

ANTICANCER RESEARCH

International Journal of Cancer Research and Treatment

ISSN: 0258-851X

Volume 46, Number 6, June 2026

Contents

Reviews

- Quality of Life Outcomes Following Pelvic Exenteration for Gynaecological Malignancies: A Systematic Review. N.A. SEKSAF, H.L. ROBERTS, M.E. LEWIS, A. SMITS, S.G. OXLEY, N. LYMPEROPOULOS, A. JEYARAJAH, R. MANCHANDA, S. PHADNIS, M. SIDERIS (*London; Wakefield, UK*) 2945
- 3D Cancer Cell Model: A New Tool to More Accurately Evaluate the Biological Effect of Cold Plasma. R. QUONIOU, S. MENECHIER (*Clermont-Ferrand, France*) 2965
- Targeting Arginine Metabolism to Reverse Immune Paralysis in Cancer. G.E. BORSATTI, F. CUTRUZZOLÀ, S. SPIZZICHINO, S. RINALDO, A. PAONE (*Rome, Italy*) 2977
- Unveiling the Anti-tumor Actions and Therapeutic Potential of Calcitriol in Colorectal Cancer. A. RAFIQUE, Y.-S. KOH (*Jeju, Republic of Korea*) 2985

Experimental Studies

- Beneficial Effects of Combining an Immune Checkpoint Inhibitor With Proton Radiation, OXi4503, or Hyperthermia in a Murine Solid Tumor Model. P.M. SINHA, C.A. FOLEFAC, M. SITARZ, P.S. NIELSEN, P. ELMING, M.R. HORSMAN (*Aarhus, Denmark*) 3005
- Y-box Binding Protein 1 as a Target Molecule of a Novel Coumarin-based Anti-metastatic Agent. E. ASHIHARA, Y. SUGIYAMA, K. KAWASHIMA, R. KAWASHIMA, Y. TODA, S. HOSOGI, M. YOSHIZAWA, Y. HATTORI (*Kyoto, Japan*) 3023
- A RANKL-derived Peptide Inhibits RSPO3-LGR4-Wnt Signaling and Lung Adenocarcinoma in Mice. N. JU, H. HAYASHI, C. CHANG, H. NAKAGAMI, R. MORISHITA, M. SHIMAMURA (*Suita, Japan*) 3033
- Novel NOTCH1-unmutated T-ALL Cell Line With Suppressed Growth by Gamma-secretase Inhibitors. M. ITOH, S. TOHDA (*Tokyo, Japan*) 3047

Contents continued on the back cover

Molecular Features of Gastrointestinal Stromal Tumors: A Single Referral Cancer Center Experience. A. ZUPA, G. VITA, A. TARTARONE, L.C. OMER, G. CALICE, G. IMPROTA (<i>Rionero in Vulture, Italy</i>).....	3055
Low-dose Andrographolide Synergizes With Cytarabine or Vincristine in Plasma Cell Neoplasm Cell Lines. H. DOI, H. AKIYAMA, T. MATSUI, Y. ABE, S. FUJII, H. MATSUURA, Y. MIURA (<i>Toyoake; Nagakute, Japan</i>)	3067
Targeting AURKB Attenuates Tumor Growth in MYC-driven Lung Adenocarcinoma. J.-H. YUN, S. YOO, Y. NOH, J. SONG, W.J. SON, J.J. LEE, I. KIM (<i>Chuncheon; Incheon; Seoul, Republic of Korea</i>)	3079
Radiodynamic Therapy Using 5-Aminolevulinic Acid as a New Treatment Option for Osteosarcoma: An <i>In Vitro</i> and <i>In Vivo</i> Study. Y. TANEMURA, T. NAKAMURA, Y. MATSUYAMA, T. HAGI, T. IINO, M. HASEGAWA (<i>Tsu, Japan</i>)	3091
Genome-wide Analysis Highlights rs4671908 and rs2238431 as Predictors of Survival in Nasopharyngeal Carcinoma. F.-C. CHAN, Z.-Y. LIN, K.-P. CHANG, W.-H. SU (<i>Taoyuan, Taiwan, ROC</i>)	3099
Enzalutamide Enhanced Honokiol-induced Apoptotic Insults to Drug-resistant Glioblastoma Cells via an Intrinsic Bak-mitochondrion-caspase Cascade Mechanism. C.-Y. CHEN, J.-T. CHEN, S.-H. LIU, E. CHEN, R.-M. CHEN (<i>Kaohsiung; Taipei, Taiwan, ROC; Vancouver, BC, Canada</i>)	3117
Silencing of β -TrCP2 Suppresses Growth and G1/S Cell Cycle Progression in Non-small Cell Lung Carcinoma Cells. N. KIM, J. KIM, H.-A. NGUYEN, S.H. MUN, S. HAN, Y. YANG (<i>Seoul, Republic of Korea</i>).....	3131
Milk Extracellular Vesicle-mediated Delivery of siPRNP Suppresses Growth and Wound Closure in PC-3M Prostate Cancer Cells. J. LEE, J. YOON, J.Y. LEE, Y.S. SONG, S.H. LEE (<i>Incheon; Seoul, Republic of Korea</i>).....	3145
Implications of the Cuproptosis Protein SLC31A1 for the Immune Microenvironment and Temozolomide Sensitivity in Glioblastoma. D. XU, G. DU, J. SUN, H. ZHAO, X. LAN, J. WANG (<i>Shandong, PR China</i>)	3159
Ginsenoside Rh4 Induces Apoptosis Through ROS-Mediated Fas Signaling in Human Nasopharyngeal Carcinoma NPC/HK1 Cells. C.-H. YANG, Y. LI, C.-C. TAO, Y.-Y. LAN (<i>Pingtung; Kaohsiung, Taiwan, ROC</i>)	3179
Fosnetupitant <i>Versus</i> Fosaprepitant for Delayed Vomiting Upon Irinotecan-Oxaliplatin Combination Chemotherapy for Pancreatic/Colorectal Cancer. K. MAEDA, S. KOYAMA, K. KAWADA, T. HAYASHI, T. YOSHIOKA, T. ISHIDA, H. FUKUDA, I. HORIKAWA, F. AIZAWA, T. NIIMURA, K. YAGI, M. GODA, Y. IZAWA-ISHIZAWA, S. ABE, K. ISHIZAWA (<i>Tokushima; Fukuoka; Nagoya; Kochi; Shimane; Hiroshima, Japan</i>)	3191
MMP-9 Genotypes Serve as Oral Cancer Predictive Marker for Smokers. L.-C. SHIH, C.-L. HSU, Y.-C. YANG, J.-C. CHEN, W.-S. CHANG, D.-T. BAU, C.-W. TSAI (<i>Taichung; Changhua, Taiwan, ROC</i>).....	3205
Scutellarein Induces Apoptosis in SCC-25 Oral Squamous Cell Carcinoma Cells Through Suppression of the PI3K/Akt Pathway. S. CHENG-KAI, C.-C. LIU, Y. LI (<i>Tainan; Pingtung; Kaohsiung, Taiwan, ROC</i>)	3219
Clinical Studies	
A Landscape of Immunogenomics Assessments for Endemic Burkitt Lymphoma: Relevance to Outcomes. T.I. HUDA, R. JAIN, T. SINGH, G. BLANCK (<i>Hudson; Tampa, FL, USA</i>).....	3231
Real-world Clinical Outcomes of Ivermectin and Mebendazole in Cancer Patients: Results from a Prospective Observational Cohort. N. HULSCHER, K. VICTORY, J.A. THORP, D. PINSKY, A. DIAZ-VILLALOBOS, P. GILLOOLY, F. COULSON, M. ANNAZONE, C. RADESI, J. BROOKS, P.A. McCULLOUGH, H. RISCH (<i>Dallas, TX; Boca Raton, FL; New Haven, CT, USA</i>)	3243

Prior <i>Chlamydia trachomatis</i> Infection and the Risk of Epithelial Ovarian Cancer and Borderline Ovarian Tumors. H. TÖRMÄNEN, H. HUHTAMÄKI, T. HOLSTER, U. PUISTOLA, M. PUOLAKKAINEN, E. URPILAINEN (<i>Oulu; Helsinki, Finland</i>).....	3257
Circulating Tumor DNA Methylation Level Is a More Accurate Prognostic Biomarker in Colon Cancer. Y. MURAI, K. SUGIMOTO, T. IRIE, T. FUJISAKI, A. HAMADA, Y. ANDO, S. KOCHI, M. TOAKE, Y. NAKAGAWA, H. TAKAHASHI, H. MOMOSE, Y. TSUCHIYA, R. TSUKAMOTO, H. RO, K. HONJO, M. TAKAHASHI, R.M. HOFFMAN (<i>Tokyo, Japan; San Diego, CA, USA</i>).....	3267
Genomic Profiling of Cancerous Areas, Dysplasia, and Background Mucosa in Ulcerative Colitis-associated Colorectal Cancer. K. FUNAKOSHI, K. SASAKI, K. HATA, H. NOZAWA, K. MURONO, S. EMOTO, Y. YOKOYAMA, T. SHINAGAWA, S. KOHSAKA, A. SHINOZAKI-USHIKU, T. USHIKU, K. ODA, K. TATSUNO, K. MIYAGAWA, H. ABURATANI, H. MANO, S. ISHIHARA (<i>Tokyo, Japan</i>).....	3281
Development of a Prognostic Model for Patients Aged ≤65 Years With Metastatic Renal Cell Carcinoma. Y. OISHI, Y. MATSUSHITA, S. WATANABE, K. WATANABE, H. WATANABE, K. TAMURA, D. MOTOYAMA, T. YANAGISAWA, K. MORI, S. SUGIYAMA, K. BEKKU, S. TOYODA, T. NUKAYA, R. MAENOSONO, K. KOMURA, M. ARAKI, K. FUJITA, K. TAKAHARA, H. AZUMA, T. INAMOTO (<i>Shizuoka; Tokyo; Okayama; Osaka; Aichi, Japan</i>).....	3293
The Prognostic Impact of Perioperative Inflammatory Status in Elderly Patients With Gastric Cancer. T. TOYOKAWA, M. YOSHII, T. ISHIDATE, H. MIYAMOTO, K. KURODA, Y. MIKI, T. TAMURA, S. LEE, M. YASHIRO, K. MAEDA (<i>Osaka, Japan</i>).....	3303
Prognostic and Neurological Outcomes Following Surgery for Spinal NF2-Associated Ependymomas With Cysts. F. GRIMM, T.M. MÜLHÖFER, U. ERNEMANN, M.U. SCHUHMANN, J.A. KOEPPEN, M. TATAGIBA, V-F. MAUTNER, I. GUGEL (<i>Tübingen; Stuttgart; Hamburg, Germany</i>).....	3317
Real-world Patterns and Trends of Intravesical Chemotherapy for Non-muscle Invasive Bladder Cancer: Insights from a Large Prospective German Cohort. T. KLATTE, S.L. HOFBAUER, J. EBERT, T.H. ECKE (<i>Bad Saarow; Brandenburg; Berlin, Germany</i>).....	3333
Pembrolizumab and Quality of Life in Recurrent or Metastatic Head and Neck Cancer. K. HIHARA, I. OKAMOTO, K. TOKASHIKI, Y. UEDA, K. HANYU, K. TSUKAHARA (<i>Tokyo, Japan</i>).....	3343
Preoperative Serum Total Cholesterol Predicts Adjuvant Chemotherapy Completion After Pancreaticoduodenectomy for Pancreatic Cancer. K. HATTA, S. NISHIMURA, R. TANAKA, H. SHINKAWA, K. NISHIO, M. KINOSHITA, J. TAUCHI, S. KURIHARA, T. ISHIZAWA (<i>Osaka, Japan</i>).....	3351
Unfavorable Outcomes of T3N0 Remnant Gastric Cancer After Distal Gastrectomy. S. SHIMIZU, T. MATSUNAGA, H. SAITO, T. OSAKI, K. FUKUDA, Y. FUKUMOTO, S. TAKAHASHI, K. TANIGUCHI, A. IWAMOTO, H. KURODA, K. KATANO, Y. SHISHIDO, K. MIYATANI, T. SAKAMOTO, Y. FUJIWARA (<i>Yonago; Tottori; Matsue; Hamada; Kurayoshi; Masuda; Nanbu, Japan</i>).....	3363
The Association Between Longitudinal Changes in TRACP-5b and Bone Metastasis Progression During Osimertinib Therapy. K. IKEGAMI, R.A. MAKIHARA, Y. SHINNO, A. TATEISHI, T. MIZUTANI, Y. OKUMA, T. YOSHIDA, H. HORINOUCHE, N. YAMAMOTO, H. HASHIMOTO, S. HORI, Y. GOTO (<i>Tokyo, Japan</i>).....	3373
Predictive Role of PSA Kinetics in Oncological Outcomes of Metastatic Castration-sensitive Prostate Cancer. Y. YAMAMOTO, N. MATSUMURA, S. FUJIMOTO, T. MORITA, T. UCHIMOTO, W. FUKUOKAYA, M. SARUTA, S. SUGIYAMA, K. TAMURA, H. AZUMA, T. KIMURA, K. TAKAHARA, K. KOMURA, T. INAMOTO, K. FUJITA (<i>Nara; Osaka; Tokyo; Aichi; Okayama; Shizuoka, Japan</i>).....	3383

Antiemetic Efficacy of Aprepitant in Cisplatin–Gemcitabine Therapy for Biliary Tract Cancer: A Multicenter Study. K. UMEHARA, Y. SAITO, D. HIRATE, A. KOOKA, R. FUJIBAYASHI, S. TAKASAKI, T. SHIMOBUCHIYA, A. KUSAKABE, T. HATAKEYAMA, Y. HASEGAWA, A. SHIMIZU, A. OTA, K. MAEDA, T. WATANABE, S. TAKADA, T. OBARA, H. NAGASHIMA, T. SAGAWA, K. FUJIKAWA, H. KAWAGUCHI (<i>Sapporo; Otaru, Japan</i>).....	3395
Pretreatment Tumor Growth Rate and Clinical Outcomes in Advanced Non–small Cell Lung Cancer. Y. TAKAHARA, R. ABE, S. NAGAE, T. TANAKA, Y. ISHIGE, I. SHIONOYA, K. YAMAMURA, M. NOJIRI, M. IGUCHI (<i>Ishikawa, Japan</i>)	3407
Dual Modality and Site-differentiated Sentinel Node Mapping in Vulvar Cancer. B. MORGENSTERN, M. SCHMIDT, F. THANGARAJAH (<i>Cologne; Essen, Germany</i>).....	3417
Standard Clinical Characteristics Fail to Predict Mild Chemotherapy-induced Peripheral Neuropathy in Breast Cancer Patients. D. RADES, M.K. STREUBEL, C. STAACKMANN, L. DOEHRING, A. RODY, M.J.N. HAVERBERG, M. BALLEGAARD (<i>Lübeck, Germany; Roskilde; Copenhagen, Denmark</i>).....	3425
Clinical Outcomes in Advanced Gastric Cancer Among Patients Aged ≥80 Years Treated With Chemotherapy. T. ITO, K. KATO, M. YAGUCHI, S. OWAKI, M. SATO, R. INO, K. SHIRAISHI, K. SUGIYAMA, Y. UNO, M. HATTORI, M. SUENAGA, M. MURAYAMA, M. SHIMADA, Y. KODERA, C. KITAGAWA (<i>Nagoya, Japan</i>)	3431
Clinical Outcomes and Failure Patterns After Postoperative IMRT for Olfactory Neuroblastoma: Late Cervical Nodal Relapse. A. NISHIDA, R. NAKASHIMA, S. HIRAOKA, A. NAKAJIMA, M. YOSHIMURA, Y. KITADA, M. MATSUNAGA, M. KIKUCHI, T. NAKAGAWA, Y. KISHIMOTO, T. MIZOWAKI (<i>Kyoto; Amagasaki; Osaka; Nagoya; Kobe, Japan</i>)	3441
Three-factor Clinical Score for First-line Nivolumab Plus Ipilimumab in Metastatic Renal Cell Carcinoma. M. YANISHI, T. NAKAMOTO, T. YOSHIDA, T. MISHIMA, H. KINOSHITA (<i>Osaka, Japan</i>)	3453
Clinical Features and Prognostic Significance of Pulmonary Metastases in Metastatic Hormone-sensitive Prostate Cancer. Y. YAMADA, M. MATSUMOTO, M. IKEHARA, T. TSUJINO, K. SATO, S. SAITO, Y. YOSHIKAWA, R. MAENOSONO, S. YAMAMOTO, T. ARAI, H. SATO, K. HIGUCHI, A. TAKEI, M. KANESAKA, K. ANDO, S. PAE, S. KANAOKA, N. TAKESHITA, K. YONEDA, D. HINO, T. TAMURA, T. SAZUKA, Y. IMAMURA, K. MIKAMI, K. NAKAMURA, S. FUKASAWA, A. KUROZUMI, Y. NAYA, M. NAGATA, A. KOMARU, T. TOBE, N. SUZUKI, H. AZUMA, S. SAKAMOTO (<i>Chiba; Osaka; Saitama; Kanagawa, Japan</i>).....	3461
Clinical Outcomes and Prognostic Factors in Patients With Pelvic Sarcomas. M. KAWANO, Y. KUBOTA, I. ITONAGA, N. KAKU, K. TANAKA (<i>Yufu, Japan</i>).....	3473
Comparison of RATS Lobectomy and VATS Lobectomy for Early-stage Non-small Cell Lung Cancer. T. TAKENAKA, T. TOKUNAGA, F. KINOSHITA, N. IWAMOTO, T. MATSUBARA, K. TAKADA, T. YOSHIKAWA, T. YOSHIKAWA (<i>Fukuoka, Japan</i>)	3483
Effectiveness of Chemotherapy With/Without Radiotherapy for Locally Advanced Esophageal Squamous Cell Carcinoma: A Population-based Target Trial Emulation Study. C.-Y. LIN, Y.-S. LIN, H.-Y. FANG, C.-C. WANG, J.-A. LIANG, C.-C. LI, C.-R. CHIEN (<i>Taichung; Taoyuan, Taiwan, ROC</i>).....	3493
Case Reports	
Unexpected Modifications to Surgical Plans in Computer-assisted Mandibulectomy With Fibula Free-flap Reconstruction: A Five-case Series. H. SUZUKI, S. HAGIWARA, S. BEPPU, Y. KOBAYASHI, H. SUZUKI, S. NABETANI, R. HASEGAWA, N. HANAI (<i>Nagoya, Japan</i>).....	3509
Basaloid Urothelial Carcinoma Presenting With Paraneoplastic Hypercalcemia and Leukocytosis: A Case Report and Literature Review. P. SABBADINI, E. PAGANONI, L. GALEASSO, I. DEPETRIS, M.D. MAIO, R. FILIPPI (<i>Orbassano; Turin, Italy</i>)	3517

Clear Cell Renal Cell Carcinoma With Syncytial Giant Cells: A Case Report With Morphological and Immune-microenvironmental Characterization. Y. OZAKI, J. IMAFUJI, A. UEKAWA, Y. IBE, S. ZHAO, R. YAMADA, K. NAKAMURA, Y. MURAKAMI, J. YATSUDA, T. BEPPU, Y. KOMOHARA, T. KAMBA (<i>Kumamoto, Japan</i>)	3523
Dual Biological Aggressiveness in Gastric MiNEN With Squamous Differentiation: A Case of Rapid Postoperative Peritoneal Dissemination. S. ISEKI, T. AOKI, K. YAMAZAKI, M. HOMMA, H. DATE, K. MOCHIZUKI, K. NAITO, K. OURA, T. YOSHIDA, T. YAMACHI (<i>Tokyo, Japan</i>)	3533
ABSTRACTS OF THE JOINT INTERNATIONAL SYMPOSIA "VITAMIN D IN PREVENTION AND THERAPY" AND "BIOLOGIC EFFECTS OF LIGHT", 10-12 June, 2026 (Homburg/Saar, Germany)	3541