AAPM SYMPOSIUM

(IMPORTANCE OF) NIH FUNDING IN INNOVATION IN RADIATION THERAPY

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NIH funds RESEARCH

(RFA) R01, R21, P01, SBIRs, etc Cooperative agreements (Uxx)

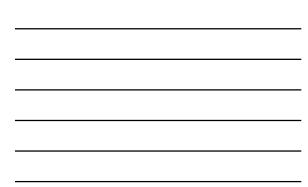
CONTRACTS: (RFP) deliverables

WORKSHOPS:

R13 co-sponsored



RRP FUNDING (mechanism)



NIH Radiation Wide Funding:

• 2010		ations: funded: 40 (17%)	new \$:	\$15,062,587
■ 2014		ations: funded: 40 (15%)	new \$:	\$25,395,000
Received:	funded: 33	National Cancer Institut	e (NCT)	
19		Biomedical Imaging and		ering (NIBIB)
	1	Office of the Director (N		
		Dental and Craniofacial	Research (N	IDCR)
		Neurological Disorders a	and Stroke (NINDS)

ute	RESEARCH DRIVEN BY CLINICAL NEED	S
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NCI / RRP WORKSHOPS

therapy: proceedings of a joint workshop nosted by the national cancer institute and the society
of nuclear medicine and molecular imaging. Files F. Zukotyeski K. Copola J. Knight N. with input from the Organizing Committee, Contributors, and
Participants of the NCI/SNMMI Joint Workshop on Targeted Radionuclide Therapy. J Nucl Med. 2014 Feb;55(2):337-48. Epub 2014 Jan 6. No abstract available. PMID:
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In adjusting of Treatment Assessment in Radiation Therapy (ITART), AddM/NG workshop Laws 21-22, 2010
Quality assurance needs for modern image-based radiotherapy: recommendations from 2007 interorganizational
symposium on "quality assurance of radiation therapy: challenges of advanced technology". Williamson JF, Dunxombe PB, Sharpe MB,
Themadsen BR, Pundy JA, Onyr JA. Int J Radiat Circol Biol Phys. 2008;71(1 Suppl):52-12.PMID: 18406928
NCI/NIBIB Workshop Report and Recommendations: Workshop for New Investigators in Medical Physics and Biomedical
Engineering September 16-17 2004 (201)
Summary and recommendations of a National Cancer Institute workshop on issues limiting the clinical use of Monte Carlo
dose calculation algorithms for megavoltage external beam radiation therapy, Frazs BA, Smathers J, Deye J. Med Phys. 2003
Operations research applied to radiotherapy, an NCI-NSF-sponsored workshop February 7-9, 2002. Larger M, Lee EK, Deasy JD,
Rardin RL, Dyge JA. Int J Radiat Oncol Biol Phys. 2003 Nov 1,57(3):762-8. Review. PMID: 14529782
Intensity-modulated radiotherapy: current status and issues of interest. Intensity Modulated Radiation Therapy Collaborative Working
Group. Int J Radiat Ontol Biol Phys. 2001 Nov 15;51(4):880-914: Review PMID: 11704310
Research in medical physics, cumberlin RL, Coleman CN. Int J Radiat Oncol Biol Phys. 2001 Mar 1;49(3):891-5. PMID: 11172973

RESEARCH IN MEDICAL PHYSICS NCI Workshop 2000

COMMENDATIONS: Implementation of linac-based IMRT Introduction of X-band technology 3D-CRT and IMRT in clinical trials. Objective segmentation of normal and malignant structures Monte Carlo calculations Optimization for automated planning Modeling treatment decisions Froton radiotherapy

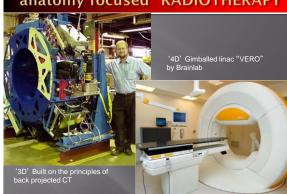
Proton radiotherapy. Rediation-activated gene therapy We encourage the Medical Physics community to help define the role and future contributions of medical physics to the emerging biological treatments. The concept that radiation is "focused biology" has been proposed to stimulate interest in understanding the interaction of physical dose and biologic perturbations at the molecular level.

JOINT WORKSHOP

Technology for Innovation in Radiation Oncology June 13-14, 2013 Natcher Conference Center National Institutes of Health Bethesda, Md. ASTRO, the National Cancer Institute (NCI) and the America Association of Physicists in Medicine (AAPM) are co-sponso a two-day workshop for radiation oncology professionals involved or interested in technological advances in radiati

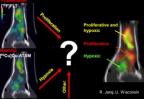
ASTRO, NCI and AAPM are co-sponsoring a two day workshop to assess the status and impact of advanced technologies in radiation therapy

This workshop will specifically address future research opportunities in advanced technology from both a physician and physicist perspective. At the workshop, experts in the field will present overview talks on innovative research topics such as **imaging** biomarkers for planning and response, novel high-performance treatment systems, patient outcome and technology, and clinical trial designs that test the impact of technology



"anatomy focused" RADIOTHERAPY

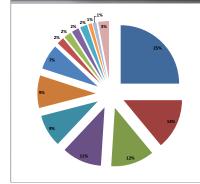
"biology focused" RADIOTHERAPY



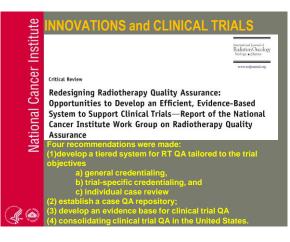
Hypothesis: Patterning radiation dose according to imaged functional or molecular distributions will increase the TR

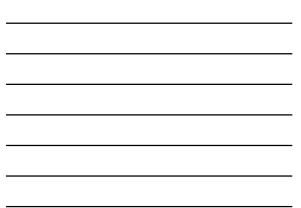


RRP Portfolio (topic)



Michael rargeting and turow signaling
Non-ionizing radiatio
Badioinmuncherspy/systemic radiothersp
Threspeculic imaging
Physics and technology
Turner microenvironment
Conters stem cell responses to radiation
Content stem cell responses to radiation
Minority/underserved health
Panapartice interventions
Particles and proton radiation
Predictive assays
Radiochemisty
Other





RCTs > Registries > CER

BIG DATA WORKSHOP: Exploring Opportunities for Radiation Oncology in the Era of Big Data Co-sponsored by AAPM, ASTRO and NCL.

August 13-14, 2015

NIH Campus, Bethesda Maryland

ASTRO; the National Cancer Institute (NCI), and the American Association of Physicists in Medicine (AAPM) are co-sponsoring a two-day workshop for radiation oncology physicians and physicists focused on opportunities for radiation encology in the era of big data.

The 2015 Big Data Workshop: Exploring Opportunities for Radiation Oncology in the Era of Big Data will provide a platform for leaders in big data projects to interact with their peers in radiation oncology research, quality assessment and clinical care. Presentations will include current big data cancer registres, safely and incident reporting systems, and other strategies that will have the greatest impact on radiation oncology research, quality assurance, safety and outcomes analysis? CRE. Abstract submissions will be solicited for poster presentations.