to the control group.

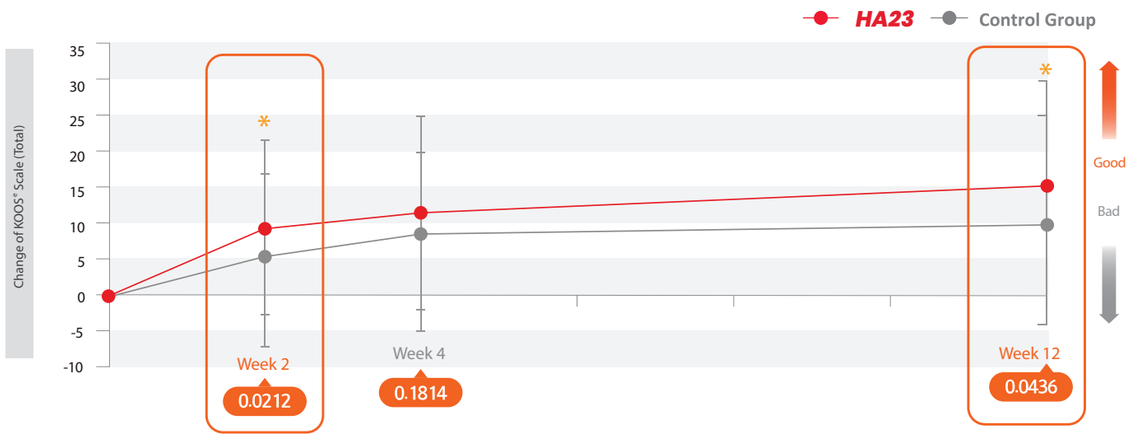


Phase 3 clinical trial results 02-1

Secondary Outcome

At 2 and 12 weeks post-administration, ***HA23*** showed statistically significant improvement in KOOS-Total scores compared to the control group.

Additionally, at 2 weeks post-administration, HA23 demonstrated statistically significant improvements compared to the control group in KOOS-pain, ADL, and Sport/Rec domains (p=0.0229, p=0.0046, and p=0.0282, respectively) (*P*=0.0212, 0.0436)



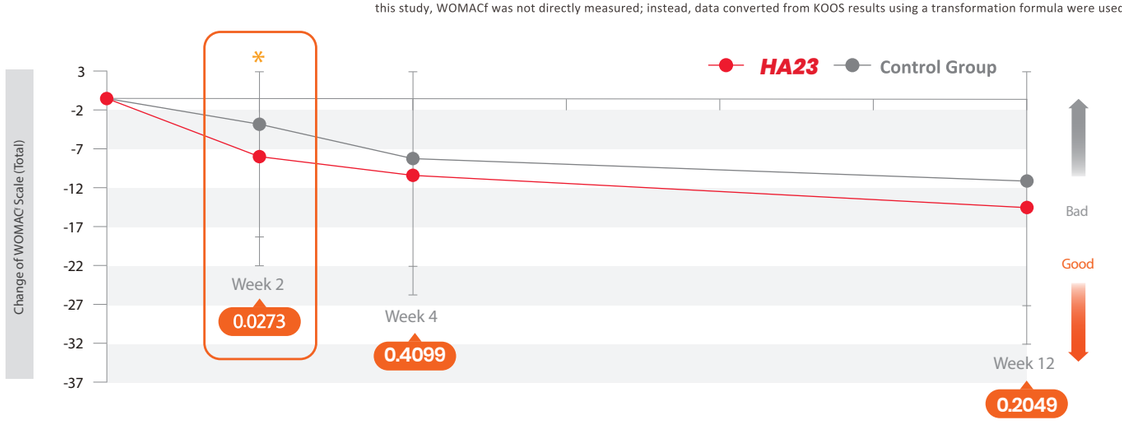
d. VAS : Visual Analogue Scale(시각 아날로그 척도) KOOS : Knee Injury and Osteoarthritis Outcome Score

Phase 3 Clinical trial results 02-2

Secondary Outcome

At 2 weeks post-administration, ***HA23*** showed a statistically significant improvement in WOMAC-Total scores compared to the control group. (*P*=0.0273)

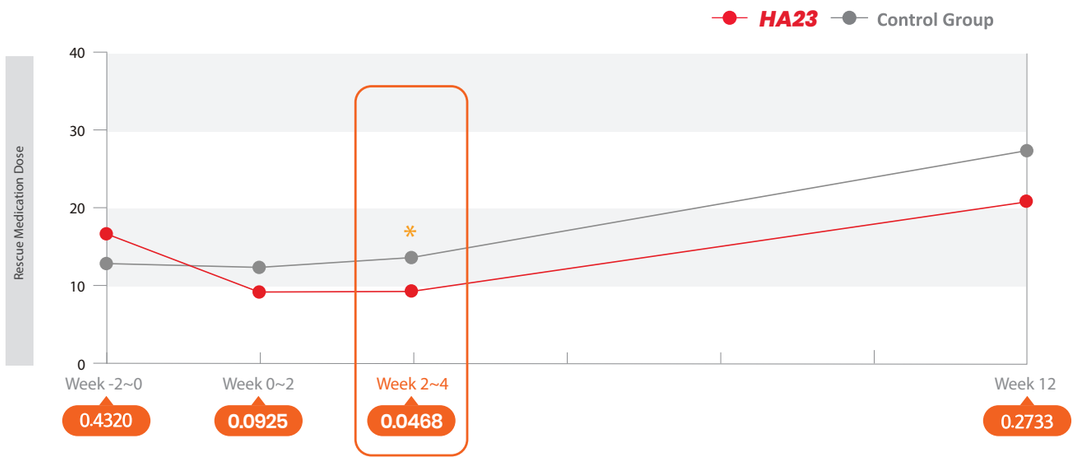
f. WOMAC (Western Ontario and McMaster Universities Arthritis Index): An index for assessing function, pain, and stiffness in daily life. In this study, WOMACf was not directly measured; instead, data converted from KOOS results using a transformation formula were used.



Phase 3 Clinical trial results 02-3

Secondary Outcome

At 2 to 4 weeks post-administration, the average per-patient rescue medication usage per visit was statistically significantly lower in the ***HA23*** group compared to the control group. (*P*=0.0468)



f. WOMAC : Western Ontario and McMaster Universities Arthritis Index

Phase 3 re-administration clinical trial results 01

Primary Outcome

At 12 weeks after re-administration, evaluation of weight-bearing pain demonstrated that ***HA23*** was non-inferior to the control group.

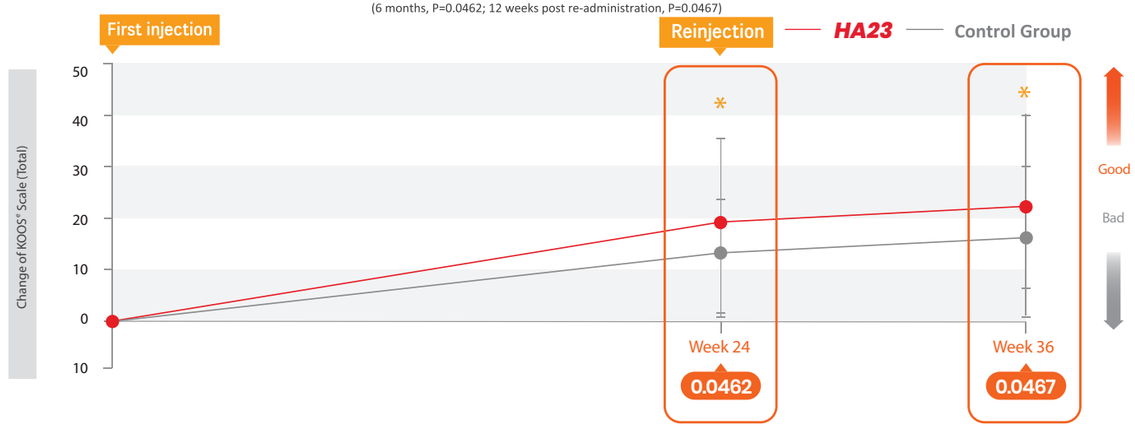
- Week 0 ~ Week 12 : Primary injection PPS 153 subjects (***HA23*** : 80, Control group: 73)
- Week 24 ~ Week 36 : Repeated injection PPS 90 subjects (***HA23*** : 47, Control group: 43)

Phase 3 re-administration clinical trial results 02-1

Secondary Outcome

At 6 months post-administration and 12 weeks after re-administration, ***HA23*** showed statistically significant improvement in Total KOOS scores compared to the control group.

(6 months, P=0.0462; 12 weeks post re-administration, P=0.0467)

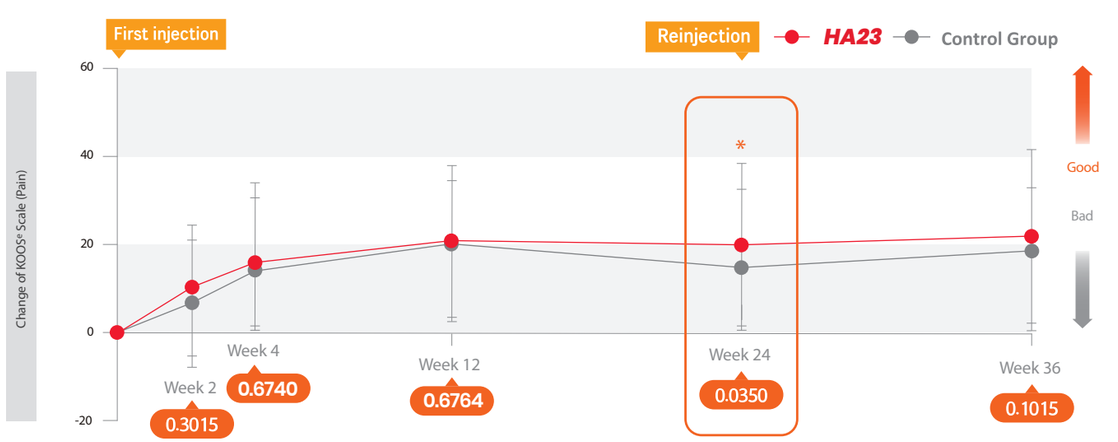


d. VAS : Visual Analogue Scale(시각 아날로그 척도) KOOS : Knee Injury and Osteoarthritis Outcome Score

Phase 3 re-administration clinical trial results 02-2

Secondary Outcome

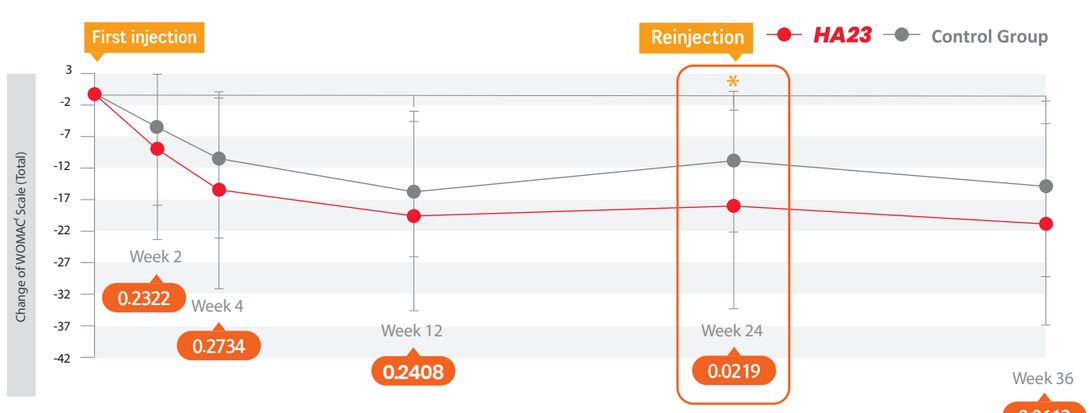
At 6 months post-administration, ***HA23*** showed a statistically significant improvement in KOOS-Pain scores compared to the control group. (*P*=0.0350)



Phase 3 re-administration clinical trial results 02-3

Secondary Outcome

At 6 months post-administration, ***HA23*** showed a statistically significant improvement in WOMACf-Total scores compared to the control group. (P=0.0219)



e. KOOS : Knee Injury and Osteoarthritis Outcome Score f. WOMAC : Western Ontario and McMaster Universities Arthritis Index

Safety

HA23 demonstrated a comparable safety profile to the control group (BDDEb cross-linked hyaluronic acid).

	Initial Administration			Re-administration		
	HA23	Control Group	p-value	***HA23***	Control Group	p-value
Injection site Local adverse reactions	48.42%	47.73%	0.9252	47.27%	36.17%	0.2577
Non-injection site Total adverse events (TEAE)	9.47%	17.05%	0.1295	14.55%	19.15%	0.5340
Adverse drug reactions (ADR)	0%	2.27%	0.2299	3.64%	4.26%	1.000
Adverse events leading to study discontinuation	0%	0%	-	1.82%	2.13%	1.000

Conclusions

HA23 is

01 has demonstrated rapid pain relief and clinical efficacy in patients with knee osteoarthritis.

02 demonstrated non-inferiority in the reduction of weight-bearing pain at 12 weeks post-administration compared to the control group.

03 showed statistically significant improvements in various KOOS indicators at 2 weeks post-administration.

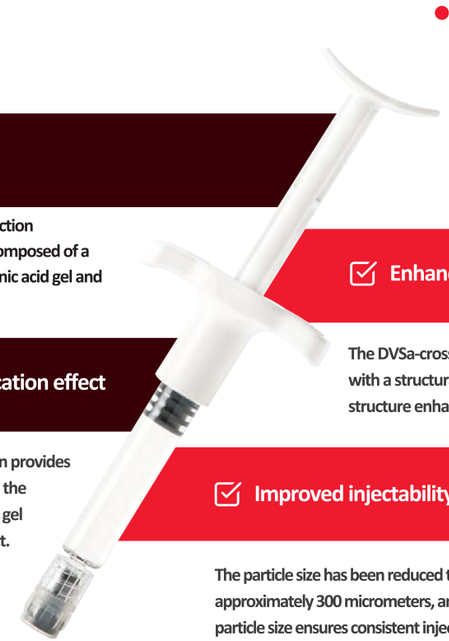
04 demonstrated a statistically significant reduction in the average per-patient rescue medication use per visit compared to other single-dose formulations.

b. BDDE : 1,4-butanediol diglycidyl ether c. HA : hyaluronic acid e. KOOS : Knee Injury and Osteoarthritis Outcome Score

Product Information

HA23 is

It is a single-dose hyaluronic acid injection approved as a domestic new drug, composed of a mixture of DVSa-crosslinked hyaluronic acid gel and natural hyaluronic acid solution.



Enhanced longevity

The DVSa-crosslinked hyaluronic acid gel with a structurally well-packed crosslinked structure enhances in vivo stability.

Improved lubrication effect

The hyaluronic acid solution provides an early onset effect, while the crosslinked hyaluronic acid gel delivers a long-lasting effect.

Improved injectability

The particle size has been reduced to approximately 300 micrometers, and the uniform particle size ensures consistent injectability.

Active ingredient · Content	A 4:1 w/w mixed gel of divinyl sulfone-crosslinked sodium hyaluronate gel and sodium hyaluronate solution
Dosage form	Prefilled syringe injection (includes 23G needle)
Indications · usage	Osteoarthritis of the knee joint
Dosage · administration	Administer one vial into the knee joint cavity as a single dose, with appropriate re-administration based on symptoms, considering an interval of at least 6 months.
Development · Clinical Trials · Manufacturing · Sales	Yoo Young Pharmaceutical
Approval	New drug approval: October 30, 2020

a. DVS : divinyl sulfone

Scientific Foundation of HA23

Molecular Architecture Designed for Joint Preservation

HA23 is a single-dose intra-articular viscosupplement composed of a mixed gel system of divinyl sulfone (DVS) cross-linked sodium hyaluronate with sodium hyaluronate solution.[7]

Molecular Profile

High–molecular weight hyaluronic acid
2,000,000–3,000,000 Daltons

DVS cross-linked three-dimensional network

- Enhances viscoelastic recovery under load
- Increases resistance to enzymatic degradation
- Prolongs intra-articular residence time
- Supports sustained biomechanical function

High–molecular weight hyaluronic acid more closely approximates the rheological behavior
of healthy synovial fluid, contributing to improved lubrication and shock absorption.[1],[2]

DVS cross-linking enhances structural durability compared with linear HA formulations.[3]

Clinical Performance

Phase 3 clinical evaluation demonstrated[7]:

- Reduction in weight-bearing pain (VAS)[6]
- Improvement in KOOS total and pain domains[5]
- Improvement in WOMAC total score[4]
- Sustained benefit up to 36 weeks following administration[7]
- Comparable safety profile to BDDE cross-linked control[7]

Resyno One® is approved by the Ministry of Food and Drug Safety (MFDS), Republic of Korea.[8]

HA23 is distributed in the Philippines by Central West Medical Inc.[9]

References

1. Altman RD, Manjoo A, Fierlinger A, Niazi F, Nicholls M. The mechanism of action for hyaluronic acid treatment in the osteoarthritic knee: A systematic review. BMC Musculoskelet Disord. 2015;16:321. https://doi.org/10.1186/s12891-015 0775-z

2. Laurent TC, Fraser JRE. Hyaluronan. FASEB J. 1992;6(7):2397–2404. https://doi.org/10.1096/fasebj.6.7.1563592

3. Balazs EA, Denlinger JL. Viscosupplementation: A new concept in the treatment of osteoarthritis. J Rheumatol Suppl. 1993;39:3–9.

4. Bellamy N, Buchanan WW, Goldsmith CH, Campbell J, Stitt LW. Validation study of WOMAC: A health status instrument for measuring clinically important patient relevant outcomes in osteoarthritis of the hip or knee. J Rheumatol. 1988;15(12):1833–1840.

5. Roos EM, Roos HP, Lohmander LS, Ekdahl C, Beynnon BD. Knee Injury and Osteoarthritis Outcome Score (KOOS): Development of a self-administered outcome measure. J Orthop Sports Phys Ther. 1998;28(2):88–96. https://doi.org/10.2519/jospt.1998.28.2.88

6. Hawker GA, Mian S, Kendzerska T, French M. Measures of adult pain: Visual Analog Scale (VAS Pain). Arthritis Care Res. 2011;63(S11):S240–S252. https://doi.org/10.1002/acr.20543

7. Young Poong Pharmaceutical Co., Ltd. Resyno One® (HA23) Phase 3 Clinical Study Report and Investigator’s Brochure. Seoul, South Korea; 2020.

8. Ministry of Food and Drug Safety (MFDS), Republic of Korea. Marketing Authorization Approval for Resyno One® (DVS cross-linked sodium hyaluronate injection). Cheongju, South Korea; 2020.

9. Central West Medical Inc. HA23 Product Information for Philippine Distribution. Philippines; 2024.

HA23

Move Better. Longer

The FIRST and ONLY DVS CROSS-LINKED Hyaluronic Acid in the Philippines.

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