DEPARTMENT OF ORTHOPAEDIC SURGERY, Showa University Fujigaoka Hospital.

●Professional medical team

Division of Spine Surgery
Division of Trauma & Reconstructive Microsurgery, Hand & Microsurgery.
Division of Shoulder & Elbow Surgery
Division of Knee Reconstruction and Replacement Surgery
Division of Hip Reconstruction and Replacement Surgery
Division of Foot & Ankle Surgery
Division of Pediatric Orthopedic Surgery

●Our Research

Spine Surgery

We specialize in surgery to (1) relieve nerve compression and (2) maintain or reconstruct the support of the spine, which is the foundation of the body. Since spinal disorders cover a wide range of areas from the craniocervical spine to the pelvis, surgery must be performed using a variety of methods, from localized surgery such as herniated disc surgery to major surgery that considers the balance of the body, such as spinal deformity. In addition, each patient has a wide range of ages and underlying diseases, from children with congenital diseases to the elderly with underlying osteoporosis, and each patient has different needs for attention. I believe that the most important thing is to think about what one's own family would do for each individual patient and strive to do the best we can. If there is no other way to improve the patient's disease other than surgery or if surgery is significantly superior to other treatment methods, we will choose the surgical method that is best suited to each patient and devote ourselves to that surgery. If you are suffering from a spinal disease, please come to our group for a consultation.

Recent Publications

1) Biomechanics of the Lumbar Facet Joint. Nozomu Inoue, Alejandro A Espinoza Orías, **Kazuyuki Segami**. Spine Surg Relat Res. 2019 Apr 26;4(1):1-7.
2) Micro-computed tomography analysis of the lumbar pedicle wall. Tomoyo Y Irie, Tohru Irie, **Kazuyuki Segami**,et al. PLoS One. 2021 Jul 8;16(7):e0253019
3) Regional distribution of computed tomography attenuation across the lumbar endplate. **Kazuyuki Segami**, Alejandro A Espinoza Orías, Hiroe Miyamoto, et al. PLoS One. 2021 Oct 27;16(10): e0259001
4) The enhancement of CCL2 and CCL5 by human bone marrow-derived mesenchymal stem/stromal cells might contribute to inflammatory suppression and

axonal extension after spinal cord injury. **Kazumichi Yagura** , Hirokazu Ohtaki, **Tomomi Tsumuraya**, et al. PLoS One. 2020 Mar 10;15(3):e0230080

Trauma & Reconstructive Microsurgery, Hand & Microsurgery.
Division of Trauma & Reconstructive Microsurgery, Hand & Microsurgery, part of Department of Orthopedic Surgery, Showa University Fujigaoka Hospital. cares for people with traumatic bone fractures and soft tissue injuries. We are also deeply committed to orthopedic education and research. The division has four key priorities:

1
to provide the highest-quality, safest, and most effective clinical care to patients in yokohama City and the surrounding communities.
2
to be the region's leading resource for orthopedic trauma education, a main goal of which is to train future orthopedic surgeons, staff and residents, medical students, and allied health professionals
3
to perform innovative basic science and clinical research that benefits patients and families, as well as improve outcomes in patients with orthopedic trauma
4
to continue to be recognized nationally as a leader in the orthopedic trauma community

Our members hold significant leadership roles in the Japanese Society for Fracture Repair, the Japanese Association for Limb Reconstruction and External Fixation.

Trauma and Fracture Surgery Education

As a national leader in resident education, the Department of Orthopedic Surgery considers resident training one of our most important objectives. The trauma-trained surgeons in the Division of Trauma and Fracture Surgery guide residents in the treatment of common fractures and the stabilization and treatment of complex injuries.

Members of the division provide orthopedic-related trauma education through didactic lectures, state-of-the-art simulation, and direct teaching of operative skills that enhance the learner's ability, knowledge base, and dexterity.

Our academic curriculum includes a weekly didactic fracture conference, and each clinical site maintains its own academic schedule and case conferences. Our faculty also oversee resident skills sessions throughout the year in both large and small groups.

Residents participate in rotations as part of the Department of Orthopedic Surgery's residency program. All interns attend the AO basic fracture course to gain further fundamental knowledge of operative treatments for fractures.

We provide reconstruction using the Ilizarov method, deformity correction, limb lengthening, osteomyelitis surgery, and soft tissue reconstruction using free flap for severe extremity trauma and post-traumatic sequelae (deformity, shortening, osteomyelitis, contracture, infected pseudoarthrosis) that are difficult to treat, and we accept referral patients for treatment. Reconstruction of both skin and bone requires treatment that crosses the boundary between plastic surgery and orthopedics. Showa University Fujigaoka Hospital is one of the few hospitals in Japan where both the Ilizarov procedure and microsurgery can be performed by the same physician.

Recent Publications

2022

1) Nail insertion points in semi-extended nailing of tibial fractures and their influence on alignment: A retrospective cohort study comparing two nail insertion techniques. **Yasuda T**, **Sato K**, **Yamazaki K**, et al. Injury. 2022 Jun 24. Online ahead of print. PMID: 35803744

2) A Rare Bone Erosion due to Fibroma of the Tendon Sheath. **Minagawa Y**, **Yasuda T**, **Kanzaki K**, **Kusaba A**, Ohike N, Inagaki K. J Orthop Case Rep. 2022;12(1):14-7. PMID: 35611284

2021

3) Exchange Nailing as Revision Surgery for Post-operative Non-union of Atypical Femoral Fractures: A Case Report and Treatment Strategy. **Yasuda T**, **Arai M**, **Shinohara D**, **Samejima Y**, **Kanzaki K**, Kawasaki K. J Orthop Case Rep. 2021;11(2):107-11. PMID: 34141683

2019

4) A Long-standing Monteggia Fracture in a Child who underwent Bone Lengthening

and Annular Ligament Reconstruction: A Case Report. **Shinohara D**, **Yasuda T**, **Arai M**, **Sato K**, **Arima T**, **Kanzaki K**. J Orthop Case Rep. 2019;9(3):30-3. PMID: 31559222

5) Posterior approach for treatment of intra-articular flap fracture of the olecranon with posterior dislocation of the elbow: A case report. **Yasuda T**, **Arai M**, **Sato K**, **Minagawa Y**, **Kanzaki K**, Kawasaki K, Inagaki K. J Orthop Sci. 2019;25:S0949-2658(19)30278-7.

2017

6) A Gustilo Type 3B Open Tibial Fracture Treated with a Proximal Flexor Hallucis Longus Flap: A Case Report. **Yasuda T**, **Arai M**, **Sato K**, **Kanzaki K**. J Orthop Case Rep. 2017;7(2):70-3. PMID: 28819607

7) Semiextended approach for intramedullary nailing via a patellar eversion technique for tibial-shaft fractures: Evaluation of the patellofemoral joint. **Yasuda T**, **Obara S**, **Hayashi J**, **Arai M**, **Sato K**. Injury. 2017;48(6):1264-8. PMID: 28408084

Shoulder & Elbow Surgery

Shoulder & Elbow Surgery Group, led by Professor Naoya Nishinaka, provides numerous outpatient consultations, hospitalizations, and surgical treatments at both Showa University Fujigaoka Hospital and Showa University Fujigaoka Rehabilitation Hospital. We specialize in shoulder and elbow joints, sports injuries and disorders, and degenerative diseases, and provide numerous outpatient consultations, inpatient admissions, and surgical treatments.

In orthopedic surgery, especially in joint surgery, rehabilitation centered on exercise therapy is a very important factor that determines the outcome of treatment, regardless of whether surgery is performed or not. The upper limb team, in particular, works closely with physicians and rehabilitation specialists. Especially in the upper limb group, physicians and rehabilitation staff regularly update their knowledge at study sessions and conduct academic activities and research together.

In addition, for many years in the past, we served as the medical check-up physician for the Chiba Lotte Marines. In recent years, we have been making efforts in the field of research and education, including collaboration with the Institute of Sports and Exercise Science. He also contributes to community medicine by serving as the physician in charge

of elbow checkups for youth baseball players in Yokohama, Japan.

Recent Publications

1) Comparing in vivo three-dimensional shoulder elevation kinematics between standing and supine postures. Sugi A, Matsuki K, Fukushi R, Shimoto T, Hirose T, Shibayama Y, **Nishinaka N**, Iba K, Yamashita T, Banks SA. JSES Int,2021;5(6):1001-1007
2) Persistent anterior shoulder pain after the Oudard-Iwahara-Yamamoto procedure in a patient with anterior shoulder instability: A case report. Kurata H, Sano H, Inawashiro T, Sasaki D, Noguchi M, Irie T, Suzuki K, **Nishinaka N**, Abe H. J Orthop Sci,2021;10:S0949-2658(21)00148-2
3) Arthroscopic Superior Capsule Reconstruction for Irreparable Rotator Cuff Tear and Axillary Nerve Palsy Associated with Anterior Dislocation of the Shoulder. **Furuya K**, **Nishinaka N**, **Uehara T**, **Tsutsui H**. J Orthop Case Rep,2018;8(2):100-103.
4) Arthroscopic Superior Capsular Reconstruction for Dislocation of the Shoulder with an Irreparable Rotator Cuff Tear: A Case Report. **Tajika Y**, **Nishinaka N**, **Uehara T**, **Tsutsui H**. JBJS Case Connect,2018;8(4):e101

Knee Reconstruction and Replacement Surgery

Knee Joint Group provides outpatient care as well as inpatient and surgical treatment at both Showa University Fujigaoka Hospital and Showa University Fujigaoka Rehabilitation Hospital. The target diseases include sports injuries, disorders, and degenerative diseases, and we treat knee joint diseases in general. For knee ligament injuries, we focus on surgical treatment for anterior cruciate ligament injuries with the goal of early return to sports. For meniscus injuries, we actively perform meniscus suture using a knee arthroscope to repair the damaged area. We also perform autologous cultured cartilage transplantation for cartilage injuries. We also actively use exercise therapy and dynamic insole (plantar plate) therapy to treat pain around the knee caused by overuse due to sports. For knee osteoarthritis, we provide surgical treatments such as knee joint replacement and high tibial osteotomy.

Recent Publications

1) Optogenetic activation of DRN 5-HT neurons induced active wakefulness, not quiet wakefulness. Moriya R, Kanamaru M, **Okuma N**, Yoshikawa A, Tanaka K, Hokari S, Ohshima Y, Yamanaka A, Honma M, Onimaru H, Kikuchi T, Izumizaki M. Brain Res

Bull, 2021;177:129-142

2) Inhibition of Angiogenic Factor Productions by Quercetin In Vitro and In Vivo. **Okumo T**, Furuta A, **Kimura T**, **Yusa K**, Asano K, Sunagawa M. Medicines (Basel), 2021;8(5):22.

3) Analgesic Effect of Combined Therapy with the Japanese Herbal Medicine " Yokukansan" and Electroacupuncture in Rats with Acute Inflammatory Pain.. Ebihara N, Ikemoto H, Adachi N, **Okumo T**, **Kimura T**, **Yusa K**, Hattori S, Manabe A, Hisamitsu T, Sunagawa M. Medicines (Basel), 2021;8(6):31.

Division of Hip Reconstruction and Replacement Surgery

The hip joint group is currently composed of Lecturer Minoru Watanabe, Assistant Professor Tsubasa Ishikawa, and two other physicians who specialize in hip replacement and revision hip arthroplasty.

The group handles a wide range of hip joint diseases, including adult hip joint diseases such as osteoarthritis secondary to acetabular dysplasia, which occurs more frequently in Japan than in Europe or the United States, and pediatric hip joint diseases such as necrosis of the femoral head, developmental hip dislocation, Perthes' disease, and slipped femoral head.

Surgeries are performed mainly on Wednesdays and Fridays, with approximately 200 to 300 cases per year, ranging from joint-sparing surgeries (acetabular labioplasty, femoral head rotation osteotomy, and kyphotic osteotomy) and hip replacement (cemented or cementless, mainly for anterior entry, with some cases posterior entry) to revision hip arthroplasty for children and adults. The most common operations are hip replacements. In hip replacement surgery, which is the most common surgical procedure, we are committed to minimally invasive surgery according to each case, and we conduct daily medical care and research in pursuit of "Forgotten joint" (patients are not conscious of the operated joint in their daily lives).

Recent Publications

1) Differences in preoperative function and outcome of patients with versus without sarcopenia after total hip arthroplasty. Koto S, Ikeda T, Inoue S, Inoue H, **Watanabe M**. J Phys Ther Sci. 2022;34(1):60-4.

2) Effect of exercise therapy combined with branched-chain amino acid supplementation on muscle strength in elderly women after total hip arthroplasty: a randomized controlled trial. Ikeda T, Matsunaga Y, Kanbara M, Kamono A, Masuda T, **Watanabe M**, **Nakanishi R**, Jinno T. Asia Pac J

Clin Nutr. 2019;28(4):720-726.

3) Early repair of necrotic lesion of the femoral head after high-degree posterior rotational osteotomy in young patients-a study evaluated by volume measurement using magnetic resonance imaging. **Ishikwa T, Atsumi T, Tamaoki S, Nakanishi R, Watanabe M, Kobayashi Y, Tanabe S, Kajiwara T**. J Hip Preserv Surg. 2015;2(2):145-51.

Division of Foot & Ankle Surgery

For a long time, our specialty was limited in the field of foot surgery and only some diseases were treated surgically. 35 surgeries were performed in FY 2019, but the number is gradually increasing. The field of foot surgery is one that has not yet been fully explored and will continue to develop in the future, and we are making efforts in academic conference activities and writing papers, including overseas.

The head of the Foot Surgery Group, Dr. Murakami, studied at Nara Medical University, one of the leading institutions in the field of foot surgery in Japan, for one year in FY2018, and has been working at our hospital since FY2019, providing surgical treatment, orthotic treatment such as insoles, and drug treatment such as injections. For patients who need rehabilitation treatment, we refer them to a nearby clinic for rehabilitation.

Recent Publications

in preparation

Division of Pediatric Orthopedic Surgery

Emeritus Susumu Saito at the time of our hospital's opening, and has a long history, including serving as president of the Japanese Society of Pediatric Orthopedics. We mainly treat hip joint diseases including congenital hip dislocation, congenital club foot and lower limb diseases. We are the first department in Japan to introduce radiation-free ultrasonography, and Dr. Ogitani and Dr. Sekihara and Dr. Ito are also lecturers at the Infant Hip Seminar held by the Japanese Society of Orthopaedic Ultrasonography. While there are few hospitals specializing in pediatric orthopedics, not only clinics but also general hospitals, our clinic plays an important role in the field of pediatric orthopedics in the northern Yokohama area. In addition, we have pediatric orthopedic specialists at Showa University's other affiliated hospitals, Showa University Northern Yokohama Hospital and Showa University Koto Toyosu Hospital, with whom we share information and provide medical care on a daily basis.

Recent Publications

in preparation