

## **“GRAFORENSIC 2.1”**

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## CHARACTERISTICS OF “GRAFORENSIC”

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“*Graforensic*” is a computer program, designed for medical purposes, that allows to perform an interactive image study just moving the mouse pointer over the picture. Pop-up messages, containing data from the region pointed, are interactively shown.

The program consist of a main screen that allows the image to be loaded trough a dialog control.

Once the image is loaded, we are ready to explore it, moving the mouse pointer over the presumed pathological image regions.

The images to be read with “Graforensic” comes in a specially adapted format (\*.gth” extension). That means that the program is unable to load, and subsequently explore, other different image formats.

Initially, this program was developed to explore forensic images (Pathology and Forensic Clinic pictures). The name “*Graforensic*” derived from this origin. Despite this exclusive initial orientation, and once its utility in other medical subjects was observed, the use of the application to the study of any kind of medical images was extended.

From the main Graforensic web site (<http://Imagenmed.com>) you can download the executable file (“*Graforensic.exe*”), and a collection of “.gth” images. You can obtain additional download information in the “How to...” section of this help.

Our purpose is, basically, to provide a constant source, periodically updated, of these images, through Internet.

## Main screen

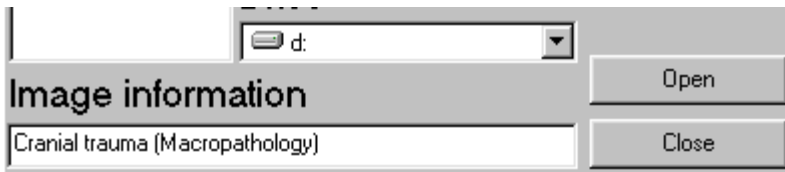
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When Graforensic is executed the main screen is loaded.

Choose open in the file menu, press the open button or, alternatively, click the icon on the



left. A dialog window will be shown, allowing the user to select the desired “\*.gth” file to open. When a \*.gth file is chosen, a brief image description will be shown at the bottom of



the dialog window, orienting about the main subject of the file.

Once selected, the file could be loaded pressing the open button or through double click on the file. The image will be loaded in the screen.

It is also possible to load “.gth” images dragging its icon until it reaches the wide space on this screen and dropping it. When “Graforensic” is properly registered (usually the second time you run the program), you may load an image just making double click on its icon in Windows.

Remember that you can only load specially adapted image files (“.gth”). Consult the author or read the “how to” section of this help to obtain such medical images.

To unload an image, choose “close” or make click on the icon with the red cross.

Only one image is allowed to be loaded at the same time. If you load a new image the precedent one will be automatically unloaded.

Choosing “Exit” from the “File” menu you can abandon the application. You will be prompted whether the exit option is really the desired action or not.



The menu item Case information provides more exhaustive information about the case which the image corresponds to.



The “Quiz” button provides, when activated, access to multiple-choice questions related to the image.

Questions are not always included in all the images. When a picture is loaded, the button is not activated if there are no questions associated to the image. It is also possible to access the questions through the menu bar (open the questions item and choose open).

The questions corresponds to the “multiple-choice” type, with only one correct answer.

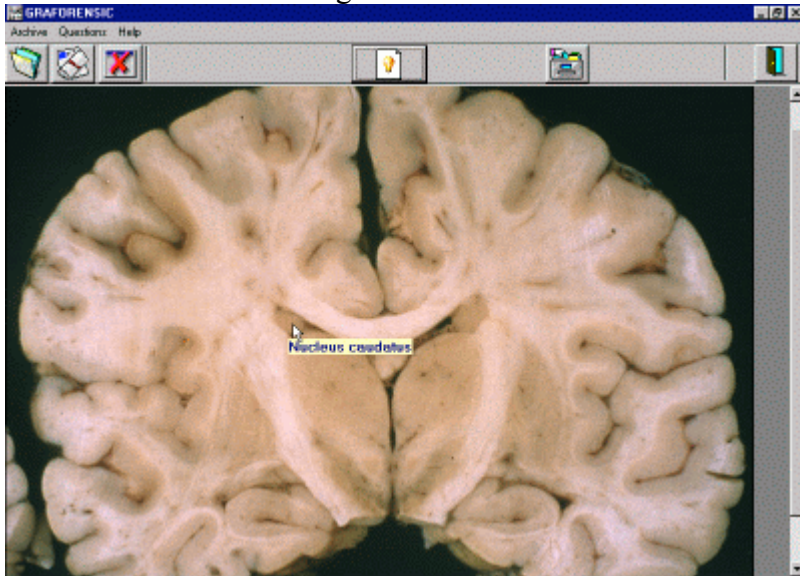
It is possible to obtain statistics of the correct-incorrect answers.

The rest of the items in this window is related to common topics, such as “About..”, including information of the author, and access to the help topics.

## Image window

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It contains the loaded image.

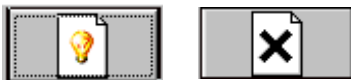


If the picture dimensions are wider than the window, you can move the image by using the vertical or horizontal slide bars. It is possible to load only one image at once. If you wish to open another one, you should close the active picture, (in the “Close” menu or pressing the button on the upper left corner and choosing “Open” from the main window menu).

Once the image has been loaded, it is possible to explore its contents moving the pointer over the details that you consider relevant or pathologic. Different pop-up messages will be shown if there is any kind of information associated to the region of the image.

Making left click on the picture you can alternate between conexión-disconexión of the pop-up information. Thus, the user can explore the image without emergent pop-up information and press the left mouse button when a relevant or pathologic detail is supposed to be embedded. The same operation could be performed pressing the light bulb button on the task bar.

When the pop-up information is disabled, a black cross appears instead the bulb.



Some images have wooden squares in one upper corner. If you place the mouse pointer on them, you will obtain general data about the image. This feature is particularly useful when the picture corresponds to a composition performed with different frames. It allows to know which is the main subject or topic of each frame.

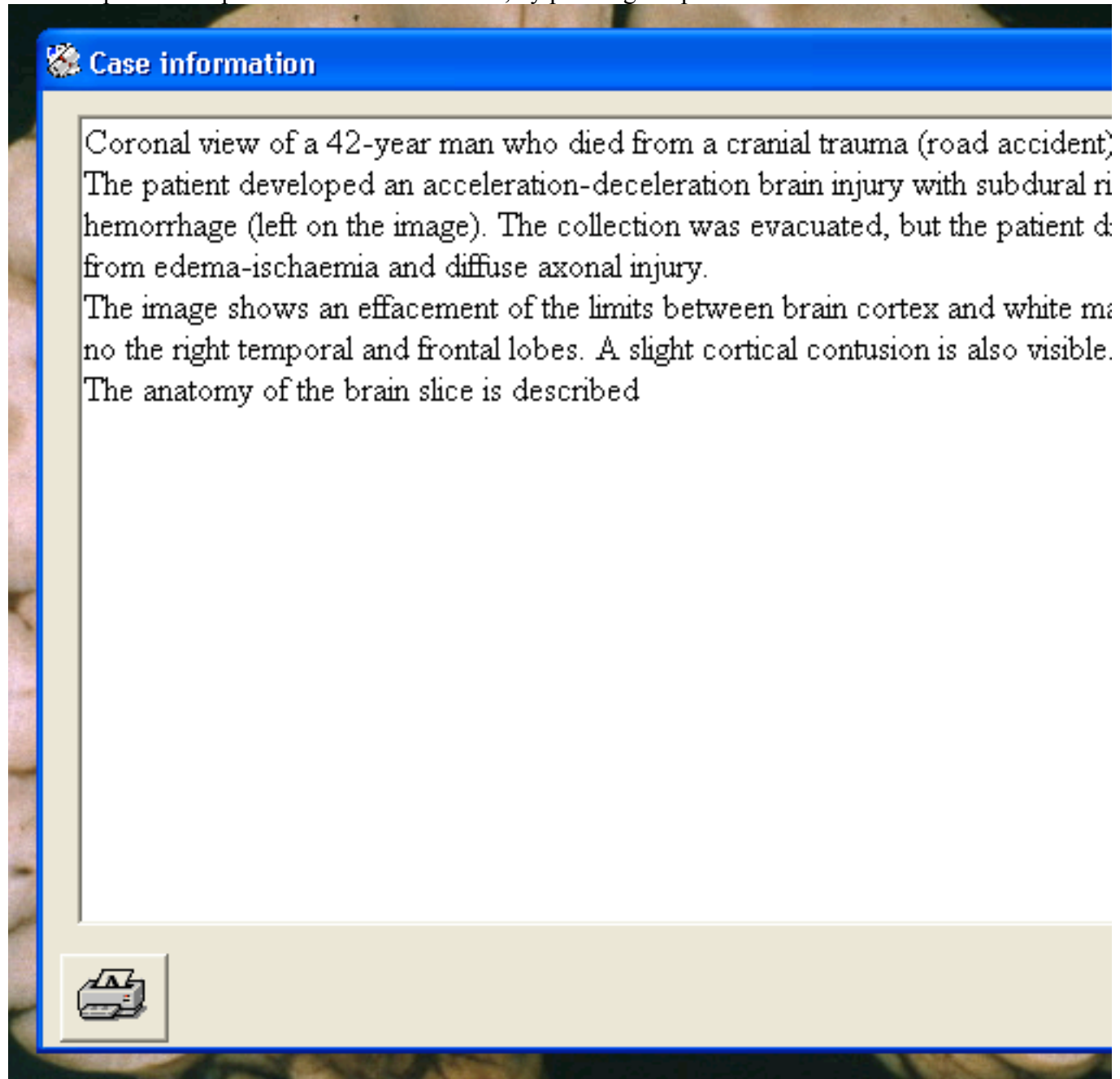
## Case information

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Provides general information about the case corresponding to the image.

To access this data you can choose "*Case information*", from the Main window menu, or simply, right click the mouse when you are on the image. To close this window, press the red-cross button at the bottom.

It is also possible to print the entire information, by pressing the printer button.



## How to...

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- **Load an image.** Chose “open” from the Main window menu. In the Dialog window select a \*.*gth*” file. Make double click on it or press the “*Open*” button.
- **Explore an image.** Simply move the mouse pointer on the image over the detail or region that you desire to explore. If there is information about it, a yellow rectangle will appear near the pointer, showing this information.
- **Obtain more images.** Keep contact with “Imagenmed”: (*http:\\www.imagenmed.com*). You can download images that are periodically placed in the web page.
- **Access to the questions of an image.** You should check if the question button is activated. Otherwise, the picture has not questions available. Pressing the question button, when activated, the Quiz window will be show.

## Dialog window

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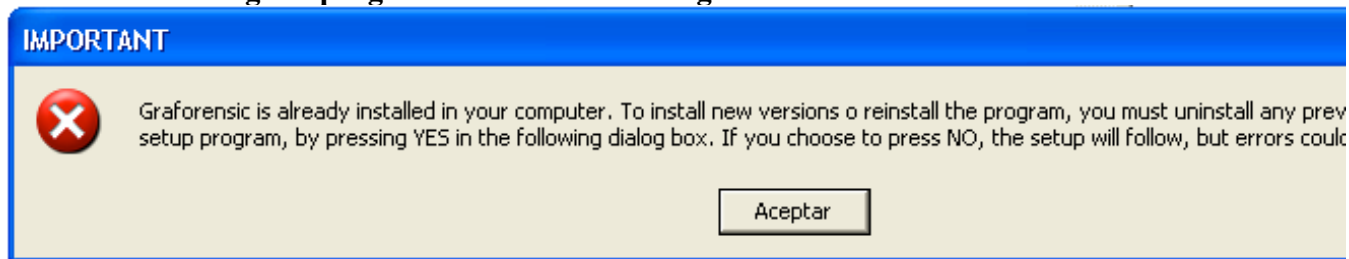
It allows to load \*.gth files. These are the images used by “Graforensic”. Remember that this program is unable to load other kind of files. In this window you can choose drives, directories and files until finding the desired image \*.gth to load. Select it with the mouse and an information about the image will appear in the “information” text box (at the bottom of the window). A thumbnail will offer you an image preview when selected file. To open the file: double click on it, or press the open button once the file has been selected.



## Common problems

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- **When installing the program I obtain the message:**



You should exit the installation and uninstall any existing Graforensic version from your computer. Once removed, you can perform the installation again, and the message will not be obtained.

- **I obtain the message: “*Inappropriate image. Load another*”.** The program tests if the image loaded corresponds to the correct format to be read by “*Graforensic*”. If you are trying to load a file not adapted to the application, will obtain this error message.
- **It appears the message: “*Inappropriate image. Graforensic only loads images adapted to the application.*”.** Probably you tried to load a file with an extension different to the “.gth”. You should load only appropriate images. The program only load files with the “\*.gth” extension, but if you rename a file not adapted with this extension, “Graforensic” will not load it and this error message will appear. Ask the author from appropriate images or load those included with the application.
- **I obtain the message: “*Unable to load image file. Probably is corrupt or has been altered. Replace it with an appropriate file and retry*”.** The problem has been originated in the interior of the file. You should reject the file (deleting it or checking it for viruses), and replace it with a correct file. Load the original file from a backup (it is always recommended to keep a security copy of the original images) or obtain it from the author.
- **The following error is produced “*inappropriate image*”.** The problem and solution are the same as the anterior paragraph.
- **Impossible to load a “.gth” file by double-clicking on its icon:** Perhaps the name of the directory where the program was installed is too long. Reinstall “Graforensic” in a shorter name directory (less or equal than six characters).

## Disclaimer

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“*Graforensic*” has been programmed following an exclusive medical learning purpose, and it is destined to Health professionals or Biomedical Science students in general. It has no direct healthcare aiming. Thus, no therapeutic action can be derived from the program in any case or situation.

The purpose of “*Graforensic*” is exclusively docent, and the author declines any responsibility derived from the use of the program outside the medical learning purpose.

No responsibility is accepted by the author about potential damage of computer or software.

## Quiz window

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This screen presents several questions, related to the image or the case, that corresponds to the picture (no necessarily to the image itself). The quiz consists of an enunciate and five possible choices, with only a correct answer between these.

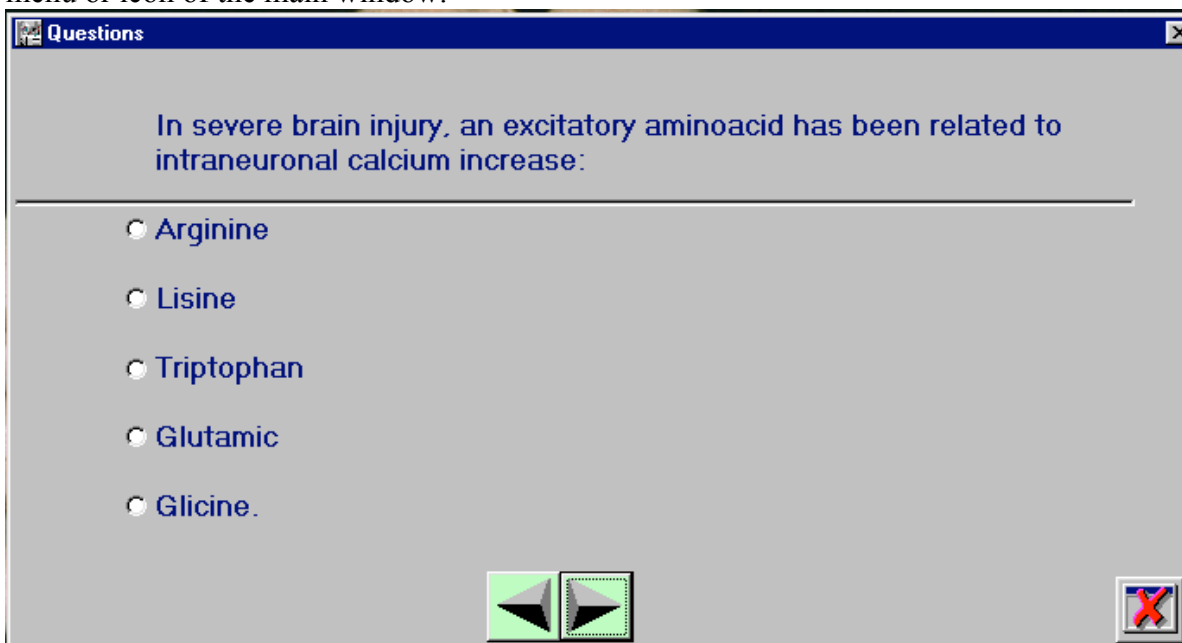
Mark the desired option. An smiling icon will appear if you succeed, or a sad one if you



failed.

Keep in mind that the failures are subtracted from the successes (one negative point corresponds to a failure).

The results are shown in the Statistics window. You can access this window through the menu or icon of the main window.



## **Statistics window**

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The score corresponding to the answers to the questions in each session (until you exit the application) are shown on this window.

These results corresponds to a positive point for a success, and a negative one for a failure.

The total score summarizes the points obtained in the answers to the different questions provided by the images that you tried.