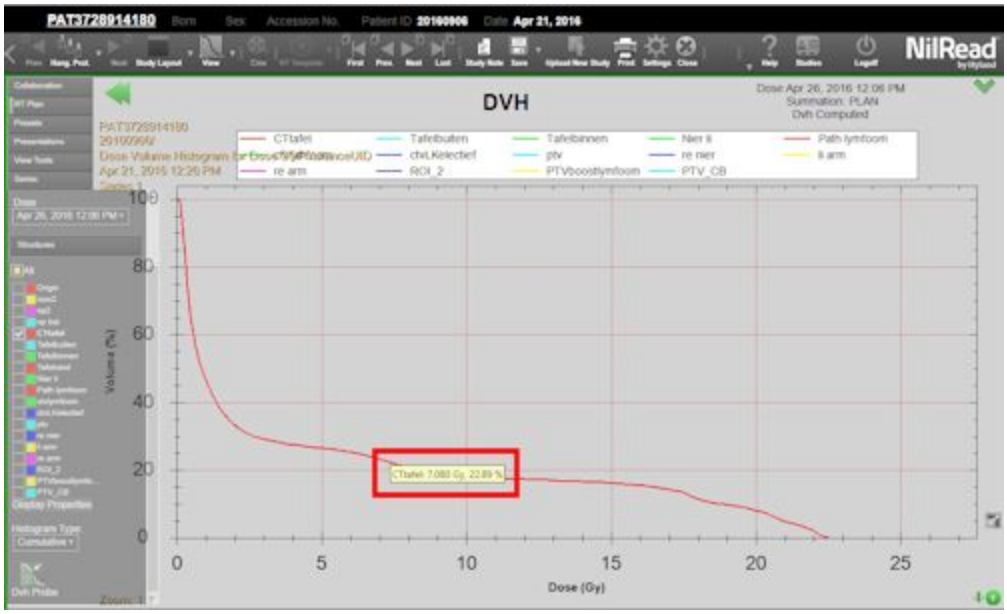
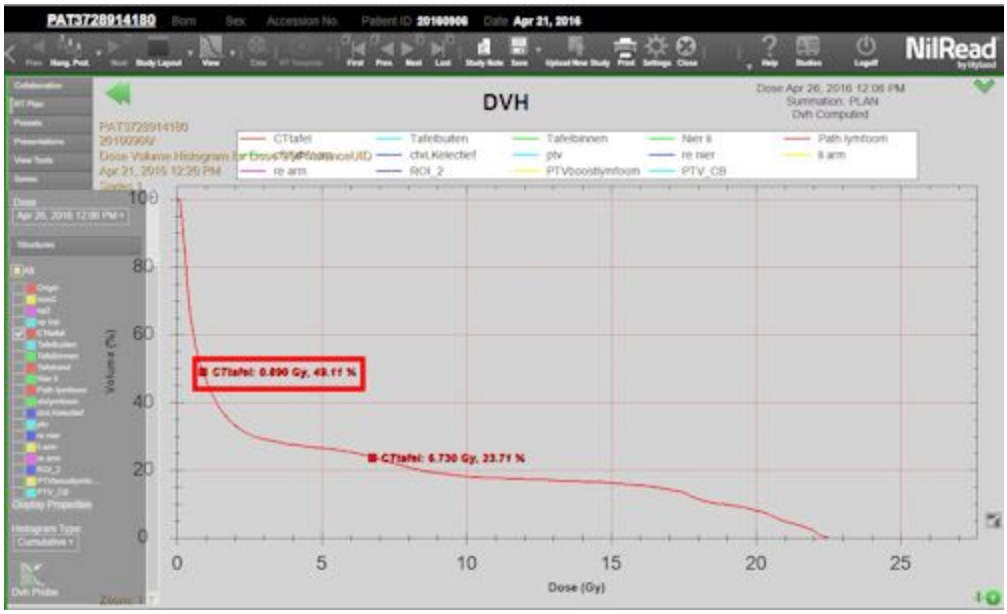
2. Hover over a point on a curve. The dose and volume are shown.



3. Click (or tap) a point on a curve. A marker is shown on the curve along with the dose and volume. You can select multiple points. To remove a point, click (or tap) the point on the curve.

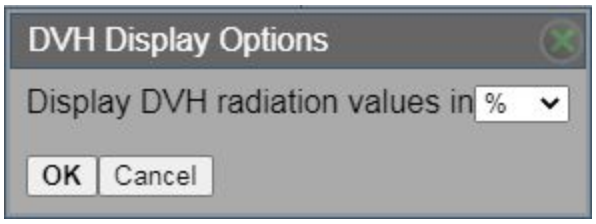


Display properties

You can change the dose unit of measurement on the graph.

1. Select **Display Properties**.

2. Select the unit of measurement for dose values. You can choose **cGy**, **Gy** or a percentage of the prescription dose.



3. Select **OK**.

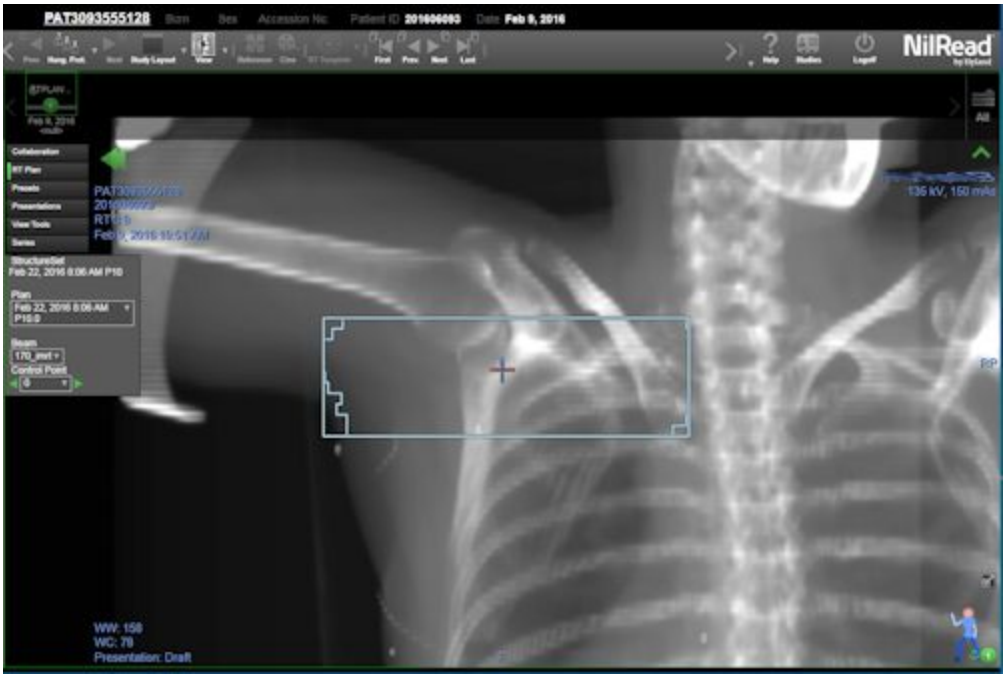
Structure color options

You can change the color used for a structure. For details, see **Using the RT Plan panel**.

Using the DRR view

The digitally reconstructed radiograph (DRR) view allows you to view the treatment field positions for a beam. The rectangle represents the jaw pairs and the area selected within the rectangle

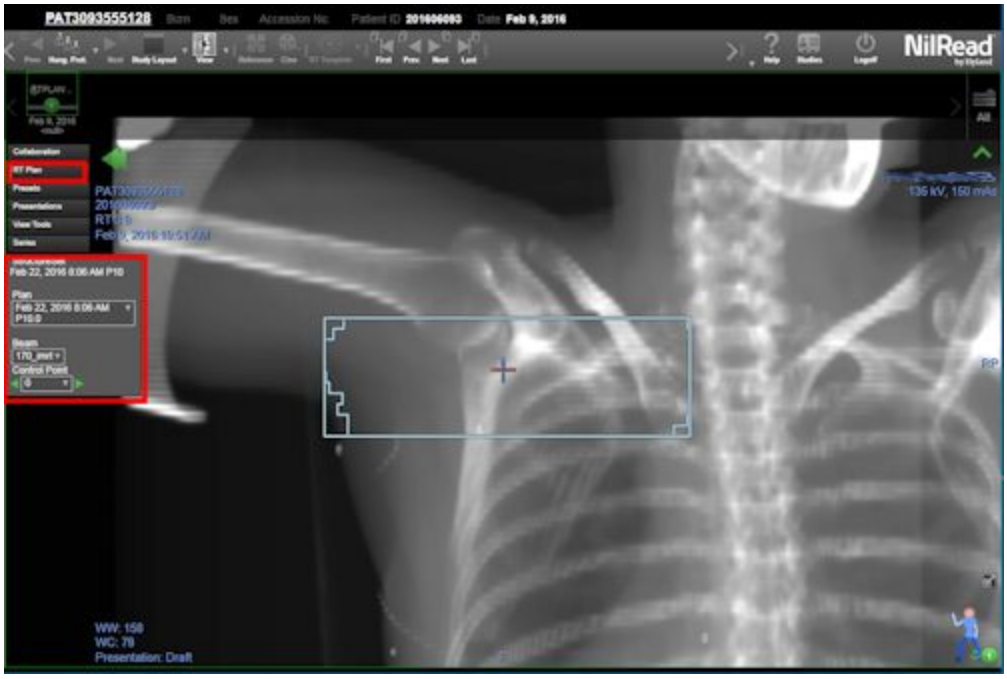
represents the multileaf collimators.

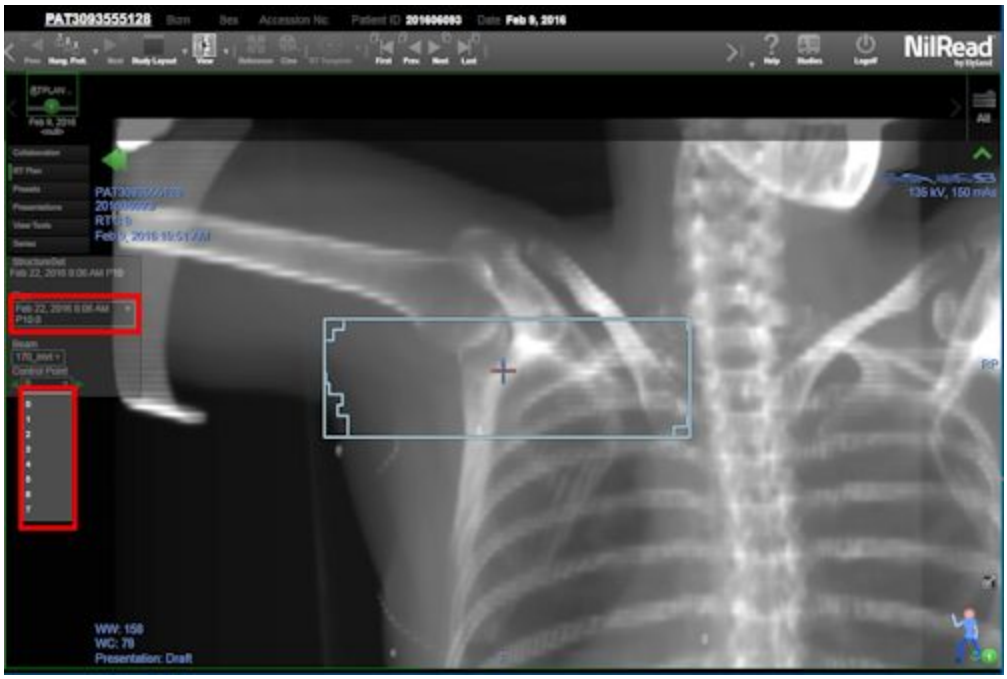


1. Select **View** (toolbar). Under **RT Views**, select **DRR**.

> **Note**
> You can also use the study layout options to place the DRR view beside an existing view. For details, see **Arrange images**.

2. Select **RT Plan** (side panel). The RT Plan options appear below the side panel.



3. Select a plan, then select a beam. Optionally, select a beam control point. To switch between control points, select the previous and next arrows beside the control point list, or click the control point list and select a control point from the drop-down list.
4. 

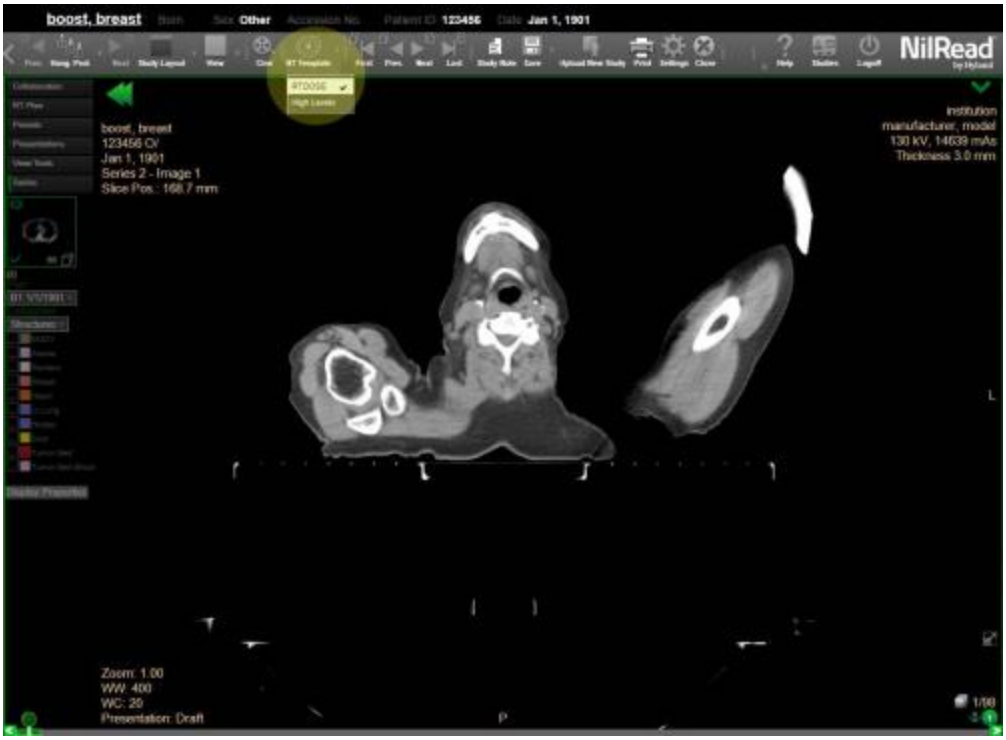
Apply an RT template to a study

When you open a study containing RT plans, the appropriate RT template will be applied to the study (if one exists). You can also choose a template while viewing a study.

> **Note**
> For details on creating templates, see **Manage RT templates**.

To apply a template to a study:

1. Select **RT Template** (toolbar). Any available templates for the current study are listed. A checkmark is shown beside the template currently applied to the study.

2. 

2. Select a template from the list. The template is applied to all viewports.

Manage RT templates

You can create radiation therapy templates to control how information is displayed. For example, you can change contour colors, isodose levels, and the isodose unit of measurement.

1. Select **Settings**.
2. Under **Preferences**, select **Radiation Therapy Templates**.
3. A list of radiation therapy templates appears. Select **Refresh** at any time to refresh the list and view the latest changes made by all users.

Add a template

1. Select **Add**. You can also select an existing template, then select **Clone**.
2. Enter the following information, then select **Save**.

Template Info

1. Enter a name for the template.
2. Select whether this is a **System**, **Group** or **User** template.

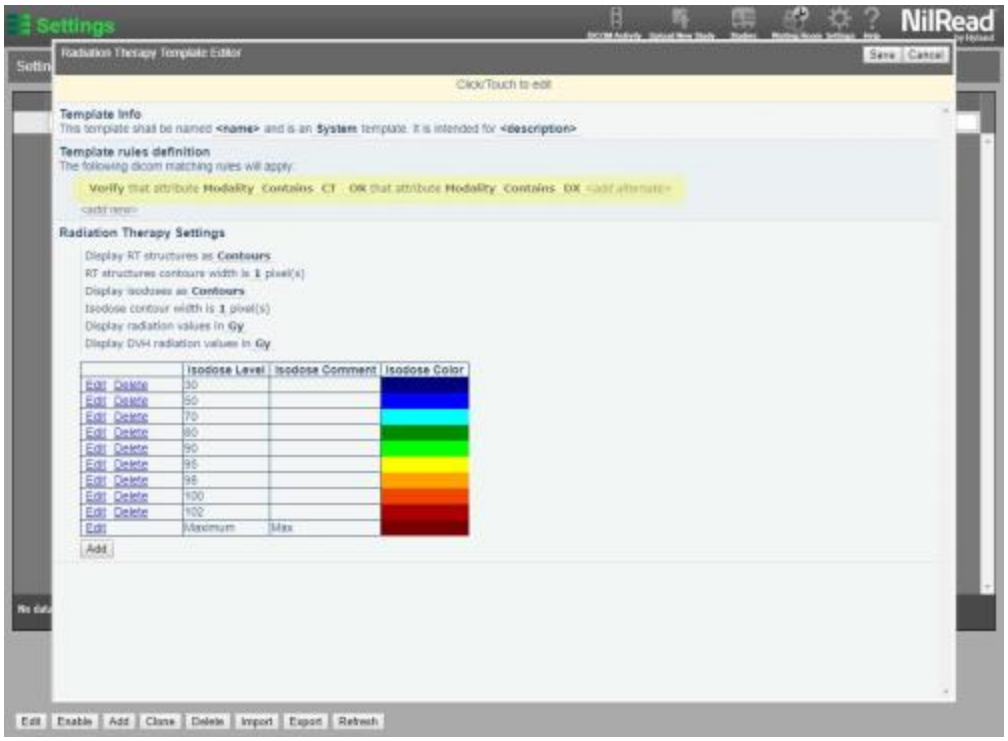
   A system template will be available to all users of NilRead, a group template will only be available to the group you specify, and a user template will only be available to the user you specify.
3. Enter a description for the template.

Template Rules Definition

You can add rules that determine the types of studies the template applies to. For example, you could state that images must be a specific modality.

If you add multiple rules, the template can only be applied to studies that match **all** of the rules.

1. Select **<add new>** to add a new rule.
2. Customizable areas are underlined and are highlighted when you hover over them. Click (or tap) a customizable area to edit it.
3. Select **<add alternate>** to add an alternate value to a rule. The template can only be applied to studies that match at least **one** of these rules. For example, you could list several modalities the template can be used for.



4. To remove a rule, select **Verify** and switch to **Delete**.

Radiation Therapy Settings

Select the default settings to apply to the study. These settings can be changed while viewing the study.

You can choose the following settings for displaying structures.

- Display as contours (outline) or filled contours (shaded).
- Select the width of the contour outline. Note that you cannot change the contour width for MPR images.

You can choose the following settings for displaying isodoses.

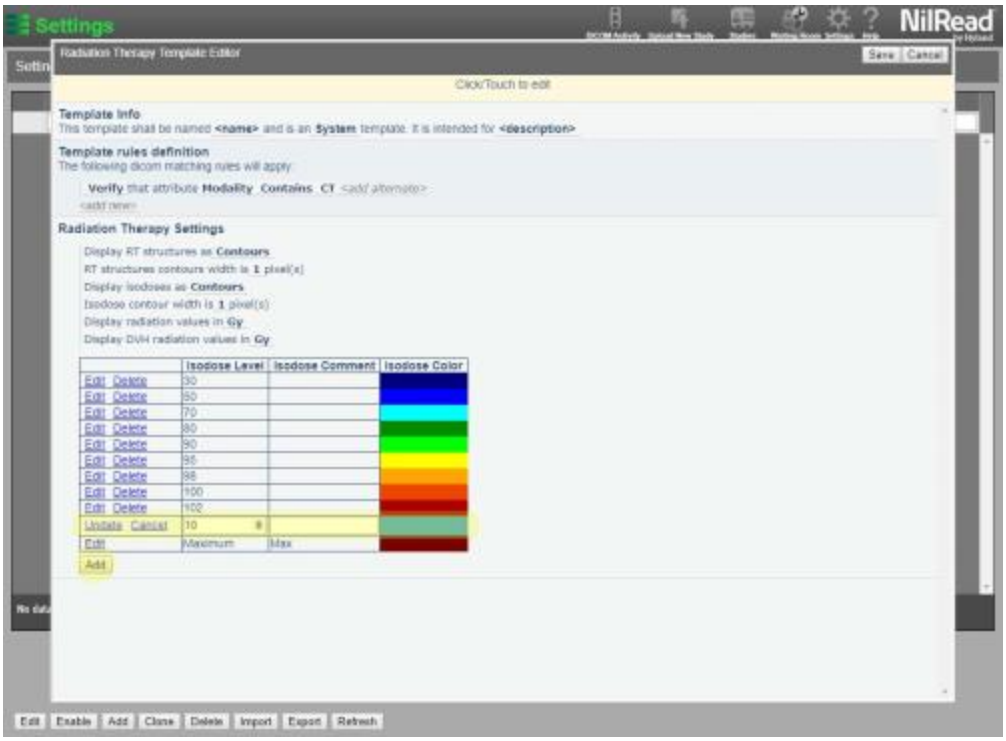
- Select one of the following options: contours (outline), filled contours (shaded), dose colorwash, or isodose colorwash.
- Select the width of the contour outline. Note that you cannot change the contour width for MPR images.

- Display radiation values as Gy or cGy. This unit of measurement will be used in the list of isodoses.
- Display DVH radiation values as Gy or cGy. This unit of measurement will be used in the RT Graph.

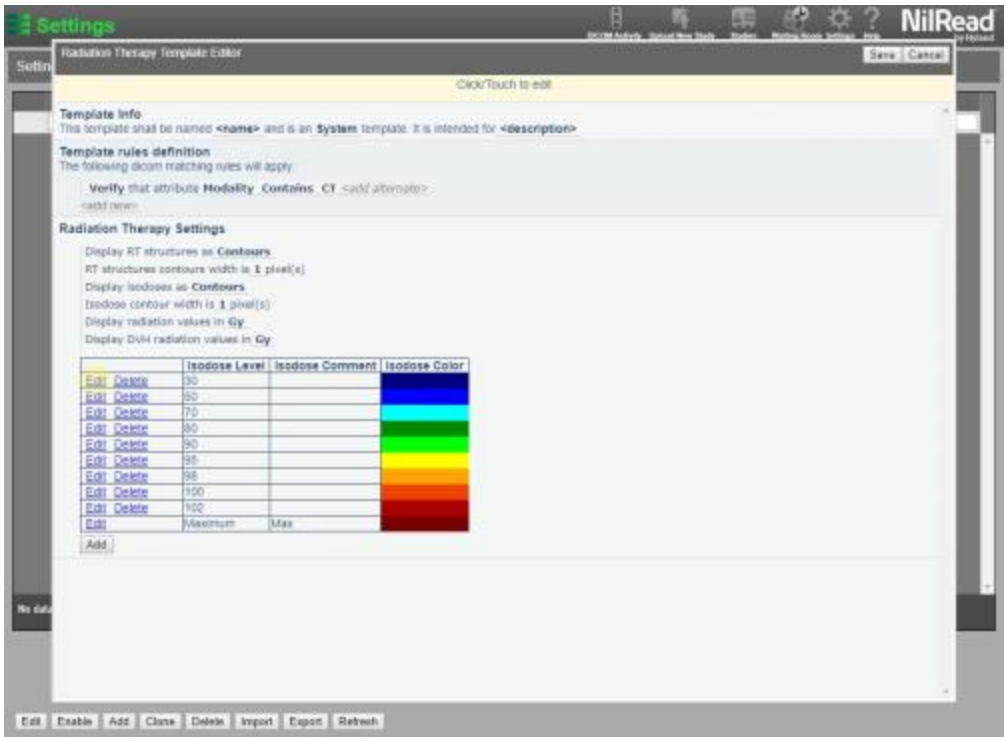
You can add, edit and delete the default isodose levels.

- To add a level, select **Add** below the isodose levels table. Enter the **Isodose Level** and select a color. Select **Update**.

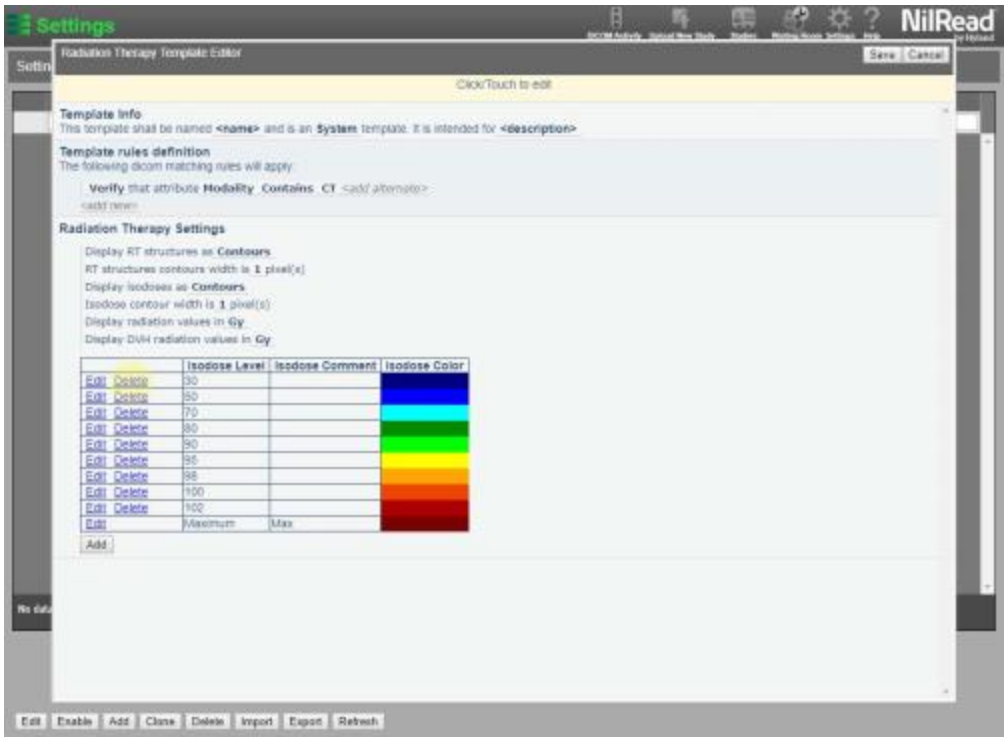
  Note that the **Isodose Comment** is reserved for future use and information entered in this field will not appear in NilRead.



- To modify a level, select **Edit** beside the level. Enter the **Isodose Level** and select a color. Select **Update**.



- To delete a level, select **Delete** beside the level.



You can select a color to use for isodose levels that are above the maximum level set in the isodose levels table.

- Select **Edit** beside the **Maximum** level. Select a color, then select **Update**.

Edit or delete a template

1. Select a template.
2. Select **Edit**. Modify the details, then select **Save**.
   or
   Select **Delete**.

Enable a template

You must enable a template to make it available when viewing a study.

1. Select the **Enabled** checkbox beside a template. You can also select a template, then select **Enable**.
2. To disable a template, deselect the **Enabled** checkbox beside the template.

Import and export templates

To import a template:

1. Select **Import**.
2. Select a file to import, then select **OK**.

To export a template:

1. Select a template.
2. Select **Export**, then select **OK**. You will be prompted by your browser to save the file.

Anonymize patient data

About anonymization

NilRead supports anonymization of studies for research, clinical trials or any other workflow which requires patient confidentiality. Anonymization allows you to remove identifying and confidential patient information from studies.

To anonymize studies, do the following:

1. **Create confidentiality profiles** that define how patient data will be anonymized (see **Manage confidentiality profiles**). You can also use the default confidentiality profile, called Nominal.
2. (Optional) **Create confidentiality masks** that define regions of an image that contain patient data as part of the image. These areas will be redacted to obscure the patient data. Masks are only applied if enabled in the confidentiality profile.
3. **Assign a confidentiality profile to a worklist or folder** (see **Manage worklists** and **Manage folders**). Patient data for studies in the worklist or folder will be anonymized when the study is viewed in the Patient Study Directory or the image viewer. This anonymization is temporary; the original study data is not modified.

> **Note**
> Studies are only anonymized when opened from a worklist or folder that contains the **Deidentify** option. Regular patient data will appear if a study is opened from the Patient Study Directory.

4. **Create a permanent anonymized copy of a study** by applying a confidentiality profile when downloading a study, series or image (see **Download studies, series or images**).

Manage confidentiality profiles

You can create confidentiality profiles that define how patient data will be anonymized based on DICOM attributes. You can also use the default confidentiality profile, called Nominal, which is based on the DICOM standard "PS3.15 Table E.1-1. Application Level Confidentiality Profile Attributes". For details, see **http://dicom.nema.org/standard.html**.

You can then assign a confidentiality profile to a worklist or folder (see **Manage worklists** and **Manage folders**). Patient data for studies in the worklist or folder will be anonymized when the study is viewed in the Patient Study Directory or the image viewer. This anonymization is temporary; the original study data is not modified.

> **Note**
> Studies are only anonymized when opened from a worklist or folder that contains the **Deidentify** option. Regular patient data will appear if a study is opened from the Patient Study Directory.

You can also create a permanent anonymized copy of a study by applying a confidentiality profile when downloading a study (see **Download studies, series or images**).

Add a confidentiality profile

1. Select **Settings**.
2. Under **Preferences**, select **Confidentiality Profiles**.
3. Select **Add**. You can also select an existing profile and select **Copy**.

4. Enter the following information:
   - **Name** Profile name.
   - **Comment** Profile description.
   - **Enabled** If selected, the profile can be used to anonymize data.

     Note
     To use a profile, you must assign it to a worklist or folder (see **Manage worklists** and **Manage folders**) or select the profile when downloading a study (see **Download studies, series or images**).

   - **Apply Masks** If selected, confidentiality masks may be used to redact patient data (see **Manage confidentiality masks**).
   - **Options** Anonymization options for the profile. To add options to the profile, select one or more options in the **Disabled** area, then select **Enable**. To remove an option, select an option in the **Enabled** area and select **Disable**.
   - **Details** DICOM attributes that will be anonymized by this profile. The action that will be applied to each attribute is shown. If you do not want to anonymize an attribute, select the **Disabled** checkbox beside the attribute.
5. Select **Save**.

Edit or delete a confidentiality profile

1. Select **Settings**. Under **Preferences**, select **Confidentiality Profiles**.
2. Select a profile.
3. Select **Edit**. Modify the details, then select **Save**.
   or
   Select **Delete**.

Refresh the confidentiality profiles list

1. Select **Settings**. Under **Preferences**, select **Confidentiality Profiles**.
2. Select **Refresh** to view the latest changes made by all users.

Manage confidentiality masks

In addition to confidentiality profiles, you can create confidentiality masks that define regions of an image that contain patient data as part of the image. These areas will be redacted to obscure the patient data.

If you are using a confidentiality profile that has masks enabled, a confidentiality mask will be applied if a mask exists that matches all of the following study attributes: modality, manufacturer and (optionally) scanner model. See **Manage confidentiality profiles**.

Add a confidentiality mask

1. Select **Settings**.
2. Under **Preferences**, select **Confidentiality Masks**.
3. Under the **Masks** area, select **Add**. You can also select an existing mask and select **Copy**.
4. Enter the following information:
   - **Name** Mask name.
   - **Comment** Mask description.
   - **Modality** Modality. The mask will only be applied to images with this modality.
   - **Manufacturer** Manufacturer. The mask will only be applied to images with this manufacturer.
   - **Model Name** (Optional) Scanner model. The mask will only be applied to images with this scanner model name.
   - **Height, Width** Height and width of the image (in pixels).
   - **Enabled** If selected, the mask can be used as part of a confidentiality profile. Deselect this checkbox if you do not want NilRead to use this mask.
5. Select **Save**.

You can now define the regions of the image to be redacted (see the following section).