

Medical and Dental Sciences

Clinical Anatomy

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Research student :

(1) Outline

Department of Clinical Anatomy supports clinical medicine through formulation of human anatomical and developmental biological bases of diagnoses and surgical procedures. We handle the whole body in human anatomical researches. We think it is classic but important to represent human morphology for exactly what they are based on meticulous observations of human body structures regardless of diagnostic technics and surgical procedures. Our researches are aimed to share languages among all clinicians based on clinical anatomy by describing the results of observations in an accessible way for clinicians. In addition, we perform analyses using experimental embryological approaches and developmental biological approaches, because we think it is important to consider how human structures are constructed.

(2) Research

- 1) Clinical anatomic study of the shoulder joint and rotator cuff.
- 2) Clinical anatomic study of the anal region for the rectoanal surgery.
- 3) Cadaveric study of the female pelvis for the gynecologic oncology and colposcopy.
- 4) Analyses of the lamination in the masticatory muscles with special reference of nerve supply.
- 5) Embryological study of the differentiation of cloaca and surrounding muscles.

(3) Education

Clinical anatomy is generally considered as the practical application of anatomical knowledge to diagnosis and treatment, however we think that this course is a part of pure anatomical science based on the findings of the morphological observations of the human bodies. Main objective of Clinical anatomy in the graduate course is to make detailed anatomical data to answer the questions developed from clinical fields especially by surgeons and

radiologists. We collaborate with many clinicians: ENT, orthopedics, gynecology, thoracic surgery, radiology and so on, and our projects have been broad areas. Students are expected to get fine dissection techniques of human bodies and also learn techniques of histology and embryological experiments. By using these techniques, we study the spatial relationships of organs, vessels nerves, and also try to examine their developmental processes in various projects.

(4) Lectures & Courses

Theories and hypotheses of morphogenesis derived from descriptive anatomy and descriptive biology have been confirmed and modified by experimental biology. Furthermore, progresses of developmental biology identified molecules and signaling pathways involved in the morphogenesis. Progresses in the developmental biology also verified morphological hypotheses, and added revisions to the morphological models. The postulates of the morphological models which are currently investigated were built and completed by Anatomy. However, we find Anatomy is still not completed and has many obscure issues through careful dissection of human body. It might be thought that everything was done and there could be no new finding in the human anatomical field anymore because the anatomy employs the classic procedures such as the gross anatomy. However, there are still a lot of unclear anatomical topics, because they had not been focused and not investigated with their clinical significances.

(5) Publications

[Original Articles]

1. Mio Norose, Akimoto Nimura, Masahiro Tsutsumi, Koji Fujita, Atsushi Okawa, Keiichi Akita. Anatomical study for elucidating the stabilization mechanism in the trapeziometacarpal joint. *Sci Rep.* 2022.12; 12(1); 20790
2. Ryo Karakawa, Hidehiko Yoshimatsu, Keisuke Kamiya, Yuma Fuse, Tomoyuki Yano, Satoru Muro, Keiichi Akita. An Anatomical Study of Posterior Trunk Recipient Vessels, and Comparisons of Outcome following Pedicled- and Free-Flap Transfers for Treatment of Sarcoma in the Posterior Trunk. *J Reconstr Microsurg.* 2022.11; 38(9); 683-693
3. Suthasinee Tharnmanularp, Akimoto Nimura, Masahiro Tsutsumi, Mio Norose, Sachi-yuki Tsukada, Keiichi Akita. Medial patellofemoral ligament is a part of the vastus medialis obliquus and vastus intermedius aponeuroses attaching to the medial epicondyle. *Knee Surg Sports Traumatol Arthrosc.* 2022.11; 30(11); 3742-3750
4. Ryo Karakawa, Takaaki Konishi, Hidehiko Yoshimatsu, Yuma Fuse, Yohei Hashimoto, Hiroki Matsui, Kiyohide Fushimi, Tomoyuki Yano, Hideo Yasunaga. Comparison of short-term outcomes between pedicled- and free-flap autologous breast reconstruction: a nationwide inpatient database study in Japan. *Breast Cancer.* 2022.11; 29(6); 1067-1075
5. Ken Imai, Kenro Chikazawa, Emi Yonemori, Tomoyuki Kuwata. Visualizing the dissectable layer for vaginal hysterectomy with indigo carmine. *Eur J Obstet Gynecol Reprod Biol.* 2022.11; 278; 195-196
6. Kengo Nakatsuka, Ryo Karakawa, Yuma Fuse, Hidehiko Yoshimatsu, Tomoyuki Yano. Donor-site Chyle Leakage after Breast Reconstruction Using a Deep Inferior Epigastric Artery Perforator Flap. *Plast Reconstr Surg Glob Open.* 2022.10; 10(10); e4612
7. Haruki Toda, Yuki Hashimoto, Takuya Ibara, Mitsunori Tada. Effect of vibrotactile stimulation of the hallux nail on segmental coordination: A secondary analysis using uncontrolled manifold analysis. *J Biomech.* 2022.08; 141; 111234
8. Atsuhiko Fukai, Akimoto Nimura, Masahiro Tsutsumi, Hitomi Fujishiro, Koji Fujita, Junya Imatani, Keiichi Akita. Lateral Ulnar Collateral Ligament of the Elbow Joint: Reconsideration of Anatomy in Terms of Connection with Surrounding Fibrous Structures. *J Bone Joint Surg Am.* 2022.08; 104(15); 1370-1379
9. Kenro Chikazawa, Shigeki Matsubara, Tomoyuki Kuwata. Difficulties in the Management of Placenta Accreta Spectrum Disorders are not Confined to Low-/Middle-Income Countries: A Possible Usefulness of Simulation Training. *Rev Bras Ginecol Obstet.* 2022.08; 44(8); 804-805

10. Takafumi Koyama, Koji Fujita, Hirotaka Iijima, Mio Norose, Takuya Ibara, Toru Sasaki, Toshitaka Yoshii, Akimoto Nimura, Masaki Takahashi, Atsushi Okawa. Analysis of Spastic Gait in Patients With Cervical Myelopathy Using the Timed Up and Go Test With a Laser Range Sensor. *Spine (Phila Pa 1976)*. 2022.06; 47(12); 892-898
11. Takayoshi Komemushi, Itsuko Okuda, Atsushi Komemushi, Yasuo Nakajima, Hidefumi Mimura, Akiyoshi Kajikawa. Matching the perforating branch of the internal thoracic artery and the deep inferior epigastric artery for breast reconstruction using multi-detector row computed tomography. *Jpn J Radiol*. 2022.06; 40(6); 624-629
12. Kenro Chikazawa, Ken Imai, Tomoyuki Kuwata, Ryo Konno. Importance of conization and pathological status. *Int J Gynecol Cancer*. 2022.06; 32(6); 820
13. Itsuko Okuda, Mizuho Takeda, Masahiro Taira, Toyooki Kobayashi, Ken Inomata, Naoki Yoshioka. Objective analysis of the effectiveness of facial massage using breakthrough computed tomographic technology: A preliminary pilot study. *Skin Res Technol*. 2022.05; 28(3); 472-479
14. Satoru Muro, Jiyeon Kim, Sachiyo Tsukada, Keiichi Akita. Significance of the broad non-bony attachments of the anterior cruciate ligament on the tibial side. *Sci Rep*. 2022.04; 12(1); 6844
15. Masahiro Tsutsumi, Isao Yamaguchi, Akimoto Nimura, Hajime Utsunomiya, Keiichi Akita, Shintarou Kudo. In vivo magnetic resonance imaging study of the hip joint capsule in the flexion abduction external rotation position. *Sci Rep*. 2022.04; 12(1); 6656
16. Keisuke Hirakawa, Masahiro Tsutsumi, Shintarou Kudo. Investigation of the relationship between the thickness of the plantar calcaneonavicular ligament and plantar fascia in patients with plantar fasciitis. *Foot (Edinb)*. 2022.03; 50; 101890
17. Hidehiko Yoshimatsu, Ryo Karakawa, Yuma Fuse, Akitatsu Hayashi, Tomoyuki Yano. Superficial Circumflex Iliac Artery Perforator Flap Elevation Using Preoperative High-Resolution Ultrasonography for Vessel Mapping and Flap Design. *J Reconstr Microsurg*. 2022.03; 38(3); 217-220
18. Yuma Fuse, Ryo Karakawa, Tomoyuki Yano, Hidehiko Yoshimatsu. Lymph-Venous Anastomosis for Breast Cancer-Related Lymphoedema after Docetaxel-Based Chemotherapy. *J Clin Med*. 2022.03; 11(5);
19. Omar Abbassi, Frances Freer, Quillan Q Young Sing, Hidehiko Yoshimatsu, Ryo Karakawa, Dajiang Song, Georgios Pafitanis. Multi-pedicled long fasciocutaneous free flaps in complex lower extremity reconstruction. *J Plast Reconstr Aesthet Surg*. 2022.02; 75(2); 893-939
20. Ryo Karakawa, Hidehiko Yoshimatsu, Tomoyuki Yano. Coronoidectomy, condylectomy, and free vascularized fibula osteomusculocutaneous flap transfer for severe trismus due to contracture of the oral mucosa and temporomandibular joint ankylosis after maxillectomy: A case report. *Microsurgery*. 2022.02; 42(2); 187-191
21. Yugo Miura, Haruhiko Shimura, Koji Fujita, Akimoto Nimura. Understanding the susceptibility to lateral condyle fracture by analyzing unaffected Baumann's angle in children with distal humeral fracture. *J Orthop Sci*. 2022.01; 27(1); 211-214
22. Mingyan He, Satoru Muro, Keiichi Akita. Positional relationship between the lateral border of Denonvilliers' fascia and pelvic plexus. *Anat Sci Int*. 2022.01; 97(1); 101-109
23. Hidehiko Yoshimatsu, Ryo Karakawa, Yuma Fuse, Tomoyuki Yano. Simultaneous Lymphatic Superficial Circumflex Iliac Artery Perforator Flap Transfer from the Zone 4 Region in Autologous Breast Reconstruction Using the Deep Inferior Epigastric Artery Perforator Flap: A Proof-of-Concept Study. *J Clin Med*. 2022.01; 11(3);
24. Ryo Karakawa, Hidehiko Yoshimatsu, Yuma Fuse, Kenta Tanakura, Tomohiro Imai, Masayuki Sawaizumi, Tomoyuki Yano. Immediate tendon transfer for functional reconstruction of a dorsal forearm defect after sarcoma resection. *J Plast Surg Hand Surg*. 2022.01; 57(1-6); 157-162
25. Kenro Chikazawa, Sachiko Netsu, Ken Imai, Azusa Kimura, Tomoyuki Kuwata, Ryo Konno. Volume Index is a Risk Factor for Recurrence Even in Patients with Clinical Stage IA Endometrial Cancer Undergoing either Laparotomy or Laparoscopy: A Retrospective Study. *Gynecol Minim Invasive Ther*. 2022; 11(2); 94-99

26. Ken Imai, Kenro Chikazawa, Masahiro Misawa, Tomoyuki Kuwata. in Laparoscopic Surgery: The Triangle I-CEED Method. *Gynecol Minim Invasive Ther.* 2022; 11(3); 188-189
27. Kenro Chikazawa, Ken Imai, Hiroyoshi Ko, Naoki Ichi, Masahiro Misawa, Tomoyuki Kuwata. Risk Factors Associated with Perineal and Vaginal Lacerations and Vaginal Removal in Total Laparoscopic Hysterectomy. *Gynecol Minim Invasive Ther.* 2022; 11(3); 150-154

[Conference Activities & Talks]

1. Kenro Chikazawa. Precise anatomy of pelvic plexus. Asia-Oceania Research Organisation in Genital Infection and Neoplasia 2022.11.25 Pattaya, Thailand
2. Tomoyuki Yano. Outcome after an urgent anastomotic revision surgery of abdominally based free flaps based on the SIEA or SCIA system for breast reconstruction. PRS Korea 2022 2022.11.12 Seoul, Korea
3. Kenro Chikazawa. Risk factors of perineal laceration in vaginal morcellation. Apget Webinar On Vaginal Morcellation 2022.11.06 Web
4. Tomoyuki Yano. Selection and preparation of recipient vessels for free flap breast reconstruction. The Korean Society for Microsurgery 2022.10.29 Seoul, Korea
5. Tomoyuki Yano. How an ultrasound has changed my clinical practices in free flap breast reconstruction. The Korean Society for Microsurgery 2022.10.29 Seoul, Korea
6. Ryo Karakawa. Risk factor for Lymphorrhea and Lymphedema after STS treatment. Sarcoma Academy Webinar 2022.10.20 Web
7. Akimoto Nimura. Anatomical knowledge in relation to acromioclavicular joint dislocation. 49th Annual meeting of Japan shoulder society 2022.10.07 Yokohama, Kanagawa
8. Kenro Chikazawa. Educating residents with TLH confirming surgical anatomy and preventing ureteral injury. The 22nd An Asia-Pacific association for gynecologic endoscopic surgeons Annual Congress 2022.10.01 Web
9. Masahiro Tsutsumi, Isao Yamaguchi, Akimoto Nimura, Hajime Utsunomiya, Keiichi Akita, Shintarou Kudo. Anatomical characteristics of the hip flexion abduction external rotation (FABER) position using magnetic resonance imaging. The 20th Congress of the International Federation of Associations of Anatomist (IFAA) 2022.08.06 Web
10. Tomoyuki Yano. Our topics for breast reconstruction and cosmetic revisions, and supporting imaging technologies. Annual Conference of Guangdong Medical Industry Association Breast Plastic and Reconstruction Surgery Branch 2022.07.02 Web
11. Wongtim K, Piboonratanaki PJ, Ikeda E, Okuhara S, Nagai S, Azuma M . Overexpression of immune checkpoint molecule PD-L1 in gingival basal keratinocytes regulates periodontal inflammation. 2022International Association for Dental Research 2022.06.20 Web
12. Suthasinee Tharnmanularp, Akimoto Nimura, Masahiro Tsutsumi, Mio Norose, Sachiya Tsukada, Keiichi Akita. Medial patellofemoral ligament is a part of the vastus medialis obliquus and vastus intermedius aponeuroses attaching to the medial epicondyle. Japanese Orthopaedic Society of Knee, Arthroscopy and Sports Medicine - Japanese Orthopaedic Society for Sports Medicine 2022 2022.06.18 Sapporo, Hokkaido
13. Ryo Karakawa. Emerging new imaging techniques, Reconstruction Strategy planning using Ultra High Frequency Ultrasound. 4th Congress of Imaging in Reconstructive Microsurgery 2022.06.06 Cancun, Mexico
14. Ryo Karakawa. Suture-stent Technique For a Lymphaticovenular Bypass. 4th Congress of Imaging in Reconstructive Microsurgery 2022.06.05 Cancun, Mexico
15. Tomoyuki Yano. Imaging for perforator flaps Technique orientation- how to do and read “Breast reconstruction”. 11th Congress of World Society for Reconstructive Microsurgery 2022.06.05 Cancun, Mexico

16. Ryo Karakawa. Suture-stent Technique For a Lymphaticovenular Bypass. 11th Congress of World Society for Reconstructive Microsurgery 2022.06.04 Cancun, Mexico
17. Ryo Karakawa. An Anatomical Study of Posterior Trunk Recipient Vessels, And Comparisons Of Outcome Following Pedicled and Free Flap Transfers For Treatment of Sarcoma in the Posterior Trunk. 11th Congress of World Society for Reconstructive Microsurgery 2022.06.03 Cancun, Mexico
18. Ryo Karakawa. Free Flap Transfer for the Defect after Posterior Trunk Sarcoma Resection. 2022 The Annual Meeting of Japan Society of Plastic and Reconstructive Surgery 2022.04.22 Osaka, Osaka
19. Tomoyuki Yano. Full-thickness eyelid “ Like with Like ” reconstruction using a combined Hughes flap and swing skin flap. 2022 The Annual Meeting of Japan Society of Plastic and Reconstructive Surgery 2022.04.21 Osaka, Osaka
20. Kenro Chikazawa. Our standardized en-bloc lymphadenectomy. Ovarian Cancer Hybrid Symposium 2022 2022.03.17 Web
21. Tomoyuki Yano. Flaps vs Implants!!. San Antonio Breast Cancer Symposium Shenzhen 2022.01.23 Web