

APSS Medtronic Fellowship Report 2025

Fellow: Dr. Md. Ziaul Hasan
MBBS, MS (Ortho) Registrar, Orthopedic Surgery
National Institute of Traumatology and Orthopedic
Rehabilitation, NITOR
Dhaka, Bangladesh



Mentor: Professor Dr. Yukihiro MATSUYAMA MD., Ph.D.
Professor and Chairman
Department of Orthopedic Surgery
Hamamatsu University School of Medicine
Hamamatsu, Japan



Fellowship Center: Hamamatsu University School of Medicine,
Hamamatsu, Japan

Fellowship Duration: 29/05/2025 to 18/06/2025



Introduction:

First and foremost, I would like to sincerely thank the Asia Pacific Spine Society (APSS) for providing me with the chance to take part in this top-tier fellowship program. In order to make this significant opportunity possible, I therefore wish to do the same for Professor Yukihiro Matsuyama at Hamamatsu University School of Medicine. In addition to helping me develop my abilities, this APSS Medtronic Fellowship training gave me a rare chance to learn about the cutting edge of global spinal surgery breakthroughs, which significantly expanded my scholarly and professional horizons.

In addition to being a top clinical facility, Hamamatsu University School of Medicine is a fantastic location for clinical research where under Professor Yukihiro Matsuyama's direction the team's significant research papers and high surgical volume further highlight their worldwide importance. I gained a profound awareness of the relationship between clinical practice and academic research from training with this esteemed team.



Pic: Recognition as one of the best hospitals in the world by Newsweek and Statista

The orthopedic surgery department of the hospital places a high value on evidence-based practice and makes careful decisions every time. Clinical consultations and open team discussions before and after surgery are quite special. The topics of postoperative case studies included issues faced, methods for resolving them, and measures to avoid or reduce future complications. These thoughtful conversations strengthened my command of numerous techniques and expanded my comprehension of surgical procedures, providing a solid basis for my future clinical practice.



Pic: Clinical Meeting before Surgery

Training Schedule:

	Monday	Tuesday	Wednesday	Thursday	Friday
0700-0900	Morning Meeting (All-surgical patients)	Morning Meeting (Preoperative surgical plan)	Branch Hospital Surgery Day (Dr. Yoshida at Aoyama Hospital)	Morning Meeting (Postoperative results)	Branch Hospital Surgery Day (Dr. Oe at Haibara General Hospital)
0900-1200	Outpatient Clinic	Surgery		Branch Hospital Surgery Day (Dr. Hasegawa at Hamamatsu Red Cross Hospital)	
1300-1800					
1800-2100	Night Meeting (Potential surgeries or complex cases)	Night Meeting (Postoperative imaging)		Night Meeting (Postoperative imaging)	

Monday: A morning conference is held every Monday from 7 to 9 AM to discuss the planned surgeries for patients in every department. After this, OPD lasts for the entire day. The team meets after the OPD to talk about patients who might need surgery or have more complicated issues.

Tuesday: Surgery is scheduled for Tuesday. A morning conference is held from 7 to 9 AM to discuss the surgical techniques and preoperative examination findings for patients undergoing spinal surgery. Surgery takes place for the entire day after this. Following the procedures, the team meets to go over the day's work, look at the postoperative photos, and talk about the surgical procedures.

Wednesday: The day for surgery at the branch hospital is Wednesday. Dr. Hasegawa operates in Hamamatsu Red Cross Hospital in the afternoon, whereas Dr. Yoshida operates at Aoyama Hospital in the morning. Depending on the cases and their complexity, the two doctors alternately take us to other hospitals to learn about and take part in surgery.

Thursday: Surgery is scheduled again for Tuesday. A morning conference is held from 7 to 9 AM to discuss the surgical techniques and preoperative examination findings for patients undergoing spinal surgery. Surgery takes place for the entire day after this. Following the procedures, the team meets to go over the day's work, look at the postoperative photos, and talk about the surgical procedures.

Friday: Finally, Friday is another branch hospital surgery day, where we follow Dr. Oe to Haibara General Hospital to perform spinal surgeries.



Surgery observation with Dr. BANNO Tomohiro



Pic: At Haibara General Hospital with Dr. Oe Shin

Operation theatre:

To guarantee the highest level of surgical safety, the operating room was completely furnished with contemporary equipment, such as a Zeiss Pentero microscope, a premium C-arm, intraoperative neuromonitoring (IONM), and Medtronic's O-arm Stealth Station navigation system. The most remarkable thing was that a technician was on hand in the operation room to

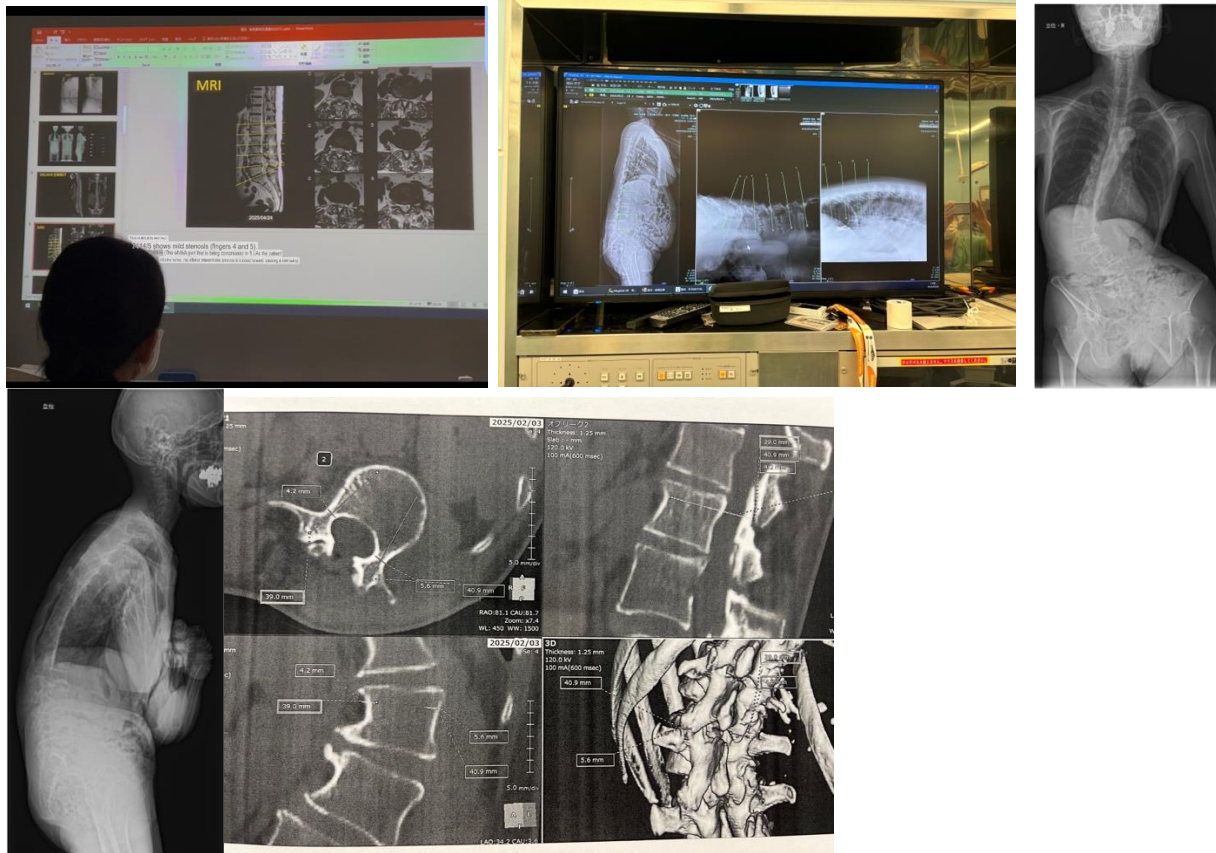
conduct real-time scanography following corrections. This allowed us to evaluate the correction's quality right away and decide whether any additional adjustments were required. Furthermore, every nurse and technician actively performed their duties and was well-versed in the surgical processes because of the large volume of surgeries. As a result, the procedures went quite well.



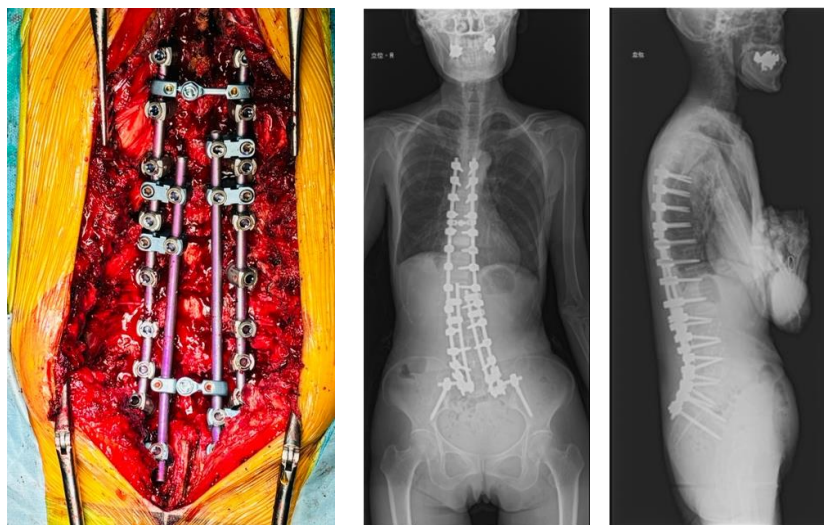
There were four to six surgeries every surgery day, for a monthly total of 40 to 50 patients. About 25–30 of these were adult spinal deformity correction procedures, which were the main focus. PLIF, XLIF, LLIF, and several osteotomy grades ranging from Grade 1 to Grade 6 were among the correction methods used. Moreover, open-door laminoplasty was used in some cervical OPLL operations, but ACDF was needed in others. In addition to these, the facility treated a variety of uncommon spinal cancers, such as extradural, intradural, and intramedullary spinal tumors, as well as primary and metastatic bone tumors.

I witnessed a few somewhat simple surgeries at the branch hospital, including spinal fixation for burst fracture and ACDF for cervical PIVD. I also had the chance to observe balloon kyphoplasty or BKP for osteoporotic vertebral fracture, a procedure that is currently more common in Japan.

Pre-operative planning:



Per Operative execution:



Common Surgeries:

1. Adult spinal deformity

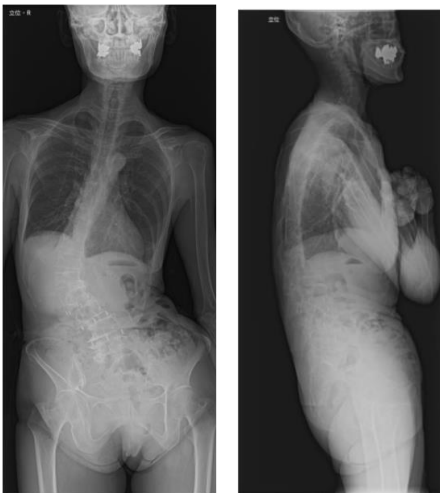
The surgical plan was divided into two approaches. For cases of spinal stenosis with mild scoliosis primarily located at the disc level without rotational deformity, the first stage involved using LLIF or XLIF. In this stage, the cage was inserted to initiate correction, followed by a re assessment of the scenography to minimize the need for extensive fusion. If it was determined that interbody fusion was unnecessary, the surgery would then proceed from the posterior approach. Prof. would use the O-arm to precisely guide and rapidly insert pedicle screws, which accelerated the procedure.

Example:



Degenerative Scoliosis

1st stage: 3 level LLIF



2nd stage: Posterior fusion and correction



2. Adolescent Idiopathic Scoliosis:



Pre Op Xray



Post Op Xray



Pre op



O Arm

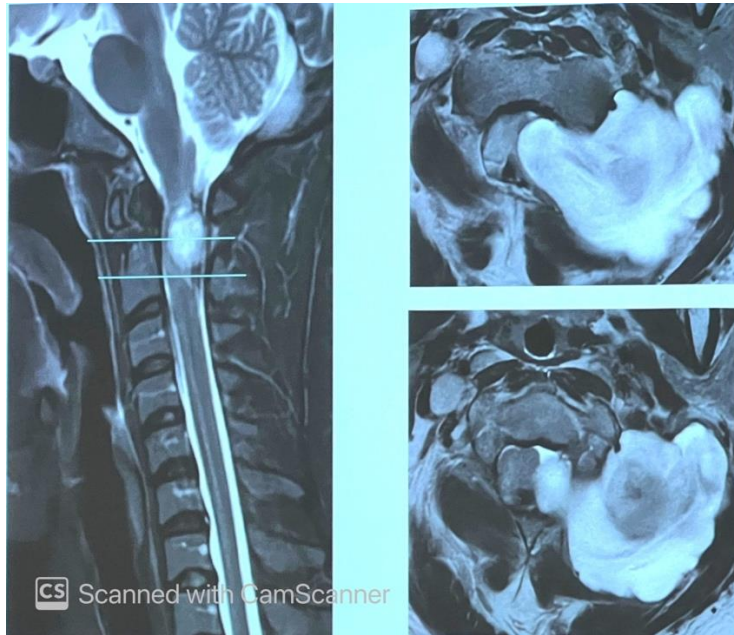


Per op



Post op

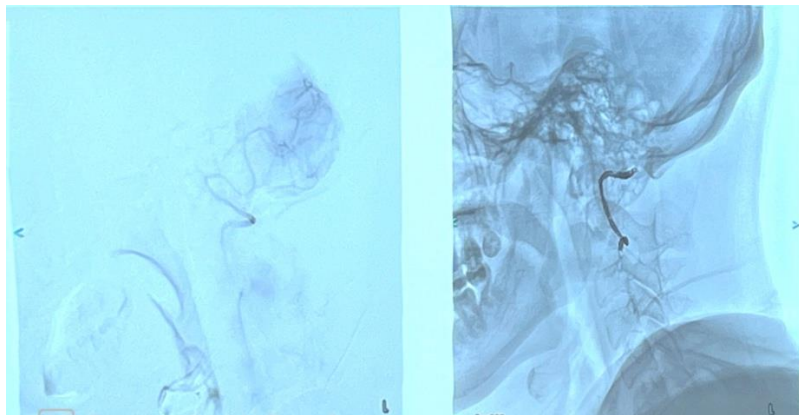
3. Spinal Tumor:



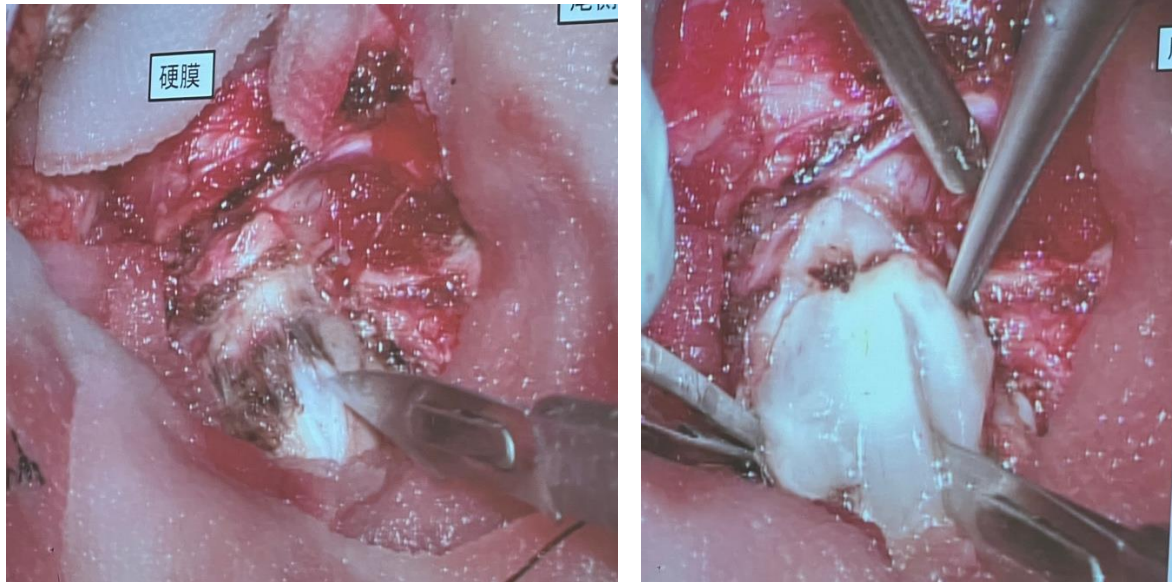
It was a very hyper vascular tumor

So performed 2 stages

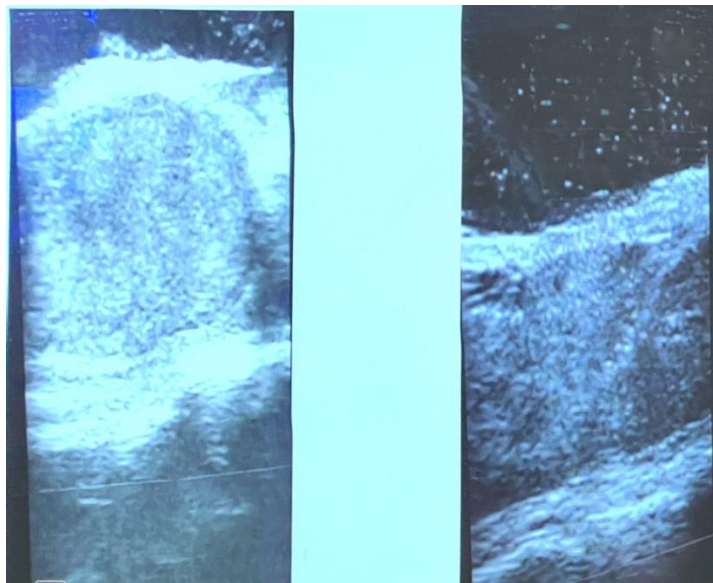
Stage 1: Selective embolization of left VA



Stage 2: Tumor excision



Post excision per operative USG check



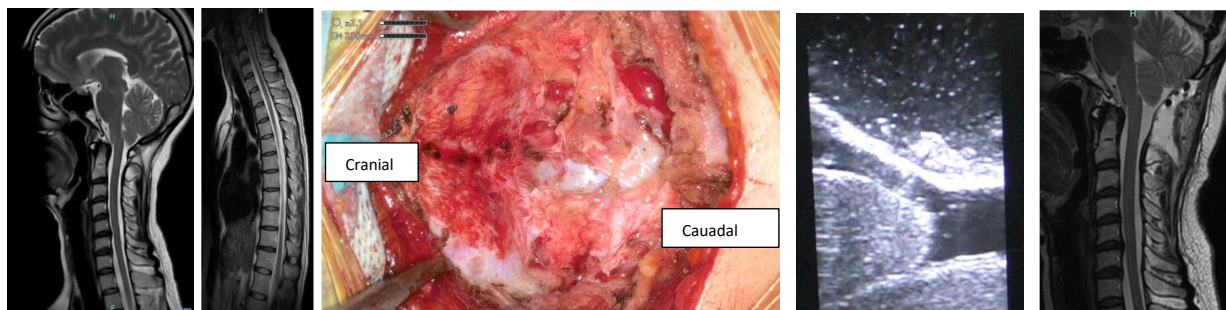
Pre- op

Post- op

4. Lateral Lumbar Interbody Fusion (LLIF)

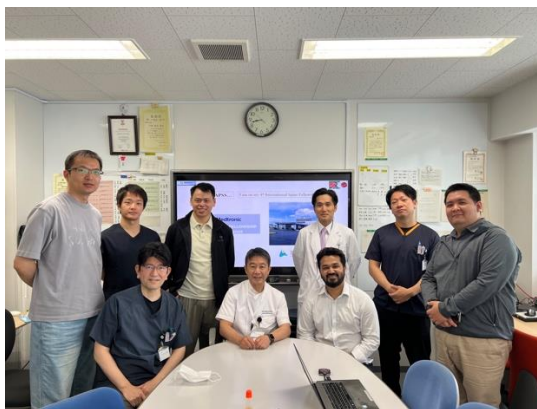


4. Foramen Magnum Decompression:

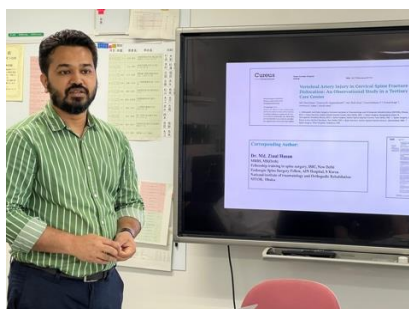


Fellowship Experience

My experience at Hamamatsu University School of Medicine has been quite enjoyable. The team members have great rapport and are open to sharing their different perspectives on surgical techniques. There are many meetings, providing ample time for everyone to discuss the most ideal surgical approaches.



Pic: My Presentation in Morning Clinical Meeting



Pic: Presentation of my published Article in Clinical Meeting

We had several international fellows, including Dr. Zhang Minmin and Dr. Wei from China and Dr. Jhon Alvin Gellangrin from the Philippines and doctoral students from other countries and everyone got along well.



Pic: With my Fellow Colleagues

Additionally, during weekends and outside of surgery hours, the attending physicians enthusiastically invited us to participate in social gatherings and sightseeing hikes, which deepened my understanding of Japanese culture.

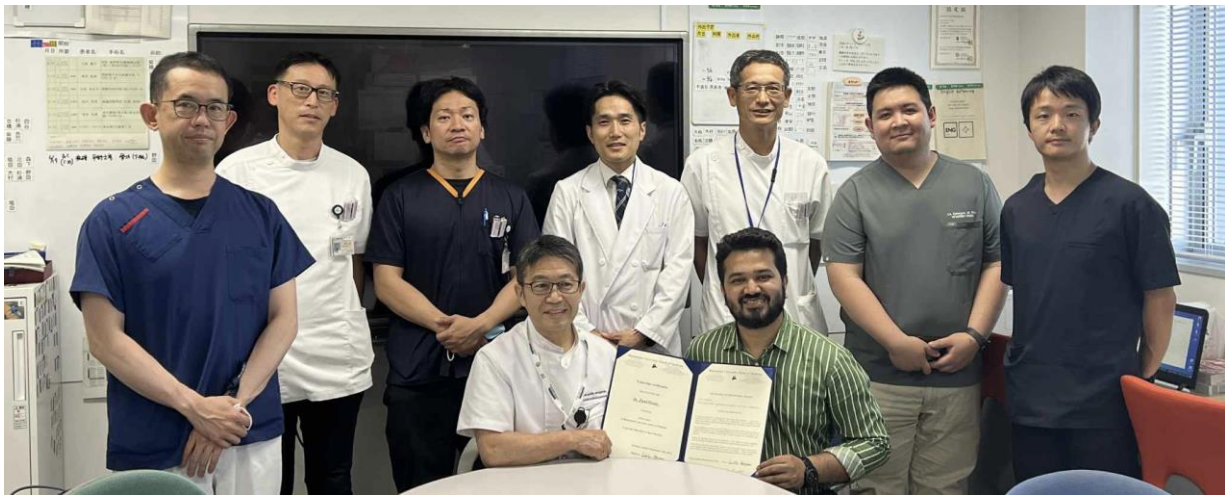
Professor Yukihiro Matsuyama and Other Professors of the department specially Dr. Yu Yamato, Dr. Tomohiko Hasegawa, Dr. Tomohiro Banno, Dr. Arima Hideyuki, Dr. OE Shin, Dr. Yoshida all were very helpful and supportive. I am really grateful to them.



Pic: With Professor and faculties

Acknowledgment:

I thank the Asia Pacific Spine Society for giving me this big opportunity. I am very grateful to Professor Yukihiro Matsuyama and His highly skilled and very generous spine team as the official hosts for this fellowship. Thank you for your kind hospitality and valuable learning experience in spine surgery. Thank you to all the members of the spine division at Hamamatsu University School of Medicine. Special thanks to Jennifer MATTHEW (APSS) for always supporting in my process. Thank you Everyone for making my fellowship become more enjoyable.



Pic: Certificate of Completion Of my Fellowship

Summary:

The APSS-Medtronic Spine Fellowship 2025 provided an invaluable opportunity for spine surgeons to gain advanced exposure and hands-on experience in spinal surgery under the mentorship of leading experts. This fellowship emphasized the latest minimally invasive techniques, complex spinal deformity management, and the integration of cutting-edge technologies in surgical practice. Fellows benefited from immersive training, including observing surgeries, participating in academic discussions, and engaging in collaborative research. The program aimed to refine their surgical skills, broaden their clinical perspectives, and foster global collaborations within the spine surgery community. Throughout the fellowship, participants gained deep insights into innovative procedures. The exposure to Medtronic's advanced spinal technology and interaction with the APSS network of skilled surgeons enriched the fellows' expertise. This transformative experience equipped them with enhanced proficiency, practical knowledge, and a network of peers and mentors to support their continued growth and leadership in the field of spinal surgery.

Reference:

The APSS Medtronic Fellowship 2025 is a program organized by the Asia Pacific Spine Society (APSS) in collaboration with Medtronic. This fellowship offers spine surgeons the opportunity to gain advanced training and experience in spinal surgery at leading centers of excellence across the Asia-Pacific region. The program aims to enhance surgical skills, broaden clinical perspectives, and foster global collaborations within the spine surgery community.

Medtronic

APSS-MEDTRONIC FELLOWSHIP 2025

APSS IS PROUD TO ANNOUNCE THE RECIPIENTS FOR THE FELLOWSHIP PROGRAMME
FOR THE YEAR 2025 BATCH

FELLOW NAME	CENTRE NAME	HOST
DR O ZAM DASTAGIR BANGLADESH	SEOUL ST. MARY'S HOSPITAL SOUTH KOREA	DR YOUNG HOON KIM
DR MD ZIAUL HASAN BANGLADESH	WAKAMATSU UNIVERSITY SCHOOL OF MEDICINE JAPAN	DR YUKIHIRO MATSUYAMA
DR KAUSTURBI ARJUN INDIA	NATIONAL UNIVERSITY HOSPITAL SINGAPORE	DR GABRIEL K. P. LIU
DR KARTHIK RAMACHANDRAN INDIA	KOREA UNIVERSITY DAERO SOUTH KOREA	DR SEUNG WOO SUN
DR DHEERJ MADHALLI MANIKANTA INDIA	KEIO UNIVERSITY JAPAN	DR MOBIO MATSUMOTO & DR KOTA WATANABE
DR NISHANK MEHTA INDIA	UNIVERSITY OF HONG KONG HONG KONG	DR JASON PUI YIN CHEUNG & DR KENNY YAT HONG KWAN
DR HYUNG-YOUL PARK KOREA	WAKAYAMA MEDICAL UNIVERSITY JAPAN	DR HISOHI YAMADA, DR HISOHI HASHIZHUME & DR KESU KANATA
DR AAYUSH ARYAL NEPAL	UNIVERSITI MALAYA MEDICAL CENTRE, MALAYSIA	DR ALUN KEONG KWAN
DR RAJESH KUMAR CHAUDHARY NEPAL	TOHOKU CENTRAL HOSPITAL JAPAN	DR YASUNISHI TANAKA
DR NGUYEN NGUYEN KHANG VIETNAM	KYUNG HEE UNIVERSITY HOSPITAL SOUTH KOREA	DR YONG CHAN KIM

FELLOWSHIP SLOT REPLACEMENT

Important note: One slot vacancy from previous batches commencing their fellowship in 2025

BATCH	FELLOW NAME	CENTRE NAME	HOST
2024	DR SIDDHARTH SETHI INDIA	SEOUL ST. MARY'S HOSPITAL SOUTH KOREA	DR YOUNG HOON KIM

Pic: Awarded Fellows List , 2025

Operative LOGBOOK:

S/N	Date	Diagnosis	Surgery	Surgeon	Assist/Observed
1	29/05/25	Arnorld Chiari Malformation	Posterior cranial high decompression	Dr. Hasegawa	O
2	29/05/25	Degen Scoliosis	Correction and Posterior spinal fusion	Dr. BANNO Tomohiro	A
3	29/05/25	Degen Scoliosis	Correction and Posterior spinal fusion	Dr. Murakami	O
4	29/05/25	Lumber spinal fracture	Fixation and Anterior fusion and decompression	Dr. Shin Oe	O
5	29/05/25	Spondylitis	Fixation and Anterior fusion and decompression	Dr. Murakami	O
6	29/05/25	Lumber canal stenosis(2 nd stage)	PSF	Dr. Hasegawa	O
7	29/05/25	Degen Scoliosis	Correction and Posterior spinal fusion	Dr. Murakami	O
8					
9	03/06/25	Degen Scoliosis	Correction and PSF	Dr. Arima	O
10	03/06/25	Spinal Tumor	Resection	Dr. Hasegawa	O
11	03/06/25	Degen Scoliosis	LLIF	Dr. Murakami	O
12	03/06/25	LCS	PLIF	Dr. Yoshida	A
13	05/06/25	Endoscopic Spine Surgery Cadaveric Workshop			
14	10/06/25	AIS	Posterior correction and Fusion	Prof. Yukihiro	A

				Matsuyama	
15	10/06/15	Spinal Tumor	Resection	Dr. Hasegawa	O
16	10/06/25	Degen Scoliosis	LLIF(1 st stage)	Dr. Yoshida	O
17	10/06/25	Degen Scoliosis	Correction and PSF(2 nd stage)	Dr. Yoshida	O
18	12/06/25	Degen Scoliosis	Correction and PSF(2 nd stage)	Dr. Yamato	O
19	12/06/25	LCS	LLIF	Prof. Dr. Matsuyama	
20	12/06/25	Spinal tumor	Resection	Dr. Hasegawa	O
21	12/06/25	LCS	LLIF	Dr. Yoshida	O
22	12/06/25	PIVD	Herniated disc removal	Dr. Shin Oe	O
23	17/06/25	ASD	Decompression and fusion	Dr. Yamato	O
24	17/06/25	Degen Scoliosis	2 nd stage: Correction and PSF	Dr. Yoshida	O
25	17/06/25	IDEM sol	Excision	Dr. Hasegawa	O
26	17/06/25	Osteoporotic Fracture	BKP	Dr. Arima	O