

CONVERSATION RECORD

TIME | DATE
9:40 am

2/22/2010

VISIT CONFERENCE TELEPHONE
 INCOMING
 OUTGOING

NAME OF PERSON(S) CONTACTED OR IN CONTACT
Gary Williams, Interim Director

ORGANIZATION (OFFICE, DEPT. ETC.)
VA, National Health Physics Program (NHPP)

TELEPHONE NO.
(501) 257-1572

SUBJECT

Telephone contact to resolve questions associated with brachytherapy patient records from VA Reno.

SUMMARY

I contacted Mr Williams to resolve an issue associated with his signed request on behalf of NHPP to withhold the patient records from public disclosure. I informed Mr. Williams that a request submitted under 10 CFR 3.390 must be made for us to withhold the documents from public disclosure. Mr. Williams indicated that he would prefer that they be withheld from public disclosure, but agreed that they could be made public if necessary. I assured Mr. Williams that from my review of each document, it was my opinion that all personal and privacy information had been redacted.

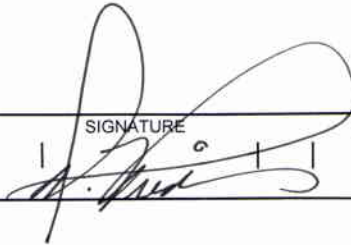
ACTION REQUIRED

The records will be placed in ADAMS and be made publicly available.

NAME OF PERSON DOCUMENTING CONVERSATION
Darrel Wiedeman

SIGNATURE

DATE

 2/22/2010

ENCLOSED DOCUMENTATION IS NOT FOR PUBLIC DISCLOSURE



DEPARTMENT OF VETERANS AFFAIRS
Veterans Health Administration
National Health Physics Program
2200 Fort Roots Drive
North Little Rock, AR 72114

In Reply Refer To: 598/115HP/NLR

FEB 16 2010

Darrel Wiedeman
Division of Nuclear Materials Safety
Region III, Nuclear Regulatory Commission (NRC)
2443 Warrenville Road, Suite 210
Lisle, Illinois 60532-4352

Re: NRC License 03-23853-01VA

Dear Mr. Wiedeman:

Per your request, we are enclosing documents from the VA Sierra Nevada Health Care System, Reno, Nevada.

Please note the following comments about the possible confidentiality of the information contained in the documents.

These documents are being released to NRC based upon your need to know. Information contained in the documents may be confidential and subject to the protection of the Privacy Act and other applicable Federal confidentiality statutes. Any further release must be per the Privacy Act and/or other applicable Federal confidentiality statutes.

Please contact me at 501-257-1571, if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink that reads "Gary E. Williams".

Gary E. Williams
Interim Director, National Health Physics Program

Enclosure

ENCLOSED DOCUMENTATION IS NOT FOR PUBLIC DISCLOSURE

Treatment records needed for NRC review from Reno NV

<u>Three letters of last Name</u>	<u>DATE OF IMPLANT</u>	<u>D-90</u>
Kuz	1/24/2008	188.7 Gy
Kir	6/21/2007	17 ⁵ / 7 .9 Gy
Cro	11/29/2007	194.44 Gy
Ris - <i>RX 110 Gy</i>	11/17/2005	113.8 Gy - <i>OK</i>
Wil	9/13/2007	196.2 Gy
Gui	12/11/2007	193.7 Gy
Rum	5/3/2007	176.8 Gy
All	12/11/2007	180 Gy
Cath	<i>2/14[?]/2006</i>	188.5 Gy

8 High D-90s

Treatment records needed for NRC review from Reno NV

<u>Three letters of last Name</u>	<u>DATE OF IMPLANT</u>	<u>D-90</u>
<u>Kuz</u> ✓	1/24/2008	188.7 Gy
<u>Kir</u>	6/21/2007	174.9 Gy
<u>Cro</u> ✓	11/29/2007	194.44 Gy
<u>Ris</u> ✓	11/17/2005	113.8 Gy
<u>Wil</u> ✓	9/13/2007	196.2 Gy
<u>Gui</u> ✓	12/11/2007	193.7 Gy
<u>Rum</u> ✓	5/3/2007	176.8 Gy
<u>All</u> ✓	12/11/2007	180 Gy
<u>Cath</u>	12/14/06	188.5 Gy

For instructions, enclosed are
 (1) written directive, (2) pre-plan, and
 (3) Post-Plans for the patients
 identified above. Identifying
 information has been redacted.
 Fran White
 (775) 328-1264

VariSeed: Study Summary Report [Page 1]

RUM

Rum

Medical Physics Services 1210 1 10/12/2008 7:17:52 PM

Name: [REDACTED]	Study: PostPlan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 15	Sources: 86
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Anisotropy: Factors (Point Modal)
		Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 37.152 U [29.254 mCi]

Study Type: Post-Op
Notes: Not Specified

Dose Information

Urethra:N/A

Rectum:

Total Volume:	38.57 cc	
V100:	0.47 cc	[1.21%]
V75:	1.88 cc	[4.87%]
V50:	5.17 cc	[13.39%]

PTV:N/A

Prostate (CTV):

Total Volume:	32.73 cc	
V150:	19.82 cc	[60.55%]
V100:	32.19 cc	[98.33%]
V90:	32.64 cc	[99.71%]
V80:	32.73 cc	[100.00%]
D90:	176.60 Gy	[121.79%]

RUM

VariSeed: Therapy Visualization Report [Page 2]

Medical Physics Services 1210 1 10/12/2008 7:17:52 PM

Name: [REDACTED]	Study: PostPlan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 15	Sources: 86
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Anisotropy: Factors (Point Model)
		Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 37.152 U [29.254 mCi]

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------

Image # 1
Position: -16.00 cm

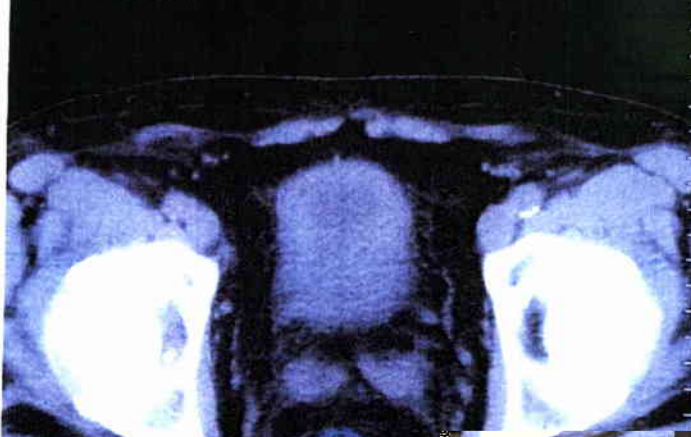


Image # 2
Position: -16.50 cm

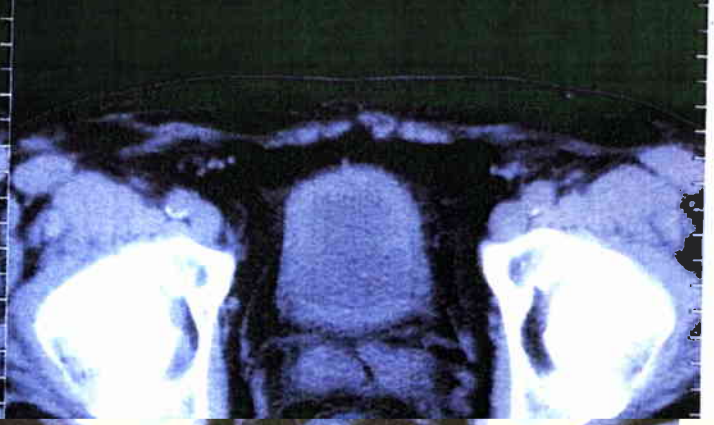


Image # 3
Position: -17.00 cm

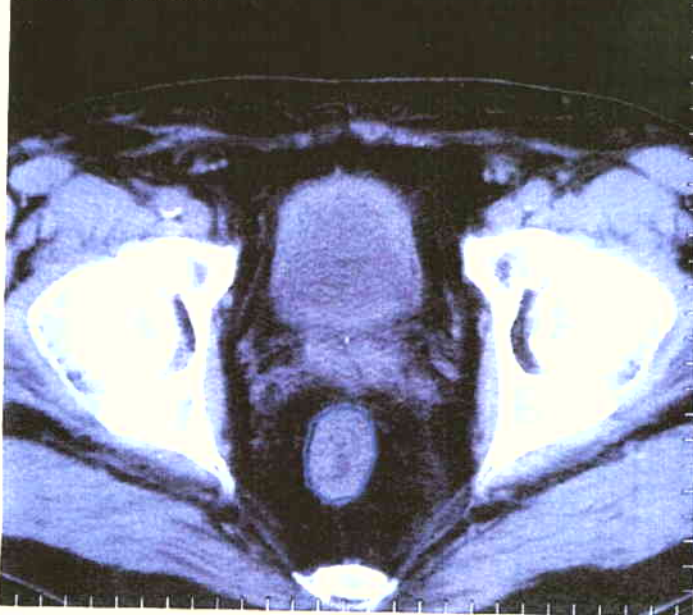
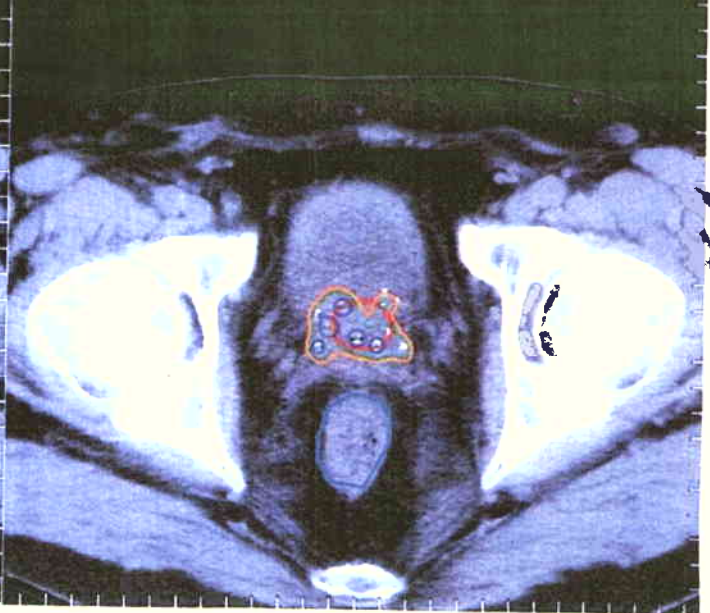


Image # 4
Position: -17.50 cm



VariSeed: Therapy Visualization Report [Page 3]

RUM

Medical Physics Services 1210 1 10/12/2008 7:17:52 PM

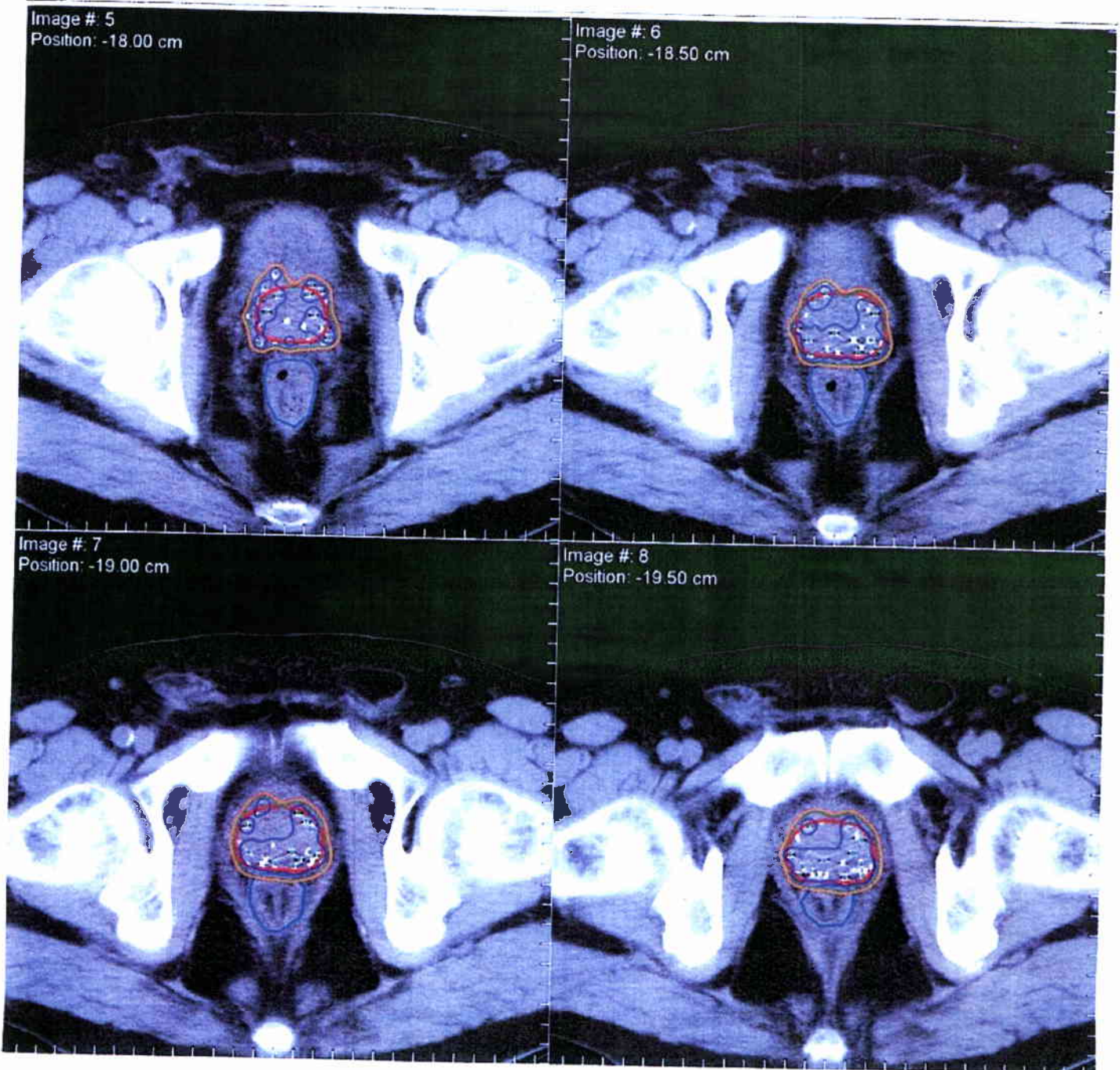
Name: [REDACTED]	Study: PostPlan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 15	Sources: 86
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Anisotropy: Factors (Point Model)
		Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 37.152 U [29.254 mCi]

Isodose Legend

Gy [% of Prescription Dose]	217.50 [150.00%]	130.50 [90.00%]
	145.00 [100.00%]	

Anatomy/Landmark Legend

Prostate (CTV)	Rectum
----------------	--------



RUM

VariSeed: Therapy Visualization Report [Page 4]

Medical Physics Services 1210 1 10/12/2008 7:17:52 PM

Name: [REDACTED]	Study: PostPlan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 15	Sources: 86
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Anisotropy: Factors (Point Model)
		Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 37.152 U [29.254 mCi]

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



VariSeed: Therapy Visualization Report [Page 5]

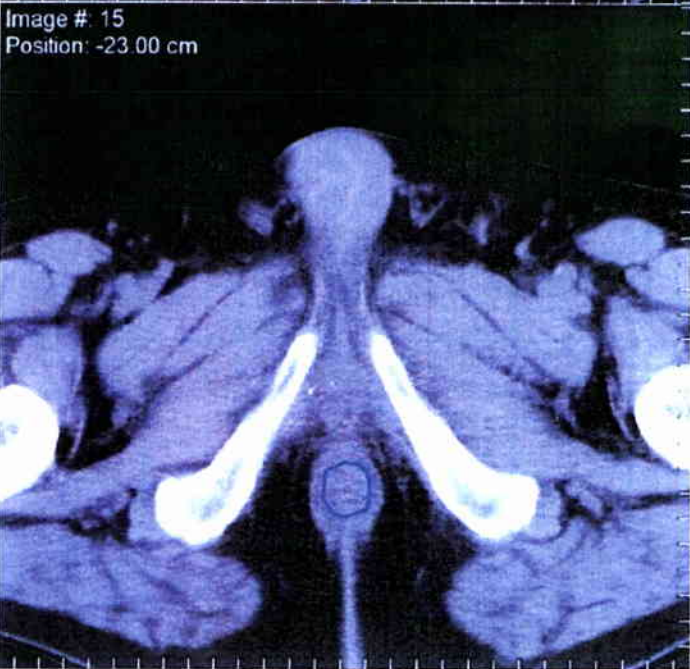
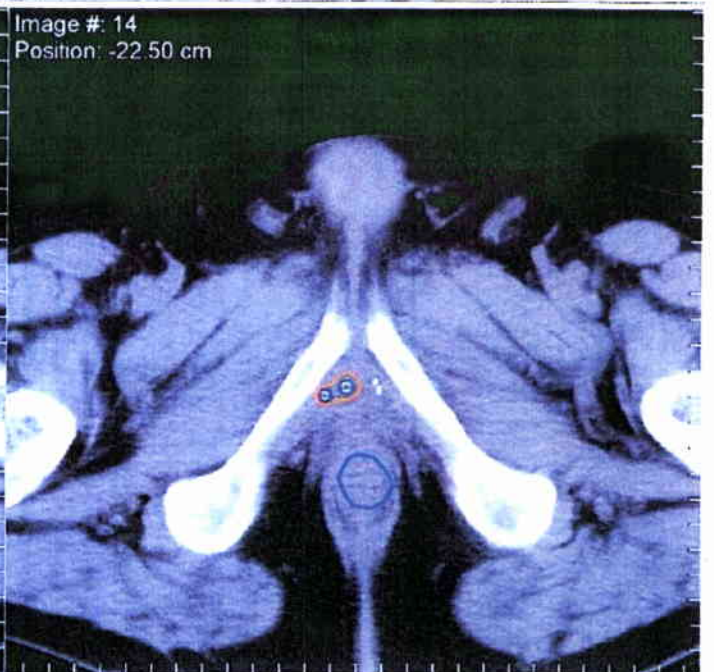
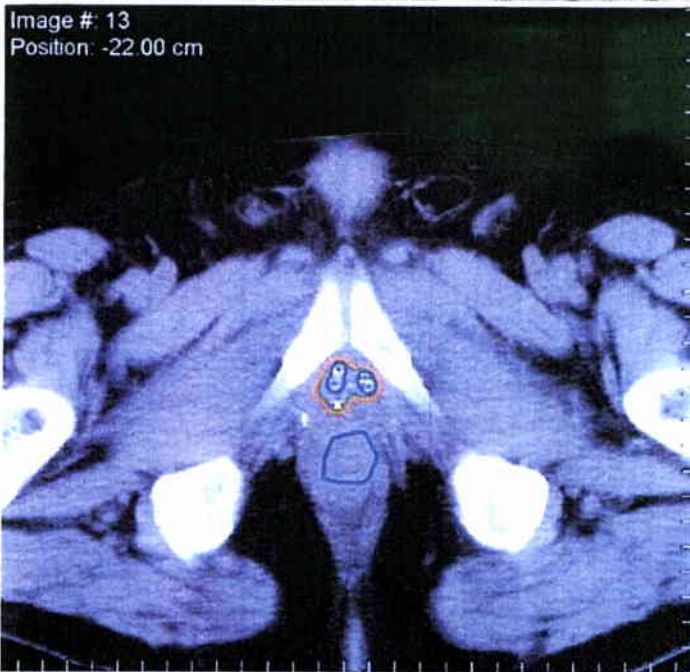
RUM

Medical Physics Services 1210 1 10/12/2008 7 17:52 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 86 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 37.152 U [29.254 mCi]
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification:

- Patient Name
- ID Bracelet
- ID Card
- Social Security Number
- Signature
- Birth Date
- Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
- The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
- The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457.

These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

RUM

RADIATION ONCOLOGY ASSOCIATES VA MEDICAL CENTER QUALITY MANAGEMENT PROGRAM I-125 or Pd-103 SEED THERAPY WRITTEN DIRECTIVE TREATMENT PLAN		
R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D. Jennifer Sutton, M.D. Jonathan S. Tay, M.D.		
DATE:	Tuesday, April 24, 2007	
PATIENT NAME:	[REDACTED]	
RADIOACTIVE MATERIAL:	I-125 (STM 1251) [NIST 99] BARD	
TREATMENT SITE	<u>PROSTATE</u>	
PRESCRIBED DOSE:	145 Gy	
	0.34	mCi/seed
NUMBER OF SEEDS:	86	
TOTAL SOURCE STRENGTH:	29.24	mCi
Signed:	[Signature]	Date: 5/1/07
PATIENT IDENTIFICATION (USE TWO METHODS)		
<input checked="" type="checkbox"/> Patient Name <input type="checkbox"/> Social Security Number <input type="checkbox"/> Signature <input type="checkbox"/> ID Card	Birthdate Address <input checked="" type="checkbox"/> ID Bracelet Other _____	
Administered by:	[Signature]	Date: 5/2/07
WASTE DISPOSAL - ROOM SURVEY		
CONDUCTED BY:	[Signature]	Date: 5/3/07
TOTAL NUMBER OF SOURCES IMPLANTED:	80	
NOTE:		

RUM

Operating Room:

Patient Name: [REDACTED]
Patient ID #: [REDACTED]

Pre-Procedure

Identify Patient by two means of ID: Name - ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address

Verify Written Directive

Verify the Correct Number and Batch of Seeds (if possible)

Ensure the following are in the Operating Room:

- 1) Lead Container for Loose Seeds
- 2) Tweezers
- 3) Survey Meter for Room
- 4) Survey Meter for Patients
- 5) Pre-loaded Seeds
- 6) Written Directives Part I and II
- 7) Physicians' Radiation Badges
- 8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

Survey People in Operating Room (linens, trash, etc.)

Survey Patient - IMPORTANT: Patient Survey must show **less than 1 mR/hr at 1 meter**. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.

Survey Operating Room
Note Total Number of Loose Seeds Recovered: _____

Complete the following (Part II of Written Directive):

- 1) Radionuclide I-125
- 2) Treatment Site Prostate
- 3) Number of Sources 36
- 4) Total Source Strength 28.24 mCi
- 5) Exposure Time PERMANENT

[Signature]
Signature of Authorized User Physician

5/2/07
Date

RUM

Prostate Seed Implant Patient Checklist

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

- Please check the following when completed:**
- Patient Name/ID # on this and next pages
 - Volume Study
 - Treatment Plan
 - Approval of Treatment Plan by Authorized User Physician (Signed and Dated)
 - Seeds Ordered
- Patient Name: [REDACTED]
 Patient ID #: [REDACTED]

Part I of Written Directive Includes (10 CFR 35.41):

- Patient Name
- Second Form of Identification
- Treatment Site
- Radionuclide
- Dose
- Signed by Authorized User Physician
- Dated by Authorized User Physician

* Retain a copy of this Written Directive in accordance with NRC 35.2040. Note: If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (NRC 35.40).

Arrival of Seeds:

- 1) Date of Arrival: 5/1/07
- 2) Time of Arrival: 11:30 am
- 3) Received By: Lynn Department: Rad Med
- 4) Survey of Package to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.
 Survey Time: 11:00 am Survey Date: 5/1/07

Through measurements or manufacture documentation, complete the following:

- 1) Source Activity: 29.154
- 2) Correct the source activity determined above for physical decay at intervals consistent with 1 percent physical decay: 29.154 for procedure date 5/3/07
- 3) Do the source positions within the applicators agree with the Needle Loading Report?

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
D. Chamberlain	5/3/07 17:00 am	Rad Med	OC	86

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 4/24/2007 5:26:45 PM

Rym

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: HigherActivity	Comment:
Dept. ID: VA	Images: 10	Sources: 80
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 34.560 U [27.213 mCi]

Study Type: Pre-Op
 Notes: Pt has had no EBRT
 I-125 to 145 Gy

Dose Information

Urethra:N/A

Rectum:

Total Volume:	10.08 cc	
V100:	0.06 cc	[0.59%]
V75:	0.82 cc	[8.18%]

PTV:

Total Volume:	43.69 cc	
V150:	19.54 cc	[44.72%]
V100:	42.24 cc	[96.67%]
V90:	43.24 cc	[98.96%]
V80:	43.59 cc	[99.78%]
D90:	161.73 Gy	[111.54%]

Prostate (CTV):

Total Volume:	29.83 cc	
V150:	15.34 cc	[51.44%]
V100:	29.38 cc	[98.50%]
V90:	29.65 cc	[99.42%]
V80:	29.80 cc	[99.91%]
D90:	172.09 Gy	[118.68%]

Prostate:N/A

Prostate (ETV):N/A

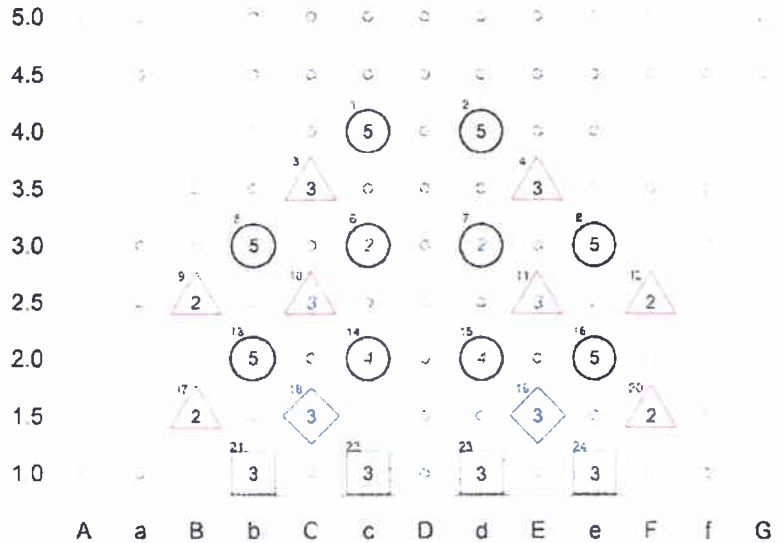
RUM

VariSeed: Needle Loading Report [Page 2]

Medical Physics Services 1210 1 4/24/2007 5:26:45 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: HigherActivity	Comment:
Dept. ID: VA	Images: 10	Sources: 80
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 34.660 U [27.213 mCi]

Needle Number	Retraction (cm)	Hole Location	Number Seeds
1	0.00	c4.0	5
2	0.00	d4.0	5
3	0.50	C3.5	3
4	0.50	E3.5	3
5	0.00	b3.0	5
● 6	0.00	c3.0	2/5
● 7	0.00	d3.0	2/5
8	0.00	e3.0	5
9	0.50	B2.5	2
● 10	0.50	C2.5	3/4
● 11	0.50	E2.5	3/4
12	0.50	F2.5	2
13	0.00	b2.0	5
● 14	0.00	c2.0	4/5
● 15	0.00	d2.0	4/5
16	0.00	e2.0	5
17	0.50	B1.5	2
18	1.50	C1.5	3
19	1.50	E1.5	3
20	0.50	F1.5	2
21	1.00	b1.0	3
22	1.00	c1.0	3
23	1.00	d1.0	3
24	1.00	e1.0	3



Plane 0	Plane 1	Plane 2	Plane 3	Plane 4	Special Other
0.00 cm	0.50 cm	1.00 cm	1.50 cm	2.00 cm	

Number of Needles	Seeds per needle
6	2
10	3
2	4
6	5

Total Activity [U]	34.56
Total Activity [mCi]	27.21
Total Needles	24
Total Seeds	80
Extra Seeds	- 6
Total Seeds to Order	86

● = Special loading

Study Created by DKC

Study Approved by [Signature]

RUM

VariSeed: Needle Loading Report [Page 3]

Medical Physics Services 1210 - 1 4/24/2007 5:26 45 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: HigherActivity	Comment:
Dept. ID: VA	Images: 10	Sources: 80
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 34.560 U [27.213 mCi]

Needle Number	Retraction (cm)	Hole Location	Number Seeds	0.00cm	0.50cm	1.00cm	1.50cm	2.00cm	2.50cm	3.00cm	3.50cm	4.00cm	4.50cm
1	0.00	c4.0	5	0.00	1.00	2.00	3.00	4.00					
2	0.00	d4.0	5	0.00	1.00	2.00	3.00	4.00					
3	0.50	C3.5	3		0.50	1.50	2.50						
4	0.50	E3.5	3		0.50	1.50	2.50						
5	0.00	b3.0	5	0.00	1.00	2.00	3.00	4.00					
6	0.00	e3.0	2	0.00								4.00	
7	0.00	d3.0	2	0.00								4.00	
8	0.00	e3.0	5	0.00	1.00	2.00	3.00	4.00					
9	0.50	B2.5	2		0.50	1.50							
10	0.50	C2.5	3		0.50			2.50	3.50				
11	0.50	E2.5	3		0.50			2.50	3.50				
12	0.50	F2.5	2		0.50	1.50							
13	0.00	b2.0	5	0.00	1.00	2.00	3.00	4.00					
14	0.00	c2.0	4	0.00	1.00	2.00						4.00	
15	0.00	d2.0	4	0.00	1.00	2.00						4.00	
16	0.00	e2.0	5	0.00	1.00	2.00	3.00	4.00					
17	0.50	B1.5	2		0.50	1.50							
18	1.50	C1.5	3			1.50	2.50	3.50					
19	1.50	E1.5	3			1.50	2.50	3.50					
20	0.50	F1.5	2		0.50	1.50							
21	1.00	b1.0	3			1.00	2.00	3.00					
22	1.00	c1.0	3			1.00	2.00	3.00					
23	1.00	d1.0	3			1.00	2.00	3.00					
24	1.00	e1.0	3			1.00	2.00	3.00					

● = Special loading

0.00cm 0.50cm 1.00cm 1.50cm 2.00cm 2.50cm 3.00cm 3.50cm 4.00cm 4.50cm

23
23

RUM

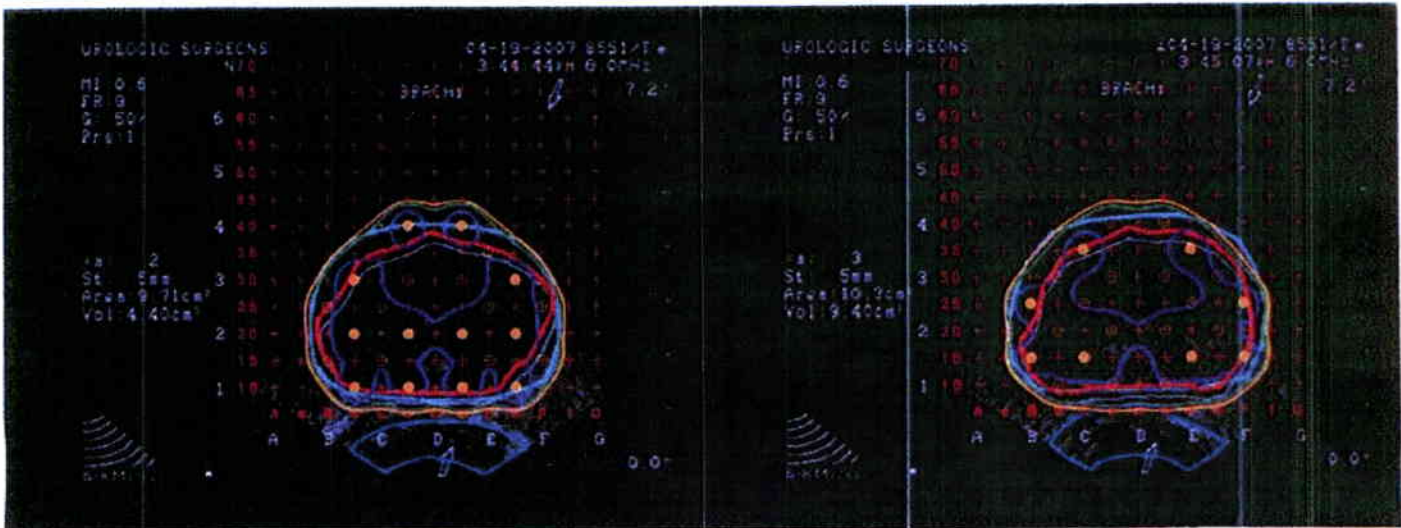
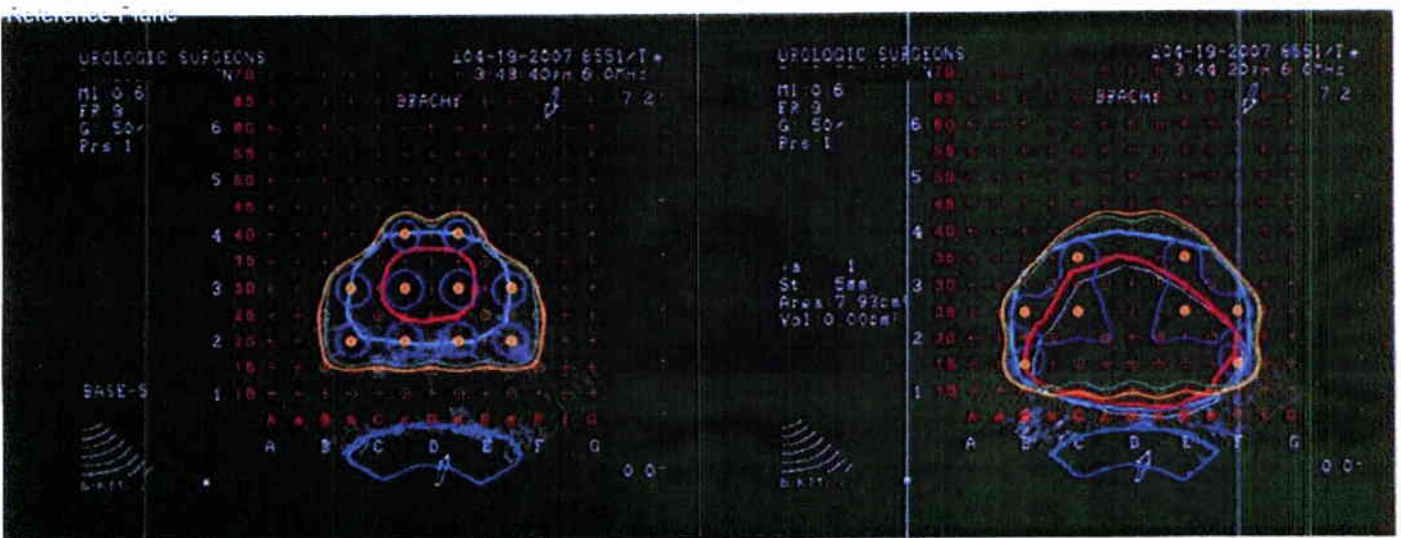
VariSeed: Therapy Visualization Report [Page 4]

Medical Physics Services 1210 1 4/24/2007 5:26:45 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: HigherActivity	Comment:
Dept. ID: VA	Images: 10	Sources: 80
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 34.560 U [27.213 mCi]

Isodose Legend
 Gy [% of Prescription Dose]
 217.50 [150.00%]
 145.00 [100.00%]
 130.50 [90.00%]

Anatomy/Landmark Legend
 Prostate (CTV) Rectum PTV



RUM

VariSeed: Therapy Visualization Report [Page 5]

Medical Physics Services 1210 1 4/24/2007 5:26:45 PM

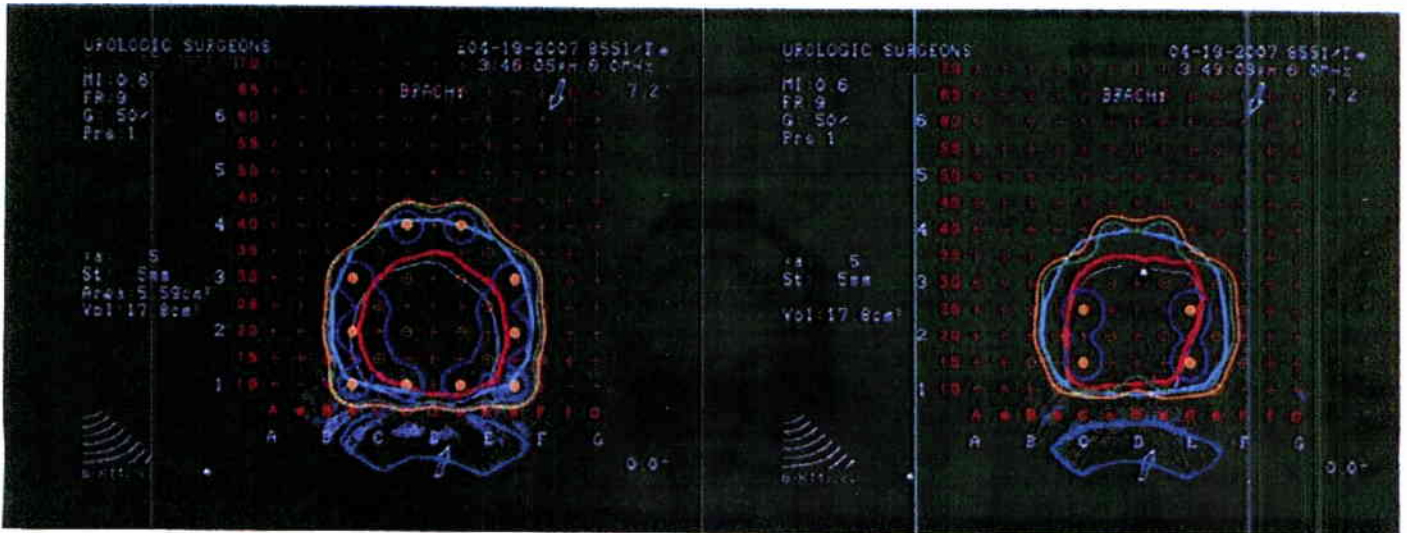
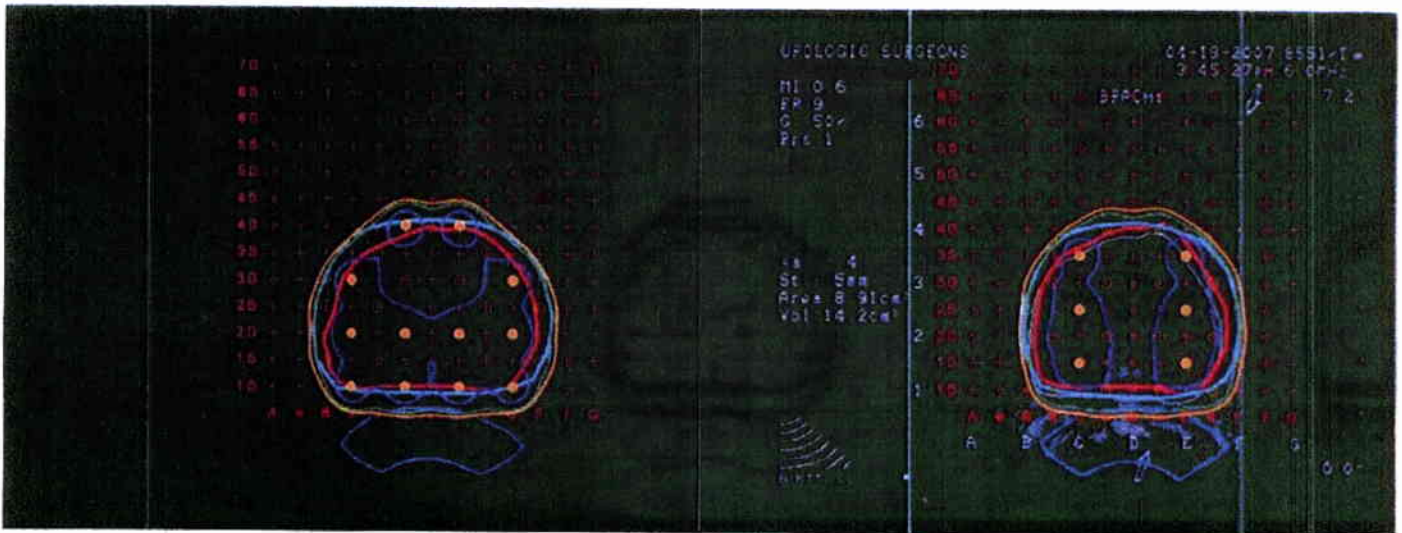
Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: HigherActivity Images: 10 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 80 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 34.560 U [27.213 mCi]
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

 217.50 [150.00%]	 130.50 [90.00%]
 145.00 [100.00%]	

Anatomy/Landmark Legend

 Prostate (CTV)	 Rectum	 PTV
--	--	---



RUM

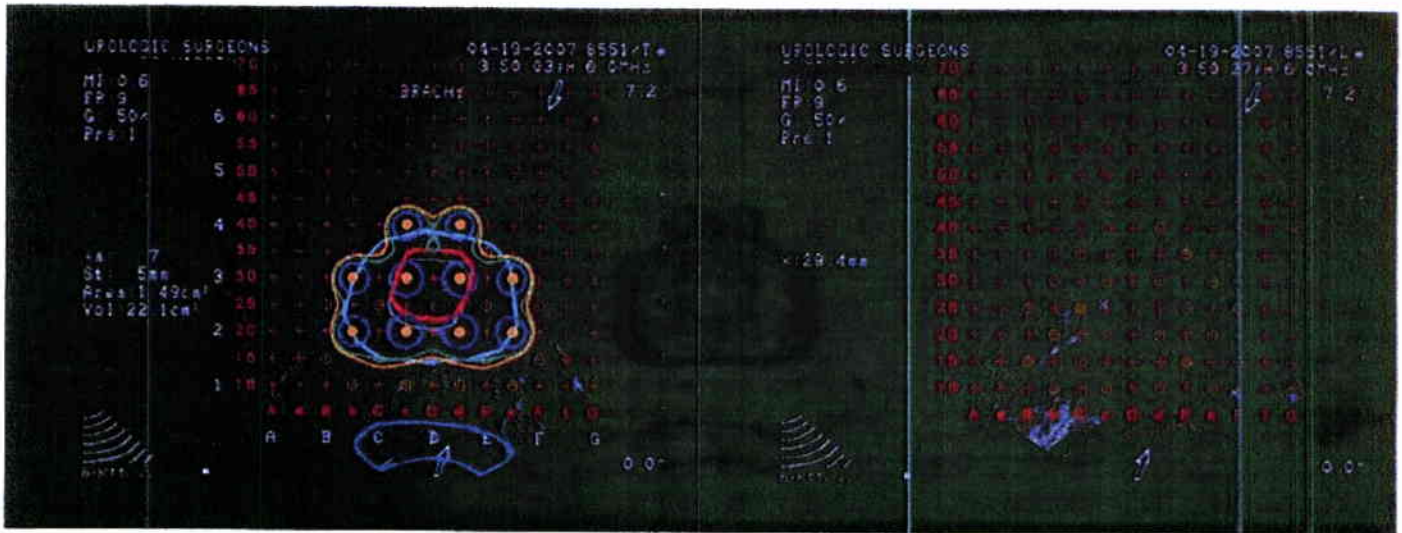
VariSeed: Therapy Visualization Report [Page 6]

Medical Physics Services 1210 1 4/24/2007 5:26:45 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: HigherActivity	Comment:
Dept. ID: VA	Images: 10	Sources: 80
	Template: B & K Standard	Anisotropy: Factors (Point Model)
		Source Activity: 0.432 U [0.340 mCi]
Procedure Date: 5/3/2007	Prescription Dose: 145.0 Gy	Total Activity: 34,560 U [27.213 mCi]

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum	PTV
-------------------------	----------------	--------	-----



KIR

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 12/15/2008 7:52:16 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 19	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Study Type: Post-Op
Notes: 145 Gy
82 Sources

Dose Information

Urethra: N/A

Rectum:

Total Volume:	39.73 cc	
V100:	0.38 cc	[0.97%]
V75:	1.35 cc	[3.40%]
V50:	3.91 cc	[9.84%]

PTV: N/A

Prostate (CTV):

Total Volume:	32.50 cc	
V150:	19.17 cc	[58.99%]
V100:	31.63 cc	[97.32%]
V90:	32.09 cc	[98.71%]
V80:	32.43 cc	[99.77%]
D90:	175.91 Gy	[121.32%]

.72

KIR

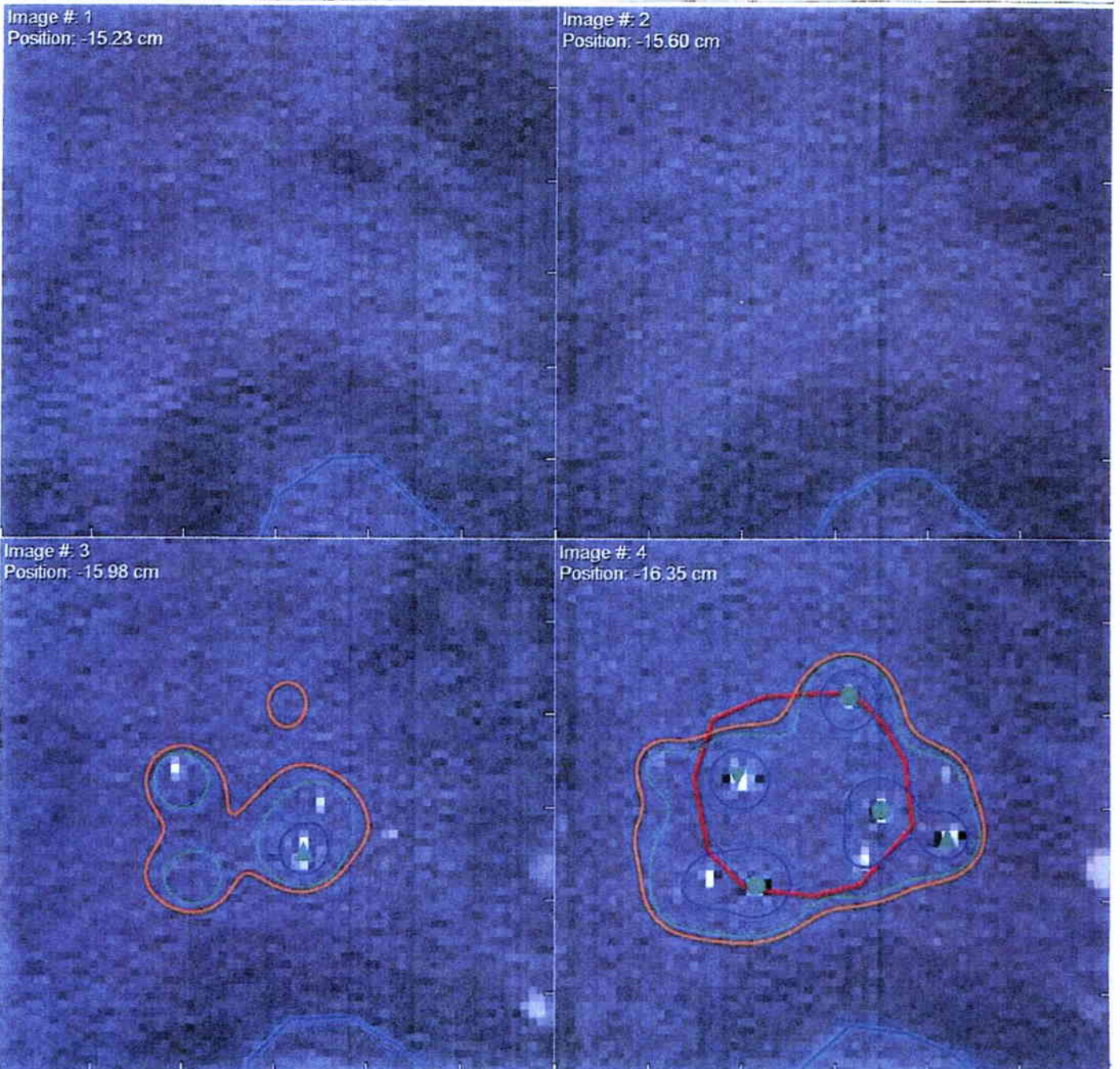
VariSeed: Therapy Visualization Report [Page 2]

Medical Physics Services - 1210 1 12/15/2008 7:52:16 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 19	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



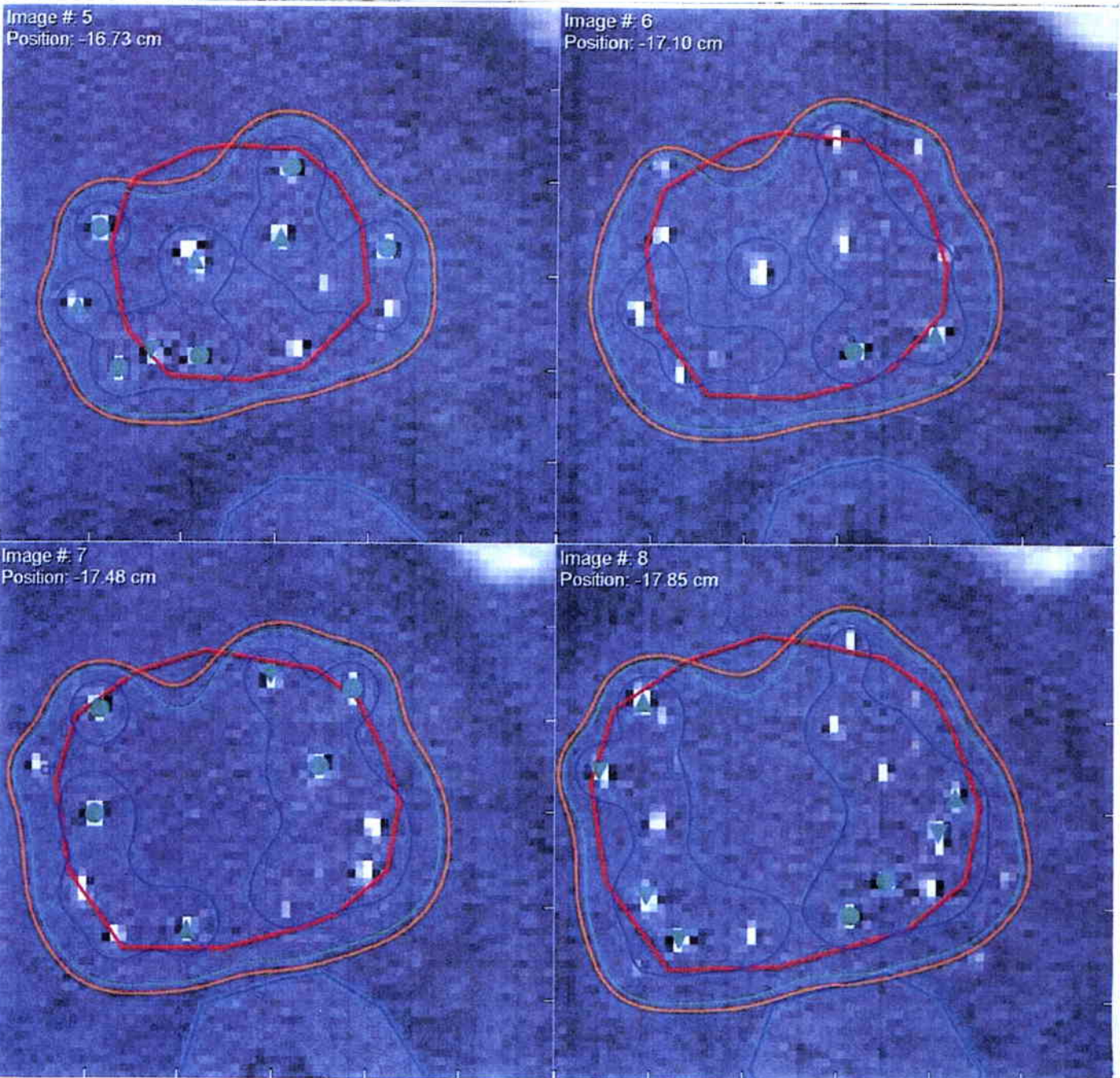
VariSeed: Therapy Visualization Report [Page 3]

Medical Physics Services 1210 1 12/15/2008 7:52:16 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 19	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



KIR

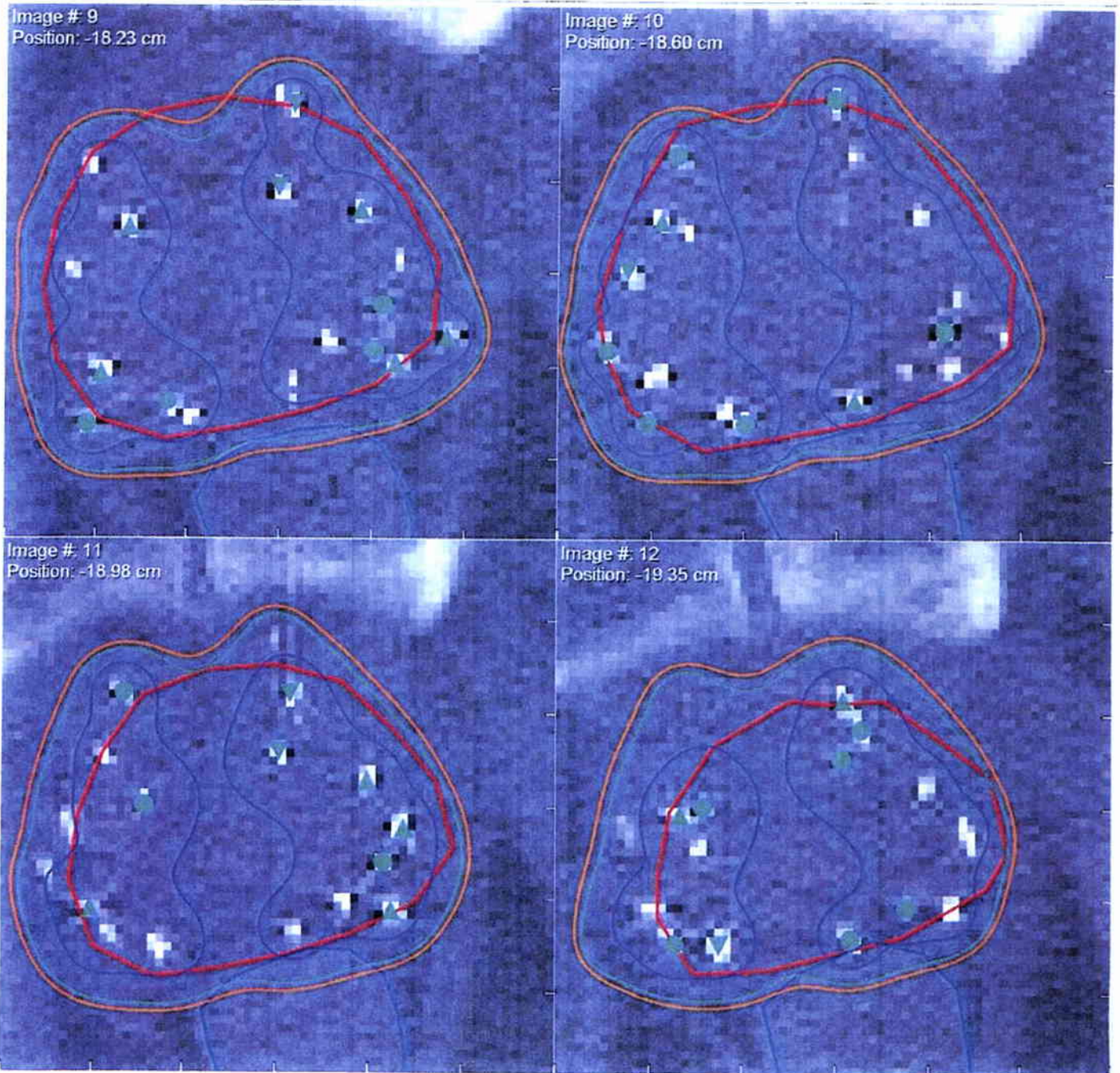
VariSeed: Therapy Visualization Report [Page 4]

Medical Physics Services 1210 1 12/15/2008 7:52:16 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study PostPlan Variation: Default Images: 19	Source: I-125 (STM 1251) (NIST 99) Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



KIR

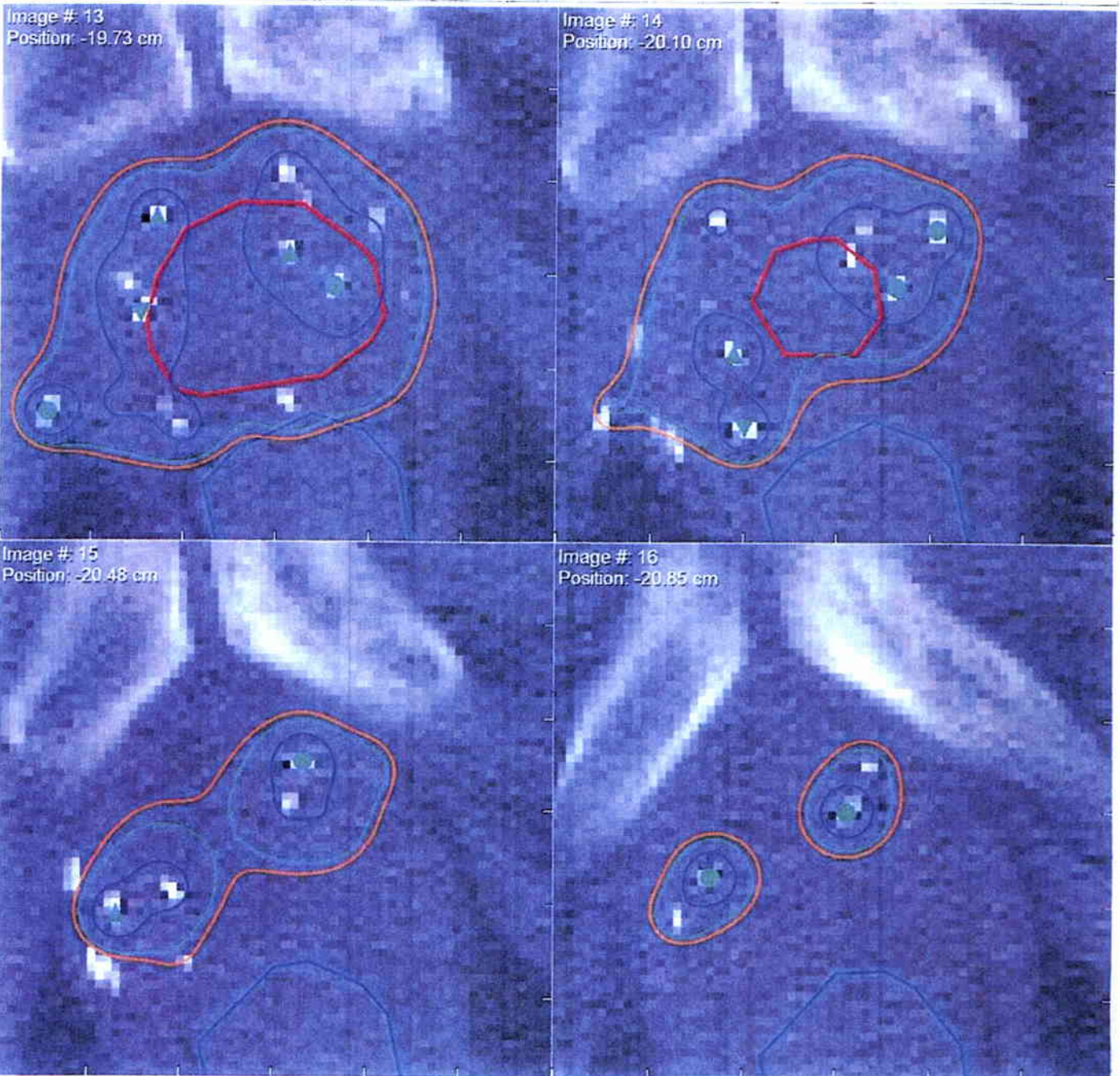
VariSeed: Therapy Visualization Report [Page 5]

Medical Physics Services · 1210 1 12/15/2008 7:52:16 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 19	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 8/21/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



KIR

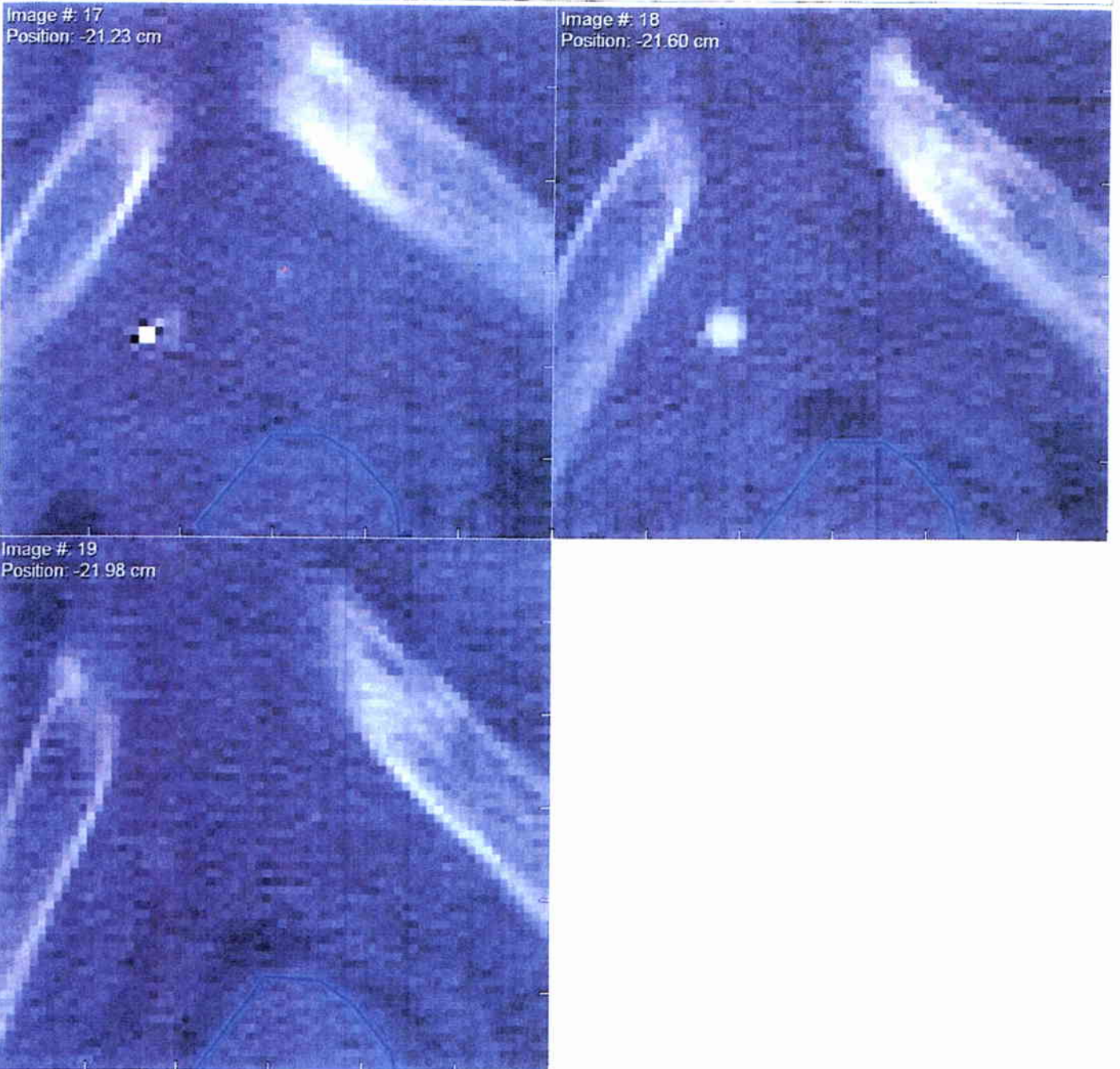
VariSeed: Therapy Visualization Report [Page 6]

Medical Physics Services 1210 1 12/15/2008 7:52:16 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 19	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification: Patient Name
ID Bracelet
ID Card
Social Security Number
Signature
Birth Date
Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
- The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
- The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457. These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

KIR

RADIATION ONCOLOGY ASSOCIATES VA MEDICAL CENTER QUALITY MANAGEMENT PROGRAM I-125 or Pd-103 SEED THERAPY WRITTEN DIRECTIVE TREATMENT PLAN	
R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D. Jennifer Sutton, M.D. Jonathan S. Tay, M.D.	
DATE:	Wednesday, June 13, 2007
PATIENT NAME:	[REDACTED]
RADIOACTIVE MATERIAL:	I-125 (STM 1251) [NIST 99] BARD
TREATMENT SITE:	<u>PROSTATE</u>
PRESCRIBED DOSE:	145 Gy
	0.34 mCi/seed
NUMBER OF SEEDS:	88
TOTAL SOURCE STRENGTH:	29.92 mCi
Signed: <u>[Signature]</u>	Date: <u>6/13/07</u>
PATIENT IDENTIFICATION (USE TWO METHODS)	
<input checked="" type="checkbox"/> Patient Name	Birthdate
<input type="checkbox"/> Social Security Number	Address
<input type="checkbox"/> Signature	<input checked="" type="checkbox"/> ID Bracelet
<input type="checkbox"/> ID Card	Other _____
Administered by: <u>[Signature]</u>	Date: <u>6/21/07</u>
WASTE DISPOSAL - ROOM SURVEY	
CONDUCTED BY: <u>[Signature]</u>	Date: <u>6/21/07</u>
TOTAL NUMBER OF SOURCES IMPLANTED:	<u>87</u>
NOTE:	

KIR

Operating Room:

Patient Name: [REDACTED]
Patient ID #: [REDACTED]

Pre-Procedure

- Identify Patient by two means of ID: Name - ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address
- Verify Written Directive
- Verify the Correct Number and Batch of Seeds (if possible)
- Ensure the following are in the Operating Room:
 - 1) Lead Container for Loose Seeds
 - 2) Tweezers
 - 3) Survey Meter for Room
 - 4) Survey Meter for Patients
 - 5) Pre-loaded Seeds
 - 6) Written Directives Part I and II
 - 7) Physicians' Radiation Badges
 - 8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

- Survey People in Operating Room (linens, trash, etc.)
- Survey Patient - IMPORTANT: Patient Survey must show **less than 1 mR/hr at 1 meter**. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.
- Survey Operating Room
Note Total Number of Loose Seeds Recovered: 1
- Complete the following (Part II of Written Directive):

- 1) Radionuclide I-125
- 2) Treatment Site Prostate
- 3) Number of Sources 88
- 4) Total Source Strength 27893 mCi
- 5) Exposure Time PERMANENT

[Signature]
Signature of Authorized User Physician

6/21/07
Date

KIR

Prostate Seed Implant Patient Checklist

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

- Please check the following when completed:**
- Patient Name/ID # on this and next pages
 - Volume Study
 - Treatment Plan
 - Approval of Treatment Plan by Authorized User Physician (Signed and Dated)
 - Seeds Ordered
- Patient Name: [REDACTED]
 Patient ID #: [REDACTED]

Part I of Written Directive Includes (10 CFR 35.41):

- Patient Name
- Second Form of Identification
- Treatment Site
- Radionuclide
- Dose
- Signed by Authorized User Physician
- Dated by Authorized User Physician

* Retain a copy of this Written Directive in accordance with NRC 35.2040. Note: If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (NRC 35.40).

Arrival of Seeds:

- 1) Date of Arrival: 6/19/07
- 2) Time of Arrival: 12:30
- 3) Received By: [Signature] Department: Rad Rad
- 4) Survey of Package to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.
 Survey Time: 12:30 Survey Date: 6/19/07

Through measurements or manufacture documentation, complete the following:

- 1) Source Activity: 2772
- 2) Correct the source activity determined above for physical decay at intervals consistent with 1 percent physical decay: 2792 for procedure date 6/21/07
- 3) Do the source positions within the applicators agree with the Needle Loading Report? Yes

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
D. Chubelov	6/19/07 1:30	Rad Rad	OR	88

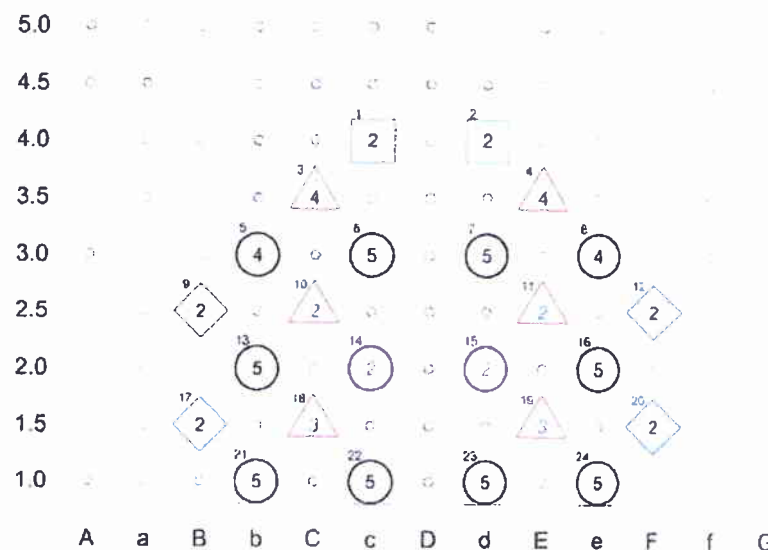
KIR

VariSeed: Needle Loading Report [Page 2]

Medical Physics Services 1210 1 6/13/2007 10:45:32 AM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 12 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Needle Number	Retraction (cm)	Hole Location	Number Seeds
1	1.00	c4.0	2
2	1.00	d4.0	2
3	0.50	C3.5	4
4	0.50	E3.5	4
5	0.00	b3.0	4
6	0.00	c3.0	5
7	0.00	d3.0	5
8	0.00	e3.0	4
9	1.50	B2.5	2
10	0.50	C2.5	2/4
11	0.50	E2.5	2/4
12	1.50	F2.5	2
13	0.00	b2.0	5
14	0.00	c2.0	2/5
15	0.00	d2.0	2/5
16	0.00	e2.0	5
17	1.50	B1.5	2
18	0.50	C1.5	3/4
19	0.50	E1.5	3/4
20	1.50	F1.5	2
21	0.00	b1.0	5
22	0.00	c1.0	5
23	0.00	d1.0	5
24	0.00	e1.0	5



Retraction Legend

Plane 0	Plane 1	Plane 2	Plane 3	Plane 4	Special	Other
0.00 cm	0.50 cm	1.00 cm	1.50 cm	2.00 cm		

0.25
0.25
3
1

Number of Needles	Seeds per needle
10	2
2	3
4	4
8	5

Plan Summary

Total Activity [U]	35.42
Total Activity [mCi]	27.89
Total Needles	24
Total Seeds	82
Extra Seeds	6
Total Seeds to Order	88

87

● = Special loading

Study Created by DKC
Study Approved by

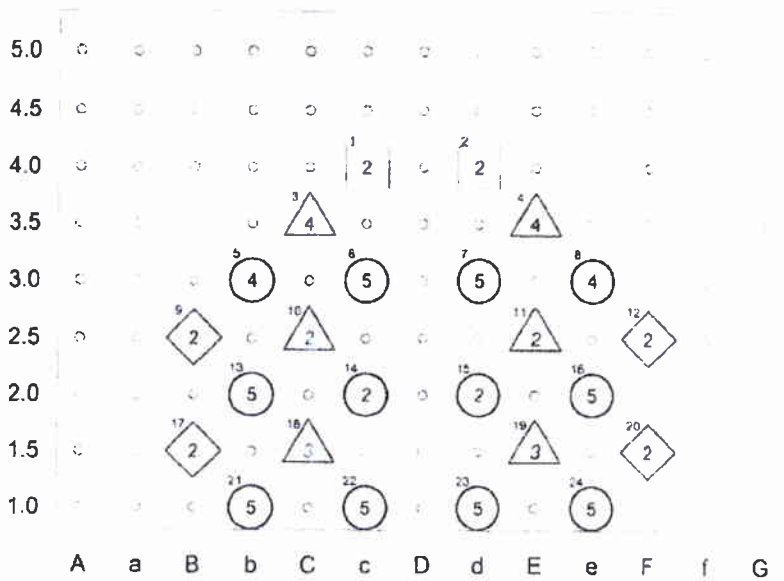
KIR

VariSeed: Needle Loading Report [Page 2]

Medical Physics Services 1210 · 1 · 6/13/2007 10:45:32 AM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 12 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Needle Number	Retraction (cm)	Hole Location	Number Seeds
1	1.00	c4.0	2
2	1.00	d4.0	2
3	0.50	C3.5	4
4	0.50	E3.5	4
5	0.00	b3.0	4
6	0.00	c3.0	5
7	0.00	d3.0	5
8	0.00	e3.0	4
9	1.50	B2.5	2
● 10	0.50	C2.5	2/4
● 11	0.50	E2.5	2/4
12	1.50	F2.5	2
13	0.00	b2.0	5
● 14	0.00	c2.0	2/5
● 15	0.00	d2.0	2/5
16	0.00	e2.0	5
17	1.50	B1.5	2
● 18	0.50	C1.5	3/4
● 19	0.50	E1.5	3/4
20	1.50	F1.5	2
21	0.00	b1.0	5
22	0.00	c1.0	5
23	0.00	d1.0	5
24	0.00	e1.0	5



Retraction Legend

Plane 0 0.00 cm ○	Plane 1 0.50 cm △	Plane 2 1.00 cm ◇	Plane 3 1.50 cm ◇	Plane 4 2.00 cm ▽	Special Other
-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	------------------

Number of Needles	Seeds per needle
10	2
2	3
4	4
8	5

Plan Summary

Total Activity [U]	35.42
Total Activity [mCi]	27.89
Total Needles	24
Total Seeds	82
Extra Seeds	6
Total Seeds to Order	88

● = Special loading

Study Created by DKC
Study Approved by [Signature]

Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification:

- Patient Name
- ID Bracelet
- ID Card
- Social Security Number
- Signature
- Birth Date
- Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
 - The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
 - The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457.

These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

KIR

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 6/13/2007 10:45:32 AM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 12 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Study Type: Pre-Op
Notes: Not Specified

Dose Information

Urethra:N/A

Rectum:N/A

PTV:

Total Volume:	44.93 cc	
V150:	20.26 cc	[45.09%]
V100:	43.71 cc	[97.27%]
V90:	44.36 cc	[98.72%]
V80:	44.81 cc	[99.72%]
D90:	171.85 Gy	[118.52%]

Prostate (CTV):

Total Volume:	33.15 cc	
V150:	17.00 cc	[51.29%]
V100:	33.08 cc	[99.79%]
V90:	33.12 cc	[99.91%]
V80:	33.15 cc	[99.98%]
D90:	181.64 Gy	[125.27%]

KIR

VariSeed: Needle Loading Report [Page 3]

Medical Physics Services 1210 1 6/13/2007 10:45:32 AM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 12 Template: B & K Standard	Source: I-125 (STM 1251) (NIST 99) Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Needle Number	Retraction (cm)	Hole Location	Number Seeds	-0.50cm	0.00cm	0.50cm	1.00cm	1.50cm	2.00cm	2.50cm	3.00cm	3.50cm	4.00cm	4.50cm	5.00cm
1	1.00	c4.0	2				1.00		2.00						✓
2	1.00	d4.0	2				1.00		2.00						✓
3	0.50	C3.5	4			0.50		1.50		2.50		3.50			✓
4	0.50	E3.5	4			0.50		1.50		2.50		3.50			✓
5	0.00	b3.0	4		0.00		1.00		2.00		3.00				✓
6	0.00	c3.0	5		0.00		1.00		2.00		3.00		4.00		✓
7	0.00	d3.0	5		0.00		1.00		2.00		3.00		4.00		✓
8	0.00	e3.0	4		0.00		1.00		2.00		3.00				✓
9	1.50	B2.5	2					1.50		2.50					✓
10	0.50	C2.5	2			0.50						3.50			✓
11	0.50	E2.5	2			0.50						3.50			✓
12	1.50	F2.5	2					1.50		2.50					✓
13	0.00	b2.0	5		0.00		1.00		2.00		3.00		4.00		✓
14	0.00	c2.0	2		0.00								4.00		✓
15	0.00	d2.0	2		0.00								4.00		✓
16	0.00	e2.0	5		0.00		1.00		2.00		3.00		4.00		✓
17	1.50	B1.5	2					1.50		2.50					✓
18	0.50	C1.5	3			0.50				2.50		3.50			✓
19	0.50	E1.5	3			0.50				2.50		3.50			✓
20	1.50	F1.5	2					1.50		2.50					✓
21	0.00	b1.0	5		0.00		1.00		2.00		3.00		4.00		✓
22	0.00	c1.0	5		0.00		1.00		2.00		3.00		4.00		✓
23	0.00	d1.0	5		0.00		1.00		2.00		3.00		4.00		✓
24	0.00	e1.0	5		0.00		1.00		2.00		3.00		4.00		✓

● = Special loading

-0.50cm 0.00cm 0.50cm 1.00cm 1.50cm 2.00cm 2.50cm 3.00cm 3.50cm 4.00cm 4.50cm 5.00cm

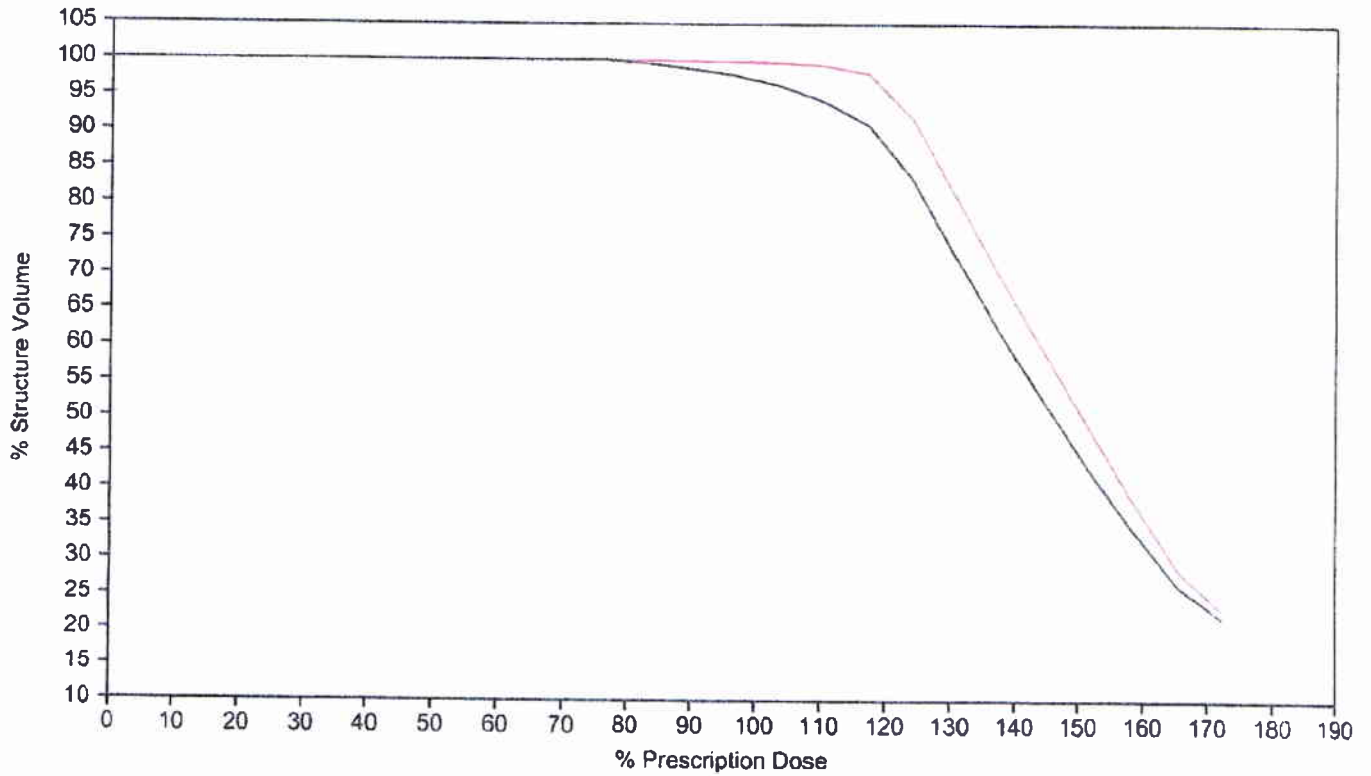
KIR

VariSeed: DVH Report [Page 4]

Medical Physics Services 1210 1 6/13/2007 10:45:32 AM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 35.424 U [27.893 mCi]

Cumulative DVH



— Prostate (CTV) — PTV

Cumulative DVH

Dose		Prostate (CTV)		PTV	
Gy	%	cc	%	cc	%
0.00	0.00	33.15	100.00	44.93	100.00
10.00	6.90	33.15	100.00	44.93	100.00
20.00	13.79	33.15	100.00	44.93	100.00
30.00	20.69	33.15	100.00	44.93	100.00
40.00	27.59	33.15	100.00	44.93	100.00
50.00	34.48	33.15	100.00	44.93	100.00
60.00	41.38	33.15	100.00	44.93	100.00
70.00	48.28	33.15	100.00	44.93	100.00
80.00	55.17	33.15	100.00	44.93	100.00
90.00	62.07	33.15	100.00	44.93	100.00

KIR

VariSeed: DVH Report [Page 5]

Medical Physics Services · 1210 · 1 6/13/2007 10:45:32 AM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 12 Template: B & K Standard	Source: I-125 (STM 1251) (NIST 99) Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	

Cumulative DVH

Dose		Prostate (CTV)		PTV	
Gy	%	cc	%	cc	%
100.00	68.97	33.15	100.00	44.93	100.00
110.00	75.86	33.15	100.00	44.90	99.92
120.00	82.76	33.14	99.96	44.71	99.51
130.00	89.66	33.12	99.91	44.38	98.77
140.00	96.55	33.10	99.84	43.97	97.87
150.00	103.45	33.05	99.68	43.36	96.50
160.00	110.34	32.91	99.28	42.35	94.25
170.00	117.24	32.53	98.12	40.81	90.83
180.00	124.14	30.39	91.67	37.41	83.26
190.00	131.03	26.71	80.58	32.42	72.15
200.00	137.93	22.98	69.31	27.61	61.44
210.00	144.83	19.56	59.01	23.35	51.96
220.00	151.72	16.13	48.65	19.24	42.83
230.00	158.62	12.64	38.13	15.33	34.13
240.00	165.52	9.48	28.58	11.05	26.37
250.00	172.41	7.57	22.83	9.75	21.70

u

VariSeed: Therapy Visualization Report [Page 6]

KIR

Medical Physics Services 1210 1 6/13/2007 10:45:32 AM

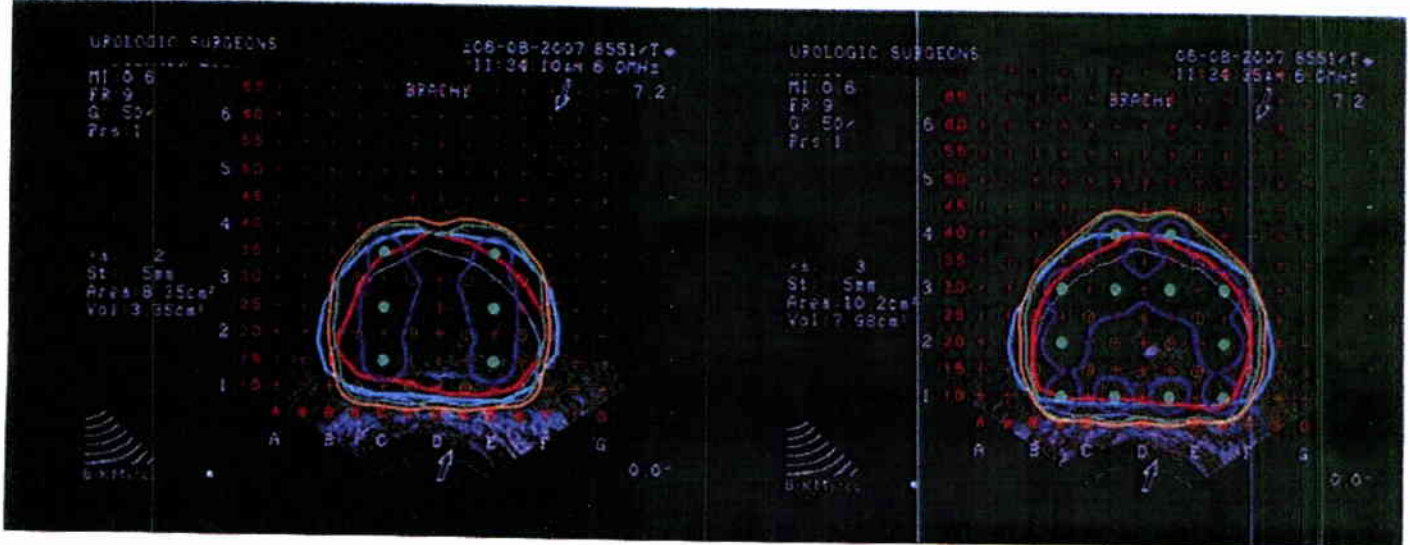
Name: [REDACTED]	Study: Preplan Variation: Default Images: 12 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.432 U [0.340 mCi] Total Activity: 35.424 U [27.893 mCi]
Dept. ID: VA	Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy

Isodose Legend
Gy [% of Prescription Dose]

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Anatomy/Landmark Legend

Prostate (CTV)	PTV
----------------	-----



[Handwritten Signature]

KIR

VariSeed: Therapy Visualization Report [Page 7]

Medical Physics Services 1210 1 6/13/2007 10:45:32 AM

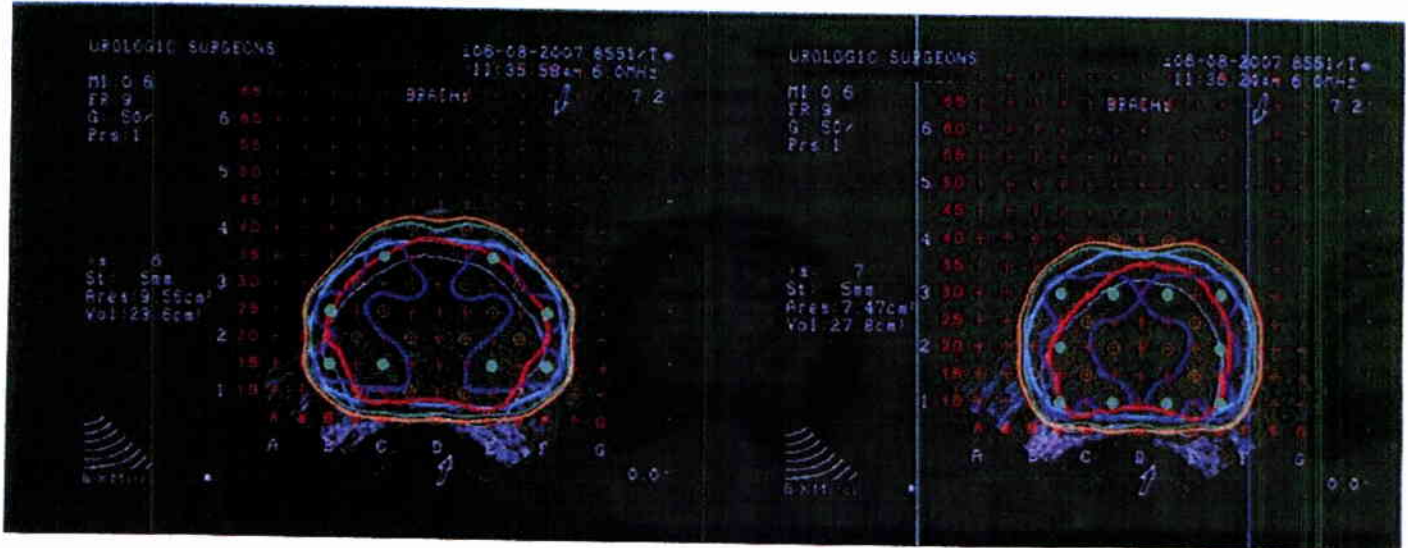
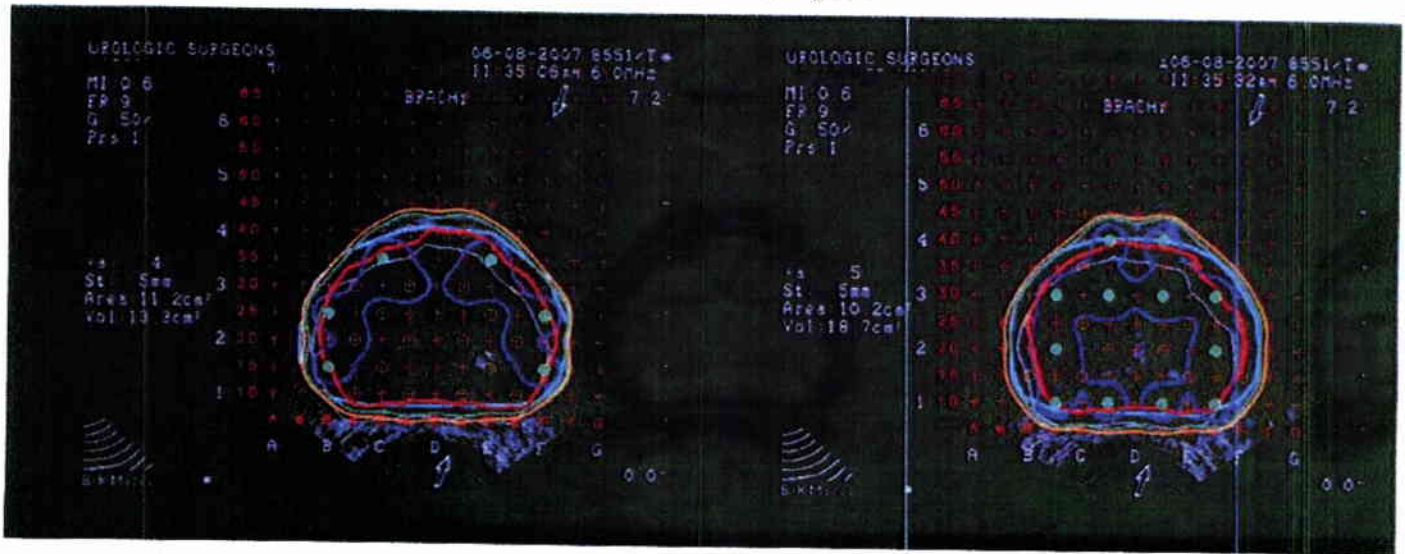
Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) (NIST 99)
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 35.424 U [27.893 mCi]

Isodose Legend

217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]

Anatomy/Landmark Legend

Prostate (CTV)	PTV
----------------	-----



VariSeed: Therapy Visualization Report [Page 8]

KIR

Medical Physics Services - 1210 - 1 - 6/13/2007 10:45:32 AM

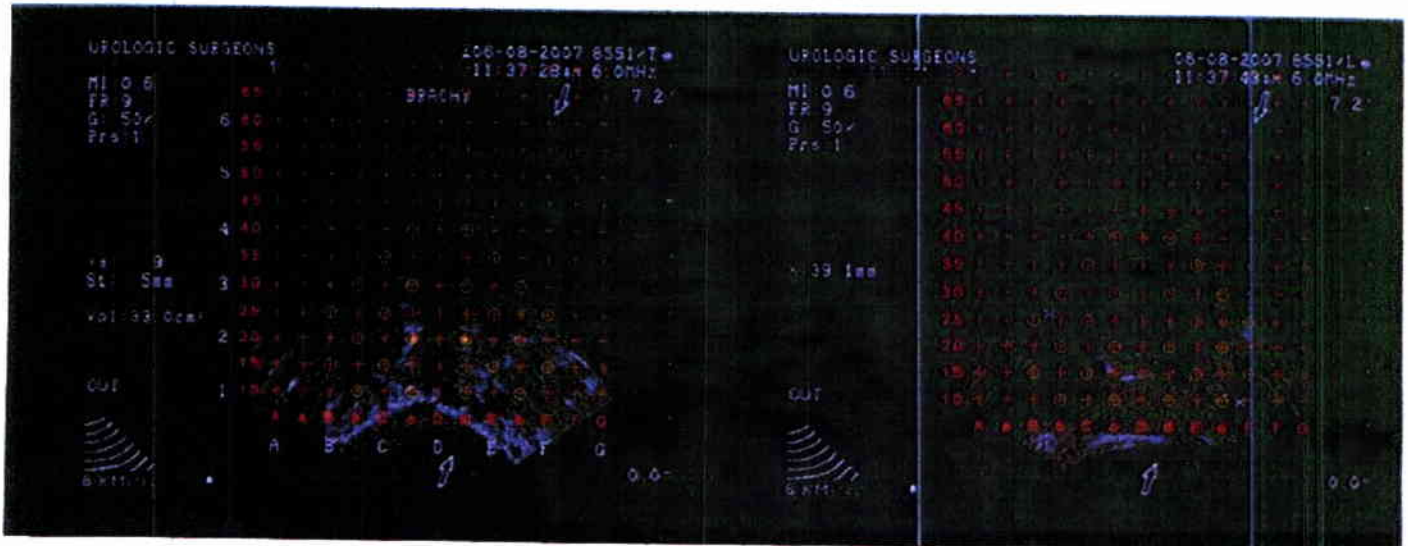
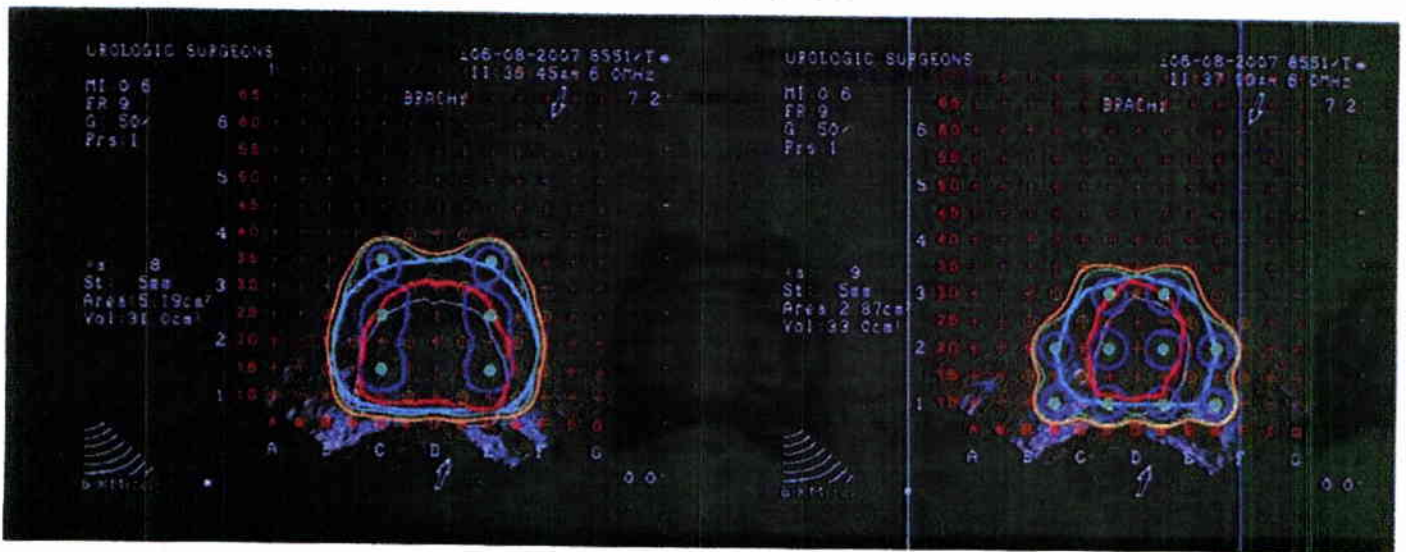
Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 6/21/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.432 U [0.340 mCi]
		Total Activity: 35.424 U [27.893 mCi]

Isodose Legend
Gy [% of Prescription Dose]

	217.50 [150.00%]		130.50 [90.00%]
	145.00 [100.00%]		

Anatomy/Landmark Legend

	Prostate (CTV)		PTV
--	----------------	--	-----



VariSeed: Study Summary Report [Page 1]

GUI

Medical Physics Services 1210 1 10/12/2008 6:54:05 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 12	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 93 Anisotropy: Factors (Point Model) Source Activity: 0.442 U [0.348 mCi] Total Activity: 41.106 U [32.367 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Study Type: Post-Op
Notes: Not Specified

Dose Information

Urethra: N/A

Rectum:

Total Volume:	30.78 cc	
V100:	0.60 cc	[1.95%]
V75:	1.80 cc	[5.85%]
V50:	4.77 cc	[15.50%]

PTV: N/A

Prostate (CTV):

Total Volume:	32.03 cc	
V150:	24.89 cc	[77.72%]
V100:	31.51 cc	[98.37%]
V90:	32.03 cc	[100.00%]
V80:	32.03 cc	[100.00%]
D90:	193.74 Gy	[133.61%]

VariSeed: Therapy Visualization Report [Page 2]

GUI

Medical Physics Services 1210 1 10/12/2008 6:54:05 PM

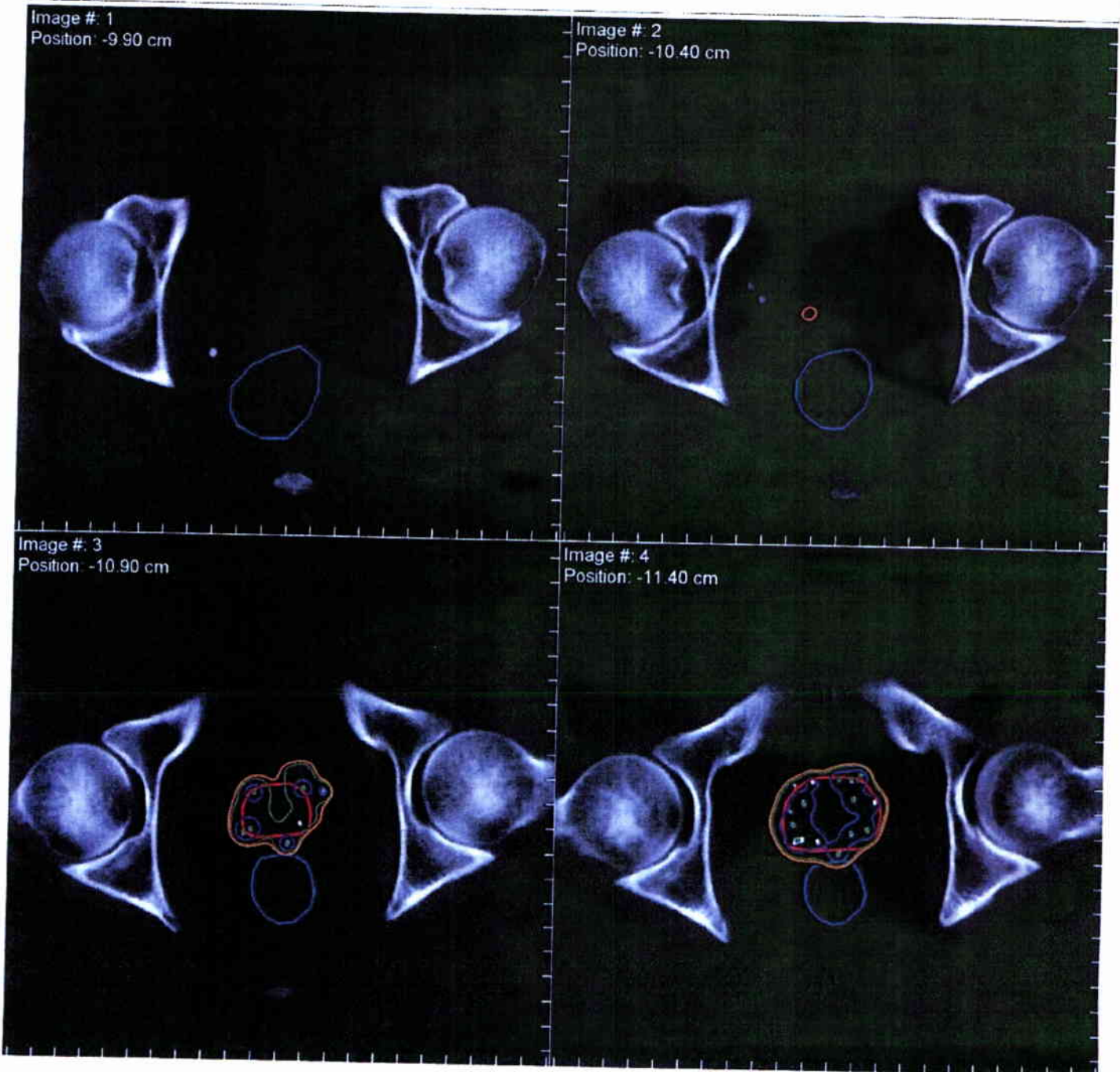
Name: [REDACTED]	Study: PostPlan Variation: Default Images: 12	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 93 Anisotropy: Factors (Point Model) Source Activity: 0.442 U [0.348 mCi] Total Activity: 41.106 U [32.367 mCi]
PID: [REDACTED]		
Dept. ID: VA		
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy (% of Prescription Dose)

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Anatomy/Landmark Legend

Prostate (CTV)	Rectum
----------------	--------



VariSeed: Therapy Visualization Report [Page 3]

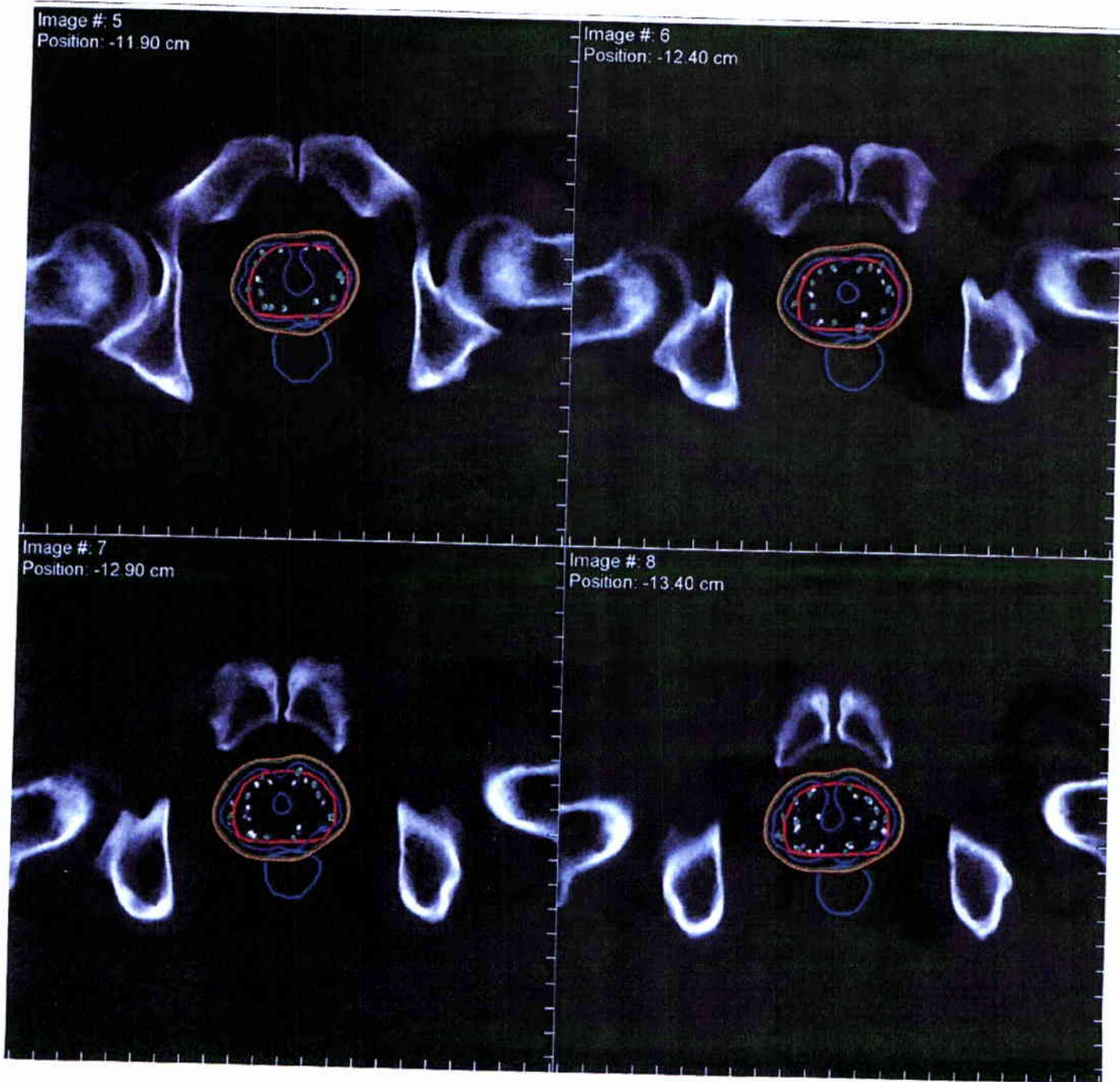
GUI

Medical Physics Services 1210 1 10/12/2008 6:54:05 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 12	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 93 Anisotropy: Factors (Point Model) Source Activity: 0.442 U [0.348 mCi] Total Activity: 41.106 U [32.367 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



VariSeed: Therapy Visualization Report [Page 4]

GUI

Medical Physics Services 1210 1 10/12/2008 6:54:05 PM

Name: [REDACTED]	Study: PostPlan Variation: Default Images: 12	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 93 Anisotropy: Factors (Point Model) Source Activity: 0.442 U [0.348 mCi] Total Activity: 41.106 U [32.367 mCi]
PID: [REDACTED]		
Dept. ID: VA		
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



GUI

RADIATION ONCOLOGY ASSOCIATES VA MEDICAL CENTER QUALITY MANAGEMENT PROGRAM I-125 or Pd-103 SEED THERAPY WRITTEN DIRECTIVE TREATMENT PLAN	
R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D. Jennifer Sutton, M.D. Jonathan S. Tay, M.D.	
DATE:	Saturday, December 01, 2007
PATIENT NAME:	[REDACTED]
RADIOACTIVE MATERIAL:	I-125 (STM 1251) [NIST 99] BARD
TREATMENT SITE:	<u>PROSTATE</u>
PRESCRIBED DOSE:	145 Gy
	0.348 mCi/seed
NUMBER OF SEEDS:	96
TOTAL SOURCE STRENGTH:	33.408 mCi
Signed: _____	Date: <u>12/1/07</u>
PATIENT IDENTIFICATION (USE TWO METHODS)	
<input type="checkbox"/> Patient Name <input type="checkbox"/> Social Security Number <input type="checkbox"/> Signature <input type="checkbox"/> ID Card	<input type="checkbox"/> Birthdate <input type="checkbox"/> Address <input type="checkbox"/> ID Bracelet <input type="checkbox"/> Other _____
Administered by: _____	Date: <u>12/1/07</u>
WASTE DISPOSAL - ROOM SURVEY	
CONDUCTED BY: _____	Date: <u>12/1/07</u>
TOTAL NUMBER OF SOURCES IMPLANTED:	<u>13</u>
NOTE:	

GUI

Operating Room:

Patient Name: [REDACTED]

Patient ID #: [REDACTED]

Pre-Procedure

Identify Patient by two means of ID: Name - ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address

Verify Written Directive

Verify the Correct Number and Batch of Seeds (if possible)

Ensure the following are in the Operating Room:

1) Lead Container for Loose Seeds

2) Tweezers

3) Survey Meter for Room

4) Survey Meter for Patients

5) Pre-loaded Seeds

6) Written Directives Part I and II

7) Physicians' Radiation Badges

8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

Survey People in Operating Room (linens, trash, etc.)

Survey Patient - **IMPORTANT:** Patient Survey must show **less than 1 mR/hr at 1 meter**. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.

Survey Operating Room

Note Total Number of Loose Seeds Recovered: _____

Complete the following (Part II of Written Directive):

1) Radionuclide _____

2) Treatment Site _____

3) Number of Sources _____

4) Total Source Strength _____

5) Exposure Time _____ **PERMANENT**

Signature of Authorized User Physician _____

Date

12/1/07

GUI

Prostate Seed Implant Patient Checklist

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

- Please check the following when completed:** Patient Name: [REDACTED]
 ✓ Patient Name/ID # on this and next pages Patient ID #: [REDACTED]
 ✓ Volume Study
 ✓ Treatment Plan
 ✓ Approval of Treatment Plan by Authorized User Physician (Signed and Dated)
 ✓ Seeds Ordered

Part I of Written Directive Includes (10 CFR 35.41):

- ✓ Patient Name
 ✓ Second Form of Identification
 ✓ Treatment Site
 ✓ Radionuclide
 ✓ Dose
 ✓ Signed by Authorized User Physician
 ✓ Dated by Authorized User Physician

* Retain a copy of this Written Directive in accordance with NRC 35.2040. Note: If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (NRC 35.40).

Arrival of Seeds:

- 1) Date of Arrival: 12/7/07
 2) Time of Arrival: 10-00am
 3) Received By: Lyn Department: Uro Med
 4) Survey of Package to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.
 Survey Time: 10:00am Survey Date: 12/10/07

Through measurements or manufacture documentation, complete the following:

- 1) Source Activity: 33.312
 2) Correct the source activity determined above for physical decay at intervals consistent with 1 percent physical decay: 33.312 for procedure date 12/10/07
 3) Do the source positions within the applicators agree with the Needle Loading Report? yes

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
[Signature]	12/10/07 10:30am	A 1	C 12	96
[Signature]	12/10/07 11:20am	C 12	A 11	3

GUI

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 12/1/2007 5:22:59 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 90
	Template: B & K Standard	Anisotropy Factors (Point Model)
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.442 U [0.348 mCi]
		Total Activity: 39.780 U [31.323 mCi]

Study Type: Pre-Op
Notes: Not Specified

Dose Information

Urethra: N/A

Rectum:

Total Volume:	9.18 cc	
V100:	0.14 cc	[1.51%]
V75:	1.43 cc	[15.54%]
V50:	4.77 cc	[51.92%]

PTV:

Total Volume:	57.94 cc	
V150:	20.61 cc	[35.57%]
V100:	55.83 cc	[96.36%]
V90:	57.45 cc	[99.17%]
V80:	57.91 cc	[99.96%]
D90:	162.90 Gy	[112.34%]

Prostate (CTV):

Total Volume:	45.16 cc	
V150:	17.73 cc	[39.26%]
V100:	44.85 cc	[99.31%]
V90:	45.08 cc	[99.82%]
V80:	45.15 cc	[99.99%]
D90:	170.47 Gy	[117.57%]

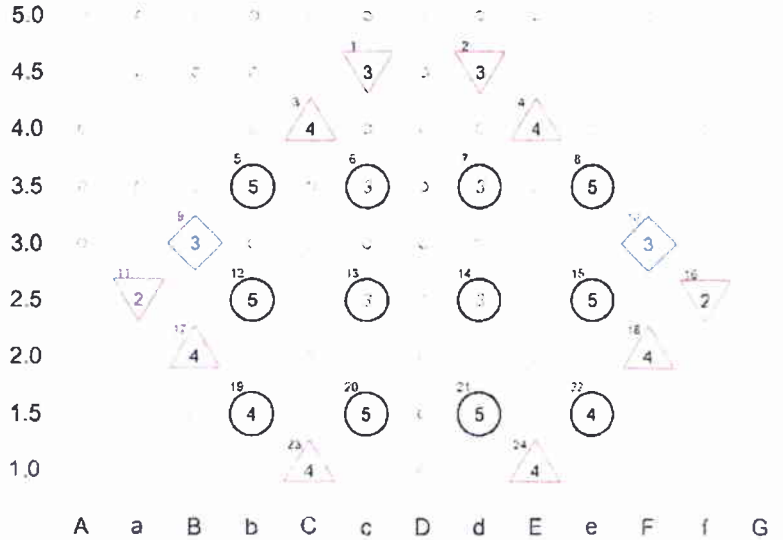
GUI

VariSeed: Needle Loading Report [Page 2]

Medical Physics Services 1210 · 1 · 12/1/2007 5:22:59 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 90
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.442 U [0.348 mCi]
		Total Activity: 39.780 U [31.323 mCi]

Needle Number	Retraction (cm)	Hole Location	Number Seeds
1	2.00	c4.5	3
2	2.00	d4.5	3
3	0.50	C4.0	4
4	0.50	E4.0	4
5	0.00	b3.5	5
6	0.00	c3.5	3 / 5
7	0.00	d3.5	3 / 5
8	0.00	e3.5	5
9	1.50	B3.0	3
10	1.50	F3.0	3
11	2.00	a2.5	2
12	0.00	b2.5	5
13	0.00	c2.5	3 / 5
14	0.00	d2.5	3 / 5
15	0.00	e2.5	5
16	2.00	f2.5	2
17	0.50	B2.0	4
18	0.50	F2.0	4
19	0.00	b1.5	4
20	0.00	c1.5	5
21	0.00	d1.5	5
22	0.00	e1.5	4
23	0.50	C1.0	4
24	0.50	E1.0	4



Plane 0	Plane 1	Plane 2	Plane 3	Plane 4	Special
0.00 cm	0.50 cm	1.00 cm	1.50 cm	2.00 cm	Other

Number of Needles	Seeds per needle
2	2
8	3
8	4
6	5

Plan Summary

Total Activity [U]	39.78
Total Activity [mCi]	31.32
Total Needles	24
Total Seeds	90
Extra Seeds	6
Total Seeds to Order	96

● = Special loading

Study Created by DKC

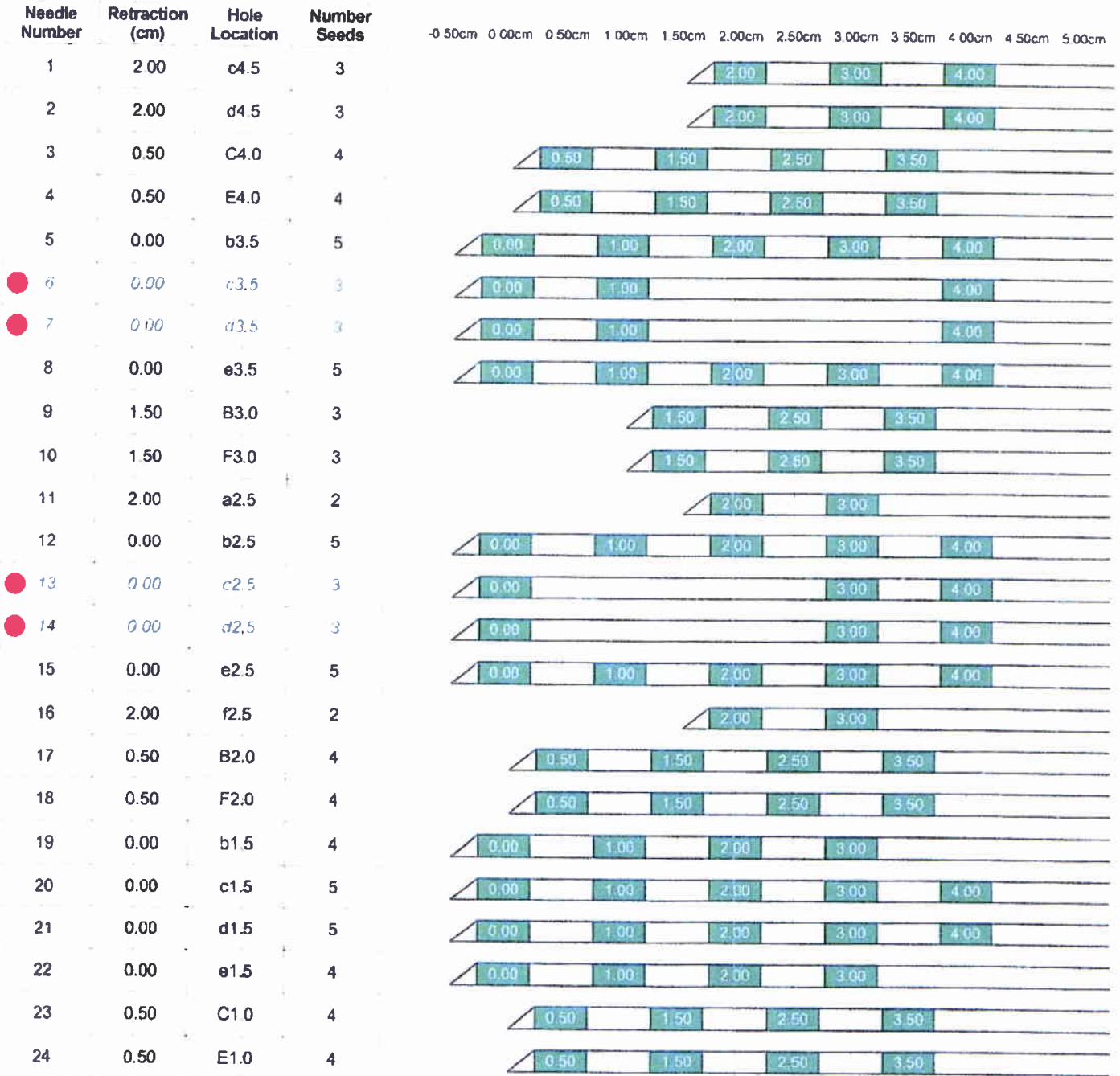
Study Approved by

GUT

VariSeed: Needle Loading Report [Page 3]

Medical Physics Services 1210 1 12/1/2007 5:22:59 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 90
	Template: B & K Standard	Anisotropy Factors (Point Model)
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.442 U [0.348 mCi]
		Total Activity: 39.780 U [31.323 mCi]



● = Special loading

0.50cm 1.00cm 1.50cm 2.00cm 2.50cm 3.00cm 3.50cm 4.00cm 4.50cm 5.00cm

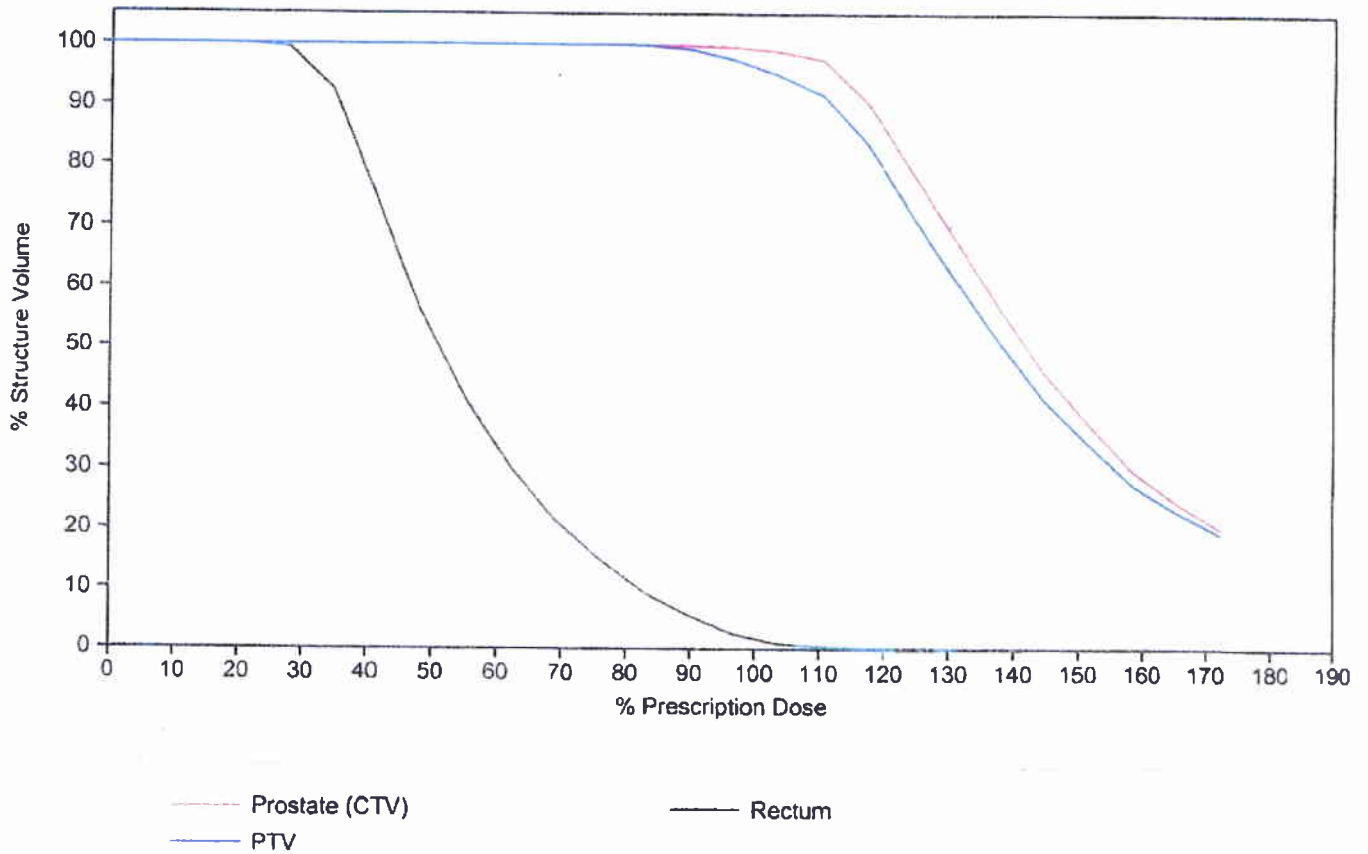
GUI

VariSeed: DVH Report [Page 4]

Medical Physics Services 1210 1 12/1/2007 5:22:59 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 90
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.442 U [0.348 mCi]
		Total Activity: 39.780 U [31.323 mCi]

Cumulative DVH



Cumulative DVH

Dose		Prostate (CTV)		Rectum		PTV	
Gy	%	cc	%	cc	%	cc	%
0.00	0.00	45.16	100.00	9.18	100.00	57.94	100.00
10.00	6.90	45.16	100.00	9.18	100.00	57.94	100.00
20.00	13.79	45.16	100.00	9.18	100.00	57.94	100.00
30.00	20.69	45.16	100.00	9.18	100.00	57.94	100.00
40.00	27.59	45.16	100.00	9.12	99.39	57.94	100.00
50.00	34.48	45.16	100.00	8.49	92.54	57.94	100.00
60.00	41.38	45.16	100.00	6.84	74.49	57.94	100.00
70.00	48.28	45.16	100.00	5.11	55.69	57.94	100.00
80.00	55.17	45.16	100.00	3.79	41.30	57.94	100.00
90.00	62.07	45.16	100.00	2.77	30.23	57.94	100.00

GUI

VariSeed: DVH Report [Page 5]

Medical Physics Services 1210 1 12/1/2007 5:22:59 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 90
	Template: B & K Standard	Anisotropy Factors (Point Model)
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.442 U [0.348 mCi]
		Total Activity: 39.780 U [31.323 mCi]

Cumulative DVH

Dose		Prostate (CTV)		Rectum		PTV	
Gy	%	cc	%	cc	%	cc	%
100.00	68.97	45.16	100.00	1.97	21.42	57.94	100.00
110.00	75.86	45.16	100.00	1.37	14.88	57.94	100.00
120.00	82.76	45.14	99.96	0.87	9.45	57.87	99.88
130.00	89.66	45.08	99.83	0.51	5.55	57.48	99.21
140.00	96.55	44.96	99.56	0.23	2.53	56.52	97.55
150.00	103.45	44.66	98.90	0.08	0.87	55.04	94.99
160.00	110.34	44.04	97.53	0.03	0.32	53.11	91.66
170.00	117.24	40.85	90.46	0.01	0.15	48.43	83.59
180.00	124.14	35.72	79.10	0.01	0.10	41.75	72.06
190.00	131.03	30.61	67.79	0.01	0.06	35.38	61.06
200.00	137.93	25.41	56.28	0.00	0.04	29.22	50.44
210.00	144.83	20.59	45.59	0.00	0.03	23.80	41.08
220.00	151.72	16.85	37.31	0.00	0.02	19.64	33.90
230.00	158.62	13.31	29.48	0.00	0.02	15.76	27.21
240.00	165.52	10.98	24.32	0.00	0.01	13.18	22.75
250.00	172.41	8.97	19.87	0.00	0.01	10.98	18.95

GUI

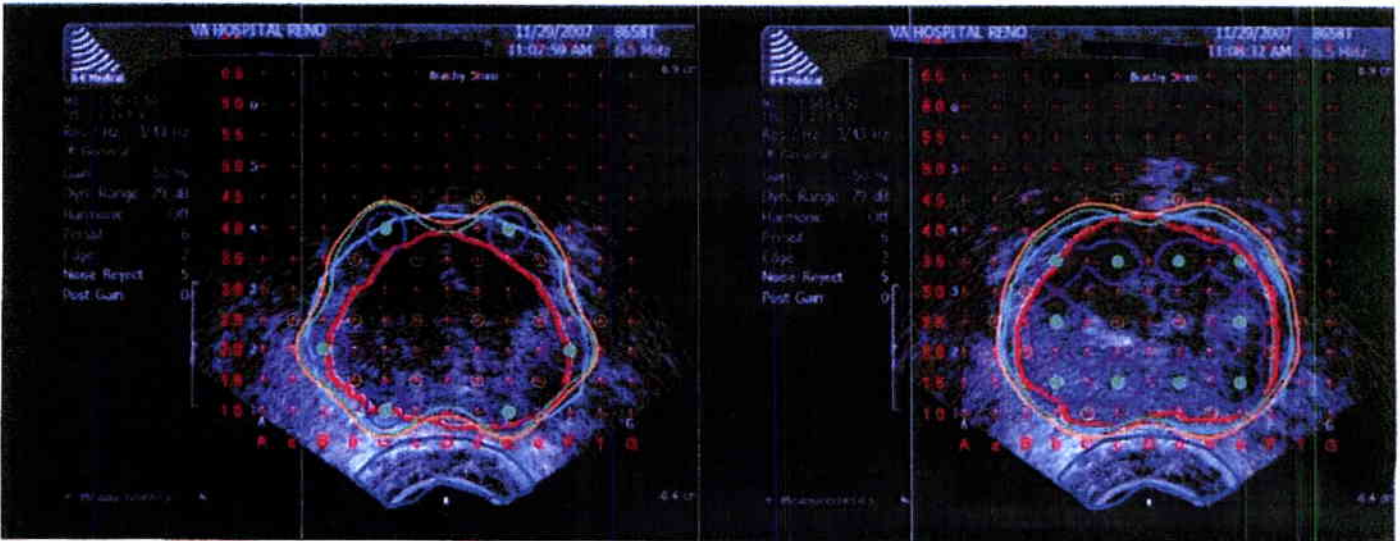
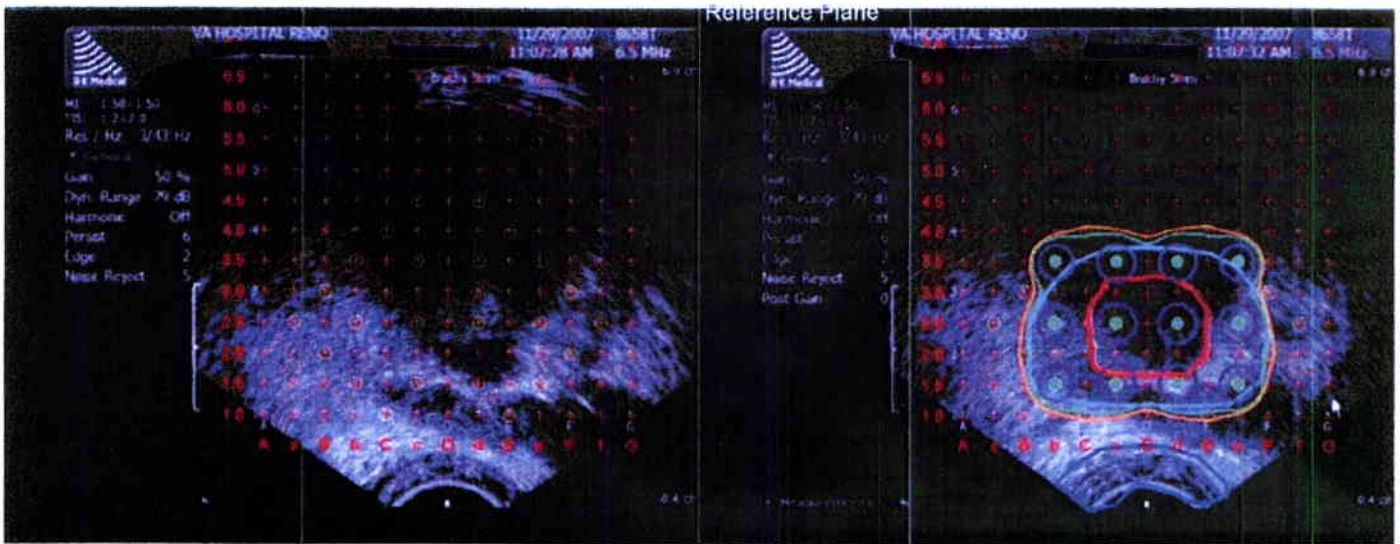
VariSeed: Therapy Visualization Report [Page 6]

Medical Physics Services 1210 1 12/1/2007 5:22:59 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 90
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.442 U [0.348 mCi]
		Total Activity: 39.780 U [31.323 mCi]

Isodose Legend
 Gy [% of Prescription Dose]
■ 217.50 [150.00%] ■ 130.50 [90.00%]
■ 145.00 [100.00%]

Anatomy/Landmark Legend
■ Prostate (CTV) ■ Rectum ■ PTV



GUI

VariSeed: Therapy Visualization Report [Page 7]

Medical Physics Services 1210 - 1 12/1/2007 5:22:59 PM

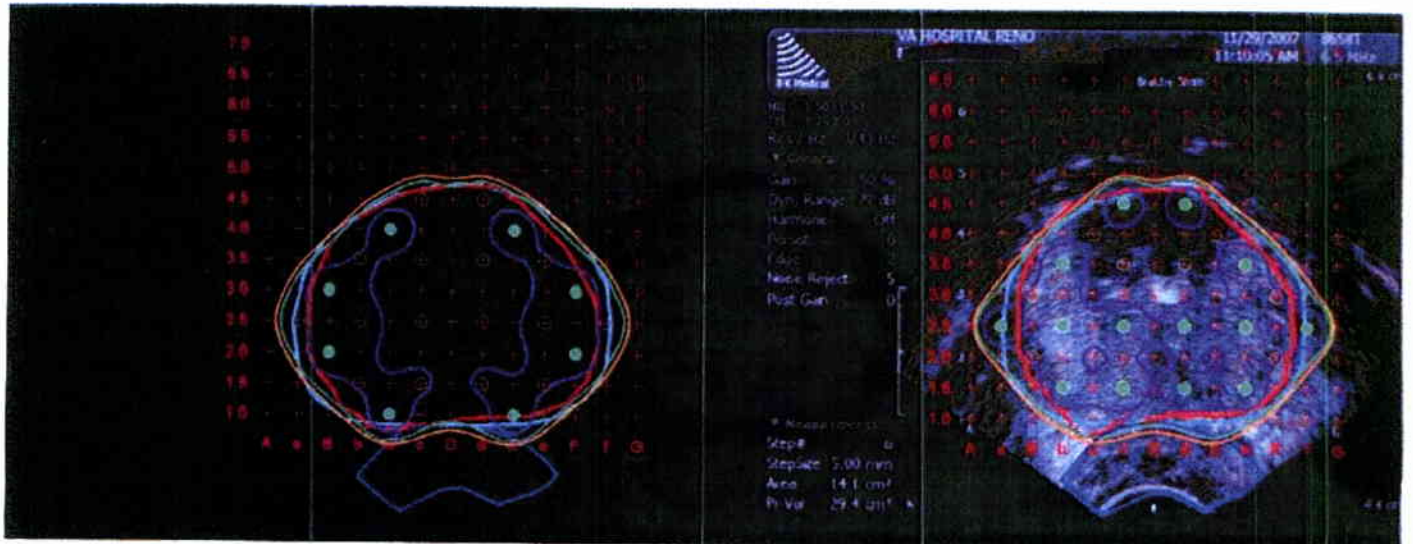
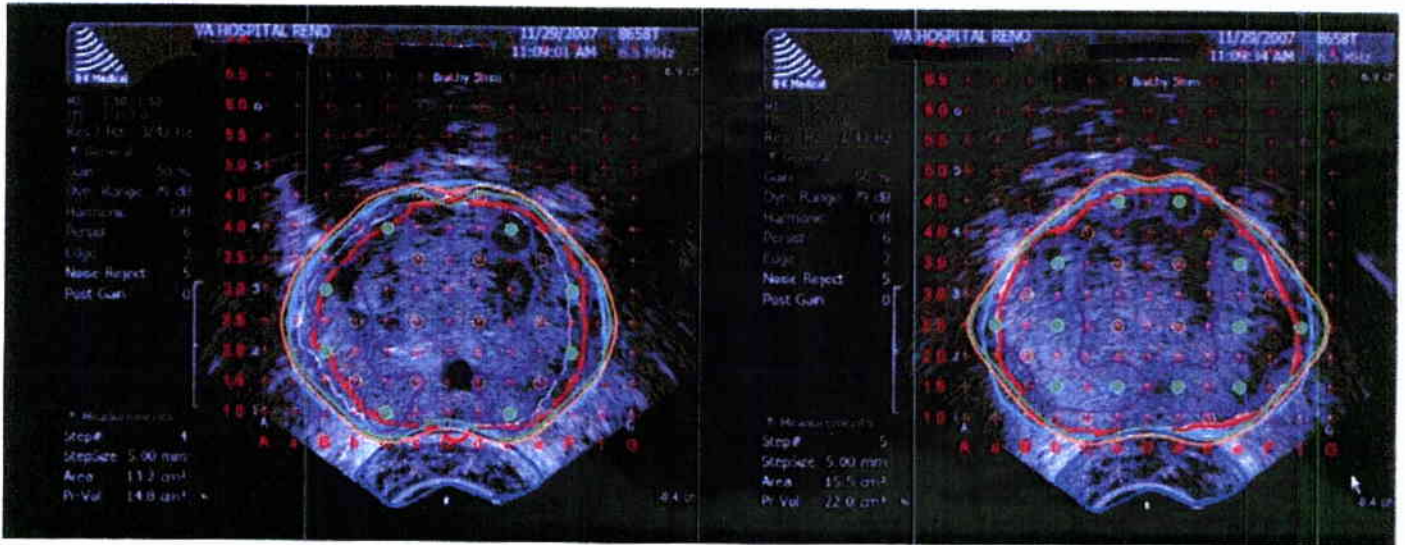
Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 12 Template: B & K Standard	Source: I-125 (STM 1251) (NIST 99) Comment: Sources: 90 Anisotropy: Factors (Point Model) Source Activity: 0.442 U [0.348 mCi] Total Activity: 39.780 U [31.323 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Anatomy/Landmark Legend

Prostate (CTV)	Rectum	PTV
----------------	--------	-----



GUT

VariSeed: Therapy Visualization Report [Page 8]

Medical Physics Services 1210 1 12/1/2007 5:22:59 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 12	Sources: 90
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.442 U [0.348 mCi]
		Total Activity: 39.780 U [31.323 mCi]

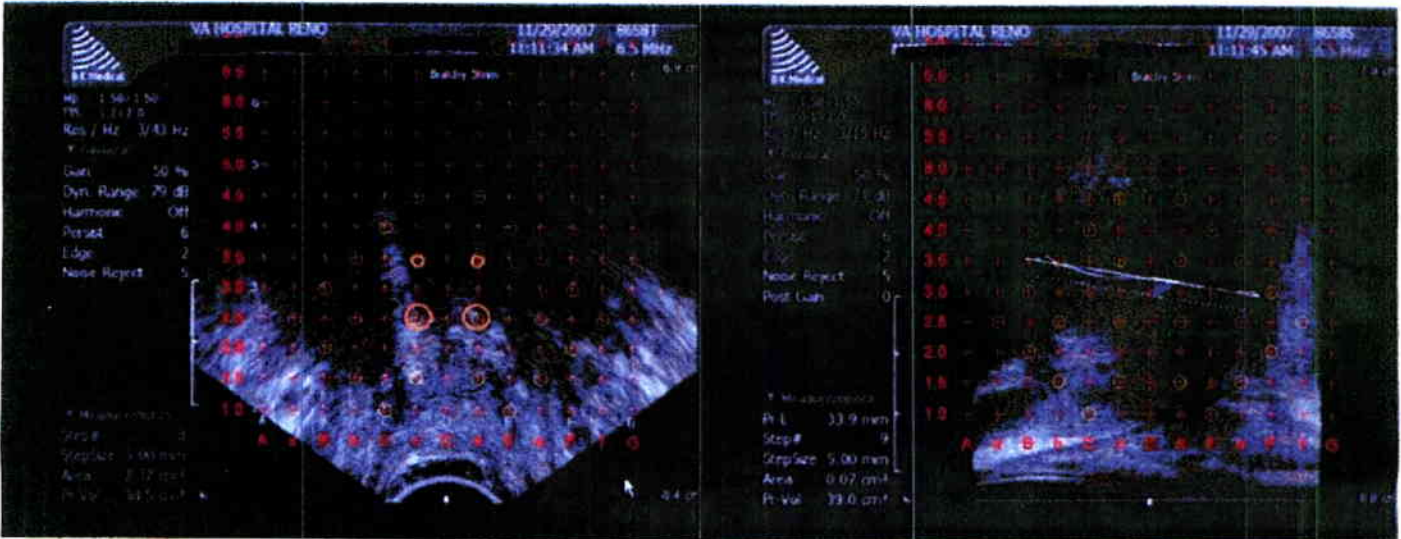
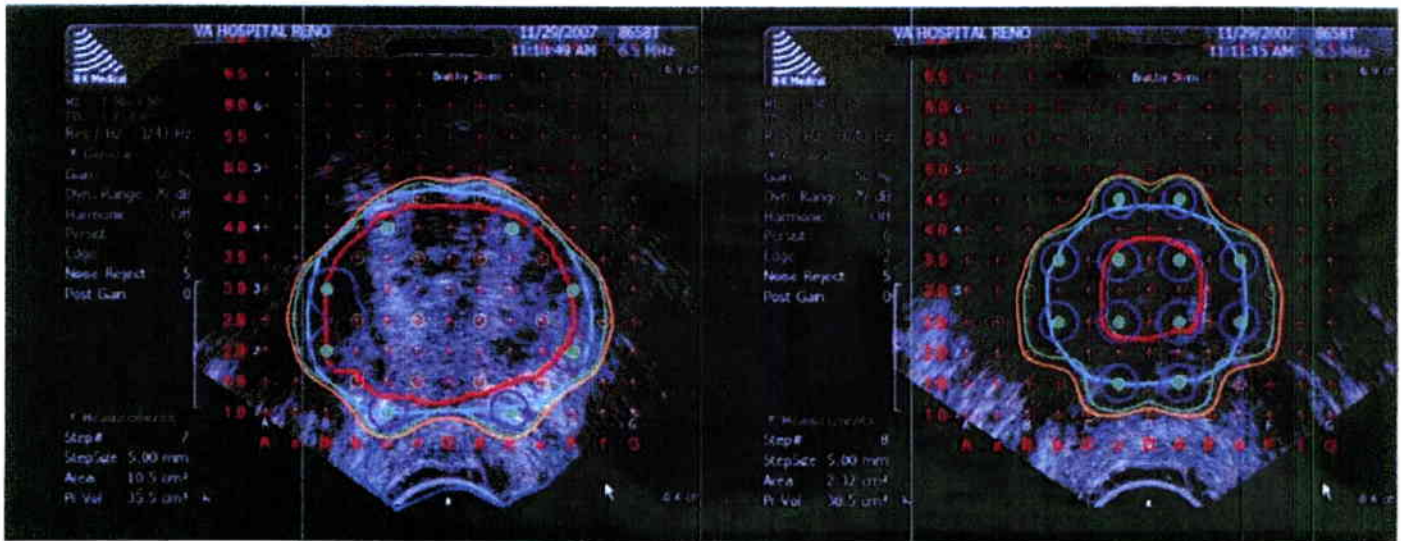
Isodose Legend

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Gy [% of Prescription Dose]

Anatomy/Landmark Legend

Prostate (CTV)	Rectum	PTV
----------------	--------	-----

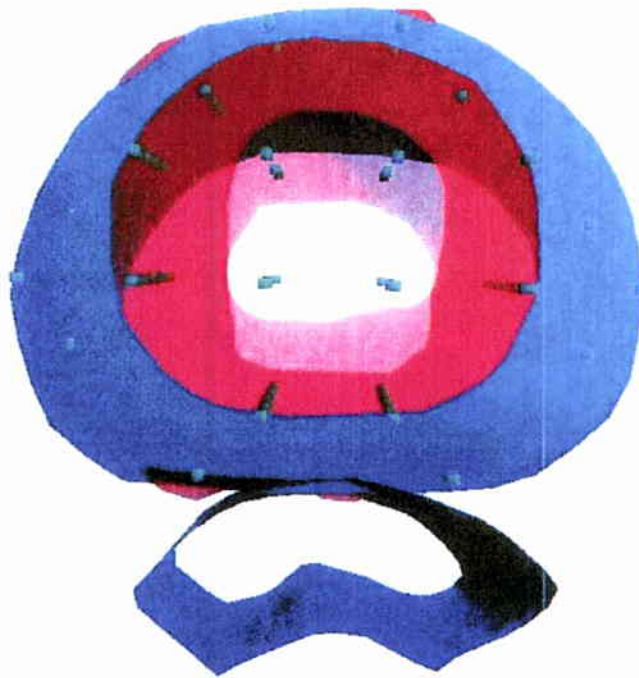


GUI

VariSeed: 3D View Report [Page 9]

Medical Physics Services 1210 1 12/1/2007 5:22:59 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 12 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 90 Anisotropy: Factors (Point Model) Source Activity: 0.442 U [0.348 mCi] Total Activity: 39.780 U [31.323 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	



VariSeed: Study Summary Report [Page 1]

CATH

Medical Physics Services 1210 1 12/15/2008 8:57:37 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 18	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 78 Anisotropy: Factors (Point Model) Source Activity: 0.395 U [0.311 mCi] Total Activity: 30.810 U [24.260 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	

Study Type: Post-Op
Notes: 145 Gy
78 Sources

Dose Information

Urethra:N/A

Rectum:

Total Volume:	38.01 cc	
V100:	0.04 cc	[0.11%]
V75:	0.77 cc	[2.04%]
V50:	3.31 cc	[8.72%]

PTV:N/A

Prostate (CTV):

Total Volume:	22.46 cc	
V150:	17.61 cc	[78.39%]
V100:	22.14 cc	[98.57%]
V90:	22.34 cc	[99.47%]
V80:	22.45 cc	[99.93%]
D90:	188.57 Gy	[130.05%]

VariSeed: Therapy Visualization Report [Page 2]

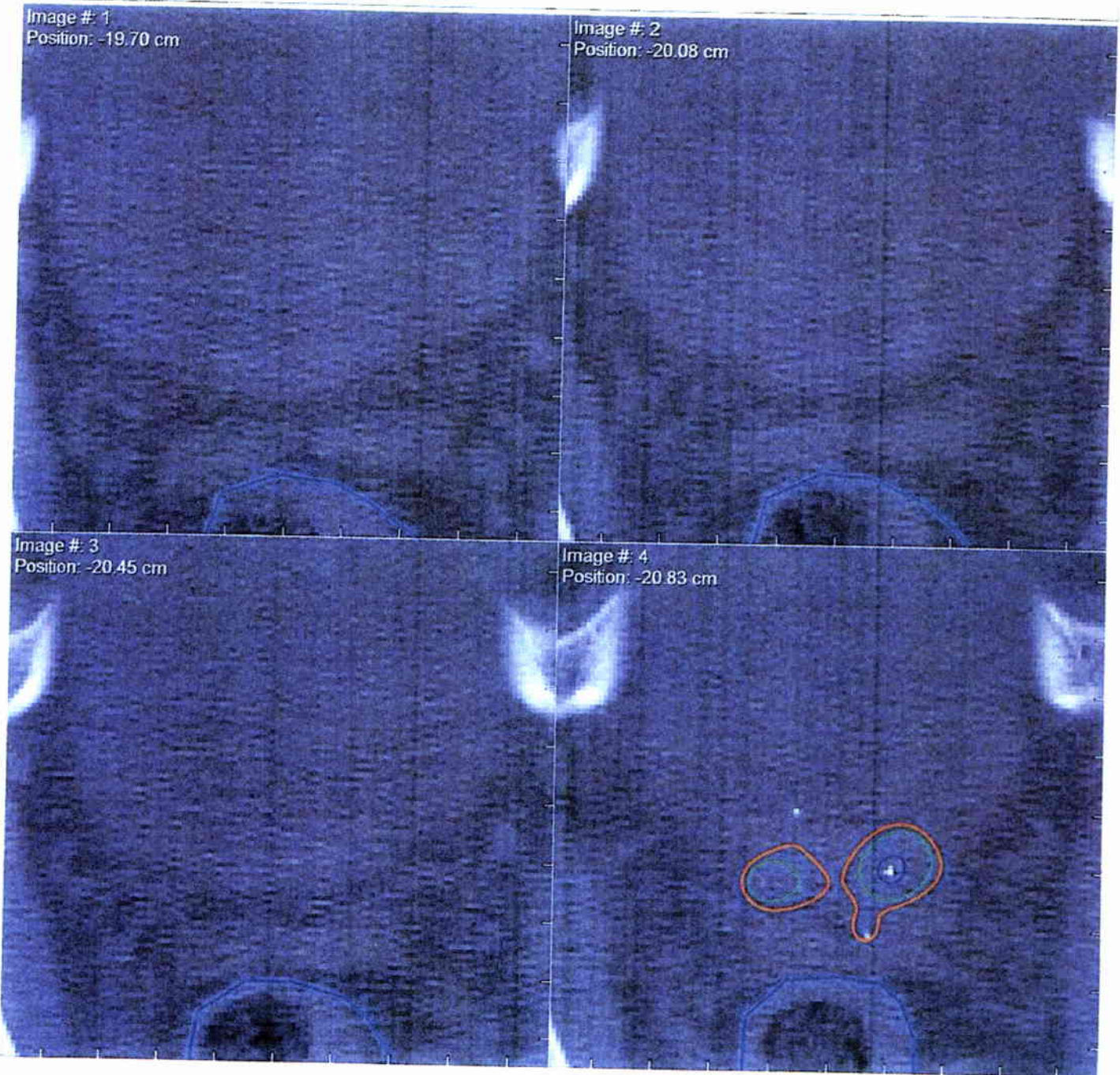
CATH

Medical Physics Services · 1210 1 · 12/15/2008 8:57:37 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 18	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 78 Anisotropy: Factors (Point Model) Source Activity: 0.395 U [0.311 mCi] Total Activity: 30.810 U [24.260 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



VariSeed: Therapy Visualization Report [Page 3]

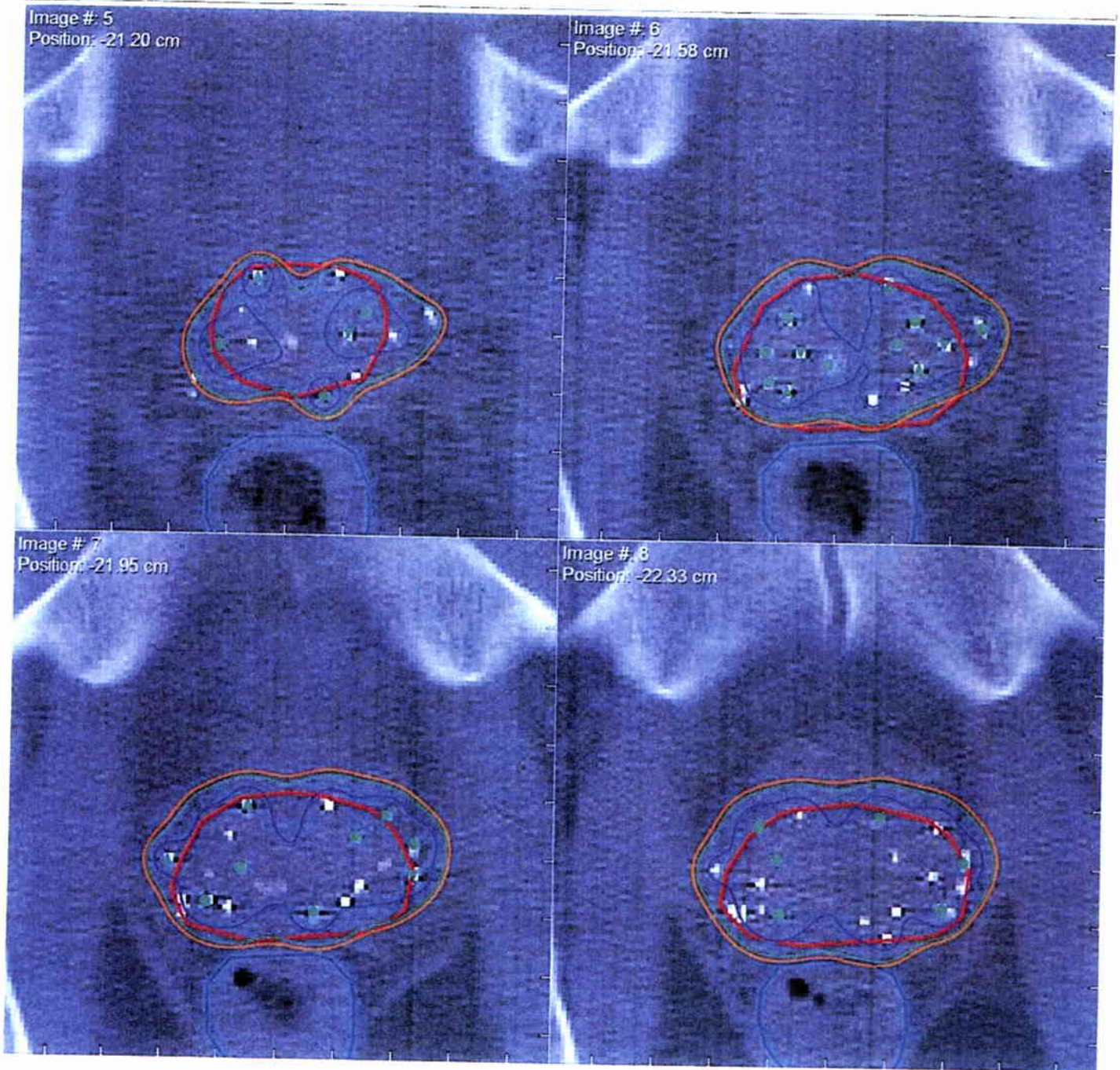
CATH

Medical Physics Services 1210 - 1 12/15/2008 8:57:37 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 18	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 78 Anisotropy: Factors (Point Model) Source Activity: 0.395 U [0.311 mCi] Total Activity: 30.810 U [24.260 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



VariSeed: Therapy Visualization Report [Page 4]

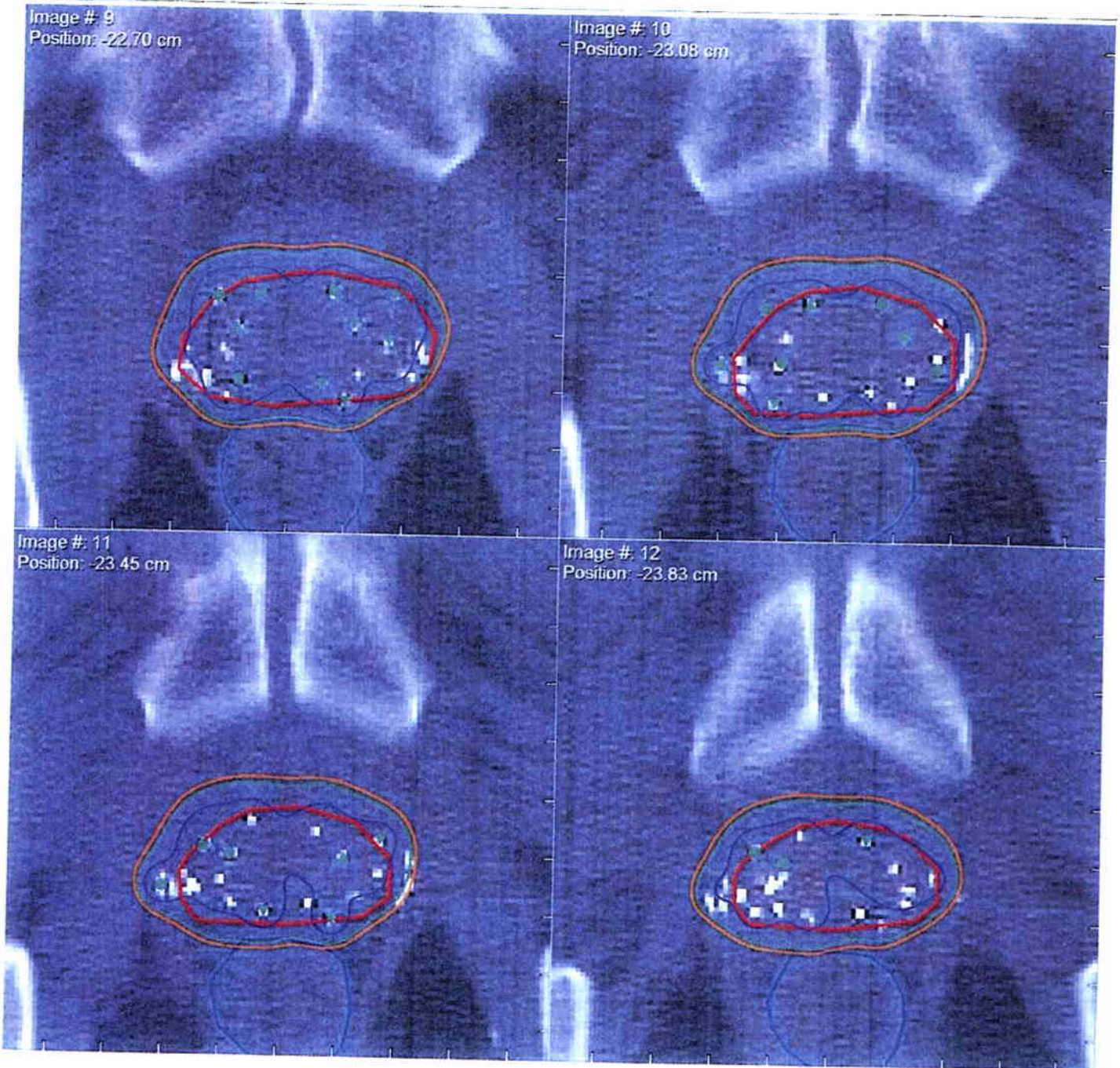
CATH

Medical Physics Services 1210 - 1 12/15/2008 8:57:37 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 18	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 78 Anisotropy: Factors (Point Model) Source Activity: 0.395 U [0.311 mCi] Total Activity: 30.810 U [24.260 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



VariSeed: Therapy Visualization Report [Page 5]

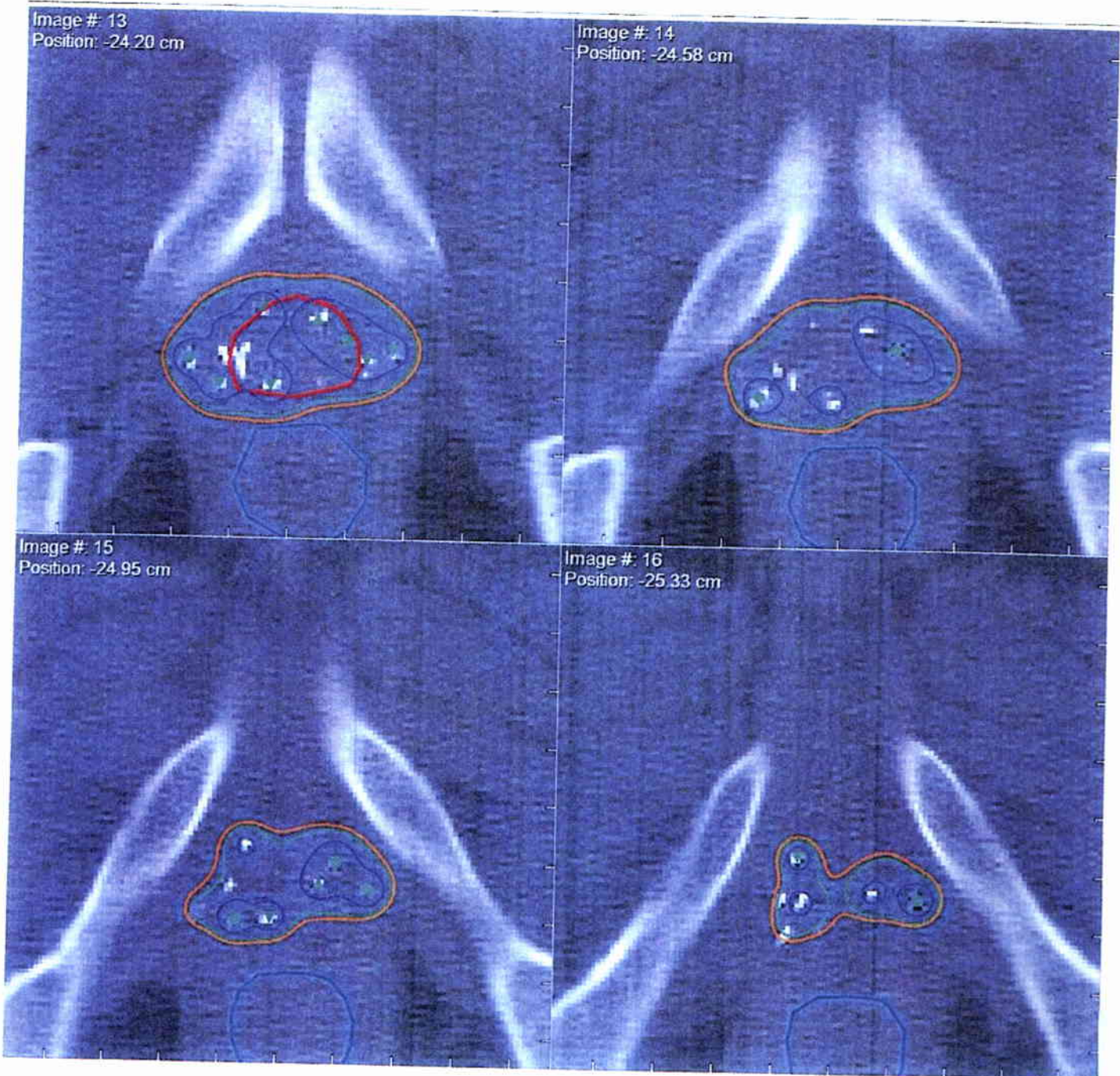
CATH

Medical Physics Services 1210 1 12/15/2008 8:57:37 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 18	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 78 Anisotropy: Factors (Point Model) Source Activity: 0.395 U [0.311 mCi] Total Activity: 30.810 U [24.260 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



VariSeed: Therapy Visualization Report [Page 6]

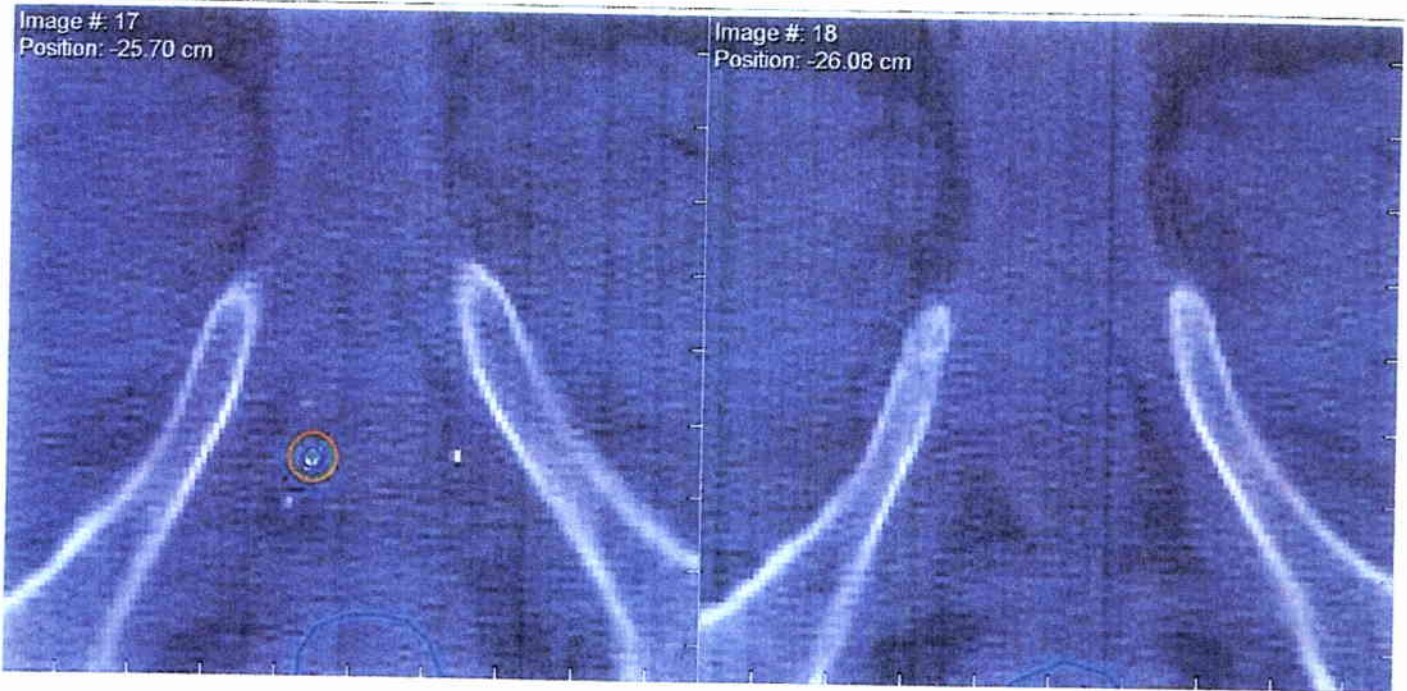
CATH

Medical Physics Services 1210 1 12/15/2008 8:57:37 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 18	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 78 Anisotropy: Factors (Point Model) Source Activity: 0.395 U [0.311 mCi] Total Activity: 30.810 U [24.260 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	

Isodose Legend Gy [% of Prescription Dose]	 217.50 [150.00%]	 130.50 [90.00%]
	 145.00 [100.00%]	

Anatomy/Landmark Legend	 Prostate (CTV)	 Rectum
-------------------------	--	--



Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification:

- Patient Name
- ID Bracelet
- ID Card
- Social Security Number
- Signature
- Birth Date
- Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
- The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
- The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457. These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

CATH

RADIATION ONCOLOGY ASSOCIATES VA MEDICAL CENTER QUALITY MANAGEMENT PROGRAM I-125 or Pd-103 SEED THERAPY WRITTEN DIRECTIVE TREATMENT PLAN	
R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D. Jennifer Sutton, M.D. Jonathan S. Tay, M.D.	
DATE:	Friday, December 08, 2006 [REDACTED]
PATIENT NAME:	[REDACTED]
RADIOACTIVE MATERIAL:	I-125 (STM 1251) [NIST 99] BARD
TREATMENT SITE:	PROSTATE
PRESCRIBED DOSE:	145 Gy
	0.311 mCi/seed
NUMBER OF SEEDS:	88
TOTAL SOURCE STRENGTH:	27.368 mCi
Signed: _____	Date: 12/14/06
PATIENT IDENTIFICATION (USE TWO METHODS)	
<input checked="" type="checkbox"/> Patient Name <input type="checkbox"/> Social Security Number <input type="checkbox"/> Signature <input type="checkbox"/> ID Card	Birthdate _____ Address _____ <input checked="" type="checkbox"/> ID Bracelet Other _____
Administered by: <u>[Signature]</u>	Date: <u>12/14/06</u>
WASTE DISPOSAL - ROOM SURVEY	
CONDUCTED BY: <u>[Signature]</u>	Date: <u>12/14/06</u>
TOTAL NUMBER OF SOURCES IMPLANTED:	<u>88</u>
NOTE:	

CATH

Operating Room:

Patient Name: [REDACTED]

Patient ID #: [REDACTED]

Pre-Procedure

- Identify Patient by two means of ID: Name ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address
- Verify Written Directive
- Verify the Correct Number and Batch of Seeds (if possible)

Ensure the following are in the Operating Room:

- 1) Lead Container for Loose Seeds
- 2) Tweezers
- 3) Survey Meter for Room
- 4) Survey Meter for Patients
- 5) Pre-loaded Seeds
- 6) Written Directives Part I and II
- 7) Physicians' Radiation Badges
- 8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

- Survey People in Operating Room (linens, trash, etc.)
- Survey Patient - IMPORTANT: Patient Survey must show **less than 1 mR/hr at 1 meter**. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.
- Survey Operating Room
Note Total Number of Loose Seeds Recovered: 0
- Complete the following (Part II of Written Directive):

1) Radionuclide T-125

2) Treatment Site Prostate

3) Number of Sources 85

4) Total Source Strength 26.84 mCi 0.31 mCi/seed

5) Exposure Time PERMANENT

[Signature]
Signature of Authorized User Physician

12/14/06
Date

CATH

Prostate Seed Implant Patient Checklist

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

Please check the following when completed:

Patient Name [REDACTED]
Patient ID #: [REDACTED]

- Patient Name/ID # on this and next pages
- Volume Study
- Treatment Plan
- Approval of Treatment Plan by Authorized User Physician (Signed and Dated)
- Seeds Ordered

Part I of Written Directive Includes (10 CFR 35.41):

- Patient Name
- Second Form of Identification
- Treatment Site
- Radionuclide
- Dose
- Signed by Authorized User Physician
- Dated by Authorized User Physician

* Retain a copy of this Written Directive in accordance with NRC 35.2040. Note: If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (NRC 35.40).

Arrival of Seeds:

- 1) Date of Arrival: 12/13/06
- 2) Time of Arrival: 11:10
- 3) Received By: Carl M. [REDACTED] Department: Nuc Med
- 4) Survey of Package to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.
Survey Time: 11:10 Survey Date: 12/13/06

Through measurements or manufacture documentation, complete the following:

- 1) Source Activity: 26,840 mCi
- 2) Correct the source activity determined above for physical decay at intervals consistent with 1 percent physical decay: 26 mCi for procedure date 12/13/06
- 3) Do the source positions within the applicators agree with the Needle Loading Report? yes

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
<u>Jean K. [REDACTED]</u>	<u>12/13/06 7:30</u>	<u>Nuc Med</u>	<u>OR</u>	<u>88</u>

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 12/8/2006 5:40:41 PM

CATH

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PrePlan Variation: Default Images: 11 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.395 U [0.311 mCi] Total Activity: 32.390 U [25.504 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	

Study Type: Pre-Op
Notes: Pat. confirmed as Jerry Cathey (9238).
Patient has had no EBRT
I-125 Primary 145 Gy

Dose Information

Urethra:N/A

Rectum:N/A

PTV:

Total Volume:	42.35 cc	
V150:	15.46 cc	[36.51%]
V100:	40.32 cc	[95.20%]
V90:	41.68 cc	[98.41%]
V80:	42.26 cc	[99.78%]
D90:	157.94 Gy	[108.92%]

Prostate (CTV):N/A

Prostate:

Total Volume:	30.34 cc	
V150:	11.91 cc	[39.27%]
V100:	29.88 cc	[98.50%]
V90:	30.22 cc	[99.62%]

Prostate2:N/A

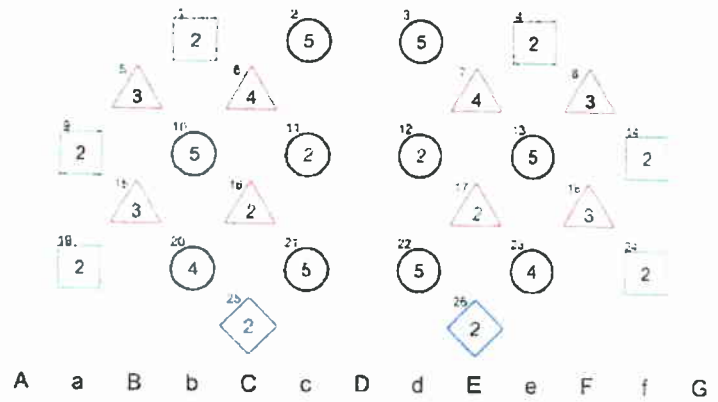
VariSeed: Needle Loading Report [Page 2]

CATH

Medical Physics Services 1210 1 12/8/2006 5:37:05 PM

Name: [REDACTED]	Study: PrePlan	Source: I-125 (STM 1251) [NIST 99]RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images 11	Sources: 82
	Template B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	Source Activity: 0.395 U [0.311 mCi]
		Total Activity: 32.390 U [25.504 mCi]

Needle Number	Retraction (cm)	Hole Location	Number Seeds	
1	1.00	b3.5	2	5.0
2	0.00	c3.5	5	4.5
3	0.00	c3.5	5	
4	1.00	e3.5	2	4.0
5	0.50	B3.0	3	3.5
6	0.50	C3.0	4	
7	0.50	E3.0	4	3.0
8	0.50	F3.0	3	
9	1.00	a2.5	2	2.5
10	0.00	b2.5	5	2.0
● 11	0.00	c2.5	2/5	1.5
● 12	0.00	d2.5	2/5	1.5
13	0.00	e2.5	5	
14	1.00	f2.5	2	1.0
15	0.50	B2.0	3	
● 16	0.50	C2.0	2/4	
● 17	0.50	E2.0	2/4	
18	0.50	F2.0	3	
19	1.00	a1.5	2	
20	0.00	b1.5	4	
21	0.00	c1.5	5	
22	0.00	d1.5	5	
23	0.00	e1.5	4	
24	1.00	f1.5	2	
25	1.50	C1.0	2	
26	1.50	E1.0	2	



Retraction Legend

Plane 0	Plane 1	Plane 2	Plane 3	Plane 4	Special
0.00 cm	0.50 cm	1.00 cm	1.50 cm	2.00 cm	Other

Number of Needles	Seeds per needle
12	2
4	3
4	4
6	5

Plan Summary

Total Activity [U]	32.39
Total Activity [mCi]	25.50
Total Needles	26
Total Seeds	82
Extra Seeds	6
Total Seeds to Order	88 <i>implanted</i>

● = Special loading

Study Created by dkc

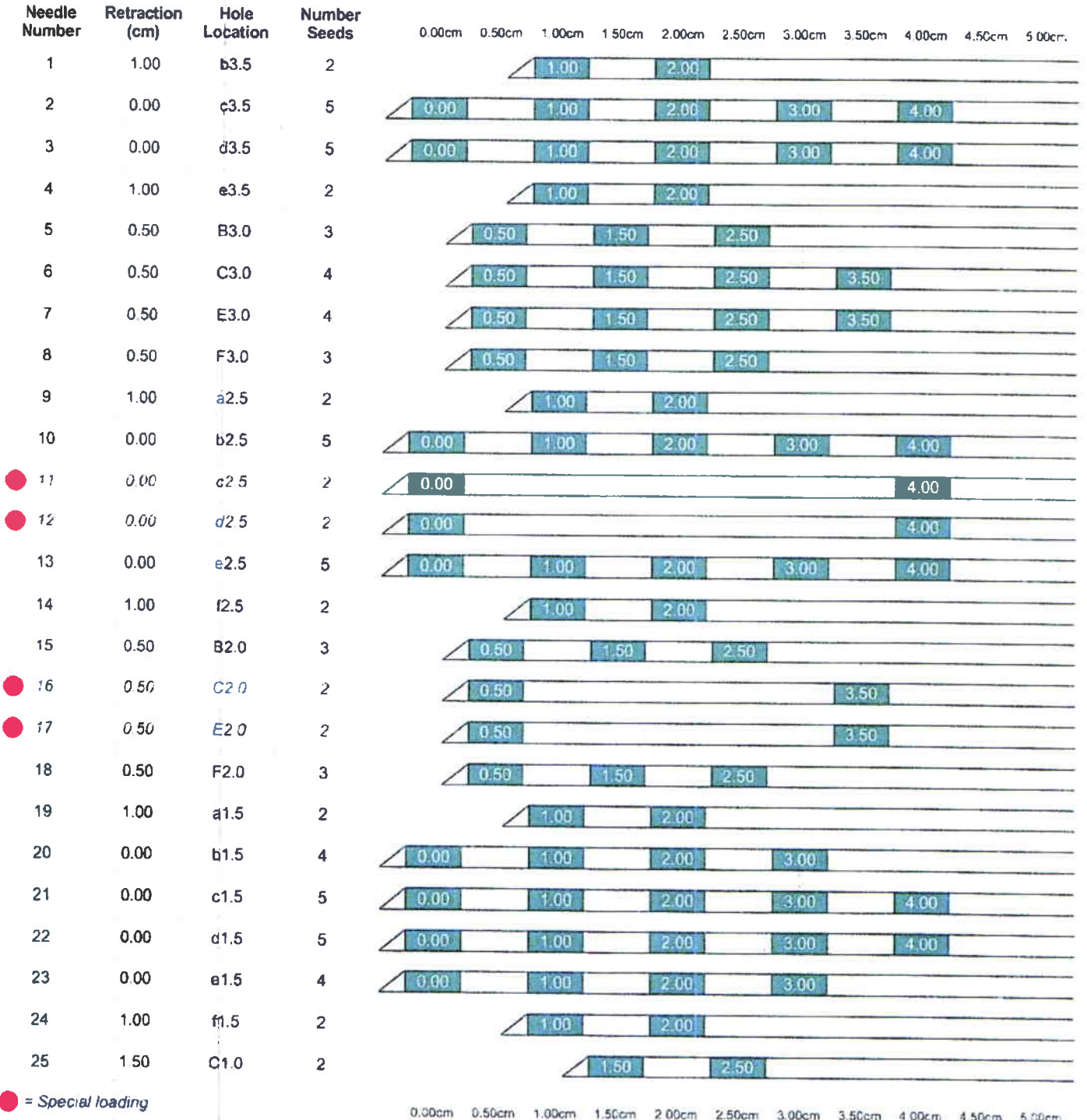
Study Approved by *JTB*

VariSeed: Needle Loading Report [Page 3]

CATH

Medical Physics Services 1210 1 12/8/2006 5:37:05 PM

Name: [REDACTED]	Study: PrePlan	Source: I-125 (STM 1251) [NIST 99]RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	Source Activity: 0.395 U [0.311 mCi]
		Total Activity: 32.390 U [25.504 mCi]



● = Special loading

0.00cm 0.50cm 1.00cm 1.50cm 2.00cm 2.50cm 3.00cm 3.50cm 4.00cm 4.50cm 5.00cm

CATH

VariSeed: Needle Loading Report [Page 4]

Medical Physics Services 1210 1 12/8/2006 5:37:05 PM

Name: [REDACTED]	Study: PrePlan	Source: I-125 (STM 1251) (NIST 99)RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	Source Activity: 0.395 U [0.311 mCi]
		Total Activity: 32.390 U [25.504 mCi]

Needle Number	Retraction (cm)	Hole Location	Number Seeds	0.50cm	1.00cm	1.50cm	2.00cm	2.50cm	3.00cm	3.50cm	4.00cm	4.50cm	5.00cm
26	1.50	E1.0	2			1.50		2.50					
				0.50cm	1.00cm	1.50cm	2.00cm	2.50cm	3.00cm	3.50cm	4.00cm	4.50cm	5.00cm

● = Special loading

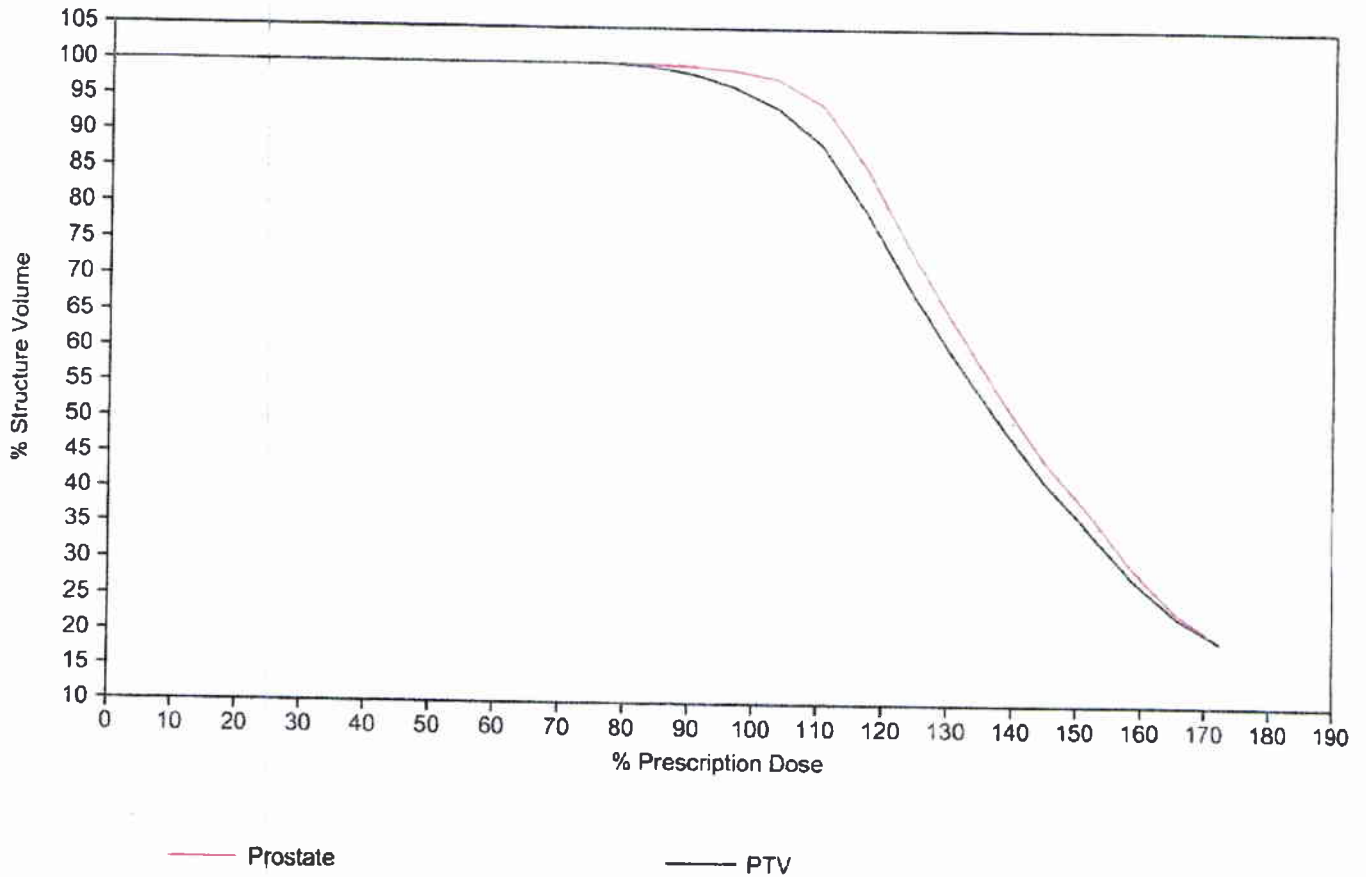
CATH

VariSeed: DVH Report [Page 5]

Medical Physics Services 1210 1 12/8/2006 5:37:05 PM

Name: [REDACTED]	Study: PrePlan	Source: I-125 (STM 1251) [NIST 99]RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	Source Activity: 0.395 U [0.311 mCi]
		Total Activity: 32.390 U [25.504 mCi]

Cumulative DVH



Cumulative DVH

Dose		Prostate		PTV	
Gy	%	cc	%	cc	%
0.00	0.00	30.34	100.00	42.35	100.00
10.00	6.90	30.34	100.00	42.35	100.00
20.00	13.79	30.34	100.00	42.35	100.00
30.00	20.69	30.34	100.00	42.35	100.00
40.00	27.59	30.34	100.00	42.35	100.00
50.00	34.48	30.34	100.00	42.35	100.00
60.00	41.38	30.34	100.00	42.35	100.00
70.00	48.28	30.34	100.00	42.35	100.00
80.00	55.17	30.34	100.00	42.35	100.00
90.00	62.07	30.34	100.00	42.35	100.00

VariSeed: DVH Report [Page 6]

Medical Physics Services 1210 1 - 12/8/2006 5:37:05 PM

CATH

Name: [REDACTED]	Study: PrePlan	Source: I-125 (STM 1251) [NIST 99]RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	Source Activity: 0.395 U [0.311 mCi]
		Total Activity: 32.390 U [25.504 mCi]

Cumulative DVH

Gy	Dose		Prostate		PTV	
	%	cc	%	cc	%	cc
100.00	68.97	30.34	100.00	42.35	100.00	
110.00	75.86	30.33	99.99	42.33	99.96	
120.00	82.76	30.30	99.90	42.17	99.58	
130.00	89.66	30.23	99.64	41.72	98.51	
140.00	96.55	30.04	99.02	40.88	96.54	
150.00	103.45	29.66	97.78	39.64	93.59	
160.00	110.34	28.58	94.22	37.41	88.34	
170.00	117.24	25.90	85.38	33.54	79.19	
180.00	124.14	22.45	74.01	29.00	68.47	
190.00	131.03	19.34	63.76	24.95	58.90	
200.00	137.93	16.34	53.87	21.14	49.92	
210.00	144.83	13.58	44.76	17.67	41.72	
220.00	151.72	11.39	37.55	14.81	34.96	
230.00	158.62	9.00	29.65	11.90	28.11	
240.00	165.52	7.07	23.31	9.61	22.69	
250.00	172.41	5.83	19.21	8.06	19.04	

CATH

VariSeed: Therapy Visualization Report [Page 7]

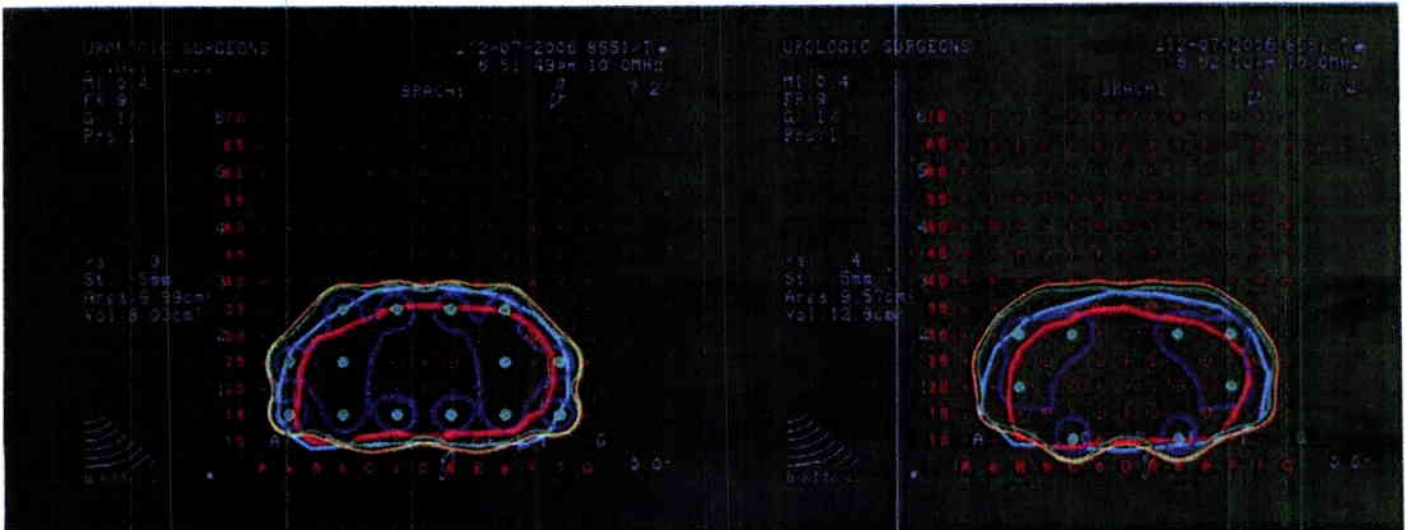
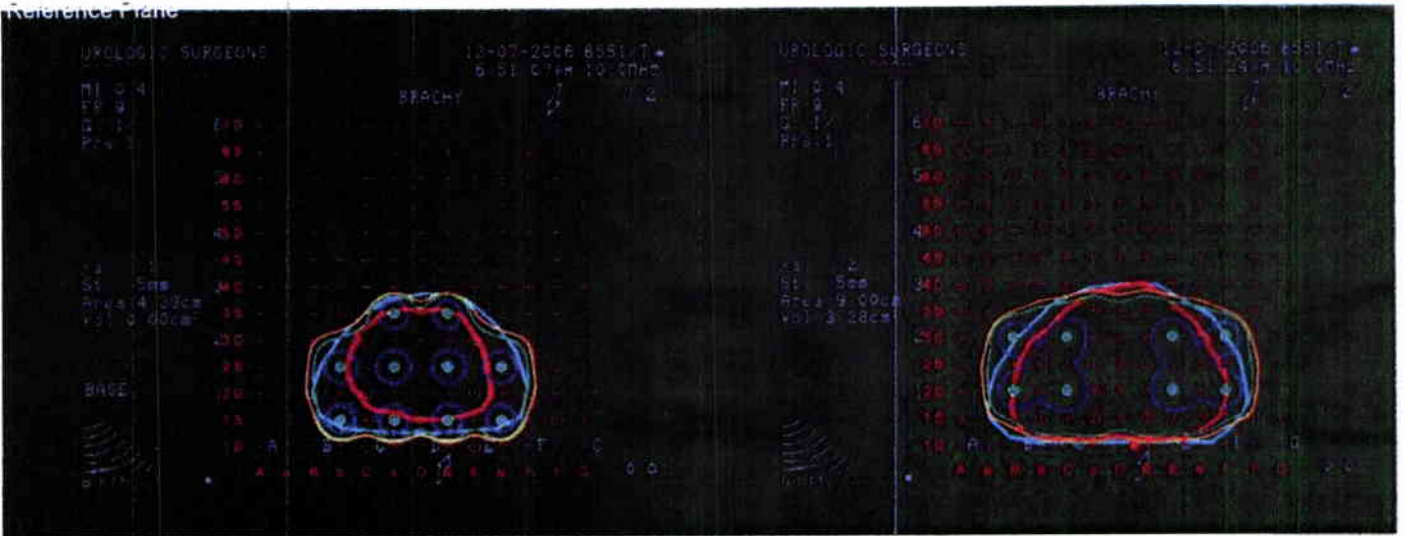
Medical Physics Services 1210 - 1 12/8/2006 5:37:05 PM

Name: [REDACTED]	Study: PrePlan	Source: I-125 (STM 1251) [NIST 99]RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
		Source Activity: 0.395 U [0.311 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	Total Activity: 32.390 U [25.504 mCi]

Isodose Legend
 Gy [% of Prescription Dose]
■ 217.50 [150.00%]
■ 130.50 [90.00%]
■ 145.00 [100.00%]

Anatomy/Landmark Legend
■ Prostate
■ PTV

Reference Plane



CATH

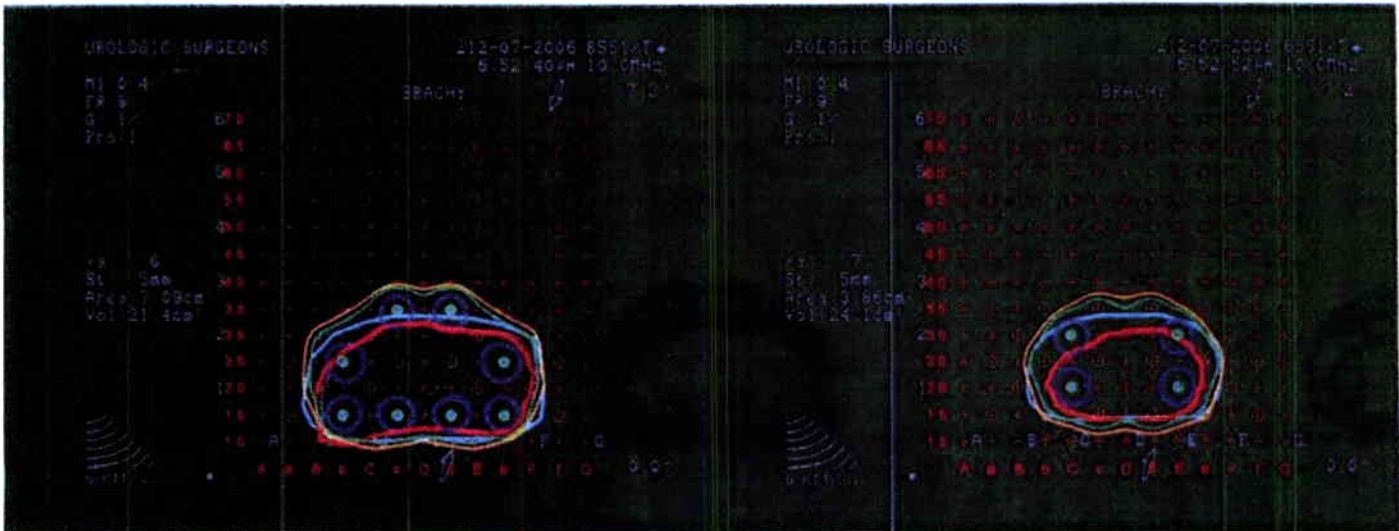
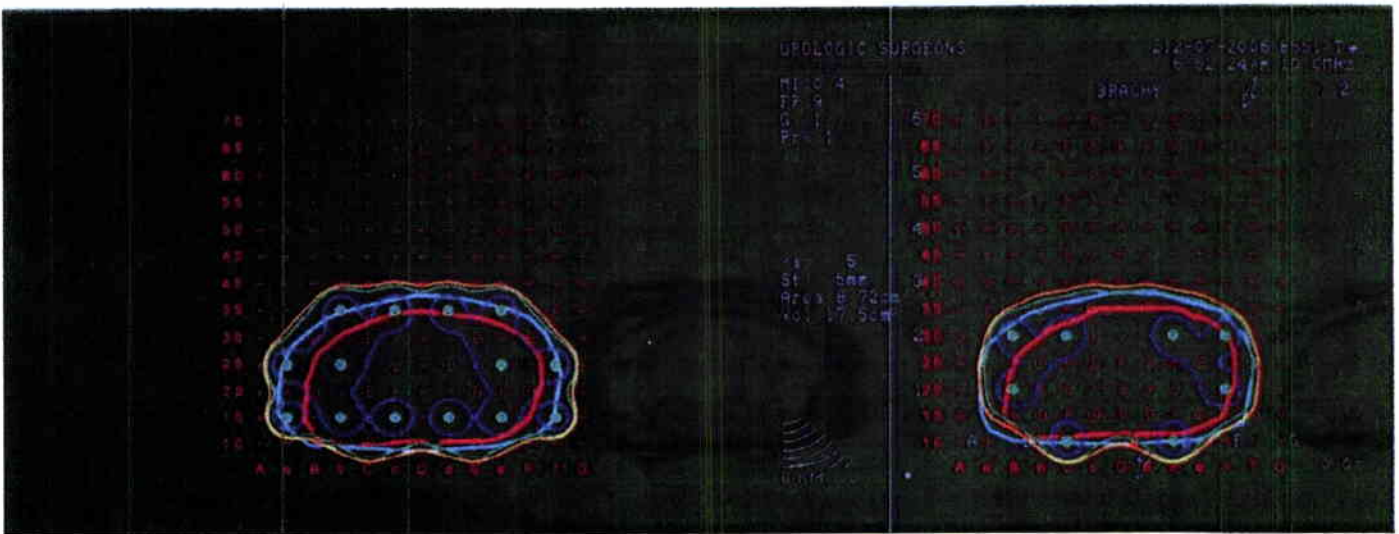
VariSeed: Therapy Visualization Report [Page 8]

Medical Physics Services 1210 1 - 12/8/2006 5:37:05 PM

Name: [REDACTED]	Study: PrePlan	Source: I-125 (STM 1251) (NIST 99)RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
		Source Activity: 0.395 U [0.311 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	Total Activity: 32.390 U [25.504 mCi]

Isodose Legend
 Gy [% of Prescription Dose]
■ 217.50 [150.00%]
■ 130.50 [90.00%]
■ 145.00 [100.00%]

Anatomy/Landmark Legend
■ Prostate
■ PTV



VariSeed: Therapy Visualization Report [Page 9]

Medical Physics Services 1210 1 12/8/2006 5:37:05 PM

CATH

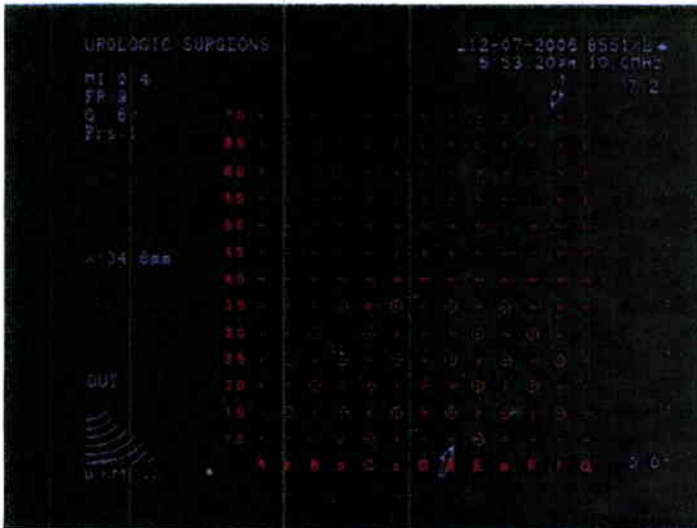
Name: [REDACTED]	Study: PrePlan	Source: I-125 (STM 1251) [NIST 99]RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 82
	Template: B & K Standard	Anisotropy: Factors (Point Model)
		Source Activity: 0.395 U [0.311 mCi]
Procedure Date: 12/14/2006	Prescription Dose: 145.0 Gy	Total Activity: 32.390 U [25.504 mCi]

Isodose Legend
 Gy [% of Prescription Dose]

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Anatomy/Landmark Legend

Prostate	PTV
----------	-----



VariSeed: Study Summary Report [Page 1]

RIS

Medical Physics Services 1210 1 12/3/2008 9:31:44 PM

Name: [REDACTED] Dept. ID: [REDACTED]	Study: Post-Plan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 106 Anisotropy: Constant (Point Model) [0.941] Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.966 U [25.958 mCi]
Procedure Date: 11/17/2005	Prescription Dose: 110.0 Gy	

Study Type: Post-Op
Notes: I-125
0.245 mCi per seed
104+2 seeds implanted
110 Gy

Dose Information

Prostate:

Total Volume:	55.25 cc	
V150:	22.45 cc	[40.64%]
V100:	51.34 cc	[92.92%]
V90:	53.89 cc	[97.54%]
D90:	113.84 Gy	[103.49%]

Urethra:N/A

Rectum:

Total Volume:	51.56 cc	
V100:	0.01 cc	[0.01%]

PTV:N/A




Prostate (CTV):N/A

VariSeed: Therapy Visualization Report [Page 2]

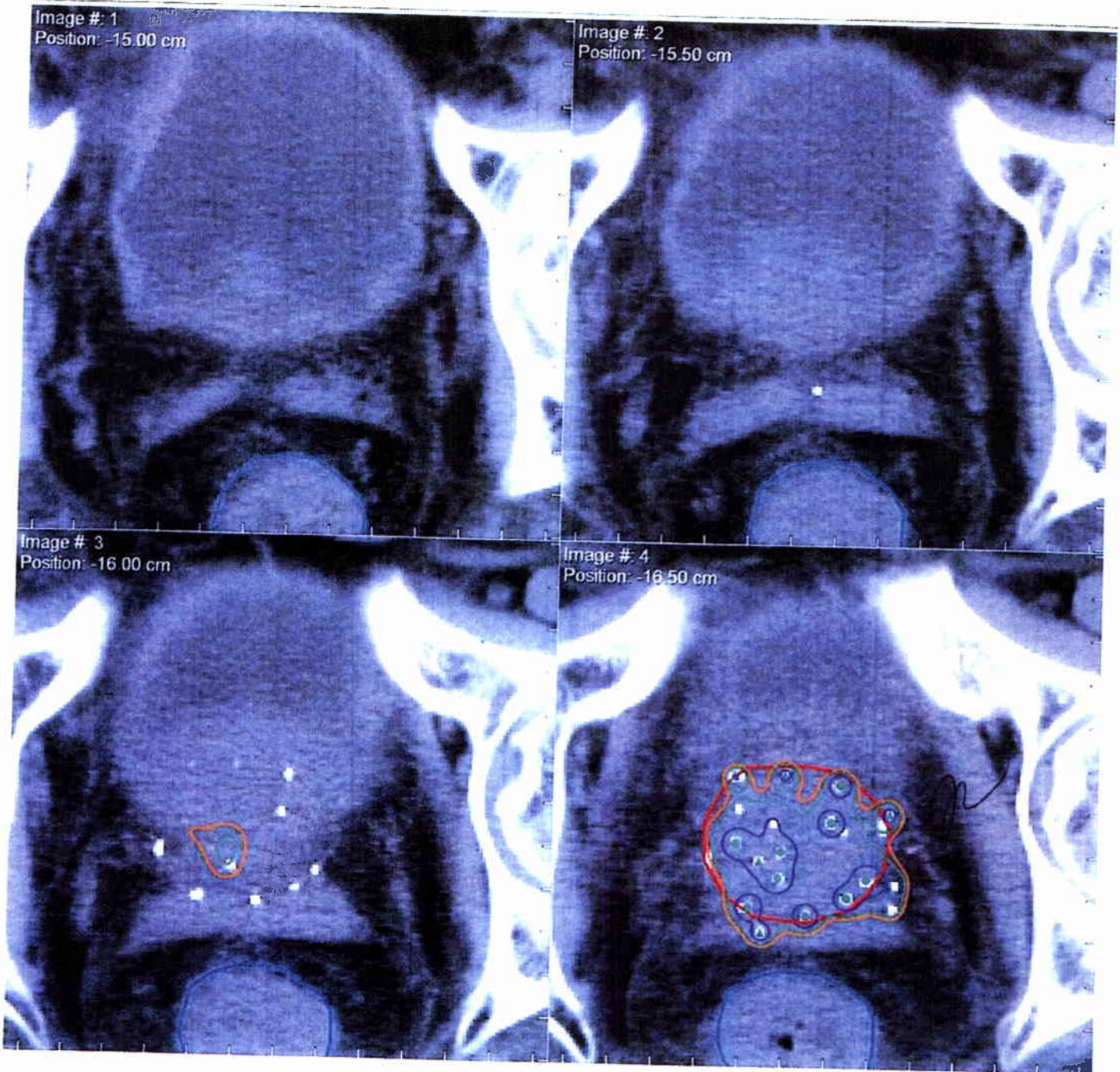
RIS

Medical Physics Services 1210 - 1 12/3/2008 9:31:44 PM

Name: [REDACTED]	Study: Post-Plan	Source: I-125 (STM 1251) [NIST 99]RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID:	Images: 15	Sources: 106
Procedure Date: 11/17/2005	Prescription Dose: 110.0 Gy	Anisotropy: Constant (Point Model) [0.941]
		Source Activity: 0.311 U [0.245 mCi]
		Total Activity: 32.966 U [25.958 mCi]

Isodose Legend	 165.00 [150.00%]	 99.00 [90.00%]
Gy [% of Prescription Dose]	 110.00 [100.00%]	

Anatomy/Landmark Legend	 Prostate	 Rectum
-------------------------	--	--



VariSeed: Therapy Visualization Report [Page 3]

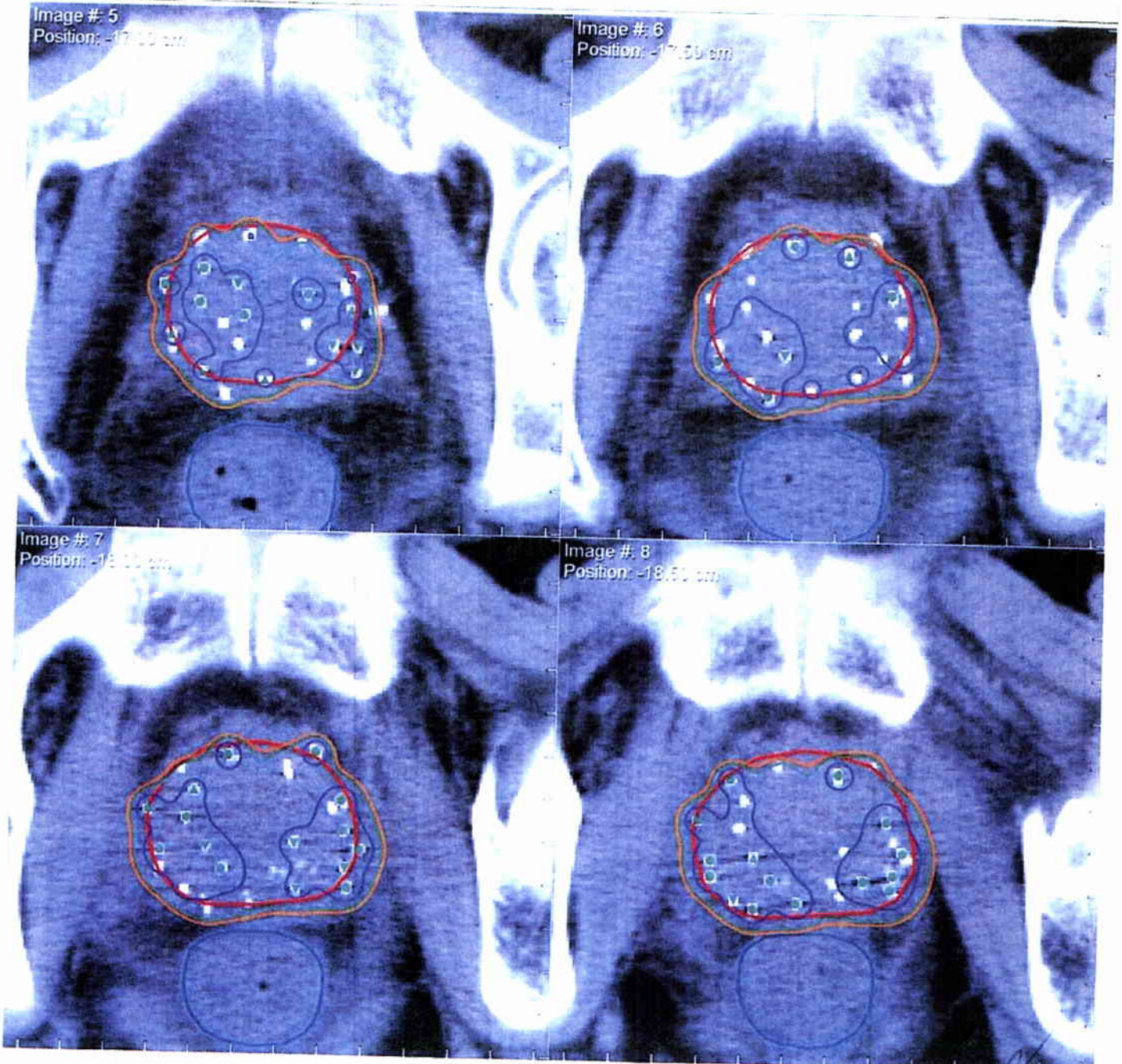
RIS

Medical Physics Services 1210 1 12/3/2008 9:31:44 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID:	Study: Post-Plan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 106 Anisotropy: Constant (Point Model) [0.941] Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.966 U [25.958 mCi]
Procedure Date: 11/17/2005	Prescription Dose: 110.0 Gy	

Isodose Legend Gy [% of Prescription Dose]	165.00 [150.00%]	99.00 [90.00%]
	110.00 [100.00%]	

Anatomy/Landmark Legend	Prostate	Rectum
-------------------------	----------	--------



VariSeed: Therapy Visualization Report [Page 4]

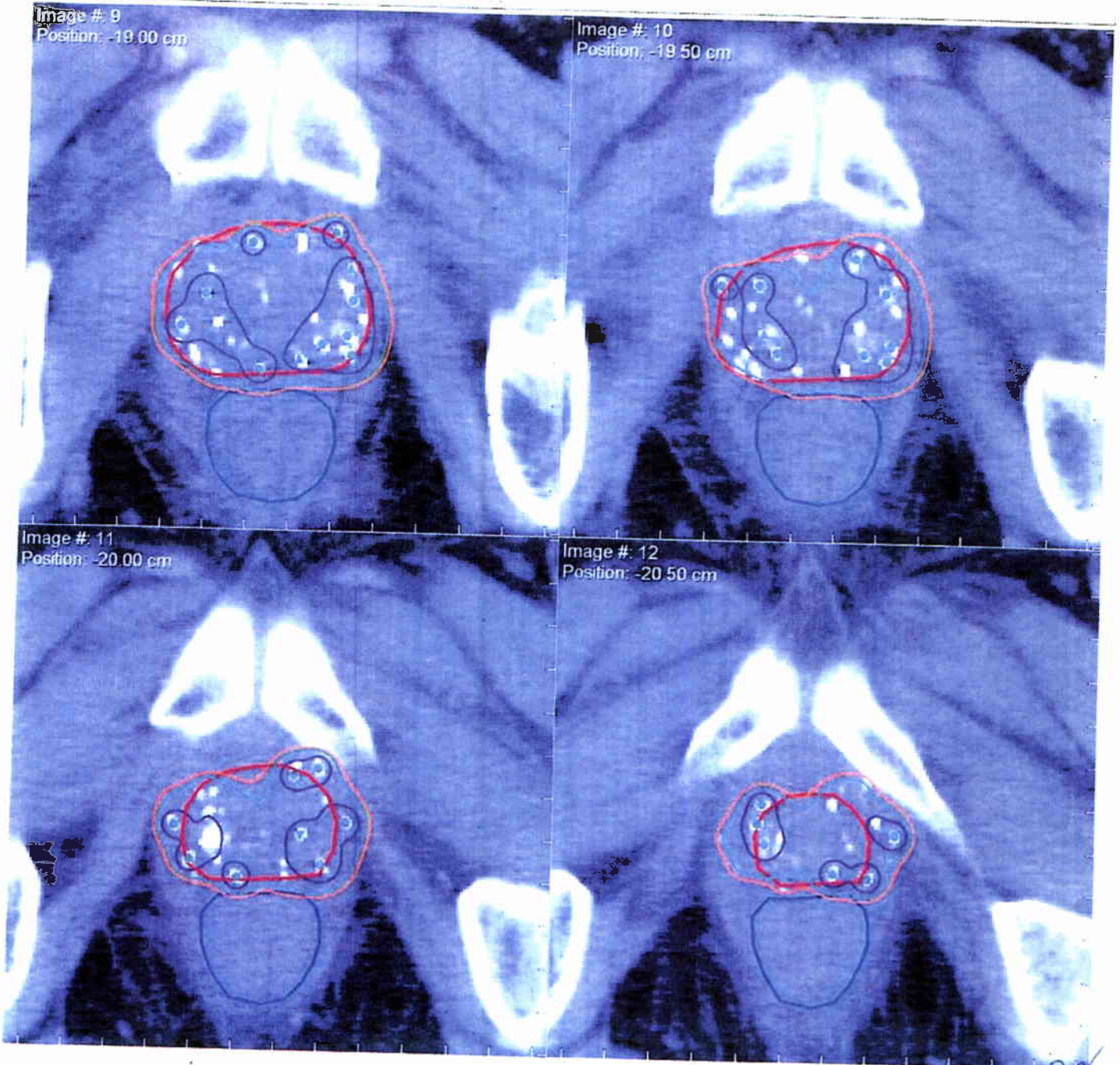
RIS

Medical Physics Services - 1210 - 1 12/3/2008 9:31:44 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID:	Study: Post-Plan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 89]RS Comment: Sources: 106 Anisotropy: Constant (Point Model) [0.941] Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.966 U [25.958 mCi]
Procedure Date: 11/17/2005	Prescription Dose: 110.0 Gy	

Isodose Legend Gy [% of Prescription Dose]	165.00 [150.00%]	99.00 [90.00%]
	110.00 [100.00%]	

Anatomy/Landmark Legend	Prostate	Rectum
-------------------------	----------	--------



VariSeed: Therapy Visualization Report [Page 5]

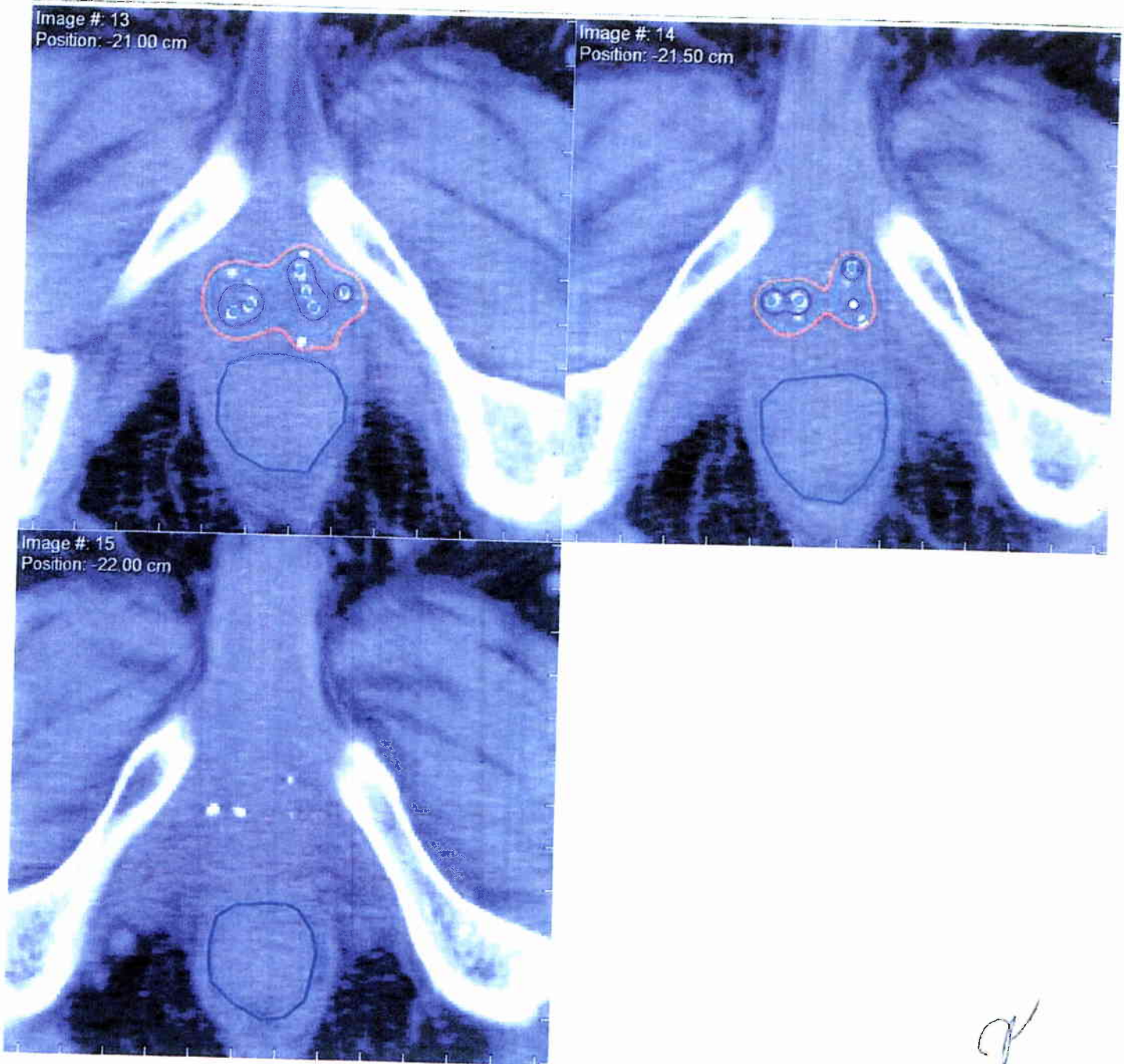
RIS

Medical Physics Services 1210 1 12/3/2008 9:31:44 PM

Name: [REDACTED]	Study: Post-Plan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 106 Anisotropy: Constant (Point Model) [0.941] Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.966 U [25.958 mCi]
PID: [REDACTED]		
Dept. ID: [REDACTED]		
Procedure Date: 11/17/2005	Prescription Dose: 110.0 Gy	

Isodose Legend	165.00 [150.00%]	99.00 [90.00%]
Gy [% of Prescription Dose]	110.00 [100.00%]	

Anatomy/Landmark Legend	Prostate	Rectum
-------------------------	----------	--------



Handwritten signature

Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification: Patient Name
ID Bracelet
ID Card
Social Security Number
Signature
Birth Date
Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
- The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
- The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457

These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

RIS

RADIATION ONCOLOGY ASSOCIATES RENO VA MEDICAL CENTER QUALITY MANAGEMENT PROGRAM I-125 or Pd-103 SEED THERAPY WRITTEN DIRECTIVE TREATMENT PLAN		
R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D. Jennifer Sutton, M.D. Jonathan S. Tay, M.D.		
DATE: <u>Wednesday, November 02, 2005</u>		
PATIENT NAME: <u>[REDACTED]</u>		
RADIOACTIVE MATERIAL: <u>I-125 (STM 1251) [NIST 99] BARD</u>		
TREATMENT SITE:	<u>PROSTATE</u>	
PRESCRIBED DOSE:	110 Gy	
	0.245	mCi/seed
NUMBER OF SEEDS:	110	
TOTAL SOURCE STRENGTH:	26.95	mCi
Signed: <u>[Signature]</u>	Date: <u>11-17-05</u>	
PATIENT IDENTIFICATION (USE TWO METHODS)		
<input checked="" type="checkbox"/> Patient Name <input checked="" type="checkbox"/> Social Security Number <input type="checkbox"/> Signature <input type="checkbox"/> ID Card	<input type="checkbox"/> Birthdate <input type="checkbox"/> Address <input type="checkbox"/> ID Bracelet <input type="checkbox"/> Other _____	
Administered by: <u>[Signature]</u>	Date: <u>11-17-05</u>	
WASTE DISPOSAL - ROOM SURVEY		
CONDUCTED BY: <u>[Signature]</u>	Date: <u>11-17-05</u>	
TOTAL NUMBER OF SOURCES IMPLANTED:	<u>106</u>	
NOTE: _____		

RIS

Prostate Seed Implant Checklist

VA Sierra Health Care System-Reno, NV

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

All staff participating in this procedure have received training/instruction per 10 CFR 19.12, 10 CFR 35.27 and Master Materials License permit 27-15192-01.

Check the following when completed:

Patient Name: [REDACTED]

Patient Name/ID# on this and next pages

Patient ID #: [REDACTED]

Volume Study

Treatment Plan

Approval of Treatment Plan by Authorized User Physician (signed and Dated)

Seeds Ordered

Part I of Written Directive Include (10 CFR 35.41):

Patient Name

Second Form of Identification

Treatment Site

Radionuclide 110 Gy Dose

Signed by Authorized User Physician

Dated by Authorized User Physician

* Retain a copy of the Written Directive in accordance with 10 CFR 35.2040. If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (19 CFR 35.40).

Arrival of Seeds:

1) Date of Arrival: 11/15/05

2) Time of Arrival: 10:35 AM N/A

3) Received By: [Signature]

Department: N/A

4) Survey of packages to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.

Survey Time: 11:15 AM Survey Date: 11/15/05

Through measurement, computation or manufacturers documentation, complete the following:

1) Total activity of sources on manufacture date 28.66.20 11/12/05

2) Activity of sources on procedure date 26.98 MC 11/17/05

3) Do the source positions as revealed on the autoradiograph agree with the needle loading report? [Signature]

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
JTS	<u>7:30 11-17-05</u>	NM	OR	110
JTS	<u>11:00 11-17-05</u>	OR	NM	4+1

RIS

Operating Room:

Patient Name: [REDACTED]
Patient ID #: [REDACTED]

Pre-Procedure

Identify Patient by two means of ID: Narje ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address

- Verify Written Directive
- Verify the Correct Number and Batch of Seeds (if possible)

Ensure the following are in the Operating Room:

- 1) Lead Container for Loose Seeds
- 2) Tweezers
- 3) Survey Meter for Room
- 4) Survey Meter for Patients
- 5) Pre-loaded Seeds
- 6) Written Directives Part I and II
- 7) Physicians' Radiation Badges
- 8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

Survey People in Operating Room (linens, trash, etc.)

Survey Patient - IMPORTANT: Patient Survey must show **less than 1 mR/hr at 1 meter**. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.

Survey Operating Room
Note Total Number of Loose Seeds Recovered: 0

Complete the following (Part II of Written Directive):

- 1) Radionuclide I 125
- 2) Treatment Site Prostate
- 3) Number of Sources 106
- 4) Total Source Strength 245 mCi/seed
- 5) Exposure Time PERMANENT

[Signature]
Signature of Authorized User Physician

11-17-05
Date

RIS

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 11/2/2005 3:25:00 PM

Name: [REDACTED] PI: [REDACTED] Dept. ID: RENO VA	Study: Pre-Plan Variation: Default Images: 9 Template: B & K Standard Shift: X = 0.00cm Y = 0.50cm Prescription Dose: 110.0 Gy	Source: I-125 (STM 1251) (NIST 99)RS Comment: Sources: 104 Anisotropy: Function (Line Model) Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.344 U [25.468 mCi]
Procedure Date: 11/17/2005		

Study Type: Pre-Op

Notes: Has had external beam within last few weeks (with Dr. Sutton).
Plan on 1 line.

Dose Information

Prostate:

Total Volume:	48.43 cc	
V150:	15.81 cc	[32.64%]
V100:	46.54 cc	[96.10%]
V90:	47.60 cc	[98.28%]
D90:	119.43 Gy	[108.57%]

Digitally signed
by E. Carl
Chamberlain
Date:
2005.11.04
12:13:22 -
08'00'

rechecked

Urethra:N/A

Rectum:N/A

PTV:

Total Volume:	62.27 cc	
V150:	19.46 cc	[31.26%]
V100:	57.44 cc	[92.25%]
V90:	60.13 cc	[96.57%]
D90:	113.62 Gy	[103.29%]

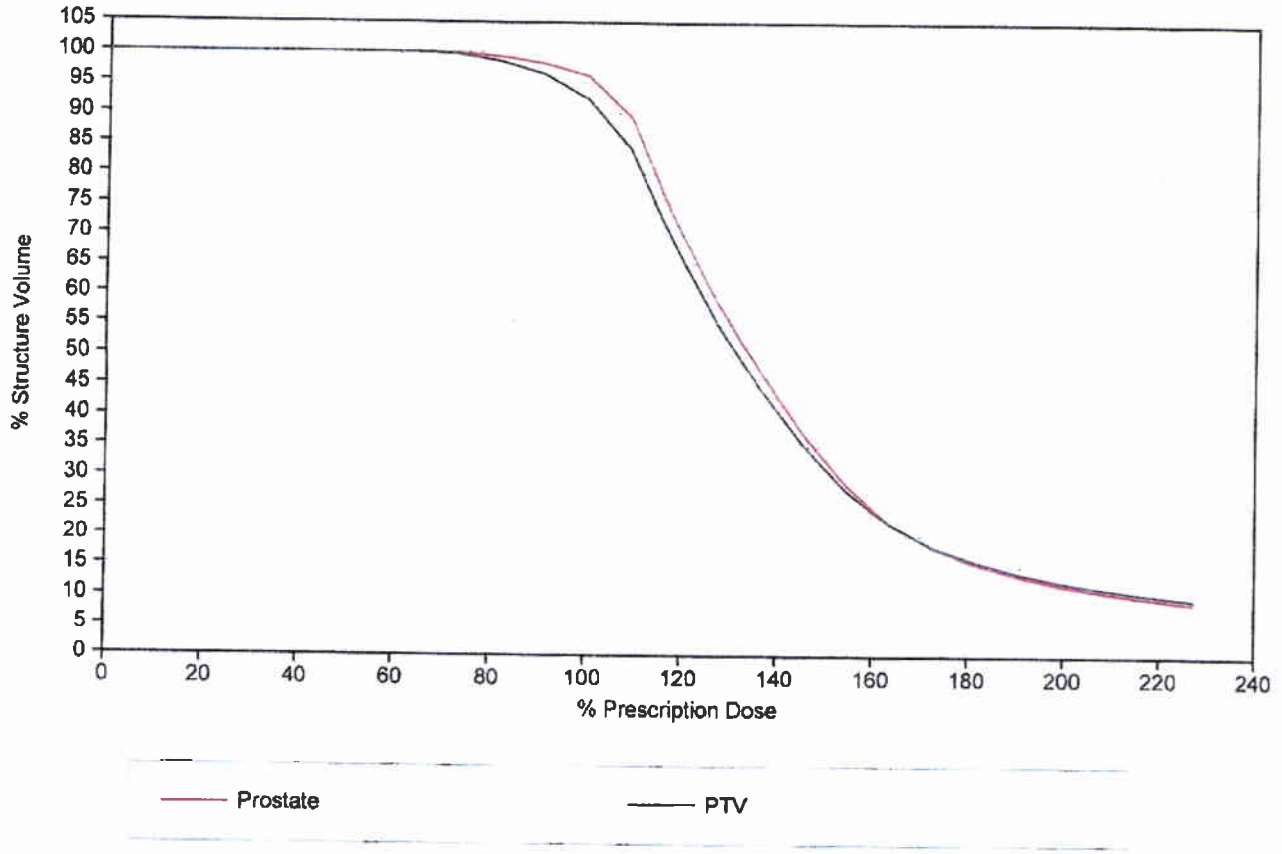
RIS

VariSeed: DVH Report [Page 5]

Medical Physics Services 1210 1 11/2/2005 3:25:00 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: RENO VA	Study: Pre-Plan Variation: Default Images: 9 Template: B & K Standard Shift: X = 0.00cm Y = 0.50cm Prescription Dose: 110.0 Gy	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 104 Anisotropy: Function (Line Model) Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.344 U [25.468 mCi]
Procedure Date: 10/17/2005		

Cumulative DVH



Cumulative DVH

Dose Gy	%	Prostate		PTV	
		cc	%	cc	%
0.00	0.00	48.43	100.00	62.27	100.00
10.00	9.09	48.43	100.00	62.27	100.00
20.00	18.18	48.43	100.00	62.27	100.00
30.00	27.27	48.43	100.00	62.27	100.00
40.00	36.36	48.43	100.00	62.27	100.00
50.00	45.45	48.43	100.00	62.27	100.00
60.00	54.55	48.43	100.00	62.27	100.00
70.00	63.64	48.43	100.00	62.25	99.97
80.00	72.73	48.38	99.89	62.03	99.62
90.00	81.82	48.09	99.29	61.27	98.40

VariSeed: DVH Report [Page 6]

RIS

Medical Physics Services 1210 1 11/2/2005 3:25:00 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: RENO VA	Study: Pre-Plan Variation: Default Images: 9 Template: B & K Standard Shift: X = 0.00cm Y = 0.50cm	Source: I-125 (STM 1251) (NIST 99)RS Comment: Sources: 104 Anisotropy: Function (Line Model) Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.344 U [25.468 mCi]
Procedure Date: 10/17/2005	Prescription Dose: 110.0 Gy	

Cumulative DVH

Dose		Prostate		PTV	
Gy	%	cc	%	cc	%
100.00	90.91	47.55	98.17	59.97	96.31
110.00	100.00	46.54	96.10	57.44	92.25
120.00	109.09	43.30	89.40	52.31	84.00
130.00	118.18	35.25	72.78	42.59	68.40
140.00	127.27	28.51	58.87	34.42	55.28
150.00	136.36	23.05	47.59	27.82	44.68
160.00	145.45	18.04	37.25	21.98	35.30
170.00	154.55	13.89	28.68	17.21	27.64
180.00	163.64	10.75	22.19	13.67	21.96
190.00	172.73	8.71	17.98	11.32	18.18
200.00	181.82	7.47	15.41	9.79	15.72
210.00	190.91	6.53	13.48	8.64	13.87
220.00	200.00	5.79	11.96	7.73	12.41
230.00	209.09	5.25	10.83	7.04	11.31
240.00	218.18	4.79	9.89	6.47	10.39
250.00	227.27	4.40	9.08	5.96	9.57

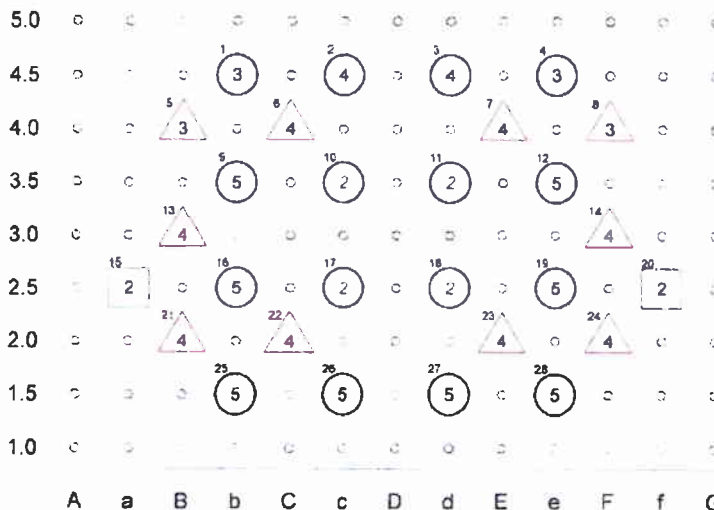
VariSeed: Needle Loading Report [Page 2]

RIS

Medical Physics Services - 1210 1 11/2/2005 3:25:00 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: RENO VA Procedure Date: 10/17/2005	Study: Pre-Plan Variation: Default Images: 9 Template: B & K Standard Shift: X = 0.00cm Y = 0.50cm Prescription Dose: 110.0 Gy	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 104 Anisotropy: Function (LLine Model) Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.344 U [25.468 mCi]
--	---	---

Needle Number	Retraction (cm)	Hole Location	Number Seeds
1	0.00	b4.5	3
2	0.00	c4.5	4
3	0.00	d4.5	4
4	0.00	e4.5	3
5	0.50	B4.0	3
6	0.50	C4.0	4
7	0.50	E4.0	4
8	0.50	F4.0	3
9	0.00	b3.5	5
10	0.00	c3.5	2/5
11	0.00	d3.5	2/5
12	0.00	e3.5	5
13	0.50	B3.0	4
14	0.50	F3.0	4
15	1.00	a2.5	2
16	0.00	b2.5	5
17	0.00	c2.5	2/5
18	0.00	d2.5	2/5
19	0.00	e2.5	5
20	1.00	f2.5	2
21	0.50	B2.0	4
22	0.50	C2.0	4
23	0.50	E2.0	4
24	0.50	F2.0	4
25	0.00	b1.5	5
26	0.00	c1.5	5
27	0.00	d1.5	5
28	0.00	e1.5	5



Retraction Legend					
Plane 0	Plane 1	Plane 2	Plane 3	Plane 4	Special Other
0.00 cm	0.50 cm	1.00 cm	1.50 cm	2.00 cm	

E. Carl Chamberlain

Digitally signed by E. Carl Chamberlain
Date: 2005.11.04 12:13:51 -08'00'

Number of Needles	Seeds per needle	Plan Summary	
8	2	Total Activity [U]	32.34
4	3	Total Activity [mCi]	25.47
10	4	Total Needles	28
8	5	Total Seeds	104
		Extra Seeds	6
		Total Seeds to Order	110

● = Special loading

Study Created by PKC
Study Approved by [Signature] 11-17-05

VariSeed: Needle Loading Report [Page 3]

RIS

Medical Physics Services 1210 1 11/2/2005 3:25:00 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: RENO VA	Study: Pre-Plan Variation: Default Images: 9 Template: B & K Standard Shift: X = 0.00cm Y = 0.50cm Prescription Dose: 110.0 Gy	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 104 Anisotropy: Function (Line Model) Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.344 U [25.468 mCi]
Procedure Date: 10/17/2005		

Needle Number	Retraction (cm)	Hole Location	Number Seeds	0.00cm	0.50cm	1.00cm	1.50cm	2.00cm	2.50cm	3.00cm	3.50cm	4.00cm
1	0.00	b4.5	3	0.00		1.00		2.00				
2	0.00	c4.5	4	0.00		1.00		2.00		3.00		
3	0.00	d4.5	4	0.00		1.00		2.00		3.00		
4	0.00	e4.5	3	0.00		1.00		2.00				
5	0.50	B4.0	3		0.50		1.50		2.50			
6	0.50	C4.0	4		0.50		1.50		2.50		3.50	
7	0.50	E4.0	4		0.50		1.50		2.50		3.50	
8	0.50	F4.0	3		0.50		1.50		2.50			
9	0.00	b3.5	5	0.00		1.00		2.00		3.00		4.00
● 10	0.00	c3.5	2	0.00								4.00
● 11	0.00	d3.5	2	0.00								4.00
12	0.00	e3.5	5	0.00		1.00		2.00		3.00		4.00
13	0.50	B3.0	4		0.50		1.50		2.50		3.50	
14	0.50	F3.0	4		0.50		1.50		2.50		3.50	
15	1.00	a2.5	2			1.00		2.00				
16	0.00	b2.5	5	0.00		1.00		2.00		3.00		4.00
● 17	0.00	c2.5	2	0.00								4.00
● 18	0.00	d2.5	2	0.00								4.00
19	0.00	e2.5	5	0.00		1.00		2.00		3.00		4.00
20	1.00	f2.5	2			1.00		2.00				
21	0.50	B2.0	4		0.50		1.50		2.50		3.50	
22	0.50	C2.0	4		0.50		1.50		2.50		3.50	
23	0.50	E2.0	4		0.50		1.50		2.50		3.50	
24	0.50	F2.0	4		0.50		1.50		2.50		3.50	
25	0.00	b1.5	5	0.00		1.00		2.00		3.00		4.00

● = Special loading

VariSeed: Needle Loading Report [Page 4]

RIS

Medical Physics Services 1210 · 1 · 11/2/2005 3:25:00 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: RENO VA	Study: Pre-Plan Variation: Default Images: 9 Template: B & K Standard Shift: X = 0.00cm Y = 0.50cm Prescription Dose: 110.0 Gy	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 104 Anisotropy: Function (Line Model) Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.344 U [25.468 mCi]
Procedure Date: 10/17/2005		

Needle Number	Retraction (cm)	Hole Location	Number Seeds	0.00cm	0.50cm	1.00cm	1.50cm	2.00cm	2.50cm	3.00cm	3.50cm	4.00cm
26	0.00	c1.5	5	0.00		1.00		2.00		3.00		4.00
27	0.00	d1.5	5	0.00		1.00		2.00		3.00		4.00
28	0.00	e1.5	5	0.00		1.00		2.00		3.00		4.00

● = Special loading

RIS

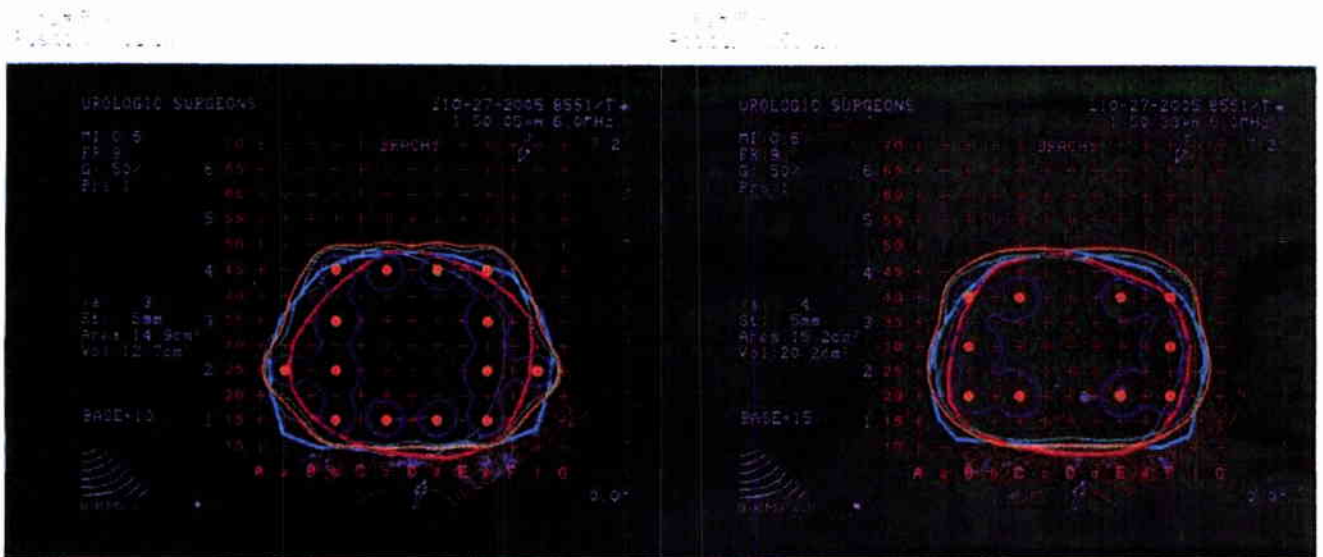
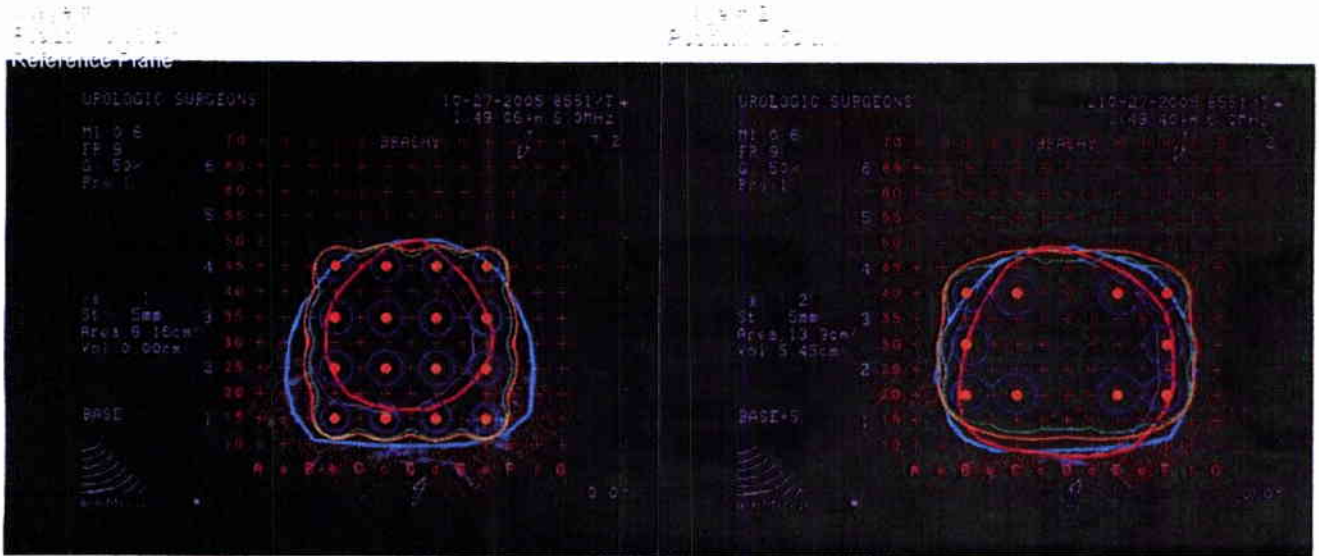
VariSeed: Therapy Visualization Report [Page 7]

Medical Physics Services 1210 1 11/2/2005 3:25:00 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: [REDACTED]	Study: Pre-Plan Variation: Default Images: 9 Template: B & K Standard Shift: X = 0.00cm Y = 0.50cm Prescription Dose: 110.0 Gy	Source: I-125 (STM 1251) [NIST 99]RS Comment: Sources: 104 Anisotropy: Function (Line Model) Source Activity: 0.311 U [0.245 mCi] Total Activity: 32.344 U [25.468 mCi]
Procedure Date: 10/17/2005		

Isodose Legend	165.00 [150.00%]	99.00 [90.00%]
Gy [% of Prescription Dose]	110.00 [100.00%]	

Anatomy/Landmark Legend	Prostate	PTV
-------------------------	----------	-----



VariSeed: Therapy Visualization Report [Page 8]

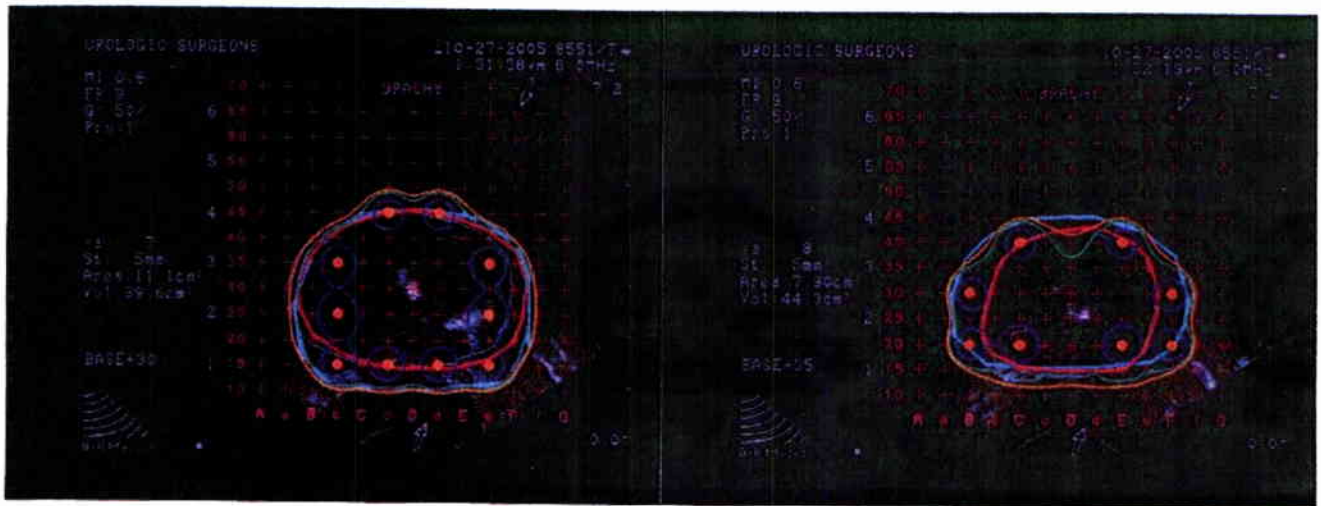
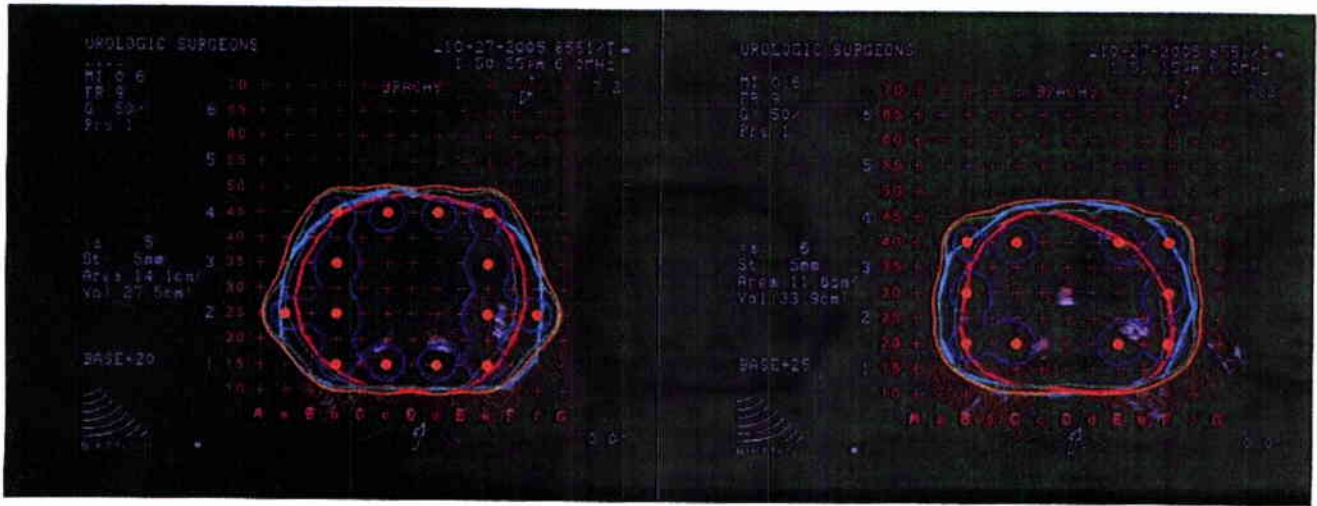
RIS

Medical Physics Services 1210 1 11/2/2005 3:25:00 PM

Name: [REDACTED]	Study: Pre-Plan	Source: I-125 (STM 1251) [NIST 99]RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: [REDACTED]	Images: 9	Sources: 104
	Template: B & K Standard	Anisotropy: Function (Line Model)
	Shift: X = 0.00cm Y = 0.50cm	Source Activity: 0.311 U [0.245 mCi]
Procedure Date: 10/17/2005	Prescription Dose: 110.0 Gy	Total Activity: 32.344 U [25.468 mCi]

Isodose Legend	165.00 [150.00%]	99.00 [90.00%]
Gy [% of Prescription Dose]	110.00 [100.00%]	

Anatomy/Landmark Legend	Prostate	PTV
-------------------------	----------	-----



VariSeed: Therapy Visualization Report [Page 9]

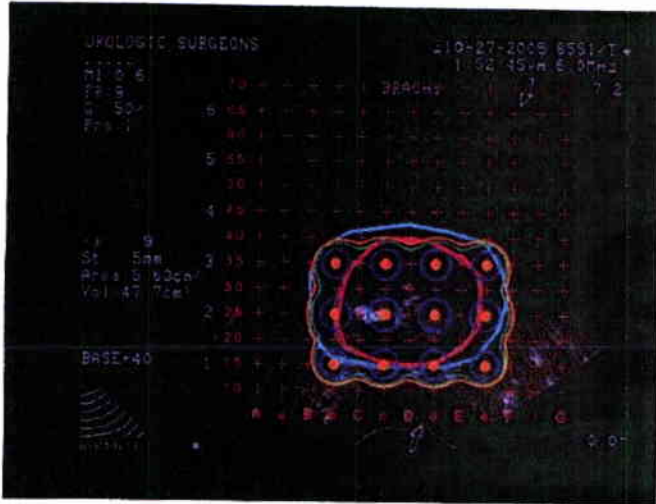
RIS

Medical Physics Services 1210 1 11/2/2005 3:25:00 PM

Name: [REDACTED]	Study: Pre-Plan	Source: I-125 (STM 1251) (NIST 99)RS
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID:	Images: 9	Sources: 104
	Template: B & K Standard	Anisotropy: Function (Line Model)
	Shift: X = 0.00cm Y = 0.50cm	Source Activity: 0.311 U [0.245 mCi]
Procedure Date: 10/17/2005	Prescription Dose: 110.0 Gy	Total Activity: 32.344 U [25.468 mCi]

Isodose Legend	165.00 [150.00%]	99.00 [90.00%]
Gy [% of Prescription Dose]	110.00 [100.00%]	

Anatomy/Landmark Legend	Prostate	PTV
-------------------------	----------	-----



E. Chamberlain
 Digitally signed by
 E. Carl Chamberlain
 Date: 2005.11.04
 12:16:30 -08'00'

VariSeed: Study Summary Report [Page 1]

ALL

Medical Physics Services 1210 1 10/12/2008 6:47 13 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 81 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 39.123 U [30.806 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Study Type: Post-Op
Notes: Not Specified

Dose Information

Urethra: N/A

Rectum:

Total Volume:	39.17 cc	
V100:	0.09 cc	[0.24%]
V75:	0.89 cc	[2.26%]
V50:	3.72 cc	[9.49%]

PTV: N/A

Prostate (CTV):

Total Volume:	34.49 cc	
V150:	23.74 cc	[68.83%]
V100:	34.01 cc	[98.62%]
V90:	34.43 cc	[99.84%]
V80:	34.49 cc	[100.00%]
D90:	180.14 Gy	[124.24%]

VariSeed: Therapy Visualization Report [Page 2]

ALL

Medical Physics Services - 1210 1 10/12/2008 6:47:13 PM

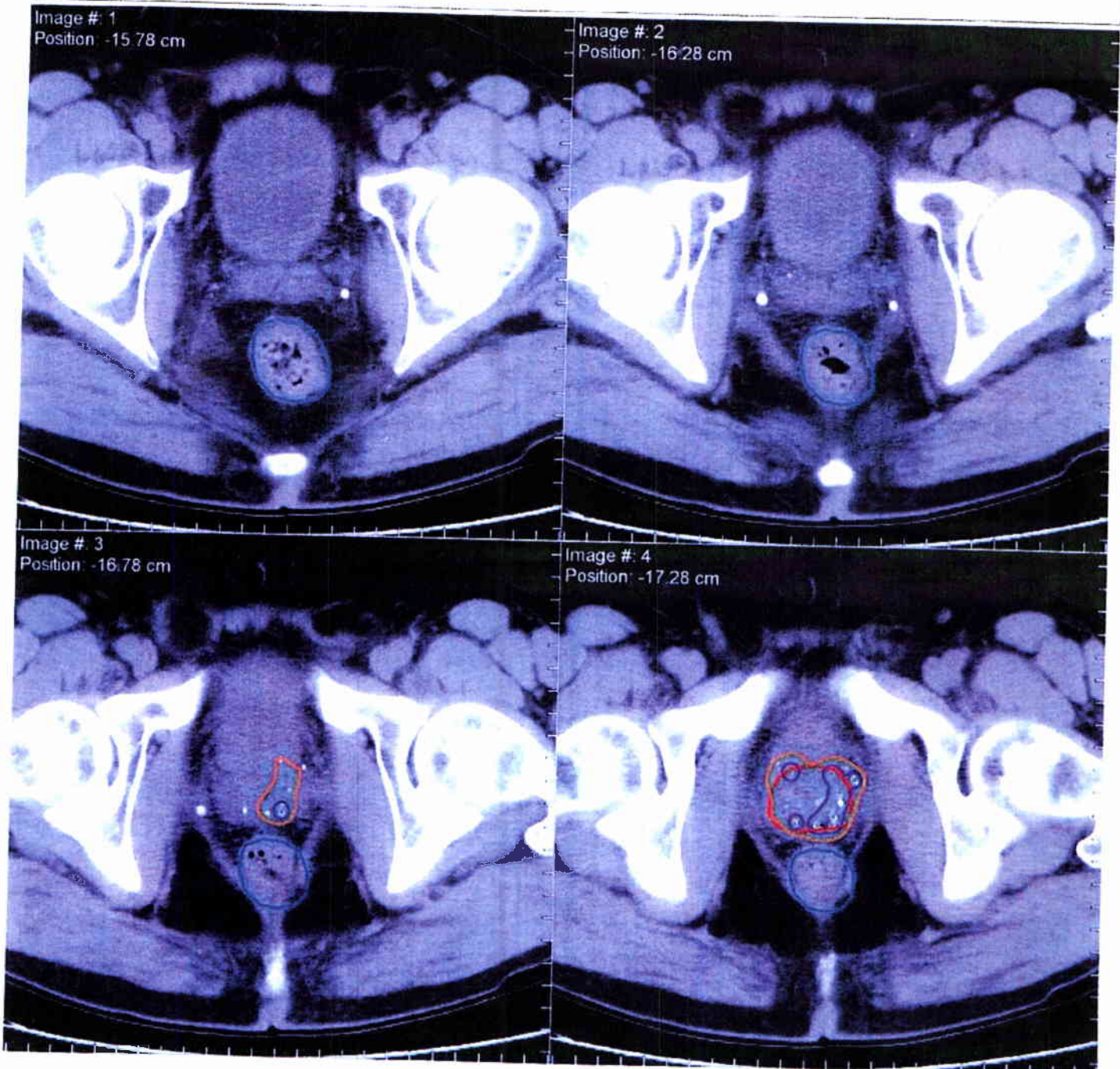
Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 81 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 39.123 U [30.806 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

 217.50 [150.00%]	 130.50 [90.00%]
 145.00 [100.00%]	

Anatomy/Landmark Legend

 Prostate (CTV)	 Rectum
--	--



VariSeed: Therapy Visualization Report [Page 3]

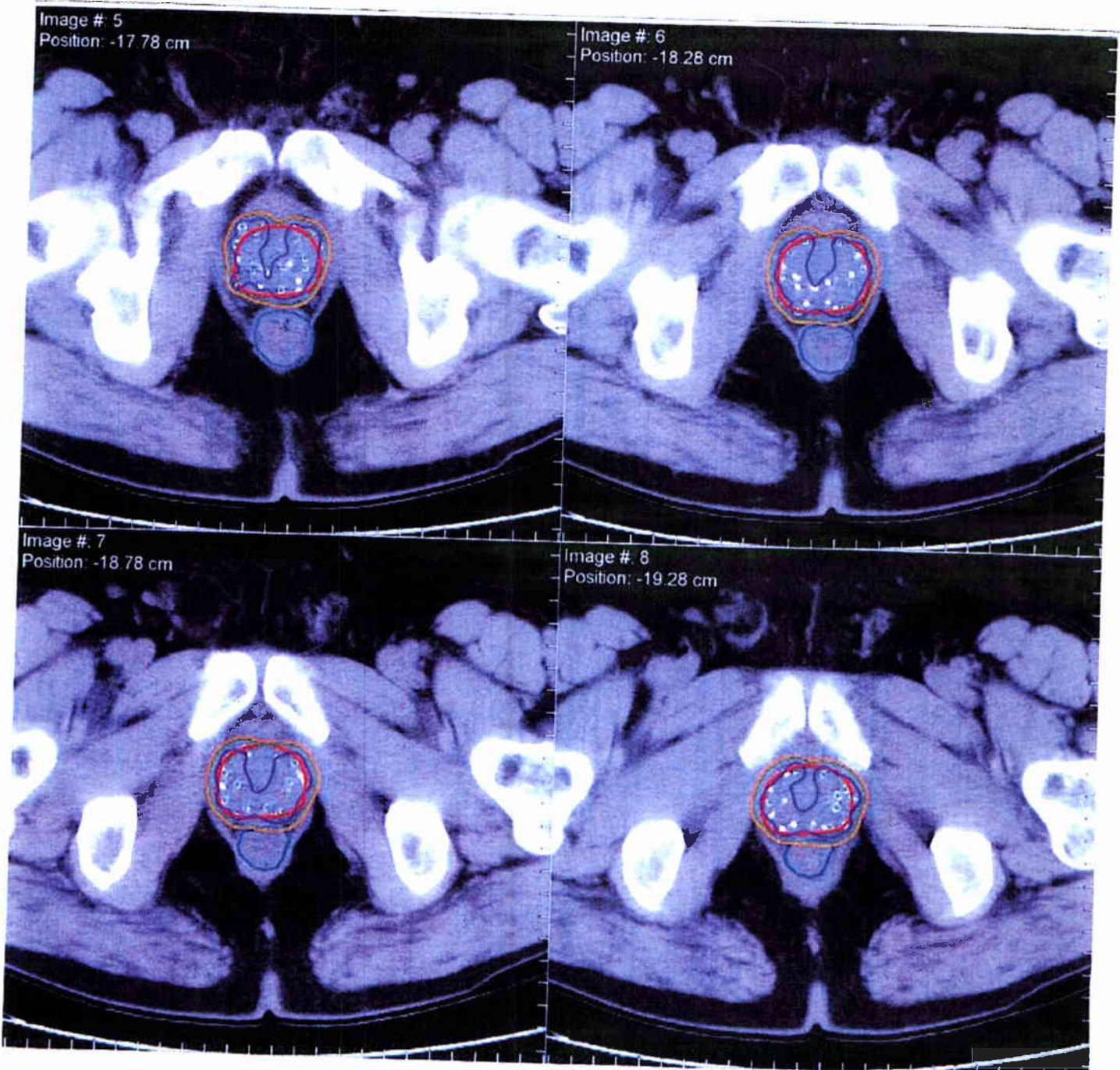
ALL

Medical Physics Services 1210 1 10/12/2008 6:47:13 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 81 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 39.123 U [30.806 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Isodose Legend Gy [% of Prescription Dose]	217.50 [150.00%]	130.50 [90.00%]
	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



VariSeed: Therapy Visualization Report [Page 4]

ALL

Medical Physics Services 1210 1 10/12/2008 6:47:13 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 81 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 39.123 U [30.806 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Anatomy/Landmark Legend

Prostate (CTV)	Rectum
----------------	--------






VariSeed: Therapy Visualization Report [Page 5]

ALL

Medical Physics Services 1210 1 10/12/2008 6:47:13 PM

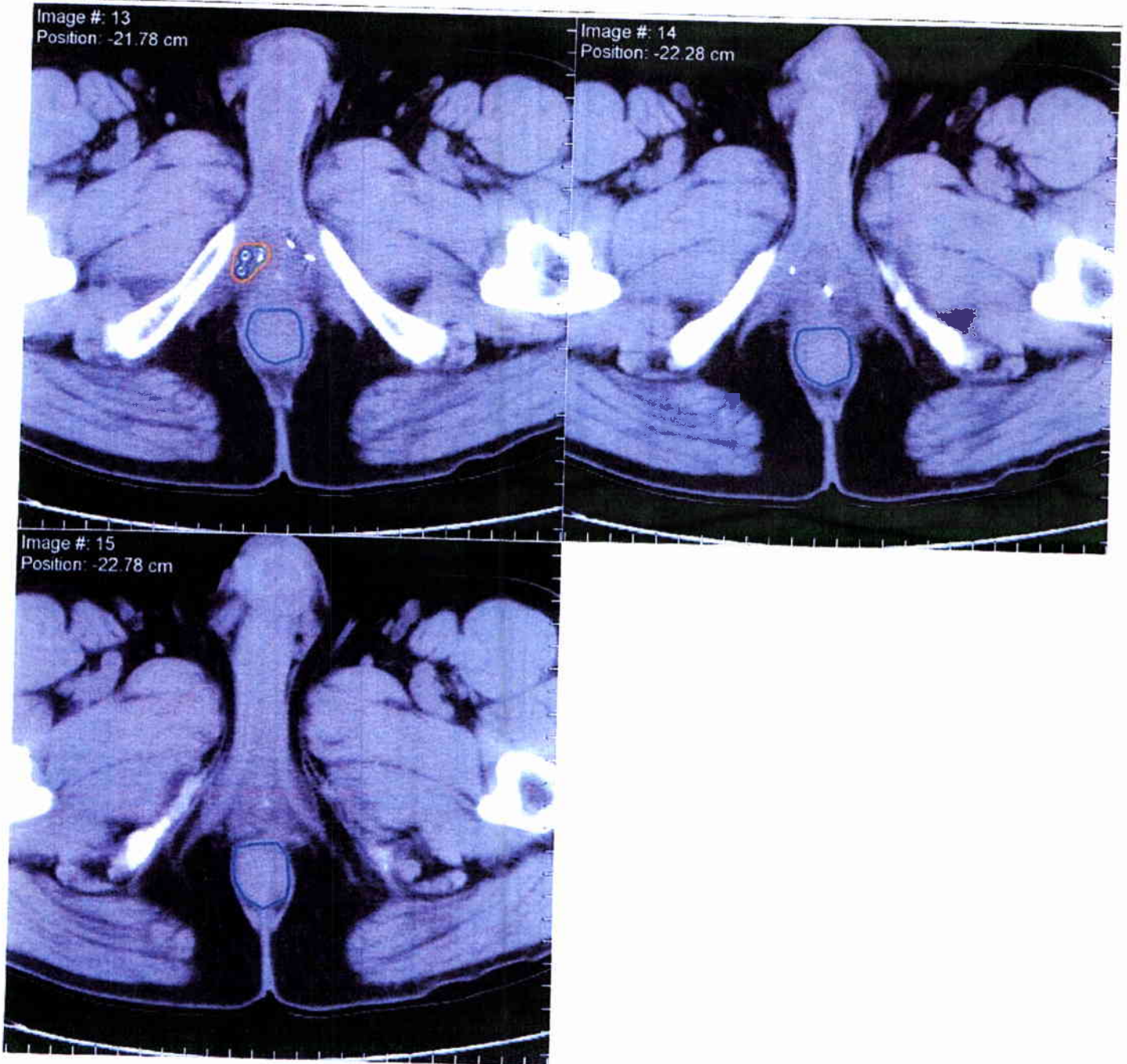
Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 81 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 39.123 U [30.806 mCi]
Procedure Date: 12/11/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

 217.50 [150.00%]	 130.50 [90.00%]
 145.00 [100.00%]	

Anatomy/Landmark Legend

 Prostate (CTV)	 Rectum
--	--



Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification:

- Patient Name
- ID Bracelet
- ID Card
- Social Security Number
- Signature
- Birth Date
- Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
- The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
- The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457. These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

ALL

RADIATION ONCOLOGY ASSOCIATES VA MEDICAL CENTER QUALITY MANAGEMENT PROGRAM I-125 or Pd-103 SEED THERAPY WRITTEN DIRECTIVE TREATMENT PLAN	
R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D. Jennifer Sutton, M.D. Jonathan S. Tay, M.D.	
DATE:	Saturday, December 01, 2007
PATIENT NAME:	[REDACTED]
RADIOACTIVE MATERIAL:	I-125 (STM 1251) [NIST 99] BARD
TREATMENT SITE:	<u>PROSTATE</u>
PRESCRIBED DOSE:	145 Gy
	0.38 mCi/seed
NUMBER OF SEEDS:	82
TOTAL SOURCE STRENGTH:	31.16 mCi
Signed: _____	Date: _____
PATIENT IDENTIFICATION (USE TWO METHODS)	
<input type="checkbox"/> Patient Name	<input type="checkbox"/> Birthdate
<input type="checkbox"/> Social Security Number	<input type="checkbox"/> Address
<input type="checkbox"/> Signature	<input type="checkbox"/> ID Bracelet
<input type="checkbox"/> ID Card	<input type="checkbox"/> Other _____
Administered by: <u>[Signature]</u>	Date: <u>12/1/07</u>
WASTE DISPOSAL - ROOM SURVEY	
CONDUCTED BY: <u>[Signature]</u>	Date: <u>12/1/07</u>
TOTAL NUMBER OF SOURCES IMPLANTED:	<u>79</u>
NOTE:	

ALL

Prostate Seed Implant Patient Checklist

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

- Please check the following when completed:** Patient Name [REDACTED]
 Patient Name/ID # on this and next pages Patient ID #: [REDACTED]
 Volume Study
 Treatment Plan
 Approval of Treatment Plan by Authorized User Physician (Signed and Dated)
 Seeds Ordered

Part I of Written Directive Includes (10 CFR 35.41):

- Patient Name
 Second Form of Identification
 Treatment Site
 Radionuclide
 Dose
 Signed by Authorized User Physician
 Dated by Authorized User Physician

* Retain a copy of this Written Directive in accordance with NRC 35.2040. Note: If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (NRC 35.40).

Arrival of Seeds:

- 1) Date of Arrival: 12/2/07
 2) Time of Arrival: 10:00
 3) Received By: Lyn Department: Nuc Med
 4) Survey of Package to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.
 Survey Time: 10:00 am Survey Date: 12/2/07

Through measurements or manufacture documentation, complete the following:

- 1) Source Activity: 31.075
 2) Correct the source activity determined above for physical decay at intervals consistent with 1 percent physical decay: 31.075 for procedure date 12/11/07
 3) Do the source positions within the applicators agree with the Needle Loading Report? Yes

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
RCB	12/11/07 ^{12:00 pm}	APR	OR	52
RCB	12/11/07 ^{12:00 pm}	OR	UR	3

ALL

Operating Room:

Patient Name: [REDACTED]
Patient ID #: [REDACTED]

Pre-Procedure

- Identify Patient by two means of ID: Name - ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address
- Verify Written Directive
- Verify the Correct Number and Batch of Seeds (if possible)
- Ensure the following are in the Operating Room:
 - 1) Lead Container for Loose Seeds
 - 2) Tweezers
 - 3) Survey Meter for Room
 - 4) Survey Meter for Patients
 - 5) Pre-loaded Seeds
 - 6) Written Directives Part I and II
 - 7) Physicians' Radiation Badges
 - 8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

- Survey People in Operating Room (linens, trash, etc.)
- Survey Patient - **IMPORTANT:** Patient Survey must show **less than 1 mR/hr at 1 meter**. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.
- Survey Operating Room
Note Total Number of Loose Seeds Recovered: _____
- Complete the following (Part II of Written Directive):
 - 1) Radionuclide _____
 - 2) Treatment Site _____
 - 3) Number of Sources _____
 - 4) Total Source Strength _____
 - 5) Exposure Time _____ PERMANENT
- Signature of Authorized User Physician

- Date

ALL

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 12/1/2007 6:09:47 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 10 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 36.708 U [28.904 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Study Type: Pre-Op
Notes: Not Specified

Dose Information

Urethra:N/A

Rectum:

Total Volume:	11.09 cc	
V100:	0.02 cc	[0.21%]
V75:	0.94 cc	[8.47%]
V50:	3.87 cc	[34.92%]

PTV:

Total Volume:	45.54 cc	
V150:	19.04 cc	[41.80%]
V100:	44.18 cc	[97.02%]
V90:	45.08 cc	[98.98%]
V80:	45.47 cc	[99.83%]
D90:	167.47 Gy	[115.50%]

Prostate (CTV):

Total Volume:	32.88 cc	
V150:	14.51 cc	[44.11%]
V100:	32.68 cc	[99.39%]
V90:	32.83 cc	[99.85%]
V80:	32.88 cc	[100.00%]
D90:	172.69 Gy	[119.10%]

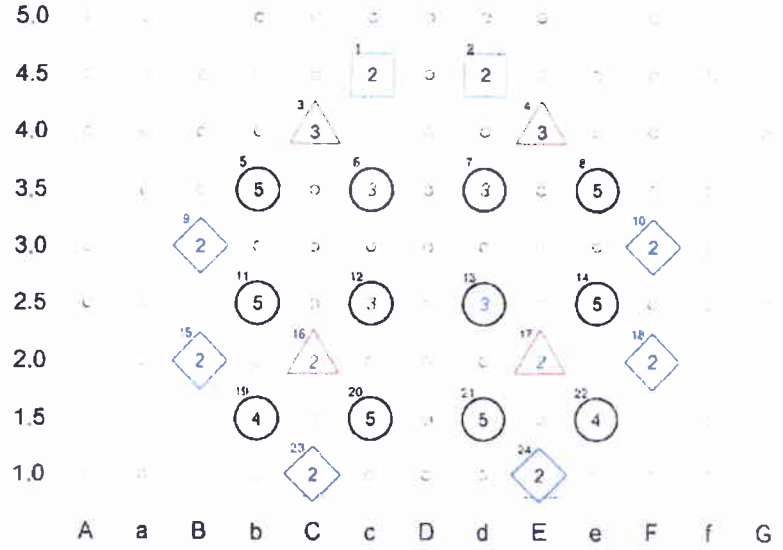
ALL

VariSeed: Needle Loading Report [Page 2]

Medical Physics Services 1210 - 1 12/1/2007 6:09:47 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 10 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 36.708 U [28.904 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Needle Number	Retraction (cm)	Hole Location	Number Seeds
1	1.00	c4.5	2
2	1.00	d4.5	2
3	0.50	C4.0	3
4	0.50	E4.0	3
5	0.00	b3.5	5
● 6	0.00	c3.5	3 /5
● 7	0.00	d3.5	3 /5
8	0.00	e3.5	5
9	1.50	B3.0	2
10	1.50	F3.0	2
11	0.00	b2.5	5
● 12	0.00	c2.5	3 /5
● 13	0.00	d2.5	3 /5
14	0.00	e2.5	5
● 15	1.50	B2.0	2
● 16	0.50	C2.0	2 /4
● 17	0.50	E2.0	2 /4
18	1.50	F2.0	2
19	0.00	b1.5	4
20	0.00	c1.5	5
21	0.00	d1.5	5
22	0.00	e1.5	4
23	1.50	C1.0	2
24	1.50	E1.0	2



Retraction Legend

Plane 0	Plane 1	Plane 2	Plane 3	Plane 4	Special
0.00 cm	0.50 cm	1.00 cm	1.50 cm	2.00 cm	Other

Number of Needles	Seeds per needle
10	2
6	3
2	4
6	5

Plan Summary

Total Activity [U]	36.71
Total Activity [mCi]	28.90
Total Needles	24
Total Seeds	76
Extra Seeds	6
Total Seeds to Order	82

● = Special loading

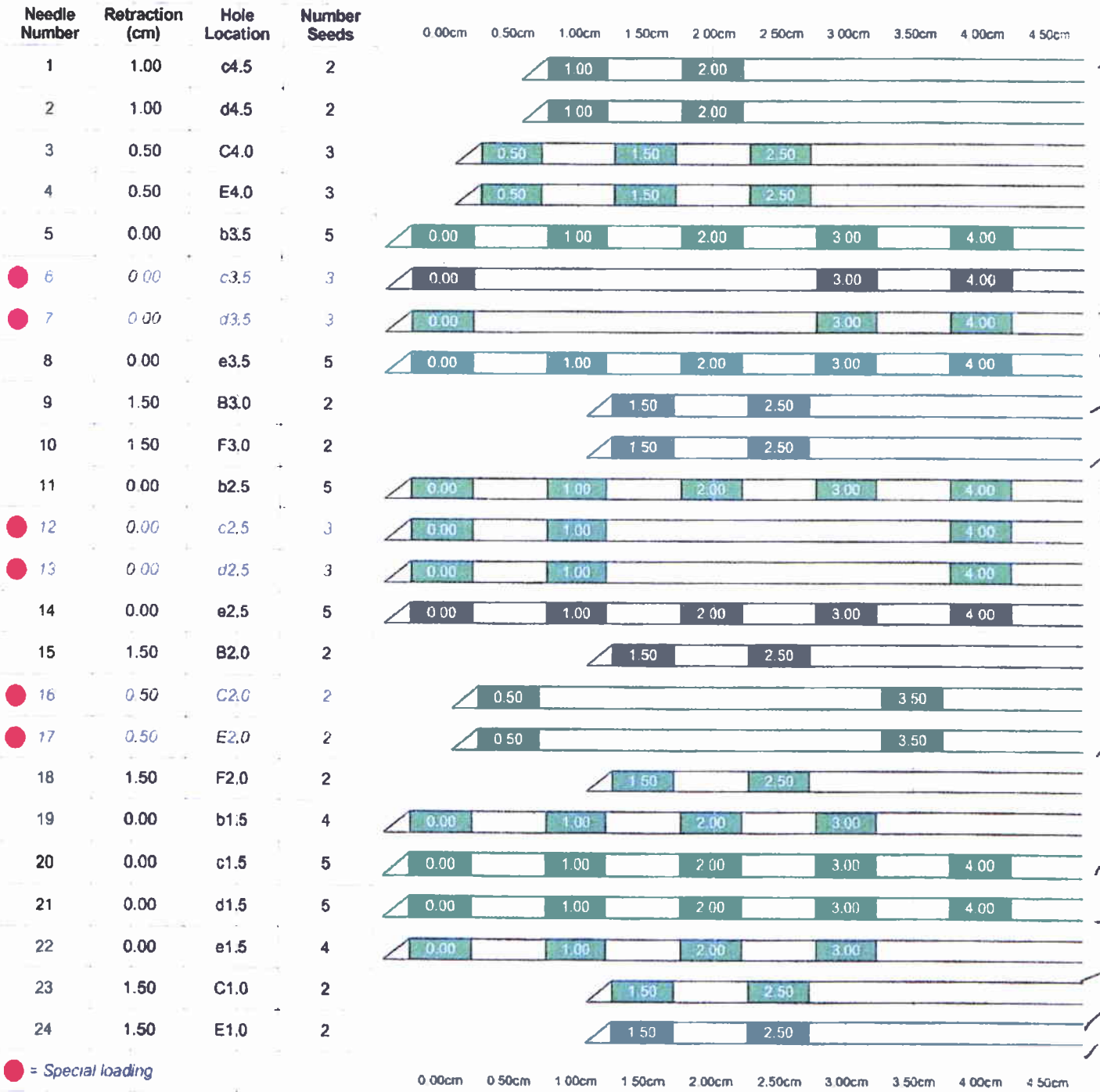
Study Created by DKC
Study Approved by [Signature]

ALL

VariSeed: Needle Loading Report [Page 3]

Medical Physics Services 1210 1 12/1/2007 6:09:47 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 10	Sources: 76
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.483 U [0.390 mCi]
		Total Activity: 38.708 U [28.904 mCi]



● = Special loading

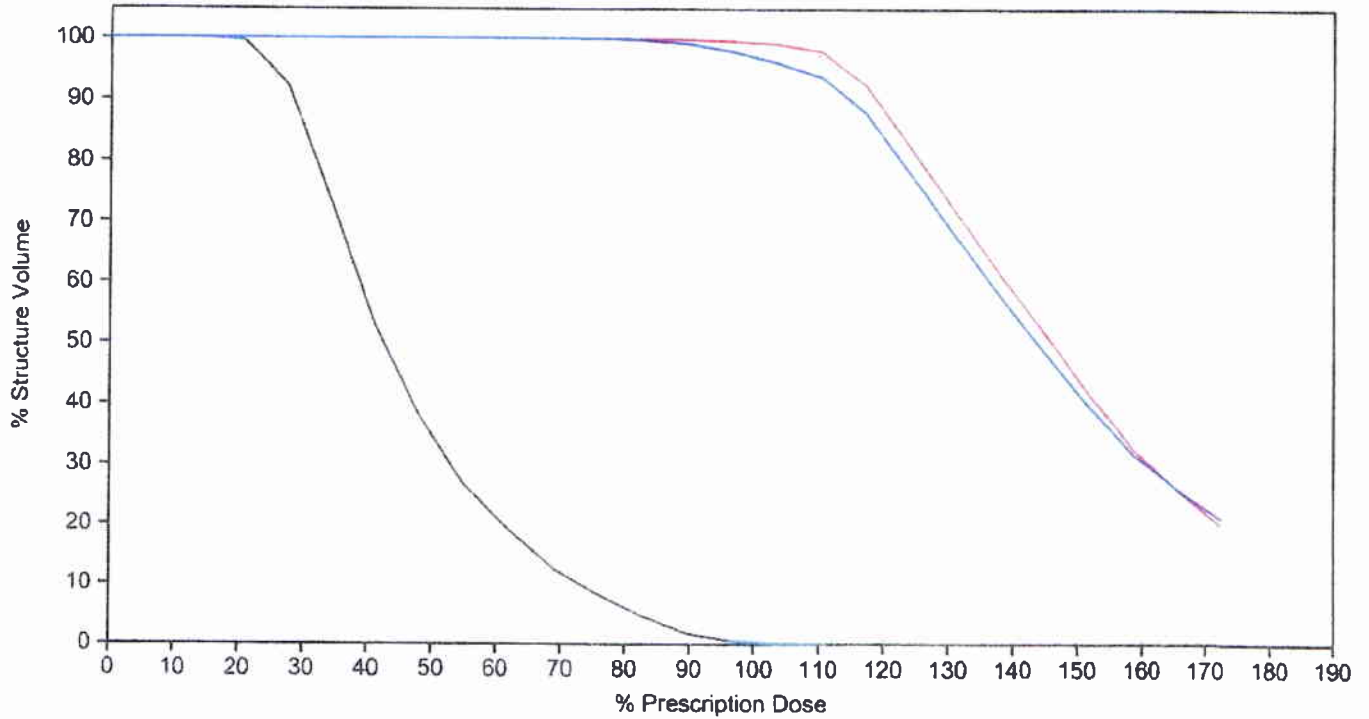
ALL

VariSeed: DVH Report [Page 4]

Medical Physics Services 1210 1 12/1/2007 6:09:47 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 10	Sources: 76
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.483 U [0.380 mCi]
		Total Activity: 36.708 U [28.904 mCi]

Cumulative DVH



— Prostate (CTV) — Rectum
— PTV

Cumulative DVH

Dose		Prostate (CTV)		Rectum		PTV	
Gy	%	cc	%	cc	%	cc	%
0.00	0.00	32.88	100.00	11.09	100.00	45.54	100.00
10.00	6.90	32.88	100.00	11.09	100.00	45.54	100.00
20.00	13.79	32.88	100.00	11.09	100.00	45.54	100.00
30.00	20.69	32.88	100.00	11.04	99.49	45.54	100.00
40.00	27.59	32.88	100.00	10.22	92.18	45.54	100.00
50.00	34.48	32.88	100.00	8.08	72.84	45.54	100.00
60.00	41.38	32.88	100.00	5.82	52.47	45.54	100.00
70.00	48.28	32.88	100.00	4.17	37.59	45.54	100.00
80.00	55.17	32.88	100.00	2.93	26.43	45.54	100.00
90.00	62.07	32.88	100.00	2.10	18.89	45.54	100.00

ALL

VariSeed: DVH Report [Page 5]

Medical Physics Services 1210 1 12/1/2007 6:09:47 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 10 Template B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 36.708 U [28.904 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Cumulative DVH

Dose		Prostate (CTV)		Rectum		PTV	
Gy	%	cc	%	cc	%	cc	%
100.00	68.97	32.88	100.00	1.38	12.42	45.54	100.00
110.00	75.86	32.88	100.00	0.90	8.15	45.52	99.95
120.00	82.76	32.88	99.98	0.50	4.47	45.41	99.70
130.00	89.66	32.84	99.86	0.19	1.71	45.10	99.02
140.00	96.55	32.75	99.60	0.05	0.42	44.55	97.83
150.00	103.45	32.59	99.10	0.01	0.12	43.73	96.02
160.00	110.34	32.21	97.95	0.01	0.05	42.67	93.68
170.00	117.24	30.39	92.42	0.00	0.02	40.03	87.89
180.00	124.14	27.07	82.31	0.00	0.00	35.47	77.88
190.00	131.03	23.62	71.83	0.00	0.00	30.89	67.82
200.00	137.93	20.25	61.58	0.00	0.00	26.40	57.96
210.00	144.83	17.08	51.95	0.00	0.00	22.19	48.71
220.00	151.72	13.75	41.83	0.00	0.00	18.10	39.75
230.00	158.62	10.77	32.76	0.00	0.00	14.52	31.88
240.00	165.52	8.51	25.87	0.00	0.00	11.85	26.02
250.00	172.41	6.57	19.98	0.00	0.00	9.62	21.12

ALL

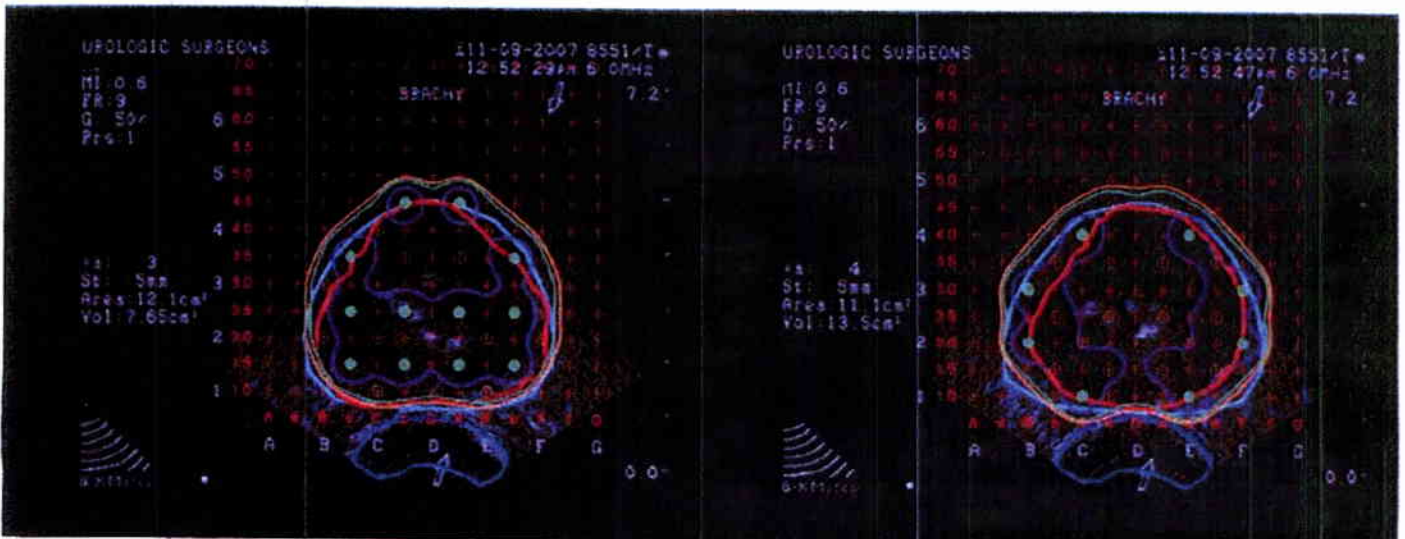
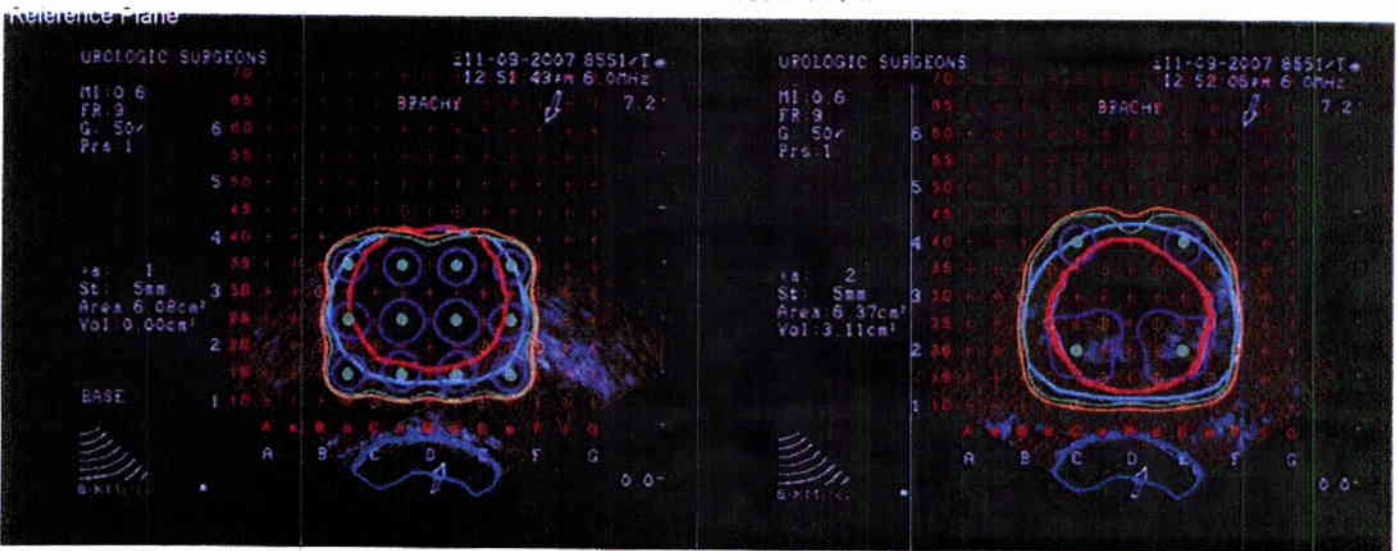
VariSeed: Therapy Visualization Report [Page 6]

Medical Physics Services 1210 1 12/1/2007 6:09:47 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 10 Template: B & K Standard	Source: I-125 (STM 1251) (NIST 99) Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Total Activity: 36.708 U [28.904 mCi]

Isodose Legend
Gy [% of Prescription Dose]
■ 217.50 [150.00%]
■ 130.50 [90.00%]
■ 145.00 [100.00%]

Anatomy/Landmark Legend
■ Prostate (CTV) ■ Rectum ■ PTV



ALL

VariSeed: Therapy Visualization Report [Page 7]

Medical Physics Services 1210 1 12/1/2007 6:09:47 PM

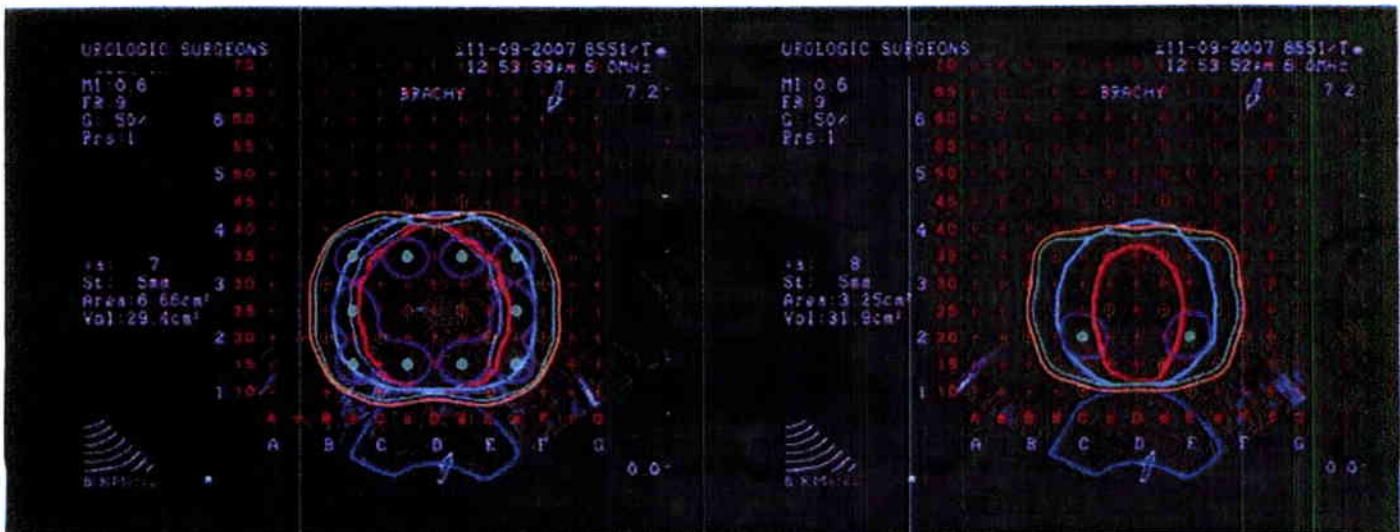
Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 10 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 36.708 U [28.904 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Anatomy/Landmark Legend

Prostate (CTV)	Rectum	PTV
----------------	--------	-----



ALL

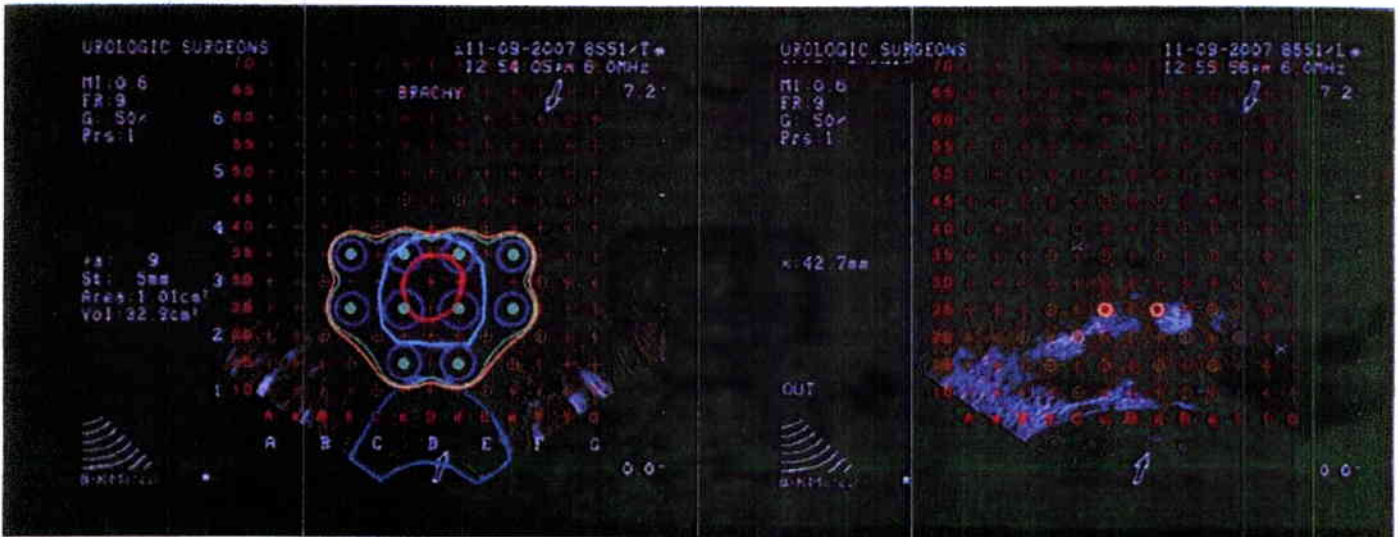
VariSeed: Therapy Visualization Report [Page 8]

Medical Physics Services 1210 1 12/1/2007 6:09:47 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 10 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 36.708 U [28.904 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum	PTV
-------------------------	----------------	--------	-----

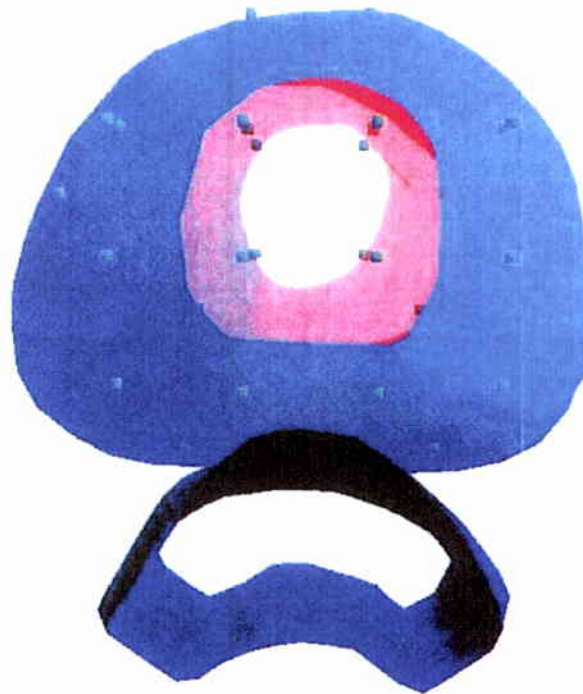


ALL

VariSeed: 3D View Report [Page 9]

Medical Physics Services 1210 1 12/1/2007 6:09:47 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 10 Template: B & K Standard	Source: I-125 (STM 1251) (NIST 99) Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.483 U [0.380 mCi] Total Activity: 36.708 U [28.904 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	



CRO

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 - 1 10/12/2008 6:58:19 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 14	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 66 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 31.086 U [24.477 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Study Type: Post-Op
Notes: Not Specified

Dose Information

Urethra: N/A

Rectum:

Total Volume:	28.53 cc	
V100:	0.80 cc	[2.81%]
V75:	1.97 cc	[6.89%]
V50:	4.69 cc	[16.44%]

PTV: N/A

Prostate (CTV):

Total Volume:	22.17 cc	
V150:	17.47 cc	[78.80%]
V100:	22.06 cc	[99.48%]
V90:	22.16 cc	[99.95%]
V80:	22.17 cc	[100.00%]
D90:	194.44 Gy	[134.10%]

CRO

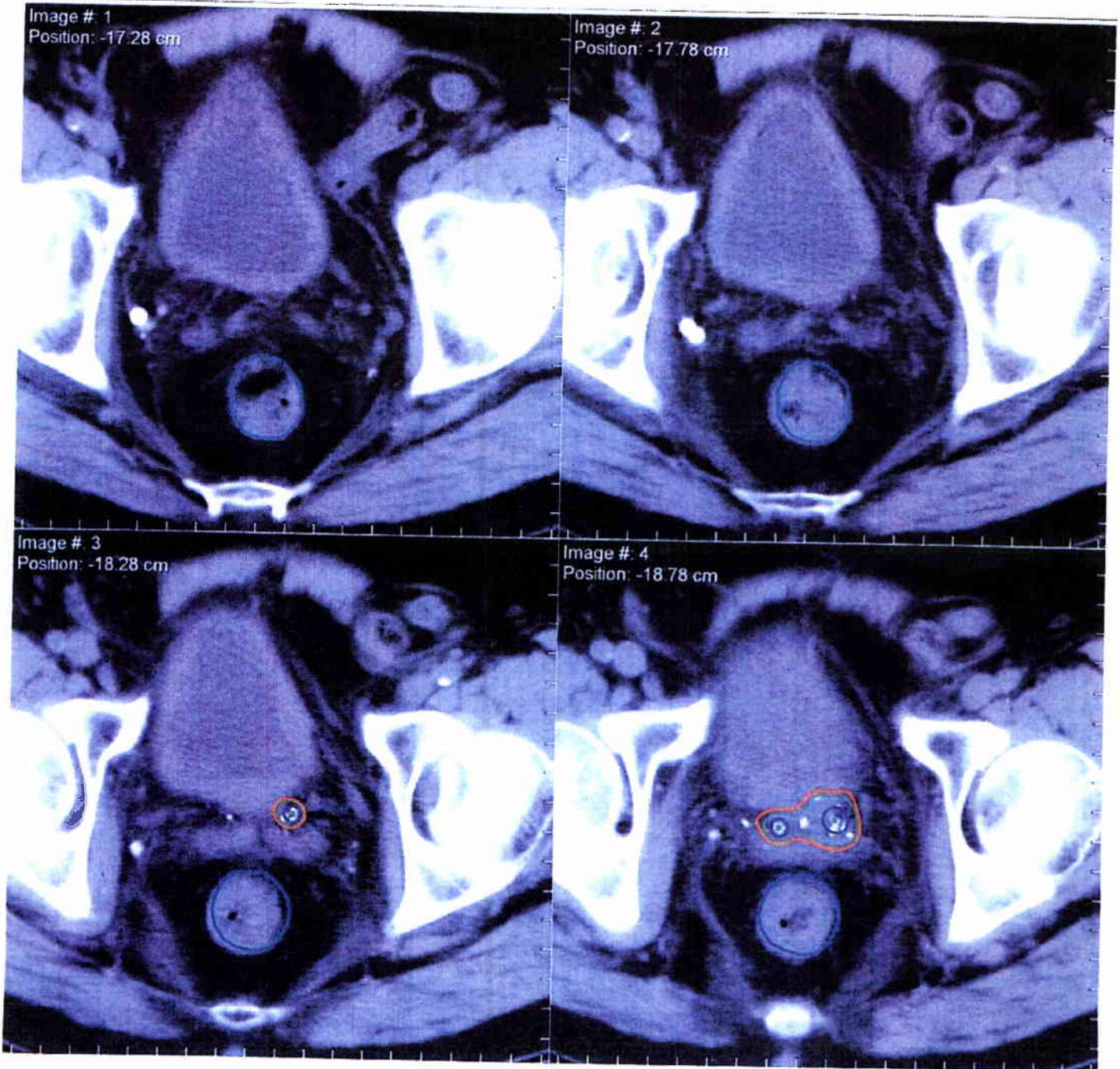
VariSeed: Therapy Visualization Report [Page 2]

Medical Physics Services 1210 - 1 - 10/12/2008 6:58:19 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 14	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 66 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 31.086 U [24.477 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Isodose Legend Gy [% of Prescription Dose]	217.50 [150.00%] 145.00 [100.00%]	130.50 [90.00%]
---	--------------------------------------	-----------------

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



CRO

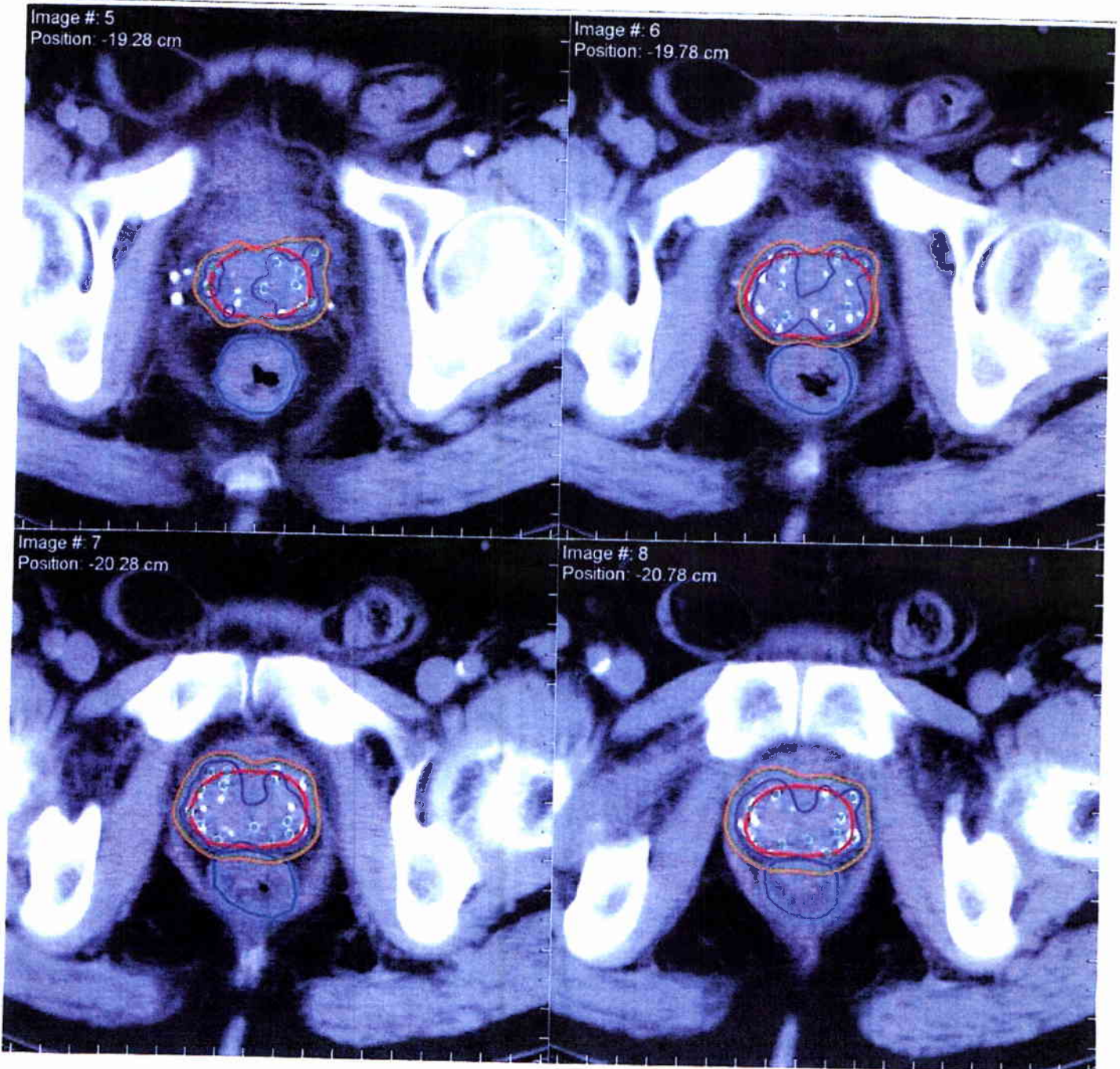
VariSeed: Therapy Visualization Report [Page 3]

Medical Physics Services 1210 1 10/12/2006 6:58:19 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 14	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 66 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 31.086 U [24.477 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Isodose Legend Gy [% of Prescription Dose]	217.50 [150.00%]	130.50 [90.00%]
	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



CPO

VariSeed: Therapy Visualization Report [Page 4]

Medical Physics Services - 1210 1 10/12/2008 6:58:19 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 14	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 66 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 31.086 U [24.477 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



CRO

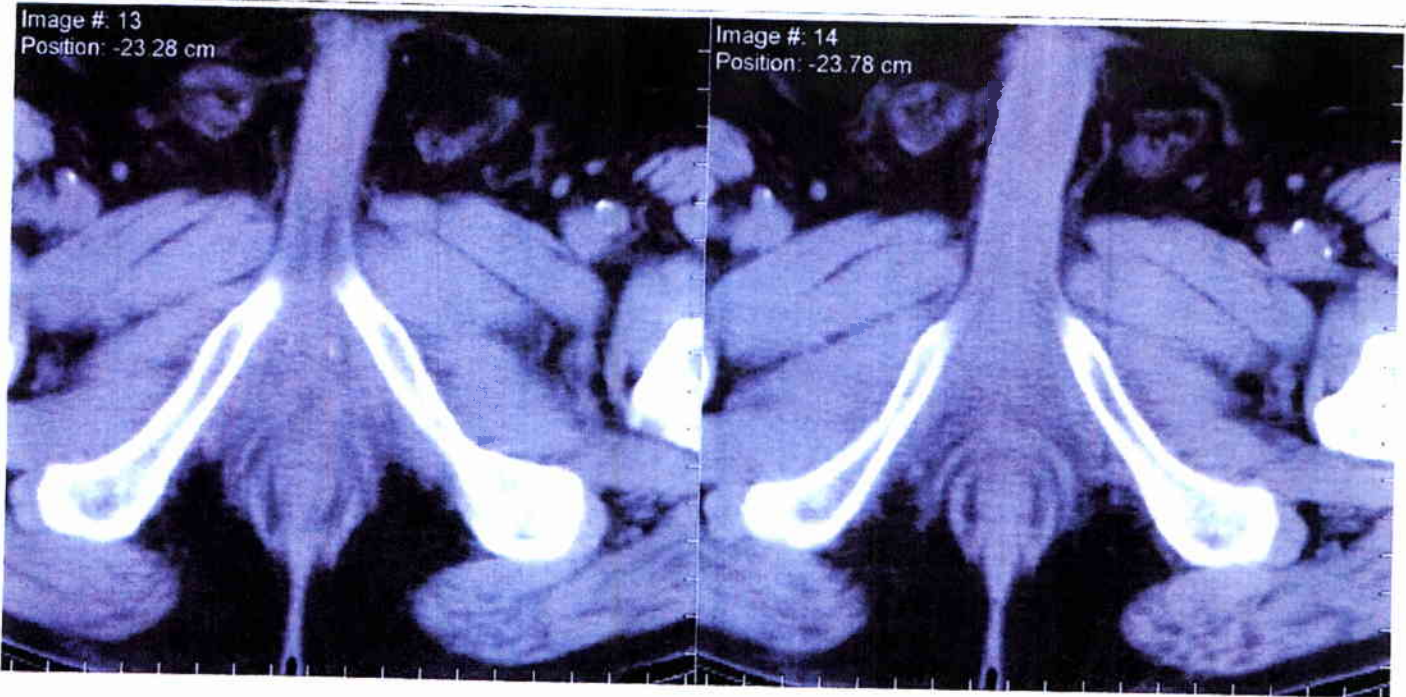
VariSeed: Therapy Visualization Report [Page 5]

Medical Physics Services - 1210 1 10/12/2008 6:58:19 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 14	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 66 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 31.086 U [24.477 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification: Patient Name
ID Bracelet
ID Card
Social Security Number
Signature
Birth Date
Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
- The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
- The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457. These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

CRO

RADIATION ONCOLOGY ASSOCIATES VA MEDICAL CENTER QUALITY MANAGEMENT PROGRAM I-125 or Pd-103 SEED THERAPY WRITTEN DIRECTIVE TREATMENT PLAN	
R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D. Jennifer Sutton, M.D. Jonathan S. Tay, M.D.	
DATE:	Monday, November 19, 2007
PATIENT NAME:	[REDACTED]
RADIOACTIVE MATERIAL:	I-125 (STM 1251) [NIST 99] BARD
TREATMENT SITE:	<u>PROSTATE</u>
PRESCRIBED DOSE:	145 Gy
	0.371 mCi/seed
NUMBER OF SEEDS:	66
TOTAL SOURCE STRENGTH:	24.486 mCi
Signed: _____	Date: <u>11/29/07</u>
PATIENT IDENTIFICATION (USE TWO METHODS)	
<input checked="" type="checkbox"/> Patient Name <input type="checkbox"/> Social Security Number <input type="checkbox"/> Signature <input type="checkbox"/> ID Card	<input type="checkbox"/> Birthdate <input type="checkbox"/> Address <input checked="" type="checkbox"/> ID Bracelet <input type="checkbox"/> Other _____
Administered by: <u>[Signature]</u>	Date: <u>11/29/07</u>
WASTE DISPOSAL - ROOM SURVEY	
CONDUCTED BY: <u>[Signature]</u>	Date: <u>11/29/07</u>
TOTAL NUMBER OF SOURCES IMPLANTED:	<u>66</u>
NOTE:	

CRO

Operating Room:

Patient Name: [REDACTED]
Patient ID #: [REDACTED]

Pre-Procedure

- Identify Patient by two means of ID: Name - ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address
- Verify Written Directive
- Verify the Correct Number and Batch of Seeds (if possible)

Ensure the following are in the Operating Room:

- 1) Lead Container for Loose Seeds
- 2) Tweezers
- 3) Survey Meter for Room
- 4) Survey Meter for Patients
- 5) Pre-loaded Seeds
- 6) Written Directives Part I and II
- 7) Physicians' Radiation Badges
- 8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

- Survey People in Operating Room (linens, trash, etc.)
- Survey Patient **IMPORTANT:** Patient Survey must show **less than 1 mR/hr at 1 meter**. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.
- Survey Operating Room
Note Total Number of Loose Seeds Recovered: 0
- Complete the following (Part II of Written Directive):

- 1) Radionuclide I-125
- 2) Treatment Site Prostate
- 3) Number of Sources 86
- 4) Total Source Strength 24.473 mCi
- 5) Exposure Time PERMANENT

[Signature]
Signature of Authorized User Physician

11/29/07
Date

CRO

Prostate Seed Implant Patient Checklist

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

- Please check the following when completed:** Patient Name [REDACTED]
 Patient Name/ID # on this and next pages Patient ID #: [REDACTED]
 Volume Study
 Treatment Plan
 Approval of Treatment Plan by Authorized User Physician (Signed and Dated)
 Seeds Ordered

Part I of Written Directive Includes (10 CFR 35.41):

- Patient Name
- Second Form of Identification
- Treatment Site
- Radionuclide
- Dose
- Signed by Authorized User Physician
- Dated by Authorized User Physician

* Retain a copy of this Written Directive in accordance with NRC 35.2040. Note: If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (NRC 35.40).

Arrival of Seeds:

- 1) Date of Arrival: 11/27/07
- 2) Time of Arrival: 12:30
- 3) Received By: R. Breslow Department: Med Med
- 4) Survey of Package to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.
 Survey Time: 12:30 Survey Date: 11/27/07

Through measurements or manufacture documentation, complete the following:

- 1) Source Activity: 24.473
- 2) Correct the source activity determined above for physical decay at intervals consistent with 1 percent physical decay: 24.473 for procedure date 11/29/07
- 3) Do the source positions within the applicators agree with the Needle Loading Report? yes

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
D. Chaudhri	11/27/07	Med Med	OR	86
[REDACTED]	11/27/07	CRO	AM	0

CPO

VariSeed: Needle Loading Report [Page 2]

Medical Physics Services 1210 1 11/19/2007 5:01:00 PM

Name: [REDACTED]
 PID: [REDACTED]
 Dept. ID: VA

Study: Preplan
 Variation: Default
 Images: 9
 Template: B & K Standard

Source: I-125 (STM 1251) [NIST 99]
 Comment:
 Sources: 60
 Anisotropy Factors (Point Model)
 Source Activity: 0.471 U [0.371 mCi]
 Total Activity: 28.260 U [22.252 mCi]

0.37 mCi

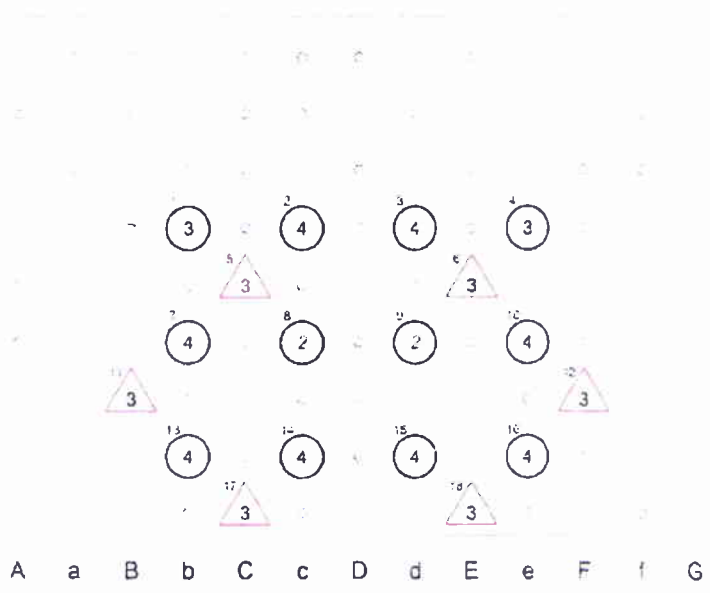
Procedure Date: 11/29/2007

Prescription Dose: 145.0 Gy

Needle Number	Retraction (cm)	Hole Location	Number Seeds	
1	0.00	b3.5	3	/
2	0.00	c3.5	4	/
3	0.00	d3.5	4	/
4	0.00	e3.5	3	/
5	0.50	C3.0	3	/
6	0.50	E3.0	3	/
7	0.00	b2.5	4	/
8	0.00	c2.5	2 14	/
9	0.00	d2.5	2 14	/
10	0.00	e2.5	4	/
11	0.50	B2.0	3	/
12	0.50	F2.0	3	/
13	0.00	b1.5	4	/
14	0.00	c1.5	4	/
15	0.00	d1.5	4	/
16	0.00	e1.5	4	/
17	0.50	C1.0	3	/
18	0.50	E1.0	3	/

8.5

b 2.5
 c 2.5
 +3
 +3



Number of Needles	Seeds per needle
2	2
8	3
8	4

Plan Summary	
Total Activity [U]	28.26
Total Activity [mCi]	22.25
Total Needles	18
Total Seeds	60
Extra Seeds	6
Total Seeds to Order	66

● = Special loading

Study Created by DKC
 Study Approved by [Signature]

CRD

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 11/19/2007 5:01:00 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 9	Sources: 60
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 28.260 U [22.252 mCi]

Study Type: Pre-Op
 Notes: Not Specified

Dose Information

Urethra:N/A

Rectum:N/A

PTV:

Total Volume:	31.63 cc	
V150:	11.59 cc	[36.64%]
V100:	30.13 cc	[95.27%]
V90:	30.90 cc	[97.67%]
V80:	31.38 cc	[99.19%]
D90:	166.11 Gy	[114.56%]

Prostate (CTV):

Total Volume:	23.43 cc	
V150:	9.19 cc	[39.23%]
V100:	23.15 cc	[98.82%]
V90:	23.38 cc	[99.79%]
V80:	23.43 cc	[100.00%]
D90:	177.47 Gy	[122.39%]

CRO

VariSeed: Needle Loading Report [Page 3]

Medical Physics Services 1210 1 11/19/2007 5:01:00 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images 9	Sources: 60
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 28.260 U [22.252 mCi]

Needle Number	Retraction (cm)	Hole Location	Number Seeds	0.00cm	0.50cm	1.00cm	1.50cm	2.00cm	2.50cm	3.00cm	3.50cm	4.00cm
1	0.00	b3.5	3	0.00		1.00		2.00				
2	0.00	c3.5	4	0.00		1.00		2.00		3.00		
3	0.00	d3.5	4	0.00		1.00		2.00		3.00		
4	0.00	e3.5	3	0.00		1.00		2.00				
5	0.50	C3.0	3		0.50		1.50		2.50			
6	0.50	E3.0	3		0.50		1.50		2.50			
7	0.00	b2.5	4	0.00		1.00		2.00		3.00		
● 8	0.00	c2.5	2	0.00						3.00		
● 9	0.00	d2.5	2	0.00						3.00		
10	0.00	e2.5	4	0.00		1.00		2.00		3.00		
11	0.50	B2.0	3		0.50		1.50		2.50			
12	0.50	F2.0	3		0.50		1.50		2.50			
13	0.00	b1.5	4	0.00		1.00		2.00		3.00		
14	0.00	c1.5	4	0.00		1.00		2.00		3.00		
15	0.00	d1.5	4	0.00		1.00		2.00		3.00		
16	0.00	e1.5	4	0.00		1.00		2.00		3.00		
17	0.50	C1.0	3		0.50		1.50		2.50			
18	0.50	E1.0	3		0.50		1.50		2.50			

● = Special loading

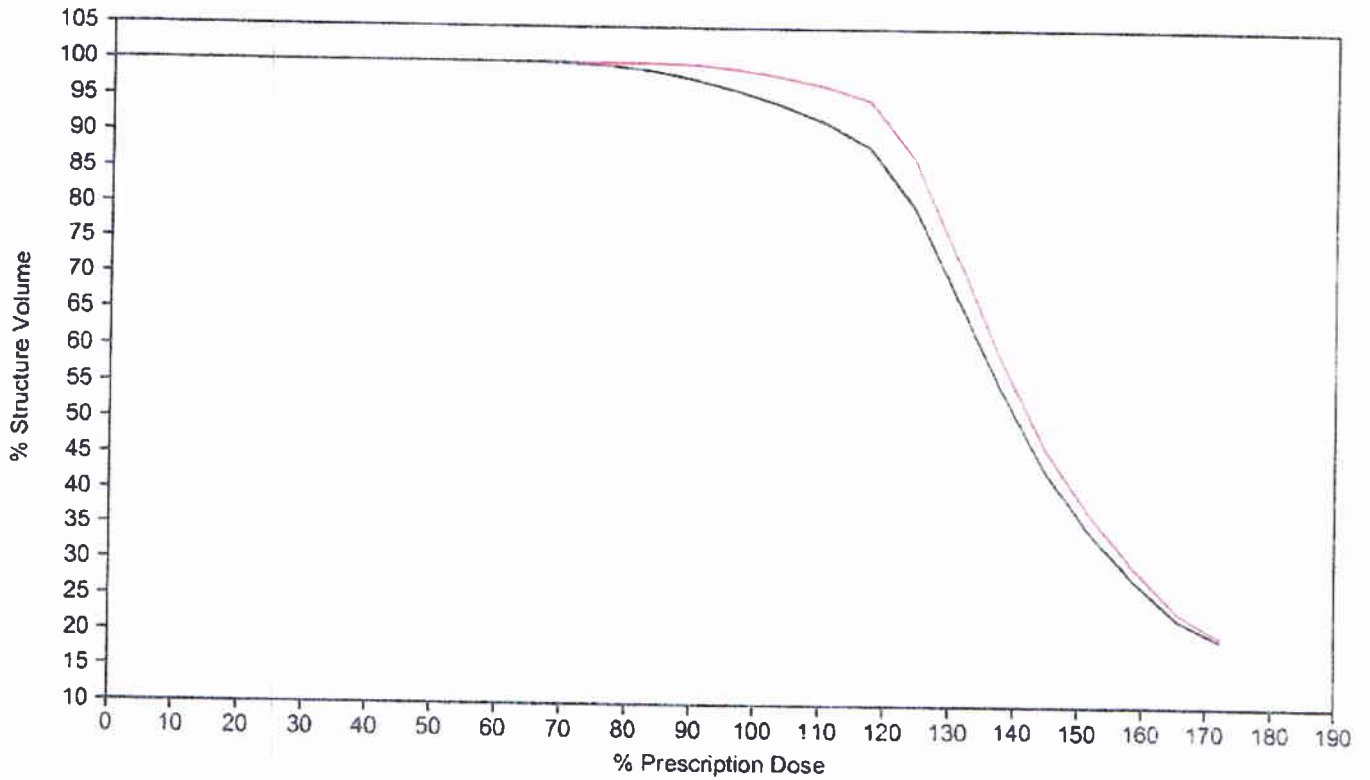
CRO

VariSeed: DVH Report [Page 4]

Medical Physics Services 1210 1 11/19/2007 5:01:00 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 9	Sources: 60
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 28.260 U [22.252 mCi]

Cumulative DVH



— Prostate (CTV) — PTV

Cumulative DVH

Dose		Prostate (CTV)		PTV	
Gy	%	cc	%	cc	%
0.00	0.00	23.43	100.00	31.63	100.00
10.00	6.90	23.43	100.00	31.63	100.00
20.00	13.79	23.43	100.00	31.63	100.00
30.00	20.69	23.43	100.00	31.63	100.00
40.00	27.59	23.43	100.00	31.63	100.00
50.00	34.48	23.43	100.00	31.63	100.00
60.00	41.38	23.43	100.00	31.63	100.00
70.00	48.28	23.43	100.00	31.63	100.00
80.00	55.17	23.43	100.00	31.63	100.00
90.00	62.07	23.43	100.00	31.63	100.00

CRO

VariSeed: DVH Report [Page 5]

Medical Physics Services 1210 1 11/19/2007 5:01:00 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PI: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 9	Sources: 60
	Template: B & K Standard	Anisotropy Factors (Point Model)
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 28.260 U [22.252 mCi]

Cumulative DVH

Gy	Dose		Prostate (CTV)		PTV	
	%	cc	%	cc	%	cc
100.00	68.97	23.43	100.00	31.60	99.89	
110.00	75.86	23.43	100.00	31.48	99.54	
120.00	82.76	23.43	100.00	31.29	98.91	
130.00	89.66	23.38	99.81	30.92	97.74	
140.00	96.55	23.25	99.25	30.44	96.25	
150.00	103.45	23.03	98.30	29.84	94.33	
160.00	110.34	22.73	97.02	29.07	91.91	
170.00	117.24	22.28	95.09	28.01	88.56	
180.00	124.14	20.42	87.16	25.39	80.27	
190.00	131.03	17.11	73.02	21.27	67.25	
200.00	137.93	13.78	58.83	17.26	54.55	
210.00	144.83	10.90	46.53	13.68	43.26	
220.00	151.72	8.74	37.31	10.97	34.67	
230.00	158.62	6.97	29.77	8.81	27.84	
240.00	165.52	5.47	23.35	7.04	22.25	
250.00	172.41	4.61	19.69	6.05	19.14	

CRO

VariSeed: Therapy Visualization Report [Page 6]

Medical Physics Services 1210 1 11/19/2007 5:01:00 PM

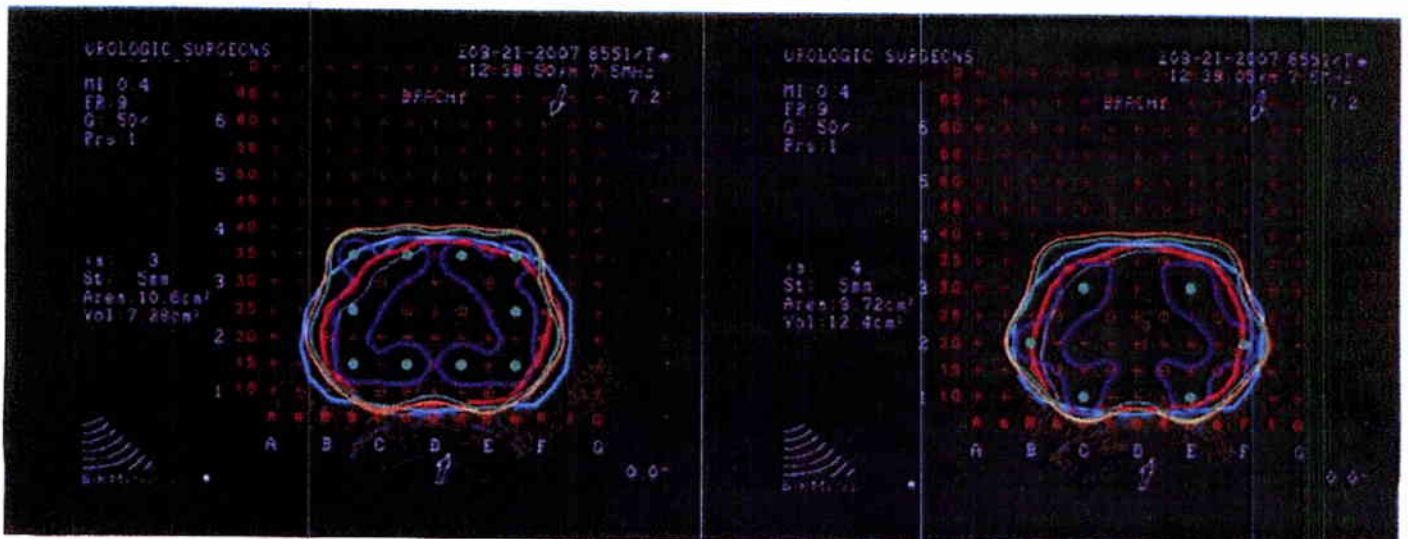
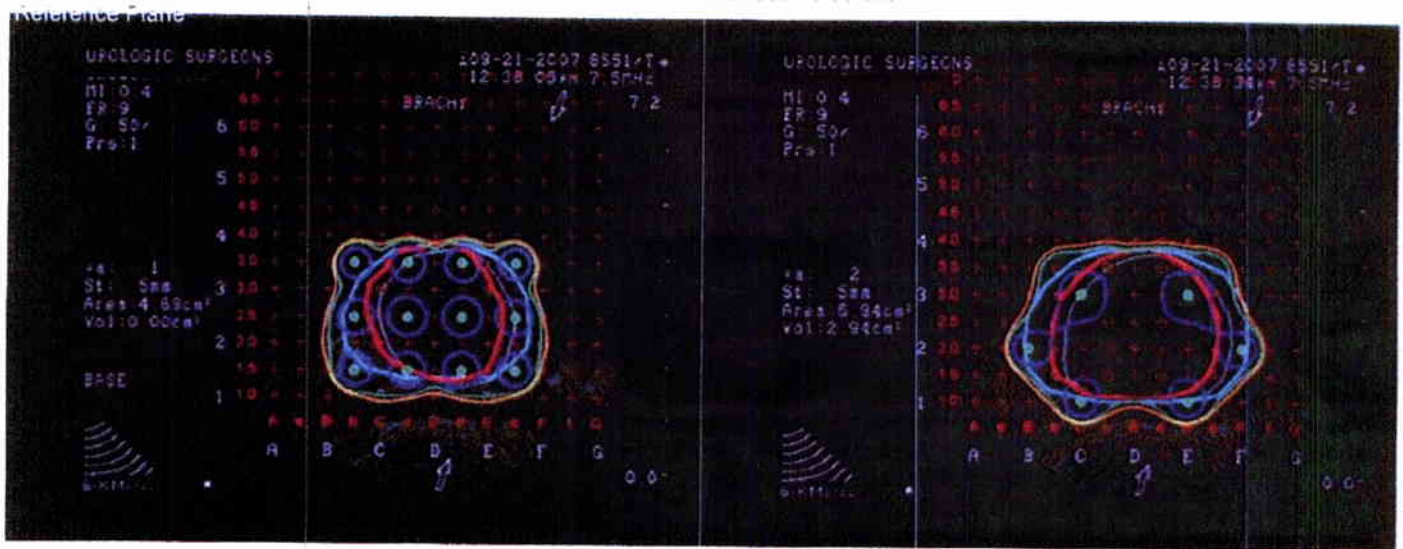
Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 9	Sources: 60
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 28.260 U [22.252 mCi]

Isodose Legend
Gy [% of Prescription Dose]

	217.50 [150.00%]		130.50 [90.00%]
	145.00 [100.00%]		

Anatomy/Landmark Legend

	Prostate (CTV)		PTV
--	----------------	--	-----



CRO

VariSeed: Therapy Visualization Report [Page 7]

Medical Physics Services 1210 - 1 - 11/19/2007 5:01:00 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) (NIST 99)
PID: [REDACTED]	Variation: Default	Comment
Dept. ID: VA	Images: 9	Sources: 60
	Template: B & K Standard	Anisotropy Factors (Point Model)
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 28.260 U [22.252 mCi]

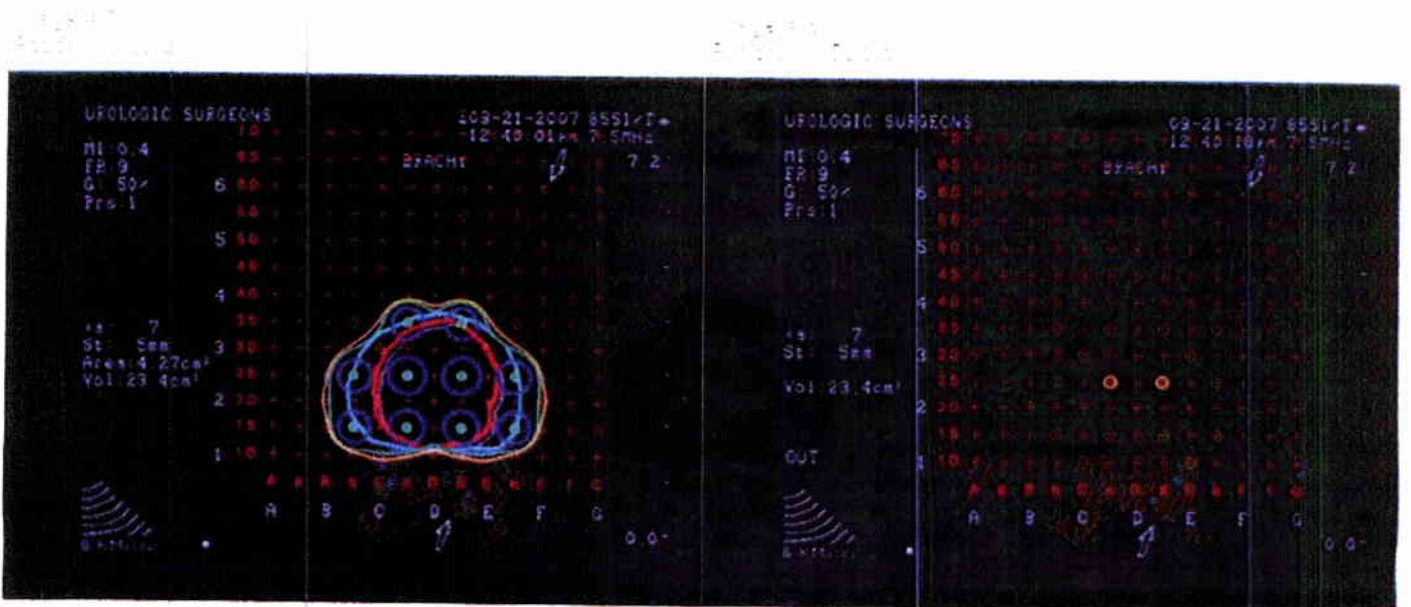
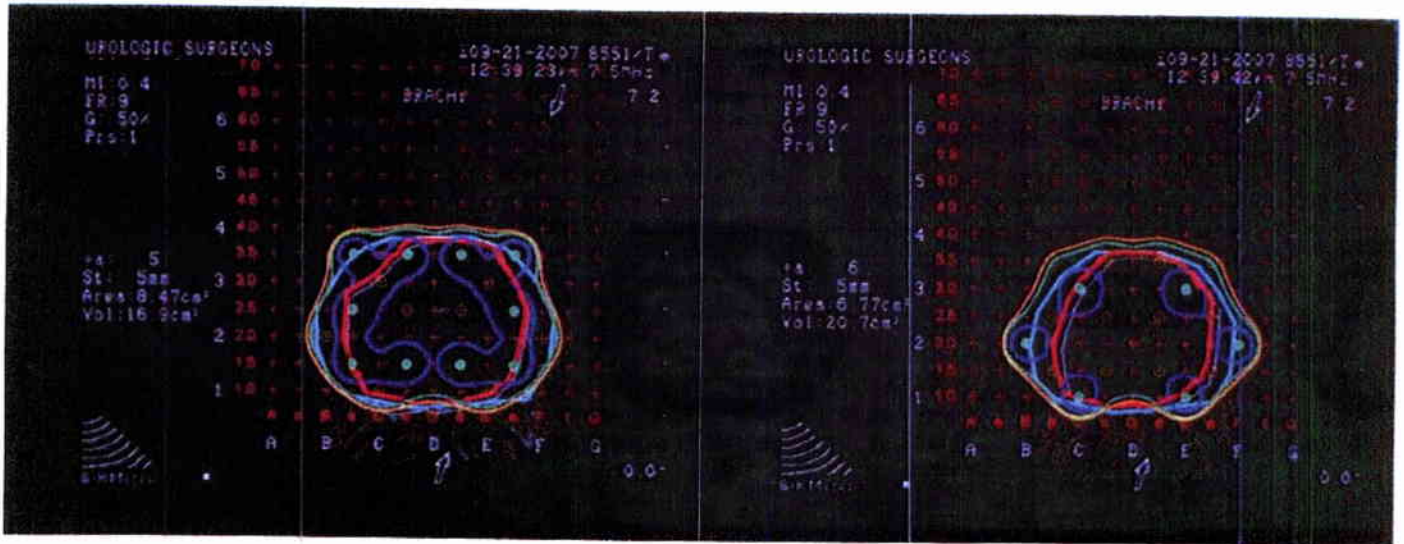
Isodose Legend

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Gy [% of Prescription Dose]

Anatomy/Landmark Legend

Prostate (CTV)	PTV
----------------	-----



CRO

VariSeed: Therapy Visualization Report [Page 8]

Medical Physics Services 1210 1 11/19/2007 5:01:00 PM

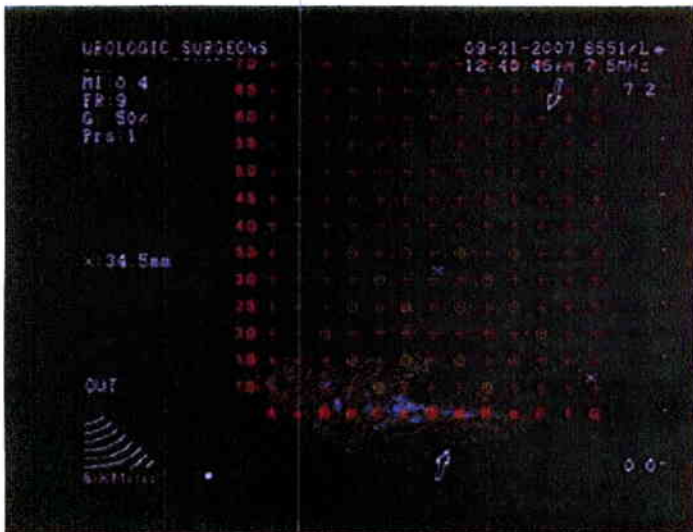
Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 9 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 60 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 28.260 U [22.252 mCi]
Procedure Date: 11/29/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

 217.50 [150.00%]	 130.50 [90.00%]
 145.00 [100.00%]	

Anatomy/Landmark Legend

 Prostate (CTV)	 PTV
--	---

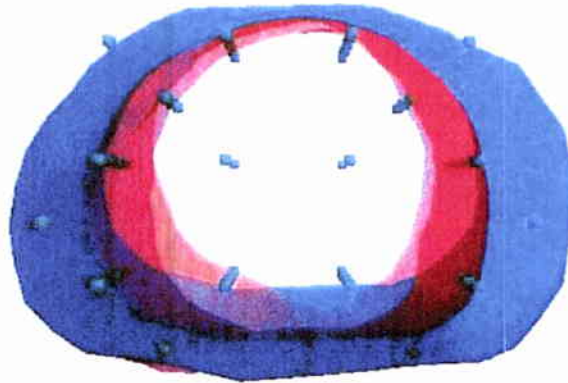


CRO

VariSeed: 3D View Report [Page 9]

Medical Physics Services 1210 1 11/19/2007 5:01:00 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 9	Sources: 60
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 11/29/2007		Source Activity: 0.471 U [0.371 mCi]
	Prescription Dose: 145.0 Gy	Total Activity: 28.260 U [22.252 mCi]



KUZ

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 10/12/2008 6:43:38 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VAMC	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 38.622 U [30.411 mCi]
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	

Study Type: Post-Op
Notes: Not Specified

Dose Information

Urethra: N/A

Rectum:

Total Volume:	45.05 cc	
V100:	0.58 cc	[1.29%]
V75:	1.90 cc	[4.21%]
V50:	5.46 cc	[12.11%]

PTV: N/A

Prostate (CTV):

Total Volume:	29.34 cc	
V150:	23.56 cc	[80.29%]
V100:	29.19 cc	[99.48%]
V90:	29.33 cc	[99.94%]
V80:	29.34 cc	[100.00%]
D90:	188.79 Gy	[130.20%]




KU2

VariSeed; Therapy Visualization Report [Page 2]

Medical Physics Services - 1210 1 10/12/2008 6:43:38 PM

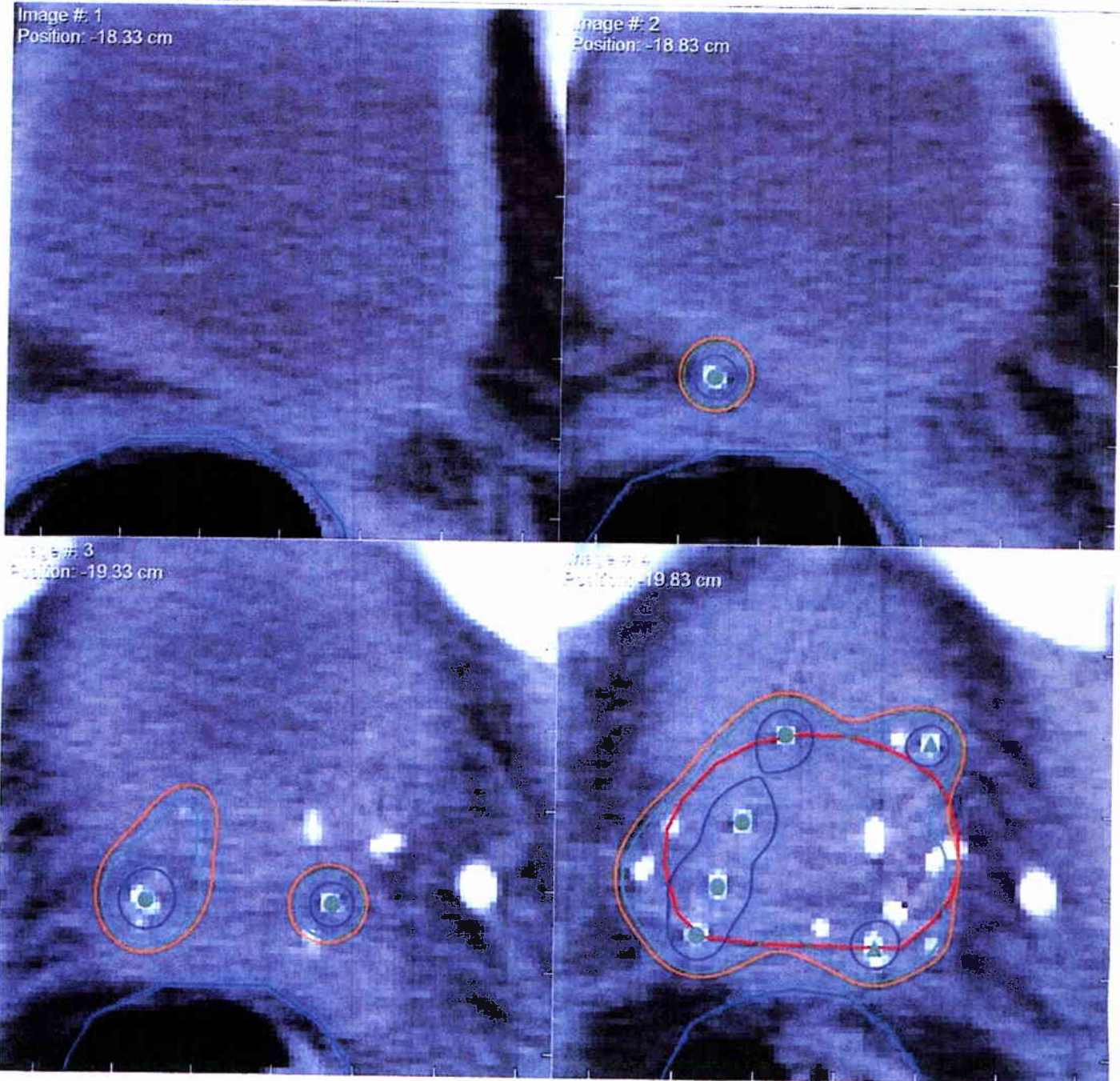
Name: [REDACTED] PID: [REDACTED] Dept. ID: VAMC	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 38.622 U [30.411 mCi]
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

 217.50 [150.00%]	 130.50 [90.00%]
 145.00 [100.00%]	

Anatomy/Landmark Legend

 Prostate (CTV)	 Rectum
--	--



KUZ

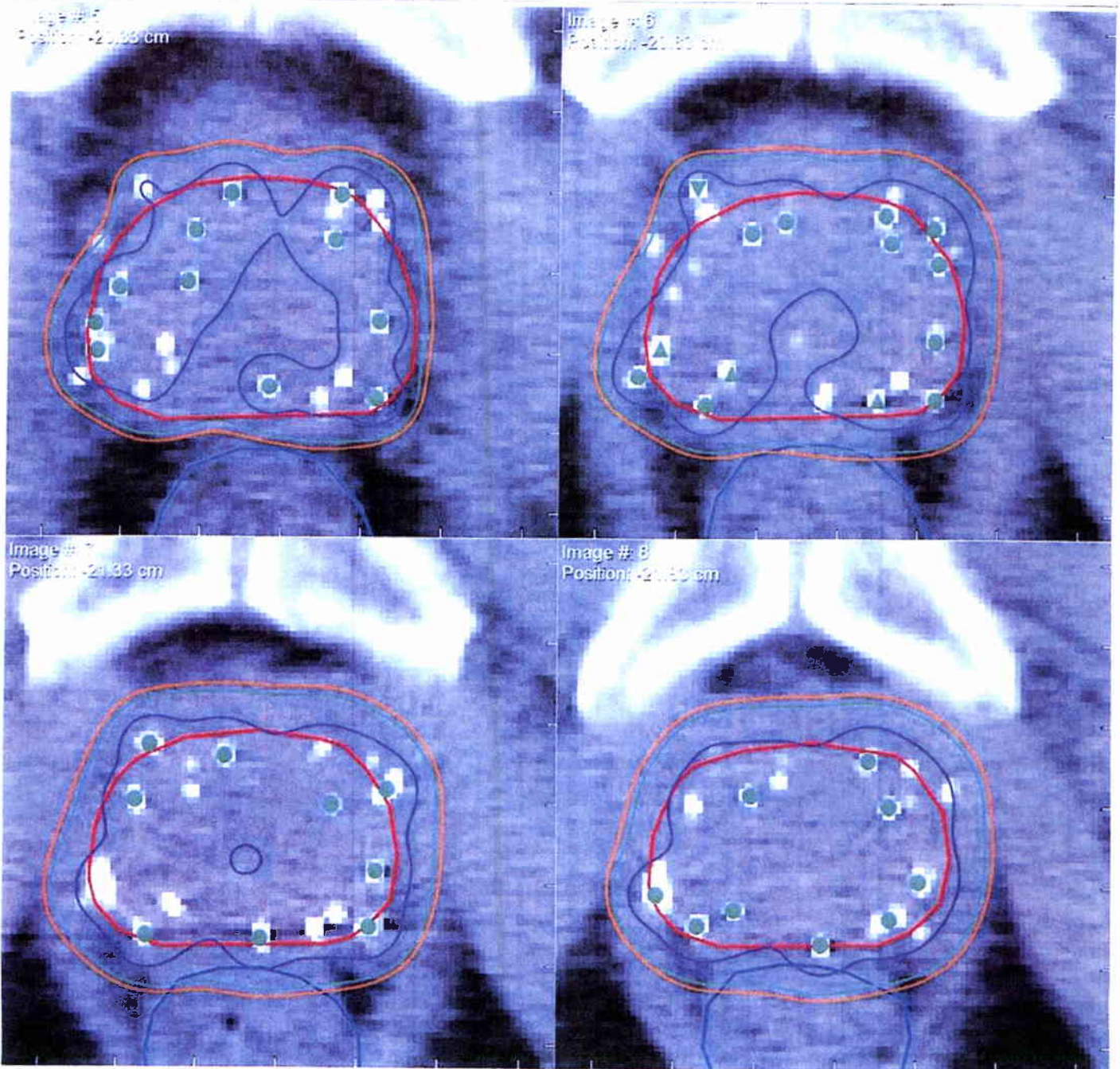
VariSeed: Therapy Visualization Report [Page 3]

Medical Physics Services - 1210 - 1 10/12/2008 6:43:38 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VAMC	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 38,622 U [30.411 mCi]
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	

Isodose Legend Gy [% of Prescription Dose]	217.50 [150.00%] 145.00 [100.00%]	130.50 [90.00%]
---	--------------------------------------	-----------------

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



KUZ

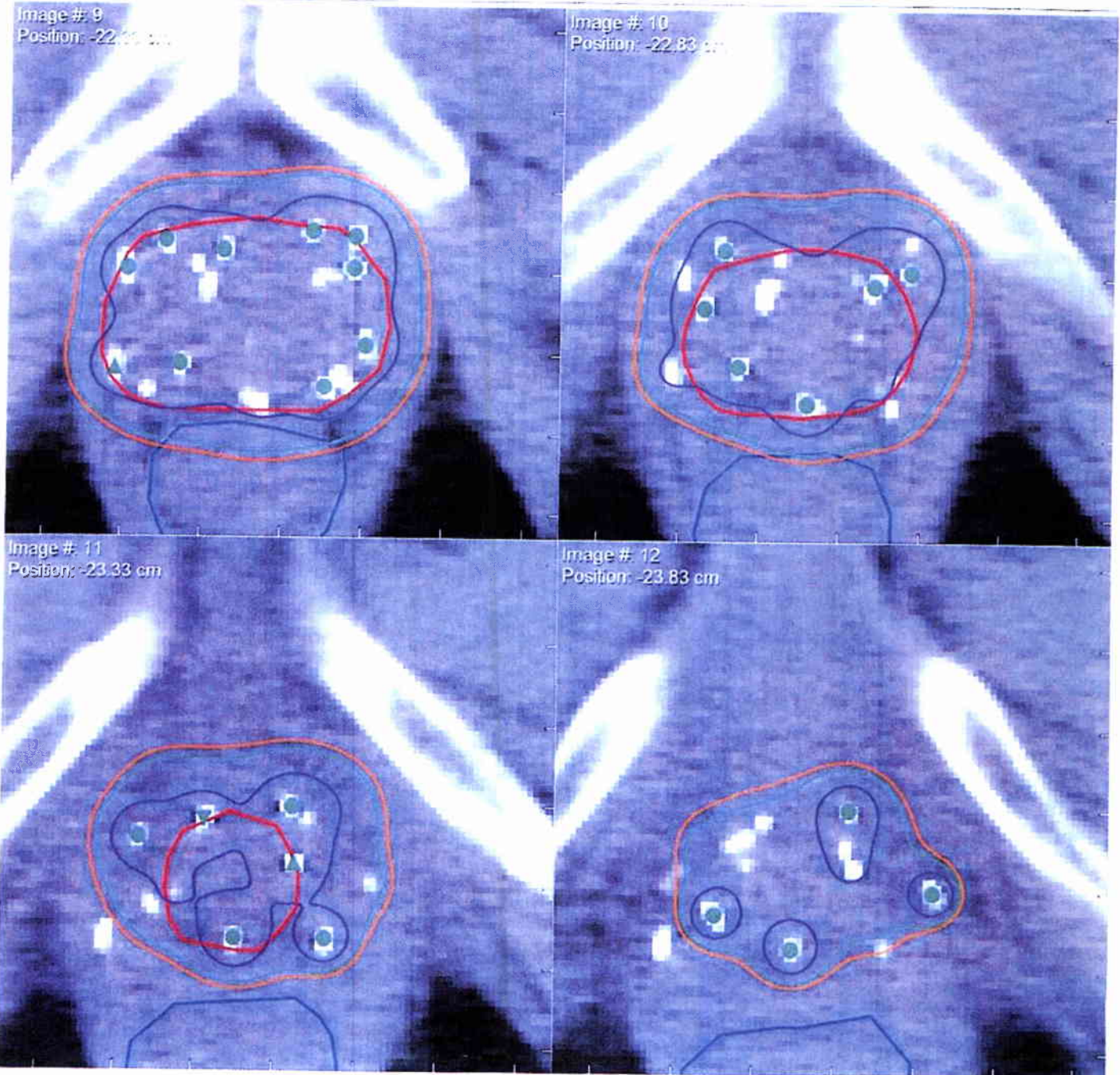
VariSeed: Therapy Visualization Report [Page 4]

Medical Physics Services 1210 1 10/12/2008 6.43 38 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VAMC	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 38.622 U [30.411 mCi]
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



KUZ

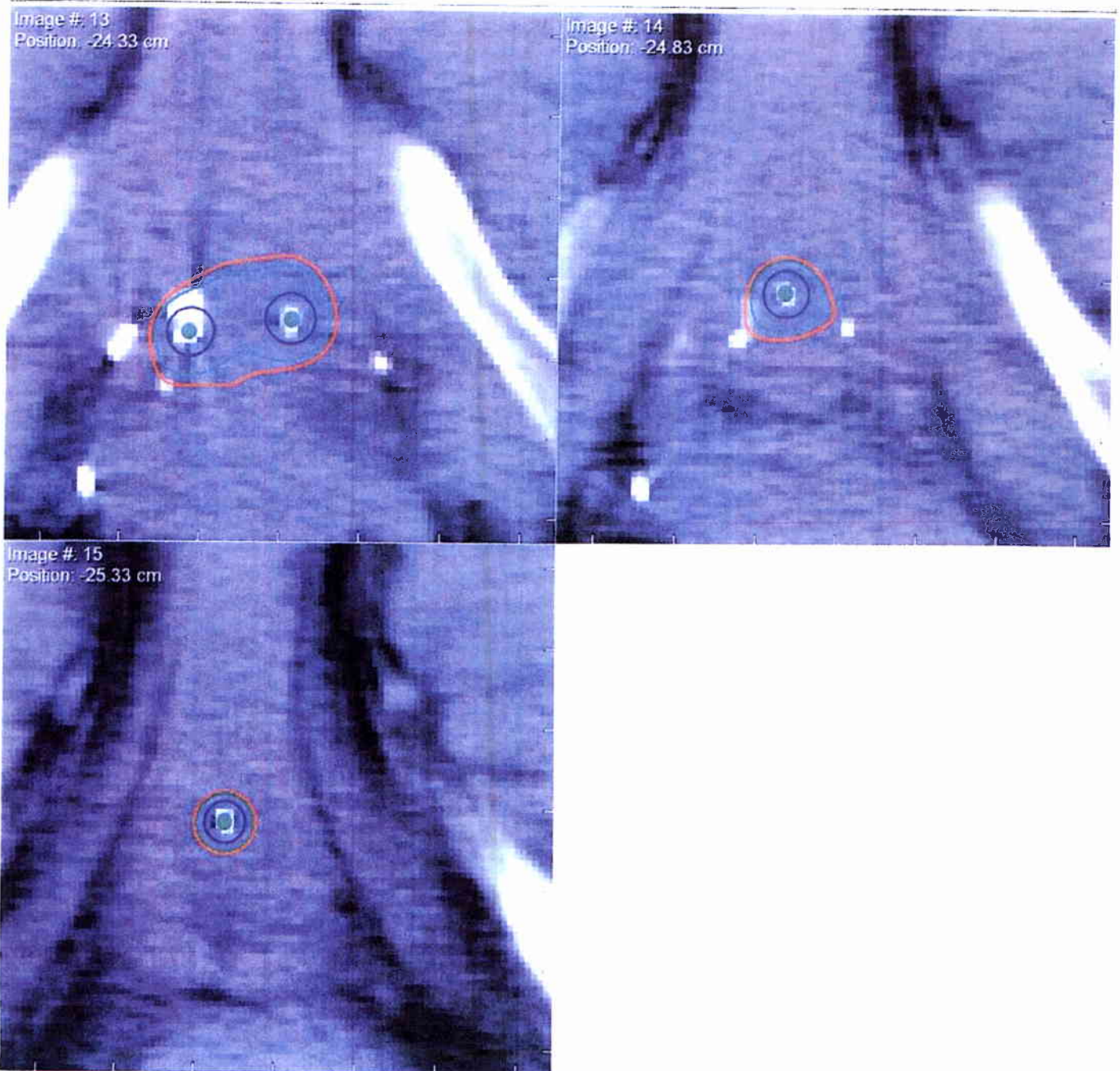
VariSeed: Therapy Visualization Report [Page 5]

Medical Physics Services 1210 1 10/12/2008 6:43:38 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VAMC	Study: PostPlan Variation: Default Images: 15	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 82 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 38.622 U [30.411 mCi]
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification:

- Patient Name
- ID Bracelet
- ID Card
- Social Security Number
- Signature
- Birth Date
- Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
- The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
- The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457. These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

K02

RADIATION ONCOLOGY ASSOCIATES

VA MEDICAL CENTER

QUALITY MANAGEMENT PROGRAM

I-125 or Pd-103 SEED THERAPY

WRITTEN DIRECTIVE

TREATMENT PLAN

R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D.
Jennifer Sutton, M.D. Jonathan S. Tay, M.D.

DATE: Wednesday, January 16, 2008

PATIENT NAME: [REDACTED]

RADIOACTIVE MATERIAL: I-125 (STM 1251) [NIST 99] BARD

TREATMENT SITE:	<u>PROSTATE</u>	
PRESCRIBED DOSE:	145 Gy	
	0.371	mCi/seed
NUMBER OF SEEDS:	82	
TOTAL SOURCE STRENGTH:	30.422	mCi

Signed: [Signature] Date: 1/24/08

PATIENT IDENTIFICATION (USE TWO METHODS)

- Patient Name
- Social Security Number
- Signature
- ID Card

- Birthdate
- Address
- ID Bracelet
- Other _____

Administered by: C.A. Date: 1/24/08

WASTE DISPOSAL - ROOM SURVEY

CONDUCTED BY: RES3 Date: 1/24/08

TOTAL NUMBER OF SOURCES IMPLANTED: 76

NOTE:

KUZ

Prostate Seed Implant Patient Checklist

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

Please check the following when completed:

- Patient Name/ID # on this and next pages
- Volume Study
- Treatment Plan
- Approval of Treatment Plan by Authorized User Physician (Signed and Dated)
- Seeds Ordered

Patient Name: [REDACTED]
Patient ID #: [REDACTED]

Part I of Written Directive Includes (10 CFR 35.41):

- Patient Name
- Second Form of Identification
- Treatment Site
- Radionuclide
- Dose
- Signed by Authorized User Physician
- Dated by Authorized User Physician

* Retain a copy of this Written Directive in accordance with NRC 35.2040. Note: If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (NRC 35.40).

Arrival of Seeds:

- 1) Date of Arrival: 1/23/08
- 2) Time of Arrival: 10:00am
- 3) Received By: lgan Department: Nuc Med
- 4) Survey of Package to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.
Survey Time: 10:00 am Survey Date: 1/23/08

Through measurements or manufacture documentation, complete the following:

- 1) Source Activity: ~~32.226~~ 32.226
- 2) Correct the source activity determined above for physical decay at intervals consistent with 1 percent physical decay: 30.406 for procedure date 1/24/08
- 3) Do the source positions within the applicators agree with the Needle Loading Report? yes

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
A Chantelion	1/24/08 7:00am	Nuc Med	OR	82
R CS	1/24/08	OR	NH	6

KUZ

Operating Room:

Patient Name: [REDACTED]
Patient ID #: [REDACTED]

Pre-Procedure

- Identify Patient by two means of ID: Name - ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address
- Verify Written Directive
- Verify the Correct Number and Batch of Seeds (if possible)

Ensure the following are in the Operating Room:

- 1) Lead Container for Loose Seeds
- 2) Tweezers
- 3) Survey Meter for Room
- 4) Survey Meter for Patients
- 5) Pre-loaded Seeds
- 6) Written Directives Part I and II
- 7) Physicians' Radiation Badges
- 8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

- Survey People in Operating Room (linens, trash, etc.)
- Survey Patient - IMPORTANT: Patient Survey must show **less than 1 mR/hr at 1 meter**. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.
- Survey Operating Room
Note Total Number of Loose Seeds Recovered: 0
- Complete the following (Part II of Written Directive):

- 1) Radionuclide I-125
- 2) Treatment Site Prostate
- 3) Number of Sources 82
- 4) Total Source Strength 30.406 mCi
- 5) Exposure Time PERMANENT

[Signature]
Signature of Authorized User Physician

1/24/08
Date

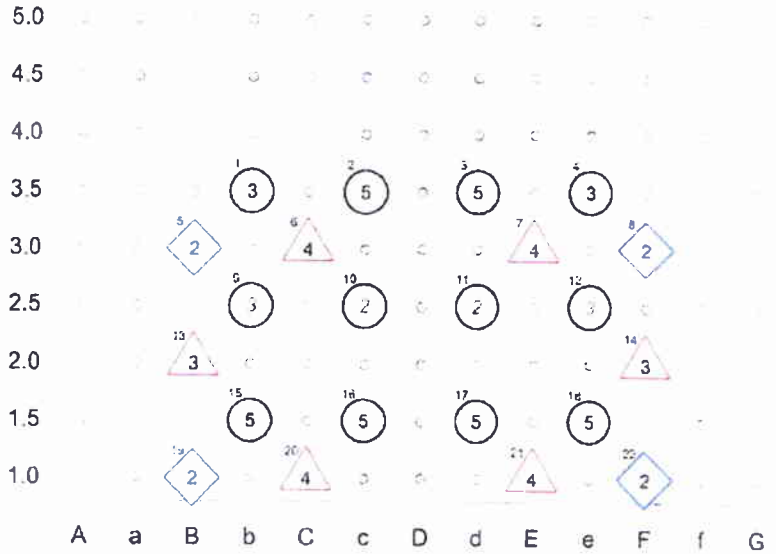
KUZ

VariSeed: Needle Loading Report [Page 2]

Medical Physics Services · 1210 1 1/17/2008 9:38:50 AM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VAMC	Study: Preplan Variation: Default Images: 9 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 35.796 U [28.186 mCi]
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	

Needle Number	Retraction (cm)	Hole Location	Number Seeds
1	0.00	b3.5	3
2	0.00	c3.5	5
3	0.00	d3.5	5
4	0.00	e3.5	3
5	1.50	B3.0	2
6	0.50	C3.0	4
7	0.50	E3.0	4
8	1.50	F3.0	2
● 9	0.00	b2.5	3/5
● 10	0.00	c2.5	2/5
● 11	0.00	d2.5	2/5
● 12	0.00	e2.5	3/5
13	0.50	B2.0	3
14	0.50	F2.0	3
15	0.00	b1.5	5
16	0.00	c1.5	5
17	0.00	d1.5	5
18	0.00	e1.5	5
19	1.50	B1.0	2
20	0.50	C1.0	4
21	0.50	E1.0	4
22	1.50	F1.0	2



Retraction Legend					
Plane 0 0.00 cm	Plane 1 0.50 cm	Plane 2 1.00 cm	Plane 3 1.50 cm	Plane 4 2.00 cm	Special Other

Number of Needles	Seeds per needle
6	2
6	3
4	4
6	5

Plan Summary	
Total Activity [U]	35.80
Total Activity [mCi]	28.19
Total Needles	22
Total Seeds	76
Extra Seeds	6
Total Seeds to Order	82

● = Special loading

Study Created by DKC
Study Approved by [Signature]

KUZ

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 1/17/2008 9:38:50 AM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VAMC	Study Preplan Variation Default Images: 9 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 35.796 U [28.186 mCi]
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	

Study Type: Pre-Op
Notes: Patient has had no EBRT

Dose Information

Urethra:N/A

Rectum:N/A

PTV:

Total Volume:	46.16 cc	
V150:	17.48 cc	[37.86%]
V100:	44.81 cc	[97.06%]
V90:	45.83 cc	[99.28%]
V80:	46.14 cc	[99.96%]
D90:	168.30 Gy	[116.07%]

Prostate (CTV):

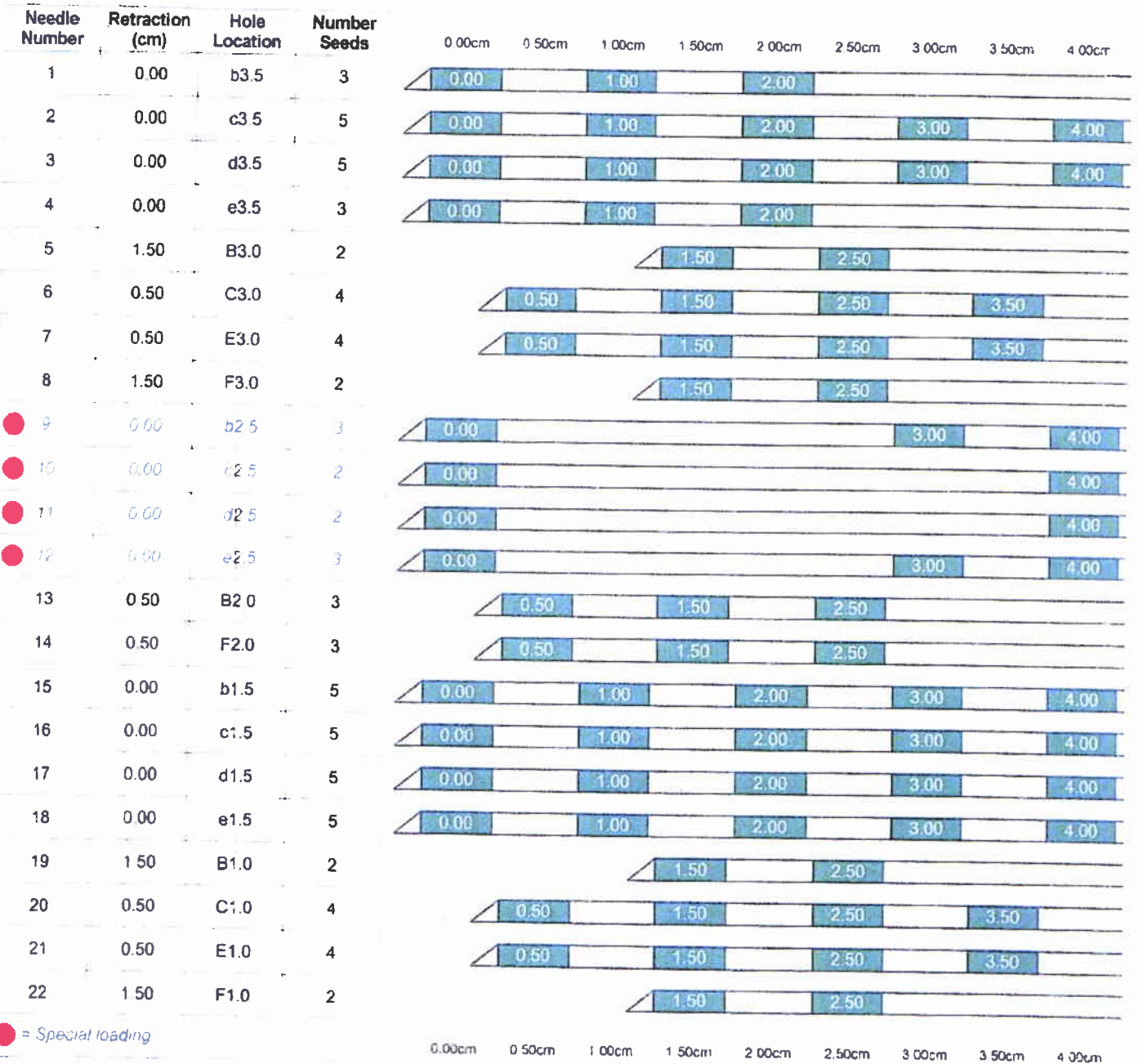
Total Volume:	31.44 cc	
V150:	12.98 cc	[41.29%]
V100:	31.41 cc	[99.91%]
V90:	31.44 cc	[100.00%]
V80:	31.44 cc	[100.00%]
D90:	181.87 Gy	[125.43%]

KUZ

VariSeed: Needle Loading Report [Page 3]

Medical Physics Services · 1210 1 · 1/17/2008 9:38:50 AM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) (NIST 99)
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VAMC	Images: 9	Sources: 76
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 35.796 U [28.186 mCi]



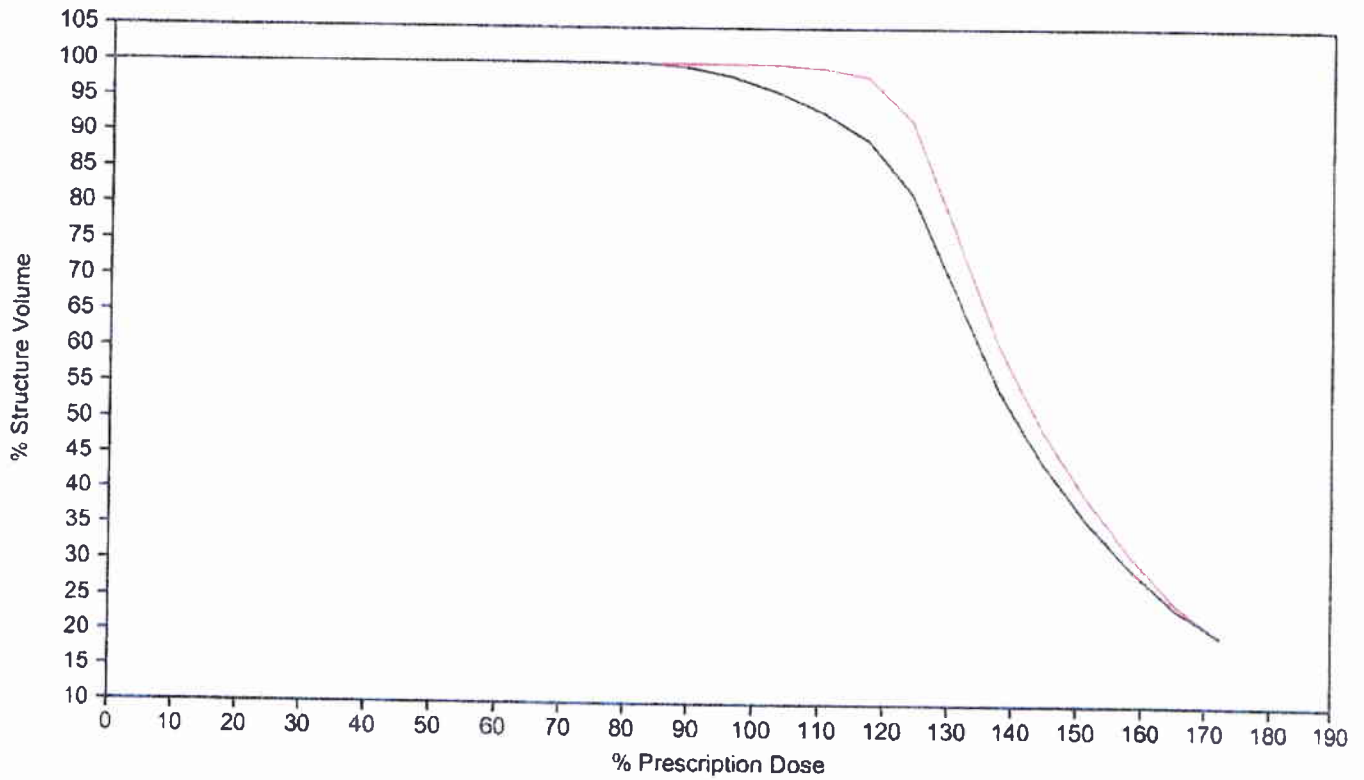
KUZ

VariSeed: DVH Report [Page 4]

Medical Physics Services 1210 · 1 · 1/17/2008 9:38:50 AM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VAMC	Images: 9	Sources: 76
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 35.796 U [28.186 mCi]

Cumulative DVH



— Prostate (CTV) — PTV

Cumulative DVH

Dose		Prostate (CTV)		PTV	
Gy	%	cc	%	cc	%
0.00	0.00	31.44	100.00	46.16	100.00
10.00	6.90	31.44	100.00	46.16	100.00
20.00	13.79	31.44	100.00	46.16	100.00
30.00	20.69	31.44	100.00	46.16	100.00
40.00	27.59	31.44	100.00	46.16	100.00
50.00	34.48	31.44	100.00	46.16	100.00
60.00	41.38	31.44	100.00	46.16	100.00
70.00	48.28	31.44	100.00	46.16	100.00
80.00	55.17	31.44	100.00	46.16	100.00
90.00	62.07	31.44	100.00	46.16	100.00

KUZ

VariSeed: DVH Report [Page 5]

Medical Physics Services 1210 1 1/17/2008 9:38:50 AM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VAMC	Images: 9	Sources: 76
	Template: B & K Standard	Anisotropy Factors (Point Model)
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 35.796 U [28.186 mCi]

Cumulative DVH

Dose		Prostate (CTV)		PTV	
Gy	%	cc	%	cc	%
100.00	68.97	31.44	100.00	46.16	100.00
110.00	75.86	31.44	100.00	46.16	100.00
120.00	82.76	31.44	100.00	46.11	99.88
130.00	89.66	31.44	100.00	45.86	99.33
140.00	96.55	31.43	99.96	45.26	98.04
150.00	103.45	31.38	99.79	44.26	95.88
160.00	110.34	31.23	99.33	42.94	93.01
170.00	117.24	30.89	98.26	41.22	89.29
180.00	124.14	28.95	92.07	37.75	81.78
190.00	131.03	24.09	76.62	31.42	68.06
200.00	137.93	19.12	60.82	25.16	54.50
210.00	144.83	15.35	48.82	20.38	44.14
220.00	151.72	12.29	39.10	16.59	35.93
230.00	158.62	9.83	31.26	13.53	29.32
240.00	165.52	7.66	24.37	10.89	23.58
250.00	172.41	6.16	19.58	9.15	19.81

KUZ

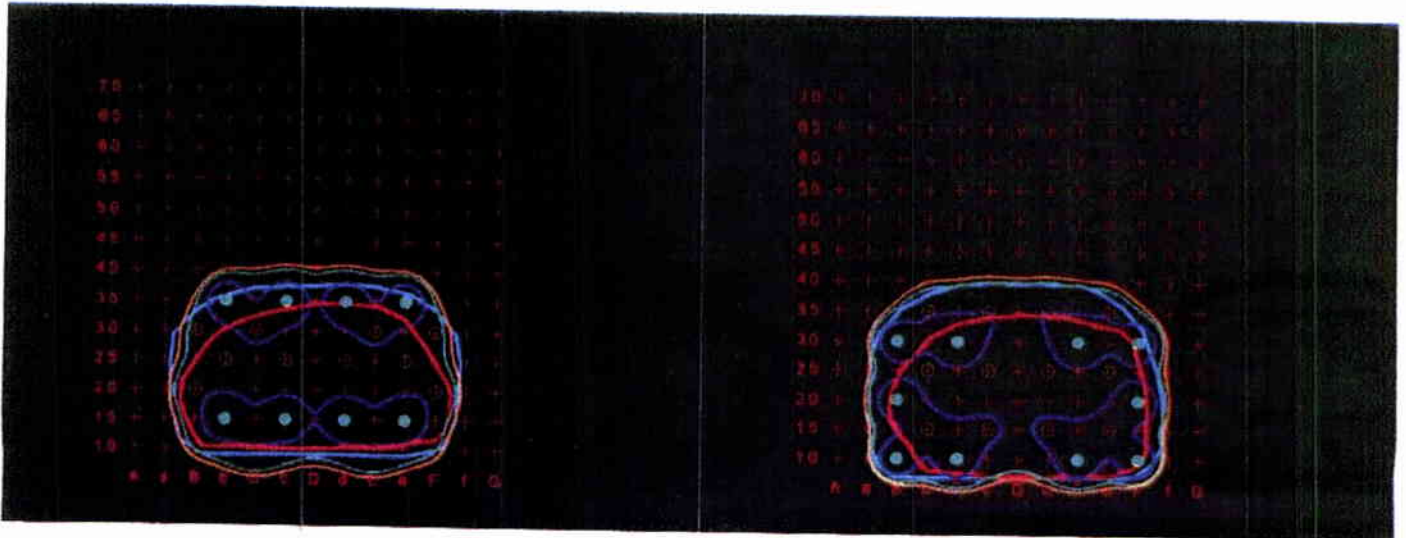
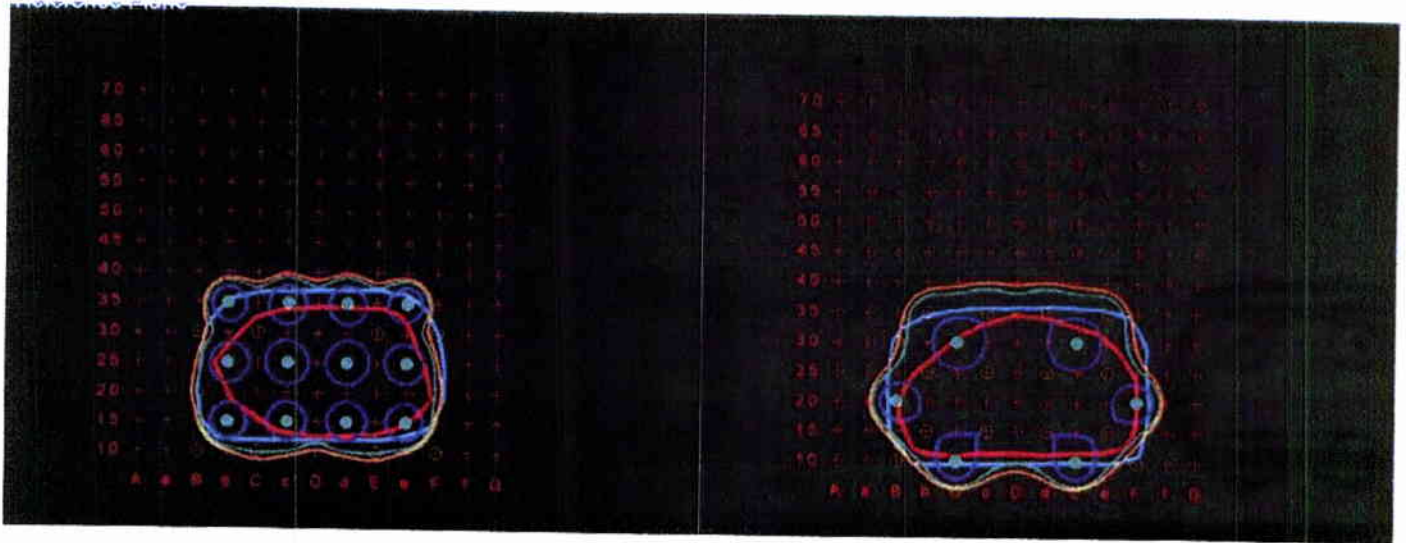
VariSeed: Therapy Visualization Report [Page 6]

Medical Physics Services 1210 1 1/17/2008 9:38:50 AM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VAMC	Images: 9	Sources: 76
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 35.796 U [28.186 mCi]

Isodose Legend
Gy [% of Prescription Dose] 217.50 [150.00%] 130.50 [90.00%]
 145.00 [100.00%]

Anatomy/Landmark Legend Prostate (CTV) PTV



KUZ

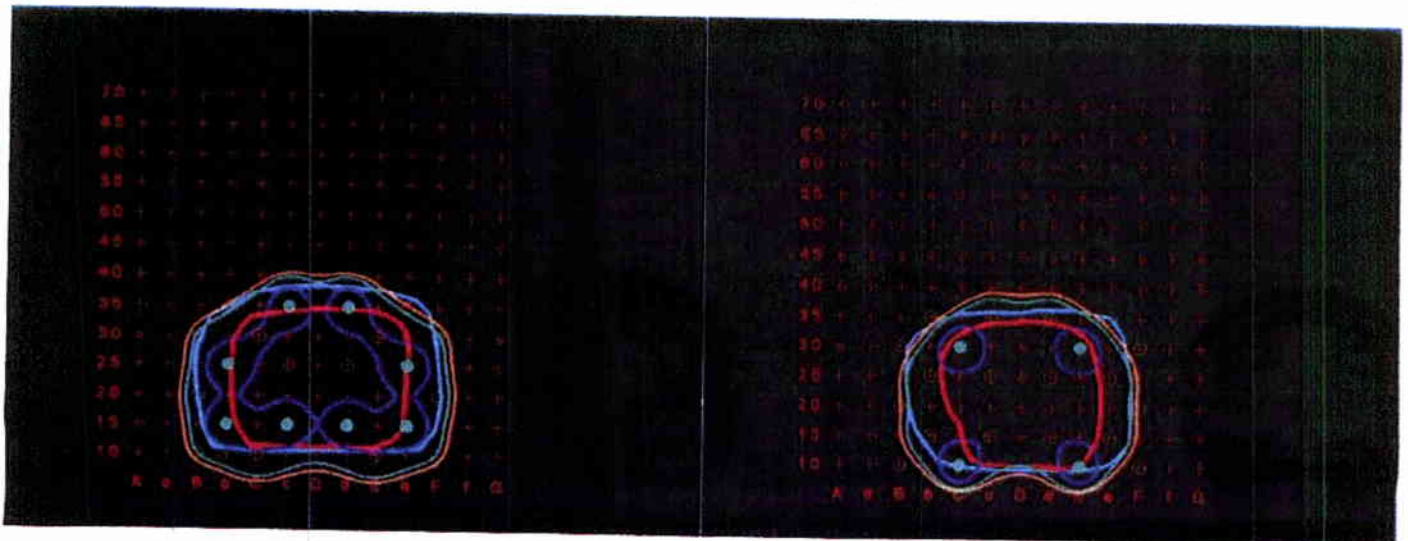
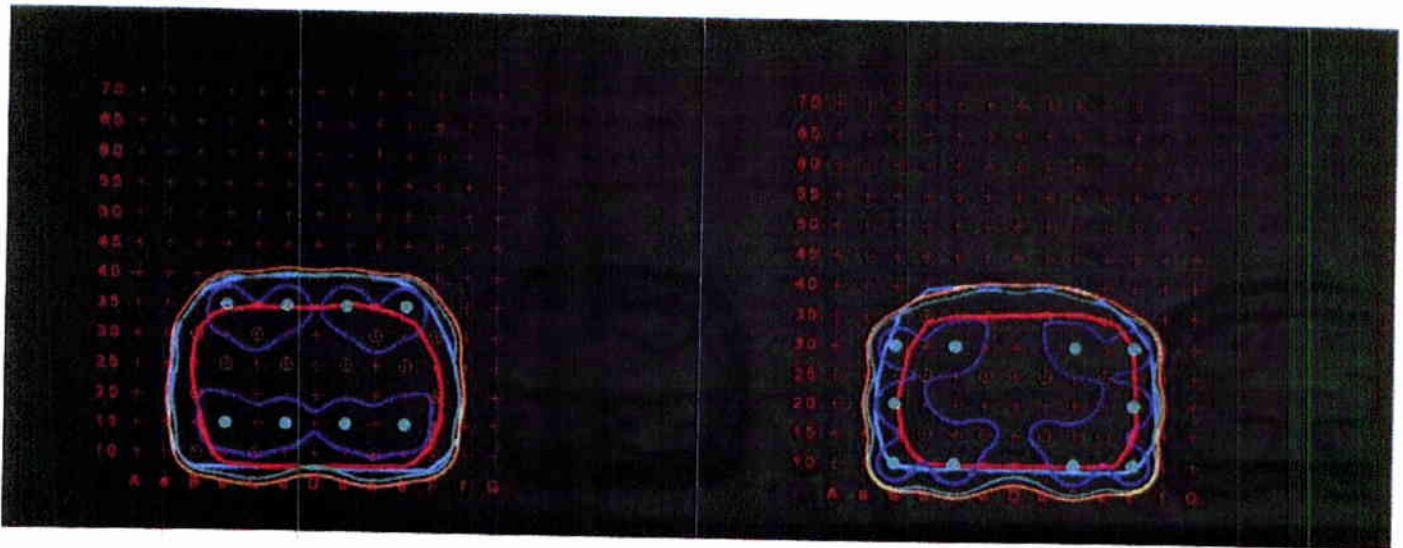
VariSeed: Therapy Visualization Report [Page 7]

Medical Physics Services 1210 1 1/17/2008 9:38:50 AM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VAMC	Images: 9	Sources: 76
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 35.796 U [28.186 mCi]

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	PTV
-------------------------	----------------	-----



KUZ

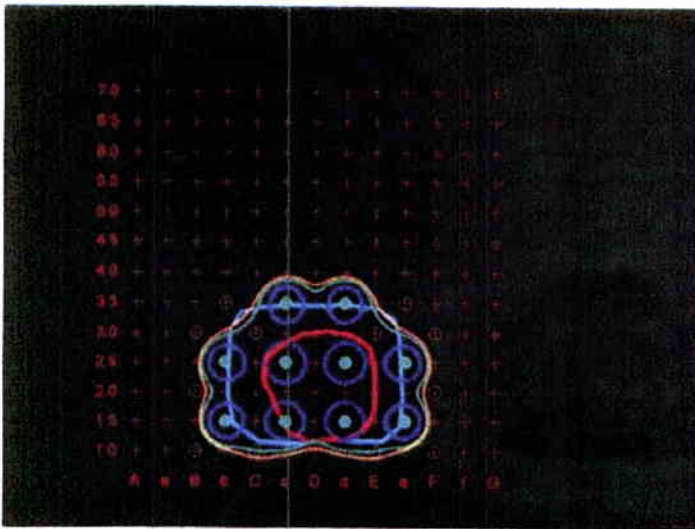
VariSeed: Therapy Visualization Report [Page 8]

Medical Physics Services 1210 1 1/17/2008 9:38 50 AM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VAMC	Images: 9	Sources: 76
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 35.796 U [28.186 mCi]

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	PTV
-------------------------	----------------	-----

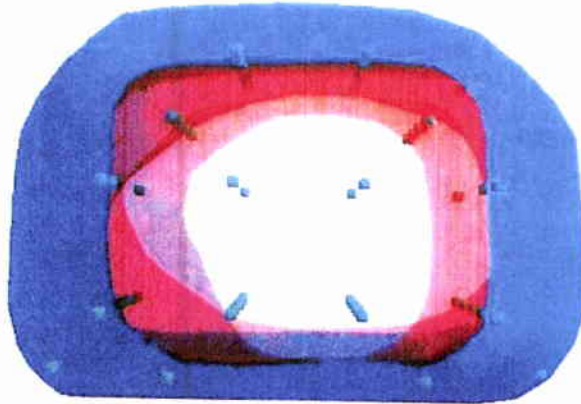


KU2

VariSeed: 3D View Report [Page 9]

Medical Physics Services 1210 1 1/17/2008 9:38:50 AM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VAMC	Study: Preplan Variation: Default Images: 9 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 76 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 35.796 U [28.186 mCi]
Procedure Date: 1/24/2008	Prescription Dose: 145.0 Gy	



Wil

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 1 12/15/2008 7:38:25 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 13	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 77 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 36.267 U [28.557 mCi]
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	

Study Type: Post-Op
Notes: 145 Gy
77 sources

Dose Information

Urethra: N/A

Rectum:

Total Volume:	35.11 cc	
V100:	1.15 cc	[3.28%]
V75:	2.74 cc	[7.79%]
V50:	6.12 cc	[17.43%]

PTV: N/A

Prostate (CTV):

Total Volume:	25.82 cc	
V150:	21.01 cc	[81.35%]
V100:	25.64 cc	[99.29%]
V90:	25.81 cc	[99.94%]
V80:	25.82 cc	[100.00%]
D90:	196.28 Gy	[135.37%]




Wil

VariSeed: Therapy Visualization Report [Page 2]

Medical Physics Services 1210 1 12/15/2008 7:38:25 PM

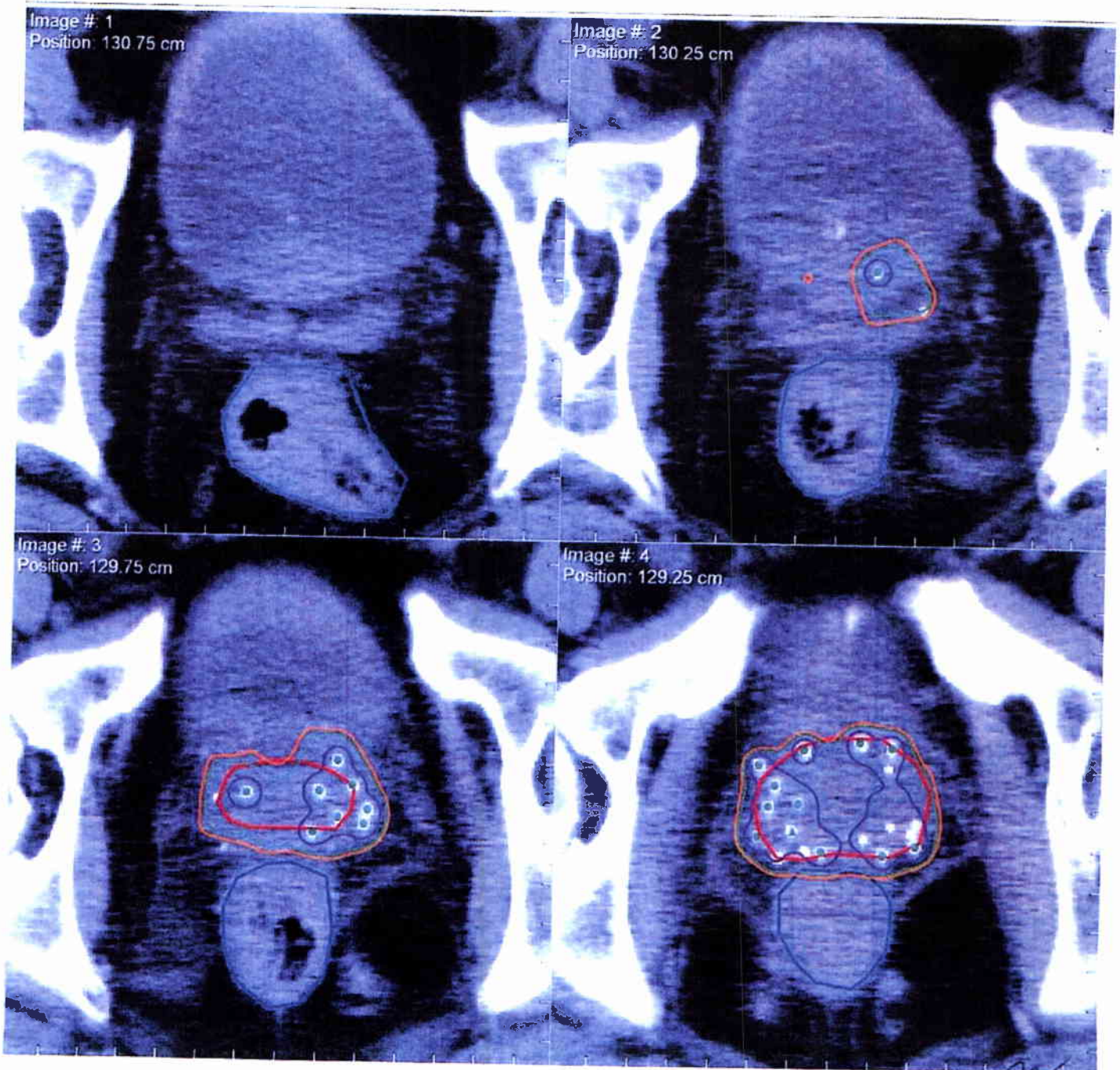
Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 13	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 77 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 36.267 U [28.557 mCi]
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]

	217.50 [150.00%]		130.50 [90.00%]
	145.00 [100.00%]		

Anatomy/Landmark Legend

	Prostate (CTV)		Rectum
---	----------------	---	--------



Wil

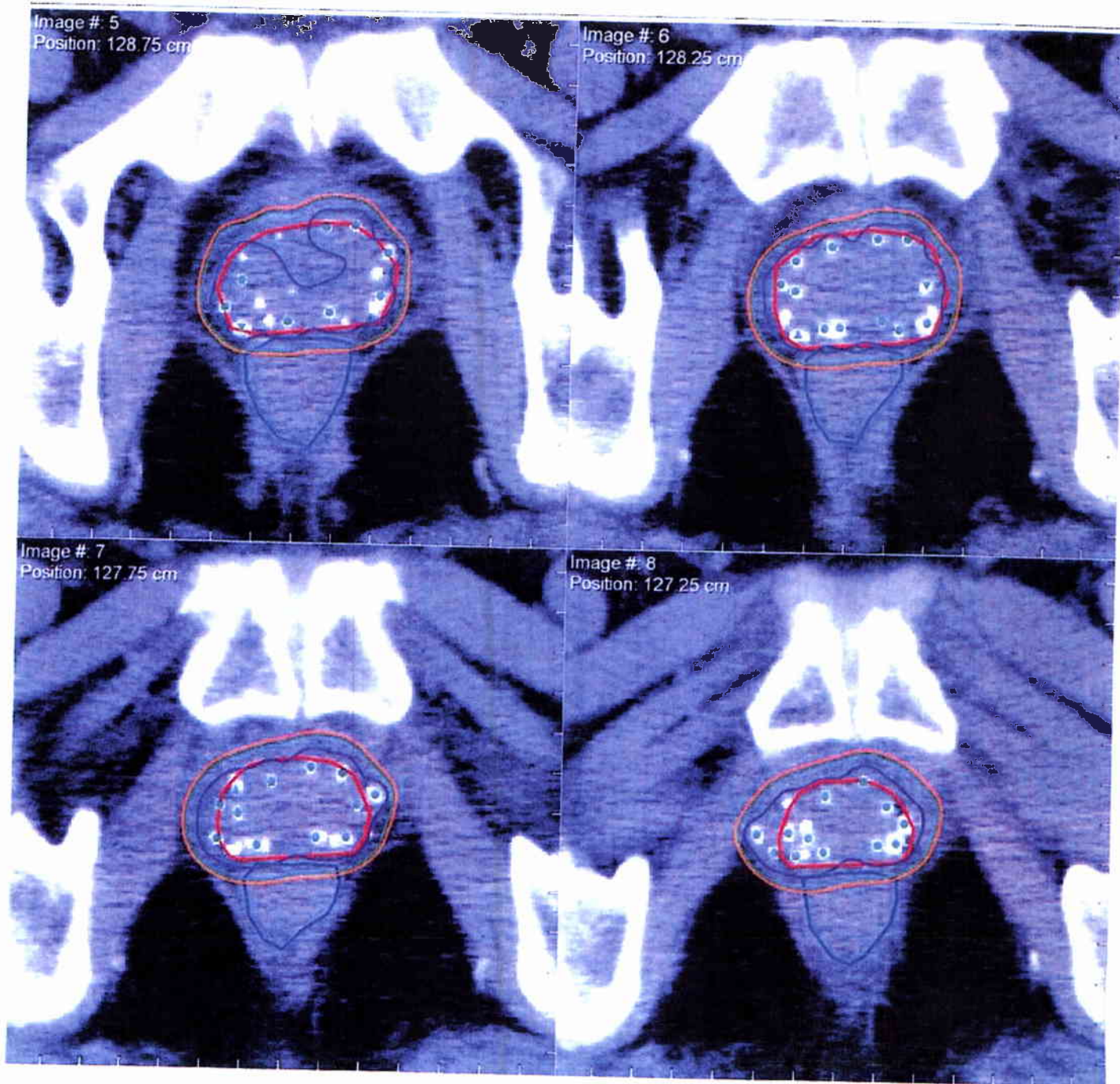
VariSeed: Therapy Visualization Report [Page 3]

Medical Physics Services 1210 - 1 - 12/15/2008 7:38:25 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 13	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 77 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 36.267 U [28.557 mCi]
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	

Isodose Legend Gy (% of Prescription Dose)	217.50 [150.00%]	130.50 [90.00%]
	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



W:1

VariSeed: Therapy Visualization Report [Page 4]

Medical Physics Services 1210 1 12/15/2008 7:38:25 PM

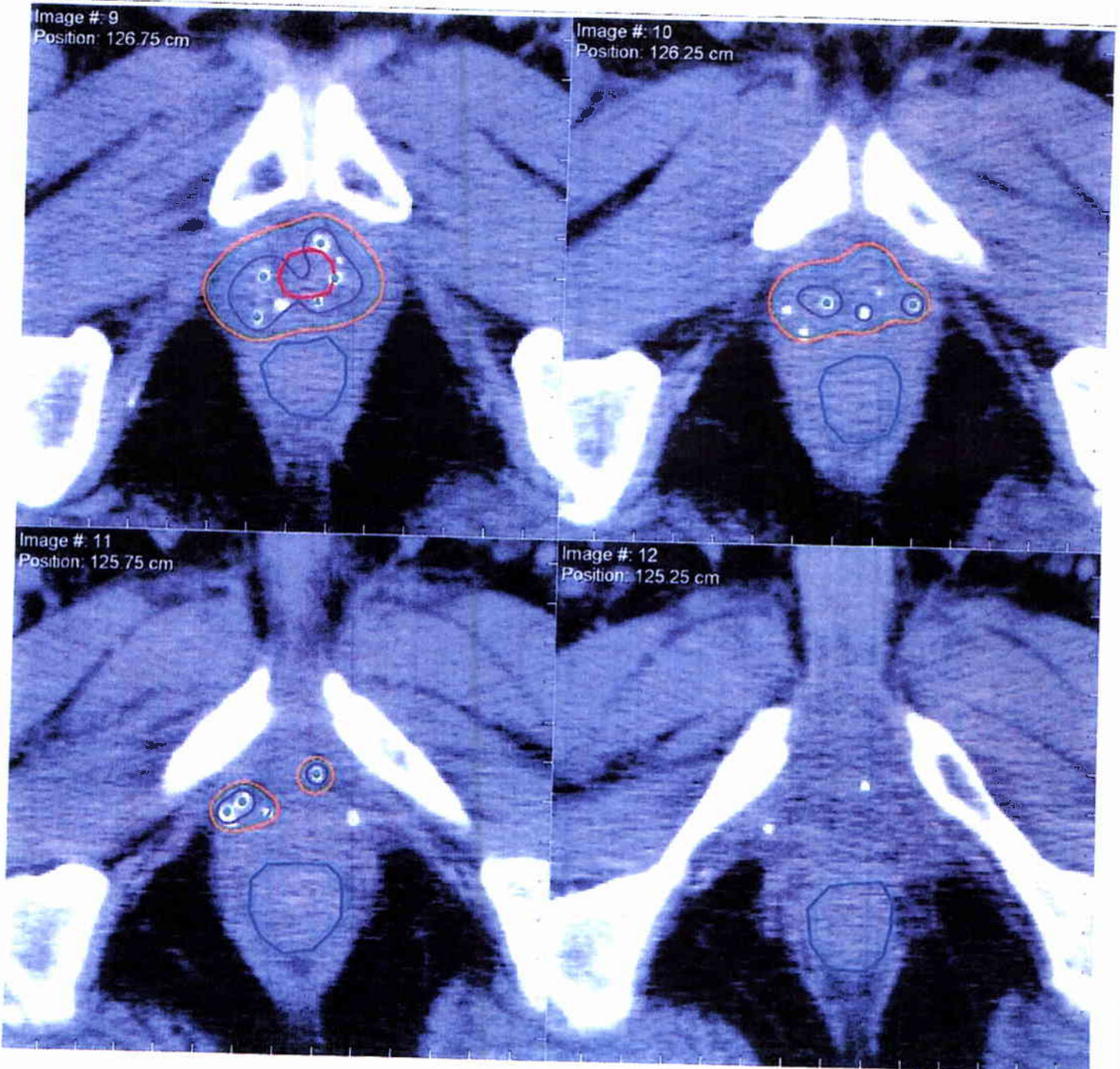
Name: [REDACTED]	Study: PostPlan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 13	Sources: 77
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	Anisotropy: Factors (Point Model)
		Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 36.267 U [28.557 mCi]

Isodose Legend
Gy [% of Prescription Dose]

	217.50 [150.00%]		130.50 [90.00%]
	145.00 [100.00%]		

Anatomy/Landmark Legend

	Prostate (CTV)		Rectum
---	----------------	---	--------



Wil

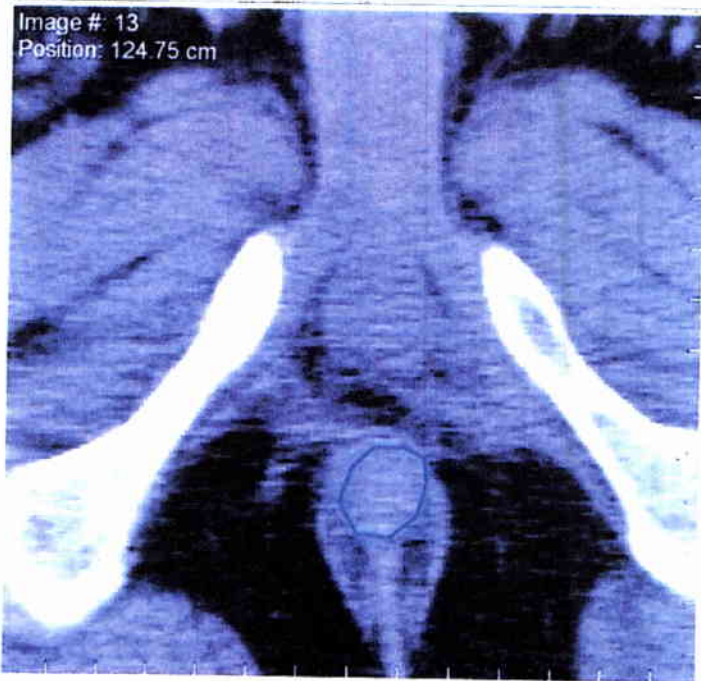
VariSeed: Therapy Visualization Report [Page 5]

Medical Physics Services 1210 1 12/15/2008 7:38:25 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: PostPlan Variation: Default Images: 13	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 77 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 36.267 U [28.557 mCi]
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	

Isodose Legend	217.50 [150.00%]	130.50 [90.00%]
Gy [% of Prescription Dose]	145.00 [100.00%]	

Anatomy/Landmark Legend	Prostate (CTV)	Rectum
-------------------------	----------------	--------



m

Procedure for Written Directives

The following procedure for Written Directives must be followed to satisfy the requirements of 10 NRC 35.40 and 35.41.

1) At least two types of patient identification must be examined in the operating room directly prior to the surgical procedure.

Acceptable forms of identification:

- Patient Name
- ID Bracelet
- ID Card
- Social Security Number
- Signature
- Birth Date
- Address

2) To ensure successful treatment, the administration must be in accordance with the treatment plan and the Written Directive. Therefore:

- The treatment plan shall be approved (signed and dated) by the Authorized User Physician.
- The patient shall be properly identified prior to the surgical procedure using two methods.
- The patient name, treatment site, radionuclide, dose, and correct number of seeds shall be documented in the Written Directive which is to be signed and dated by the Authorized User Physician.
- The needle number, retraction depth, hole location, and number of seeds shall be read aloud by someone other than the physician during the procedure.

3) Manual and computer-generated dose calculations shall be verified to ensure accuracy for therapy-related computer systems and software to satisfy the requirements of NRC 35.457. These acceptance tests must include verification of:

- The source-specific input parameters required by the dose calculation algorithm.
- The accuracy of dose, dwell time, and treatment time calculations at representative points.
- The accuracy of isodose plots and graphic displays
- The accuracy of the software used to determine sealed source positions from radiographic images.

4) Be aware of NRC 35.3045 describing what constitutes a Medical Event and the procedure to follow if such an event occurs.

5) A copy of the procedures will be retained by the Veterans Affairs Medical Center as required under paragraph (a) in accordance with NRC 35.2041.

Wil

RADIATION ONCOLOGY ASSOCIATES VA MEDICAL CENTER QUALITY MANAGEMENT PROGRAM I-125 or Pd-103 SEED THERAPY WRITTEN DIRECTIVE TREATMENT PLAN	
R.D. Miercort, M.D. G.E. Campbell, M.D. B. L. Hummer, M.D. Jennifer Sutton, M.D. Jonathan S. Tay, M.D.	
DATE:	Tuesday, September 04, 2007
PATIENT NAME:	[REDACTED]
RADIOACTIVE MATERIAL:	I-125 (STM 1251) [NIST 99] BARD
TREATMENT SITE:	<u>PROSTATE</u>
PRESCRIBED DOSE:	145 Gy
	0.371 mCi/seed
NUMBER OF SEEDS:	84
TOTAL SOURCE STRENGTH:	31.164 mCi
Signed: _____	Date: <u>9/5/07</u>
PATIENT IDENTIFICATION (USE TWO METHODS)	
Patient Name _____ Social Security Number _____ Signature _____ ID Card _____	Birthdate _____ Address _____ ID Bracelet _____ Other _____
Administered by: _____	Date: <u>9/5/07</u>
WASTE DISPOSAL - ROOM SURVEY	
CONDUCTED BY: _____	Date: <u>9/17/07</u>
TOTAL NUMBER OF SOURCES IMPLANTED:	<u>78</u>
NOTE:	<i>1 Seed + 10 sources + 1 CA = 25 seeds</i>

Wil

Operating Room: Patient Name: [REDACTED]
Patient ID #: [REDACTED]

Pre-Procedure

- Identify Patient by two means of ID: Name - ID Bracelet - ID Card - SS Number
Signature - Birth Date - Address
- Verify Written Directive
- Verify the Correct Number and Batch of Seeds (if possible)

Ensure the following are in the Operating Room:

- 1) Lead Container for Loose Seeds
- 2) Tweezers
- 3) Survey Meter for Room
- 4) Survey Meter for Patients
- 5) Pre-loaded Seeds
- 6) Written Directives Part I and II
- 7) Physicians' Radiation Badges
- 8) Ultra-sound Pictures from Volume Study

Post-Procedure (NRC # 35.2404)

____ Survey People in Operating Room (linens, trash, etc.)

____ Survey Patient - IMPORTANT: Patient Survey must show less than 1 mR/hr at 1 meter. If greater than 1 mR/hr, immediately call Radiation Safety Officer and Do Not release the patient from the hospital until approved by the RSO. See NRC 35.75.

____ Survey Operating Room
Note Total Number of Loose Seeds Recovered: _____

____ Complete the following (Part II of Written Directive):

- 1) Radionuclide I-125
- 2) Treatment Site Prostate
- 3) Number of Sources 54
- 4) Total Source Strength 7 28.928 mCi
- 5) Exposure Time PERMANENT

[Signature]
Signature of Authorized User Physician

9/13/07
Date

Wil

Prostate Seed Implant Patient Checklist

This checklist is to ensure all procedures conform to the Nuclear Regulatory Commission's requirements for prostate seed implants and handling of associated radioactive materials.

- Please check the following when completed:**
- Patient Name/ID # on this and next pages
 - Volume Study
 - Treatment Plan
 - Approval of Treatment Plan by Authorized User Physician (Signed and Dated)
 - Seeds Ordered
- Patient Name: [REDACTED]
 Patient ID #: [REDACTED]

Part I of Written Directive Includes (10 CFR 35.41):

- Patient Name
- Second Form of Identification
- Treatment Site
- Radionuclide
- Dose
- Signed by Authorized User Physician
- Dated by Authorized User Physician

* Retain a copy of this Written Directive in accordance with NRC 35.2040. Note: If, because of an emergent nature of a patient's condition, an oral directive is acceptable if followed by a written directive within 48 hours of the oral directive (NRC 35.40).

Arrival of Seeds:

- 1) Date of Arrival: 9/12/07
- 2) Time of Arrival: 10:00 am
- 3) Received By: [Signature] Department: Rad Med
- 4) Survey of Package to be completed within 3 working hours (i.e. hours between 8:00 am and 5:00 pm) of delivery.
 Survey Time: 12:00 Survey Date: 9/12/07

Through measurements or manufacture documentation, complete the following:

- 1) Source Activity: 31.147
- 2) Correct the source activity determined above for physical decay at intervals consistent with 1 percent physical decay: 31.147 for procedure date 9/13/07
- 3) Do the source positions within the applicators agree with the Needle Loading Report?

Seed Location Log

User	Date & Time	Transfer From	Transfer To	# of seeds trans.
[Signature]	9/13/07 7:00	Rad Med	CR	84
[Signature]	9/13/07 12:00	CR	Rad Med	6

Wil

VariSeed: Study Summary Report [Page 1]

Medical Physics Services 1210 · 1 9/4/2007 6:46:23 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 78
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 36.738 U [28.928 mCi]

Study Type: Pre-Op
Notes: Pt has had no EBRT
I-125 to 145 Gy

Dose Information

Urethra: N/A

Rectum:

Total Volume:	12.80 cc	
V100:	0.25 cc	[1.98%]
V75:	1.96 cc	[15.30%]
V50:	6.19 cc	[48.40%]

PTV:

Total Volume:	47.90 cc	
V150:	22.82 cc	[47.65%]
V100:	46.35 cc	[96.76%]
V90:	47.37 cc	[98.90%]
V80:	47.77 cc	[99.73%]
D90:	166.71 Gy	[114.97%]

Prostate (CTV):

Total Volume:	36.68 cc	
V150:	20.37 cc	[55.53%]
V100:	36.46 cc	[99.40%]
V90:	36.64 cc	[99.89%]
V80:	36.68 cc	[100.00%]
D90:	181.51 Gy	[125.18%]

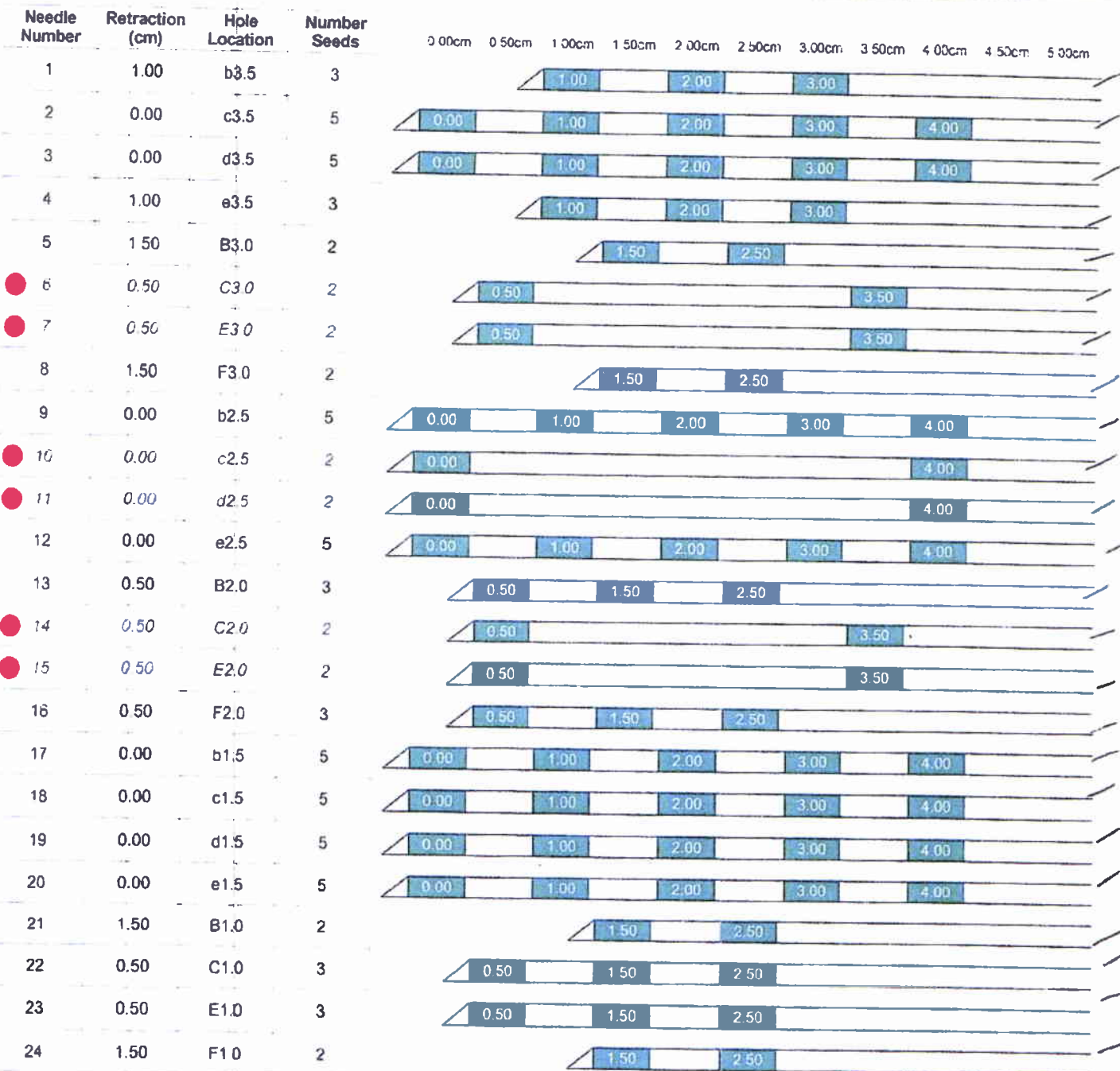
Handwritten signature

Wil

VariSeed: Needle Loading Report [Page 3]

Medical Physics Services · 1210 1 9/4/2007 6:46:23 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 78
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 36.738 U [28.928 mCi]



● = Special loading

0.00cm 0.50cm 1.00cm 1.50cm 2.00cm 2.50cm 3.00cm 3.50cm 4.00cm 4.50cm 5.00cm

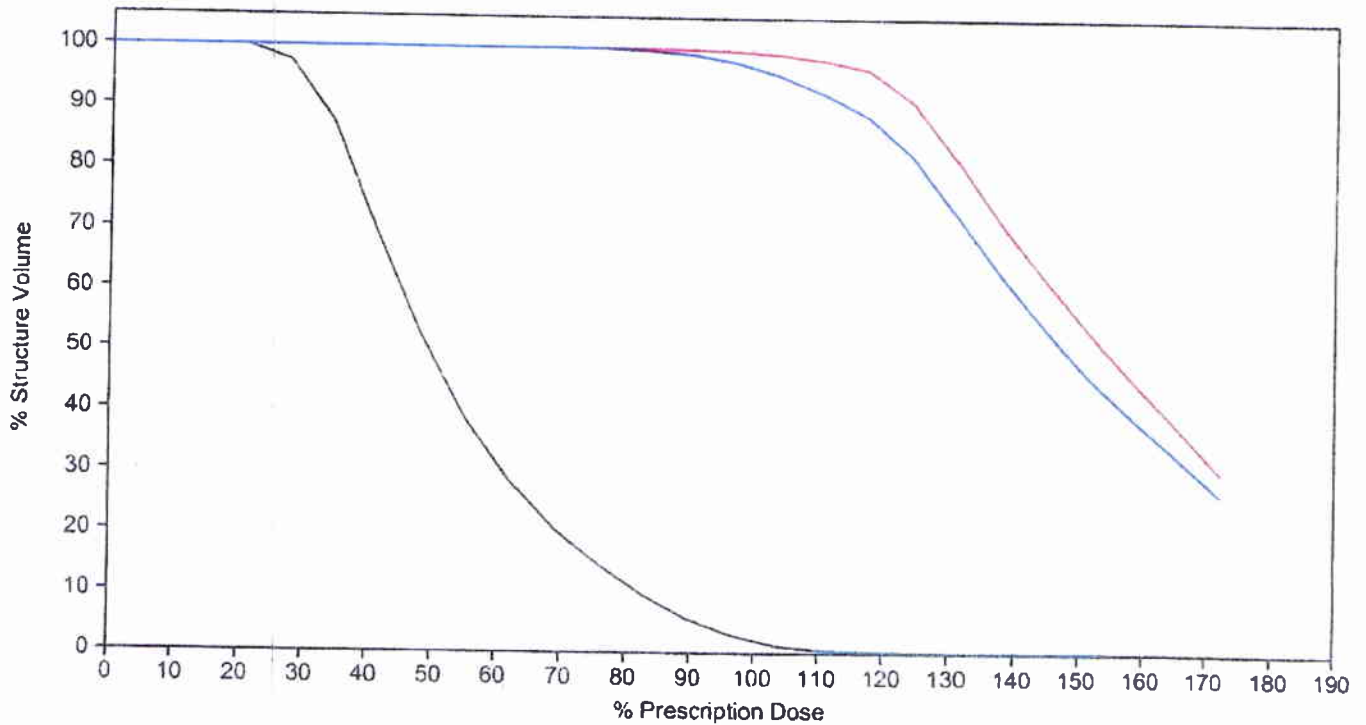
Wil

VariSeed: DVH Report [Page 4]

Medical Physics Services 1210 1 9/4/2007 6:46:23 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 78
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 36.738 U [28.928 mCi]

Cumulative DVH



— Prostate (CTV) — Rectum
— PTV

Cumulative DVH

Dose		Prostate (CTV)		Rectum		PTV	
Gy	%	cc	%	cc	%	cc	%
0.00	0.00	36.68	100.00	12.80	100.00	47.90	100.00
10.00	6.90	36.68	100.00	12.80	100.00	47.90	100.00
20.00	13.79	36.68	100.00	12.80	100.00	47.90	100.00
30.00	20.69	36.68	100.00	12.80	99.99	47.90	100.00
40.00	27.59	36.68	100.00	12.47	97.43	47.90	100.00
50.00	34.48	36.68	100.00	11.16	87.17	47.90	100.00
60.00	41.38	36.68	100.00	8.84	69.06	47.90	100.00
70.00	48.28	36.68	100.00	6.67	52.07	47.90	100.00
80.00	55.17	36.68	100.00	4.94	38.63	47.90	100.00
90.00	62.07	36.68	100.00	3.64	28.46	47.90	100.00

Wil

VariSeed: DVH Report [Page 5]

Medical Physics Services 1210 1 - 9/4/2007 6:46:23 PM

Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment:
Dept. ID: VA	Images: 11	Sources: 78
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 36.738 U [28.928 mCi]

Cumulative DVH

Dose		Prostate (CTV)		Rectum		PTV	
Gy	%	cc	%	cc	%	cc	%
100.00	68.97	36.68	100.00	2.63	20.57	47.90	100.00
110.00	75.86	36.68	100.00	1.88	14.67	47.85	99.90
120.00	82.76	36.67	99.99	1.24	9.71	47.70	99.59
130.00	89.66	36.64	99.90	0.73	5.72	47.40	98.96
140.00	96.55	36.55	99.64	0.38	2.97	46.79	97.68
150.00	103.45	36.35	99.10	0.16	1.24	45.76	95.53
160.00	110.34	36.01	98.19	0.06	0.49	44.30	92.48
170.00	117.24	35.45	96.65	0.04	0.28	42.51	88.75
180.00	124.14	33.48	91.27	0.02	0.19	39.41	82.28
190.00	131.03	29.97	81.71	0.02	0.13	34.84	72.74
200.00	137.93	26.15	71.29	0.01	0.09	29.95	62.53
210.00	144.83	22.77	62.09	0.01	0.06	25.73	53.72
220.00	151.72	19.56	53.33	0.00	0.04	21.94	45.80
230.00	158.62	16.61	45.30	0.00	0.03	18.68	39.00
240.00	165.52	13.88	37.84	0.00	0.02	15.69	32.76
250.00	172.41	11.03	30.08	0.00	0.01	12.63	26.38

Wil

VariSeed: Therapy Visualization Report [Page 6]

Medical Physics Services 1210 1 9/4/2007 6:46:23 PM

Name: [REDACTED]	Study: Preplan Variation: Default Images: 11 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 78 Anisotropy: Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 36.738 U [28.928 mCi]
PID: [REDACTED]		
Dept. ID: VA		
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	

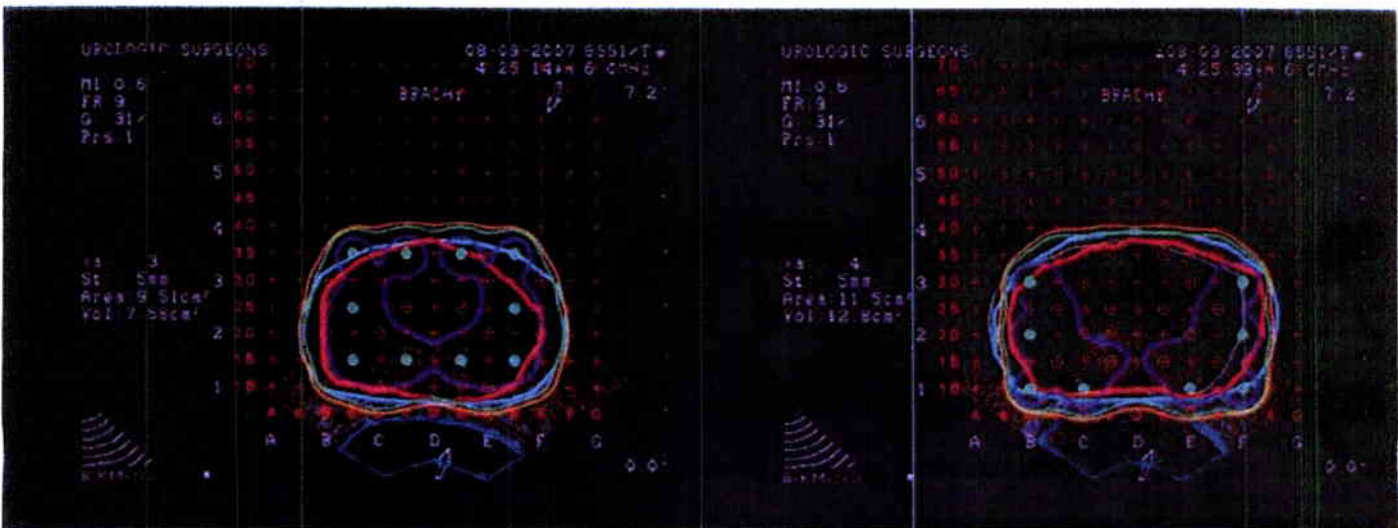
Isodose Legend

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Gy [% of Prescription Dose]

Anatomy/Landmark Legend

Prostate (CTV)	Rectum	PTV
----------------	--------	-----



Wil

VariSeed: Therapy Visualization Report [Page 7]

Medical Physics Services - 1210 1 9/4/2007 6:46:23 PM

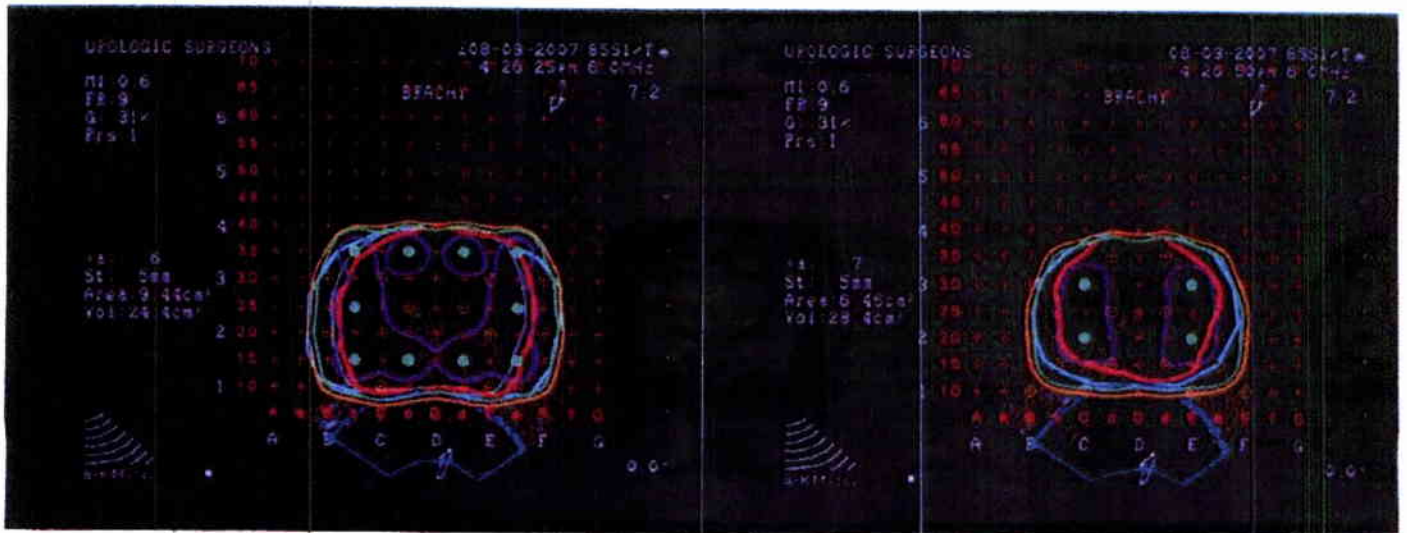
Name: [REDACTED]	Study: Preplan	Source: I-125 (STM 1251) [NIST 99]
PID: [REDACTED]	Variation: Default	Comment
Dept. ID: VA	Images: 11	Sources: 78
	Template: B & K Standard	Anisotropy: Factors (Point Model)
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	Source Activity: 0.471 U [0.371 mCi]
		Total Activity: 36.738 U [28.928 mCi]

Isodose Legend
Gy [% of Prescription Dose]

217.50 [150.00%]	130.50 [90.00%]
145.00 [100.00%]	

Anatomy/Landmark Legend

Prostate (CTV)	Rectum	PTV
----------------	--------	-----



VariSeed: Therapy Visualization Report [Page 8]

Medical Physics Services - 1210 1 - 9/4/2007 6:46:23 PM

Name: [REDACTED] PID: [REDACTED] Dept. ID: VA	Study: Preplan Variation: Default Images: 11 Template: B & K Standard	Source: I-125 (STM 1251) [NIST 99] Comment: Sources: 78 Anisotropy Factors (Point Model) Source Activity: 0.471 U [0.371 mCi] Total Activity: 36.738 U [28.928 mCi]
Procedure Date: 9/13/2007	Prescription Dose: 145.0 Gy	

Isodose Legend
Gy [% of Prescription Dose]



Anatomy/Landmark Legend

