

Curriculum Vitae

NAME: Ariel Matías, KAEN. MD. PhD.

E-mail: kaenariel@hotmail.com

Phone: +34 647 009 818



EDUCATION & TRAINING:

2002-2009	M.D. Universidad Católica de Córdoba. Argentina With honors
2004 - 2009	Resident in Neurosurgery, Hospital 12 de Octubre. Madrid. Spain.
2009 - present	Staff Neurosurgical Department. Hospital Virgen del Rocío. Seville. Spain.
2013 – present	Co-Director Skull Base and Spine Unit. Hospital Virgen del Rocío. Seville. Spain.
2014	Ph D. Universidad Complutense de Madrid. Surgery Department.
2015	Master in Advance Endoscopy Otorhinolaryngology. Specialization in Advanced Nasosinusual Surgery. Universidad de Sevilla
2020	Accredited as " EXPERT " by the Andalusian Health Quality Agency (AHQA)
2020	Fellowship uniportal in Endoscopic Spine Surgery (India)
2021	Professor international university of Seville. Master's Degree in Advanced Rhinology and Anterior Skull Base
2022	Officially certified by KOMISS (Korean Minimally Invasive Spine Surgery Society) as an endoscopic spinal surgery training center (Dr. Son and Dr. Park). Busan. Korea. Member of SECPEC (Spanish Endoscopic Spine Society)
2023	Member of European Spine journal revision Team. 2do visit to Dr. Son and Dr. Park in Good Moonhwa Hospital Spine Center. International UBE Academy Busan. Korea.

International clinical observer

- Visiting Clinical Observer (March/Abril 2012) in the Cranial Base Surgery at the University of Pittsburgh Medical Center (UPMC) (Dr. Juan C. Fernandez-Miranda).
- Visiting Clinical (May/2022) at the Neurosurgery Department of the Park Weon Wook Hospital, officially certified by KOMISS (Korean Minimally Invasive Spine Surgery Society) as an endoscopic spinal surgery training center (Dr. Son and Dr. Park). **Busan. Korea.**
- Visiting Clinical (Feb/2023) at the Neurosurgery Department of the Good Moonhwa Hospital, as an endoscopic spinal surgery training center (Dr. Son and Dr. Park). **Busan. Korea.**

SPINE TRAINING

- Certificate of Continuing Medical Education AO North America, Inc. certifies that **Ariel Kaen, MD, PhD** has participated in the educational activity titled AOSpine North America Webinar: **Odontoid Fractures: Operative and Non-Operative Considerations in the Elderly**. 8/10/2016 to 8/10/2016 Paoli, PA, USA. and is awarded **125.00 AMA PRA Category 1 Credits**
- Certificate of Continuing Medical Education AO North America, Inc. certifies that **Ariel Kaen, MD, PhD** has participated in the educational activity titled AOSpine North America Webinar: **Cervical Myelopathy: Natural History, Treatment Options, and Strategies for Reducing Complications**. 9/21/2016 to 9/21/2016 Paoli, PA, USA. and is awarded **125.00 AMA PRA Category 1 Credits**
- Certificate of Continuing Medical Education AO North America, Inc. certifies that **Ariel Kaen, MD, PhD** has participated in the educational activity titled AOSpine North America Webinar: **Intraoperative Complications During Lumbar Spine Surgery: Management Strategies and Salvage Techniques** 11/2/2016 to 11/2/2016 Paoli, PA, USA. and is awarded **125.00 AMA PRA Category 1 Credits**
- AOSpine Advanced Level Sim. Bioskills Course—**Microsurgical Decompression & Fusion Procedures in Lumbar Spine**. Participant, 12 credits. Davos. Suiza. 11-12 Diciembre/2016.
- Certificate of Continuing Medical Education AO North America, Inc. certifies that **Ariel Kaen, MD, PhD** has participated in the educational activity titled AOSpine North America Webinar: **Cervical Disc Arthroplasty vs. Anterior Cervical Fusion: What is the Best Option?** 2/22/2017 to 2/22/2017 Paoli, PA, USA and is awarded **125.00 AMA PRA Category 1 Credits**
- AOSpine Advanced Online Course - Module I. Mar 11, 2017. Virtual Course (2 hours)
- AOSpine Advanced Webinar “**Cirugía Mínimamente invasiva en columna lombar**”. Mar 28, 2017. Curso Virtual (1hs)
- AOSpine Master Webinar “**Complications in Adult Deformity Correction**”. March 30, 2017. Dübendorf, Switzerland. 1hs.
- AOSpine Advances Symposium – **Managing the complex cervical spine junction to junction**. 3 April 2017. Barcelona. Spain (14hs)
- Certificate of Continuing Medical Education AO North America, Inc. certifies that **Ariel Kaen, MD, PhD** has participated in the educational activity titled AOSpine North America Webinar: **Surgical Decision Making in Adult Sagittal Balance** 4/19/2017 to 4/19/2017 Paoli, PA, USA and is awarded **1.25 AMA PRA Category 1 Credits**
- AOSpine Advanced Online Course - Module II. 29 Apr 2017. Virtual Course (2 hours).
- AOSpine Advanced Webinar - Degenerative Scoliosis. 09 May 2017. Virtual Course (1hs).
- AOSpine Advanced Online Symposium - Thoracolumbar Trauma. May 12, 2017. Virtual Course (4hs).
- Certificate of Continuing Medical Education AO North America, Inc. certifies that **Ariel Kaen, MD, PhD** has participated in the educational activity titled AOSpine North America Webinar: **Update on Treatment of Thoracolumbar Burst Fractures** 5/24/2017 to 5/24/2017 Paoli, PA, USA and is awarded **1.25 AMA PRA Category 1 Credits**
- AOSpine Advanced Online Course - Module III. Jun 3, 2017. Virtual Course (2 hours).
- Minimally Invasive Lateral Lumbar Fusion (XLIF / DLIF-OLLIF) June 16, 2017. Castellon (9hs).
- AOSpine Latin America Regional Courses – **Online Plenary Session**. 24 Jun 2017. Online, Mexico (4hs)
- AOSpine Advanced Online Course - Module IV. 12 Aug 2017. Virtual Course. Brazil (2 hours).
- AOSpine Advanced Webinar - High cervical spine fractures. 29 Aug 2017, Virtual Course (1hs).
- AO Spine Webinar-**The COVID-19 Pandemic: The Role of Spine surgeon**. 27 Mar 2020.
- AO Spine Online **Course-Endoscopy**. December 03-05 2020. Davos Switzerland.
- Attendance in the **World Congress on Spine endoscopy**. 19th-20th September 2020
- On-line Endoscopic Spine Surgery Training Program 05.09.2020 to 22.11.2020. **CERTIFICATE OF FELLOWSHIP**.
- Training module on “**From the Master of Masters-Dr. Anthony Yeung**” 2 lesson (64min) November 2020.
- Training module on “**360 Deg. Endoscopic Spine Surgery**” (34min). November 2020.
- Certificate of Participations in **9th WESSCON and Endoscopic Spine Surgery Workshop 2020 (Virtual)**. World Endoscopic Spine Society (WESS) 26th-27th December 2020.
- Officially certified by KOMISS (Korean Minimally Invasive Spine Surgery Society) as an endoscopic spinal surgery training center (Dr. Son and Dr. Park). Busan. Korea.
- Amplify Surgical’s Inaugural Endoscopic Spine Symposium. featuring dualPortal™ and dualX® System on February 5, 2022 - Long Beach, CA. USA.

Publications in Peer-reviewed in National and International Scientific Journals: (h-index 10)

1. "Value of serial CT scanning and intracranial pressure monitoring for detecting new intracranial mass effect in severe head injury patients showing lesions type I-II in the initial CT scan". Lobato RD, Alen JF, Pérez-Núñez A, Alday R, Gomez PA, Pascual B, Lagares A, Miranda P, Arrese I, **Kaen A**. *Neurocirugía (Astur)*. 2005 Jun;16(3):217-34. PMID: 16007322.
2. "Resonancia magnética en trauma craneal moderado y grave: estudio comparativo de hallazgos en TC y RM. Características relacionadas con la presencia de localización de lesión axonal difusa en RM". Lagares A.; Ramos A.; Alday R.; Ballenilla F.; Pérez-Núñez A.; Arrese I.; Alen J.F.; Pascual B.; **Kaen A.**; Gomez G.A.; Lobato R.D. *Neurocirugía (Astur)*. Abril 2006;17:105-118. PMID: 16721477
3. "Infratentorial Hygroma". Arrese I; **Kaen A**; Lobato RD. *Journal of Neurosurgery*. 2006 may; 104(5):856-857. PMID: 16703900.
4. "Illustrative short review Haemangiopericytoma Presenting with Acute Intracerebral Haemorrhage". **Kaen A**; Arrese I; Lobato RD; Lagares A; Cabello A. *Acta Neurochirurgica*. 2007 Apr; 149(4):415-8. Epub 2007 Feb 12. PMID: 17294344.
5. "Brown-Sequard syndrome after blunt cervical spine trauma: clinical and radiological correlations". Miranda P, Gomez P, Alday R, **Kaen A**, Ramos A. *European Spine Journal*. 2007. Aug 16(8):1165-70. PMID: 17394028.
6. "Validation of a Prognostic Score of Early Mortality in Severe Head Injury". Gomez PA, de-la-Cruz J, Boto GR, **Kaen A**, Lastra R, Sauquillo J, Morera J, Lazo E, Domínguez J, Ibáñez J, Brell M, de-la-Lama A and Lobato RD. *13th European Congreso of Neurosurgery*. Glasgow (United Kingdom), September 2-7, 2007. p 347-351.
7. "Cervical lipomyelomenigocele. Case Illustrations". **Kaen A**, Lobato R. *Neurocirugía* Letter to the Editor. 2007;18:505-507.
8. "Idiopathic Subarachnoid Hemorrhage and Venous Drainage: Are They Related". Alen JF, Lagares A, Campollo J, Ballenilla F, **Kaen A**, Pérez-Núñez A, Lobato RD. *Neurosurgery* 2008. December 63(6):1106-11. PMID: 19057322.
9. "The role of MR imaging in assessing prognosis after severe and moderate head injury". Lagares A, Ramos A, Pérez-Núñez A, Ballenilla F, Alday R, Gómez PA, **Kaen A**, Lobato RD. *Acta Neurochirurgica*. 2009 Apr;151(4):341-56. PMID: 19224121.
10. "Intradural extramedullar spinal hydatidosis: case report". **Kaen A**, Perez-Núñez A, Lagares A, Rivas JJ, Ramos A, Lobato RD. *Neurocirugía (Astur)*. 2009 Jun;20(3):282-7. PMID: 19575134.
11. "The Value of Sequential Computed Tomography Scanning in Anticoagulated Patients Suffering From Minor Head Injury". **Kaen A**, Jimenez-Roldan L, Arrese I, Amosa M, Gomez P, Alday R, Alen JF, Lobato RD. *J Trauma*. 2010 Apr;68(4):895-8. PMID: 20016390.
12. "Interhemispheric hygroma after decompressive craniectomy: does it predict posttraumatic hydrocephalus?" **Kaen A**, Jimenez-Roldan L, Gomez P, Alday R, Lagares A, Alen JF, Lobato RD. *J Neurosurg*. 2010 Dec;113(6):1287-93. PMID: 20486895.
13. Letter to the editor "*Interhemispheric hygroma*" Takeuchi S, Nagatani K, Otani N and Nawashiro H. **Response: Kaen A, Lagares A and Gomez P**. Posted online on 6 May 2011.
14. "Acute perfusion changes after spontaneous SAH: a perfusion CT study" Lagares A, Cicuendez M, Ramos A, Salvador E, Alen JF, **Kaen A**, Jimenez-Roldan L, Millan JM. *Acta Neurochir (Wien)*. 2012 Jan 12. PMID: 22234794
15. "(99m)Tc-HDP SPECT/MRI in isolated xanthoma of the temporal bone" Lojo-Ramirez JA, Garcia-Gomez FJ, **Kaen A**, Roldan F, Marcilla-Plaza D, Acevedo-Bañez I. *Rev Esp Med Nucl Imagen Mol*. 2015 Sep-Oct;34(5):329-30. PMID: 26198794
16. "Endoscopic radical hypophysectomy: how I do it". Cárdenas Ruiz-Valdepeñas E, **Kaen A**, Perez Prat G. *Acta Neurochir (Wien)*. 2016 Nov;158(11):2159-2162. PMID: 27638642
17. "How I do It? Cranial setup for cranial settling". Cárdenas Ruiz-Valdepeñas E, **Kaen A**, Perez Prat G. *Acta Neurochir (Wien)*. 2017 Oct;159(10):1919-1923. PMID: 28577039
18. "Optic Nerve Atrophy Due To long-Standing Compression By Planum Sphenoidale Meningioma" Di Somma A, **Kaen A**, Cardenas Ruiz Valdepeñas E, Cavallo LM. *World Neurosurg*. 2018 Feb 14. PMID: 29454120
19. "How I do it: endoscopic endonasal approach to the inferior third of the clivus". Cardemas Ruiz-Valdepeñaz E, **Kaen A**, Perez Prat G, Ambrosiani Fernandez J. *Acta Neurochir (Wien)*. 2018 Feb 17. PMID: 29455409.
20. "Refining the anatomic boundaries of the endoscopic endonasal transpterygoid approach: the "VELPHA area" concept". **Kaen A**, Cardenas Ruiz-Valdepeñaz E, Di somma A, col. *Journal of Neurosurgery*. 2018 Sep 21;131(3):911-919. doi: 10.3171/2018.4.JNS173070. PMID: 30239316

21. "Dynamic Chess-Table Cranial Expansion for Treatment of Craniocerebral Disproportion: Technical Note and Volumetric Results". Tirado-Caballero J, Rivero-Garvía M, Gómez-González E, **Kaen A**, Cardenas Ruiz-Valdepeñas E, Márquez-Rivas J. *World Neurosurg.* 2019 Feb;122:533-543. doi: 10.1016/j.wneu.2018.11.119. Epub 2018 Nov 23. PMID: 30476673
22. "Surgical outcome and treatment of thyrotropin (TSH)-secreting pituitary tumors in a tertiary referral center". N. Herguido, E. Dios Fuentes, E. Venegas-Moreno, L. Borau Maorad1, A. Flores-Martinez1, P. Resmón Ruiz, M. Cózar Dueñas, F. Roldán, E. Fajardo, E. Cárdenas Valdepeñas, A. Kaen, I. Martín, D. Cano, A. Soto-Moreno. *World Neurosurg.* 2019 Oct;130:e634-e639. doi: 10.1016/j.wneu.2019.06.180. Epub 2019 Jul 2. PMID: 31276853
23. "Surgical Outcomes and Comorbidities in Cushing Disease: 30 Years of Experience in a Referral Center" JA. Ortega, E Venegas-Moreno, E Dios, P. Remón Ruíz, E CárdenasValdepeñas, **A.Kaen**, D. Cano, A Soto-Moreno *World Neurosurg.* Volume 122, February 2019, Pages e436-e442
24. "Endoscopic endonasal superomedial orbitectomy: how far is safe and possible?". E. Cardenas. **A. Kaen**. P. Garner. JC. Fernandez Miranda. C. Snayderman. E.Wan. *Laryngoscope* 2019. Laryngoscope. 2020 May;130(5):1151-1157. doi: 10.1002/lary.28080. Epub 2019 Jun 17. PMID: 31206702
25. "Transcavernous sinus pituitary gland transposition: how i do it". E. Cardenas. **A. Kaen**. *Acta Neurochir (Wien)*. 2019 Acta Neurochir (Wien). 2019 Oct;161(10):2123-2127. doi: 10.1007/s00701-019-04012-1. Epub 2019 Jul 20. PMID: 31327080
26. "Fully Endoscopic Transforaminal-Transchoroidal Approach for Tectal Area Tumor Removal". Tirado-Caballero J, Rivero-Garvía M, González-Pombo M, Cárdenas-Ruiz-Valdepeñas E, **Kaen A**, Márquez-Rivas J. *World Neurosurg.* 2020 May;137:164-172. doi: 10.1016/j.wneu.2019.12.106. Epub 2019 Dec 26. PMID: 31884125
27. "Impact of Early Reoperation on the Prognosis of Patients Operated on for Glioblastoma". Troya-Castilla M, **Kaen A**, Márquez-Rivas FJ, Infante-Cossio P, Rius Díaz F, Narros Gimenez JL, Gonzalez-Pombo M, Cancela P, Segura Fernández-Nogueras M, Arráez Sánchez MÁ. *World Neurosurg.* 2020 Jul;139:e592-e600. doi: 10.1016/j.wneu.2020.04.072. Epub 2020 Apr 21. PMID: 32330620.
28. "Regional and experiential differences in surgeon preference for the treatment of cervical facet injuries: a case study survey with the AO Spine Cervical Classification Validation Group". Canseco JA, Schroeder GD, Patel PD, Grasso G, Chang M, Kandziora F, Vialle EN, Oner FC, Schnake KJ, Dvorak MF, Chapman JR, Benneker LM, Rajasekaran S, Kepler CK, Vaccaro AR; AO Spine Cervical Classification Validation Group. *Eur Spine J.* 2021 Feb;30(2):517-523. doi: 10.1007/s00586-020-06535-z. Epub 2020 Jul 22. PMID: 32700126
29. "The sellar barrier on preoperative imaging predicts intraoperative cerebrospinal fluid leak: a prospective multicenter cohort study". Villalonga JF, Solari D, Cavallo LM, Cappabianca P, Prevedello DM, Carrau R, Martinez-Perez R, Hardesty D, Fuchssteiner C, Saenz A, Abbritti RV, Valencia-Ramos C, **Kaen A**, Bernat AL, Cardenas E, Hirtler L, Gomez-Amador JL, Liu J, Froelich S, Cervio A, Campero A. *Pituitary.* 2021 Feb;24(1):27-37. doi: 10.1007/s11102-020-01082-8. Epub 2020 Sep 12. PMID: 32918661
30. "Our experience in prolactinomas larger than 60mm". Remón-Ruiz P, Venegas-Moreno E, Dios Fuentes E, **Matias Kaen A**, Cardenas Ruiz-Valdepeñas E, Martin-Schrader I, Roldán F, Fajardo E, Cano D, Soto-Moreno A. *Endocrinol Diabetes Nutr.* 2021 Jan;68(1):3-10. doi: 10.1016/j.endinu.2020.03.012. Epub 2020 Aug 26. PMID: 32861621
31. "Quantitative Analysis of Somatostatin and Dopamine Receptors Gene Expression Levels in Non-functioning Pituitary Tumors and Association with Clinical and Molecular Aggressiveness Features". Flores-Martinez Á, Venegas-Moreno E, Dios E, Remón-Ruiz P, Gros-Herguido N, Vázquez-Borrego MC, Madrazo-Atutxa A, Japón MA, **Kaen A**, Cárdenas-Valdepeñas E, Roldán F, Castaño JP, Luque RM, Cano DA, Soto-Moreno A. *J Clin Med.* 2020 Sep 22;9(9):3052. doi: 10.3390/jcm9093052. PMID: 32971845
32. "Basilar Artery Injury During Endonasal Surgery: Stepwise to Control Bleeding". Cárdenas Ruiz-Valdepeñas E, **Kaen A**, Tirado-Caballero J, Di Somma A, Iglesias Pais M, Vázquez Domínguez M, Márquez Rivas J, Villa Fernández JM. *Oper Neurosurg (Hagerstown)*. 2021 Feb 16;20(3):282-288. doi: 10.1093/ons/opaa367. PMID: 33372208
33. Effect of surgical experience and spine subspecialty on the reliability of the AO Spine Upper Cervical Injury Classification System. **AO Spine Subaxial Injury Classification System Validation Group**. *J Neurosurg Spine* August 19, 2022. DOI: 10.3171/2022.6.SPINE22454.
34. "Variation in global treatment for subaxial cervical spine isolated unilateral facet fractures". Karamian BA, Schroeder GD, Holas M, Joaquim AF, Canseco JA, Rajasekaran S, Benneker LM, Kandziora F, Schnake KJ, Öner FC, Kepler CK, Vaccaro AR; AO Spine Subaxial Injury Classification System Validation Group. *Eur Spine J.* 2021 Apr 2. doi: 10.1007/s00586-021-06818-z. Online ahead of print. PMID: 33797624.

35. "Clinical outcomes of uniportal compared with biportal endoscopic decompression for the treatment of lumbar spinal stenosis: A systematic review and meta-analysis." Kaen A, Park MK, Son SK. *European Spine Journal*. Accepted. Pending final proof.

Chapters in Books

- "Endoscopic Endonasal Odontoidectomy". **3D Atlas of Neurosurgical approaches**. Chapter 8. January 2013. Online access in www.neurosurgicalapproches.com. ISSN 2254-9595.
- "Nasal Anatomy" Garcia-Piñero A, Cárdenas E, Kaen A, Simal-Julian JA. **Nasoseptal Perforations: Endoscopic Repair Techniques**. Chapter 1. 1ª edición. Pag 3-10. Editorial Thieme. ISBN 978-3-13-205391-5.
- "Frontal Sinus and Draf Approaches" Cárdenas E, Kaen A, Alobid I, Bernal-Sprekelsen M. **Endoscopic Approaches to the Paranasal Sinuses and Skull Base. A step-by-Step Anatomic Dissection Guide**. Chapter 4. 1ª Edition. Pag. 38-47. Editorial Thieme. ISBN 978-3-13-201891-4.
- "Far lateral approach" **3D Atlas of Neurosurgical approaches**. Chapter 7. Nov 2012. Gonzalez E, Cardenas Ruiz-Valdepeñas E, Rastelli M, Abarca J. Online access in www.neurosurgicalapproches.com. ISSN 2254-9595.
- **Referencias anatómicas para la cirugía endoscópica de senos paranasales y base de cráneo. Chapter 11.** Abordaje transtuberculum/transplanum. Eugenio Cardenas, Ariel Kaen, Ramón Moreno, Serafín Sánchez, Ignacio Martín. CYAN, Proyectos Editoriales, S.A. ISBN: 978-84-8198-974-8
- **Referencias anatómicas para la cirugía endoscópica de senos paranasales y base de cráneo. Chapter 19.** Abordaje a la unión craneo-cervical. Ariel Kaen, Eugenio Cardenas, Juan Maza, Francisco Esteban, Ignacio Martín. CYAN, Proyectos Editoriales, S.A. ISBN: 978-84-8198-974-8
- **Recidivas en los tumores del sistema nervioso. Chapter 8.** Manejo de la progresión y recidiva de los adenomas hipofisarios José Luis Narros Giménez, Eugenio Cárdenas Ruiz-Valdepeñas, Ariel Kaen, Manuel Chaves. ©grupo de trabajo de neuro-oncología. Sociedad española de neurocirugía. ISBN 978-84-09-11701
- Editor of "**COLGAJOS E INJERTOS ENDONASALES**". **Reconstruction techniques in endoscopic sinonasal and skull base surgery**. © 2020 Amplifon Ibérica. Barcelona. ISBN: 978-84-09-20514-1
- Andalusian Society of Endocrinology, Diabetes and Nutrition, Carlos Santos Clinical Case Meeting. **Corticotropinoma silente: un enemigo sigiloso e impredecible**. Martine AJ, Dios E, Aliaga A, Romero AR, Jimenez I, Gros N, Polaina M, Cárdenas E, Martín I, Kaen A, Venegas E, Soto A. ISBN: 978-84-939832-6-0.
- Andalusian Society of Endocrinology, Diabetes and Nutrition, Carlos Santos Clinical Case Meeting. **"Cavergoline-lovers. ¿Nos encomendamos a su poder curativo?"**. Chapter 38. Gonzalez Aguilera B, Venegas Moreno E, Dios fuentes E, García Hernandez N, Cárdenas Ruiz-Valdepeñas E, Soto Moreno A. Antequera 2015. ISBN: 978-84-608-2809-9.
- Andalusian Society of Endocrinology, Diabetes and Nutrition, Carlos Santos Clinical Case Meeting. **Chapter 20. A propósito de un caso de Acromegalia**. Ariadel D, Venegas E, Dios E, Gomez E, Rolda F, Martin I, Cárdenas E, Kaen A, Soto A. Antequera 2016. ISBN: 978-84-617-6135-7.
- **Unilateral Biportal Endoscopy of the Spine. An Atlas of Surgical Techniques. Chapter 14. Unilateral Biportal Endoscopy for Complex Lumbar Disc Herniations**. Kaen A, Yoshimizu T, Durand F. ISBN 978-3-031-14736-4. doi.org/10.1007/978-3-031-14736-4. SPRINGER 2023.

UBE Speaker course

- International Society of Unilateral Biportal Endoscopy ISUBE 2021 Webinar Singapore Station. Course Speaker about "Lumbar disc Herniation by UBE". Nov/2021
- International Society of Unilateral Biportal Endoscopy ISUBE 2021 Webinar France Station. Course Speaker about "UBE in Lumbar juxta Facet Cyst". January/2022
- International Society of Unilateral Biportal Endoscopy ISUBE 2021 Webinar Latam Station. Course Speaker about "UBE basic concept". March/2022
- International Society of Unilateral Biportal Endoscopy ISUBE 2021 Webinar Turkey Station. Course Speaker about "Lumbar disc Herniation by UBE". April/2022
- Biportal Endoscopic Surgery (UBE) presentation a new Era of MIS. Febrery/2023