

# Radiation Oncology Committee

Charles R. Thomas, Jr., M.D.

## Mission

To play a critical role in the design and execution of high quality prospective clinical trials and correlative studies that involves radiotherapy and related emerging technologies.

## Specific Aims

1. To identify opportunities for incorporating radiotherapy into ACOSOG studies.
2. To assess methodologies such as biomarkers and genomic profiling for prediction of response to neoadjuvant chemoradiotherapy or adjuvant radiotherapy and prognostic indicators of treatment outcome.
3. To participate in all scientific processes of ACOSOG to ensure high-quality studies that include state-of-the-art treatment planning and delivery of radiotherapy and related emerging technologies.

## Committee Roster

Charles R. Thomas, Jr., M.D., Chair, OHSU Knight Ca Center  
Dwight E. Heron, M.D., Vice-Chair, U Pittsburgh Ca Institute  
Paul Decker, MS, ACOSOG Staff

Eli Glatstein, M.D., Sr. Advisor, Abramson Cancer Center  
Ross Abrams, M.D., Rush University Medical Center  
Thomas Buchholz, M.D., MD Anderson Cancer Center  
Laurie Cuttino, M.D., Medical College of Virginia  
Thomas DiPetrillo, M.D., Tufts New England Medical Center  
Clifton David Fuller, M.D. Univ. Texas HSC @ San Antonio  
Thomas Goffman, M.D. Cancer Intelligence & Research  
Shalina Gupta-Burt, M.D., Kansas City Cancer Center  
Chandan Guha, M.D., PhD, Albert Einstein/Montefiore Med  
Michael Haddock, M.D., Mayo Clinic  
Bruce Haffty, M.D., Robert Wood Johnson Medical School  
Ruth Heimann, M.D., PhD, University of Vermont/FAHC  
Charlotte Kubicky, M.D., Ph.D., OHSU Knight Cancer Institute  
Brian E. Lally, M.D., University of Miami  
Bo Lu, M.D., Ph.D., Vanderbilt University  
Mitchell Machtay, M.D., Case Western Reserve University  
Tracey Scheffer, M.D., University of Colorado HSC  
Christopher G. Willett, M.D., Duke University Medical Center

## Progress and Accomplishments:

ACOSOG recognizes the importance of an active radiation oncology committee in designing multi-disciplinary therapeutic trials that require an active surgical network.

Dr. Charles R. Thomas, Jr., appointed Committee Chair, January 2009, has been a member of ACOSOG since 1999. Dr. Thomas initiated the relationship that currently exists with the Quality Assurance Radiation Center (QARC).

The radiation oncology community will attend the ACOSOG Radiation Oncology Committee meeting held at the annual ASTRO meeting each fall.

The Committee membership now includes NCI-funded MD-PhD physician-scientists (Drs. Guha, Haffty, & Lu), who are conducting trials involving novel targeted agents and ionizing radiotherapy, which will include biomarkers of response and attempt to clarify the mechanisms of cell death from therapy. The first protocol will be directed towards stage IIIB and/or bulky N2/IIIA NSCLC.

Members of the committee serve as study chair or co-chairs of the following studies:

- Dr. Abrams (Study Co-PI), ACOSOG Z5041
- Dr. Lally (Overall Study Co-PI), ACOSOG-led Intergroup Postop Radiotherapy (PORT) trial;
- Drs. DiPetrillo & Heron (Study Co-PI's), ACOSOG Z4032
- Dr. Scheffer (Study Co-PI), ACOSOG Z4051
- Dr. Thomas (Study Co-PI), ACOSOG Z0601

Z4051, and B-39 are actively accruing studies with a radiation therapy component.

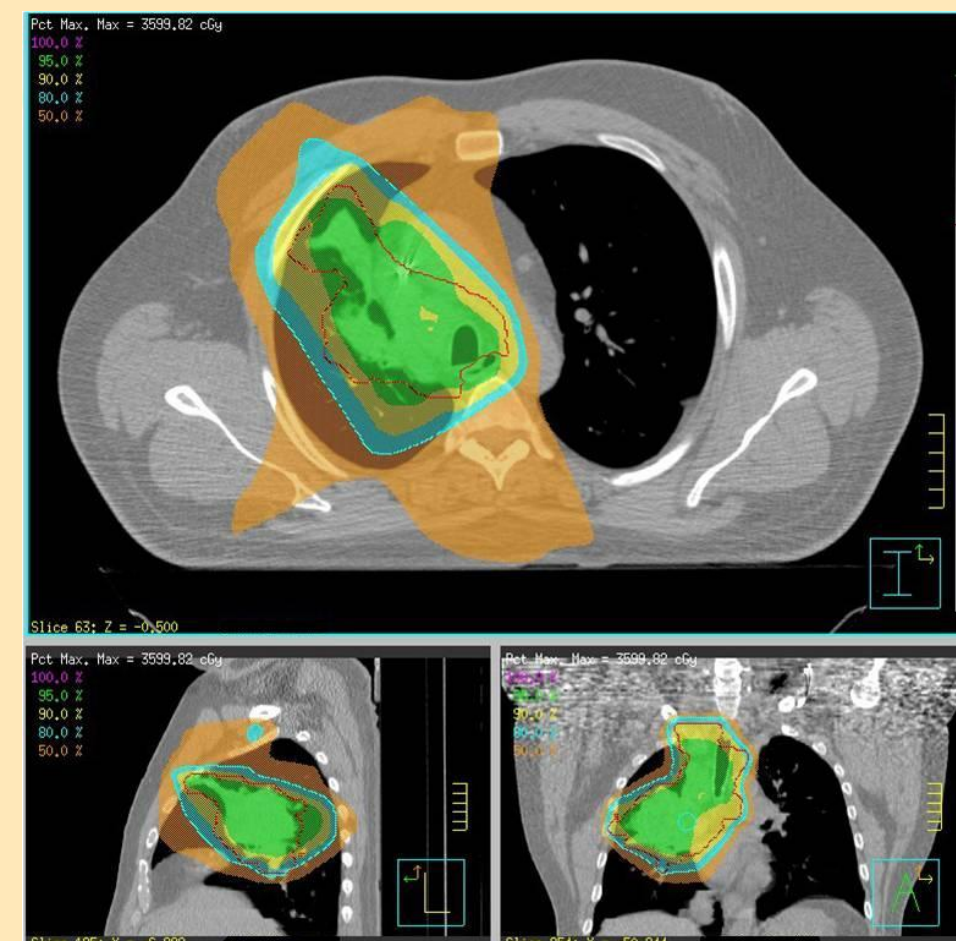
Z6041 and Z4032 closed in 2009 and are being presented at national scientific meetings (ASTRO '09, ASCO '10).

Drs. DiPetrillo and Heron are involved with the design of Z4099, a successor to Z4032.

Dr. Thomas is involved with the successor trial to Z6041.

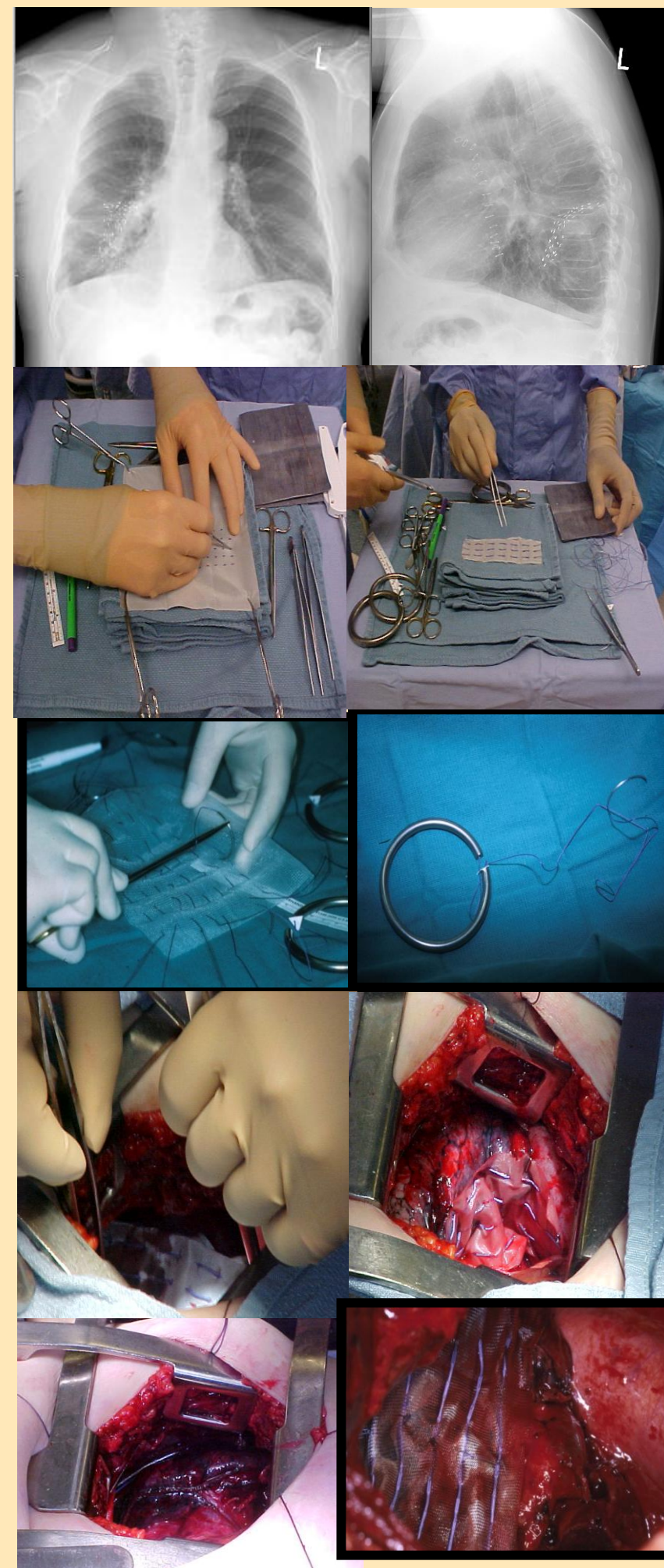
A RT QA Subcommittee has been established and is charged with developing written policy for radiation oncology institutional participation in ACOSOG trials. Radiation oncology QA data collection and review will be accomplished, as in the past, with the collaboration of QARC. Participation with the Radiological Physics Center (RPC) and appropriate credentialing measures (benchmarks and phantoms) as determined by the protocol requirements will be included.

Annual review of participating ACOSOG radiation oncology members will be scheduled in conjunction with the annual ACOSOG meeting. Performance data will be provided by QARC for the RT QA sub-committee's review and actions. Committee members are authors or co-authors on multiple publications/abstracts.

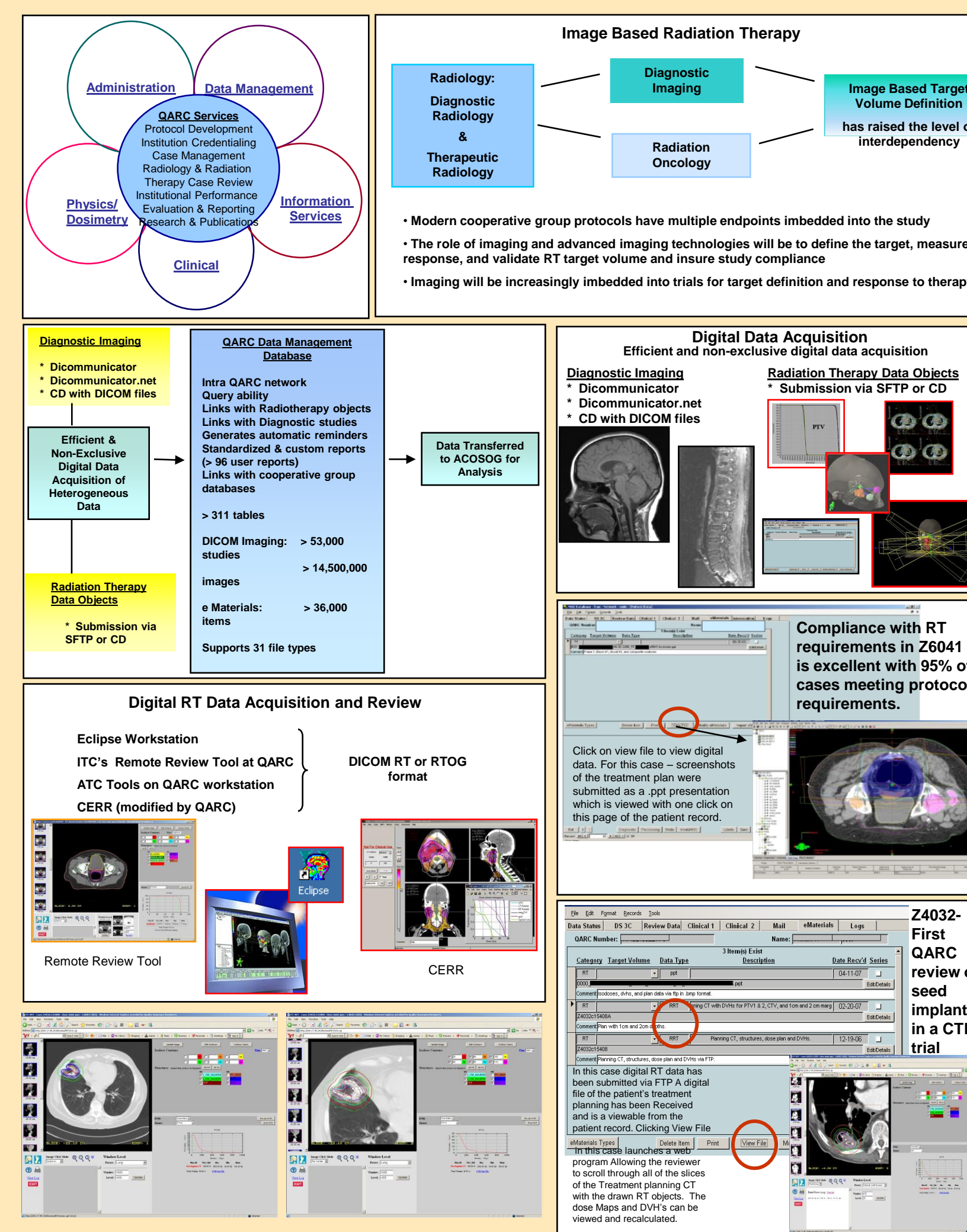


## Quality Assurance and Quality Control

### Brachytherapy Techniques



### Collaborating with QARC



## Publications/Presentations

Garcia-Aguilar J, Shi Q, *Thomas CR Jr*, et al. A Phase II trial of neoadjuvant chemoradiation and local excision for T2N0 rectal cancer: preliminary results of the ACOSOG Z6041 trial. ASTRO abstract, 2010.

Garcia-Aguilar J, Shi Q, *Thomas CR Jr*, et al. Pathologic complete response (pCR) to neoadjuvant chemoradiation (CRT) of uT2N0 rectal cancer (RC) treated by local excision (LE): Results of the ACOSOG Z6041 trial. Proceedings of 2010 ASCO, Chicago

Smith RP, Schuchert M, Komanduri K, Burton S, *Heron DE*, et al. Dosimetric evaluation of radiation exposure during I-125 vicyril mesh implants: Implications for ACOSOG Z4032. Annals of Surgical Oncology 2007 Dec;14(12):3610-3. Epub 2007 Oct 2.

Picozzi VJ, *Abrams RA*, et al. ACOSOG Z05031: Report on a multicenter, phase II trial for adjuvant therapy of resected pancreatic cancer using cisplatin, 5-FU, and alpha-interferon. J Clin Oncol 26: 2008 (May 20 suppl; abstract no 4505)

Picozzi VJ, *Abrams RA*, et al. ACOSOG Z05031: Initial report of a multicenter, phase II trial of a novel chemoradiation protocol using cisplatin, 5-FU, and alpha-interferon as adjuvant therapy for resected pancreas cancer. 2008 Gastrointestinal Cancers Symposium

*DiPetrillo TA*, *Heron DE*, Fernando HC, Landreneau RJ, *Logan D*, Briggs K, *Fitzgerald TJ*, *Thomas CR*, et al. Sublobar resection and iodine-125 brachytherapy for stage I NSCLC: Initial quality assurance review of ACOSOG Z04032. Proceedings of 51st Annual Meeting of the American Society of Radiation Oncology (ASTRO), Chicago, 2009

## Future Plans

- 1) Drs. Cuttino & Kubicky are co-chairs of the first cooperative group trial designed specifically for multifocal & multicentric breast cancer, "Study Evaluating the Role of Breast Conservation Surgery in Patients with Multicentric and Multifocal Breast Cancer"
- 2) Drs. Heron & DiPetrillo are co-chairs of Z4099, the first cooperative group phase 3 trial of SBRT, in conjunction with the RTOG, "A Randomized Phase III Study of Sublobar Resection vs SBRT in High-Risk Patients with NSCLC 3 cm or Smaller"
- 3) Dr. Lally will be chair of the intergroup postoperative radiotherapy lung cancer AMRE trial, "Adjuvant Mediastinal Radiotherapy Evaluation: the AMRE Phase II Trial"
- 4) Dr. Lu will be chair of the first ACOSOG lung cancer trial incorporating a mTOR inhibitor, a radiosensitizer in pre-clinical models via upregulation of autophagy and inhibition of tumor angiogenesis, into a combined modality platform with prospective embedded translational endpoints, "Phase I/II Trial of Neoadjuvant Thoracic Radiotherapy with Rad001 for bulky N2/IIIA and/or IIIB NSCLC"
- 5) Dr. DiPetrillo will be co-chair of the phase 3 intergroup preop tri-modality protocol, RTOG-1010
- 6) The Radiation Oncology Committee will conduct an ancillary study to Z4051 titled, "Atlas Implementation to Optimize Target Delineation for Conformal Radiotherapy in the Cooperative Group Setting: a Prospective, Randomized *In Silico* Pilot Companion Study to ACOSOG Z4051"

*Specific aims* include: 1) summarization of differentials in target volume delineation parameters, as assessed by established target delineation evaluation software, between the expert and non-expert users; 2) evaluation of the stability or improvement over time target volume delineation parameters in Specific Aim 1 using a time-delayed re-test; and 3) determination of the impact of a formal atlas based training curriculum in target volume delineation on target volume delineation concordance with expert-derived target structures.