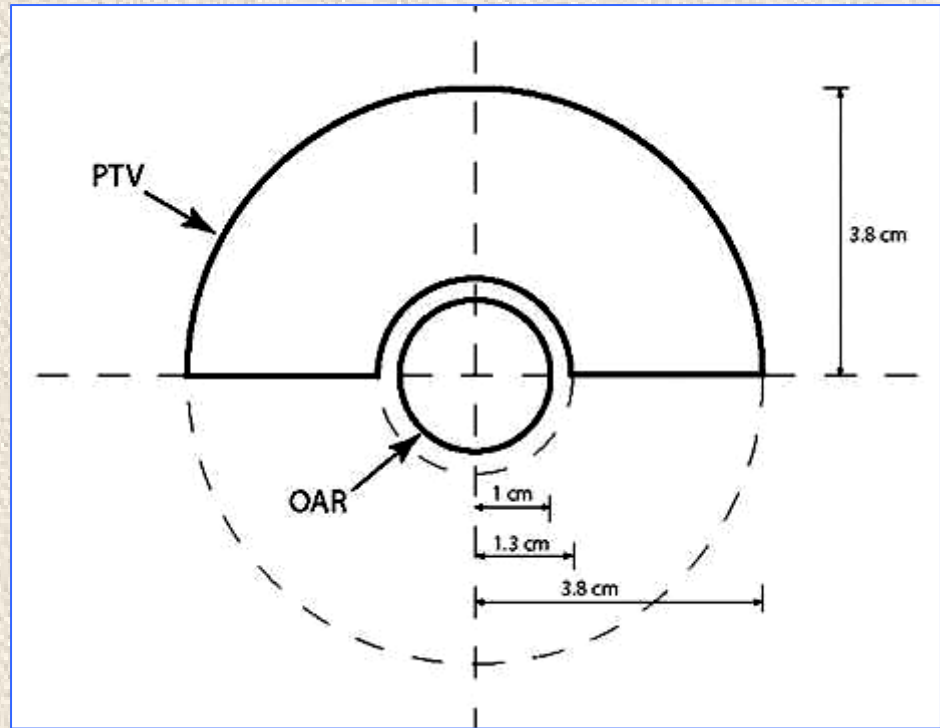


# **QARC/ATC Efforts and Accomplishments**

ATC 11/6/07

# IMRT Benchmark



**1st Priority: CNT: <5% volume receive > 60% prescribed dose**

**2nd Priority: CTV: 100% vol. receive prescribed dose**

**3rd Priority: CTV maximum 120%**

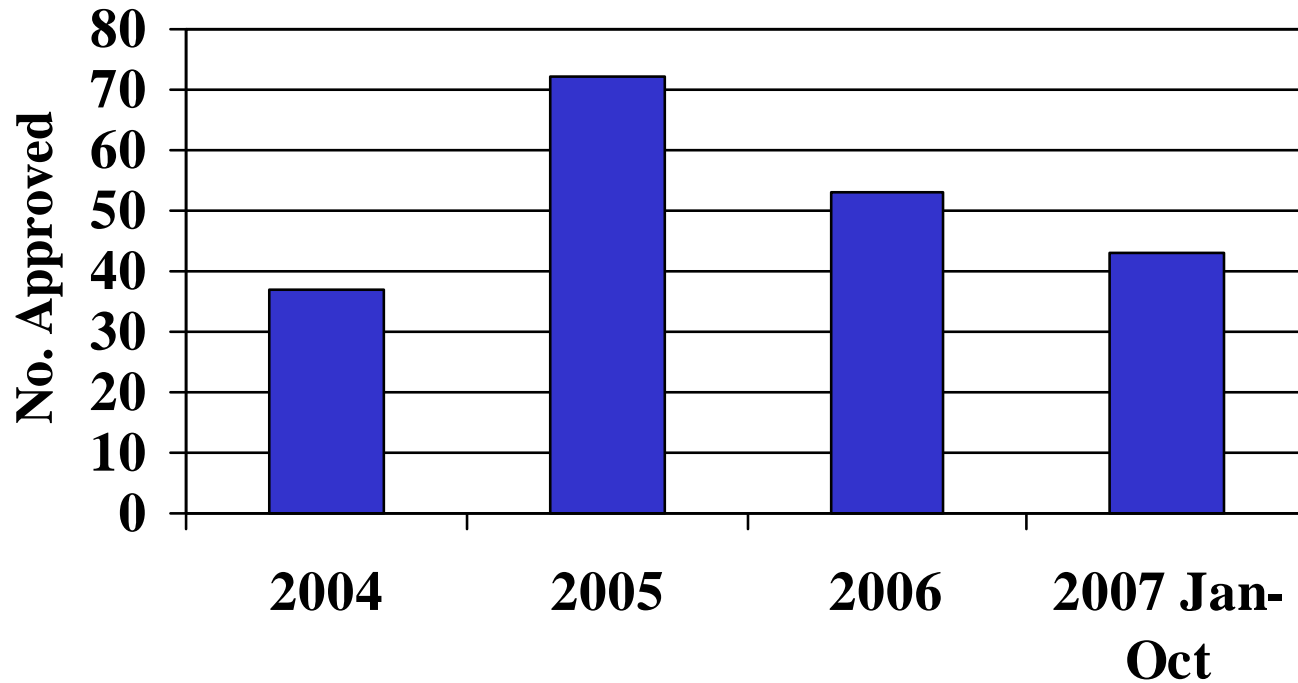
Co-planar 4-9 gantry angles (except arc techniques)

# IMRT Benchmark

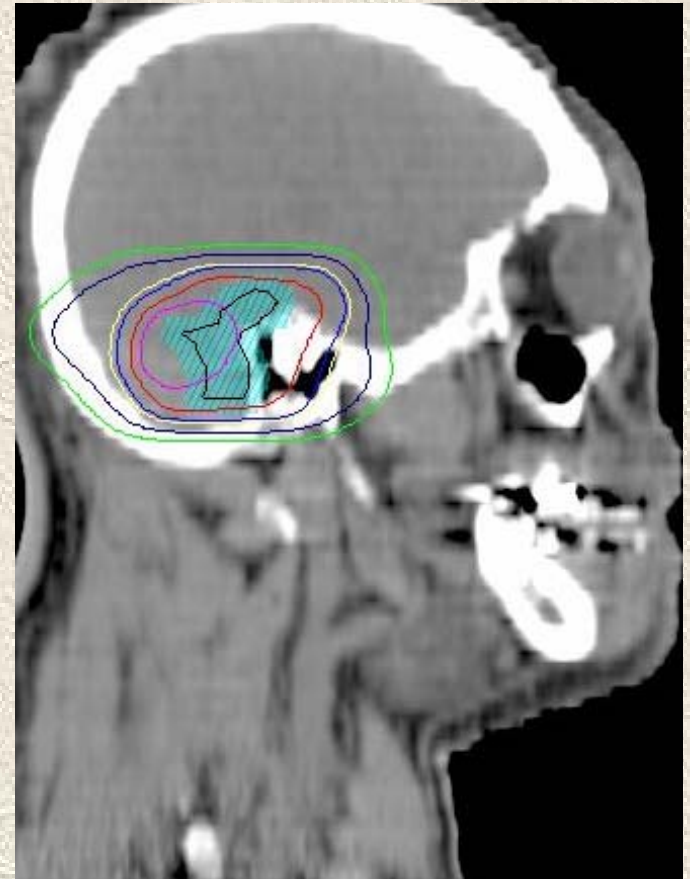
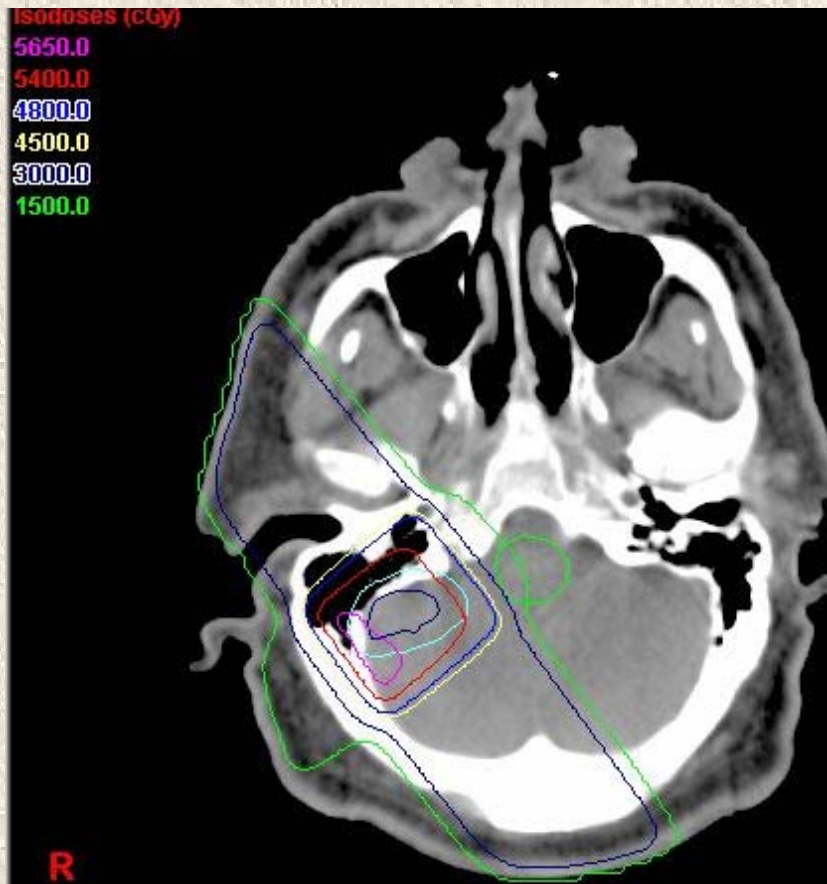
- 108 QARC Benchmarks approved
- 110 approved with RPC phantom
- Evaluation criteria established in collaboration with ATC
- Reciprocal notification of benchmark approvals established with RPC

# IMRT Benchmark

## Approved Benchmarks



# 3D Conformal Benchmark



# 3D Conformal Benchmark

- Collaborated with RPC in benchmark design
- All submissions to be shared with RPC for use in RPC site visits
- 43 benchmarks submitted
- 29 approved, 1 approved by RPC
- 29 submitted electronically

## Digital RT Data

- In the fall of 2004 ITC staff (Walter Bosch and John Matthews) installed the Remote Review Tool and associated applications on a Linux server at QARC.
- The system became operational in January, 2005.
- Processes for handling digital data have been established.
- All cases are linked to the patient's record in the QARC database.
- FTP site set up at QARC by ITC currently has 107 accounts. Digital data is accepted by both CD and FTP.

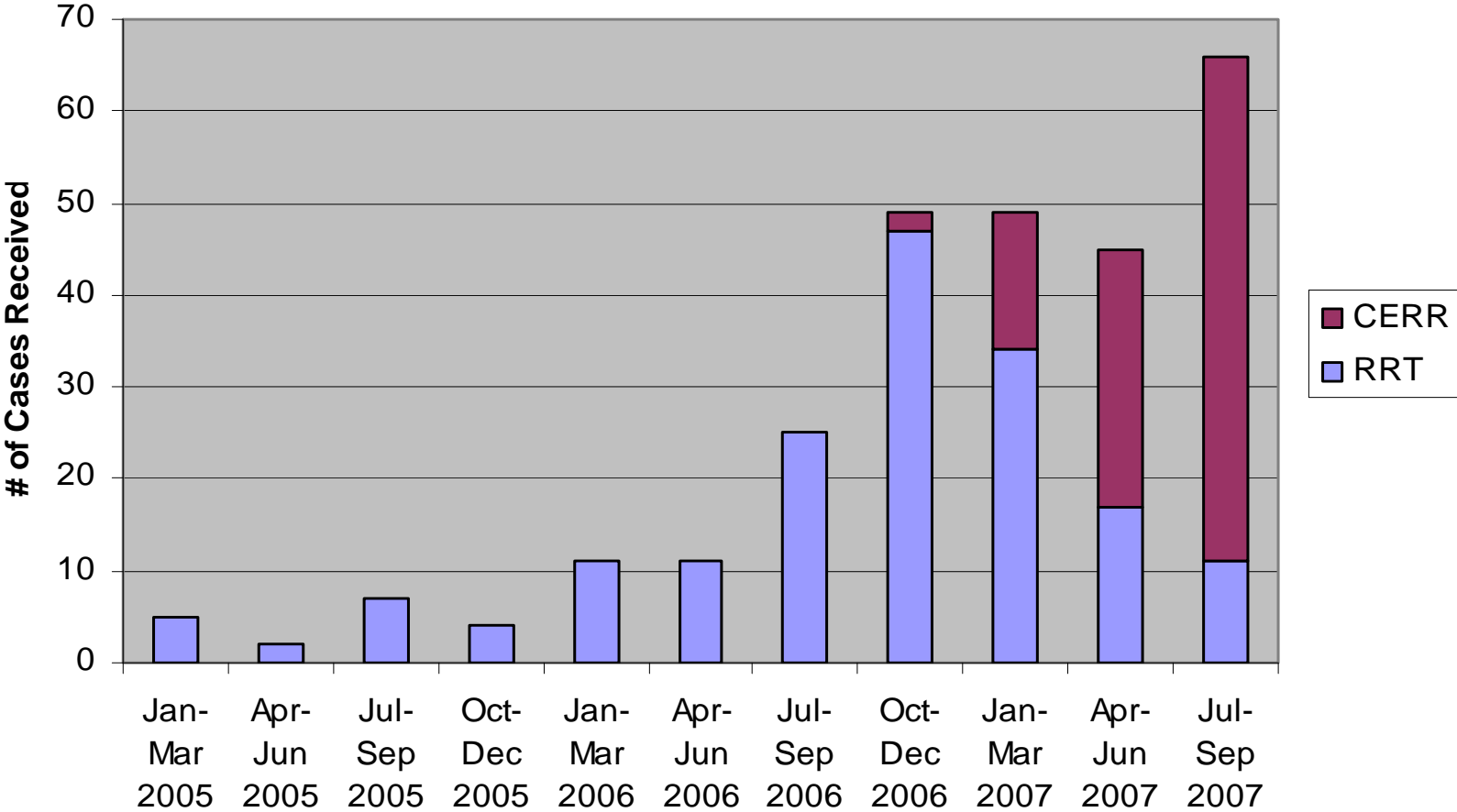
# Digital RT Data

## Current Accrual (11/1/07)

<b>Protocol</b>	<b>Number of Cases</b>
ACNS0121	45
ACNS0126	5
ACNS0331	35
ACOSOG Z4032	15
CALGB 80101	10
miscellaneous studies	163
Total of 273 cases from 105 institutions on 46 studies	



# QARC Digital RT Data (All Studies)



# Use of CERR at QARC

## Computational Environment for Radiotherapy Research (developed by Joe Deasy et al)

- We are now using CERR as well as the Remote Review Tool to view and analyze digital RT data.
- More than 100 of the digital RT cases in our database have been imported into CERR.
- We have customized CERR for QARC use.
- We can launch a CERR study directly from a patient's record in the QARC database.

## **Use of CERR at QARC**

Teleconference discussions have begun between CERR team, ITC, and QARC to discuss improvements/modifications for QA center use.

- QARC modifications
- Structure import speed
- Display of DRR's