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| January 18, 2021 | Morphological, functional, and molecular assessment of breast cancer bone metastases by experimental ultrasound techniques compared with magnetic resonance imaging and histological analysis | Background: The imaging of bone metastases, which is regularly performed by cross-sectional modalities, is clinically vital when characterizing and st |
| November 03, 2020 | Cysteine depletion induces pancreatic tumor ferroptosis in mice | Ferroptosis is a form of cell death that results from the catastrophic accumulation of lipid reactive oxygen species (ROS). |
| October 19, 2020 | Contrast-Enhanced Multispectral Photoacoustic Imaging for Irregular Hepatectomy Navigation: A Pilot Study | Irregular hepatectomy plays a prominent role in the treatment of small hepatocellular carcinoma (HCC) patients with severe cirrhosis and localized liv |
| September 09, 2020 | Tetrazine-Derived Near-Infrared Dye as a Facile Reagent for Developing Targeted Photoacoustic Imaging Agents | A new photoacoustic (PA) dye was developed as a simple-to-use reagent for creating targeted PA imaging agents. |
| March 30, 2020 | Noninvasive monitoring of liver metastasis development via combined multispectral photoacoustic imaging and fluorescence diffuse optical tomography | Rationale: In vivo molecular imaging in preclinical animal models is a tool of choice for understanding the pathophysiological mechanisms involved in |
| January 01, 2019 | Label-free Visualization of Early Cancer Hepatic Micrometastasis and Intraoperative Image-guided Surgery by Photoacoustic Imaging | Objectives: The detection of cancer micrometastasis for early diagnosis and treatment poses a great challenge for conventional imaging techniques. |
| January 01, 2019 | Indocyanine Green J Aggregates in Polymersomes for Near-Infrared Photoacoustic Imaging | Clinical translation of photoacoustic imaging (PAI) has been limited by the lack of near-infrared (NIR) contrast agents with low toxicity required for |
| April 30, 2018 | Intraoperative Resection Guidance with Photoacoustic and Fluorescence Molecular Imaging Using an Anti-B7-H3 Antibody-Indocyanine Green Dual Contrast Agent | Breast cancer often requires surgical treatment including breast-conserving surgical resection. |
| November 01, 2017 | Exploration of melanoma metastases in mice brains using endogenous contrast photoacoustic imaging | Photoacoustic imaging (PAI) provides real time non-invasive and contrast agent free monitoring of some endogenous compounds concentrations that provid |
| January 01, 2016 | Spectroscopic photoacoustic molecular imaging of breast cancer using a B7-H3-targeted ICG contrast agent | Purpose: Breast cancer imaging methods lack diagnostic accuracy, in particular for patients with dense breast tissue, and improved techniques are crit |
| January 01, 2013 | Quantification of Murine Pancreatic Tumors by High-Resolution Ultrasound | Ultrasonography is a powerful imaging modality that enables non-invasive, real time visualization of abdominal organs and tissues. |
| November 01, 2012 | Functional polycystin-1 dosage governs autosomal dominant polycystic kidney disease severity | Autosomal dominant polycystic kidney disease (ADPKD) is caused by mutations to PKD1 or PKD2, triggering progressive cystogenesis and typically leading |
| March 25, 2021 | Regorafenib combined with PD1 blockade increases CD8 T-cell infiltration by inducing CXCL10 expression in hepatocellular carcinoma | Background and purpose Combining inhibitors of vascular endothelial growth factor and the programmed cell death protein 1 (PD1) pathway has shown effi |
| March 25, 2021 | Placental growth factor promotes tumour desmoplasia and treatment resistance in intrahepatic cholangiocarcinoma | Objective: Intrahepatic cholangiocarcinoma (ICC) - a rare liver malignancy with limited therapeutic options - is characterised by aggressive progressi |
| March 25, 2021 | Combination of vasculature targeting, hypofractionated radiotherapy, and immune checkpoint inhibitor elicits potent antitumor immune response and blocks tumor progression | ABSTRACT Background Tumor endothelial marker 1 (TEM1) is a protein expressed in the tumor- associated endothelium and/or stroma of various types of ca |

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| March 25, 2021 | One-step synthesis of multifunctional nanoparticles for CT/PA imaging guided breast cancer photothermal therapy | Advances in nanotheranostics have promoted the development of precision medicine, which has great potential as a weapon for clinical diagnosis and the |
| March 25, 2021 | Respiratory Motion Mitigation and Repeatability of Two Diffusion-Weighted MRI Methods Applied to a Murine Model of Spontaneous Pancreatic Cancer | Respiratory motion and increased susceptibility effects at high magnetic fields pose challenges for quantitative diffusion-weighted MRI (DWI) of a mou |
| March 25, 2021 | Photoacoustic monitoring of oxygenation changes induced by therapeutic ultrasound in murine hepatocellular carcinoma | Hepatocellular carcinoma (HCC) is a highly vascular solid tumor. |
| March 12, 2021 | A multimodal molecular imaging approach targeting urokinase plasminogen activator receptor for the diagnosis, resection and surveillance of urothelial cell carcinoma | With a 5-year recurrence rate of 30–78%, urothelial cell carcinoma (UCC) rates amongst the highest of all solid malignancies. |
| March 08, 2021 | Digoxin treatment reactivates in vivo radioactive iodide uptake and correlates with favorable clinical outcome in non medullary thyroid cancer | Purpose: Non-medullary thyroid cancer (NMTCT) treatment is based on the ability of thyroid follicular cells to accumulate radioactive iodide (RAI). |
| March 08, 2021 | Inhibition of focal adhesion kinase enhances antitumor response of radiation therapy in pancreatic cancer through CD8+ T cells | Objective: Pancreatic ductal adenocarcinoma (PDAC) is a deadly malignancy, due in large part to its resistance to conventional therapies, including ra |
| March 03, 2021 | Adaptation of pancreatic cancer cells to nutrient deprivation is reversible and requires glutamine synthetase stabilization by mTORC1 | Pancreatic ductal adenocarcinoma (PDA) is a lethal, therapy-resistant cancer that thrives in a highly desmoplastic, nutrient-deprived microenvironment |
| March 02, 2021 | Sonoporation-enhanced chemotherapy significantly reduces primary tumour burden in an orthotopic pancreatic cancer xenograft | Purpose: Adenocarcinoma of the pancreas remains one of the most lethal human cancers. |
| March 01, 2021 | Pharmacological Normalization of Pancreatic Cancer–Associated Fibroblast Secretome Impairs Pro-metastatic Cross-Talk With Macrophages | Cancer-associated fibroblasts orchestrate pancreatic adeno- carcinoma (PDA) aggressiveness. |
| March 01, 2021 | Time-restricted feeding normalizes hyperinsulinemia to inhibit breast cancer in obese postmenopausal mouse models | Accumulating evidence indicates that obesity with its associated metabolic dysregulation, including hyperinsulinemia and aberrant circadian rhythms, i |
| February 23, 2021 | Multifunctional nanoparticles as theranostic agents for therapy and imaging of breast cancer | Over the last decade, there has been significant developments in nanotechnology, in particular for combined imaging and therapeutic applications (ther |
| February 23, 2021 | Tumor-Specific Activatable Nanocarriers with Gas-Generation and Signal Amplification Capabilities for Tumor Theranostics | Multifunctional nanotheranostics are typically designed by integrating multiple functional components. |
| February 23, 2021 | Gold nanoparticle-based nanoprobe with enhanced tumor targeting and photothermal/photodynamic response for therapy of osteosarcoma | Abstract Plasmonic nanomaterials, especially a wide variety of gold nanoparticles, demonstrate great potential for theranostics of cancer. |
| February 23, 2021 | Enhanced Antitumoral Activity and Photoacoustic Imaging Properties of AuNP-Enriched Endothelial Colony Forming Cells on Melanoma | Near infrared (NIR)-resonant gold nanoparticles (AuNPs) hold great promise in cancer diagnostics and treatment. |
| January 29, 2021 | Quantitative In Vivo Monitoring of Hypoxia and Vascularization of Patient-Derived Murine Xenografts of Mantle Cell Lymphoma Using Photoacoustic and Ultrasound Imaging | Tumor oxygenation and vascularization are important parameters that determine the aggressiveness of the tumor and its resistance to cancer therapies. |
| January 18, 2021 | Systemic and intravesical adoptive cell therapy of tumor-reactive T cells can decrease bladder tumor growth in vivo | BACKGROUND: The therapeutic armamentarium of bladder cancer has been recently enriched with the introduction of new therapies including immune checkpo |

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| January 18, 2021 | 4-Methoxydalbergione is a potent inhibitor of human astrogloma U87 cells in vitro and in vivo | Astrogloma is the most common primary tumor in the central nervous system without effective treatment strategies. |
| January 18, 2021 | Multifunctional nanotheranostic gold nanocage/ selenium core-shell for pai-guided chemo-photothermal synergistic therapy in vivo | Introduction: Cancer theragnosis involving cancer diagnosis and targeted therapy simultaneously in one integrated system would be a promising solution |
| January 14, 2021 | Apigenin Increases SHIP-1 Expression, Promotes Tumoricidal Macrophages and Anti-Tumor Immune Responses in Murine Pancreatic Cancer | Pancreatic cancer (PC) has an extremely poor prognosis due to the expansion of immunosuppressive myeloid-derived suppressor cells (MDSC) and tumor-ass |
| January 14, 2021 | Galactosyltransferase B4GALT1 confers chemoresistance in pancreatic ductal adenocarcinomas by upregulating N-linked glycosylation of CDK11p110 | Aberrant glycosylation in pancreatic cancer has been linked to cancer development, progression and chemoresistance. |
| January 14, 2021 | Biomimetic Anti PD 1 Peptide Loaded 2D FePSe 3 Nanosheets for Efficient Photothermal and Enhanced Immune Therapy with Multimodal MR/PA/Thermal Imaging | Metal phosphorous trichalcogenides (MPX3) are novel 2D nanomaterials that have recently been exploited as efficient photothermal–chemodynamic agents f |
| January 04, 2021 | Photoacoustic and magnetic resonance imaging of hybrid manganese dioxide-coated ultra-small NaGdF4 nanoparticles for spatiotemporal modulation of hypoxia in head and neck cancer | There is widespread interest in developing agents to modify tumor hypoxia in head and neck squamous cell carcinomas (HNSCC). |
| January 04, 2021 | Assessment of the theranostic potential of gold nanostars-a multimodal imaging and photothermal treatment study | Gold nanoparticles offer the possibility to combine both imaging and therapy of otherwise difficult to treat tumors. |
| January 04, 2021 | Multimodal Imaging of Pancreatic Ductal Adenocarcinoma Using Multifunctional Nanoparticles as Contrast Agents | Late diagnosis and refractory behavior toward current treatment protocols make pancreatic ductal adenocarcinoma (PDAC) one of the most difficult cance |
| January 04, 2021 | Bacteria-derived membrane vesicles to advance targeted photothermal tumor ablation | Nanoscale outer membrane vesicles (OMVs) secreted by Gram-negative bacteria are often applied in antibacterial treatment as adjuvants or antigens. |
| January 04, 2021 | Triptolide targets super-enhancer networks in pancreatic cancer cells and cancer-associated fibroblasts | The tumor microenvironment in pancreatic ductal adenocarcinoma (PDAC) is highly heterogeneous, fibrotic, and hypovascular, marked by extensive desmopl |
| January 04, 2021 | Multifunctional tumor-targeted PLGA nanoparticles delivering Pt(IV)/siBIRC5 for US/MRI imaging and overcoming ovarian cancer resistance | Cisplatin (Pt(II)) resistance is an important factor in the high mortality rates of ovarian cancer. |
| January 04, 2021 | Ultrastable AgBiS2Hollow Nanospheres with Cancer Cell-Specific Cytotoxicity for Multimodal Tumor Therapy | Specific cytotoxicity for catalytic nanomedicine triggered by the tumor microenvironment (TME) has attracted increasing interest. |
| January 04, 2021 | Therapeutic Ultrasound Parameter Optimization for Drug Delivery Applied to a Murine Model of Hepatocellular Carcinoma | Ultrasound and microbubble (USMB)-mediated drug delivery is a valuable tool for increasing the efficiency of the delivery of therapeutic agents to can |
| January 04, 2021 | Bruceantin targets HSP90 to overcome resistance to hormone therapy in castration-resistant prostate cancer | Rationale: Aberrant androgen receptor (AR) signaling via full-length AR (AR-FL) and constitutively active AR variant 7 (AR-V7) plays a key role in the |
| January 04, 2021 | Highly photostable croconium dye-anchored cell membrane vesicle for tumor pH-responsive duplex imaging-guided photothermal therapy | The development of tumor acidic microenvironment-responsive theranostic agents is a research hotspot. |

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| December 30, 2020 | Ultrasound Molecular Imaging of Renal Cell Carcinoma: VEGFR targeted therapy monitored with VEGFR1 and FSHR targeted microbubbles | Recent treatment developments for metastatic renal cell carcinoma offer combinations of immunotherapies or immunotherapy associated with tyrosine kinase |
| November 03, 2020 | BRAFV600E overrides NOTCH signaling in thyroid cancer. | Background: Several mechanisms likely cooperate with the MAP-kinase pathway to promote cancer progression in the thyroid. |
| November 03, 2020 | Targeted theranostics of lung cancer: PD-L1-guided delivery of gold nanoparticles with chlorin e6 for enhanced imaging and photothermal/photodynamic therapy | Peptide modified nanoparticles have emerged as powerful tools for enhanced cancer diagnosis and novel treatment strategies. |
| November 03, 2020 | Respiratory Supercomplexes Promote Mitochondrial Efficiency and Growth in Severely Hypoxic Pancreatic Cancer | Pancreatic ductal adenocarcinoma (PDAC) is characterized by extensive fibrosis and hypovascularization, resulting in significant intratumoral hypoxia |
| October 23, 2020 | Precision mouse models with expanded tropism for human pathogens | A major limitation of current humanized mouse models is that they primarily enable the analysis of human-specific pathogens that infect hematopoietic |
| October 19, 2020 | In Vivo Real-Time Pharmaceutical Evaluations of Near-Infrared II Fluorescent Nanomedicine Bound Polyethylene Glycol Ligands for Tumor Photothermal Ablation | Pharmaceutical evaluations of nanomedicines are of great significance for their further launch into industry and clinic. |
| October 19, 2020 | Ultrasound-triggered therapeutic microbubbles enhance the efficacy of cytotoxic drugs by increasing circulation and tumor drug accumulation and limiting bioavailability and toxicity in normal tissues | Most cancer patients receive chemotherapy at some stage of their treatment which makes improving the efficacy of cytotoxic drugs an ongoing and important |
| October 16, 2020 | Cisplatin promotes the expression level of PD-L1 in the microenvironment of hepatocellular carcinoma through YAP1 | Hepatocellular carcinoma (HCC) is one of the most lethal malignancies worldwide. |
| October 16, 2020 | Novel biomimetic dual-mode nanodroplets as ultrasound contrast agents with potential ability of precise detection and photothermal ablation of tumors | Purpose: Molecule-targeted ultrasound imaging has attracted extensive attention for precise diagnosis and targeted therapy of tumors. |
| October 16, 2020 | pH-responsive Ag2S nanodots loaded with heat shock protein 70 inhibitor for photoacoustic imaging-guided photothermal cancer therapy | Heat-treated cancer cells have thermo-resistance due to the up-regulated levels of heat shock proteins (HSP) resulting in low therapeutic efficiency |
| October 16, 2020 | Synergistic activity of linifanib and irinotecan increases the survival of mice bearing orthotopically implanted human anaplastic thyroid cancer. | Anaplastic thyroid cancer (ATC) is the most aggressive form of thyroid cancer, and novel combined therapies are urgently needed to prolong patient survival |
| October 16, 2020 | Prophylactical low dose whole-liver irradiation inhibited colorectal liver metastasis by regulating hepatic niche in mice | Background: The liver is the most common target for metastatic colorectal cancer. |
| October 16, 2020 | Elevated Serum Amino Acids Induce a Subpopulation of Alpha Cells to Initiate Pancreatic Neuroendocrine Tumor Formation | The cellular origin of sporadic pancreatic neuroendocrine tumors (PNETs) is obscure. |
| October 16, 2020 | Ultrasound-Mediated Delivery of Chemotherapy into the Transgenic Adenocarcinoma of the Mouse Prostate Model | Ultrasound (US) in combination with microbubbles (MB) has had promising results in improving delivery of chemotherapeutic agents. |
| October 16, 2020 | Iron(II) phthalocyanine loaded and as1411 aptamer targeting nanoparticles: A nanocomplex for dual modal imaging and photothermal therapy of breast cancer | Purpose: A multi-functional nanoplatform with diagnostic imaging and targeted treatment functions has aroused much interest in the nanomedical research |
| October 01, 2020 | Albumin-constrained large-scale synthesis of renal clearable ferrous sulfide quantum dots for T1-Weighted MR imaging and phototheranostics of tumors | Ultras-small-sized iron-based nanoparticles are showing increasing potentials to be alternatives as T1-weighted magnetic resonance imaging (MRI) contrast |

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| September 09, 2020 | Photoacoustic imaging biomarkers for monitoring biophysical changes during nanobubble-mediated radiation treatment | The development of novel anticancer therapies warrants the parallel development of biomarkers that can quantify their effectiveness. |
| September 09, 2020 | The novel DPP-BDT nanoparticles as efficient photoacoustic imaging and positron emission tomography agents in living mice | Background: Molecular imaging is of great benefit to early disease diagnosis and timely treatment. |
| September 09, 2020 | Construction of Nucleolin-Targeted Lipid Nanobubbles and Contrast-Enhanced Ultrasound Molecular Imaging in Triple-Negative Breast Cancer | Purpose: To construct aptamer AS1411-functionalized targeted lipid nanobubbles that could simultaneously target abnormally highly expressed nucleolin |
| September 09, 2020 | Interrogating the immune-modulating roles of radiation therapy for a rational combination with immune-checkpoint inhibitors in treating pancreatic cancer | Background Radiation therapy (RT) has the potential to enhance the efficacy of immunotherapy, such as checkpoint inhibitors, which has dramatically al |
| June 01, 2020 | Light-assisted hierarchical intratumoral penetration and programmed antitumor therapy based on tumor microenvironment (TME)-amendatory and self-adaptive polymeric nanoclusters | The anticancer performance of nanomedicine is largely impeded by insufficient intratumoral penetration. |
| June 01, 2020 | Generation of Pancreatic Organoid-Derived Isografts | This protocol is a procedure for generating orthotopic isografts using mouse pancreatic cancer organoids. |
| June 01, 2020 | Photoacoustic imaging for three-dimensional visualization and delineation of basal cell carcinoma in patients | Background: Photoacoustic (PA) imaging is an emerging non-invasive biomedical imaging modality that could potentially be used to determine the borders |
| June 01, 2020 | Gambogic acid augments black phosphorus quantum dots (BPQDs)-based synergistic chemo-photothermal therapy through downregulating heat shock protein expression | In an attempt to attain synergistic therapeutic benefits and address various intrinsic limitations of the highly efficient black phosphorus quantum do |
| May 14, 2020 | Nanostructural Control Enables Optimized Photoacoustic–Fluorescence–Magnetic Resonance Multimodal Imaging and Photothermal Therapy of Brain Tumor | The performance of current multimodal imaging contrast agents is often constrained by the tunability of nanomaterial structural design. |
| May 01, 2020 | Melanin-instructed biomimetic synthesis of copper sulfide for cancer phototheranostics | Biomimetic synthesis is a promising strategy for the preparation of nanotheranostics with excellent biocompatibility. |
| May 01, 2020 | Biogenic nanobubbles for effective oxygen delivery and enhanced photodynamic therapy of cancer | Tumor hypoxia is believed to be a factor limiting successful outcomes of oxygen-consuming cancer therapy, thereby reducing patient survival. |
| May 01, 2020 | Biodegradable theranostic nanoplateforms of albumin-biomaterialized nanocomposites modified hollow mesoporous organosilica for photoacoustic imaging guided tumor synergistic therapy | Benefit from the integration of therapeutic and diagnostic functions, theranostic nanoplateforms have attracted widespread attention in preclinical res |
| May 01, 2020 | Sequential delivery of nanoformulated α-mangostin and triptolide overcomes permeation obstacles and improves therapeutic effects in pancreatic cancer | Pancreatic ductal adenocarcinoma (PDAC) is a devastating disease exhibiting the poorest prognosis among solid tumors. |
| May 01, 2020 | Design of Light/ROS Cascade-Responsive Tumor-Recognizing Nanotheranostics for Spatiotemporally Controlled Drug Release in Locoregional Photo-Chemotherapy | Carrier-free nanotheranostics with high drug loading and no carrier-related toxicity are highly promising cancer therapy agents. |
| May 01, 2020 | Co-delivery of Cu(I) chelator and chemotherapeutics as a new strategy for tumor theranostic | Chelating Cu from tumors has been verified as an effective and promising strategy for cancer therapy through antiangiogenesis. |

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| May 01, 2020 | Opposing Functions of BRD4 Isoforms in Breast Cancer | Bromodomain-containing protein 4 (BRD4) is a cancer therapeutic target in ongoing clinical trials disrupting primarily BRD4-regulated transcription pr |
| April 01, 2020 | Less is more: Silver-AIE core@shell nanoparticles for multimodality cancer imaging and synergistic therapy | Nanomaterials with integrated multiple imaging and therapeutic modalities possess great potentials in accurate cancer diagnostics and enhanced therape |
| April 01, 2020 | Surface-modified GVs as nanosized contrast agents for molecular ultrasound imaging of tumor | Nanobubbles, as a kind of new ultrasound contrast agent (UCAs), have shown promise to penetrate tumor vasculature to allow for targeted imaging. |
| April 01, 2020 | Spectral Signatures in the Different Layers of the Human Eyelid by Photoacoustic Imaging | Background and Objectives: The eyelids are susceptible to a number of skin cancers, which are challenging to excise radically without sacrificing exce |
| April 01, 2020 | Scalable dextran-polypyrrole nano-assemblies with photothermal/photoacoustic dual capabilities and enhanced biocompatibility | Polypyrroles have shown great potential in photoacoustic imaging and photothermal therapy owing to its excellent photothermal conversion capabilities. |
| April 01, 2020 | Rod-based urchin-like hollow microspheres of Bi2S3: Facile synthesis, photo-controlled drug release for photoacoustic imaging and chemo-photothermal therapy of tumor ablation | Hollow nanostructures have been evoked considerable attention owing to their intriguing hollow interior for important and potential applications in dr |
| April 01, 2020 | Janus γ-Fe₂O₃/SiO₂-based nanotheranostics for dual-modal imaging and enhanced synergistic cancer starvation/chemodynamic therapy | Multimodal cancer synergistic therapy exhibited remarkable advantages over monotherapy in producing an improved therapeutic efficacy. |
| March 31, 2020 | Novel Multifunctional Nanoagent for Visual Chemo/Photothermal Therapy of Metastatic Lymph Nodes via Lymphatic Delivery | Breast cancer is one of the major diseases that threaten women's health. |
| March 31, 2020 | Long Circulating Drug Dye Based Micelles with Ultrahigh pH Sensitivity for Deep Tumor Penetration and Superior Chemo-Photothermal Therapy | Nanocarriers for chemo-photothermal therapy suffer from insufficient retention at the tumor site and poor penetration into tumor parenchyma. |
| March 30, 2020 | Biologically Responsive Plasmonic Assemblies for Second Near-Infrared Window Photoacoustic Imaging-Guided Concurrent Chemo-Immunotherapy | We developed dual biologically responsive nanogapped gold nanoparticle vesicles loaded with immune inhibitor and carrying an anticancer polymeric prod |
| March 01, 2020 | Cathodic protected Mn²⁺ by Na_xWO₃ nanorods for stable magnetic resonance imaging-guided tumor photothermal therapy | The stability and safety of magnetic resonance imaging (MRI) contrast agents (CAs) are crucial for accurate diagnosis and real-time monitor of tumor d |
| March 01, 2020 | Biodegradable CoS₂ nanoclusters for photothermal-enhanced chemodynamic therapy | Retaining in tumors for cancer diagnosis/treatment with sequential elimination from body is crucial to the clinical translation of inorganic medicamen |
| March 01, 2020 | Light-activated oxygen self-supplied starving therapy in near-infrared (NIR) window and adjuvant hyperthermia-induced tumor ablation with an augmented sensitivity | Glucose oxidase (GOx)-mediated starvation circumvents the energy supply for tumor growth, which has been proved as a potent tumor treatment modality. |
| March 01, 2020 | Bimetallic nanodots for tri-modal CT/MRI/PA imaging and hypoxia-resistant thermoradiotherapy in the NIR-II biological windows | Hypoxic tumor microenvironment leads to resistance or failure of radiotherapy (RT). |

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| March 01, 2020 | B cell–Derived IL35 Drives STAT3-Dependent CD8 + T-cell Exclusion in Pancreatic Cancer | Pancreatic ductal adenocarcinoma (PDA) is an aggressive malignancy characterized by a paucity of tumor-proximal CD8+ T cells and resistance to immunot |
| March 01, 2020 | In vivo delivery of an exogenous molecule into murine T lymphocytes using a lymphatic drug delivery system combined with sonoporation | Physical delivery of exogenous molecules into lymphocytes is extremely challenging because conventional methods have notable limitations. |
| March 01, 2020 | LIN28B Underlies the Pathogenesis of a Subclass of Ewing Sarcoma | Ewing sarcoma (EwS) is associated with poor prognosis despite current multimodal therapy. |
| March 01, 2020 | Senescence-Induced Vascular Remodeling Creates Therapeutic Vulnerabilities in Pancreas Cancer | Summary KRAS mutant pancreatic ductal adenocarcinoma (PDAC) is characterized by a desmoplastic response that promotes hypovascularity, immunosuppressi |
| February 01, 2020 | US-triggered ultra-sensitive “thrombus constructor” for precise tumor therapy | Embolization therapy is an attractive strategy for antitumor therapy, especially for solid tumors. |
| February 01, 2020 | Tumor Contrast Imaging with Gas Vesicles by Circumventing the Reticuloendothelial System | Gas vesicles (GVs) are nanosized structures (45–800 nm) and have been reported to produce non-linear contrast signals, making them an attractive agent |
| February 01, 2020 | Enhancing sustained-release local therapy: Single versus dual chemotherapy for the treatment of neuroblastoma | Background: Neuroblastoma is the most common pediatric extracranial solid malignancy with limited effective treatment. |
| February 01, 2020 | Dual-stimuli responsive nanotheranostics for mild hyperthermia enhanced inhibition of Wnt/β-catenin signaling | Wnt/ β -catenin signaling cascade is highly associated with tumorigenesis and progression of various cancers. |
| January 30, 2020 | Interstitial diffuse optical probe with spectral fitting to measure dynamic tumor hypoxia | Understanding the dynamic nature of tumor hypoxia is vital for cancer therapy. |
| January 01, 2020 | CD105 is a prognostic marker and valid endothelial target for microbubble platforms in cholangiocarcinoma | Purpose: The current treatment outcomes in cholangiocarcinoma are poor with cure afforded only by surgical extirpation. |
| January 01, 2020 | Photoacoustic Imaging Quantifies Drug Release from Nanocarriers via Redox Chemistry of Dye Labeled Cargo | We report a new approach to monitor drug release from nanocarriers via a paclitaxel–methylene blue conjugate (PTX-MB) with redox activity. |
| January 01, 2020 | Selective Alanine Transporter Utilization Creates a Targetable Metabolic Niche in Pancreatic Cancer | Pancreatic ductal adenocarcinoma (PDAC) evolves a complex microenvironment comprised of multiple cell types, including pancreatic stellate cells (PSC) |
| January 01, 2020 | Light-activated gold nanorod vesicles with NIR-II fluorescence and photoacoustic imaging performances for cancer theranostics | Fluorescence (FL) and photoacoustic (PA) imaging in the second near infrared window (NIR-II FL and NIR-II PA) hold great promise for biomedical applic |
| January 01, 2020 | High Frequency Spectral Ultrasound Imaging to Detect Metastasis in Implanted Biomaterial Scaffolds | For most cancers, metastasis is the point at which disease is no longer curable. |
| January 01, 2020 | Acute kidney injury promotes development of papillary renal cell adenoma and carcinoma from renal progenitor cells | Acute tissue injury causes DNA damage and repair processes involving increased cell mitosis and polyploidization, leading to cell function alterations |
| January 01, 2020 | Glucose Oxidase-Instructed Traceable Self-Oxygenation/Hyperthermia Dually Enhanced Cancer Starvation Therapy | Cancer theranostics based on glucose oxidase (GOx)-induced starvation therapy has got more and more attention in cancer management. |
| January 01, 2020 | Fluorescent Silica Nanoparticles to Label Metastatic Tumor Cells in Mineralized Bone Microenvironments | During breast cancer bone metastasis, tumor cells interact with bone microenvironment components including inorganic minerals. |

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| January 01, 2020 | Sufficiency of CD40 activation and immune checkpoint blockade for T cell priming and tumor immunity | Innate immune receptors such as toll-like receptors (TLRs) provide critical molecular links between innate cells and adaptive immune responses. |
| January 01, 2020 | Mitochondria as Target for Tumor Management of Hemangioendothelioma | Aims: Hemangioendothelioma (HE) may be benign or malignant. EOMA cells are validated to study mechanisms in HE. |
| January 01, 2020 | Molecular Engineered Squaraine Nanoprobe for NIR-II/Photoacoustic Imaging and Photothermal Therapy of Metastatic Breast Cancer | Various squaraine dyes have been developed for biological imaging. |
| January 01, 2020 | Coordination-induced exfoliation to monolayer Bi-anchored MnB 2 nanosheets for multimodal imaging-guided photothermal therapy of cancer | Background: Rapid advance in biomedicine has recently vitalized the development of multifunctional two-dimensional (2D) nanomaterials for cancer thera |
| January 01, 2020 | Xenograft Tumor Volume Measurement in Nude Mice: Estimation of 3D Ultrasound Volume Measurements Based on Manual Caliper Measurements | Objectives: Volume measurement of subcutaneous xenograft tumors in nude mice models is an important metric to assess tumor growth or response to thera |
| January 01, 2020 | TME-activatable theranostic nanoplatform with ATP burning capability for tumor sensitization and synergistic therapy | Adenosine triphosphate (ATP), as a key substance for regulating tumor progression in the tumor microenvironemnt (TME), is an emerging target for tumor |
| January 01, 2020 | Mannose receptor (CD206) activation in tumor-associated macrophages enhances adaptive and innate antitumor immune responses | Solid tumors elicit a detectable immune response including the infiltration of tumor-associated macrophages (TAMs). |
| January 01, 2020 | Photo-Electro Active Nanocomposite Silk Hydrogel for Spatiotemporal Controlled Release of Chemotherapeutics: An In Vivo Approach Towards Suppressing Solid Tumor Growth | Conventional systemic chemotherapeutic regimens suffer from challenges such as non-specificity, shorter half-life, clearance of drugs and dose-limitin |
| January 01, 2020 | Assessment of Metastatic and Reactive Sentinel Lymph Nodes with B7-H3-Targeted Ultrasound Molecular Imaging: A Longitudinal Study in Mouse Models | Purpose: To explore the potential of B7-H3-targeted ultrasound molecular imaging (USMI) for longitudinal assessment and differentiation of metastatic |
| January 01, 2020 | Targeted nanobubbles carrying indocyanine green for ultrasound, photoacoustic and fluorescence imaging of prostate cancer | Objective: To construct prostate-specific membrane antigen (PSMA)-targeting, indocyanine green (ICG)-loaded nanobubbles (NBs) for multimodal (ultrasou |
| January 01, 2020 | The mechanism of cancer drug addiction in ALK-positive T-Cell lymphoma | Rational new strategies are needed to treat tumors resistant to kinase inhibitors. |
| January 01, 2020 | Programmable NIR II Photothermal Enhanced Starvation Primed Chemodynamic Therapy using Glucose Oxidase Functionalized Ancient Pigment Nanosheets | Chemodynamic therapy (CDT) has attracted considerable attention recently, but the poor reaction kinetics restrict its practical utility in clinic. |
| January 01, 2020 | Biodegradation-Mediated Enzymatic Activity-Tunable Molybdenum Oxide Nanourchins for Tumor-Specific Cascade Catalytic Therapy | Recent advances in nanomedicine have facilitated the development of potent nanomaterials with intrinsic enzyme-like activities (nanozymes) for cancer |
| January 01, 2020 | Carcinogenetic initiation contributed by EpCAM+ cancer cells in orthotopic HCC models of immunocompetent and athymic mice | Purpose: Overexpression of epithelial cell adhesion molecule (EpCAM) correlates with poor prognosis, therapeutic failure and early tumor recurrence in |
| January 01, 2020 | Biodegradable Bi 2 O 2 Se Quantum Dots for Photoacoustic Imaging Guided Cancer Photothermal Therapy | As new 2D layered nanomaterials, Bi2O2Se nanoplates have unique semiconducting properties that can benefit biomedical applications. |

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| January 01, 2020 | Stopping transformed cancer cell growth by rigidity sensing | A common feature of cancer cells is the alteration of kinases and biochemical signalling pathways enabling transformed growth on soft matrices, wherea |
| January 01, 2020 | Bovine HDL and Dual Domain HDL-Mimetic Peptides Inhibit Tumor Develop- ment in Mice | A growing body of literature supports the role of apolipoproteins present in HDL in the treatment of pro-inflamma- tory diseases including cancer. |
| January 01, 2020 | Anti-G250 nanobody-functionalized nanobubbles targeting renal cell carcinoma cells for ultrasound molecular imaging | Traditional imaging examinations have difficulty in identifying benign and malignant changes in renal masses. |
| January 01, 2020 | Unique spectral signature of human cutaneous squamous cell carcinoma by photoacoustic imaging | Cutaneous squamous cell carcinoma (cSCC) is a common skin cancer with metastatic potential. |
| January 01, 2020 | Ultra - small Pyropheophorbide - a Nanodots for Near - infrared Fluorescence/Photoacoustic Imaging-guided Photodynamic Therapy | Rationale: Nanoparticles (NPs) that are rapidly eliminated from the body offer great potential in clinical test. |
| January 01, 2020 | NIR/ROS Responsive Black Phosphorus QD Vesicles as Immunoadjuvant Carrier for Specific Cancer Photodynamic Immunotherapy | 2D black phosphorus (BP) nanosheets and BP quantum dots (BPQD), as two main material styles of BP, are widely used in the biomedical filed. |
| January 01, 2020 | Detection of Lung Tumor Progression in Mice by Ultrasound Imaging | With ~1.6 million victims per year, lung cancer contributes tremendously to the worldwide burden of cancer. |
| January 01, 2020 | ILC2s amplify PD-1 blockade by activating tissue-specific cancer immunity | Group 2 innate lymphoid cells (ILC2s) regulate inflammation and immunity in mammalian tissues ^{1,2} . |
| January 01, 2020 | Impact of hypoxia on chemoresistance of mesothelioma mediated by the proton-coupled folate transporter, and preclinical activity of new anti-LDH-A compounds | BACKGROUND: Expression of proton-coupled folate transporter (PCFT) is associated with survival of mesothelioma patients treated with pemetrexed, and i |
| January 01, 2020 | GSH Depleted PtCu 3 Nanocages for Chemodynamic Enhanced Sonodynamic Cancer Therapy | The ultrahigh concentration of glutathione (GSH) inside tumors destroys reactive oxygen species (ROS) based therapy, improving the outcome of chemodyn |
| January 01, 2020 | Fluorinated Chitosan To Enhance Transmucosal Delivery of Sonosensitizer-Conjugated Catalase for Sonodynamic Bladder Cancer Treatment Post-intravesical Instillation | Sonodynamic therapy (SDT) is a noninvasive ultrasound-triggered therapeutic strategy for site-specific treatment of tumors with great depth penetratio |
| January 01, 2020 | Conjugation of a Scintillator Complex and Gold Nanorods for Dual-Modal Image-Guided Photothermal and X-ray-Induced Photodynamic Therapy of Tumors | Light-mediated therapy has many unique merits but monotherapy strategies rarely completely inhibit tumor growth because resistance often develops. |
| January 01, 2020 | PRMT1 promotes neuroblastoma cell survival through ATF5 | Aberrant expression of protein arginine methyltransferases (PRMTs) has been implicated in a number of cancers, making PRMTs potential therapeutic targ |
| January 01, 2020 | Ultrasound and magnetic resonance imaging for group stratification and treatment monitoring in the transgenic adenocarcinoma of the mouse prostate model | Background: The transgenic adenocarcinoma of the mouse prostate (TRAMP) is a widely used genetically engineered spontaneous prostate cancer model. |
| January 01, 2020 | Clarithromycin inhibits autophagy in colorectal cancer by regulating the hERG1 potassium channel interaction with PI3K | We have studied how the macrolide antibiotic Clarithromycin (Cla) regulates autophagy, which sustains cell survival and resistance to chemotherapy in |

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| January 01, 2020 | Tumor Microenvironment Adaptable Nanoplatfom for O₂ Self Sufficient Chemo/Photodynamic Combination Therapy | Malignant proliferation of tumor cells induces abnormal tissue microenvironments, leading to therapeutic resistance and poor therapeutic outcome. |
| January 01, 2020 | Statin as anti-cancer therapy in autochthonous T-lymphomas expressing stabilized gain-of-function mutant p53 proteins | An important component of missense mutant p53 gain-of-function (mutp53 GOF) activities is the ability of stabilized mutp53 proteins to upregulate the |
| January 01, 2020 | Carbon-coated FeCo nanoparticles as sensitive magnetic-particle-imaging tracers with photothermal and magnetothermal properties | The low magnetic saturation of iron oxide nanoparticles, which are developed primarily as contrast agents for magnetic resonance imaging, limits the s |
| January 01, 2020 | Development and Validation of a Clinically Relevant Workflow for MR-Guided Volumetric Arc Therapy in a Rabbit Model of Head and Neck Cancer | There is increased interest in the use of magnetic resonance imaging (MRI) for guiding radiation therapy (RT) in the clinical setting. |
| January 01, 2020 | DLX1008 (brolicizumab), a single-chain anti-VEGF-A antibody fragment with low picomolar affinity, leads to tumor involution in an in vivo model of Kaposi Sarcoma | Kaposi Sarcoma (KS) is among the most angiogenic cancers in humans and an AIDS-defin- ing condition. |
| January 01, 2020 | Systemic long term inactivation of hypoxia inducible factor prolyl 4 hydroxylase 2 ameliorates aging induced changes in mice without affecting their life span | Hypoxia inactivates hypoxia-inducible factor (HIF) prolyl 4-hydroxylases (HIF-P4Hs), which stabilize HIF and upregulate genes to restore tissue oxygen |
| January 01, 2020 | Near-Infrared Light-Responsive Nitric Oxide Delivery Platform for Enhanced Radioimmunotherapy | Radiotherapy (RT) is a widely used way for cancer treatment. |
| January 01, 2020 | PEGylated-folic acid–modified black phosphorus quantum dots as near-infrared agents for dual-modality imaging-guided selective cancer cell destruction | Biological systems have high transpance to 700–1100-nm near-infrared (NIR) light. |
| January 01, 2020 | Progression of AITL-like tumors in mice is driven by Tfh signature proteins and T-B cross talk | Angioimmunoblastic T-cell lymphoma (AITL) is an aggressive peripheral T-cell lymphoma driven by a pool of neoplastic cells originating from T follicul |
| January 01, 2020 | Polydopamine-doped virus-like structured nanoparticles for photoacoustic imaging guided synergistic chemo-/photothermal therapy | The therapeutic diagnosis effect of cancer commonly depends on the cellular uptake efficiency of nanomaterials. |
| January 01, 2020 | Inhibited metastasis and amplified chemotherapeutic effects by epigene-transfection based on a tumor-targeting nanoparticle | Purpose: Tumor metastasis and drug resistance have always been vital aspects to cancer mortality and prognosis. |
| January 01, 2020 | Organoid-Transplant Model Systems to Study the Effects of Obesity on the Pancreatic Carcinogenesis in vivo | Pancreatic ductal adenocarcinoma (PDAC) is the third leading cause of cancer-related mortality among adults in developed countries. |
| January 01, 2020 | Inhibition of erythropoietin producing hepatoma receptor B4 (EphB4) signaling suppresses the vascularization and growth of endometriotic lesions | Background and Purpose: The development of endometriotic lesions is crucially dependent on the formation of new blood vessels. |
| January 01, 2020 | Dietary Tomato or Lycopene Do Not Reduce Castration-Resistant Prostate Cancer Progression in a Murine Model | Background: Dietary tomato products or lycopene protect against prostate carcinogenesis, but their impact on the emergence of castration-resistant pro |
| January 01, 2020 | Local delivery of dinutuximab from lyophilized silk fibroin foams for treatment of an orthotopic neuroblastoma model | Immunotherapy targeting GD2 is a primary treatment for patients with high-risk neuroblastoma. |
| January 01, 2020 | On-demand drug release nanoplatfom based on fluorinated aza-BODIPY for imaging-guided chemo-phototherapy | Intelligent drug delivery systems (DDS), integrating with multi-modal imaging guidance and controlled drug release, have practical significance in enh |

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| January 01, 2020 | Establishment and characterization of a cell line and patient-derived xenograft (PDX) from peritoneal metastasis of low-grade serous ovarian carcinoma | Peritoneal spread indicates poor prognosis in patients with serous ovarian carcinoma (SOC) and is generally treated by surgical cytoreduction and chem |
| January 01, 2020 | Microvascular Ultrasonic Imaging of Angiogenesis Identifies Tumors in a Murine Spontaneous Breast Cancer Model | The purpose of this study is to determine if microvascular tortuosity can be used as an imaging biomarker for the presence of tumor-associated angiogenesis |
| January 01, 2020 | Radiosensitive core/satellite ternary heteronanostructure for multimodal imaging-guided synergistic cancer radiotherapy | Developing safe, effective and targeting radiosensitizers with clear action mechanisms to achieve synergistic localized cancer treatment is an important |
| January 01, 2020 | "All-in-One" Silver Nanoprism Platform for Targeted Tumor Theranostics | Designing a multifunctional theranostic nanoplat- form with optional therapeutic strategies is highly desirable to select the most suitable therapeuti |
| January 01, 2020 | Hydrogen-Peroxide-Responsive Protein Biomimetic Nanoparticles for Photothermal-Photodynamic Combination Therapy of Melanoma | Background and Objectives: Recently, there has been a rapid increase in the incidences of melanoma, which represents a serious threat to human health. |
| January 01, 2020 | Evaluation of ductal carcinoma in situ grade via triple-modal molecular imaging of B7-H3 expression | Ductal carcinoma in situ (DCIS) will account for 62,930 cases of breast cancer in 2019. |
| January 01, 2020 | Multifunctional Nanoparticles for Multimodal Imaging-Guided Low-Intensity Focused Ultrasound/Immunosynergistic Retinoblastoma Therapy | Retinoblastoma (RB) is prone to delayed diagnosis or treatment and has an increased likelihood of metastasizing. |
| January 01, 2020 | Tumor-Specific Endogenous Fe II -Activated, MRI-Guided Self-Targeting Gadolinium-Coordinated Theranostic Nanoplatfor- ms for Amplification of ROS and Enhanced Chemodynamic Chemotherapy | Low drug payload and lack of tumor-targeting for chemodynamic therapy (CDT) result in an insufficient reactive oxygen species (ROS) generation, which |
| January 01, 2020 | Heterogeneity and chimerism of endothelial cells revealed by single-cell transcriptome in orthotopic liver tumors | The liver is a common host organ for cancer, either through lesions that arise in liver epithelial cells [e.g., hepatocellular carcinoma (HCC)] or as |
| January 01, 2020 | Prostate tumor-derived GDF11 accelerates androgen deprivation therapy-induced sarcopenia | Most prostate cancers depend on androgens for growth, and therefore, the mainstay treatment for advanced, recurrent, or metastatic prostate cancer is |
| January 01, 2020 | Liposomal 2-Methoxyestradiol Nanoparticles for Treatment of Uterine Leiomyoma in a Patient-Derived Xenograft Mouse Model | Uterine leiomyomas represent a challenging problem with limited medical treatment options. |
| January 01, 2020 | Magnetic targeted near-infrared II PA/MR imaging guided photothermal therapy to trigger cancer immunotherapy | Rationale: Photothermal therapy (PTT) alone is easy to cause cancer recurrence and fail to completely resist metastasis, yet recurrence and metastasis |
| January 01, 2020 | Chemiluminescence resonance energy transfer-based nanoparticles for quantum yield-enhanced cancer phototheranostics | Chemiluminescence (CL) has recently gained attention for CL resonance energy transfer (CRET)-mediated photodynamic therapy of cancer. |
| January 01, 2020 | SUSD2 expression correlates with decreased metastasis and increased survival in a high-grade serous ovarian cancer xenograft murine model | The cause of death among high-grade serous ovarian cancer (HGSOC) patients involves passive dissemination of cancer cells within the peritoneal cavity |
| January 01, 2020 | Pancreatic tropism of metastatic renal cell carcinoma | Renal cell carcinoma (RCC) is characterized by a particularly broad metastatic swath, and, enigmatically, when the pancreas is a destination, the dise |

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| January 01, 2020 | Use of Transabdominal Ultrasound for the Detection of Intra-Peritoneal Tumor Engraftment and Growth in Mouse Xenografts of Epithelial Ovarian Cancer | Objective: To evaluate intraperitoneal (IP) tumor engraftment, metastasis and growth in a pre-clinical murine epithelial ovarian cancer (EOC) model us |
| January 01, 2020 | Accelerating development of high-risk neuroblastoma patient-derived xenograft models for preclinical testing and personalised therapy | Background: Predictive preclinical models play an important role in the assessment of new treatment strategies and as avatar models for personalised m |
| January 01, 2020 | Development of a chimeric Fab directed against human galectin-3 and validation as an immune-PET tracer for the sensitive in vivo imaging of thyroid cancer | BACKGROUND The lack of facile methods for the specific characterization of malignant thyroid nodules makes the diagnosis of thyroid cancer (TC) challe |
| January 01, 2020 | 2,4-dienoyl-CoA reductase regulates lipid homeostasis in treatment-resistant prostate cancer | Despite the clinical success of Androgen Receptor (AR)-targeted therapies, reactivation of AR signalling remains the main driver of castration-resista |
| January 01, 2020 | MT1-MMP-Activated Liposomes to Improve Tumor Blood Perfusion and Drug Delivery for Enhanced Pancreatic Cancer Therapy | Promoting tumor angiogenesis effectively and specifically to resolve tumor-associated hypoperfusion holds promise for improving pancreatic cancer ther |
| January 01, 2020 | Biodegradable rare earth fluorochloride nanocrystals for phototheranostics | Rare earth (RE) doped inorganic nanocrystals have been demonstrated as efficient contrast agents for deep tissue shortwave-infrared (SWIR) imaging wit |
| January 01, 2020 | Stromal Modulation and Treatment of Metastatic Pancreatic Cancer with Local Intraperitoneal Triple miRNA/siRNA Nanotherapy | Nanomedicines achieve tumor-targeted delivery mainly through enhanced permeability and retention (EPR) effect following intravenous (IV) administratio |
| January 01, 2020 | A Mitochondria Driven Metabolic Sensing Nanosystem for Oxygen Availability and Energy Blockade of Cancer | A mitochondrial targeting and adenosine triphosphate (ATP) responsive nanosystem is designed and constructed to interfere with mitochondrial respirati |
| November 01, 2019 | Modulation of redox metabolism negates cancer-associated fibroblasts-induced treatment resistance in a heterotypic 3D culture platform of pancreatic cancer | The complex interplay between cancer cells and their microenvironment remains a major challenge in the design and optimization of treatment strategies |
| November 01, 2019 | Mitochondrial fragmentation, elevated mitochondrial superoxide and respiratory supercomplexes disassembly is connected with the tamoxifen-resistant phenotype of breast cancer cells | Tamoxifen resistance remains a clinical obstacle in the treatment of hormone sensitive breast cancer. |
| November 01, 2019 | Photothermal-pH-hypoxia responsive multifunctional nanoplatform for cancer photo-chemo therapy with negligible skin phototoxicity | Highly specific and effective cancer phototherapy remains as a great challenge. |
| November 01, 2019 | Laser-triggered polymeric lipoproteins for precision tumor penetrating theranostics | Natural particles ranging from various cell membranes to nascent proteins are highly optimized for their specific functions in vivo and possess featur |
| November 01, 2019 | Effects of gold nanoprism-assisted human PD-L1 siRNA on both gene down-regulation and photothermal therapy on lung cancer | Gold nanoprisms (GNPs) have been broadly studied for the potential applications in both imaging and treatment on tumors due to their special character |
| October 01, 2019 | Magnetic-responsive and targeted cancer nanotheranostics by PA/MR bimodal imaging-guided photothermally triggered immunotherapy | While theranostic nanoparticle (TNP)-based photothermal therapy (PTT) exhibits prominent promise for cancer therapy, metastatic cancers remain one of |

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| September 01, 2019 | LMO2 Confers Synthetic Lethality to PARP Inhibition in DLBCL | Deficiency in DNA double-strand break (DSB) repair mechanisms has been widely exploited for the treatment of different malignances, including homologo |
| September 01, 2019 | Inhibition of breast cancer proliferation and metastasis by strengthening host immunity with a prolonged oxygen-generating phototherapy hydrogel | Hypoxia is a potent tumor microenvironmental (TME) factor promoting immunosuppression and metastatic progression. |
| August 31, 2019 | GRIM-19 over-expression represses the proliferation and invasion of orthotopically implanted hepatocarcinoma tumors associated with downregulation of Stat3 signaling | The retinoid-interferon-induced mortality-19 (GRIM-19) gene has been identified as a negative regulator associated with tumor development. |
| August 01, 2019 | Small-Molecule and CRISPR Screening Converge to Reveal Receptor Tyrosine Kinase Dependencies in Pediatric Rhabdoid Tumors | Cancer is often seen as a disease of mutations and chromosomal abnormalities. |
| August 01, 2019 | Combination PD-1 and PD-L1 Blockade Promotes Durable Neoantigen-Specific T Cell-Mediated Immunity in Pancreatic Ductal Adenocarcinoma | Pancreatic ductal adenocarcinoma (PDA) is a lethal cancer resistant to immunotherapy. |
| March 01, 2019 | Data processing of 3D and 4D in-vivo electron paramagnetic resonance imaging co-registered with ultrasound. 3D printing as a registration tool | We present the concept of image registration using ultrasound (US) and electron paramagnetic resonance (EPR) imaging and discuss the benefits of this |
| March 01, 2019 | Multifunctional nanoplatform for photoacoustic imaging-guided combined therapy enhanced by CO induced ferroptosis | A multifunctional CO/thermo/chemotherapy nanoplatform is here reported, which is composed of mesoporous carbon nanoparticles (MCN) as near infrared (N |
| March 01, 2019 | Mild hyperthermia as a localized radiosensitizer for deep-seated tumors: investigation in an orthotopic prostate cancer model in mice | OBJECTIVE:: Non-ablative or mild hyperthermia (HT) has been shown in preclinical (and clinical) studies as a localized radiosensitizer that enhances t |
| February 28, 2019 | Use of Antimetastatic SOD3-Mimetic Albumin as a Primer in Triple Negative Breast Cancer | Of the deaths attributed to cancer, 90% are due to metastasis. Treatments that prevent or cure metastasis remain elusive. |
| February 01, 2019 | Down-regulation of MYCN protein by CX-5461 leads to neuroblastoma tumor growth suppression | Purpose: MYCN oncogene amplification is an independent predictor of poor prognosis in neuroblastoma. |
| February 01, 2019 | Erythrocyte-cancer hybrid membrane-camouflaged melanin nanoparticles for enhancing photothermal therapy efficacy in tumors | Cell membrane coating has emerged as an intriguing biomimetic strategy to endow nanomaterials with functions and properties inherent to source cells f |
| February 01, 2019 | Specific delivery of delta-5-desaturase siRNA via RNA nanoparticles supplemented with dihomo-γ-linolenic acid for colon cancer suppression | We have previously demonstrated that DGLA treatment along with Delta-5-Desaturase (D5D) siRNA in various types of cancer cells enhances the formation |
| January 01, 2019 | Bioinspired lipoproteins-mediated photothermia remodels tumor stroma to improve cancer cell accessibility of second nanoparticles | The tumor stromal microenvironments (TSM) including stromal cells and extracellular matrix (ECM) form an abominable barrier hampering nanoparticles ac |
| January 01, 2019 | Organosilica-Based Hollow Mesoporous Bilirubin Nanoparticles for Antioxidation-Activated Self-Protection and Tumor-Specific Deoxygenation-Driven Synergistic Therapy | A major concern about glucose oxidase (GOx)-mediated cancer starvation therapy is its ability to induce serious oxidative damage to normal tissues thr |
| January 01, 2019 | α-Ketoglutarate links p53 to cell fate during tumour suppression | The tumour suppressor TP53 is mutated in the majority of human cancers, and in over 70% of pancreatic ductal adenocarcinoma (PDAC) ^{1,2} . |

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| January 01, 2019 | SDF-1-loaded PLGA nanoparticles for the targeted photoacoustic imaging and photothermal therapy of metastatic lymph nodes in tongue squamous cell carcinoma | The combination of photothermal therapy and targeted chemotherapy can produce much greater cytotoxicity than chemotherapy. |
| January 01, 2019 | Tumor pH Responsive Albumin/Polyaniline Assemblies for Amplified Photoacoustic Imaging and Augmented Photothermal Therapy | Tumor-microenvironment-responsive theranostics have great potential for precision diagnosis and effective treatment of cancer. |
| January 01, 2019 | Indocyanine Green-Coated Gold Nanoclusters for Photoacoustic Imaging and Photothermal Therapy | Abstract Traditional oncology treatment modalities are often associated with a poor therapeutic index. |
| January 01, 2019 | Porphyrin-palladium hydride MOF nanoparticles for tumor-targeting photoacoustic imaging-guided hydrogenothermal cancer therapy | Hydrogen gas, which is an important energy resource, was recently discovered to have high advantage in the treatment of many diseases, but the current |
| January 01, 2019 | Effects of Photodynamic Therapy with Redaporfin on Tumor Oxygenation and Blood Flow in a Lung Cancer Mouse Model | Three photodynamic therapy (PDT) protocols with 15 min, 3 h and 72 h drug-to-light time intervals (DLIs) were performed using a bacteriochlorin named |
| January 01, 2019 | One-pot growth of triangular SnS nanopyramids for photoacoustic imaging and photothermal ablation of tumors | Recently, metal sulfides have received great attention in biomedical applications due to their fascinating properties. |
| January 01, 2019 | Research paper microbubble enhanced ultrasound for the antivasular treatment and monitoring of hepatocellular carcinoma | Background and Objective: Hepatocellular carcinoma (HCC) is the most common primary liver malignancy, and its current management relies heavily on loc |
| January 01, 2019 | 1300 nm absorption two-acceptor semiconducting polymer nanoparticles for NIR-II photoacoustic imaging system guided NIR-II photothermal therapy | 1300 nm absorption SPNs were designed to realize in vivo NIR-II PTT treatment guided by commercial NIR-II PAI systems. |
| January 01, 2019 | Lipid/PLGA Hybrid Microbubbles as a Versatile Platform for Noninvasive Image-Guided Targeted Drug Delivery | Microbubbles (MBs) have recently emerged as promising theranostic carriers for ultrasound contrast imaging and drug delivery. |
| January 01, 2019 | A polymeric paste-drug formulation for intratumoral treatment of prostate cancer | Objective: Focal therapy has emerged as a treatment option for low- to intermediate-risk localized prostate cancer (PCa) patients, to balance the risk |
| January 01, 2019 | Cytosolic 5'-nucleotidase 1A is overexpressed in pancreatic cancer and mediates gemcitabine resistance by reducing intracellular gemcitabine metabolites | Background: Cytosolic 5'-nucleotidase 1A (NT5C1A) dephosphorylates non-cyclic nucleoside monophosphates to produce nucleosides and inorganic phosphate |
| January 01, 2019 | Mouse Model of Thyroid Cancer Progression and Dedifferentiation Driven by STRN-ALK Expression and Loss of p53: Evidence for the Existence of Two Types of Poorly Differentiated Carcinoma | Thyroid tumor progression from well-differentiated cancer to poorly differentiated thyroid carcinoma (PDTC) and anaplastic thyroid carcinoma (ATC) inv |
| January 01, 2019 | Tumor Microenvironment Responsive Shape-Reversal Self-Targeting Virus-Inspired Nanodrug for Imaging-Guided Near-Infrared-II Photothermal Chemotherapy | Tumor microenvironment responsive multimodal synergistic theranostic strategies can significantly improve the therapeutic efficacy while avoiding seve |
| January 01, 2019 | Effect of increasing liver blood flow on nanodrug clearance by the liver for enhanced antitumor therapy | The clinical applications of particulate drug delivery systems have demonstrated limited treatment out- comes, which is largely attributable to the el |
| January 01, 2019 | A spontaneously metastatic model of bladder cancer: imaging characterization | Background: Spontaneously metastatic xenograft models of cancer are infrequent and the few that exist are resource intensive. |
| January 01, 2019 | Radioembolization of Hepatocellular Carcinoma with Built-In Dosimetry: First in vivo Results with Uniformly-Sized, Biodegradable Microspheres Labeled with 188 Re | A common form of treatment for patients with hepatocellular carcinoma (HCC) is transarterial radioembolization (TARE) with non-degradable glass or res |

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| January 01, 2019 | Immuno-evolution of mouse pancreatic organoid isografts from preinvasive to metastatic disease | Pancreatic ductal adenocarcinoma (PDA) has a highly immunosuppressive microenvironment, which is contributed by the complex interaction between cancer |
| January 01, 2019 | Efficient prostate cancer therapy with tissue-specific homing peptides identified by advanced phage display technology | Selective targeting of drugs to tumor cells is a key goal in oncology. |
| January 01, 2019 | pH/NIR-responsive semiconducting polymer nanoparticles for highly effective photoacoustic image guided chemo-photothermal synergistic therapy | ABSTRACT Multifunctional drug delivery nanoplatfrom (PDPP3T@PSNiAA NPs) based on NIR absorbing semiconducting polymer nanoparticles for pH/NIR light- |
| January 01, 2019 | Platelet-Mimicking Biotaxis Targeting Vasculature-Disrupted Tumors for Cascade Amplification of Hypoxia-Sensitive Therapy | Tumorous vasculature plays key roles in sustaining tumor growth. |
| January 01, 2019 | Inhibiting Glutamine-Dependent mTORC1 Activation Ameliorates Liver Cancers Driven by β-Catenin Mutations | Based on their lobule location, hepatocytes display differential gene expression, including pericentral hepatocytes that surround the central vein, wh |
| January 01, 2019 | Dual-labeled pertuzumab for multimodality image-guided ovarian tumor resection. | Pertuzumab is clinically employed in the treatment of cancers over-expressing human epidermal growth factor receptor 2 (HER2). |
| January 01, 2019 | Mussel-inspired functionalization of semiconducting polymer nanoparticles for amplified photoacoustic imaging and photothermal therapy | A versatile and straightforward strategy for the encapsulation of semiconducting polymer nanoparticles (SPNs) using biocompatible polydopamine (PDA) a |
| January 01, 2019 | Imaging of the Mouse Lymphatic Sinus during Early Stage Lymph Node Metastasis Using Intranodal Lymphangiography with X-ray Micro-computed Tomography | Purpose: Lymph node (LN) metastasis is detected prior to distant metastasis in many types of cancer. |
| January 01, 2019 | Development of a Human Photoacoustic Imaging Reporter Gene Using the Clinical Dye Indocyanine Green | Purpose: To develop a photoacoustic imaging (PAI) reporter gene that has high translational potential. |
| January 01, 2019 | eIF4A supports an oncogenic translation program in pancreatic ductal adenocarcinoma | Pancreatic ductal adenocarcinoma (PDA) is a lethal malignancy with limited treatment options. |
| January 01, 2019 | Fluorinated Polyethylenimine to Enable Transmucosal Delivery of Photosensitizer Conjugated Catalase for Photodynamic Therapy of Orthotopic Bladder Tumors Postintravesical Instillation | Photodynamic therapy (PDT) by insertion of an optical fiber into the bladder cavity has been applied in the clinic for noninvasive treatment of bladder |
| January 01, 2019 | Differential Diagnosis and Precision Therapy of Two Typical Malignant Cutaneous Tumors Leveraging Their Tumor Microenvironment: A Photomedicine Strategy | Elevated hydrogen peroxide (H ₂ O ₂) in biological tissues is generally recognized to be relevant to the carcinogenesis process that regulates the prolifer |
| January 01, 2019 | Oxygenated theranostic nanoplatforms with intracellular agglomeration behavior for improving the treatment efficacy of hypoxic tumors | Hypoxia plays vital roles in the development of tumor resistance against typical anticancer therapies and local reoxygenation has proved effective to |
| January 01, 2019 | Collagenase Nanoparticles Enhance the Penetration of Drugs into Pancreatic Tumors | Overexpressed extracellular matrix (ECM) in pancreatic ductal adenocarcinoma (PDAC) limits drug penetration into the tumor and is associated with poor |
| January 01, 2019 | Verteporfin-Loaded Lipid Nanoparticles Improve Ovarian Cancer Photodynamic Therapy In Vitro and In Vivo | Advanced ovarian cancer is the most lethal gynecological cancer, with a high rate of chemoresistance and relapse. |
| January 01, 2019 | Novel Oxygen-Deficient Zirconia (ZrO_{2-x}) for Fluorescence/Photoacoustic Imaging-Guided Photothermal/Photodynamic Therapy for Cancer | Theranostic nanoplatforms that integrate therapy and diagnosis in a single composite have become increasingly attractive in the field of precise and e |

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| January 01, 2019 | Chlorella-gold nanorods hydrogels generating photosynthesis-derived oxygen and mild heat for the treatment of hypoxic breast cancer | Hypoxic tumors are rarely cured because their low oxygen environment restricts the cytotoxicity of many chemotherapeutics by blocking the production of |
| January 01, 2019 | Intra-arterial EmboCept S® and DC Bead® effectively inhibit tumor growth of colorectal rat liver metastases | Background: Intra-arterial therapy with embolics is established for the treatment of malignancies of the liver. |
| January 01, 2019 | Endothelial CDS2 deficiency causes VEGFA-mediated vascular regression and tumor inhibition | The response of endothelial cells to signaling stimulation is critical for vascular morphogenesis, homeostasis and function. |
| January 01, 2019 | Fluorescent Silicon Nanorods-Based Nanotheranostic Agents for Multimodal Imaging-Guided Photothermal Therapy | The utilization of diagnosis to guide/aid therapy procedures has shown great prospects in the era of personalized medicine along with the recognition |
| January 01, 2019 | Photoacoustic and Ultrasound Dual-Mode Imaging via Functionalization of Recombinant Protein-Stabilized Microbubbles with Methylene Blue | Contrast-enhanced photoacoustics and ultrasonics are complementary methods of bioimaging. |
| January 01, 2019 | Hybrid Protein Nano Reactors Enable Simultaneous Increments of Tumor Oxygenation and Iodine 131 Delivery for Enhanced Radionuclide Therapy | It is hard for current radionuclide therapy to render solid tumors desirable therapeutic efficacy owing to insufficient tumor targeted delivery of rad |
| January 01, 2019 | Nanozymes-Engineered Metal–Organic Frameworks for Catalytic Cascades-Enhanced Synergistic Cancer Therapy | The efficiency of chemical intercommunication between enzymes in natural networks can be significantly enhanced by the organized catalytic cascades. |
| January 01, 2019 | Localized Free Radicals Burst Triggered by NIR-II Light for Augmented Low-Temperature Photothermal Therapy | As a novel treatment modality of tumors, hypothermal hyperthermia employed relatively lower temperature (|
| January 01, 2019 | Folate-Targeted and Oxygen/Indocyanine Green-Loaded Lipid Nanoparticles for Dual-Mode Imaging and Photo-sonodynamic/Photothermal Therapy of Ovarian Cancer in Vitro and in Vivo | We have successfully fabricated versatile folate-targeted and oxygen/indocyanine green-loaded lipid nanoparticles (FA-OINPs) for dual-mode imaging-gui |
| January 01, 2019 | Hollow Cu₂Se Nanozymes for Tumor Photothermal-Catalytic Therapy | Tumor microenvironment (TME)-mediated cancer therapy, such as chemodynamic therapy (CDT) based on Fenton reaction, has attracted extensive attention i |
| January 01, 2019 | Phase Change Materials Based Nanoparticles for Controlled Hypoxia Modulation and Enhanced Phototherapy | Tumor hypoxia strengthens tumor resistance to different therapies especially oxygen involved strategies, such as photodynamic therapy (PDT). |
| January 01, 2019 | Precision Cancer Theranostic Platform by In Situ Polymerization in Perylene Diimide-Hybridized Hollow Mesoporous Organosilica Nanoparticles | Phototheranostics refers to advanced photonics-mediated theranostic methods for cancer and includes imaging-guided photothermal/chemotherapy, photothe |
| January 01, 2019 | Quantitative Proteomics of Th-MYCN Transgenic Mice Reveals Aurora Kinase Inhibitor Altered Metabolic Pathways and Enhanced ACADM To Suppress Neuroblastoma Progression | Neuroblastoma is a neural crest-derived embryonal tumor and accounts for about 15% of all cancer deaths in children. |
| December 26, 2018 | Integration of Polymerization and Biomineralization as a Strategy to Facilely Synthesize Nanotheranostic Agents | Integration of biological macromolecules with inorganic materials via biomineralization has demonstrated great potential for development of nanother |
| December 22, 2018 | IL-6-mediated cross-talk between human preadipocytes and ductal carcinoma in situ in breast cancer progression | Background: The function of preadipocytes in the progression of early stage breast cancer has not been fully elucidated at the molecular level. |

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| December 19, 2018 | Contrast-enhanced ultrasound for ovary assessment in a murine model: preliminary findings on the protective role of a gonadotropin-releasing hormone analogue from chemotherapy-induced ovarian damage | The prolonged, gonadotoxic effect of chemotherapy can finally lead to infertility in female cancer survivors. |
| December 15, 2018 | A Multimodal Molecular Imaging Study Evaluates Pharmacological Alteration of the Tumor Microenvironment to Improve Radiation Response | Hypoxic zones in solid tumors contribute to radioresistance, and pharmacological agents that increase tumor oxygenation prior to radiation, including |
| December 14, 2018 | Intrinsically absorbing photoacoustic and ultrasound contrast agents for cancer therapy and imaging | Nanoparticles are submicrometer in size and are used in a variety of ways in the biomedical field. |
| December 12, 2018 | Multimodality cellular and molecular imaging of concomitant tumour enhancement in a syngeneic mouse model of breast cancer metastasis | |
| December 12, 2018 | Stemness marker ALDH1A1 promotes tumor angiogenesis via retinoic acid/HIF-1α/VEGF signalling in MCF-7 breast cancer cells | BACKGROUND: Aldehyde dehydrogenase 1A1 (ALDH1A1), a member of aldehyde dehydrogenase family, is a marker of stemness in breast cancer. |
| December 12, 2018 | Chemodrug-Gated Biodegradable Hollow Mesoporous Organosilica Nanotheranostics for Multimodal Imaging-Guided Low-Temperature Photothermal Therapy/Chemotherapy of Cancer | Noninvasive physical treatment with relatively low intensity stimulation and the development of highly efficient anticancer medical strategy are still |
| December 10, 2018 | Species-dependent extracranial manifestations of a brain seeking breast cancer cell line | Purpose Metastatic brain tumors pose a severe problem in the treatment of patients with breast carcinoma. |
| December 08, 2018 | Evaluation of pancreatic tumor development in KPC mice using multi-parametric MRI | Pancreatic ductal adenocarcinoma (PDA) is a fatal disease with very poor prognosis. |
| December 04, 2018 | RET, a Targetable Driver of Pancreatic Adenocarcinoma | Pancreatic ductal adenocarcinoma (PDA) remains a deadly disease, affecting about 40,000 individuals in the United States annually. |
| December 04, 2018 | Up-regulation of FGF15/19 signaling promotes hepatocellular carcinoma in the background of fatty liver | Background: Upregulated fibroblast growth factor 19 (FGF19) expression in human hepatocellular carcinoma (HCC) specimens is associated with tumor prog |
| November 25, 2018 | C3HeB/FeJ Mice mimic many aspects of gene expression and pathobiological features of human hepatocellular carcinoma | Hepatocellular carcinoma (HCC) remains a deadly cancer, underscoring the need for relevant preclinical models. |
| November 22, 2018 | Conditional knockout of SHP2 in ErbB2 transgenic mice or inhibition in HER2-amplified breast cancer cell lines blocks oncogene expression and tumorigenesis | Overexpression of the human epidermal growth factor receptor 2 (HER2) is the cause of HER2-positive breast cancer (BC). |
| November 19, 2018 | Noninvasive quantification of oxygen saturation in the portal and hepatic veins in healthy mice and those with colorectal liver metastases using QSM MRI | Purpose: This preclinical study investigated the use of QSM MRI to noninvasively measure venous oxygen saturation (SvO ₂) in the hepatic and portal vein |
| November 12, 2018 | Lestaurtinib is a potent inhibitor of anaplastic thyroid cancer cell line models | Anaplastic thyroid cancer (ATC) is a rare and lethal human malignancy with no known effective therapies in the majority of cases. |
| November 09, 2018 | Tumor cell invasion from the marginal sinus into extranodal veins during early-stage lymph node metastasis can be a starting point for hematogenous metastasis | The primary control on the N-S zonation of the Southern Ocean is the wind-induced transport of the Antarctic Circumpolar Current (ACC). |
| November 01, 2018 | Remodeling Tumor-Associated Macrophages and Neovascularization Overcomes EGFR T790M -Associated Drug Resistance by PD-L1 Nanobody-Mediated Codelivery | Precision medicine has made a significant breakthrough in the past decade. |

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| November 01, 2018 | Nonlinear ultrasound parameter to monitor cell death in cancer cell samples | A scaling subtraction method was proposed to analyze the radio frequency data from cancer cell samples exposed to an anti-cancer drug and to estimate |
| November 01, 2018 | Enhancing Checkpoint Inhibitor Therapy with Ultrasound Stimulated Microbubbles | Checkpoint inhibitor (CI) immunotherapy is playing an increasingly prominent role in the treatment of cancer but is effective and durable in only a su |
| October 18, 2018 | In Vivo Molecular Ultrasound Assessment of Glioblastoma Neovasculature with Endoglin-Targeted Microbubbles | Objectives . Glioblastoma, as one of the most malignant cancer in the world, usually shows substantially increased angiogenesis. |
| October 15, 2018 | Size-dependent Tumor Response to Photodynamic Therapy and Irinotecan Monotherapies Revealed by Longitudinal Ultrasound Monitoring in an Orthotopic Pancreatic Cancer Model | Longitudinal monitoring of tumor size in vivo can provide important biological information about disease progression and treatment efficacy that is no |
| October 12, 2018 | Sonodynamic Therapy on Intracranial Glioblastoma Xenografts Using Sinoporphyrin Sodium Delivered by Ultrasound with Microbubbles | —Sonodynamic therapy (SDT) is a promising nonin-vasive method for cancer treatment. |
| October 10, 2018 | Self-Supplied Tumor Oxygenation through Separated Liposomal Delivery of H₂O₂ and Catalase for Enhanced Radio-Immunotherapy of Cancer | The recent years have witnessed the blooming of cancer immunotherapy, as well as their combinational use together with other existing cancer treatment |
| October 04, 2018 | Combination Therapy with DETA/NO and Clopidogrel Inhibits Metastasis in Murine Mammary Gland Cancer Models via Improved Vasoprotection | Vascular endothelial dysfunction and platelet activation play a key role in tumor metastasis, and therefore both of these processes are considered imp |
| October 01, 2018 | Growth and in vivo stresses traced through tumor mechanics enriched with predator-prey cells dynamics | Mechanical stress accumulating during growth in solid tumors plays a crucial role in the tumor mechanobiology. |
| September 01, 2018 | Tumor inhibitory effects of intravesical Ganoderma lucidum instillation in the syngeneic orthotopic MB49/C57 bladder cancer mice model | Ethnopharmacological relevance: Ganoderma lucidum (GL) has been traditionally used in oriental medicine as superior health tonic, and there are numero |
| September 01, 2018 | Biomimetic O₂-Evolving metal-organic framework nanoplatform for highly efficient photodynamic therapy against hypoxic tumor | Improving the supply of O ₂ and the circulation lifetime of photosensitizers for photodynamic therapy (PDT) in vivo would be a promising approach to el |
| September 01, 2018 | Combined application of Indocyanine green (ICG) and laser lead to targeted tumor cell destruction | Purpose: Precise excision of neuroblastoma is challenging, especially when tumors adhere to vital structures. |
| August 24, 2018 | Alterations in Sod2-induced oxidative stress affect endocrine cancer progression | Although significant advances have been made in understanding the genetics of endocrine tumors, cellular physiology is relatively understudied as a de |
| July 24, 2018 | Four-class tumor staging for early diagnosis and monitoring of murine pancreatic cancer using magnetic resonance and ultrasound | Background. |
| June 19, 2018 | The oncolytic Adenovirus XVir-N-31 as a novel therapy in muscle-invasive bladder cancer | Muscle invasive bladder cancer represents approximately 25% of patients diagnosed with bladder cancer and carries a significant risk of death. |
| June 08, 2018 | Deletion of Rap1b, but not Rap1a or Epac1, reduces PKA-mediated thyroid cancer | Background: Thyroid cancer is an emerging health problem in the United States and Worldwide. |
| May 28, 2018 | A Tumor Vascular-Targeted Interlocking Trimodal Nanosystem That Induces and Exploits Hypoxia | Vascular-targeted photodynamic therapy (VTP) is a recently approved strategy for treating solid tumors. |

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| May 19, 2018 | Treatment of SEC62 over-expressing tumors by Thapsigargin and Trifluoperazine | Treatment with analogues of the SERCA-inhibitor Thapsigargin is a promising new approach for a wide variety of cancer entities. |
| May 11, 2018 | Impact of Age on Disease Progression and Microenvironment in Oral Cancer | Despite the recognized link between aging and cancer, most preclinical studies in experimental tumor models are conducted with 6- to 8-wk-old rodents. |
| May 01, 2018 | Histidine-rich glycoprotein-induced vascular normalization improves EPR-mediated drug targeting to and into tumors | Tumors are characterized by leaky blood vessels, and by an abnormal and heterogeneous vascular network. |
| May 01, 2018 | A TRAMP-derived orthotopic prostate syngeneic (TOPS) cancer model for investigating anti-tumor treatments | Background: Patients with advanced prostate cancer have limited curative options, therefore new treatments are needed. |
| April 23, 2018 | Monitoring circulating prostate cancer cells by in vivo flow cytometry assesses androgen deprivation therapy on metastasis | It remains controversial whether surgical castration prolongs survival rate and improves therapy prospects in patients suffering from prostate cancer. |
| April 22, 2018 | Biomimetic nanoparticles delivered hedgehog pathway inhibitor to modify tumour microenvironment and improved chemotherapy for pancreatic carcinoma | The unique tumour microenvironment (TM) of pancreatic ductal adenocarcinoma (PDA) including highly desmoplastic ECM and low tumour perfusion supports |
| April 20, 2018 | Magnetic resonance and photoacoustic imaging of brain tumor mediated by mesenchymal stem cell labeled with multifunctional nanoparticle introduced via carotid artery injection | OBJECTIVE: To evaluate the feasibility of visualizing bone marrow-derived human mesenchymal stem cells (MSCs) labeled with a gold-coated magnetic reso |
| April 19, 2018 | Quantifying solid stress and elastic energy from excised or in situ tumors | Solid stress, distinct from both tissue stiffness and fluid pressure, is a mechanical stress that is often elevated in both murine and human tumors. |
| April 07, 2018 | Utilizing High Resolution Ultrasound to Monitor Tumor Onset and Growth in Genetically Engineered Pancreatic Cancer Models | The LSL-KrasG12D/+; LSL-Trp53R172H/+; Pdx-1-Cre (KPC) mouse model represents an established and frequently used transgenic model to evaluate novel the |
| April 06, 2018 | Radiotherapy-Sensitized Tumor Photothermal Ablation Using γ-Polyglutamic Acid Nanogels Loaded with Polypyrrole | Development of versatile nanoscale platforms for cancer diagnosis and therapy is of great importance for applications in translational medicine. |
| April 01, 2018 | A Yolk-Shell Nanoplatform for Gene-Silencing-Enhanced Photolytic Ablation of Cancer | Noninvasive near infrared (NIR) light responsive therapy is a promising cancer treatment modality; however, some inherent drawbacks of conventional ph |
| April 01, 2018 | The combined therapeutic effects of iodine 131-labeled multifunctional copper sulfide-loaded microspheres in treating breast cancer | Compared to conventional cancer treatment, combination therapy based on well-designed nanoscale platforms may offer an opportunity to eliminate tumors |
| March 01, 2018 | Deep Tumor Penetrating Bioparticulates Inspired Burst Intracellular Drug Release for Precision Chemo-Phototherapy | The relevance of personalized medicine has inspired research for individually concerted diagnosis and therapy. |
| March 01, 2018 | Thyroid-Specific PPARγ Deletion Is Benign in the Mouse | Peroxisome proliferator-activated receptor γ (PPAR γ) is widely expressed at low levels and regulates many physiological processes. |
| February 23, 2018 | MicroRNA-378 enhances radiation response in ectopic and orthotopic implantation models of glioblastoma | Glioblastoma multiforme (GBM) is the most common and highly malignant primary brain tumor, which is virtually incurable due to its therapeutic resista |

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| February 23, 2018 | Primary Immunoprevention of Epithelial Ovarian Carcinoma by Vaccination against the Extracellular Domain of Anti-Müllerian Hormone Receptor II | Epithelial ovarian carcinoma (EOC) is the most prevalent form of ovarian cancer in the United States, representing approximately 85% of all cases and |
| February 13, 2018 | Multi-modality photoacoustic tomography, ultrasound, and light sheet microscopy for volumetric tumor margin detection | Current methods for breast tumor margin detection are invasive, time consuming, and typically result in a reoperative rate of over 25%. |
| February 01, 2018 | Biomimetic Copper Sulfide for Chemo-Radiotherapy: Enhanced Uptake and Reduced Efflux of Nanoparticles for Tumor Cells under Ionizing Radiation | Combined chemo-radiotherapy is one of most widely applied treatments for clinical cancer therapy. |
| January 31, 2018 | Design of Phase-Changeable and Injectable Alginate Hydrogel for Imaging-Guided Tumor Hyperthermia and Chemotherapy | The objective of the present study was to construct an alginate (AG)-based phase-changeable and injectable hydrogel for imaging-guided tumor hyperther |
| January 18, 2018 | The novel TRAIL-receptor agonist APG350 exerts superior therapeutic activity in pancreatic cancer cells | Tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) has raised attention as a novel anticancer therapeutic as it induces apoptosis prefer |
| January 01, 2018 | Role of Acid Sphingomyelinase and Ceramide in Mechano-Acoustic Enhancement of Tumor Radiation Responses | Background: High-dose radiotherapy (>8-10 Gy) causes rapid endothelial cell death via acid sphingomyelinase (ASMase)-induced ceramide production, resu |
| January 01, 2018 | Nuclear factor 90 promotes angiogenesis by regulating HIF-1α/VEGF-A expression through the PI3K/Akt signaling pathway in human cervical cancer article | © 2018 The Author(s). |
| January 01, 2018 | Multi-modal characterization of vasculature and nanoparticle accumulation in five tumor xenograft models | Preclinical research has demonstrated that nanoparticles and macromolecules can accumulate in solid tumors due to the enhanced permeability and retent |
| January 01, 2018 | Anti-angiogenic drug scheduling optimisation with application to colorectal cancer | Bevacizumab (bvz) is a first choice anti-angiogenic drug in oncology and is primarily administered in combination with chemotherapy. |
| January 01, 2018 | Tumour vascular shutdown and cell death following ultrasound-microbubble enhanced radiation therapy | High-dose radiotherapy effects are regulated by acute tumour endothelial cell death followed by rapid tumour cell death instead of canonical DNA break |
| January 01, 2018 | Radiation treatment monitoring with DCE-US in CWR22 prostate tumor xenografts. | Background Longitudinal monitoring of potential radiotherapy treatment effects can be determined by dynamic contrast-enhanced ultrasound (DCE-US). |
| January 01, 2018 | Preparation and Imaging Investigation of Dual-targeted C3F8-filled PLGA Nanobubbles as a Novel Ultrasound Contrast Agent for Breast Cancer | Molecularly-targeted contrast enhanced ultrasound (US) imaging is a promising imaging strategy with large potential for improving diagnostic accuracy |
| January 01, 2018 | Facile fabrication of highly photothermal-effective albumin-assisted gold nanoclusters for treating breast cancer | Gold nanoclusters (AuNCs) have been considered to be a promising candidate for hyperthermia-based anticancer therapy. |
| January 01, 2018 | Breast cancer cell-derived exosomes and macrophage polarization are associated with lymph node metastasis | Crosstalk between breast cancer and macrophages has potential implications for tumor metastasis. |
| January 01, 2018 | Targeting the NRG1/HER3 pathway in tumor cells and cancer-associated fibroblasts with an anti-neuregulin 1 antibody inhibits tumor growth in pre-clinical models of pancreatic cancer | Neuregulin 1 (NRG1), a ligand for HER3 and HER4 receptors, is secreted by both pancreatic tumor cells (PC) and cancer-associated fibroblasts (CAFs), t |

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| January 01, 2018 | An Easy-to-Fabricate Clearable CuS-Superstructure-Based Multifunctional Theranostic Platform for Efficient Imaging Guided Chemo-Photothermal Therapy | Despite drug delivery systems (DDSs) have been receiving ever-increasing attention, development of a simple, effective, sensitive and clearable drug d |
| January 01, 2018 | Serological biomarkers associate ultrasound characteristics of steatohepatitis in mice with liver cancer | Banana is the common name for herbaceous plants of the genus Musa and for the fruit they produce. It is one of the oldest cultivated plants. |
| January 01, 2018 | A novel mouse model of human prostate cancer to study intraprostatic tumor growth and the development of lymph node metastases | BACKGROUND: In this study, we aimed to establish a versatile in vivo model of prostate cancer, which adequately mimics intraprostatic tumor growth, an |
| January 01, 2018 | Preoperative measurement of cutaneous melanoma and nevi thickness with photoacoustic imaging | Photoacoustic imaging (PAI) is an emerging biomedical imaging technology, which can potentially be used in the clinic to preoperatively measure melano |
| January 01, 2018 | Phosphatidylserine targeted single-walled carbon nanotubes for photothermal ablation of bladder cancer | © 2017 IOP Publishing Ltd. |
| January 01, 2018 | Superselective Drug Delivery Using Doxorubicin-Encapsulated Liposomes and Ultrasound in a Mouse Model of Lung Metastasis Activation | Conventional treatment of lymph node metastasis involves dissection of the tumor and regional lymph nodes, but this may cause activation of latent met |
| January 01, 2018 | Natural antibody against neuroblastoma of TH-MYCN transgenic mice does not correlate with spontaneous regression | The mechanism underlying the spontaneous regression of neuroblastoma is unclear. |
| January 01, 2018 | Therapy-educated mesenchymal stem cells enrich for tumor initiating cells | Stromal cells residing in the tumor microenvironment contribute to the development of therapy resistance. |
| January 01, 2018 | Photoacoustic Imaging as an Early Biomarker of Radio Therapeutic Efficacy in Head and Neck Cancer | The negative impact of tumor hypoxia on radiotherapeutic efficacy is well recognized. |
| January 01, 2018 | Thyroid Cancer Detection by Ultrasound Molecular Imaging with SHP2-Targeted Perfluorocarbon Nanoparticles | Background . |
| January 01, 2018 | Perfusion Computer Tomography Assessment of the Effect of Angiotensin II On Blood Flow Distribution in Rabbits with Intrarenal VX2 Tumors | Background/Aims: Unlike other organs, which only have one set of capillary network, the renal microvasculature consists of two sets of capillary netwo |
| January 01, 2018 | Disseminated injection of vincristine-loaded silk gel improves the suppression of neuroblastoma tumor growth | Background: Advanced-stage neuroblastoma patients require multiagent chemotherapy. |
| January 01, 2018 | Thy1-Targeted Microbubbles for Ultrasound Molecular Imaging of Pancreatic Ductal Adenocarcinoma | Purpose: To engineer a dual human and murine Thy1-binding single-chain-antibody ligand (Thy1-scFv) for contrast microbubble-enhanced ultrasound mole |
| January 01, 2018 | Visualizing the effects of metformin on tumor growth, vascularity, and metabolism in head and neck cancer | © 2018 John Wiley & Sons A/S. |
| January 01, 2018 | MYC-family protein overexpression and prominent nucleolar formation represent prognostic indicators and potential therapeutic targets for aggressive high-MK1 neuroblastomas: A report from the children's oncology group | © Niemas-Teshiba et al. |
| January 01, 2018 | Au-PLGA Hybrid Nanoparticles with Catalase-Mimicking and near-Infrared Photothermal Activities for Photoacoustic Imaging-Guided Cancer Therapy | © 2018 American Chemical Society. Imaging-guided diagnosis and therapy has been highlighted in the area of nanomedicines. |
| January 01, 2018 | MiR-301a-3p Suppresses Estrogen Signaling by Directly Inhibiting ESR1 in ERα Positive Breast Cancer. | BACKGROUND/AIMS MiRNA-301a-3p is an oncogenic miRNA whose expression is associated with tumor development, metastases and overall poor prognosis. |

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| January 01, 2018 | Development and evaluation of a CEACAM6-targeting theranostic nanomedicine for photoacoustic-based diagnosis and chemotherapy of metastatic cancer | Metastasis is the leading cause of cancer-related deaths. |
| January 01, 2018 | Degradable rhenium trioxide nanocubes with high localized surface plasmon resonance absorbance like gold for photothermal theranostics | The applications of inorganic theranostic agents in clinical trials are generally limited to their innate non-biodegradability and potential long-term |
| January 01, 2018 | Hypoxia-specific therapeutic agents delivery nanotheranostics: A sequential strategy for ultrasound mediated on-demand tritherapies and imaging of cancer | The hypoxic microenvironment induced by sonodynamic therapy (SDT) via sonochemical oxygen consumption usually triggered tumor resistance to SDT, impeded |
| January 01, 2018 | Synthesis of Hollow Biom mineralized CaCO₃-Polydopamine Nanoparticles for Multimodal Imaging-Guided Cancer Photodynamic Therapy with Reduced Skin Photosensitivity | The development of activatable nanoplateforms to simultaneously improve diagnostic and therapeutic performances while reducing side effects is highly a |
| January 01, 2018 | [ASAP] Gadolinium Metallofullerene-Polypyrrole Nanoparticles for Activatable Dual-Modal Imaging-Guided Photothermal Therapy | Accurate diagnosis of tumor is promising to guide photothermal therapy (PTT) for efficacious tumor ablation with minimal damage to healthy tissues. |
| January 01, 2018 | Selective cancer treatment via photodynamic sensitization of hypoxia-responsive drug delivery | The precise and selective delivery of chemodrugs into tumors represents a critical requirement for anti- cancer therapy. |
| January 01, 2018 | Sensitization of Hypoxic Tumors to Radiation Therapy Using Ultrasound-Sensitive Oxygen Microbubbles | Purpose: Much of the volume of solid tumors typically exists in a chronically hypoxic microenvironment that has been shown to result in both chemother |
| January 01, 2018 | Early assessment of tumor response to radiation therapy using high-resolution quantitative microvascular ultrasound imaging | Measuring changes in tumor volume using anatomical imaging weeks to months post radiation therapy (RT) is currently the clinical standard for indicati |
| January 01, 2018 | Photoacoustic imaging of integrin-overexpressing tumors using a novel ICG-based contrast agent in mice | PhotoAcoustic Imaging (PAI) is a biomedical imaging modality currently under evaluation in preclinical and clinical settings. |
| January 01, 2018 | Molecular imaging of tumor photoimmunotherapy: Evidence of photosensitized tumor necrosis and hemodynamic changes | Near-infrared photoimmunotherapy (NIR PIT) employs the photoabsorbing dye IR700 conjugated to antibodies specific for cell surface epidermal growth fa |
| January 01, 2018 | Bacteria-like mesoporous silica-coated gold nanorods for positron emission tomography and photoacoustic imaging-guided chemo-photothermal combined therapy | Mesoporous silica nanoshell (MSN) coating has been demonstrated as a versatile surface modification strategy for various kinds of inorganic functional |
| January 01, 2018 | Biodegradable Hollow Mesoporous Organosilica Nanotheranostics for Mild Hyperthermia-Induced Bubble-Enhanced Oxygen-Sensitized Radiotherapy | Alleviation of tumor hypoxia has been the premise for improving the effectiveness of radiotherapy, which hinges upon the advanced delivery and rapid r |
| January 01, 2018 | One-pot synthesis of pH-responsive charge-switchable PEGylated nanoscale coordination polymers for improved cancer therapy | Nanoscale coordination polymers (NCPs) are promising nanomedicine platforms featured with biodegradability and versatile functionalities. |
| January 01, 2018 | Semi-Automated Segmentation of the Tumor Vasculature in Contrast-Enhanced Ultrasound Data | The vascular architecture in tumors contains relevant information for tumor classification and evaluation of therapy responses. |
| January 01, 2018 | Perfluorooctyl bromide & indocyanine green co-loaded nanoliposomes for enhanced multimodal imaging-guided phototherapy | As a highly biocompatible NIR dye, indocyanine green (ICG) has been widely explored for cancer treatment due to its various energy level transition pa |

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| January 01, 2018 | Tumor Evolution and Drug Response in Patient-Derived Organoid Models of Bladder Cancer | Bladder cancer is the fifth most prevalent cancer in the U.S., yet is understudied, and few laboratory models exist that reflect the biology of the hu |
| January 01, 2018 | Ultrasound Doppler as an Imaging Modality for Selection of Murine 4T1 Breast Tumors for Combination Radiofrequency Hyperthermia and Chemotherapy | Noninvasive radiofrequency-induced (RF) hyperthermia has been shown to increase the perfusion of chemotherapeutics and nanomaterials through cancer ti |
| January 01, 2018 | Chemotherapy and Radiofrequency-Induced Mild Hyperthermia Combined Treatment of Orthotopic Pancreatic Ductal Adenocarcinoma Xenografts | Patients with pancreatic ductal adenocarcinomas (PDAC) have one of the poorest survival rates of all cancers. |
| January 01, 2018 | 2D Ultrathin MXene-Based Drug-Delivery Nanoplatfom for Synergistic Photothermal Ablation and Chemotherapy of Cancer | Two-dimensional (2D) MXenes, as a new 2D functional material nanosystem, have been extensively explored for broad applications. |
| January 01, 2018 | Unfavorable effect of calcitriol and its low-calcemic analogs on metastasis of 4T1 mouse mammary gland cancer | Low vitamin D status is considered as a risk factor for breast cancer and has prognostic significance. |
| January 01, 2018 | A catalase-loaded hierarchical zeolite as an implantable nanocapsule for ultrasound-guided oxygen self-sufficient photodynamic therapy against pancreatic cancer | Photodynamic therapy (PDT) is an alternative strategy for treating pancreatic cancer (PC) in clinics. |
| January 01, 2018 | Complement 5a stimulates macrophage polarization and contributes to tumor metastases of colon cancer | Inflammatory cells such as macrophages can play a pro-tumorigenic role in the tumor stroma. |
| January 01, 2018 | Ultrasound beam steering of oxygen nanobubbles for enhanced bladder cancer therapy | New intravesical treatment approaches for bladder cancer are needed as currently approved treatments show several side effects and high tumor recurren |
| January 01, 2018 | Motion model ultrasound localization microscopy for preclinical and clinical multiparametric tumor characterization | Super-resolution imaging methods promote tissue characterization beyond the spatial resolution limits of the devices and bridge the gap between histop |
| January 01, 2018 | Photoacoustic imaging of tumour vascular permeability with indocyanine green in a mouse model | Background: We analysed the haemodynamics of indocyanine green (ICG) in mouse organs and tumours and evaluated responses to anti-angiogenic agents in |
| January 01, 2018 | In vitro and in vivo evaluation of etoposide - silk wafers for neuroblastoma treatment | High-risk neuroblastoma requires surgical resection and multi-drug chemotherapy. |
| January 01, 2018 | Iodinated Echogenic Glycol Chitosan Nanoparticles for X-ray CT/US Dual Imaging of Tumor | Development of biopolymer-based imaging agents which can access rapidly and provide detailed information about the diseases has received much attentio |
| January 01, 2018 | Cranial irradiation increases tumor growth in experimental breast cancer brain metastasis | © 2018 John Wiley & Sons, Ltd. |
| January 01, 2018 | A laser-activated multifunctional targeted nanoagent for imaging and gene therapy in a mouse xenograft model with retinoblastoma Y79 cells | Retinoblastoma (RB) is the most common intraocular malignancy of childhood that urgently needs early detection and effective therapy methods. |
| January 01, 2018 | Endoglin targeted contrast enhanced ultrasound imaging in hepatoblastoma xenografts | Angiogenesis is required for the growth of hepa- toblastoma (HB). |
| January 01, 2018 | Acidic pH-responsive polymer nanoparticles as a TLR7/8 agonist delivery platform for cancer immunotherapy | Synthetic imidazoquinoline-based toll-like receptor (TLR) 7/8 bi-specific agonists are promising vaccine adjuvants that can induce maturation of dendr |

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| January 01, 2018 | Generation and testing of clinical-grade exosomes for pancreatic cancer | Exosomes are extracellular vesicles produced by all cells with a remarkable ability to efficiently transfer genetic material, including exogenously lo |
| January 01, 2018 | Generation of multiparametric MRI maps by using Gd-labelled- RBCs reveals phenotypes and stages of murine prostate cancer | Prostate Cancer (PCa) is the second most common and fifth cause of cancer-related mortality in males in Western Countries. |
| December 27, 2017 | In Vitro and In Vivo Comparison of Gemcitabine and the Gemcitabine Analog 1-(2'-deoxy-2'-fluoroarabinofuranosyl) Cytosine (FAC) in Human Orthotopic and Genetically Modified Mouse Pancreatic Cancer Models | Purpose: Although gemcitabine is a mainstay of pancreatic cancer therapy, it is only moderately effective, and it would be desirable to measure drug u |
| December 17, 2017 | Validation of Bevacizumab Therapy Effect on Colon Cancer Subtypes by Using Whole Body Imaging in Mice | Purpose: Preclinical imaging offers a useful tool for monitoring cance |
| December 04, 2017 | Altering calcium influx for selective destruction of breast tumor | BACKGROUND: Human triple-negative breast cancer has limited therapeutic choices. Breast tumor cells have depolarized plasma membrane potential. |
| December 01, 2017 | Contrast enhanced ultrasound imaging can predict vascular-targeted photodynamic therapy induced tumor necrosis in small animals | Aims To evaluate the accuracy of contrast-enhanced ultrasound (CEUS) for monitoring tumor necrosis following WST-11 vascular targeted photodynamic the |
| November 02, 2017 | NOTCH3 regulates stem-to-mural cell differentiation in infantile hemangioma | Infantile hemangioma (IH) is a vascular tumor that begins with rapid vascular proliferation shortly after birth, followed by vascular involution in ea |
| November 01, 2017 | mTORC1 Couples Nucleotide Synthesis to Nucleotide Demand Resulting in a Targetable Metabolic Vulnerability | The mechanistic target of rapamycin complex 1 (mTORC1) supports proliferation through parallel induction of key anabolic processes, including protein, |
| October 05, 2017 | A cerebellar window for intravital imaging of normal and disease states in mice | The cerebellum is a prominent part of the vertebrate hindbrain that is critically involved in the regulation of important body functions such as movem |
| October 05, 2017 | Fibroblast activation protein augments progression and metastasis of pancreatic ductal adenocarcinoma | Pancreatic ductal adenocarcinomas (PDAs) are desmoplastic and can undergo epithelial-to-mesenchymal transition to confer metastasis and chemoresistanc |
| September 26, 2017 | Targeting CXCR4-dependent immunosuppressive Ly6C low monocytes improves antiangiogenic therapy in colorectal cancer | Antiangiogenic therapy with antibodies against VEGF (bevacizumab) or VEGFR2 (ramucirumab) has been proven efficacious in colorectal cancer (CRC) patie |
| August 06, 2017 | Radiolabeled pertuzumab for imaging of human epidermal growth factor receptor 2 expression in ovarian cancer | © 2017, Springer-Verlag Berlin Heidelberg. |
| August 01, 2017 | Measuring Absolute Blood Perfusion in Mice Using Dynamic Contrast-Enhanced Ultrasound | We investigated the feasibility of estimating absolute tissue blood perfusion using dynamic contrast-enhanced ultrasound (CEUS) imaging in mice. |
| July 01, 2017 | Cabozantinib Eradicates Advanced Murine Prostate Cancer by Activating Antitumor Innate Immunity | Several kinase inhibitors that target aberrant signaling pathways in tumor cells have been deployed in cancer therapy. |
| July 01, 2017 | Abstract 2833: Epithelial cell adhesion molecule (EpCAM) is associated with prostate cancer progression and chemo-/radio-resistance in vitro and in vivo | Aims: Prostate cancer (CaP) is the most common cancer in males in Australia which caused more than 3000 deaths in 2015. |
| July 01, 2017 | Drug "Pent-Up" in Hollow Magnetic Prussian Blue Nanoparticles for NIR-Induced Chemo-Photothermal Tumor Therapy with Trimodal Imaging | The study reports a biocompatible smart drug delivery system based on a doxorubicin (DOX) blending phase-change material of 1-pentadecanol loaded holl |

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| July 01, 2017 | Dielectric properties of the normal and malignant breast tissues in xenograft mice at low frequencies (100 Hz–1 MHz) | Previous studies have shown that dielectric properties of biological tissues can be imaged at high frequencies (50 MHz–20 GHz) to detect abnormalities |
| June 01, 2017 | Lanthanide-integrated supramolecular polymeric nanoassembly with multiple regulation characteristics for multidrug-resistant cancer therapy | Cancer treatment can in principle be enhanced by the synergistic effects of chemo- and nucleic acid-based combination therapies but the lack of effici |
| May 31, 2017 | Marriage of Albumin–Gadolinium Complexes and MoS₂ Nanoflakes as Cancer Theranostics for Dual-Modality Magnetic Resonance/Photoacoustic Imaging and Photothermal Therapy | The construction of safe and stable theranostics is beneficial to realize simultaneous cancer diagnosis and treatment. |
| May 15, 2017 | A Model-Based Personalized Cancer Screening Strategy for Detecting Early-Stage Tumors Using Blood-Borne Biomarkers | An effective cancer blood biomarker screening strategy must distinguish aggressive from nonaggressive tumors at an early, intervenable time. |
| May 04, 2017 | Development of prostate specific membrane antigen targeted ultrasound microbubbles using bioorthogonal chemistry | Prostate specific membrane antigen (PSMA) targeted microbubbles (MBs) were developed using bioorthogonal chemistry. |
| May 01, 2017 | Near-infrared photothermal therapy using EGFR-targeted gold nanoparticles increases autophagic cell death in breast cancer | Although triple negative breast cancer (TNBC) is a small percentage of all breast cancers, to date, TNBC is one of the most challenging types of breas |
| May 01, 2017 | Orthogonal near-infrared upconversion co-regulated site-specific O₂ delivery and photodynamic therapy for hypoxia tumor by using red blood cell microcarriers | Pre-existing hypoxia in tumors can result in an inadequate oxygen supply during photodynamic therapy (PDT), which in turn hampers photodynamic efficac |
| May 01, 2017 | A Smart Responsive Dual Aptamers-Targeted Bubble-Generating Nanosystem for Cancer Triplex Therapy and Ultrasound Imaging | The absence of targeted, single treatment methods produces low therapeutic value for treating cancers. |
| April 20, 2017 | Aptamer-mediated impairment of EGFR-integrin $\alpha\beta 3$ complex inhibits vasculogenic mimicry and growth of triple-negative breast cancers | Current treatment options for triple-negative breast cancers (TNBCs) is limited by the absence of well-defined biomarkers, excluding a targeted therap |
| April 03, 2017 | A novel treatment for metastatic lymph nodes using lymphatic delivery and photothermal therapy | Systemic delivery of an anti-cancer agent often leads to only a small fraction of the administered dose accumulating in target sites. |
| April 01, 2017 | In vivo photoacoustics and high frequency ultrasound imaging of mechanical high intensity focused ultrasound (HIFU) ablation | The thermal effect of high intensity focused ultrasound (HIFU) has been clinically exploited over a decade, while the mechanical HIFU is still largely |
| March 23, 2017 | Optimizing ultrasound molecular imaging of secreted frizzled related protein 2 expression in angiosarcoma | Secreted frizzled related protein 2 (SFRP2) is a tumor endothelial marker expressed in angiosarcoma. |
| March 16, 2017 | Ganetespib synergizes with cyclophosphamide to improve survival of mice with autochthonous tumors in a mutant p53-dependent manner | The DNA-alkylating cytotoxic agent cyclophosphamide (CTX) is commonly used in the clinic to treat hematological malignancies like lymphomas and leukem |
| March 13, 2017 | Optimizing non-invasive radiofrequency hyperthermia treatment for improving drug delivery in 4T1 mouse breast cancer model | Interactions of high-frequency radio waves (RF) with biological tissues are currently being investigated as a therapeutic platform for non-invasive ca |
| March 01, 2017 | Tumor angiogenesis of SCLC inhibited by decreased expression of FMOD via downregulating angiogenic factors of endothelial cells | Fibromodulin (FMOD), an ECM small leucine-rich proteoglycan (SLRP), was reported to promote angiogenesis not only during wound healing, but also in op |

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| March 01, 2017 | NH₄HCO₃ gas-generating liposomal nanoparticle for photoacoustic imaging in breast cancer | In this study, we have developed a biodegradable nanomaterial for photoacoustic imaging (PAI). |
| March 01, 2017 | Photoacoustic signal characterization of cancer treatment response: Correlation with changes in tumor oxygenation | Frequency analysis of the photoacoustic radiofrequency signals and oxygen saturation estimates were used to monitor the in-vivo response of a novel, t |
| February 28, 2017 | Magnetic Nanoliposomes as in Situ Microbubble Bombers for Multimodality Image-Guided Cancer Theranostics | Nanosized drug delivery systems have offered promising approaches for cancer theranostics. |
| February 01, 2017 | Enhancing the anti-multiple myeloma efficiency in a cancer stem cell xenograft model by conjugating the ABCG2 antibody with microbubbles for a targeted delivery of ultrasound mediated epirubicin | Background: Although multiple myeloma (MM) treatment has improved in the last decade, it remains largely incurable. |
| January 24, 2017 | Theranostic Liposomes with Hypoxia-Activated Prodrug to Effectively Destruct Hypoxic Tumors Post-Photodynamic Therapy | Photodynamic therapy (PDT), a noninvasive cancer therapeutic method triggered by light, would lead to severe tumor hypoxia after treatment. |
| January 17, 2017 | Matrix stiffening promotes a tumor vasculature phenotype | Tumor microvasculature tends to be malformed, more permeable, and more tortuous than vessels in healthy tissue, effects that have been largely attribu |
| January 01, 2016 | Enhanced photothermal therapy of biomimetic polypyrrole nanoparticles through improving blood flow perfusion | In this study, we reported a strategy to improve delivery efficiency of a long-circulation biomimetic photothermal nanoagent for enhanced photothermal |
| January 01, 2016 | inhibition of bone marrow-derived mesenchymal stem cells homing towards triple-negative breast cancer microenvironment using an anti-PDGFRβ aptamer | Bone marrow-derived mesenchymal stem cells (BM-MSCs) are shown to participate in tumor progression by establishing a favorable tumor microenvironment |
| January 01, 2016 | Two-Dimensional Tantalum Carbide (MXenes) Composite Nanosheets for Multiple Imaging-Guided Photothermal Tumor Ablation | MXenes, an emerging family of graphene-analogues two-dimensional (2D) materials, have attracted continuous and tremendous attention in many applicati |
| January 01, 2016 | Biological Evaluation of a Fluorescent-Imaging Agent for Medullary Thyroid Cancer in an Orthotopic Model | Context: The primary and definitive treatment of medullary thyroid cancer (MTC) is surgical re- section. |
| January 01, 2016 | The brain microenvironment mediates resistance in luminal breast cancer to PI3K inhibition through HER3 activation | Although targeted therapies are often effective systemically, they fail to adequately control brain metastases. |
| January 01, 2016 | Exosome as a Vehicle for Delivery of Membrane Protein Therapeutics, PH20, for Enhanced Tumor Penetration and Antitumor Efficacy | As biochemical and functional studies of membrane protein remain a challenge, there is growing interest in the application of nanotechnology to solve |
| January 01, 2016 | Tumor vasculature normalization by orally fed erlotinib to modulate the tumor microenvironment for enhanced cancer nanomedicine and immunotherapy | The abnormal tumor vasculature is one of key reasons that lead to the limited tumor perfusion as well as hypoxic and immunosuppressive tumor microenvi |
| January 01, 2016 | Albumin-Templated Manganese Dioxide Nanoparticles for Enhanced Radioisotope Therapy | Although nanoparticle-based drug delivery systems have been widely explored for tumor-targeted delivery of radioisotope therapy (RIT), the hypoxia zon |
| January 01, 2016 | Carbon ion radiotherapy: Impact of tumor differentiation on local control in experimental prostate carcinomas | To summarize the research activities of the "clinical research group heavy ion therapy", funded by the German Research Foundation (DFG, KFO 214), on t |

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| January 01, 2016 | Black hollow silicon oxide nanoparticles as highly efficient photothermal agents in the second near-infrared window for in vivo cancer therapy | Semiconductor nanoparticles with localized surface plasmon resonance (LSPR) have gained increasing interest due to their potential for use in nanomedicine |
| January 01, 2016 | Manipulation of variables in local controlled release vincristine treatment in neuroblastoma | Introduction Local drug delivery minimizes systemic toxicity while delivering high-dose chemotherapy for neuroblastoma patients. |
| January 01, 2016 | Photoacoustic-Guided Surgery with Indocyanine Green-Coated Superparamagnetic Iron Oxide Nanoparticle Clusters | A common cause of local tumor recurrence in brain tumor surgery results from incomplete surgical resection. |
| January 01, 2016 | PBCA-based polymeric microbubbles for molecular imaging and drug delivery | Microbubbles (MB) are routinely used as contrast agents for ultrasound (US) imaging. |
| January 01, 2016 | β-elemene regulates endoplasmic reticulum stress to induce the apoptosis of NSCLC cells through PERK/IRE1α/ATF6 pathway | Endoplasmic reticulum stress (ERs) has been regarded as an important cause for the pathogenesis of non-small-cell lung cancer (NSCLC). |
| January 01, 2016 | Protein disulfide isomerase a4 acts as a novel regulator of cancer growth through the procaspase pathway | Protein disulfide isomerase a4 (PDIA4) is implicated in the growth and death of tumor cells; however, its molecular mechanism and therapeutic potential |
| January 01, 2016 | Intrathymic injection of hematopoietic progenitor cells establishes functional T cell development in a mouse model of severe combined immunodeficiency | BACKGROUND Even though hematopoietic stem cell transplantation can be curative in patients with severe combined immunodeficiency, there is a need for |
| January 01, 2016 | Tissue-directed Implantation Using Ultrasound Visualization for Development of Biologically Relevant Metastatic Tumor Xenografts | Background: Advances in cancer therapeutics depend on reliable in vivo model systems. |
| January 01, 2016 | A Combination of Radiation and the Hypoxia-Activated Prodrug Evofosfamide (TH-302) is Efficacious against a Human Orthotopic Pancreatic Tumor Model | This study was designed to investigate the effect of single-dose radiation therapy (RT) in combination with evofosfamide (TH-302), a hypoxia-activated |
| January 01, 2016 | Reactive Oxygen Species (ROS)-Responsive Nanomedicine for RNAi Cancer Therapy | Although much effort has been dedicated to the development of efficient siRNA delivery for cancer therapy, delivery nanomaterials that can particularl |
| January 01, 2016 | Monitoring of Blood Vessel Density Using Contrast-Enhanced High Frequency Ultrasound May Facilitate Early Diagnosis of Lymph Node Metastasis | Time-dependent alterations in the ultrasonography characteristics of lymph nodes during early-stage metastasis have not been compared with those of tu |
| January 01, 2016 | Establishment of highly metastatic KRAS mutant lung cancer cell sublines in long-term three-dimensional low attachment cultures | Decreased cell-substratum adhesion is crucially involved in metastasis. |
| January 01, 2016 | Engineered Zn(II)-dipicolylamine-gold nanorod provides effective prostate cancer treatment by combining siRNA delivery and photothermal therapy | Combination cancer treatment has emerged as a critical approach to achieve remarkable anticancer effect. |
| January 01, 2016 | PSMA-targeted theranostic nanocarrier for prostate cancer | Herein, we report the use of a theranostic nanocarrier (Folate-HBPE(CT20p)) to deliver a therapeutic peptide to prostate cancer tumors that express PS |
| January 01, 2016 | Magnetically-actuated drug delivery device (MADDD) for minimally invasive treatment of prostate cancer: An in vivo animal pilot study | Background: The vast majority of prostate cancer presents clinically localized to the prostate without evidence of metastasis. |
| January 01, 2016 | Highly versatile SPION encapsulated PLGA nanoparticles as photothermal ablaters of cancer cells and as multimodal imaging agents | We have designed versatile polymeric nanoparticles with cancer cell specific targeting capabilities via aptamer conjugation after the successful encapsulation |

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| January 01, 2016 | Proteoglycan-targeting applied to hypoxia-activated prodrug therapy in chondrosarcoma: first proof-of-concept | Due to its abundant chondrogenic matrix and hypoxic tissue, chondrosarcoma is chemo- and radio-resistant. |
| January 01, 2016 | Bottom-up synthesis of WS 2 nanosheets with synchronous surface modification for imaging guided tumor regression | Two-dimensional transition metal dichalcogenides (TMDs) have been receiving great attention as NIR photothermal transducing agent in tumor phototherma |
| January 01, 2016 | Non-invasive monitoring of the therapeutic response in sorafenib-treated hepatocellular carcinoma based on photoacoustic imaging | PURPOSE: We investigated the changes of tissue oxygen saturation (sO ₂) in sorafenib-treated HCC (hepatocellular carcinoma) mouse models using photoacou |
| January 01, 2016 | Anti-RhoJ antibody functionalized Au@I nanoparticles as CT-guided tumor vessel-targeting radiosensitizers in patient-derived tumor xenograft model | The clinical success of radiotherapy is greatly hampered due to its intolerable off-target cytotoxicity induced by the high dose of radiation. |
| January 01, 2016 | Transposon mutagenesis identifies chromatin modifiers cooperating with Ras in thyroid tumorigenesis and detects ATXN7 as a cancer gene | Oncogenic RAS mutations are present in 15-30% of thyroid carcinomas. |
| January 01, 2016 | Inhibition of ROCK1 kinase modulates both tumor cells and stromal fibroblasts in pancreatic cancer | ROCK, or Rho-associated coiled coil-containing protein kinase, is a member of the AGC kinase family and has been shown to play a role in cell migratio |
| January 01, 2016 | Ultrasound-mediated delivery and distribution of polymeric nanoparticles in the normal brain parenchyma and melanoma metastases | The blood-brain barrier (BBB) prevents the passage of nearly all drugs into the brain, hindering brain cancer treatment. |
| January 01, 2016 | Targeting the tumour microenvironment with an enzyme-responsive drug delivery system for the efficient therapy of breast and pancreatic cancers | The development of novel therapeutic strategies allowing the destruction of tumour cells while sparing healthy tissues is one of the main challenges o |
| January 01, 2016 | Apple polyphenol decelerates bladder cancer growth involving apoptosis and cell cycle arrest in N-butyl-N-(4-hydroxybutyl) nitrosamine-induced experimental animal model | Apple polyphenol (AP) was found to possess the potential to prevent cancers. |
| January 01, 2016 | Polyaniline-loaded γ-polyglutamic acid nanogels as a platform for photoacoustic imaging-guided tumor photothermal therapy | We report the facile synthesis of polyaniline (PANI)-loaded γ -polyglutamic acid (γ -PGA) nanogels (NGs) for photoacoustic (PA) imaging-guided photother |
| January 01, 2016 | Spatiotemporal Optoacoustic Mapping of Tumor Hemodynamics in a Clinically Relevant Orthotopic Rabbit Model of Head and Neck Cancer | The purpose of this study was to investigate the usefulness of photoacoustic imaging (PAI) for spatiotemporal mapping of tumor hemodynamics in a rabbi |
| January 01, 2016 | Rational Design of Branched Nanoporous Gold Nanoshells with Enhanced Physico-Optical Properties for Optical Imaging and Cancer Therapy | Reported procedures on the synthesis of gold nanoshells with smooth surfaces have merely demonstrated efficient control of shell thickness and particl |
| January 01, 2016 | BSA-Bioinspired Gadolinium Hybrid-Functionalized Hollow Gold Nanoshells for NIRF/PA/CT/MR Quadmodal Diagnostic Imaging-Guided Photothermal/Photodynamic Cancer Therapy | Multimodal imaging guided synergistic therapy promises more accurate diagnosis and higher therapeutic efficiency than single imaging modality or their |
| January 01, 2016 | A triple-synergistic strategy for combinational photo/radiotherapy and multi-modality imaging based on hyaluronic acid-hybridized polyaniline-coated WS 2 nanodots | In this study, we report a strategy for integrating hyaluronic acid (HA), polyaniline (PANI), WS2 nanodots (WS2), and chlorin e6 (Ce6) into a single n |
| January 01, 2016 | Rational Design of Tumor Microenvironment-Activated Micelles for Programed Targeting of Breast Cancer Metastasis | The poor drug delivery to primary and metastatic tumors of breast cancer remains a great challenge for effective antimetastasis therapy. |

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| January 01, 2016 | Self-assembly of semiconducting-plasmonic gold nanoparticles with enhanced optical property for photoacoustic imaging and photothermal therapy | Although various noble metal and semiconducting molecules have been developed as photoacoustic (PA) agents, the use of semiconducting polymer-metal na |
| January 01, 2016 | CD8$\alpha\alpha$ intraepithelial lymphocytes arise from two main thymic precursors | TCR $\alpha\beta$ +CD4–CD8 α +CD8 β – intestinal intraepithelial lymphocytes (CD8 $\alpha\alpha$ IELs) are an abundant population of thymus-derived T cells that protect the gut bar |
| January 01, 2016 | Red blood cell membrane-camouflaged melanin nanoparticles for enhanced photothermal therapy | Photothermal therapy (PTT) has represented a promising noninvasive approach for cancer treatment in recent years. |
| January 01, 2016 | Experimental imaging in orthotopic renal cell carcinoma xenograft models: comparative evaluation of high-resolution 3D ultrasonography, in-vivo micro-CT and 9.4T MRI | In this study, we aimed to comparatively evaluate high-resolution 3D ultrasonography (hrUS), in-vivo micro-CT (μ CT) and 9.4T MRI for the monitoring of |
| January 01, 2016 | Ultra-small Iron-Gallic Acid Coordination Polymer Nanoparticles for Chelator-free Labeling of ^{64}Cu and Multimodal Imaging-guided Photothermal Therapy | Cancer nanotechnology has become the hot topic nowadays. |
| January 01, 2016 | Modeling the Iatrogenic Pancreatic Cancer Risk After Islet Autotransplantation in Mouse | Iatrogenic pancreatic cancer metastasis after islet infusion is a potential risk of islet autotransplantation performed after pancreatectomy. |
| January 01, 2016 | Ly6Clomonocytes drive immunosuppression and confer resistance to anti-VEGFR2 cancer therapy | Current anti-VEGF therapies for colorectal cancer (CRC) provide limited survival benefit, as tumors rapidly develop resistance to these agents. |
| January 01, 2016 | A Theranostic Nanoplatform: Triple-Model Imaging Guided Synergistic Cancer Therapy Based on Liposomes Conjugated Mesoporous Silica Nanoparticles | Mesoporous silica nanoparticles (MSNs) have long since been investigated to provide a versatile drug-delivery platform due to their multitudinous meri |
| January 01, 2016 | The chemokine scavenging receptor D6 / ACKR2 is a target of miR-146a in thyroid cancer | We have previously shown that miR-146a, a NF- κ B-regulated microRNA, is strongly expressed in human specimens and cell lines derived from anaplastic th |
| January 01, 2016 | Limiting the protein corona: A successful strategy for in vivo active targeting of anti-HER2 nanobody-functionalized nanostars | Gold nanoparticles hold great promise as anti-cancer theranostic agents against cancer by actively tar- getting the tumor cells. |
| January 01, 2016 | Optical clearing and fluorescence deep-tissue imaging for 3D quantitative analysis of the brain tumor microenvironment | © 2017 The Author(s) Background: Three-dimensional visualization of the brain vasculature and its interactions with surrounding cells may shed light o |
| January 01, 2016 | A Systems Biology Approach Identifies FUT8 as a Driver of Melanoma Metastasis | Association of aberrant glycosylation with melanoma progression is based mainly on analyses of cell lines. |
| January 01, 2016 | Detection and characterization of murine colitis and carcinogenesis by molecularly targeted contrast-enhanced ultrasound | AIM To study mucosal addressin cellular adhesion molecule-1 (MAdCAM-1) and vascular endothelial growth factor (VEGF)-targeted contrast enhanced ultras |
| January 01, 2016 | Nanoscale covalent organic polymers as a biodegradable nanomedicine for chemotherapy-enhanced photodynamic therapy of cancer | Recently, covalent-organic polymers (COPs), which covalently cross-link different types of organic molecules to form organic network structures, have |
| December 19, 2016 | Synthesis and functionalization of protease-activated nanoparticles with tissue plasminogen activator peptides as targeting moiety and diagnostic tool for pancreatic cancer | Background: Functionalized nanoparticles (NPs) are one promising tool for detecting specific molecular targets and combine molecular biology and nanot |

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| December 08, 2016 | PD L1 blockade enhances response of pancreatic ductal adenocarcinoma to radiotherapy | Pancreatic ductal adenocarcinoma (PDAC) is considered a non-immunogenic tumor, and immune checkpoint inhibitor monotherapy lacks efficacy in this disease. |
| December 06, 2016 | Mitochondrial Targeting of Metformin Enhances Its Activity against Pancreatic Cancer | Pancreatic cancer is one of the hardest-to-treat types of neoplastic diseases. |
| December 01, 2016 | Suppression of Tumor Growth and Muscle Wasting in a Transgenic Mouse Model of Pancreatic Cancer by the Novel Histone Deacetylase Inhibitor AR-42 | PURPOSE: Pancreatic ductal adenocarcinoma (PDAC) is the third leading cause of cancer death in the United States. |
| November 30, 2016 | Assessment of murine colorectal cancer by micro-ultrasound using three dimensional reconstruction and non-linear contrast imaging | The relatively low success rates of current colorectal cancer (CRC) therapies have led investigators to search for more specific treatments. |
| November 29, 2016 | Local checkpoint inhibition of CTLA-4 as a monotherapy or in combination with anti-PD1 prevents the growth of murine bladder cancer | ABSTRACT Checkpoint blockade of CTLA-4 results in long-lasting survival benefits in metastatic cancer patients. |
| October 24, 2016 | Quantitative assessment of pancreatic cancer precursor lesions in IHC-stained tissue with a tissue image analysis platform | Tissue image analysis (tIA) is emerging as a powerful tool for quantifying biomarker expression and distribution in complex diseases and tissues. |
| October 12, 2016 | Anti-VEGF therapy induces ECM remodeling and mechanical barriers to therapy in colorectal cancer liver metastases | The survival benefit of anti-vascular endothelial growth factor (VEGF) therapy in metastatic colorectal cancer (mCRC) patients is limited to a few months. |
| October 12, 2016 | Ultrasound Triggered Tumor Oxygenation with Oxygen-Shuttle Nanoperfluorocarbon to Overcome Hypoxia-Associated Resistance in Cancer Therapies | Tumor hypoxia is known to be one of the critical reasons that limit the efficacy of cancer therapies, particularly photodynamic therapy (PDT) and radiotherapy. |
| September 08, 2016 | Lack of immunoeediting in murine pancreatic cancer reversed with neoantigen | In carcinogen-driven cancers, a high mutational burden results in neoepitopes that can be recognized immunologically. |
| September 01, 2016 | Ultrasound-guided therapeutic modulation of hepatocellular carcinoma using complementary microRNAs | Treatment options for patients with hepatocellular carcinoma (HCC) are limited, in particular in advanced and drug resistant HCC. |
| August 17, 2016 | A Multimodal Imaging Approach for Longitudinal Evaluation of Bladder Tumor Development in an Orthotopic Murine Model | Bladder cancer is the fourth most common malignancy amongst men in Western industrialized countries with an initial response rate of 70% for the non-metastatic disease. |
| August 01, 2016 | Nanotherapy silencing the interleukin-8 gene produces regression of prostate cancer by inhibition of angiogenesis | Interleukin-8 (IL-8) is a proangiogenic cytokine associated with aggressive prostate cancer (CaP). |
| August 01, 2016 | Combination of Eribulin and Aurora A Inhibitor MLN8237 Prevents Metastatic Colonization and Induces Cytotoxic Autophagy in Breast Cancer | Recent findings suggest that the inhibition of Aurora A (AURKA) kinase may offer a novel treatment strategy against metastatic cancers. |
| August 01, 2016 | Functional Flow Patterns and Static Blood Pooling in Tumors Revealed by Combined Contrast-Enhanced Ultrasound and Photoacoustic Imaging | Alterations in tumor perfusion and microenvironment have been shown to be associated with aggressive cancer phenotypes, raising the need for noninvasive imaging techniques. |
| August 01, 2016 | Photoacoustic Imaging in Oncology: Translational Preclinical and Early Clinical Experience | Photoacoustic imaging has evolved into a clinically translatable platform with the potential to complement existing imaging techniques for the management of cancer. |
| June 20, 2016 | Preclinical efficacy of bevacizumab with CRLX101, an investigational nanoparticle-drug conjugate, in treatment of metastatic triple-negative breast cancer | VEGF-pathway targeting antiangiogenic drugs, such as bevacizumab, when combined with chemotherapy have changed clinical practice for the treatment of breast cancer. |

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| May 25, 2016 | Monitoring the Growth of an Orthotopic Tumour Xenograft Model: Multi-Modal Imaging Assessment with Benchtop MRI (1T), High-Field MRI (9.4T), Ultrasound and Bioluminescence | Background: Research using orthotopic and transgenic models of cancer requires imaging methods to non-invasively quantify tumour burden. |
| April 19, 2016 | Ang-2/VEGF bispecific antibody reprograms macrophages and resident microglia to anti-tumor phenotype and prolongs glioblastoma survival | Inhibition of the vascular endothelial growth factor (VEGF) pathway has failed to improve overall survival of patients with glioblastoma (GBM). |
| April 12, 2016 | High Resolution Ultrasound and Photoacoustic Imaging of Orthotopic Lung Cancer in Mice: New Perspectives for Onco-Pharmacology | Objectives: We have developed a relevant preclinical model associated with a specific imaging protocol dedicated to onco-pharmacology studies in mice. |
| April 07, 2016 | Combined Inhibition of Cyclin-Dependent Kinases (Dinaciclib) and AKT (MK-2206) Blocks Pancreatic Tumor Growth and Metastases in Patient-Derived Xenograft Models | KRAS is activated by mutation in the vast majority of cases of pancreatic cancer; unfortunately, therapeutic attempts to inhibit KRAS directly have been |
| February 01, 2016 | Squamous Cell Carcinoma Xenografts: Use of VEGFR2-targeted Microbubbles for Combined Functional and Molecular US to Monitor Antiangiogenic Therapy Effects | Purpose: To assess the ability of vascular endothelial growth factor receptor type 2 (VEGFR2)-targeted and nontargeted ultrasonography (US) to depict |
| February 01, 2016 | Cytosolic Phospholipase A 2 α Is Essential for Renal Dysfunction and End-Organ Damage Associated With Angiotensin II-Induced Hypertension | BACKGROUND: The kidney plays an important role in regulating blood pressure (BP). |
| February 01, 2016 | Monitoring Prostate Tumor Growth in an Orthotopic Mouse Model Using Three-Dimensional Ultrasound Imaging Technique | Prostate cancer (CaP) is the most commonly diagnosed and the second leading cause of death from cancer in males in USA. |
| February 01, 2016 | Preclinical Efficacy of Ado-trastuzumab Emtansine in the Brain Microenvironment | Background: Central nervous system (CNS) metastases represent a major problem in the treatment of human epidermal growth factor receptor 2 (HER2)-positi |
| January 01, 2015 | Ultrasound Molecular Imaging of the Breast Cancer Neovasculature using Engineered Fibronectin Scaffold Ligands: A Novel Class of Targeted Contrast Ultrasound Agent | Molecularly-targeted microbubbles (MBs) are increasingly being recognized as promising contrast agents for oncological molecular imaging with ultrasound |
| January 01, 2015 | Tumor priming using metronomic chemotherapy with neovasculature-targeted, Nanoparticulate paclitaxel | Normalization of the tumor microenvironment is a promising approach to render conventional chemotherapy more effective. |
| January 01, 2015 | Co-option of Liver Vessels and Not Sprouting Angiogenesis Drives Acquired Sorafenib Resistance in Hepatocellular Carcinoma | Background: The anti-angiogenic Sorafenib is the only approved systemic therapy for advanced hepatocellular carcinoma (HCC). |
| January 01, 2015 | Photoacoustic monitoring of tumor and normal tissue response to radiation | Hypoxia is a recognized characteristic of tumors that influences efficacy of radiotherapy (RT). |
| January 01, 2015 | Multifunctional Fe₃O₄ @ Au core/shell nanostars: a unique platform for multimode imaging and photothermal therapy of tumors | We herein report the development of multifunctional folic acid (FA)-targeted Fe ₃ O ₄ @ Au nanostars (NSs) for targeted multimode magnetic resonance (MR |
| January 01, 2015 | Sonoporation with Acoustic Cluster Therapy (ACT®) induces transient tumour volume reduction in a subcutaneous xenograft model of pancreatic ductal adenocarcinoma | Pancreatic ductal adenocarcinoma (PDAC) remains one of the deadliest cancers with survival averaging only 3 months if untreated following diagnosis. |
| January 01, 2015 | Nutrition Modulation of Cardiotoxicity and Anticancer Efficacy Related to Doxorubicin Chemotherapy by Glutamine and -3 Polyunsaturated Fatty Acids | BACKGROUND: Doxorubicin (DOX) has been one of the most effective antitumor agents against a broad spectrum of malignancies. |

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| January 01, 2015 | Ultrasound-guided photoacoustic imaging for the selective detection of EGFR-expressing breast cancer and lymph node metastases | We assessed the use of ultrasound (US)-guided photoacoustic imaging (PAI) and anti-EGFR antibody-conjugated gold nanorods (anti-EGFR-GNs) to non-inva |
| January 01, 2015 | Transdermal drug targeting and functional imaging of tumor blood vessels in the mouse auricle | Subcutaneously growing tumors are widely utilized to study tumor angiogenesis and the efficacy of antiangiogenic therapies in mice. |
| January 01, 2015 | High-Frequency Ultrasound-Guided Injection for the Generation of a Novel Orthotopic Mouse Model of Human Thyroid Carcinoma | Background: Thyroid carcinoma is the most common endocrine malignancy and has an increasing incidence. |
| January 01, 2015 | Photodynamic Therapy Synergizes with Irinotecan to Overcome Compensatory Mechanisms and Improve Treatment Outcomes in Pancreatic Cancer | The ability of tumor cells to adapt to therapeutic regimens by activating alternative survival and growth pathways remains a major challenge in cancer |
| October 27, 2015 | Tumor-Specific Formation of Enzyme-Instructed Supramolecular Self-Assemblies as Cancer Theranostics | Despite the effort of developing various nanodelivery systems, most of them suffer from undesired high uptakes by the reticuloendothelial system, such |
| September 02, 2015 | Multimodal imaging guided preclinical trials of vascular targeting in prostate cancer | // James Kalmuk 1, 4 , Margaret Folaron 1, 2 , Julian Buchinger 1, 5 , Roberto Pili 3 , Mukund Seshadri 1, 2 1 Department of Pharmacology and Therapeu |
| August 01, 2015 | Losartan treatment attenuates tumor-induced myocardial dysfunction | Fatigue and muscle wasting are common symptoms experienced by cancer patients. |
| July 16, 2015 | Mucin 1 is a potential therapeutic target in cutaneous T-cell lymphoma | Cutaneous T-cell lymphoma (CTCL) is an aggressive neoplasm with limited treatments for patients with advanced disease. |
| June 22, 2015 | Impaired Coronary and Renal Vascular Function in Spontaneously Type 2 Diabetic Leptin-Deficient Mice | Background: Type 2 diabetes is associated with macro- and microvascular complications in man. |
| June 15, 2015 | Breast Cancer Detection by B7-H3-Targeted Ultrasound Molecular Imaging | Ultrasound is a complimentary imaging modality to mammography in breast cancer detection in particular in patients with dense breast tissue, but is li |
| June 01, 2015 | A Cre-conditional MYCN-driven neuroblastoma mouse model as an improved tool for preclinical studies | Neuroblastoma, a childhood cancer that originates from neural crest-derived cells, is the most common deadly solid tumor of infancy. |
| May 01, 2015 | Ubiquinol reduces muscle wasting but not fatigue in tumor-bearing mice. | PURPOSE: Fatigue is the most common and distressing symptom reported by cancer patients during and after treatment. |
| April 30, 2015 | Effect of Sodium-Glucose Cotransport Inhibition on Polycystic Kidney Disease Progression in PCK Rats | The sodium-glucose-cotransporter-2 (SGLT2) inhibitor dapagliflozin (DAPA) induces glucosuria and osmotic diuresis via inhibition of renal glucose re |
| March 01, 2015 | Vascular Endothelial Growth Factor Receptor Type 2–targeted Contrast-enhanced US of Pancreatic Cancer Neovasculature in a Genetically Engineered Mouse Model: Potential for Earlier Detection | PURPOSE: To test ultrasonographic (US) imaging with vascular endothelial growth factor receptor type 2 (VEGFR2)-targeted microbubble contrast material |
| January 01, 2015 | High-Fat, High-Calorie Diet Enhances Mammary Carcinogenesis and Local Inflammation in MMTV-PyMT Mouse Model of Breast Cancer | Epidemiological studies provide strong evidence that obesity and the associated adipose tissue inflammation are risk factors for breast cancer; howeve |
| January 01, 2015 | Novel effects of simvastatin on uterine fibroid tumors: In vitro and patient-derived xenograft mouse model study | Objective Uterine leiomyomas represent a common gynecologic problem with no satisfactory long-term medical treatment. |

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| January 01, 2015 | Melanoma brain metastasis is independent of lactate dehydrogenase A expression. | BACKGROUND: The key metabolic enzyme lactate dehydrogenase A (LDHA) is overexpressed in many cancers, and several preclinical studies have shown encour |
| January 01, 2015 | Urine Stasis Predisposes to Urinary Tract Infection by an Opportunistic Uropathogen in the Megabladder (Mgb) Mouse | PURPOSE: Urinary stasis is a risk factor for recurrent urinary tract infection (UTI). |
| January 01, 2015 | Preclinical Pharmacologic Evaluation of Pralatrexate and Romidepsin Confirms Potent Synergy of the Combination in a Murine Model of Human T-cell Lymphoma | Purpose:T-cell lymphomas (TCLs) are aggressive diseases, which carry a poor prognosis. |
| January 01, 2015 | Quantitative Ultrasound Comparison of MAT and 4T1 Mammary Tumors in Mice and Rats Across Multiple Imaging Systems | Objectives—Quantitative ultrasound estimates such as the frequency-dependent backscatter coefficient (BSC) have the potential to enhance noninvasive t |
| January 01, 2015 | Phototheranostic Porphyrin Nanoparticles Enable Visualization and Targeted Treatment of Head and Neck Cancer in Clinically Relevant Models | Head and neck cancer is the fifth most common type of cancer worldwide and remains challenging for effective treatment due to the proximity to critica |
| January 01, 2015 | An orthotopic mouse model of laryngeal squamous cell carcinoma | Objective: This study aimed to create a reliable and reproducible orthotopic mouse model of laryngeal malignancy that recapitulates its biologic behav |
| January 01, 2015 | Erythropoietin accelerates the regeneration of ureteral function in a murine model of obstructive uropathy. | PURPOSE: Unilateral ureteral obstruction halts ureteral peristalsis, and may cause pain and lead to infection. |
| January 01, 2015 | Semaphorin 3D autocrine signaling mediates the metastatic role of annexin A2 in pancreatic cancer. | Most patients with pancreatic ductal adenocarcinoma (PDA) present with metastatic disease at the time of diagnosis or will recur with metastases after |
| January 01, 2015 | Collecting Duct-Derived Cells Display Mesenchymal Stem Cell Properties and Retain Selective In Vitro and In Vivo Epithelial Capacity. | We previously described a mesenchymal stem cell (MSC)-like population within the adult mouse kidney that displays long-term colony-forming efficiency, |
| January 01, 2015 | Comparison of Photoacoustically Derived Hemoglobin and Oxygenation Measurements with Contrast-Enhanced Ultrasound Estimated Vascularity and Immunohistochemical Staining in a Breast Cancer Model | In this preliminary study, we compared two noninvasive techniques for imaging intratumoral physiological conditions to immunohistochemical staining in |
| January 01, 2015 | Quantitative correlational study of microbubble-enhanced ultrasound imaging and magnetic resonance imaging of glioma and early response to radiotherapy in a rat model | Purpose: Radiotherapy remains a major treatment method for malignant tumors. |
| January 01, 2015 | Quantitative volumetric imaging of normal, neoplastic and hyperplastic mouse prostate using ultrasound | Abstract Background: Genetically engineered mouse models are essential to the investigation of the molecular mechanisms underlying human prostate path |
| January 01, 2015 | Induction of T-cell Immunity Overcomes Complete Resistance to PD-1 and CTLA-4 Blockade and Improves Survival in Pancreatic Carcinoma | Disabling the function of immune checkpoint molecules can unlock T-cell immunity against cancer, yet despite remarkable clinical success with monoclon |
| January 01, 2015 | Prediction of Tumor Recurrence and Therapy Monitoring Using Ultrasound-Guided Photoacoustic Imaging | Selection and design of individualized treatments remains a key goal in cancer therapeutics; prediction of response and tumor recurrence following a g |
| January 01, 2015 | Cell type-specific abundance of 4EBP1 primes prostate cancer sensitivity or resistance to PI3K pathway inhibitors | The activity of the PI3K-AKT-mTOR signaling pathway is often increased in various cancer types. |
| January 01, 2015 | Targeted Inhibition of Phosphoinositide 3-Kinase/Mammalian Target of Rapamycin Sensitizes Pancreatic Cancer Cells to Doxorubicin without Exacerbating Cardiac Toxicity. | Pancreatic cancer has the lowest 5-year survival rate of all major cancers despite decades of effort to design and implement novel, more effective tre |

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| January 01, 2015 | Prostaglandin E synthase is upregulated by Gas6 during cancer-induced venous thrombosis. | Venous thromboembolism (VTE) is a common complication of cancer. |
| August 08, 2014 | High-Resolution Ultrasound Allows Percutaneous Initiation and Surveillance of Prostate Cancer in an Orthotopic Murine Model | Introduction: Prostate cancer xenografts should prefer or- thotopic growth to subcutaneous tumors as the former more closely mimics the natural tumor |
| August 01, 2014 | Investigation and identification of etiologies involved in the development of acquired hydronephrosis in aged laboratory mice with the use of high-frequency ultrasound imaging | Laboratory mice develop naturally occurring lesions that affect biomedical research. |
| July 17, 2014 | Combination treatment with TRA-8 anti death receptor 5 antibody and CPT-11 induces tumor regression in an orthotopic model of pancreatic cancer. | PURPOSE: Evaluate the response of human pancreatic cancer cell lines and orthotopic tumors to TRA-8, an agonistic antibody to death receptor 5, in com |
| July 09, 2014 | Anti-VEGF therapy reduces intestinal inflammation in Endoglin heterozygous mice subjected to experimental colitis | Chronic intestinal inflammation is associated with pathological angiogenesis that further amplifies the inflammatory response. |
| July 01, 2014 | Tumor Microenvironment Regulates Metastasis and Metastasis Genes of Mouse MMTV-PymT Mammary Cancer Cells In Vivo | Metastasis is the primary cause of death in breast cancer patients, yet there are challenges to modeling this process in vivo. |
| June 01, 2014 | Comparison of dynamic contrast-enhanced MR, ultrasound and optical imaging modalities to evaluate the antiangiogenic effect of PF-03084014 and sunitinib | Noninvasive imaging has been widely applied for monitoring antiangiogenesis therapy in cancer drug discovery. |
| April 22, 2014 | Multifunctional Albumin–MnO 2 Nanoparticles Modulate Solid Tumor Microenvironment by Attenuating Hypoxia, Acidosis, Vascular Endothelial Growth Factor and Enhance Radiation Response | Insufficient oxygenation (hypoxia), acidic pH (acidosis), and elevated levels of reactive oxygen species (ROS), such as H ₂ O ₂ , are characteristic abnor |
| April 01, 2014 | 307 Orthotopic tumorgrafts in nude mice: A new method to study human prostate cancer | BACKGROUND. In vivo model systems in prostate cancer research that authentically reproduce tumor growth are still sparse. |
| March 01, 2014 | Ultrasound Molecular Imaging in a Human CD276 Expression-Modulated Murine Ovarian Cancer Model. | PURPOSE: To develop a mouse ovarian cancer model that allows modulating the expression levels of human vascular targets in mouse xenograft tumors and |
| February 01, 2014 | Translational therapeutics in genetically engineered mouse models of cancer. | Advances in knowledge of the molecular alterations of human cancers, refinements in technologies for the generation of genetically engineered mouse mo |
| January 01, 2014 | Generation of orthotopic patient-derived xenografts from gastrointestinal stromal tumor | BACKGROUND: Gastrointestinal stromal tumor (GIST) is the most common sarcoma and its treatment with imatinib has served as the paradigm for developing |
| January 01, 2014 | p53 constrains progression to anaplastic thyroid carcinoma in a Braf-mutant mouse model of papillary thyroid cancer | Anaplastic thyroid carcinoma (ATC) has among the worst prognoses of any solid malignancy. |
| January 01, 2014 | Routes of Delivery for CpG and Anti-CD137 for the Treatment of Orthotopic Kidney Tumors in Mice | We have found previously that the tumor cell lines, Renca (a renal cancer) and MC38 (a colon tumor) which had been injected subcutaneously in mice, co |
| January 01, 2014 | High-resolution imaging diagnosis and staging of bladder cancer: comparison between optical coherence tomography and high-frequency ultrasound. | A comparative study between 1.3-microm optical coherence tomography (OCT) and 40-MHz high-frequency ultrasound (HFUS) is presented to enhance imaging |
| January 01, 2014 | Safety and Chemopreventive Effect of Polyphenon E in Preventing Early and Metastatic Progression of Prostate Cancer in TRAMP Mice. | Prostate cancer treatment is often accompanied by untoward side effects. |

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| January 01, 2014 | Tumor-Associated Hyaluronan Limits Efficacy of Monoclonal Antibody Therapy | Despite tremendous progress in cancer immunotherapy for solid tumors, clinical success of monoclonal antibody (mAb) therapy is often limited by poorly |
| January 01, 2014 | Targeting cancer stem-like cells as an approach to defeating cellular heterogeneity in Ewing sarcoma. | Plasticity in cancer stem-like cells (CSC) may provide a key basis for cancer heterogeneity and therapeutic response. |
| January 01, 2014 | Quantitative Assessment of Cancer Vascular Architecture by Skeletonization of High-resolution 3-D Contrast-enhanced Ultrasound Images: Role of Liposomes and Microbubbles. | The accurate characterization and description of the vascular network of a cancer lesion is of paramount importance in clinical practice and cancer re |
| January 01, 2014 | Multiparametric Spectroscopic Photoacoustic Imaging of Breast Cancer Development in a Transgenic Mouse Model | OBJECTIVE: To evaluate the potential of multiparametric spectroscopic photoacoustic imaging using oxygen saturation, total hemoglobin, and lipid conte |
| January 01, 2014 | Active curcumin nanoparticles formed from a volatile microemulsion template | Mitochondria targeted phototherapy, including photodynamic therapy (PDT) and photothermal therapy (PTT), has excelled as an effective approach among o |
| January 01, 2014 | Silencing HoxA1 by intraductal injection of siRNA lipidoid nanoparticles prevents mammary tumor progression in mice. | With advances in screening, the incidence of detection of premalignant breast lesions has increased in recent decades; however, treatment options rema |
| December 18, 2013 | Ultrasound-guided intra-tumor injection of combined immunotherapy cures mice from orthotopic prostate cancer | Intra-tumor injection of immunotherapeutic agents is often the most effective, likely because of concomitant modification of tumor microenvironment. |
| November 15, 2013 | Crizotinib inhibits metabolic inactivation of gemcitabine in c-Met-driven pancreatic carcinoma. | Pancreatic ductal adenocarcinoma (PDAC) remains a major unsolved health problem. |
| November 06, 2013 | Selective Permeabilization of the Blood-Brain Barrier at Sites of Metastasis | BACKGROUND: Effective chemotherapeutics for primary systemic tumors have limited access to brain metastases because of the blood-brain barrier (BBB). |
| October 31, 2013 | Non-invasive Monitoring of Ultrasound-Stimulated Microbubble Radiation Enhancement Using Photoacoustic Imaging | Modulation of the tumour microvasculature has been demonstrated to affect the effectiveness of radiation, stimulating the search for anti-angiogenic a |
| October 01, 2013 | Phosphatidylserine-Targeting Antibody Induces M1 Macrophage Polarization and Promotes Myeloid-Derived Suppressor Cell Differentiation | Multiple tumor-derived factors are responsible for the accumulation and expansion of immune-suppress- sing myeloid-derived suppressor cells (MDSC) andM |
| July 23, 2013 | CTGF antagonism with mAb FG-3019 enhances chemotherapy response without increasing drug delivery in murine ductal pancreas cancer. | Pancreatic ductal adenocarcinoma (PDA) is characterized by abundant desmoplasia and poor tissue perfusion. |
| May 01, 2013 | Struvite Urolithiasis and Chronic Urinary Tract Infection in a Murine Model of Urinary Diversion | OBJECTIVE: To characterize the clinical course after cutaneous vesicostomy (CV) in megabladder (mgb ^{-/-}) mice with functional urinary bladder obstruc |
| April 01, 2013 | Rapid decrease in tumor perfusion following VEGF blockade predicts long-term tumor growth inhibition in preclinical tumor models. | Vascular endothelial growth factor (VEGF) is a key upstream mediator of tumor angiogenesis, and blockade of VEGF can inhibit tumor angiogenesis and de |
| April 01, 2013 | Enhanced Sonographic Imaging to Diagnose Lymph Node Metastasis: Importance of Blood Vessel Volume and Density | Lymph node size is an important variable in ultrasound diagnosis of lymph node metastasis. |

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| March 28, 2013 | Mitochondrial activation by inhibition of PDKII suppresses HIF1a signaling and angiogenesis in cancer | Most solid tumors are characterized by a metabolic shift from glucose oxidation to glycolysis, in part due to actively suppressed mitochondrial functi |
| March 26, 2013 | Ultrasound-Guided Intramural Inoculation of Orthotopic Bladder Cancer Xenografts: A Novel High-Precision Approach | Orthotopic bladder cancer xenografts are essential for testing novel therapies and molecular manipulations of cell lines in vivo. |
| January 01, 2013 | Intraluminal gel ultrasound and eco-color doppler: new tools for the study of colorectal cancer in mice. | AIM: Azoxymethane (AOM) is a potent carcinogen that induces colorectal cancer in mice. |
| January 01, 2013 | Progressive development of polycystic kidney disease in the mouse model expressing Pkd1 extracellular domain. | Autosomal dominant polycystic kidney disease (ADPKD) is characterized by slow progression of multiple cysts in both kidneys that lead to renal insuffi |
| January 01, 2013 | Bio-ink properties and printability for extrusion printing living cells | Angiogenesis is a common pathological characteristic of many solid tumors and vulnerable atherosclero- tic plaques. |
| January 01, 2013 | Pancreatic Cancer | Ultrasonography is a powerful imaging modality that enables noninvasive, real-time visualization of abdominal organs and tissues. |
| January 01, 2013 | Imaging of thyroid tumor angiogenesis with microbubbles targeted to vascular endothelial growth factor receptor type 2 in mice | BACKGROUND: To evaluate whether Contrast Enhanced Ultrasound (CEUS) with microbubbles (MBs) targeted to VEGFR-2 is able to characterize in vivo the VEG |
| January 01, 2013 | CHARACTERIZATION OF THYROID CANCER IN MOUSE MODELS USING HIGH-FREQUENCY QUANTITATIVE ULTRASOUND TECHNIQUES | Currently, the evaluation of thyroid cancer relies on the use of fine-needle aspiration biopsy, as noninvasive imaging methods do not provide suffice |
| January 01, 2013 | Molecular basis of renal adaptation in a murine model of congenital obstructive nephropathy. | Congenital obstructive nephropathy is a common cause of chronic kidney disease and a leading indication for renal transplant in children. |
| January 01, 2013 | Angiopoietin-2 functions as a Tie2 agonist in tumor models, where it limits the effects of VEGF inhibition. | The angiopoietins Ang1 (ANGPT1) and Ang2 (ANGPT2) are secreted factors that bind to the endothelial cell-specific receptor tyrosine kinase Tie2 (TEK) |
| January 01, 2013 | Earlier detection of breast cancer with ultrasound molecular imaging in a transgenic mouse model. | While there is an increasing role of ultrasound for breast cancer screening in patients with dense breast, conventional anatomical ultrasound lacks se |
| December 11, 2012 | Molecular application of spectral photoacoustic imaging in pancreatic cancer pathology | Spectral imaging is an advanced photoacoustic (PA) mode that can discern optical absorption of contrast agent(s) in the tissue micro-environment. |
| November 01, 2012 | The Vascular Disrupting Agent STA-9584 Exhibits Potent Antitumor Activity by Selectively Targeting Microvasculature at Both the Center and Periphery of Tumors | Vascular disrupting agents (VDAs) are an emerging class of therapeutics targeting the existing vascular network of solid tumors. |
| July 01, 2012 | In vitro and in vivo anticancer effects of destruxin B on human colorectal cancer. | AIM: The study of the anticancer effects of destruxin B (DB) is rare and its anticancer mechanism remains unknown. |
| June 01, 2012 | Assessment of endothelin-A receptor expression in subcutaneous and orthotopic thyroid carcinoma xenografts in vivo employing optical imaging methods. | Endothelin (ET) receptor dysregulation has been described in a number of pathophysiological processes, including cardiovascular disorders, renal failu |
| May 15, 2012 | Real-time monitoring of rare circulating hepatocellular carcinoma cells in an orthotopic model by in vivo flow cytometry assesses resection on metastasis. | The fate of circulating tumor cells (CTC) is an important determinant of metastasis and recurrence, which leads to most deaths in hepatocellular carci |

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| May 15, 2012 | Dinitroazetidines are a novel class of anticancer agents and hypoxia-activated radiation sensitizers developed from highly energetic materials. | In an effort to develop cancer therapies that maximize cytotoxicity, while minimizing unwanted side effects, we studied a series of novel compounds ba |
| May 15, 2012 | Dependence of Wilms tumor cells on signaling through insulin-like growth factor 1 in an orthotopic xenograft model targetable by specific receptor inhibition | We have previously demonstrated an increased DNA copy number and expression of IGF1R to be associated with poor outcome in Wilms tumors. |
| April 01, 2012 | Vascular Normalization by Loss of Siah2 Results in Increased Chemotherapeutic Efficacy | Tumor hypoxia is associated with resistance to antiangiogenic therapy and poor prognosis. |
| March 12, 2012 | Gamma secretase inhibition promotes hypoxic necrosis in mouse pancreatic ductal adenocarcinoma. | Pancreatic ductal adenocarcinoma (PDA) is a highly lethal disease that is refractory to medical intervention. |
| March 01, 2012 | Oral infusion of pomegranate fruit extract inhibits prostate carcinogenesis in the TRAMP model. | We earlier provided evidence that oral consumption of pomegranate fruit extract (PFE) inhibits prostate cancer (PCa) cell growth in nude mice. |
| March 01, 2012 | Low-dose metronomic oral dosing of a prodrug of gemcitabine (LY2334737) causes antitumor effects in the absence of inhibition of systemic vasculogenesis. | Metronomic chemotherapy refers to the close, regular administration of conventional chemotherapy drugs at relatively low, minimally toxic doses, with |
| February 15, 2012 | Optical imaging with her2-targeted affibody molecules can monitor hsp90 treatment response in a breast cancer xenograft mouse model. | PURPOSE: To determine whether optical imaging can be used for in vivo therapy response monitoring as an alternative to radionuclide techniques. |
| January 01, 2011 | A Polymeric Nanoparticle Encapsulated Small-Molecule Inhibitor of Hedgehog Signaling (NanoHHI) Bypasses Secondary Mutational Resistance to Smoothed Antagonists | Aberrant activation of the hedgehog (Hh) signaling pathway is one of the most prevalent abnormalities in human cancer. |
| January 01, 2011 | Experimental orthotopic prostate tumor in nude mice: Techniques for local cell inoculation and three-dimensional ultrasound monitoring | Objectives: Orthotopic prostate cancer models are of great importance for cancer research. Orthotopic models in mice have been described previously. |
| January 01, 2011 | Modulation of the tumor microvasculature by phosphoinositide-3 kinase inhibition increases doxorubicin delivery in vivo. | PURPOSE: Because effective drug delivery is often limited by inadequate vasculature within the tumor, the ability to modulate the tumor microenvironment |
| January 01, 2011 | A comparison between detectors of high frequency oscillations | Objective—High frequency oscillations (HFOs) are a biomarker of epileptogenicity. |
| January 01, 2011 | Tumor development, growth characteristics and spectrum of genetic aberrations in the TH-MYCN mouse model of neuroblastoma. | BACKGROUND: The TH-MYCN transgenic neuroblastoma model, with targeted MYCN expression to the developing neural crest, has been used to study neuroblas |
| December 06, 2011 | Imaging guided trials of the angiogenesis inhibitor sunitinib in mouse models predict efficacy in pancreatic neuroendocrine but not ductal carcinoma. | Preclinical trials in mice represent a critical step in the evaluation of experimental therapeutics. |
| December 01, 2011 | Monitoring antivasular therapy in head and neck cancer xenografts using contrast-enhanced MR and US imaging. | BACKGROUND: The overall goal of this study was to non-invasively monitor changes in blood flow of squamous cell carcinoma of the head and neck (SCCHN) |
| December 01, 2011 | Innate immune responses to Pseudomonas aeruginosa infection | Selective inhibition of oncogenic targets and associated signaling pathways forms the basis of personalized cancer medicine. |
| November 15, 2011 | Volumetric and Angiogenic Evaluation of Antitumor Effects with Acoustic Liposome and High-Frequency Ultrasound | Acoustic liposomes (AL) have their inherent echogenicity and can add functionality in serving as drug carriers with tissue specificity. |

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| September 27, 2011 | Monitoring transplanted islets by high-frequency ultrasound | Islet transplantation is a cell replacement therapy to improve glycometabolic control in type 1 diabetic patients. |
| September 15, 2011 | Mast Cell Targeting Hampers Prostate Adenocarcinoma Development but Promotes the Occurrence of Highly Malignant Neuroendocrine Cancers | Mast cells (MC) are c-Kit-expressing cells, best known for their primary involvement in allergic reactions, but recently reappraised as important play |
| August 01, 2011 | In vivo activity of combined PI3K/mTOR and MEK inhibition in a Kras(G12D);Pten deletion mouse model of ovarian cancer. | The phosphatidylinositol 3-kinase (PI3K)/Akt pathway is commonly dysregulated in human cancer, making it an attractive target for novel anticancer the |
| June 01, 2011 | Effects of a synthetic PEG-ylated Tie-2 agonist peptide on endotoxemic lung injury and mortality. | PURPOSE: To develop targeted molecular imaging probes for the noninvasive detection of breast cancer lymph node metastasis. |
| June 01, 2011 | In Vivo Targeted Contrast Enhanced Micro-Ultrasound to Measure Intratumor Perfusion and Vascular Endothelial Growth Factor Receptor 2 Expression in a Mouse Orthotopic Bladder Cancer Model | Purpose: We evaluated the feasibility of using targeted contrast enhanced micro-ultrasound imaging to assess intratumor perfusion and vascular endothe |
| June 01, 2011 | Mutationally Activated BRAFV600E Elicits Papillary Thyroid Cancer in the Adult Mouse | Mutated BRAF is detected in approximately 45% of papillary thyroid carcinomas (PTC). |
| June 01, 2011 | Proangiogenic factor PIGF programs CD11b(+) myelomonocytes in breast cancer during differentiation of their hematopoietic progenitors. | Tumor-mobilized bone marrow-derived CD11b(+) myeloid cells promote tumor angiogenesis, but how and when these cells acquire proangiogenic properties i |
| April 29, 2011 | Preclinical Models for Neuroblastoma: Establishing a Baseline for Treatment | BACKGROUND: Preclinical models of pediatric cancers are essential for testing new chemotherapeutic combinations for clinical trials. |
| April 21, 2011 | In Vivo High-Frequency, Contrast-Enhanced Ultrasonography of Uveal Melanoma in Mice: Imaging Features and Histopathologic Correlations | PURPOSE: To evaluate the usefulness of in vivo imaging of uveal melanoma in mice using high-frequency contrast-enhanced ultrasound (HF-CE-US) with 2D |
| April 01, 2011 | Magnitude of enhanced permeability and retention effect in tumors with different phenotypes: 89Zr-albumin as a model system. | UNLABELLED: Targeted nanoparticle-based technologies show increasing prevalence in radiotracer design. |
| April 01, 2011 | A perspective on vascular disrupting agents that interact with tubulin: preclinical tumor imaging and biological assessment. | The tumor microenvironment provides a rich source of potential targets for selective therapeutic intervention with properly designed anticancer agents |
| February 15, 2011 | Fes Tyrosine Kinase Expression in the Tumor Niche Correlates with Enhanced Tumor Growth, Angiogenesis, Circulating Tumor Cells, Metastasis, and Infiltrating Macrophages | Fes is a protein tyrosine kinase with cell autonomous oncogenic activities that are well established in cell culture and animal models, but its involv |
| February 01, 2011 | Potential Role of Coregistered Photoacoustic and Ultrasound Imaging in Ovarian Cancer Detection and Characterization | Currently, there is no adequate technology to detect early stage ovarian cancers. |
| February 01, 2011 | Pharmacokinetic modeling of tumor bioluminescence implicates efflux, and not influx, as the bigger hurdle in cancer drug therapy. | In vivo bioluminescence imaging is a powerful tool for assessing tumor burden and quantifying therapeutic response in xenograft models. |
| January 01, 2010 | Improved detection of regional melanoma metastasis using 18F-6-fluoro-N-[2-(diethylamino)ethyl] pyridine-3-carboxamide, a melanin-specific PET probe, by perilesional administration. | UNLABELLED: The efficacy of differing routes of administration of 18F-6-fluoro-N-[2-(diethylamino)ethyl] pyridine-3-carboxamide (18F-MEL050), a new be |
| January 01, 2010 | Assessment and Monitoring Tumor Vascularity With Contrast-Enhanced Ultrasound Maximum Intensity Persistence Imaging | Objectives: Contrast-enhanced ultrasound imaging is increasingly being used in the clinic for assessment of tissue vascularity. |

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| January 01, 2010 | Use of ultrasound biomicroscopy to evaluate induced ovarian follicular growth and ovulation in mice. | Recent advances in image technology, including significant gains in spatial resolution, have made realtime sequential ovarian evaluations possible in |
| January 01, 2010 | Development of an orthotopic human pancreatic cancer xenograft model using ultrasound guided injection of cells. | Mice have been employed as models of cancer for over a century, providing significant advances in our understanding of this multifaceted family of dis |
| January 01, 2010 | High-Resolution Ultrasound in Research of Mouse Orthotopic Glioma and Ultrasound-Guided Cell Implant | The purpose is to evaluate the feasibility of imaging mouse brain with high resolution ultrasound (HiRes US), and generation of mouse brain tumor (gli |
| December 01, 2010 | Pathogenesis of Renal Injury in the Megabladder Mouse: A Genetic Model of Congenital Obstructive Nephropathy | Congenital obstructive nephropathy (CON) is the most common cause of chronic renal failure in children, often leading to end stage renal disease. |
| October 01, 2010 | Anti-alpha_v integrin monoclonal antibody intetumumab enhances the efficacy of radiation therapy and reduces metastasis of human cancer xenografts in nude rats. | We previously reported that intetumumab (CNTO 95), a fully human anti- α_v integrin monoclonal antibody, is a radiosensitizer in mice with xenograft tum |
| April 01, 2010 | Correlation of quantified contrast-enhanced sonography with in vivo tumor response. | OBJECTIVE: The purpose of our study was to establish in vivo criteria for monitoring tumor treatment response using 3-dimensional (3D) volumetric gray |
| March 01, 2010 | IFN-beta restricts tumor growth and sensitizes alveolar rhabdomyosarcoma to ionizing radiation. | Ionizing radiation is an important component of multimodal therapy for alveolar rhabdomyosarcoma (ARMS). |
| March 01, 2010 | Targeted contrast-enhanced ultrasound imaging of tumor angiogenesis with contrast microbubbles conjugated to integrin-binding knottin peptides. | UNLABELLED: Targeted contrast-enhanced ultrasound imaging is increasingly being recognized as a powerful imaging tool for the detection and quantifica |
| January 01, 2009 | Antiangiogenic Cancer Therapy : Monitoring with Molecular US and a Clinically Translatable Contrast Purpose : Methods : Results : | Purpose: Materials and Methods: To develop and test human kinase insert domain receptor (KDR)-targeted microbubbles (MBs) (MB KDR) for imaging KDR at |
| January 01, 2009 | Correlation between 2- and 3- dimensional assessment of Tumor Volume and Vascular Density by Ultrasonography in a Transgenic mouse model of Mammary carcinoma | Objective. Visualization and quantification of angiogenesis are instrumental in development of antian- giogenic therapy. |
| December 08, 2009 | Complementarity of ultrasound and fluorescence imaging in an orthotopic mouse model of pancreatic cancer | BACKGROUND: Pancreatic cancer is a devastating disease characterized by dismal 5-year survival rates and limited treatment options. |
| October 01, 2009 | Morphological Ultrasound Microimaging of Thyroid in Living Mice | The objective of the study was to explore high-frequency ultrasound (HFUS) for noninvasive microimaging of thyroid in living mice. |
| September 15, 2009 | Inhibition of Tumor Growth Progression by Antiandrogens and mTOR Inhibitor in a Pten-Deficient Mouse Model of Prostate Cancer | Androgen receptors have been shown to play a critical role in prostate cancer. |
| June 12, 2009 | Inhibition of Hedgehog Signaling Enhances Delivery of Chemotherapy in a Mouse Model of Pancreatic Cancer | Pancreatic ductal adenocarcinoma (PDA) is among the most lethal human cancers in part because it is insensitive to many chemotherapeutic drugs. |
| May 01, 2009 | Sunitinib and PF-562,271 (FAK/Pyk2 inhibitor) effectively block growth and recovery of human hepatocellular carcinoma in a rat xenograft model. | EXPERIMENTAL DESIGN: To investigate the antitumor effect of sunitinib and FAK/Pyk2 tyrosine kinase inhibitor (PF-562,271)combination therapy in vivo, |

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| March 15, 2009 | Quantitative ultrasound characterization of responses to radiotherapy in cancer mouse models. | PURPOSE: Currently, no imaging modality is used routinely to assess tumor responses to radiotherapy within hours to days after the delivery of treatment |
| January 01, 2009 | High-resolution ultrasound biomicroscopy for monitoring ovarian structures in mice | BACKGROUND: Until recently, the limit of spatial resolution of ultrasound systems has prevented characterization of structures |
| December 23, 2008 | Comparison of mouse mammary gland imaging techniques and applications: Reflectance confocal microscopy, GFP Imaging, and ultrasound | BACKGROUND: Genetically engineered mouse models of mammary gland cancer enable the in vivo study of molecular mechanisms and signaling during development |
| December 01, 2008 | A method for assessing the microvasculature in a murine tumor model using contrast-enhanced ultrasonography. | OBJECTIVE: The purpose of this study was to develop a method for assessing tumor vascularity in a preclinical model of breast cancer using contrast-enhanced |
| November 15, 2008 | Molecular imaging of therapeutic response to epidermal growth factor receptor blockade in colorectal cancer. | PURPOSE: To evaluate noninvasive molecular imaging methods as correlative biomarkers of therapeutic efficacy of cetuximab in human colorectal cancer |
| September 01, 2008 | An orally bioavailable small-molecule inhibitor of Hedgehog signaling inhibits tumor initiation and metastasis in pancreatic cancer. | Recent evidence suggests that blockade of aberrant Hedgehog signaling can be exploited as a therapeutic strategy for pancreatic cancer. |
| September 01, 2008 | Dual-targeted Contrast Agent for US Assessment of Tumor Angiogenesis in Vivo | Purpose: To develop and validate a dual-targeted ultrasound imaging agent that attaches to both vascular endothelial growth factor receptor-2 (VEGFR2) |
| May 01, 2008 | Zebrafish as a Cancer Model | The zebrafish has developed into an important model organism for biomedical research over the last decades. |
| January 15, 2008 | Targeting Notch signaling in autoimmune and lymphoproliferative disease. | Patients with autoimmune lymphoproliferative syndrome (ALPS) and systemic lupus erythematosus (SLE) have T-cell dysregulation and produce abnormal, ac |
| December 01, 2007 | TRA-8 anti-DR5 monoclonal antibody and gemcitabine induce apoptosis and inhibit radiologically validated orthotopic pancreatic tumor growth. | PURPOSE: To evaluate agonistic TRA-8 monoclonal antibody to human death receptor 5 (DR5) and gemcitabine in vitro and in an orthotopic pancreatic cancer |
| August 01, 2007 | Detecting vascular changes in tumour xenografts using micro-ultrasound and micro-ct following treatment with VEGFR-2 blocking antibodies. | Blockade of vascular endothelial growth factor (VEGF) binding to its receptors on endothelial cells has been shown preclinically to induce tumour growth |
| July 17, 2007 | Ultrasound biomicroscopy permits in vivo characterization of zebrafish liver tumors | Zebrafish are a valuable vertebrate model to study carcinogenesis, but noninvasive imaging is challenging because adult fish are not transparent. |
| April 01, 2007 | A peptide conjugate of vitamin E succinate targets breast cancer cells with high ErbB2 expression. | Overexpression of erbB2 is associated with resistance to apoptosis. |
| March 15, 2007 | Functional neoangiogenesis imaging of genetically engineered mouse prostate cancer using three-dimensional power Doppler ultrasound. | We report the first application of high-frequency three-dimensional power Doppler ultrasound imaging in a genetically engineered mouse (GEM) prostate |
| January 01, 2007 | Endothelial Growth Factor Receptor | Objective. |

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| January 01, 2007 | Ovarian Volume Measurements in Mice with high resolution ultrasonography | The aim of our study was to evaluate the intraobserver and interobserver variability of ovarian volume measurements in mice with high-resolution 2-d |
| September 22, 2006 | Therapy-induced acute recruitment of circulating endothelial progenitor cells to tumors. | The contribution of bone marrow-derived circulating endothelial progenitor cells (CEPs) to tumor angiogenesis has been controversial, primarily because |
| September 15, 2006 | Rapamycin improves lymphoproliferative disease in murine autoimmune lymphoproliferative syndrome (ALPS). | Autoimmune lymphoproliferative syndrome (ALPS) is a disorder of abnormal lymphocyte survival caused by defective Fas-mediated apoptosis, leading to lymphoproliferation |
| July 14, 2006 | Transgenic expression of Angiopoietin 1 in the liver leads to changes in lymphatic and blood vessel architecture. | To investigate the possible role of the Angiopoietins in vessel remodelling, we overexpressed one of the angiopoietins, Angiopoietin-1 (Ang1), in the liver |
| May 21, 2006 | Volume measurement variability in three-dimensional high-frequency ultrasound images of murine liver metastases | The identification and quantification of tumour volume measurement variability is imperative for proper study design of longitudinal non-invasive imaging |
| May 05, 2006 | Nanosecond pulsed electric fields cause melanomas to self-destruct. | We have discovered a new, drug-free therapy for treating solid skin tumors. |
| April 01, 2006 | Targeted anti-vascular endothelial growth factor receptor-2 therapy leads to short-term and long-term impairment of vascular function and increase in tumor hypoxia. | Because antiangiogenic therapies inhibit the growth of new tumor-associated blood vessels, as well as prune newly formed vasculature, they would be expected to increase tumor hypoxia |
| November 01, 2005 | Establishment of a serum tumor marker for preclinical trials of mouse prostate cancer models. | Current prostate cancer research in both basic and preclinical trial studies employ genetically engineered mouse models. |
| November 01, 2005 | The use of three-dimensional ultrasound micro-imaging to monitor prostate tumor development in a transgenic prostate cancer mouse model. | Longitudinal studies of mouse cancer models required large cohorts since autopsy was the only reliable method to evaluate treatment efficacy. |
| June 15, 2005 | Three-dimensional high-frequency ultrasound imaging for longitudinal evaluation of liver metastases in preclinical models. | Liver metastasis is a clinically significant contributor to the mortality associated with melanoma, colon, and breast cancer. |