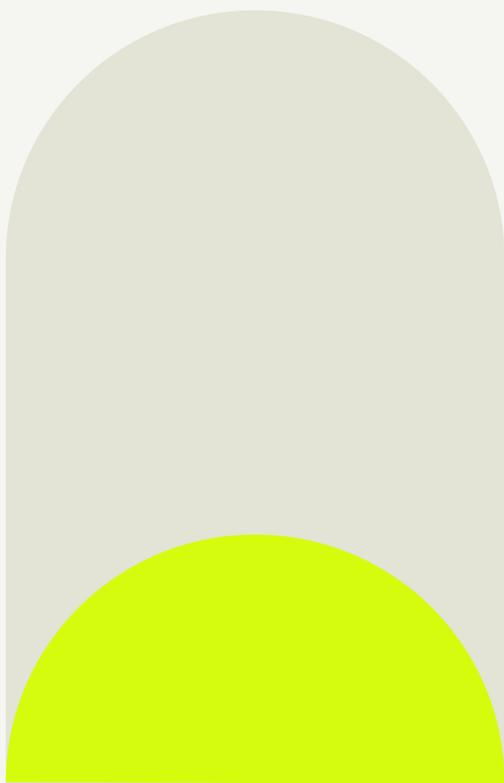




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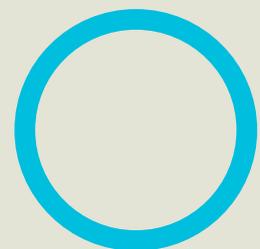
第三者評価用**Procedure**作成方法

For Precision
(Radixact System ver. 1.x)



2021.8.6_ver.A





照射野5x10cm、10cm深において
1Gy照射の例

始めに

- 1 Gy照射の作成例 (Ex.10.3 sec)

1. 照射野5x10 cm, 10 cm深において、照射時間 60 secの測定結果を記録します。
2. 測定結果より、1 Gy照射に必要な照射時間を算出します。

例) 測定結果が5.83 Gyであった場合

- 1 Gyの照射時間 = $60 \div 5.83 = 10.3$ sec (小数点2位四捨五入)
- Warm Upの10 secと合わせ、照射時間は、20.3 secとなります。

※本手順書ではこの照射時間例に沿った値を使用しますが、実際にはご施設の値を使用してください。

Procedure作成方法

Create Machine QAを選択

Machine Name: 4010017_HRC_6MV X-ray, 3.5MV MVCT
Machine Serial Number: 4010017
Machine Status: Ready
Water Temperature: 38.90°C
Service Mode: OFF
Warmup Status: Complete

What's Next?
Treatment Delivery Console
Select one of the workflows below.

Tools Lock

Radixact
ACCURAY

User: training, training
Version: 1.0.0.6

Warmup

Air Scan

CT Number Calibration

Treat Patient

Patient QA

Static Couch Patient QA

Treat Phantom Plan

Review Registration

Machine QA

Create Machine QA

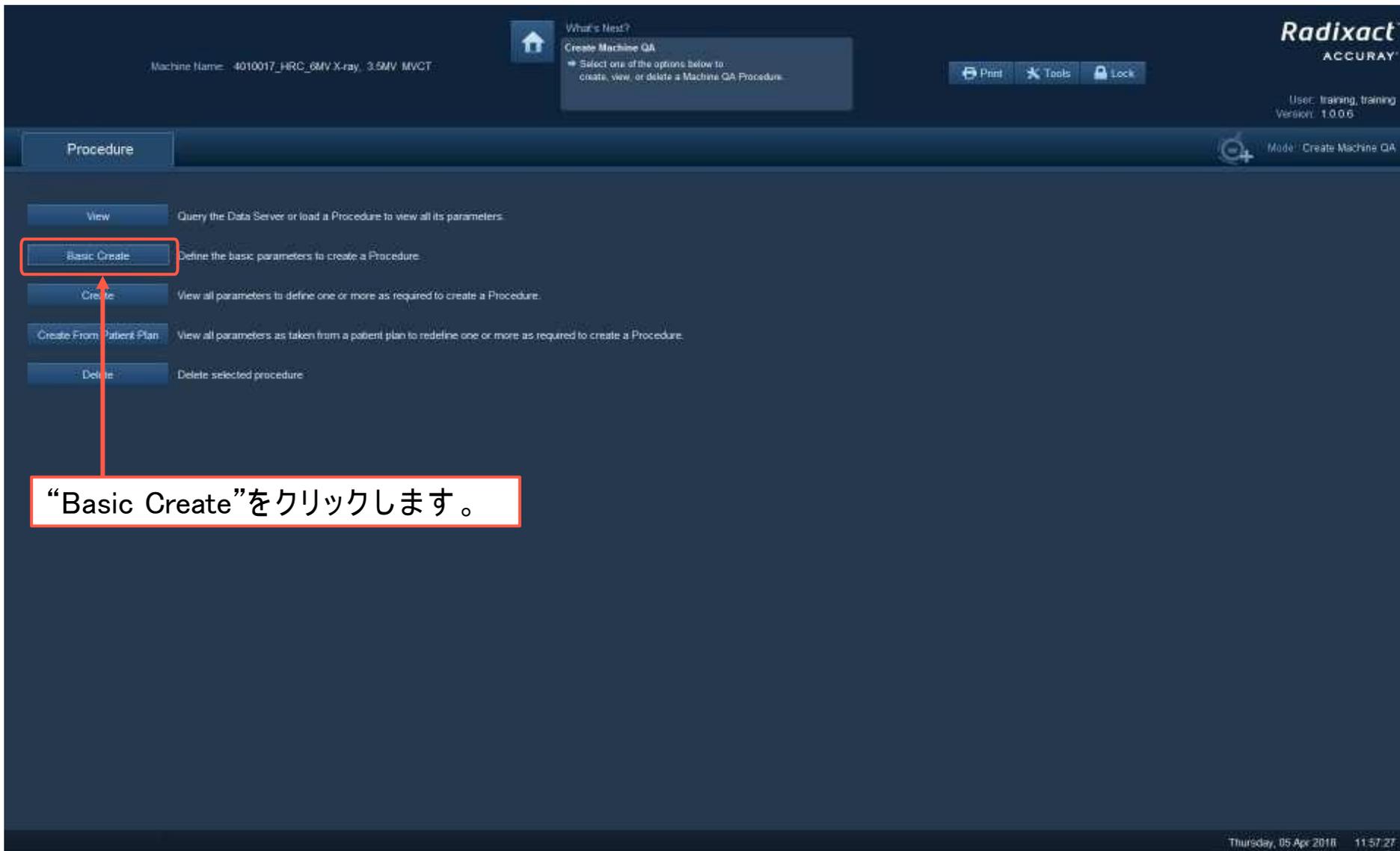
Create Machine QAをクリックします。

Thursday, 05 Apr 2018 11:56:56

Confidential Property of Accuray

Procedure作成方法

Basic Createを選択



The screenshot displays the Radixact ACCURAY software interface. At the top, the machine name is '4010017_HRC_6MV X-ray, 3.5MV, MVCT'. A 'What's Next?' box prompts the user to 'Create Machine QA' and select an option: 'create, view, or delete a Machine QA Procedure'. The 'Procedure' menu is open, showing several options: 'View', 'Basic Create', 'Create', 'Create From Patient Plan', and 'Delete'. The 'Basic Create' option is highlighted with a red box, and a red arrow points to it from a text box below. The text box contains the instruction: '“Basic Create”をクリックします。' (Click 'Basic Create').

Machine Name: 4010017_HRC_6MV X-ray, 3.5MV, MVCT

What's Next?
Create Machine QA
Select one of the options below to:
create, view, or delete a Machine QA Procedure.

Print Tools Lock

User: training, training
Version: 1.0.0.6

Procedure

View Query the Data Server or load a Procedure to view all its parameters.

Basic Create Define the basic parameters to create a Procedure.

Create View all parameters to define one or more as required to create a Procedure.

Create From Patient Plan View all parameters as taken from a patient plan to redefine one or more as required to create a Procedure.

Delete Delete selected procedure.

“Basic Create”をクリックします。

Thursday, 05 Apr 2018 11:57:27

Procedure作成方法

基本設定

The screenshot shows a software interface for configuring a procedure. At the top, there are buttons for "Save to XML File", "Save to Data Server", and "Cancel". Below these are several input fields and a list of procedures. The "Machine QA Name" field is set to "Output 1Gy". The "Procedures" list contains one entry: "5x10cm 10.3sec", with "Clone" and "Delete" buttons next to it. The "Description" field is also set to "5x10cm 10.3sec". The "Setup To Ready Longitudinal Distance (mm)" field is set to "0". The "Compression Factor" field is set to "10". The "Compression Type" dropdown menu is set to "BY_COMPRESSION_FACTOR". The "Beam" dropdown menu is set to "Treatment, Nominal MU: 1180, Pulse Rate: 300". At the bottom left, there is a "Fragment Summary" box with the following text: "Type of delivery: Static", "Total number of projections: 30", "Projections per second: 1.00", "Gantry Rotations: None", "Projections per rotation: 6.00", "Total Couch Distance: 0.00 mm", "Procedure Time: 30.00 seconds". Below the summary is a "Status" section which is currently empty.

Machine QA Nameを入力します。
※ 本例では“Output 1Gy”とします。

Descriptionを入力します。
※ 本例では“5x10cm 10.3sec”とします。

Setup To…に“0”を入力します。
この値はReady-Yes後のCouch移動量で、“0”にした場合、
測定時にあらかじめCouchをガントリ内に入れておきます。

Compression Factorを“10”、Compression Typeを
BY_COMPRESSION_FACTORとします。

Beamは“Treatment…”を選択します。

Procedure作成方法

Jaws、Gantry、Sinogramの設定

Fragment #1

Jaws

Jaw Mode: Fixed

Front Jaw Position (mm): -21.0 Front Jaw: -21.0 Back Jaw: 21.0

Back Jaw Position (mm): 21.0

Dynamic Jaw File: Browse

Gantry

Gantry Mode: Fixed

Gantry Start Angle (degrees): 0.0

Projections Per Gantry Rotation:

Time Per Gantry Rotation (seconds):

Projections Per Second: 10

Sinogram

Sinogram Mode: Dynamic

Sinogram Filename: c:\accuray\tdc\calibrationData\sinograms\fancyplan_144proj.bin Browse

Number of projections: 40

Sinogram Editor

Warm-up Duration (seconds): 0.0

Procedure Duration (seconds): 30.0

Couch

Couch Mode: Fixed

Couch Distance Per Rotation (mm): 10.0

Couch Speed (mm/second): 1.0

Jaw Modeを“Fixed”に設定します。

“Front Jaw: -21.0 Back Jaw: 21.0”を選択します。

Gantry Modeを“Fixed”に設定します。

Gantry Start Angleを“0.0”にします。

Projection Per Secondを“10”にします。
1秒当たり10Projectionになります。

Sinogram Modeを“Dynamic”に設定します。

Editをクリックします。

Procedure作成方法

Sinogramの編集①

Create a new Sinogramアイコンをクリックします。

Resize the sinogramアイコンをクリックします。

Projection countに“203”を入力します。

OKをクリックします。

Sinogram Editor ID: 3763472E

64 x 144

Procedure作成方法

Sinogramの編集②

Sinogram Editor ID: 3763472E

Fill a rectangle with the current open valueアイコンをクリックします。Sinogramを矩形で指定することができます。

リーフが開く範囲を指定します。
1枚当たり6.25mmなので、16枚で10cmとなります。
中心の25～40番までのリーフが開くように指定します。
左下にLeaf No.とProjectionが表示されます。

※ 本例の場合、Leaf: 25, Projection: 1 から始め、
Leaf: 40, Projection: 103 へドラッグします。

Leaf: 25 Projection: 1 Percent Open: 0.00 64 x 103

Procedure作成方法

Sinogramの編集③

The screenshot shows the 'Sinogram Editor - new sinogram' window. The main area is a grid representing a sinogram. A vertical black bar is visible in the center. A red box highlights the bottom-left corner of the grid, containing the text 'Leaf: 40 Projection: 203'. Another red box highlights a small red square on the grid, with a red arrow pointing to a larger text box. The text box contains the instruction: 'Leaf: 40, Projection: 103までドラッグすると幅10cm、10.3秒分のSinogramが出来ます。'. The bottom status bar shows 'Leaf: 40 Projection: 203 Percent Open: 100.00' and '64 x 203'.

Leaf: 40, Projection: 103までドラッグすると幅10cm、10.3秒分のSinogramが出来ます。

Leaf: 40 Projection: 203 Percent Open: 100.00

64 x 203

Procedure作成方法

Sinogramの保存

Save the sinogram to a file

Save the sinogram to a fileアイコンをクリックし、SinogramをFileとして保存します。

File Name: 5x10 203proj

Files of Type: Sinograms (*.bin)

Save

Cancel

File Nameを入力します。
ここでは“5x10 203proj”です。

Saveをクリックします。

Exit the Sinogram EditorアイコンをクリックしてSinogram Editorを終了します。

Leaf: Projection: Percent Open: 64 x 203

Procedure作成方法

Projection・Couchの設定

Fragment #1

Jaws

Jaw Mode: Fixed

Front Jaw Position (mm): -21.0 Front Jaw: -21.0 Back Jaw: 21.0

Back Jaw Position (mm): 21.0

Dynamic Jaw File:

Gantry

Gantry Mode: Fixed

Gantry Start Angle (degrees): 0.0

Projections Per Gantry Rotation:

Time Per Gantry Rotation (seconds):

Projections Per Second: 10

Sinogram

Sinogram Mode: Dynamic

Sinogram Filename: c:\accuray\tdc\calibrationData\sinograms\5x10_203proj.bin

Number of projections: 203

Sinogram Editor

Warm-up Duration (seconds): 0.0

Procedure Duration (seconds): 30.0

Couch

Couch Mode: Fixed

Couch Distance Per Rotation (mm): 10.0

Couch Speed (mm/second): 1.0

Number of projectionに実際に使用するProjection数を入力します。
※ 本例では“203”です。

Couch Modeを“Fix”に設定します。

Procedure作成方法

XMLファイルとして保存

The image shows a software interface for creating a procedure. The main window has a 'Procedure' tab and several buttons: 'Save to XML File', 'Save to Data Server', and 'Cancel'. A red box highlights the 'Save to XML File' button, with an arrow pointing to a text box that says '“Save to XML File”をクリックします。' (Click 'Save to XML File').

Below the buttons, there are several input fields: 'Machine QA Name' (Output 1Gy), 'Procedures' (5x10cm 10.3sec), 'Description' (5x10cm 10.3sec), 'Setup To Ready Longitudinal Distance (mm)' (0), 'Compression Factor' (10), 'Compression Type' (BY_COMPRESSION_FACTOR), and 'Beam' (Treatment, Nominal MU: 1180, Pulse Rate: 300).

A 'Fragment Summary' box is highlighted with a red box, containing the following text:
Type of delivery: Static
Total number of projections: 203
Projections per second: 10.00
Gantry Rotations: None
Projections per rotation: 60.00
Total Couch Distance: 0.00 mm
Procedure Time: 20.30 seconds

A 'Save' dialog box is overlaid on the main window. It shows the current directory as 'calibrationData' and lists several folders: '5x10 60sec', 'CouchImages', 'CTs', 'JawProfiles', 'sinograms', 'StaticDDTSinograms', and 'TreatmentProcedures'. The 'Save Binaries' checkbox is checked. The 'File Name' field is highlighted with a red box and contains the text 'Output 1Gy'. An arrow points from a text box that says 'File Nameを入力します。 ※本例では“Output 1Gy”です。' (Enter File Name. ※In this example, it is "Output 1Gy".') to the 'File Name' field.

The 'Save' dialog box also has a 'Files of Type' dropdown set to 'Accuray calibration files (*.xml)'. At the bottom, the 'Save' button is highlighted with a red box, with an arrow pointing from a text box that says '“Save”をクリックします。' (Click 'Save').

Fragment SummaryでProjection Timeを確認します。
※本例では20.30secondsです。

Procedure作成方法

データサーバーに保存

The screenshot shows the 'Procedure' configuration window. At the top, there are three buttons: 'Save to XML File', 'Save to Data Server', and 'Cancel'. A red box highlights the 'Save to Data Server' button, with an arrow pointing to it from a text box that says 'Save to Data Serverをクリックします。' Below the buttons, there are several input fields: 'Machine QA Name' (Output 1Gy), 'Procedures' (5x10cm 10.3sec), 'Description' (5x10cm 10.3sec), 'Setup To Ready Longitudinal Distance (mm)' (0), 'Compression Factor' (10), 'Compression Type' (BY_COMPRESSION_FACTOR), and 'Beam' (Treatment, Nominal MU: 1180, Pulse Rate: 300). A 'Fragment Summary' box is also visible, containing details like 'Type of delivery: Static', 'Total number of projections: 203', 'Projections per second: 10.00', 'Gantry Rotations: None', 'Projections per rotation: 60.00', 'Total Couch Distance: 0.00 mm', and 'Procedure Time: 20.30 seconds'. A 'Status' section is at the bottom left. On the right, a modal dialog box titled 'Saving Machine QA Procedure to Data Server' (ID: 23208413) is open. It lists a series of validation steps: 'Validating parameters', 'Validating reference image file', 'Validating procedures', 'Validating Procedure: 5x10cm 10.3sec', 'Validating fragment [1] settings', 'Checking for matching beam', 'Validating fixed jaw settings', 'Validating sinogram file', 'Finished validating Procedure: 5x10cm 10.3sec', and 'Finished validating parameters'. This is followed by 'Uploading to server...', 'Creating machine QA record', 'Building Machine QA', 'Loading Reference Image', 'Building procedure sets', 'Building procedure', 'Building fragment', 'Loading Sinogram', and 'Uploading files'. At the bottom of the dialog, a message box says 'Machine QA record created successfully' with a 'Close' button. A red box highlights this message box, with an arrow pointing to it from a text box that says 'Machine QA record created successfullyと表示されたらCloseをクリックします。'



Thank you

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