

# **ATC PRIORITIES**

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January 19, 2006**

**James A. Purdy, Ph.D.  
Department of Radiation Oncology  
UC Davis Medical Center  
Sacramento, CA, USA**

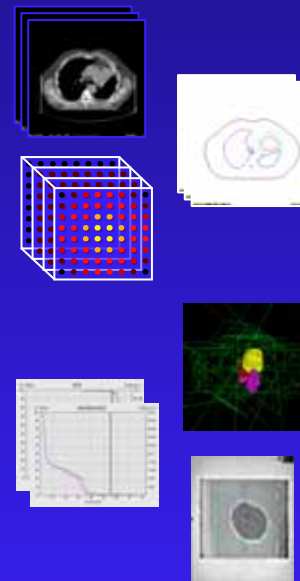
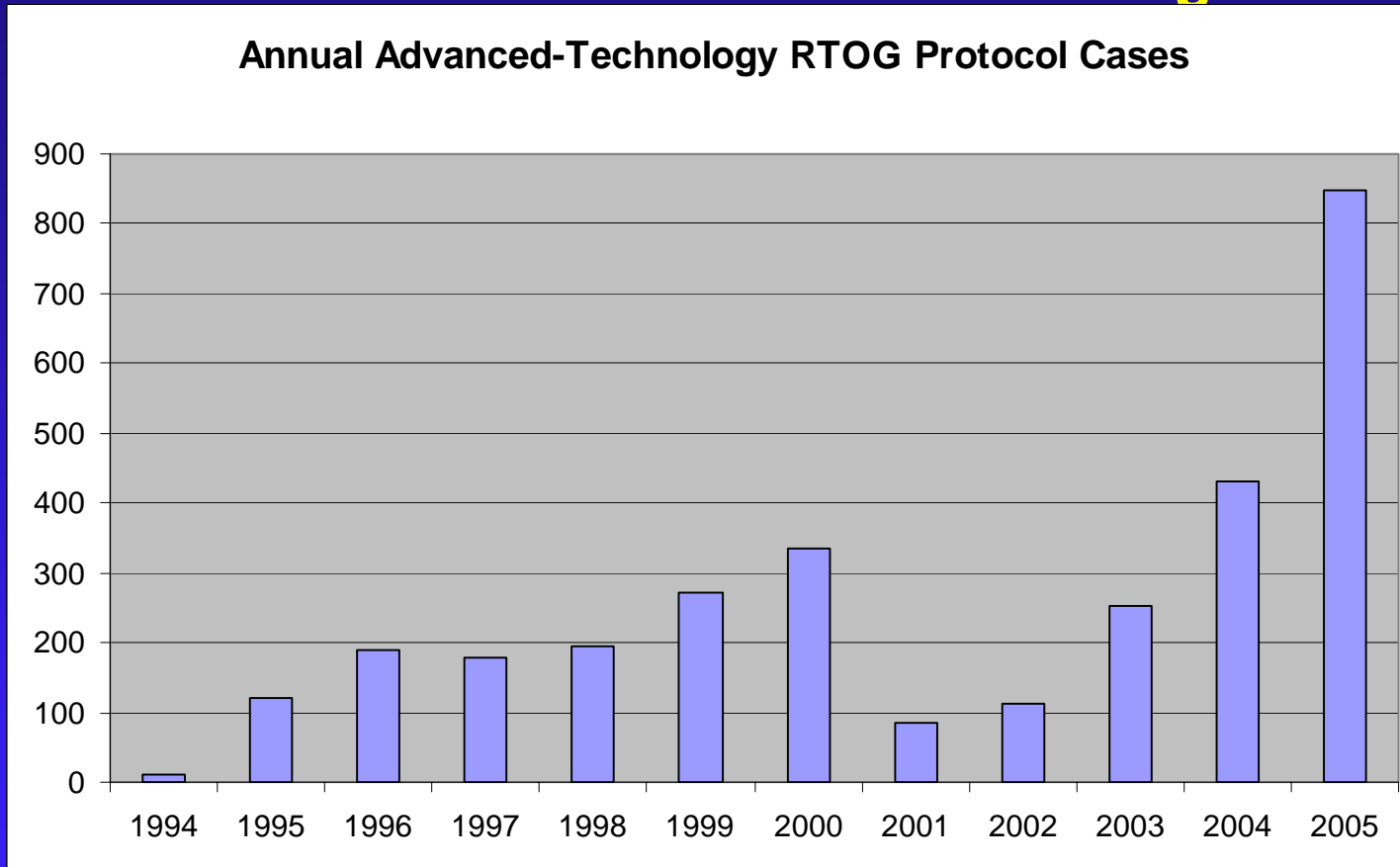
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# **Challenges: ATC Supported Clinical Trials**

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- **Workload at ITC**
- **ATC compliant stereotactic radiosurgery or radiotherapy RTP systems**
- **PET (quantitative) data import and image fusion QA**
- **4-D CT (several 100 MB)**
- **Image-Guided RT (EPID, Kilovoltage Cone beam CT, Helical Tomotherapy megavoltage CT)**
- **Adaptive Radiotherapy (Daily Confirmation and Adjustment using On-Board Imaging)**
- **Increased use of ATC Method 1 at QARC**
- **Successful implementation of ATC Method 2a at ITC and 2b at NCIC**
- **caBIG compliant software**

- **Jan 19 2006 ATC Mtg: 3026 Complete Digital Data Sets Submitted Over 12 Year Period using ATC Method 1\***



- **16 commercial RTP systems have implemented export capability**
- **331 institutions able to submit data**

# RTOG Digital Data Protocols (Jan 6, 2006)

Institutions  
Credentialed

| Protocol | Description                            | Credentialed   | Cases Accrued  |
|----------|--|----------------|----------------|
| 9406     | Ph I/II 3DCRT Prostate Dose Escalation | 54             | 1084           |
| 9311     | Ph I/II 3DCRT Lung Dose Escalation     | 27             | 180            |
| 9803     | Ph I/II 3DCRT GBM Dose Escalation      | 46             | 210            |
| 0022     | Ph I/II 3DCRT/IMRT Oropharynx          | 35             | 69             |
| 0319     | Ph I/II 3DCRT Partial Breast           | 31             | 58             |
| 0117     | Ph I/II 3DCRT/chemo Lung               | 46             | 35             |
| 0126     | Ph III 3DCRT/IMRT Prostate             | 125 (54 IMRT)  | 767 (148 IMRT) |
| 0225     | Ph I/II 3DCRT/IMRT Nasopharynx         | 36             | 68             |
| 0232     | Ph III Ext Beam/TIPPB Prostate         | 63             | 170            |
| 0236     | Ph II SBRT Lung                        | 7              | 29             |
| 0321     | Ph I/II HDR/Ext Beam Prostate          | 14             | 66             |
| 0413     | Phase III Partial Breast Irradiation   | 230(192/118/23 | 633(225/65/26) |

# SERVICE PRIORITIES

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1. Provide daily operational support for ongoing ATC facilitated (using ATC Method 1) protocols (RTOG, NSABP, JCOG, and other cooperative groups supported by QARC and RPC as their ATC supported protocols open). See ATC website for protocol details. This service effort includes the following (a) facilitate digital data submissions; (b) evaluate and approve institution's credentialing tests for each specific protocol; (c) facilitate/perform QA reviews of submitted digital data sets; and (d) maintain QA and treatment planning databases.
2. Provide support to NCIC in their use of ATC Method 3 technology for MA.20 protocol.

## **SERVICE PRIORITIES**

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3. Foster implementation of ATC compliant DICOM export capability. This includes the following: (a) working with radiation treatment planning systems (TPS) vendors; specifically, ATC will target TPSs manufactured by BrainLab, Radionics, Elekta Gamma Knife, TomoTherapy Hi-ART, Cyber-Knife systems, and Prowess; (b) ATC representation in NEMA/DICOM Working Group 7; and (c) ATC representation in the IHE initiative.

# SERVICE PRIORITIES

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4. Provide expertise in the areas of protocol design, credentialing, monitoring, and analysis for new clinical trials that utilize advanced technologies and require digital data submission (e.g., NSABP B-39/RTOG 0413). The effort includes the following: (a) develop credentialing tests and criteria (including periodic review/modification of existing requirements/criteria); (b) design/manufacture phantoms for credentialing; (c) develop QA procedures, documents, criteria, and ATC web page/links; develop new protocol module for TPV and QA databases
5. Facilitate outcome analysis and data mining for ATC supported closed protocols.

# DEVELOPMENTAL PRIORITIES

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1. Increase number of publications referencing ATC NIH U24 grants CA 86147.
2. Implement ATC Method 1 technology at QARC and increase use of this technology by other cooperative groups, i.e., COG, SWOG, and CALGB. (Time line for this work has been established).
3. Develop, test, and implement ATC Method 2b technology at NCIC. (Time line for this work has been established).
4. Develop, test, and implement ATC Method 2a technology at ITC. (Time line for this work has been established).



# DEVELOPMENTAL PRIORITIES

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5. Develop/implement brachytherapy QA software to facilitate RPC support of clinical trials. (See current time line for this work).
6. Develop/implement QA process for protocols requiring multi-modality imaging (PET, MRI, Image fusion).
7. Develop ATC consensus on credentialing requirements for the use of IMRT for intra-thoracic treatments, in which significant heterogeneities are encountered and tumor mobility is likely.