APOA (ASIA PACIFIC ORTHOPAEDIC ASSOCIATION) E-NEWSLETTER

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Connect Share and Grow

LISTEN TO THE ORTHOPAEDIC SURGEON'S VOICE ACROSS THE ASIA PACIFIC

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ANDY ARDIANSYAH







AZETA ARIF

Welcome to the latest edition of Connection, the APOA Newsletter, where we aim to amplify the voices of orthopaedic surgeons across the Asia Pacific region. Our theme for this issue is "Listen to the Orthopaedic Surgeon's Voice Across the Asia Pacific," inviting you to listen and contribute to the diverse experiences and perspectives of orthopaedic surgery from around the world.

In Connection, provide we an opportunity for every orthopaedic surgeon in the Asia Pacific region to contribute. We value diversity and understand the importance of listening to what is happening in of the world. other parts We encourage you to share your thoughts on the latest advancements orthopaedic in surgery, the challenges faced in the field, and the unique aspects that emerge within orthopaedic practices in different countries.

However, we also want you to share more than just medical knowledge. Therefore, we have included a section called "Social Culture and Sports" in this Newsletter. In this section, you can recommend exciting tourist destinations you have visited or your favorite sports activities. This provides a space for us to get to know each other and build social connections.

Your voice matters to us. We recognize that every country and every practitioner has valuable and unique experiences. In the Connection Newsletter, we invite you to share your experiences, broaden your perspectives, and learn new things from orthopaedic your colleagues across the Asia Pacific region.

By participating in Connection, you become part of a supportive and inspiring community.



We hope to see strong collaborations and beneficial knowledge exchanges among APOA members. Let's collectively empower and strengthen the voice of orthopaedic surgeons in the Asia Pacific region through this Connection Newsletter.

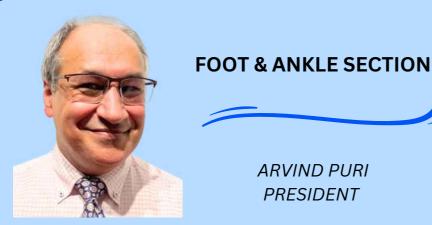
Special thanks to Dr. Jamal Ashraf, APOA 1st Vice President and Prof. Arif Khan, APOA General Secretary for all his help and guidance. Finally, I would like to thank our diverse & inclusive "Connection Team" : Baris Kuzuca (Turkey), Ruba Jamal (Saudi Arabia), Raja Bhaskar (India), Maria Shelynn Wong (Malaysia), Asep Santoso (Indonesia) andSarah O'Reilly-Harbridge (Australia) for all their hard work in this issue.

We hope you feel encouraged to share your knowledge, experiences, and insights. Remember, your voice matters.

Thank you for your participation, and let's continue this journey together.







**ARVIND PURI** 

PRESIDENT



During the evolution of humans, there was a sentinel point when the Homo sapiens could maintain an upright posture, and continue as such since then. It is, therefore, no surprise that Foot and Ankle, as an Orthopaedic subspecialty, has emerged and established itself in its own right.

Foot and Ankle societies, Journals, Research, and surgeon numbers have increased dramatically. There is most definitely a need and necessity for all of the above.

The Foot and Ankle Section of the Asia Pacific Orthopaedic Association existed at the Melbourne APOA Scientific meeting in 2016. Mark Blackney took up the responsibility and the helm as its first President. The Foot and Ankle Council is constituted of eleven members only. Today both the Council Executive Committee member and number stands at 25.

It was in October 2016 that all the members of the then newly constituted APOA F&A section met one another in

during GIFAS (Gwangju person International Foot and Ankle Symposium), Gwangju, South Korea, organized by Prof K B Lee. After that, the first scientific program of the APOA F&A Council was the "1st APOA Foot & Ankle Update Course 2017," held in Kuala Lumpur in August 2017, organized by Dr. Chua Yoek Pin. In the same year (2017), in December, the APOA F&A section was invited APOA section at the 38th SICOT World Orthopaedic Congress in Cape Town, South Africa. The F&A section had a very active scientific participation in the 20th APOA Congress in Antalya, Turkey, in April 2018. These academic activities afforded the F&A section good recognition in the fraternity, and the very well-attended First Section Scientific Meeting in September 2019 in Bangkok was a testimony to that. The Trauma Section of APOA was our partner in hosting this scientific congress.



Over the years, the Foot and Ankle section has organized and successfully numerous conducted courses and conferences-Basic and Advanced online course, Middle East Foot and Ankle course, Indonesian and Indian Sub Continent Regional course and collaborated with SARRC Orthopaedic Meeting, Pakistan Foot and Ankle Instructional Course, etc. Under the discerning supervision of Prof. Siu Kwai Ming and Prof. Chayanin Angthong, the Case of the Fortnight has been a approximately resounding success-1000 email recipients! Foot and Ankle specialty continues to grow based on a better understanding of the pathologies and newer surgical procedures to address traumatic and elective conditions. APOA Foot and Ankle section has actively promoted the current evidence-based practice of this to the subspecialty orthopaedic surgeons in the Asia Pacific region.

The commitment, perseverance, and tireless efforts of the Executive and Council of the section have contributed to its current healthy membership and sterling reputation as an educational and collaborative body. It is the section's pride and honor to have recent Presidents of Indonesian, Malaysian, members of the section have contributed scientific and instructional articles to journals and chapters in Foot and Ankle textbooks.

I have been fortunate and immensely honored to be handed the baton from Prof. Rajiv Shah, the Immediate Past President of the Foot and Ankle Section.

So Quo Vadis? Is the question for our section?

There is no doubt in my mind that our role in the Asia Pacific region is to promote the practice of our specialty based on current evidence, educate the young and upcoming Orthopaedic surgeons, collaborate with the individual Foot and Ankle societies, and while being involved be cognisant of the local pathologies, surgeon experience, and health systems. Our region's diversity poses a challenge and provides an opportunity to innovate, improvise and help each other deliver appropriate patient care.

Efforts to achieve the above require involvement at all our members' local, regional, national, and international levels. Our current General membership and the Executive and Council members encompass representation from the region, so we are well-placed to understand the milieu of the different health systems and their strengths and deficiencies.

We will continue organizing instructional courses in Cold and Acute foot and ankle pathologies online and in person.



The world is much smaller, more interconnected, and more informed than ever before, and so should all the different organizations and societies while preserving their uniqueness.

Collaboration is the key to achieving this cross-pollination. Therefore, our section will endeavor to participate in as many conferences, courses, and annual scientific meetings organized by our region's foot and ankle societies. A reciprocal open invitation is extended to all to participate in our next scientific meeting in Dubai in 2024.

APOA, with its healthy membership and vast geographical inclusion, is ideally suited for conducting meaningful and groundbreaking research. Multi-center clinical trials, regional systematic review, and pooling of data are all real possibilities. Our section is well to initiate, promote and placed organize such collaboration between APOA member states.

Immediate Past President-President Vice President Secretary Treasurer Arvind Puri Chua Yeok Pin Kumar Shantanu Anand Andri Primadhi Rajiv Shah Malaysia Australia India Indonesia India **Council Members** Chayanin Anthong Andri Primadhi Arvind Puri Lee Kyun Bae Indonesia Australia Thailand South Korea



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#### The Cartilage

"A 25-year-old active footballer has a painful knee that shows a large fullthickness cartilage defect on MRI". In our daily practice, we are familiar with such cases of intricate cartilage injury in a young knee. The case troubles us with the following questions: How do we deal with cartilage? What armaments do we have?

Articular cartilage, consisting of hyaline cartilage, provides a smooth surface for articular motion and facilitates the transmission of loads with low friction. It highly versatile yet delicate а is connective tissue. The articular cartilage is highly versatile with its ability to cyclic withstand high loads, demonstrating little or no evidence of degenerative damage or change. However, it is fragile as it possesses a limited intrinsic healing capacity and repairs once injured and exposed to constant harsh environments.

# **The Defect**

When the cartilage is damaged and constantly exposed to excessive loads, it will progressively lose its thickness to DEALING WITH LARGE CARTILAGE DEFECTS: CONSIDERING XENOGENEIC SCAFFOLD AS AN ALTERNATIVE SOLUTION

# KUKUH D. HERNUGRAHANTO DWIKORA N. UTOMO

the last layer. When all layers are lost, this is when arthritis will take place. The exposed subchondral bone, when left untreated, will result in imminent early degenerative osteoarthritis.

Numerous conservative and surgical treatment options have been introduced to avoid complications. Unfortunately, there is still no consensus on the best treatment method for a large, fullthickness cartilage defect. The very first method of marrow-stimulating technique of micro-fracturing the barren subchondral area shows good results in small lesions but not in lesions larger than 4 cm2. Another mosaicplasty technique that transfers osteochondral plugs from a healthy, non-bearing area to the defect area shows good short to midterm follow-up. However, there is an inconsistent long-term result, particularly in the transitional area between the donor and the defect site. advanced cell-based The more technique of autologous chondrocyte implantation, either with or without matrix, shows promising results for various defect sizes. Unfortunately, this procedure is lengthy and costly.



Figure 1. Freeze-dried sponge bovine cartilage scaffold

# The Scaffold

In the past decades, no gold standard has been agreed upon on the best method to repair the chondral injury. Once the degeneration takes place, the result is joint arthroplasty. That is why we must move on to an alternative method of treating cartilage defects before degeneration occurs. Regardless of which specific treatment modality to use, all the currently available treatment options agree that three components are important to promote healing: the cell, the growth factor, and last but not least, the scaffold. Therefore, the ideal scaffold is crucial to fill up the defect.

The ideal scaffold should be biocompatible, biodegradable, nontoxic, able to retain cell and growth factors, reproducible, widely available, and affordable. The scaffold can be natural or synthetic, with the former one processing from the patient (autologous), another donor animal (allogeneic), or origin (xenogeneic). The autologous scaffold faces challenges of donor site morbidity

and size limitation, while the allogenic scaffold has limited availability and poses the risk of disease transmission. also various There are kinds of commercially available natural and synthetic cartilage scaffolds. Reports show considerable outcomes, but unfortunately, they are not always and affordable available in every country. Therefore, an alternative source of cartilage scaffold from animal origin should be considered. Some of the most common sources are porcine and bovine, depending on which animal abundant source is more and acceptable in the respective country.

In our country, cow provides a more abundant and affordable supply of raw materials for scaffold processing since the cow's bone is a dispensable byproduct. We have been studying the manufacturing of bovine cartilage scaffolds over the past few years. The process took off from the processing of the prototype scaffold model to freezedried cartilage scaffold and the subsequent sponge cartilage scaffold, followed by studies on physicochemical characteristics, immunogenicity, and efficacy evaluation on the animal and the currently ongoing clinical trials.

The production of sponge scaffold starts with the procurement of cow's femoral condyle from a certified slaughterhouse. It undergoes separation



Figure 2. Application of scaffold in a 29-year-old football player: a. The defect on the medial femoral condyle; b. Sponge cartilage scaffold soaked in normal saline;

c. Implanted scaffold

We realize that the ongoing clinical application is limited to a small sample size of twelve. It is not as easy as we thought to recruit samples since most patients come in the late stage of degenerative arthritis. Nevertheless, the process is ongoing, and we expect to recruit more samples and evaluate longer follow up. We agree that pursuing the ideal scaffold is still long and winding. Still, we believe this can be an alternative option for an affordable, accessible, and effective scaffold in our country soon to save more cartilage.









Figure 3. Preoperative MRI images show cartilage defect

Figure 4. MRI Improvement on 6 months postoperatively



and washing before deep freezing to -80°Celcius, drying, and decellularization. The freeze-dried product provides practical convenience for storage and distribution so that more hospitals can use the product.

A characterization study is important to evaluate if the product matches the physical and biological requirements of the ideal Scaffold. Physical characterization shows that the sponge cartilage scaffold has the necessary pores and interconnectivity to provide mechanical properties and room for cell growth. Water uptake, retention, and biodegradability exhibited acceptable properties as the natural Scaffold. The sponge scaffold can retain its content of type II collagen, aggrecan, and TGFbeta. The histological assessment also shows that the provides sponge favorable room and space for cells to reside and grow.

One of the concerns of xenogenic scaffold application is the adverse immunologic reaction. We conducted an animal study to evaluate rejection and inflammation markers after bovine cartilage sponge implantation on the model. The animal product is decellularized to improve safety. From days 1,3 and 7 after the implantation, the eosinophil, basophil, and neutrophil counts show acceptable values. The IgG, interleukin-2, and interleukin-10 also show no spike increase to indicate any adverse immunologic event.

The scaffold offers safetv as an alternative to the xenogeneic Scaffold without any sign of inflammatory or rejection reaction. Animal study for efficacy has also been conducted to evaluate the healing. The mean score for all treatment groups was better than the control group macroscopically and histologically. The Scaffold shows a favorable result towards a hyaline-like result by increasing collagen type II expression.

# **The Clinical Application**

The scaffold product aims for clinical applications in cartilage defects, huge ones. The application follows the routine procedure of debridement and freshening of the defect to establish a clear and healthy margin. The next step is the micro-fracturing of the defect for marrow stimulation. The sponge scaffold is applied to the prepared bone bed according to the intended size. Fibrin glue is used to seal and secure the implanted Scaffold at the defect site. Following the surgery, rehabilitation protocol to restrict weight bearing and knee motion is mandatory.

Our clinical study in twelve patients showed that applying scaffold in fullthickness defect results better at 18month follow-up. Comparison of pre and postsurgical outcomes shows significant improvement in Tegner Activity Scale, IKDC subjective score, and KOOS score.

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CURRENT RESEARCH, INNOVATION, DEVELOPMENT IN ORTHOPAEDICS IN TURKEY

> EMRAH ÇALIŞKAN EMEL GÖNEN

In the rapidly advancing field of medicine, technology has brought about a significant transformation in orthopedic surgery. Emerging and innovative technological developments offer patients more precise diagnoses, effective and faster treatments. recoverv processes. The orthopedic community in Turkey has been quick to adopt and integrate cutting-edge technologies into their practices, resulting in patient outcomes improved and enhanced surgical procedures.

Joint replacement surgery is а common procedure in orthopedics, and in Turkey, it is performed using advanced techniques and technology. There is ongoing research into the development of new materials and improve implant designs to the longevity of joint replacements and reduce complications. One of the key areas of research in this field is the of patient-specific implants. use which are designed based on the patient's individual anatomy.

This approach can lead to better functional outcomes and reduced risk of complications. Robotics arthroplasty is an emerging technology that is being applied in various hospitals in Turkey (Figure 1 a-d) (1). At the moment this article has been written, various robots in the marketing is being used by twenty private hospitals in Turkey. On the other hand, robots are not used in public hospitals due to governmental issues. 3D printing technology is also used for patient treatment specific algorithm revision cases, especially in oncologic patient and pediatric deformity correction (2)

. Stem cell therapy is a promising treatment for various orthopaedic conditions, including osteoarthritis and cartilage injuries. Turkey has been at the forefront of research in this field, with several clinical trials investigating the safety and efficacy of stem cell therapy for orthopaedic patients.



Figure 1 (A-D). Use of robotic arm-assisted systems in total hip arthroplasty. Using MAKO assistance, a 3-dimensional (3D) preoperative planning workstation provides planning the orientation and depth of the acetabular component for reamerization (A), and the estimation of the inclination and anteversion (B). Adjusting the Stryker MAKO robot with tracking array attachment (C).To map the acetabulum, a tracking array with a hand-held array is positioned in the iliac crest (D).

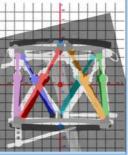
Meniscal transplants are also used for young patients whose menisci cannot be repaired by routine treatment modalities. In Turkey, there is a particular focus on the development of minimally invasive techniques for the treatment of sports injuries, including arthroscopic surgery and regenerative medicine.

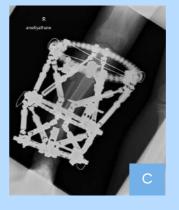
Spinal surgery is a complex and specialized field of orthopedics, and Turkey has a significant number of expert surgeons in this area. There is ongoing research into the development of surgical new techniques, including minimally invasive spinal surgery, to improve outcomes and reduce patient complications. One of the key areas of research in this field is the use of navigation systems, which can improve the accuracy and safety of spinal surgery. The interest in endoscopic discectomy is increasingly growing in Turkey (3).

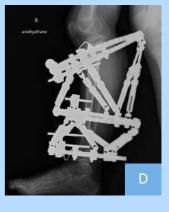




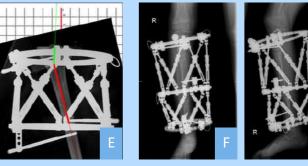








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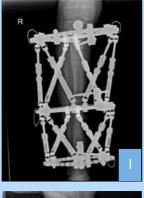




Figure 2 (A-J). Computer assisted hexapodal external fixators yields to correct complext deformities precisely. Anteroposterior standing radiography of a patient with Olier's disease shows the deformity of varus -in spite of guided growth operation- and shorthening on her right tibia (A), and with a recurvatum deformity of tibia seen on lateral view (B). Immediate postoperative anteroposterior (C), and lateral (D) radiographies after the implant removal, proximal and distal osteotomies of the tibia with the application of Taylor spatial frame. Gradual correction and lengthening have been calculated (E) and provided for the tibia as seen on the follow-up xrays (F-H). Precise lenghtening and deformity correction with good bony consolidation has been achieved as seen on AP (I) and lateral (J) control radiographies.



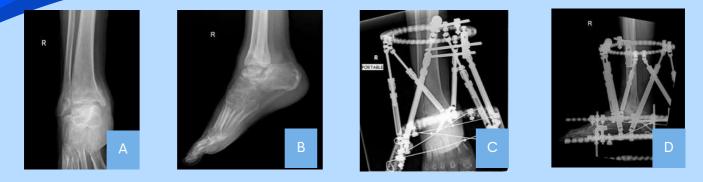


Figure 3 (A-D). Use of hexapodal external fixators for ankle deformity correction with arthrodesis. Preoperative anteroposterior (A) and lateral (B) radiographs of the patient shows severe ankle joint destruction.Postoperative AP (C) and lateral (D) radiographs shows the precise correction of deformity and union provided by Taylor spatial frame.

There is a focus on developing new techniques for the treatment of traumatic injuries. This includes the use of advanced imaging technology and surgical techniques to improve patient outcomes and reduce recovery times. AO surgical guidance is generally preferred reference point for surgical techniques used for trauma cases in Turkey.

Use of hexapod software systems and deformity correction with computer assisted hexapodal external fixators has gained popularity in Turkey (Figures 2 A-J and Figure 3 A-D). These techniques allow for more precise and the quickest possible spatial corrections of the complex deformity around a virtual hinge (4).

In some centers of Turkey, virtual reality (VR) technology is used to show the anatomical components during surgery, which makes learning more engaging and increases teaching efficiency (5, 6). Finite element analysis (FEA) (Figure 4 A-B) and gait analysis are tools that are frequently used in Turkey. Overall, orthopedics is an important area of medical research, innovation, and development in Turkey. The country has many highly skilled orthopedic surgeons, researchers, and healthcare professionals who are dedicated to improving patient outcomes through the development of new techniques and treatments. ongoing The research in ioint replacement surgery, stem cell therapy, sports medicine, spinal surgery, trauma surgery, and robotics is helping to advance the field of orthopaedics and improve the lives of patients in Turkey and around the world.

Conflict of interest statement Declaration of competing interest All authors declare that they have no conflict of interest.



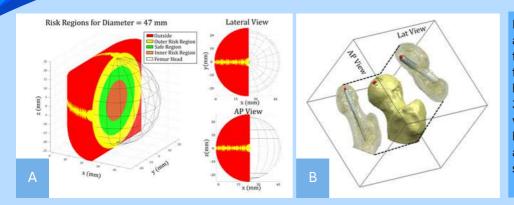


Figure 4 (A-B). Use of finite element analysis (FEA) tool to research for femoral head penetration risk during femoral nailing. Simulation of femoral head region and the construction of 3D volume by using 2D AP and lateral views (A). Hip cartilage violation can be documented by 3D simulation although AP and lateral projections shows no penetration (B).

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SHALIMAR ABDULLAH

I have been lucky to be involved in an international non-governmental organization (NGO) called MERCY Malaysia since 1998. MERCY stands for Medical Relief Society of Malaysia. The NGO was initiated when an obstetrician and gynecologist, Dr. Jemilah Mahmood, watching on television the horrors of the Kosovo war, had her son asking her, "Mummy, why don't you go and help them?".

I began by volunteering with easy, domestic missions in Kuala Lumpur, running mobile clinics for drug addicts and homeless people, before progressing to rural tasks in the interiors of Sabah. My first big international mission to Afghanistan was in 2002, caught in a long, drawnout complex war. We stayed in Chaman, Pakistan, as it was safer, but we would travel daily across the border into Spin Boldak, Afghanistan. There, we saw hundreds of local villagers. It was difficult to adjust my medical treatment with minimal resources. We often felt the villagers were there to see us because we were

a novelty, "foreigners from Asia," They had nothing to do anyway. Most were unemployed. However, I made it a point to always listen to the patient and at least touch them by feeling their pulse rate and listening to their chests. I learned that the human touch is very important in connecting with your patients.

Of course, the usual "patients" came multiple times to get our medications and sell them on the black market. our alert translators Usually, and registration counter staff are able to weed them out. I also had a culture shock because I was a Muslim and going to Afghanistan surrounded by turbanclad men and burga-covered women. I expected them to be religious. Yet, when the call to prayer resonated till the end of the prayer time, none when to go and pray but stayed stuck in their queue. When I enquired why - they said they didn't know how to pray, let alone recite holy verses, as no one had taught them.

We worked tirelessly for about 2 weeks when we received news that a local politician wanted to use us to run a free clinic for his voters.



PERFORMING WARD ROUNDS WITH THE LOCAL DOCTORS DURING THE 2005 KASHMIR, PAKISTAN EARTHQUAKE

Rumors circulated that an armed guard would be sent to secure us, so we ended clinic early that day and returned to Pakistan but not without saying tearful goodbyes to our lovely clinic staff.

My next memorable mission was to the Pakistan Earthquake in Kashmir in 2005. It was very cold in the mountains without heat and water, which was challenging. I was sent with helicopter into the an army mountains to a cut-off village where roads had disappeared. the Μv mission was to run a mobile clinic for 3 hours and, in the end, to select the ten most critically injured / ill patients to be brought back by helicopter. It was a tough decision in a village of 800 people – I argued with a family who wanted me to transport their 80-year-old father with various comorbidities. Still, I stayed with my decision to transport mostly children

as they had the best chance of surviving.

Another challenging mission was during the 2011 Tohoku Japan triple disaster of earthquake, tsunami, and nuclear meltdown. We arrived at the Arrivals Counter with a handful of while the passengers Departure Counter was packed. Everyone leaving was looking at us as if we were crazy. We came to support a medical relief Japanese NGO (AMDA (Association of Medical Doctors of Asia)). lt was psychologically distressing as rumors circulated that strong radiation winds would cause us to develop leukemias and other malignancies. We were worried daily, and everyone kept talking about the same thing. Our team carried a radiation badge, but we would only know the reading at the end of our mission. In the end, the reading was negligible.



ASSISTING THE LOCAL STAFF IN STERILISING SURGICAL EQUIPMENT IN A FIELD HOSPITAL DURING THE 2005 KASHMIR, PAKISTAN EARTHQUAKE



I continue to be active in MERCY Malaysia, volunteering for the Nepal Earthquake, Typhoon Haiyan in the Philippines, Cox's Bazar refugee camps in Bangladesh, and the Palu Sulawesi tsunami not forgetting local disasters in Malaysia such as floods and COVID-19 pandemic. It sounds glamorous to volunteer internationally, but one begins by helping at home, especially in your medical center or hospital.



SEDATING A PATIENT FOR CLOSED MANIPULATION AND REDUCTION PROCEDURE DURING THE 2005 KASHMIR, PAKISTAN EARTHQUAKE

Accumulating all the experiences above, our MERCY Malaysia team has recently obtained certification as a Fixed Type 1 Emergency Medical Team, achieving the minimum standards the World Health Organisation (WHO) set. We hope to be of service to more vulnerable groups and populations.



RUNNING A STATIC CLINIC IN KUTUPALONG, COX'S BAZAR, BANGLADESH FOR ROHINGYA REFUGEES IN 2017 - THE LARGEST REFUGEE CRISIS TO DATE

If we are blessed with good health, wealth, and time, we should strive to give back and help the less fortunate in their times of need. I remember what a family in an earthquakestricken area told us, "Thank you for coming to help us. Once things are better, we will rebuild our homes and invite and welcome you to come and visit us!"

### LET THERE ALWAYS BE HOPE..

Dr. Shalimar Abdullah

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2. Consultant Hand & Microsurgeon / Orthopaedics

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# INDONESIAN ORTHO-TRAUMA

# ANDY ARDIANSYAH

Cycling is a low-impact aerobic exercise that offers a plethora of benefits. It is a suitable form of exercise for individuals of all fitness levels, as the intensity can vary greatly, ranging from casual activities such as using it as a mode of transportation to an intense workout and competitive endeavor. As an orthopaedic surgeon with a heavy workload, engaging in casual riding with low intensity while enjoying the scenery may be more beneficial in terms of safety, as opposed to participating in competitive cycling.

My name is Andy Ardiansyah, and I work as an Ortho-Surgeon in Cilacap, Central Java. Our journey to gather as a community began in 2017 when road cycling became a popular sport among Ortho doctors across Indonesia. Our first group ride took place in Aceh, in conjunction with the National Congress, and has since become a routine at every Congress.

Aceh boasts many stunning coastal attractions, including Lhoknga beach, which was our first destination.

As we headed northeast, Bukit Suharto was our next day's destination. The road was relatively flat, followed by a short climb with a breathtaking view of Teluk Balohan at the top of the hill. Prof. Respati, dr. Rahadyan Magetsari, and dr. Tedjo Rukmoyo, who are still actively engaging in physical activities to this day, were among the teachers and seniors who participated in these rides. Their dedication to staying fit and healthy serves as an inspiration for all of us.



BUKIT SUHARTO



Our latest ride was during the Jakarta Congress in 2023, where we sought some fresh air at Sentul Km O.

Most cyclists typically ride for one to two hours during the weekdays and take longer rides (3-4 hours) on weekends. However, some Orthocyclists surpass the "normal" distance and participate in ultracycling events. Dr. Nasrulloh from Lampung and dr. Johan Bastian from Malang completed both the 600 km and 1200 km ultracycling distance events in 2022, demonstrating their incredible endurance and passion for the sport.



SOME OF US DECIDED TO CLIMB HIGHER TO CANGAR IN BATU THE NEXT DAY. WE ENJOYED THE BEAUTIFUL TEA PLANTATION VIEW AND COLD WEATHER, WHICH WAS PERFECT FOR THOSE WHO LOVE TO SEEK ALTITUDES.







DURING THE COE MAKASSAR, WE EXPLORED DOWNTOWN AND ENJOYED COFFEE AND LOCAL CUISINE.

OUR LATEST RIDE WAS DURING THE JAKARTA CONGRESS IN 2023, WHERE WE SOUGHT SOME FRESH AIR AT SENTUL KM 0.



IN 2018, OUR GROUP RIDE TOOK US TO BANJARMASIN, WHERE WE HEADED TOWARDS BANJARBARU FOR A 70 KM TRIP WITH A RELATIVELY FLAT ROUTE.



. AFTER THE PANDEMIC, OUR NEXT GROUP RIDE WAS IN MALANG DURING THE 2021 PABOI CONGRESS. WE WENT ON A MORNING COFFEE RIDE WITH A SHORT CLIMB TO BATU

Our members are located all over Indonesia, and it is not uncommon for us to take a vacation and go cycling on some of the scenic routes.

Here are some of our recommendations:

# LOMBOK

Lombok is considered a haven for cycling, with silky smooth roads and breathtaking beachside views. Here are some of our favorite routes:

1. Mataram - Pusuk - Malimbu -Mataram: This rolling terrain with multiple climbs spans 60 km and is 100% asphalt. It offers a truly tranquil escape situated on the west coast of Lombok, with the white sand stretching along its long coastline, including the famous Senggigi Beach.

2. The Mataram-Bukit Merese-Mandalika Circuit route has gained popularity among those seeking a long 100 km route. Located on the southern coast of Lombok, Bukit Merese offers panoramic views of the blue-green Indian Ocean.

3.For those who enjoy long climbs, the Mataram-Pusuk Sembalun route offers a 100 km ride all the way to Mt. Rinjani

MOUNT MERAPI YOGYAKARTA



PHOTO COURTESY: DR. ARIFANDI WIJAYA, LOMBOK.

# YOGYAKARTA

Road cycling in Yogyakarta is unique in that all of the best routes are within a 30 km radius of the city center. Mount Merapi climbs are among the most popular, with nine different uphill routes ranging from a short climb to the Kaliurang Resort to a long climb to Klangon, finishing just 5 km from the top of Mt. Merapi.





For a more leisurely ride, the flat course to Kulonprogo is a scenic option that showcases paddy fields, rivers, and hills. Cyclists seeking a challenge can head south via Bantul, the south beach, and Wonosari for a memorable grand fondo ride through teak and pine forests.



PRONOSUTAN VIEW YOGYAKARTA

# BALI

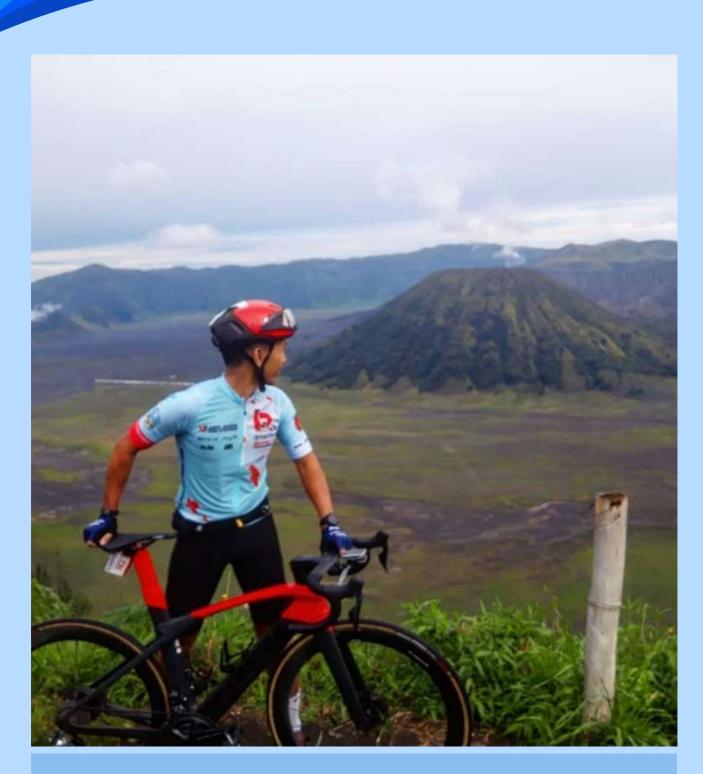
Bali offers a range of road cycling routes that cater to different preferences. Cyclists can choose from flat coastal roads to challenging climbs towards the crater rim of Kintamani. The thirtykilometer nonstop ascent of Kintamani climb rewards cyclists with stunning views of Gunung Agung and Kintamani Lake at the top.

# **MOUNT BROMO**

Climbing to the altitude of 2,200 meters to reach Bromo Mountain is a significant accomplishment for many cyclists. This is the most popular Hors Categorie climb and one of the longest in Indonesia, with a slope of over 10% along its final 10 km.

The question of which bike is best for daily cycling is one that many new cyclists ask. While there is no one-bikefor-all, different types of bikes including MTBs, folding bikes, road bikes, and gravel bikes - each have their own specific usage. Road bike, for instance, are designed for long rides and provide an ergonomic position for the rider. Rider will be able to put the spine in more anatomical position and an open-rotated pelvis. The frame geometry of a road bike enables its rider to sit with straight back and openrotated pelvis, as long as the rider have a good, trained core muscle. Road bike is considered as a racing bike because it is lighter and faster. However, it's important to note that riding a road bike isn't just about high-intensity, high-power, pushing the limit, and going faster to get stronger.

For those who are new to cycling, it's far more beneficial to focus on lowintensity training in most exercises. Andy Ardiansyah, Orthopaedic Surgeon, Cilacap General Hospital,Indonesia.



MOUNT BROMO, EAST JAVA, INDONESIA

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