



대한척추외과학회
KOREAN SOCIETY OF SPINE SURGERY

www.ksss2020.org

KSSS 2020

The International Congress of
Korean Society of Spine Surgery



August 2 ~ 3, 2020
Swiss Grand Hotel Seoul
Seoul, Korea



KOREA
TOURISM
ORGANIZATION
한국관광공사



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KSS 2020

The International Congress of the Korean Society
of Spine Surgery 2020

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Welcome Message

On behalf of the Korean Society of Spine Surgery (KSSS), it is our great pleasure to invite you to the International Congress of the Korean Society of Spine Surgery from August 2 to 3, 2020 at Swiss Grand Hotel, Seoul, Korea.

Due to the spread of COVID-19 world widely from early this year, we are experiencing difficulties not only in our daily lives but also in all areas including society, economy, and culture. Although KSSS committee actively supports the prevention of the spread of COVID-19, but for research activity, which is the main purpose of the KSSS, has decided to hold an online-offline hybrid conference after delay the schedule once.

The International Congress of the Korean Society of Spine Surgery is the new decade's of the first congress. The congress aims to enhance the scientific knowledge and state-of-the-art techniques of spine surgery. The KSSS 2020 is just one small step for Korean Society of Spine Surgery when a giant leap is needed and it will be a quantum leap in the future of spine surgery.

The meeting will include informative presentations by dedicated faculty and participants from Asian Pacific region. We are confident, this meeting can promote expertise and communicate knowledge across fields. In addition, it will foster new relationships across the Asia-Pacific region and establish networks among fellow surgeons.

The host city Seoul is the capital city of South Korea, where you can experience not only advanced technology but also traditional Korean Culture. Swiss Grand Hotel, Seoul is one of the best hotel in Korea and is located at heart of the Seoul City area.

We are passionately working to ensure this meeting can be successful and unforgettable to the participants. We are looking forward to seeing you in the 2020 International Congress of the Korean Society of Spine Surgery.



Hak-Sun Kim

President, Korean Society of Spine Surgery
2020



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Ref. 1) Osteoporosis International (2019) 30:675–683, 2) Osteoporosis International volume 30, pages2027–2037(2019)

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[효능·효과] 1) 폐경기 이후 여성 및 골절의 위험이 높은 남성에 대한 골다공증의 치료 2) 골절의 위험이 높은 여성 및 남성에서 지속적인 글루코코르티코이드 요법과 관련 된 골다공증의 치료 [용법·용량] 권장용량은 1일 1회 이 약 20μg을 대퇴부 또는 복부에 피하주사 한다. 환자들은 올바른 주사방법에 대하여 교육을 받아야 한다. 환자에게 펜의 정확한 사용을 지도하기 위한 사용자 안내서(user manual)도 있다. 이 약의 투약기간은 최대 24개월이다. 한 환자의 일생에서 이 약의 24개월 과정을 반복해서는 안 된다. 만일 음식섭취가 불충분한 경우에는, 환자들은 칼슘과 비타민D 보조제를 추가적으로 섭취하여야 한다. 이 약의 치료가 끝난 후에는, 환자들은 다른 골다공증 치료를 계속할 수 있다. [사용상의 주의사항] 다음 환자에는 투여하지 말 것. 1) 테리파라타이드 또는 이 약의 부형제 성분에 대하여 과민반응 2) 임부 및 수유부 3) 기존의 고칼슘혈증 4) 중증의 신장 기능손상 5) 일차적인 골다공증 이외에 대사성 골 질환(부갑상선 기능항진증 및 뼈의 Paget's disease 포함) 6) 충분히 설명되지 않는 alkaline phosphatase 의 상승 7) 이전에 골격에 방사선 치료를 한 경우 8) 골격 악성종양 또는 골 전이가 있는 환자 * 이 외의 보다 자세한 사항은 테로사 카트리지주 제품설명서 전문을 참조하여 주시기를 바랍니다.

[제조사] Richter-Helm Biologics GmbH & Co.KG (Germany) (원료의약품), Gedeon Richter Plc. (Hungary) (완제의약품) [판매사] 대원제약(주) 서울특별시 성동구 천호대로 386 대표번호 : 02-2204-7000 소비자상담실 : 080-497-8272(수신자부담) <http://www.daewonpharm.com>
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Organizing Committee

President	Hak-Sun Kim	President-elect	Kyu-Jung Cho
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Adult	Young-Do Koh, Dong Soo Kim		
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Program & Scientific Committee	Chairman	Kyung-Soo Suk Sung-Soo Kim, Young-Yul Kim, Ho-Joong Kim (director), Woo-Kie Min, Se-Jun Park, Seung Woo Suh, Kyung-Soo Suk, Hong Moon Sohn, Dong Ki Ahn, Jae Jun Yang, Jae-Ho Yang, Gun Woo Lee, Dong-Ho Lee, Dong-Gune Chang, Nam-Su Chung, Jae-Young Hong, Kyung-Chung Kang, Young-Woo Kim, JinHyok Kim, Tae Kyun Kim, Yung Park, Jaewan Soh, In-Soo Oh, Jin Sup Yeom, Ho-Jin Lee	
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Bylaws Committee	Chairman	Ki Tack Kim Hak-sun kim (President), Kyu-Jung Cho (President-elect), Jae Hyup Lee (Secretary), Kyung-Soo Suk, Jin-Sup Yeom, Ki Tack Kim	
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Board of Education	Chairman	Chang-Hoon Jeon Young-Woo Kim, Si-Young Park, Kyung-Soo Suk, Dong-Ho Lee, Jae Chul Lee, Jung Hee Lee, Ho-Jin Lee, Chang Hwa Hong, Chang Ju Hwang (director)	



Program at a Glance

August 2 (Sun)

	Grand Ballroom A	Grand Ballroom B
08:00	Opening Remarks (Grand Ballroom A+B)	
08:20	Free Paper: Basic Science I	Free Paper: Deformity I
08:50	Free Paper: Basic Science II	Free Paper: Deformity II
09:20	Free Paper: Cervical I	Free Paper: Deformity III
09:50	Free Paper: Cervical II	Free Paper: Deformity IV
10:20	Free Paper: Cervical III	Free Paper: Deformity V
10:50	Coffee Break (Grand Ballroom Lobby)	
11:10	Invited Lecture: Masaya Nakamura (Grand Ballroom A+B)	
11:35	Invited Lecture: Masahiko Watanabe (Grand Ballroom A+B)	
12:00	KSSS General Assembly (Grand Ballroom A+B)	
12:30	Sponsored Luncheon Symposium (Grand Ballroom A+B)	
13:30	Asia Spine Forum (Grand Ballroom A+B)	
14:40	Invited Lecture: Hans-Joachim Wilke (Grand Ballroom A+B)	
15:20	Coffee Break (Grand Ballroom Lobby)	
15:35	Symposium: Cervical	Symposium: Deformity
16:25	Free Paper: Cervical IV	Free Paper: Deformity VI
16:55	Free Paper: MISS I	Free Paper: Lumbar I
17:25		

August 3 (Mon)

	Grand Ballroom A	Grand Ballroom B
08:00	Free Paper: MISS II	Free Paper: Lumbar II
08:30	Free Paper: MISS III	Free Paper: Lumbar III
09:00	Free Paper: MISS IV	Free Paper: Lumbar IV
09:25	Free Paper: MISS V	Free Paper: Lumbar V
09:55	Free Paper: Trauma I	Free Paper: Lumbar VI
10:20	Coffee Break (Grand Ballroom Lobby)	
10:30	Free Paper: Trauma II	Free Paper: Lumbar VII
11:00	Asia Traveling Fellowship Session	Free Paper: Infection
		Free Paper: Tumor I
		Free Paper: Tumor II
12:30	Sponsored Luncheon Symposium (Grand Ballroom A+B)	
13:30	Invited Lecture: Hiroshi Taneichi (Grand Ballroom A+B)	
13:55	Invited Lecture: Yukihiro Matsuyama (Grand Ballroom A+B)	
14:20	Coffee Break (Grand Ballroom Lobby)	
14:35	Symposium: MISS	Symposium: Lumbar
15:35	Free Paper: Trauma III	Free Paper: Miscellaneous II
16:05	Free Paper: Miscellaneous I	Free Paper: Miscellaneous III
16:30	Best Paper Awards (Grand Ballroom A+B)	
16:50	Closing Remarks (Grand Ballroom A+B)	
17:00		



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GC 녹십자

골관절염 치료,
신바로정과
펠루비 처방으로
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신바로 정



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4 Action 다중 항염증 효과



통증감소 효과

COX-2 억제

Ref. 1) Evid Based Complement Alternat Med (2012) 2012:730907, 2) J Ethnopharmacol (2010) 130(3):450-9, 3) Chin Med (2016) 11:17, 4) 2019 UBIST DATA

Daewon 대원제약

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Scientific Program

August 2 (Sun) Grand Ballroom A

08:00 - 08:20 Opening Remarks (Grand Ballroom A+B)

08:20 - 08:50 Free Paper: Basic Science I

Moderator: Kwang-Sup Song (Korea), Masaya Nakamura (Japan)

08:00 - 08:25	S001 Optimization of Porous Structure for Patient-Specific Titanium Cage	Byung Wan Choi (Korea)
08:25 - 08:30	S002 Repurposing Bone-Forming Agents Based on Connectivity Map Technique: A Pilot Study to Discover Therapeutics for Osteoporosis	Dong Eun Shin (Korea)
08:30 - 08:35	S003 Neuropeptide Y Regulates the Bone Marrow Hematopoietic Stem Cell Microenvironment	Woo-Kie Min (Korea)
08:35 - 08:40	S004 Enhanced Healing of Rat Calvarial Defects with 3D Printed Calcium-Deficient Hydroxyapatite/Collagen/Bone Morphogenetic Protein 2 Scaffolds	Shihuan Han (China)
08:40 - 08:50	Discussion	

08:50 - 09:20 Free Paper: Basic Science II

Moderator: Seong-Hwan Moon (Korea), Daisuke Sakai (Japan)

08:50 - 08:55	S005 Isolation and Characterization of Exosome from Epidural Fat-Derived Mesenchymal Stem Cell	Gun Woo Lee (Korea)
08:55 - 09:00	S006 Spinal Stenosis Grading Using Deep Convolutional Neural Network	Suk-Joong Lee (Korea)
09:00 - 09:05	S007 Feasibility of Human Induced Pluripotent Stem Cell-Derived Osteoblasts for Spine Fusion in a Rat Model	Sang-Il Kim (Korea)
09:05 - 09:10	S008 Concordant Osteopenia Have Similar FRAX Assessed Fracture Risk with Discordant Osteoporosis in Postmenopausal Women	Tae Sik Goh (Korea)
09:10 - 09:20	Discussion	

09:20 - 09:50 Free Paper: Cervical I

Moderator: Kyung-Soo Suk (Korea), Dong-Ho Lee (Korea)

09:20 - 09:25	S009 The Impact of Spinopelvic Morphology on the Global Spinal Sagittal Alignment	Sung Hoon Choi (Korea)
09:25 - 09:30	S010 Computed Tomography-Based Feasibility Study of C1 Posterior Arch Crisscrossing Screw Fixation	Gururaj Gururaj (India)
09:30 - 09:35	S011 Pedicle Screw Fixation in the Lower Cervical Spine	Pashupati Chaudhary (Nepal)
09:35 - 09:40	S012 Posterior Occiput-Cervical Fixation for Metastasis to Upper Cervical Spine	Tarush Rustagi Arush (India)
09:40 - 09:50	Discussion	



Scientific Program

August 2 (Sun) Grand Ballroom A

09:50 - 10:20 Free Paper: Cervical II

Moderator: Jong-Beom Park (Korea), Bo-Gun Suh (Korea)

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|---------------|---|-------------------------------|
| 09:50 - 09:55 | S013 Do Intra-operative Neurophysiological Changes Predict Functional Outcome Following Decompressive Surgery for Cervical Myeloradiculopathy? A Prospective Study | Keyur Kantilal Akbari (India) |
| 09:55 - 10:00 | S014 Redo Surgery in Cranio Vertebral Junction Anomalies - Challenges Faced and Lessons Learnt | Ashish Tandon (India) |
| 10:00 - 10:05 | S015 Factors Affecting the Clinical Outcome of Posterolateral Fusion Using Lateral Mass Screw in Cervical Myelopathy Patients: Evaluation with Computed Tomography | Kyeol Han (Korea) |
| 10:05 - 10:10 | S016 Characteristics and Surgical Outcomes of C8 and T1 Cervical Radiculopathies | Kyung Chung Kang (Korea) |
| 10:10 - 10:20 | Discussion | |

10:20 - 10:50 Free Paper: Cervical III

Moderator: Kyung-Jin Song (Korea), Woo-Kie Min (Korea)

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|---------------|---|-------------------------|
| 10:20 - 10:25 | S017 Traumatic Atlanto-Occipital Dislocation: Analysis of 15 Survival Cases with Emphasis on Associated Upper Cervical Spine Injuries | Dong-Gune Chang (Korea) |
| 10:25 - 10:30 | S018 Impact of Anterior Cervical Plating on Serial Postoperative Segmental Motion in Patients who Underwent Single-level Anterior Cervical Discectomy or Corpectomy Fusion | Kwang-Sup Song (Korea) |
| 10:30 - 10:35 | S019 Fate of Machined Allograft Spacers Used for Anterior Cervical Discectomy and Fusion: Classification and Clinical Implication of Postoperative Morphologic Changes of the Allografts | Jae Jun Yang (Korea) |
| 10:35 - 10:45 | Discussion | |

10:45 - 11:10 Coffee Break (Grand Ballroom Lobby)

11:10 - 11:35 Invited Lecture: Masaya Nakamura (Grand Ballroom A+B)

Moderator: Kyu-Jung Cho (Korea)

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|---------------|--|-------------------------|
| 11:10 - 11:30 | Regenerative Medicine for Spinal Cord Injury Using IPS Cells | Masaya Nakamura (Japan) |
| 11:30 - 11:35 | Discussion | |

11:35 - 12:00 Invited Lecture: Masahiko Watanabe (Grand Ballroom A+B)

Moderator: Kyu-Yeol Lee (Korea)

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|---------------|---------------------------------------|---------------------------|
| 11:35 - 11:55 | Management of Upper Cervical Injuries | Masahiko Watanabe (Japan) |
| 11:55 - 12:00 | Discussion | |



Scientific Program

August 2 (Sun) Grand Ballroom A

12:00 - 12:30 KSSS General Assembly (Grand Ballroom A+B)

12:30 - 13:30 Sponsored Luncheon Symposium (Grand Ballroom A+B)

Moderator: Hak-Sun Kim (Korea)

12:30 - 13:30 New Era of Bone Forming Agent with Dual Mechanism of Action: Romosozumab

Jae Hyup Lee (Korea)

13:30 - 14:40 Asia Spine Forum (Grand Ballroom A+B)

Moderator: Hak-Sun Kim (Korea)

13:30 - 13:40 Spine Surgery in Hong Kong: Past, Present and Future

Wong Nang Man Raymond
(Hong Kong)

13:40 - 13:50 Strategies to Overcome the Challenges in Management of Neglected and Severe Spine Deformities

H.S. Chhabra (India)

13:50 - 14:00 Role of Spine Surgery at Orthopaedic and Future Expectation in Indonesia

Zairin Noor (Indonesia)

14:00 - 14:10 Clinical Development of Regenerative Medicinal Products for Intervertebral Disc Disease in Japan

Daisuke Sakai (Japan)

14:10 - 14:20 Ortho and Neuro Spine – Competition or Collaboration?

Keith Dk Luk
(Hong Kong)

14:20 - 14:30 Role of Ortho-Spine Surgery and Future Expectations in Vietnam

Vo Van Thanh
(Viet Nam)

14:30 - 14:40 Spine Surgery in Singapore

Wong Hee Kit
(Singapore)

14:40 - 15:20 Invited Lecture: Hans-Joachim Wilke

Moderator: Hak Sun Kim (Korea)

14:40 - 15:55 Motion Preservation Techniques for the Anterior and Posterior Spine - Biomechanical Considerations

Hans-Joachim Wilke
(Germany)

15:55 - 15:10 Nucleus Replacement and Annulus Repair - Ideas and limitation

Hans-Joachim Wilke
(Germany)

15:10 - 15:20 Discussion

15:20 - 15:35 Coffee Break (Grand Ballroom Lobby)



Scientific Program

August 2 (Sun) Grand Ballroom A

15:35 - 16:25 Symposium: Cervical

15:35 - 16:00 Intraoperative Painful Experiences

**Moderator: Jin Sup Yeom (Korea),
Masahiko Watanabe (Japan)**

15:35 - 15:40 Vertebral Artery Injury Min Woo Kim (Korea)

15:40 - 15:45 Esophageal Injury Sang-Bong Ko (Korea)

15:45 - 15:50 Dural Tear & Neurologic Deficit Moon Soo Park (Korea)

15:50 - 15:55 Cervicothoracic Junctional Approach Jong Min Baik (Korea)

15:55 - 16:00 Discussion

16:00 - 16:25 Postoperative Painful Experiences

Moderator: Dae Moo Shim (Korea), Jong Won Kang (Korea)

16:00 - 16:05 Retropharyngeal Hematoma and Management Jong-Beom Park (Korea)

16:05 - 16:10 Dysphagia and Dysphonia Woo-Kie Min (Korea)

16:10 - 16:15 Postoperative Surgical Site Infection Gun Woo Lee (Korea)

16:15 - 16:20 Pseudoarthrosis Diagnosis and Management Jae Jun Yang (Korea)

16:20 - 16:25 Discussion



Scientific Program

August 2 (Sun) Grand Ballroom A

16:25 - 16:55 Free Paper: Cervical IV Moderator: Moon Soo Park (Korea), Vo Van Thanh (Vietnam)

16:25 - 16:30 **S020** Mechanical Complications of Multilevel Posterior Cervical Fusion
- Depending on Caudal Fusion Level C7 or T1 Sang-Jun Park (Korea)

16:30 - 16:35 **S021** Vertebral Body Rotational Osteotomy for Decompressing an Eccentrically Protruded
Ossification of the Posterior Longitudinal Ligament: Technical Note and Case Series Se Han Park (Korea)

16:35 - 16:40 **S022** Posterior Fusion Surgery only is Inferior to Combined Anterior-posterior Fusion
for the Patients of Cervical Myelopathy with Athetoid-type Cerebral Palsy Gun Woo Lee (Korea)

16:40 - 16:45 **S023** Is Steroid Necessary for Transforaminal Epidural Block in Patients
with Cervical Radiculopathy? Eugene Park (Korea)

16:45 - 16:55 Discussion

16:55 - 17:25 Free Paper: MISS I Moderator: Seok woo Kim (Korea), Youk Sang Kwon (Korea)

16:55 - 17:00 **S024** Insidious Pneumoperitoneum After Minimally Invasive Oblique Lumbar
Interbody Fusion Kook Jong Kim (Korea)

17:00 - 17:05 **S025** Advantage of Single-Position Oblique Lumbar Interbody Fusion
with Percutaneous Pedicle Screw Instrumentation Eugene Park (Korea)

17:05 - 17:10 **S026** Endoscopic Biportal Foraminotomy and Discectomy in Patients
with Cervical Disc Disorder Seok-Bong Jung (Korea)

17:10 - 17:15 **S027** Combination of Oblique Lumbar Interbody Fusion (OLIF) with Biportal Endoscopic
Spinal Surgery (BESS) for Lumbar Spinal Stenosis: Comparison with Conventional Open
Transforaminal Lumbar Interbody Fusion (TLIF) Ho-Jin Lee (Korea)

17:15 - 17:25 Discussion



Scientific Program

August 2 (Sun) Grand Ballroom B

08:00 - 08:20 Opening Remarks (Grand Ballroom A+B)

08:20 - 08:50 Free Paper: Deformity I

Moderator: Eung-Ha Kim (Korea), N S Jung (Korea)

- 08:20 - 08:25 **S028** Does Sacral Slanting Affect Postoperative Shoulder Imbalance in Lenke Type 2A AIS? Suk Kyu Lee (Korea)
- 08:25 - 08:30 **S029** Significance of Sarcopenia in Sagittal Imbalance Byung-Jik Kang (Korea)
- 08:30 - 08:35 **S030** The Cause of Upper Instrumented Vertebral Fracture is Low Occupancy Rate of the Pedicle Screw in the Vertebral Body Shin Oe (Japan)
- 08:35 - 08:40 **S031** Updates in Pelvic Fixation: The S2AI (Sacro-alar-iliac) Screw Matthew David Chong (USA)
- 08:40 - 08:50 Discussion

08:50 - 09:20 Free Paper: Deformity II

Moderator: Seung-Woo Suh (Korea), Keith Dk Luk (Hong Kong)

- 08:50 - 08:55 **S032** Feasibility of Single-Stage Posterior Spinal Fusion without Osteotomies in Reducing Perioperative Morbidity Among Patients with Severe Rigid Idiopathic Scoliosis Weng Hong Chung (Malaysia)
- 08:55 - 09:00 **S033** Can we Perform Posterior Spinal Fusion Surgeries Safely in Adolescent Idiopathic Scoliosis Patients with Menses? Chee Kidd Chiu (Malaysia)
- 09:00 - 09:05 **S034** Incidence and Medical Utilization Pattern of Idiopathic Scoliosis Sa Hyun Sung (Korea)
- 09:05 - 09:10 **S035** Optimal Correction of Lumbar Lordosis for Lumbar Degenerative Kyphosis with Sagittal Imbalance in Patients Over Age 65 Ki Young Lee (Korea)
- 09:10 - 09:20 Discussion

09:20 - 09:50 Free Paper: Deformity III

Moderator: Sung-Soo Kim (Korea), Chang Ju Hwang (Korea)

- 09:20 - 09:25 **S036** Improvement in Gait Pattern and Its Relationship with Preoperative Pelvic Compensation after Surgery in Patients with Sagittal Plane Deformity Hee Soo Han (Korea)
- 09:25 - 09:30 **S037** Impact of Adult Spinal Deformity Corrective Surgery in Patients with the Symptoms of Gastroesophageal Reflux Disease: A Five-year Follow-up Report Tomohiko Hasegawa (Japan)
- 09:30 - 09:35 **S038** Sarcopenia and Back Muscle Degeneration as Risk Factors for Degenerative Adult Spinal Deformity with Sagittal Imbalance and Degenerative Spinal Disease: A Comparative Study Whoan Jeang Kim (Korea)
- 09:35 - 09:45 Discussion

09:50 - 10:20 Free Paper: Deformity IV

Moderator: Jin-Hyok Kim (Korea), Dong-Gune Chang (Korea)

- 09:50 - 09:55 **S039** How Much Can Iliac Screws Prevent L5-S1 Pseudoarthrosis After Long Fusion Surgery for Adult Spinal Deformity? CT-based Risk Analysis with 2-year Follow up Yunjin Nam (Korea)
- 09:55 - 10:00 **S040** Effects of Sagittal Balance Restoration on Adjacent Level Degeneration in Instrumented Lumbar Fusions Hun-Chul Kim (Korea)
- 10:00 - 10:05 **S041** Outcome and Safety Analysis of 3D-printed Patient-specific Pedicle Screw Jigs for Complex Spinal Deformities: A Comparative Study Bhavuk Garg (India)
- 10:05 - 10:10 **S042** The Significance of Posterior Fusion Bone Density on Mechanical Complications in Patients In Adult Spinal Deformity Patients Who Underwent Thoracolumbar Three-column Osteotomy: Minimum Two Year Follow-up Jae Hwan Cho (Korea)
- 10:10 - 10:20 Discussion



Scientific Program

August 2 (Sun) Grand Ballroom B

10:20 - 10:50	Free Paper: Deformity V	Moderator: Jung Hee Lee (Korea), Dong-Ju Lim (Korea)
10:20 - 10:25	S043 Spinal Fusion for Adolescent Idiopathic Scoliosis: Does Fusion at T2, T3 or T4 Affect the Range of Motion of Cervical Spine and the Functional Outcome at the Cervical Spine?	Sabarul Afian Mokhtar (Malaysia)
10:25 - 10:30	S044 Analysis of the Change Patterns of Sagittal Alignment Values After Selective Thoracic Fusion in Lenke 1 Adolescent Idiopathic Scoliosis According to Preoperative Thoracic Kyphosis Status	Se-Jun Park (Korea)
10:30 - 10:35	S045 Rib Regeneration Morphology after Thoracoplasty in Adolescent Idiopathic Scoliosis	Hong Jin Kim (Korea)
10:35 - 10:40	S046 Prediction of Standing Radiography during Posterior Correction and Fusion with Lower Instrumented Vertebra L3 or L4 for the Structural Thoracolumbar/Lumbar Curve in Patients with Adolescent Idiopathic Scoliosis	Kun-Bo Park (Korea)
10:40 - 10:50	Discussion	
10:50 - 11:10	Coffee Break (Grand Ballroom Lobby)	
11:10 - 11:35	Invited Lecture: Masaya Nakamura (Grand Ballroom A+B)	Moderator: Kyu-Jung Cho (Korea)
11:10 - 11:30	Regenerative Medicine for Spinal Cord Injury Using IPS Cells or Clinical Significance of Diffusion	Masaya Nakamura (Japan)
11:30 - 11:35	Discussion	
11:35 - 12:00	Invited Lecture: Masahiko Watanabe (Grand Ballroom A+B)	Moderator: Kyu-Yeol Lee (Korea)
11:35 - 11:55	Management of Upper Cervical Injuries	Masahiko Watanabe (Japan)
11:55 - 12:00	Discussion	
12:00 - 12:30	KSSS General Assembly (Grand Ballroom A+B)	
12:30 - 13:30	Sponsored Luncheon Symposium (Grand Ballroom A+B)	Moderator: Hak-Sun Kim (Korea)
12:30 - 13:30	The Evidence of Limaprost in the Treatment, Lumbar Spinal Stenosis	Ho-Joong Kim (Korea)
13:30 - 14:40	Asia Spine Forum (Grand Ballroom A+B)	Moderator: Hak-Sun Kim (Korea)
13:30 - 13:40	Spine Surgery in Hong Kong: Past, Present and Future	Wong Nang Man Raymond (Hong Kong)
13:40 - 13:50	Strategies to Overcome the Challenges in Management of Neglected and Severe Spine Deformities	H.S. Chhabra (India)
13:50 - 14:00	Role of Spine Surgery at Orthopaedic and Future Expectation in Indonesia	Zairin Noor (Indonesia)
14:00 - 14:10	Clinical Development of Regenerative Medicinal Products for Intervertebral Disc Disease in Japan	Daisuke Sakai (Japan)
14:10 - 14:20	Ortho and Neuro Spine – Competition or Collaboration?	Keith Dk Luk (Hong Kong)
14:20 - 14:30	Role of Ortho-Spine Surgery and Future Expectations in Vietnam	Vo Van Thanh (Viet Nam)
14:30 - 14:40	Spine Surgery in Singapore	Wong Hee Kit (Singapore)



Scientific Program

August 2 (Sun) Grand Ballroom B

14:40 - 15:20	Invited Lecture: Hans-Joachim Wilke (Grand Ballroom A+B)	Moderator: Hak-Sun Kim (Korea)
14:40 - 15:55	Motion Preservation Techniques for the Anterior and Posterior Spine - Biomechanical Considerations	Hans-Joachim Wilke (Germany)
15:55 - 15:10	Nucleus Replacement and Annulus Repair - Ideas and limitation	Hans-Joachim Wilke (Germany)
15:10 - 15:20	Discussion	
15:20 - 15:35	Coffee Break (Grand Ballroom Lobby)	
15:35 - 16:25	Symposium: Deformity	Moderator: H.S. Chhabra (India), Chong-Suh Lee (Korea)
15:35 - 15:45	Adult Spinal Deformity Classification and Acceptable Ranges of Balance Parameters	Ki-Ho Na (Korea)
15:45 - 15:55	Posterior only or Antero-posterior Surgical Correction in Adult Spinal Deformity: Indication and Current Treatment Outcomes	Chang Ju Hwang (Korea)
15:55 - 16:05	Strategy for Prevention of Proximal Junctional Problems in the Treatment of Adult Spinal Deformity	Dong-Gune Chang (Korea)
16:05 - 16:15	Revisional Strategy in Adult Spinal Deformity	Jae Hyuk Yang (Korea)
16:15 - 16:25	Discussion	
16:25 - 16:55	Free Paper: Deformity VI	Moderator: Young-Hoon Kim (Korea), Ho-Joong Kim (Korea)
16:25 - 16:30	S047 Treatment for Frailty Does Not Improve Complication Rates in Corrective Surgery for Adult Spinal Deformity	Mitsuru Yagi (Japan)
16:30 - 16:35	S048 Intraoperative Neuromonitoring during Adult Spinal Deformity Surgery: Alert Positive Cases in Different Surgical Procedures	Go Yoshida (Japan)
16:35 - 16:40	S049 Coronal Imbalance After Pedicle Subtraction Osteotomy for the Surgical Correction of Ankylosing Spondylitis: Incidence and Risk Factors	Yong-Chan Kim (Korea)
16:40 - 16:45	S050 Outcomes of Treatment of Dystrophic Kyphoscoliosis in Neurofibromatosis Type-1 with One-stage Posterior Only All Pedicle Screw Technique Using Strategic Anchor Point Method	Aju Bosco (India)
16:45 - 16:55	Discussion	
16:55 - 17:25	Free Paper: Lumbar I	Moderator: Young - Do Koh (Korea), Sang Bum Kim (Korea)
16:55 - 17:00	S051 The Influence of Lordotic Angle of Cages on Lumbar Lordosis in Lumbar Interbody Fusion	Hae-Dong Jang (Korea)
17:00 - 17:05	S052 Comparing Clinical Results of ULIF (Unilateral Biportal Endoscopic LIF) with Traditional PLIF for 2Lumbosacral Segment	Seung-Hyun Choi (Korea)
17:05 - 17:10	S053 Clinical and Radiological Outcomes of Minimally Invasive Oblique Lumbar Interbody Fusion at L5-S1	Tae Wook Kang (Korea)
17:10 - 17:15	S054 Risk Factors for Postoperative Ileus After Oblique Lateral Interbody Fusion	Sung Cheol Park (Korea)
17:15 - 17:25	Discussion	



Scientific Program

August 3 (Mon) Grand Ballroom A

08:00 - 08:30 Free Paper: MISS II		Moderator: Chang Nam Kang (Korea), Jae Hyup Lee (Korea)
08:00 - 08:05	S055 Mid-term Clinical and Radiological Outcomes in Minimal Invasive Scoliosis Surgery	Jeong-Hwan Ahn (Korea)
08:05 - 08:10	S056 Long-term Clinical and Radiological Outcomes of Minimally Invasive Transforaminal Lumbar Interbody Fusion: 10-year Follow-up Results	Young Ho, Roh (Korea)
08:10 - 08:15	S057 Mid-term Surgical Outcomes of Minimally Invasive Robotic Assisted vs Open Transforaminal Lumbar Interbody Fusion: A Single Centre Cohort Study	Vigneshwara M Badikillaya (India)
08:15 - 08:20	S058 Clinical Results after Paraspinal Approach by Unilateral Biportal Surgery in Lumbar Foraminal Stenosis	Seung Deok-Sun (Korea)
08:20 - 08:30	Discussion	
08:30 - 09:00 Free Paper: MISS III		Moderator: Kee-Won Rhyu (Korea), Francisco P. Altarejos (Philippine)
08:30 - 08:35	S059 Cauda Equina Syndrome: Percutaneous Transforaminal Endoscopy Under Local Anesthesia. A 15 patients Series	Ajay Krishnan (India)
08:35 - 08:40	S060 Cervical Epidural Pressure Measurement During Biportal Endoscopic Spinal Surgery	Tae wook Kang (Korea)
08:40 - 08:45	S061 Postoperative Spinal Epidural Hematoma in a Biportal Endoscopic Spine Surgery with Local Hemostatics and without Local Hemostatics	Won Shik Shin (Korea)
08:45 - 08:50	S062 Biportal Endoscopic Spine Surgery for Spinal Stenosis Considering Merits and Pitfalls	Chang-Myong Choi (Korea)
08:50 - 09:00	Discussion	
09:00 - 09:25 Free Paper: MISS IV		Moderator: Yung Park (Korea), Wong Hee Kit (Singapore)
09:00 - 09:05	S063 Cortical Bone Trajectory Pedicle Screw Fixation in Surgical Treatment of Mono-segmental Lumbar Pyogenic Spondylodiscitis	Kee-Won Rhyu (Korea)
09:05 - 09:10	S064 The Radiologic and Clinical Outcomes of Oblique Lateral Interbody Fusion for Correction of Adult Degenerative Lumbar Deformity	Jae Hyuk Yang (Korea)
09:10 - 09:15	S065 Spontaneous Fusion of Facet Joints Following Lateral Lumbar Interbody Fusion Supplemented with Percutaneous Pedicle Screw Fixation in Degenerative Lumbar Disease	Dae Woong Kim (Korea)
09:15 - 09:25	Discussion	
09:25 - 09:55 Free Paper: MISS V		Moderator: Keun-Ho Park (Korea), Si-Young Park (Korea)
09:25 - 09:30	S066 The Isthmic Corridor- A Novel Anatomical Approach for L5-S1 Postero-lateral Endoscopic Lumbar Discectomy (PELD)	Sourabh Chachan (India)
09:30 - 09:35	S067 Biportal Endoscopy-Assisted Versus Microendoscopy-Assisted Minimally Invasive Transforaminal Lumbar Interbody Fusion for Lumbar Degenerative Diseases	Hyun-Jin Park (Korea)
09:35 - 09:40	S068 Biportal Endoscopic Lumbar Decompression Combined with Vertebroplasty for Extremely Elderly Patients Who Had Low Lumbar Osteoporotic Vertebral Collapse with Neurologic Deficit	Min Seok Kang (Korea)
09:40 - 09:45	S069 Hidden Pathology about Lumbar Foraminal Stenosis: Radiologic Clue and Decompression Skills Using Biportal Endoscopic Spine Surgery	Dae-Jung Choi (Korea)
09:45 - 09:55	Discussion	



Scientific Program

August 3 (Mon) Grand Ballroom A

09:55 - 10:20 Free Paper: Trauma I

Moderator: Dong Ki Ahn (Korea), Jin Hwan Kim (Korea)

09:55 - 10:00	S070 Spinal Injury in Indian Children: Review of 204 Cases	M L Bansal (India)
10:00 - 10:05	S071 Risk Factors of Prolonged Pulmonary Supportive Care after Spinal Cord Injury	Jong Hyun Ko (Korea)
10:05 - 10:10	S072 Does Longus Collis and Capitis Muscle Have Protective Function Against Extension Injury of the Cervical Spine Trauma?	Tae-Young Kwon (Korea)
10:10 - 10:20	Discussion	

10:20 - 10:30 Coffee Break (Grand Ballroom Lobby)

10:30 - 11:00 Free Paper: Trauma II

Moderator: Ye-Soo Park (Korea), Woo Dong Nam (Korea)

10:30 - 10:35	S073 Fracture Type and Canal Encroachment Ratio in Reconstructed Midsagittal Computed Tomogram Image are Related with Neurologic Deficits in the Traumatic Fractures of Lumbar Vertebra Corresponding to Cauda Equina Level	Han-Dong Lee (Korea)
10:35 - 10:40	S074 Posterior Surgical Treatment of Delayed Myelopathy in Osteoporotic Vertebral Compression Fractures with PMMA Augmented Pedicle Screws	Dong Ki Ahn (Korea)
10:40 - 10:45	S075 Long Versus Short Segment Fixation for Thoraco-Lumbar Fixation - Can a Consensus be Reached?	Alok Agrawal (India)
10:45 - 10:50	S076 Motor Recovery by Epidural Stimulation after Spinal Cord Injury: Early Result of a Pilot Clinical Study	M N Muttha (India)
10:50 - 11:00	Discussion	

11:00 - 11:48 Asia Travelling Fellowship Session

Moderator: Kyu-Jung Cho (Korea)

11:00 - 11:07	Diaphragm Pacing: Is It Possible to Get Rid of Mechanical Ventilation in Cervical Injury Patients?	M N Muttha (India)
11:07 - 11:14	Correlation of mRNA Expression of Ladybird Homeobox 1 (LBX1) and Estrogen Receptor (ESR) with Severity of Deformity and Flexibility in Adolescent Idiopathic Scoliosis	Yudha Mathan Sakti (Indonesia)
11:14 - 11:21	The Change in Position and Distance of the Aorta from the Vertebra in Relation with the Magnitude of the Lenke 1 & 2 Scoliotic Curve	Chee Kidd Chiu (Malaysia)
11:21 - 11:28	Surgical Strategy for Osteoporotic Vertebral Fracture	Shinji Takahashi (Japan)
11:28 - 11:48	Discussion	

11:48 - 12:30 Asia Travelling Fellowship Session

Moderator: Bong Soon Chang (Korea)

11:48 - 11:55	The Accuracy of Pedicle Screw Placement Using the Set Square to Determine the Ideal Entrance Point and Angle of Screw for Lower Cervical Pedicle Screw Placement	Manh Hoang Tran (Viet Nam)
11:55 - 12:02	Anterior Column Realignment Application for Adult Spinal Deformity: A Prospective Cohort Study	Philip Cheung (Hong Kong)
12:02 - 12:09	Head Injury as Predictor of Cervical Spine Injury: A 5-Year Review	Jeremiah R. Morales (Philippine)
12:09 - 12:30	Discussion	



Scientific Program

August 3 (Mon) Grand Ballroom A

12:30 - 13:30	Sponsored Luncheon Symposium (Grand Ballroom A+B)	Moderator: Kyu-Jung Cho (Korea)
12:30 - 13:30	Effect of Teriparatide on the Healing of Osteoporotic Vertebral Compression Fracture	Si-Young Park (Korea)
13:30 - 13:55	Invited Lecture: Hiroshi Taneichi (Grand Ballroom A+B)	Moderator: Chong-Suh Lee (Korea)
13:30 - 13:50	Spinal Column Reconstruction Using Anterior Column Realignment (ACR) in Treatment of Adult Spinal Deformity	Hiroshi Taneichi (Japan)
13:50 - 13:55	Discussion	
13:55 - 14:20	Invited Lecture: Yukihiro Matsuyama (Grand Ballroom A+B)	Moderator: Byung-Joon Shin (Korea)
13:55 - 14:15	Hip-spine Syndrome: Which Surgery Should be Selected for Patients with Hip OA and Spinal Deformity?	Yukihiro Matsuyama (Japan)
14:15 - 14:20	Discussion	
14:20 - 14:35	Coffee Break (Grand Ballroom Lobby)	
14:35 - 15:35	Symposium: MISS	
14:35 - 15:05	Endoscopic Spinal Surgery	Moderator: Zairin Noor (Indonesia), Yung Park (Korea)
14:35 - 14:40	Multifidus Muscle Changes After Biportal Endoscopic Spinal Surgery: Magnetic Resonance Imaging Evaluation	Ho-Jin Lee (Korea)
14:40 - 14:45	A Novel Preoperative Trajectory Evaluation Method for L5-S1 Transforaminal Percutaneous Endoscopic Lumbar Discectomy	Sang Soo Eun (Korea)
14:45 - 14:50	Decompression Procedure Using Unilateral Biportal Endoscopy for Thoracic Myelopathy Caused by Ossification of the Ligamentum Flavum: A Technical Note and Preliminary Clinical Results	Seung-Hyun Choi (Korea)
14:50 - 14:55	Biportal Endoscopic Transforaminal Interbody Fusion	Ju Eun Kim (Korea)
14:55 - 15:05	Discussion	
15:05 - 15:35	Minimally Invasive Spinal Fusion	Moderator: Whoan Jeang Kim (Korea), Jae Chul Lee (Korea)
15:05 - 15:10	Combination of OLIF Plus BESS for Lumbar Spinal Stenosis: Comparison with Conventional Open TLIF	Ho-Jin Lee (Korea)
15:10 - 15:15	Unilateral Biportal Endoscopic Lumbar Interbody Fusion Versus Conventional Posterior Lumbar Interbody Fusion for 2 Lumbosacral Segment : Clinical and Radiological Outcomes of One-Year Follow-up	Seung-Hyun Choi (Korea)
15:15 - 15:20	Pearl and Pitfall of Minimally Invasive Instrumentation for Metastatic Spine Tumor	Se Jun Park (Korea)
15:20 - 15:25	MI Anterior and Posterior Support Surgery for Vertebral Burst Fractures	Jae-Young Hong (Korea)
15:25 - 15:35	Discussion	



Scientific Program

August 3 (Mon) Grand Ballroom A

15:35 - 16:05 Free Paper: Trauma III

Moderator: Yong-Soo Choi (Korea), Jae Jun Yang (Korea)

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|---------------|--|-----------------------|
| 15:35 - 15:40 | S077 Smoking and Alcohol Drinking and Risk of Non-union or Delayed Union after Fractures-protocol for Systematic Review and Dose-response Meta-analysis | Bin Xu (China) |
| 15:40 - 15:45 | S078 Increased Mortality from Recurrent Subsequent Fractures in Elderly Men and Women | Ji Won Kwon (Korea) |
| 15:45 - 15:50 | S079 Correlation of Deformation of Kyphotic Angle with Fat Infiltration Rate of Multifidus and Erector Spinae in Patients with Acute Osteoporotic Fractures of the Lumbar Spine | Jong-Min Baik (Korea) |
| 15:50 - 15:55 | S080 Trends of Incidence and Mortality of Vertebral Fractures in Korea | Sang-Min Park (Korea) |
| 15:55 - 16:05 | Discussion | |

16:05 - 16:30 Free Paper: Miscellaneous I

Moderator: Jae-Sung Ahn (Korea), Jun-Seok Lee (Korea)

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|---------------|---|------------------------------|
| 16:05 - 16:10 | S081 Complex Revision Spine Surgeries: How To Do It Right? | Harshil Rajesh Patel (India) |
| 16:10 - 16:15 | S082 Evaluation of the Authorship and Quality of Information on the Internet Web Sites Regarding Cervical Disc Herniation in Korea | Chang Hwa Hong (Korea) |
| 16:15 - 16:20 | S083 Does Aortic Calcification Affect BMD Assessment Using Dual Energy X-ray Absorptiometry? : Linear Regression Analysis | Jae Hyup Lee (Korea) |
| 16:20 - 16:30 | Discussion | |

16:30 - 16:50 Best Paper Awards (Grand Ballroom A+B)

16:50 - 17:00 Closing Remarks (Grand Ballroom A+B)



Scientific Program

August 3 (Mon) Grand Ballroom B

08:00 - 08:30 Free Paper: Lumbar II		Moderator: Hwan-Mo Lee (Korea), Hwa-Yeop Na (Korea)
08:00 - 08:05	S084 The Impact of Geometrical Spinal Shape on Fresh Vertebral Fractures in Elderly Volunteers: A Longitudinal Cohort Analysis	Tomohiro Yamada (Japan)
08:05 - 08:10	S085 The Effect of Enhanced Recovery after Surgery on Degenerative Lumbar Spinal Surgery	Hae-Dong Jang (Korea)
08:10 - 08:15	S086 Correlation Between Degenerative Lumbar Kyphosis and Degenerative Changes of Lumbar Extensor Muscles and Facet Joints	Seung Min Son (Korea)
08:15 - 08:25	Discussion	
08:30 - 09:00 Free Paper: Lumbar III		Moderator: Ho Geun Chang (Korea), Chang Hwa Hong (Korea)
08:30 - 08:35	S087 Instrumented Decompression in the Elderly with Degenerative Lumbar Canal Stenosis Improves Quality of Life	Harjinder Singh Bhatoe (India)
08:35 - 08:40	S088 Predictive Value of Comprehensive Geriatric Assessment on Early Postoperative Complications Following Lumbar Spinal Stenosis Surgery: A Prospective Cohort Study	Sam Yeol Chang (Korea)
08:40 - 08:45	S089 Comparison of Bilateral Decompression Via Unilateral Laminotomy and Conventional Laminectomy for Single-level Degenerative Lumbar Spinal Stenosis Regarding Low Back Pain, Functional Outcome, and Quality of Life: A Randomized Controlled, Prospective Trial	Sang Bong Ko (Korea)
08:45 - 08:50	S090 Superior Articular Process Cross-sectional Area is a Sensitive Parameter for the Diagnosis of Lumbar Lateral Recess Spinal Stenosis	Jong Uk Mun (Korea)
08:50 - 09:00	Discussion	
09:00 - 09:25 Free Paper: Lumbar IV		Moderator: Young-Woo Kim (Korea), Yong - Chan Kim (Korea)
09:00 - 09:05	S091 Lumbar Facet Joint Morphometry in South East Asian Population- A Cadaveric Study	Vishal Kumar (India)
09:05 - 09:10	S092 Spinal Surgery Under Spinal Anesthesia for Patients Over Mean 80 Years Old	Eun Seok Son (Korea)
09:10 - 09:15	S093 Epidemiological Survey on Lumbar Pain in the Community-dwelling Elderly	Shinji Tanishima (Japan)
09:15 - 09:25	Discussion	
09:25 - 09:55 Free Paper: Lumbar V		Moderator: Jae-Hyuk Shin (Korea), Wong Nang Man Raymond (Hong Kong)
09:25 - 09:30	S094 The Correlation Between Facet Joint Osteoarthritis and Disc Degeneration of Lower Lumbar with Segmental Motion and Clinical Symptoms	Wan Zainuddin Wan Ab Rahman (Malaysia)
09:30 - 09:35	S095 Analgesic Effectiveness of Single Ropivacaine Epidural Injection Versus Intravenous Patient-controlled Analgesia After Single-level Lumbar Decompression or Arthrodesis Surgery: A Randomized, Multi-center, Observer Blinded, Active-controlled Study	Kwang-Sup Song (Korea)
09:35 - 09:40	S096 Dynamic Ultrasound Imaging of Lumbar Multifidus for Assessment of Lumbar Spinal Muscles	Seung-Woo Shim (Korea)
09:40 - 09:50	Discussion	



Scientific Program

August 3 (Mon) Grand Ballroom B

09:55 - 10:20	Free Paper: Lumbar VI		Moderator: Hong-Moon Sohn (Korea), Yukihiro Matsuyama (Japan)	
09:55 - 10:00	S097 Complete Open Laminectomy, Posterior Decompression with Preservation of Posterior Ligamentous Complex : A Case Series of 5 Cauda Equina		Kean Loong Ong (Malaysia)	
10:00 - 10:05	S098 Clinical Effect of Sarcopenia in Surgical Outcome in Degenerative Lumbar Diseases		Jae-Ho Yang (Korea)	
10:05 - 10:10	S099 Is There a Relationship Between the Rate of Vertebral Body Height Loss Before Balloon Kyphoplasty and Early Adjacent Vertebral Fracture?		Jin Hun Park (Korea)	
10:10 - 10:20	Discussion			
10:20 - 10:30 Coffee Break (Grand Ballroom Lobby)				
10:30 - 11:00	Free Paper: Lumbar VII		Moderator: Jung Sub Lee (Korea), Hun Kyu Shin (Korea)	
10:30 - 10:35	S100 Clinical and Radiological Result of Revision Surgery in the Thoracolumbar Spine Using Revision Rod		Yung-Hun Youn (Korea)	
10:35 - 10:40	S101 Is Indirect Neural Decompression Sufficient after Lateral Lumbar Interbody Fusion?		Jae-Young Hong (Korea)	
10:40 - 10:45	S102 PRP Injections in Low Back Ache: Solution or Burden?		Vishnu Senthil Kumar (India)	
10:45 - 10:55	Discussion			
11:00 - 11:30	Free Paper: Infection		Moderator: Ki Ho Na (Korea), Moon Soo Park (Korea)	
11:00 - 11:05	S103 Anterior Debridement and Reconstruction with Femoral Allograft for Infectious Spondylitis		Hyoung-Yeon Seo (Korea)	
11:05 - 11:10	S104 Is the Management of Lumbar Spine Tuberculosis Different from Dorsal Spine TB?		Iiftekar Syed (India)	
11:10 - 11:15	S105 Intraspinal Hereditary Multiple Exostosis with Thoracic Myelopathy		Thean Sim Yee (Malaysia)	
11:15 - 11:20	S106 Fibromyalgia in Axial Spondyloarthritis - A Meta-analysis		Jung Sub Lee (Korea)	
11:20 - 11:30	Discussion			
11:30 - 12:00	Free Paper: Tumor I		Moderator: Hyoung-Yeon Seo (Korea), Jeong-Hyun Yoo (Korea)	
11:30 - 11:35	S107 Treatment Strategy for Impending Instability of Spinal Metastasis		Yeon Ho Kim (Korea)	
11:35 - 11:40	S108 Outcomes of MIS Surgery with Neurological Deficit Metastatic Cases -prospective Clinical Study of 20 Cases		Sanjoy Biswas (India)	
11:40 - 11:45	S109 Instrumented Surgical Treatment for Metastatic Spinal Tumors: Is Fusion Necessary?		Keun-Ho Lee (Korea)	
11:45 - 11:50	S110 Analysis of Surgical Outcomes Between Open versus Mini -open Surgery for Thoracolumbar Spinal Metastasis		Chang Hee Cho (Korea)	
11:50 - 12:00	Discussion			
12:00 - 12:30	Free Paper: Tumor II		Moderator: Tae Kyun Kim (Korea), Young-Yul Kim (Korea)	
12:00 - 12:05	S111 Primary Bone Tumour of the Spine: Surgical Treatment and Histopathological Findings		Shafiu Alam (Bangladesh)	
12:05 - 12:10	S112 Outcome of Denosumab Therapy in Spinal Giant Cell Tumours A Multicentric Study		Rohan Bharat Gala (India)	
12:10 - 12:15	S113 Diagnostic Performance of F-18 FDG PET or PET/CT for Differentiation of Benign from Malignant Vertebral Compression Fractures; A Systematic Review and Meta-analysis		Jung Sub Lee (Korea)	
12:15 - 12:20	S114 Incidence and Prognosis of Spinal Metastases as the First Manifestation of Malignant Tumors: Analysis of 338 Patients Undergoing Surgical Treatment		Jin-Sung Park (Korea)	
12:20 - 12:30	Discussion			

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August 3 (Mon) Grand Ballroom B

12:30 - 13:30	Sponsored Luncheon Symposium (Grand Ballroom A+B)	Moderator : Kyu-Jung Cho (Korea)
12:30 - 13:30	Optimal Pain Management after Surgery Multimodal Approach	Se-Jun Park (Korea)
13:30 - 13:55	Invited Lecture (Grand Ballroom A+B) : Hiroshi Taneichi	Moderator: Chong-Suh Lee (Korea)
13:30 - 13:50	Spinal Column Reconstruction Using Anterior Column Realignment (ACR) in Treatment of Adult Spinal Deformity	Hiroshi Taneichi (Japan)
13:50 - 13:55	Discussion	
13:55 - 14:20	Invited Lecture (Grand Ballroom A+B) : Yukihiro Matsuyama	Moderator: Byung-Joon Shin (Korea)
13:55 - 14:15	Hip-spine Syndrome: Which Surgery Should be Selected for Patients with Hip OA and Spinal Deformity?	Yukihiro Matsuyama (Japan)
14:15 - 14:20	Discussion	
14:20 - 14:35	Coffee Break (Grand Ballroom Lobby)	
14:35 - 15:35	Symposium: Lumbar	
14:35 - 15:00	Surgical Technique: Anterior Column Realignment Surgery on Lumbar Spine	Moderator: Chang-Hoon Jeon (Korea), Dong Eun Shin (Korea)
14:35 - 14:39	Redefining	Chang Hwa Hong (Korea)
14:39 - 14:43	Tip and Pitfall of Using Cage for Achieving Both Indirect Decompression and Segmental Angle Restoration	Sang Bum Kim (Korea)
14:43 - 14:47	Technical Tip for Getting the Larger Lumbar Correction "With Physiologic Curve"	Yong-Chan Kim (Korea)
14:47 - 14:51	Strategies for Prevention of Surgical Complication: Hernia, Neurovascular Injury etc	Tae-Hoon Kim (Korea)
14:51 - 15:00	Discussion	
15:00 - 15:25	Degenerative Lumbar Scoliosis in Lumbar Spine	Moderator: Byung-Joon Shin (Korea)
15:00 - 15:04	Radiographic Restoration After Surgery Promises the Better Clinical Outcome?	Dae-Hyun Park (Korea)
15:04 - 15:08	Comparative Analysis of Lower Most Fusion Level: L5 vs S1 vs Ilium	Byung Ho Lee (Korea)
15:08 - 15:12	Proximal Coronal Curve Progression After Surgery	Woo Dong Nam (Korea)
15:12 - 15:16	Proximal Sagittal Curve Progression After Surgery	Young-Woo Kim (Korea)
15:16 - 15:25	Discussion	



Scientific Program

August 3 (Mon) Grand Ballroom B

15:25 - 15:35 Prevention and Management After Elderly Spine Surgery Moderator: Bong Soon Chang (Korea)

15:25 - 15:30 Perioperative Delirium After Elderly Spine Surgery Hun Kyu Shin (Korea)

15:30 - 15:35 Discussion

15:35 - 16:05 Free Paper: Miscellaneous II Moderator: Kyung Chung Kang (Korea), Yong-Gi Choi (Korea)

15:35 - 15:40 **S115** The Comparison of One and Two Distal Hooks in Thoracolumbar Fusion Using Pedicle Screw Instrumentation in Elderly Patients Sung-Soo Kim (Korea)

15:40 - 15:45 **S116** A Prospective Study on the Feasibility, Safety, and Efficacy of a Modified Technique to Augment the Strength of Pedicle Screw in Osteoporotic Spine Fixation Vikas Tandon (India)

15:45 - 15:50 **S117** Prevalence of Psychiatric Disorders in Pediatric Scoliosis Patients: An Analysis of the Nationwide Patient Sample Data Sets Soo-Bin Lee (Korea)

15:50 - 15:55 **S118** Effect of Lumbar Spinal Stenosis on Bone Mineral Density in Patients Treated with Ibandronate for Newly Diagnosed Osteoporosis Hyung-Youl Park (Korea)

15:55 - 16:05 Discussion

16:05 - 16:30 Free Paper: Miscellaneous III Moderator: Dong Soo Kim (Korea), Gwang Il Ko (Korea)

16:05 - 16:10 **S119** Cauda Equina Syndrome: False-positive Diagnosis of Neurogenic Bladder Can Be Reduced by Multichannel Urodynamic Study Sulaiman Sath (India)

16:10 - 16:15 **S120** The Gait Trunk Angle Assessment by Using Gait Analyzer with KINECT in Elderly Volunteers with or without Low Back Pain Yuh Watanabe (Japan)

16:15 - 16:20 **S121** Clinical Implication of Mid-range Dynamic Instability in Lumbar Degenerative Spondylolisthesis Seung-Hwan Lee (Korea)

16:20 - 16:30 Discussion

16:30 - 16:50 Best Paper Awards (Grand Ballroom A+B)

16:50 - 17:00 Closing Remarks (Grand Ballroom A+B)



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Ref. 1) Osteoporosis International (2019) 30:675–683, 2) Osteoporosis International volume 30, pages2027–2037(2019)

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[효능효과] 1) 폐경기 이후 여성 및 골질의 위험이 높은 남성에 대한 골다공증의 치료 2) 골질의 위험이 높은 여성 및 남성에 있어서 지속적인 글루코코르티코이드 요법과 관련 된 골다공증의 치료 [용법·용량] 권장용량은 1일 1회 이 약 20ug을 대퇴부 또는 복부에 피하주사 한다. 환자들은 올바른 주사방법에 대하여 교육을 받아야 한다. 환자에게 펜의 정확한 사용을 지도하기 위한 사용자 안내서(user manual)도 있다. 이 약의 투약기간은 최대 24개월이다. 한 환자의 일생에서 이 약의 24개월 과정을 반복해서는 안 된다. 만일 음식섭취가 불충분한 경우에는 환자들은 칼슘과 비타민D 보조제를 추가적으로 섭취하여야 한다. 이 약의 치료가 끝난 후에는 환자들은 다른 골다공증 치료를 계속할 수 있다. [사용상의 주의사항] 다음 환자에는 투여하지 말 것. 1) 테리파라타이드 또는 이 약의 부형제 성분에 대하여 과민반응 2) 임부 및 수유부 3) 기존의 고칼슘혈증 4) 중증의 신장 기능손상 5) 일차적인 골다공증 이외에 대사성 골 질환(부갑상선 기능항진증 및 뼈의 Paget's disease 포함)이 충분히 설명되지 않는 alkaline phosphatase 의 상승 7) 이전에 골격에 방사선 치료를 한 경우 8) 골격 악성종양 또는 골 전이가 있는 환자 * 이 외의 보다 자세한 사항은 테로사 카트리지주 제품설명서 전문을 참조하여 주시기를 바랍니다.

[제조사] Richter-Helm BioLogics GmbH & Co.KG (Germany) (원료의약품), Gedeon Richter Plc. (Hungary) (원제의약품) [판매사] 대원제약(주) 서울특별시 성동구 천호대로 386 대표번호 : 02-2204-7000 소비자상담실 : 080-497-8272(수신자부담) <http://www.daewonpharm.com>
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PP-CEL-KOR-2237-9JAN2022



Venue Information

Swiss Grand Hotel _Grand Ballroom 2F

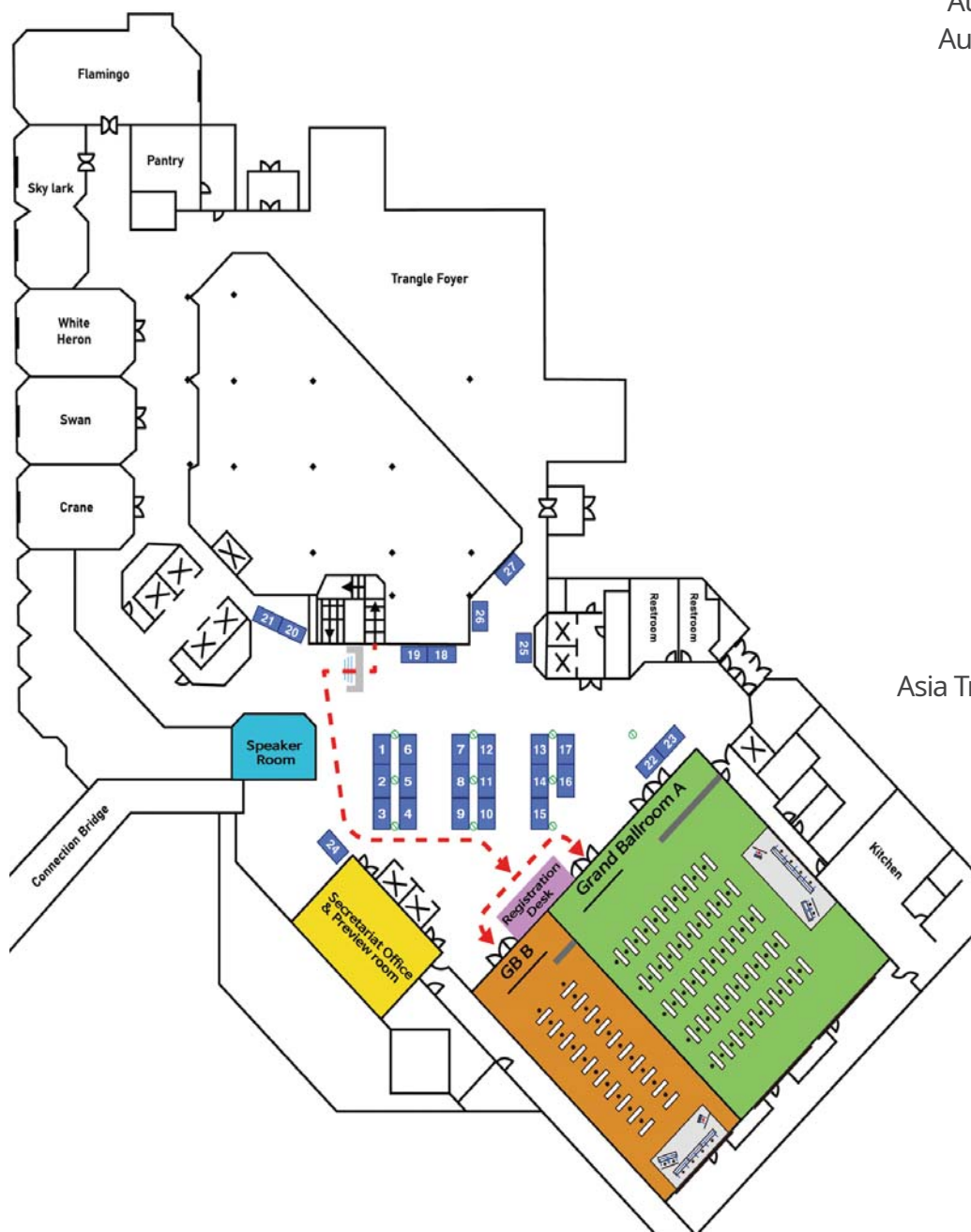
Grand Ballroom Lobby_ Exhibition

Date & Time

August 2 (Sun) , 08:00 - 18:00

August 3 (Mon) , 08:00 - 17:30

Coffee Break



Grand Ballroom A

Opening Remarks

Asia Spine Forum

Invited Lecture

KSSS General Assembly

Luncheon Symposium

Symposium

Free Paper

Best Awards

Closing Remarks

Convention Hall B

Asia Travelling Fellowship Session

Invited Lecture

Luncheon Symposium

Symposium

Free Paper

Peacock Room

Preview Room

Secretariat Office

Board Room

Speaker & VIP Room



Conference Information

Registration

Location: Lobby (Swiss Grand Hotel, Grand Ballroom 2F)

Operation Hours: August 2 - 3, 07:00 AM ~ 18:00 PM

Name Badge Policy

For security purposes, participant and exhibitors to wear their name badges during the conference
If you needs any corrections, please visit the registration desk for a replacement

Lunch Coupon

Lunch Coupon will be provided at the registration desk

The participants enter the cafeteria and pass the coupon to a hotel manager and order the selected Menu

Place at: ATRIUM

Operation hour: 11:30 AM ~ 15:30 PM

The lunch coupon is only valid for August 2 - 3, 2020

Coffee Break

Coffee will be provided to participant at break times in the lobby of Grand Ballroom lobby and an Exhibition Hall area.

Preview Room

Location: Peacock Room 2F

Operation Hours: 07:00 AM ~ 17:00 PM, August 2 - 3, 2020

All speakers are requested to visit the preview room and submit presentation materials at least 2hours prior to presentation. A PC will be provided with window 7 and Microsoft 2013 for presentations

Free Paper Session Abstract & E - Poster Download

Abstracts selected for E-Poster will have no specific presentation date and time

But any Free Paper Session abstract & E-Poster abstract can be viewed and downloaded on KSSS 2020 website



Guidance on COVID - 19

Please keep your social distance

Regarding COVID -19, KSSS 2020 prepared the response measures following the government guidelines

General Guideline for Entrance to the Venue for Attendees

- All visitors should wear a mask (Only KF80 mask allowed)
- Use of hand sanitizer is required before admission
- Search the "KI-PASS": Get my QR code in advance
- Those who have correspond to following within 14 days (Based on the day of the event) recommend refrain from the attending.

- Have a history of overseas travel
- Close-contact to someone with confirmed COVID -19
- Visiting an area that experience an infection
- Those displaying fever, respiratory symptoms, or pneumonia of unidentified cause

Procedure of Entry of Conference Venue

• STEP 1 •



Prepare and submit a questionnaire

• STEP 2 •



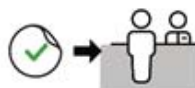
Identification:
QR Code Registration with KI-PASS

• STEP 3 •



Temperature measurement:
Non-contact Temperature Measure

• STEP 4 •



After get the checked sticker,
move to registration desk



Guidance on COVID - 19

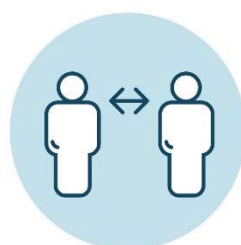
Please keep your social distance

Guidelines for Grand Ballroom

- Full disinfection of the conference room after or before the lecture
- Place the Grand Ballroom seats at least 1.5 meters apart
- Restrict the number of attendees entering the conference room (Arrange one counting and restricting staff)
- Place the bottled water instead of serving the water in the conference room
- Cover all microphones in the conference room and change the cover every times (Presenter, Moderator microphone cover change)
- Presenter and moderator should wear KF 80 mask while speaking on the session and all the time onsite
- Transparent acrylic screen for presenter, moderator and panel

Guidelines for Exhibition Hall

- Full disinfection of the booth exhibition hall before or after of the day
- Restricting access to exhibition halls without name tags or fever checked stickers by assigning onsite staff
- The number of people assigned to each booth is limited to a minimize to 1-2 staff
- To presence, KF80 masks and if it is needed a facial protection must be worn
- Hand sanitizer will be placed in each booth
- When promoting the product, using video is recommended and avoid face-to-face public relations
- Can not have Lunch inside the venue and only the designated entrance is allowed to access





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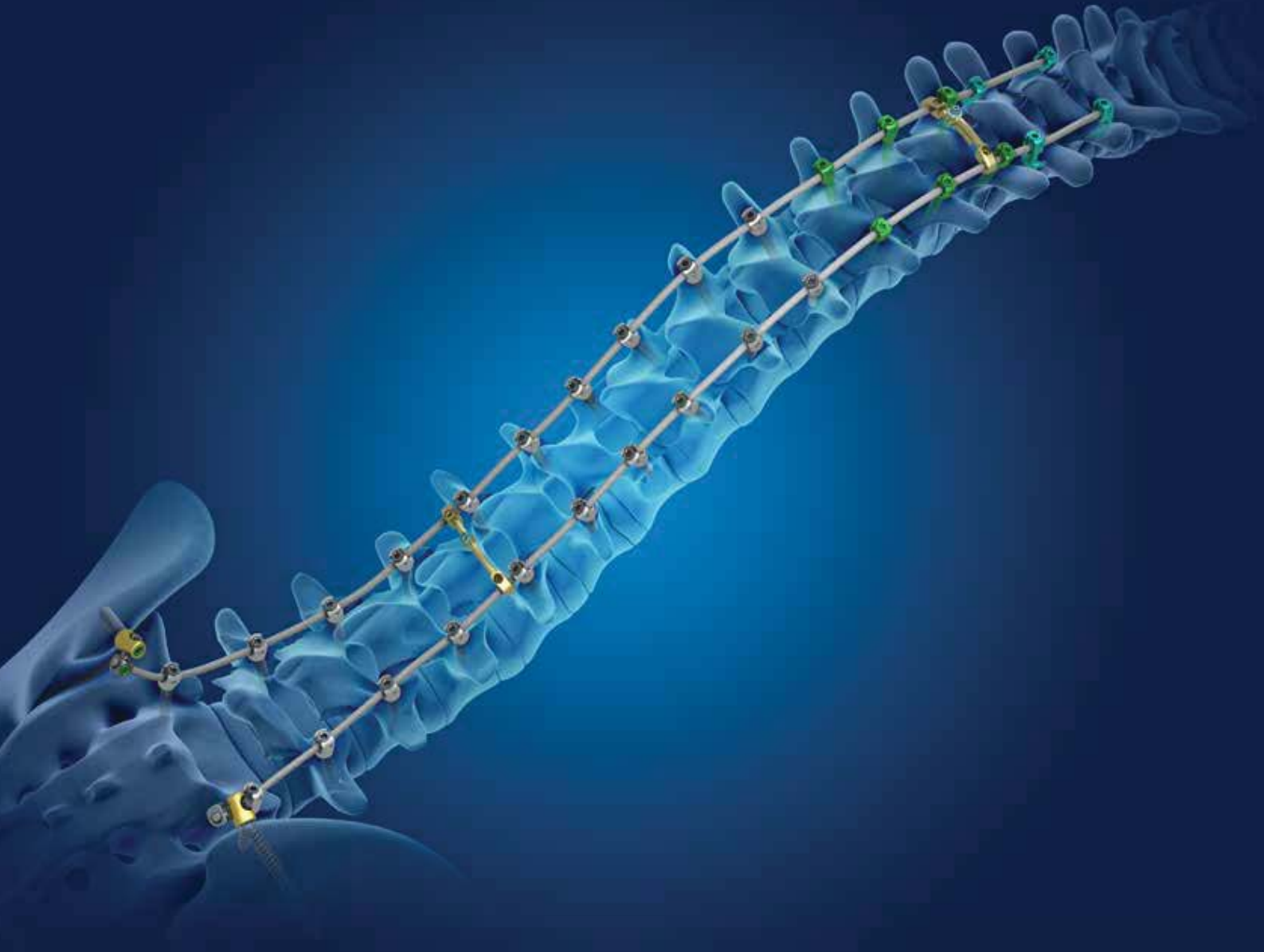


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Drug Information

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효능·효과

1. 성인에서 말초와 중추 신경병증성 통증의 치료
2. 간질: 성인에서 이차적 전신증상을 동반하거나 동반하지 않은 부분 발작의 보조제
3. 섬유근육통의 치료

용법·용량

이 약은 프레가발린으로서 1일 총 투여용량을 1일 2회로 나누어 음식물과 상관 없이 경구 투여한다. 이 약은 주로 신장으로 배설되므로, 신기능이 저하된 환자에 대해서는 용량이 조정되어야 한다. 1. 신경병증성 통증 1) 말초 신경병증성 통증(성인): 이 약은 시작용량으로 1일 150mg을 투여할 수 있다. 개개 환자에서의 반응과 내약성에 근거하여 3일 내지 7일 후에 1일 300mg까지 증량할 수 있다. 필요하다면, 이후 7일 간격으로 1일 최대 600mg까지 증량할 수 있다. 2) 중추 신경병증성 통증(성인): 이 약은 시작용량으로 1일 150mg을 투여할 수 있다. 개개 환자에서의 반응과 내약성에 근거하여 1주일 후에 1일 300mg까지 증량할 수 있다. 추가로 1주일 후에 목표 1일 용량인 600mg까지 증량할 수 있다. 목표 1

일 용량에서 내약성을 나타내지 않을 경우 용량 감소가 고려될 수 있다. 2. 간질 (성인): 이 약은 시작용량으로 1일 150mg을 투여할 수 있다. 개개 환자에서의 반응과 내약성에 근거하여 일주일 후에 1일 300mg까지 증량할 수 있다. 필요하다면, 이후 7일 간격으로 1일 최대 600mg까지 증량할 수 있다. 3. 섬유근육통: 이 약의 권장 용량은 1일 300mg~450mg 이다. 이 약은 시작 용량으로 75mg 씩 1일 2회(1일 150mg)를 투여하며, 유효성과 내약성에 근거하여 1주일 이내에 150mg씩 1일 2회(1일 300mg) 까지 증량할 수 있다. 1일 300mg의 용량에서 충분한 유효성을 경험하지 못한 환자의 경우에는 1주일 이내에 225mg씩 1일 2회(1일 450mg) 까지 증량할 수 있다. 1일 600mg의 용량에서도 임상 연구가 실시 되었으나, 이 용량에서의 부가적인 유효성이나 충분한 내약성에 대한 증거는 없다. 용량 의존적인 이상반응을 고려하면, 1일 450mg을 초과하는 용량 투여는 권장되지 않는다.

사용상의 주의사항

1. 경고 1) 자살충동과 자살행동 (i) 항간질약을 복용한 환자에서 자살충동 또는 자살행동을 보이는 위험성이 증가되므로 항간질약을 치료받은 환자는 자살충동 또는 자살행동, 우울증의 발현 또는 악화 및 기분과 행동의 비정상적 변화에 대하여 모니터링되어야 한다. (2) 항간질약을 처방받는 간질과 다른 많은 질병은

그 자체가 이환 및 사망, 치료기간 동안의 자살충동과 자살행동의 위험성증가와 관련된다. 따라서 처방자는 항간질약 처방시 환자의 치료기간 동안 자살충동 또는 자살행동과 치료될 질병간의 연관성 유무 및 이 약의 유효성을 함께 고려한다. 2. 다음 환자에는 투여하지 말 것 1) 프레가발린 또는 이 약의 성분에 과민한 환자 2) 이 약은 유당을 함유하고 있으므로, 갈락토오스 불내성 (galactose intolerance), Lapp 유당분해효소 결핍증 (Lapp lactase deficiency) 또는 포도당-갈락토오스 흡수 장애 (glucose-galactose malabsorption) 등의 유전적인 문제가 있는 환자에게는 투여하면 안 된다.

* 기타 자세한 사항은 제품설명서를 참고하십시오.

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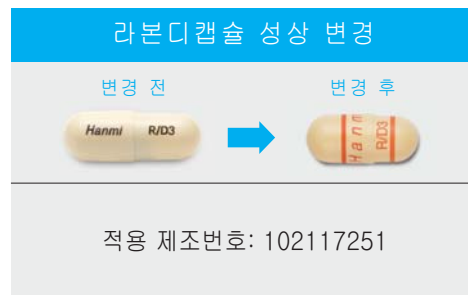
성분	Risedronate 150 mg+ Cholecalciferol 30000 IU
적응증	1. 폐경 후 여성 골다공증 예방(골감소증) 2. 폐경 후 여성 골다공증 치료
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- 폐경초기에도 BP 대비 골 교체율 유지효과 우수^{2) 3)}
- Raloxifene 단일제 가격으로 Vit.D 추가 복용 가능^{*}

[효능·효과] 폐경 후 여성의 골다공증 치료 및 예방 [용법·용량] 1일 1회 1캡슐, 자세한 사항은 첨부문서 참조

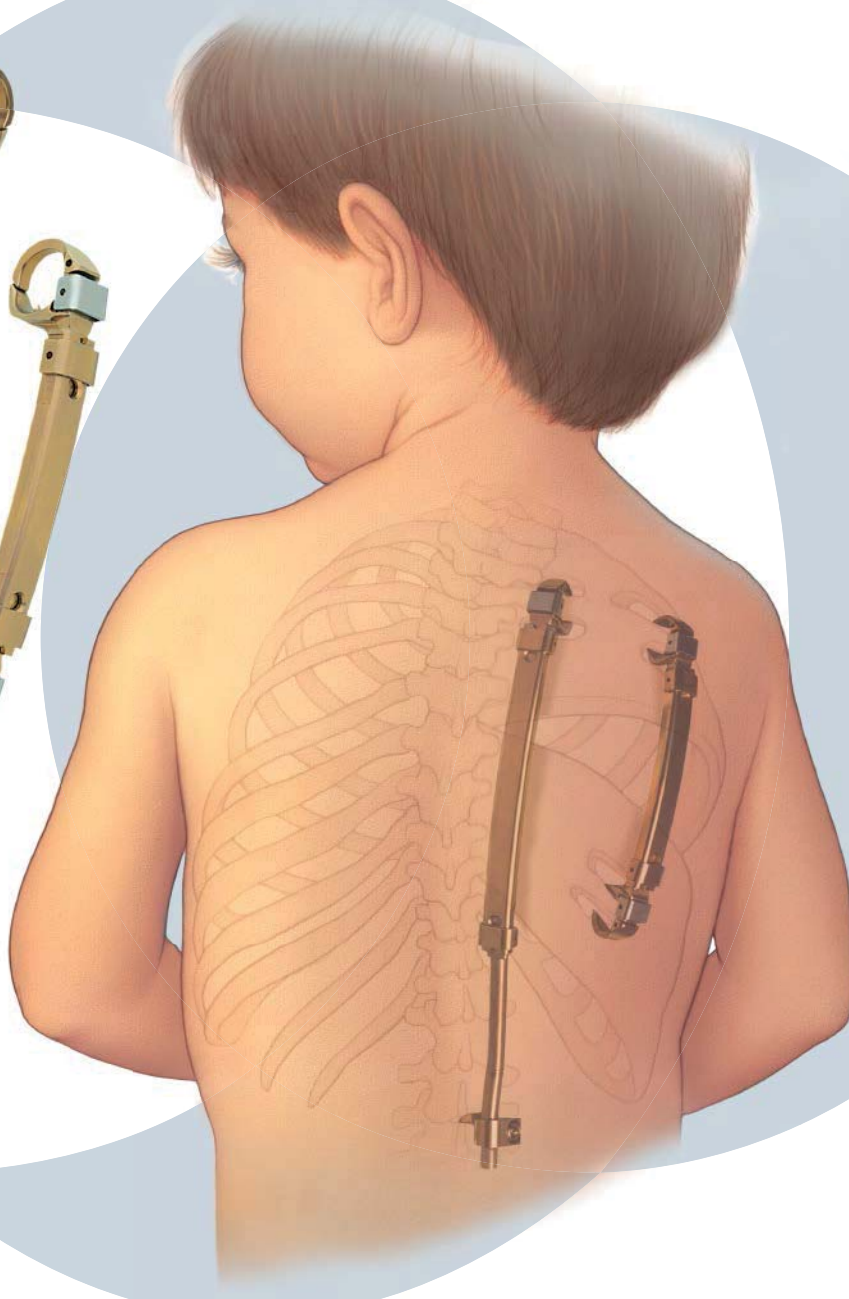
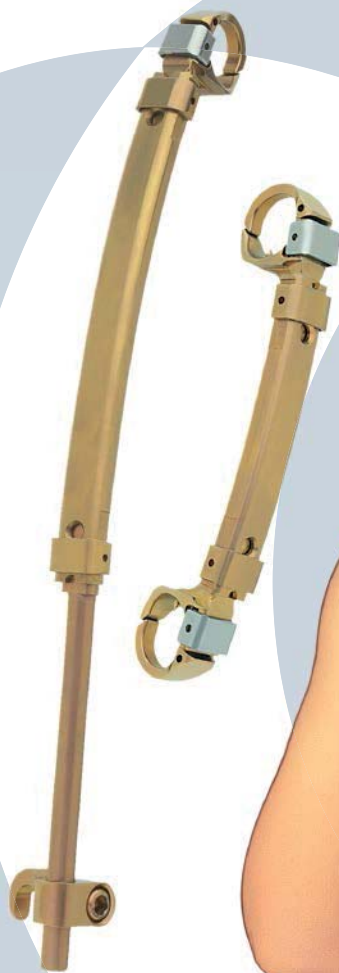
*인용한 Data는 한미약품 제품을 직접 투여한 결과는 아닙니다. *SERM : Selective Estrogen Receptor Modulator *BP : Bisphosphonate

Reference, 1) 2015 대한골대사학회 권고안 2) J.J STEPAN et al, Endocrine Regulations 2003; 37: 227-240 3) Santiago Palacios et al, Gynecological Endocrinology 2012; online: 1-17

An illustration of the Gemini constellation against a dark blue starry background. Two figures, representing the twins, are shown in white outlines. They are wearing purple tunics and have their arms crossed. A large white hexagon with a black border is positioned on the left, containing a large white letter 'N'. The figures are connected by lines representing the constellation's stars.

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제품요약정보⁷⁾

전문약품

【제품명】 조인스정200mg **【원료약품 및 그 분량】** 이 약 1정 중 조인스정 유효성분: 위령선-갈루근-하고초30%에탄올건조엑스(40→1)(별규) ...200mg **【효능·효과】** 골관절증(퇴행관절질환), 류마티스관절염의 증상 완화 **【용법·용량】** 성인 : 1회 1정을 1일 3회 경구투여한다. 증상에 따라 적절히 증감한다. **【사용상의 주의사항】** 1. 다음 환자에는 신중히 투여할 것. 1) 감염상태 또는 감염의 원인이 있는 환자(감염에 대한 자체 저항력이 감소될 가능성이 있음을 고려해야 하며, 이런 경우에는 감염의 진행을 억제하는 처치를 취해야 한다.) 2) 임부 또는 임신하고 있을 여성 및 수유부 (후락) **【제조사】** 에스케이케미칼(주) 충청북도 청주시 흥덕구 산단로 149 **【판매자】** 에스케이케미칼㈜ 경기도 성남시 분당구 판교로 310 2011. 3. 21. 개정

※처방하기 전 제품설명서 전문을 참고하십시오. 최신 허가사항에 대한 정보는 '식품의약품 안전처 의약품안전나라 (<https://nedrug.mfds.go.kr/index>)'에서 확인할 수 있습니다.

References 1. Choi JH et al., Effects of SKI 306X, a new herbal agent, on proteoglycan degradation in cartilage explant culture and collagenase-induced rabbit osteoarthritis model., Osteoarthritis Cartilage, 2002 Jun;10(6):471-8. 2. Hartog A et al., The multicomponent phytopharmaceutical SKI306X inhibits in vitro cartilage degradation and the production of inflammatory mediators., Phytomedicine, 2008 May;15(5):313-20. 3. Lee SW et al., Clematis mandshurica protected to apoptosis of rat chondrocytes., J Ethnopharmacol, 2005 Oct 3;101(1-3):294-8. 4. Choi CH et al., SKI306X inhibition of glycosaminoglycan degradation in human cartilage involves down-regulation of cytokine-induced catabolic genes., Korean J Intern Med, 2014 Sep;29(5):647-55. 5. Jung YB et al., A four-week, randomized, double-blind trial of the efficacy and safety of SKI306X: a herbal anti-arthritis agent versus diclofenac in osteoarthritis of the knee., Am J Chin Med, 2004;32(2):291-301. 6. JoinsFinalReport_20051007(최종). Data on file, SK케미칼. [Updated 2005,10,07] 7. 조인스정 허가정보, 의약품안전나라 [Cited 2020,02,26] Available from: <https://nedrug.mfds.go.kr/>

i. 4년간의 시판후 조사결과 상 6개월 이상 장기투여(184명, 전체의 3.09%) 대상자 포함하였음.

ii. Pubmed SKI 306X 검색결과, 조인스로 진행된 연구 총 13건 [Cited 2020,02,17] Available from : <https://www.ncbi.nlm.nih.gov/pubmed/?term=SKI+306X>.

iii. Certificate of Good Manufacturing Practice (2015,08), Daejeon Regional Commissioner Food and Drug Administration.



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Reference 1. 이베니티™ 제품설명서. 암젠코리아 2. Forteo® (teriparatide) prescribing information, Eli Lilly and Company. 3. Tymlos® (abaloparatide) prescribing information, Radius Health, Inc. 4. Rosen CJ. *N Engl J Med*. 2017;377:1479-1480. 5. Cosman F, et al. *N Engl J Med*. 2016;375:1532-1543. 6. Ferran SL. *Nat Rev Rheumatol*. 2018;14:128. 7. Saag KG, et al. *N Engl J Med*. 2017;377:1417-1427.

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