Radiation Therapy Oncology Group

American College of Radiology
1818 Market Street, 16th Floor
Philadelphia, PA 19103
(215) 574-3189
(800) 227-5463 Ext. 4189
(215) 928-0153 Fax

Washington, DC

Dosimetry Orientation
6/24/04

TABLE OF CONTENTS

T2 - Protocol Treatment Form..... 1
T3 - Large Localization Films..... 1
T4 - Dose Calculation Form..... 2
Transmittal Form..... 2
Z2 - Request for Additional Dosimetry Information..... 2
TL - Supplemental Dose Calculation Form..... 2
TP - Supplemental Films..... 2
T5 - Daily Treatment Record..... 3
T6 - Isodose Distribution..... 3
T7 - Polaroids or Photos..... 3
T8 - Boost Films..... 4
T1 - Radiotherapy Form..... 4
Z4 - Request for Final Dosimetry Information..... 4
C1 - Pre Rx CT Scan..... 4
C2 - Follow-Up CT Scan..... 4
C3 - CT Scan Report..... 4
C5 - Pre Rx Bone Scan..... 4
C6 - Follow-Up Bone Scan..... 4
C7 - Bone Scan Report..... 5
MR - MRI Films..... 5
ME - MRI Report..... 5
PS - Pre RT Perfusion Lung Scan..... 5
PR - Pre RT Perfusion Lung Scan Report..... 5
T0 - Implant Films (AP/LAT Intracavitary Films)..... 5
I9 - Intracavitary Dose Form..... 5
BT - Brachytherapy Treatment Form..... 5
TM - Prior Radiotherapy Material..... 5
RP - Radiosurgery Placement Films..... 5
RS - Radiosurgery Calculations..... 6
IMRT Submission..... 6
Additional Notes..... 6

Sample Forms

Slide Presentation

RTOG DOSIMETRY DATA SUBMISSION

T2 - Protocol Treatment Form

Form Must Indicate:

Primary Site of Treatment, Surgical Staging
Machine energy (e.g., Co60, 6Mv, 18Mv)
Fields Treated, AP, PA, RT, LAT, etc.
Daily Treatment Dose expressed in Gy
Number of Fractions (number of treatments) for Initial and Boost fields
"Planned total dose" must be completed

Nodes: As dictated in protocol (use coding table at bottom of forms)

Critical Structures:

(1) Areas in or adjacent to treatment field of interest for toxicity and morbidity; e.g., Spinal Cord, Kidney, Retina, Heart as indicated in protocol (Use coding table)
(2) Identify the method of limiting dose (e.g., block, boost field, compensator, etc.)

T3 - Large Localization Films

Approved Initial Treatment Films

e.g., : Lung (usually ANTERIOR/POSTERIOR, initial fields treated)
Pelvis (usually ANT/POST or ANT, POST, RIGHT, LEFT LATERAL)

DO NOT SUBMIT ANY ORIGINAL FILMS

SIMULATION AND PORT FILMS MUST BE SUBMITTED UNLESS PROTOCOL SPECIFIES OTHERWISE

IMAGES ON PAPER ARE ACCEPTABLE

IMAGES ON CD ARE ACCEPTABLE

T4 - Dose Calculation Form

This form should be completed by: Dosimetrist, Radiation Therapist or Physicist.

Daily Dose Calculations

1. Field Projection (Ant, Lat, Oblique, etc.)
2. Machine manufacturer name and unit energy (e.g., 18MV Mevatron 80; 23MV Varian Clinac 2500)
3. Monitor Units/Minutes
4. Tumor dose per field for each field @ point of protocol prescription
5. SSD/SAD (cm)
6. Treatment Depth (cm)
7. Collimator setting
8. Equivalent Square at SSD/SAD
9. % DD, TAR, TMR, TPR, TOR (indicate as applicable)
10. ***Beam output factor for treatment field size (include calibration distance factor if applicable)**
    a. cGy/ (Linac)
    b. cGy/ minutes(Cobalt)
11. **Transmission Factors**
    a. Wedge
    b. Tray
    c. Comp.
    d. Other, Specify _____

All information is necessary to verify dose to each treatment field. The T4 form should accompany all additional fields submitted with final dosimetry.

A labeled computer calculation printout will be accepted in lieu of a T4 form.

Transmittal Form

This form is included in the forms packet. It is a listing of the Dosimetry forms required for the specific study.

Z2 - Request for Additional Initial Dosimetry Information Form

This is a memo that requires **immediate action**. The requested data is needed for the reviewing Radiation Oncologist to complete the Initial Review process.

TL - Supplemental Dose Calculation Form

This form is used for studies that do not receive Initial Review in lieu of T4 form. See instructions for T4 form.

TP - Supplemental Films

Used for studies that do not receive Initial Review, and/or additional films that may be needed for a specific protocol.

T5 - Daily Treatment Record

Patient information relative to his or her daily radiotherapy should be kept and accounted for in a specific treatment chart. The external beam RT chart contains entries by the Radiation Therapists, the Dosimetrist, the Physicist and the Radiation Oncologist. For submission, a copy of the **entire** treatment record must be sent at the completion of treatment for each site.

Every part of the chart should be sent including the front sheet which may contain the physician's prescription, areas of treatment, and other data relative to the patient's setup (patient position, SSD, SAD, etc.). Be sure to photocopy the entire chart including dates and times of daily treatment, plus any notes made by Radiation Therapists indicating adjustments in daily treatments.

The treatment chart includes all:

Treatment sites (e.g., Pelvis, Lung, etc.)
Field Projections (e.g., ANT, POST, RAO, LPO, etc.)
Field sizes (Width x Length)
Treatment Depths (specified SAD, SSD, etc.)
Patient Position (e.g., Supine, Prone)
Gantry Angles
Collimator Angles, if applicable
Devices Used (e.g., Wedges, Compensators, Bolus, etc.)
Total Doses
Start and Stop dates
Reason for RT Treatment breaks
Exact treatment times for hyperfractionated protocols

T6 - Isodose Distribution

The complete isodose/treatment plan should be submitted, including all images/plots, DVH's and calculation information. **Color copies are required.**

*** Please refer to section 6.0 for specific protocol dose requirements.**

T7 - Polaroids or Photos

Some protocols may require a photo of treatment area for the purpose of clarification of treatment portals, patient position, etc.

Electron fields are often not verified by either a simulation film or portal film; therefore, it is necessary to identify parameters of treatment fields in some way, and photo satisfies this requirement.

T8 - Boost Films

The **approved** films that verify any reduction or change in field size (e.g., block added or field size change) are considered boost fields.

Examples: Off-Cord fields
R/L LAT
RAO, LPO (any oblique fields)

***N.B. - One approved set of films for each field should be submitted. It is not necessary to submit weekly port films.**

T1 - Radiotherapy Form

This form summarizes the course of radiation treatment.

Z4 - Request for Final Dosimetry Information Form

This memo is sent by the Dosimetrist at Headquarters. It requests specific data needed to complete the case for the study chairman final review. **The Z4 requires a response.**

C1 - Pre Rx CT Scan

This scan designation may be used as a pre surgery or pre RT scan. It may also designate a CT/MRI scan. Please refer to the protocol section 12 for clarification and the individual patient calendar for due dates.

*** Do not cover the date of the scan when removing identification.**

C2 - Follow-Up CT Scan

This scan designation may be used as a post surgery, post chemo or as a true follow-up scan as specified by protocol. Please refer to patient calendar for due date. If a scan is submitted as a follow-up scan please indicate the date to which it should be credited.

*** Imaging modalities must be consistent throughout the case.**

C3 - CT Scan Report

Films must be accompanied by report, please clip to films.

C5 - Pre Rx Bone Scan

Films and report should be submitted.

C6 - Follow-Up Bone Scan

Films and report should be submitted.

C7 - Bone Scan Report

Report must accompany films.

MR - MRI Films

Please see explanation for submission of CT films.

ME - MRI Report

Report must accompany films.

PS - Pre RT Perfusion Lung Scan

These films should be marked as previously described.

PR - Pre RT Perfusion Lung Scan Report

Report must accompany films.

T0 - Implant Films (AP/LAT Intracavitary Films)

Copies of Orthogonal Localization films (AP, LAT) of the implant should be attached to corresponding implant form (I9). Each implant procedure requires its own set of **dated** orthogonal films and I9 form.

*** Please do not block the date of the implant.**

I9 - Intracavitary Dose Form

Must be completed by Dosimetrist/Physicist.

Complete a separate form for each application.

Submit isodose distributions of implant with this form.

BT - Brachytherapy Treatment Form

The requirements of this form will be described in the protocol.

TM - Prior Radiotherapy Material

The required material for submission will be listed in the protocol.

RP - Radiosurgery Placement Films

This is a film of the radiosurgery field. It should be submitted if the capability exists to produce it. Please notify the RTQA Department if the capability does not exist.

RS - Radiosurgery Calculations

A complete copy of the radiosurgery calculations DVHs & isodose plots should be submitted **in the format required by the protocol.** Color copies are preferred whenever possible.

IMRT Submission

The IMRT data is protocol specific. A color printout of the plan must be submitted. Black and white copies are **not** acceptable.

Additional Notes

- Initial Dosimetry data has a tight timeline. The data should be sent by Federal Express or a similar carrier to arrive at Headquarters by the due date.
- T2, T3, and T4 are needed before Initial Review can be performed. If these are not received within four weeks of treatment start date, the case is considered delinquent. At that time, it is too late for any corrections to be made.
- Do not staple paper data to films.
- Dosimetry data should be clearly marked and submitted separately from data management forms.
- The transmittal form should be submitted with the dosimetry data. Identify all data submitted on the transmittal form. Please use the bar coded labels for identification. If the bar coded labels have not been received, use a plain white label with the study number, case number, patient identifiers and dosimetry form type clearly written on it. This type of labeling will only be accepted by the RTQA (Dosimetry) department.
- Call Headquarters (Tammy McGlade - (215) 574-3219) with any questions after you have submitted material but continue to receive requests. **The requests are automatically generated by the computer and data credit may not have been entered at the time the reminder is sent.** All data is stamped and entered with the date it is received at headquarters.
- Please provide a phone number and contact person when submitting data. Refer data submission questions to Tammy McGlade, Administrative Assistant, and any Dosimetry questions to the headquarters staff Dosimetrists.

RADIATION THERAPY ONCOLOGY GROUP

R.T. QUALITY ASSURANCE STAFF

ELIZABETH MARTIN, DIRECTOR	(215) 574-3209
LORRAINE QUARLES (GU, GI, GYN & BREAST)	(215) 574-3181
DENISE MANFREDI (BRAIN & CCOP)	(215) 717-2755
JULIE MCILVAINE (LUNG)	(215) 574-3229
JOANNE HUNTER (HEAD & NECK)	(215) 574-3222

R.T. QUALITY ASSURANCE ADMINISTRATIVE ASSISTANT

TAMMY McGLADE	(215) 574-3219
FACSIMILE	(215) 923-1737
	(215) 928-0153

DOSIMETRY FORMS

INITIAL REVIEW DATA

- T2 - PROTOCOL TREATMENT FORM
- T3 - LARGE LOCALIZATION FILM
- T4 - DOSE CALCULATION FORM
- **Z2 - REQUEST/ADD'L INITIAL DOSIMETRY**

FINAL REVIEW DATA

- T1 - RADIOTHERAPY FORM
- T5 - DAILY TREATMENT RECORD
- T6 - ISODOSE DISTRIBUTION
- T7 - PHOTO - POLAROIDS
- T8 - BOOST FILMS
- TL - SUPPLEMENTAL DOSE CALCULATION
- TP - SUPPLEMENTAL LOCALIZATION FILMS
- **Z4 - REQUEST/ADD'L FINAL DOSIMETRY**

- MR - MRI FILM
- ME - MRI REPORT
- C1 - PRE-RX CT SCAN OR CT/MRI SCAN
- C2 - FOLLOW-UP CT SCAN OR CT/MRI SCAN
- C3 - CT SCAN REPORT OR CT/MRI REPORT
- C4 - DIAGNOSTIC FILM
- C5 - PRE-RX BONE SCAN
- C6 - FOLLOW-UP BONE SCAN
- C7 - BONE SCAN REPORT
- PS - PRE RT PERFUSION LUNG SCAN
- PR - PERFUSION LUNG SCAN REPORT
- T0 - AP/LATERAL INTRACAVITARY FILMS
- BT - BRACHYTHERAPY TREATMENT FORM
- I9 - INTRACAVITARY DOSE FORM
- RP - RADIOSURGERY PLACEMENT FILMS
- RS - RADIOSURGERY CALCULATIONS
- TM - PRIOR RADIOTHERAPY MATERIAL

- PLEASE USE THE CASE SPECIFIC BAR-CODED LABELS PROVIDED.
- INCLUDE CONTACT PERSON'S NAME AND PHONE NUMBER.

SAMPLE FORMS

R T O G

Radiation Therapy Oncology Group
Dosimetry Transmittal Form

RTOG Study | Case #

PLACE LABEL HERE

Institution | Institution No.

Participant's Initials | Participant's I.D. No.

Please identify the items mailed:*

All forms and films must be identified prior to mailing .

Date Mailed	Form Type	Form Name
	T2	Protocol treatment form
	T3	Initial simulation & portal films
	T4	Protocol calculation form
	C1	Planning CT Scan
	T5	Complete treatment record
	T6	Isodose distributions(s)
	T8	Boost simulation & portal films
	T1	Radiotherapy form

DOSIMETRY

CONTACT PERSON_____ PHONE NUMBER_____

FILMS: Film labels should indicate specific form type to ensure proper credit. Do not block the date of the film.

05-25-04

T2 Radiation Therapy Oncology Group

Initial Protocol Treatment Form

RTOG Study Case #

PLACE LABEL HERE

Institution	Institution No.
	Patient's I.D. No.
Option # / Description	Date RT starts
Surgical Stage: T N M or system	Primary Site

ENERGY (Check all that apply)

- ____ ^{60}Co (> 80 cm SAD)
- ____ 2-4 Mv
- ____ 6-8 Mv
- ____ > 10 Mv
- ____ Particle

BRACHYTHERAPY IMPLANT/ INSERTION/APPLICATION

- ____ No
- ____ Yes, specify source _____

☐☐ # OF INSERTIONS

☐☐.☐☐ PLANNED IMPLANT DOSE

FIELDS (Check all that apply)

- ____ AP
- ____ PA
- ____ Left lateral
- ____ Right lateral
- ____ Left oblique
- ____ Right oblique
- ____ Left arc
- ____ Right arc
- ____ 360° rotation
- ____ Other, specify

ELECTRONS

- ____ No
- ____ Yes

SITE OF ELECTRON RT_____

ALL FIELDS TREATED EACH SESSION

- ____ No
- ____ Yes

CHECK ALL THAT APPLY

- ____ 5 FX/Week; once per day
- ____ 10 FX/Week; twice per day (hyperfx)
- ____ Other, specify_____

FOR FRACTIONATION SCHEDULES OTHER THAN ONCE PER DAY, SPECIFY TIME INTERVAL BETWEEN FRACTIONS_____

POINT OF PRIMARY TREATMENT PRESCRIPTION

- ____ Midplane depth
- ____ Intersection of multiple fields
- ____ Isocenter/center of rotation
- ____ Other, specify _____

PLEASE COMPLETE FOR ALL PLANNED TREATMENT FIELDS

SITE OF PROTOCOL TREATMENT	DAILY DOSE	TOTAL FX	TOTAL DOSE
INITIAL FIELD	☐☐.☐☐	☐☐	☐☐.☐☐
BOOST FIELD #1	☐☐.☐☐	☐☐	☐☐.☐☐
BOOST FIELD #2	☐☐.☐☐	☐☐	☐☐.☐☐
ADDITIONAL SITE	☐☐.☐☐	☐☐	☐☐.☐☐
NODES ☐*	☐☐.☐☐	☐☐	☐☐.☐☐
NODES ☐*	☐☐.☐☐	☐☐	☐☐.☐☐
NODES ☐*	☐☐.☐☐	☐☐	☐☐.☐☐
PLANNED TOTAL DOSE			

*** PRIMARY TREATMENT SITE/NODES**

HEAD & NECK
1 Ant to cord
2 Post to cord
3 S'clav
LUNG (UPPER/MID LOBES)
4 Ipsil hilar/subcar
5 Contra hilar
6 S'clav
LUNG (LOWER LOBES)
7 Ipsil hilar/subcar
8 Contra hilar
9 Inf mediastinal
ESOPHAGUS
10 Mediastinal
11 S'clav
PELVIC PRIMARIES
12 Int/ext iliac
13 Common iliac
14 Para-aortic
BREAST
15 Int mammary
16 Axillary
17 S'clav
ABDOMEN
18 Mesenteric

** CRITICAL STRUCTURES	MAXIMUM DOSE	SPECIFY METHOD USED TO RESTRICT DOSE
☐	☐☐.☐☐ GY	_____
☐	☐☐.☐☐ GY	_____
☐	☐☐.☐☐ GY	_____

**** PRIMARY TREATMENT SITE / CRITICAL STRUCTURES**

HEAD & NECK
1 Spinal cord
LUNG (UPPER / MID LOBES)
2 Spinal cord
3 Heart
4 Contra lung
LUNG (LOWER LOBES)
5 Spinal cord
6 Heart
7 Contra lung

ESOPHAGUS
8 Spinal cord
9 Heart
10 Lung
PELVIC PRIMARIES
11 Bladder
12 Rectum
13 Small bowel

BRAIN
14 Lens (right)
15 Lens (left)
16 Spinal cord
ABDOMEN
17 Kidney
18 Liver
19 Spinal cord
20 Small intestine

T2 Radiation Therapy Oncology Group
Initial Protocol Treatment Form

RTOG Study Case #

PLACE LABEL HERE

Institution	Institution No.
	Patient's I.D. No.
Option # / Description	Date RT starts
Surgical Stage: T N M or system	Primary Site

ENERGY (Check all that apply)

- ___ ^{60}Co (> 80 cm SAD)
- ✓ 2-4 Mv
- ✓ 6-8 Mv
- ___ > 10 Mv
- ___ Particle

BRACHYTHERAPY IMPLANT/ INSERTION/APPLICATION

- ✓ No
- ___ Yes, specify source _____

☐☐ # OF INSERTIONS

☐☐.☐☐ PLANNED IMPLANT DOSE

FIELDS (Check all that apply)

- ✓ AP
- ___ PA
- ✓ Left lateral
- ✓ Right lateral
- ___ Left oblique
- ___ Right oblique
- ___ Left arc
- ___ Right arc
- ___ 360° rotation
- ___ Other, specify

ELECTRONS

- ✓ No
- ✓ Yes

9MeVE-

SITE OF ELECTRON RT RT/LT Bst

ALL FIELDS TREATED EACH SESSION

- ✓ No
- ✓ Yes

CHECK ALL THAT APPLY

- ✓ 5 FX/Week; once per day
- ___ 10 FX/Week; twice per day (hyperfx)
- ___ Other, specify _____

FOR FRACTIONATION SCHEDULES OTHER THAN ONCE PER DAY, SPECIFY TIME INTERVAL BETWEEN FRACTIONS _____

POINT OF PRIMARY TREATMENT PRESCRIPTION

- ✓ Midplane depth
- ✓ Intersection of multiple fields
- ___ Isocenter/center of rotation
- ___ Other, specify _____

PLEASE COMPLETE FOR ALL PLANNED TREATMENT FIELDS

SITE OF PROTOCOL TREATMENT	DAILY DOSE	TOTAL FX	TOTAL DOSE
INITIAL FIELD	2.00	20	40.00
BOOST FIELD #1	2.00	5	10.00
BOOST FIELD #2	2.00	8	16.00
ADDITIONAL SITE ANT SCLAV	2.00	22	44.00
NODES 2* POST NECK	2.00	25	50.00
NODES 3* SCLAV BST	2.00	27	54.00
NODES ☐*	☐☐.☐☐	☐☐	☐☐.☐☐
PLANNED TOTAL DOSE		33	66.00

*** PRIMARY TREATMENT SITE/NODES**

HEAD & NECK
1 Ant to cord
2 Post to cord
3 S'clav
LUNG (UPPER/MID LOBES)
4 Ipsil hilar/subcar
5 Contra hilar
6 S'clav
LUNG (LOWER LOBES)
7 Ipsil hilar/subcar
8 Contra hilar
9 Inf mediastinal
ESOPHAGUS
10 Mediastinal
11 S'clav
PELVIC PRIMARIES
12 Int/ext iliac
13 Common iliac
14 Para-aortic
BREAST
15 Int mammary
16 Axillary
17 S'clav
ABDOMEN
18 Mesenteric

**** CRITICAL STRUCTURES**

CRITICAL STRUCTURES	MAXIMUM DOSE	SPECIFY METHOD USED TO RESTRICT DOSE
1	44.00 GY	Blocking field change
☐	☐☐.☐☐ GY	
☐	☐☐.☐☐ GY	

**** PRIMARY TREATMENT SITE / CRITICAL STRUCTURES**

HEAD & NECK
1 Spinal cord
LUNG (UPPER / MID LOBES)
2 Spinal cord
3 Heart
4 Contra lung
LUNG (LOWER LOBES)
5 Spinal cord
6 Heart
7 Contra lung

ESOPHAGUS
8 Spinal cord
9 Heart
10 Lung
PELVIC PRIMARIES
11 Bladder
12 Rectum
13 Small bowel

BRAIN
14 Lens (right)
15 Lens (left)
16 Spinal cord
ABDOMEN
17 Kidney
18 Liver
19 Spinal cord
20 Small intestine

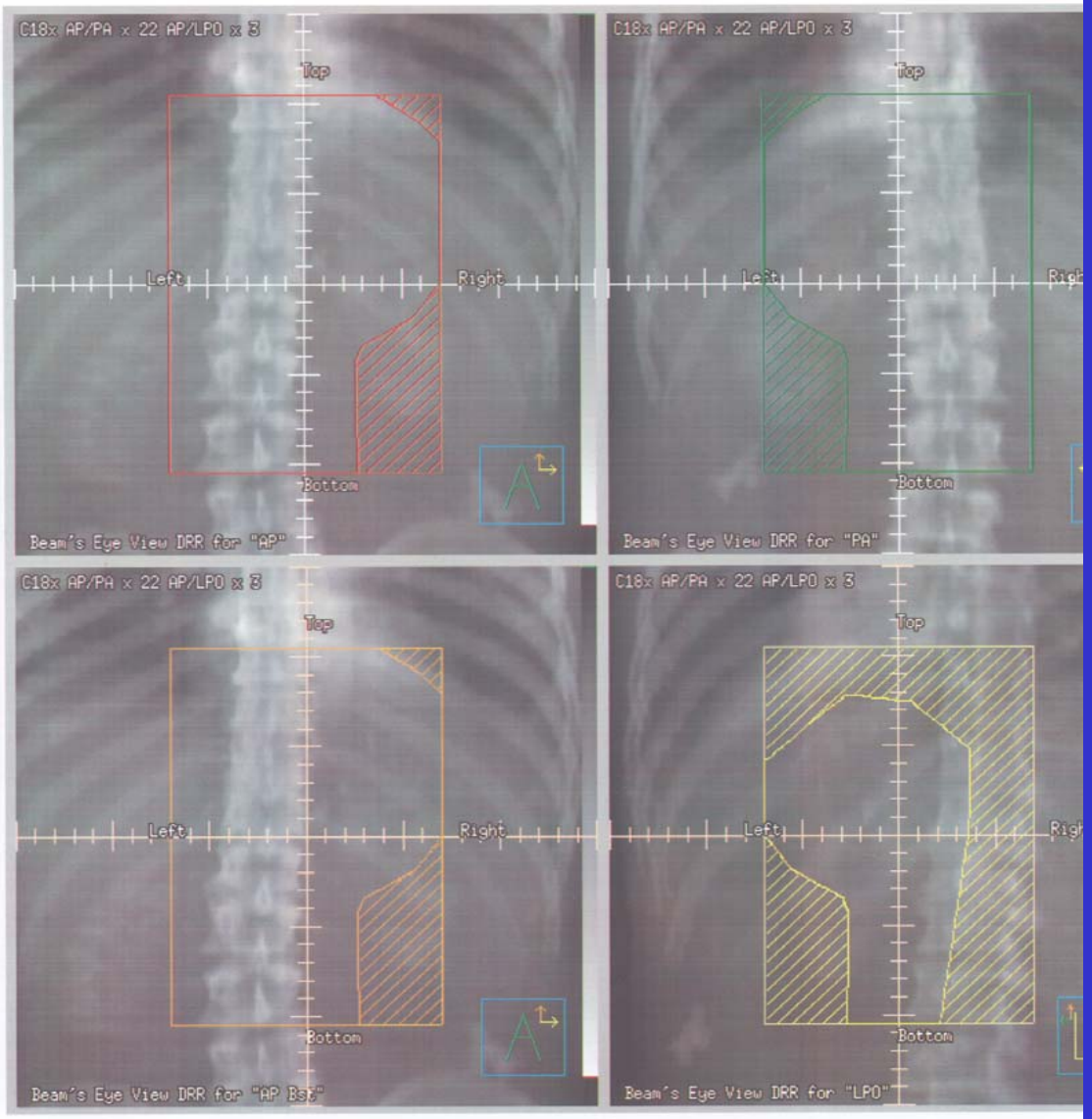
Pinnacle³

RECEIVED
FEB 2 5 2002
IMETRY

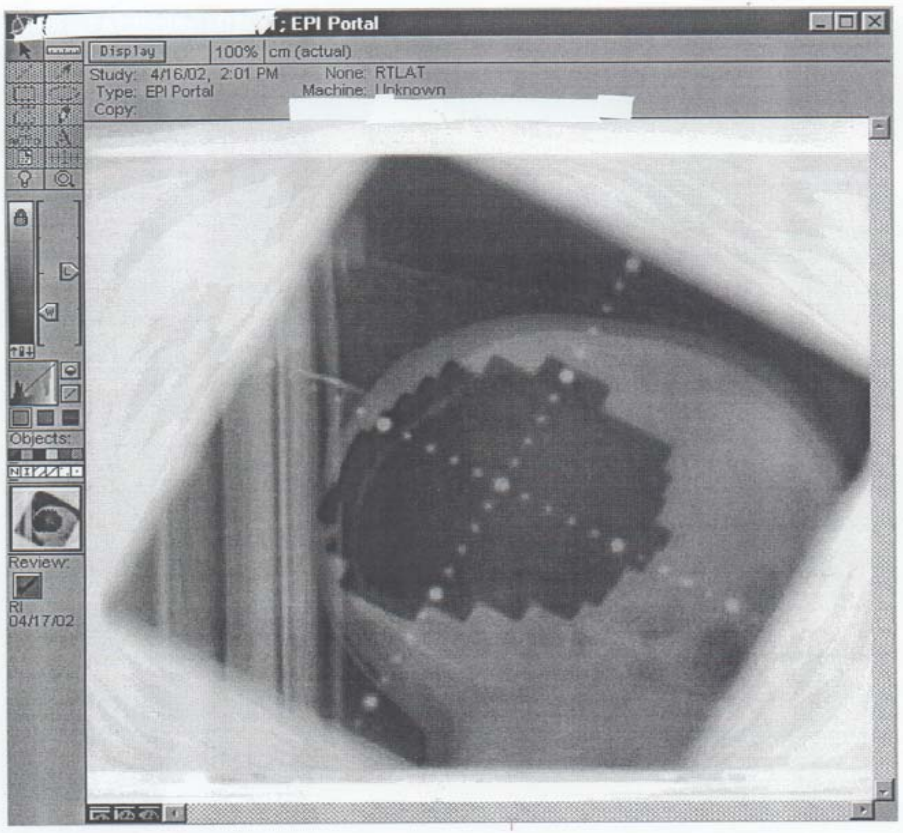
T3

Patient Name:
Patient ID:
Plan Name: A1

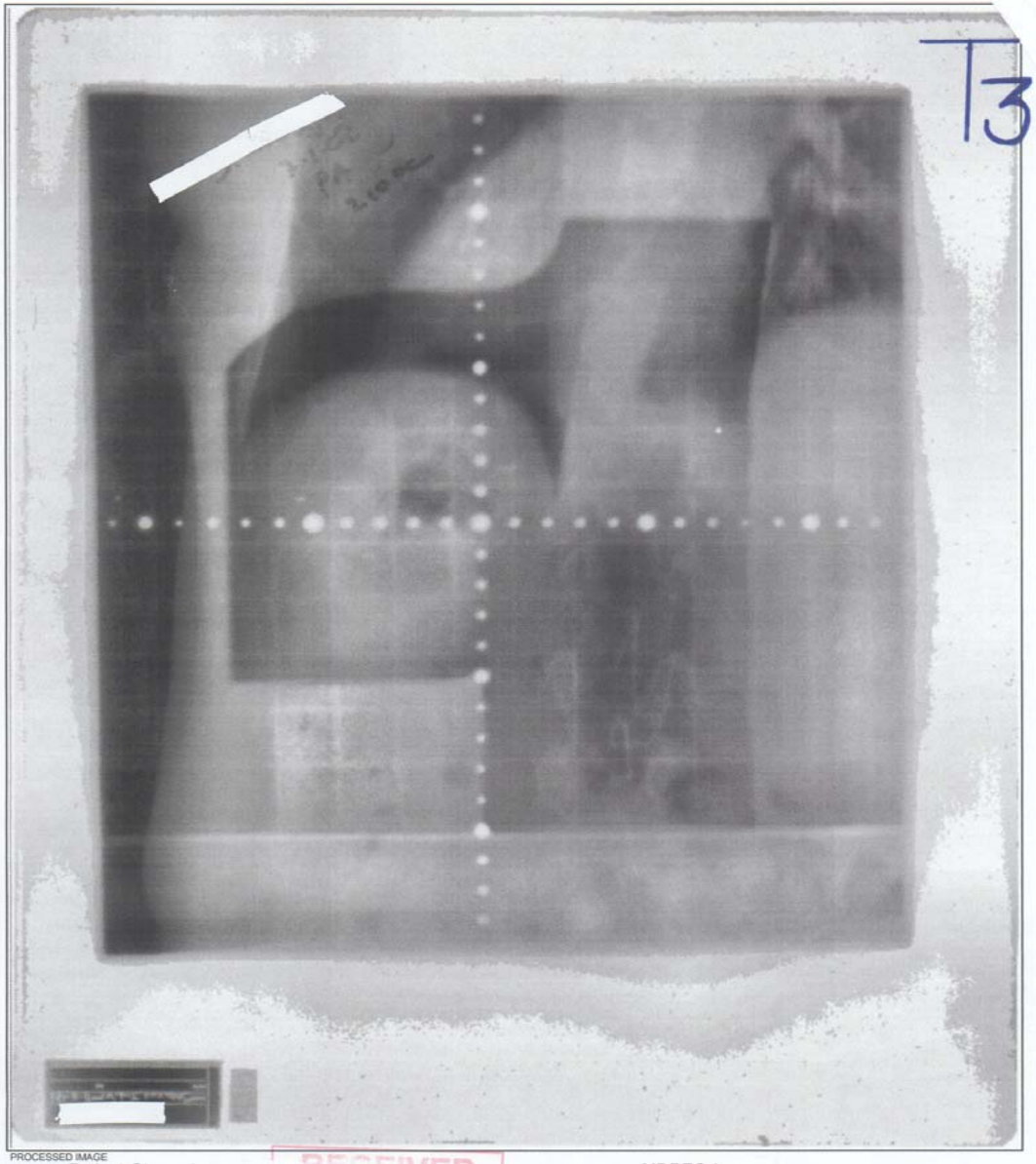
Date/Time: Thu Feb 14 11:49:37 20
Comment: C18x AP/PA x 18;AP/L
Physician/Physicist: DR.



T3



FORM/FILM TYPE



PROCESSED IMAGE

Patient:
Study: 7/ 1/02, 7:39 AM
Field/Location: Field: 2; pa abd
Review Status: Approved by Attending Physician
Reviewed By:
Comments:

RECEIVED
DEC 9 2002
DOSIMETRY

MDREC:
Machine: 2100C
Physician:
Copy:
Slice:

FH 2 PA PORT

Print Scale: Fit to Page

Printed on: December 02, 2002, 3:15:35 PM

T4 Radiation Therapy Oncology Group

Protocol Calculation Form

RTOG Study Case #

PLACE LABEL HERE

Institution **Institution No.**

Patient's I.D. No.

Anatomical Treatment Area

INSTRUCTIONS: Submit this form with initial dosimetry data. If additional boost fields are given, complete form again to include all additional data and send with final dosimetry data.

RTOG dose specifications points are described in section 6.0 of each protocol text.

DAILY DOSE CALCULATIONS	FIELD I	FIELD II	FIELD III	FIELD IV	FIELD V	FIELD VI
1 Field projection (ant,lat,oblique,etc.)						
2 Manufacturer name and unit energy						
3 Monitor units/minutes						
4 Tumor dose per field for each field @ point of protocol prescription						
5 SSD/SAD (cm) (circle one)						
6 Treatment depth (cm)						
7 Collimator setting (Field size in cm at isocenter)						
8 Equivalent square at SSD/SAD						
9 % DD, TAR, TMR, TPR, TOR (indicate as applicable)						
10 *** Beam output factor for treatment field size (include calibration distance factor if applicable.)**						
A CGY/MU (Linac)						
B CGY/MIN (cobalt)						
11 **Transmission Factors**						
A Wedge						
B Tray						
C Comp						
D Other, specify _____						

Form completed by_____ Date ____/____/

T4 Radiation Therapy Oncology Group

Protocol Calculation Form

RTOG Study Case #

PLACE LABEL HERE

Institution

Institution No.

Patient's I.D. No.

Anatomical Treatment Area

INSTRUCTIONS: Submit this form with initial dosimetry data. If additional boost fields are given, complete form again to include all additional data and send with final dosimetry data.

RTOG dose specifications points are described in section 6.0 of each protocol text.

DAILY DOSE CALCULATIONS	FIELD I	FIELD II	FIELD III	FIELD ~~IV~~ IIA	FIELD ~~V~~ IIA	FIELD ~~VI~~ IIA
1 Field projection (ant,lat,oblique,etc.)	RT LAT NECK	LT LAT NECK	ANT SCLAV	RT LAT OFF CORD	LT LAT OFF CORD	ANT SCLAV CD
2 Manufacturer name and unit energy	VARIAN	6MV				
3 Monitor units/minutes	113	110	193	118	114	201
4 Tumor dose per field for each field @ point of protocol prescription	100	100	200	100	100	200
5 SSD/SAD (cm) (circle one)	92.5	93.5	97.0	92.5	92.5	97.0
6 Treatment depth (cm)	7.5	6.5	3.0	7.5	7.5	3.0
7 Collimator setting (Field size in cm at isocenter)	13 x 22	13 x 22	20 x 22.5	13 x 11	13 x 11	20 x 11.3
8 Equivalent square at SSD/SAD						
9 % DD, TAR, TMR, TPR, TOR (indicate as applicable)	0.876	0.905	1.007	0.843	0.843	0.970
10 * Beam output factor for treatment field size (include calibration distance factor if applicable.)						
A CGY/MU (Linac)	1.062	1.062	1.088	1.040	1.040	1.065
B CGY/MIN (cobalt)						
11 Transmission Factors						
A Wedge						
B Tray	0.973	0.973	0.973	0.973	0.973	0.973
C Comp						
D Other, specify _____						

Form completed by_____ Date ___/___/

T4 Radiation Therapy Oncology Group
Protocol Calculation Form

RTOG Study Case #

PLACE LABEL HERE

Institution

Institution No.

Patient's I.D. No.

Anatomical Treatment Area

INSTRUCTIONS: Submit this form with initial dosimetry data. If additional boost fields are given, complete form again to include all additional data and send with final dosimetry data.

RTOG dose specifications points are described in section 6.0 of each protocol text.

	DAILY DOSE CALCULATIONS	~~FIELD I~~ IB	~~FIELD II~~ IIB	~~FIELD III~~ IV	~~FIELD IV~~ V	FIELD V	FIELD VI
1	Field projection (ant,lat,oblique,etc.)	RT LAT E-NECK	LT LAT E-NECK	RAO CD NECK	LPO CD NECK		
2	Manufacturer name and unit energy	VARIAN CLINAC 9MEV E-		VARIAN CLINAC 15MV			
3	Monitor units/minutes	300	300	86	126		
4	Tumor dose per field for each field @ point of protocol prescription	200	200	81.6	122.4		
5	SSD/SAD (cm) (circle one)	100	100	93.0	94.0		
6	Treatment depth (cm)	AT MAX	—	7.0	6.0		
7	Collimator setting (Field size in cm at isocenter)	10 x 10 CONE	10 x 10 CONE	7 x 9.5	7 x 9.5		
8	Equivalent square at SSD/SAD						
9	% DD, TAR, TMR, TPR, TOR (indicate as applicable)			0.939	0.939		
10	*** Beam output factor for treatment field size (include calibration distance factor if applicable.)**						
A	CGY/MU (Linac)			1.045	1.045		
B	CGY/MIN (cobalt)						
11	**Transmission Factors**						
A	Wedge						
B	Tray			0.982	0.982		
C	Comp						
D	Other, specify _____						

Form completed by _____ Date ____/____/

Patient Name:		Date/Time:	
Patient ID:		Comment:	
Plan Name:	*cumulative plan, pancreas*	Institution:	
Trial Name:	*Trial_I*	Physician:	
Revision	R01.P03.D04	Planner: *lmk*	

T4

Prescription: *Presciption_I*

Isocenter: *iso*

Prescribe 4500 cGy overall to 99 % of dose at "iso" in 25 fractions
Beam weights are proportional to point dose.
Actual dose at "iso" from all prescriptions/beams is 5067.41 cGy.
3 beams are assigned to this prescription.

Position patient such that lasers line up with patient marks.
Move the table RIGHT 2.42 cm (looking from foot of table.)
Move the table DOWN 2.01 cm.
Move the table IN (toward the gantry) 3.25 cm.

Beam Setup	*(A) ap pancreas*	*(B) rt lat pancreas*	*(C) lt lat pancreas*
Machine Name	CL 1800 SN 131	CL 1800 SN 131	CL 1800 SN 131
Machine Version	2001-07-31 15:03:04	2001-07-31 15:03:04	2001-07-31 15:03:04
Energy / Modality	10X Photons	10X Photons	10X Photons
SAS (cm)	100.0	100.0	100.0
Beam Geometry			
Couch Angle	0	0	0
Gantry Angle	0	270	90
Collimator Angle	0	270	270
SSD (cm)	92.09	88.47	85.84
Collimators			
X2/X1 (X)	5.50/5.50 (11.00)	8.50/8.50 (17.00)	8.50/8.50 (17.00)
Jaw I/Jaw 2 (Y)	8.50/8.50 (17.00)	5.50/8.50 (11.00)	5.50/5.50 (11.00)
Modifiers			
Wedge Name	None	*45 Degree*	*45 Degree*
Wedge Orientation	--	OUT	IN
Wedge Angle	No Wedge	Fixed	Fixed
Blocked	Yes	Yes	Yes
Bolus Type	None	None	None
Bolus Width/Height (cm)	--	--	--
Bolus Thickness (cm)	--	--	--
Bolus Density (g/cm^3)	--	--	--
Compensator	None	None	None
Dose			
Dose Engine	Adaptive Convolve	Adaptive Convolve	Adaptive Convolve
Model	All Field Sizes	*W:45 Degree, 13.3571 cm	*W:45 Degree, 13.3571 cm
Density Correction	Homogeneous	Homogeneous	Homogeneous
# Fractions x MU/Fract	25 x 66	25 x 136	25 x 147
Relative Weight	33.33 %	33.33 %	33.33 %
Reference Point	*iso*	*iso*	*iso*
Meas Ref Point Dose (cGy/MU)	--	--	--
Dose at Ref/Fraction (cGy)	60.7	60.8	60.7
Normalized Dose (ND) at Ref Pt	1.029	0.517	0.477
Collimator Output Factor (OFc)	1.010	0.978	0.978
Tray / Block & Tray Factor	0.9700 / 0.0450	0.9700 / 0.0450	0.9700 / 0.0450
Total Transmission Factor (TTF)	0.970	0.970	0.970
SPD/OAD (cm)	100.00 / 0.00	100.00 / 0.00	100.00 / 0.00
SSD to Ref Pt (cm)	92.09	88.47	85.84
Ref Pt Depth / Eff Depth (cm)	7.91 / 7.91	11.53 / 11.53	14.16 / 14.16
Unblk Equiv Sq / % Blkd	13.4 / 17.3%	13.4 / 49.5%	13.4 / 49.6%

***Note that model is interpolated.**

Plan Authorization:_____

T4

Photon
Monitor Unit Calc Sheet

Patient Name:_____ **Pat. ID#:**_____

Prescription Name	Prescribed Dose	Dose Per Treatment	Num Fractions
BRAIN BST	1400	200	7

Field ID	A1	B1	C1
Field Description	Sup Ant Obliq Bst	RT VERTEX BST	PA OBLIQ BST
Prescription	BRAIN BST	BRAIN BST	BRAIN BST
Accelerator	Clinac 2100EX	Clinac 2100EX	Clina 2100EX
Energy	18 MV	18 MV	6 MV
Dose Per Treatment	70.0	80.0	50.0
Isodose Line to Treat	95.0%	95.0%	95.0%
Dose at Calc Pt	73.7	84.2	52.6

Gantry Mode	Gantry Dir		Fixed			Fixed			Fixed		
Gantry Start	Gantry Stop		120	120		270	270		10	10	
Collimator Angle			180			180			180		
Couch Angle			195			110			90		
X jaws Mode	X1	X2	Asym	4.50	5.00	Asym	6.00	5.50	Asym	6.30	4.30
Y jaws Mode	Y1	Y2	Asym	6.50	4.00	Assym	5.00	4.70	Asym	4.70	4.50
Wedge Name	Orientation		15 Degree	15-OUT		30 Degree	30-LEFT		30 Degree	30-RIGHT	
Wedge Angle	Wedge Factor		Fixed	0.772		Fixed	0.634		Fixed	0.552	
Atten. Name	Atten. Factor		NONE	1.000		NONE	1.000		NONE	1.000	
Compensator	Comp. Factor		No	1.000		No	1.000		No	1.000	
Eq. Sq. @ Iso	Sc		9.98	1.000		10.52	1.005		9.85	0.999	
Block Corr	Value		Blk Equiv Sq	8.70		Blk Equiv Sq	9.20		Blk Equiv Sq	8.90	
SSD at Calc Pt	ISF		95.13	1.000		92.03	1.000		94.33	1.000	
OADx	OADz	OAF	0.00	0.00	1.000	0.00	0.00	1.000	0.00	0.00	1.000
Blk. Eq. Sq. @ Pt	Sp		8.70	0.997		9.20	0.998		8.90	0.996	
Meas. Depth	TPR		4.87	1.005		7.97	0.955		5.67	0.915	
Inhomo Corr	Value		Equiv Path	0.989		Equiv Path	0.965		Equiv Path	0.978	
Calibration at Iso. (cGy/MU)			1.0730			1.0730			1.0300		
Dose Per MU (cGy/MU)			0.821			0.628			0.506		
MU			90			134			104		
Plan MU			94			139			107		
Percent Difference			-4.3%			-3.6%			-2.8%		

Calculated By: _____

Checked By: _____

Physician Signature: _____

T4

PATIENT NAME:

TREATMENT SITE: 1st course pelvis (4 field) on VI, @ 96% normalization

CHART PORTAL NUMBER:	1	2	3	4
PORTAL ORIENTATION	AP	PA	Rt Lat	Lt Lat
ENERGY:	18 MV	18 MV	18 MV	18 MV
COLLIMATOR SETTING:	10 x 10	10 x 10	10 x 10	10 x 10
Sc:	1.000	1.000	1.000	1.000
SSD:	88.9	88.4	81.1	81.9
DEPTH:	11.1	11.6	18.9	18.1
EQ. SQUARE ROCS:	7.9	8.1	8.1	8.0
Sp	0.989	0.991	0.991	0.990
TRAY:	Solid	Solid	Solid	Solid
TRAY FACTOR:	0.982	0.982	0.982	0.982
WEDGE:	None	None	None	None
WEDGE FACTOR:	1.000	1.000	1.000	1.000
TMR:	0.880	0.870	0.725	0.742
INVERSE SQUARE:	1.071	1.071	1.071	1.071
OCR:	1	1	1	1
DOSE:	52	38	45	45
MU:	59	44	62	61
ROCS MU's:	--- 58 ---	--- 44 ---	--- 61 ---	--- 60 ---
Impac time:	.17	.13	.18	.18

Calculated by: 10/11/01, Checked by:

TL

Radiation Therapy Oncology Group

Protocol Calculation Form

RTOG Study Case #

Institution

Institution No.

Patient's I.D. No.

Anatomical Treatment Area

INSTRUCTIONS: Please complete this form for all treatment fields and send with final dosimetry data.

RTOG dose specifications points are described in section 6.0 of each protocol text.

	DAILY DOSE CALCULATIONS	FIELD I	FIELD II	FIELD III	FIELD IV	FIELD V	FIELD VI
1	Field Projection (Ant, Lat, Oblique etc.)						
2	Manufacturer name and unit energy						
3	Monitor Units/Minutes						
4	Tumor dose per field for each field @ point of protocol prescription						
5	SSD / SAD (cm) circle one						
6	Treatment Depth (cm)						
7	Collimator setting (Field size in cm at isocenter)						
8	Equivalent Square at SSD / SAD						
9	% DD, TAR, TMR, TPR, TOR (indicate as applicable)						
10	* Beam output factor for treatment field size (include calibration distance factor if applicable.)						
A	CGY / MU (Linac)						
B	CGY / MIN (Cobalt)						
11	Transmission Factors						
A	Wedge						
B	Tray						
C	Comp						
D	Other , Specify _____						

Form completed by_____ Date ____/____/____

T5

Radiation Oncology Chart

Field Number	1	2	3	4
Field Name BRAIN	RT LAT INF	LAO INF	AP SUP	VERTEX
Modality/Energy	8/10mv	8/10mv	8/10mv	8/10mv
Coll.Set./Cone Size	14x14	14x13	10x13	12x14
Offsets X				
Y	1.0↓			
SSD	Aimed @ 100 SAD			
Collimator Angle	145	180	90	235
Gantry Angle	270	45	30	70
Alloy/Pb blks/Pb cut.	ALLOY	ALLOY	ALLOY	ALLOY
Wedge	YES	YES	YES	YES
Compensator	—	—	—	—
Bolus ISO	10	30	90	90
Other	179/201	141/160	53/70	173/173

1999 Date	Day	Time	Tec Int	Cht Chk	MU Wdg	Open	MU Wdg	Open	MU Wdg	Open	MU Wdg	Open	MU Wdg	Open	MU Wdg	Open
	M															
11/23	T				PORT FILM TAKEN											
11/24	W		BG	✓	179	22	141	19	53	17	173	–				
11/25	Th				HOLIDAY											
11/26	F		BG		179	22	141	19	53	17	173	–				
	S/S															
11/29	M		JMC		179	22	141	19	53	17	173	–				
11/30	T		JMC		179	22	141	19	53	17	173	–				
12/1	W		JMC		179	22	141	19	53	17	173	–				
12/2	Th		JMC	✓	179	22	141	19	53	17	173	–				
12/3	F		JMC		179	22	141	19	53	17	173	–				
	S/S															
12/6	M		LG		179	22	141	19	53	17	173	–				
12/7	T		LG		179	22	141	19	53	17	173	–				
12/8	W		LG		179	22	141	19	53	17	173	–				
12/9	Th		LG	✓	179	22	141	19	53	17	173	–				
12/10	F		BD		179	22	141	19	53	17	173	–				
	S/S															
12/13	M		BD		179	22	141	19	53	17	173	–				
12/14	T		BD		179	22	141	19	53	17	173	–				
12/15	W		DM		179	22	141	19	53	17	173	–				
12/16	Th		DM	✓	179	22	141	19	53	17	173	–				
12/17	F		DM		179	22	141	19	53	17	173	–				
	S/S															

Form 4321-HS (Rev. 8/91)

Total Dose-Sites:	Rx Record of
1 34.0 Gy	Conedown:
2	1
3	2
4	3

Re-evaluations:
1
2
3

Cumulative Doses

1–4	1–4	1–4
TD = 100%	min TD = 95%	max TD = 105%

F	ED	Daily Dose	Cumul Dose	F	ED	Daily Dose	Cumul Dose	F	ED	Daily Dose	Cumul Dose	F	ED	Daily Dose	Cumul Dose	F	ED	Daily Dose	Cumul Dose	F	ED	Daily Dose	Cumul Dose
0			2.0			1.9	1.9			2.1	2.1												
2	2	2.0	4.0			1.9	3.8			2.1	4.2												
5	5	2.0	6.0				5.7			2.1	6.3												
6	6	2.0	8.0				7.6			2.1	8.4			PORT FILMS TAKEN									
7			10.0				9.5			2.1	10.5												
8			12.0				11.4			2.1	12.6												
9			14.0				13.3			2.1	14.7												
12			16.0				15.2			2.1	16.8												
13			18.0				17.1			2.1	18.9			PORT FILMS TAKEN									
14			20.0				19.0			2.1	21.0												
15			22.0				20.9			2.1	23.1												
16			24.0				22.8			2.1	25.2												
19			26.0				24.7			2.1	27.3												
20			28.0				26.6			2.1	29.4			PORT FILMS TAKEN									
21			30.0				28.5			2.1	31.5												
22			32.0				30.4			2.1	33.6												
23			34.0				32.3			2.1	35.7												

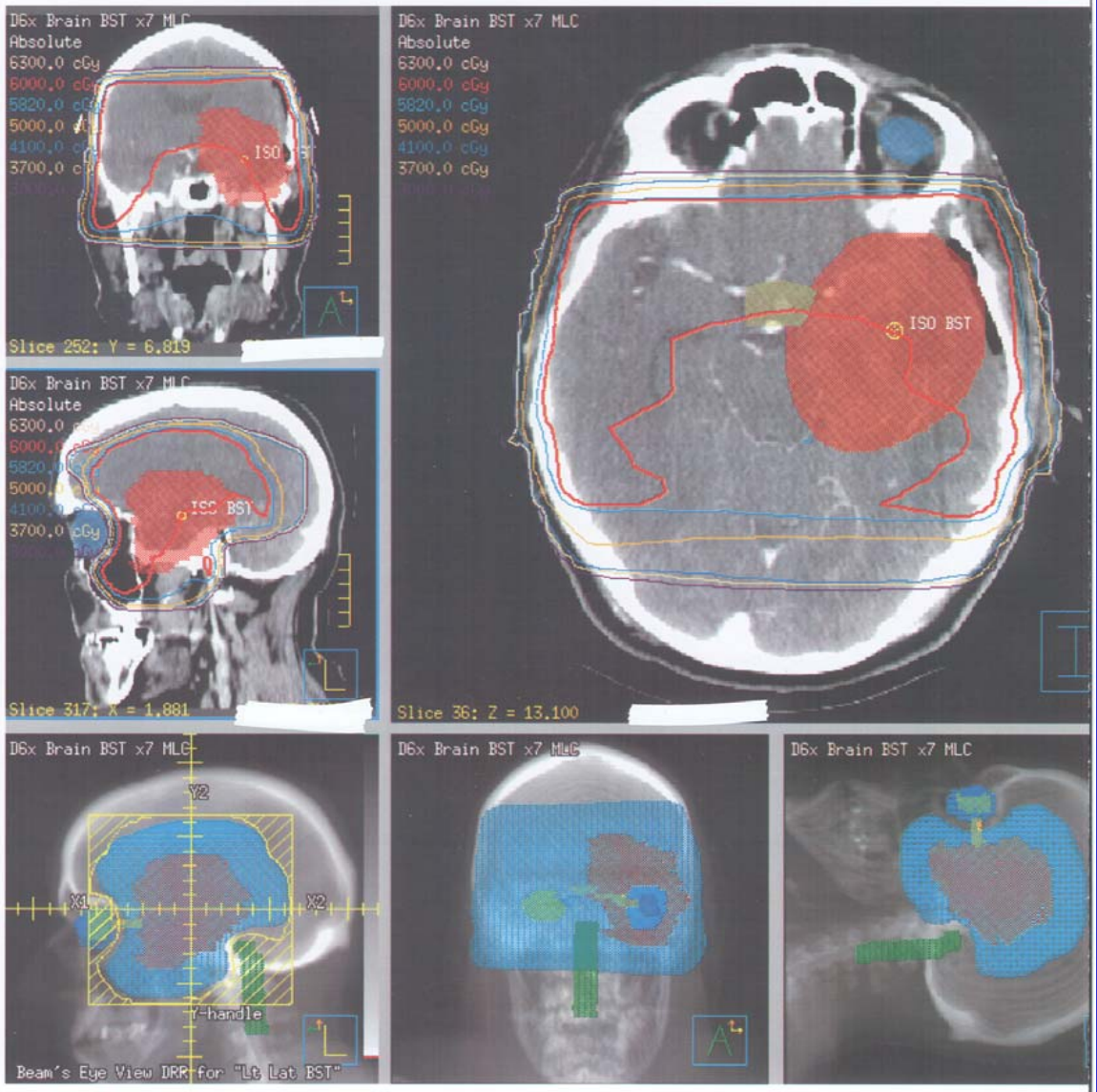
MUG 01.3471

Pinnacle³

Patient Name:
Patient ID:
Plan Name: A2

T6

Date/Time: Wed May 15 12:58:21 2002
Comment: D6x Brain BST x7 (30of30)
Physician/Physicist:



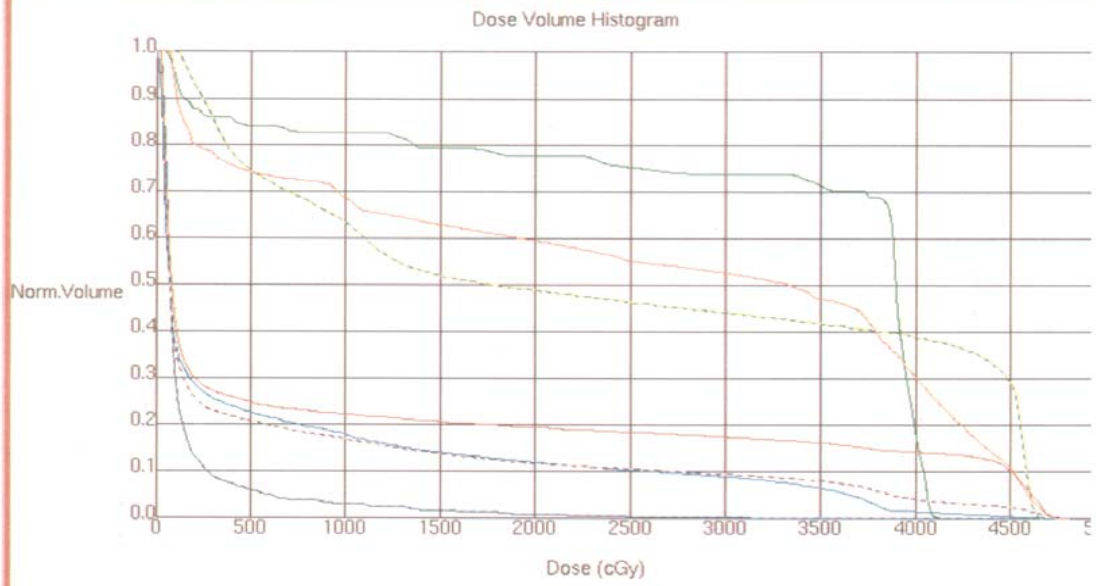
Pinnacle³

Patient Name:
Patient ID:
Plan Name: A2&A1

Date/Time: Mon May 13 16:35:04 2(
Comment: C18x AP/LPO BST x 7 (
Physician/Physicist: DR.

Sample DVH

Dose Volume Histogram Window



Current	Region of Interest	Trial	Beam	Color	Dash Color	% Outside Grid
◆	Cord	C18x AP/LPO	All Beams/Sources	green	No Dash	23.54 %
◇	Rt Kidney	C18x AP/LPO	All Beams/Sources	lightblue	spectrum	0.00 %
◇	Lt Kidney	C18x AP/LPO	All Beams/Sources	yellow	forest	0.00 %
◇	Heart	C18x AP/LPO	All Beams/Sources	tomato	No Dash	24.54 %
◇	Rt Lung	C18x AP/LPO	All Beams/Sources	teal	No Dash	43.38 %
◇	Lt Lung	C18x AP/LPO	All Beams/Sources	khaki	slateblue	48.24 %
◇	Liver	C18x AP/LPO	All Beams/Sources	maroon	No Dash	0.00 %

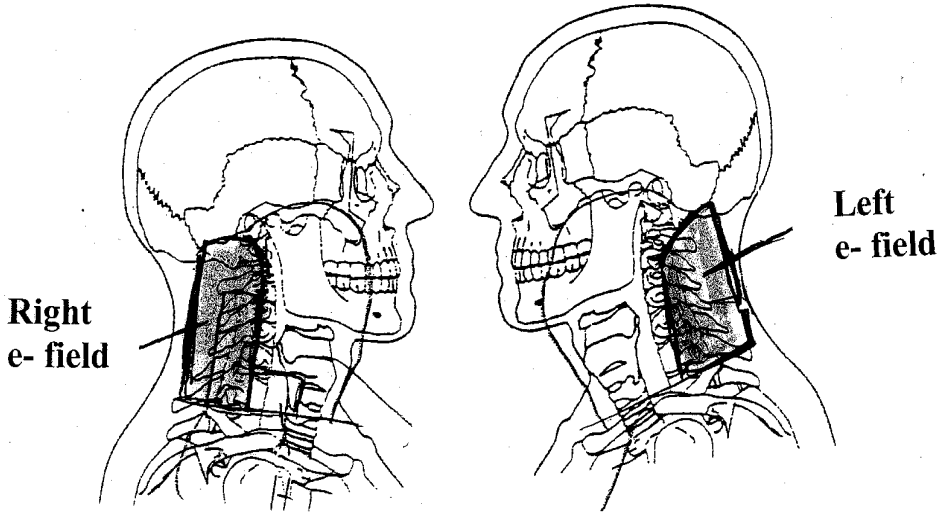
Dismiss | Tabular DVH... | Edit NTCP/TCP...

Acceptable electron field documentation

T7

Portal films
Simulation Films with e- fields marked
Photos of field with e-field highlighted or marked
*Diagrams with e-field highlighted or marked

*Diagrams must show where on the body the field was located (see below).



T1 Radiation Therapy Oncology Group Phase II Head & Neck Cancer Radiotherapy Form

RTOG Study 0234 Case #

PLACE LABEL HERE

Institution Institution No.

Participant's Initials Participant's I.D. No.

If this is a revised or corrected form, indicate by checking box. ☐

INSTRUCTIONS: Submit this form at the completion of protocol therapy. Dates are recorded mm-dd-yyyy unless otherwise specified. If no RT is given, start and stop dates should be left blank, enter 0 for elapsed days (q3), fractions (q4), and total dose (q5), and give reason for no RT (q7).

1 **RADIATION THERAPY START DATE**

_____-_____-_____

2 **RADIATION THERAPY END DATE**

_____-_____-_____

3 **ELAPSED DAYS** ☐☐

4 **TOTAL FRACTIONS** ☐☐

5 **TOTAL DOSE** ☐☐.☐☐ Gy

6 **RADIATION THERAPY INTERRUPTIONS**

☐☐ Total # of treatment days interrupted for toxicity

☐☐ Total # of treatment days interrupted for other reasons, specify_____

7 ☐☐ **REASON *RADIATION THERAPY* TREATMENT ENDED**

1 Treatment completed per protocol criteria
2 Disease progression, relapse during active treatment
3 Toxicity/side effects/complications
4 Death on study
5 Patient withdrawal or refusal after beginning protocol RT
6 Patient withdrawal or refusal prior to beginning protocol RT
7 Alternative therapy, *specify*_____
8 Other complicating disease, *specify* _____
98 Other, *specify* _____

COMMENTS_____

_____

_____

Signature _____ Date _____

Radiation Therapy Oncology Group

American College of Radiology
1818 Market Street, Suite 1600
Philadelphia, PA 19103-3604
(215) 574-3189
(800) 227-5463 Ext. 4189
(215) 928-0153 Fax

MEMORANDUM

Z 2

TO: Research Associate

Institution # _____

FROM: Dr. Robert Lustig
Radiation Oncologist

DATE:

SUBJECT: **INITIAL REVIEW DATA – ADDITIONAL DOSIMETRY**

Protocol # _____ Case # _____

Patient Initials _____

****

The Initial Review Process has been temporarily suspended due to the following occurrence:

(1) Simulation films needed for _____

(2) Portal Films needed for _____

(3) Calculation data _____

(4) Specify treatment dose plan _____ _____
(Initial & Boost, if applicable) Initial Boost

(5) C.T. Scans needed _____

Please submit as soon as possible. If a reply to this memorandum is not received within 16 days from the above date, the case status will then be "Additional Data Requested Not Received in Time for Initial Review." Thank you for your kind attention to this matter.

- To expedite the processing of additional Z2 dosimetry data, please send to the attention of the Dosimetry Department.

Supported by the Division of Cancer Treatment and Diagnosis, National Cancer Institute

Radiation Therapy Oncology Group

American College of Radiology
1818 Market Street, 16th Floor
Philadelphia, PA 19103
(215) 574-3189
(800) 227-5463 Ext. 4189
(215) 928-0153 Fax

MEMORANDUM

TO: Physician/
Research Associate _____ Inst. # _____

FROM: Dr. Robert Lustig
Radiation Oncologist

DATE:

SUBJECT: PROTOCOL DEVIATION

PROTOCOL# _____ CASE# _____ PT. NAME _____

****

1) This will confirm your telephone conversation with Quality Assurance Representative, _____ regarding the following deviation(s):

2) Efforts by Quality Assurance Representatives _____ to reach you by telephone regarding the following deviation(s) were unsuccessful:

_____

_____

_____

Please return this form advising us what action has been taken to bring this case into compliance.

_____

_____

cc: RESEARCH ASSOCIATE

Supported by the Division of Cancer Treatment and Diagnosis, National Cancer Institute

Radiation Therapy Oncology Group

American College of Radiology
1818 Market Street, 16th Floor
Philadelphia, PA 19103
(215) 574-3189
(800) 227-5463 Ext. 4189
(215) 928-0153 Fax

MEMORANDUM

TO: Physician _____ Inst. # _____

FROM: Dr. Robert Lustig
Radiation Oncologist

DATE:

SUBJECT: PROTOCOL DEVIATIONS

PROTOCOL# _____ CASE# _____ PT. NAME _____

****

The protocol deviation (s) listed below has (have) been determined in the Initial Review by the reviewing Radiotherapist, Dr. _____.

At this time, it is too late for any corrections to be made and the case is considered to be "not in Compliance."

_____

_____

_____

_____

_____

cc: RESEARCH ASSOCIATE

Supported by the Division of Cancer Treatment and Diagnosis, National Cancer Institute

Radiation Therapy Oncology Group

American College of Radiology
1818 Market Street, Suite 1600
Philadelphia, PA 19103-3604
(215) 574-3189
(800) 227-5463 Ext. 4189
(215) 928-0153 Fax

MEMORANDUM

Z4

TO: Research Associate, Institution # _____

FROM: RT. Quality Assurance

DATE: _____

SUBJECT: **SUBMISSION OF RT. DATA FOR FINAL REVIEW OF RTOG PROTOCOL**

CASE _____ PATIENT INITIALS _____

The Study will be reviewing the Radiotherapy for cases in this study. The above mentioned case from your institution is incomplete. Kindly submit the material requested, to make the case evaluable for final review.

[ ] Simulation Films for Field(s) _____

[ ] Portal Films for Field(s) _____

[ ] Isodose Plan(s) (T6) _____

[ ] CT Scan & Report _____

[ ] Complete Attached Form (T4)_____

[ ] Complete Treatment Record (T5)_____

[ ] Other _____

- **If data will not be forthcoming, please indicate reason on this form, sign and return to headquarters as soon as possible. This will help to circumvent further inquiries on this case.**

Research Associate Completing Request _____ **Phone #** _____

Supported by the Division of Cancer Treatment and Diagnosis, National Cancer Institute