



# *AAPM Dose Check Education Slides*

Neusoft Medical Systems USA



## *Disclaimer*

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## Disclaimer

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- Screen captures are **examples** of a common (or latest) software version only and all software versions are not represented
- The information contained herein is current as of the date shown on the title slide
- Modification of the content of these slides is **not allowed**.



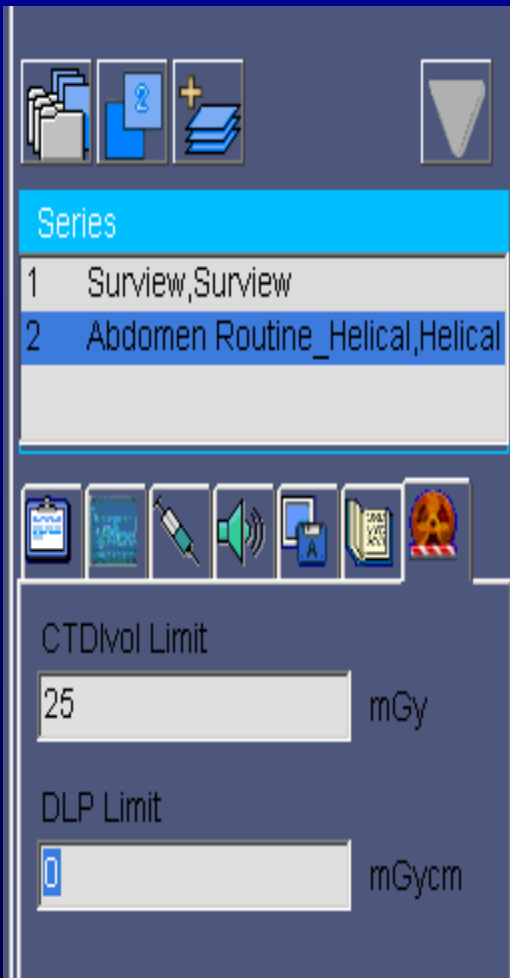
## User Access Controls

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- Access Control for Dose Notifications
- Changes to GLOBAL NOTIFICATION LEVELS can be made in System Settings--> Scan Miscellaneous Settings--> Dose Setting-->Max CTDIvol per series --> Max DLP per series(mGy\*cm)
- Access Control for Dose Alerts
- Changes to GLOBAL ALERT LEVELS can be made in System Settings--> Scan Miscellaneous Settings-->Dose Setting --> Max CTDIvol per study--> Max DLP per study (mGy\*cm)



# Configuring Dose Notifications-NeuViz 16



- Dose Notification Limits are set in Protocol Edit, per protocol.
- CTDIvol per series and DLP per series can be set.
- Note: Only users with Admin privileges can set the Dose Limits



# Configuring Dose Notifications-NeuViz 16

The screenshot shows the 'Procedure' list with 'Abdomen Routine, Helical' selected. Below the list is a toolbar with several icons, including a radiation warning icon highlighted with a red box. The main display area shows dose-related data for 'Head' and 'Body' sections.

| Section      | Metric              | Value         |
|--------------|---------------------|---------------|
| Head         | Accumulated CTDIvol | 0.00 mGy      |
|              | Accumulated DLP     | 0.00 mGycm    |
| Body         | Accumulated CTDIvol | 28.81 mGy     |
|              | Accumulated DLP     | 1269.54 mGycm |
| Series       | CTDIvol             | 28.74 mGy     |
|              | DLP                 | 1266.34 mGycm |
| Limits       | CTDIvol Limit       | 25.00 mGy     |
|              | DLP Limit           | 0.00 mGycm    |
| Phantom Size |                     | BODY 32cm     |

## Dose Check Tab

- This section displays all dose related values.
- If a value is red, the operator has exceeded a set limit



# Configuring Dose Notifications NeuViz 64

Dose Setting

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Max CTDIvol per study (mGy)

Max DLP per study (mGy-cm)

Max DLP per series (mGy-cm)

Use the value from setting only

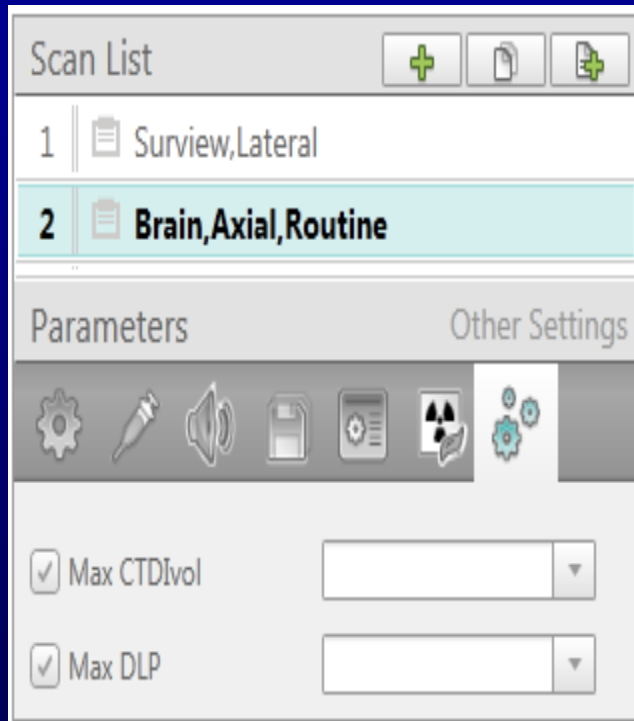
Max CTDIvol per series (mGy)

Use the value from setting only

- After checking “Use the value from setting only”, enter values in Max CTDIvol per series (mGy) and/or Max DLP per series (mGy\*cm)



## Configuring Dose Notifications per Protocol NeuVis 64



### Protocol Settings

After checking Max CT DIvol and/or Max DLP, enter desired values in dropdown.





# Configuring Dose Alerts- NeuViz 16

The screenshot shows the NeuSoft System Setting interface. The top navigation bar includes Home, Review, Filming, Report, Service, and Help. The left sidebar lists various settings, with 'Dose Check Setting' highlighted. The main content area is divided into three sections: 'Dose Check Setting', 'Password Validation', and 'Dose Limit Setting'. The 'Dose Check Setting' section has 'Perform Dose Check' set to 'On' and 'Password Validation' set to 'On'. The 'Dose Limit Setting' section, highlighted with a red box, shows four input fields: 'Head accumulated CTDIvol limit' (1000 mGy), 'Head accumulated DLP limit' (0 mGycm), 'Body accumulated CTDIvol limit' (1000 mGy), and 'Body accumulated DLP limit' (0 mGycm).

| Setting                        | Value | Unit  |
|--------------------------------|-------|-------|
| Head accumulated CTDIvol limit | 1000  | mGy   |
| Head accumulated DLP limit     | 0     | mGycm |
| Body accumulated CTDIvol limit | 1000  | mGy   |
| Body accumulated DLP limit     | 0     | mGycm |

Default Head and Body accumulated CTDIvol 1000mGy



# Configuring Dose Alerts NeuViz 64

Dose Setting

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Max CTDIvol per study (mGy)

Max DLP per study (mGy-cm)

Max DLP per series (mGy-cm)

Use the value from setting only

Max CTDIvol per series (mGy)

Use the value from setting only

## Global Dose Alert

- After checking Max CTDIvol per study (mGy) and/or Max DLP per study (mGy\*cm), enter desired values.



# Acknowledging Notifications-NeuViz 16

**DOSE NOTIFICATION** [X]

Information:

Series 2: Planned CT DI Vol is 93.86 mGy which exceeds the recommended limit of 75 mGy

You can continue scanning after fill all the blank fields and click "Proceed" button.

Diagnostic Reason

Radiologist requested more dose.

Proceed Cancel

Dose Notification Pop-up

Diagnostic Reason may be entered, but it is not mandatory to proceed



# Acknowledging Notifications NeuViz 64

5... | CTDI 103.7 mGy DLP 1452.1 mGy-cm | Images 28

DOSE NOTIFICATION

| Series | Plan CTDI <sub>vc</sub> | Maximum C | Plan DLP | Maximum D |
|--------|-------------------------|-----------|----------|-----------|
| 2      | 103.7                   | N/A       | 1452.1   | 1000.0    |

Dose of the current series exceeds the set maximum dose. Enter a reason (optional) in order to continue to scan, or edit scan parameters within set dose limits.

Optional message may be entered in the text box above. Press Continue to scan or Return to edit scan parameters.



# Acknowledging Dose Alerts-NeuViz 16

**DOSE ALERT**

Information:

Series 2: Accumulated CTDIVol is 28.81 mGy which exceeds the recommended limit of 25 mGy

You can continue scanning after fill all the blank fields and click "Proceed" button.

Username: LR

Diagnostic Reason: MORE DOSE NEEDED FOR DIAGNOSTIC IMAGES

Password: \*\*\*\*\*

Proceed Cancel

- The default username and password location is left with the Admin or 'Super Users' who have Admin privileges. It is up to them to educate the rest of the staff on location of the default username and password.

The system default configuration for Dose Check:

- Dose Check ON
- Password: OFF

In this Dose Alert example, Password is on, so user must fill in Username and Password to continue



# Acknowledging Dose Alerts-NeuViz 16

**DOSE ALERT**

Information:

Series 1: Accumulated CTDIVol is 1031.42 mGy which exceeds the recommended limit of 1000 mGy

You can continue scanning after fill all the blank fields and click "Proceed" button.

Username: \*\*\*\*\*

Diagnostic Reason: NEED MORE IMAGES ABLATION

Proceed Cancel

- The default username and password location is left with the Admin or 'Super Users' who have Admin privileges. It is up to them to educate the rest of the staff on location of the default username and password.

The system default configuration for Dose Check:

- Dose Check ON
- Password: OFF

In this Dose Alert example, Password is off. The user has the option to fill in Username, Diagnostic Reason, then Proceed



# Acknowledging Dose Alerts NeuViz 64

DOSE ALERT (A dose alert value will be exceeded!)

The current study CTDIvol = 80.4 mGy, DLP = 1125.4 mGy-cm, maximum CTDIvol = 200.0 mGy, maximum DLP = 1000.0 mGy-cm. Because the dose has been close to or exceeds the maximum dose, please enter the operator name, password and reasons in order to continue to scan, otherwise re-edit the scanning parameters.

Username:

\* Password: [masked]

\* Operator: TC

Reason

Continue Return

Password Validation

- The system is configured with Password Validation checked ON
- When checked, the operator must enter Password and Operator fields. Reason text field is optional



# Turning off Dose Alert Feature-NeuViz 16

**NeuSoft**

Home Review Filming Report **Service**

System Setting

- Voice Manager
- Auto-delete settings
- Data Source
- CCT monitor setting
- Image information setting
- IP Manager
- Annotation
- Patient Registration Settings
- PID Generator
- Study ID Generator
- Print
- Scanner Option
- Dose Check Setting**
- Machine Information
- Hospital Information
- User Management

**Dose Check Setting**

General Setting

Perform Dose Check  On  Off

Password Validation  On  Off

To Turn Dose Check Off (Logged into Admin)

Service—Dose Check Setting—Perform Dose Check

Select Off





# Turning off Dose Alert Feature NeuViz 64

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**Dose Setting**

Max CTDIvol per study (mGy)  
15

Max DLP per study (mGy-cm)  
1000

Max DLP per series (mGy-cm)  
1000

Use the value from setting only

Max CTDIvol per series (mGy)  
200

Use the value from setting only

- Uncheck all boxes to turn off Dose Alert feature



## Location of Alert/Notification log-NeuViz 16

Neusoft

Home

Review

Filming

Report

Service

Help

Scanning>>

Report Viewer

### DOSE ALERT


|                  |            |
|------------------|------------|
| Date             | 8/14/2013  |
| Time             | 2:08:02 PM |
| Study ID         | 000633     |
| Accepted CTDIvol | 75.11      |
| Accepted DLP     | 947.85     |
| CTDIvol Limit    | 10         |
| DLP Limit        | 0          |
| Age Group        | Adult      |
| mAs              | 471        |
| KV               | 120        |
| Phantom Size     | HEAD 16    |


Report Management


| Date       | Time        | Study ID | First Name | Last Name       | Type         |
|------------|-------------|----------|------------|-----------------|--------------|
| 2013-08-14 | 2:09:42 PM  | 000633   | NADIA      | RUSSELL         | Alert        |
| 2013-08-14 | 2:09:55 PM  | 000633   | NADIA      | RUSSELL         | Notification |
| 2013-09-20 | 10:58:36 AM | 000657   | x          | x               | Notification |
| 2013-09-20 | 11:09:09 AM | 000657   | x          | x               | Notification |
| 2013-09-20 | 11:10:49 AM | 000657   | x          | x               | Notification |
| 2013-09-20 | 2:14:31 PM  | 000662   | Unknown    | could be anyone | Notification |
| 2013-09-30 | 11:42:58 AM | 000669   | Unknown    | could be anyone | Alert        |
| 2013-09-30 | 11:50:48 AM | 000670   | Unknown    | could be anyone | Notification |
| 2014-03-18 | 11:47:37 AM | 000720   | ivory      | donaldson       | Notification |
| 2014-04-11 | 1:36:16 PM  | 000733   | Person     | Unknown         | Notification |
| 2014-04-16 | 9:42:33 AM  | 000734   | Person     | Unknown         | Notification |
| 2014-04-29 | 2:34:01 PM  | 000750   | dd         | rus             | Notification |
| 2014-04-30 | 3:48:15 PM  | 000757   | 11         | 11              | Alert        |
| 2014-04-30 | 3:10:18 PM  | 000754   | 11         | 11              | Notification |
| 2014-04-30 | 3:16:35 PM  | 000755   | 11         | 11              | Notification |
| 2014-05-02 | 11:12:46 AM | 000762   | 11         | 11              | Alert        |
| 2014-05-02 | 11:07:01 AM | 000760   | 11         | 11              | Notification |
| 2014-05-02 | 11:08:25 AM | 000761   | 11         | 11              | Notification |


To View Dose Check Report:  
Go to:  
Service  
Dose Check Report  
Select Patient  
View Report


Daily

  
 Tube Warm Up

  
 Air Calibration


  
 System Setting


  
 Protocol Edit


  
 Dose Check Report


  
 Virus Scan


  
 QA


  
 Bug Reports

  
 Disk Cleanup

  
 Remote Medicine

  
 Remote Service

  
 Switch User

  
 Function Test

04-14-15 16:06:18

Tube Heat Storage: 6.68%

140 Gb

Exit

Export

Review Dose Setting

Hide Factory Protocols



## Exporting of alert/notification log-NeuViz 16

Report Management

| Date       | Time        | Study ID | First Name | Last Name       | Type         |
|------------|-------------|----------|------------|-----------------|--------------|
| 2013-08-14 | 2:09:42 PM  | 000633   | NADIA      | RUSSELL         | Alert        |
| 2013-08-14 | 2:09:55 PM  | 000633   | NADIA      | RUSSELL         | Notification |
| 2013-09-20 | 10:58:36 AM | 000657   | x          | x               | Notification |
| 2013-09-20 | 11:09:09 AM | 000657   | x          | x               | Notification |
| 2013-09-20 | 11:10:49 AM | 000657   | x          | x               | Notification |
| 2013-09-20 | 2:14:31 PM  | 000662   | Unknown    | could be anyone | Notification |
| 2013-09-30 | 11:42:58 AM | 000669   | Unknown    | could be anyone | Alert        |
| 2013-09-30 | 11:50:48 AM | 000670   | Unknown    | could be anyone | Notification |
| 2014-03-18 | 11:47:37 AM | 000720   | ivory      | donaldson       | Notification |
| 2014-04-11 | 1:36:16 PM  | 000733   | Person     | Unknown         | Notification |
| 2014-04-16 | 9:42:33 AM  | 000734   | Person     | Unknown         | Notification |
| 2014-04-29 | 2:34:01 PM  | 000750   | dd         | rus             | Notification |
| 2014-04-30 | 3:48:15 PM  | 000757   | 11         | 11              | Alert        |
| 2014-04-30 | 3:10:18 PM  | 000754   | 11         | 11              | Notification |
| 2014-04-30 | 3:16:35 PM  | 000755   | 11         | 11              | Notification |
| 2014-05-02 | 11:12:46 AM | 000762   | 11         | 11              | Alert        |
| 2014-05-02 | 11:07:01 AM | 000760   | 11         | 11              | Notification |
| 2014-05-02 | 11:08:25 AM | 000761   | 11         | 11              | Notification |

Exit      Export

**To Export Dose Check Report:**  
Go to:  
Dose Check Report  
Select Patients to Export  
Select Export  
Export to CD/DVD or Removable Disk.  
Select OK  
The Dose Check Report is an HTML file.

**Export**

Export to:

Removable Disk    H:\    Refresh

CD/DVD Disc    F:\    Refresh

OK    Cancel



# Location of alert/notification log NeuViz 64

## Dose Check Log

| ID | Patient ID     | Time                | Type         | Operator | Scan Time           | Real CTDIvol(mGy) | Max CTDIvol Thresh |
|----|----------------|---------------------|--------------|----------|---------------------|-------------------|--------------------|
| 1  | P-201504150325 | 2015-04-15 13:43:08 | Notification |          | 2015-04-15 13:43:07 | 98.7              | 200.0              |
| 2  | P-201504150325 | 2015-04-15 13:46:50 | Alert        | tc       |                     | 98.7              | 200.0              |
| 3  | P-201504150325 | 2015-04-15 13:49:42 | Notification |          | 2015-04-15 13:49:41 | 93.0              | 200.0              |
| 4  | P-201504150325 | 2015-04-15 13:49:43 | Alert        | tc       |                     | 93.0              | 200.0              |

To view Dose Check Log, go to Service -->System Setting-->  
Dose Check Log