



ATHENA
DICOM ESSENTIAL

Quick Guide ATHENA DICOM Essential



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Quick Guide

Athena DICOM Essential

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1. Local Import of Patients/Open Directly

It is possible to open DICOM files directly in Athena DICOM, to do so, just double-click on the DICOM file and select Athena DICOM Essential as the visualization software (Image 1).

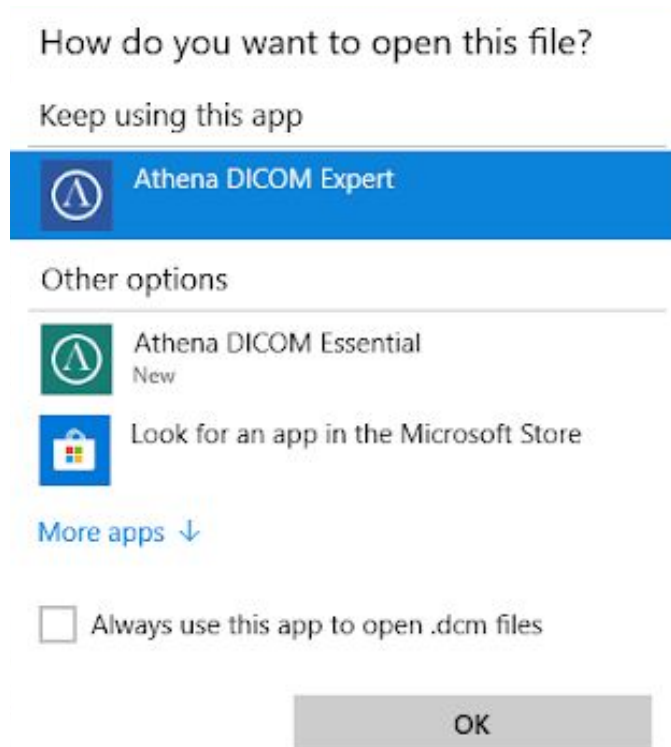



Image 1 - Opening DICOM files directly in the software

You can also import local DICOM images by clicking the button  **Add Patient** in the sidebar menu (Image 2 and 3).

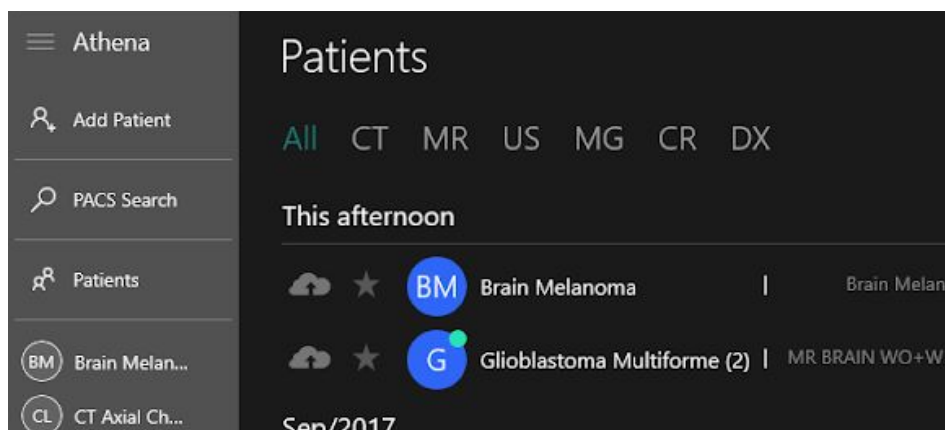


Image 2 - Local import of patients

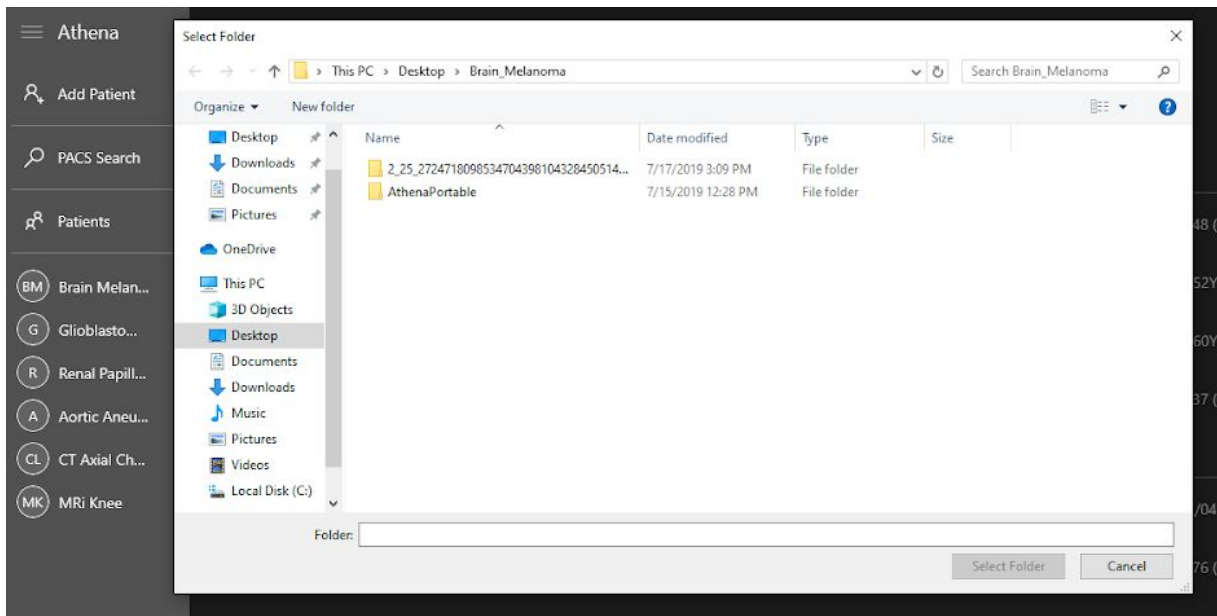


Image 3 - Selection of files for local importation of patients.

Just select a folder and Athena will import automatically all DICOM files as said folder. **It's not necessary to access each folder individually to import all studies.** Athena also supports ZIP files, to import them just drag and drop the file into Athena and the software will import the images automatically.

1.1 Tooltip

This feature is designed to provide quick access to the summary of exams, and contains all the information about a patient or a study/series. To access it, simply hold the mouse (without clicking) on the patient or on the series of interest (Image 4 and 5).

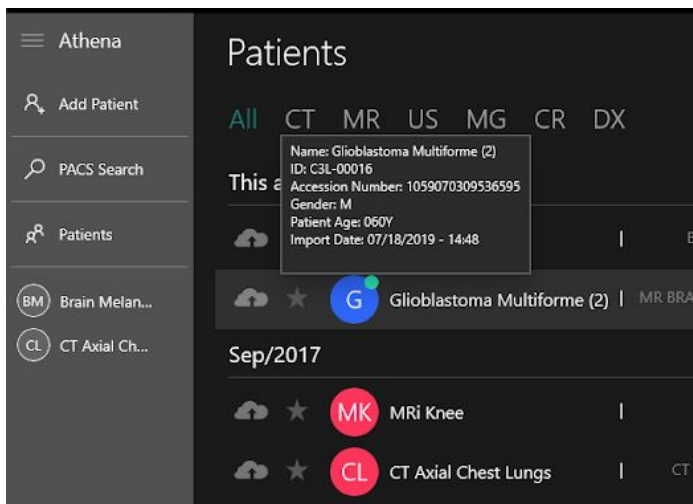


Image 4 - Summary of informations regarding add images in the patient list of Athena.

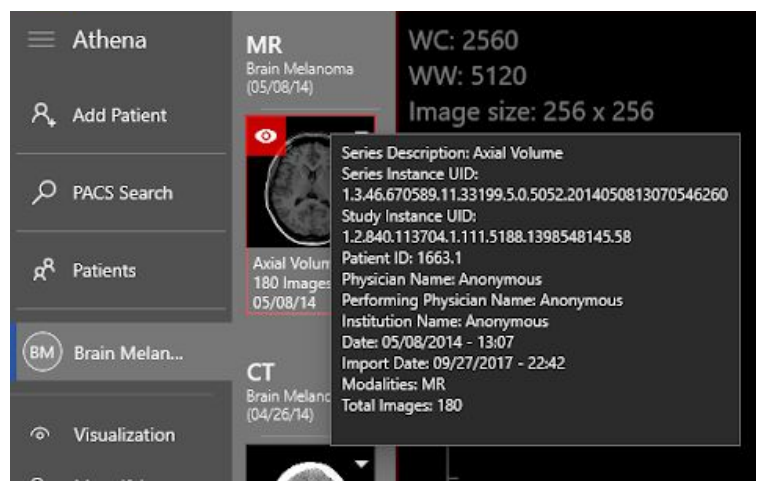


Image 5 - Summary of informations regarding add images in open views in Athena.

1.2 Local Quick Search

The Athena has a search tab, which makes possible to find a patient already imported by name. The search displays all patients who have the word/letter somewhere in their name, in the search field (Image 6).



Image 6 - Local search of patients.

2. PACS Configuration

Athena supports multiple configurations of PACS servers. They are listed in the "PACS Search" panel and can be added, edited or removed through the "PACS" tab in **Settings**. (Image 7).

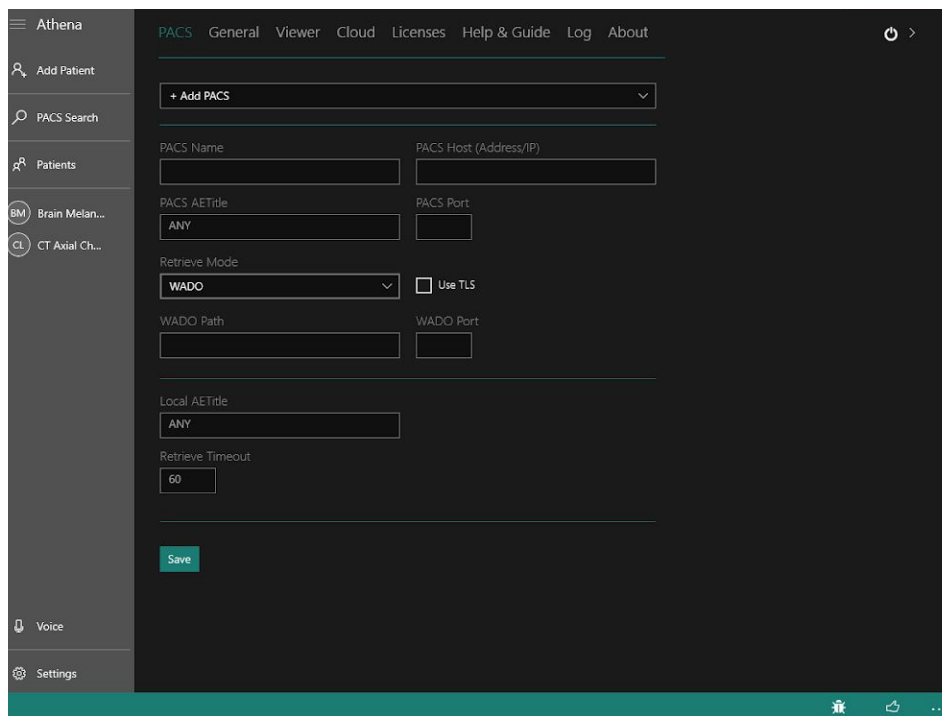


Image 7 - Access to PACS server configuration

2.1 Add PACS

To add a PACS server, select the **+ Add PACS** option in the check box and enter the required settings (Image 8). If you have any questions about adding the setting of the PACS server, consult the specialist in your Hospital/Clinic. After the configuration of the PACS is done, you can search and import exams from those PACS by going to **PACS Search**.

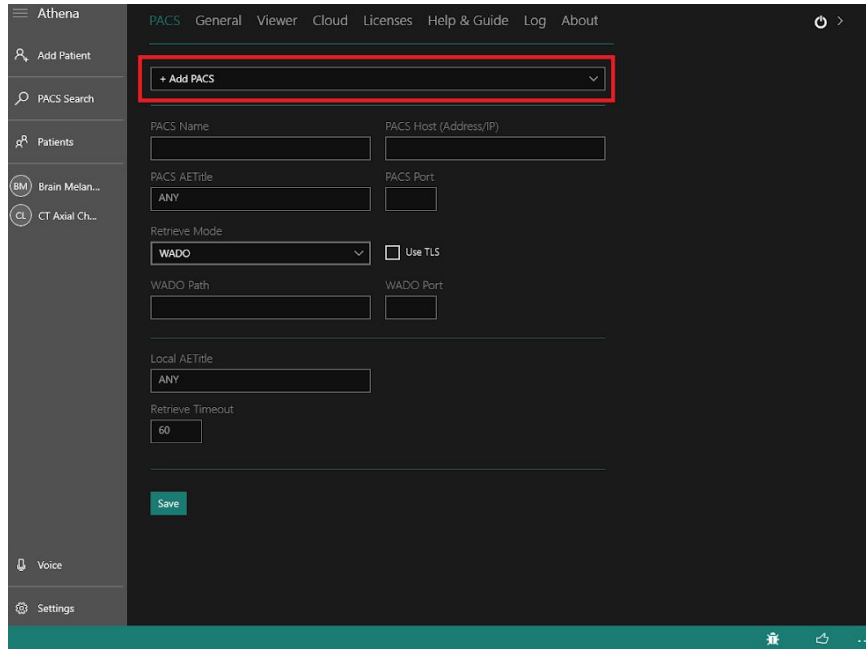


Image 8 - Option to add a PACS server

3. Viewer

The Athena DICOM viewer is designed to be an advanced, dynamic, robust and easy-to-use tool. It allows high productivity, helping and resulting in fast and accurate diagnostics. Athena has four main viewing modes: Original, MPR*, 3D* and Mosaic.

* These viewer modes are available only in Athena DICOM Expert.

3.1 Original

This is the default viewer of the Athena DICOM. The Original image viewer displays the original DICOM images without any kind of interference. This mode can be accessed with a left mouse click on the series, or by right-clicking on it and selecting the **+ Original** option (Image 9). If no series are open in the viewer, you can open all series of a selected patient by clicking the button



in the lower right corner of the viewer screen (Image 9). Athena allows the original series to be opened more than once at the same time (Image 10).

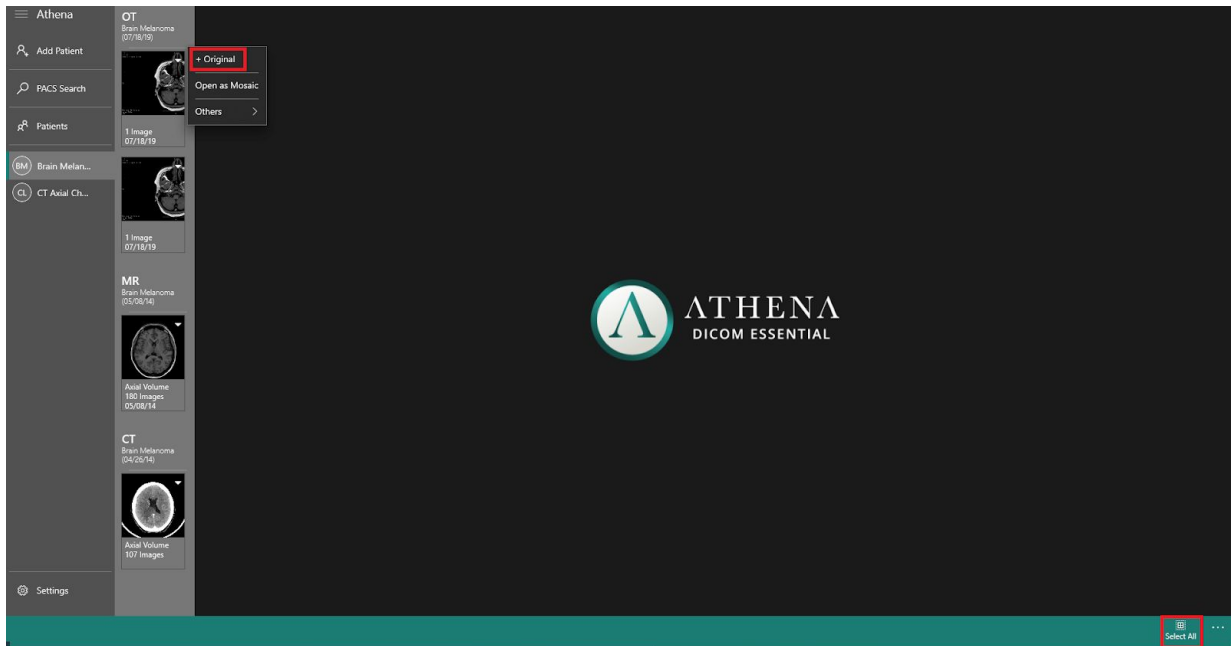


Image 9 - Location of the +Original and Select all button



Image 10 - Simultaneous visualization of the original mode in Athena.

3.2 Mosaic Mode

Mosaic mode allows you to have a visualization of a number of slices from the selected series, in a personalized layout. To select it, click with the right-button on the series and select **Open as Mosaic**. Just choose the desired image slices, and the matrix you want to view at the screen (rows x columns) (Image 11). You can select each image you want by checking the boxes, typing the range or index of the images. (Image 12).

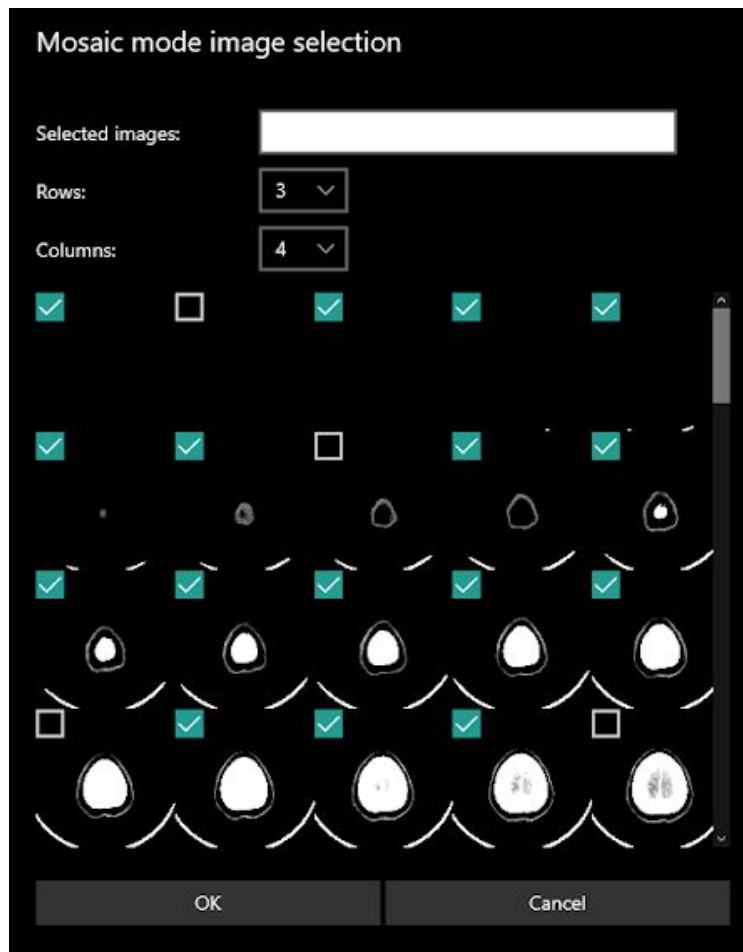


Image 11 - Selection of images in mosaic mode

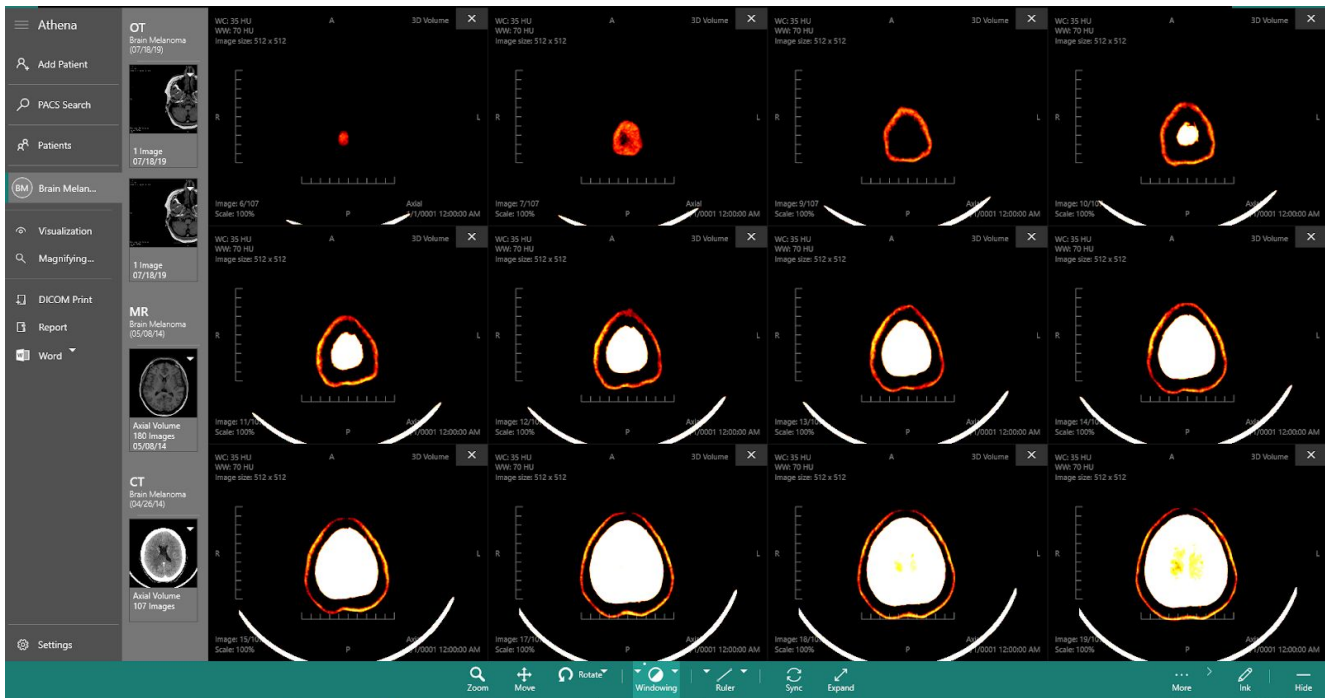



Image 12 - Mosaic mode after image selection

5. Tools

Athena DICOM has several basic tools like, windowing presets, color palettes (CLUT), magnifying glass, among others. To facilitate the use of the tools, any kind of alteration to the image can be made with the help of a mouse or with the hands, in cases where the software is used in touchscreen devices.

5.1 Cine

O cine é um recurso que permite rolar automaticamente as imagens de uma série. A execução pode ser reproduzida ou pausada no modo Original. Para ativar o modo cine é necessário clicar

no botão  presente na barra de ferramentas.

5.2 Magnifying Glass

To make it easier to see an image, you can use the magnifying glass tool, which displays a region with more details (it is not necessary to enable the function in each view). You can also customize many aspects of this tool, such as size, shape, and zoom (Image 13).

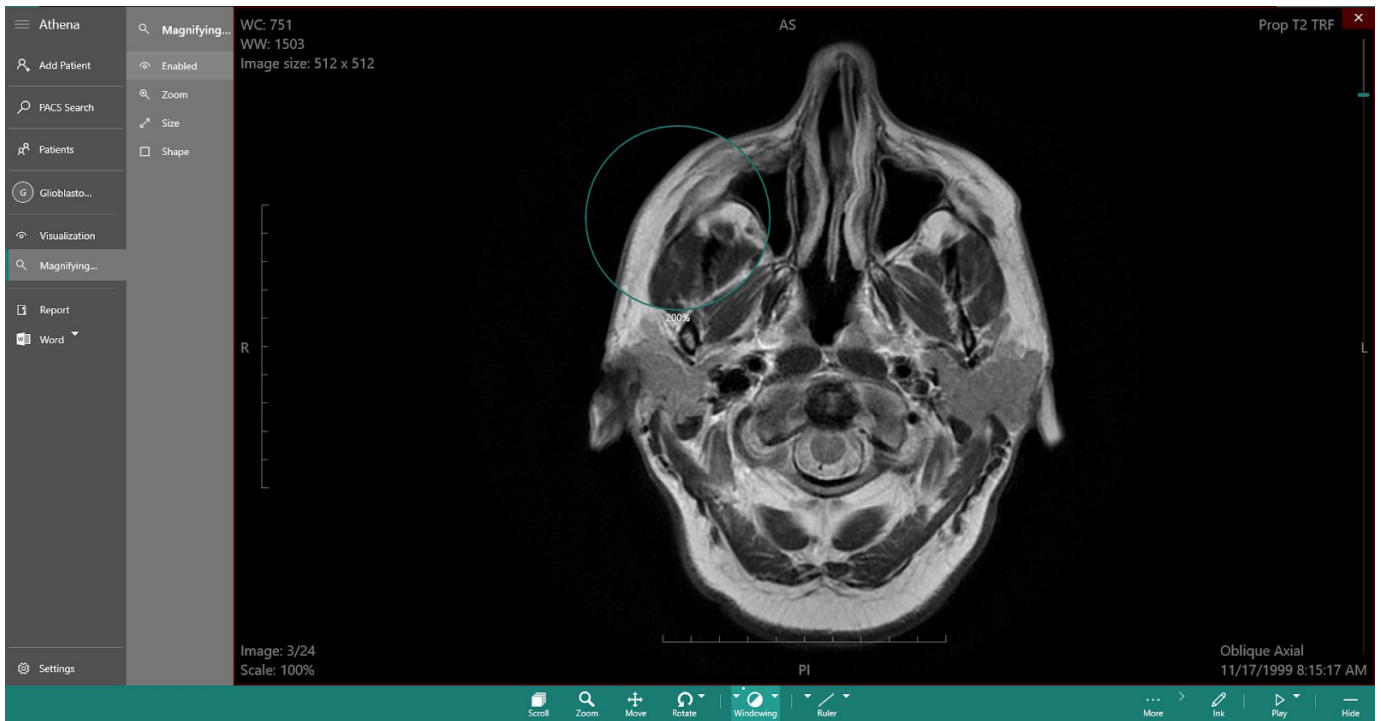


Image 13 - Magnifying glass tool enabled in Athena

To access the magnifying glass tool just click **Magnifying...** on the left side menu of Athena. To activate the magnifying glass, simply select the **Enabled** button.

Tip: To modify the amplification of the magnifying glass simply move the mouse wheel on the viewer screen.

5.3 Key Images

The Key Image feature is ideal for saving annotations, measurements and comments of regions of interest, such as images in a new series within the imported patient. The created images are added to the current patient as OT (others) and shown in the series list (Image 14).

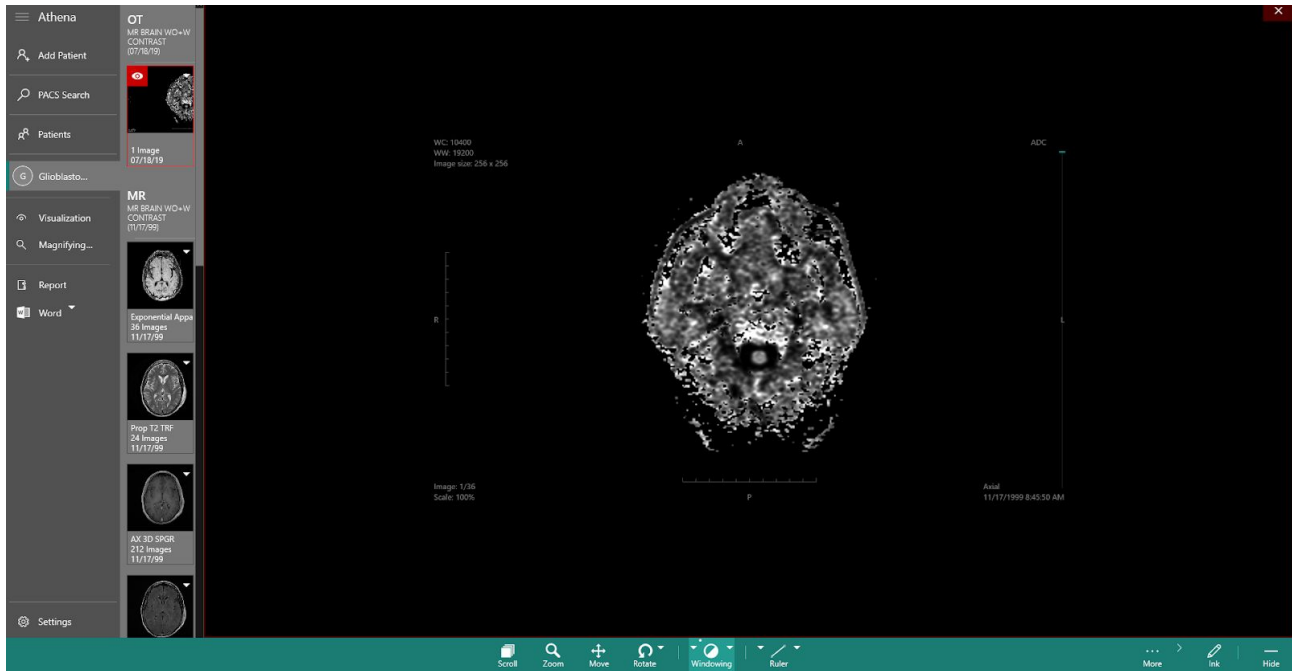


Image 14 - Key Image saved in the patients series list

5.4 Basic Tools

Athena basic tools include: scrolling, magnifying, moving, rotating, and windowing. These can be easily accessed through the bottom viewer bar. (Figura 16).



Image 16 - Basic tools in Athena. The position of the white sphere on top of them indicates the mouse button that can use the tool.

5.4.1 Scroll

Image scrolling is available in the Original or MPR modes. You can scroll up or down using the left and right keyboard arrows or by using the middle mouse button. You can also select the button




in the bottom menu, click and drag up or down on the viewer screen. This function can be selected using the shortcut key "1".

5.4.2 Zoom



The zoom option is available in all modes, including 3D. You can zoom in or out using the mouse button, or by selecting "Zoom in" from the bottom menu, clicking and dragging up and down on the viewer screen. You can also zoom using the on screen tweezer gesture when using in touchscreens. This tool can be selected with the shortcut "2".

5.4.3 Move

To use it is possible to select  present in the lower menu of the tool, click and drag in any direction. It is also possible to apply the tool using a two-finger touch and moving, if your screen is touch sensitive. This tool can be selected with the shortcut "3".

5.4.4 Rotate



Rotate is also available in all modes. You can access this function by selecting  in the lower menu, clicking and dragging in any direction. You can also "Rotate" by touching with two fingers and rotating, in case your screen is touch sensitive. It is also possible to change the mode of this tool by clicking the arrow on the right side and selecting between "Rotate" or "Rotate 90 °".




Image 16 - Options rotation in Athena

5.4.5 Windowing

To apply this function is necessary to select the button  present in the lower menu (or using the shortcut key "4"), click and drag in any direction. The width of the window (WW) is applied using the left-right direction and the center of the window (WC) using the up and down direction.

5.4.6 Color Palettes (CLUT)

Athena provides a list of Color Palettes (CLUT). To access them, simply click on the left arrow of the button  and choose the desired filter (Image 17). It will apply to the selected view.

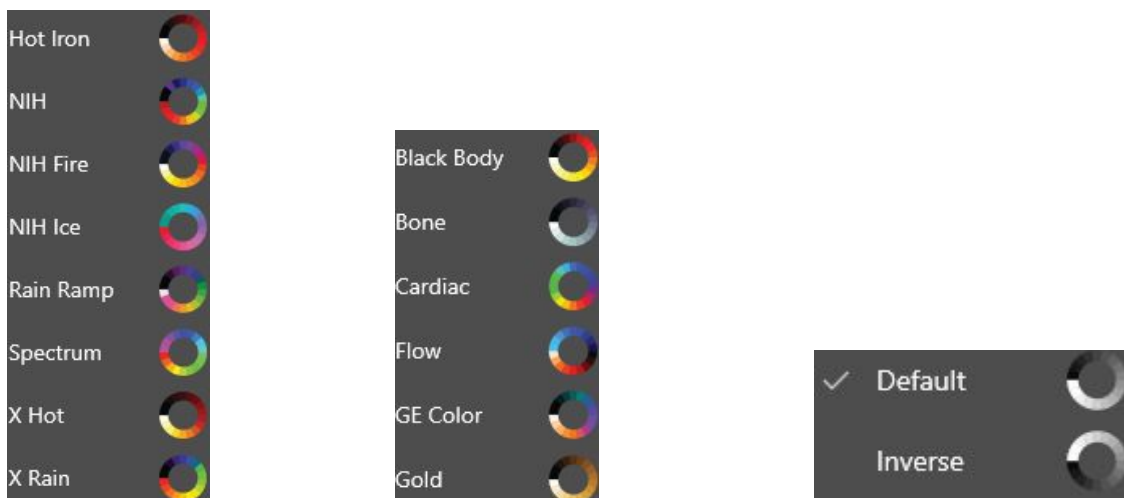


Image 17 - Color Palettes available

6. Shortcuts

Athena provides a list of shortcuts for quick access to some tools and features. To access this list at any time in Athena simply click the "F1" button in the viewer.

Up / Right	Scroll Up
Down / Left	Scroll Down
Key 1	Select Scroll
Key 2	Select Zoom
Key 3	Select Move
Key 4	Select Windowing
Key S	Synchronization
Key V	Select Annotation Value
Key A	Select Annotation Arrow
Key L	Select Annotation Line
Key R	Select Annotation Rectangle
Key E	Select Annotation Ellipse
Key P	Select Annotation Path
Key F	Select Annotation Consecutive
Key G	Select Annotation Angle Separate



Key T	Select Annotation Text
Key D / Delete	Delete Annotation
Key H	Hide Annotations
CTRL + Z:	Undo
CTRL + Y:	Redo
CTRL + Tab:	Next view
Backspace / Esc:	Exit
CTRL + R:	Relatório
Add(+)	Add to Report
F2 a F12:	Color Palettes

7. Annotations

Athena has a set of very useful Annotations tools, some of which contains measurements in millimeters, Hounsfield value, area, perimeter, min, max, average, standard deviation and even angles between consecutive or separated lines. You can add, edit or remove any annotation. You just need to click on the icon with a ruler on it (image 18).

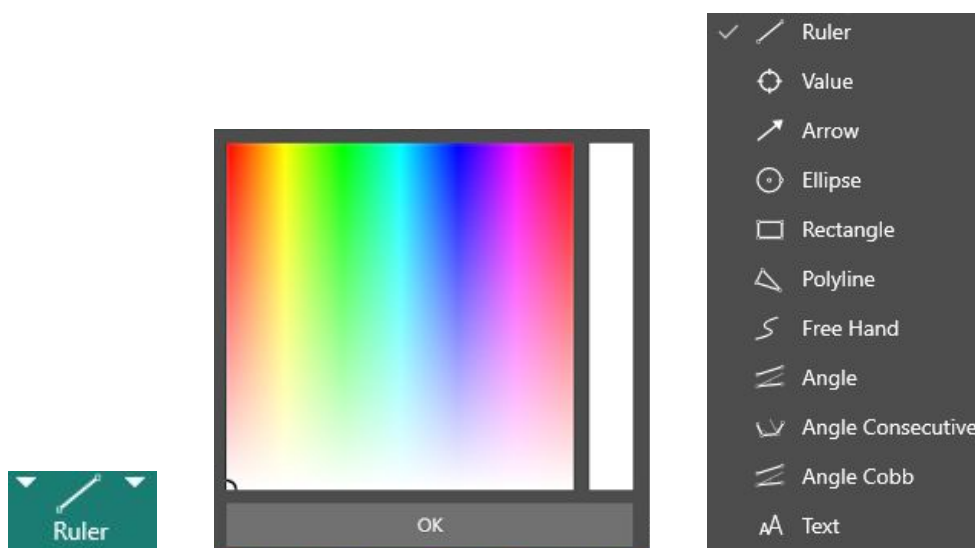



Image 18 - Annotations tools and color box.

8. Report

As we have seen, Athena makes it possible to apply several types of changes in the initial image. If you need to save the images with the notes used, Athena DICOM allows you to add those images to a report. You can also add patient information in the report such as: name, date of birth, and so on.

There are 2 main Athena report modes: full report and images only. The complete report consists of: editable header, added images and a space to write comments (Image 19). To open a report, go to the left side menu and click on  **Report**.

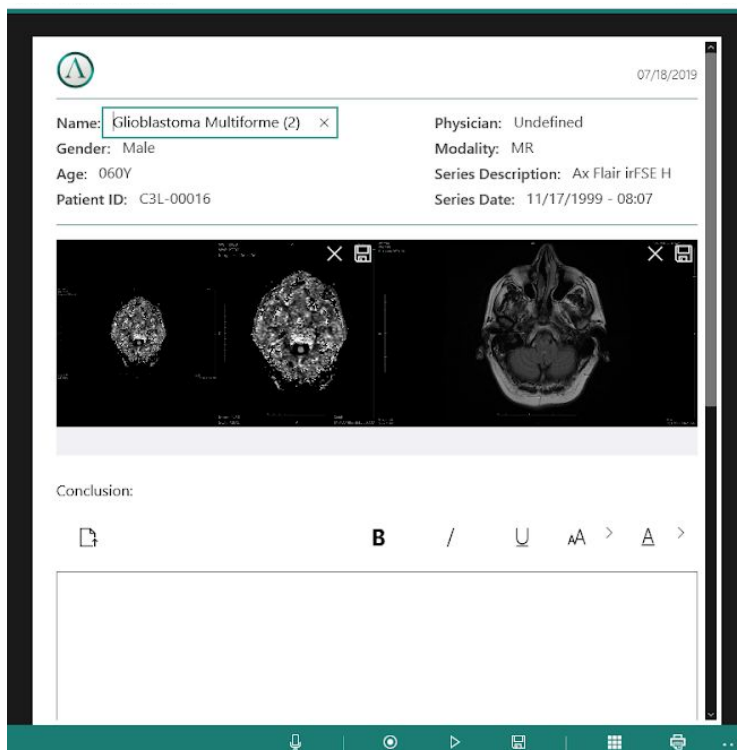



Image 19- Example of complete report in Athena

In the report formed only by images, the additional information does not appear which allows the wide viewing of images in the document (Image 20). To access it, select the  icon inside the report and choose, “only image” (image 21).

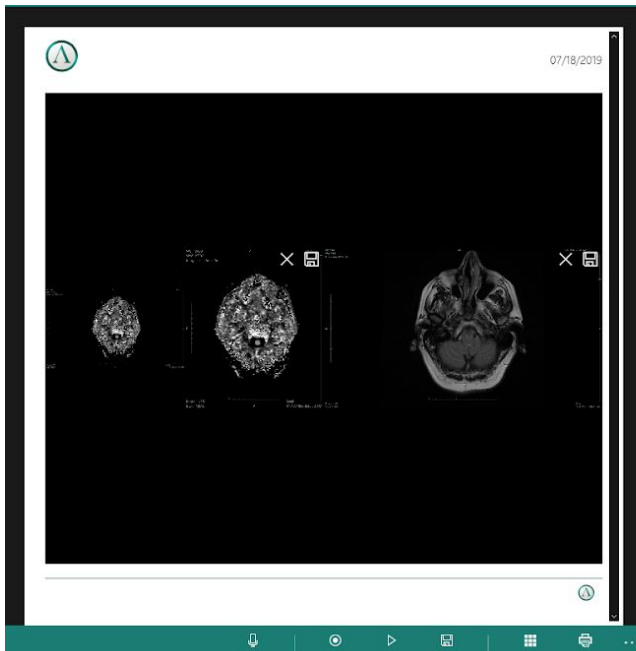


Image 20 - Example of report compose only by images in Athena

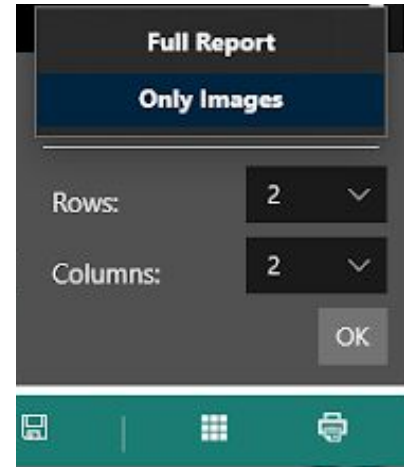


Image 21 - Location of types o report

8.1 Adicionar e Remover Imagem

To add images to the report, simply right-click the image and select **Add to Report**. You can add multiple images to a single report (Image 22). To remove the images in a report, simply click the "X" button in the upper right corner of said image. (image 23).

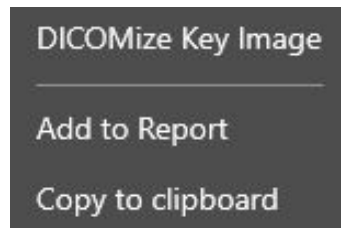


Image 22 - Option to add an image of interest in a report

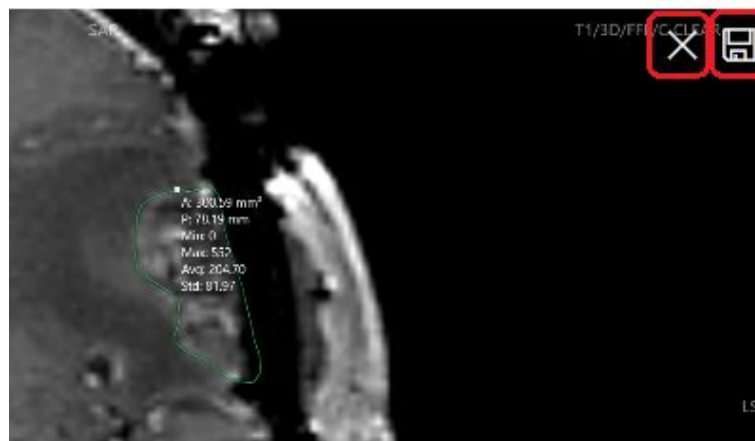


Image 23 - Removing and Saving options in a report

8.2 Report Header

The report header is fully editable and contains the following data: Patient Name, Gender, Age, Patient ID, Physician, Mode, Series Description, and Series Date. (Image 24)



07/18/2019

Name: Glioblastoma Multiforme (2)	Physician: Undefined
Gender: Male	Modality: MR
Age: 060Y	Series Description: Ax Flair irFSE H
Patient ID: C3L-00016	Series Date: 11/17/1999 - 08:07

Image 24 - Report header in Athena

8.3 Definition of Image Matrix

This feature allows you to choose the number of images per line or column that will be displayed on each page. In this way, the report can be customized according to the user needs (Image 25).

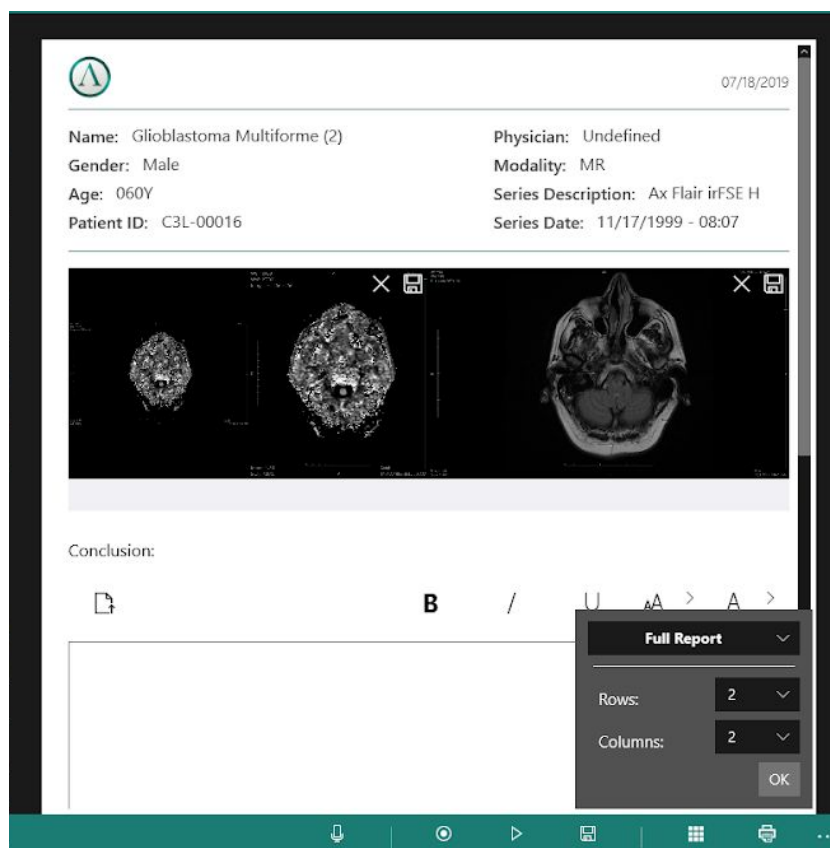



Image 25 - Configuration of rows and columns in the report

8.4 Printing

Athena allows the report to be printed to any available printer installed. You can also export the report to a PDF file. To do this, simply select the  button in the report window and a window with the print settings will be displayed (Image 26).

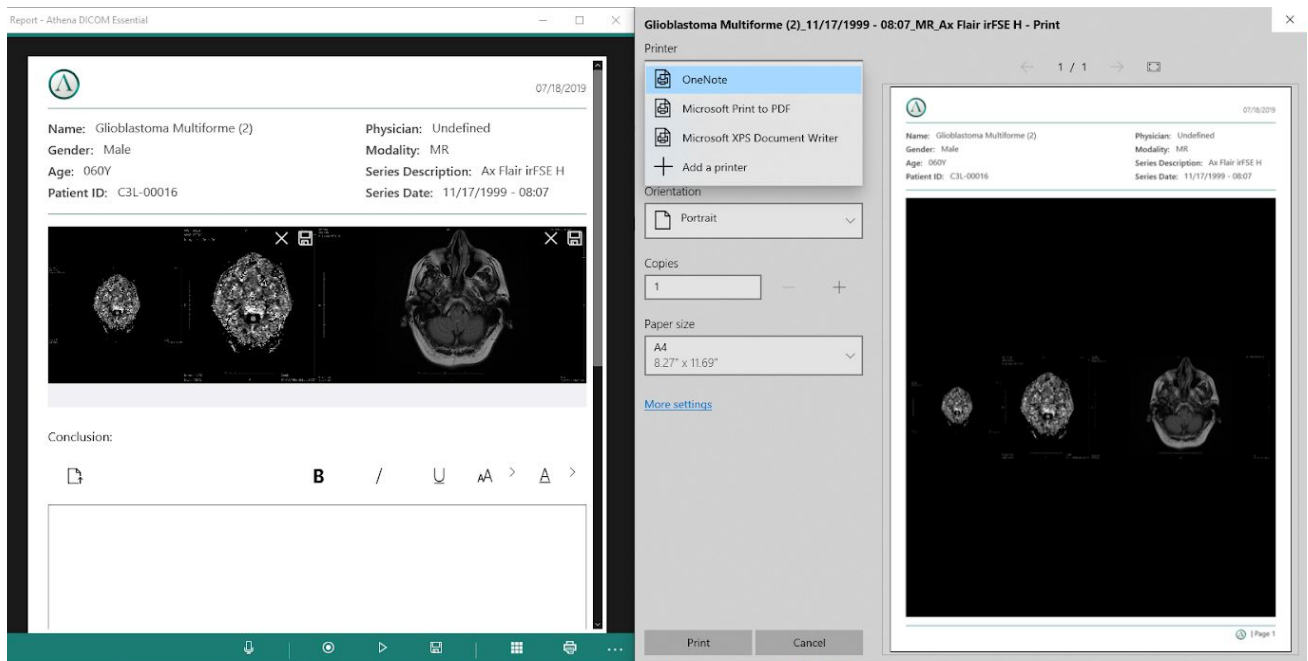





Image 26 - Configuration of printing a report in Athena


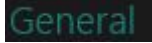
9. Word report

With Athena you can use Word documents (*.doc) to make a report and customize the template according to your needs. You can choose the fields and customize the position, header, footer, etc.


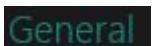

The report will be filled with some standard information such as: Patient Name, Gender, Age, Mode, Study Date, Access Number, Referring Physician, Executor Physician, Study Description, Series Description and Print Date. You can use several Word report templates.

To access this function open a series, click the right button arrow  and select "Word Report Template".

To create a Word report just click the button  Word . A file will be generated in Word with the template defined. To edit the text simply click on  .

You can also modify the folder where Athena saves the Word report. To do this simply access  Settings ,  and set the location in "Word Report Folder".

9.1 Edit Template

To edit the default template, simply access  Settings ,  , choose the template in "Word Report Template" and click  (Image 27). A file will open in Word and you can make changes. To save it just click save and close the file.

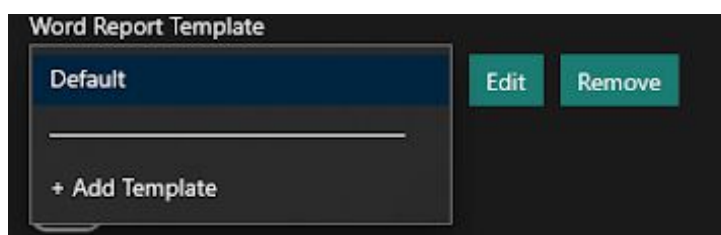

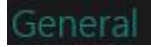



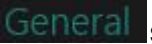



Image 27 - Configuration of Word report

9.2 Create/Remove New Template

To add a new template, go to  Settings ,  and click  . After that, you will need to set the template name and click  . A file will open in Word allowing you to make the changes. To save changes just click save and close the file.

To remove some created template or to reset the default template, simply access  Settings ,  select the desired template and click the button  .