

# ANTICANCER RESEARCH

## International Journal of Cancer Research and Treatment

ISSN: 0250-7005

**Volume 43, Number 2, February 2023**

### Contents

#### Reviews

The Latest Treatments for Cancer Cachexia: An Overview. H. WATANABE, T. OSHIMA ( <i>Yokohama, Japan</i> ) .....	511
Intramedullary Spinal Cord Metastases from Breast Cancer: A Systematic Review. G. SCALIA, R. COSTANZO, A. VIOLA, L. BONOSI, M. PORZIO, A. GIOVANNINI, F. GRAZIANO, D.G. IACOPINO, R. MAUGERI, G.F. NICOLETTI, G.E. UMANA ( <i>Catania; Palermo; Viagrande, Italy</i> ) .....	523

#### Experimental Studies

Treatment of Human Pancreatic Cancers Following Local and Systemic Administration of Oncolytic Adenovirus Serotype 35. R. ONO, K. TAKAYAMA, R. ONISHI, S. TOKUOKA, F. SAKURAI, H. MIZUGUCHI ( <i>Osaka, Japan</i> ) .....	537
Hypoxia-adapted Multiple Myeloma Stem Cells Resist $\gamma\delta$ -T-Cell-mediated Killing by Modulating the Mevalonate Pathway. Y. SANO, N. KUWABARA, S. NAKAGAWA, Y. TODA, S. HOSOGI, S. SATO, E. ASHIHARA ( <i>Kyoto; Niigata, Japan</i> ) .....	547
Contrast-enhanced Ultrasound Using Intradermal Microbubble Sulfur Hexafluoride for Identification of Sentinel Lymph Nodes During Breast Cancer Surgery: A Clinical Trial. O.C. BUONOMO, M. MATERAZZO, M. PELLICCIARO, G. IAFRATE, B. IELPO, S. RIZZA, C.A. PISTOLESE, T. PERRETTA, R. MEUCCI, B. LONGO, V. CERVELLI, G. VANNI ( <i>Rome, Italy; Barcelona, Spain</i> ) .....	557
Itraconazole Repolarizes Tumor-associated Macrophages and Suppresses Cervical Cancer Cell Growth. Y. TAKIMOTO, H. TSUBAMOTO, R. TANIGUCHI, K. SAKATA, Y. TAKADA, J. ADACHI, T. TOMONAGA, T. UEDA, K. NAKAGAWA, S. NARITA, Y. WAKIMOTO, H. SHIBAHARA ( <i>Nishinomiya; Osaka, Japan</i> ) .....	569

*Contents continued on the back cover*

Ultra-high Dose-rate Carbon-ion Scanning Beam With a Compact Medical Synchrotron Contributing to Further Development of FLASH Irradiation. M. YAGI, S. SHIMIZU, K. MINAMI, N. HAMATANI, T. TSUBOUCHI, M. TAKASHINA, M. UMEZAWA, T. NOMURA, W. MUKOYOSHI, T. NISHIO, M. KOIZUMI, K. OGAWA, T. KANAI ( <i>Osaka; Chiba, Japan</i> ) .....	581
Prognostic Value of WNT1, NOTCH1, PDGFR $\beta$ , and CXCR4 in Oral Squamous Cell Carcinoma. P. CIERPIKOWSKI, A. LIS-NAWARA, J. BAR ( <i>Wroclaw, Poland</i> ) .....	591
Eribulin Treatment Promotes Re-expression of Estrogen Receptor in Endocrine Therapy-resistant Hormone Receptor-positive Breast Cancer Cells. W. GOTO, S. KASHIWAGI, N. IIMORI, R. KOUHASHI, A. YABUMOTO, K. TAKADA, Y. ASANO, Y. TAUCHI, K. OGISAWA, T. MORISAKI, M. SHIBUTANI, H. TANAKA, K. MAEDA ( <i>Osaka, Japan</i> ) .....	603
Anti-VEGF and Anti-EGFR Antibody Therapy on T-Cell Infiltration and TCR Variation in Metastatic Colorectal Cancer. M. XU, R. TSUNEDOMI, K. KIYOTANI, S. TOMOCHIKA, K. FURUYA, M. NAKAJIMA, H. MATSUI, Y. TOKUMITSU, Y. SHINDO, S. YOSHIDA, M. IIDA, N. SUZUKI, S. TAKEDA, T. IOKA, S. HAZAMA, H. NAGANO ( <i>Yamaguchi; Tokyo, Japan</i> ) .....	613
Antitumor Effects of Deep Ultraviolet Irradiation for Pancreatic Cancer. K. YAMAZAKI, T. KOKURYO, J. YAMAGUCHI, M. SUNAGAWA, A. OGURA, N. WATANABE, S. ONOE, K. MIYATA, T. MIZUNO, K. UEHARA, T. IGAMI, Y. YOKOYAMA, T. EBATA, M. NAGINO ( <i>Nagoya, Japan</i> ) .....	621
Spontaneous Regression of Swine Melanoma: The Role of Tumour-infiltrating T and NK Cells. D. PLANSKA, V. HORAK ( <i>Prague; Libechov, Czech Republic</i> ) .....	631
5-Azacytidine (5-aza) Induces p53-associated Cell Death Through Inhibition of DNA Methyltransferase Activity in Hep3B and HT-29 Cells. D.-Y. KIM, R. LEE, H.-T. CHEONG, C.-S. RA, K.-J. RHEE, J. PARK, B.D. JUNG ( <i>Chuncheon; Wonju, Republic of Korea</i> ) .....	639
Epithelial–Mesenchymal Transition Phenotype and Peritumoral Immune Cell Infiltration in Advanced Biliary Tract Cancer. C.R. OH, H.-D. KIM, Y.-M. RYU, S. LEE, D. KIM, D.S. LEE, J.H. JEONG, H.-M. CHANG, B.-Y. RYOO, K.-P. KIM, M. KIM, S.-Y. KIM, C. YOO ( <i>Seoul, Republic of Korea</i> ) .....	645
<b>Clinical Studies</b>	
Real-world Data on Olaparib in Relapsed BRCA-mutated Ovarian Cancer: A Multicenter GINECO RETROLA Cohort Study. H. BOURIEN, L.B. LEFEVRE, M.-A. MOURET-REYNIER, B. ASSELAIN, B. LUCAS, C. GAVOILLE, C. CORNILA, L. GAVOILLE, E. COLOMBA, A. PATSOURIS, M. FABBRO, C. CHAKIBA, P. TOUSSAINT, H. SIMON, D. BERTON, D. GARBay, C.G. TIXIDRE, D. COEFFIC, A. MORVAN, O. COLLARD, T. DE LA MOTTE ROUGE ( <i>Rennes; Dijon; Clermont Ferrand; Paris; Brest; Vandoeuvre Les Nancy; Orléans; Nancy; Villejuif; Angers; Montpellier; Bordeaux; Lyon; Saint-Herblain; Aix en Provence; Saint-Etienne, France</i> ) ..	653
Risk of Neurological Decline in Patients With Temporal Lobe Brain Masses. J. SWEENEY, M. BONDOL, S. BANDLAMURI, M. HOLDWAY, P. ENTEZAMI, M.W. O'BRIEN, M.A. ADAMO ( <i>Albany, NY, USA</i> ) .....	663
Refined Diagnosis of Pleural Effusions by Immunocytochemistry of Cell Blocks. H. KOYI, E. WILANDER ( <i>Gävle; Stockholm, Sweden</i> ) .....	669
Comparison of the Efficacy and Toxicity of Concurrent Chemoradiotherapy and Durvalumab and Concurrent Chemoradiotherapy Alone for Locally Advanced Non-small Cell Lung Cancer With N3 Lymph Node Metastasis. T. ABE, M. IINO, S. SAITO, T. AOSHIKA, Y. RYUNO, T. OHTA, M. IGARI, R. HIRAI, Y. KUMAZAKI, Y. MIURA, K. KAIRA, H. KAGAMU, S.-E. NODA, S. KATO ( <i>Hidaka, Japan</i> ) .....	675
Ki67 and E-cadherin Are Independent Predictors of Long-term Survival in Endometrial Carcinoma. B. MARTIN-SALAMANCA, D. ERASUN, J. LLORCA, J. SCHNEIDER ( <i>Madrid; Santander; Valladolid, Spain</i> ) .....	683

Clinical Course of Vitamin B12 Deficiency and Associated Risk Factors in Patients After Total Gastrectomy for Gastric Cancer. T. AOYAMA, K. HARA, Y. MAEZAWA, K. KAZAMA, I. HASHIMOTO, S. SAWAZAKI, K. KOMORI, H. TAMAGAWA, A. TAMAGAWA, K. KANO, H. CHO, J. MORITA, K. SEGAMI, M. ISHIMOTO, T. OSHIMA, N. YUKAWA, Y. RINO ( <i>Yokohama; Tokyo, Japan</i> ) .....	689
Preoperative Plasma miRNA Levels Predict Prognosis in Early-stage Malignant Melanoma. M.S. BAGHERI, J. POLIVKA, I. TRESKOVA, K. HOUKOVA, T. KNIZKOVA, V. WOZNICA, T. FIKRLE, K. PIVOVARCIKOVA, M. SVATON, D. SHETTI, R. NEGI, M. PESTA ( <i>Pilsen, Czech Republic</i> ) .....	695
Evaluation of 95-Gene Classifier of Formalin-fixed Paraffin-embedded Tissues in ER-positive, HER2-negative, and Node-negative Breast Cancer. H. YAMASHITA, K.C. HATANAKA, K. YAMAGISHI, Y. SAITO, K. HAMASAKI, M. TANIGUCHI, A. OKUMURA, A. NANGE, Y. MATSUNO, Y. HATANAKA ( <i>Sapporo; Kobe, Japan</i> ) .....	707
Real-world Efficacy and Safety of Atezolizumab Plus Bevacizumab, Paclitaxel and Carboplatin for First-line Treatment of Japanese Patients With Metastatic Non-squamous Non-small Cell Lung Cancer. N. IKEUCHI, F. IGATA, E. KINOSHITA, T. KAWABATA, I. TAN, Y. OSAKI, R. OTSUKA, R. ON, T. IKEDA, A. NAKAO, T. SASAKI, T. AOYAMA, R. HIRANO, T. HARADA, N. EBI, M. FUJITA, H. INOUE ( <i>Fukuoka, Japan</i> ) .....	713
Relationship Between Osimertinib Concentration and Clinical Response in Japanese Patients With Non-small Cell Lung Cancer. M. YAMAZAKI, N. KOMIZO, H. IIHARA, C. HIROSE, K. YANASE, Y. YAMADA, J. ENDO, S. YAMASHITA, Y. OHNO, K. TODOROKI, A. SUZUKI, H. HAYASHI ( <i>Gifu; Shizuoka, Japan</i> ) .....	725
Breast Conserving Surgery in Combination With Targeted Intraoperative Radiotherapy Compared to Mastectomy for In-breast-tumor-recurrence. H.-C. KOLBERG, H. NIESING, J.S. VAIDYA, L. AKPOLAT-BASCI, A. MAGUZ, O. HOFFMANN, G. LOEVEY, M. STEPHANOU, C. KOLBERG-LIEDTKE ( <i>Bottrop; Wiesbaden; Essen, Germany; London, UK</i> ) .....	733
Independent Validation of a Risk Stratification Model Predicting Survival in Elderly Patients Irradiated for Bone Metastases. C. NIEDER, L. STANISAVLJEVIC, B. MANNSÅKER, E.C. HAUKNES, J. ENDO, S. YAMASHITA, Y. OHNO, K. TODOROKI, A. SUZUKI, H. HAYASHI ( <i>Bodo; Tromsø; Stavanger, Norway</i> ) .....	741
Prognostic Factors and Independent Validation of a Risk Stratification Model in Octogenarian Patients Irradiated for Brain Metastases. C. NIEDER, A. DALHAUG ( <i>Bodø; Tromsø, Norway</i> ) .....	749
Lenvatinib Versus Sorafenib in Advanced Hepatic Cell Carcinoma: A Double Center Retrospective Analysis. G.A. MARROCCO, M. SILLETTA, V. BIANCO, F. MONDERA, C. SCIORTINO, L. PAPPALARDO, V. VIGLIALORO, E. CORTESI, G. TONINI, S. CAPONNETTO ( <i>Rome, Italy</i> ) .....	755
Pelvic Recurrence After Curative Resection for Rectal Adenocarcinoma: Impact of Surgery on Survival. C. FERRARI, L. CUNILO, M. MASCHERINI, M. SANTOLIQUIDO, S. DI DOMENICO, F. DE CIAN ( <i>Genoa, Italy</i> ) .....	765
Breaking Bad News During the COVID-19 Pandemic: A Systematic Review of the Literature. G. GOUMAS, N. SYRIGOS, E. FYTA, T.I. DARDAVESIS, E. SIMOU ( <i>Athens; Kifissia; Thessaloniki, Greece; Boston, MA, USA</i> ) .....	773
Correlation of Pre- and Post-radio-chemotherapy MRI Texture Features With Tumor Response in Rectal Cancer. F. PAIAR, M. GABELLONI, F. PASQUALETTI, P. COCUZZA, S. MONTRONE, C. ARENA, L. FAGGIONI, Z. FALASCHI, L. DEL SECCO, A. ALBERICH-BAYARRI, L.M. BONMATI, E. NERI ( <i>Pisa; Lucca, Italy; Valencia, Spain</i> ) .....	781
Small Bowel Lipomatosis: An Unusual Radiological Finding in Patients With Renal Cell Cancer on Pazopanib. A. SHARMA, A. LAKHANI, S. GHOSH-RAY, S. ALAM, A. PADHANI, A. GOGBASHIAN, P. NATHAN ( <i>Northwood, UK</i> ) .....	789

Comparison of Two Cisplatin Regimens for Chemoradiation in Patients With Squamous-cell Carcinoma of the Head and Neck. I. ZWAAN, T. SOROR, K.L. BRUCHHAGE, S.G. HAKIM, S.E. SCHILD, D. RADES ( <i>Lübeck; Schwerin, Germany; Phoenix, AZ, USA</i> ) .....	795
Comparison of Three Survival Scores in a Series of Patients $\geq 80$ Years of Age Irradiated for Bone Metastases. D. RADES, C. DELIKANLI, S.E. SCHILD, C. KRISTIANSEN, S. TVILSTED, S. JANSSEN ( <i>Lübeck; Hannover, Germany; Scottsdale, AZ, USA; Odense; Køge, Denmark</i> ) .....	801
Carbon Ion Radiotherapy Versus Perioperative Adjuvant Chemotherapy and Curative Surgery for Resectable Pancreatic Cancer. N. YAMAMOTO, T. OSHIMA, S. KAWAHARA, D. TAKAHASHI, Y. KAMIOKA, M. MURAKAWA, H. KATO, M. UENO, S. MORINAGA ( <i>Yokohama, Japan</i> ) .....	809
Comparing Survival Outcomes and Impact of EPIC in Patients Undergoing CRS/HIPEC for Mucinous Appendiceal Neoplasm. M. MERCADO, R. SHAMAVONIAN, E. CHENG, N. AHMADI, D.L. MORRIS ( <i>Kogarah; Sydney, NSW, Australia</i> ) .....	817
Evaluation of the Impact of Smoking and Alcohol Consumption on Toxicity and Outcomes of Chemoradiation for Head and Neck Cancer. D. RADES, I. ZWAAN, S. JANSSEN, N.Y. YU, S.E. SCHILD, C. IDEL, R. PRIES, S.G. HAKIM, T. SOROR ( <i>Lübeck; Schwerin, Germany; Phoenix, AZ, USA</i> ) .....	823
Chemerin and Chemokine-like Receptor 1 Are Not Prognostic in Colorectal Carcinoma. F. WEBER, R. JUNG, O. TREECK, C. BUECHLER ( <i>Regensburg, Germany</i> ) .....	831
Prognostic Value of Serum Soluble PD-L1 in Metastatic Renal Cell Carcinoma Patients Treated With Nivolumab. N. WAKITA, N. HINATA, Y. BANDO, T. HARA, T. TERAKAWA, J. FURUKAWA, Y. NAKANO, M. FUJISAWA ( <i>Kobe; Hiroshima, Japan</i> ) .....	841
Prognostic Impact of Smoking on Bevacizumab Combination Chemotherapy for Advanced Breast Cancer. K. TAKADA, S. KASHIWAGI, N. IIMORI, R. KOUSHASHI, A. YABUMOTO, W. GOTO, Y. ASANO, Y. TAUCHI, K. OGISAWA, T. MORISAKI, M. SHIBUTANI, H. TANAKA, K. MAEDA ( <i>Osaka, Japan</i> ) .....	849
Clinical Relevance of Proximal Gastrectomy With Double-flap Esophagogastrostomy Reconstruction With Glycemic Profile and Postgastrectomy Syndromes. J. SHIBAMOTO, T. KUBOTA, K. NISHIBEPPU, T. OHASHI, H. KONISHI, A. SHIOZAKI, H. FUJIWARA, E. OTSUJI ( <i>Kyoto, Japan</i> ) .....	857
Time to Pain Relapse After Palliative Radiotherapy for Bone Metastasis: A Prospective Multi-institutional Study. A.I. SAITO, T. HIRAI, T. INOUYE, N. HOJO, S. KAWAI, Y. KATO, K. ITO, M. KATO, Y. OZAWA, H. SHINJO, K. TODA, R.-I. YOSHIMURA ( <i>Tokyo, Japan</i> ) .....	865
Glasgow Prognostic Score Predicts Survival and Recurrence Pattern in Patients With Hepatocellular Carcinoma After Hepatectomy. T. KUMAMOTO, K. TAKEDA, R. MATSUYAMA, Y. SAWADA, K. SAHARA, Y. YABUSHITA, Y. HOMMA, J. WATANABE, M. NUMATA, T. SATO, D. MORIOKA, C. KUNISAKI, I. ENDO ( <i>Yokohama, Japan</i> ) .....	875
Analysis of Clinical Factors in Olaparib-related Anemia Using Adverse Drug Event Reporting Databases. C. SHIRAISHI, T. HIRAI, T. OGURA, T. IWAMOTO ( <i>Mie, Japan</i> ) .....	883
Prognostic Significance of Preoperative Nutritional Assessment in Elderly Patients who Underwent Laparoscopic Gastrectomy for Stage I-III Gastric Cancer. H. UEHARA, M. OTA, M. YAMAMOTO, T. NAKANOKO, Y. SHIN, K. SHIOKAWA, Y. FUJIMOTO, Y. NAKASHIMA, M. SUGIYAMA, E. ONISHI, T. SHIMAGAKI, Y. MANO, K. SUGIMACHI, M. MORITA, Y. TOH ( <i>Fukuoka, Japan</i> ) .....	893
The Prognostic Implications of Perioperative Serum Cholesterol Levels in Patients With Gastric Cancer. A. YAMAMOTO, K. SHODA, Y. KAWAGUCHI, H. AKAIKE, S. FURUYA, K. SHIRAISHI, K. HIRAYAMA, R. SAITO, N. ASHIZAWA, K. TAKIGUCHI, N. HOSOMURA, H. AMEMIYA, H. KAWAIDA, H. KONO, D. ICHIKAWA ( <i>Chuo, Japan</i> ) .....	903

Outcomes of the Sequential Treatment of Unresectable Hepatocellular Carcinoma Using Lenvatinib. D. NAKAGAWA, S. KOMATSU, Y. YANO, M. KIDO, K. KURAMITSU, A. YAMAMOTO, S. OMIYA, Y. SHIMURA, T. GOTO, H. YANAGIMOTO, H. TOYAMA, Y. UEDA, Y. KODAMA, T. FUKUMOTO ( <i>Kobe, Japan</i> ) .....	911
Real-world Data on the Incidence of Coronavirus Disease (COVID-19) in Patients With Advanced Thoracic Cancer During the Early Phase of the Pandemic in Japan. A. FUKUDA, T. YOSHIDA, S. YAGISHITA, M. SHIOTSUKA, O. KOBAYASHI, S. IWATA, H. UMEGUCHI, M. YANAGIDA, Y. IRINO, K. MASUDA, Y. SHINNO, Y. OKUMA, Y. GOTO, H. HORINOUCHI, A. HAMADA, N. YAMAMOTO, Y. OHE ( <i>Tokyo; Saga; Hyogo, Japan</i> ) .....	919
Examining the Efficacy of Nivolumab for Gastric Cancer Focusing on Using an Inflammation-based Prognostic Score: A Multicenter Retrospective Study. N. NAKAZAWA, M. SOHDA, K. TATENO, T. WATANABE, A. KIMURA, N. KOGURE, H. HOSAKA, A. NAGANUMA, M. SEKIGUCHI, K. SAITO, K. OGATA, A. SANO, M. SAKAI, H. OGAWA, K. SHIRABE, H. SAEKI ( <i>Maebashi; Ohta; Takasaki; Isesaki, Japan</i> ) .....	927
Cumulative Incidence of Thromboembolism and Prognostic Impact of Stroke in <i>BRAF</i> V600E-mutant Non-small-cell Lung Cancer. S. YAMADA, A. SEKINE, E. HAGIWARA, Y. ONODERA, E. TABATA, S. IKEDA, H. KITAMURA, T. BABA, S. KOMATSU, T. OGURA ( <i>Yokohama, Japan</i> ) .....	935
Clear-cell Variant of Mucoepidermoid Carcinoma Presenting as a Palatal Mass in a 10-Year-old Boy. S.H. HAN, T.R. O'TOOLE, R.G. MEYER, K.B. GEIERSBACH, M.N. ISLAM, L. CHENG, J. LAI ( <i>Sacramento; Roseville, CA; Rochester, MN; Gainesville, FL, USA</i> ) .....	939
Conversion Surgery After Atezolizumab Plus Bevacizumab for Primary and Peritoneal Metastasis After Hepatocellular Carcinoma Rupture. T. MIYATA, K. SUGI, T. HORINO, A. ONO, Y. TAGAYASU, D. NOMOTO, M. INOUE, T. MIZUMOTO, T. KUBOTA, E. YANAGIDA, T. MURAYAMA, N. MIYANARI, H. BABA ( <i>Kumamoto, Japan</i> ) .....	943
Book Reviews.....	949