

June 25, 2021	Magnetic black phosphorus microbubbles for targeted tumor theranostics	Black phosphorus (BP) is attracting more and more interest for the biomedical application.
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
August 24, 2021	Targeted Micellar Phthalocyanine for Lymph Node Metastasis Homing and Photothermal Therapy in an Orthotopic Colorectal Tumor Model	Small-sized trastuzumab-targeted micelles (T-MP) were engineered using a surfactant-stripping approach that yielded concentrated phthalocyanines with
August 09, 2021	Cross-Modality Imaging of Murine Tumor Vasculature—a Feasibility Study	Tumor vasculature and angiogenesis play a crucial role in tumor progression. Their visualization is therefore of utmost importance to the community.
August 09, 2021	Iminodibenzyl redirected cyclooxygenase-2 catalyzed dihomog-γ-linolenic acid peroxidation pattern in lung cancer	Cyclooxygenase-2 (COX-2) is up-regulated by redox imbalance and is considered a target for cancer therapy.

July 07, 2021	DLL1 orchestrates CD8+ T cells to induce long-term vascular normalization and tumor regression	The immunosuppressive and hypoxic tumor microenvironment (TME) remains a major obstacle to impede cancer immunotherapy.
July 07, 2021	Low-dose X-ray enhanced tumor accumulation of theranostic nanoparticles for high-performance bimodal imaging-guided photothermal therapy	Background: Theranostic nanoparticles (NPs) have achieved rapid development owing to their capacity for personalized multimodal diagnostic imaging and
July 07, 2021	Molecular magnetic resonance imaging of Alpha-v-Beta-3 integrin expression in tumors with ultrasound microbubbles	Microbubbles (MB) are used as ultrasound (US) contrast agents and can be efficiently targeted against markers of angiogenesis and inflammation.
June 25, 2021	ROS-responsive liposomes with NIR light-triggered doxorubicin release for combinatorial therapy of breast cancer	Background: Reactive oxygen species (ROS)-responsive drug delivery systems (DDSs) are potential tools to minimize the side effects and substantially e
June 25, 2021	Dual mitigation of immunosuppression combined with photothermal inhibition for highly effective primary tumor and metastases therapy	T-cell based immune response can attack cancer cells formidably when certain immune checkpoint (e.g., PD-1/PD-L1) is blocked.
June 25, 2021	Dual-Stimuli-Responsive Nanotheranostics for Dual-Targeting Photothermal-Enhanced Chemotherapy of Tumor	Stimuli-responsive nanotheranostics have been widely explored for precision medicine.
June 21, 2021	Volumetric tumor delineation and assessment of its early response to radiotherapy with optical coherence tomography	Texture analyses of optical coherence tomography (OCT) images have shown initial promise for differentiation of normal and tumor tissues.
June 21, 2021	Instant Ultrasound-Evoked Precise Nanobubble Explosion and Deep Photodynamic Therapy for Tumors Guided by Molecular Imaging	Nanobubbles (NBs) have recently gained interest in cancer imaging and therapy due to the fact that nanoparticles with the size range of 1-1000 nm can
June 21, 2021	Tailored theranostic nanoparticles cause efficient ferroptosis in head and neck squamous cell carcinoma through a reactive oxygen species "butterfly effect"	Multidrug resistance (MDR) is the main reason of chemotherapy failure in head and neck squamous cell carcinoma (HNSCC) patients, leading to the worst
June 10, 2021	Targeted microbubbles carrying lipid-oil-nanodroplets for ultrasound-triggered delivery of the hydrophobic drug, Combretastatin A4	The hydrophobicity of a drug can be a major challenge in its development and prevents the clinical translation of highly potent anti-cancer agents.
June 10, 2021	FOSL1 promotes cholangiocarcinoma via transcriptional effectors that could be therapeutically targeted	Background & Aims: Cholangiocarcinoma (CCA) is a neoplasia of the biliary tract driven by genetic, epigenetic and transcriptional mechanisms.
June 09, 2021	Construction of Smart Nanotheranostic Platform Bi-Ag@PVP: Multimodal CT/PA Imaging-Guided PDT/PTT for Cancer Therapy	High-efficiency nanotheranostic agents with multimodal imaging guidance have attracted considerable interest in the field of cancer therapy.
June 09, 2021	A Pegylated Flavin Adenine Dinucleotide PEG Complex to Boost Immunogenic and Therapeutic Effects in a Liver Cancer Model	Flavin adenine dinucleotide (FAD) is engaged in several metabolic diseases.
June 09, 2021	Tuning band gap of MnO2 nanoflowers by Alkali metal doping for enhanced Ferroptosis/phototherapy synergism in Cancer	Due to the complexity and heterogeneity of tumors, the therapeutic effectiveness of monomodal phototherapy is still limited.
June 09, 2021	A metal protoporphyrin-induced nano-self-assembly for potentiating photothermal therapy by depleting antioxidant defense systems	Nanomaterial-mediated low-temperature photothermal therapy (PTT) by integrating photothermal agent and heat shock proteins (HSPs) inhibitor holds grea
June 07, 2021	Applications of the Chick Chorioallantoic Membrane as an Alternative Model for Cancer Studies	A variety of in vivo experimental models have been established for the studies of human cancer using both cancer cell lines and patient-derived xenogr

June 07, 2021	Development of a bispecific immune engager using a recombinant malaria protein	As an immune evasion and survival strategy, the Plasmodium falciparum malaria parasite has evolved a protein named VAR2CSA.
June 04, 2021	Targeting mitochondrial iron metabolism suppresses tumor growth and metastasis by inducing mitochondrial dysfunction and mitophagy	Deferoxamine (DFO) represents a widely used iron chelator for the treatment of iron overload.
June 04, 2021	Transmucosal Delivery of Self-Assembling Photosensitizer-Nitazoxanide Nanocomplexes with Fluorinated Chitosan for Instillation-Based Photodynamic Therapy of Orthotopic Bladder Tumors	Theoretically, on account of improved local bioavailability of photosensitizers and attenuated systemic phototoxicity, intravesical instillation-based
June 04, 2021	Oxygen and oxaliplatin-loaded nanoparticles combined with photo-sonodynamic inducing enhanced immunogenic cell death in syngeneic mouse models of ovarian cancer	Immunotherapy by stimulating the host immune system has been a promising therapeutic strategy for advanced ovarian cancer.
June 04, 2021	Sequential Release of Pooled siRNAs and Paclitaxel by Aptamer-Functionalized Shell-Core Nanoparticles to Overcome Paclitaxel Resistance of Prostate Cancer	Paclitaxel (PTX) is a first-line chemotherapeutic agent to treat prostate cancer (PCa), but a large number of patients acquired drug resistance after
June 04, 2021	Hollow Mesoporous Silica Nanoparticles Gated by Chitosan-Copper Sulfide Composites as Theranostic Agents for the Treatment of Breast Cancer	The combination of chemotherapy and photothermal therapy (PTT) into a single formulation has attracted increasing attention as a strategy for enhancin
June 04, 2021	PH-triggered poly(ethylene glycol)-poly(lactic acid/glycolic acid)/ croconaine nanoparticles-assisted multiplexed photoacoustic imaging and enhanced photothermal cancer therapy	The most advantageous and attractive property of photoacoustic imaging is its capability to visualize and differentiate multiple species according to
May 28, 2021	Targeting EphA2 suppresses hepatocellular carcinoma initiation and progression by dual inhibition of JAK1/STAT3 and AKT signaling	Hepatocellular carcinoma (HCC) remains one of the deadliest malignancies worldwide.
May 20, 2021	Development of an embedded multimodality imaging platform for onco-pharmacology using a smart anticancer prodrug as an example	Increasingly, in vivo imaging holds a strategic position in bio-pharmaceutical innovation.
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
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 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 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 (NMTC) 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	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.
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.
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	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 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
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 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 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 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.
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.
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 kina
November 03, 2020	Targeted theranostics of lung cancer: PD-L1-guided delivery of gold nanoprisms 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
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.

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 import
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 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 a
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 sur
October 01, 2020	Albumin-constrained large-scale synthesis of renal clearable ferrous sulfide quantum dots for T1-Weighted MR imaging and phototheranostics of tumors	Ultrasmall-sized iron-based nanoparticles are showing increasing potentials to be alternatives as T1-weighted magnetic resonance imaging (MRI) contras
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
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

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 dot
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.
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	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	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
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.
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	Biodegradable theranostic nanoplatfoms 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 nanoplatfoms have attracted widespread attention in preclinical res
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	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.
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.

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 therapy
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 eyes
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.
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 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 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 product
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 immunotherapy
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, immunosuppression
March 01, 2020	Cathodic protected Mn2+ by Na2WO3 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 monitoring of tumor
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 medicaments
March 01, 2020	Light-activated oxygen self-supplied starvation 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).
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.

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.
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	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
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	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	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 importa
January 01, 2020	Tumor Microenvironment Adaptable Nanoplatform 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	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	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	On-demand drug release nanoplatform 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
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 transparency 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	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	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	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	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	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	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	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	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	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	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 chemotherapy
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	Tumor-Specific Endogenous Fe II -Activated, MRI-Guided Self-Targeting Gadolinium-Coordinated Theranostic Nanoplatforms 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	"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	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	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	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	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	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	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	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	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	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	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	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.
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
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	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	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
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	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	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 microenvironment (TME), is an emerging target for tumor
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	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	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	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	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	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	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	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	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	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 Bi₂O₂Se Quantum Dots for Photoacoustic Imaging Guided Cancer Photothermal Therapy	As new 2D layered nanomaterials, Bi ₂ O ₂ Se nanoplates have unique semiconducting properties that can benefit biomedical applications.
January 01, 2020	Coordination-induced exfoliation to monolayer Bi-anchored MnB₂ 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	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	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	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	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	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	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	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	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	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	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	DLX1008 (brolucizumab), 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	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	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	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	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	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
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
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
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
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.
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
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	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
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
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 03, 2019	Abstract 2833: Epithelial cell adhesion molecule (EpCAM) is associated with prostate cancer progression and chemo-/radio-resistance in vitro and in vivo	Prostate cancer (CaP) is the most common cancer in males in Australia which caused more than 3000 deaths in 2015.
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	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	ABSTRAC T Multifunctional drug delivery nanoplatform (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	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	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	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	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	Oxygenated theranostic nanoplatfoms 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	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	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	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 o
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.
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} .
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	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	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	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	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	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	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	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	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 bladde
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	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	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	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	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
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
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 demon- strated 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.
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	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 progression
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.
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 veins
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	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 subset
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.
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
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 not
October 12, 2018	Sonodynamic Therapy on Intracranial Glioblastoma Xenografts Using Sinoporphyrin Sodium Delivered by Ultrasound with Microbubbles	—Sonodynamic therapy (SDT) is a promising noninvasive 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	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.
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
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.
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	Abstract 3109: 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.
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
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 prefere

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	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	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	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	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	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	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	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	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	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	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	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	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 Biomineralized CaCO₃-Polydopamine Nanoparticles for Multimodal Imaging-Guided Cancer Photodynamic Therapy with Reduced Skin Photosensitivity	The development of activatable nanoplatfoms to simultaneously improve diagnostic and therapeutic performances while reducing side effects is highly a
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	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	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	Endoglin targeted contrast enhanced ultrasound imaging in hepatoblastoma xenografts	Angiogenesis is required for the growth of hepa- toblastoma (HB).
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
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.
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	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
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	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 Nanoplatform 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	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	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	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	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	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	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	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	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	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	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	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.
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	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	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	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	[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	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	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	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	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	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
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 movement
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 chemoresistance
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) patients
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	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 hollow
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 efficacy
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 breast
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 efficacy

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 $\alpha\beta3$ 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
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	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	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	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
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	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 nanomedi
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	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 potentia
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	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	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	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 encaps
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	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	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	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	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	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 rabbit
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.
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	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	A Theranostic Nanoplatfrom: 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	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	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	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
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-κB-regulated microRNA, is strongly expressed in human specimens and cell lines derived from anaplastic th
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	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
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
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 dise
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 mon
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 critical reasons that limit the efficacy of cancer therapies, particularly photodynamic therapy (PDT) and radiothe
September 08, 2016	Lack of immunoediting 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
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 noninvasi
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 managem
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).
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
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 be
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	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)—posi
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	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

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 multi-mode 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 3months 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.
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
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
November 16, 2015	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
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	CutaneousT-cellymphoma(CTCL) is an aggressiveneoplasmwith 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	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	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	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 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	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	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
January 01, 2015	Prostaglandin E synthase is upregulated by Gas6 during cancer-induced venous thrombosis.	Venous thromboembolism (VTE) is a common complication of cancer.
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.
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 encou
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–MnO₂ 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	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.
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	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	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	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-suppressing myeloid-derived suppressor cells (MDSC) and M
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.
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	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	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	Pancreatic Cancer	Ultrasonography is a powerful imaging modality that enables noninvasive, real-time visualization of abdominal organs and tissues.
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 sufficie

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	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.
December 11, 2012	Molecular application of spectral photoacoustic imaging in pancreatic cancer pathology	Spectral imaging is an advanced photo-acoustic (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
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.
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	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
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.
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.
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-αv 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,
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 treatme
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 developm
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-en
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 c
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 canc
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 grow
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.
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 ly
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
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 imag
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 ex
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.