

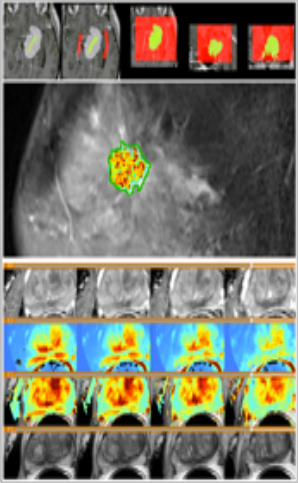
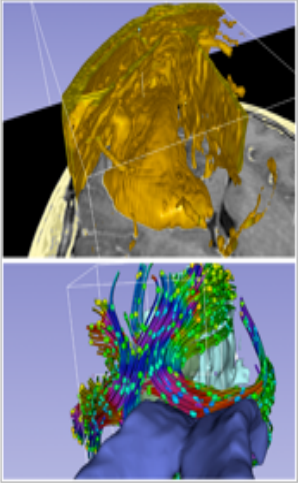




3D Data Loading and Visualization

Sonia Pujol, Ph.D.

Surgical Planning Laboratory
Harvard University

3DSlicer

Powerful processing.	Streamlined interface.	Extensible platform.
 A collage of images demonstrating powerful processing capabilities. It includes a top row with four small images showing different stages of image enhancement or segmentation. Below that is a larger image of a brain scan with a green and yellow segmented region. At the bottom are two rows of images showing a grid of processed brain slices, likely demonstrating registration or multi-modal image fusion.	 A collage of images showing a streamlined interface for 3D visualization. The top image shows a large, textured yellow 3D model of a brain or organ. The bottom image shows a more complex 3D model with multiple colored components (red, green, blue, purple) representing different anatomical structures or segments.	 A collage of images illustrating the extensible platform. The top image shows a 3D model of a hand or limb with a purple segmented part, labeled with 'R'. The bottom image shows a 3D model of a human torso with a highlighted organ, alongside a 2D image of a surgical instrument (scalpel) and a 3D model of the instrument.
 3D Slicer <i>version 4.0</i>		www.slicer.org

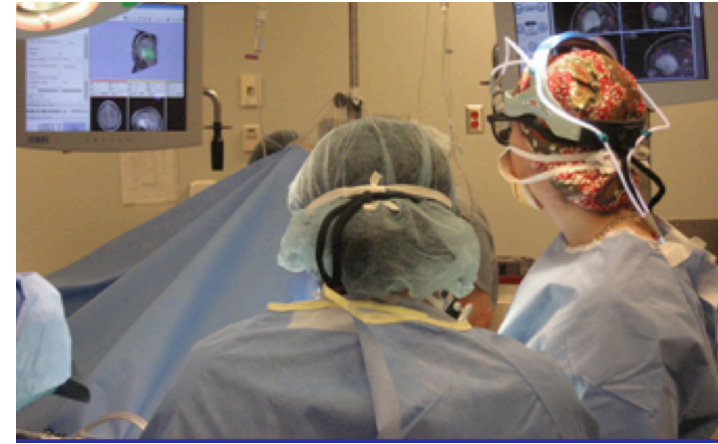
Slicer is a freely available [open-source](#) platform for segmentation, registration and 3D visualization of medical imaging data.

3DSlicer is a [multi-institutional effort](#) supported by the [National Institute of Health](#).

Translational research



An **open-source environment**
for software developers



An **end-user application**
for clinical investigators
and scientists

3D Slicer: an open-source platform for
translating innovative algorithms into
clinical research applications

3DSlicer History

- 1997: Slicer started as a research project between the Surgical Planning Lab (Harvard) and the CSAIL (MIT)

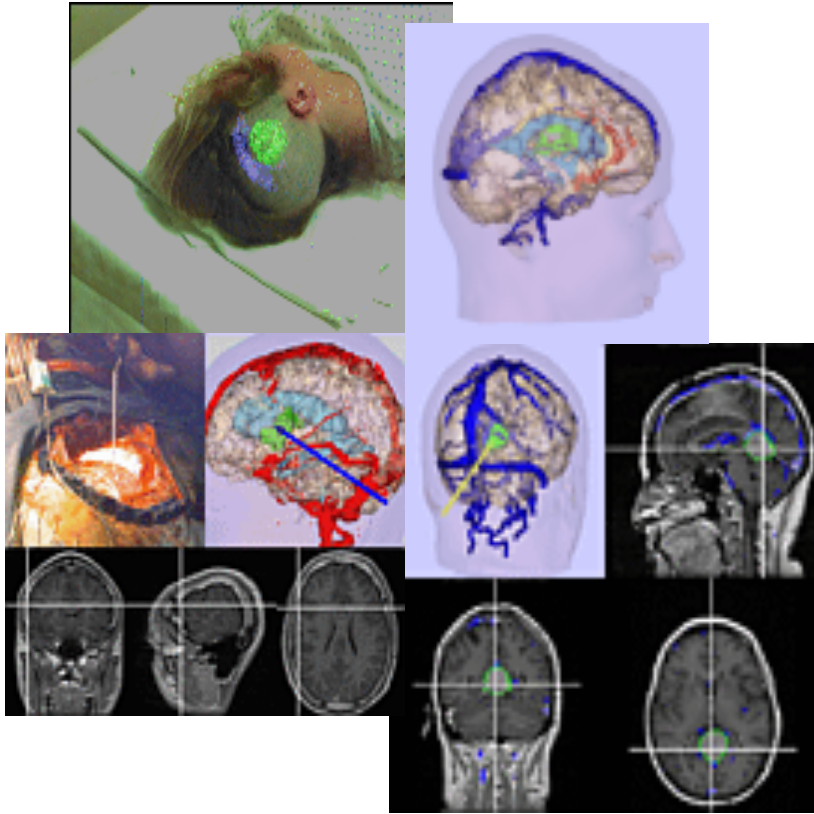
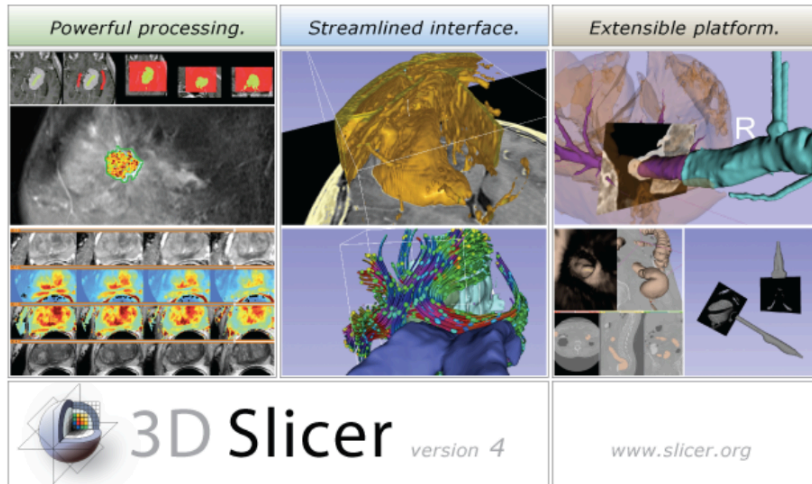


Image Courtesy of the CSAIL, MIT

3DSlicer History

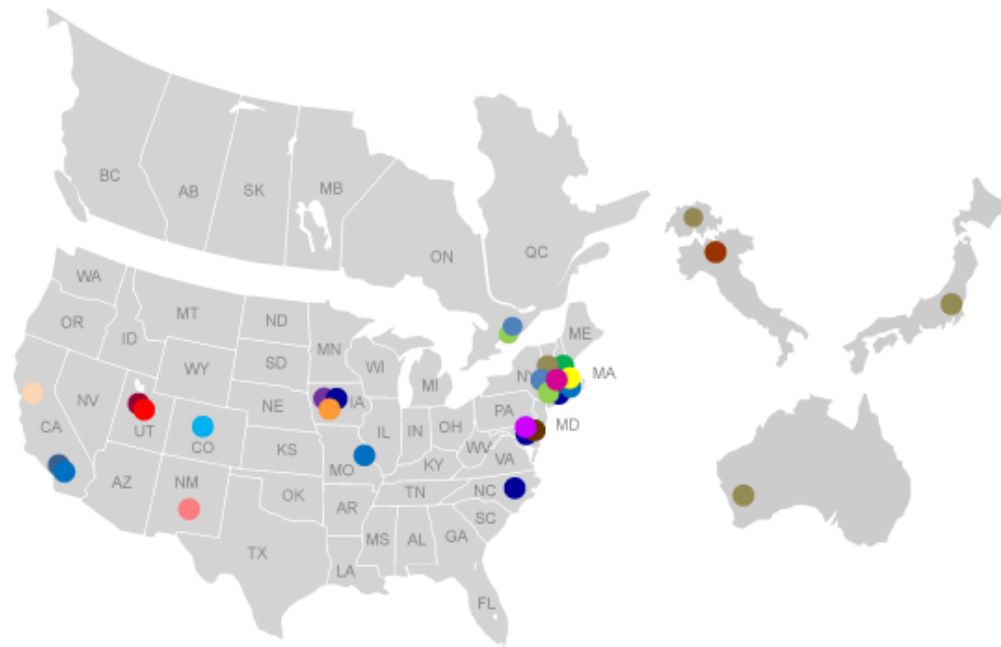
- 1997: Slicer started as a research project between the Surgical Planning Lab (Harvard) and the CSAIL (MIT)
- 2016: Multi-institution effort to share the latest advances in image analysis with clinicians and scientists



A Multi-institution Effort



- Autism
- Brain Cancer
- Depression
- Head and Neck Cancer
- Huntington's Disease
- Lupus
- Schizophrenia
- Traumatic Brain Injury
- VCFS
- Neuroimage Analysis
- Lung Disease
- Atrial Fibrillation
- Cardiovascular Disease
- Liver Cancer
- Colon Cancer
- Prostate Cancer
- Orthopedic Injury
- Neuromuscular Dynamics
- Image Informatics



Active

- R01MH084795
- R01EB005973
- UL1RR025758
- U41RR019703
- U54EB005149-05S2
- U54LM006748
- NSF CCF-0916526
- U54GM072970
- P41RR013218
- U24RR025736
- U24RR021992
- U24RR021382
- U24RR026057
- R01EB008171
- R01EB006733
- R01NS050568
- R21EB009900
- U01HL089897
- R01CA124377
- R01NS050568
- R01CA131718
- R01CA11128
- R01NS050568
- R21EB009900
- U54EB005149-05S3
- Mario Negri Institute, Italy
- CO-ME, Switzerland
- OCAIRO, Canada
- AIST, Japan
- UWA, Australia

Completed

- U54EB005149-04S1

- Infrastructure grants fund the platform
- Collaborative projects (e.g. Canada, Japan, Australia, Italy) fund the application packages

Slicer Is Open

Madrid 2012



Iowa City, USA 2012

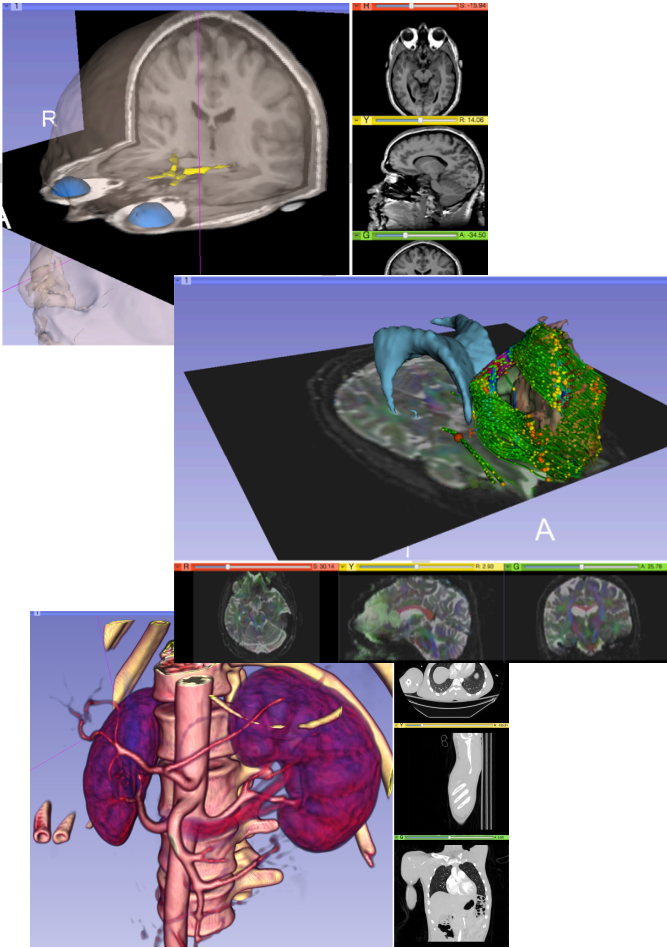


Courtesy R. Kikinis

- Open Science
= Open Source
+ Open Data
+ Open Community

Slicer Open Community

- 80 authorized developers contributing to the source code of Slicer
- Over 700 subscribers on Slicer user and Slicer developer mailing list



3D Slicer in practice



Download Slicer4

the free cross-platform open-source medical image processing and visualization system

You are one click away from downloading 3D Slicer, a free and open-source platform for analyzing and understanding medical image data. Created through multiple grants from the US National Institutes of Health (NIH) over almost two decades, Slicer brings powerful medical image processing, visualization, and data analysis tools within reach of everyone.

Slicer is built and tested on many hardware and software platforms. 3D Slicer runs on modern Windows, Mac OS X (10.7 and up), and a variety of Linux distributions.

Installers

	Windows	Mac OS X	Linux
Stable Release	version 4.5.0-1 revision 24735 built 2015-11-12	version 4.5.0-1 revision 24735 built 2015-11-12	version 4.5.0-1 revision 24735 built 2015-11-12
Nightly Build	version 4.5.0+ revision 24817 built 2015-12-16	version 4.5.0+ revision 24817 built 2015-12-16	version 4.5.0+ revision 24817 built 2015-12-16

- Slicer is open-source
- Slicer works on Windows, Linux, and Mac
- Slicer is distributed under a BSD-style license agreement with no restriction on use

Slicer: Behind the scenes

Safari File Edit View History Bookmarks Window Help

CDash - Slicer4

http://www.cdash.org/slicer4/index.php?project=Slicer4

Dashboard Calendar Previous Current Project

WARNING: This CDash instance is running the bleeding edge svn trunk CDash code, and is updated frequently. You have been notified by email. This page was last changed by 1 author as of Sunday, November 27 2011 - 22:00 EST

Lightly-Packaged

Site	Build Name	Update			Configure			Build			Build Time
		Files	Error	Warn	Error	Warn	Not Run	Fail	Pass		
stony-win7.kitware	Windows7-VS2010-32bits-QT4.7.1-PythonQt-With-Tcl-CLI-Release	0	0	0	2 ⁻²	107	0	0	0	47 minutes ago	
stony-mac-64bits.kitware	SnowLeopard-g++4.2.1-64bits-QT4.7-PythonQt-With-Tcl-CLI-Release	1	0	0	0	14 ⁻³	0	28 ⁻¹	459 ⁻¹	9 hours ago	
stony-ubuntu-64bits.kitware	Linux-g++4.4.3-64bits-QT4.7-PythonQt-With-Tcl-CLI-Release	1	0	0	0	13 ⁻²	0	28 ⁻¹⁸	459 ⁻¹	13 hours ago	
stony-win7.kitware	Windows7-VS2008-64bits-QT4.7.1-PythonQt-With-Tcl-CLI-Release	0	0	0	0 ⁻²⁴	1000 ²⁴	0	26 ⁻⁶	461 ⁻³	4 hours ago	
stony-win7.kitware	Windows7-VS2008-32bits-QT4.7.1-PythonQt-With-Tcl-CLI-Release	1	0	0	0 ⁻³	1000 ²⁷²	0	24 ⁻⁶	463 ⁻²	11 hours ago	

Lightly

Site	Build Name	Update			Configure			Build			Test			Build Time
		Files	Error	Warn	Error	Warn	Not Run	Fail	Pass	Not Run	Fail	Pass		
itecube.kitware	SnowLeopard-gcc4.2.1-QT4.7.0-PythonQt-With-Tcl-Release	1	0	0	27	190	0	96	391	0	0	0	11 hours ago	
upl.sci.utah.edu	OpenSuse-c++4.5.0-64bits-QT4.6.3-PythonQt-With-NoCLI-Release	0	0	0	0	15	0	304	6	0	0	0	11 hours ago	
s.kitware	Linux-g++4.4-QT4.6.3-PythonQt-CLI-Release	1	0	0	0	15 ⁻²	0	36 ⁻⁷	451 ⁻¹	0	0	0	3 hours ago	
stony-ubuntu-64bits.kitware	Linux-g++4.4.3-QT4.7-PythonQt-With-Tcl-CLI-Valgrind-Release	0	0	0	0	13 ⁻³	0	27 ⁻¹	460 ⁻¹	0	0	0	11 hours ago	
stony-ubuntu-64bits.kitware	Linux-g++4.4.3-64bits-QT4.7-PythonQt-With-Tcl-NoCLI-Coverage-Release	0	0	0	0	12 ⁻²	0	23 ⁻¹	287 ⁻¹	0	0	0	11 hours ago	
garmatha.kitware	Linux-g++4.3.3-QT4.7-PythonQt-With-Tcl-NoCLI-Release	0	0	0	0	12 ⁻²	0	22	288	0	0	0	12 hours ago	

Continuous

Site	Build Name	Update			Configure			Build			Test			Build Time
		Files	Error	Warn	Error	Warn	Not Run	Fail	Pass	Not Run	Fail	Pass		
upl.sci.utah.edu	OpenSuse-c++4.5.0-64bits-QT4.6.3-PythonQt-With-NoCLI-Release	2	0	0	0	0 ⁻¹	0	304	6	0	0	0	1 hour ago	

Slicer is built every night on Windows, Mac and Linux platforms

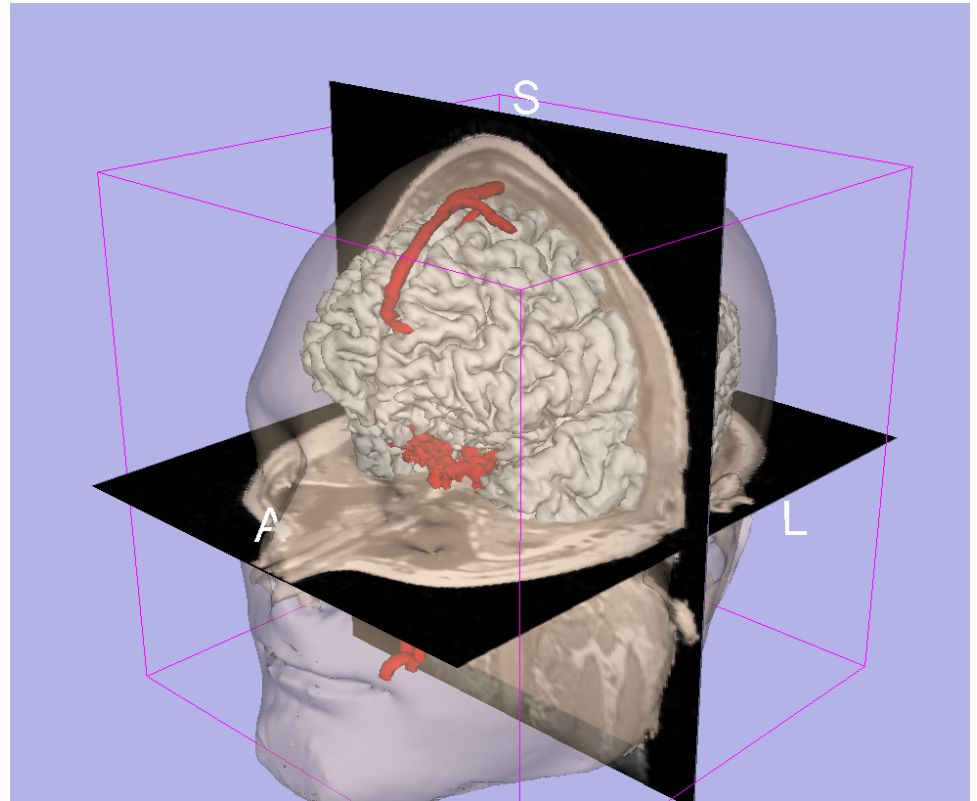
Slicer Training



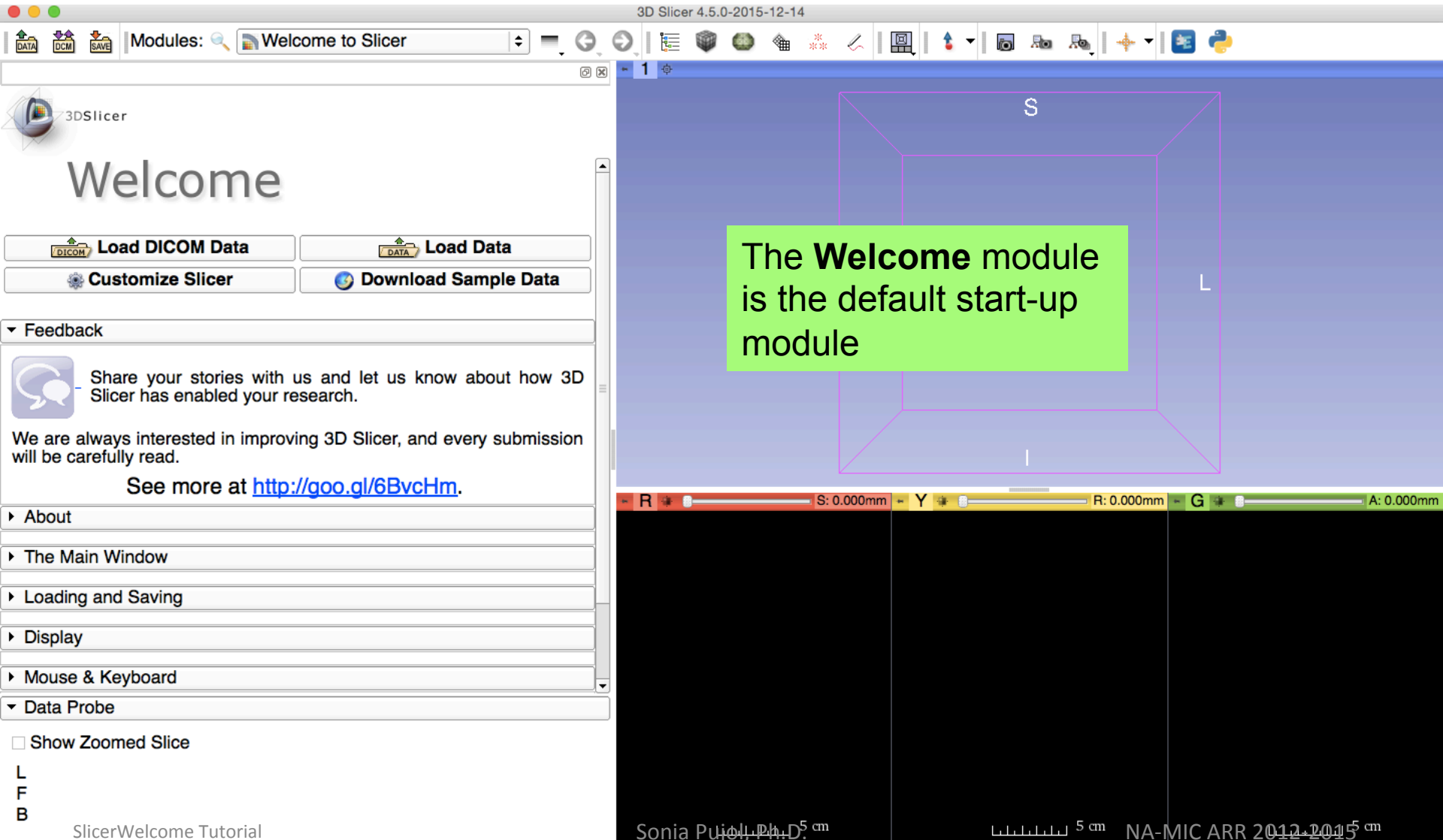
- Hands-on training workshops at national and international venues
- >2,300 clinicians, clinical researchers and scientists trained since 2005

3D Visualization of the Anatomy

Following this tutorial, you will be able to **load and visualize volumes** within Slicer4, and to **interact in 3D** with structural images and models of the anatomy.



3DSlicer Version4



3DSlicer Version4

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slic

3DSlicer

Welcome

Load DICOM Data

Customize Slicer

Download

Feedback

About

3D Slicer is a free open source software platform for medical image processing and 3D visualization of image data. This module contains some basic information and useful links to get you started using Slicer. For more information, please visit our website <http://www.slicer.org>.

3D Slicer is distributed under a BSD-style license; for details about the contribution and software license agreement, please see the [3D Slicer Software License Agreement](#). This software has been designed for research purposes only and has not been reviewed or approved by the Food and Drug Administration, or by any other agency.

The Main Window

Loading and Saving

Display

Data Probe

Show Zoomed Slice

L
F
B

SlicerWelcome Tutorial

Each module of Slicer includes a series of tabs, which gives access to different functionalities

Click on the arrow symbol to display the content of each tab

R: 0.000mm Y: 0.000mm G: 0.000mm A: 0.000mm

S: 0.000mm

5 cm

5 cm

5 cm

NA-MIC ARR 2012-2015



3DSlicer Version4

The screenshot shows the 3D Slicer 4.5.0-2015-12-14 interface. The top bar includes the title '3D Slicer 4.5.0-2015-12-14', a 'Modules:' dropdown set to 'Welcome to Slicer', and a toolbar with various icons. The main window is titled 'Welcome' and contains several buttons: 'Load DICOM Data', 'Load Data', 'Customize Slicer', and 'Download Sample Data'. Below these are sections for 'Feedback', 'About', and 'The Main Window'. The 'The Main Window' section contains a diagram of the UI layout with labels: File Menu, GUI Panel, Data Probe, Toolbar, 3D Viewer, Slice Viewers, and Message Bar. A red arrow points from the 'The Main Window' section to the main window area. A green callout box is overlaid on the main window area.

The Main Window tab contains information on the basic organization of Slicer's user interface

Scroll down to see all the contents

The basic organization of Slicer's user interface (UI) is shown above. This module's content will reference these following components, labeled in the figure:

File Menu:
Contains basic load and save functionality, access to application settings, Tcl and Python interfaces for developers, help and mechanisms for users to provide feedback.

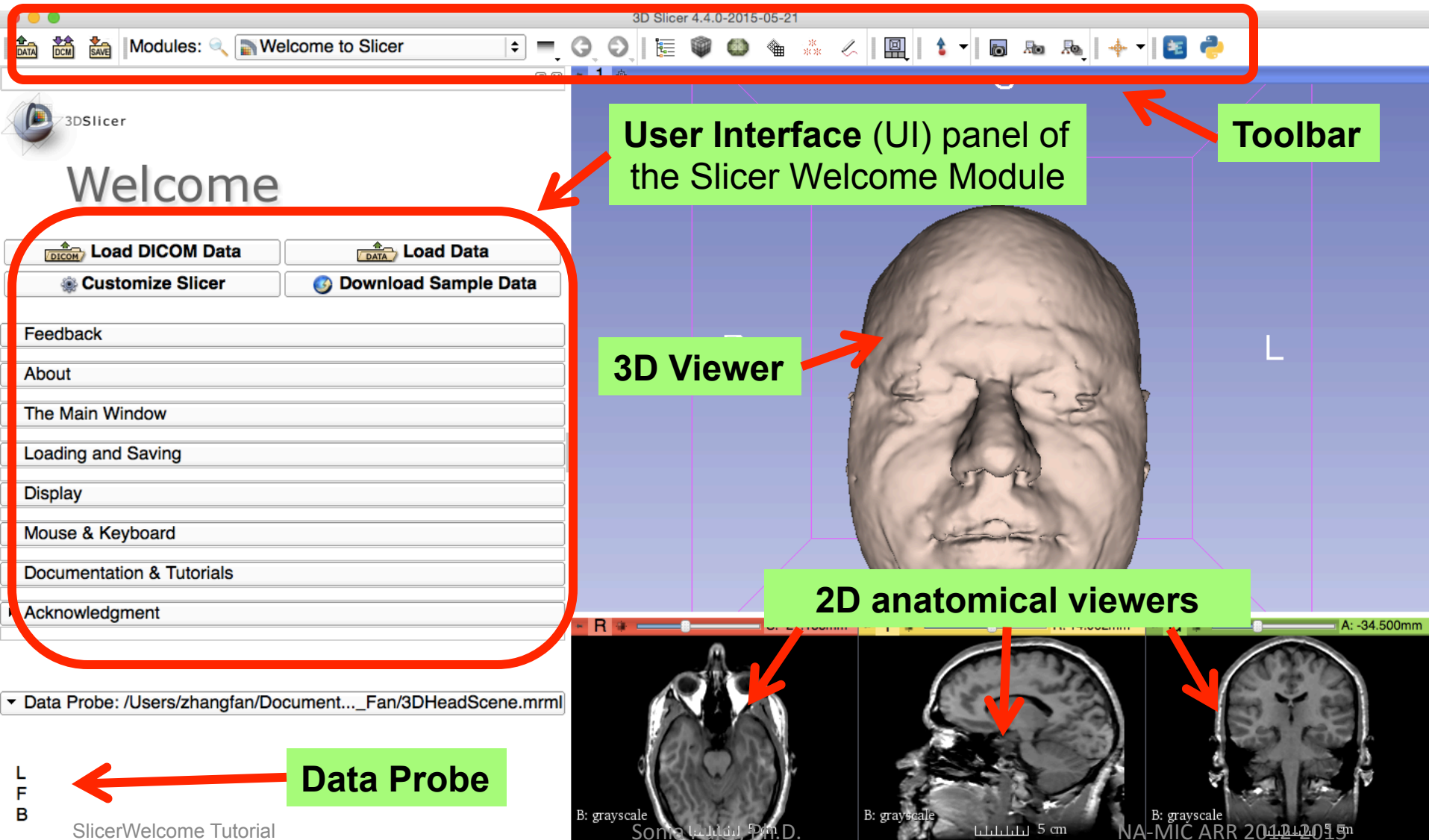
Toolbar:
Contains tools for selecting and navigating among Slicer modules, layout and other utilities.

GUI Panel:
Contains a UI for any selected module.

Data Probe



Slicer User Interface



Slicer4

The image shows a screenshot of the Slicer4 software interface. On the left, a file browser window displays a directory structure with a file named 'MR-head.nrrd' selected. A red arrow points from this file to a yellow text box. Below the file browser, a panel titled 'The Main Window' contains text describing the 'Add data into the scene' window. On the right, the 'Add data into the scene' dialog box is open, showing the selected file path and a description of 'Volume'. A red arrow points from a yellow text box to the 'OK' button in the dialog.

Browse to the location of the MR dataset **MR-head.nrrd** on your disk.

Drag and drop it into Slicer

Click on **OK** to load the dataset into Slicer

Slicer automatically opens the **'Add data into the scene'** window.

This module's content will reference these following components, labeled in the figure:

File Menu:
Contains basic load and save functionality, access to application settings, Tcl and Python interfaces for developers, help and mechanisms for users to provide feedback.

Toolbar:
Contains tools for selecting and navigating among Slicer modules, layout and other utilities.

GUI Panel:
Contains a UI for any selected module.

▶ Data Probe

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data Load Data

Customize Slicer Download Sample Data

Feedback

Share your stories with us and let us know about how 3D Slicer has enabled your research.

We are always interested in improving 3D Slicer, and every submission will be carefully read.

See more at <http://goo.gl/6BvcHm>.

About

- The Main Window
- Loading and Saving
- Display
- Mouse & Keyboard
- Documentation & Tutorials
- Acknowledgment

Data Probe

3D Data Loading and Visualization

The axial, sagittal and coronal views appear in the 2D viewers

F S: -10.214mm Y R: -2.145mm G A: 6.929mm

B: MR-head B: MR-head B: MR-head

Sonia Pulido, PhD 5 cm NA-MIC ARR 2014-10-13 5 cm

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data | Load Data | Customize Slicer | Download Sample Data

Feedback

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Data Probe

3D Data Loading and Visualization

Click on the **Slicer layout icon**

R: -10.214mm | Y: -2.145mm | A: 6.929mm

B: MR-head | Sonia Pulgar, PhD | 5 cm | NA-MIC ARR 2017, DOI: 10.1117/1.5111111

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data **Load Data**

Customize Slicer **Download Sample Data**

Feedback

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About

The Main Window

Loading and Saving

Display

Click on the Red slice only option

Acknowledgment

Data Probe

3D Data Loading and Visualization

- Conventional
- Conventional Widescreen
- Conventional Quantitative
- Four-Up
- Four-Up Quantitative
- Four-Up Table
- Dual 3D
- Triple 3D
- 3D only
- One-Up Quantitative
- Red slice only**
- Yellow slice only
- Green slice only
- Tabbed 3D
- Tabbed slice
- Compare
- Compare Widescreen
- Compare Grid
- Three over three
- Three Over Three Quantitative
- Four over four
- Two over Two
- Side by side
- Four by three slice
- Four by two slice
- Three by three slice

R S: -10.214mm

G A: 6.929mm

B: MR-head Sonia Pulido 5 cm

B: MR-head 5 cm

B: MR-head NA-MIC ARR 2014 5 cm

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data **Load Data**

Customize Slicer **Download Sample Data**

Feedback

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About

The Main Window

Position your mouse over the pin icon to display the slice viewer toolbar

Documentation & Tutorials

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Data Probe

3D Data Loading and Visualization

B: MR-head

Sonia Pujol, Ph.D.

5mm

NA-MIC ARR 2012-2015

S: -10.214mm

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data **Load Data**

Customize Slicer **Download Sample Data**

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About

The Main Window

Loading and Saving

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Data Probe

3D Data Loading and Visualization

Axial MR-head S: -10.214mm

B: MR-head

Sonia Pujol, Ph.D.

NA-MIC ARR 2012-2015

5/11

Once the slice viewer toolbar is displayed, click on the ">>"

Loading a volume

The screenshot shows the 3D Slicer 4.5.0-2015-12-14 interface. The 'Welcome' screen is visible on the left, with a green callout box stating: "This menu will appear once the '>>' button is pressed". The main window displays an axial MRI slice of a brain. A red-bordered menu is overlaid on the right side of the main window, showing the following options:

- 1.00 None
- 0.00 None
- 1.00 MR-head

The menu also includes a 'Data' button and a 'Data Probe' button. The 'Data Probe' button is highlighted in green. The 'Data Probe' button is located at the bottom left of the main window, with the text '3D Data Loading and Visualization' below it.

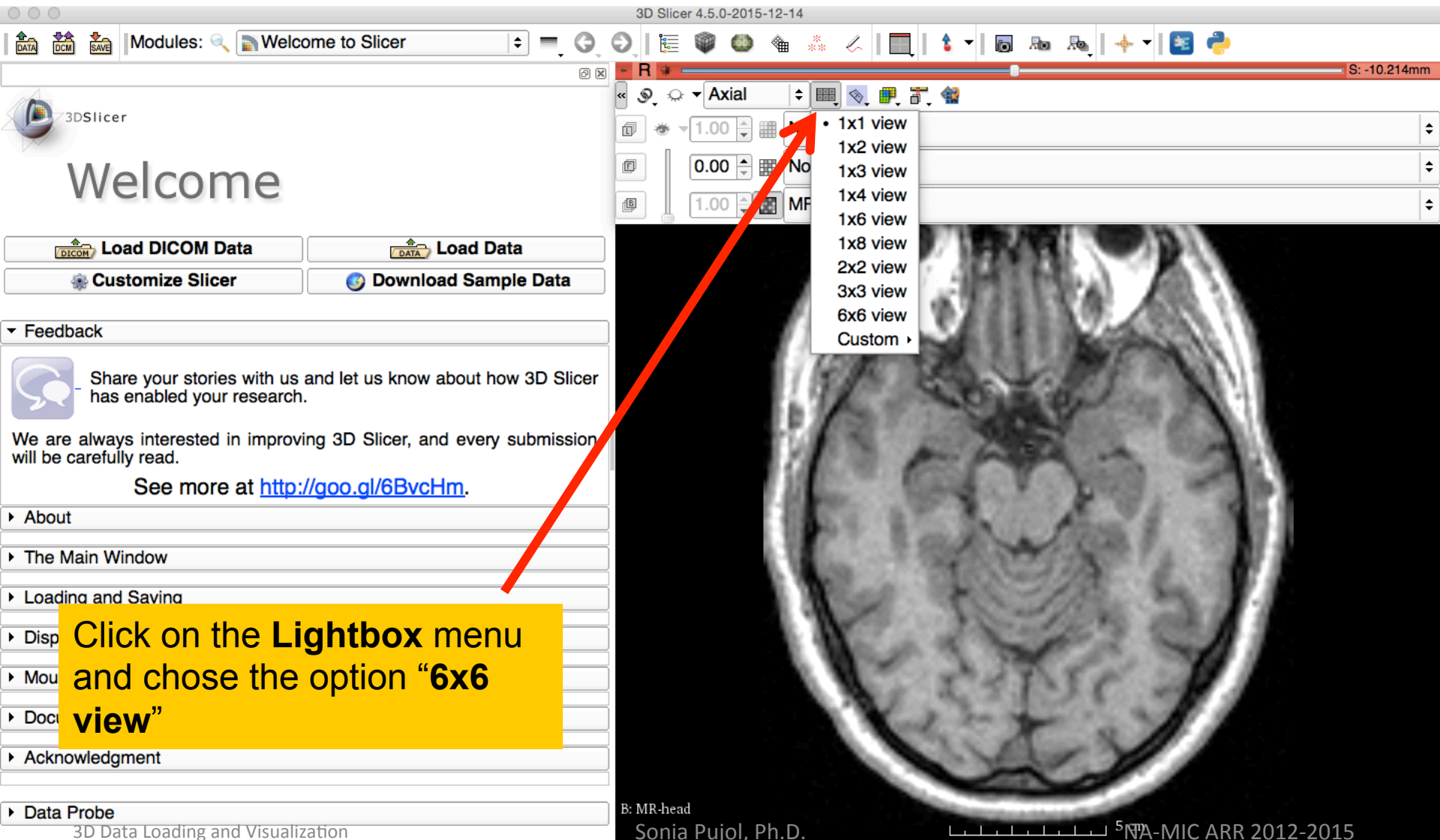
B: MR-head

Sonia Pujol, Ph.D.

5/11/15 NA-MIC ARR 2012-2015



Loading a volume



The screenshot shows the 3D Slicer 4.5.0-2015-12-14 interface. The main window displays a brain MRI volume in an Axial view. A red arrow points from a yellow text box to the 'Lightbox' menu icon in the top toolbar. The 'Lightbox' menu is open, showing a list of view options: 1x1 view, 1x2 view, 1x3 view, 1x4 view, 1x6 view, 1x8 view, 2x2 view, 3x3 view, 6x6 view, and Custom. The '6x6 view' option is highlighted. The left sidebar contains a 'Welcome' message and several buttons: 'Load DICOM Data', 'Load Data', 'Customize Slicer', and 'Download Sample Data'. The bottom status bar shows 'B: MR-head' and 'Sonia Pujol, Ph.D.'.

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data **Load Data**

Customize Slicer **Download Sample Data**

Feedback

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About

The Main Window

Loading and Saving

Display

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Data Probe

3D Data Loading and Visualization

MR-head

Sonia Pujol, Ph.D.

NA-MIC ARR 2012-2015

Click on the **Lightbox** menu and chose the option "**6x6 view**"

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Slicer displays 36 consecutive images of the dicom volume. Use the red slice slider to browse through the data

See more at <http://goo.gl/6BvcHm>.

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3D Data Loading and Visualization

B: MR-head

Some Pujol, Ph.D. NA-MIC ARR 2012-2015

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data **Load Data**

Customize Slicer **Download Sample Data**

Feedback

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About

The Main Window

Loading and Saving

Click on the Slicer layout icon and select Conventional

Acknowledgment

Data Probe

3D Data Loading and Visualization

Conventional

- Conventional Widescreen
- Conventional Quantitative
- Four-Up
- Four-Up Quantitative
- Four-Up Table
- Dual 3D
- Triple 3D
- 3D only
- One-Up Quantitative
- Red slice only
- Yellow slice only
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- Tabbed 3D
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- Compare
- Compare Widescreen
- Compare Grid
- Three over three
- Three Over Three Quantitative
- Four over four
- Two over Two
- Side by side
- Four by three slice
- Four by two slice
- Three by three slice

S: -10.214mm

B: MR-head

Some Pujol, Ph.D. NA-MIC ARR 2012-2015

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data Load Data

Customize Slicer Download Sample Data

Feedback

Position your arrow again on the **pin icon** of the red viewer, select the **Lightbox** menu and change it back to **"1x1 view"**

3D Data Loading and Visualization

1x1 view
1x2 view
1x3 view
1x4 view
1x6 view
1x8 view
2x2 view
3x3 view
• 6x6 view
Custom

R S L I

R: -2.145mm Y S: -10.214mm G A: 6.929mm

MR-head 5 cm NA-MIC ARR 2014.00 5 cm

Loading a volume

The screenshot shows the 3D Slicer 4.5.0-2015-12-14 interface. The main window displays a 3D volume with a purple wireframe bounding box labeled with 'S' (Superior), 'I' (Inferior), 'R' (Right), and 'L' (Left). Below the main window are three slice viewers: Axial, Sagittal, and Coronal. The Axial viewer shows a brain slice with a 5 cm scale bar. The Sagittal viewer shows a brain slice with a 5 cm scale bar. The Coronal viewer shows a brain slice with a 5 cm scale bar. The interface includes a top toolbar with various icons, a left sidebar with a 'Modules' list, and a bottom status bar with coordinates and scale information.

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Position your arrow again on the **pin icon** of the red viewer and click on the links icon to link all three viewers

Share your stories with us and let us know about how 3D Slicer has enabled your research.

We are always interested in improving 3D Slicer, and every submission will be carefully read.

See more at <http://goo.gl/6BvcHm>.

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▶ Loading and Saving

▶ Display

▶ Mouse & Keyboard

▶ Documentation & Tutorials

▶ Acknowledgment

▶ Data Probe

3D Data Loading and Visualization

Link/Unlink the slice controls (except scales) across all Slice Viewers.

1.00 MR-head

B: MR-head 5 cm

B: MR-head 5 cm

B: MR-head 5 cm

NA-MIC ARR 2014.00

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

Welcome

Once the icons are linked, click on the **eye icon** to display all 3 anatomical slices in the 3D viewer

We are always interested in improving 3D Slicer, and every submission will be carefully read.
See more at <http://goo.gl/6BvcHm>.

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- Acknowledgment
- Data Probe

3D Data Loading and Visualization

3D Viewer: S: -10.214mm, Y: ..., R: -2.145mm, G: ..., A: 6.929mm

Toggle slice visibility in 3D view

MR-head

MR-head

MR-head

5 cm

5 cm

5 cm

NA-MIC ARR 2014

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

Welcome

Load DICOM Data **Customize Slicer** **Download Sample Data**

Feedback

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About

- The Main Window
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- Acknowledgment

Data Probe

3D Data Loading and Visualization

All three anatomical slices are shown in the 3D viewer

S R L

R S: -10.214mm Y R: -2.145mm G A: 6.929mm

B: MR-head Sonia Pulido 5 cm

B: MR-head NA-MIC ARR 2014.001 5 cm

B: MR-head

Loading a volume

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

Use the left mouse button to rotate the camera and the right mouse button to zoom in and out

Share your stories with us and let us know about how 3D Slicer has enabled your research.

We are always interested in improving 3D Slicer, and every submission will be carefully read.

See more at <http://goo.gl/6BvcHm>.

- About
- The Main Window
- Loading and Saving
- Display
- Mouse & Keyboard
- Documentation & Tutorials
- Acknowledgment
- Data Probe

3D Data Loading and Visualization

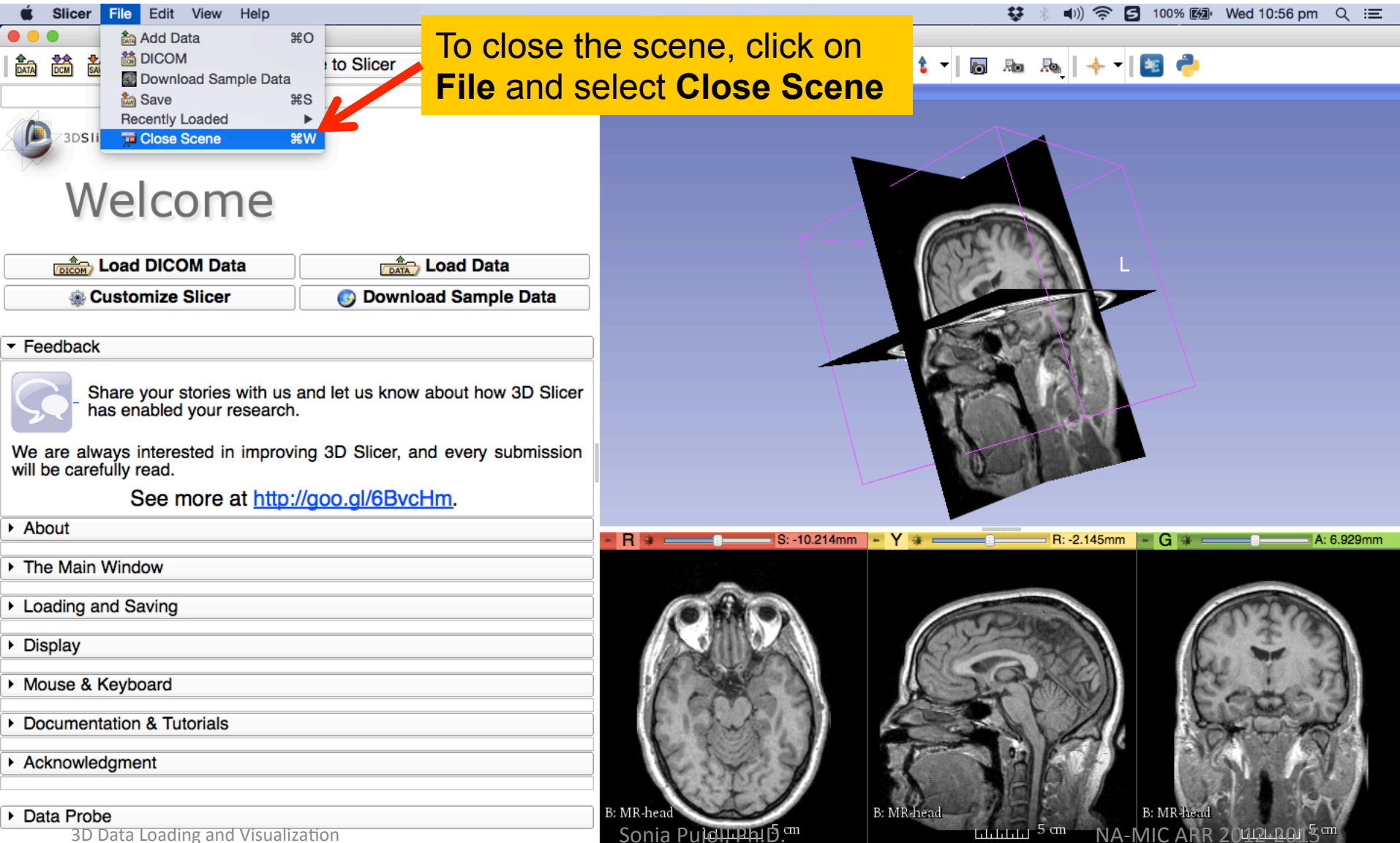
R: -10.214mm Y: -2.145mm G: 6.929mm

B: MR-head Sonia Pulido 5 cm

B: MR-head 5 cm

B: MR-head NA-MIC ARR 2014.001 5 cm

Close the scene



The image shows the 3D Slicer software interface. The 'File' menu is open, and the 'Close Scene' option is highlighted in blue. A red arrow points to this option. A yellow text box with black text says 'To close the scene, click on File and select Close Scene'. The main window displays a 3D view of a brain MRI scan with a purple wireframe bounding box. Below the 3D view are three 2D views: Axial, Sagittal, and Coronal. The status bar at the bottom shows coordinates: R: -10.214mm, Y: -2.145mm, G: 6.929mm. The bottom left corner has the text 'Sonia Pulido' and '3D Data Loading and Visualization'. The bottom right corner has the text 'NA-MIC ARR 2012-01-13'.

To close the scene, click on **File** and select **Close Scene**

File menu options:

- Add Data (%O)
- DICOM
- Download Sample Data
- Save (%S)
- Recently Loaded
- Close Scene (%W)**

Buttons:

- Load DICOM Data
- Load Data
- Customize Slicer
- Download Sample Data

Feedback section:

Share your stories with us and let us know about how 3D Slicer has enabled your research.

We are always interested in improving 3D Slicer, and every submission will be carefully read.

See more at <http://goo.gl/6BvcHm>.

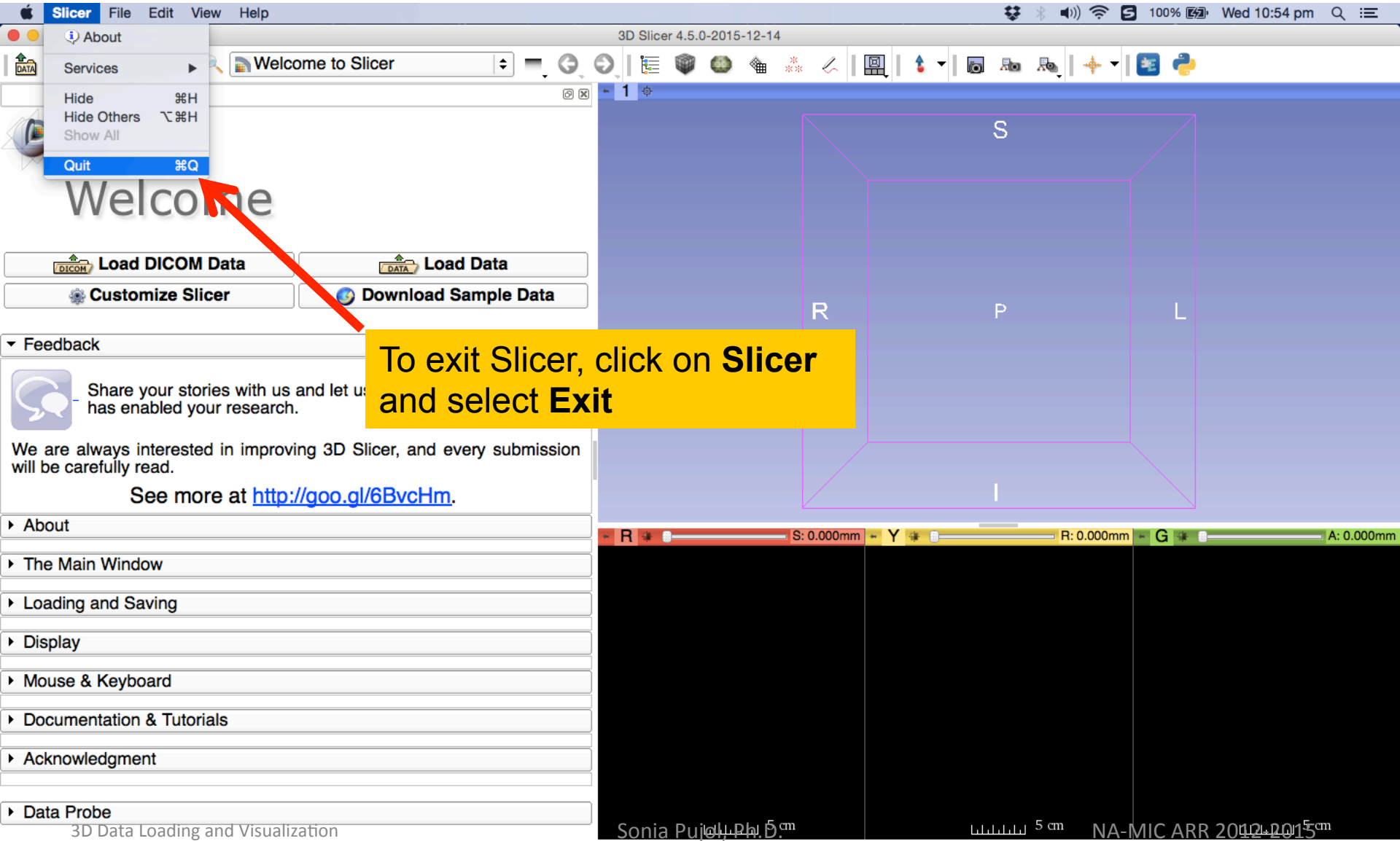
About section:

- The Main Window
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- Data Probe

3D Data Loading and Visualization

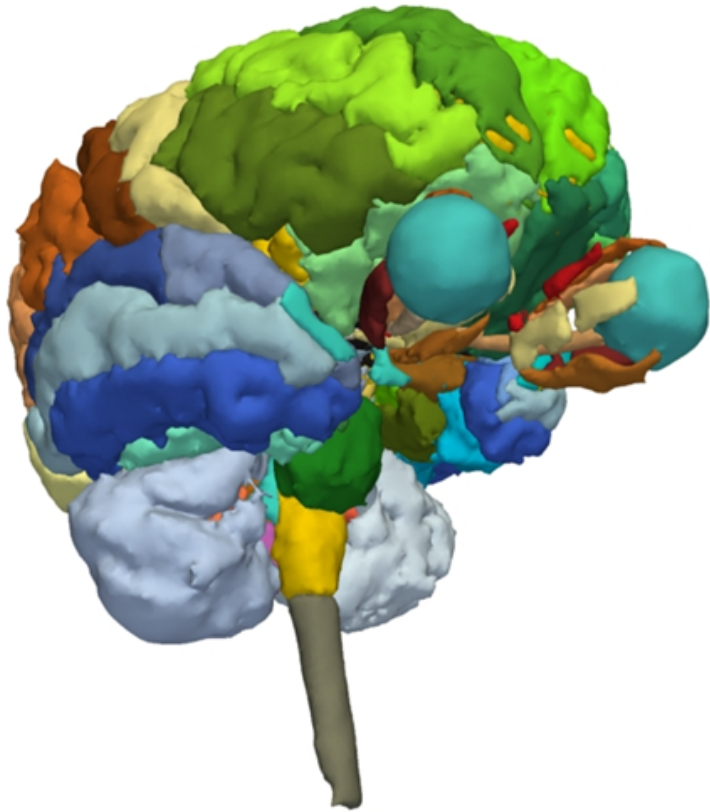
NA-MIC ARR 2012-01-13

Exit Slicer



To exit Slicer, click on **Slicer** and select **Exit**





Part 2:

3D visualization of surface models of the brain

Loading a Scene

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DSlicer

Welcome

Load DICOM Data | Load Data | Customize Slicer | Download Sample Data

Feedback

Share your stories with us and let us know how we have enabled your research.

We are always interested in improving 3D Slicer. Your feedback will be carefully read.

See more at <http://goo.gl/6...>

About | The Main Window | Loading and Saving | Display | Mouse & Keyboard | Documentation & Tutorials | Acknowledgment | Data Probe

3D Data Loading and Visualization

Drag and drop the file '3DHeadScene.mrml' into Slicer

Name	Modified	Size	Type
3DHeadData			
3DHeadScene.mrml	7 Jul 2015 11:04 am	96 KB	Unix E...le File
grayscale.nrrd	16 Jun 2015 2:48 pm	5.1 MB	Document
hemispheric_white_matter.vtk	16 Jun 2015 2:48 pm	6.4 MB	Unix E...le File
left_eyeball.vtk	16 Jun 2015 2:48 pm	57 KB	Unix E...le File
Master Scene View.png	7 Jul 2015 11:04 am	379 KB	PNG image
optic_chiasm.vtk	16 Jun 2015 2:48 pm	14 KB	Unix E...le File
optic_nerve_L.vtk	16 Jun 2015 2:48 pm	28 KB	Unix E...le File
optic_nerve_R.vtk	16 Jun 2015 2:48 pm	29 KB	Unix E...le File
optic_tract_L.vtk	16 Jun 2015 2:48 pm	18 KB	Unix E...le File
optic_tract_R.vtk	16 Jun 2015 2:48 pm	16 KB	Unix E...le File
right_eyeball.vtk	16 Jun 2015 2:48 pm	53 KB	Unix E...le File
SceneView.png	7 Jul 2015 11:04 am	379 KB	PNG image
Skin.vtk	16 Jun 2015 2:48 pm	3.5 MB	Unix E...le File
skull_bone.vtk	16 Jun 2015 2:48 pm	4.8 MB	Unix E...le File
MR-head.nrrd	16 Mar 2012 5:43 pm	6.6 MB	Document

R: 0.000mm | G | A: 0.000mm

Sonia Pujuguet, Ph.D. | 5 cm | NA-MIC ARR 2012-2015 | 5 cm

Loading a Scene

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

3DDataLoadingandVisualization

Name	Date Modified	Size	Kind
3DHeadData	3 Dec 2015 10:57 pm	--	Folder
3DHeadScene.mrml	7 Jul 2015 11:04 am	96 KB	Unix E...le File
grayscale.nrrd	16 Jun 2015 2:48 pm	5.1 MB	Document
hemispheric_white_matter.vtk	16 Jun 2015 2:48 pm	6.4 MB	Unix E...le File
left_eyeball.vtk			
Master Scene View.png			
optic_chiasm.vtk			
optic_nerve_L.vtk			
optic_nerve_R.vtk			
optic_tract_L.vtk			
optic_tract_R.vtk			
right_eyeball.vtk			
SceneView.png			
Skin.vtk			
skull_bone.vtk			
MR-head.nrrd			

Add data into the scene

Choose Directory to Add | Choose File(s) to Add | Show Options

File	Description
✓ ...DDataLoadingandVisualization/3DHeadData/3DHeadScene.mrml	MRML Scene

Reset | OK | Cancel

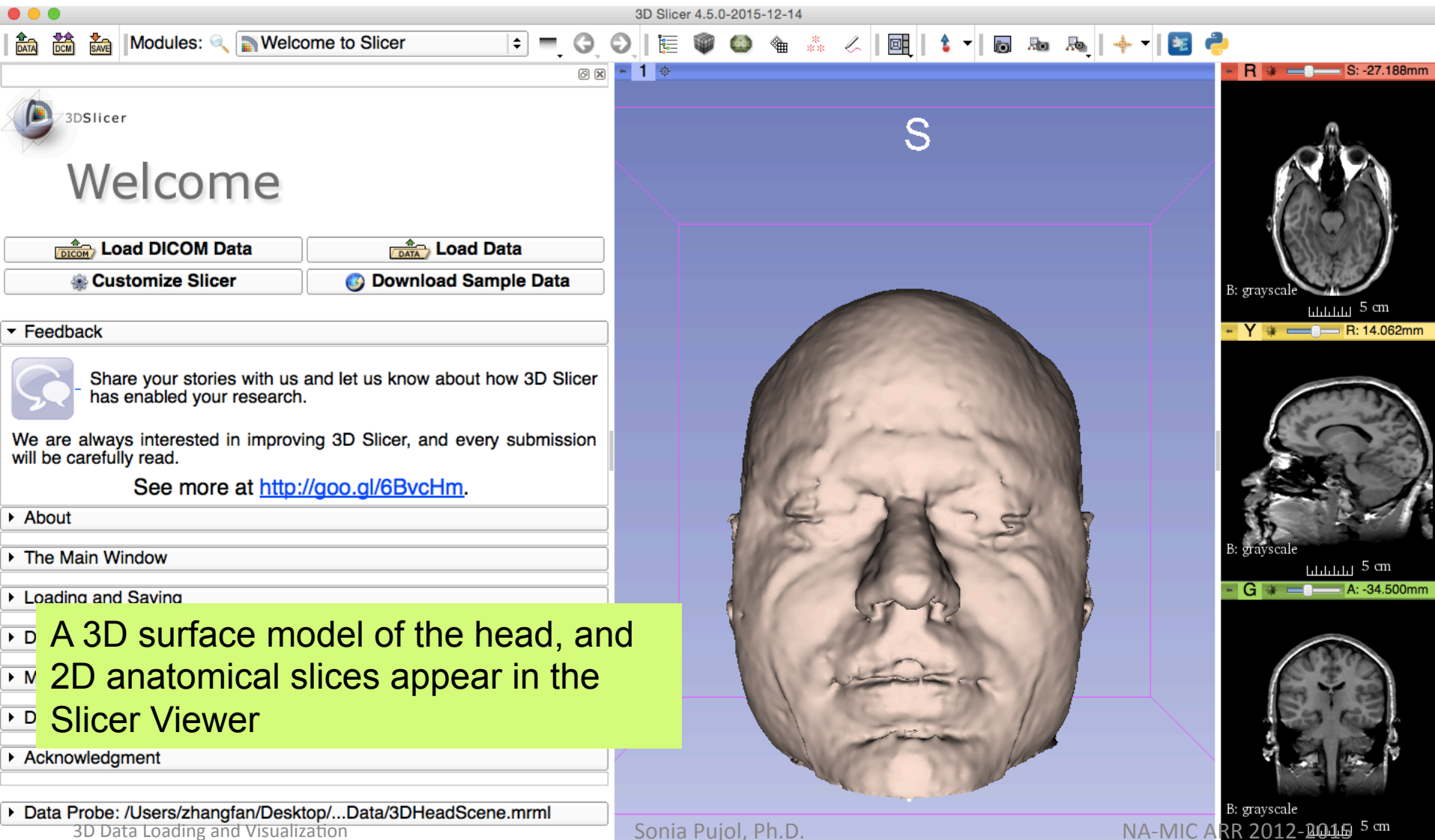
Slicer automatically opens the 'Add data into the scene' window.

Click on **OK** to load the scene file.

3D Data Loading and Visualization

Sonia Pujuguet, Ph.D. 5 cm NA-MIC ARR 2012-2015 5 cm

Loading the Slicer Scene



A 3D surface model of the head, and 2D anatomical slices appear in the Slicer Viewer

Loading the Slicer Scene

3D Slicer 4.5.0-2015-12-14

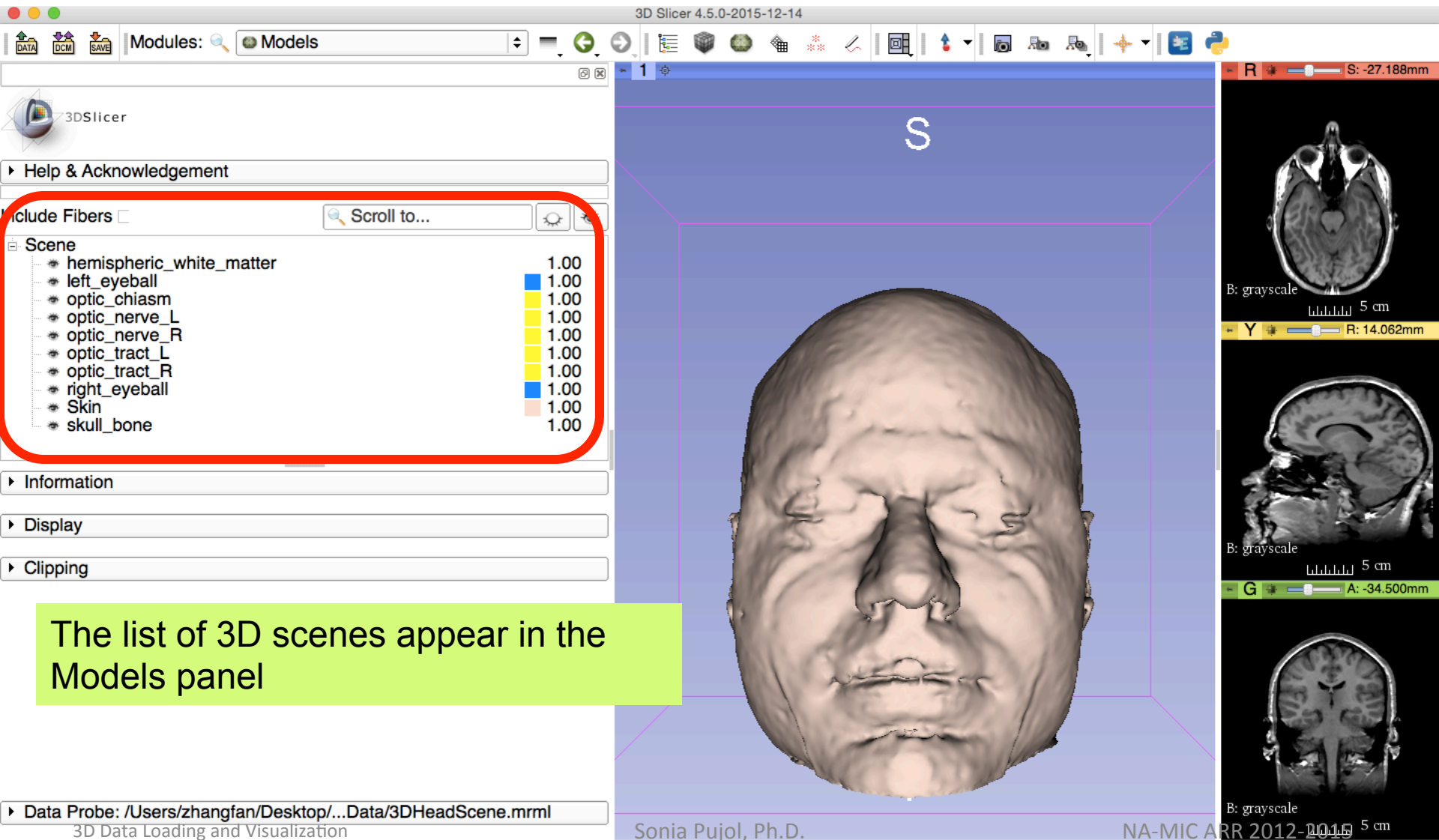
Modules: Welcome to Slicer

- All Modules
- Annotations
- Data
- DataStore
- DICOM
- Editor
- Markups
- Models
- Scene Views
- Subject Hierarchy
- Transforms
- View Controllers
- Volume Rendering
- Volumes
- Welcome to Slicer
- Wizards
- Informatics
- Registration
- Segmentation
- Quantification
- Diffusion
- Endoscopy
- Utilities
- Developer Tools
- Legacy
- Filter
- MultiVolume Support

Select the Modules menu and select Models

Sonia Pujol, Ph.D. NA-MIC ARR 2012-2015

Models Module



The list of 3D scenes appear in the Models panel

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

Position the cursor over the **pin icon** to reveal the slice menu and click on the **eye icon** to reveal the axial slice

Scene

- hemispheric_white_matter 1.00
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 1.00
- skull_bone 1.00

Information

Display

Clipping

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

Sonia Pujol, Ph.D.

NA-MIC ARR 2012-2019

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

3DSlicer

- optict_tract_L 1.00
- optict_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information

Display

Visibility

Visible:

View: All

Clip:

Slice Intersections Visible:

Slice Intersections Thickness: 1 px

Representation

Color

Color: #ffddce

Opacity: 0.30

Notice the skin has become almost fully transparent

Scalars

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

S

R S: -27.188mm

B: grayscale 5 cm

Y R: 14.062mm

B: grayscale 5 cm

G A: -34.500mm

B: grayscale 5 cm

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3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

3DSlicer

Help & Acknowledgement

Include Fibers Scroll to...

Scene

- hemispheric_white_matter 1.00
- left_eyeball 1.00
- optic_chias 3D Visualization 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00**

Information

Display

Visibility

Visible:

View: All

Clip:

S

S

S

Y R: 14.062mm

G A: -34.500mm

B: grayscale 5 cm

B: grayscale 5 cm

B: grayscale 5 cm

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3D Data Loading and Visualization

Scroll back up to the 3D scenes menu and select **skull_bone**

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

3DSlicer

Help & Acknowledgement

Include Fibers

Scene

- hemispheric_white_ma
- left_eyeball
- optic_chiasm
- optic_nerve_L
- optic_nerve_R
- optic_tract_L
- optic_tract_R
- right_eyeball
- Skin
- skull_bone

Information

Display

Visibility

Visible:

View: All

Clip:

Slice Intersections Visible:

Slice Intersections Thickness: 1 px

Representation

Color

Color: #ffffff

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

Turn off its visibility by unchecking the **Visibility** option and notice the bone disappearing from the 3D view of the head

S

R: -27.188mm

B: grayscale

5 cm

Y: R: 14.062mm

B: grayscale

5 cm

G: A: -34.500mm

B: grayscale

5 cm

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NA-MIC ARR 2012-2019

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

3DSlicer

Help & Acknowledgement

Include Fibers Scroll to...

Scene

- hemispheric_white_matter 1.00
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information

Display

Visibility

Visible:

Color: #ffffff

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

S

R S: -27.188mm

B: grayscale 5 cm

Y R: 14.062mm

G A: -34.500mm

Coronal

B: grayscale 5 cm

Sonia Pujol, Ph.D. NA-MIC ARR 2012-2019

Position your mouse over the **pin icon** in the coronal slice view and select the **eye icon** to reveal the coronal slice in the 3D view

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

3DSlicer

Help & Acknowledgement

Include Fibers Scroll to...

Scene

- hemispheric_white_matter 1.00
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information

Display

Visible

View: **Coronal**

Clip:

Slice Intersections Visible:

Slice Intersections Thickness: 1 px

Representation

Color

Color: #ffffff

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

S

P

R: -27.188mm

B: grayscale 5 cm

Y: R: 14.062mm

B: grayscale 5 cm

G: A: -34.500mm

B: grayscale 5 cm

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NA-MIC ARR 2012-2019

The coronal slice is shown in the 3D viewer.

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

3DSlicer

Help & Acknowledgement

Include Fibers Scroll to...

Scene

- hemispheric_white_matter 1.00
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information

Display

Visibility

Visible:

View: All

Clip:

Hide Intersections Visible:

Slice Intersections Thickness: 1 px

Representation

Color

Color: #ffffff

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

Scroll up and select the 3D scene **hemispheric_white_matter**, then check off the option for **Clip** under the **Visibility** tab

R P

B: grayscale 5 cm

Y R: 14.062mm

B: grayscale 5 cm

G A: -34.500mm

B: grayscale 5 cm

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3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

3DSlicer

Display

Visibility

Visible:

View: All

Clip:

Scroll down and find the tab **Clipping**, and check off the options for **Green Slice Clipping** and **Negative Space**

Edge visibility:

Edge Color: #000000

Lighting

Material

Scalars

Clipping

Clipping Type: Union Intersection

Red Slice Clipping: Positive Negative

Yellow Slice Clipping: Positive Negative

Green Slice Clipping: Positive Negative

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml
3D Data Loading and Visualization

S

R

P

B: grayscale 5 cm

Y R: 14.062mm

B: grayscale 5 cm

G A: -34.500mm

B: grayscale 5 cm

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3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

3DSlicer

Display

Visibility

Visible:

View: **The optic chiasm appears in the 3D viewer**

Clip:

Slice In:

Slice Int:

Representation

Color

Color:

Opacity:

Edge Visibility:

Edge Color:

Lighting

Material

Scalars

Clipping

Clipping Type: Union Intersection

Red Slice Clipping: Positive Negative

Yellow Slice Clipping: Positive Negative

Green Slice Clipping: Positive Negative

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

R

S

B: grayscale 5 cm

Y R: 14.062mm

B: grayscale 5 cm

G A: -34.500mm

B: grayscale 5 cm

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3D Visualization

The screenshot displays the 3D Slicer interface. The main window shows a 3D visualization of a brain model with a yellow structure and two blue spheres. The model is semi-transparent, revealing internal structures. The interface includes a top toolbar, a left sidebar with a scene tree, and a bottom panel with various settings.

Scene Tree:

- hemispheric_... (highlighted)
- left_eyeball
- optic_chiasm
- optic_nerve_L
- optic_nerve_R
- optic_tract_L
- optic_tract_R
- right_eyeball
- Skin
- skull_bone

Properties Panel (for hemispheric_...):

- Visible:
- View: A
- Clip:
- Slice Intersections Visible:
- Slice Intersections Thickness: 1 px
- Color: #ffffff
- Opacity: 0.30
- Edge visibility:
- Edge Color: #000000

3D Visualization: The main window shows a 3D brain model with a yellow structure and two blue spheres. The model is semi-transparent, revealing internal structures. The axes are labeled R (Right), S (Superior), and A (Anterior).

2D Slices: Three 2D grayscale slices are shown on the right side of the interface, labeled B (axial), G (sagittal), and A (coronal). Each slice includes a 5 cm scale bar and a position indicator (e.g., R: 14.062mm, A: -34.500mm).

Annotations: A yellow box with black text contains the instruction: "Scroll up and uncheck the option for **Clip** and lower the **Opacity** of **hemispheric_white_matter**". A red arrow points from this box to the 'Clip' checkbox and the 'Opacity' slider in the properties panel.

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

Scene

- hemispheric_white_matter 0.30
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information

Display

Visibility

Visible:

View: All

Clip:

Slice Intersections Visible:

Slice Intersections Thickness: 1 px

Edge visibility:

Edge Color: #000000

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

S

R

P

I

B: grayscale 5 cm

Y R: 14.062mm

B: grayscale 5 cm

G A: -34.500mm

B: grayscale 5 cm

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NA-MIC ARR 2012-2019

The intersection of the white matter surface with the 2D anatomical slices are shown in the 2D viewers

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

Scene

- hemispheric_white_matter 0.30
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information

Display

Visibility

Visible:

View: All

Clip:

Slice Intersections Visible:

Slice Intersections Thickness: 1 px

Edge Color: #000000

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

S

P

R

B: grayscale 5 cm

Y R: 14.062mm

G A: -34.500mm

B: grayscale 5 cm

B: grayscale 5 cm

Sonia Pujol, Ph.D. NA-MIC ARR 2012-2019

Position your cursor over the pin icon in the corona slice view and unselect the eye icon

3D Visualization

The screenshot displays the 3D Slicer interface. On the left, the 'Scene' panel lists various anatomical models with their respective opacities: hemispheric_white_matter (0.30), left_eyeball (1.00), optic_chiasm (1.00), optic_nerve_L (1.00), optic_nerve_R (1.00), optic_tract_L (1.00), optic_tract_R (1.00), right_eyeball (1.00), Skin (0.30), and skull_bone (1.00). The 'Display' panel shows 'Visibility' settings: 'Visible' is checked, 'View' is set to 'All', 'Clip' is unchecked, 'Slice Intersections Visible' is unchecked, and 'Slice Intersections Thickness' is set to 1 px. A red arrow points from the 'Slicer Layout' icon in the top toolbar to the 'Conventional' option in the visualization menu. The menu also includes options like 'Conventional Widescreen', 'Four-Up', 'Dual 3D', 'One-Up Quantitative', 'Red slice only', 'Green slice only', 'Tabbed 3D', 'Compare', 'Three over three', 'Four over four', 'Two over Two', 'Side by side', 'Four by three slice', 'Four by two slice', and 'Three by three slice'. The main 3D view shows a head model with a blue slice and two blue eye models. To the right, three grayscale axial, sagittal, and coronal slices are displayed with 5 cm scale bars. The status bar at the bottom indicates 'Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml' and '3D Data Loading and Visualization'.

3D Slicer 4.5.0-2015-12-14

Modules: Models

Scene

- hemispheric_white_matter 0.30
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information

Display

Visibility

Visible:

View: All

Clip:

Slice Intersections Visible:

Slice Intersections Thickness: 1 px

Opacity: 0.30

Edge Visibility:

Edge Color: #000000

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

Conventional

- Conventional Widescreen
- Conventional Quantitative
- Four-Up
- Four-Up Quantitative
- Four-Up Table
- Dual 3D
- Triple 3D
- 3D only
- One-Up Quantitative
- Red slice only
- Yellow slice only
- Green slice only
- Tabbed 3D
- Tabbed slice
- Compare
- Compare Widescreen
- Compare Grid
- Three over three
- Three Over Three Quantitative
- Four over four
- Two over Two
- Side by side
- Four by three slice
- Four by two slice
- Three by three slice

Sonia Pujol, Ph.D.

NA-MIC ARR 2012-2019

3D Visualization

3D Slicer 4.5.0-2015-12-14

Modules: Models

Scene

- hemispheric_white_matter 0.30
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information

Display

Visibility

Visible:

View: All

Clip:

Slice Intersections Visible:

Slice Intersections Thickness: 1 px

3D Viewer

3D Control Window: P, S, R, L, A

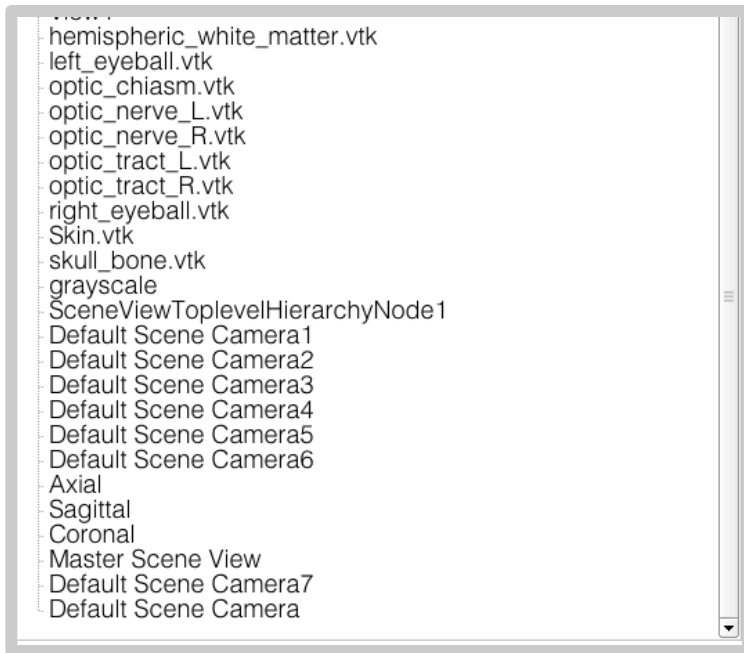
2D Viewers

S: -27.188mm Y R: 14.062mm G A: -34.500mm

B: grayscale 10 cm

Sonia Pujol, Ph.D. NA-MIC ARR 2012-2015

Position your cursor over the pin icon in the 3D viewer to display the 3D control windows. Select the A (Anterior) view of the 3D models



Part 3:

Saving a scene

Saving a Scene

3D Slicer 4.5.0-2015-12-14

File menu options:

- Add Data ⌘O
- DICOM
- Download Sample Data
- Save ⌘S**
- Recently Loaded ▶
- Close Scene ⌘W

Scene list:

- hemispheric_white_matter 0.30
- left_eyeball 1.00
- optic_chiasm 1.00
- optic_nerve_L 1.00
- optic_nerve_R 1.00
- optic_tract_L 1.00
- optic_tract_R 1.00
- right_eyeball 1.00
- Skin 0.30
- skull_bone 1.00

Information panel:

- Visible:
- View: A
- Clip:
- Slice Intersections Visible:
- Slice Intersections Thickness: 1 px

Display panel:

- Color: #ffffff
- Opacity: 0.30
- Edge Visibility:
- Edge Color: #000000

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml

3D Data Loading and Visualization

Bottom panel labels: R, S: -27.188mm, Y, R: 14.062mm, G, A: -34.500mm

Bottom panel text: B: grayscale, Sonia Pujol, Ph.D., 10 cm, NA-MIC ARR 2012-2015

Yellow box text: Click on File and select Save

Saving a Scene

The **Save Scene and Unsaved Data** window lists all the elements of the slicer scene.

File Name	File Format	Directory
<input type="checkbox"/> 3DHeadScene.mrml	MRML Scene (.mrml)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> hemispheric_white_matter.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> left_eyeball.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_chiasm.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_nerve_L.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_nerve_R.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_tract_L.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_tract_R.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> right_eyeball.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> Skin.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> skull_bone.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> grayscale.nrrd	NRRD (.nrrd)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> Master Scene View.png	PNG (.png)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData

Change directory for selected files

Color: #ffffff
Opacity: 0.30
Edge Visibility:
Edge Color: #000000

Data Probe: /Users/zhangfan/Desktop/...Data/3DHeadScene.mrml
3D Data Loading and Visualization

B: grayscale
Sonia Pujol-Pons, D. 10 cm
NA-MIC ARR 2012-2015 10 cm

Saving a Scene

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

Save Scene and Unsaved Data

Show options

File Name	File Format	Directory
<input checked="" type="checkbox"/> myNewScene.mrml	MRML Scene (.mrml)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> hemispheric_white_matter.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> left_eyeball.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_chiasm.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_nerve_L.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_nerve_R.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_tract_L.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> optic_tract_R.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> right_eyeball.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> Skin.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> skull_bone.vtk	Poly Data (.vtk)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData
<input type="checkbox"/> grayscale.nrrd	NRRD (.nrrd)	/Users/zhangfan/Desktop/3DDataLoadingandVisualization/3DHeadData

Directory for selected files

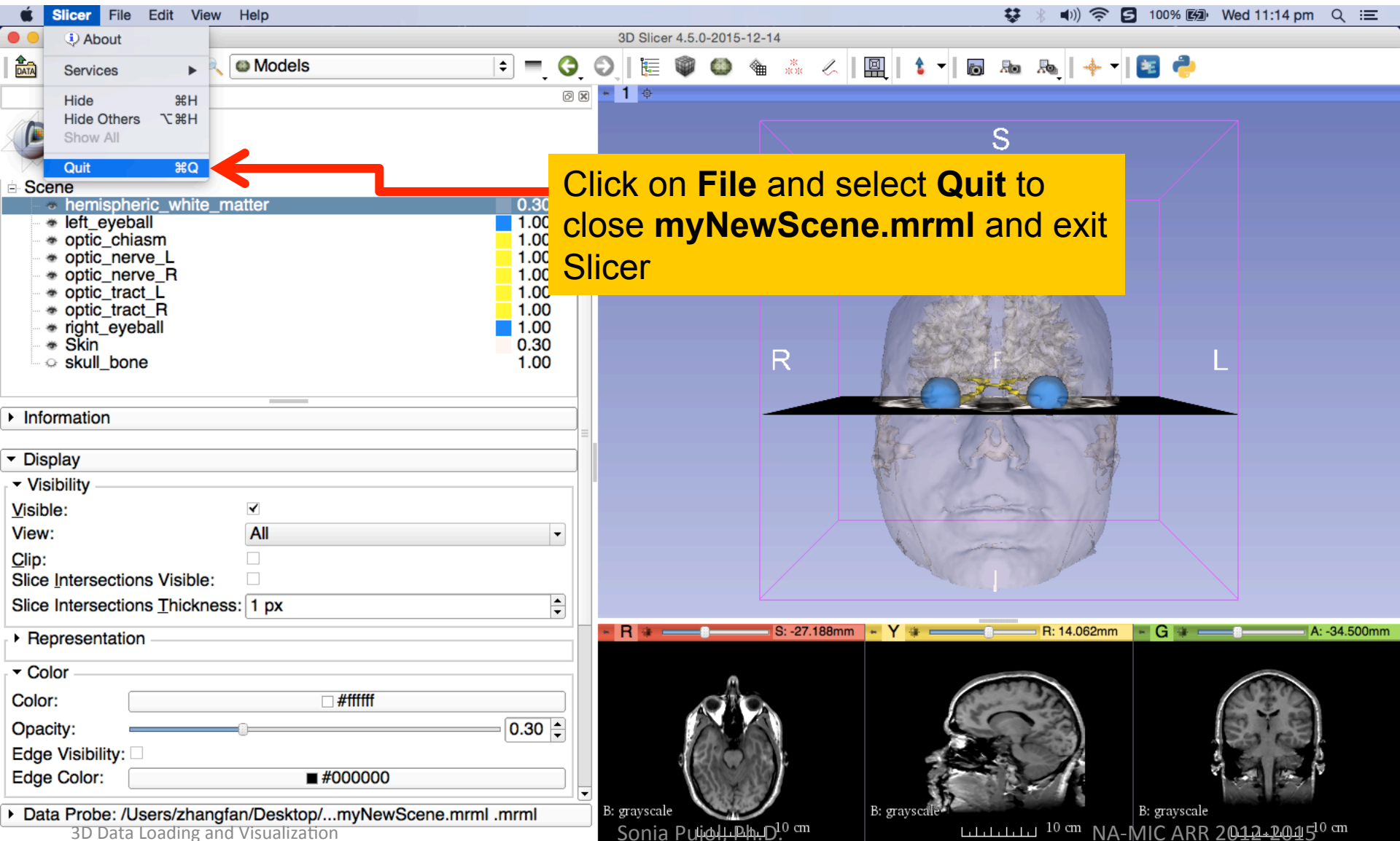
Save Cancel

Check off the box next to the scene named **3DHeadScene.mrml** and double click on it. Rename it **myNewScene.mrml** and select **Save**

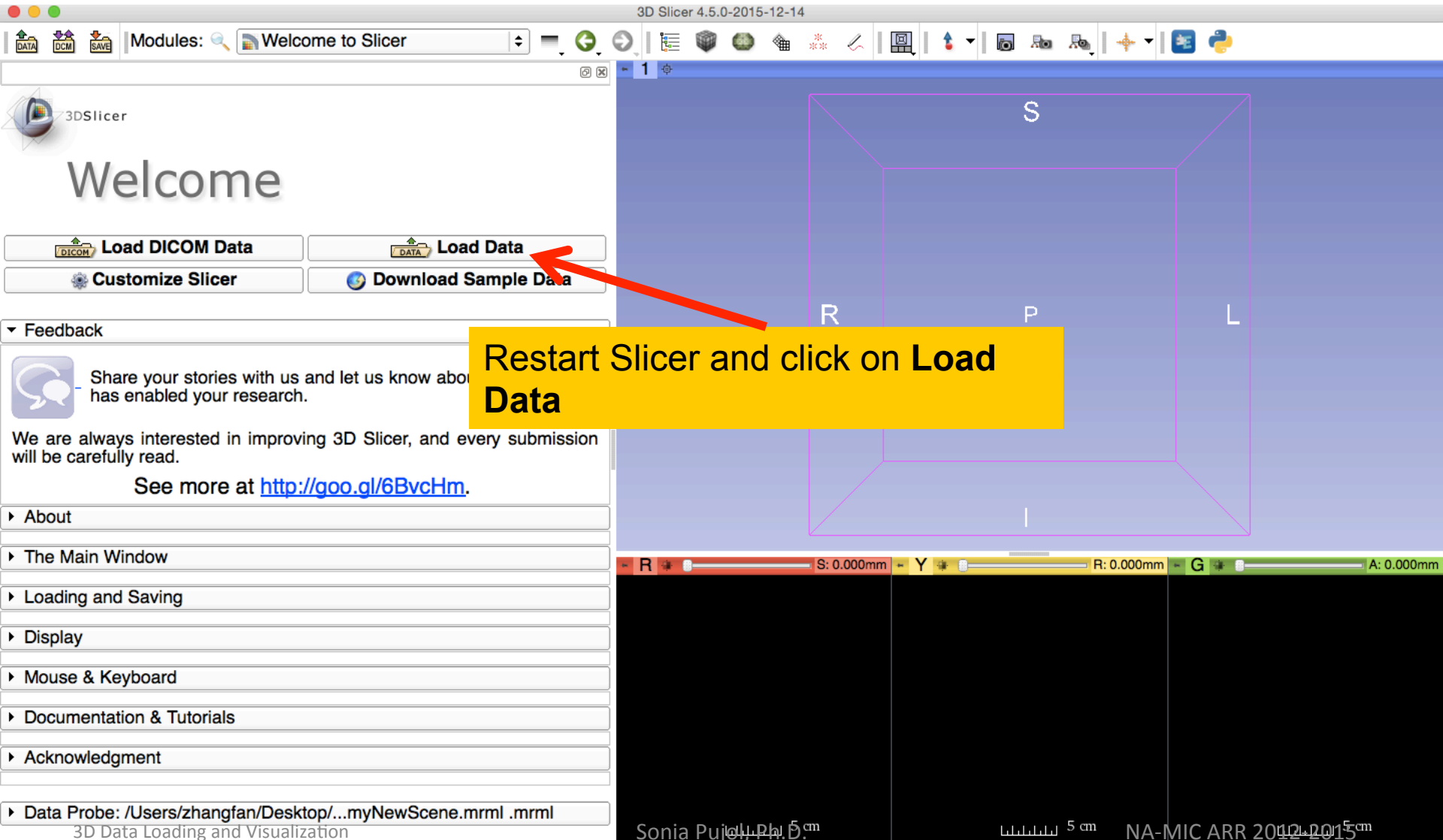
3D Data Loading and Visualization

Sonia Pujol, Ph.D. 10 cm NA-MIC ARR 2012-2015

Saving a Scene



Scene Restore



Slicer4

The screenshot displays the 3D Slicer 4.5.0-2015-12-14 interface. The main window shows a 3D model of a human head with a brain slice. The model is labeled with 'S' (Superior), 'R' (Right), 'L' (Left), and 'I' (Inferior). Below the 3D view, there are three 2D slices: an axial slice (left), a sagittal slice (middle), and a coronal slice (right). The slices are labeled 'B: grayscale' and '10 cm'. The interface includes a 'Welcome to Slicer' sidebar with buttons for 'Load DICOM Data', 'Load Data', 'Customize Slicer', and 'Download Sample Data'. A feedback section is also visible.

3D Slicer 4.5.0-2015-12-14

Modules: Welcome to Slicer

Welcome

Load DICOM Data **Load Data**

Customize Slicer **Download Sample Data**

Feedback

Share your stories with us and let us know about how 3D Slicer has enabled your research.

We are always interested in improving 3D Slicer, and every submission will be carefully read.

See more at <http://goo.gl/6BvcHm>.

About

- The Main Window
- Loading and Saving
- D
- M
- D

Acknowledgment

Data Probe: /Users/zhangfan/Desktop/...dData/myNewScene.mrml

3D Data Loading and Visualization

S

R L

R S: -27.188mm Y R: 14.062mm G A: -34.500mm

B: grayscale 10 cm

B: grayscale 10 cm

B: grayscale 10 cm

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