License agreement

Welcome

LIFEx is an easy-to-use freeware enabling calculation of 1) a broad range of radiomic features: conventional, textural, shape features from PET, MR, US and CT images 2) Cerebral Blood Volume, Mean Transit Time and Cerebral Blood Flow maps from dynamic susceptibility contrast-enhanced MR , 3) total metabolically active volume from PET images.

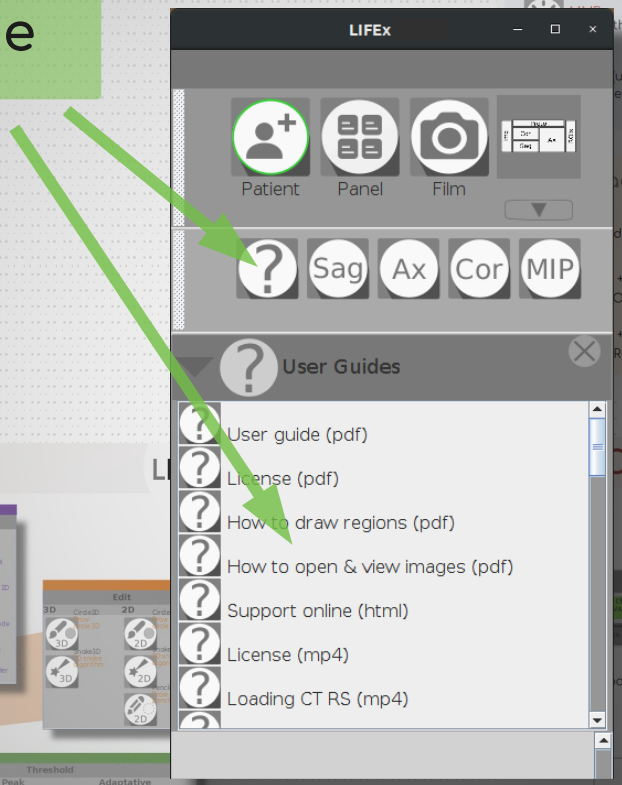
The software package LIFEx is not a medical product.

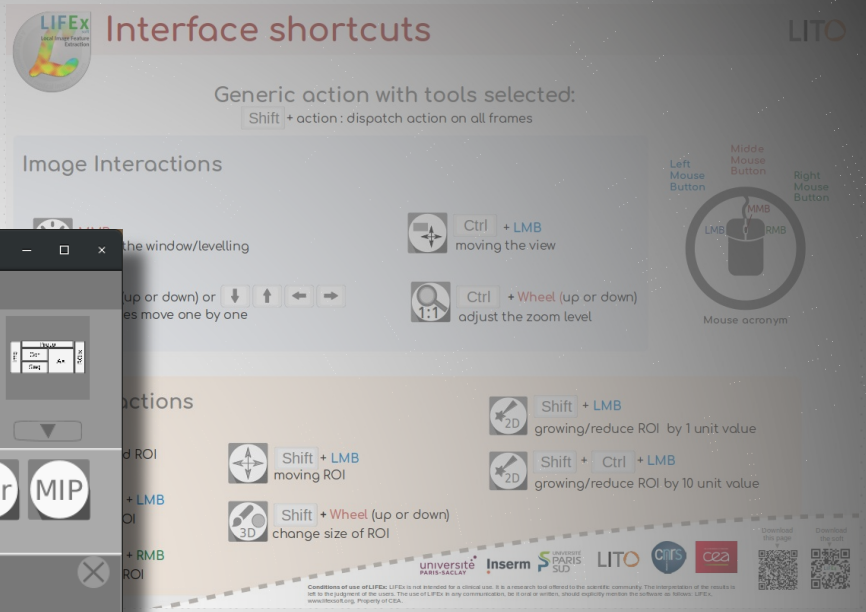
This software is not intended to be used for medical diagnosis and/or patient management. The software may be used exclusively for scientific research purpose and neither for commercial nor curative purposes. This program is provided "as is" without warranty of any kind. Any usage of the results or images of the LIFEx package is at your own risk and liability.

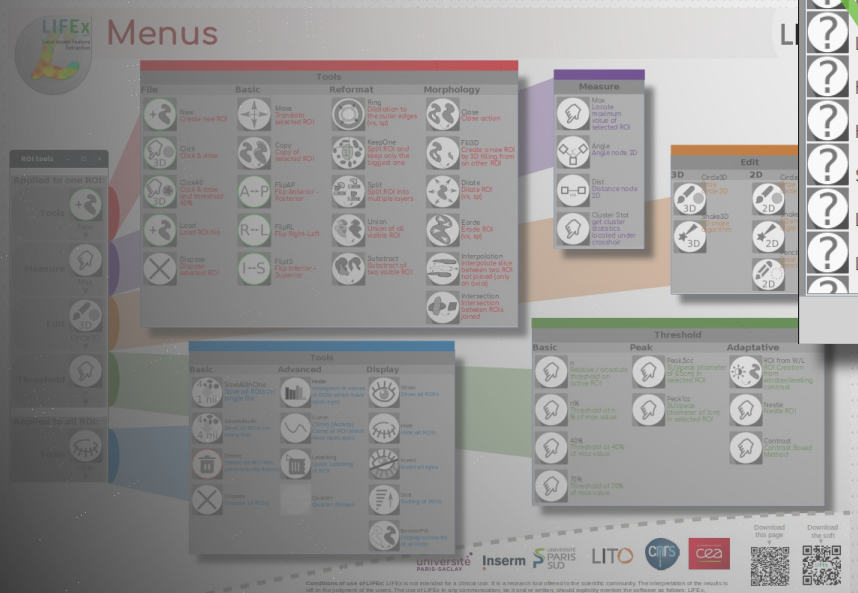
Click on "Accept" to start using LIFEx.

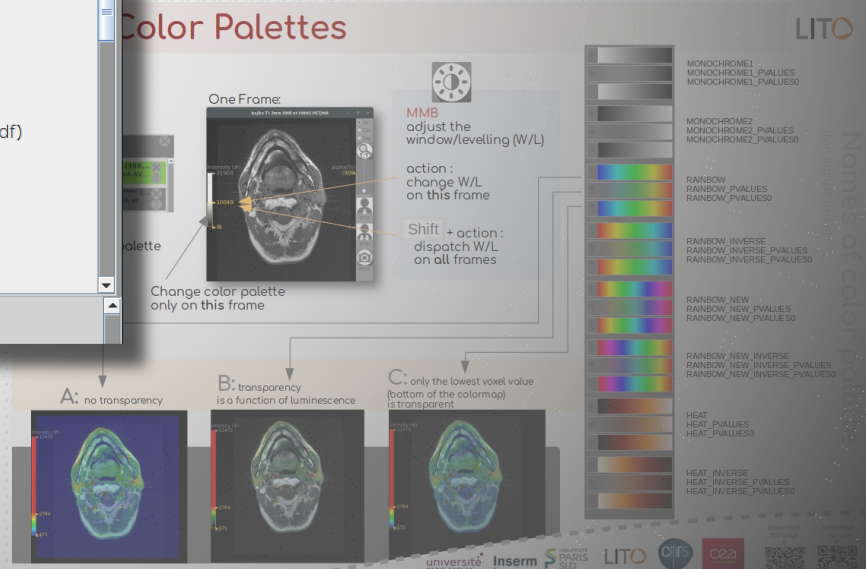
LIFEx is user friendy and assists users !

Help is available
in the main interface









Interface shortcuts

Generic action using tool icons:

Shift + action : dispatch action on all frames

Image Interactions

MMB + MM
adjust the window/levelling

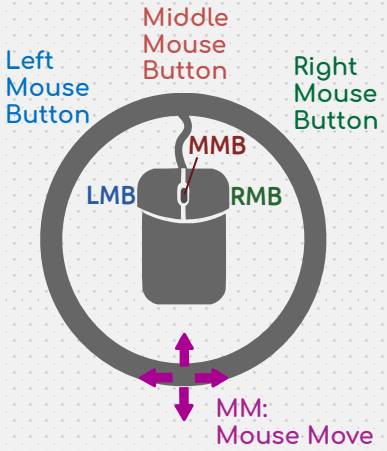
Mouse Button

Ctrl + LMB + MM
moving the view

the slices move one by one
Wheel (up or down) or

Ctrl + Wheel (up or down)
adjust the zoom level

Mouse acronyms



ROI Interactions

LMB
selected ROI

Shift + LMB + (MM)
draw ROI

Shift + RMB + (MM)
delete ROI

Shift + LMB+ MM
move ROI

Shift + Wheel (up or down)
change size of ROI

Shift + LMB
grow/reduce ROI by 1 unit value

Shift + Ctrl + LMB
grow/reduce ROI by 10 unit values

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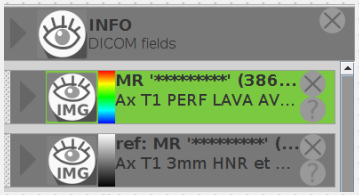
Color Palettes

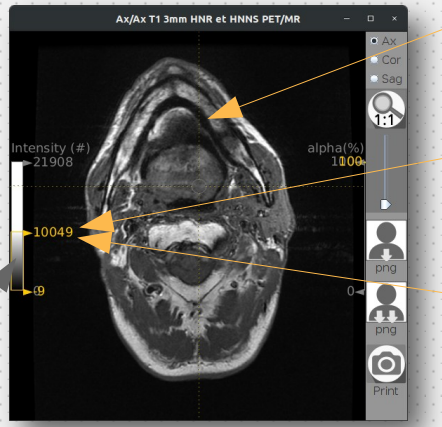
LIFEx soft
Local Image Feature Extraction

Image GUI:



Change color palette on **all** frames

One Frame:



Change color palette on **this** frame only

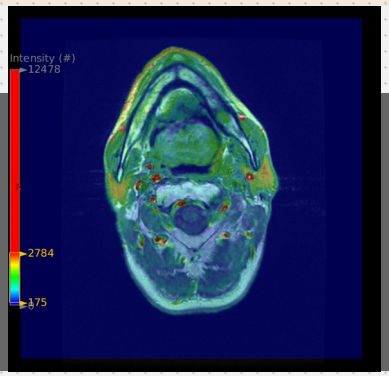
MMB + MM
adjust the window/levelling (W/L)

Shift + MMB + MM
dispatch W/L on **all** frames

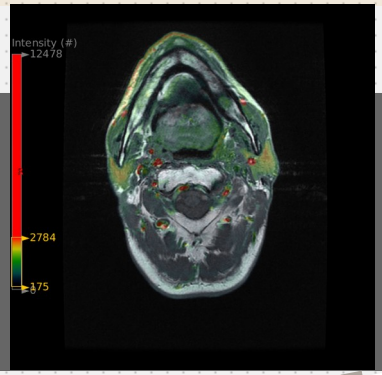
LMB + MM
change W/L on **this** frame

Shift + LMB + MM
dispatch W/L on **all** frames

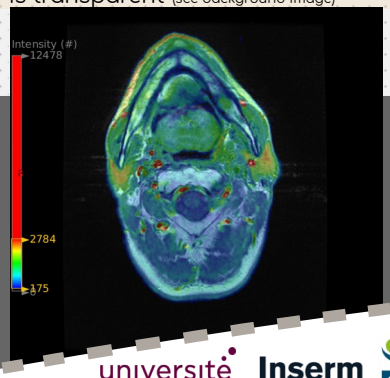
A: no transparency
(see background image)

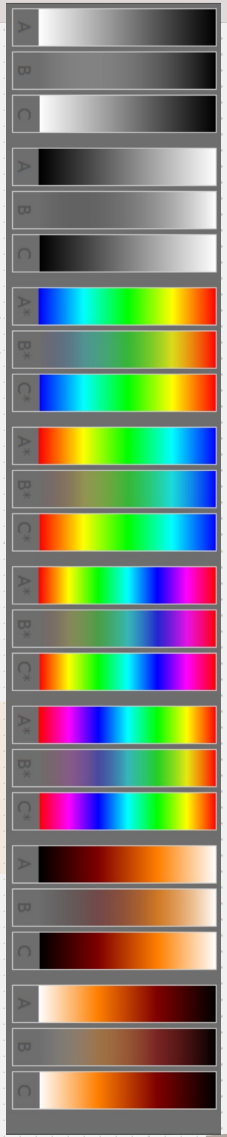


B: transparency is a function of luminescence



C: only the lowest voxel value (bottom of the colormap) is transparent (see background image)





Names of color palette (for script links)

MONOCHROME1
MONOCHROME1_PVALUES
MONOCHROME1_PVALUES0

MONOCHROME2
MONOCHROME2_PVALUES
MONOCHROME2_PVALUES0

RAINBOW
RAINBOW_PVALUES
RAINBOW_PVALUES0

RAINBOW_INVERSE
RAINBOW_INVERSE_PVALUES
RAINBOW_INVERSE_PVALUES0

RAINBOW_NEW
RAINBOW_NEW_PVALUES
RAINBOW_NEW_PVALUES0

RAINBOW_NEW_INVERSE
RAINBOW_NEW_INVERSE_PVALUES
RAINBOW_NEW_INVERSE_PVALUES0

HEAT
HEAT_PVALUES
HEAT_PVALUES0

HEAT_INVERSE
HEAT_INVERSE_PVALUES
HEAT_INVERSE_PVALUES0

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Menus

Tools

File

- New — Create new ROI
- Click — Click & draw
- Click40 — Click & draw and threshold 40%
- Load — Load ROI file
- Dispose — Dispose selected ROI

Basic

- Move — Translate selected ROI
- Copy — Copy of selected ROI
- FlipAP — Flip Anterior - Posterior
- FlipRL — Flip Right-Left
- FlipIS — Flip Inferior – Superior

Reformat

- Ring — Dilatation to the outer edges (vx, sp)
- KeepOne — Split ROI and keep only the biggest one
- Split — Split ROI into multiple layers
- Union — Union of all visible ROI
- Substract — Substract of two visible ROI

Morphology

- Close — Close action
- Fill3D — Create a new ROI by 3D filling from another ROI
- Dilate — Dilate ROI (vx, sp)
- Eorde — Erode ROI (vx, sp)
- Interpolation — interpolate slice between two ROI not joined (only on axial)
- Intersection — Intersection between ROIs joined

Measure

- Max — Locate maximum value of selected ROI
- Angle — Angle node 2D
- Dist — Distance node 2D
- Cluster Stat — get cluster statistics pointed by crosshair

Edit

3D

- Circle3D — Draw circle 3D
- Snake3D — 3D snake algorithm

2D

- Circle2D — Draw circle 2D
- Snake2D — 2D snake algorithm
- Pencil2D — Draw with pencil 2D

Tools

Basic

- SaveAllInOne — Save all ROI on single file
- SaveAllInAll — Save all ROI on many files
- Delete ROI — Delete all files (permanently delete)
- Dispose — Dispose all ROI

Advanced

- Histo — Histogram of values in ROI with open eyes
- Curve — {Time}{Activity} Curve of ROI with open eyes
- Labelling — Quick Labelling of ROI
- Quarter — Quarter division

Display

- Show — Show all ROI
- Hide — Hide all ROI
- Invert — Invert all eyes
- Sort — Sorting of ROI
- Border/Fill — Display border /fill of all ROI

Threshold

Basic

- n — Relative / absolute threshold on active ROI
- n% — Threshold at n% of max value
- 40% — Threshold at 40% of max value
- 70% — Threshold at 70% of max value

Peak

- Peak.5cc — SUVpeak (diameter of 0.5cm) in selected ROI
- Peak1cc — SUVpeak (diameter of 1cm) in selected ROI

Adaptative

- ROI from W/L — ROI Creation from window/leveling contrast
- Nestle — Nestle ROI
- Contrast — Contrast Based Method

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