I am delighted to introduce this issue of the Stanford Cancer Institute Clinical Research Newsletter. This quarterly publication is designed to inform you about current clinical trials available at the NCI-designated Stanford Cancer Institute. Along with our own physician-led studies, which are unique to Stanford, we offer NCI Cooperative Group and industry sponsored trials.

This issue is devoted to our innovative world-class programs in Radiology, Interventional Radiology, and Radiation Oncology. Each program is renowned for its leadership in its field, cutting edge treatments, research studies, and landmark scientific breakthroughs.

The Stanford Radiology Department is led by Sanjiv Sam Gambhir, MD, PhD, an internationally recognized leader in the field of multimodality molecular imaging. Stanford Radiology has one of the highest National Institutes of Health (NIH) funding rankings. It is also among the world’s leaders in creating imaging platforms for combined applications of CT, MR, PET, molecular imaging, nanotechnology, and bioinformatics. Stanford Radiology’s primary goal is early detection of disease. The article describes our advanced imaging capabilities, and how these are applied in research studies to a range of different cancer disease groups.

Stanford Interventional Radiology is led by Division Chief Lawrence “Rusty” Hofmann, MD. Described as the ‘surgery’ of the new millennium, interventional procedures are developed and used to treat cancer with minimally invasive techniques, eliminating the need for open surgery, decreasing risk, reducing pain, and promoting a speedier recovery time. The enclosed article discusses Stanford’s state-of-the-art image-guided tumor treatments along with some of the division’s exciting trials and research.

The Stanford Department of Radiation Oncology is an international leader in its field with a long history of research breakthroughs from employing the first medical linear accelerator in 1955, through its recent advances in stereotactic body radiotherapy. Led by newly appointed Chair, Quynh-Thu Le, MD, the Department receives unparalleled NIH funding. Stanford Radiation Oncologists offer some of the most advanced treatments and research studies available, many of which reduce radiation received by healthy tissues.

As always, a listing of the Phase I and II trials from our Developmental Therapeutics Program is included. These early-phase trials using novel therapeutics are aimed at advanced cancers.

We hope that you will consider a Stanford Cancer Institute clinical trial when you deem it appropriate to refer a patient to an academic medical facility. We, in turn, will make every effort to deliver great care to your patient, keep you informed of the patient’s treatment and response, and if clinical trial treatment is not appropriate for your patient, return them to your care.

Beverly S. Mitchell, MD
George E. Becker Professor of Medicine
Director, Stanford Cancer Center Chair
The Stanford Radiology Department is a national leader in the performance of cutting edge translational research that advances early disease detection and personalized medicine using anatomical, functional, and molecular imaging.

GOALS AND OBJECTIVES

Radiology research:
- Advances medical imaging through sophisticated physics and engineering approaches
- Develops molecular imaging techniques and probes
- Combines image processing techniques with biocomputational tools
- Develops strategies to marry in vitro diagnostsWith in vivo imaging
- Investigates molecular mechanisms underlying cancer progression

One of the key goals of radiology research at Stanford is the early detection of disease.

RADIOLOGY RESEARCH HIGHLIGHTS; OVER 100 YEARS OF ACHIEVEMENT

For more than 100 years, Stanford’s Department of Radiology has been making contributions to medical and surgical advances through pioneering research, innovations in image-based patient care, and education.

Since 1904, Stanford Radiology has made scientific breakthroughs:
- Advancing imaging to cure Hodgkin’s disease
- Developing CT angiography for the examination of blood vessels throughout the body
- Pioneering technical advances to enhance MRI and CT scanners
- Establishing one of the world’s leading molecular imaging programs
- Cultivating innovative 3D imaging techniques to support more accurate diagnoses and improve communication of exam results to referring physicians and patients
- Developing computational and data integration solutions for the study of disease progression
- Developing strategies for the early detection of cancer including novel nanotechnologies

Stanford Radiology continues to make imaging discoveries. Department researchers have initiated 115 patents over the past five years.

nih-funded stanford radiology research centers and programs

Major multidisciplinary NIH-funded Radiology Research Centers and Programs at the Stanford Department of Radiology include:

• Center for Advanced Magnetic Resonance Technology at Stanford (CAMRT, G Glover PI) The CAMRT, located in the Richard M. Lucas Center for Imaging, brings together the expertise and talent of individuals from the Radiology Department’s Radiological Sciences Laboratory (RSL) and the Electrical Engineering Department’s Magnetic Resonance Systems Research Laboratory (MRSRL). This multidisciplinary group shares the common goals of developing innovative Magnetic Resonance Imaging and Spectroscopy (MRI/ MRS) techniques for fundamental anatomic, physiologic, and pathophysiologic studies.

• In Vivo Cellular and Molecular Imaging Program at Stanford (ICMIC, SS Gambhir PI) The ICMIC, one of 8 NIH-funded Specialized Programs of Research Excellence (SPOREs), emphasizes the application and extension of molecular imaging to translational research and clinical applications. The ICMIC at Stanford integrates successful pre-clinical work into clinical applications that:
  - exploit molecular imaging by extracting information from animal models and pre-clinical studies
  - provide new information on tumor diagnosis, initiation, progression, and responses to therapy
  - develop new imaging technologies

• Center for Cancer Nanotechnology Excellence and Translation (CCNE-T, SS Gambhir PI) The CCNE-T, one of 8 NCI-funded Centers of Cancer Nanotechnology Excellence (CCNeEs), brings together scientists and physicians from Stanford University, University of California Berkeley/Lawrence Berkeley National Lab, University of California Los Angeles, University of Southern California, and the Massachusetts Institute of Technology. Work of the CCNE-T expands on the concept that in vivo diagnostics, used in conjunction with in vitro diagnostics, can markedly impact cancer patient management. Utilizing nanotechnology, researchers aim to advance in vitro diagnostics through proteomic sensors, and in vivo diagnostics through nanotechnology for molecular imaging. The CCNE-T also brings together investigators in the Schools of Medicine and Engineering.

• Center for Cancer Systems Biology (CCSB, S Plewits PI)

The CCSB, one of 12 new NCI-funded Centers for Cancer Systems Biology, is a collaborative effort of faculty from the Schools of Medicine, Engineering, and Humanities & Sciences, with expertise ranging from molecular biology and oncology to mathematics, statistics, and computer science. CCSB focuses its research on the analysis of cancer as a complex system by merging experimental and computational methods. The group aims to discover molecular mechanisms underlying cancer progression by studying cancer as a complex biological system that is driven, in part, by impaired differentiation. CCSB’s overarching goal is to provide a better understanding of the differentiation and self-renewal properties of cancer to help identify molecular therapeutic targets and strategies to eradicate this disease, or at least, maintain it in a nonlethal state.

Early Detection Research Network (EDRN, SS Gambhir and J Brooks Co-PI’s)

The EDRN aims to improve current screening methods for prostate cancer by increasing the accuracy of detection and prognosis, and reducing the numbers of unnecessary surgeries. Prostate-specific antigen (PSA) testing currently serves as the test of choice to screen and manage prostate cancer. However, translating PSA scores is imperfect, frequently resulting in under or over-diagnosis. Better methods are needed for early and accurate detection and monitoring of prostate cancer. The EDRN, which leverages the CCNe and ICMIC, currently lead efforts to:

- Adapt magneto-nanosensors for multiplex analysis of blood-based biomarkers for prostate cancer detection and prognosis. This platform is far more sensitive and specific than current techniques.
- Adapt ultrasound technology using tumor angiogenesis-targeted microbubbles to image prostate cancer, an approach that will increase the accuracy of detection during the screening process.

With one of the highest National Institutes of Health (NIH) funding rankings in the country, Stanford Radiology is the only Radiology department in the US with multiple major NCI funded Research Centers and is also among the world’s leaders in creating imaging platforms for combined applications of CT, MR, PET, molecular imaging, nanotechnology, and bioinformatic technologies.

Led by Departmental Chair Sanjiv Sam Gambhir, MD, PhD, an international leader in the field of multimodality molecular imaging, Stanford Radiology focuses its research on a range of different disease groups that span bone, breast, head & neck, liver, kidney, lung, non-hodgkin’s lymphoma, and other disease sites.
CURRENT STUDIES INCLUDE

Multiple Sites
• Combined F18 and F18 FDG PET/CT for Evaluation of Malignancy (VAR0024)
• Biodistribution and Safety of the PET Probes [18F]FPRGD2 and [18F]FPRGD2 (VAR0047)
• 18 F-fluoride PET/CT versus 99mTc-NDP Scanning for Detecting Bone Metastases (BONE0002)

Lymphoma: Non-Hodgkin's, Diffuse Large B-Cell
• F7-PE/TCT vs. FDG PET/CT for Therapy Monitoring of Diffuse Large B-cell Lymphoma (Lymph0001)

Bone
• A Feasibility Study to Evaluate the Safety and Initial Effectiveness of ExAblate MR Guided Focused Ultrasound Surgery in the Treatment of Pain Resulting from Metastatic Bone Tumors with the ExAblate 2100 Conformal Bone System (BONE0007)
• A Pivotal Study to Evaluate the Effectiveness and Safety of ExAblate Treatment of Metastatic Bone Tumors for the Palliation of Pain in Patients Who are not Candidates for Radiation Therapy (BONE0005)

Breast
• High Resolution 3D Diffusion-weighted Breast MRI (BRS0013)
• Magnetic Resonance Imaging of Breast Cancer (BRSNSTU0004)
• A Prospective Study Evaluating Breast Density and the Role of Preoperative Mammography, Ultrasound, Elastography, and Magnetic Resonance Imaging in the Detection of Breast Cancer (BRSNSTU0004)
• Pilot Study to Determine Radiodiode Accumulation and Dosimetry in Breast Cancers Using 124I PET/CT (BRS0001)

Hepatobiliary
• Perfusion CT as a Predictor of Treatment Response in Patients with Hepatic Malignancies (HEP0031)
• A Phase 2b Randomized Single-Blinded Trial of JK-594 (Vacchina GM-CSF / TK-deactivated Virus Plus Best Supportive Care) Versus Placebo Plus Best Supportive Care in Patients with Advanced Hepatocellular Carcinoma Who Have Failed Sorafenib Treatment (HEP0039)
• Characterization of Focal Liver Lesions with Sorofluor-Enhanced Vascular Imaging: A Phase III, Intrapatiet Comparative Study versus Unenhanced Ultrasound Imaging (HEP0036)
• A Phase III Randomized, Double-Blind Trial of Chemotherapy with or without Sorafenib in Unresectable Hepatocellular Carcinoma (HCC) in Patients with and without Vascular Invasion (DRH) (ECOG1208)
• Phase 3 Prospective, Randomized, Blinded And Controlled Investigation Of Hepasphere/Quadrasphere Microspheres For Delivery Of Doxorbucin For The Treatment Of Hepatocellular Cancer (HEP0038)

Kidney
• Evaluating Sunitinib Therapy in Renal Cell Carcinoma Using F-18 FDG PET/CT and DCE MRI (FENAL0013)
• Impact of C-arm CT in Decreased Renal Function Undergoing TACE for Tx of Hepatocellular Carcinoma (HEP0035)

Lung & Respiratory Tract
• Detection of Serum Biomarkers for FDG-PET Positive Lung Nodules (LUN0045)

Pancreas
• Prognostic Value of Baseline CT Perfusion Parameters of Pancreatic Cancer for Patients Undergoing Stereotactic Body Radiotherapy or Surgical Resection (PANC0009)

Developmental Therapeutics

Phase 1 and 2 Studies for Multiple Cancers

- Directing Phase I and II trials of new tyrosine kinase inhibitors both as single agents and integrated with standard chemotherapies.
- Engaging in translational studies of molecular determinants of therapeutic response and toxicity.

Below is a sampling of currently available Phase 1 and 2 studies.

PHASE 1 STUDIES

Multiple Solid Tumor Sites
• A Phase I Dose Escalation Study to Evaluate the Safety and Tolerability of HGS1029 (AEG40826-2HCl) in Patients with Advanced Solid Tumors (VAR0031)

Lymphomas
• A Phase I Trial of an Anti-CD22 Monoclonal Antibody Conjugate DCD32980S in Relapsed or Refractory B-Cell Non-Hodgkin's Lymphomas (VAR0059)

PHASE 2 STUDIES

Ovarian Cancers
• A Phase 2 Study of Cabozantinib (XL-184), an Inhibitor of MET and VEGFR2, in Patients with Relapsed and Recurrent Ovarian Cancers (VAR0146)

Thymic Cancers
• A Phase 2 Study of Aminrubin in Relapsed or Refractory Thymic Malignancies (THOR0003)

Mantle Cell and Diffuse Large B-Cell Lymphomas
• Multicenter Phase 2 Study of Bruton's Tyrosine Kinase (Btk) Inhibitor, PCI-32765, in Relapsed or Refractory Mantle Cell Lymphoma (LYMHL0084)
• A Multicenter, Open-Label, Phase 2, Safety and Efficacy Study of the Bruton's Tyrosine Kinase (Btk) Inhibitor, PCI-32765, in Subjects with Relapsed or Refractory de novo Diffuse Large B-cell Lymphoma (LYMHL0088)

Gastric Cancers
• A Phase 2 Study of Capeclobabine, Carboplatin, and Bevacizumab for Metastatic or Unresectable Gastroesophageal Junction and Gastric Adenocarcinoma (G00002)

• highlighted studies are Stanford investigator initiated
Stanford Interventional Radiology (IR) is renowned for its translational research in developing methods for the delivery of safe, effective, and compassionate cancer care. Stanford is a world leader in IR, with research and clinical work recognized by peers and professional societies such as the Society of Interventional Radiology (SIR) and the Radiologic Society of North America (RSNA). Stanford IR has also been honored for its work with SIR-Spheres and TheraSphere, the only two radioembolization treatments currently available for the treatment of liver cancer.

IR RESEARCH — “CANCER TREATMENT OF THE NEW MILLENNIUM”

Led by Division Chief Lawrence “Rusty” Hofmann, MD, Stanford interventional radiologists conduct clinical trials and basic laboratory research to discover new ways of treating cancer. Described as the ‘surgery’ of the new millennium, interventional procedures are developed and used to treat cancer with minimally invasive techniques, eliminating the need for open surgery, decreasing risk, reducing pain, and promoting a speedier recovery time. Similarly, through interventional techniques, Stanford radiologists are able to deliver a localized therapeutic cytotoxic dose directly to the tumor site, reducing side effects including toxic dose to surrounding normal tissues.

Stanford IR investigates and provides image-guided tumor treatments that use:

- **Radioembolization**: A palliative therapy to treat both primary and metastatic tumors by injecting radioactive microspheres directly into the arteries that feed tumors allowing for a very high dose of radiation to be concentrated in tumors while limiting exposure to the surrounding normal tissues.
- **Chemoembolization**: A palliative, minimally invasive treatment for cancer involving the liver and other solid organs that is used for tumors that are not amenable to surgical intervention or radiofrequency ablation (RFA). Similar to radioembolization, chemoembolization delivers and traps a high dose of a chemotherapeutic drug directly in the tumor while depriving the tumor of its blood supply by blocking, or “embolizing,” the arteries feeding the tumor.
- **Radiofrequency ablation (RFA)**: A procedure that offers a nonsurgical, localized treatment to kill tumor cells with heat while sparing the surrounding healthy tissue. RFA ablation is performed on inoperable tumors. With an RFA probe inserted into the tumor, radiofrequency waves (similar to microwaves) are transmitted through the probe to the surrounding tumor producing enough heat to destroy the tumor.
- **Microwave ablation**: A newer technique that kills tumor cells with high temperatures using a microwave-emitting probe that is placed directly into the tumor. Because it is capable of higher temperature induction within the tumor, and yields faster ablation times, microwave ablation has the potential to treat larger tumors in the liver and may be the preferred approach for tumors situated near major blood vessels.
- **Cryoaulation**: An alternative method of killing tumor cells also using extreme temperature. A needle probe is inserted into the tumor and applies extreme cold to destroy tumor cells by freezing. The freezing process stops blood flow and induces tumor cell death. Cryoaulation may be used for tumors of the kidneys, lungs, and other body sites.

RESEARCH HIGHLIGHTS ENCOMPASS:

- Multicenter and Stanford-exclusive chemoembolization and radioembolization trials.
- Clinical trials:
  - studying the treatment of liver tumors using viruses engineered to kill cancer.
  - evaluating non-invasive pain palliation for cancer patients with metastases to bones.
  - focusing on the development of predictive models of vascular invasion in hepatocellular carcinoma through the integration of systematically extracted imaging characteristics and gene expression profiles.
- exploring new methods of tumor ablation, such as microwave ablation and high-intensity focused ultrasound.
- Biomarker and imaging studies to detect pre-cursors to blood clot development in the cancer patient population.
- Basic research on gene therapy delivery. Projects focus on nonviral methods of delivery, including VIPER, a method invented and patented in the IR basic science laboratory that utilizes novel combinations of FDA-approved agents.

CURRENT STUDIES INCLUDE

Bone
- A Pivotal Study to Evaluate the Effectiveness and Safety of ExAblate Treatment of Metastatic Bone Tumors for the Palliation of Pain in Patients Who are not Candidates for Radiation Therapy (BONE0003)
- A Feasibility Study to Evaluate the Safety and Initial Effectiveness of ExAblate MR Guided Focused Ultrasound Surgery in the Treatment of Pain Resulting from Metastatic Bone Tumors with the ExAblate 2100 Conformal Bone System (BONE0007)

Hepatology
- Phase II Study of Combination Stereotactic Body Radiotherapy (SBRT) with Transarterial Chemo-Embolization (TACE) for Unresectable Hepatocellular Carcinoma (HEP0016)
- Impact of C-arm CT in Patients with Decreased Renal Function Undergoing Transarterial Arterial Chemoembolization (TACE) for the Treatment of Hepato-Cellular Carcinoma (HEP0036)

Gastrointestinal
- Bone
- Liver
- Hepatobiliary
- Pancreatic
- GI Tract
- FUTURE RESEARCH PROJECTS INCLUDE:
  - Phase III Prospective, Randomized, Blinded and Controlled Investigation of Hepasphere/Quadrasphere Microspheres for Delivery of Dosorubicin for the Treatment of Hepatocellular Cancer
  - Phase 2b Randomized Single-Blinded Trial of JX-594 (Vaccinia GM-CSF / TK-deactivated Virus) Plus Best Supportive Care Versus Placebo Plus Best Supportive Care in Patients with Advanced Hepatocellular Carcinoma Who Have Failed Sorafenib Treatment
  - Phase III Randomized, Double-Blind Trial of Chemoembolization with or without Sorafenib in Unresectable Hepatocellular Carcinoma (HCC) in Patients with and without Vascular Invasion (CIRB)
An international leader in its field, the Stanford Department of Radiation Oncology is comprised of three divisions known as radiation oncology, radiation physics, and radiation and cancer biology research. Led by new Chair, Quynh-Thu Le, MD, the Department receives more NIH funding than any other radiation oncology department in the United States. Furthermore, the Department’s focus on translational research brings cutting edge technologies to enable full-service patient care in an interdisciplinary setting.

RESEARCH BREAKTHROUGHS

Stanford Radiation Oncology laboratory and clinical research efforts have led to numerous scientific breakthroughs. Over the years, scientists and clinicians:

- Employed the first medical linear accelerator routinely used for radiotherapy in the Western hemisphere. Developed by Stanford in 1955, it was first used in the successful treatment of a 7-month old boy suffering from retinoblastoma.
- Initiated the first randomized, prospective studies on the treatment of Hodgkin’s disease and other lymphomas, using high-energy radiation and statistical analysis to establish the validity of an aggressive approach to treating these diseases. In addition, conducted clinical trials that promoted the understanding and management of these diseases, resulting in dramatic improvement in cure rates and decreased long-term treatment-related toxicities.
- Developed total skin electron beam therapy of mycosis fungoides, and reported the first long-term disease-free survivals of this disease.
- Established the efficacy of external beam irradiation in the treatment of prostate cancer.
- Collaborated with the Stanford Department of Neurosurgery to develop stereotactic radiosurgery for the treatment of brain and spine tumors.
- Performed the first prospective single-fraction dose escalation studies investigating the use of stereotactic body radiotherapy (SBRT)/stereotactic ablative radiotherapy (SABR) for the treatment of lung, liver, and pancreatic tumors.
- Identified several classes of small molecules that specifically kill VHL deficient renal cancer cells through a synthetic lethal pathway in multiple myeloma and other cancers.
- Discovered that the depletion of a protein called Perp could be 1) an early indicator of skin cancer development and 2) useful for staging and establishing prognoses.
- Discovered the first small molecule that targets a specific pathway in multiple myeloma and other cancers.
- Identified a potent anti-cancer therapy that starves cancer cells of glucose, their energy source, with few side effects and translated this discovery into clinical studies targeting tumor metabolism.
- Initiated a clinical trial to target the Connective Tissue Growth Factor (CTGF) in pancreatic carcinoma. This is the first trial to target both pancreatic cancer cells and pancreatic tumor stromal cells.

CURRENT RESEARCH HIGHLIGHTS

- Studying the effect of targeting Galectin-1, a hypoxia induced protein and an immune modulator, in the management of lung cancer
- Investigating stem-cell based approaches to minimize radiation damage to normal tissues, specifically the gastrointestinal (GI) tract and the salivary glands

ADVANCED RADIOLOGY RESEARCH AND TREATMENT

The department offers the most advanced radiation oncology treatments in the world with the overall goal of delivering high dose radiotherapy to the tumor while maximally sparing the surrounding normal tissue. These therapies include:

- Stereotactic body radiotherapy (or stereotactic ablative radiotherapy, SABR), which combines computerized imaging with radiation therapy for highly precise delivery of radiation to tumors and allows for the treatment to be completed in less than 1 week.
- Low-dose rate brachytherapy, which permanently deposits a radiation source inside the body within the tumor.
- High-dose rate brachytherapy, which places a very high-energy radiation source inside the body near the tumor for a brief period of time.
- Intensity modulated radiotherapy (IMRT), which delivers radiotherapy via dynamically shaped beam fields from multiple angles.
- Image guided radiotherapy, which combines tumor imaging integrated with special linear accelerators to deliver radiation that corresponds to the exact tumor location in real-time.
- Dynamic arc therapy, which allows for the continuous treatment of tumors in a manner that maximally spares adjacent normal tissue.
- Intraoperative radiotherapy (IORT), which focuses a high dose of radiation onto residual tumor cells during surgery.

Other modalities include total skin electron therapy, total body irradiation (TBI) with peripheral stem cell or bone marrow reconstitution, and total lymphoid irradiation (TLI) for immunosuppression.
Clinical Research
A Feasibility Study of IMRT Modulation to Account for Scattered 
Investigating the Role of Audiovisual Biofeedback on Image 
A Phase III Trial Evaluating the Addition of Trastuzumab to 
A Phase I Study of Safety and Bioactivity with FG-3019 in 
Breath Analysis for Evaluation of Radiation Exposure in Lung 
Randomized Phase II Study of Pre-Operative Chemoradiotherapy 
Identification and Characterization of Novel Proteins and Genes 
Phase II/III Study of Image-guided Radiosurgery/SBRT for 
Phase III Comparison of Thoracic Radiotherapy Regimens in 
A Pilot Study of Ipilimumab in Subjects with Stage IV 
Study of Biomarkers Indicative of Radiation Exposure 
A Randomized Phase III Study of Sublobar Resection (+/- 
Imaging and Biomarkers of Hypoxia in Solid Tumors (VAR0032) 
A Novel Therapy for Radiation-induced Xerostomia Using 
Study of Biomarkers Indicative of Radiation Exposure 

Brain 
• A Phase I/I Study of Fractionated Stereotactic Radiosurgery to 
• A Phase I/I Trial of Temozolomide and Hypofractionated 
Radiation therapy in Treatment of Supratentorial Glioblastoma 
Multiforme (BRN0012) 
• A Longitudinal Study of Plasma Epstein-Bar Virus (EBv) DNA 
in Nasopharyngeal Carcinoma from Both Endemic and Non- 
Endemic Patient Populations (ENT0006) 
• Identification and Characterization of Novel Proteins and Genes 
in Head and Neck Cancer (ENT0038) 
• Identification of Secreted Markers for Tumor Hypoxia in Patients 
with Head and Neck or Lung Cancers (ENT0016) 
• A Multi-Institutional Phase II Study of Radiation and GW572016 
(Lapatinib) for Patients with Stage III-IV Head and Neck 
Cancer Who Cannot Tolerate Concurrent Chemoradiotherapy 
(ENT0020) 
• Comparison of Intrafraction Motion in Patients with Head and 
Neck Cancer using Real-Time kV Imaging vs. Real-Time 3D 
Patient Surface Tracking (ENT0028) 
• Phase I Trial of Metabolic Reprogramming Therapy for 
Treatment of Recurrent Head and Neck Cancers (ENT0031) 
• A Feasibility Study of IMRT Modulation to Account for Scattered 
Radiation from Dental Fillings in Head and Neck Cancer Patients 
(ENT0032) 

• A Phase III Study of Postoperative Radiation Therapy (IMRT) 
+/- Cetuximab for Locally-Advanced Resected Head and Neck 
Cancer (RTOG0920) 
• A Randomized Phase II Study of Adjunct Concurrent Radiation 
and Chemotherapy versus Radiation Alone in Resected High- 
Risk Malignant Salivary Gland Tumors (RTOG1008) 

Head & Neck 
• Development of Novel Serum Markers for Monitoring Response 
to Anti-Cancer Therapy (VAR0008) 
• Imaging and Biomarkers of Hypoxia in Solid Tumors (VAR0032) 
• A Novel Therapy for Radiation-induced Xerostomia Using 
Human Salivary Stem Cells (VAR0050) 
• Study of Biomarkers Indicative of Radiation Exposure 
(VAR0060) 

Gastrointestinal 
Hepatobiliary 
• Phase II Study of Combination Stereotactic Body Radiotherapy 
(SBRT) with Transarterial Chemo-Embolization (TACE) for 
Unresectable Hepatocellular Carcinoma (HEP0024) 
• Phase II Study of Stereotactic Body Radiotherapy (SBRT) and 
Chemotherapy for Unresectable Cholangiocarcinoma Followed 
by Liver Transplantation (HEP0032) 
• A Phase II Trial of Adjunct Cetuximab/Gemcitabine 
Chemotherapy Followed by Concurrent Cetuximab and 
Radiotherapy in Intrahepatic Cholangiocarcinoma (HCC) 
(SWOGS0805) 

Pancreas 
• A Phase 1 Study of Safety and Bioactivity with FG-3019 in 
Combination with Gemcitabine and Erlotinib for Subjects with 
Locally Advanced or Metastatic Pancreatic Cancer (PANC0006) 
• A Phase II Multi-Institutional Study to Evaluate the Efficacy of 
Gemcitabine and Fractionated Stereotactic Radiotherapy for 
Unresectable Pancreatic Adenocarcinoma (PANC0027) 

Esophagus 
• A Phase II Trial Evaluating the Addition of Trastuzumab to 
Tridose Aims of Her2 Overexpressing Esophageal 
Adenocarcinoma (RTOG1010) 

Gynecological 
• A Phase II Study of Postoperative Intensity Modulated Radiation 
Therapy (IMRT) with Concurrent Cisplatin and Bevacizumab 
Followed by Cisplatin and Paclitaxel for Patients with 
Endometrial Cancer (RTOG0921) 

Lung 
• Investigating the Role of Audiovisual Biofeedback on Image 
Quality during 4D Anatomic and Functional Imaging (LUN0026) 
• 4D-CT-based Ventilation Imaging for Adaptive Functional 
Guidance in Radiotherapy (LUN0034) 
• Phase I Study of Accelerated Hypofractionated Image-Guided 
Radiation Therapy (IGRT) in Patients with Stage II-IV Non-Small 
Cell Lung Cancer and Poor Performance Status (LUN0039) 
• Pulmonary Interstitial Lymphangitis in Early Stage Lung 
Cancer (LUN0043) 
• Breath Analysis for Evaluation of Radiation Exposure in Lung 
Cancer Patients Treated with Radiation: A Feasibility Study 
(LUN0043) 

• Highlighted studies are Stanford investigator initiated

RESOURCES: 
Clinical Trials Recruitment Specialist 650.498.7061 
Referral Center 1.866.742.4811 
Clinical Trials Web Search Engine cancer.stanford.edu/trials

To register for the event: cme.stanford.edu

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