

1. Sawahashi M, Kakuta Y, Naito T, et al. Autoantibodies against endothelial protein C receptor and integrin $\alpha v \beta 6$ predict the development of ulcerative colitis. *J Gastroenterol*. Published online May 15, 2025. doi:10.1007/s00535-025-02263-7
2. Ishida N, Harada S, Toki R, et al. Causal relationship between body mass index and insulin resistance: Linear and nonlinear Mendelian randomization study in a Japanese population. *J Diabetes Investig*. Published online April 29, 2025. doi:10.1111/jdi.14377
3. Yoshida N, Stewart DR, Uchimura A, et al. Symposium report—ethical and social considerations regarding return of secondary findings in atomic bomb survivors. *Carcinogenesis*. 2025;46(3). doi:10.1093/carcin/bgaf059
4. Obara T, Ishikuro M, Noda A, et al. Cohort Profile Update: The Tohoku Medical Megabank Project Birth and Three-Generation Cohort Study (TMM BirThree Cohort Study) 2023 update. *Int J Epidemiol*. 2025;54(5). doi:10.1093/ije/dyaf148
5. Eljonid MY, Okazaki F, Hishinuma E, Matsukawa N, Hamido S, Tamaru Y. Proteomic Characterization of the *Clostridium cellulovorans* Cellulosome and Noncellulosomal Enzymes with Sorghum Bagasse. *Int J Mol Sci*. 2025;26(23):11728. doi:10.3390/ijms262311728
6. Sato K, Uehara S, Tsugita A, et al. Bispecific antibody–antigen complex structures reveal activity enhancement by domain rearrangement. *Cell Rep*. 2025;44(7):115965. doi:10.1016/j.celrep.2025.115965
7. Oshikiri H, Taguchi K, Hirose W, et al. Anticancer Effect of C19-Position Substituted Geldanamycin Derivatives Targeting NRF2–NQO1–activated Esophageal Squamous Cell Carcinoma. *Mol Cell Biol*. 2025;45(2):79–97. doi:10.1080/10985549.2024.2438817
8. Minn AKK, Matsuzaki M, Narita A, et al. Profiling of runs of homozygosity from whole-genome sequence data in Japanese biobank. *J Hum Genet*. 2025;70(6):287–296. doi:10.1038/s10038-025-01331-3
9. Tokioka S, Takase M, Nakaya N, et al. Sex difference in genetic risk in the prevalence of atrial fibrillation. *Hear Rhythm*. Published online March 2025. doi:10.1016/j.hrthm.2025.03.1974
10. Nagino K, Akasaki Y, Fuse N, et al. Integration of Digital Phenotyping and Genomics for Dry Eye Disease: Protocol for a Prospective Cohort Study. *JMIR Res Protoc*. 2025;14:e67862. doi:10.2196/67862

11. Miyauchi Y, Koba H, Sawai M, et al. Disulfide bond-mediated stabilization of the oligomers of UDP-glucuronosyltransferase 2B7. *J Biol Chem.* 2025;301(9):110502. doi:10.1016/j.jbc.2025.110502
12. Ohneda K, Suzuki Y, Hamanaka Y, et al. Returning genetic risk information for hereditary cancers to participants in a population-based cohort study in Japan. *J Hum Genet.* 2025;70(3):147–157. doi:10.1038/s10038-024-01314-w
13. Takase M, Hirata T, Nakaya N, et al. Associations of family history of hypertension, genetic, and lifestyle risks with incident hypertension. *Hypertens Res.* 2025;48(10):2606–2617. doi:10.1038/s41440-025-02314-9
14. Koketsu A, Fukase S, Tamahara T, et al. Bacterial Involvement in Oral Squamous Cell Carcinoma and Potentially Malignant Oral Disorders. *Oral Dis.* Published online October 9, 2025. doi:10.1111/odi.70115
15. Kobari Y, Miyata N, Takayama J, et al. A Japanese Case of Lenz-Majewski Syndrome With a Novel PTDSS1 Variant. *Mol Genet Genomic Med.* 2025;13(6). doi:10.1002/mgg3.70112
16. Shiraki A, Hirayama A, Fuse N, et al. Prevalence and Associations of Epiretinal Membrane by OCT in a Japanese Population-Based Cohort: Tohoku Medical Megabank Organization Eye Study. *Ophthalmol Sci.* 2025;5(4):100752. doi:10.1016/j.xops.2025.100752
17. Advancements in Whole-Genome Sequencing Protocols: A Decade of In-House Operations and Quality Controls at the Tohoku Medical Megabank. *JMA J.* 2025;8(4). doi:10.31662/jmaj.2025-0159
18. Ohmori Y, Hishinuma E, Suzuki Y, et al. Comprehensive functional characterization of rare and known CYP2E1 allelic variants identified in a Japanese population. *Biochem Pharmacol.* 2025;242:117396. doi:10.1016/j.bcp.2025.117396
19. Bekker G, Nagao C, Shiota M, et al. Protein Data Bank Japan: Improved tools for sequence-oriented analysis of protein structures. *Protein Sci.* 2025;34(3). doi:10.1002/pro.70052
20. Shimizu M, Hishinuma E, Igarashi R, et al. In Silico Binary Classification of Catalytic Function (Unaffected or Impaired) of Flavin-Containing Monooxygenase 3 (FMO3) Variants and in Vitro Validation Using New Variants Found in a Japanese Genome Resource Database. *Biol Pharm Bull.* 2025;48(7):b25-00359. doi:10.1248/bpb.b25-00359
21. Shiota H, Miyake A, Kawamura M, et al. Regional Differences in the Frequency of *BRCA1* and *BRCA2* Variants in Northeastern Japan: A Cohort Study. *Cancer Med.* 2025;14(8). doi:10.1002/cam4.70443
22. Bekker GJ, Nagao C, Shiota M, et al. Protein Data Bank Japan: Computational Resources for Analysis of Protein Structures. *J Mol Biol.* 2025;437(15):169013. doi:10.1016/j.jmb.2025.169013

23. Sriwichaiin S, Makino S, Funayama T, et al. JG2: an updated version of the Japanese population-specific reference genome. *Hum Genome Var.* 2025;12(1):21. doi:10.1038/s41439-025-00326-y
24. Graefe ASL, Rehburg F, Alkarkoukly S, et al. RareLink: scalable REDCap-based framework for rare disease interoperability linking international registries to FHIR and Phenopackets. *npj Genomic Med.* 2025;10(1):72. doi:10.1038/s41525-025-00534-z
25. Mori N, Mugikura S, Hozawa A, et al. Language Registration-Based Scoring System for Handwritten Logical Memory of Wechsler Memory Scale-Revised: Developed and Validated in the Tohoku Medical Megabank Project. *Tohoku J Exp Med.* Published online 2025:2025.J006. doi:10.1620/tjem.2025.J006
26. Iwafuchi S, Uchida N, Saijo N, et al. Idiopathic infantile hypercalcemia with a CYP24A1 variant triggered by vitamin D supplementation in fortified milk: A case report. *Clin Pediatr Endocrinol.* 2025;34(1):2024-0049. doi:10.1297/cpe.2024-0049
27. Saijo N, Yaoita H, Takayama J, et al. A Prevalent *TMEM260* Deletion Causes Conotruncal Heart Defects, Including Truncus Arteriosus. *Am J Med Genet Part A.* 2025;197(3). doi:10.1002/ajmg.a.63906
28. Abdelhafiz AS, Henderson MK, Kozlakidis Z, et al. Transforming Biobanking with AI: Perspectives from Leading Experts. *Biopreserv Biobank.* Published online June 19, 2025. doi:10.1089/bio.2025.0101
29. Nagaie S, Mizuno S, Ogishima S. Unraveling the Trajectories from Health to Disease Onset Using Health Checkup Data. In: ; 2025. doi:10.3233/SHTI251286
30. Akimoto T, Inaba H, Ogishima S, et al. Comparison of genotypes and phenotypes for von Willebrand factor gene variants using Japanese genome database. *Blood Vessel Thromb Hemost.* Published online April 2025:100070. doi:10.1016/j.bvth.2025.100070
31. Aoyama Y, Yamazaki H, Nishimura K, et al. Selenoprotein-Mediated Redox Regulation Shapes the Cell Fate of HSCs and Mature Lineages. *Blood J.* Published online January 7, 2025. doi:10.1182/blood.2024025402
32. Katata Y, Okubo Y, Nakamura H, et al. Identification of *CNKSR2* Pathogenic Variant and Detection of Strong XCI in a Female Patient With Severe DEE - SWAS and Phenotype Expansion in Male Patients. *Clin Genet.* 2025;108(6):755-757. doi:10.1111/cge.70054
33. Chimirri L, Caufield JH, Bridges Y, et al. Consistent performance of large language models in rare disease diagnosis across ten languages and 4917 cases. *eBioMedicine.* 2025;121:105957. doi:10.1016/j.ebiom.2025.105957

34. Lin MR, Wu IW, Chou WH, et al. Whole exome sequencing and polygenic risk assessment for kidney functions and clinical management in both hospital-based cohort and population-based Asian cohorts. *J Biomed Sci.* 2025;32(1):72. doi:10.1186/s12929-025-01168-0
35. Takahashi H, Suzuki J, Motoike IN, et al. Relationship between age-related hearing loss and alcohol consumption in a Japanese population. *Sci Rep.* 2025;16(1):336. doi:10.1038/s41598-025-29634-7
36. Kawahara T, Nawa N, Murakami K, et al. Genetic effects on gestational diabetes mellitus and their interactions with environmental factors among Japanese women. *J Hum Genet.* 2025;70(5):265–273. doi:10.1038/s10038-025-01330-4
37. Asai-Sato M, Takahashi T, Ota K, et al. Attitudes toward subsequent primary cancer prevention among survivors of childhood, adolescent, and young adult (CAYA) cancer in Japan: results of a comprehensive questionnaire survey on long-term women's health after CAYA cancer. *J Gynecol Oncol.* 2025;36. doi:10.3802/jgo.2025.36.e29
38. Kodate S, Sato M, Hishinuma E, et al. Simulating metabolic pathways to enhance interpretations of metabolome genome-wide association studies. *Sci Rep.* 2025;15(1):17035. doi:10.1038/s41598-025-01634-7
39. Tamahara T, Kouketsu A, Fukase S, et al. Ecological and Functional Landscape of the Oral Microbiome: A Multi-Site Analysis of Saliva, Dental Plaque and Tongue Coating. *Microorganisms.* 2025;14(1):2. doi:10.3390/microorganisms14010002
40. Takase M, Nakaya N, Nakamura T, et al. Genetic risk, lifestyle adherence, and risk of developing hyperuricaemia in a Japanese population. *Rheumatology.* 2025;64(5):2591–2600. doi:10.1093/rheumatology/keae492
41. Uchida N, Ishizaka R, Kawakita A, et al. A Structurally Robust Phospholipid Microtube Constructed by Membrane Phase Separation as a Scaffold for On-Tube Characterization of Membrane-Bound Proteins. *J Am Chem Soc.* 2025;147(45):41706–41716. doi:10.1021/jacs.5c13384
42. Hishinuma E, Shigeta S, Matsukawa N, et al. Sequential Plasma Metabolome and Proteome Analyses to Develop a Novel Monitoring Strategy for Patients with Epithelial Ovarian Cancer: A Pilot Study. *Int J Mol Sci.* 2025;26(12):5435. doi:10.3390/ijms26125435
43. Suzuki N, Kojima K, Malvica S, et al. Deep learning-based histopathological assessment of tubulo-interstitial injury in chronic kidney diseases. *Commun Med.* 2025;5(1):3. doi:10.1038/s43856-024-00708-3

44. Toki R, Fushiki S, Kojima S, et al. Genome-wide association study of plasma amino acids and Mendelian randomization for cardiometabolic traits. *Sci Rep.* 2025;15(1):14569. doi:10.1038/s41598-025-98992-z
45. Matsuo K, Matsuzaki S, Nagase Y, et al. Identifying the possible candidate population for adjuvant radiotherapy de-escalation for intermediate-risk cervical cancer. *Int J Gynecol Cancer.* 2025;35(11):102674. doi:10.1016/j.ijgc.2025.102674
46. Sawane K, Takahashi I, Ishikuro M, et al. Exploring the association between human breast milk lipids and early adiposity rebound in children: A case-control study. *Nutrition.* 2025;135:112739. doi:10.1016/j.nut.2025.112739
47. Suzuki T, Takagi K, Iso T, et al. Bidirectional regulation of KEAP1 BTB domain-based sensor activity. *Redox Biol.* 2025;87:103885. doi:10.1016/j.redox.2025.103885
48. Tokioka S, Nakaya N, Hatanaka R, et al. Association Between Sodium- and Potassium-Related Urinary Markers and the Prevalence of Atrial Fibrillation. *Circ J.* 2025;89(6):CJ-24-0780. doi:10.1253/circj.CJ-24-0780
49. Wang K, Baird L, Yamamoto M. The clinical-grade CBP/ p300 inhibitor CCS1477 represses the global NRF2-dependent cytoprotective transcription program and re-sensitizes cancer cells to chemotherapeutic drugs. *Free Radic Biol Med.* 2025;233:102-117. doi:10.1016/j.freeradbiomed.2025.03.034
50. Abe M, Hashimoto H, Soejima A, et al. Shared decision-making in patients with gynecological cancer and healthcare professionals: a cross-sectional observational study in Japan. *J Gynecol Oncol.* 2025;36. doi:10.3802/jgo.2025.36.e47
51. Watanabe H, Fujishima F, Yamazaki Y, et al. GLP- 1R status using validated monoclonal antibody in 689 cases of neuroendocrine neoplasm and its correlation with somatostatin receptor scintigraphy, insulin production, and histological grades. *Virchows Arch.* 2025;486(6):1317-1326. doi:10.1007/s00428-025-04098-2
52. Nanatani K, Guan L, Kanno R, et al. Elucidation of the structure and molecular mechanisms of the aspartate antiporter. *Commun Biol.* 2025;8(1):1359. doi:10.1038/s42003-025-08676-7
53. Saleous R, Hishinuma E, Al-Mahayri ZN, et al. Evaluation of the functional impact of rare CYP2C19 missense variants identified in understudied Populations: An Integrated in silico and in vitro analysis. *Biochem Pharmacol.* 2025;242:117350. doi:10.1016/j.bcp.2025.117350

54. Sakakibara K, Kawahara T, Nawa N, et al. Household income modifies the association between social capital and gestational diabetes mellitus in Japan: Results from TMM BirThree Cohort Study. *J Diabetes Investig.* 2025;16(10):1900–1909. doi:10.1111/jdi.70101
55. Kobayashi M, Kobayashi T, Obara T, et al. Gaze Patterns of Children with Communication Difficulties Associated with Core Symptoms of Autism Spectrum Disorder. *Tohoku J Exp Med.* Published online 2025:2025.J074. doi:10.1620/tjem.2025.J074
56. Fuse N, Anzawa H, Sakurai M, et al. Genome-Wide Association Study of Intraocular Pressure in Population-Based Cohorts in Japan: The Tohoku Medical Megabank Organization Eye Study. *Ophthalmol Sci.* 2025;5(5):100821. doi:10.1016/j.xops.2025.100821
57. Hasegawa-Minato J, Tochigi M, Miyahara S, et al. Breast cancer surveillance for epithelial ovarian cancer patients with BRCA1 and BRCA2 pathogenic variants: a single-center retrospective study. *Jpn J Clin Oncol.* Published online January 21, 2025. doi:10.1093/jjco/hyaf010
58. Isozaki Y, Makikawa T, Kimura K, et al. Creation of a macrolide antibiotic against non-tuberculous *Mycobacterium* using late-stage boron-mediated aglycon delivery. *Sci Adv.* 2025;11(10). doi:10.1126/sciadv.adt2352
59. Takahashi T, Kobayashi Y, Sakurai R, et al. A Systematic Review of the Application of Artificial Intelligence in Colposcopy: Diagnostic Accuracy for Cervical Intraepithelial Neoplasia and Cervical Cancer. *Clin Med Insights Oncol.* 2025;19. doi:10.1177/11795549251374908
60. Sasaki T, Hiraki H, Yashima-Abo A, et al. Comprehensive Genome Profiling-Initiated Tumor-Informed Circulating Tumor DNA Monitoring for Patients With Advanced Cancer. *Cancer Sci.* Published online January 5, 2025. doi:10.1111/cas.16446
61. Mizuno S, Nagaie S, Tamiya G, et al. Development of AI Models for Early Prediction of Preterm Birth. *Studies in Health Technology and Informatics.* 2025; 7:329:1932–1933.
62. Iwasaki T, Shiota H, Hishinuma E, et al. Plasma Lysophosphatidylcholine Levels Correlate with Prognosis and Immunotherapy Response in Squamous Cell Carcinoma. *Int J Mol Sci.* 2025;26(15):7528. doi:10.3390/ijms26157528
63. Takahashi I, Shinoda G, Ueno F, et al. Respiratory syncytial virus infection, non-respiratory syncytial virus respiratory infections, and later wheezing. *Pediatr Int.* 2025;67(1). doi:10.1111/ped.70050
64. Saito Y, Shimizu M, Sato M, et al. Gender differences in plasma element concentrations and associations between selenoprotein P and iron metabolism in a community-based cohort study. *Sci Rep.* 2025;15(1):25319. doi:10.1038/s41598-025-10581-2

65. Sawane K, Takahashi I, Ishikuro M, et al. Association Between Human Milk Oligosaccharides and Early Adiposity Rebound in Children: A Case–Control Study of the Tohoku Medical Megabank Project Birth and Three–Generation Cohort Study. *J Nutr.* 2025;155(5):1498–1507. doi:10.1016/j.tjnut.2025.02.024
66. Baird L, Zhang L, Hidaka T, et al. Systemic activation of NRF2 contributes to the therapeutic efficacy of clinically–approved KRAS–G12C anti–cancer drugs. *Br J Cancer.* 2025;133(9):1377–1390. doi:10.1038/s41416–025–03162–7
67. Tateishi M, Goto K, Hishinuma E, et al. Double prenylation of budding yeast Ykt6 regulates cell wall integrity and autophagy. *J Biol Chem.* 2025;301(4):108384. doi:10.1016/j.jbc.2025.108384
68. Takase M, Nakaya N, Kogure M, et al. Association of circulating metabolites and polygenic risk score with incident type 2 diabetes: a prospective community–based cohort study. *Cardiovasc Diabetol.* 2025;24(1):335. doi:10.1186/s12933–025–02849–8
69. Motohashi T, Shimada M, Tokunaga H, et al. Niraparib as maintenance therapy in Japan: a retrospective observational study using a Japanese claims database. *J Gynecol Oncol.* 2025;36. doi:10.3802/jgo.2025.36.e19
70. Mori N, Mugikura S, Abe Y, Hozawa A, Fuse N, Yamamoto M. STAT image reporting in a large–scale cohort: types, frequency, and insights from the Tohoku Medical Megabank Brain MRI Study. *Jpn J Radiol.* Published online May 15, 2025. doi:10.1007/s11604–025–01800–x
71. Wen H, Suzuki T, Zhang A, et al. NRF2 activation in cancer cells suppresses immune infiltration into the tumor microenvironment. *iScience.* 2025;28(10):113519. doi:10.1016/j.isci.2025.113519
72. Narita D, Hishinuma E, Ebina–Shibuya R, et al. Histological and genetic features and therapeutic responses of lung cancers explored via the global analysis of their metabolome profile. *Lung Cancer.* Published online January 2025:108082. doi:10.1016/j.lungcan.2025.108082
73. Takase M, Nakaya N, Kogure M, et al. Effect of healthy lifestyle on renal dysfunction risk: interactions with genetic risk. *Clin Kidney J.* 2025;18(10). doi:10.1093/ckj/sfaf275
74. Tanizawa Y, Murakami A, Takahashi R, et al. Quantum Key Distribution Network and Quantum Secure Cloud Technologies for Genome Medicine Use Cases. *IEEE Trans Quantum Eng.* 2025;6:1–15. doi:10.1109/TQE.2025.3611335
75. Abe M, Yamaguchi T, Koshiba S, et al. Correction: Oral alkalinizing supplementation suppressed intrarenal reactive oxidative stress in mild–stage chronic kidney disease: a randomized cohort study. *Clin Exp Nephrol.* 2025;29(8):1116–1127. doi:10.1007/s10157–025–02733–5