2021 年 12 月 1 日

松井茂之の主な研究業績

著書

1. Daimon T, Hirakawa A, Matsui S. Dose-Finding Designs for Early-Phase Cancer Clinical Trials: A Brief Guidebook to Theory and Practice, Springer, 2019.

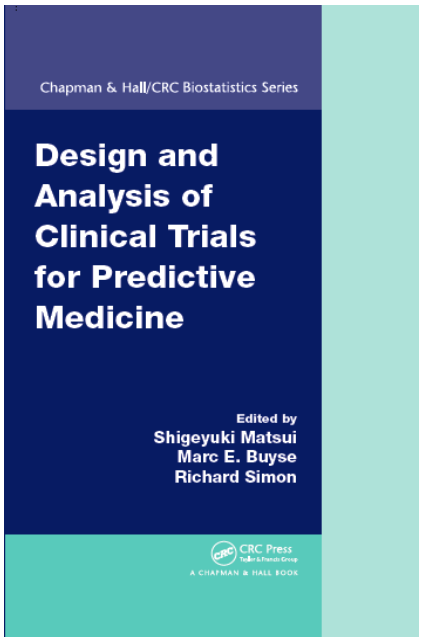
2. Emura T, Chen YH, Matsui S, Rondeau V. Survival Analysis with Correlated Endpoints: Joint Frailty-Copula Models, Springer, 2019.

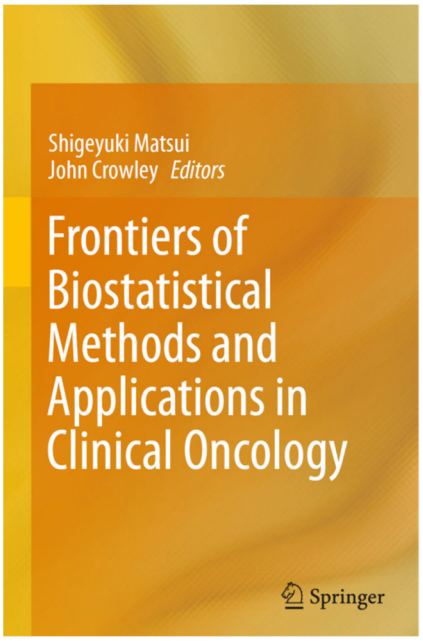
3. Hirakawa A, Sato H, Daimon T, Matsui S. Modern Dose-Finding Designs for Cancer Phase I Trials: Drug Combination and Molecularly Targeted Agents. Springer, 2018

4. 丹後俊郎，松井茂之（編）．新版医学統計学ハンドブック．朝倉書店, 2018.

5. Matsui S, Crowley J (eds). Frontiers of Biostatistical Methods and Applications in Clinical Oncology, Springer, 2017.

6. Matsui S, Buyse M, Simon R. (eds). Design and Analysis of Clinical Trials for Predictive Medicine. CRC Press, 2015.





Book Chapter

1. Matsui S, Igeta M, Toyoizumi K. (2019). Biomarker-based phase II and III clinical trials in oncology. In Textbook of Clinical Trials in Oncology. (eds. S. Halabi and S. Michiels), CRC Press.

2. Matsui S. (2017). Phase III clinical trial designs incorporating predictive biomarkers: an overview.

In Frontiers of Biostatistical Methods and Applications in Clinical Oncology. (eds. S. Matsui, J. Crowley), Springer.

3. Simon R, Matsui S, Buyse M. (2015). Clinical trials for predictive medicine: new paradigms and challenges. In Design and Analysis of Clinical Trials for Predictive Medicine. (eds. S. Matsui, M. Buyse, R. Simon), CRC Press.

4. Daimon T, Hirakawa A, Matsui S. (2015). Phase I dose-finding designs and their applicability to targeted therapies. In Design and Analysis of Clinical Trials for Predictive Medicine. (eds. S. Matsui, M. Buyse, R. Simon), CRC Press.

5. Matsui S, Choai Y, Nonaka T. (2015). Phase III all-comers clinical trials with a predictive biomarker. In Design and Analysis of Clinical Trials for Predictive Medicine. (eds. S. Matsui, M. Buyse, R. Simon), CRC Press.

6. Matsui S. (2015). Statistical issues in clinical development and validation of genomic signatures. In Design and Analysis of Clinical Trials for Predictive Medicine. (eds. S. Matsui, M. Buyse, R. Simon), CRC Press.

7. Noma H, Matsui S. (2015). Univariate analysis for gene screening: beyond the multiple testing. In Design and Analysis of Clinical Trials for Predictive Medicine. (eds. S. Matsui, M. Buyse, R. Simon), CRC Press.

8. Matsui S. (2015). Development and validation of continuous genomic signatures in randomized clinical trials. In Design and Analysis of Clinical Trials for Predictive Medicine. (eds. S. Matsui, M. Buyse, R. Simon), CRC Press.

9. Matsui S, Nonaka T, Choai Y. (2014). Design of phase III clinical trials with predictive biomarkers for personalized medicine. In *Developments in Statistical Evaluation of Clinical Trials* (eds K. van Montfort, J. Oud, W. Ghidey), Springer.

10. Hirakawa A, Matsui S. (2014). Dose-finding for two-agent combination phase I trials. In *Developments in Statistical Evaluation of Clinical Trials* (eds K. van Montfort, J. Oud, W. Ghidey), Springer.

11. Matsui S, Noma H. (2012). Analysis of DNA microarrays. In *Handbook of Statistics in Clinical Oncology, 3rd edn*. (eds J. J. Crowley and A. Hoering), CRC Press, Boca Raton.

12. Noma H, Matsui S. (2012). Bayesian ranking and selection methods in microarray studies, *Statistical Diagnostics for Cancer*. (eds M. Dehmer and F. Emmert-Streib), Wiley.

13. 松井茂之 (2011). ゲノムデータ解析, ファーマコゲノミクス, ゲノム・スクリーニング, 遺伝疫学, がんの分子診断. 松原望, 美添泰人（編） 統計応用の百科事典. 丸善.

14. 松井茂之 (2010). 再発事象データの解析. 丹後俊郎, 小西貞則（編） 医学統計学の事典.

朝倉書店.

15. Matsui S. (2006). Statistical applications using DNA microarrays for cancer diagnosis and prognosis. In *Handbook of Statistics in Clinical Oncology, 2nd edn.* (eds J.J. Crowley and D.P. Ankerst), CRC Press, Boca Raton.

16. 松井茂之 (2006). 再起的事象の評価. 丹後俊郎, 上坂浩之（編）臨床試験ハンドブック, 朝倉書店.

研究論文

生物統計の方法論

1. Morisawa J, Otani T, Nishino J, Emoto R, Takahashi K, Matsui S. (2021). Semi-parametric empirical Bayes factor for genome-wide association studies. *European Journal of Human Genetics* 29, 800-807.

2. Igeta M, Matsui S. (2021). Blinded sample size re-estimation in comparative clinical trials with overdispersed count data: Incorporation of misspecification of the variance function. *Statistics in Biopharmaceutical Research* 13, 170-180.

3. Emoto R, Kawaguchi A, Takahashi K, Matsui S. (2020). Effect-size estimation using semiparametric hierarchical mixture models in disease-association studies with neuroimaging data. *Computational and Mathematical Methods in Medicine*. Article ID 7482403.

4. Kawabata T, Emoto R, Nishino J, Takahashi K, Matsui S. (2019). Two-stage analysis for selecting fixed numbers of features in omics association studies. *Statistics in Medicine* 38, 2956-2971.

5. Nonaka T, Igeta M, Matsui S. (2019). Statistical testing strategies for assessing treatment efficacy and marker accuracy in phase III trials. *Pharmaceutical Statistics* 18, 459-475.

6. Emura T, Matsui S, Chen HY. (2019). compound.Cox: univariate feature selection and compound covariate for predicting survival. *Computer Methods and Programs in Biomedicine* 168, 21-37.

7. Otani T, Noma H, Sugasawa S, Kuchiba A, Goto A, Yamaji T, Kochi Y, Iwasaki M, Matsui S, Tsunoda T. (2019). Exploring predictive biomarkers from clinical genome-wide association studies via multidimensional hierarchical mixture models. *European Journal of Human Genetics* 27, 140-149.

8. Nishino J, Ochi H, Kochi Y, Tsunoda T, Matsui S. (2018). Sample size for successful genome-wide association study of major depressive disorder. *Frontiers in Genetics* 9: 227.

9. Nishino J, Kochi Y, Shigemizu D, Kato M, Ikari K, Ochi H, Noma H, Matsui K, Morizono T, Boroevich K, Tsunoda T, Matsui S. (2018). Empirical Bayes estimation of semi-parametric hierarchical mixture models for unbiased characterization of polygenic disease architectures.

Frontiers in Genetics 9: 115.

10. Igeta M, Takahashi K, Matsui S. (2018). Power and sample size calculation incorporating misspecifications of the variance function in comparative clinical trials with over-dispersed count data. *Biometrics* 74, 1459-1467.

11. Otani T, Noma H, Nishino J, Matsui S. (2018). Re-assessment of multiple testing strategies for more efficient genome-wide association studies. *European Journal of Human Genetics* 26, 1038-1048.

12. Shimamura F, Hamada C, Matsui S, Hirakawa A. (2018). Two-stage approach based on zone and dose findings for two-agent combination phase I/II trials. *Journal of Biopharmaceutical Statistics* 8:1-13.

13. Emura T, Nakatochi M, Matsui S, Michimae H, Rondeau V. (2018). Personalized dynamic prediction of death according to tumour progression and high-dimensional genetic factors: Meta-analysis with a joint model. *Statistical Methods in Medical Research* 27, 2842-2858.

14. Matsui S, Crowley J. (2018). Biomarker-stratified phase III clinical trials: enhancement with a subgroup-focused sequential design. *Clinical Cancer Research* 24, 994-1001.

15. Matsui S, Noma H, Qu P, Yoshio Sakai, Matsui K, Heuck C, Crowley J. (2018). Multi-subgroup gene screening using semi-parametric hierarchical mixture models and the optimal discovery procedure: application to a randomized clinical trial in multiple myeloma. *Biometrics* 74, 313-320.

16. Sugasawa S, Noma H, Otani T, Nishino J, Matsui S. (2017). An efficient and flexible test for rare variant effects. *European Journal of Human Genetics* 25, 752-757.

17. Toyoizumi K, Matsui S. (2017). Correcting estimation bias in randomized clinical trials with a test of treatment-by-biomarker interaction. *Statistics in Biopharmaceutical Research* 9, 172-179.

18. Noma H, Tanaka S, Matsui S, Cipriani A, Furukawa TA. (2017). Quantifying indirect evidence in network meta-analysis. *Statistics in Medicine* 36, 917-927.

19. Hirakawa A, Wages NA, Sato H, Matsui S. (2015). A comparative study of adaptive dose-finding designs for phase I oncology trials of combination therapies. *Statistics in Medicine* 34, 3194-3213.

20. Hirakawa A, Matsui S. (2015). Operating characteristics of restrictions on skipping dose level for adaptive dose-finding method in two-agent phase I trials. *Japanese Journal of Biometrics* 36, 1-12.

21. Choai Y, Matsui S. (2015). Estimation of treatment effects in all-comers randomized clinical trials with a predictive marker. *Biometrics* 71, 25-32.

22. Matsui S, Choai Y, Nonaka T. (2014). Comparison of statistical analysis plans in randomize-all

phase III trials with a predictive biomarker. *Clinical Cancer Research* 20, 2820-2830.

23. Hirakawa A, Matsui S. (2014). Response to Letter to the Editor by Drs Wages et al. *Statistics in Medicine* 33, 12.

24. Noma H, Matsui S. (2013). Empirical Bayes ranking and selection methods via semiparametric hierarchical mixture models in microarray studies. *Statistics in Medicine* 32, 1904-1916.

25. Mori K, Oura T, Noma H, Matsui S. (2013). Cancer outlier analysis based on mixture modeling of gene expression data. *Computational and Mathematical Methods in Medicine*, Article ID: 693901.

26. Noma H, Matsui S. (2013). An empirical Bayes optimal discovery procedure based on semiparametric hierarchical mixture models. *Computational and Mathematical Methods in Medicine*, Article ID: 568480.

27. Matsui S. (2013). Genomic biomarkers for personalized medicine: development and validation in clinical studies. *Computational and Mathematical Methods in Medicine*, Article ID: 865980.

28. Hirakawa A, Hamada C, Matsui S. (2013). A dose-finding approach based on shrunken predictive probability for combinations of two agents in phase I trials. *Statistics in Medicine* 32, 4515-4525.

29. Noma H, Matsui S. (2012). The optimal discovery procedure in multiple significance testing: an empirical Bayes approach. *Statistics in Medicine* 31, 165-176.

30. Matsui S, Simon R, Qu P, Shaughnessy J, Barlogie B, Crowley J. (2012). Developing and validating continuous genomic signatures in randomized clinical trials for predictive medicine. *Clinical Cancer Research* 18, 6065-6073.

31. Matsui S, Noma H. (2011). Estimation and selection in high-dimensional genomic studies for developing molecular diagnostics. *Biostatistics* 12, 223-233.

32. Matsui S, Noma H. (2011). Estimating effect sizes of differentially expressed genes for power and sample size assessments in microarray experiments. *Biometrics* 67, 1225-1235.

33. Noma H, Matsui S, Omori T, Sato T. (2010). Bayesian ranking and selection methods using hierarchical mixture models in microarray studies. *Biostatistics* 11, 281-289.

34. Noma H, Matsui S. (2010). Optimality of gene ranking based on univariate P-values for detecting differentially expressed genes. *Japanese Journal of Biometrics* 31, 13-21.

35. Matsui S, Oura T. (2009). Sample sizes for a robust ranking and selection of genes in microarray experiments. *Statistics in Medicine* 28, 2801-2816.

36. Oura T, Matsui S, Kawakami K. (2009). Sample size calculations for controlling the distribution of false discovery proportion in microarray experiments. *Biostatistics* 10, 694-705.

37. Matsui S, Zeng S, Yamanaka T, Shaughnessy J. (2008). Sample size calculations based on ranking and selection in microarray experiments. *Biometrics* 64, 217-226.

38. Matsui S, Yamanaka T, Barlogie B, Shaughnessy J, Crowley J. (2008). Clustering of significant genes in prognostic studies with microarrays: application to a clinical study for multiple myeloma. *Statistics in Medicine* 27, 1106-1120.

39. Matsui S, Ito M, Nishiyama H, Uno H, Kotani H, Watanabe J, Guilford P, Reeve A, Fukushima M, Ogawa O. (2007). Genomic characterization of multiple clinical phenotypes of cancer using multivariate linear regression models. *Bioinformatics* 23, 732-738.

40. Matsui S. (2006). Reducing false positive findings in statistical analysis of pharmacogenomic biomarker studies using high-throughput technologies. *Current Drug Safety* 1, 135-141.

41. Matsui S. (2006). Predicting survival outcomes using subsets of significant genes in prognostic marker studies with microarrays. *BMC Bioinformatics* 7, 156.

42. Matsui S. (2005). Sample size calculations for comparative clinical trials with over-dispersed Poisson process data. *Statistics in Medicine* 24, 1339-1356.

43. Matsui S. (2005). Stratified analysis in randomized trials with noncompliance. *Biometrics* 61, 816-823.

44. Matsui S. (2004). Analysis of times to repeated events in two-arm randomized trials with noncompliance and early withdrawal. *Biometrics* 60, 965-976.

45. Matsui S, Ohashi Y. (1999). Analysis of recurrent events: Application to a clinical trial of colony stimulating factor with the endpoint of febrile neutropenia. *Statistics in Medicine* 18, 2409-2420.

46. Matsui S, Miyagishi H. (1999). Design of clinical trials for recurrent events with periodic monitoring. *Statistics in Medicine* 18, 3005-3020.

生物統計の実践

47. Yasuda Y, Nishikimi M, Matsui K, Numaguchi A, Nishida K, Emoto R, Matsui S, Matsuda N. (2021). The rCAST score is useful for estimating the neurological prognosis in pediatric patients with post-cardiac arrest syndrome before ICU admission: External validation study using a nationwide prospective registry. *Resuscitation* 168, 103-109.

48. Nishi T, Mutsuga M, Akita T, Narita Y, Fujimoto K, Tokuda Y, Nishida K, Matsui S, Nishiwaki K, Usui A. (2021). Hypofibrinogenemia can be estimated by the predictive formula in aortic surgery. *Gen Thorac Cardiovasc Surg* 69(10), 1376-1382.

49. Araki Y, Yokoyama K, Uda K, Kanamori F, Kurimoto M, Shiba Y, Mamiya T, Nishihori M, Izumi

T, Sumitomo M, Okamoto S, Matsui K, Emoto R, Wakabayashi T, Matsui S, Natsume A. Postoperative stroke and neurological outcomes in the early phase after revascularization surgeries for moyamoya disease: an age-stratified comparative analysis. *Neurosurgical Review* 44(5), 2785-2795.

50. Hiraiwa H, Kasugai D, Ozaki M, Goto Y, Jingushi N, Higashi M, Nishida K, Kondo T, Furusawa K, Morimoto R, Okumura T, Matsuda N, Matsui S, Murohara T. (2021). Clinical impact of visually assessed right ventricular dysfunction in patients with septic shock. *Sci Rep* 11(1), 18823.

51. Nishikimi M, Ogura T, Nishida K, Hayashida K, Emoto R, Matsui S, Matsuda N, Iwami T. (2021). Outcome Related to Level of Targeted Temperature Management in Postcardiac Arrest Syndrome of Low, Moderate, and High Severities: A Nationwide Multicenter Prospective Registry. *Crit Care Med* 49(8), e741-e750.

52. Yoshihara M, Emoto R, Kitami K, Iyoshi S, Uno K, Mogi K, Tano S, Yoshikawa N, Matsui S, Kajiyama H. (2021). A large-scale multi-institutional study evaluating prognostic aspects of positive ascites cytology and effects of therapeutic interventions in epithelial ovarian cancer. *Sci Rep* 11(1), 15154.

53. Kasugai D, Ozaki M, Nishida K, Goto Y, Takahashi K, Matsui S, Matsuda N. (2021). Relative platelet reductions provide better pathophysiologic signatures of coagulopathies in sepsis. *Sci Rep* 11(1), 14033.

54. Hayashida K, Takegawa R, Nishikimi M, Aoki T, Emoto R, Shinozaki K, Miyara SJ, Rolston DM, Li T, Shoaib M, Fukuda T, Molmenti EP, Suzuki M, Sasaki J, Matsui S, Becker LB. (2021). The interplay between bystander cardiopulmonary resuscitation and ambient temperature on neurological outcome after cardiac arrest: A nationwide observational cohort study. *Resuscitation* 164, 46-53.

55. Matsui S, Le-Rademacher J, Mandrekar SJ. (2021). Statistical models in clinical studies. *J Thorac Oncol* 16(5), 734-739.

56. Nishikimi M, Nishida K, Shindo Y, Shoaib M, Kasugai D, Yasuda Y, Higashi M, Numaguchi A, Yamamoto T, Matsui S, Matsuda N. (2021). Failure of non-invasive respiratory support after 6 hours from initiation is associated with ICU mortality. *PLoS One* 16(4), e0251030.

57. Ueno H, Ishiguro M, Nakatani E, Ishikawa T, Uetake H, Murotani K, Matsui S, Teramukai S, Sugai T, Ajioka Y, Maruo H, Kotaka M, Tsujie M, Munemoto Y, Yamaguchi T, Kuroda H, Fukunaga M, Tomita N, Sugihara K. (2021). Prognostic value of desmoplastic reaction characterisation in stage II colon cancer: prospective validation in a Phase 3 study (SACURA Trial). *Br J Cancer* 124(6), 1088-1097.

58. Yoshihara M, Tamauchi S, Iyoshi S, Kitami K, Uno K, Tano S, Matsui S, Kajiyama H. (2021).

Does complete-staging lymphadenectomy improve survival outcomes in stage I endometrioid epithelial ovarian carcinoma? A multi-institutional retrospective study with propensity score weighted analysis. *Jpn J Clin Oncol* 51(3), 387-392.

59. Ueno H, Ishiguro M, Nakatani E, Ishikawa T, Uetake H, Matsui S, Teramukai S, Murotani K, Ajioka Y, Shimazaki H, Maeda A, Takuma K, Yoshida T, Kambara T, Matsuda K, Takagane A, Tomita N, Sugihara K; SACURA Study Group. (2020). Optimal criteria for G3 (poorly differentiated) stage II colon cancer: prospective validation in a randomized controlled study (SACURA Trial). *Am J Surg Pathol*. 44(12), 1685-1698.

60. Nishida Y, Hamada S, Urakawa H, Ikuta K, Sakai T, Koike H, Ito K, Emoto R, Ando Y, Matsui S. (2020). Desmoid with biweekly methotrexate and vinblastine shows similar effects to weekly administration: A phase II clinical trial. *Cancer Sci*. 111(11), 4187-4194.

61. Kumagai S, Togashi Y, Kamada T, Sugiyama E, Nishinakamura H, Takeuchi Y, Vitaly K, Itahashi K, Maeda Y, Matsui S, Shibahara T, Yamashita Y, Irie T, Tsuge A, Fukuoka S, Kawazoe A, Udagawa H, Kirita K, Aokage K, Ishii G, Kuwata T, Nakama K, Kawazu M, Ueno T, Yamazaki N, Goto K, Tsuboi M, Mano H, Doi T, Shitara K, Nishikawa H. (2020). The PD-1 expression balance between effector and regulatory T cells predicts the clinical efficacy of PD-1 blockade therapies. *Nat Immunol*. 21(11), 1346-1358.

62. Okubo N, Matsui S, Matsumoto T, Sugimoto T, Hosoi T, Osakabe T, Watanabe K, Takami H, Shiraki M, Nakamura T. (2020). Relationship between bone mineral density and risk of vertebral fractures with denosumab treatment in Japanese postmenopausal women and men with osteoporosis. *Calcif Tissue Int*. 107(6), 559-566.

63. Yoshihara M, Kajiyama H, Tamauchi S, Iyoshi S, Yokoi A, Suzuki S, Kawai M, Nagasaka T, Takahashi K, Matsui S, Kikkawa F. (2020). Impact of uterus-preserving surgery on Stage I primary mucinous epithelial ovarian carcinoma: A multi-institutional study with propensity score-weighted analysis. *Int J Gynaecol Obstet.* 150(2), 177-183

64. Omote N, Matsuda N, Hashimoto N, Nishida K, Sakamoto K, Ando A, Nakahara Y, Nishikimi M, Higashi M, Matsui S, Hasegawa Y. (2020). High-flow nasal cannula therapy for acute respiratory failure in patients with interstitial pneumonia: a retrospective observational study. *Nagoya J Med Sci*. 82(2), 301-313.

65. Yasuda Y, Nishikimi M, Nishida K, Takahashi K, Numaguch A, Higashi M, Matsui S, Matsuda N. (2020). Relationship between serum norepinephrine levels at ICU admission and the risk of ICU-acquired delirium: Secondary analysis of the melatonin evaluation of lowered inflammation of ICU trial. *Critical Care Explorations* 2(2), e0082.

66. Fujii T, Shibata Y, Ban Y, Shitaokoshi A, Takahashi K, Matsui S, Nishiwaki K. (2020). A single paravertebral injection via a needle vs. a catheter for the spreading to multiple intercostal levels:

a randomized controlled trial. *Journal of Anesthesia* 34(1), 72-78.

67. Takagi H, Hagiwara D, Handa T, Sugiyama M, Onoue T, Tsunekawa T, Ito Y, Iwama S, Goto M, Suga H, Banno R, Takahashi K, Matsui S, Arima H. (2020). Diagnosis of central diabetes insipidus using a vasopressin radioimmunoassay during hypertonic saline infusion. *Endocrine Journal* 67(3), 267-274.

68. Kasugai D, Hirakawa A, Ozaki M, Nishida K, Ikeda T, Takahashi K, Matsui S, Uenishi N. (2020). Maximum norepinephrine dosage within 24 hours as an indicator of refractory septic shock: a retrospective study. *Journal of Intensive Care Medicine* 35(11), 1285-1289.

69. Yoshihara M, Kajiyama H, Tamauchi S, Iyoshi S, Yokoi A, Suzuki S, Kawai M, Nagasaka T, Takahashi K, Matsui S, Kikkawa F. (2020). Prognostic impact of pelvic and para-aortic lymphadenectomy on clinically-apparent stage I primary mucinous epithelial ovarian carcinoma: a multi-institutional study with propensity score-weighted analysis. *Japanese Journal of Clinical Oncology* 50(2), 145-151.

70. Nakajima H, Nishikimi M, Shimizu M, Hayashi K, Inoue T, Nishida K, Takahashi K, Matsui S, Nishida Y, Matsuda N. (2019). Clinical frailty scale score before ICU admission is associated with mobility disability in septic patients receiving early rehabilitation. (2019). *Critical Care Explorations* 1(12), e0066.

71. Fujii T, Shibata Y, Akane A, Aoki W, Sekiguchi A, Takahashi K, Matsui S, Nishiwaki K. (2019). A randomised controlled trial of pectoral nerve-2 (PECS 2) block vs. serratus plane block for chronic pain after mastectomy. *Anaesthesia* 74(12), 1558-1562.

72. Yoshihara M, Kajiyama H, Tamauchi S, Suzuki S, Takahashi K, Matsui S, Kikkawa F. (2019). Prognostic factors and effects of fertility-sparing surgery in women of reproductive age with ovarian clear-cell carcinoma: a propensity score analysis. *Journal of Gynecologic Oncology* 30(6), e102.

73. Komori S, Ueno S, Ito Y, Sayo A, Meinert M, Kominami T, Inooka D, Kitagawa M, Nishida K, Takahashi K, Matsui S, Terasaki H. (2019). Steeper Macular Curvature in Eyes With Non-Highly Myopic Retinitis Pigmentosa. *Investigative Ophthalmology & Visual Science* 60(8), 3135-3141.

74. Nishikimi M, Ogura T, Nishida K, Takahashi K, Nakamura M, Matsui S, Matsuda N, Iwami T. (2019). External validation of a risk classification at the emergency department of post-cardiac arrest syndrome patients undergoing targeted temperature management. *Resuscitation* 140, 135-141.

75. Kasugai D, Nishikimi M, Nishida K, Higashi M, Yamamoto T, Numaguchi A, Takahashi K, Matsui S, Matsuda N. (2019). Timing of administration of epinephrine predicts the responsiveness to epinephrine in norepinephrine-refractory septic shock: a retrospective study. *Journal of*

Intensive Care 7, 20.

76. Ueno H, Ishiguro M, Nakatani E, Ishikawa T, Uetake H, Matsuda C, Nakamoto Y, Kotake M, Kurachi K, Egawa T, Yasumasa K, Murata K, Ikawa O, Shinji S, Murotani K, Matsui S, Teramukai S, Tomita N, Sugihara K; SACURA Study Group. (2019). Prospective multicenter study on the prognostic and predictive impact of tumor budding in stage II colon cancer: Results from the SACURA trial. *Journal of Clinical Oncology* 37, 1886-1894.

77. Sakai Y, Honda M, Matsui S, Komori O, Murayama T, Fujiwara T, Mizuno M, Imai Y, Yoshimura K, Nasti A, Wada T, Iida N, Kitahara M, Horii R, Toshikatsu T, Nishikawa M, Okafuji H, Mizukoshi E, Yamashita T, Yamashita T, Arai K, Kitamura K, Kawaguchi K, Takatori H, Shimakami T, Terashima T, Hayashi T, Nio K, Kaneko S; Hokuriku Liver Study Group. (2019). Development of novel diagnostic system for pancreatic cancer, including early stages, measuring mRNA of whole blood cells. *Cancer Science* 110, 1364-1388.

78. Nomura K, Hiyama TY, Sakuta H, Matsuda T, Lin CH, Kobayashi K, Kobayashi K, Kuwaki T, Takahashi K, Matsui S, Noda M. (2019). [Na+] Increases in Body Fluids Sensed by Central Nax Induce Sympathetically Mediated Blood Pressure Elevations via H+-Dependent Activation of ASIC1a. *Neuron* 101, 60-75.e6.

79. Funahashi S, Okazaki Y, Nishiyama T, Ohyoshi H, Yasui H, Nishida K, Matsui S, Toyokuni S. (2018). Global overexpression of divalent metal transporter 1 delays crocidolite-induced mesothelial carcinogenesis in male mice. *Free Radical Research* 12, 1-10.

80. Nishikimi M, Numaguchi A, Takahashi K, Matsui S, Matsuda N. (2018). The authors reply. *Critical Care Medicine* 46, e1010-e1011.

81. Ogura T, Nakamura Y, Takahashi K, Nishida K, Kobashi D, Matsui S. (2018). Treatment of patients with sepsis in a closed intensive care unit is associated with improved survival: a nationwide observational study in Japan. *Journal of Intensive Care* 6, 57.

82. Nishikimi M, Ogura T, Matsui K, Takahashi K, Fukaya K, Liu K, Morita H, Nakamura M, Matsui S, Matsuda N. (2018). Accuracy of the first interpretation of early brain CT images for predicting the prognosis of post-cardiac arrest syndrome patients at the emergency department. *Journal of Intensive Care* 6, 26.

83. Komura T, Yano M, Miyake A, Takabatake H, Miyazawa M, Ogawa N, Seki A, Honda M, Wada T, Matsui S, Kaneko S, Sakai Y. (2018). Immune condition of colorectal cancer patients featured by serum chemokines and gene expressions of CD4+ cells in blood. *Canadian Journal of Gastroenterology and Hepatology* 7436205.

84. Hayashi K, Oshima H, Shimizu M, Kobayashi K, Matsui S, Nishida Y, Usui A. (2018). Preoperative six-minute walk distance is associated with postoperative cognitive dysfunction.

Annals of Thoracic Surgery 106, 505-512.

85. Nishikimi M, Ogura T, Nishida K, Takahashi K, Fukaya K, Liu K, Nakamura M, Matsui S, Matsuda N. (2018). Differential effect of mild therapeutic hypothermia depending on the findings of hypoxic encephalopathy on early CT images in patients with post-cardiac arrest syndrome. *Resuscitation* 128, 11-15.

86. Nishikimi M, Numaguchi A, Takahashi K, Miyagawa Y, Matsui K, Higashi M, Makishi G, Matsui S, Matsuda N. (2018). Effect of administration of ramelteon, a melatonin receptor agonist, on the duration of stay in the ICU: A single-center randomized placebo-controlled trial. *Critical Care Medicine* 46, 1099-1105.

87. Kawai A, Goto T, Shibata T, Tani K, Mizutani S, Nishikawa A, Shibata T, Matsumoto S, Nagata K, Narukawa M, Matsui S, Ando M, Toguchida J, Monden M, Heike T, Kimura S, Ueda R. (2018). The current state of therapeutic development for rare cancers in Japan, and proposals for improvement. *Cancer Science* 109, 1731-1737.

88. Horisaki K, Takahashi K, Ito H, Matsui S. (2018). A dose-response meta-analysis to coffee consumption and colorectal cancer risk in the Japanese population: Application of a cubic-spline model. *Journal of Epidemiology* 28, 503-509.

89. Okumura J, Shindo Y, Takahashi K, Sano M, Sugino Y, Ichikawa M, Ogasawara T, Shindoh J, Nomura F, Yagi T, Yamamoto M, Taniguchi H, Suzuki R, Saka H, Matsui S, Hasegawa Y. (2018). Implication of β-lactam plus macrolide combination therapy on mortality in patients with community-onset pneumonia at low risk for drug-resistant pathogens. *Respirology* 23, 526-534.

90. Sayo A, Ueno S, Kominami T, Nishida K, Inooka D, Nakanishi A, Yasuda S, Okado S, Takahashi K, Matsui S, Terasaki H. (2017). Longitudinal study of visual field changes determined by Humphrey Field Analyzer 10-2 in patients with Retinitis Pigmentosa. *Scientific Reports* 7, 16383.

91. Takagishi M, Sawada M, Ohata S, Asai N, Enomoto A, Takahashi K, Weng L, Ushida K, Ara H, Matsui S, Kaibuchi K, Sawamoto K, Takahashi M (2017). Daple coordinates planar polarized microtubule dynamics in ependymal cells and contributes to hydrocephalus. *Cell Reports* 20, 960-972.

92. Nishikimi M, Matsuda N, Matsui K, Takahashi K, Ejima T, Liu K, Ogura T, Higashi M, Umino H, Makishi G, Numaguchi A, Matsushima S, Tokuyama H, Nakamura M, Matsui S. (2017). A novel scoring system for predicting the neurologic prognosis prior to the initiation of induced hypothermia in cases of post-cardiac arrest syndrome: the CAST score. *Scandinavian Journal of Trauma, Resuscitation, and Emergency Medicine* 25, 49.

93. Nishikimi M, Matsuda N, Matsui K, Takahashi K, Ejima T, Liu K, Ogura T, Higashi M, Umino H, Makishi G, Numaguchi A, Matsushima S, Tokuyama H, Nakamura M, Matsui S. (2016).

CAST: a new score for early prediction of neurological outcomes after cardiac arrest before therapeutic hypothermia with high accuracy. *Intensive Care Medicine* 42, 2106-2107.

94. Ishikawa T, Uetake H, Murotani K, Kobunai T, Ishiguro M, Matsui S, Sugihara K. (2016). Genome-wide DNA copy-number analysis in ACTS-CC trial of adjuvant chemotherapy for stage III colonic cancer. *Anticancer Research* 36, 853-860.

95. Kobayashi M, Iwase T, Yamamoto K, Ra E, Murotani K, Matsui S, Terasaki H. (2016). Association between photoreceptor regeneration and visual acuity following surgery for rhegmatogenous retinal detachment. *Investigative Ophthalmology & Visual Science* 57, 889-898.

96. Yanagida K, Iwase T, Yamamoto K, Ra E, Kaneko H, Murotani K, Matsui S, Terasaki H. (2015). Sex-related differences in ocular blood flow of healthy subjects using laser speckle flowgraphy. *Investigative Ophthalmology & Visual Science* 56, 4880-4890.

97. Sugimoto T, Matsumoto T, Hosoi T, Miki T, Gorai I, Yoshikawa H, Tanaka Y, Tanaka S, Fukunaga M, Sone T, Nakano T, Ito M, Matsui S, Yoneda T, Takami H, Watanabe K, Osakabe T, Okubo N, Shiraki M, Nakamura T. (2015). Three-year denosumab treatment in postmenopausal Japanese women and men with osteoporosis: results from a 1-year open-label extension of the Denosumab Fracture Intervention Randomized Placebo Controlled Trial (DIRECT). *Osteoporosis International* 26, 765-774.

98. Takanari K, Araki Y, Okamoto S, Sato H, Yagi S, Toriyama K, Yokotyama K, Murotani K, Matsui S, Wakabayashi T, Kamei Y. (2015). Operative wound related complications after cranial revascularization surgeries. *Journal of Neurosurgery* 123, 1145-1150.

99. Iwase T, Yamamoto K, Ra E, Murotani K, Matsui S, Terasaki H. (2015). Diurnal variations in blood flow at optic nerve head and choroid in healthy eyes: diurnal variations in blood flow. *Medicine* 94, e519.

100. Nakashima T, Sato H, Gyo K, Hato N, Yoshida T, Shimono M, Teranishi M, Sone M, Fukunaga Y, Kobashi G, Takahashi K, Matsui S, Ogawa K. (2014). Idiopathic sudden sensorineural hearing loss in Japan. *Acta Oto-Laryngologica* 134, 1158-1163.

101. Nakamura T, Matsumoto T, Sugimoto T, Hosoi T, Miki T, Gorai I, Yoshikawa H, Tanaka Y, Tanaka S, Sone T, Nakano T, Ito M, Matsui S, Yoneda T, Takami H, Watanabe K, Osakabe T, Shiraki M, Fukunaga M. (2014). Fracture risk reduction with denosumab in Japanese postmenopausal women and men with osteoporosis: denosumab fracture intervention randomized placebo controlled trial (DIRECT). *Journal of Clinical Endocrinology & Metabolism* 99, 2599-2607.

102. Kokubo T, Matsui S, Ishiguro M. (2013). Meta-analysis of oro-cecal transit time in fasting subjects. *Pharmaceutical Research* 30, 402-411.

103. Atagi S, Katakami N, Yoshioka H, Fukuoka M, Kudoh S, Ogiwara A, Imai M, Ueda M, Matsui S. (2013). Nested case control study of proteomic biomarkers for interstitial lung disease in Japanese patients with non-small-cell lung cancer treated with erlotinib: a multicenter phase 4 study (JO21661). *Clinical Lung Cancer*, 14, 407-417.

104. Tsuchiya N, Matsui S, Narita S, Kamba T, Mitsuzuka K, Hatakeyama S, Horikawa Y, Inoue T, Saito S, Ohyama C, Arai Y, Ogawa O, Habuchi T. (2013). Distinct cancer-specific survival in metastatic prostate cancer patients classified by a panel of single nucleotide polymorphisms of cancer-associated genes. *Genes & Cancer* 4, 54-60.

105. Sugano K, Kontani T, Katsuo S, Takei Y, Sakaki N, Ashida K, Mizokami Y, Asaka M, Matsui S, Kanto T, Soen S, Takeuchi T, Hiraishi H, Hiramatsu N. (2012). Lansoprazole for secondary prevention of gastric or duodenal ulcers associated with long-term non-steroidal anti-inflammatory drug (NSAID) therapy: Results of a prospective, multicenter, double-blind, randomized, double-dummy, active-controlled trial. *Journal of Gastroenterology* 47, 540-552.

106. Negoro H, Kanematsu A, Doi M, Suadicani SO, Matsuo M, Imamura M, Okinami T, Nishikawa N, Oura T, Matsui S, Seo K, Tainaka M, Urabe S, Kiyokage E, Todo T, Okamura H, Tabata Y, Ogawa O. (2012). Involvement of urinary bladder Connexin43 and the circadian clock in coordination of diurnal micturition rhythm. *Nature Communications* 3: 809.

107. Ishiguro M, Mochizuki H, Tomita N, Shimada Y, Takahashi K, Kotake K, Watanabe M, Kanemitsu Y, Ueno H, Ishikawa T, Uetake H, Matsui S, Teramukai S, Sugihara K. (2012). Study protocol of the SACURA trial: a randomized phase III trial of efficacy and safety of UFT as adjuvant chemotherapy for stage II colon cancer. *BMC Cancer* 12:281.

108. Sakaki N, Ashida K, Mizokami Y, Asaka M, Matsui S, Kanto T, Hiraishi H, Hiramatsu N, Sugano K. (2012). Endoscopic evaluation of non-steroidal anti-inflammatory drug (NSAID)-induced gastric and duodenal ulcers during prophylaxis with lansoprazole. *Journal of Gastroenterology and Hepatology Research* 1, 260-265.

109. Sugano K, Matsumoto Y, Itabashi T, Abe S, Sakaki N, Ashida K, Mizokami Y, Chiba T, Matsui S, Kanto T, Shimada K, Uchiyama S, Uemura N, Hiramatsu N. for the Lansoprazole Ulcer Prevention Study Group (Low-Dose Aspirin Therapy). (2011). Lansoprazole for secondary prevention of gastric or duodenal ulcers associated with long-term low-dose aspirin therapy: Results of a prospective, multicenter, double-blind, randomized, double-dummy, active-control trial. *Journal of Gastoroenterogy* 46, 724-735.

110. Shoji S, Suzuki M, Tomono Y, Bockbrader HN, Matsui S. (2011). Population pharmacokinetics of pregabalin in healthy subjects and patients with postherpetic neuralgia or diabetic peripheral neuropathy. *British Journal of Clinical Pharmacology* 72, 63-76.

111. Yamaguchi K, Mandai M, Oura T, Matsumura N, Hamanishi J, Baba T, Matsui S, Murphy SK,

Konishi I. (2010). Identification of an ovarian clear cell carcinoma gene signature that reflects inherent disease biology and the carcinogenic processes. *Oncogene* 29, 1741-1752.

112. Yoshimura K, Kamoto T, Ogawa O, Matsui S, Tsuchiya N, Tada H, Murata K, Yoshimura K, Habuchi T, Fukushima M. (2010). Medical mushrooms used for biochemical failure after radical treatment for prostate cancer: An open-label study. *International Journal of Urology* 17, 548-554.

113. Matsumura N, Mandai M, Okamoto T, Yamaguchi K, Yamamura S, Oura T, Baba T, Hamanishi J, Kang HS, Matsui S, Mori S, Murphy SK, Konishi I. (2010). Sorafenib efficacy in ovarian clear cell carcinoma revealed by transcriptome profiling. *Cancer Science* 101, 2658-2663.

114. Tada H, Matsui S, Kawahara M, Hosoe S, Hamada C, Fukushima M. (2008). Efficacy, toxicity and cost analysis for non-platinum triplet (gemcitabine and vinorelbine followed by docetaxel) vs. platinum-based chemotherapy in IIIB/IV non-small cell lung cancer: Single institution experience. *European Journal of Cancer Care* 17, 120-126.

115. Tsubouchi M, Morishita R, Tabata Y, Matsui S, Kawakami K. (2008). Critical issues for effective collaboration between academia and industry in the field of regenerative medicine in Japan. *Regenerative Medicine* 3, 497-504.

116. Tsubouchi M, Matsui S, Banno Y, Kurokawa K, Kawakami K. (2008). Overview of the clinical application of regenerative medicine products in Japan. *Health Policy* 88, 62-72.

117. Yamashita S, Hbujo H, Arai H, Harada-Shiba M, Matsui S, Fukushima M, Saito Y, Kita T, Matsuzawa Y. (2008). Long-term probucol treatment prevents secondary cardiovascular events: a cohort study of patients with heterozygous familial hypercholesterolemia in Japan. *Journal of Atherosclerosis Thrombosis* 15, 292-303.

118. Ito M, Nishiyama H, Kawanishi H, Matsui S, Guilford P, Reeve A, Ogawa O. (2007). P21-activated kinase 1: a new molecular marker for intravesical recurrence after transurethral resection of bladder cancer. *Journal of Urology* 178, 1073-1079.

119. Nishimura T, Tada H, Nakagawa M, Teramukai S, Matsui S, Fukushima M. (2006). Lessons from gefitinib-induced interstitial lung disease in Japan and proposal for the prevention of serious drug-induced suffering: Problems in approval, pharmacovigilance, and regulatory decision-making procedures. *Pharmacy Practice* 4, 168-178.

120. Sakai R, Matsui S, Fukushima M, Yasuda H, Miyauchi H, Miyachi Y. (2005). Prognostic factor analysis for plaque psoriasis. *Dermatology* 211, 103-106.

121. Watanabe D, Suzuma K, Matsui S, Kurimoto M, Kiryu J, Kita M, Suzuma I, Ohashi H, Ojima T, Murakami T, Kobayashi T, Masuda S, Nagao M, Yoshimura N, Takagi H. (2005). Erythropoietin as a retinal angiogenic factor in proliferative diabetic retinopathy. *New England Journal of Medicine* 353, 782-792.

122. Manzoni P, Maestri A, Gomirato G, Takagi H, Watanabe D, Matsui S. (2005). Erythropoietin as a retinal angiogenic factor. *New England Journal of Medicine* 353, 2190-2191; author reply 2190-2191.

123. Matsui S, Sadaike T, Hamada C, Fukushima M. (2005). Creutzfeldt-Jakob disease and cadaveric dura mater grafts in Japan: an updated analysis of incubation time. *Neuroepidemiology* 24, 22-25.

124. Shinohara M, Toyokuni S, Morimoto T, Matsui S, Honjo T, Shinohara T. (2003). Functional assessment of self-renewal activity of male germline stem cells following cytotoxic damage and serial transplantation. *Biology of Reproduction* 68, 1801-1807.

和文総説, コメント（計量生物学）

1. 松井茂之. (2018). オミクス研究における検証的解析と探索的解析：多重検定と P 値を中心に. 計量生物学 38, 127-139.

2. 平川晃弘, 松井茂之. (2013). がん第 I 相試験における 2 剤併用療法の用量探索法：最近の展開. 計量生物学 34, 81-97.

3. 松井茂之. (2006). Points to Consider on Missing Data へのコメント. 計量生物学. 27 巻特別号. 50-54.

4. 松井茂之, 宇野一, 小山暢之.(2000): 中間解析における頻度論的アプローチ：最近の理論的展開. 計量生物学 21 巻特集号, 87-124.

5. 宇野一, 松井茂之, 小山暢之 (2000): 中間解析におけるベイズ流アプローチ：最近の理論的展開. 計量生物学 21 巻特集号, 125-149.