

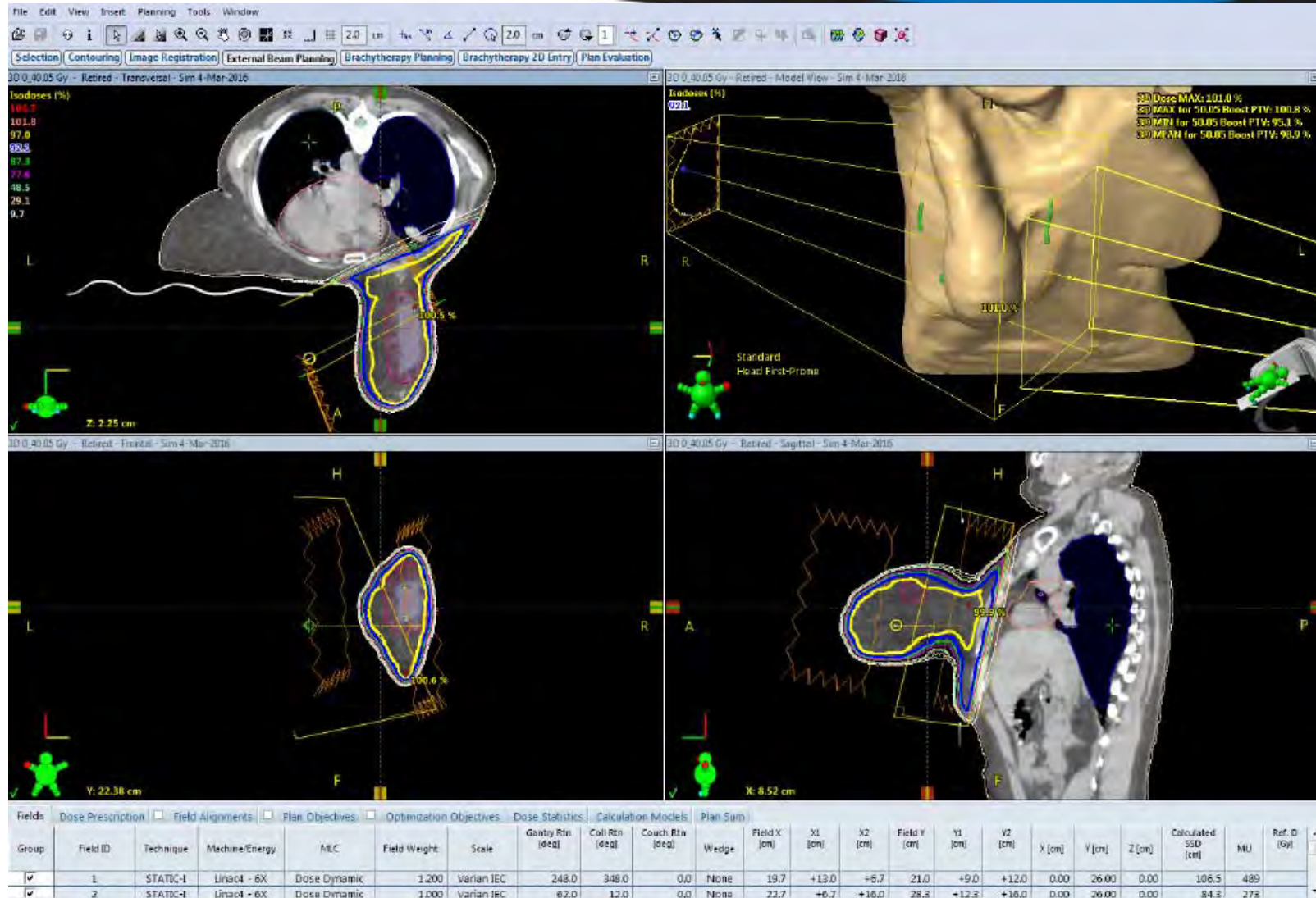


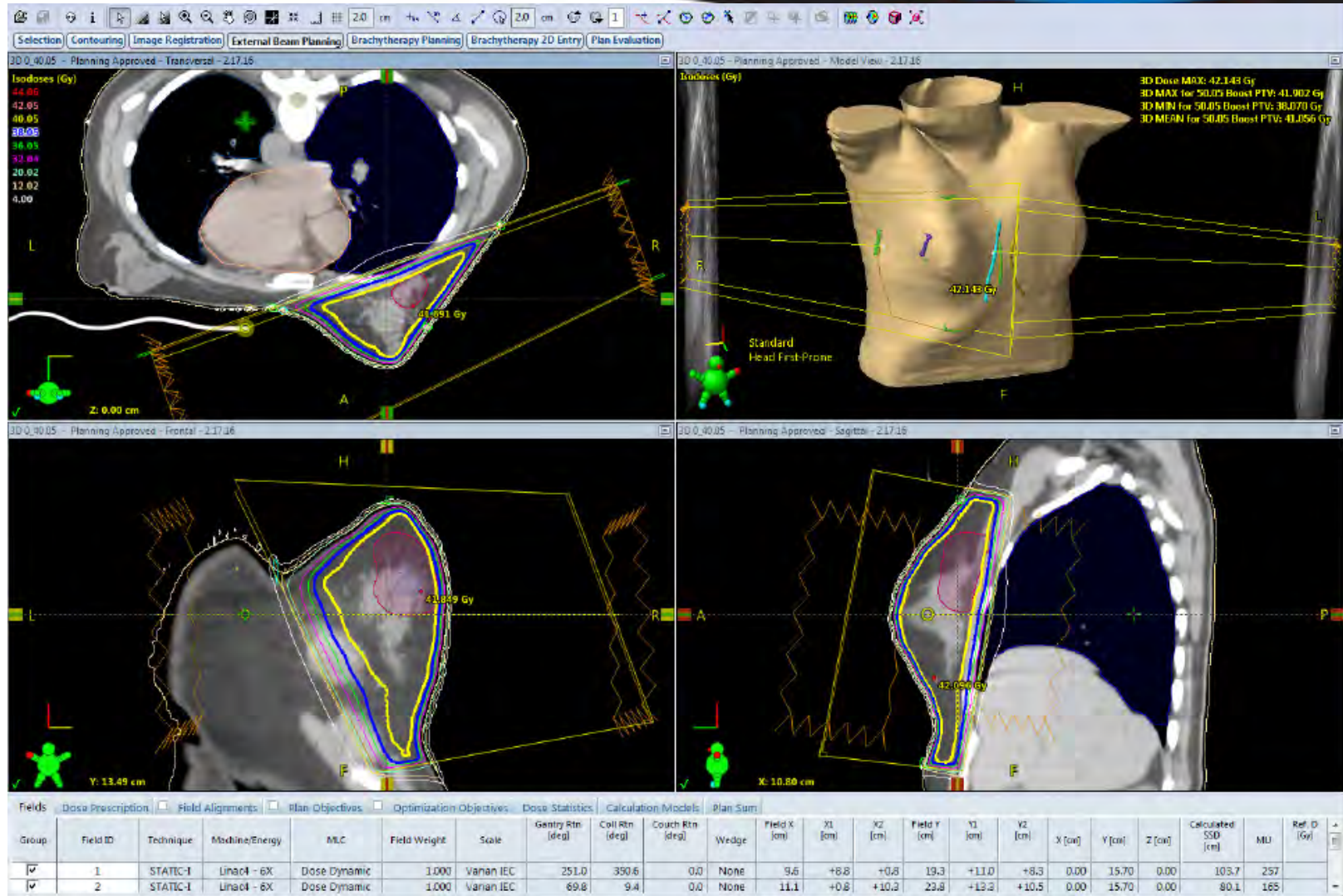
## Prone Breast – Comp What?

Rachel A. Hackett CMD, RTT

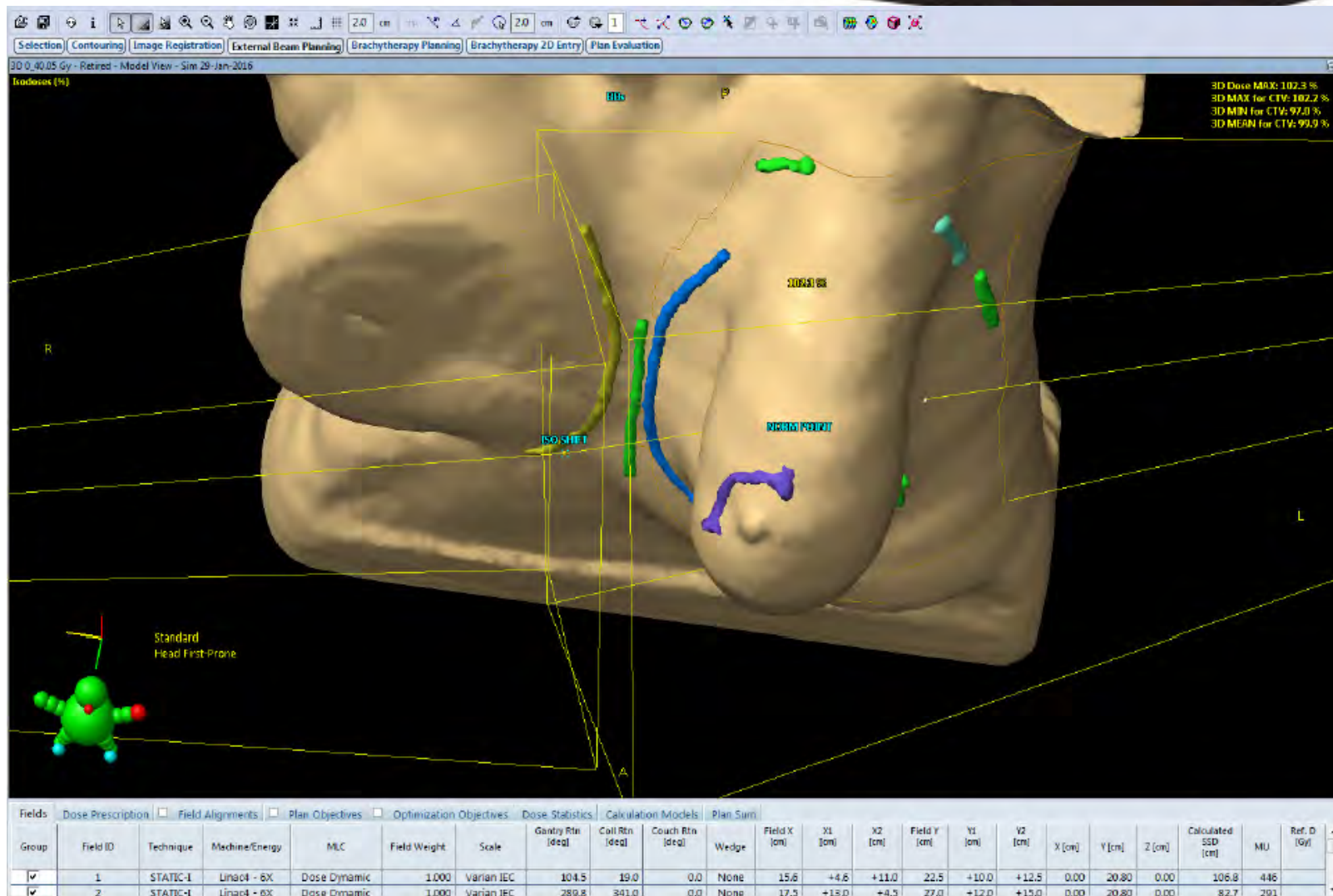


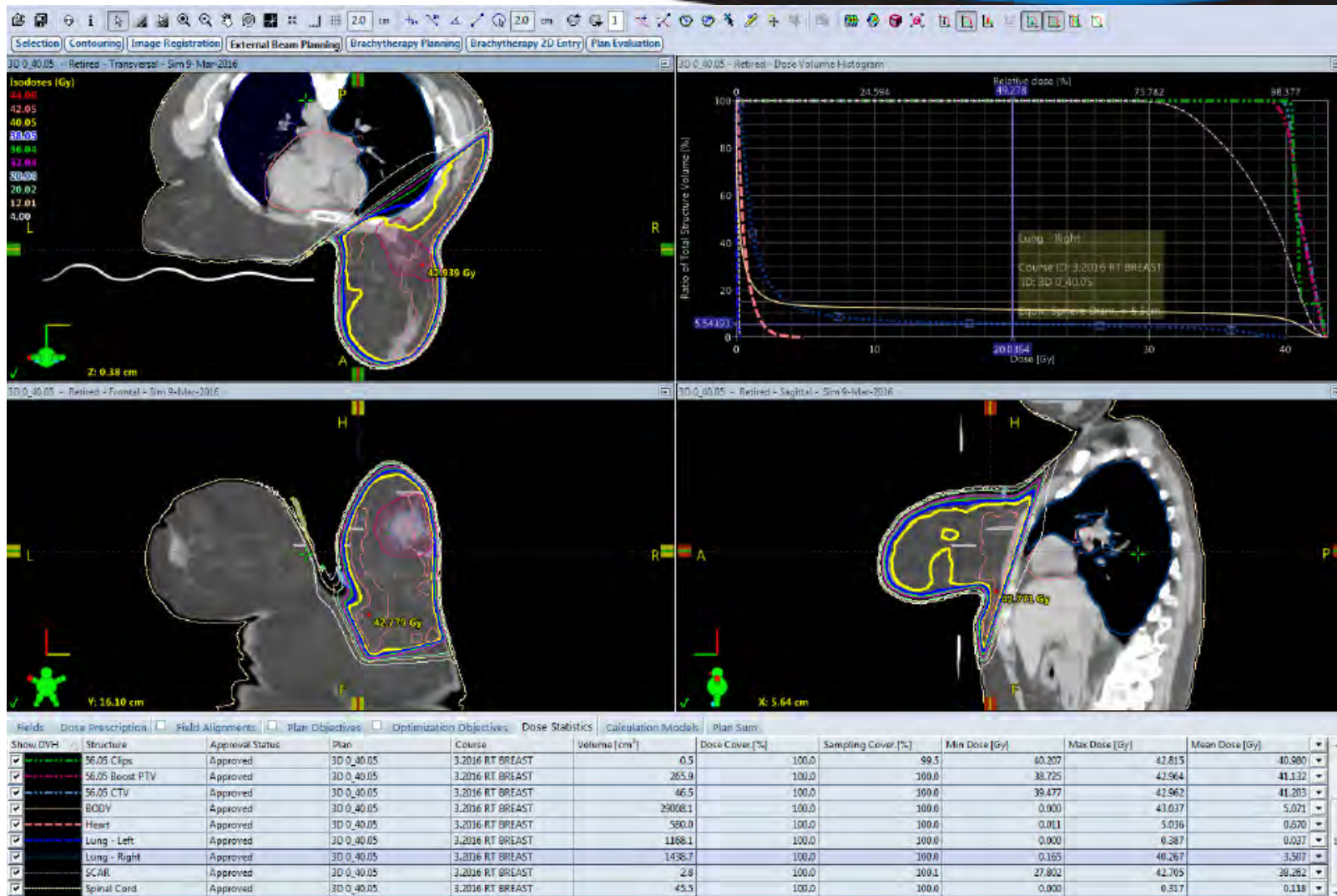
- Disclosures
- Examples of prone cases
  - Lung dose
  - Heart dose
  - General look of the dose
- Case study

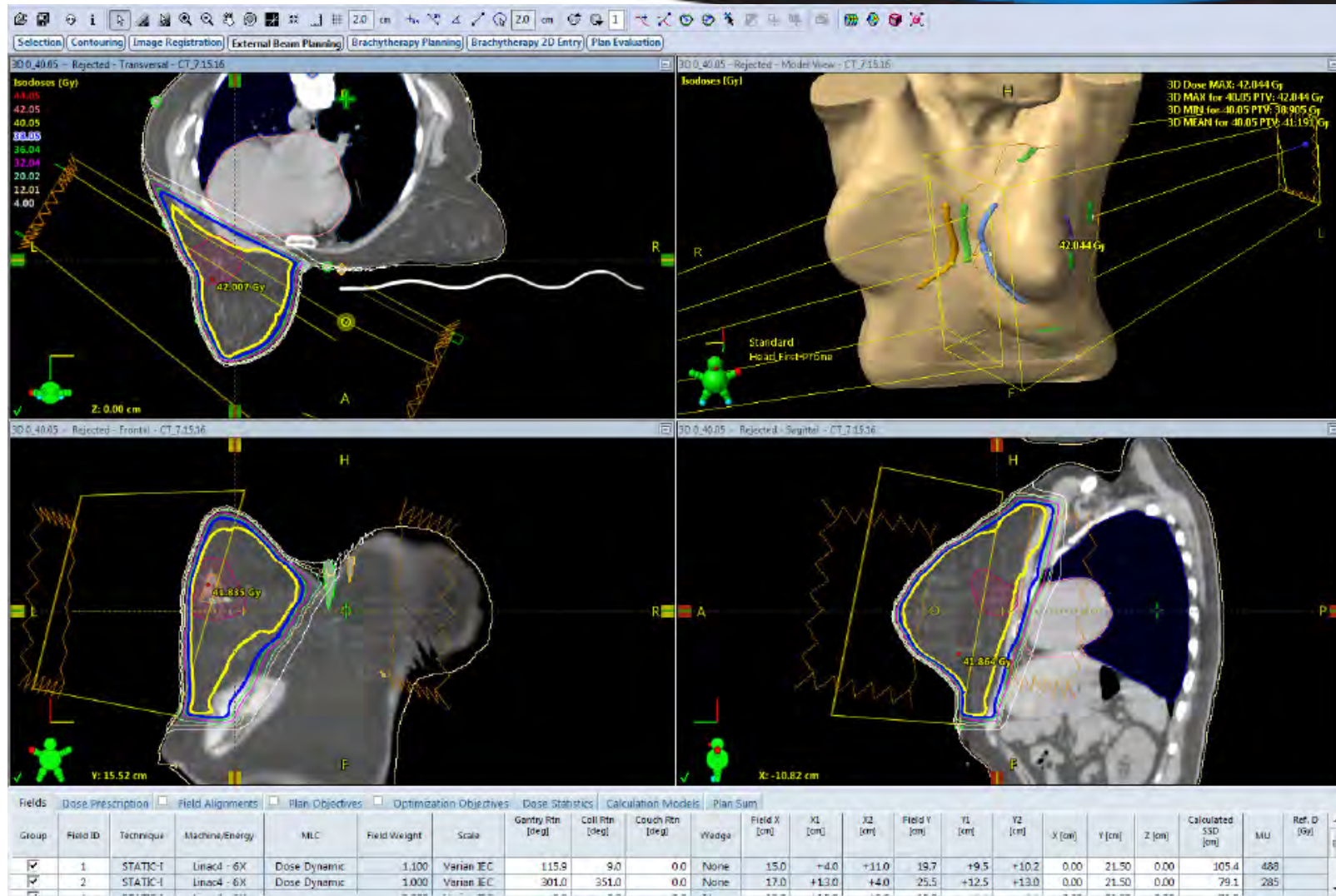


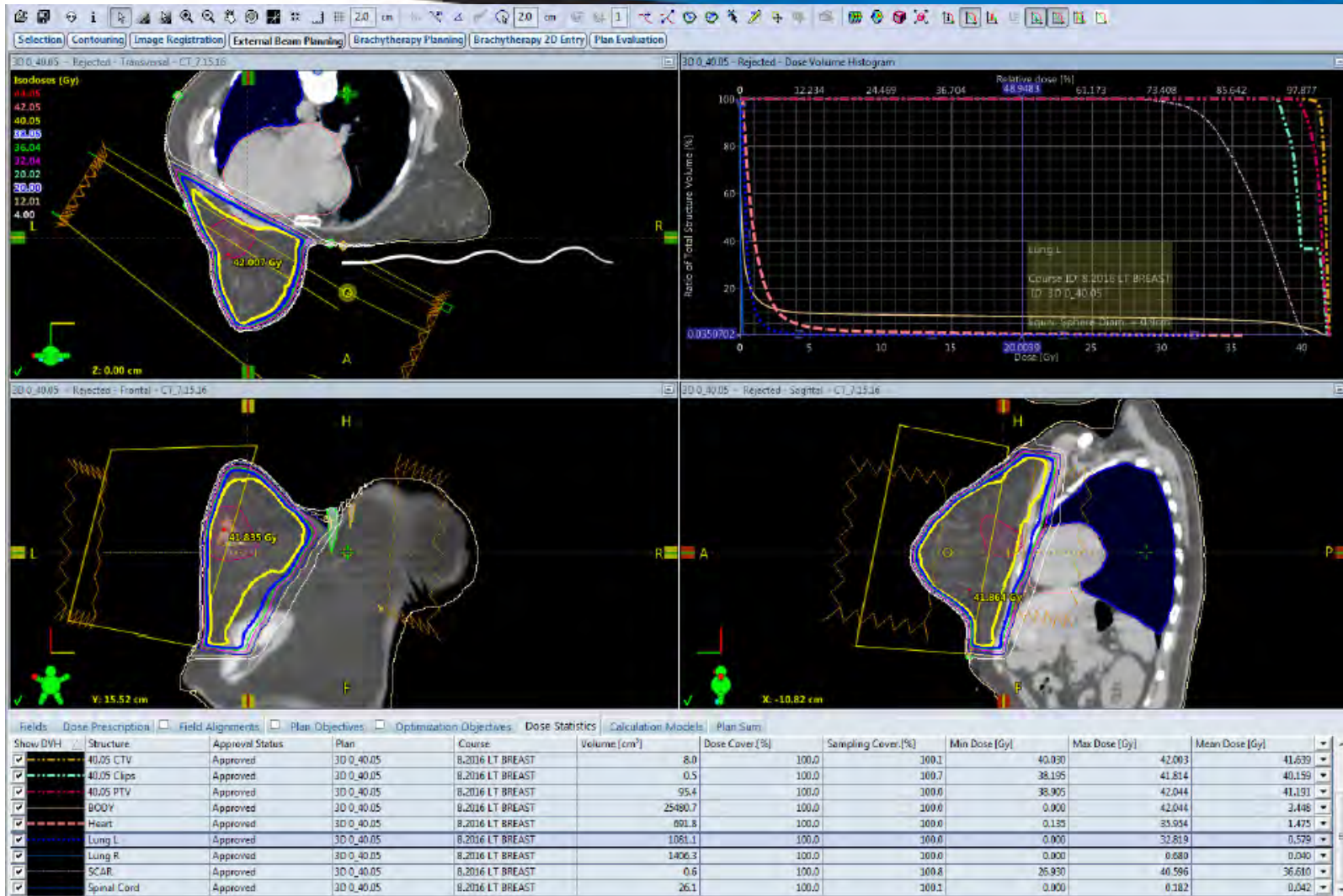


# Bad Swipe?











# Electronic Compensators - “eComp”

## About Electronic Compensators

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An electronic compensator is a field modifier implemented by means of a Dynamic MLC (DMLC) that replaces a mechanical compensator. Electronic compensators can speed up the treatment, and also reduce skin dose, since they do not expose the patient to electron contamination from the compensator material or fixed wedge filters. Moreover, electronic compensation does not require the high overhead in production that is present in mechanical compensators, and multi-beam treatments are much faster because there is no need to install a different physical compensator before each treatment beam.

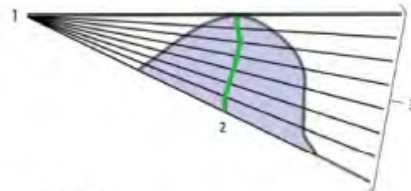
# Irregular Surface Compensator

## Irregular Surface Compensators

Irregular surface compensator is an electronic compensator designed for treating a curved compensation surface as opposed to a straight compensation plane in traditional physical compensators and normal electronic compensators.

Using a curved compensation surface provides better dose distributions in cases where the shape of the target volume is rounded, such as breast treatments. In breast cases, traditional compensators often create hot spots in the base of the breast near the skin, but this can be avoided with irregular surface compensation.

The shape of the irregular compensation surface is always specific to the shape of each patient's body outline. The position of the desired irregular compensation surface is defined by specifying the desired penetration depth. The penetration depth is the percentage of the penetration of the radiation along each fanline ray through the patient; calculated as path length = exit point - entry point. The penetration depth range is 0-100%, where 0% = entry point; 100% = exit point. A penetration depth of 50% creates a compensation surface that represents the mid-point of every ray. The figure shows schematically what the irregular compensation surface would look like for a curved structure, using penetration depth of 50%.



1. Radiation focus
2. Path of the irregular compensation surface, 50% penetration depth
3. Fanline rays

### Penetration Depths, Medial 50% Penetration

The use of different penetration percentages affects the fluence. The larger the penetration depth percentage, the more fluence difference there will be between thin and thick parts of the patient. A value close to but smaller than 50% works well for breast cases.

#### Note:

An irregular surface compensator does not apply any skin flash to the generated fluence. If necessary, you can apply additional skin flash to the fluence by using the Skin Flash tool.

The calculation of the irregular surface compensator is performed with the Dose Volume Optimizer algorithm using smoothing options. The result is an optimal fluence, which can be converted into an electronic compensator.

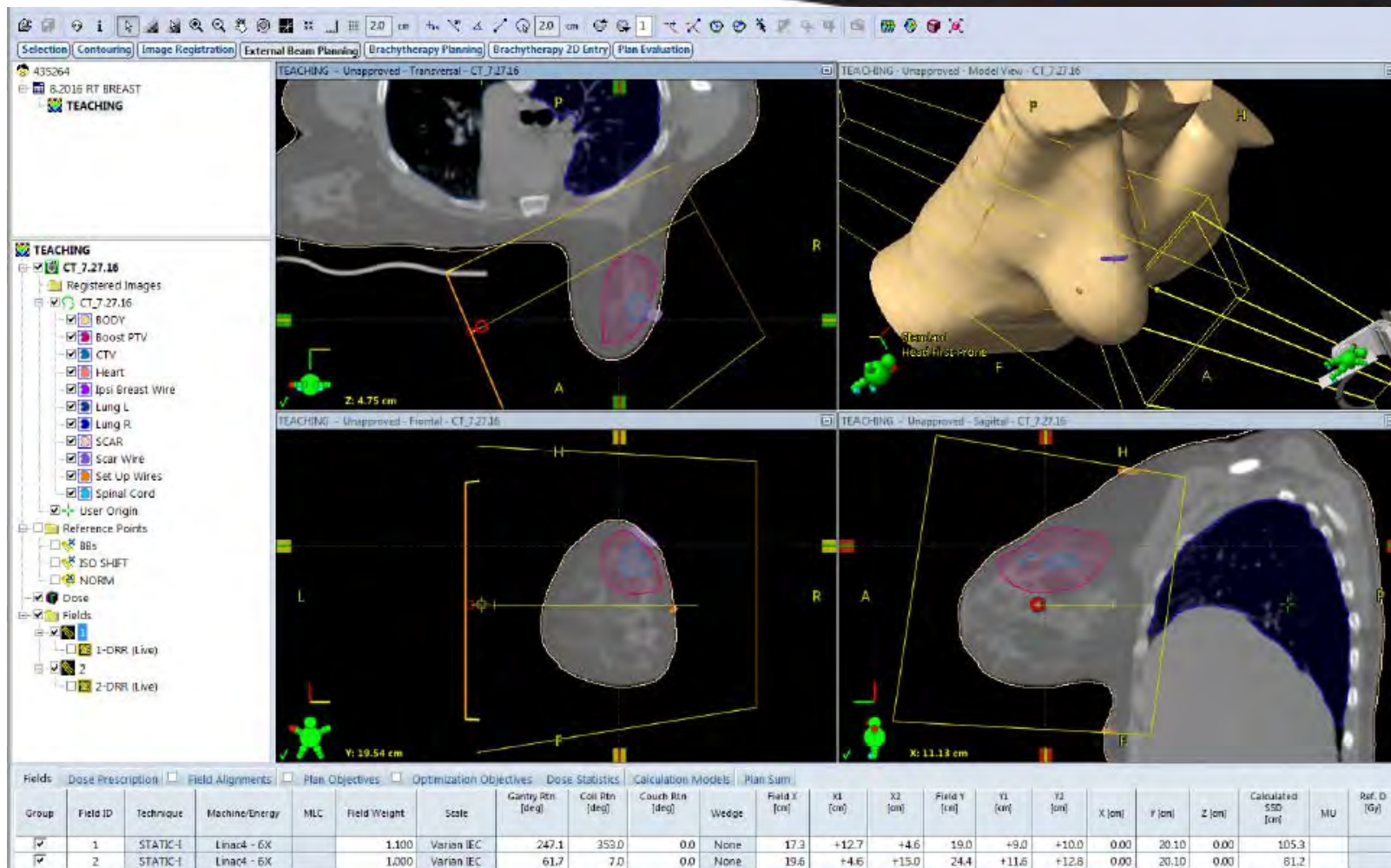
# Irregular Surface Compensator

## Add an Irregular Surface Compensator to a Field

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1. In the active plan, insert the necessary fields and field accessories.
2. If desired, calculate the dose distribution.
3. In the Focus window, right-click a field and choose **New Irregular Surface Compensator**.  
You are prompted to select the MLC device, if there are several of them configured to your system.
4. To specify the desired position of the irregular surface for the compensation along each fanline, type the penetration depth and click **OK**.  
  
The range of possible values is 0–100% penetration (0% = entry point, 100% = exit point). The default value is 50%.  
  
The irregular surface calculation is started. The fluence appears in the Focus window under the selected field.
5. Re-calculate the dose distribution.
6. Define the LMC settings.  
  
The leaf motions are calculated and MLCs appear under the fluence in the Focus window.

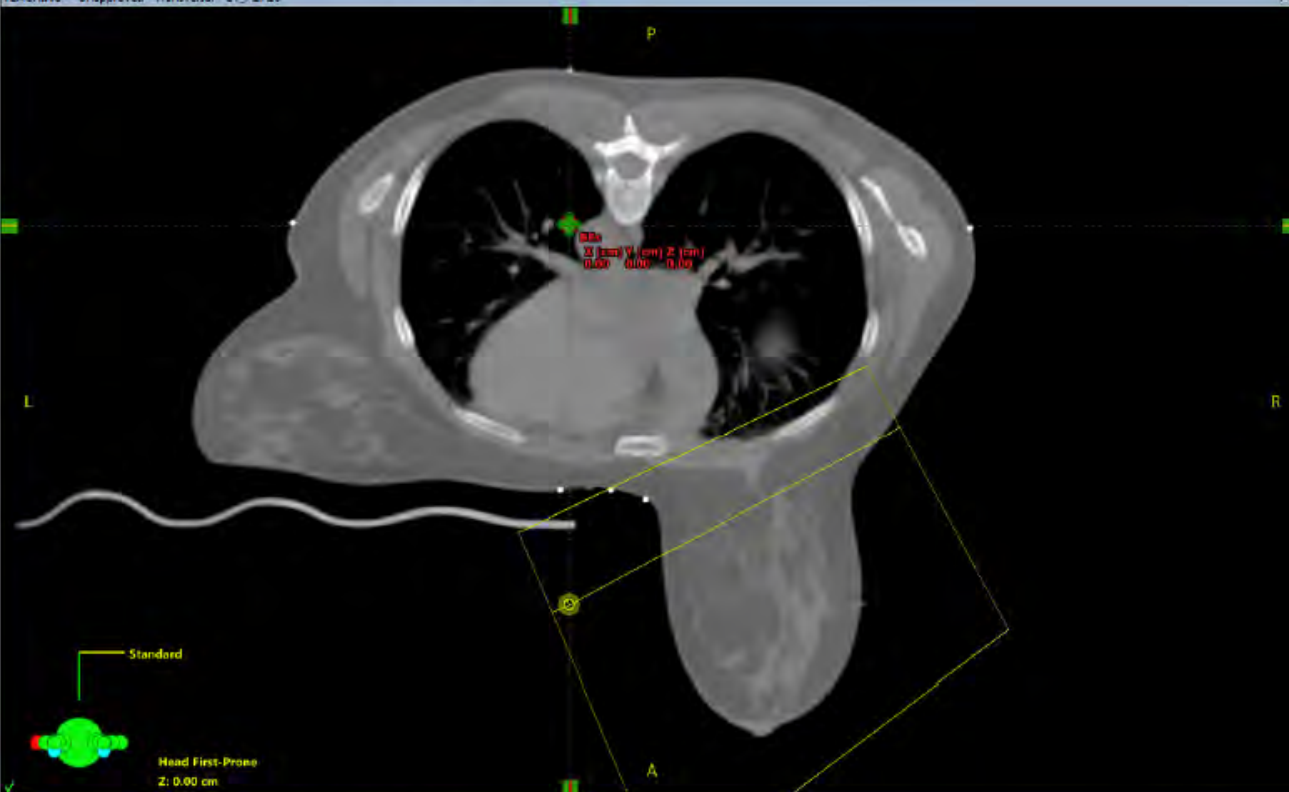
**Note:** An irregular surface compensator does not apply any skin flash to the generated fluence. If necessary, you can apply additional skin flash to the fluence by using the Skin Flash tool.



TEACHING - Unapproved - Transversal - CT\_7\_2716

435264  
8.2016 RT BREAST  
TEACHING

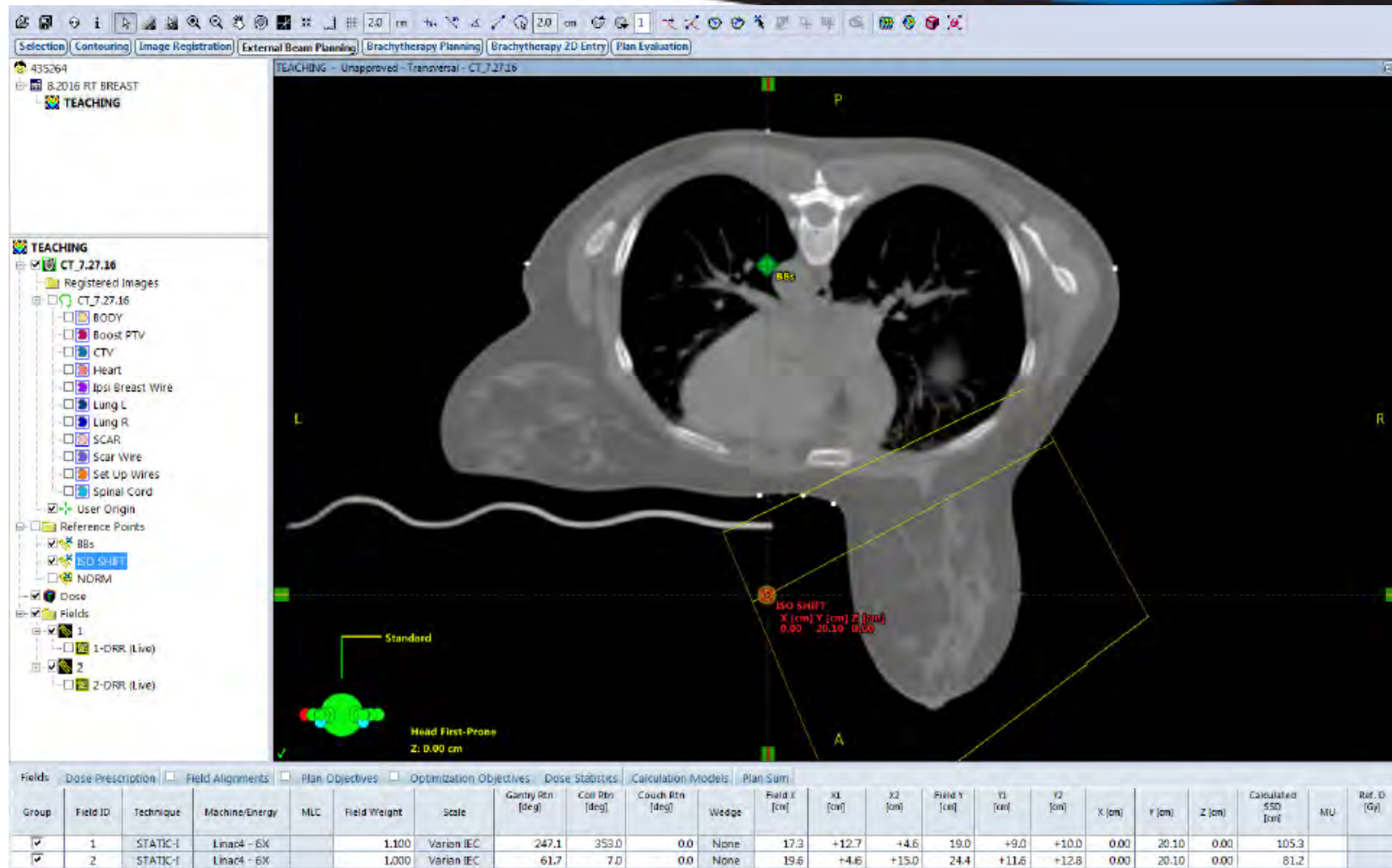
TEACHING  
CT\_7\_27.16  
Registered Images  
CT\_7\_27.16  
BODY  
Boost PTV  
CTV  
Heart  
Ipsi Breast Wire  
Lung L  
Lung R  
SCAR  
Scar Wire  
Set Up Wires  
Spinal Cord  
User Origin  
Reference Points  
BBs  
ISO SHIFT  
NORM  
Dose  
Fields  
1  
1-ORR (Live)  
2  
2-ORR (Live)



Standard  
Head First-Prone  
Z: 0.00 cm

Fields		Dose Prescription	Field Alignments	Plan Objectives	Optimization Objectives	Dose Statistics		Calculation Models		Plan Sum				Calculated SSD [cm]	MU	Ref. D [Gy]						
Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Ptn [deg]	Coll Ptn [deg]	Couch Ptn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]	Calculated SSD [cm]	MU	Ref. D [Gy]
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X		1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	61.2		

# Set Isocenter



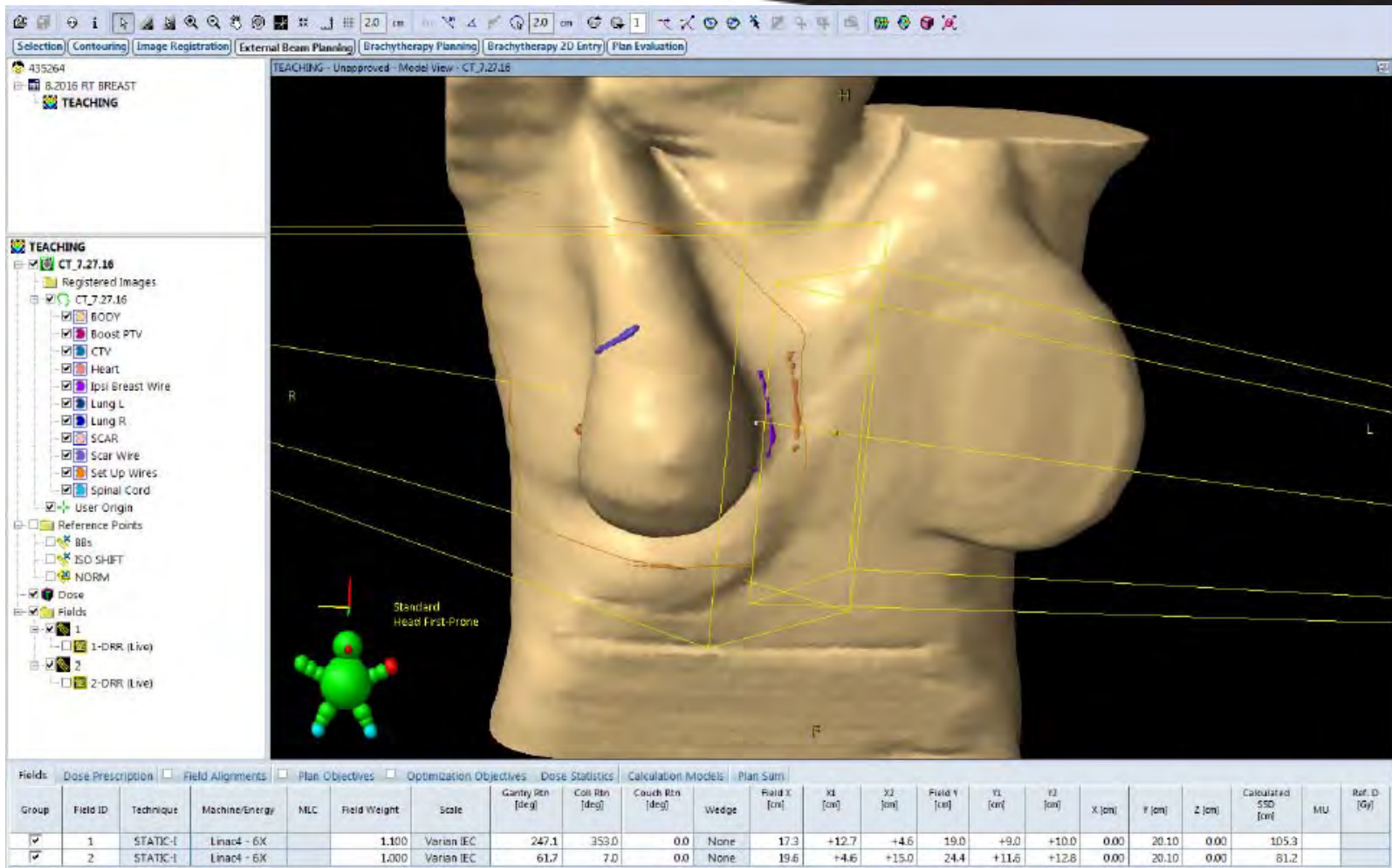
The screenshot shows a radiotherapy planning software interface. The main window displays a CT scan of a chest in a transversal view. A red dot indicates the isocenter, with a text box showing its coordinates: **ISO SHIFT**  
X [cm] Y [cm] Z [cm]  
0.00 20.10 0.00. A yellow box highlights the isocenter area. The left-hand tree view shows the following structure:

- TEACHING
  - CT\_7.27.16
    - Registered Images
      - CT\_7.27.16
        - BODY
        - Boost PTV
        - CTV
        - Heart
        - Ipsi Breast Wire
        - Lung L
        - Lung R
        - SCAR
        - Scar Wire
        - Set Up Wires
        - Spinal Cord
      - User Origin
    - Reference Points
      - Bbs
      - ISO SHIFT
      - NORM
    - Dose
    - Fields
      - 1
      - 1-DRR (Live)
      - 2
      - 2-DRR (Live)

At the bottom, there is a table with the following data:

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn [deg]	Coll Rtn [deg]	Couch Rtn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]	Calculated SSD [cm]	MU	Ref. D [Gy]
✓	1	STATIC-1	Linac4 - 6X		1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00		105.3	
✓	2	STATIC-1	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00		81.2	

# Check Beam Entrances on Skin



TEACHING - Unapproved - Model View - CT\_7.27.16

435264  
8.2016 RT BREAST  
TEACHING

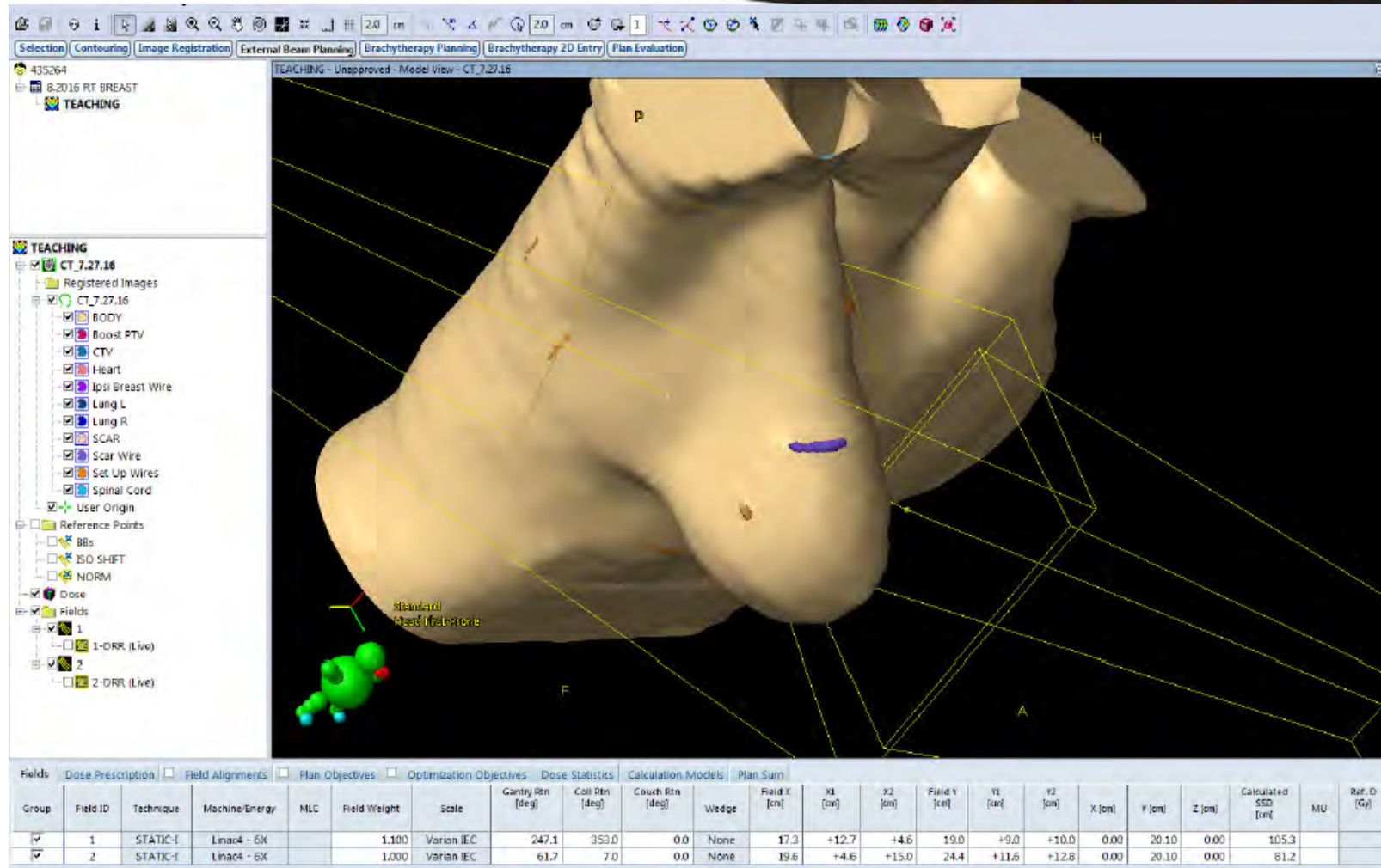
TEACHING

- CT\_7.27.16
  - Registered Images
    - CT\_7.27.16
      - BODY
      - Boost PTV
      - CTV
      - Heart
      - Ipsi Breast Wire
      - Lung L
      - Lung R
      - SCAR
      - Scar Wire
      - Set Up Wires
      - Spinal Cord
      - User Origin
    - Reference Points
      - BBs
      - ISO SHIFT
      - NORM
    - Dose
    - Fields
      - 1
        - 1-DRR (Live)
      - 2
        - 2-DRR (Live)

Standard Head First-Prone

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Canthy Bn [deg]	Coll Bn [deg]	Couch Bn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]	Calculated SSD [cm]	MU	Ref. D [Gy]
<input checked="" type="checkbox"/>	1	STATIC-I	Linac4 - 6X		1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-I	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		

# Check Beam Entrances on Skin



TEACHING - Unapproved - Model View - CT\_7.27.16

435264  
8.2016 RT BREAST  
TEACHING

TEACHING

- CT\_7.27.16
  - Registered Images
    - CT\_7.27.16
      - BODY
      - Boost PTV
      - CTV
      - Heart
      - Ipsi Breast Wire
      - Lung L
      - Lung R
      - SCAR
      - Scar Wire
      - Set Up Wires
      - Spinal Cord
    - User Origin
  - Reference Points
    - BBs
    - ISO SHIFT
    - NORM
  - Dose
    - Fields
      - 1
        - 1-DRR (Live)
      - 2
        - 2-DRR (Live)

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn [deg]	Coll Rtn [deg]	Couch Rtn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]	Calculated SSD [cm]	MU	Ref. D [Gy]
<input checked="" type="checkbox"/>	1	STATIC-I	Linac4 - 6X		1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-I	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		

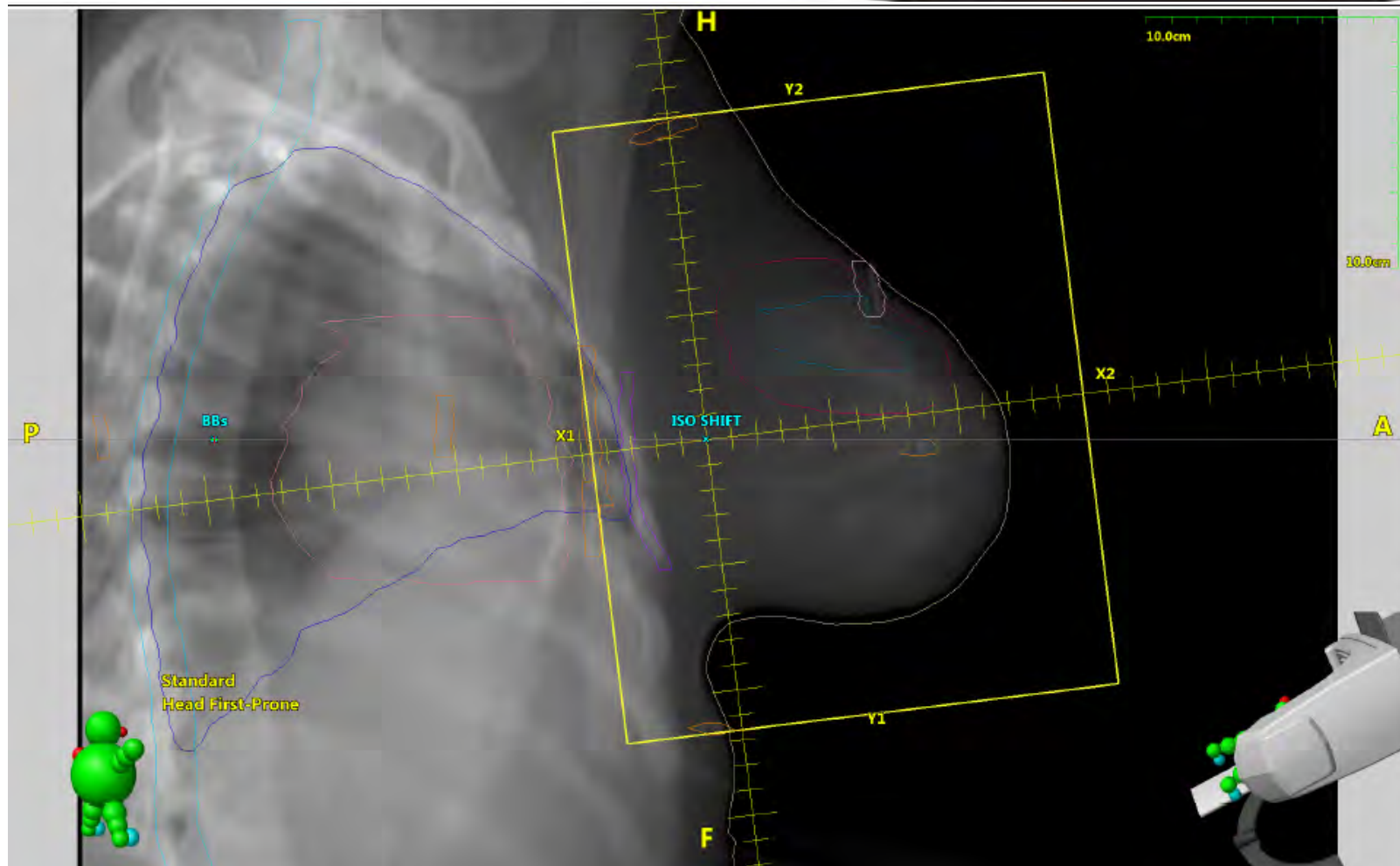




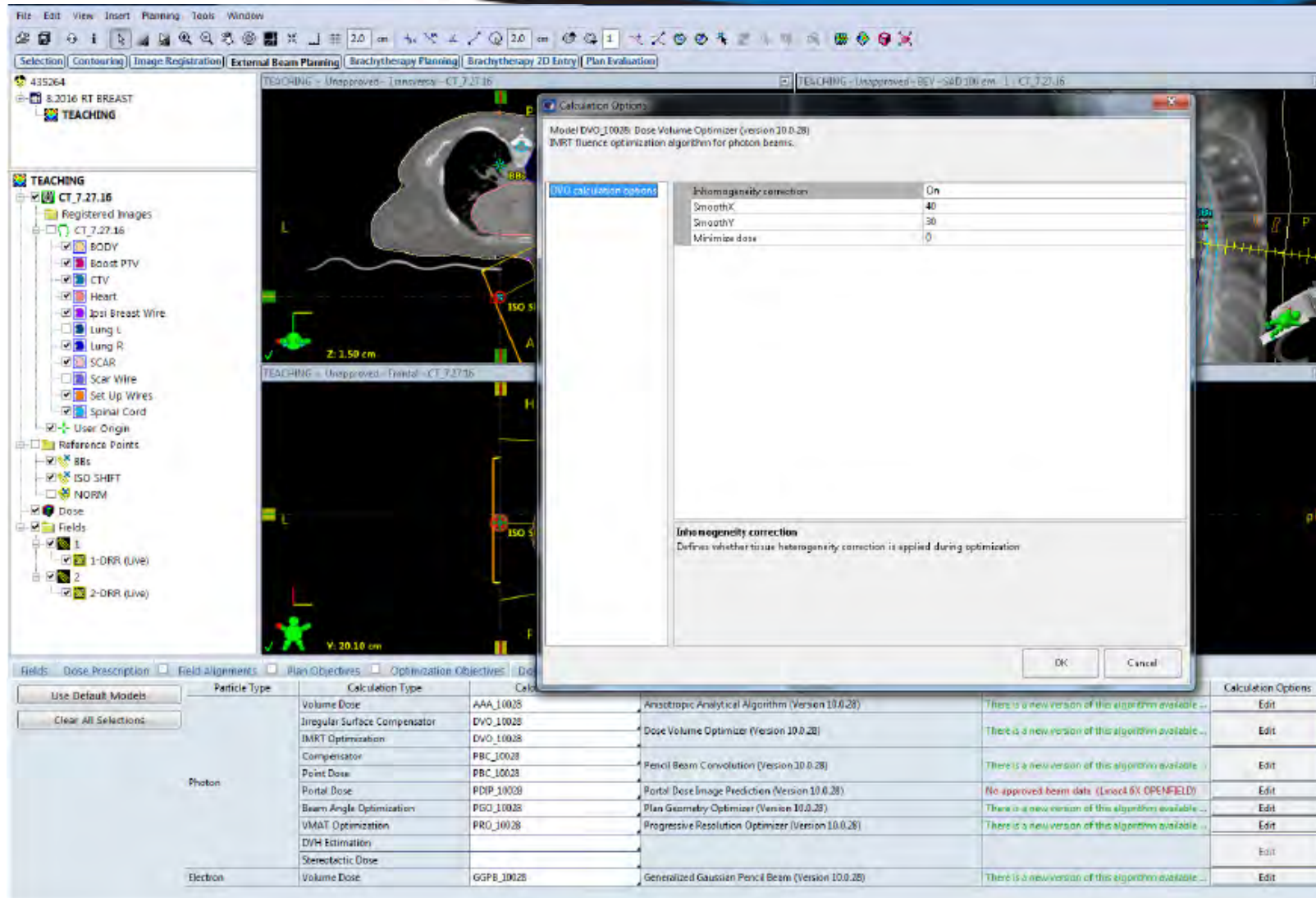
TEACHENG - Unapproved - BEV - SAD 100 cm - 1 - CT.7.27.15

Standard  
Head First-Prone

Fields:		<input type="checkbox"/> Dose Prescription	<input type="checkbox"/> Field Alignments	<input type="checkbox"/> Plan Objectives	<input type="checkbox"/> Optimization Objectives	Dose Statistics		Calculation Models			Plan Sum											
Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn [deg]	Coll Rtn [deg]	Couch Rtn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]	Calculated SSD [cm]	MU	Ref. D [Gy]
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X		1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		



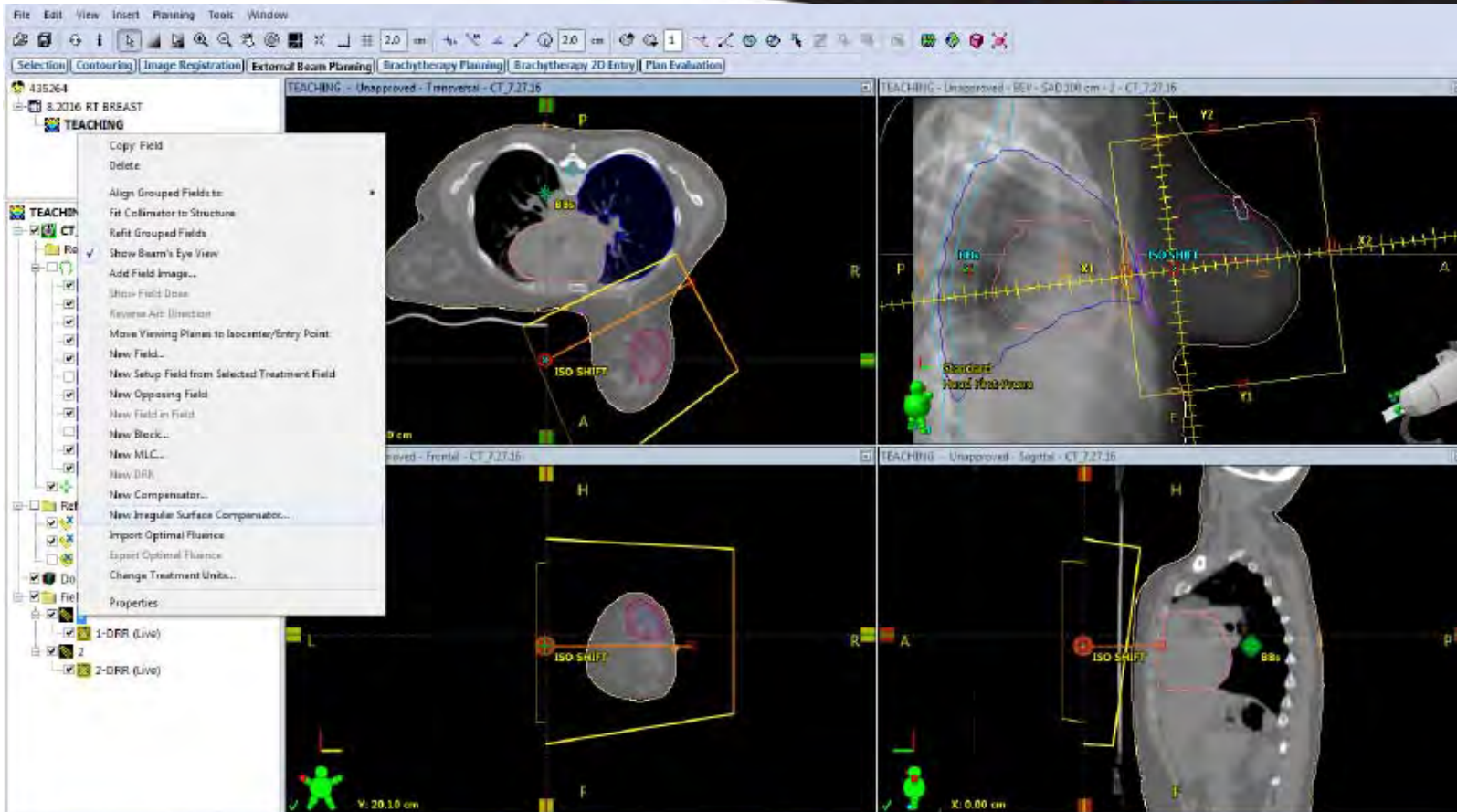
# Inhomogeneity Correction ON: Opt + Calc



The screenshot shows the 'Calculation Options' dialog box for the 'Dose Volume Optimizer (version 10.0.28)'. The 'Inhomogeneity correction' option is checked and set to 'On'. Other options include 'SmoothK' (40), 'SmoothY' (30), and 'Minimize dose' (0). Below the dialog box, a table lists the calculation algorithms used in the plan.

Particle Type	Calculation Type	Calculation Name	Version	Status	Action
Photon	Volume Dose	AAA_10028	Anisotropic Analytical Algorithm (Version 10.0.28)	There is a new version of this algorithm available ...	Edit
	Irregular Surface Compensator	DVO_10028	Dose Volume Optimizer (Version 10.0.28)	There is a new version of this algorithm available ...	Edit
	Compensator	PBC_10028	Pencil Beam Convolution (Version 10.0.28)	There is a new version of this algorithm available ...	Edit
	Point Dose	PBC_10028	Pencil Beam Convolution (Version 10.0.28)	There is a new version of this algorithm available ...	Edit
	Portal Dose	PDP_10028	Portal Dose Image Prediction (Version 10.0.28)	No approved beam data (Load 6X OPENFIELD)	Edit
	Beam Angle Optimization	PGO_10028	Plan Geometry Optimizer (Version 10.0.28)	There is a new version of this algorithm available ...	Edit
	VMAT Optimization	PRO_10028	Progressive Resolution Optimizer (Version 10.0.28)	There is a new version of this algorithm available ...	Edit
	D/H Estimation				Edit
	Stereotactic Dose				Edit
	Electron	Volume Dose	GGPB_10028	Generalized Gaussian Pencil Beam (Version 10.0.28)	There is a new version of this algorithm available ...

# Add an Irreg Surface Comp



The screenshot shows a radiotherapy planning software interface with a 4-view CT scan of a breast. A context menu is open over the 'TEACHING' field, listing various actions. The 'New Irregular Surface Compensator...' option is highlighted. The interface includes a toolbar, a menu bar, and a status bar at the bottom.

**Fields**    Dose Prescription    Field Alignments    Plan Objectives    Optimization Objectives    Dose Statistics    Calculation Models    Plan Sum

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-I	Linac4 - 6X		1.000	Varian IEC	247.1	3530	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-I	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.0	+4.0	+15.0	24.4	+11.0	+12.8	0.00	20.10	0.00	81.2		



File Edit View Insert Planning Tools Window

Selection Contouring Image Registration External Beam Planning Brachytherapy Planning Brachytherapy 2D Entry Plan Evaluation

435264  
8.2016 RT BREAST  
TEACHING

TEACHING  
CT\_7.27.16  
Registered Images  
CT\_7.27.16  
BODY  
Boost PTV  
CTV  
Heart  
Ipsi Breast Wire  
Lung L  
Lung R  
SCAR  
Scar Wire  
Set Up Wires  
Spinal Cord  
User Origin  
Reference Points  
BBs  
ISO SHIFT  
NORM  
Dose  
Fields  
1  
1-DRR (Live)  
2  
2-DRR (Live)

TEACHING - Unapproved - Transverse - CT\_7.27.16  
TEACHING - Unapproved - BEV - SAG 370 cm - 1 - CT\_7.27.16  
TEACHING - Unapproved - Frontal - CT\_7.27.16  
TEACHING - Unapproved - Sagittal - CT\_7.27.16

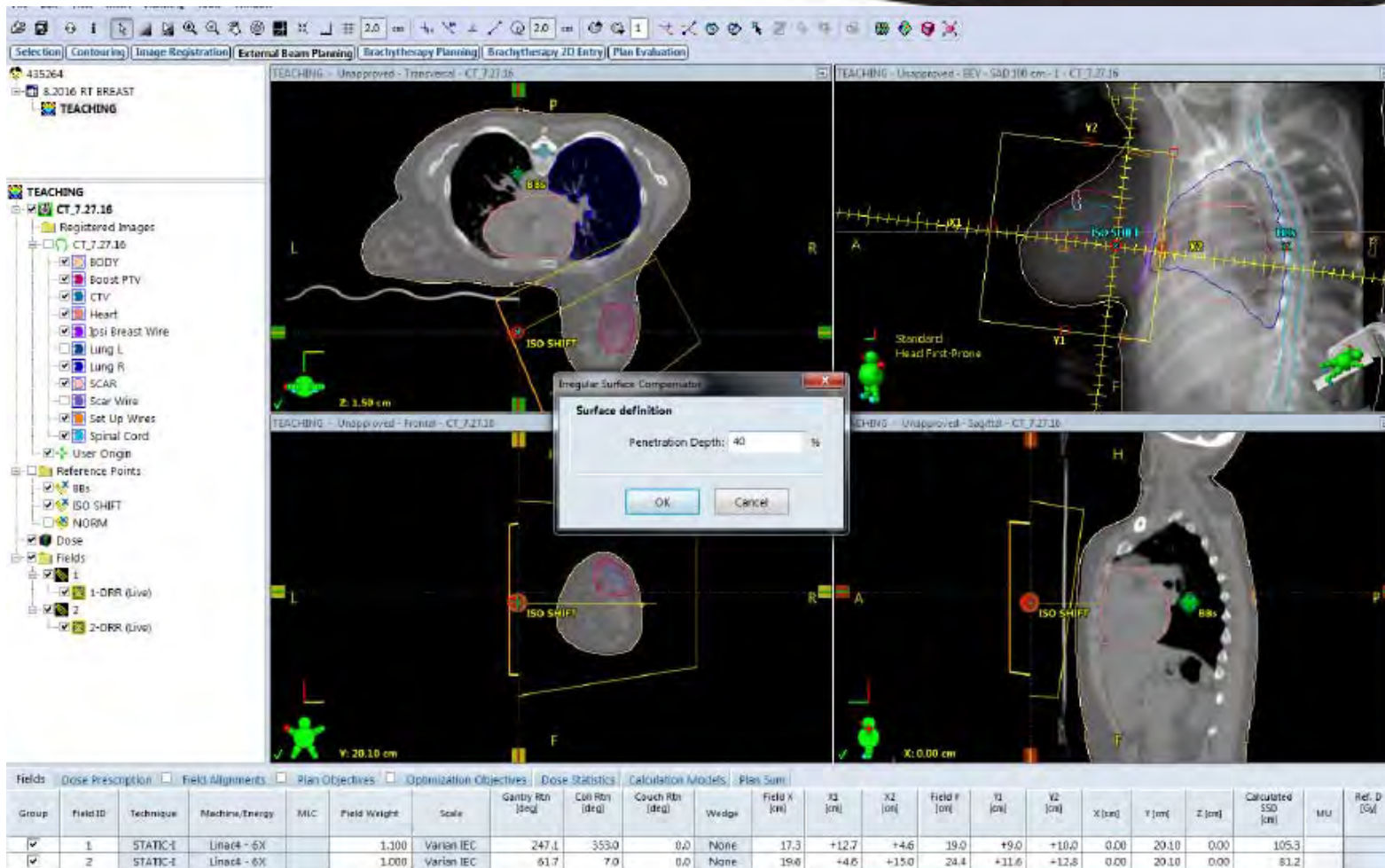
Standard Head First-Prone

Irregular Surface Compressor  
Surface definition  
Penetration Depth: 0%  
OK Cancel

Fields Dose Prescription Field Alignments Plan Objectives Optimization Objectives Dose Statistics Calculation Models Plan Sum

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (Deg)	Coll Rtn (Deg)	Couch Rtn (Deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated ISO (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-E	Linac4 - 6X		1.000	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-E	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.0	+4.0	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		

# Pick Penetration Depth



The screenshot displays a radiotherapy planning software interface. The main window shows a 3D view of a patient's chest with a target volume (BB+) and an isocenter (ISO SHIFT). A dialog box titled "Irregular Surface Compensator" is open, showing "Surface definition" and "Penetration Depth: 40 %". The interface includes a tree view on the left, a top toolbar, and a bottom table with field parameters.

Group	FieldID	Technique	Machine/Energy	MC	Field Weight	Scale	Gantry Rot (deg)	Coll Rot (deg)	Couch Rot (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field F (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
✓	1	STATIC-E	Linac4 - 6X		1.100	Varian IEC	247.1	353.0	0.0	NONE	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
✓	2	STATIC-E	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	NONE	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		



435264  
8.2016 RT BREAST  
TEACHING

TEACHING  
CT\_7.27.16  
Registered Images  
CT\_7.27.16  
BODY  
Boost PTV  
CTV  
Heart  
Ipsi Breast Wire  
Lung L  
Lung R  
SCAR  
Scar Wire  
Set Up Wires  
Spinal Cord  
User Origin  
Reference Points  
BBs  
ISO SHIFT  
NORM  
Dose  
Fields  
1  
1-ORR (Live)  
2  
2-ORR (Live)

TEACHING - Unapproved - Transverse - CT\_7.27.16  
TEACHING - Unapproved - BEV - SAD 100 cm - 1 - CT\_7.27.16  
TEACHING - Unapproved - Monitor - CT\_7.27.16  
TEACHING - Unapproved - Sagittal - CT\_7.27.16

Inregular Surface Compressor Calculation  
Calculating...  
Abort

Z: 3.59 cm  
V: 20.10 cm  
X: 0.00 cm

Fields:  Dose Prescription  Field Alignments  Plan Objectives  Optimization Objectives  Dose Statistics  Calculation Models  Plan Sum

Group	Field ID	Technique	Machine/Energy	MIC	Field Weight	Scale	Gantry Rot (deg)	Coll Rot (deg)	Couch Rot (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X		1.000	Variation IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X		1.000	Variation IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		



435264  
8.2016 RT BREAST  
TEACHING

TEACHING  
CT\_7.27.16

- Registered Images
  - CT\_7.27.16
    - BODY
    - Boost PTV
    - CTV
    - Heart
    - Ipsi Breast Wire
    - Lung L
    - Lung R
    - SCAR
    - Scar Wire
    - Set Up Wires
    - Spinal Cord
    - User Origin
- Reference Points
  - BBs
  - ISO SHIFT
  - NORM
- Dose
  - Fields
    - 1
      - 1-DRR (Live)
      - Fluence
    - 2
      - 2-DRR (Live)

TEACHING - Unapproved - Transversal - CT\_7.27.16  
TEACHING - Unapproved - BEV - SAD 100 cm - 1 - CT\_7.27.16  
TEACHING - Unapproved - Frontal - CT\_7.27.16  
TEACHING - Unapproved - Sagittal - CT\_7.27.16

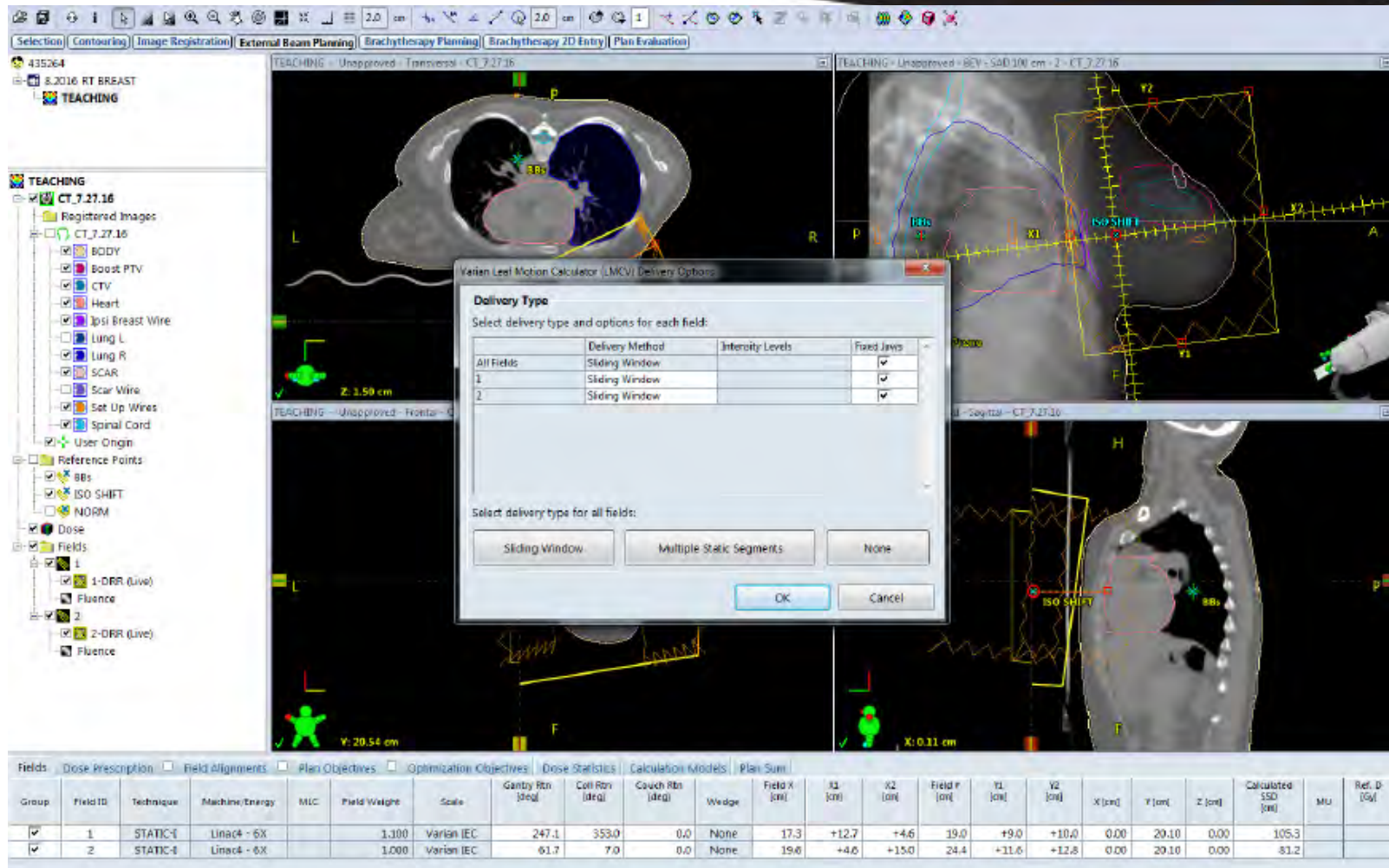
Z: 1.90 cm  
Y: 20.54 cm  
X: 0.11 cm

Fields:  Dose Prescription  Field Alignments  Plan Objectives  Optimization Objectives  Dose Statistics  Calculation Models  Plan Sum

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn [deg]	Coll Rtn [deg]	Couch Rtn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]	Calculated SSD [cm]	MU	Ref. D [Gy]
<input checked="" type="checkbox"/>	1	STATIC-I	Linac4 - 6X		1.000	Varian IEC	247.1	252.0	0.0	None	17.2	+12.7	-4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-I	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.6	-4.6	+15.0	24.4	+11.0	+12.8	0.00	20.10	0.00	81.2		



# Run the LMC (not the DMC)



The screenshot displays a radiotherapy planning software interface. The main window shows a patient's chest CT scan with treatment fields and isosurface overlays. A dialog box titled "Varian Leaf Motion Calculator (LMC) Delivery Options" is open, allowing the user to select delivery types for each field. The dialog box contains a table for field-specific settings and buttons for "Sliding Window", "Multiple Static Segments", and "None".

**Varian Leaf Motion Calculator (LMC) Delivery Options**

Select delivery type and options for each field:

All Fields	Delivery Method	Intensity Levels	Fixed Jaws
	Sliding Window		<input checked="" type="checkbox"/>
1	Sliding Window		<input checked="" type="checkbox"/>
2	Sliding Window		<input checked="" type="checkbox"/>

Select delivery type for all fields:

**Fields** | Dose Prescription | Field Alignment | Plan Objectives | Optimization Objectives | Dose Statistics | Calculation Models | Plan Sum

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rot (deg)	Coll Rot (deg)	Couch Rot (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-I	Linac4 - 6X		1.000	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-I	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		



TEACHING - Unapproved - Treatment - CT 7 27 16

TEACHING - Unapproved - RPV - SAB 100 cm - 1 - Full CMO View - CT 7 27 16

435264  
8.2016 RT BREAST  
TEACHING

TEACHING  
CT 7.27.16  
Registered Images  
CT 7.27.16  
BODY  
Boost PTV  
CTV  
Heart  
Ipsi Breast Wire  
Lung L  
Lung R  
SCAR  
Scar Wire  
Set Up Wires  
Spinal Cord  
User Origin  
Reference Points  
BBs  
ISO SHIFT  
NORM  
Dose  
Fields  
1  
1-ORR (Live)  
Fluence  
2  
2-ORR (Live)  
Fluence

Calculating Leaf Motions

Warning: [1] The field has been split into multiple carriage groups. Please see the LMC calculation log on field property sheet for  
Warning: [2] The field has been split into multiple carriage groups. Please see the LMC calculation log on field property sheet for

Progress  
Messages  
Errors and Warnings  
Refresh  
View Distributor Status Page  
0' 03"

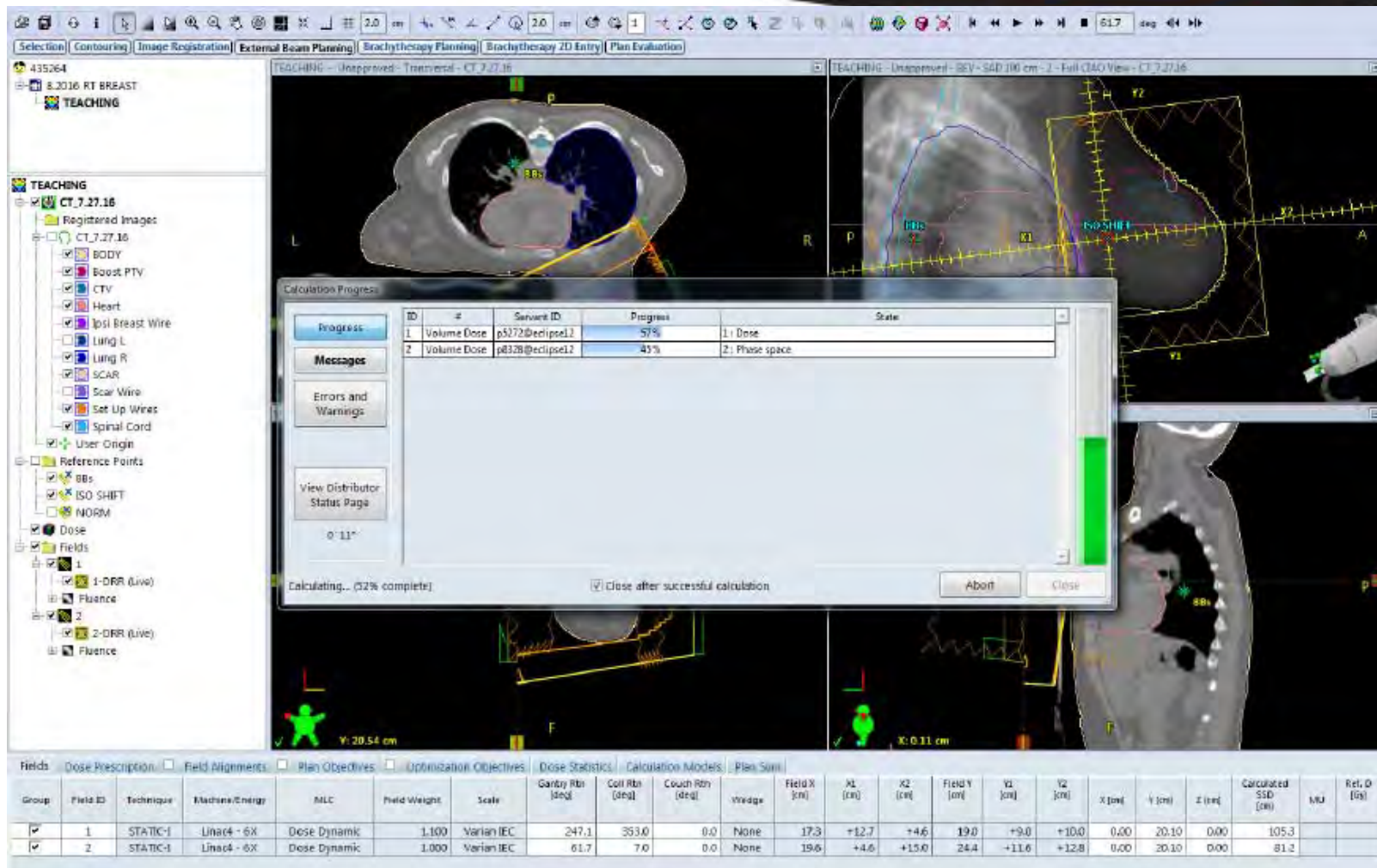
Calculation completed with warnings, took 0' 03"  Close after successful calculation

ADVICE Close

Fields Dose Prescription  Field Alignments  Plan Objectives  Optimization Objectives  Dose Statistics  Calculation Models  Plan Sum

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MR	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-F	Linac4 - 6X	Dose Dynamic	1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-F	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		

# Dose Calc all Planes



TEACHING -- Unapproved - Transverse - CT\_7.27.16

TEACHING -- Unapproved - BEV - SAD 100 cm - 2 - Full C140 View - CT\_7.27.16

435264

8.2016 RT BREAST

TEACHING

TEACHING

CT\_7.27.16

Registered Images

CT\_7.27.16

- BODY
- Boost PTV
- CTV
- Heart
- Ipsilateral Breast Wire
- Lung L
- Lung R
- SCAR
- Scar Wire
- Set Up Wires
- Spinal Cord
- User Origin

Reference Points

- 88s
- ISO SHIFT
- NORM

Dose

Fields

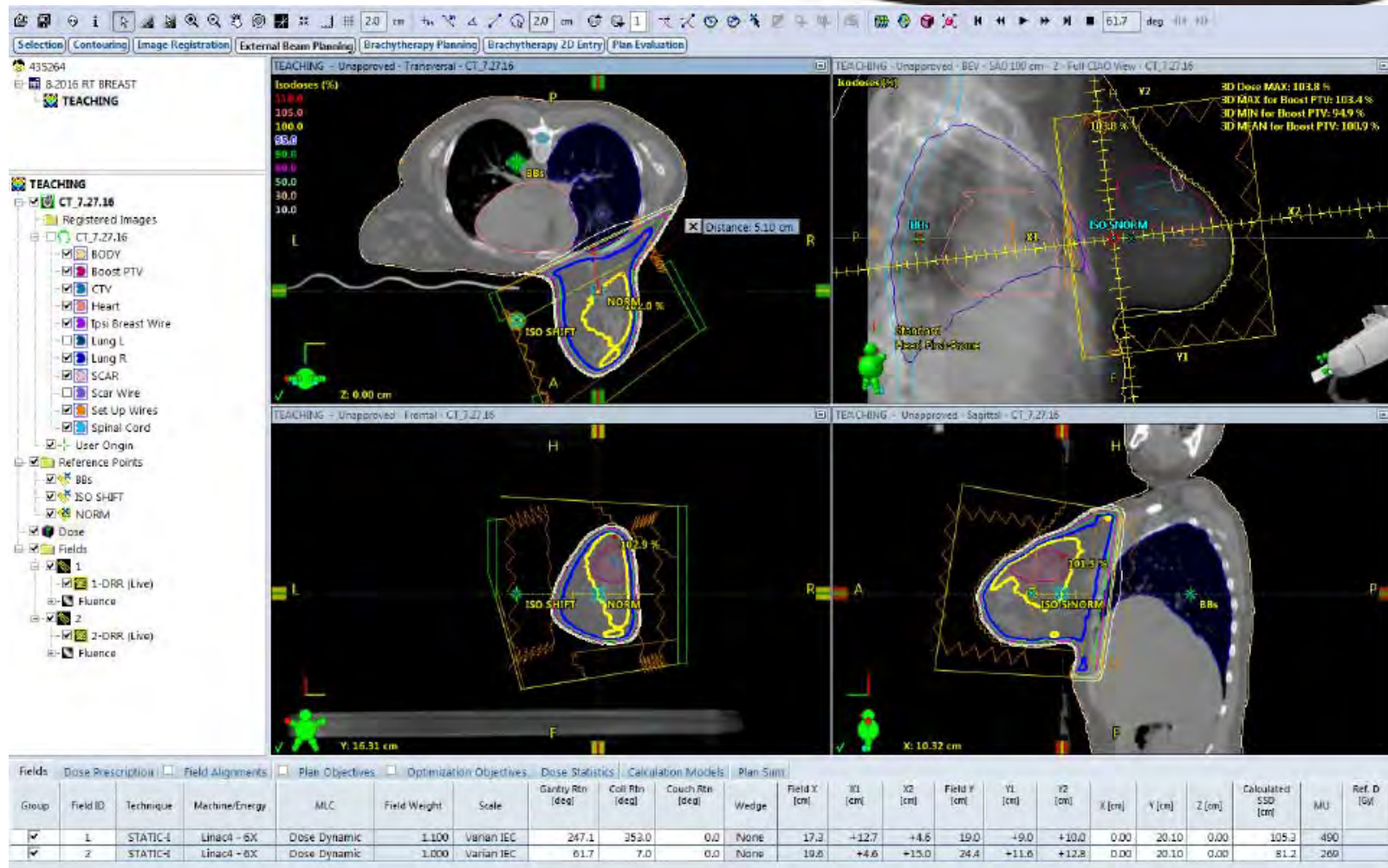
- 1
  - 1-DRR (Live)
  - Fluence
- 2
  - 2-DRR (Live)
  - Fluence

Calculating... (52% complete)  Close after successful calculation

Abort Close

Group	Field ID	Technique	Mach/En/Imp	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X	Dose Dynamic	1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		

# Set Normalization Point



The screenshot displays a radiotherapy planning software interface with four main view windows:

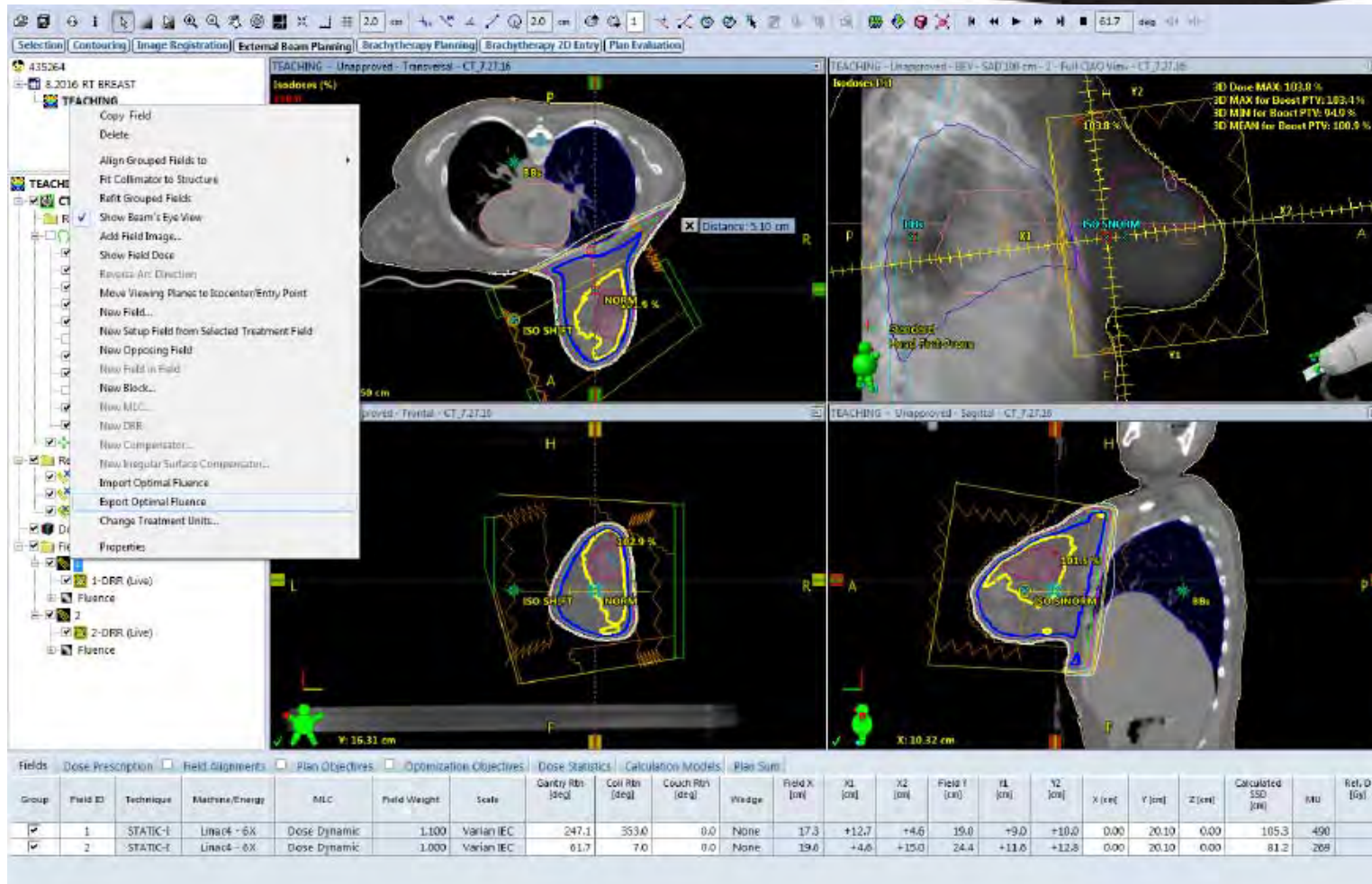
- Top Left (Transverse):** Shows a cross-section of the chest with target volumes (BBs, ISO SHFT, NORM) and a distance of 5.10 cm.
- Top Right (BEV):** Shows a beam's eye view with target volumes and dose statistics: 3D Dose MAX: 103.8%, 3D MAX for Boost PTV: 103.4%, 3D MIN for Boost PTV: 94.9%, 3D MEAN for Boost PTV: 100.9%.
- Bottom Left (Frontal):** Shows a frontal view of the chest with target volumes and a distance of 16.91 cm.
- Bottom Right (Sagittal):** Shows a sagittal view of the chest with target volumes and a distance of 10.92 cm.

The left sidebar shows a tree view for the plan named "TEACHING" with various target and organ-at-risk (OAR) structures listed.

The bottom of the interface features a table with the following data:

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC4	Linac4 - 6X	Dose Dynamic	1.100	varian IEC	247.1	352.0	0.0	None	17.3	-12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	490	
<input checked="" type="checkbox"/>	2	STATIC4	Linac4 - 6X	Dose Dynamic	1.000	varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2	260	

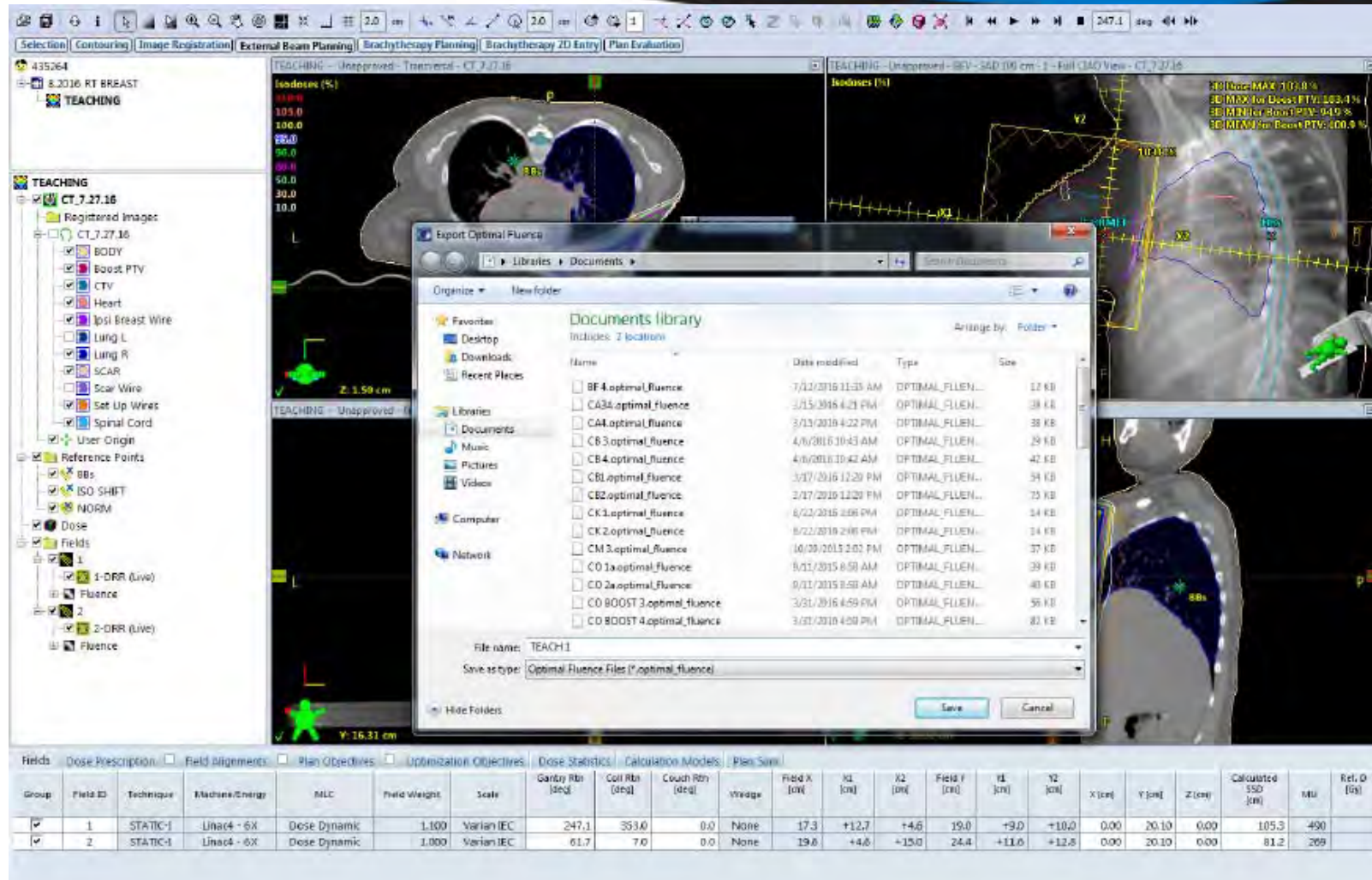
# Exporting Fluence



The screenshot displays a radiotherapy planning software interface. A patient's chest CT scan is shown in a 3D view with treatment fields overlaid. A context menu is open over the 'TEACHING' field, listing various actions such as 'Copy Field', 'Delete', 'Align Grouped Fields to Fit Collimator to Structure', and 'Export Optimal Fluence'. The 'Export Optimal Fluence' option is highlighted. The interface also shows a 'Doses (Gy)' panel with 3D statistics: 3D Dose MAX: 103.0%, 3D MAX for Boost PTV: 103.4%, 3D MIN for Boost PTV: 94.9%, and 3D MEAN for Boost PTV: 100.5%. At the bottom, a table provides detailed field parameters.

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	ISU	Ref. D (Gy)
✓	1	STATIC-E	Linac4 - 6X	Dose Dynamic	1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	490	
✓	2	STATIC-E	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2	268	

# Exporting Fluence



**Export Optimal Fluence**

Libraries > Documents >

Organize New folder

Documents library  
Includes 2 locations

Name	Date modified	Type	Size
BF 4 optimal_fluence	7/2/2016 11:55 AM	OPTIMAL_FLUEN...	12 KB
CA34 optimal_fluence	2/15/2016 4:21 PM	OPTIMAL_FLUEN...	38 KB
CA4 optimal_fluence	3/13/2016 4:22 PM	OPTIMAL_FLUEN...	38 KB
CB 3 optimal_fluence	4/6/2016 10:43 AM	OPTIMAL_FLUEN...	29 KB
CB 4 optimal_fluence	4/6/2016 10:42 AM	OPTIMAL_FLUEN...	42 KB
CB1 optimal_fluence	3/17/2016 12:29 PM	OPTIMAL_FLUEN...	34 KB
CB2 optimal_fluence	2/17/2016 12:29 PM	OPTIMAL_FLUEN...	75 KB
CK 1 optimal_fluence	6/22/2016 8:06 PM	OPTIMAL_FLUEN...	34 KB
CK 2 optimal_fluence	6/22/2016 2:06 PM	OPTIMAL_FLUEN...	14 KB
CM 3 optimal_fluence	10/20/2015 2:03 PM	OPTIMAL_FLUEN...	37 KB
CO 1a optimal_fluence	9/21/2015 8:50 AM	OPTIMAL_FLUEN...	39 KB
CO 2a optimal_fluence	9/21/2015 8:50 AM	OPTIMAL_FLUEN...	40 KB
CO BOOST 3 optimal_fluence	3/31/2016 4:59 PM	OPTIMAL_FLUEN...	56 KB
CO BOOST 4 optimal_fluence	3/31/2016 4:59 PM	OPTIMAL_FLUEN...	81 KB

File name: TEACH1

Save as type: Optimal Fluence Files (\*.optimal\_fluence)

Save Cancel

---

Fields Dose Prescription Field Alignments Plan Objectives Optimization Objectives Dose Statistics Calculation Models Plan Sum

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculation SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X	Dose Dynamic	1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	490	
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.0	+12.8	0.00	20.10	0.00	81.2	269	



File Edit View Insert Planning Tools Window

Selection | Contouring | Image Registration | External Beam Planning | Brachytherapy Planning | Brachytherapy 2D Entry | Plan Evaluation

TEACHING - Unapproved - Tomverski - CT\_7.27.16

TEACHING - Unapproved - BEV - SAD 100 cm - 1 - Full CIAO View - CT\_7.27.16

TEACHING - Unapproved - Frontal - CT\_7.27.16

TEACHING - Unapproved - Sagittal - CT\_7.27.16

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8.2016 RT BREAST

TEACHING

CT\_7.27.16

- Registered Images
  - CT\_7.27.16
    - BODY
    - Boost PTV
    - CTV
    - Heart
    - Ipsi Breast Wire
    - Lung L
    - Lung R
    - SCAR
    - Scar Wire
    - Set Up Wires
    - Spinal Cord
- User Origin
- Reference Points
  - BBs
  - ISO SHIFT
  - NORM
- Dose
  - Fields
    - 1
      - 1-DRR (Live)
      - Fluence
    - 2
      - 2-DRR (Live)
      - Fluence

External Beam Planning

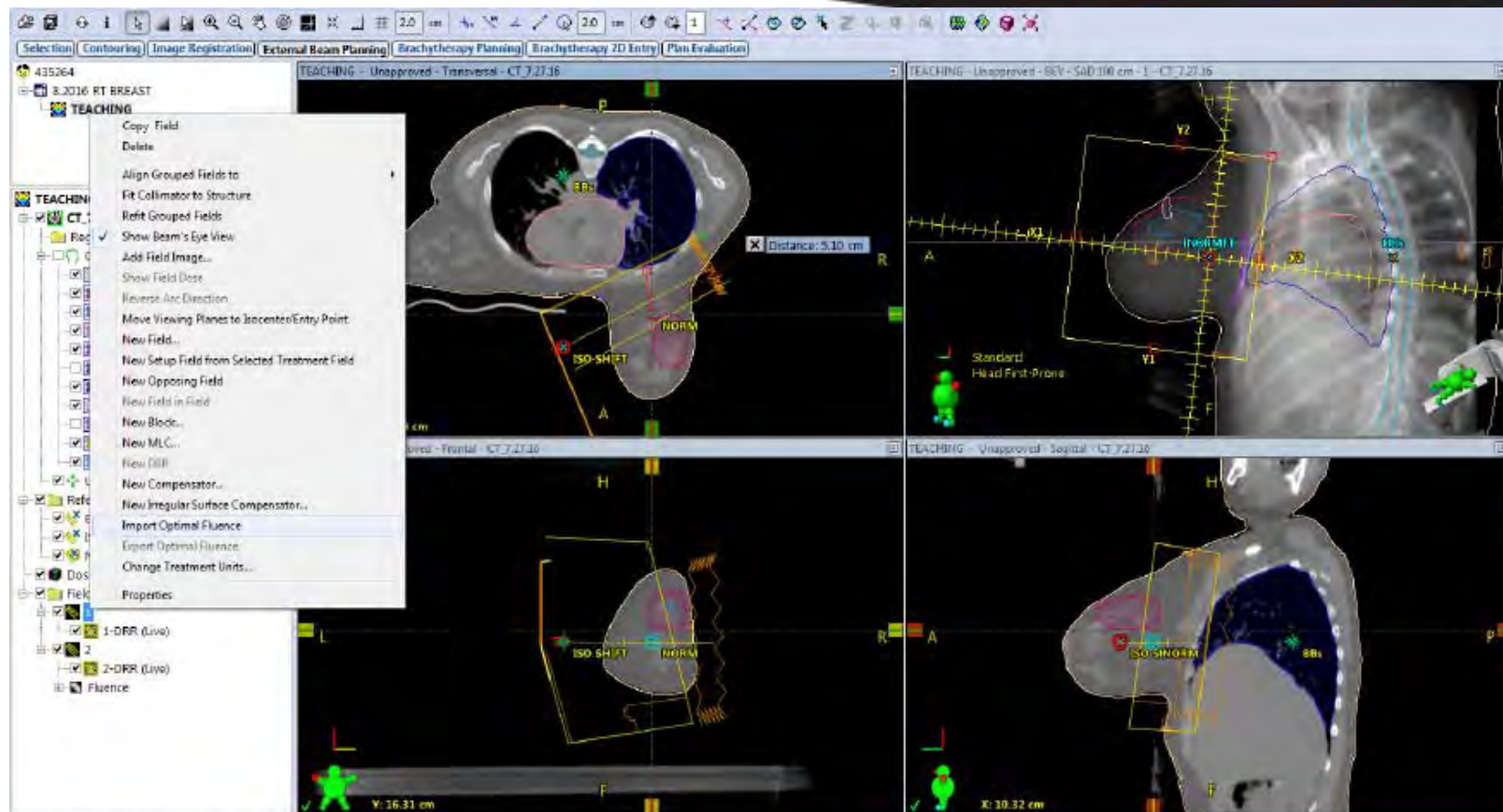
Do you really want to delete this Optimal Fluence?

Yes No

Fields

Group	Field ID	Technique	Machine/Energy	MCC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X	Dose Dynamic	1.100	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	490	
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.8	+15.0	24.4	+11.0	+12.8	0.00	20.10	0.00	81.2	209	

# Importing Fluence

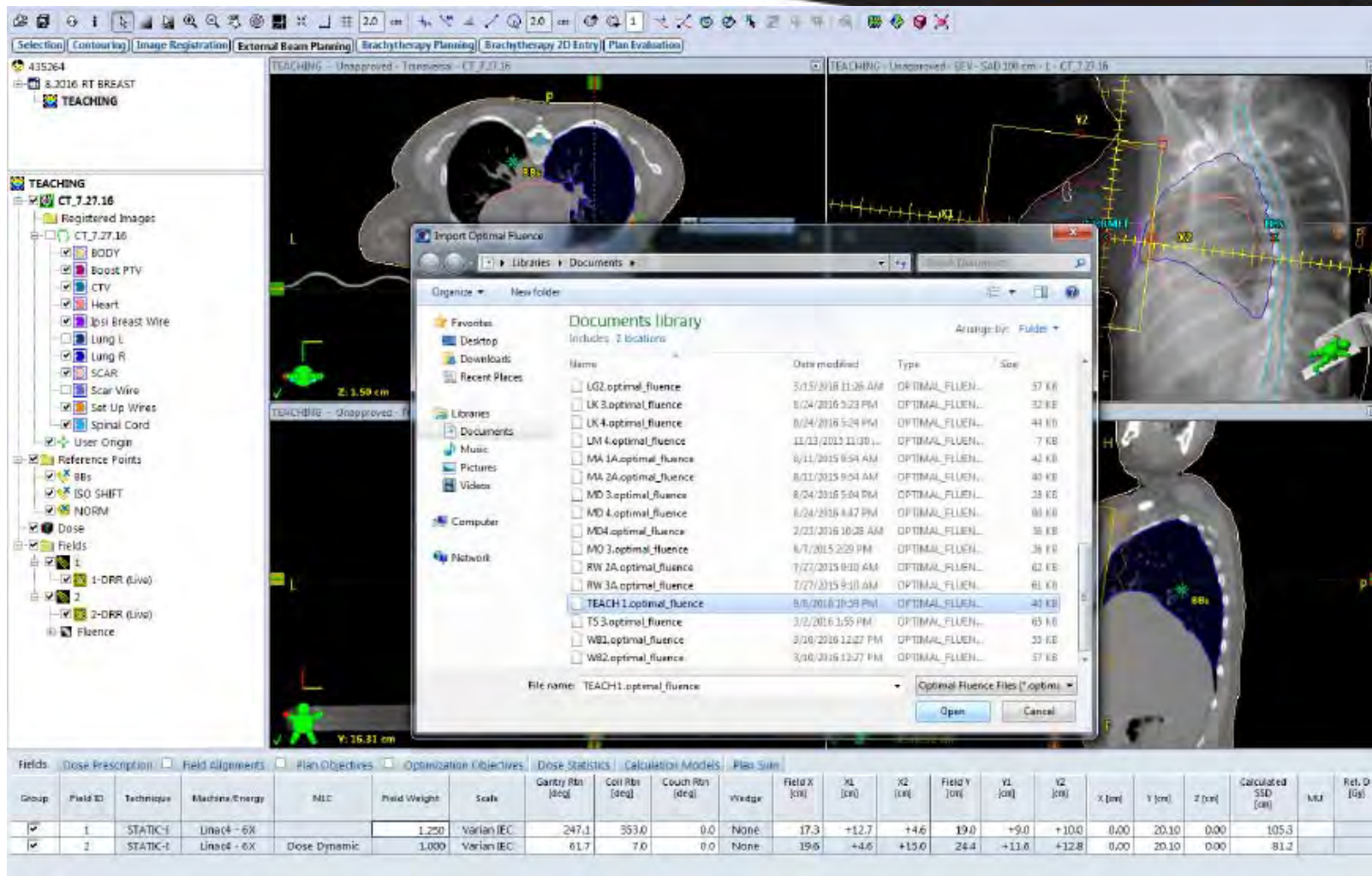


The screenshot displays a radiotherapy planning software interface. A 3D patient model is shown with various treatment fields and isocenters. A context menu is open over the 'TEACHING' field, listing several actions. The 'Import Optimal Fluence' and 'Export Optimal Fluence' options are highlighted. The interface also shows a 'Fields' table at the bottom.

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	Y1 (cm)	Y2 (cm)	Field Y (cm)	V1 (cm)	V2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MLC	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-I	Linac4 - 6X		1.250	Varian IEC	247.1	333.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-I	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		



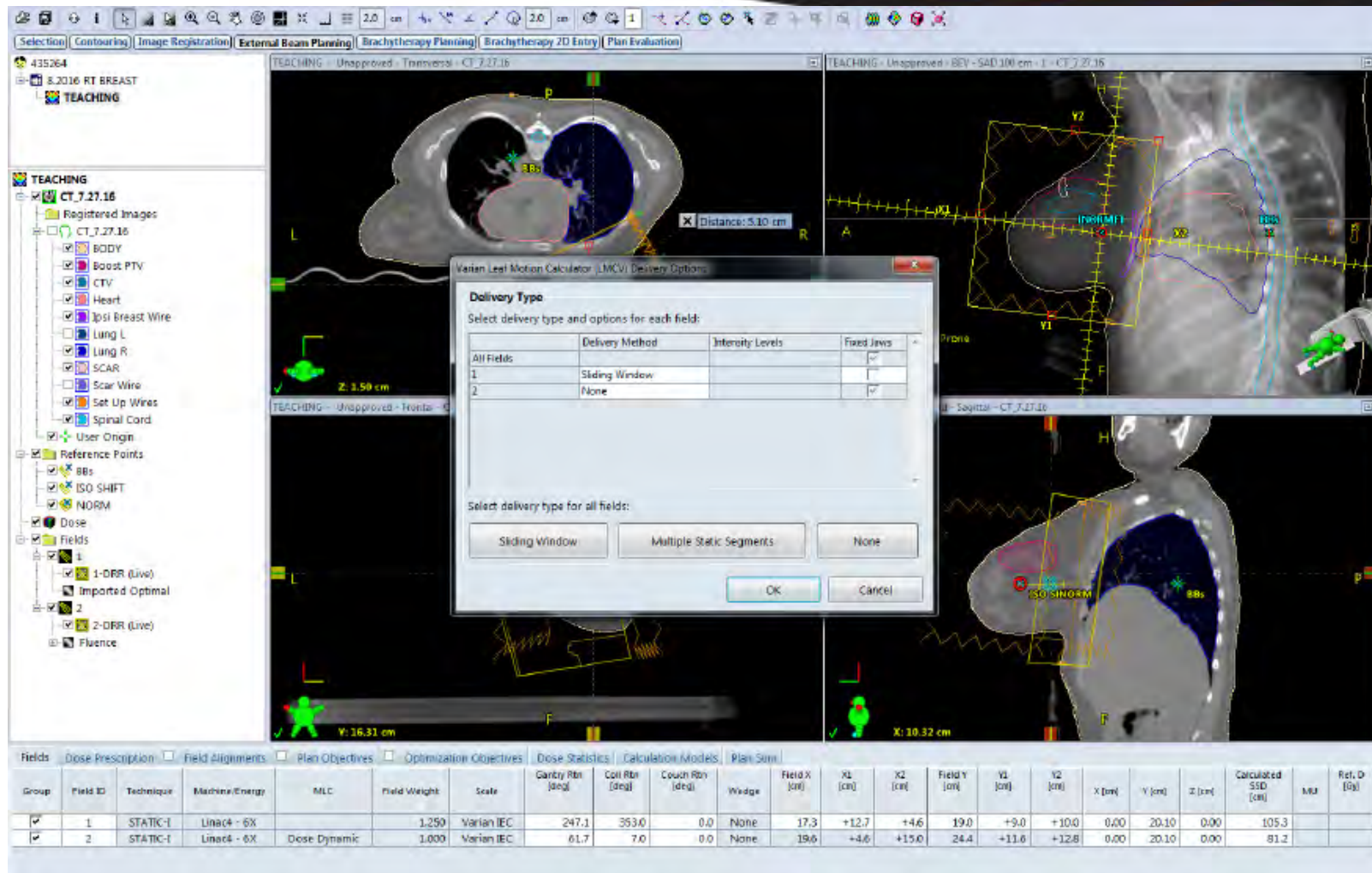
# Importing Fluence



The screenshot displays the 'Import Optimal Fluence' dialog box within a radiotherapy planning application. The dialog box is open to the 'Documents library' and shows a list of files. The file 'TEACH1.optimal\_fluence' is selected. The background shows a 3D model of a patient's chest with target and organ at risk contours.

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	XL (cm)	XZ (cm)	Field Y (cm)	YL (cm)	YZ (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-I	Linac4 - 6X		1.250	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-I	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2		

# Fix Your Jaws



The screenshot displays a radiotherapy planning software interface. The main window shows a patient's CT scan with target and organ at risk contours. A dialog box titled "Varian Leaf Motion Calculator (LMCV) Delivery Options" is open, showing the "Delivery Type" section. The dialog box contains a table for selecting delivery type and options for each field, and buttons for "Sliding Window", "Multiple Static Segments", and "None".

**Delivery Type**  
Select delivery type and options for each field:

All Fields	Delivery Method	Intensity Levels	Fixed Jaws
1	Sliding Window		<input type="checkbox"/>
2	None		<input checked="" type="checkbox"/>

Select delivery type for all fields:

**Fields** | Dose Prescription | Field Alignments | Plan Objectives | Optimization Objectives | Dose Statistics | Calculation Models | Plan Sim

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MRJ	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X		1.250	Varian IEC	247.1	353.6	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X	Dose: Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.6	0.00	20.10	0.00	81.2		



File Edit View Insert Planning Tools Window

Selection Contouring Image Registration External Beam Planning Brachytherapy Planning Brachytherapy 2D Entry Plan Evaluation

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8.2016 RT BREAST  
TEACHING

TEACHING

CT\_7.27.16

- Registered Images
  - CT\_7.27.16
    - BODY
    - Boost PTV
    - CTV
    - Heart
    - Ipsi Breast Wire
    - Lung L
    - Lung R
    - SCAR
    - Scar Wire
    - Set Up Wires
    - Spinal Cord
    - User Origin
- Reference Points
  - BBs
  - ISO SHIFT
  - NORM
- Dose
  - 1
  - 2-DRR (Live)
  - Imported Optimal
  - 2
  - 2-DRR (Live)
  - Fluence

TEACHING - Unapproved - Transversal - CT\_7.27.16

TEACHING - Unapproved - BEV - SAD 100 cm - 1 - Full QA0 View - CT\_7.27.16

TEACHING - Unapproved - Frontal - CT\_7.27.16

TEACHING - Unapproved - Sagittal - CT\_7.27.16

Fields Dose Prescription Field Alignments Plan Objectives Optimization Objectives Dose Statistics Calculation Models Plan Sim

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn [deg]	Coll Rtn [deg]	Couch Rtn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]	Calculated SSD [cm]	MU	Ref. D [Gy]
<input checked="" type="checkbox"/>	1	STATIC-I	Linac - 6X	Dose Dynamic	1.250	Varian IEC	247.1	35.0	0.0	None	17.3	-12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	514	
<input checked="" type="checkbox"/>	2	STATIC-I	Linac - 6X	Dose Dynamic	1.000	Varian IEC	0.17	7.0	0.0	None	19.8	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2	251	

# Edit More Fluence

File Edit View Insert Planning Tools Window

Selection | Contouring | Image Registration | External Beam Planning | Brachytherapy Planning | Brachytherapy 2D Entry | Plan Evaluation

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8,2016 RT BREAST  
TEACHING

TEACHING - Unapproved - Transversal - CT\_7.27.16

TEACHING - Unapproved - BEV - SAD 306 cm - 1 - Full GAO View - CT\_7.27.16

TEACHING - Unapproved - Frontal - CT\_7.27.16

TEACHING - Unapproved - Sagittal - CT\_7.27.16

TEACHING  
CT\_7.27.16  
Registered Images  
CT\_7.27.16  
BODY  
Boost PTV  
CTV  
Heart  
Ipsi Breast Wire  
Lung L  
Lung R  
SCAR  
Scar Wire  
Set Up Wires  
Spinal Cord  
User Origin  
Reference Points  
IBs  
ISO SHIFT  
NORM  
Dose  
Fields  
1  
1-DRR (Live)  
2  
2-DRR (Live)  
Fluence

Edit Fluence  
View Fluence  
Skin Flash Tool  
Convert Fluence into compensator...  
Properties

Fields		Dose Prescription	Field Alignments	Plan Objectives	Optimization Objectives	Dose Statistics			Calculation Models			Plan Sum			Calculated SSD [cm]	MI	Ref. D [Gy]				
Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scalr	Gantry Rtn [deg]	Coll Rtn [deg]	Couch Rtn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]		
<input checked="" type="checkbox"/>	1	STATIC-T	Linac - 6X	Dose Dynamic	1.250	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	51.4
<input checked="" type="checkbox"/>	2	STATIC-T	Linac - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.6	0.00	20.10	0.00	81.2	251



TEACHING - Unapproved - BEV - SAD 100 cm - 1 - Full CTAO View - CT\_7.27.16

435264  
8.2016 RT BREAST  
TEACHING

TEACHING  
CT\_7.27.16  
Registered Images  
CT\_7.27.16  
BODY  
Boost PTV  
CTV  
Heart  
Ipsi Breast Wire  
Lung L  
Lung R  
SCAR  
Scar Wire  
Set Up Wires  
Spinal Cord  
User Origin  
Reference Points  
BBs  
ISO SHIFT  
NORM  
Dose  
Fields  
1  
1-DRR (Live)  
Imported Optimal  
2  
2-DRR (Live)  
Fluence

Fluence Editor

Optimal Fluence

Tool options  
Brushes  
Brush size: 1.00 cm  
Transmission Factor: 0.000

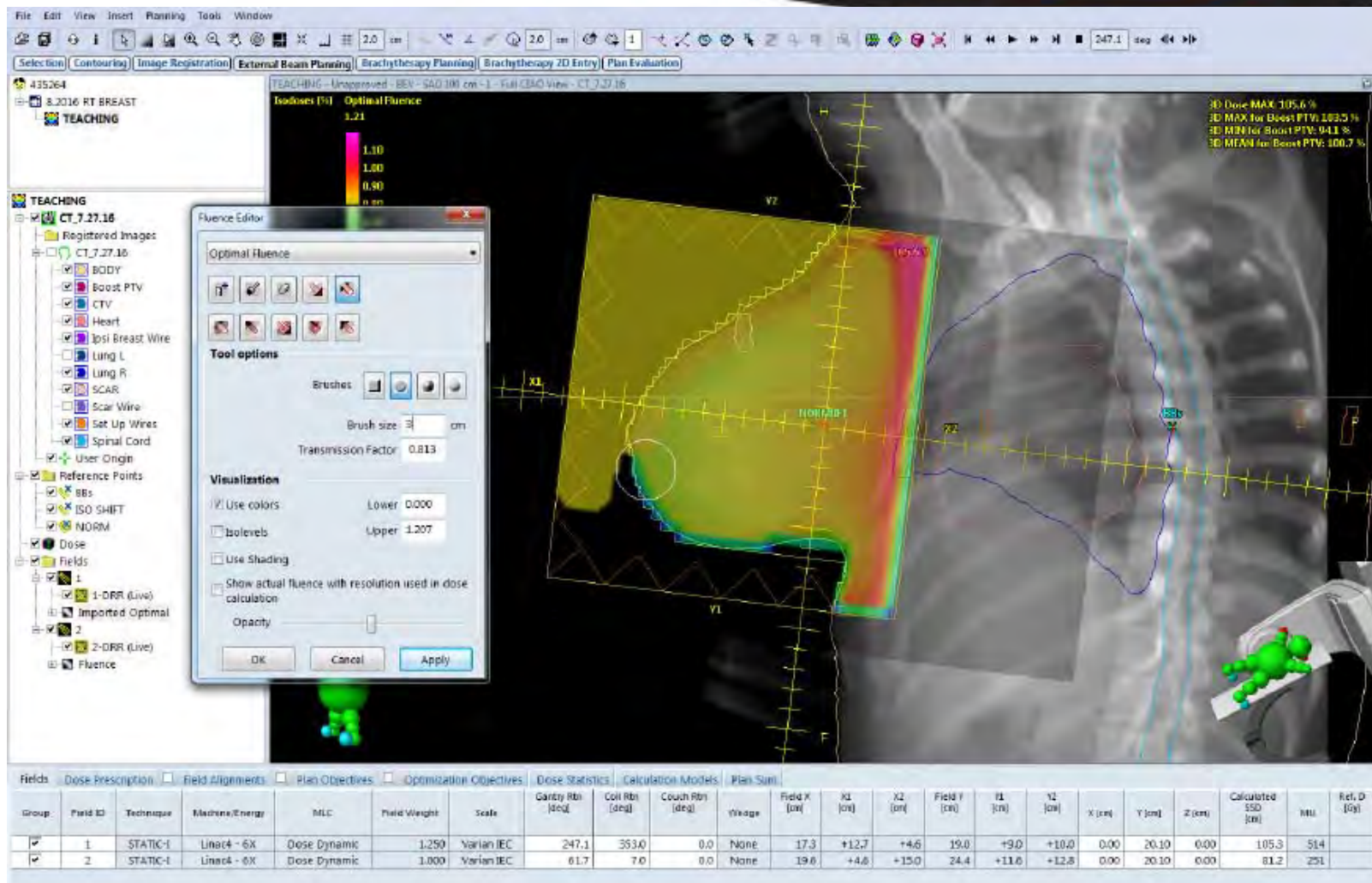
Visualization  
 Use colors Lower: 0.000  
 Isolevels Upper: 1.207  
 Use Shading  
 Show actual fluence with resolution used in dose calculation  
Opacity

3D: Dose MAX: 105.6 %  
3D: MAX for Boost PTV: 103.5 %  
3D: MIN for Boost PTV: 94.1 %  
3D: MEAN for Boost PTV: 100.7 %

Fields | Dose Prescription | Field Alignments | Plan Objectives | Optimization Objectives | Dose Statistics | Calculation Models | Plan Sum

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn [deg]	Coll Rtn [deg]	Couch Rtn [deg]	Wedge	Field X [cm]	X1 [cm]	X2 [cm]	Field Y [cm]	Y1 [cm]	Y2 [cm]	X [cm]	Y [cm]	Z [cm]	Calculated SSD [cm]	MM	Ref. D [Gy]
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X	Dose Dynamic	1.250	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	514	
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2	251	

# Edit Fluence - Make it Flashy

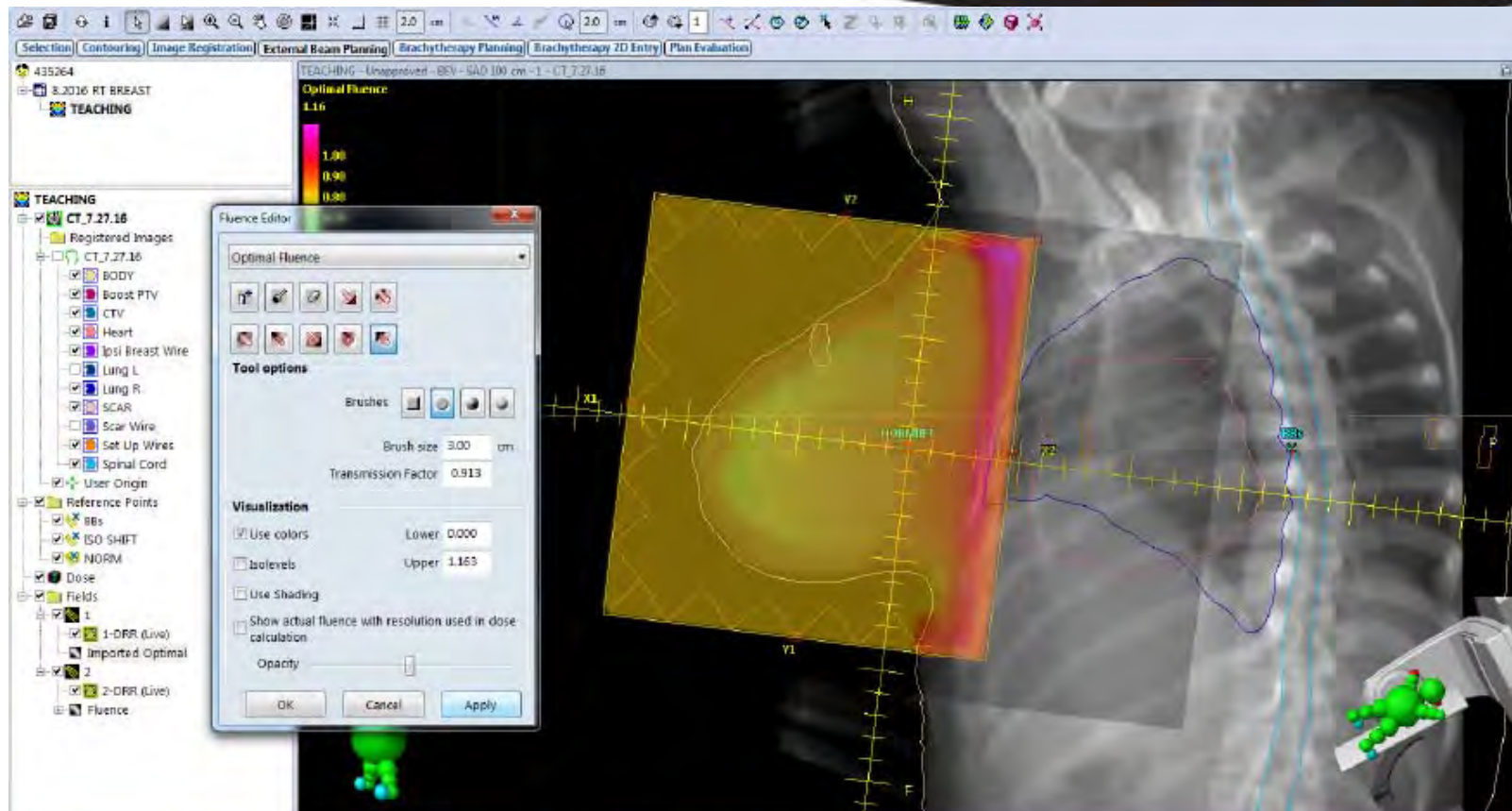


The screenshot displays a radiotherapy planning software interface. The main window shows a 3D dose distribution map overlaid on a patient's CT scan. A color scale on the left indicates dose levels from 0.50 to 1.10. A 'Fluence Editor' dialog box is open, allowing for adjustments to the fluence map. The dialog box includes options for 'Optimal Fluence', 'Tool options' (Brushes, Brush size, Transmission Factor), and 'Visualization' (Use colors, Use Shading, Show actual fluence with resolution used in dose calculation, Opacity). The 'Fluence Editor' dialog box is currently set to 'Optimal Fluence' with a value of 1.21. The 'Tool options' section shows 'Brushes' set to 'None', 'Brush size' set to 3 cm, and 'Transmission Factor' set to 0.813. The 'Visualization' section has 'Use colors' checked with 'Lower' set to 0.000 and 'Upper' set to 1.207. 'Use Shading' is unchecked, and 'Show actual fluence with resolution used in dose calculation' is also unchecked. The 'Opacity' slider is set to approximately 50%. The 'OK', 'Cancel', and 'Apply' buttons are visible at the bottom of the dialog box.

3D Dose MAX: 105.6 %  
 3D MAX for Boost PTV: 102.0 %  
 3D MIN for Boost PTV: 94.1 %  
 3D MEAN for Boost PTV: 100.7 %

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MTU	Ref. D (Gy)
✓	1	STATIC-1	Linac4 - 6X	Dose Dynamic	1.250	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	514	
✓	2	STATIC-1	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.0	+4.6	+15.0	24.4	+11.0	+12.8	0.00	20.10	0.00	81.2	251	

# Edit Fluence - Fix the Edges



TEACHING - Unapproved - BEV - SAD 100 cm -1 - CT 7.27.16

Optimal Fluence  
1.16

1.00  
0.90  
0.80

Fluence Editor

Optimal Fluence

Tool options

Brushes

Brush size 3.00 cm

Transmission Factor 0.913

Visualization

Use colors Lower: 0.000

Isolevels Upper: 1.163

Use Shading

Show actual fluence with resolution used in dose calculation

Opacity

OK Cancel Apply

Fields		Dose Prescription	Field Alignments	Plan Objectives	Optimization Objectives	Dose Statistics			Calculation Models	Plan Sum					Calculated SSD (cm)	MU	Ref. D (Gy)						
Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)				
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X		1.250	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00			105.3	
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00			81.2	



TEACHING - Unapproved - BEV - SAD 100 cm - 2 - CT\_7.27.16

Selection | Contouring | Image Registration | External Beam Planning | Brachytherapy Planning | Brachytherapy 2D Entry | Plan Evaluation

435264  
8.2016 RT BREAST  
TEACHING

TEACHING

- CT\_7.27.16
  - Registered Images
    - CT\_7.27.16
    - BODY
    - Boost PTV
    - CTV
    - Heart
    - Ipsi Breast Wire
    - Lung L
    - Lung R
    - SCAR
    - Scar Wire
    - Set Up Wires
    - Spinal Cord
  - User Origin
  - Reference Points
    - BBS
    - ISO SHFT
    - NORM
  - Dose
  - Fields
    - 1
      - 1-DRR (Live)
      - Imported Optimal
    - 2
      - 2-DRR (Live)
      - Fluence

Fluence Editor

Optimal Fluence

Tool options

Brushes: [Brush icons]

Brush size: 2.00 cm

Transmission Factor: 0.400

Visualization

Use colors Lower: 0.000

Isolevels Upper: 0.502

Use Shading

Show actual fluence with resolution used in dose calculation

Opacity: [Slider]

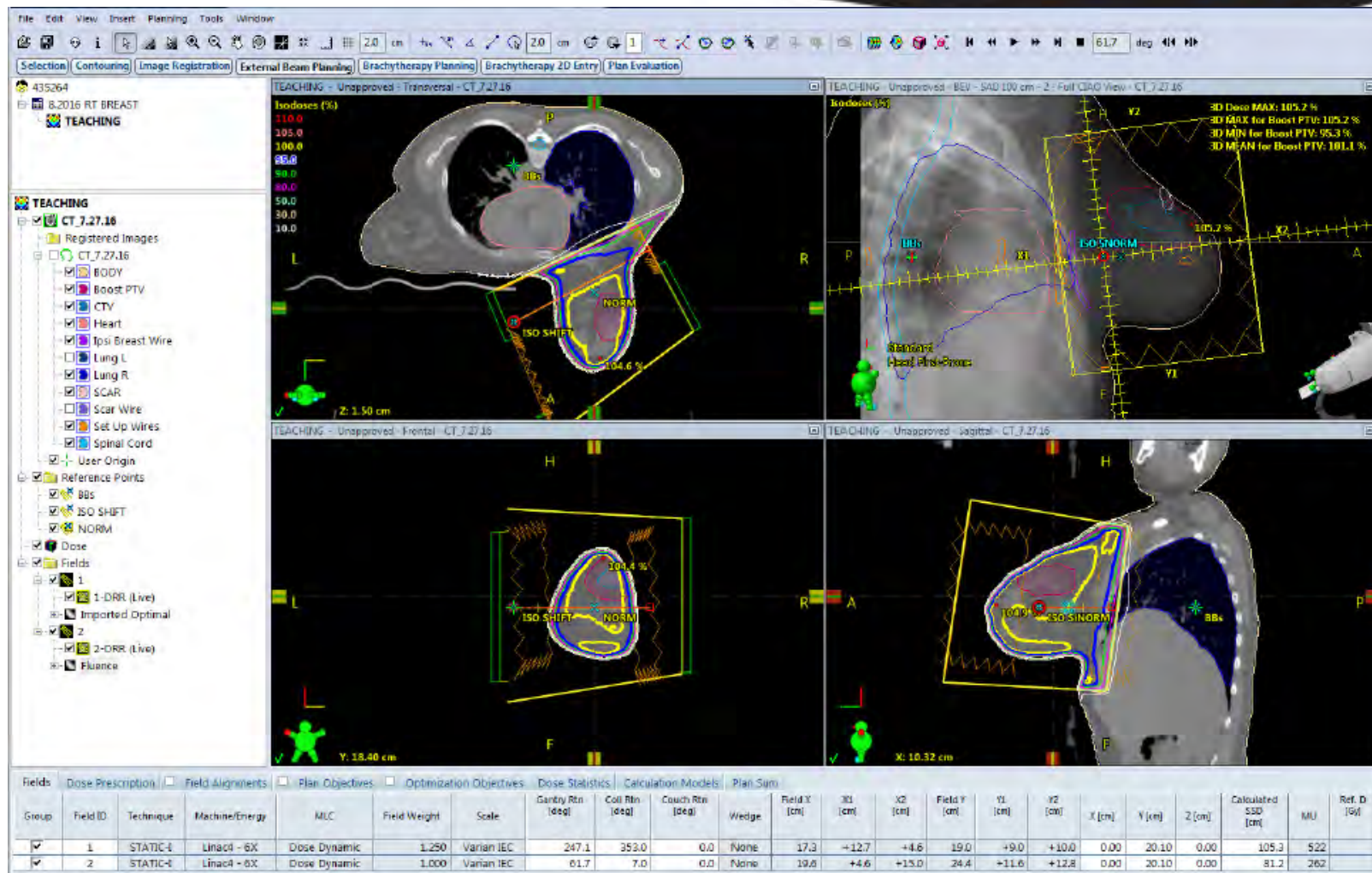
OK Cancel Apply

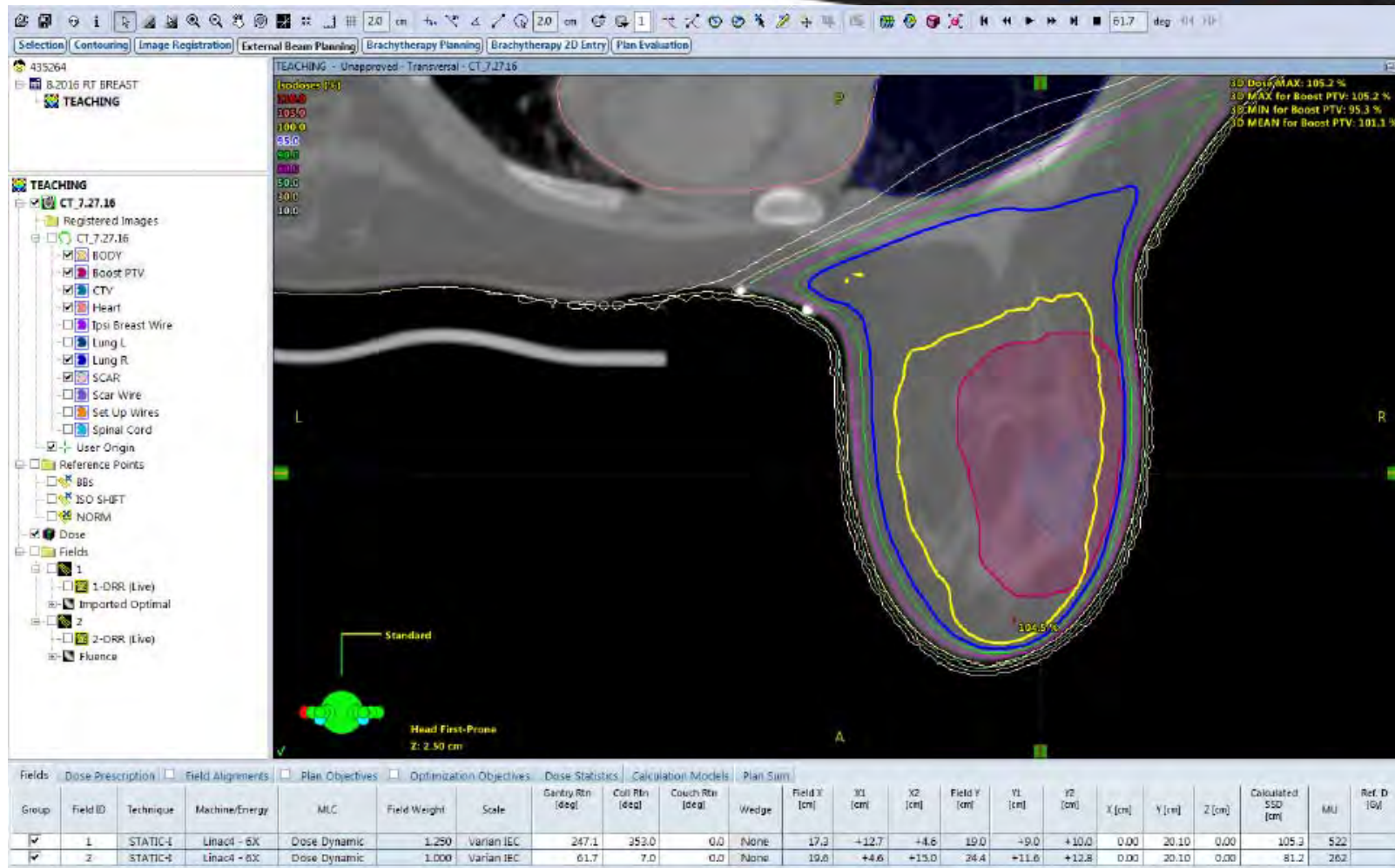
Fields | Dose Prescription |  Field Alignments |  Plan Objectives |  Optimization Objectives | Dose Statistics | Calculation Models | Plan Sum

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-I	Linac4 - 6X		1.250	Varian IEC	247.1	252.0	0.0	None	17.3	+12.7	-4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3		
<input checked="" type="checkbox"/>	2	STATIC-I	Linac4 - 6X		1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.0	+12.8	0.00	20.10	0.00	81.2		

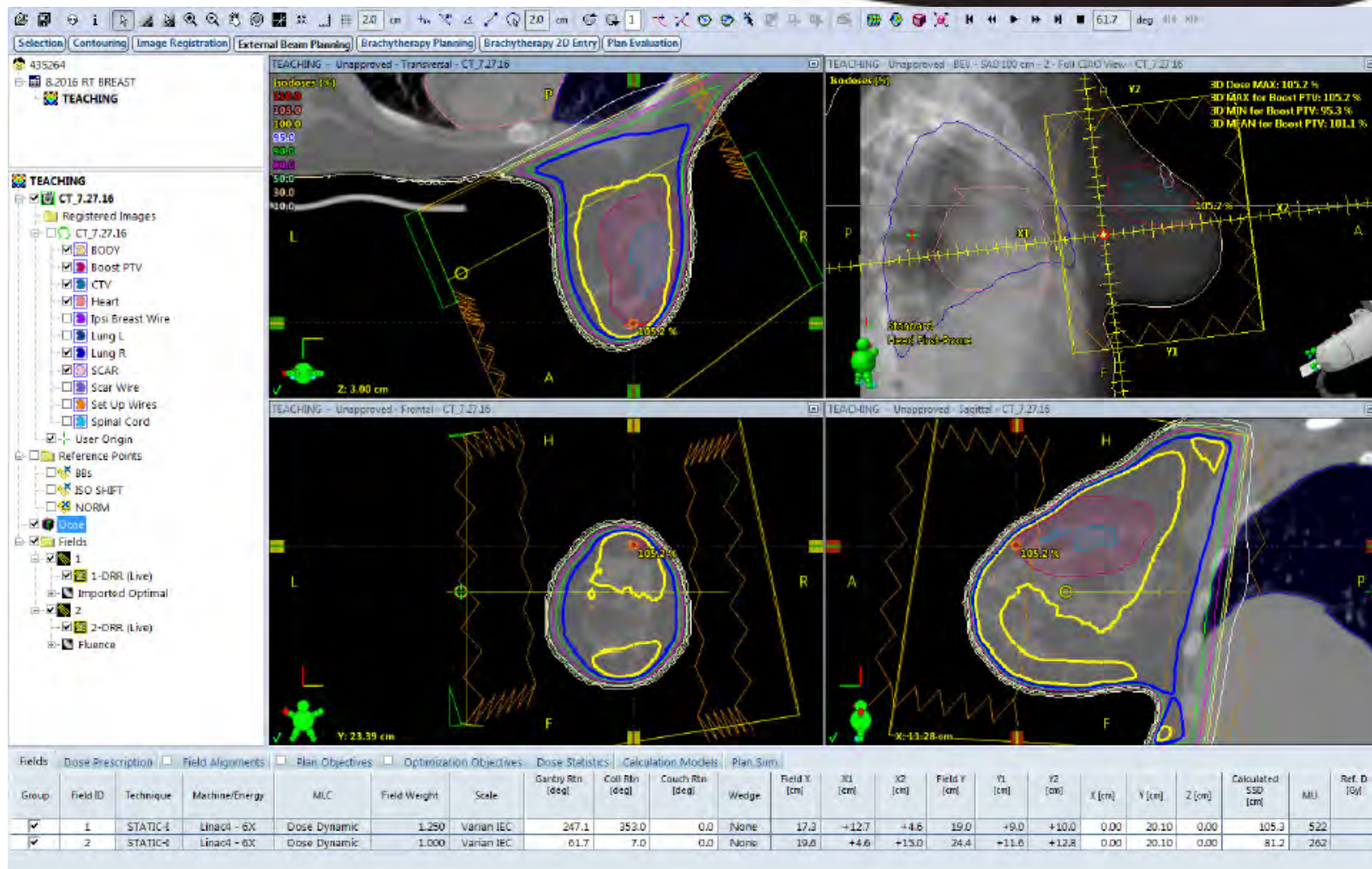


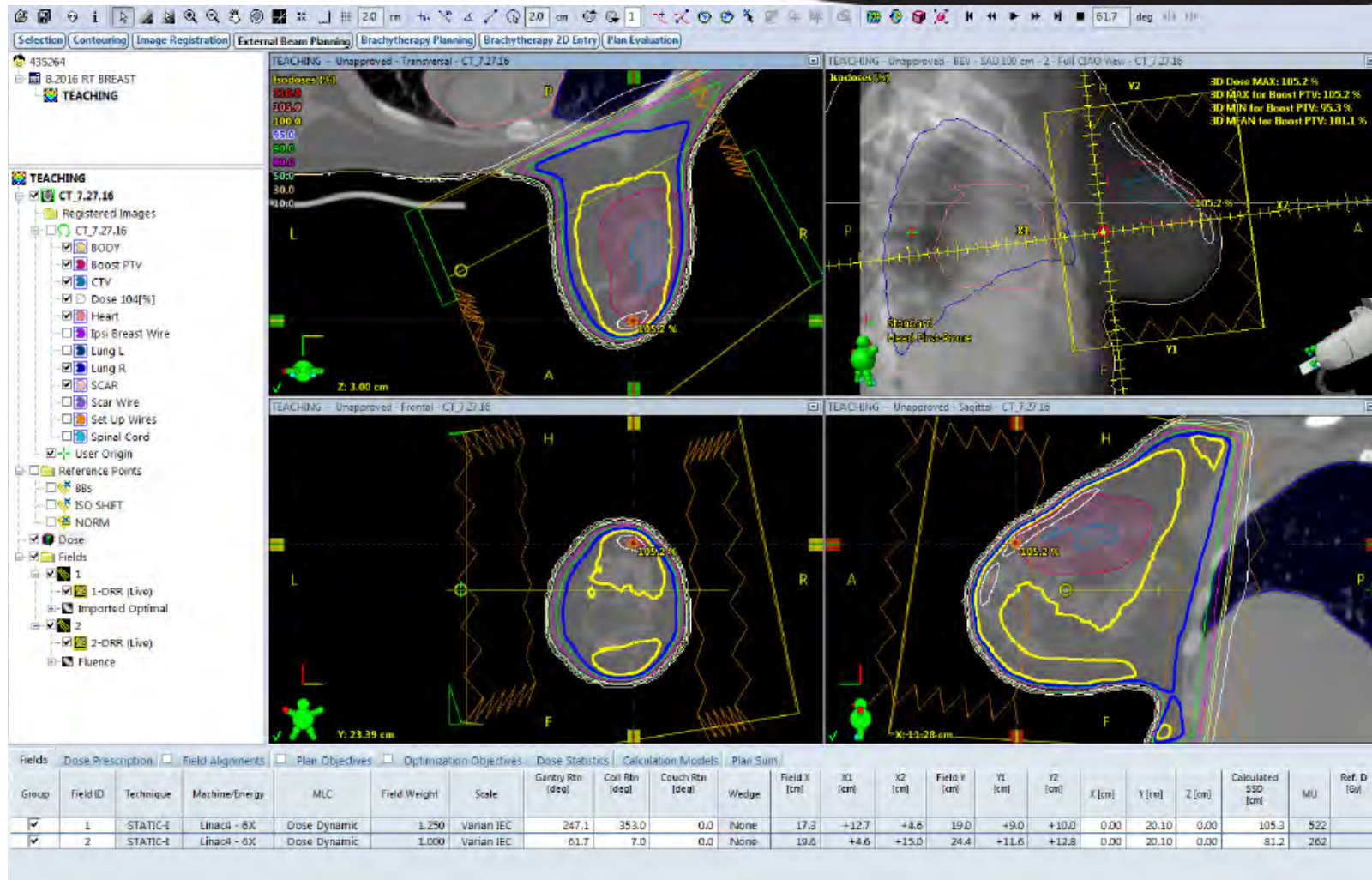
# Result of Dose Calculation



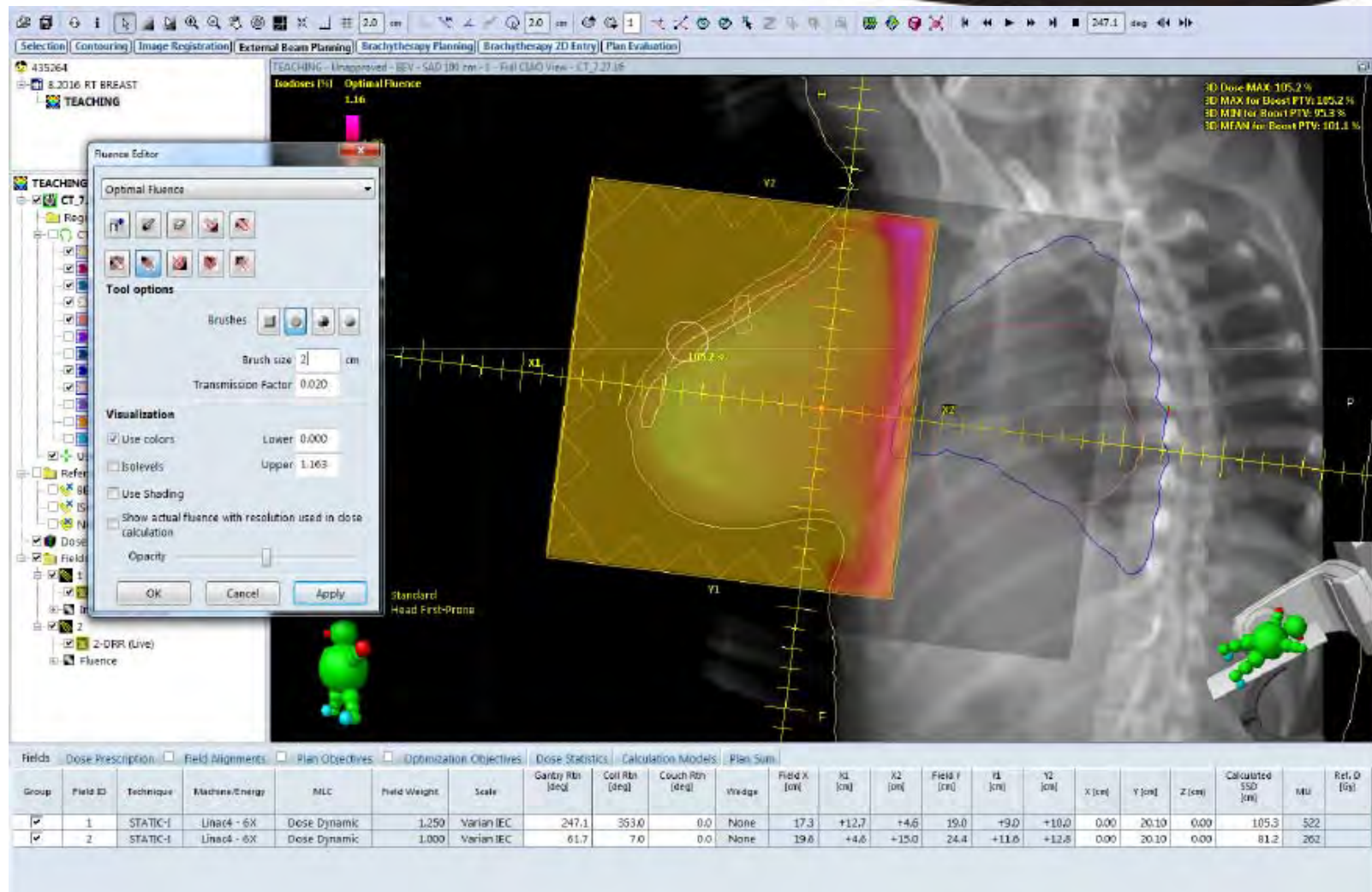


# Find the Hotspots





# Edit Fluence - Paint down Hot



TEACHING - Unapproved - BEV - SAD 190 cm - 1 - Field CMO View - CT\_2,27.16

3D Dose MAX: 105.2 %  
 3D MAX for Boost PTV: 105.2 %  
 3D MIN for Boost PTV: 95.3 %  
 3D MEAN for Boost PTV: 101.1 %

Optimal Fluence: 1.16

Fluence Editor

Optimal Fluence

Tool options

Brushes

Brush size: 2 cm

Transmission Factor: 0.020

Visualization

Use colors Lower: 0.000

Isolevels Upper: 1.163

Use Shading

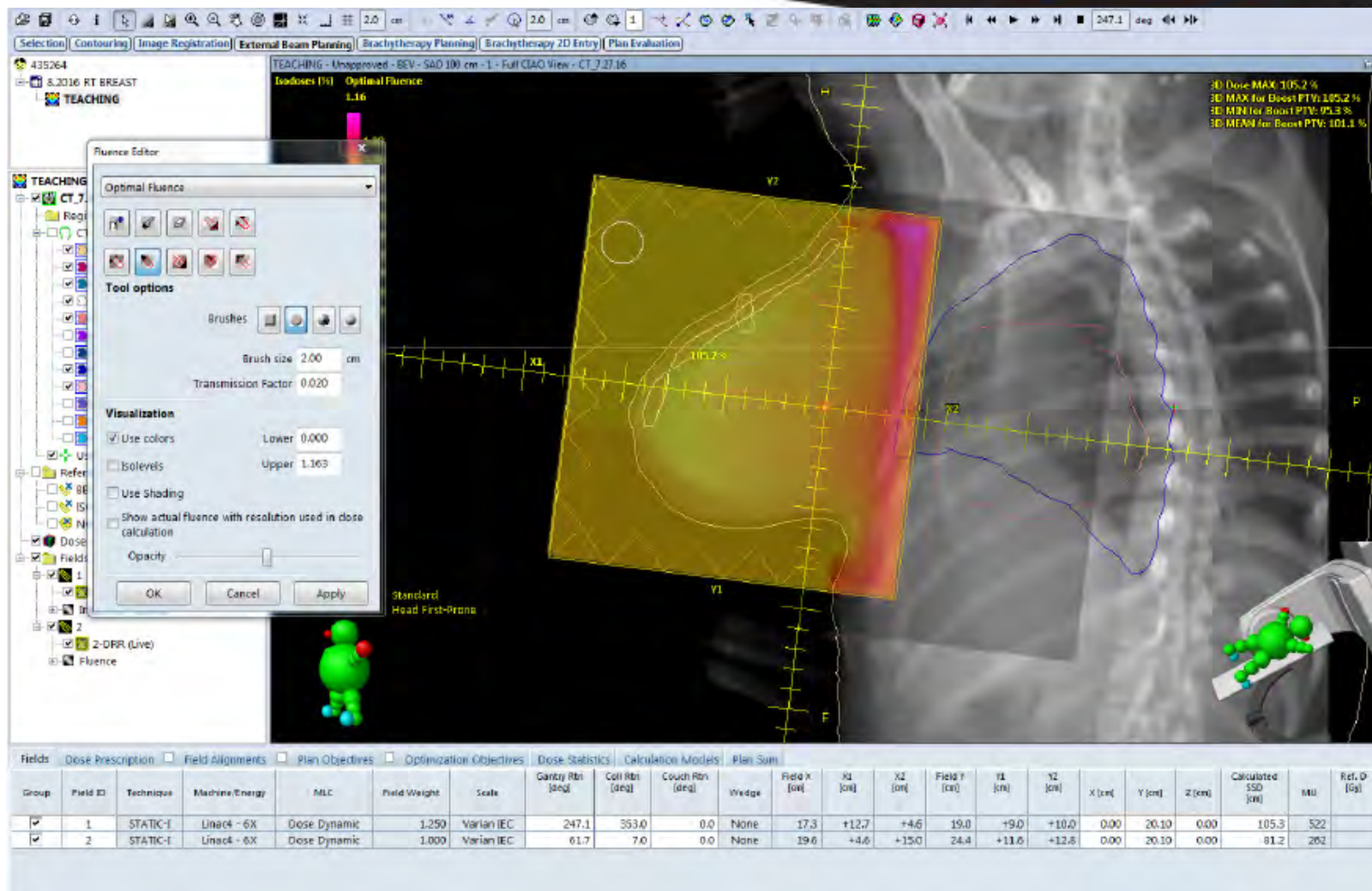
Show actual fluence with resolution used in dose calculation

Opacity

OK Cancel Apply

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MTU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-1	Linac4 - 6X	Dose Dynamic	1.250	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	522	
<input checked="" type="checkbox"/>	2	STATIC-1	Linac4 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.8	0.00	20.10	0.00	81.2	262	

# Edit Fluence - Paint down Hot



TEACHING - Unapproved - BEV - SAD 100 cm - 1 - Full CIAO View - CT\_7.27.16

Dose Statistics:

- 3D: Dose MAX: 105.2 %
- 3D: MAX for Boost PTV: 105.2 %
- 3D: MIN for Boost PTV: 95.3 %
- 3D: MEAN for Boost PTV: 101.1 %

Fluence Editor

Optimal Fluence

Tool options

Brushes

Brush size 2.00 cm

Transmission Factor 0.020

Visualization

- Use colors Lower 0.000 Upper 1.163
- Isolevels
- Use Shading
- Show actual fluence with resolution used in dose calculation

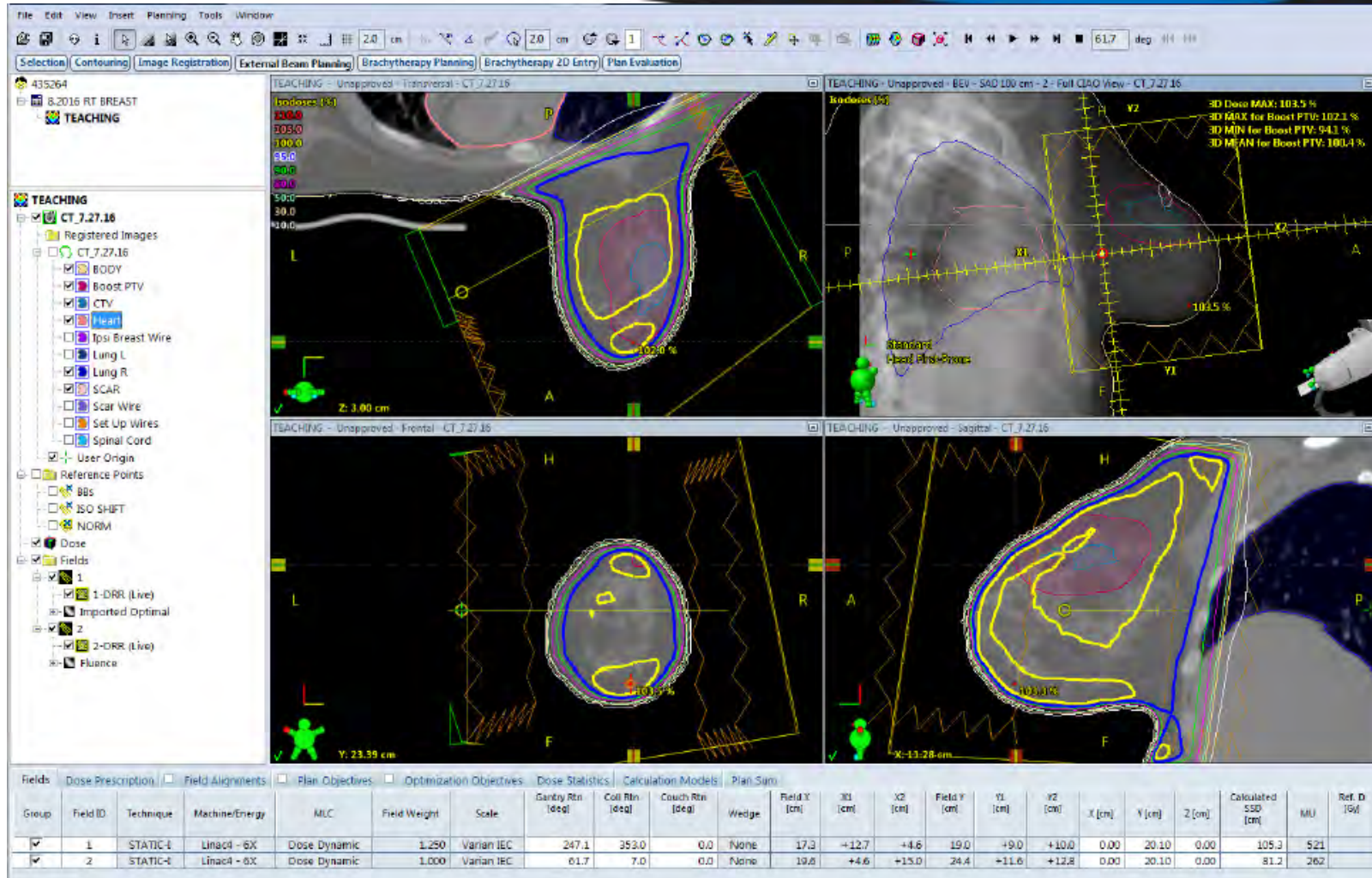
Opacity

OK Cancel Apply

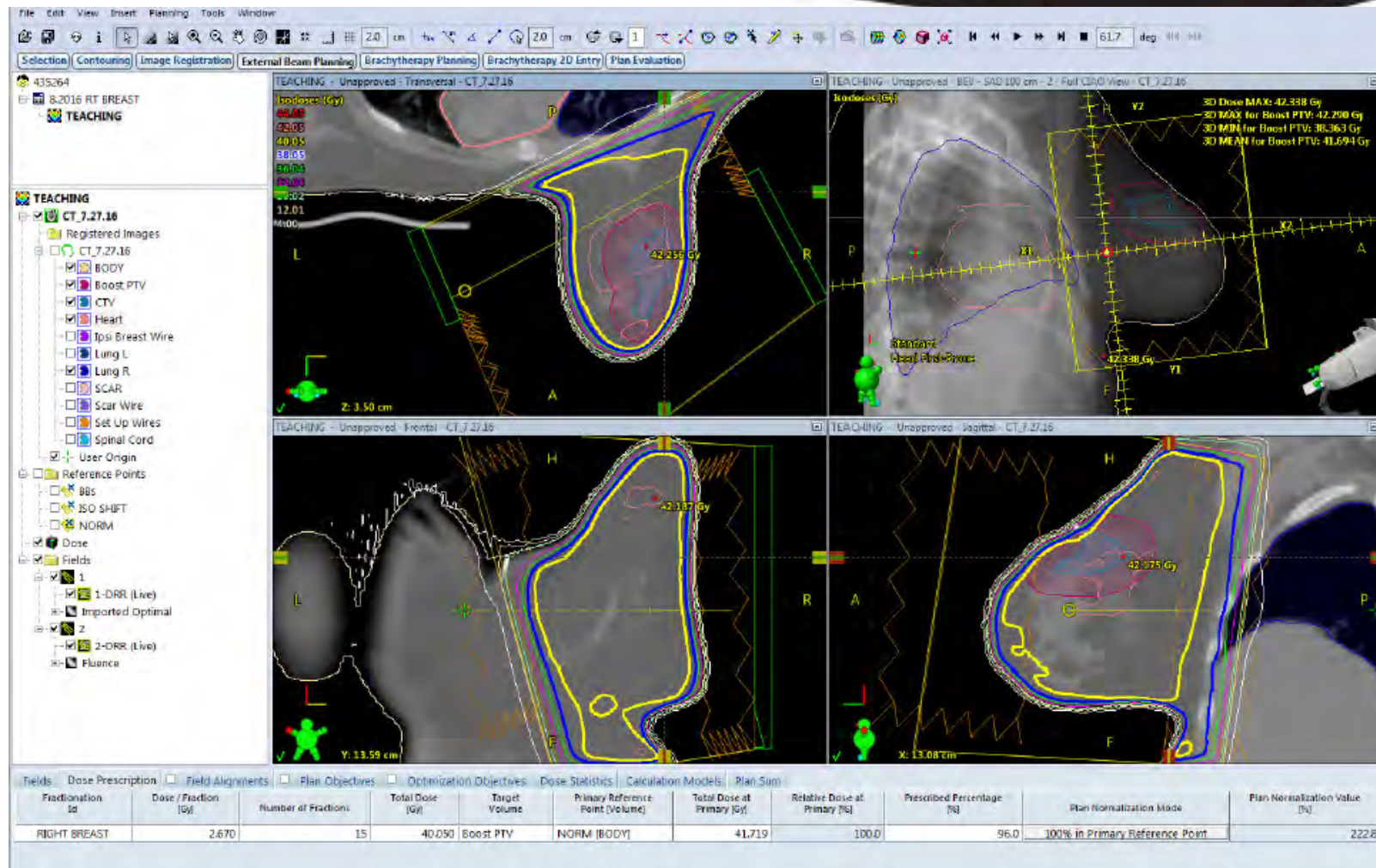
Standard Head First-Prone

Group	Field ID	Technique	Machine/Energy	MLC	Field Weight	Scale	Gantry Rtn (deg)	Coll Rtn (deg)	Couch Rtn (deg)	Wedge	Field X (cm)	X1 (cm)	X2 (cm)	Field Y (cm)	Y1 (cm)	Y2 (cm)	X (cm)	Y (cm)	Z (cm)	Calculated SSD (cm)	MU	Ref. D (Gy)
<input checked="" type="checkbox"/>	1	STATIC-1	Una04 - 6X	Dose Dynamic	1.250	Varian IEC	247.1	353.0	0.0	None	17.3	+12.7	+4.6	19.0	+9.0	+10.0	0.00	20.10	0.00	105.3	522	
<input checked="" type="checkbox"/>	2	STATIC-1	Una04 - 6X	Dose Dynamic	1.000	Varian IEC	61.7	7.0	0.0	None	19.6	+4.6	+15.0	24.4	+11.6	+12.6	0.00	20.10	0.00	81.2	262	

# Superficial Dose - Room to Prescribe Down

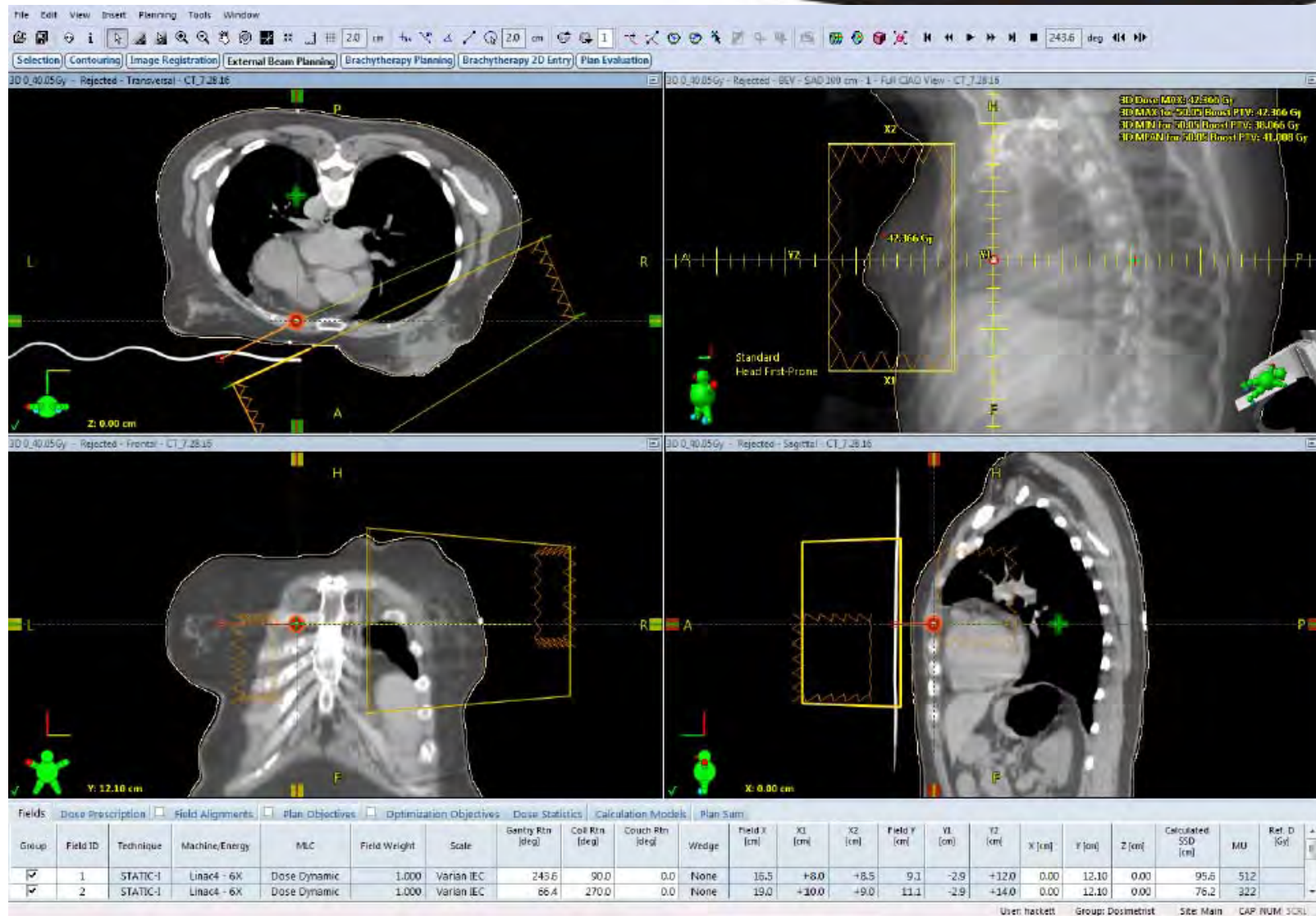


ta da.....





# Unusual Case Example



- A symposium? Cool!
- A death panel? Even cooler!
- Invited guest speaker? Outstanding!

Questions? Complaints? [rachel.hackett@roswellpark.org](mailto:rachel.hackett@roswellpark.org)

