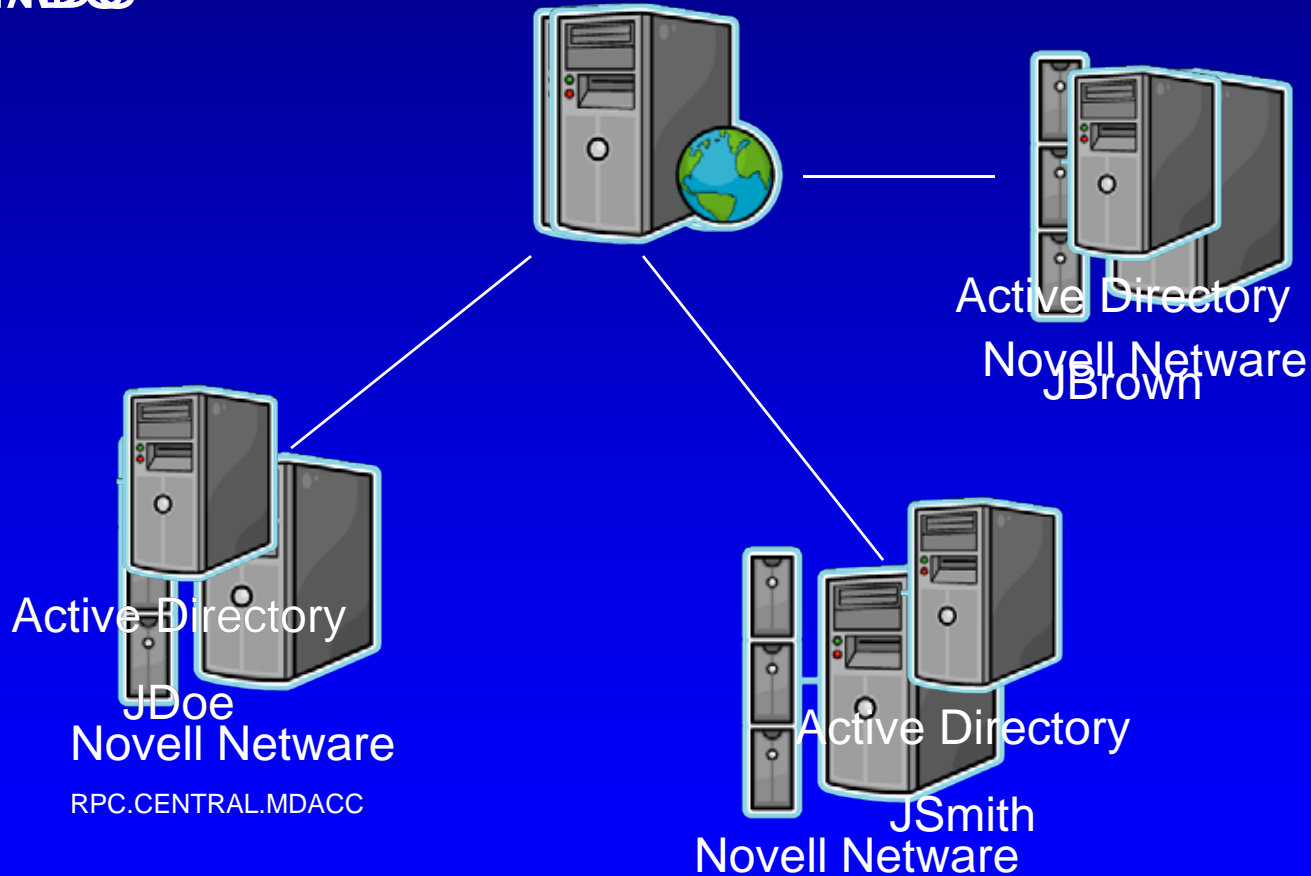


Informatics at the RPC

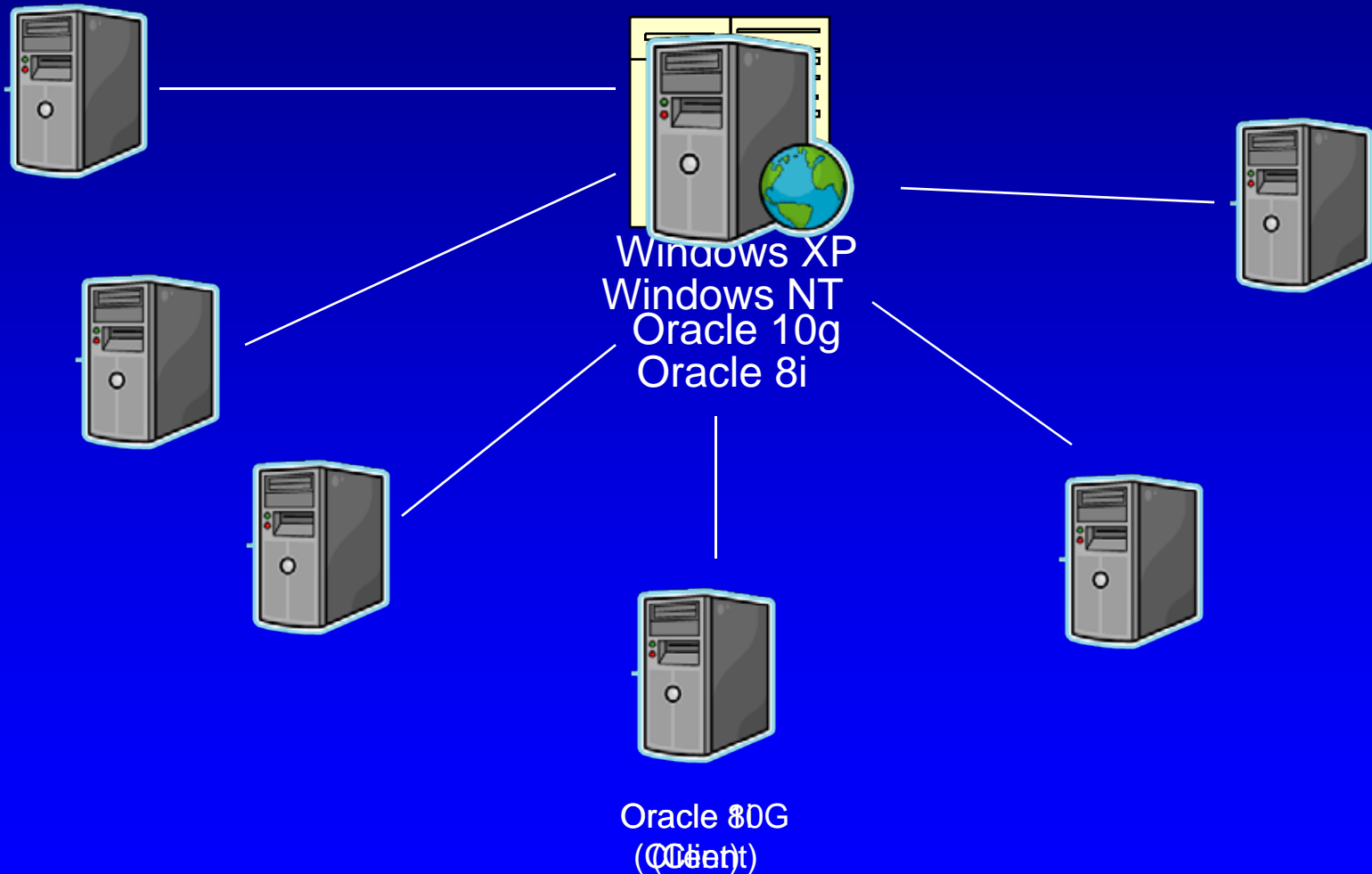
Jessica Lowenstein, M.S.

Servers Migration

MADS



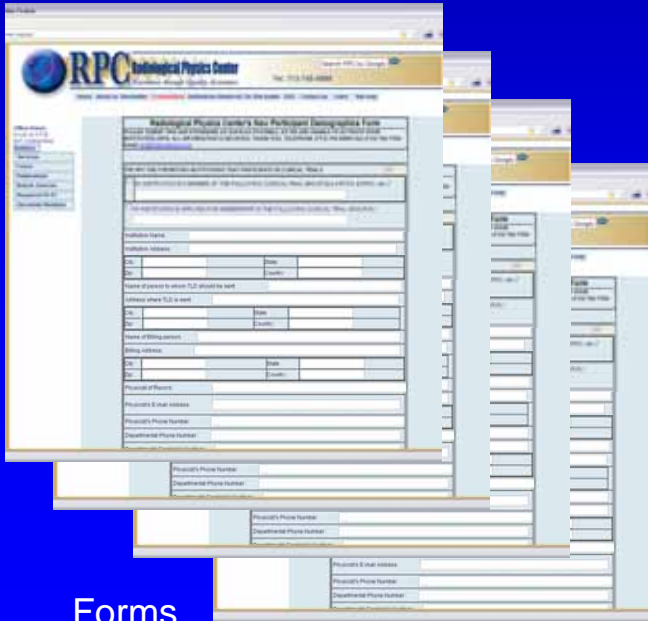
Servers Migration (cont.)



Web Forms



Questionnaires



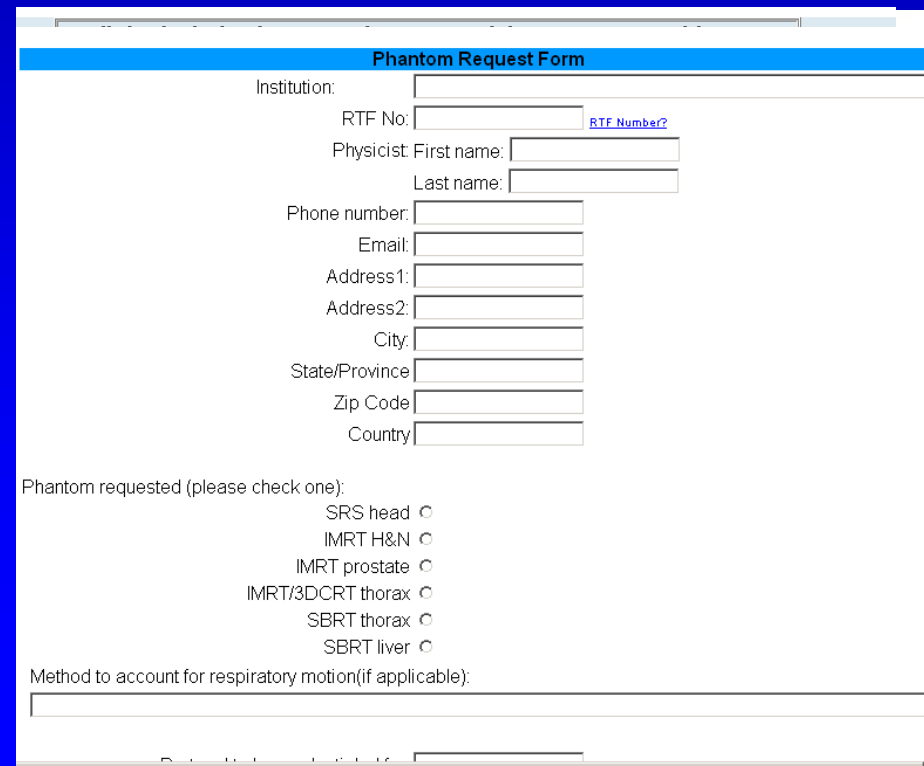
Forms

ASP.NET



Website

- Institutional Participation
- Credentialing requirements
- Demographics Form
- Request Phantoms
- International Interaction



The screenshot displays a web form titled "Phantom Request Form". The form contains several input fields for user information: Institution, RTF No. (with a link "RTF Number?"), Physicist First name, Last name, Phone number, Email, Address1, Address2, City, State/Province, Zip Code, and Country. Below these fields is a section for "Phantom requested (please check one)" with radio button options for SRS head, IMRT H&N, IMRT prostate, IMRT/3DCRT thorax, SBRT thorax, and SBRT liver. At the bottom, there is a text input field for "Method to account for respiratory motion(if applicable)".

Phantom Request Form

Institution:

RTF No: [RTF Number?](#)

Physicist: First name:

Last name:

Phone number:

Email:

Address1:

Address2:

City:

State/Province:

Zip Code:

Country:

Phantom requested (please check one):

SRS head

IMRT H&N

IMRT prostate

IMRT/3DCRT thorax

SBRT thorax

SBRT liver

Method to account for respiratory motion(if applicable):

Credentialing

- On–line forms and questionnaires
 - Credentialing Status Inquiry
 - Knowledge Assessments
 - Facility Questionnaires

Page 1 of

**NSABP/RTOG PBI PROTOCOL
FACILITY QUESTIONNAIRE**

Please fill out all that applies to your institution. If there are any questions please contact the RPC at (713) 745-8989 or rpc@mdanderson.org
Quotes are not allowed.

I. Radiation Oncology Facility:

Facility Name:

Address:

Street1:

Street2:

City: , State/Province: ZIP Code:

Country:

Check the appropriate box and provide the Facility's member number:

RTOG#: NSABP#:

Fill in the Facility's identification: NCI#: RTF#: ¹RTF# is required and may be obtained by clicking [here](#)

Is this Facility also known by other name(s)? If so, please provide ,

II. PERSONNEL CONTACT INFORMATION:

Rapid Reviews & Patient Calcs

- Rapid Reviews
 - Remote Reviews
 - HDR & LDR Calcs
- Patient Calculations
 - DICOM CT data via RPC FTP site

Add Update

Case no: 0014b

Disease Site: Cervical Endometrial

RTOG GYNECOLOGICAL BRACHYTHERAPY PROTOCOL COMPLIANCE FROM

If there are any questions please contact the RPC at (713) 745-8989 or rpc@mndanderson.org

Retrieve record no: 38

Patient Initials: Case no: Protocol:

	Name	Phone number	Email address
Oncologist:	Tracey Scheffer	720-848-0116	tracey.scheffer@ucdenver.edu
Physicist:	Kelly Stuhr	720-848-0142	kelly.stuhr@ucdenver.edu
Dosimetrist:	Dale Thornton	720-848-0161	dale.thornton@ucdenver.edu
Data Manager:	Tracy King	720-848-0663	tracy.king@ucdenver.edu

External Beam:
 Start date of external beam (mm/dd/yyyy) :
 End date of external beam (mm/dd/yyyy) :
 Whole pelvic dose: (Gy) Daily dose: Total fractions:
 Boost dose: (Gy)

Brachytherapy:
 Treatment Type: LDR HDR Number of insertions:
 Nuclide: Cs-137 Ir-192 Other

Insertion	Start Date (mm/dd/yyyy)	Diameter Ovoid app (cm)	A _R (Gy)	A _L (Gy)	B _R (Gy)	B _L (Gy)	Rectum (Gy)	Bladder (Gy)	Vaginal Surface (Gy)	Magnification Factor	
										AP Film	Lat. Film
1	07/15/2008	2 cm	6.004	5.815	1.783	1.263	3.095	2.597	R7.703/L7.672	NA	NA
2	07/17/2008	2 cm	6.002	5.844	1.337	1.801	3.881	2.449	R7.394/L8.096	NA	NA
3	07/24/2008	2 cm	6.005	5.938	1.398	1.572	4.986	1.689	R6.389/L5.462	NA	NA
4	07/28/2008	2 cm	6.000	5.821	1.462	1.570	3.062	2.351	R7.655/L7.231	NA	NA
5	07/31/2008	2 cm	5.768	5.998	1.278	1.857	3.917	2.361	R7.227/L8.146	NA	NA
Total Dose:			29.779	29.416	7.258	8.063	18.941	11.447	R36.368/L36.607		

9. Small Bowel	<input checked="" type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
10. Rectum	<input checked="" type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
11. Unspecified Tissue	<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

Note: * 1 - Per Protocol; 2 - Minor Deviation, evaluable as is; 3 - Major Deviation, unevaluation as is.

Clinical Reviewers Comments1(existed):
 I agree with your assessment, looks good. lets for it, thanks - anuja

Clinical Reviewers Comments2(existed):
 great

Reviewed by:
 Anuja Jhingran, M.D. Lorraine Portelance, M.D.

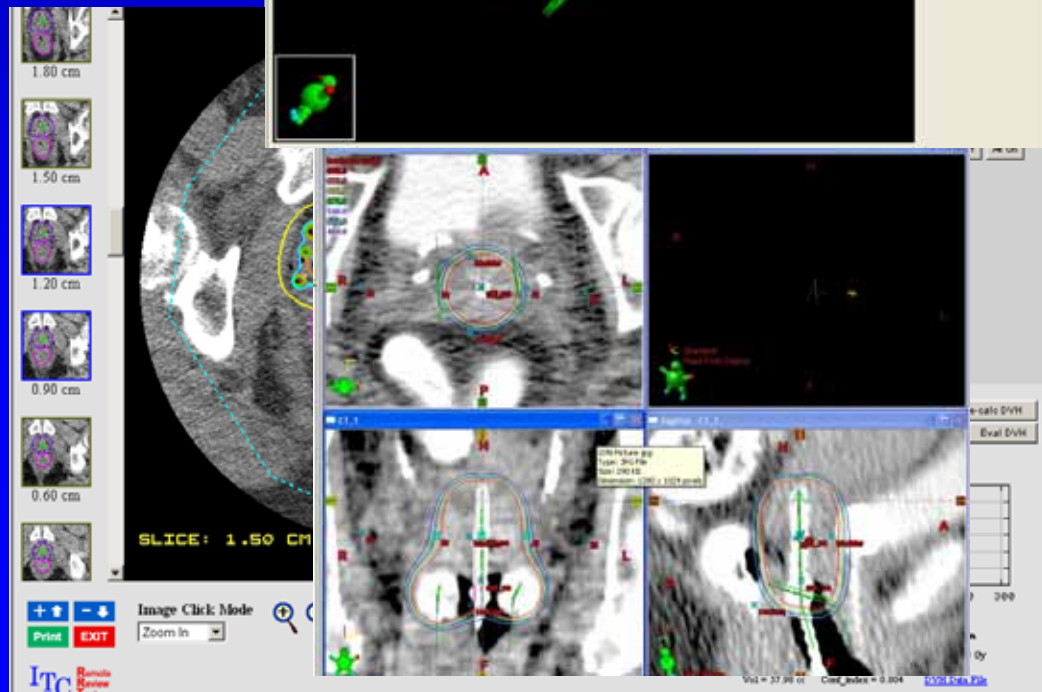
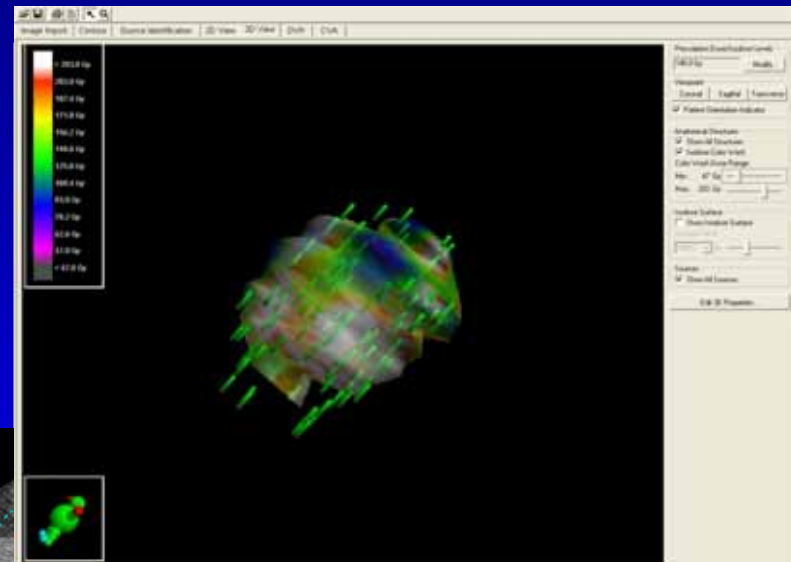
Re-Calculate Dosimetry

Homegrown Brachy Program

- RadComp
- Remote Review Tools
- PC Calc

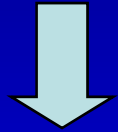
Commercial Treatment Planning System

- Variseed
- Brachyvision

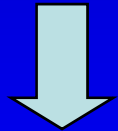


Phantom Evaluations

Inst. submits
treatment plan to ITC



ITC verifies data
received is correct

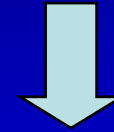


ITC converts data to
CERR format

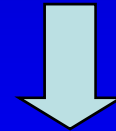


Dose Distribution Analysis

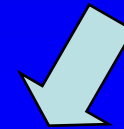
Inst. returns
Phantom to RPC



Dose Calculation
based on TLD system



Film Evaluation



Dose Distribution Analysis

TLD

Phantoms In Session 23016

Institution Info
 Code: 647 Name: Location:

Beam Info
 Model: Clinac 21EX Serial #: 2388 In-House: 21 EX
 Mach#: 62 Energy: 6 MV X-rays

Setup Info | **Capsules** | Calculations | Final Results | Comments

Results Info
 Session #: 23016 Irradiated By: Batch: 807
 Date Read: 3/23/2009 Contact...

Irradiation Setup for Block
 Irradiation Date: 3/6/2009 Actual Timer Setting: 300
 Dist. to Top of Platform: 100 Net Timer Setting: 300
 Irradiated: Yes

Dose Specification
 Dist to Dose Spec. Pt.: 101.5 Setup Type: SSD Field Size: 10X10
 Inst Output: 1.016 SSD (cm): 100 TMR: 1
 Output is From: Ion Chamber Measurement Depth Type: Dmax Other Correction: 1
 Dose Specified To: WATER Depth (cm): 1.5
 Calibration Protocol: TG-51
 Institution Dose: 304.8

Include this beam in final reports sent to institution

Phantom
IMRT H&N(14)
IMRT H&N(13)

Phantom Tld To Inst
3 0.999

Institution Info
 Code: 647 Name: Location:

Beam Info
 Model: Clinac 21EX Serial #: 2388 In-House: 21 EX
 Mach#: 62 Energy: 6 MV X-rays

Setup Info | Capsules | **Calculations** | Final Results | Comments

Calibration Block Calculations

Average Reading	0.918
System Sensitivity	321.897 0
Fading	1.039
Linearity	0.998
Energy Dependence	1.01
Inverse Square	0.942
Decay	1
Backscatter	1.029
TMR	1
Batch Correction	1
Other Correction	1
TLD Dose	299.9
TLD / Institution	0.983

Institution Info
 Code: 647 Name: Location:

Beam Info
 Model: Clinac 21EX Serial #: 2388 In-House: 21 EX
 Mach#: 62 Energy: 6 MV X-rays

Setup Info | Capsules | **Calculations** | Final Results | Comments

	µC	Wt. (mg)	µC/mg	Off Average	OK
▶	19.478	21.43	0.909	-1	Yes
	20.508	22.12	0.927	0.9	Yes
	19.999	21.75	0.919	0.1	Yes

Avg Rdg: 0.9185 +/- 1 %

Buttons: Add Capsule..., Edit Capsule..., Delete Capsule...

Film analysis

Phantom

RPC Film Registration Tool (J:\everyone\Phantoms\IMRT Prostate\IMRT Prostate Images\431\coronal.FIT)

File Dose

prostate

Select Phantom Number

P3

Axial Coronal Sagittal Flip LR Flip TB

Registration Tool

Pick Points >> Register

Profile Plot

Mouse Motion Profile Coord Input Profile

Registration Points(mm)

ID	Label	X	Y	Z	Check
1	sup left	-38.5	0	36.2	<input checked="" type="checkbox"/>
2	sup right	39	0	36.6	<input checked="" type="checkbox"/>
3	inf left	-40.8	0	-40.8	<input checked="" type="checkbox"/>

RMS 2D : 0.3759 mm

FIT: OD to Dose

x^0	x^1	x^2	x^3	Bgd	OD
0	8.0685	-24.894	36.676	0.001	

Convert to Dose

TLD: Correction

ID	Label	MF ROI	M TLD	MT/MF	Check
1	rt post	6.0695	6.03	0.99349	<input checked="" type="checkbox"/>
2	lt ant	6.1558	5.98	0.97143	<input checked="" type="checkbox"/>

Go

Correction: 0.98246 Apply Correction

Color Scale Gray Map

Cursor STATS

Parameter	Value
x	:
y	:
z	:
OD	:
Dose	:

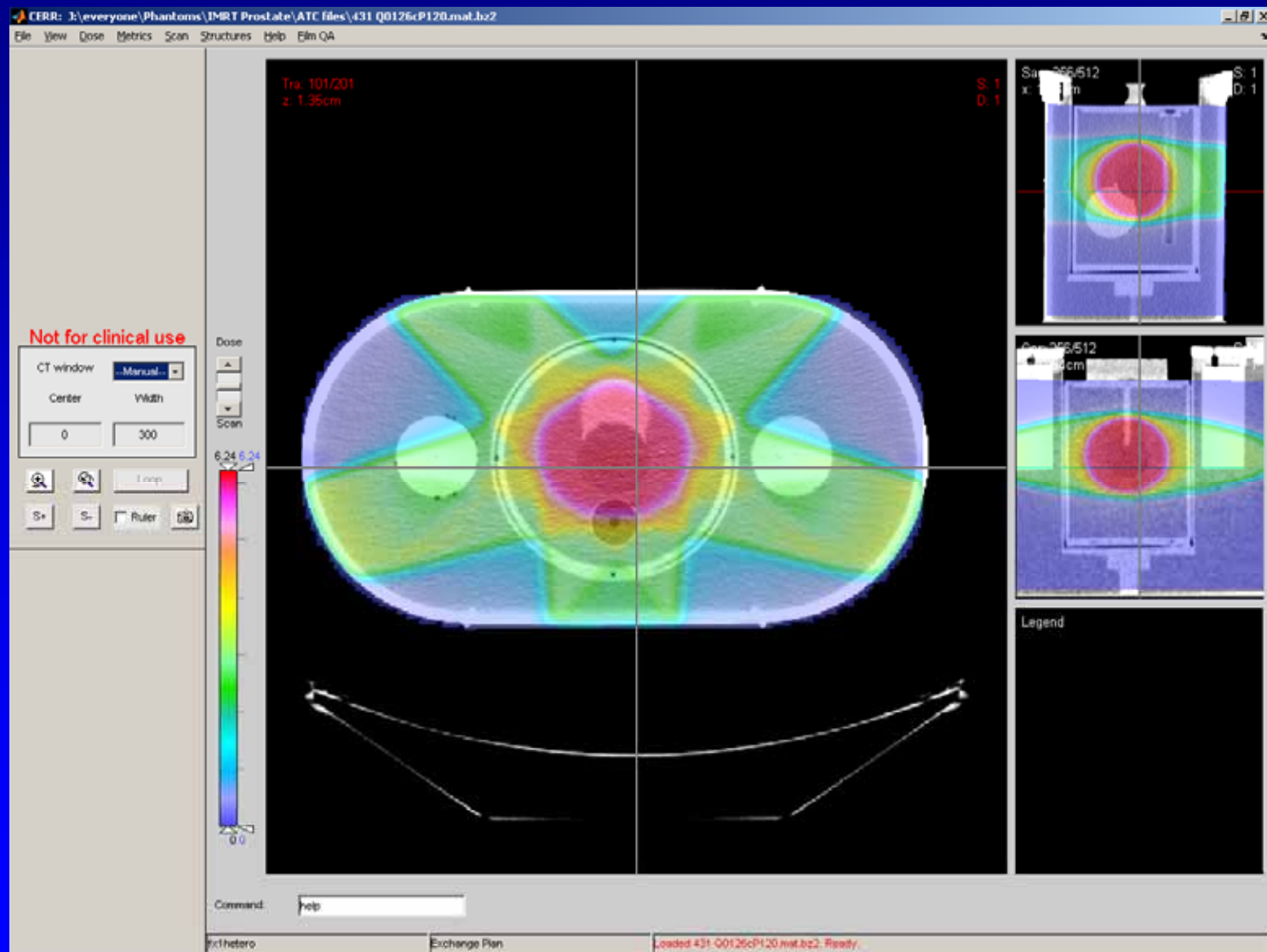
Export FIT to DICOM Register 3D

Registration

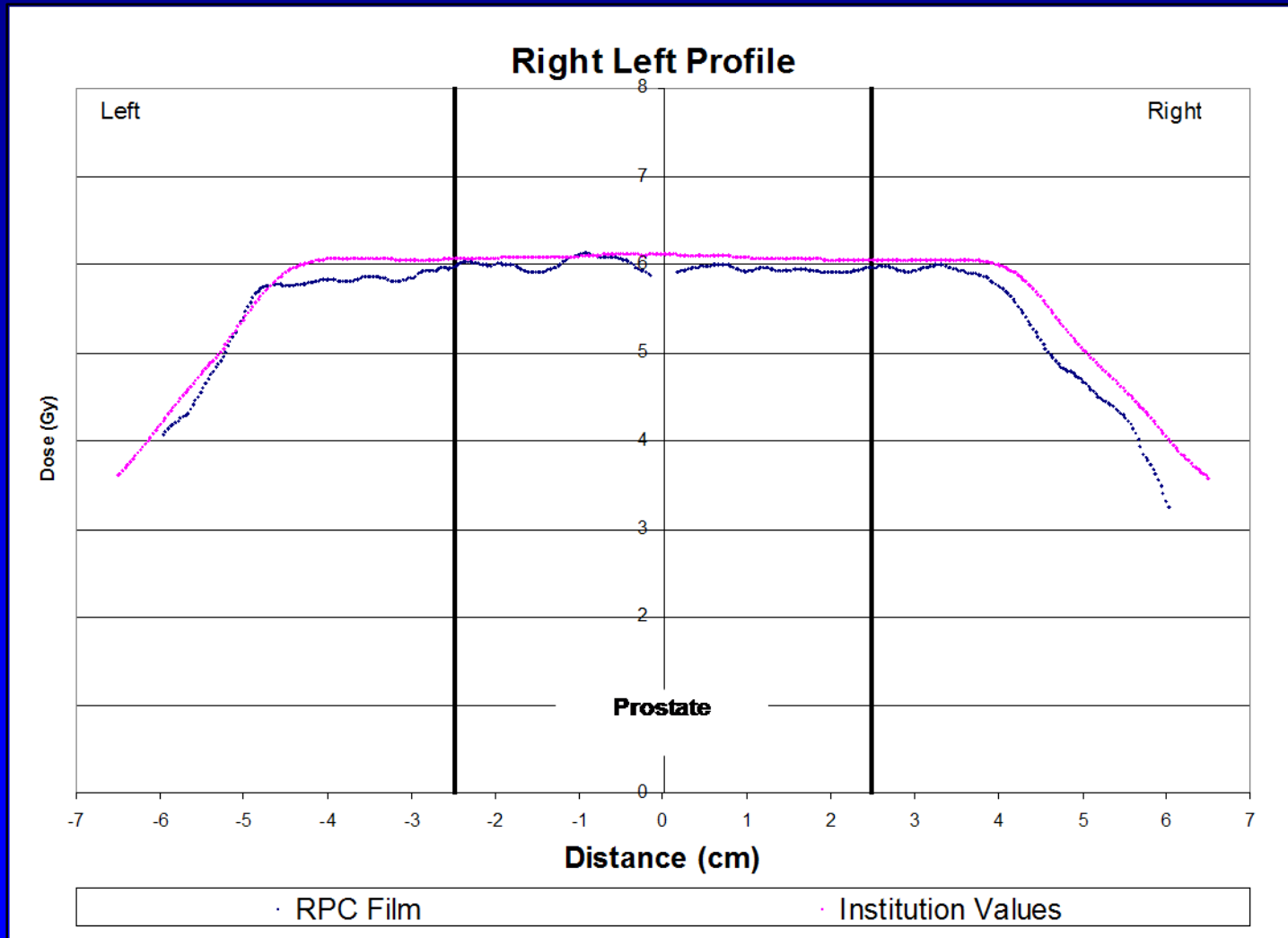
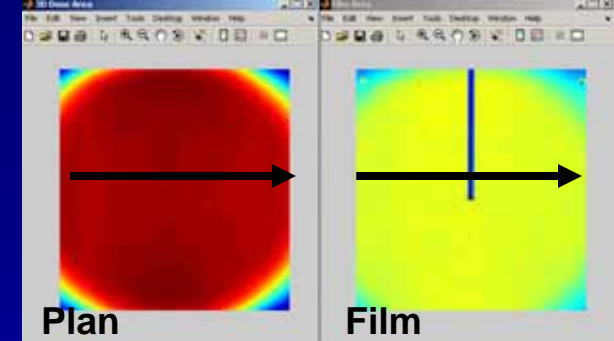
Film data

TLD data

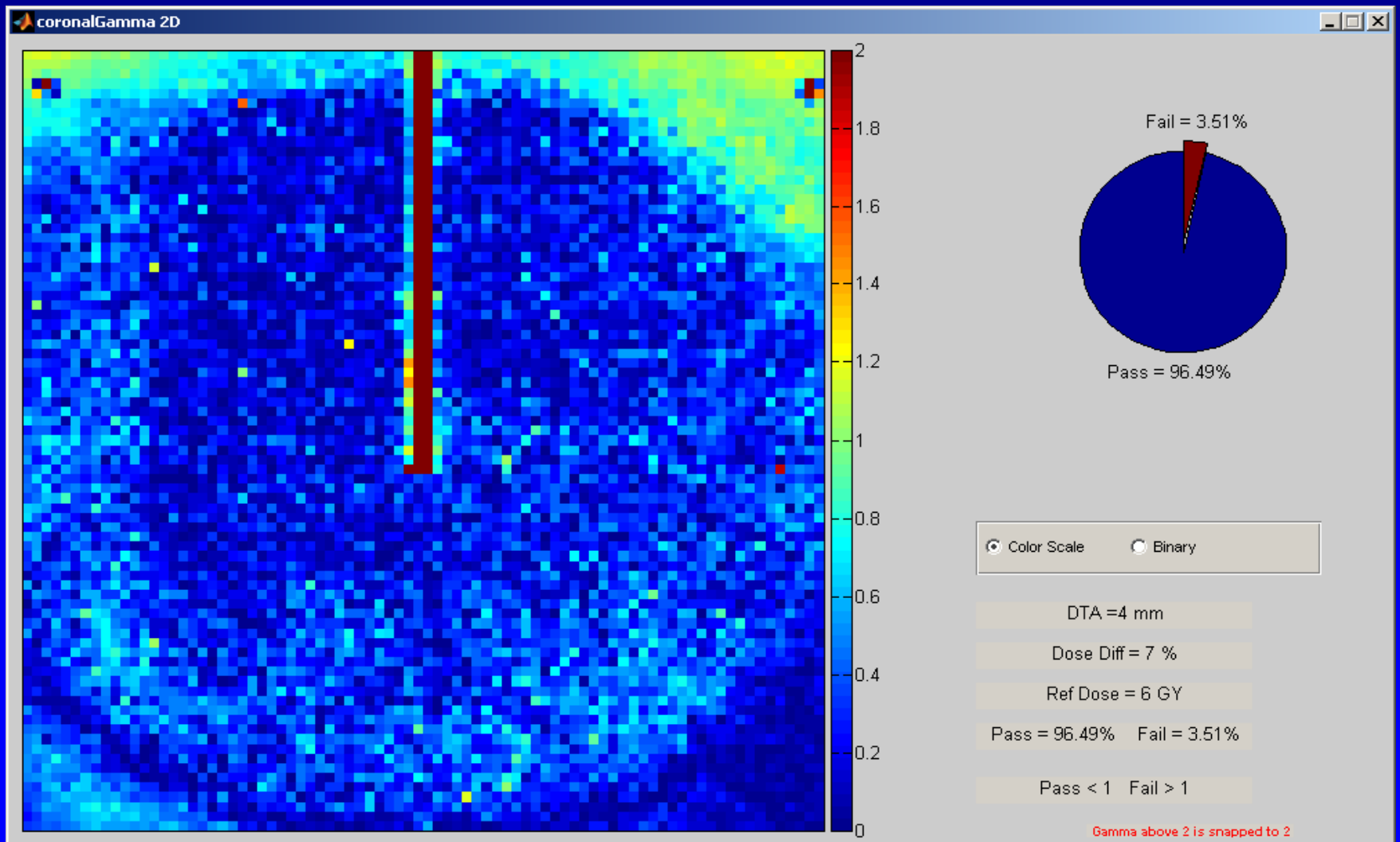
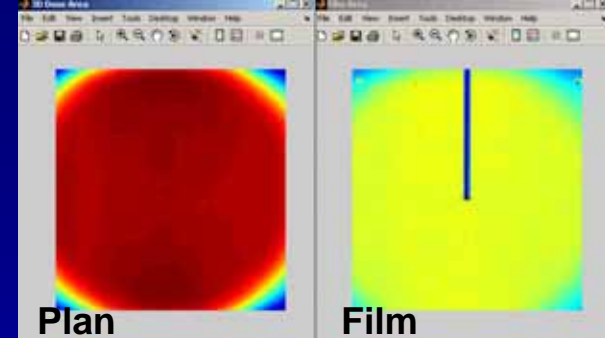
Dose distribution - CERR



1D analysis



2D - analysis



Future Direction

- Increased international participation and communication
- Enhanced electronic data transfer capability
- Recruitment of GOG to initiate electronic submission of patient data
- Retrospective analysis of trial outcomes using MC calc tool for lung studies