

## 研究実績リスト (2023 年～)

1. Nakagawa N, Toda M, Kunita A, Horie M, Tokunaga M, Ikushima H, Ka M, Iida T, Shigeoka M, Ito Y, Ando T, Watanabe K, Ota Y, Liu X, Dmitrovsky E, Kage H, Kawakami M. Targeting KIFC1 to disrupt centrosome clustering and trigger anaphase catastrophe in small-cell lung cancer. *JCI Insight*. 2026; 11(7):e199352
2. Kunita A, Shinozaki-Ushiku A, Nagumo S, Ushiku T. Preanalytical Determinants of DNA and RNA Quality in FFPE Tissues: Practical Recommendations for Molecular Testing. *Pathol Int*. 2026; 76:e70118
3. Matsunaga A, Ogawa M, Kunita A, Ikeda Y, Kashiwabara K, Okuma Y, Kobayashi O, Hayashi N, Nakajima T, Xi Q, Ka M, Kamata S, Saitou K, Nakanishi Y, Masuda S, Watanabe K, Shinozaki-Ushiku A, Ushiku T, Kage H, Kawana K, Oda K. Type-specific detection and quantification of circulating tumor HPV DNA by digital PCR in surgically resected cervical cancer. *J Gynecol Oncol*. 2026; 37(5):e99
4. Xi Q, Kunita A, Ogawa M, Kawakami M, Ka M, Nagai S, Duong AQ, Taguchi A, Watanabe K, Fukuda T, Sone K, Shinozaki-Ushiku A, Ushiku T, Hirota Y, Kage H, Katayama K, Oda K. PLK1 or WEE1 inhibition targets homologous recombination repair proficiency in BRCA1/2 wild-type high-grade serous ovarian cancer. *Cell Death Dis*. 2025;16(1):905
5. Kitamura S, Taguchi A, Tamai K, Yamamoto Y, Duong AQ, Yoshimoto D, Mori A, Ishizaka A, Tsuchimochi S, Sone K, Kawazu M, Oda K, Hirota Y. DNA methylation in ovarian and endometrial cancers: predictive and mechanistic roles in PARP inhibitor and ICI response. *Cancer Sci*. 2025;116(11):2929–2939.
6. Habano E, Ogawa M, Watanabe K, Akiyama N, Chang H, Ka M, Shinozaki-Ushiku A, Tanabe M, Akahori M, Ichijo T, Tsutsumi S, Tatsuno K, Aburatani H, Kage H, Oda K. Germline pathogenic variants detected by GenMineTOP: insight from a nationwide tumor/normal paired comprehensive genomic profiling test in Japan. *J Hum Genet*. 2025;71(1):1-11.
7. Sato Y, Fujii M, Nakamura A, Tanai C, Yamada Y, Watanabe K, Kage H, Sunami K, Oda K, Kume H. A case of metastatic castration-resistant prostate cancer with RAD54L mutation responding to niraparib. *IJU Case Rep*. 2025;8(6):578–582.
8. Oshima T, Akazawa H, Ishida J, Kadowaki H, Shindo A, Ueda T, Amano Y, Watanabe K, Fujiu K, Kage H, Komuro I. Risk factors and prognostic significance of non-perioperative atrial fibrillation in lung cancer patients. *Circ Rep*. 2025;7(12):1171-1180.
9. Ozaki M, Ikushima H, Suzuki M, Yokoyama A, Fukuda K, Watanabe K, Shinozaki-Ushiku A, Kato M, Ushiku T, Aburatani H, Oda K, Kage H. Lung adenocarcinoma expressing an EML4-ALK fusion transcript with premature stop codons and response to alectinib: a case report. *Thorac Cancer*. 2025;16:e70146.

10. Endo G, Ishigaki K, Nakai Y, Nishio H, Fukuda K, Ishida K, Takaoka S, Tokito Y, Fukuda R, Noguchi K, Oyama H, Suzuki T, Sato T, Saito T, Hamada T, Miyabayashi K, Takahara N, Sato Y, Kage H, Oda K, Fujishiro M. Factors associated with actionable gene aberrations in pancreatic cancer based on the C-CAT database. *J Gastroenterol.* 2025;60:1026–1035.
11. Matsubara J, Mukai K, Kondo T, Yoshioka M, Kage H, Oda K, Ikeda S, Ebi H, Muro K, Kajiura S, Hayashi R, Ashida R, Kitano M, Muto M. First-line genomic profiling in previously untreated advanced solid tumors: 1-year follow-up of the FIRST-Dx study. *Cancer Sci.* 2025;116:1908–1919.
12. Tsuchimochi S, Yamamoto Y, Taguchi A, Kawazu M, Sone K, Ikemura M, Tamai K, Kitamura S, Yoshimoto D, Fukaya S, Ishizaka A, Quynh AD, Nishijima A, Miyamoto Y, Mori M, Hiraike O, Hasegawa K, Ushiku T, Oda K, Hirota Y, Osuga Y. BRCA1 promoter methylation in ovarian cancer: clinical relevance and a novel diagnostic approach using fragment analysis. *Cancer Sci.* 2025;116:1996–2007.
13. Watanabe K, Ogawa M, Shinozaki-Ushiku A, Tsutsumi S, Tatsuno K, Aburatani H, Kage H, Oda K. Real-world data analysis of genomic alterations detected by a dual DNA-RNA comprehensive genomic profiling test. *Cancer Sci.* 2025;116:1984–1995.
14. Xi Q, Kunita A, Ogawa M, Ka M, Tanimoto S, Tsuchimochi S, Nagai S, Matsunaga A, Fukuda T, Watanabe K, Sone K, Shinozaki-Ushiku A, Kawana K, Ushiku T, Osuga Y, Katayama K, Kage H, Oda K. Cyclin E1 overexpression sensitizes ovarian cancer cells to WEE1 and PLK1 inhibition. *Oncogene.* 2025;44:1375–1386.
15. Fujii K, Ueki M, Morishita M, Ikushima H, Isago H, Watanabe K, Oda K, Kage H. Clinical utility of comprehensive genomic profiling in non-small cell lung cancer: an analysis of a nation-wide database. *Lung Cancer.* 2025;200:108099.
16. Tanimoto S, Sone K, Jonouchi Y, Hachijo R, Suzuki E, Tsuboyama N, Toyohara Y, Inoue F, Honjoh H, Fukuda T, Taguchi A, Miyamoto Y, Iriyama T, Mori M, Asada K, Komatsu M, Kaneko S, Hamamoto R, Wada-Hiraike O, Oda K, Hirota Y, Osuga Y. BET inhibitor JQ1 induces apoptosis of ovarian and endometrial endometrioid carcinoma cells by downregulating c-Myc. *Oncol Lett.* 2025;29:106.
17. Ikushima H, Watanabe K, Shinozaki-Ushiku A, Oda K, Kage H. Pan-cancer clinical and molecular landscape of MTAP deletion in nationwide and international comprehensive genomic data. *ESMO Open.* 2025;10(4):104535.
18. Matsushita K, Ishige T, Watanabe K, Akahane T, Tanimoto A, Yoshimoto M, Yamakuchi M, Hashiguchi T, Okugawa Y, Ikejiri M, Yamaguchi T, Yamasaki T, Takeda M, Hibi M, Akiyama N, Shimizu K, Hashimoto N, Sato H, Tanaka Y, Amari F; EQA working group of Japan Association for Clinical Laboratory Science (JACLS). Importance of EQA/PT for the detection of genetic variants in comprehensive cancer genome testing. *Sci Rep.* 2025;15(1):1036.
19. Ka M, Matsumoto Y, Ando T, Hinata M, Xi Q, Sugiura Y, Iida T, Nakagawa N, Tokunaga M, Watanabe K, Kawakami M, Ushiku T, Sato M, Oda K, Kage H. Integrin- $\alpha$ 5 expression and its role in non-small cell lung cancer progression. *Cancer Sci.* 2025;116:406–419.

20. Ishigaki K, Tokito Y, Takahara N, Nishio H, Endo G, Fukuda K, Ishida K, Fukuda R, Takaoka S, Oyama H, Noguchi K, Suzuki T, Sato T, Saito T, Hamada T, Miyabayashi K, Sato Y, Nakai Y, Kage H, Oda K, Fujishiro M. Association between homologous recombination deficiency and time to treatment failure to platinum-based chemotherapy for pancreatic cancer by using the C-CAT database. *J Gastroenterol.* 2025;60:247–256.
21. Shimada S, Yamada T, Minamoto A, Matsukawa M, Yabe I, Tada H, Oda K, Ueki A, Higashigawa S, Morikawa M, Sato Y, Hirasawa A, Ogawa M, Kondo T, Yoshioka M, Kanai M, Muto M, Kosugi S. Nationwide survey of the secondary findings in cancer genomic profiling: survey including liquid biopsy. *J Hum Genet.* 2025;70:33–40.
22. Takamatsu S, Hillman RT, Yoshihara K, Baba T, Shimada M, Yoshida H, Kajiyama H, Oda K, Mandai M, Okamoto A, Enomoto T, Matsumura N. Molecular classification of ovarian high-grade serous/endometrioid carcinomas through multi-omics analysis: JGOG3025-TR2 study. *Br J Cancer.* 2024;131:1340–1349.
23. Iwasawa O, Ikegami M, Miyagawa T, Morita H, Saito H, Omori I, Awaji K, Omatsu J, Yamada D, Kage H, Oda K, Sato S, Sumida H. Association of genetic alterations with prognosis in extramammary Paget disease: insights into the involvement of somatic CDKN2A variants in patients with a poor prognosis. *Br J Dermatol.* 2024;192:46–54.
24. Nishijima A, Oda K, Hasegawa K, Koso T, Asada K, Ikeda Y, Taguchi A, Maeda D, Nagae G, Tsuji S, Tatsuno K, Uehara Y, Kurosaki A, Sato S, Tanikawa M, Sone K, Mori M, Ikemura M, Fujiwara K, Ushiku T, Osuga Y, Aburatani H. Integrated genomic/epigenomic analysis stratifies subtypes of clear cell ovarian carcinoma, highlighting their cellular origin. *Sci Rep.* 2024;14:18797.
25. Kage H, Kohsaka S, Tatsuno K, Watanabe K, Shinozaki-Ushiku A, Isago H, Ushiku T, Aburatani H, Mano H, Oda K. Molecular analysis of non-small cell lung cancer using a dual-targeted DNA and RNA comprehensive genomic profiling panel. *Respir Investig.* 2024;62:910–913.
26. Saito Y, Kage H, Kobayashi K, Kamogashira T, Fukuoka O, Yamamura K, Yamashita S, Tanabe M, Oda K, Kondo K. Comprehensive genomic profiling from C-CAT database unveiled over 80% presence of oncogenic drivers in anaplastic thyroid carcinoma including BRAF, RAS family, NF1, and FGFR1. *Clin Endocrinol (Oxf).* 2024;101:170–179.
27. Tsuda Y, Okajima K, Ishibashi Y, Zhang L, Hirai T, Kage H, Shinozaki-Ushiku A, Oda K, Tanaka S, Kobayashi H. Clinical genomic profiling of malignant giant cell tumor of bone: a retrospective analysis using a real-world database. *Med Int (Lond).* 2024;4:17.
28. Watanabe K, Kohsaka S, Tatsuno K, Shinozaki-Ushiku A, Isago H, Kage H, Ushiku T, Aburatani H, Mano H, Oda K. Analysis of quality metrics in comprehensive cancer genomic profiling using a dual DNA-RNA panel. *Pract Lab Med.* 2024;39:e00368.

29. Inoue F, Sone K, Kumegawa K, Hachijo R, Suzuki E, Tanimoto S, Tsuboyama N, Kato K, Toyohara Y, Takahashi Y, Kusakabe M, Kukita A, Honjoh H, Nishijima A, Taguchi A, Miyamoto Y, Tanikawa M, Iriyama T, Mori M, Wada-Hiraike O, Oda K, Suzuki H, Maruyama R, Osuga Y. Inhibition of protein arginine methyltransferase 6 activates interferon signaling and induces the apoptosis of endometrial cancer cells via histone modification. *Int J Oncol.* 2024; 64(3):32.
30. Kage H, Akiyama N, Chang H, Shinozaki-Ushiku A, Ka M, Kawata J, Muto M, Okuma Y, Okita N, Tsuchihara K, Kikuchi J, Shirota H, Hayashi H, Kokuryo T, Yachida S, Hirasawa A, Kubo M, Kenmotsu H, Tanabe M, Ushiku T, Muto K, Seto Y, Oda K. Patient survey on cancer genomic medicine in Japan under the national health insurance system. *Cancer Sci.* 2024;115:954–962.
31. Iwasawa O, Miyagawa T, Omatsu J, Matsuda KM, Awaji K, Yamada D, Kage H, Oda K, Sato S. Mutational landscape of advanced extramammary Paget disease with comprehensive genomic profiling tests: a cohort study in a Japanese real-world setting. *J Am Acad Dermatol.* 2024;90:842–845.
32. Toyohara Y, Taguchi A, Ishii Y, Yoshimoto D, Yamazaki M, Matsunaga H, Nakatani K, Hoshi D, Tsuchimochi S, Kusakabe M, Baba S, Kawata A, Ikemura M, Tanikawa M, Sone K, Uchino-Mori M, Ushiku T, Takeyama H, Oda K, Kawana K, Hippo Y, Osuga Y. Identification of target cells of human papillomavirus 18 using squamocolumnar junction organoids. *Cancer Sci.* 2024;115:125–138.
33. Tanaka M, Takeshita K, Kunita A, Hasegawa K, Ushiku T. PRKACA/PRKACB fusions in pancreatobiliary intraductal oncocytic papillary neoplasms including those with atypical morphology: an analysis of 22 cases expanding morphologic spectrum. *Am J Surg Pathol.* 2024;48:1032–1040.
34. Rokutan H, Arai Y, Kunita A, Yamasaki S, Nakamura H, Hama N, Nakayama A, Hosoda F, Totoki Y, Fujishiro M, Seto Y, Shibata T, Ushiku T. Genomic and pathologic profiling of very well-differentiated gastric adenocarcinoma of intestinal type: a study with emphasis on diffuse-type transformation. *Am J Surg Pathol.* 2024;48:652–661.
35. Murakami K, Tago S-i, Takishita S, Morikawa H, Kojima R, Yokoyama K, Ogawa M, Fukushima H, Takamori H, Nannya Y. Pathogenicity prediction of gene fusion in structural variations: a knowledge graph-infused explainable artificial intelligence (XAI) framework. *Cancers.* 2024;16(10):1915.
36. Xi Q, Kage H, Ogawa M, Matsunaga A, Nishijima A, Sone K, Kawana K, Oda K. Genomic landscape of endometrial, ovarian, and cervical cancers in Japan from the database in the Center for Cancer Genomics and Advanced Therapeutics. *Cancers (Basel).* 2024; 16(1):136.
37. Ohara K, Miyawaki S, Nakatomi H, Okano A, Teranishi Y, Shinya Y, Ishigami D, Hongo H, Takayanagi S, Tanaka S, Shinozaki-Ushiku A, Kohsaka S, Kage H, Oda K, Miyagawa K, Aburatani H, Mano H, Tatsuno K, Saito N. Case report and literature review: exploration of molecular therapeutic targets in recurrent malignant meningioma through comprehensive genetic analysis with Todai OncoPanel. *Front Neurol.* 2023;14:1270046.

38. Tsuchimochi S, Wada-Hiraike O, Urano Y, Kukita A, Yamaguchi K, Honjo H, Taguchi A, Tanikawa M, Sone K, Mori-Uchino M, Tsuruga T, Oda K, Osuga Y. Characterization of a fluorescence imaging probe that exploits metabolic dependency of ovarian clear cell carcinoma. *Sci Rep.* 2023;13:20292.
39. Shigeta S, Shimada M, Suzuki S, Kajiyama H, Oda K, Takehara K, Mandai M, Aoki D, Enomoto T, Okamoto A. An attempt to develop a new treatment strategy for rare refractory gynecological malignancies: the Japanese Gynecologic Oncology Group. *JMA J.* 2023;6:527–531.
40. Saito Y, Kage H, Kobayashi K, Yoshida M, Fukuoka O, Yamamura K, Mukai T, Oda K, Yamasoba T. TERT promoter mutation positive oral cavity carcinomas, a clinically and genetically distinct subgroup of head and neck squamous cell carcinomas. *Head Neck.* 2023;45:3107–3118.
41. Kobayashi K, Saito Y, Kamogashira T, Kage H, Fukuoka O, Yamamura K, Mukai T, Oda K, Yamasoba T. Survival analysis of high-grade salivary gland carcinoma adjusted for length bias due to delay in comprehensive genomic profiling. *Jpn J Clin Oncol.* 2023;53:1092–1093.
42. Matsubara J, Mukai K, Kondo T, Yoshioka M, Kage H, Oda K, Kudo R, Ikeda S, Ebi H, Muro K, Hayashi R, Tokudome N, Yamamoto N, Muto M. First-line genomic profiling in previously untreated advanced solid tumors for identification of targeted therapy opportunities. *JAMA Netw Open.* 2023;6:e2323336.
43. Kobayashi K, Saito Y, Kage H, Fukuoka O, Yamamura K, Mukai T, Oda K, Yamasoba T. CDK12 alterations and ARID1A mutations are predictors of poor prognosis and therapeutic targets in high-grade salivary gland carcinoma: analysis of the National Genomic Profiling Database. *Jpn J Clin Oncol.* 2023;53:798–807.
44. Kobayashi H, Zhang L, Okajima K, Ishibashi Y, Hirai T, Tsuda Y, Ikegami M, Kage H, Shinozaki-Ushiku A, Oda K, Tanaka S. BRAF mutations and concurrent alterations in patients with soft tissue sarcoma. *Genes Chromosomes Cancer.* 2023;62:648–654.
45. Kage H, Oda K, Muto M, Tsuchihara K, Okita N, Okuma Y, Kikuchi J, Shirota H, Hayashi H, Kokuryo T, Sakai D, Hirasawa A, Kubo M, Kenmotsu H, Akiyama N, Shinozaki-Ushiku A, Tanabe M, Ushiku T, Miyagawa K, Seto Y. Human resources for administrative work to carry out a comprehensive genomic profiling test in Japan. *Cancer Sci.* 2023;114: 3041–3049.
46. Yoshihara K, Baba T, Tokunaga H, Nishino K, Sekine M, Takamatsu S, Matsumura N, Yoshida H, Kajiyama H, Shimada M, Kagimura T, Oda K, Sasajima Y, Yaegashi N, Okamoto A, Sugiyama T, Enomoto T. Homologous recombination inquiry through ovarian malignancy investigations: JGOG3025 Study. *Cancer Sci.* 2023;114:2515–2523.

47. Kusakabe M, Taguchi A, Tanikawa M, Hoshi D, Tsuchimochi S, Qian X, Toyohara Y, Kawata A, Wagatsuma R, Yamaguchi K, Yamamoto Y, Ikemura M, Sone K, Mori-Uchino M, Matsunaga H, Tsuruga T, Nagamatsu T, Kukimoto I, Wada-Hiraike O, Kawazu M, Ushiku T, Takeyama H, Oda K, Kawana K, Hippo Y, Osuga Y. Application of organoid culture from HPV18-positive small cell carcinoma of the uterine cervix for precision medicine. *Cancer Med.* 2023;12:8476–8489.
48. Komura A, Taguchi A, Ikemura M, Nishijima A, Miyamoto Y, Tanikawa M, Sone K, Mori M, Oda K, Osuga Y. A case of refractory pelvic squamous cell carcinoma of unknown primary that responded to nivolumab. *J Obstet Gynaecol Res.* 2023;49:1300–1304.
49. Kage H, Shinozaki-Ushiku A, Ishigaki K, Sato Y, Tanabe M, Tanaka S, Tanikawa M, Watanabe K, Kato S, Akagi K, Uchino K, Mitani K, Takahashi S, Miura Y, Ikeda S, Kojima Y, Watanabe K, Mochizuki H, Yamaguchi H, Kawazoe Y, Kashiwabara K, Kohsaka S, Tatsuno K, Ushiku T, Ohe K, Yatomi Y, Seto Y, Aburatani H, Mano H, Miyagawa K, Oda K. Clinical utility of Todai OncoPanel in the setting of approved comprehensive cancer genomic profiling tests in Japan. *Cancer Sci.* 2023;114:1710–1717.
50. Takamatsu S, Yoshihara K, Baba T, Shimada M, Yoshida H, Kajiyama H, Oda K, Mandai M, Okamoto A, Enomoto T, Matsumura N. Prognostic relevance of HRDness gene expression signature in ovarian high-grade serous carcinoma: JGOG3025-TR2 study. *Br J Cancer.* 2023;128:1095–1104.
51. Mizuno S, Ikegami M, Koyama T, Sunami K, Ogata D, Kage H, Yanagaki M, Ikeuchi H, Ueno T, Tanikawa M, Oda K, Osuga Y, Mano H, Kohsaka S. High-throughput functional evaluation of MAP2K1 variants in cancer. *Mol Cancer Ther.* 2023;22:227–239.
52. Kusakabe M, Taguchi A, Tanikawa M, Wagatsuma R, Yamazaki M, Tsuchimochi S, Toyohara Y, Kawata A, Baba S, Ueno T, Sone K, Mori-Uchino M, Ikemura M, Matsunaga H, Nagamatsu T, Wada-Hiraike O, Kawazu M, Ushiku T, Takeyama H, Oda K, Kawana K, Mano H, Osuga Y. Cells with stem-like properties are associated with the development of HPV18-positive cervical cancer. *Cancer Sci.* 2023;114:885–895.
53. Oda K, Aoki D, Tsuda H, Nishihara H, Aoyama H, Inomata H, Shimada M, Enomoto T. Japanese nationwide observational multicenter study of tumor BRCA1/2 variant testing in advanced ovarian cancer. *Cancer Sci.* 2023;114:271–280.
54. Kobayashi H, Makise N, Shinozaki-Ushiku A, Zhang L, Ishibashi Y, Ikegami M, Tsuda Y, Kohsaka S, Ushiku T, Oda K, Miyagawa K, Aburatani H, Mano H, Tanaka S. Dramatic response to entrectinib in a patient with malignant peripheral nerve sheath tumor harboring novel SNRNP70-NTRK3 fusion gene. *Genes Chromosomes Cancer.* 2023;62:47–51.
55. Kondo A, Shinozaki-Ushiku A, Rokutan H, Kunita A, Ikemura M, Yamashita H, Seto Y, Nagae G, Tatsuno K, Aburatani H, Koinuma D, Ushiku T. Loss of viral genome with altered immune microenvironment during tumour progression of Epstein-Barr virus-associated gastric carcinoma. *J Pathol.* 2023;260(2):124–136.

56. Abe S, Tago S, Yokoyama K, Ogawa M, Takei T, Imoto S, Fuji M. Explainable AI for estimating pathogenicity of genetic variants using large-scale knowledge graphs. *Cancers*. 2023;15(4):1118.
57. Sato A, Kobayashi M, Yusa N, Ogawa M, Shimizu E, Kawamata T, Yokoyama K, Ota Y, Ichinohe T, Ohno H, Mori Y, Sakaida E, Kondo T, Imoto S, Nannya Y, Mitani K, Tojo A. Clinical and prognostic features of Langerhans cell histiocytosis in adults. *Cancer Sci*. 2023;114(9):3687–3697